

BCC Mtg Date: March 7, 2017

Prepared by and after recording return to

Thomas M. Roehlk  
14901 S. Orange Blossom Trail  
Orlando, FL 32837

DOC# 20170129428  
03/10/2017 03:00:11 PM Page 1 of 91  
Rec Fee: \$775.00  
Deed Doc Tax: \$0.00  
DOR Admin Fee: \$0.00  
Intangible Tax: \$0.00  
Mortgage Stamp: \$0.00  
Phil Diamond, Comptroller  
Orange County, FL  
IO - Ret To: ORANGE COUNTY GROWTH MANA



Tax Parcel I.D. No.:34-24-29-0000-00-004 and 35-24-29-0000-00-002

**TRANSPORTATION IMPACT FEE CREDIT  
AGREEMENT**

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**ROADWAY CONCEPTUAL ANALYSIS**

**TUPPERWARE HEIGHTS PD**

**ORANGE AVENUE**

This Transportation Impact Fee Credit Agreement (the "Agreement"), effective as of the latest date of execution (the "Effective Date"), is made and entered into by and between Deerfield Land Corporation ("Owner"), a Delaware corporation, whose mailing address is 14901 S. Orange Blossom Trail, Orlando, Florida 32837, and Orange County, a charter county and political subdivision of the State of Florida ("County"), whose mailing address is c/o Orange County Administrator, Post Office Box 1393, Orlando, Florida 32802-1393.

**WITNESSETH:**

WHEREAS, Owner is the owner of fee simple title to certain real property, as shown in the project location map identified as Exhibit "A", and as more particularly described on "Exhibit B" (legal description and sketch of description), both of which are attached hereto and incorporated herein by this reference (the "Property"); and

Transportation Impact Fee Credit Agreement—A Portion of Tupperware Heights Planned Development  
Deerfield Land Corporation, Orange Avenue, 2017  
Page 2 of 10

WHEREAS, Owner is developing the Property as a Transit-Oriented Development (“TOD”) mixed-use project (the “Project”); and

WHEREAS, Owner wishes to undertake a roadway conceptual analysis study regarding the widening of Orange Avenue for a distance of approximately 0.6 miles north of the Orange County/Osceola County line (“Study”); and

WHEREAS, Owner has conveyed to County certain portions of the Property (the “ROW Conveyance”) in return for credits against transportation impact fees to be paid in the future in connection with the Project, pursuant to that certain Right-Of-Way Dedication and Road Impact Fee Credit Agreement between the Owner and the County dated as of August 3, 2007 (OR BK 09381 PG 0378), as amended effective November 13, 2007 (OR BK 09508 PG 1732) and September 1, 2009 (OR 09928 PG 9385); and

WHEREAS, the Orange County Engineer has declared the widening of Orange Avenue to be impact fee eligible; and

WHEREAS, County and Owner desire to set forth certain terms, conditions, and agreements between the parties as to the conveyance of such land to County.

NOW, THEREFORE, for and in consideration of the above premises, the mutual covenants and agreements set forth herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Owner and County (the “Parties”) agree as follows:

**Section 1. Recitals.** The above recitals are true and correct and are incorporated herein by this reference.

**Section 2. Completion of Roadway Conceptual Analysis Study.**



(a) Within ninety (90) days from the Effective Date, Owner shall cause to be initiated a roadway conceptual analysis (“RCA”) for the Project, to be completed by March 1, 2018, pursuant to a Civil Engineering Scope of Services by Harris Civil Engineers, LLC attached hereto as Exhibit C. The County shall be named in such Civil Engineer Scope of Services as a third-party beneficiary thereof and the work product thereunder shall inure to the benefit of the County. The County shall have the opportunity to review, and the right to approve, the RCA.

(b) *Value of Study.* The value of the Study is agreed to be approximately \$255,280.00 plus reimbursable expenses estimated to be \$24,150.00, in accordance with the proposal of Harris Civil Engineers, Inc. dated January 2017 and as set forth in Exhibit D in return for credits against transportation impact fees to be paid in the future in connection with the Project in such amount.

(c) *Easements and Rights-of-Way.* Upon the determination by the County to proceed with the widening of Orange Avenue to a four-lane highway, Owner shall enter into a separate agreement with the County to address any and all necessary rights-of-way and or easements necessary for the Project, including any easements and/or rights-of-way identified by sketch and description in the Study, and providing for a preliminary environmental assessment to identify any potential contamination.

**Section 3. Transportation Impact Fee Credits.** Promptly upon County's receipt and approval of the Study in accordance with the proposal of Harris Civil Engineers, LLC referenced in Section 2 above (see Exhibits C and D), County shall credit on its books to the account of Owner, for purposes of Article IV of Chapter 23 of the Orange County Code and any successor code provisions (the "Impact Fee Ordinance"), the aforementioned amount of County-approved transportation impact fee credits to which Owner is entitled under the Impact Fee Ordinance. Such transportation impact fee credits may only be used in transportation impact fee zone three (3). Thereafter, as impact fees become payable from time to time in connection with the Project, and if so instructed by Owner, County shall deduct such amounts payable from Owner's account.

For purposes of the foregoing, County shall make deductions from Owner's account from time to time only upon receipt of written direction from Owner (or from such person or entity to whom Owner expressly may assign this authority, in writing, in the future) to effect the particular deduction.

Nothing herein shall prevent Owner from assigning transportation impact fee credits as provided for in Section 23-95(e) of the Orange County Code, as may be amended from time to time.

**Section 4. Utilities.** This agreement does not address utility requirements. Owner shall coordinate with the Orange County Utilities Director, or a designee, with respect to any utility easements necessary to accommodate appropriately-sized wastewater sewer mains or lines, potable water mains or lines, and/or reclaimed water mains or lines.

**Section 5. Notice.** Any notice delivered with respect to this Agreement shall be in writing and shall be deemed to be delivered (whether or not actually received) (i) when hand



Transportation Impact Fee Credit Agreement—A Portion of Tupperware Heights Planned Development  
Deerfield Land Corporation, Orange Avenue, 2017  
Page 5 of 10

delivered to the person(s) hereinafter designated, or (ii) upon deposit of such notice in the United States mail, postage prepaid, certified mail, return receipt requested, addressed to the person at the address set forth opposite the party's name below, or to such other address or to such other person as the party shall have specified by written notice to the other party delivered in accordance herewith.

As to Owner:           Deerfield Land Corporation  
                                  14901 S. Orange Blossom Trail  
                                  Orlando, FL 32837  
                                  Attention: General Counsel

As to County:           Orange County Administrator  
                                  P.O. Box 1393  
                                  201 S. Rosalind Ave  
                                  Orlando, FL 32802-1393

With a copy to:        Orange County Community, Environmental,  
                                  and Development Services Department  
                                  Manager, Transportation Planning Division  
                                  Orange County Public Works Complex  
                                  4200 S. John Young Parkway  
                                  Orlando, Florida 32839-9205

**Section 6.     Covenants Running with the Land.** This Agreement shall run with the Property and shall be binding upon and shall inure to the benefit and burden of the heirs, legal representatives, successors, and assigns of the parties and to any person, firm, corporation, or other entity that may become a successor in interest to the Property. Notwithstanding the foregoing, however, the authority under Section 3 to instruct County to make deductions from Owner's transportation impact fee account shall remain with Owner unless expressly assigned in writing to another by Owner.

**Section 7. Recordation of Agreement.** An executed original of this Agreement shall be recorded, at Owner's expense, in the Public Records of Orange County, Florida within thirty (30) days of the Effective Date.

**Section 8. Applicable Law.** This Agreement and the provisions contained herein shall be construed, controlled, and interpreted according to the laws of the State of Florida.

**Section 9. Time is of the Essence.** Time is hereby declared of the essence to the lawful performance of the duties and obligations contained in this Agreement.

**Section 10. Further Documentation.** The Parties agree that at any time following a request therefor by the other party, each shall execute and deliver to the other party such further documents and instruments reasonably necessary to confirm and/or effectuate the obligations of either party hereunder and the consummation of the transactions contemplated hereby.

**Section 11. Limitation of Remedies.** County and Owner expressly agree that the consideration, in part, for each of them entering into this Agreement is the willingness of the other to limit the remedies for all actions arising out of or in connection with this Agreement.

(a) **Limitations on County's remedies.** Upon any failure by Owner to perform its obligations under this Agreement, County shall be limited strictly to only the following remedies:

- (i) action for specific performance or injunction; or
- (ii) the right to set off, against the amounts of impact fees to be credited in favor of Owner under this Agreement, (A) any amounts due to County from Owner under this Agreement but remaining unpaid and (B) the cost to County of performing any action or



- actions required to be done under this Agreement by Owner, but which Owner has failed or refused to do when required; or
- (iii) the withholding of development permits and other approvals or permits in connection with the Project and/or the Property; or
  - (iv) any combination of the foregoing.

In addition to the foregoing, nothing in this Agreement prohibits or estops County from exercising its power of eminent domain with respect to the Conveyed Lands or any other portion of the Property as County may lawfully elect.

(b) *Limitations on Owner's remedies.* Upon any failure by County to perform its obligations under this Agreement, Owner shall be limited strictly to only the following remedies:

- (i) action for specific performance; or
- (ii) action for injunction; or
- (iii) action for declaratory judgment regarding the rights and obligations of Owner; or
- (iv) any combination of the foregoing.

Both parties expressly waive their respective rights to sue for damages of any type for breach of, or default under, this Agreement by the other. Both parties expressly agree that each party shall bear the cost of its own attorney fees for any action arising out of or in connection with this Agreement. Venue for any actions initiated under or in connection with this Agreement shall be in the Circuit Court of the Ninth Judicial Circuit in and for Orange County, Florida.

**Section 12. Amendment.** This Agreement may be amended only in writing, formally executed in the same manner as this Agreement.

Transportation Impact Fee Credit Agreement—A Portion of Tupperware Heights Planned Development  
Deerfield Land Corporation, Orange Avenue, 2017  
Page 8 of 10

**Section 13. Counterparts.** This Agreement and any amendment(s) may be executed in up to three (3) counterparts, each of which shall be deemed an original and all of which shall constitute one and the same instrument.

**Section 14. Termination; Effect of Annexation.** This Agreement shall remain in effect so long as the Property remains in unincorporated Orange County, Florida, unless the Parties terminate it in writing. If any portion of the Property is proposed to be annexed into a neighboring municipality, and out of the unincorporated areas, County may, in its sole discretion, terminate this Agreement upon notice to the Owner.

[Signatures appear on following pages]



Transportation Impact Fee Credit Agreement—A Portion of Tupperware Heights Planned Development  
Deerfield Land Corporation, Orange Avenue, 2017  
Page 9 of 10

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their respective duly authorized representatives on the dates set forth below.



ORANGE COUNTY, FLORIDA  
By: Board of County Commissioners

By: *Yeresa Jacobs*  
Yeresa Jacobs,  
Orange County Mayor  
Date: 3.7.17

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

By: *Katie Smith*  
Deputy Clerk

Printed name: Katie Smith

Transportation Impact Fee Credit Agreement—A Portion of Tupperware Heights Planned Development  
Deerfield Land Corporation, Orange Avenue, 2017  
Page 10 of 10

DEERFIELD LAND CORPORATION, a Delaware corporation

By: *Thomas M. Roehlk*

Printed name: THOMAS M. ROEHLK

Title: VICE PRESIDENT & SECRETARY

Date: 2/7/17

WITNESSES:

*Karin M. Sheehan*

Printed Name: Karin M. Sheehan

*Nereida Montalvo*

Printed Name: Nereida Montalvo

STATE OF FLORIDA  
COUNTY OF ORANGE

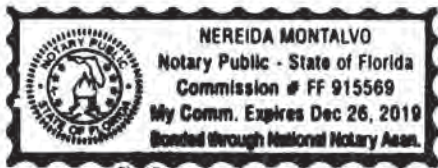
The foregoing instrument was acknowledged before me by Thomas m. Roehlk, as Vice President & Secretary of Deerfield Land Corp., who is known by me to be the person described herein and who executed the foregoing, this 7th day of February, 2017. S/he is personally known to me or has produced \_\_\_\_\_ as identification and did/did not take an oath.

WITNESS my hand and official seal in the County and State last aforesaid this 7th day of February, 2017.

*Nereida Montalvo*  
Notary Public

Print Name: Nereida Montalvo

My Commission Expires: Dec. 26, 2019





**Exhibit "A"**  
**Project Location Map**

[See attached 1 page(s)]

Exhibit "A"  
Project Location Map



**EXHIBIT 1**  
ORANGE AVENUE EXTENSION FROM OKECHOLA  
COUNTY TO THE TURNPIKE BRIDGE



**Exhibit "B"**  
**Legal Description and Sketch of Description**

**[See attached 5 pages]**

Sheet 1 of 2  
See Sketch of Description  
Included as Attachment "A"

#### LEGAL DESCRIPTION

A TRACT OF LAND BEING THE SOUTH 1800 FEET OF SECTIONS 34 AND 35, TOWNSHIP 24 SOUTH, RANGE 29 EAST, ORANGE COUNTY, FLORIDA, LYING EAST OF THE RIGHT OF WAY LINE FOR U.S. HIGHWAY NO. 441 AND WEST OF THE S.C.I. RAILROAD. LESS AND EXCEPT FOR THE RIGHTS OF WAY OF ORANGE AVENUE, AND THE DRAINAGE AREA CREATED BY OFFICIAL RECORDS BOOK 6483, PAGE 550 BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

#### PARCEL A

Begin at the North 1/4 corner of Section 3, Township 25 South, Range 29 East, Osceola County, Florida and run North 89°53'31" West along the Orange-Osceola County line for a distance of 134.25 feet to South 1/4 corner of Section 34, Township 24 South, Range 29 East, Orange County, Florida; thence continue North 89°53'31" West along said County line for a distance of 1111.72 feet to a point on the East right of way line of State Road No. 500 (U.S. 441 - Orange Blossom Trail); thence run Northerly along the aforesaid East right of way line for the following courses: North 06°53'55" West for a distance of 537.82 feet to a Point of Curvature of a curve concave Easterly and having a radius of 8,442.57 feet and a central angle of 05°36'19"; thence run Northerly along the arc of said curve for a distance of 825.92 feet; thence departing said curve and run radially North 88°42'23" East for a distance of 10.83 feet to a point on a curve concave Easterly and having a tangent bearing North 01°17'37" West and a radius of 8,431.74 feet; thence run Northerly along the arc of said curve, through a central angle of 00°33'04", for a distance of 81.10 feet; thence departing said curve and run radially South 89°15'27" West for a distance of 10.83 feet to a point on a curve concave Easterly and having a tangent bearing North 00°44'33" West and a radius of 8,442.57 feet; thence run Northerly along the arc of said curve, through a central angle of 00°40'29", for a distance of 99.43 feet to the Point of Tangency; thence run North 00°04'04" West for a distance of 111.56 feet; thence South 89°55'56" West for a distance of 14.63 feet; thence North 00°04'04" West for a distance of 150.70 feet; thence departing said East right of way line and run along the North line of the South 1800 feet of said Sections 34 and 35, parallel to the Orange-Osceola County line for the following courses: South 89°53'31" East for a distance of 1,389.51 feet; thence South 89°55'24" East for a distance of 2,653.94 feet; thence South 89°54'09" East for a distance of 110.84 feet to a point on the West right of way line of County Road No. 527 (Old Dixie Highway - Orange Avenue); thence run Southerly along said West right of way for the following courses: thence South 07°51'42" East for a distance of 13.88 feet; thence South 00°55'26" West for a distance of 65.46 feet; thence South 08°28'49" West for a distance of 197.09 feet; thence South 09°32'49" West for a distance of 200.00 feet; thence South 10°07'12" West for a distance of 200.01 feet; thence South 08°58'27" West for a distance of 200.01 feet; thence South 09°32'49" West for a distance of 200.00 feet; thence South 10°32'58" West for a distance of 200.03 feet; thence South 08°56'44" West for a distance of 200.01 feet; thence South 09°13'42" West for a distance of 179.80 feet; thence South 34°30'22" West for a distance of 23.94 feet; thence South 07°09'00" West for a distance of 21.52 feet; thence South 05°19'32" West for a distance of 121.50 feet; thence South 11°58'24" West for a distance of 2.84 feet to a point on the South line of aforesaid Section 34 and the Orange-Osceola County line; thence run North 89°55'24" West along said line for a distance of 2,482.11 feet to the POINT OF BEGINNING. (LESS the drainage area as recorded in Official Record Book 6483, Page 550 of the Public Records of Orange County, Florida.)

Contains 161.981 Acres, more or less.



Sheet 2 of 2  
See Sketch of Description  
Included as Attachment "A"

TOGETHER WITH:

PARCEL B

Begin at the Northeast corner of Section 3, Township 25 South, Range 29 East, Osceola County, Florida and run North 89°55'24" West along the Orange-Osceola County line for a distance of 110.82 feet to a point on the East right of way line of County Road No. 527 (Old Dixie Highway - Orange Avenue) and being on a curve concave Westerly and having a tangent bearing North 10°56'37" East and a radius of 1,465.39 feet; thence run Northerly along said right of way and along the arc of said curve through a central angle of 01°23'47" for a distance of 35.71 feet to the Point of Tangency; thence continue Northerly along said right of way for the following courses: North 09°32'49" East for a distance of 1,501.23 feet; thence North 08°06'54" East for a distance of 100.03 feet; thence North 05°56'55" East for a distance of 102.86 feet; thence North 00°08'55" East for a distance of 82.65 feet to a point on the North line of the South 1800 feet of Section 35, Township 24 South, Range 29 East, Orange County, Florida; thence run South 89°54'09" East along said North line for a distance of 1,493.86 feet to a point on the Westerly right of way line of the Atlantic Coastline Railroad (CSX Railroad); thence run Southerly along said railroad right of way line for the following courses: South 38°44'40" West for a distance of 326.03 feet to a Point of Curvature of a curve concave Southeasterly and having a radius of 2,959.33 feet and a central angle of 26°26'55"; thence run Southwesterly along the arc of said curve for a distance of 1,366.07 feet to the Point of Tangency; thence run South 12°17'45" West for a distance of 198.00 feet; thence South 77°42'15" East for a distance of 50.00 feet; thence South 12°17'45" West for a distance of 121.14 feet to a point on the North line of the Northwest 1/4 of Section 2, Township 25 South, Range 29 East, Osceola County, Florida; thence run North 89°54'09" West along said North line of the Northwest 1/4 and along the Orange-Osceola County line for a distance of 856.89 feet to the POINT OF BEGINNING.

Contains 45.002 Acres, more or less.

T07-B24

Prepared by:

Tinklepaugh Surveying Services, Inc.  
379 West Michigan Street  
Suite 208  
Orlando, Florida 32806  
(407) 422-0957

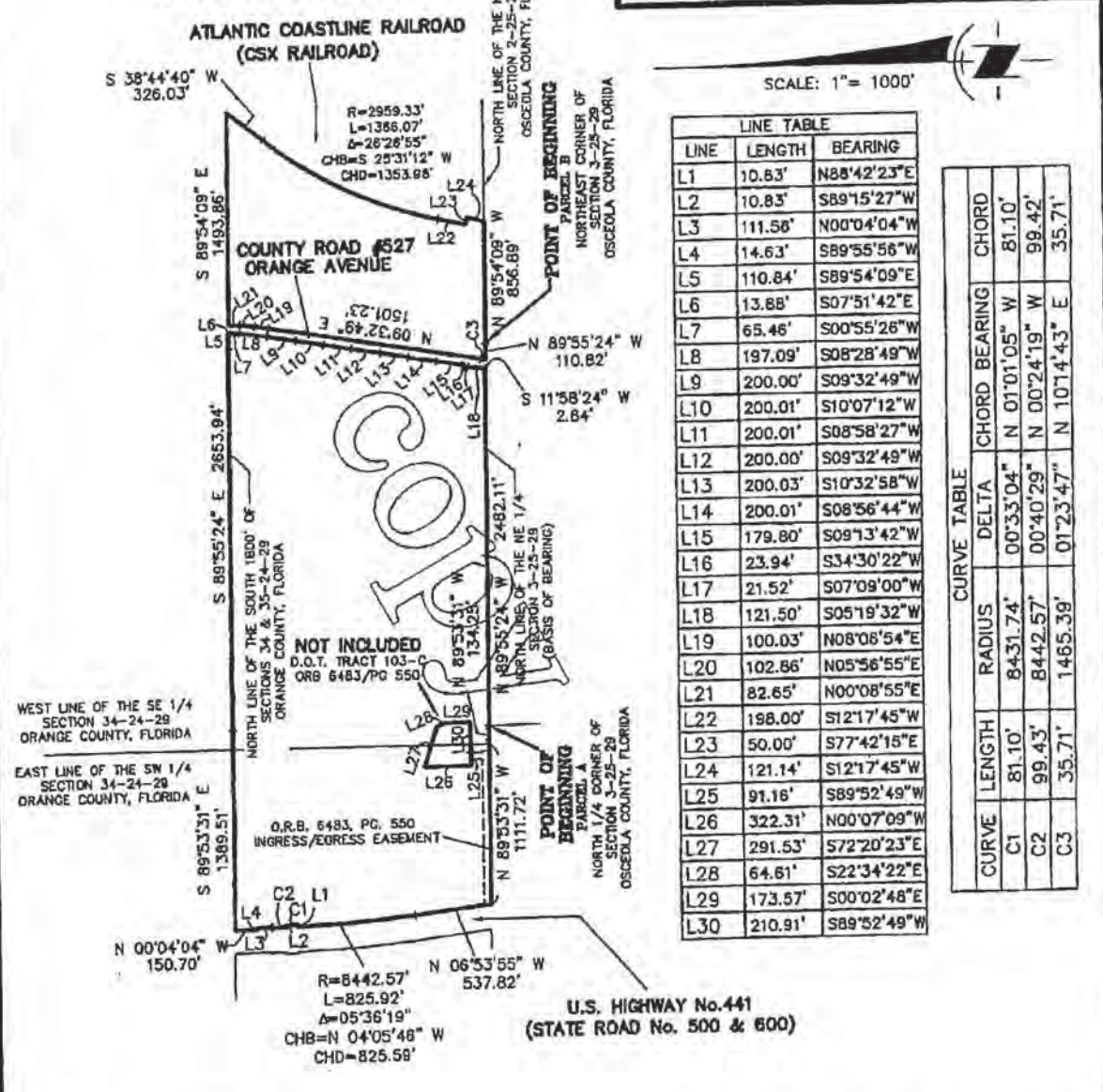
This description and the accompanying sketch or sketches has been prepared in accordance with the Standards set forth in Chapter 61G17, F.A.C., pursuant to Chapters 177 and 472, Florida Statutes. Unless it bears the signature and the original raised seal of a Florida licensed surveyor and mapper this drawing, sketch, plat or map is for informational purposes only and is not valid.

*Robert W. Monaco*

ROBERT W. MONACO, P.S.M. # 5980

Date: MARCH 20, 2007

# SKETCH OF DESCRIPTION ATTACHMENT "A" - NOT A SURVEY -



SCALE: 1" = 1000'

LINE TABLE		
LINE	LENGTH	BEARING
L1	10.83'	N88°42'23"E
L2	10.83'	S89°15'27"W
L3	111.56'	N00°04'04"W
L4	14.63'	S89°55'56"W
L5	110.84'	S89°54'09"E
L6	13.88'	S07°51'42"E
L7	65.46'	S00°55'26"W
L8	197.09'	S08°28'49"W
L9	200.00'	S09°32'49"W
L10	200.01'	S10°07'12"W
L11	200.01'	S08°58'27"W
L12	200.00'	S09°32'49"W
L13	200.03'	S10°32'58"W
L14	200.01'	S08°56'44"W
L15	179.80'	S09°13'42"W
L16	23.94'	S34°30'22"W
L17	21.52'	S07°09'00"W
L18	121.50'	S05°19'32"W
L19	100.03'	N08°08'54"E
L20	102.86'	N05°56'55"E
L21	82.65'	N00°08'55"E
L22	198.00'	S12°17'45"W
L23	50.00'	S77°42'15"E
L24	121.14'	S12°17'45"W
L25	91.16'	S89°52'49"W
L26	322.31'	N00°07'09"W
L27	291.53'	S72°20'23"E
L28	64.61'	S22°34'22"E
L29	173.57'	S00°02'48"E
L30	210.91'	S89°52'49"W

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	81.10'	8431.74'	00°33'04"
C2	99.43'	8442.57'	00°40'29"
C3	35.71'	1465.39'	01°23'47"

**ABBREVIATION LISTING**  
 PG. = PAGE  
 P.B. = PLAT BOOK  
 CHB./CHD. = CHORD BEARING/CHORD DISTANCE  
 NR = NOT RADIAL

**SURVEYOR'S NOTES**  
 1) Bearings are based on the North line of the Northeast 1/4 of Section 3, Township 25 East, Range 29 South, Osceola County, Florida, being North 89°55'24" West.  
 2) See Sheet 1 for Legal Description.

**Tinklepaugh**  
 SURVEYING SERVICES, INC.  
 379 W. Michigan Street, Suite 208 • Orlando, Florida 32806  
 Tele. No. (407) 422-0957 Fax No. (407) 422-8916  
 LICENSED BUSINESS No. 3778



Sheet 1  
See Sketch of Description  
Included as Attachment "A"

### LEGAL DESCRIPTION

A tract of land being a portion of the South 1800 feet of Sections 34 and 35, Township 24 South, Range 29 East, Orange County, Florida and being more particularly described as follows:

Commence at the North 1/4 corner of Section 3, Township 25 South, Range 29 East, Osceola County, Florida and run South 89°55'24" East along the North line of the Northeast 1/4 of said Section 3 for a distance of 2436.95 feet to the POINT OF BEGINNING; said point also being on a curve concave Westerly and having a tangent bearing of North 15°53'00" East, and a radius of 3499.72 feet; thence run Northerly along the arc of said curve, through a central angle of 11°47'25", for a distance of 720.18 feet to the Point of Tangency; thence run North 04°05'35" East for a distance of 1094.51 feet to a point on the North line of the South 1800 feet of Sections 34 and 35; thence run South 89°55'24" East along said line for a distance of 17.07 feet; thence run South 89°54'09" East for a distance of 123.27 feet; thence departing said line and run South 04°05'35" West for a distance of 1104.30 feet to a Point of Curvature of a curve concave Westerly and having a radius of 3,639.72 feet and a central angle of 11°10'03"; thence run Southerly along the arc of said curve for a distance of 709.41 feet to a point on the aforesaid North line of the Northeast 1/4 of Section 3; thence run North 89°55'24" West along said North line for a distance of 145.28 feet to the POINT OF BEGINNING.

Contains 253,987 square feet or 5.831 Acres, more or less.

T06-E91R2

Prepared by:

Tinklepaugh Surveying Services, Inc.  
379 West Michigan Street  
Suite 208  
Orlando, Florida 32806  
(407) 422-0957

This description and the accompanying sketch or sketches has been prepared in accordance with the Standards set forth in Chapter 61G17, F.A.C., pursuant to Chapters 177 and 472, Florida Statutes. Unless it bears the signature and the original raised seal of a Florida licensed surveyor and mapper this drawing, sketch, plat or map is for informational purposes only and is not valid.

Robert W. Monaco  
ROBERT W. MONACO, P.S.M. # 5980  
Date: OCTOBER 6, 2006

# ATTACHMENT 'A'

## SKETCH OF DESCRIPTION

-- NOT A SURVEY --

North line of the South 1800 feet of Sections 34 and 35

S 89°55'24" E  
17.07'

S 89°54'09" E  
123.27'

### ABBREVIATION LISTING

O.R.B. =	OFFICIAL RECORDS BOOK
PG. =	PAGE
P.B. =	PLAT BOOK
P.C. =	POINT OF CURVATURE
P.T. =	POINT OF TANGENCY
P.C.C. =	POINT OF COMPOUND CURVATURE
P.R.C. =	POINT OF REVERSE CURVATURE
TAN. BRG. =	TANGENT BEARING

## Tinklepaugh

### SURVEYING SERVICES, INC.

379 W. Michigan Street, Suite 208 • Orlando, Florida 32806

Tele. No. (407) 422-0957 Fax No. (407) 422-0915

LICENSED BUSINESS No. 3778

PROPOSED ADDITIONAL RIGHT OF WAY 2.750 ACRES +/-

#### AREA CALCULATIONS

ADDITIONAL RIGHT OF WAY  
2.750 ACRES +/- (WEST SIDE)

ADDITIONAL RIGHT OF WAY  
1.009 ACRES +/- (EAST SIDE)

LESS RIGHT OF WAY TO BE RELEASED  
0.475 ACRES +/-

TOTAL ADDITIONAL RIGHT OF WAY FOR  
NEW ALIGNMENT  
3.284 ACRES +/-

#### POINT OF COMMENCEMENT

North 1/4 corner of Section 3,  
Township 25 South, Range 29  
East, Osceola County, Florida

North line of the  
Northeast 1/4 of  
Section 3

**POINT OF BEGINNING**  
TAN. BRG. AT THIS  
POINT = N 15°53'00" E

S 89°55'24" E  
2436.95'

EAST LINE OF THE SOUTHEAST 1/4 OF SECTION 34, TOWNSHIP 24 SOUTH, RANGE 29 EAST, ORANGE COUNTY, FLORIDA

N 04°05'35" E 1094.51'

C.R. No. 527 (ORANGE AVENUE)

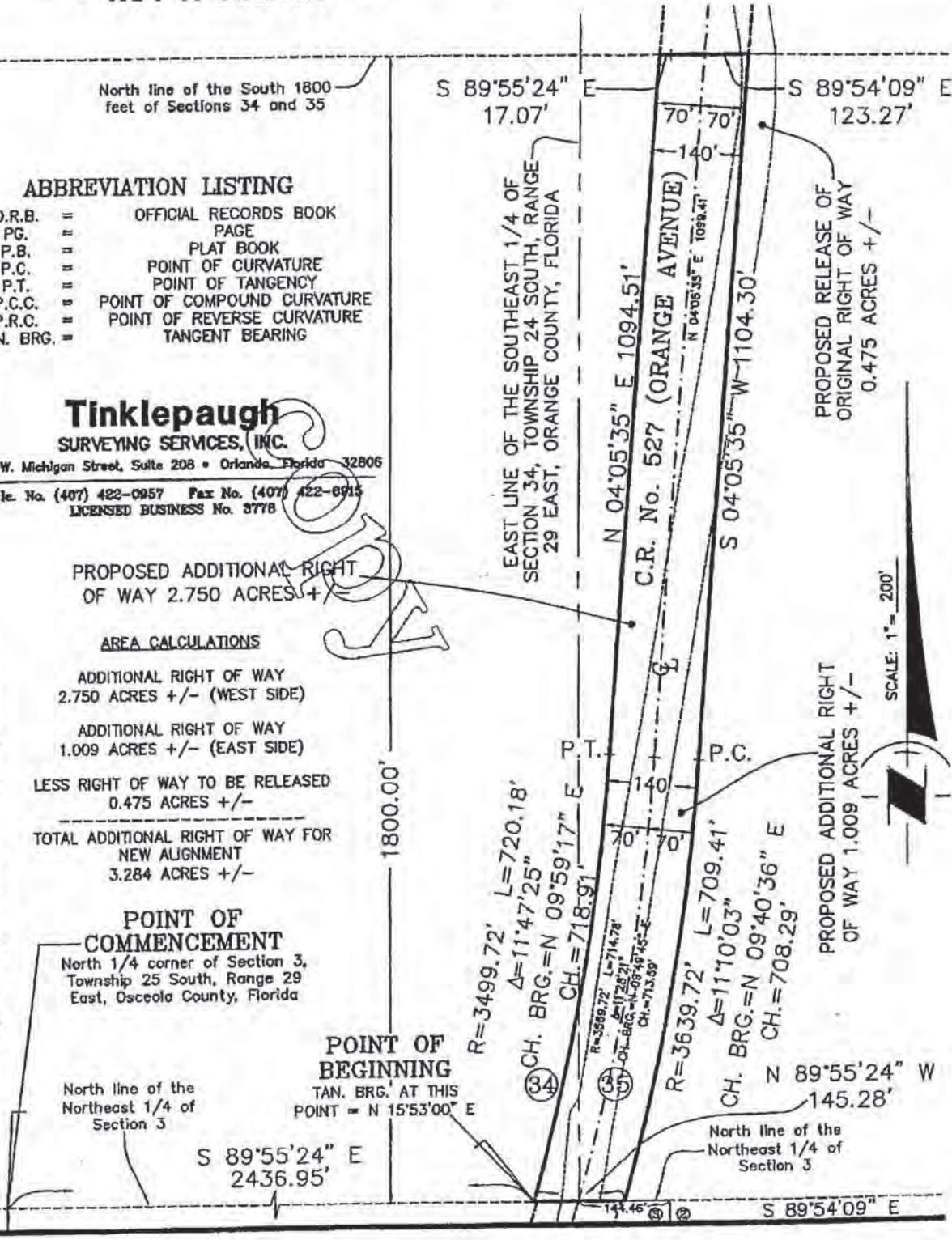
S 04°05'35" W 1104.30'

PROPOSED RELEASE OF ORIGINAL RIGHT OF WAY  
0.475 ACRES +/-

PROPOSED ADDITIONAL RIGHT OF WAY 1.009 ACRES +/-

SCALE: 1" = 200'

I:\T06E91\T06E91.DWG 10/13/2006





**Exhibit "C"**  
**Scope of Services**

**[See attached 70 pages]**

## Exhibit C

### **ORANGE AVENUE EXTENSION FROM OSCEOLA COUNTY TO THE TURNPIKE BRIDGE CONCEPTUAL ANALYSIS**

#### **Civil Engineering Scope**

##### **Orange Avenue**

Florida's Turnpike South to Osceola County line  
Approximate Length: 0.61 miles

#### **Roadway Conceptual Analysis**

##### **Scope of Services**

Orange County's Roadway Conceptual Analysis (RCA) process is intended to provide comprehensive interdisciplinary approach, combining the strengths of the engineering and transportation planning disciplines in the initial development phases of Orange County's major roadway improvement projects. This approach seeks to assure early coordination with all affected County Departments and Divisions, the appropriate state and local entities and the citizens of the County. The resulting coordination effort should accurately gather and convey information pertinent to the development of the project, thereby identifying viable options to expedite or advance pertinent project phases.

Harris Civil Engineers, LLC (HCE) shall provide project planning, preliminary engineering, and environmental analysis services for approximately 0.61 miles of Orange Avenue from the Osceola County line to the Turnpike Bridge. HCE and their sub consultants (The HCE Team) shall perform the services required for design studies, environmental effects, safety and public hearings.

The HCE Team will study the expansion of the existing right of way to 120 feet where needed, addition of lanes, and a five (5) foot wide sidewalk to the existing two-lane sections of Orange Avenue from Florida's Turnpike south to the Osceola County line. The HCE Team shall consider special treatment and/or additional lanes at the Mary Louis Lane intersection, and widening of the crossroad to provide intersection operation at Level of Service C or higher in the design year.

The HCE Team shall provide the lump sum fee, man-hour estimates and the Activity and Fee Summary (see attached). A general Project Schedule shall be attached as Exhibit A. The tasks included in this Scope of Services are:

1. Administration
2. Public Involvement
3. Data Collection
4. Surveying and Mapping
5. Corridor Analysis and Project Need Documentation



- 6. Improvement Alternatives
- 7. Recommendations

The format and digital source application used for all submittals shall be in PDF and CAD format and are subject to County acceptance and approval. All maps and illustrations depicting aerial extent shall include a directional symbol indicating north and scale appropriate to the map at the size presented.

The scope of service addresses each task within these elements and serves to further define specific requirements.

## **1.0 Administration**

### **1.1 Notice to Proceed Meeting with County Project Manager and the HCE Team**

- To establish parameters for the project and initiate the study.

### **1.2 Project Status Meetings with County Project Manager and the HCE Team**

- Attend periodic meetings (up to 10 meetings) to discuss project progress and status, upcoming events and action items.
- Prepare and distribute meeting minutes following each meeting (draft within 5 days, final within 10 days of the meeting). The project schedule shall reflect these meetings.

### **1.3 Project Management**

- Each Section shall be included in the various Pay Items for each Section and shall not exceed 10 percent (10%) of the work effort for that Section.

### **1.4 RCA Project Schedule**

- Submit a detailed project schedule for the RCA identifying major tasks, their duration and tasks relationships.
- An updated project schedule shall be submitted at each project status meeting, with notation or justification of any major changes to the schedule.
- The schedule shall utilize the Orange County Standard Roadway Project Schedule format on MS Project.

### **1.5 Quality Assurance/Quality Control**

- The HCE Team to conduct Quality Assurance/Quality Control (QA/QC) reviews of all work products.
- Reviews shall be performed for newsletters, webpages, press releases, exhibits, PowerPoint presentations, reports, maps and other work products prior to them being submitted to the County for review or use.

- QA/QC reviews shall be included as part of the work effort for the various Pay Items in each section as identified elsewhere herein and shall be limited to 5 percent (5%) of the work effort of each item.

### **1.6 Deliverables**

Work to be completed under this section by the Consultant shall require the following items to be delivered and accepted by the County:

- Notice to Proceed Meeting Materials and Minutes
- Project Status Meeting Minutes
- RCA Project Schedule (Initial and updates as needed)

## **2.0 Public Involvement**

The Harris Team shall conduct the following public involvement activities throughout the project.

### **2.1 Public Involvement Plan**

- Prepare a Public Involvement Plan (PIP) submit it to the County for review and approval within two weeks of the Notice to Proceed meeting.
- The PIP shall inform and involve the citizens of the county, appropriate state and local agencies and responsible appointed and elected public officials in the project planning, review and approval process.
- Identify a) stakeholders, b) public outreach methods with particular attention to low income, elderly, minority and disabled persons, c) estimated schedule of public/community meetings, d) limited English proficiency strategies and e) other opportunities for the public to provide input.

### **2.2 Coordination Meetings**

- The HCE Team shall coordinate and conduct initial meetings/telephone calls and up to ten (10) follow-up meetings/telephone calls with the following local and state organizations to inform them of the project and solicit their input:
  - United States Fish & Wildlife Service (USFWS)
  - Army Corps of Engineers, (ACOE)
  - Florida Department of Environmental Protection (FDEP)
  - Florida Fish & Wildlife Conservation Commission (FFWCC)
  - South Florida Water Management District
  - Orange County Environmental Protection Department (EPD)
  - Orange County Utilities Department
  - Orange County Public Schools (OCPS)



- Osceola County
  - MetroPlan Orlando
  - Orange County Fire Rescue
  - Florida Department of Transportation (FDOT)
  - The FDOT Florida Turnpike District
  - LYNX
- The Harris Team shall coordinate with LYNX, OCPS, Osceola County and Metro Plan to determine if the project will result in adverse impacts to their schedules, routes, and bus stops. Results to be reflected in the model and present the proposed solution(s) on the plan typical sections.
  - The Consultant shall include County staff in the meetings/telephone calls and shall provide the name of the individual contacted, date, time, contact details and minutes of the topics discussed for each interaction. Production of minutes shall be included in the associated pay item and shall be submitted to County Project Manager within two days of each coordination meeting.
  - Where agency involvement is required or agency participation is requested at a public meeting, the Consultant shall coordinate with pertinent agencies a minimum of 30 days prior to such public meeting.

### **2.3 Small Group Meetings**

- Attend up to four (4) small group meetings with organizations interested in the Study i.e. homeowners, formal homeowner associations, business owners or other formal organizations such as a Citizens Advisory Committee.
- Prepare all presentation and handout materials. Prepare for public meetings and other outreach activities.
- Prepare meeting summaries and follow up.

### **2.4 Updated Mailing List**

- County shall provide a list of property owners and their addresses to the HCE Team. The list shall contain all homeowners / property owners located within the study corridor as determined by the County.
- HCE Team shall expand the initial mailing list to include any person or institution expressing an interest in the project, potential permitting or review agencies, elected and appointed officials, community leaders, and media representatives.
- HCE Team shall maintain and regularly update the mailing list during the course of the study.

- Provide an updated listing for Public Information Meetings and Land Planning Agency (LPA) and Board of County Commissioner (BCC) Public Hearings.

## 2.5 Newsletters

- The HCE Team shall prepare and distribute five (5) editions of the project newsletters at the following events of the Study:
  - Edition 1: Prior to Kickoff-Alternatives Information Public Meeting
  - Edition 2: Prior to the Recommended Improvement Concept Meeting
  - Edition 3: Prior to the LPA Public Hearing
  - Edition 4: Prior to the Board of County Commissioners Public Hearing
  - Edition 5: After final action by the Board of County Commissioners
- The newsletters shall be prepared in English and Spanish printed in color on 8 ½" x 11" sheets in a format acceptable to the County.
- The English newsletters shall be sent by First Class Mail to each entry included in the data base mailing list at least two (2) weeks prior to scheduled meetings or hearings.
- Each English newsletter shall include a Spanish point of contact (County employee). Sufficient copies of each English edition shall be printed by the Consultant to provide 110% of the addressees on the mailing list at each mailing. Sufficient copies of each Spanish edition shall be printed by the Consultant to provide 10% of the addresses on the mailing list at each mailing. The Chief Planner of the Transportation Planning Division and the County Communication Office must approve all final newsletter proofs prior to final printing. Newsletters shall adhere to the County's Title VI Nondiscrimination Policy and Plan.

## 2.6 Website Creation / Maintenance

- HCE Team shall prepare an internet website for the study.
- Site shall be linked to the Orange County Website. The HCE Team shall coordinate with the appropriate County offices to ensure compatibility and format. The County shall provide a sample of the acceptable webpage format.
- HCE Team shall create and post the site on a public-access server provided by the HCE Team at least two (2) weeks prior to the Kick-off-Alternatives meeting.
- HCE Team shall update the site (to include meeting minutes) prior to each public meeting, work session, public hearing, and following the final public hearing.
- HCE Team, at the conclusion of the RCA, shall develop a Design Phase introduction webpage and transfer maintenance responsibilities of the website to the County. The website shall be transferred to the County on compact disc CD, DVD or USB flash or portable drive.



**2.7 Advertisements / News Releases**

- The HCE Team shall prepare and submit display advertisements in the Sunday Orange County Extra Section of the Orlando Sentinel and El Sentinel at least two weeks prior to each of the two public meetings and two public hearings. The advertisements shall be display ads approximately 4" x 5".
- The HCE Team is responsible for placing the public meeting dates/announcements on the Calendar of Events in the Orange County Extra Section of the Orlando Sentinel.
- The HCE Team shall prepare and distribute news releases to the media at least one (1) week prior to each public meetings and each public hearing.
- All public display advertisements and news releases must be approved by the Chief Planner of the Transportation Planning Division and the County Communication Office prior to their distribution to media outlets and the general public.

**2.8 Public Information Meetings**

The HCE Team shall prepare for and participate in two (2) public information meetings as described below:

- **Preparation and Documentation of Public Meetings**

Logistics:

- The HCE Team shall prepare for the public meetings for the County and shall ensure that HCE Team personnel are present to assist with the meetings.
- The meeting shall include a formal PowerPoint presentation followed by an informal question and answer period during which meeting participants may meet one-on-one with the HCE Team to individually discuss their areas of concern.

Presentation/Materials:

- The HCE Team shall obtain direction from the County Project Manager prior to beginning work on meeting presentation and materials and shall have the PowerPoint presentation and all meeting materials (including script and displays) in final format ready for review and approval by County staff no later than two (2) weeks prior to the public meeting.
- Exhibits mounted on foam board unless otherwise directed by the County. Exhibits shall be plotted in color or black and white as appropriate and as directed by the County. Exhibits shall include maps on an aerial

photography base, traffic data and projections, typical sections, alternative evaluation matrices, detail sketches and other text or graphical information as described elsewhere herein or as directed by the County.

- The HCE Team shall prepare and distribute comment forms to meeting participants and other interested parties. An interactive comment form shall be posted on the project website to obtain public feedback from persons who are not able to attend the public meeting. The comment form shall be designed to elicit information from the public relevant to the road improvement being considered.
- Any and all meeting and public outreach materials that will be presented to the general public must be approved by the Chief Planner of the Transportation Planning Division and County Communications Office.

Meeting Documentation:

- The HCE Team shall document, interpret and summarize all comments received and questions addressed at the meetings and shall prepare written responses to all questions not adequately addressed at the meetings.
  - The HCE Team shall document and summarize all comments and questions received from the hardcopy and online comment forms.
  - The HCE Team shall provide follow-up information necessary to respond to the public's comments and questions.
  - All comments shall be incorporated in the alternative analysis process, leading to the identification and selection of a Recommended Improvement Concept and shall be incorporated into the Roadway Conceptual Analysis Report.
  - Public meeting minutes and summaries shall be submitted to the County Project Manager within two (2) days of the meeting. Sign-In sheets, public comment card summaries, final meeting minutes/summaries and other meeting documentation shall be submitted to the County Project Manager and staff within five (5) days of the public meeting. Once approved by the County Project Manager, meeting summaries will be posted on the project web site.
- **Kick-Off Alternative Information Public Meeting**—The HCE Team shall prepare for and conduct a Kick-Off Alternatives Information Public Meeting within twenty (20) weeks of the Notice to Proceed Meeting. To present the data collection findings, alternative improvement concepts and the preferred alignment improvement of the Preferred Alternative (including the draft recommended



stormwater pond sites, typical section(s), stormwater conveyance for offsite and bypass systems and access management, alternative typical sections, wildlife crossings, transit needs as addressed in typical sections, predetermined or proposed trail, bike and pedestrian pathways and crossings).

- **Recommended Improvement Concept Public Meeting** – Following completion of the alternative analysis activities and identification of a Recommended Improvement Concept, the HCE Team shall prepare for and conduct a Recommended Improvement Concept Public Meeting. The purpose of this meeting is to present the draft Recommended Improvement Concept to the public for review and comment prior to presentation to the LPA and BCC.

## 2.9 Staff Presentation

- HCE Team shall prepare and present to the Public Works Director and other senior staff at least two (2) weeks prior to the LPA Work Session.
- The presentation shall be the final draft of the PowerPoint presentation and script to be presented at the LPA Work Session. The HCE Team shall modify the presentation to address comments received from county management and staff at that time.

## 2.10 Local Planning Agency Work Session and Public Hearing

- The HCE Team shall prepare for, participate in and provide all support necessary (including a PowerPoint presentation, script and handout materials) for the County Project Manager to conduct a Work Session and Public Hearing with the LPA.
- The Work Session and the Public Hearing presentations shall reflect the Recommended Improvement Concept. Back up materials and supporting reports shall be provided in an editable digital format acceptable to the County sixteen (16) days prior to the scheduled LPA Work Session and the LPA Public Hearing.

## 2.11 Board of County Commissioners Work Session and Public Hearing

- The HCE Team shall prepare for, participate in and provide all support necessary (including a PowerPoint presentation, script and handout materials) for the County Project Manager to conduct a Work Session and Public Hearing with the BCC.
- The Final Public Hearing presentation shall reflect the Recommended Improvement Concept and any comments received from the LPA and BCC Work Sessions and LPA Public Hearing.



- Back up materials and supporting reports shall be provided in a digital editable format acceptable to the County (16) days prior to the scheduled BCC Work Session and the BCC Public Hearing. Ordinances or ordinance revisions shall be provided in a digital editable format acceptable to the County Project Manager twenty-one (21) days prior to the scheduled BCC Work Session and BCC Public Hearing.

### 2.12 Deliverables

Work to be completed under this section by the HCE Team shall be:

- Public Involvement Plan
- Updated Mailing List
- Newsletters (English and Spanish versions)
- Small Group Meeting Material and Minutes
- Operational Webpage/Webpage CD (Final Web site with Design page)
- Advertisements & News Releases
- Public Information Meeting Materials
  - Exhibits
  - PowerPoint Presentations
  - Comment Forms
  - Handouts
  - Response/Comment Tabulations
- Public Works Senior Staff Presentation Materials, Minutes and Summary
- Local Planning Agency Work Session Presentation and Summary
- Local Planning Agency Public Hearing Presentation and Summary
- Board of County Commissioners Work Session Presentation and Summary
- Board of County Commissioners Public Hearing Presentation and Summary

### 3.0 Data Collection

Upon receipt of notice to proceed, the HCE Team shall begin collecting the engineering, land use, traffic and crash, transit, drainage, hydraulic, and environmental data necessary to develop and evaluate a reasonable range of alternative improvement concepts as defined in Section 6.0 to meet the existing and future travel demand within the Orange Avenue Study Area. The HCE Team shall utilize information gathered in previous science, engineering, cultural and ecological reports and/or other existing right-of-way documentation. Prior to the presentation to executive staff, the HCE Team shall conduct a field review with County project staff to identify features proposed in the Recommended Concept.

#### 3.1 Aerial Photography / Base Maps

- The HCE Team shall prepare color and black and white 1"=100' and 1"=50' scale controlled aerial-based raster image maps. These maps shall be used to present



the master drainage basins (1"=100'), the alternative improvement concepts (1"=100'), the recommended improvement concept (1"=50'), right-of-way requirements (1"=50') and any other required information.

- The HCE Team shall prepare color aerial photography on standard 22 x 34 inch sheets with appropriate title blocks, which shall be suitable for public display. Color aerial imaging shall be used to present the overall project concept and the final recommended improvement alternative to the public at the various public meetings. The color photography shall be manipulated with a gray-cast background for the right-of-way identification maps. Both shall be provided to the County in digital format on CD or USB flash or portable drive acceptable to the County.

### 3.2 Existing Roadway Characteristics

- The HCE Team shall conduct field investigations to collect all pertinent information on existing roadway characteristics (including structures where applicable) necessary to develop, evaluate and compare the alternative improvement concepts.
- All pedestrian infrastructure (i.e., sidewalks, curb ramps, street crossings, etc.) located within the project limits and public rights-of-way shall be evaluated to determine compliance with current Americans with Disabilities Act (ADA) standards. If the subject areas appear to be non-compliant with the current ADA standards, the HCE Team shall notify the County Project Manager in writing advising the Public Work's ADA Coordinator or designee of the existing non-compliant features for further review and assessment.
- The roadway data shall be compiled, documented and mapped on the aerial photography base maps for public presentations.

### 3.3 Traffic Data

The HCE Team shall collect the traffic data and develop the traffic factors and design traffic projections listed below:

#### 3.3.1 Traffic Counts

- The HCE Team shall review existing traffic forecasts for the Orange Ave section under study.
- The HCE Team shall collect and analyze a combination of 72-hour classification counts and eight (8) hour turning movement counts (by 15-minute increments). All traffic count locations shall be identified by map in the Design Traffic Engineering Report.

- **72 Hour Count Locations**
  - Florida's Turnpike to Town Center Boulevard
  - East Osceola Parkway to Mary Louis Lane
  - Mary Louis Lane to Florida's Turnpike
- **Turning Movement Count Locations (minimum eight [8] hour)**
  - The intersection of Orange Avenue and Town Center Boulevard
  - The intersection of Orange Avenue and Mary Louis Lane

In addition to the traffic counts, the Consultant shall perform an intersection LOS analysis, as well as other performance indicators using the appropriate software as approved by the County to document existing operating conditions within the study area.

### 3.3.2 Traffic Factors

Using the data collected through the traffic count program described above, the HCE Team shall develop current and future year values for the following traffic factors:

- Peak to Daily Ratio (K) Factor
- Directional Split (D) Factor
- Truck Factor (T)

### 3.3.3 Design Traffic Projections

- Using the latest adopted Orlando Urban Area Transportation Study (OUATS) travel forecasting model and historical data, the HCE Team shall prepare opening year, interim year, and design year travel forecasts for the Orange Avenue study segment for No-Build and Build conditions. The HCE Team shall be responsible for the review of the sub area model and shall make adjustments as necessary or as directed by the County.
- The traffic projections shall be presented as average annual daily traffic (AADT) and directional design hour volumes (DDHV) based on the comparison of model and trends based growth rates. For the purpose of this Study, the following horizon years shall be assumed:
  - Opening Year – To be determined
  - Interim Year – Ten years from Opening Year
  - Design Year – Twenty years from Opening Year
- The design traffic shall be used to establish the basic design requirements for the roadway typical section and each intersection.



**3.3.4 Crash Data**

The HCE Team shall collect and analyze Signal 4 analytic data provided by the County for the most recent three (3) years. Crash diagram summaries shall be provided for each identified high crash area. The crash data collected shall include, at a minimum, the total number of crashes within the Study area and a summary of the crashes by type, location, fatalities, injuries, cause and conditions, and shall be included in the *Design Traffic Technical Memorandum*.

**3.3.5 Design Traffic Technical Memorandum**

The HCE Team shall summarize the traffic data, travel forecasting and crash analysis activities in a *Design Traffic Technical Memorandum* that shall be submitted to the County for review and comment two weeks prior to scheduling the Kick-Off Alternatives Information Public Meeting and updated two (2) months following the Kick-off Alternatives Information Public Meeting. Comments on the updated *Design Traffic Technical Memorandum* shall be addressed in the *Design Traffic Engineering Report*.

**3.3.6 Design Traffic Engineering Report**

The HCE Team shall prepare a detailed *Design Traffic Engineering Report* describing the traffic data collection effort, modeling and analysis. The report shall contain tabulations of all data collected, warrant analyses where appropriate, and recommendations as to traffic control methods and turn lane geometry for specific intersections. The draft *Design Traffic Engineering Report* shall be submitted for review two weeks prior to scheduling the Recommended Concept Public Meeting. The final *Design Traffic Engineering Report* shall be summarized in and appended to the *Orange Avenue Roadway Conceptual Analysis Report*.

The Consultant shall also prepare peak hour turning movement forecasts for each of the study area intersection using the latest FDOT TURNS spreadsheet. Unsignalized intersections shall be evaluated for signal warrant possibility. The Consultant shall perform an intersection LOS analysis, as well as other performance indicators, and provide a recommendation for the preferred method of traffic control (roundabout, two way stop control, all way stop control or signalization) for each of the above listed intersections using the appropriate software as approved by the County. Furthermore, the intersection operational analysis (for both the Build and No-Build concepts) shall establish the minimum required lane geometry (including queue lengths) needed to adequately serve the projected turning movements. The design traffic shall be used to establish the basic design requirements for the roadway typical section and each intersection.

### 3.4 Utilities

- The HCE Team shall identify any existing and proposed utilities, which may influence location and design consideration, including but not limited to the following:
  - Overhead: transmission lines, microwave towers, etc.
  - Land Surface: utility boxes, valves and shut-offs, potable or irrigation water supply wells, etc.
  - Underground: water, gas, sanitary sewer, force mains, power and telephone cables, etc.
- The HCE Team shall coordinate with Orange County Utilities to:
  - Make them aware of the project at the conceptual level. (All information provided to each utility shall be documented as noted below.)
  - Obtain information on proposed utility construction and required clearances and easements.
  - Obtain input on utility issues that may not be readily apparent.
- The HCE Team shall map and document this information in the Utility Section of the *Orange Avenue Roadway Conceptual Analysis Report*, which shall summarize how the existing utilities shall influence location and design considerations.

### 3.5 Transportation Plans

- The HCE Team shall review and document plans, including the Orange County Trails Master Plan, for all modes of transportation including automobile, truck/freight, transit, bicycle/pedestrian and other non-motorized vehicles and modes. The information received from these plans shall be used to identify the conformance of this project to applicable transportation plans and to develop and evaluate the alternative improvement concepts. The HCE Team shall document this investigation and its conclusions in the *Orange Avenue Roadway Conceptual Analysis Report*.

### 3.6 Existing Multimodal Accommodations and Services

- The HCE Team shall research, evaluate and document the locations and conditions of existing and planned pedestrian, bicycle, trail, and public transportation accommodations and services within the vicinity of the Study area including, but not limited to, sidewalks, pedestrian crossings, paved shoulder widths, signed bike routes, park-and-ride lots and transit bus routes and stops. The HCE Team shall also observe, document and map pedestrian and bicycle activity and travel patterns within the vicinity of the Study area. This information, along with a review of the County's adopted Trails Master Plan, will be used to identify potential multimodal improvements and connections to existing and planned multimodal infrastructure, if applicable.



### 3.7 Soil Survey and Geotechnical Data

- The HCE Team shall review existing soil maps and available geotechnical information for the study area. Preliminary borings should be conducted along the recommended alignment to determine seasonal groundwater levels and in areas of each alignment that have a probability of having significant depths of unsuitable materials.
- The HCE Team shall also perform one (1) soil boring to a depth of 15 feet for each proposed stormwater retention pond site. For this study, it is assumed that up to four (4) locations shall be evaluated as preferred (two [2] primary and two [2] alternative) pond sites.
- The results of the geotechnical data collection activities shall be mapped and documented in a Geotechnical Report, which shall be summarized in and appended to the *Orange Avenue Roadway Conceptual Analysis Report*. This section shall document existing soil, geotechnical and boring results and shall contain preliminary stormwater/drainage recommendations, including pond siting recommendations, relevant to the project.

### 3.8 Environmental Site Assessment

- The HCE Team shall conduct a Contamination Screening Evaluation Report (CSER) including Sanborn Maps, if available, and any data contained on the FDEP websites for the properties affected by each alignment being considered. The Environmental Site Assessment shall be mapped and documented in a CSER report, which shall be summarized in and appended to the *Orange Avenue Roadway Conceptual Analysis Report*.

### 3.9 Land Use / Development Plans

- The HCE Team shall review all relevant land use information (existing and future) necessary to develop and evaluate a reasonable range of alternative roadway improvements and to identify locations where right-of-way could potentially be dedicated for the roadway improvement and multiuse trail. Land use information may be found in the following sources: comprehensive and future land use plans, proposed development plans, zoning regulations, special area studies / plans and preliminary and final plats. This information shall be updated as needed during the Study period, documented on the aerial base maps and included in the Conceptual Analysis Report.
- The HCE Team shall document pertinent information in the *Orange Avenue Roadway Conceptual Analysis Report* and on the aerial base maps.

### 3.10 Cultural Facilities

- The HCE Team shall conduct a desk-top review of cultural facilities that are located within the vicinity of the Orange Avenue study area. Cultural facilities shall include, but not be limited to, trails, parks, schools and recreational areas as well as the neighborhoods they serve. Information relevant to this Study shall be mapped and documented in the *Orange Avenue Roadway Conceptual Analysis Report*.

### 3.11 Archaeological and Historic Features

- The HCE Team shall review federal, state and local sources to identify recorded historical and archaeological sites within the study area. Utilizing this information, the HCE Team shall map all sites that may influence the location and evaluation of alternative improvement concepts. This information shall be documented in the Cultural Resource Section of the *Orange Avenue Roadway Conceptual Analysis Report*.

### 3.12 Hydrologic and Natural Features

- The HCE Team shall review existing information, including, but not limited to, the data and maps of the US Army Corps of Engineers, Florida Natural Areas Inventory, St. Johns River and South Florida Water Management District Databases, Florida Department of Environmental Protection, Florida Land Use and Cover Classification Systems, Natural Resources Conservation Service, Orange County Stormwater including Federal Emergency Management Agency basin studies and current FEMA maps, Florida Fish and Wildlife Conservation Commission Habitat Model Data, US Fish and Wildlife IPaC tool and specific site indicators such as topography, vegetation, soils data, floodplain information, and other field observations to identify significant hydrologic and natural features found within the study area.
- The HCE Team shall supplement existing literature/resource documents with field reviews of the study area. If the field review identifies the potential presence of a listed feature within the study area, the HCE Team shall document and map the location(s) and extent relative to the occurrence within the study area. Information to be documented shall, at a minimum, include the following:
  - Wetlands, Uplands or both according to quality and conservation value
  - Wildlife Corridors
  - Wildlife Crossing Recommendation(s)
  - Critical and Strategic Habitat
  - Conservation, Refuge and Management Areas
  - Mitigation Sites / Conservation Easements
  - Water Quality
  - Floodplains and Floodways
  - Drainage Outfalls
  - Recommendations for the Maintenance of Watershed Water Flows and Volumes



- Wildlife Corridor shall be defined as a route that permits the direct travel or spread of animals or plants from one area or region to another, either by the gradual spread of a population of a species along the route or by actual movement of animals, seeds, pollen, spores or microbes, as defined in Florida's State Wildlife Action Plan (formerly Comprehensive Wildlife Conservation Strategy). Critical and Strategic Habitat shall be defined as areas designated or proposed in accordance with the US Fish and Wildlife Endangered Species Act or FWC modeled areas of habitat that have been identified as essential to sustain a minimum viable population for focal terrestrial vertebrate species that were not adequately protected on existing conservation lands, respectively.
- The HCE Team shall make recommendations as appropriate, to accommodate, wildlife crossing(s) and to preserve wildlife corridors.
- The HCE Team shall document offsite and bypass drainage features occurring within the study corridor and shall make recommendations to preserve and maintain water flows and volumes within watersheds.
- The HCE Team shall also evaluate corridor-wide permit-related information on environmental resource permits, dredge and fill permits, water quality permits, or stormwater discharge permits. This activity shall include coordinating with all applicable permitting agencies and identifying all existing permits and their conditions and influence on this Study.
- The HCE Team shall document in report and map format, in the *Orange Avenue Roadway Conceptual Analysis Report*, all information that may influence the location and evaluation of alternative improvement concepts.

### 3.13 Threatened and Endangered Species

- The HCE Team shall review existing information to determine the potential presence of threatened or endangered plant and animal species within the study area. If the review identifies the potential presence of threatened or endangered plant or animal species, the HCE Team shall document and map their locations relative to the findings/recommendations in Section 3.13. The HCE Team shall supplement documented information with field reviews of the study area. The HCE Team shall document in report and map format, in the *Orange Avenue Roadway Conceptual Analysis Report*, all information that may influence the location and evaluation of alternative improvement concepts.

### 3.14 Deliverables

Work to be completed under this section by the Consultant shall require the following items to be submitted to and accepted by the County:

- Color and gray-cast Aerial Base Map
- Initial Design Traffic Technical Memorandum
- Updated Design Traffic Technical Memorandum
- Design Traffic Engineering Report
- Geotechnical Reports and Maps
- Recommendations for the Maintenance of Watershed Water Flows and Volumes
- Environmental Site Assessment Report
- Wildlife Crossing Recommendation(s)
- Wildlife Corridors and Critical and Strategic Habitat, Management Areas and Mitigation Sites
- Mapping and Documentation of:
  - Existing road characteristics
  - Existing and proposed utilities
  - Hazardous materials areas
  - Land use plans
  - Cultural features including trails
  - Archaeological and Historical Sites
  - Hydrologic and Natural Features
  - Wildlife Corridors and Critical and Strategic Habitat
  - Threatened & Endangered Species
  - Utilities

## 4.0 Right-of-Way Engineering Projects (Right-of-Way Identification Maps)

### 4.1 Right-of-Way Mapping

- The HCE Team shall prepare a Right-of-Way Identification (I.D.) Map for the entire project area at a scale of 1" = 40' or at a scale approved by the County Project Manager. All survey work shall meet the requirements of Chapter 472, Florida Statutes and Chapter 5J-17 (050, 051, 052), Florida Administrative Code.
- The HCE Team shall analyze each proposed acquisition to identify the appropriate property interest to be acquired (fee simple right-of-way, drainage easement, fill slope easement, temporary construction easement, temporary demolition easement, etc.). The HCE Team shall include identification of the right-of-way required for the multiuse trail within this project if required. The HCE Team shall submit 60%, 90% and 100% progress review submittals of the Right-of-Way I.D. Maps in 11 inch x 17 inch format. Electronic copies in PDF format and a disc containing electronic copies in CAD Autodesk – Civil 3D 2015 shall be provided at 100% submittal.



- Sufficient control data shall be shown on the final Right-of-Way I.D. Map to allow the HCE Team/County to prepare legal descriptions and parcel sketches for individual parcels with no additional field information needed.
- The HCE Team shall update and modify legal descriptions, parcel sketches and Right-of-Way I.D. Maps as needed until final 100% submittal.

## 4.2 Parcels

### 4.2.1 Review of Title Work

The HCE Team shall review the title work as provided by the County, supplemental surveys and investigations and/or other record information. The size, location, and dimensions of each parent tract, parcel and property interest (easements, leases, etc.) shall be determined by the HCE Team from this review. This information shall be shown on the Right-of-Way I.D. Maps/miscellaneous surveys and parcel sketches, as appropriate. Recorded and Unrecorded easements shall be shown to the extent they can be identified and located on the Right-of-Way I.D. Map and parcel sketches.

### 4.2.2 Legal Descriptions and Parcel Sketches

Legal Descriptions and parcel sketches will be amended during design if Necessary.

### 4.2.3 Parcel Staking for Appraisal (Not Used)

## 4.3 Right-of-Way Surveys, Alignment and Monumentation

- The HCE Team shall have a licensed Professional Surveyor and Mapper conduct field surveys to supplement existing survey data.
- Prior to the submittal of 60% Right-of-Way identification (I.D.) maps the basis of survey and centerline of construction shall be the same line. Separate baselines shall not be acceptable.
- All survey information shall be recorded in cross section field book that has 10 columns by 10 rows per inch on both pages supplied by the Consultant. The field book remains the property of the County and must be submitted with the Final Right-of-Way I.D. Map/miscellaneous surveys and be signed and sealed. When a data collector is used, the Consultant shall submit a paper copy of the raw data files and coordinate data files bound in a book, together with the electronic copy on a disc. All Right-of-Way computations shall be documented in a Right-of-Way Computation Book, which shall be submitted to the County Project Manager with the Survey Field Notes, State Plane Coordinate file, adjusted bench run (if required) and Final Right-of-Way I.D. Maps/miscellaneous surveys. Similar monumentation and markings



shall be provided at all side streets to 150 feet beyond the limits of the topographic survey or at other locations as approved by the County Project Manager.

- The HCE Team shall have a licensed Professional Surveyor and Mapper monument the center line of construction/survey at stations that are not more than 600 feet apart and at all P.C.'s, P.T.'s, side street intersections and changes in direction including the limits of the property required for the proposed multiuse trail.
- Stationing shall be shown on the Right-of-Way I. D. Maps at all changes of direction, property lines, points of curvature and proposed parcel takes.
- The centerline of construction/survey shall be referenced to permanent monumentation (Section Corners, subdivision corners, roadway monumentation) located outside the limits of construction at the beginning and end of project, all P.C.'s and P.T.'s, all changes in direction, and intermediate points such that referenced points are spaced not more than 600 feet apart. Horizontal control, as stated above shall be tied to the Florida State Plane Coordinate System, North American Datum of 1983/1990 Adjustment East Zone and shall be shown on the final Right-of-Way I.D. Maps/miscellaneous surveys. Map Dimensions shall be shown in U.S. feet.

#### 4.4 Minimization of Compensable Impacts

- The HCE Team shall, in coordination with the Orange County Project Manager, coordinate with Orange County Public Works Engineering, the County Attorney's Office and Orange County Real Estate early in the final design phase of the project to review the design corridor and make the necessary revisions to the design to minimize compensable impacts to private properties. The HCE Team shall also identify and evaluate alternatives to acquisition (e.g., retaining walls instead of fill slope easements, closed drainage instead of ditch systems, etc.) to determine the most cost effective option(s) to meet the project needs.
- The HCE Team shall perform the following services during this phase:
  - Meet as necessary with the County and property owners.
  - Perform site inspections with the County and property owners as may be necessary.
  - Coordinate with the County to identify cost effective ways to reduce compensable impacts.
  - Consult with the County as may be necessary during the design process with respect to right-of-way issues.
- During this phase, the HCE Team shall inspect affected properties in the field to determine the extent of compensable impacts on each parcel and whether such impacts can be reduced in a cost-effective manner. Consideration shall, at a minimum, be given to site access, onsite drainage, onsite parking, onsite utilities,



including septic systems, and any other existing facilities impacted by the proposed improvements. This effort shall include meetings with property owners to obtain their input on the configuration of the proposed improvements in those cases where various options exist. The HCE Team shall modify the design, where possible, to minimize the number and extent of such compensable impacts and to accommodate property owner preferences where appropriate.

- The HCE Team shall meet with all property owners where the proposed right-of-way exceeds the limits shown on the Right-of-Way Identification Maps.

#### 4.5 Deliverables

Work to be completed under this section shall require the following items to be delivered and accepted by the County:

- Right-of-Way I.D. Maps (60%, 90%, 100%)/miscellaneous surveys in PDF format and three (3) hardcopy paper sets with each submittal – signed and sealed at 100%.
- Right-of-Way Survey Field Books. In original format signed and sealed.
- Right-of-Way Computation Book (Raw Data Files, Coordinate data files, benchmarks, etc.) In original format signed and sealed.
- Electronic PDF and CAD format on disc at project completion of all final set(s).

#### 5.0 Corridor Analysis and Project Need Documentation

- Following completion of the data collection and evaluation activities, the HCE Team shall perform a corridor analysis for the study area. This analysis shall determine the characteristics within the study area and potential corridors therein that could influence the development of alternative alignments and improvement concepts.
- The Corridor Analysis activities shall identify the improvement need, the existing and projected travel demand, the current and projected land use development patterns and the presence of any environmental, cultural, archaeological/historical, hydrologic and natural sensitive area(s) within the corridor.
- The HCE Team shall prepare a draft *Corridor Analysis Technical Memorandum* that shall document the Corridor Analysis activities. The draft memorandum shall be submitted within thirty (30) days prior to the Kick-Off Alternatives Information Public Meeting to allow the County's review comments to be incorporated into the development of the alternatives and analysis. The technical memorandum shall be submitted to the County for approval and shall be included in the Corridor Analysis Section of the *Orange Avenue Roadway Conceptual Analysis Report*.

- The *Corridor Analysis Technical Memorandum* shall contain, at a minimum, the following information in the body of the memorandum (including maps as appropriate):

#### Characteristics of the Study Area

- Existing Road Characteristics
- Crash Data
- School and Public Transportation
- Existing and Proposed Utilities
- Existing Transportation and Long Range Plans
- Geotechnical Data
- Areas of Potential Contamination
- Existing and Proposed Land Uses, Zoning and Development Project Boundaries
- Cultural Features including Trails
- Archeological and Historic Features
- Demographic Data
- Wildlife Corridors
- Critical and Strategic Habitat
- Threatened and Endangered Species

#### Corridor Analysis

- Project Need
- Existing and proposed travel demand
- Current and projected development patterns
- Improvement Opportunities, Alternatives and Constraints
- Summary of Public Involvement to date

### 5.1 Deliverables

Work to be completed under this section by the HCE Team shall require the following items to be delivered and accepted by the County:

- Corridor Analysis Technical Memorandum

### 6.0 Improvement Alternatives Development and Analysis

- The HCE Team shall perform the following tasks to develop, analyze and compare alternative improvement concepts within the Orange Avenue corridor.
- All alternatives shall consider and demonstrate the capacity to comply with ADA standards. The HCE Team shall document in the *Orange Avenue Roadway Conceptual Analysis Report* any design criteria utilized in the analysis process for roadway and drainage improvement concepts.

### 6.1 Alternative Typical Sections



- Based on the draft Design Traffic Technical Memorandum and Corridor Analysis Technical Memorandum, drainage considerations, transit and multimodal needs and other available information, the HCE Team shall consider alternative typical sections and shall develop up to two (2) alternative typical sections that can be contained within the existing Orange Avenue right-of-way.

## 6.2 Access Management Determination

- The HCE Team shall evaluate the effects of at least two (2) alternative access management concepts that appear to be most applicable considering traffic circulation, access to individual properties and other applicable criteria and recommend the most appropriate application for each section of the corridor.
- The HCE Team shall update the concept throughout the Study and document the evaluation and recommendation of the alternative access management concepts in the *Orange Avenue Roadway Conceptual Analysis Report*.

## 6.3 Develop Alternative Alignment Improvement Concepts

- The HCE Team shall develop up to two alignment improvement concepts which utilize the existing Orange Avenue right-of-way to the greatest extent possible. The improvement concepts shall be prepared on the aerial base maps.
- The proposed right-of-way requirements shall be shown on each Improvement Alternative Concept display.

## 6.4 Analyze Alternative Improvement Concepts

- The HCE Team shall analyze the benefits and impacts associated with the Alternative Alignment Improvement Concept as well as the No-Build Concept. The results of the analysis of the Alternative Improvement Concepts shall be documented in the *Orange Avenue Roadway Conceptual Analysis Report*. The analysis to be performed for each alternative shall specifically include safety, cost, conformance to long range plans, good engineering practices and environmental considerations, some of which are more particularly described below:
  - Conceptual Impacts Analysis and Avoidance of Impacts to Floodways as Indicated - The HCE Team shall, in coordination with the Orange County Project Manager, coordinate with the County Attorney's Office, Orange County Engineering Division Right-of-Way Section and the Orange County Real Estate Management Division Appraisal Section during the development of the Alternative Improvement Concepts to minimize compensable impacts to private properties associated with each viable alternative. This evaluation effort shall include:
    - Inspection of potential affected properties in the field to determine the extent of compensable impacts on each parcel associated with each viable



alternative, and whether such impacts can be reduced in a cost-effective manner.

- Consideration of site access, onsite drainage, onsite parking, onsite utilities, including septic systems, and any other existing facilities that may be impacted by each viable alternative improvement concept, including financial impacts to existing businesses.
- Meetings with potentially affected property owners to obtain their input on viable alternative alignments and configurations of the proposed improvements in those cases where various options exist, for example, where the shape and location of retention ponds can be configured to meet property owner's preferences.
- Incorporation of comments in the recommended alternative such as to minimize the number and extent of such compensable impacts.
- The above described investigations, findings and recommendations shall be documented in the Orange Avenue Roadway Conceptual Analysis *Report*.

- Cost Analysis – The HCE Team shall develop engineering design and construction cost estimates for each alternative. The HCE Team shall provide the County with a Right-of-Way Impacts Estimation Package. This package shall include a tabulation of potential acquisition parcels and areas (in square feet) for each Alternative Alignment Improvement Concept. The location of each parcel shall be shown on an aerial map. Right-of-way cost estimates shall be provided for each alternative by the County and shall include property values and damages. The cost estimates shall be based on the information in the Right-of-Way Impacts Estimation Package and shall reflect the costs for the year of expenditure. The County will provide the HCE Team with escalation/de-escalation factors and production phase schedules for converting present day values to year of expenditure values.
- Conceptual Drainage Analysis – The HCE Team shall perform a preliminary drainage analysis of each alternative to determine the potential outfall locations and preliminary sizes (volume and area) of required detention and/or retention facilities for stormwater treatment or attenuation. The drainage analysis shall include identification of the facilities required to serve the proposed multiuse trail. This analysis shall also address off-site and bypass systems within each viable alternative corridor including the sizing of closed systems. Pond locations shall be evaluated for each basin. Pond site evaluations shall require coordination with the property owner to determine the owner's preferred location within the property. The evaluation shall also consider permitability, avoidance of wetland and floodplain impacts and avoidance of impacts to the floodways, outfall availability, hydraulics and County standards with regards to the pond slopes and configuration. A matrix shall be



developed to compare the cost of each alternative pond site, including property cost and construction cost for the pond, conveyance system and outfall. The findings shall be documented in a Pond Siting Report that shall be appended to the *Orange Avenue Roadway Conceptual Analysis Report*. The HCE Team shall provide a digital copy of associated interconnected Channel and Pond Routing (ICPR) model output files to the County.

- Wetland and/or Upland Impacts – The HCE Team shall estimate the acres of wetlands and/or equivalent uplands impacted by each alternative and identify potential mitigation strategies, including costs.
- Flood Plain Impacts – The HCE Team shall estimate the extent of flood plain encroachment of each alternative improvement concept and identify potential floodplain compensation alternatives and costs.
- Critical and Strategic Habitat Impact - The HCE Team shall quantify/qualify the potential impacts to US Endangered Species Act critical habitats and FWC identified strategic habitat associated with each alternative, and shall identify potential alignment alternatives and/or mitigation strategies and costs.
- Wildlife Corridor Impact - The HCE Team shall quantify/qualify the potential impacts to wildlife corridors associated with each alternative and shall identify potential mitigation strategies and costs. The HCE Team shall coordinate with regulatory agencies to identify engineered controls and other means of preserving wildlife corridors.
- Threatened & Endangered Species Impacts – The HCE Team shall quantify/qualify the potential impacts to threatened and endangered plant and animal species and their habitats associated with each alternative and shall identify potential mitigation strategies and costs. The HCE Team shall coordinate with regulatory agencies to identify permissibility of impacts of the recommended alignment to Threatened and Endangered Species.
- Archaeological and Historic Feature Impacts – The HCE Team shall estimate the location and extent of impacts caused to significant archaeological or historical structures or sites. The HCE Team shall identify alternatives to avoid, minimize and/or mitigate impacts and shall identify costs associated with each alternative.
- Contaminated Sites Impacted – The HCE Team shall identify the location of any contaminated or potentially contaminated sites, known extent of contaminated soil, groundwater and/or surface water and the location of pollutant storage tanks or other regulated materials storage areas or vessels in each alternative and shall recommend whether a Phase II Environmental Site Assessment is necessary.

- Geotechnical Analysis – The HCE Team shall evaluate the suitability of the soil underlying each alternative for roadway and pond construction.

#### 6.5 Alternatives Comparison Matrix

The HCE Team shall prepare and submit to the County Project manager and staff an Alternatives Evaluation and Comparison Matrix. The HCE Team shall prepare an evaluation matrix to document and compare the results of the evaluation tasks. This matrix shall be used to clearly identify the most viable improvement concept. It shall be prepared in a manner suitable for presentation to the public. The draft matrix shall be provided at least thirty (30) days in advance of the Kick-Off Alternatives Information Public Meeting to allow the County's review comments to be incorporated into the matrix prior to the Kick-Off Alternatives Improvement Public Meeting. The matrix shall be updated prior to the Recommended Improvement Concept Public Meeting to reflect the Recommended Improvement.

#### 6.6 Deliverables

Work to be completed under this section by the Consultant shall require the following items to be delivered and accepted by the County:

- No Build Alternative
- Alternative Typical Sections
- Access Management, Evaluation and Concept
- Alternative Alignment Improvement Concepts and Maps, to include:
  - Right-of-Way Impacts Estimation Package
  - Cost Analysis
  - Conformance to Transportation Plans Analysis
  - Land Use and Development Plan Analysis
  - Community Needs and Preferences Analysis
  - Conceptual Drainage Analysis and Pond Siting Report
  - Wetlands and/or Upland Impact Analysis
  - Floodplain Impact of Alternatives
  - Critical and Strategic Habitats Impact Analysis
  - Wildlife Corridor Impact Analysis
  - Threatened and Endangered Species Impact of Analysis
  - Archaeological and Historic Feature Analysis
  - Contaminated Sites Analysis
  - Geotech Analysis
  - Draft and Final Alternatives Comparison Matrix
- Digital Copy of ICPR Output Files



## 7.0 Recommended Alternative Improvement Evaluation

Following completion of the alternative analysis and Alternatives Information Public Meeting, the HCE Team, in association with the County, shall prepare the final recommended improvement concept to be evaluated at a more detailed level.

The HCE Team shall refine the final Recommended Alternative Improvement concept to finalize the major elements of the project. These refinements shall include estimating the final recommended right-of-way limits, pond locations, cost and other major features needed to advance the project to the subsequent design phase. The evaluation matrix shall be updated to reflect the impacts of the final recommended improvement concept. Impacts that are not quantifiable shall be documented in the *Orange Avenue Roadway Conceptual Analysis Report*.

### 7.1 Roadway Conceptual Analysis Report

- One primary document entitled the *Orange Avenue Roadway Conceptual Analysis Report* shall be prepared. This document shall record all public involvement activities, alternatives developed, analysis efforts, and the final recommendation. A report outline shall be submitted to the County Project Manager for review and approval prior to initiating documentation. It shall contain summaries and recommendations pertaining to the recommended alternative and potential impacts associated with it.
- The HCE Team shall prepare the draft *Orange Avenue Roadway Conceptual Analysis Report* documenting all activities leading to and including all comments received from the public to that point and the selection of the recommended improvement concept. The draft report shall be prepared two (2) months prior the Recommended Improvement Concept Public Meeting to allow the County's review comments to be incorporated into the draft document which shall be available for review at that meeting.
- The *Orange Avenue Roadway Conceptual Analysis Report* shall be amended, if necessary, in accordance with the results of the Recommended Improvement Concept Public Meeting and subsequent LPA Work Session and Public Hearing. Five (5) paper and twenty (20) digital copies of the draft report shall be submitted to the County Project Manager sixteen (16) days prior to the LPA Work Session, LPA Public Hearing, BCC Work Session and BCC Public Hearing respectively. To the maximum extent possible, all draft documents shall be updated by modifying and inserting adjusted pages into the previously submitted documents. Digital copies shall be delivered on CD or USB flash or portable drive acceptable to the County and may be similarly updated for each submittal.
- Following the LPA and BCC Public Hearings and final action by the BCC, the HCE Team shall finalize the *Orange Avenue Roadway Conceptual Analysis Report* by formally documenting BCC action and the public involvement process, including all comments received up to and during the LPA and BCC Public Hearings.

- Technical memoranda shall be prepared throughout the course of the study to document interim decision on the traffic forecasts and the initial corridor analysis processes. These technical memoranda shall be formally summarized in the body of the report and incorporated in their entirety into the *Orange Avenue Roadway Conceptual Analysis Report* as appendices two weeks prior to the Recommended Concept Public Meetings.
- The *Roadway Conceptual Analysis Report* shall, at a minimum, contain the following information in the body of the report (including maps as appropriate):
  - Public Involvement
  - Existing Conditions
  - Project Need
  - Utilities
  - Conformance with Transportation and Long Range Plans
  - Land Use and Development Patterns
  - Existing and Proposed Land Uses
  - Community Needs and Preferences
  - Geotechnical Considerations
  - Utilities Analysis
  - Environmental Site Assessment Issues
  - Cultural Features including Trails
  - Archeological and Historic Features
  - Hydrologic and Natural Features
  - Critical and Strategic Habitat
  - Wildlife Corridors
  - Threatened and Endangered Species
  - Corridor Analysis
  -
- Alternative Typical Sections
  - Alternative Alignment Improvement Concepts
  - No Build Concepts
  - Access Management Alternatives
  - Alternative Drainage and Pond Concepts
  - Analysis and Comparison of Alternatives (Including Costs and Impacts)
  - Recommended Alternative Improvement Concept and Map
  - Right-of-Way Identification Map
  - Cost Estimates
  - Design and Construction Schedules
- In addition, the *Roadway Conceptual Analysis Report* shall include the following as appendices or as separate volumes of the report:
  - Public Involvement Report



- Geotechnical Report
- Design Traffic Engineering Report
- Environmental Site Assessment Report
- Hydrologic and Natural Features Report
- Threatened and Endangered Species Report
- Pond Siting Report

- The HCE Team shall prepare an Executive Summary that contains a synopsis of the *Roadway Conceptual Analysis Report*. The Executive Summary shall be included in the draft and updated draft of the report as amended and shall be updated as necessary for inclusion in the final report.

### 7.2 Cost Estimates and Final Design Schedule

- The HCE Team shall submit an estimated schedule and estimated costs for the final design and construction of the recommended alignment. The schedule and estimated cost shall be included in the draft, updated and final copies of the *Orange Avenue Roadway Conceptual Analysis Report*.

### 7.3 Final Recommended Improvement Concept Map

- The HCE Team shall prepare a Recommended Improvement Concept Map that shall graphically depict the location of the roadway and trail, their alignment and the proposed improvements two (2) weeks prior to the Recommended Concept Public Meeting.
- The map shall be prepared in a strip-map format at a scale of 1" = 50'. The Recommended Improvement Concept Map shall show the location of median openings (identified as to full or directional), signalization, lane configurations, pedestrian/bicycle facilities, transit facilities, potential pond/mitigation/flood plain compensation sites, wildlife corridors, critical and strategic habitat, utility strips, privacy walls and any other project elements identified for inclusion in the final design of the roadway. If deviations from the proposed typical sections are proposed in specific areas (such as reductions in lane widths, modification to border areas, etc.), they shall be clearly identified on the Recommended Improvement Concept Map.
- A draft version of the Recommended Improvement Concept Map shall be prepared by the HCE Team two (2) months prior to the Recommended Improvement Concept Public Meeting to allow for review by the County and incorporation of any review comments prior to the Public Meeting. The Recommended Improvement Concept Map shall be updated and submitted to the County Project Manager sixteen (16) days prior to the LPA Public Hearing, if necessary, to reflect adjustments arising from the Recommended Concept Public Meeting and the LPA Work Session respectively. The Recommended Improvement Concept Map shall be updated and submitted to the

County Project Manager sixteen (16) days prior to the BCC Public Hearings to reflect any adjustments arising from LPA Public Hearing, if necessary.

- The HCE Team shall submit a Final Recommended Improvement Concept Map with the Final *Roadway Concept Analysis Report*. The final map shall include modifications to the draft map as necessary to reflect the Board’s action at the Public Hearing.
- The draft and final submittals of the *Roadway Conceptual Analysis Report* with Executive Summary shall include final Recommended Improvement Concept Maps formatted onto 11 inch X 17 inch sheets at a scale of 1” = 100’.

**7.4 Deliverables**

Work to be completed under this section by the Consultant shall require the following items to be submitted to and accepted by the County:

- Draft, updated drafts, and final Roadway Conceptual Analysis Report (including 11” X 17” maps)
- Draft, updated drafts, and final Executive Summary (including 11” X 17” maps)
- Recommended Improvement Concept Map, drafts and final
- Final Design Cost Estimate and Schedule
- Construction Cost Estimate and Schedule

**8.0 FEES SUMMARY**

**Orange Avenue Study:**

Lump sum (Plus Reims Below) .....\$255,280.00

See attached Exhibit D.

Reimbursable Fees are estimated at .....\$24,150.00

The above estimate is in addition to the fee detailed in Exhibit “D”. The cost of the Right of Way appraisal and Title search of the additional (approximately 0.8 acres) of right of way has been included in this fee. And an estimated \$12,000 for four advertisements in the Orlando Sentinel and El Sentinel.

**9.0 SERVICES NOT INCLUDED**





The following services have not been included within this proposal. HCE will be pleased to provide any of the following as additional services, should the Client desire and authorize HCE to do so.

- Traffic signal design.
- Roadway Lighting Design
- Structural, site electrical, communication, gas, and/or M.E.P. engineering services.
- Specialty pavement/hardscape design (walls, signs, pavers, etc.).
- Additional meetings
- Landscape and Irrigation Plans.
- Any other services not specifically included herein.

### **TABLE OF DELIVERABLES**

#### **Technical Memoranda, Reports, Maps and Graphics**

Public Involvement Plan Technical Memorandum	2/1 Copies
Color Aerial Base Map – Hard Copy /Digital	2/1 Copies
Geotechnical Report	4/1 Copies
Geotechnical Maps	0/1 Copy
Environmental Site Assessment Report	5/1 Copies
Design Traffic Technical Memorandum	5/1 Copies
Design Traffic Engineering Report	5/1 Copies
Existing Road Characteristics Map(s)	0/1 Copy
Existing and Proposed Utilities Map(s)	0/1 Copy
Land Use, Zoning and Development Plans Map(s)	0/1 Copy
Demographic data Map(s)	0/1 Copy
Cultural Features Map(s)	0/1 Copy
Archaeological and Historical Sites Map(s)	0/1 Copy
Hydrologic and Natural Features Report	5/1 Copies
Hydrologic and Natural Features Map(s)	0/1 Copy
Critical and Strategic Habitats Map(s)	0/1 Copy
Wildlife Corridor Map(s)	0/1 Copy
Threatened and Endangered Species Report	5/1 Copies
Threatened & Endangered Species Map(s)	0/1 Copy
Pond Siting Report	5/1 Copies
Alternative Typical Sections	
Draft sets	1/Iteration
Final set	1/1 Copy
Access Management Maps	
Draft Concept sets	1/Iteration
Final set	2/1 Copies
Alternative Alignment Maps	
Draft sets	1/Iteration

Final set	2/1 Copies
Right-of-Way Cost Estimation Package	3 Copies
Alternative Improvement Concepts Analysis	
Cost Analysis of Alternatives	
Draft	2/Iteration
Final	2/1 Copies
Conceptual Drainage Analysis of Alternatives	2/1 Copies
ICPR Output Files	2/1 Copies
Community Impact Analysis of Alternatives	2/1 Copies
Computer Enhanced Photographs	
Existing Conditions 18" X 22" (3) Locations	1/1 Copy/Site
Enhanced Photographs	
Drafts 11"X17"	2/1 Iteration/Site
Final 18"X22"	1/1 Copy/Site
Wetlands Impact Analysis of Alternatives	0/1 Copy
Uplands Impact Analysis of Alternatives (If Applicable)	0/1 Copy
Floodplain Impact of Alternatives	0/1 Copy
Archaeological and Historical Feature Analysis of Alternatives	0/1 Copy
Contaminated Sites Alternatives Analysis	0/1 Copy
Geotech Alternatives Analysis	0/1 Copy
Alternatives Comparison Matrix	
Draft	2/1 Iteration
Final	2/1 Copies

### Public Involvement

Mailing List updates	Ongoing
Newsletters (5 issues) Draft	5English/1Spanish
Newsletters (5 issues) Final	110% + 50 + 10%
English/Spanish) Copies/Issue	
Webpage Format – Hard Copy/Digital	0/1 Copy
Operational Webpage	Link
Advertisements – News Releases – Draft/Final	4/4
Public Meeting Exhibits	as Required
Public Meeting PowerPoint (2 presentation files)	
Draft – Hard Copy/Digital	4/1 per Iteration
Final – Hard Copy/Digital	4/1 per Meeting
Public / Community Meeting	
Comment Form 2 meetings) – Draft English-Spanish/Final	4/1/50 Copies
Public / Community Meeting	
Handout (2 meetings) – Draft English-Spanish/Final	4/1/50 per Meeting
Response/Comment Tabulations (2 meetings)	4 Copies/Meeting



Senior Staff Presentation	1/1
LPA Work Session Power Point	
Draft – Hard Copy/Digital	4/1
Final – Hard Copy/Digital	4/1
LPA Public Hearing Power Point	
Draft – Hard Copy/Digital	4/1
Final – Hard Copy/Digital	4/1
BCC Work Session Power Point	
Draft – Hard Copy/Digital	4/1
Final – Hard Copy/Digital	4/1
BCC Public Hearing Power Point	
Draft – Hard Copy/Digital	4/1
Final – Hard Copy/Digital	4/1

### **Roadway Conceptual Analysis Report**

Draft Report prior to the Recommended Concept Public Meeting	5/1 Copies (Rev. Set)
Updated Draft Report prior to LPA Work Session	5/20 Copies
Updated Draft Report prior to LPA Public Hearing	5 Copies (Rev. Set)
Updated Draft Report prior to BCC Work Session	5/20 Copies
Updated Draft Report prior to BCC Public Hearing	5 Copies (Rev. Set)
Final Report following BCC Public Hearing	8/8 Copies/Digital
Recommended Improvement Concept Map	
Recommended Concept Public Meeting	
Review Set – Hard Copy	1/Iteration
Meeting Set – Hard Copy	2/1 Copies
LPA Public Hearing	
Review Set – Hard Copy	1/Iteration
Meeting Set – Hard Copy	1/1 Copy
BCC Public Hearing	
Review Set – Hard Copy	1/Iteration
Meeting Set – Hard Copy	2/1 Copies
Final – Hard Copy/Digital	1/1 Copy

### **Cost Estimates and Project Schedules**

RCA Project Schedule (Initial) – Hard Copy/Digital File	3/1 Copies
RCA Project Schedule (Monthly) – Hard Copy/Digital File	3/1 Copies/Month
Final Design Cost Estimate – Hard Copy	3 Copies
Construction Cost Estimate – Hard Copy	3 Copies
Final Design Project Schedule – Hard Copy/Digital File	3/1 Copies
Construction Project Schedule – Hard Copy/Digital File	3/1 Copies

**Field Notes and Field Data**

Orange County Field and Computation Books – Original	1/1 Copy
Raw Field Data – Hard Copy	3/1 Copies
Raw Field Data – Digital File	1/1 Copy

**Preliminary Right-of-Way ID Maps (Black and White Aerial Base)**

30% Submittal – Paper, Full and Half Sized	3/3 Copies
60% Submittal – Paper, Full and Half Sized	3/3 Copies
90% Submittal – Paper, Full and Half Sized	3/3 Copies
100% Submittal – Paper, Full and Half Sized	3/3 Copies

**Final Right-of-Way ID Maps (Black and White Aerial Base)**

Hard Copy – Paper, Full Sized (Signed and Sealed)	3/1 Copies
Hard Copy – Paper, Laminated Covers, Half Size (S & S)	4/1 Copies
Digital Files – CAD Autodesk – Civil 3D 2015	1/1 Copy



**EXHIBIT "D" – PROPOSAL  
ORANGE COUNTY PUBLIC WORKS DEPARTMENT  
ROADWAY CONCEPTUAL ANALYSIS ACTIVITY AND FEE SUMMARY**

• Project Name: Orange

• Sheet 1

Orange Ave From Mary Louis Lane To FL Turnpike

Project Number: Consultant: Harris Civil Engineers, LLC Date: 11/18/2016

ACTIVITY	PAY ITEM	HCE	Modica	Terracon	TPD	RED-ROC	PA	Tinklepaugh	ACT. TOTAL
1.0 Administration	Notice to Proceed Meeting	3							
	Project Status Meetings/Minutes	42	40			4			
	RCA Project Schedule	24	4			20			
2.0 Public Involvement	Public Involvement Plan	16		6		20			
	Updated Mailing List	6				26			
	Functioning, Maintained Webpage	15				18			
	Newsletters	26				12			
	Advertisements – News Releases	13				6			
	Public Information Meetings	54			15				
	Coordination Meetings	72	42		15				
	Small Group Meetings	38			15				
	Senior Staff Presentation	22	10			17			
	LPA Work Session PowerPoint Presentation	6				20			
	LPA Public Hearing PowerPoint Presentation	4	10			20			
	BCC Work Session PowerPoint Presentation	6	20			15			
	BCC Public Hearing PowerPoint Presentation	5				17			
	3.0 Data Collection	Color and Grey Cast Aerial Base Map	10		6				
Design Traffic Technical Memorandum		2			30				
Design Traffic Engineering Report		2			65				
Geotechnical Reports and Maps		1		56		15			
Environmental Site Assessment Report		1	110			15			
Maps		10				10			
4.0 Surveying and Mapping	Field Survey	1						144	
	Right-of-Way Identification Maps	4	33					72	
	Field Books and Field Data	1						19.4	
5.0 Corridor Anal. & Project Need Doc.	Corridor Analysis Technical Memorandum	16	32		115				



**EXHIBIT "D" – PROPOSAL  
ORANGE COUNTY PUBLIC WORKS DEPARTMENT  
ROADWAY CONCEPTUAL ANALYSIS ACTIVITY AND FEE SUMMARY**

• Sheet 2

ACTIVITY	PAY ITEM	HCE	Modica	Terracon	TPD	RED-ROC	PA	Tinklepaugh	ACT. TOTAL
6.0 Improvement Alternatives Development Analysis	Alternative Typical Sections	132		16					
	Access Management, Evaluation and Classification	18			18				
	Alternative Alignment Maps	20							
	Compensable Impacts Analysis	12	16						
	Right-of-Way Cost Estimation Package	2							
	Cost Analysis of Alternatives	24							
	Concept. Drain. Anal. Of Alternatives & Pond Siting Rep. and Digital ICPR Output Files	36							
	Draft & Final Alternatives Comparison Matrix	14							
	Community Impact Analysis of alternatives including Land Uses, Zoning and Development, Transportation Plan and Community Needs and Preferences Analysis.	4			36				
	Computer Enhanced Photographs	4							
	Wetland/Upland Impact Analysis of Alternatives	4	24						
	Floodplain Impact Analysis of Alternatives	4							
	Threatened & Endangered Species/Critical and Strategic Habitat/ Wildlife Corridors Impact Anal. Of Alt's	6	24						
	Archaeological and Historical Feature Anal. Of Alt's	3					6		
	Contaminated Sites alternatives Analysis	3							
	Geotech Alternatives Analysis	6							
	Draft & Final Alternatives Comparison Matrix	22	5						
7.0 Recommended Improvement Evaluation	Draft Roadway Conceptual Analysis Report	16		20					
	Updated Draft Roadway Conceptual Anal. Report	8							
	Final Roadway Conceptual Analysis Report	18	42						
	Draft Executive Summary	8							
	Updated Draft Executive Summary	6							
	Final Executive Summary	6							
	Recommended Improvement Concept Map Drafts	12							
	Final Recommended Improvement Concept Map	14							
	Final Design Cost Estimate and Schedule	16							
Construction Cost Estimate and Schedule	8								
<b>TOTAL</b>		<b>\$105,800</b>	<b>\$39,140</b>	<b>\$28,500</b>	<b>\$35,000</b>	<b>\$18,800</b>	<b>\$540</b>	<b>\$27,500</b>	



**SCHEDULE OF REIMBURSABLE FEES**  
**Effective January 1, 2015**



**I. IN-HOUSE REIMBURSABLES**

**MILEAGE**

**CURRENT IRS STANDARD**

COPY - B/W 8.5x11	\$0.20/page
COPY - COLOR 8.5x11	\$0.50/page
COPY - B/W 11x17	\$0.40/page
COPY - COLOR 11x17	\$1.00/page
PLOTTING - BOND	\$0.35/sq. ft
PLOTTING - VELLUM	\$1.95/sq. ft
SCAN COPY - 8 1/2 X 11 or 11x17	\$0.55/page
SCAN COPY - LARGE FORMAT B&W or COLOR	\$0.75/sq. ft
PROJECT FILE CD	\$25.00 for 1st CD / DVD; \$10.00 thereafter for duplicates

**II. OUTSIDE VENDOR REIMBURSABLES**

REPRODUCTION	actual cost plus 10%
LONG DISTANCE TELEPHONE	actual cost plus 10%
POSTAGE	actual cost plus 10%
COURIER	actual cost plus 10%
EXPRESS OVERNIGHT	actual cost plus 10%
MISCELLANEOUS REIMBURSABLES	actual cost plus 10%

Detail (back-up) of expenses will be provided only upon request.

## SCHEDULE OF HOURLY RATES Effective October 1, 2015



PRINCIPAL	\$295.00
DIRECTOR OF ENGINEERING	\$230.00
ENGINEERING MANAGER	\$220.00
ENGINEER VI	\$180.00
ENGINEER V	\$150.00
ENGINEER IV	\$125.00
ENGINEER III	\$105.00
ENGINEER II	\$90.00
ENGINEER I	\$75.00
SENIOR PERMIT COORDINATOR	\$90.00
SENIOR DESIGNER / CAD TECHNICIAN	\$110.00
DESIGNER / CAD TECHNICIAN IV	\$90.00
CAD TECHNICIAN III	\$75.00
CAD TECHNICIAN II	\$65.00
CAD TECHNICIAN I	\$55.00
PERMIT COORDINATOR	\$60.00
GRAPHIC ARTIST	\$60.00
CLERICAL III	\$60.00
CLERICAL II	\$55.00
CLERICAL I	\$45.00
WORD PROCESSOR	\$50.00
IT MANAGER	\$90.00





**EXHIBIT 1**  
ORANGE AVENUE EXTENSION FROM OKECHOLA  
COUNTY TO THE TURNPIKE BRIDGE

**ORANGE AVENUE ROADWAY CONCEPTUAL ANALYSIS  
PROPOSAL FOR ECOLOGICAL COMPONENTS  
January 20, 2017**

**SCOPE OF SERVICES**

Modica & Associates ("M&A") shall provide supporting consulting services for project planning, preliminary engineering, and environmental analysis services for the Orange Avenue Roadway Conceptual Analysis, the progress of which will follow a typical Roadway Conceptual Analysis conducted by and for Orange County. M&A will specifically perform those services required to support the location/design studies, social and environmental effects, engineering reports and public hearings.

**Roadway Conceptual Analysis (RCA):**

M&A will work with Harris Civil Engineers ("Harris") to study the establishment of right-of-way (ROW), addition of lanes, stormwater ponds, and a sidewalk, as applicable, to the existing two-lane section of Orange Avenue from Florida's Turnpike south approximately 2,500 feet.

The RCA categories listed below are excerpts from an Orange County RCA, and only reflect those sections applicable to services to be provided by M&A.

**1.0 Administration**

**1.1 Notice to Proceed Meeting**

M&A shall prepare for and attend a Notice to Proceed Meeting with the Orange County Project Manager and staff. At this meeting, Orange County staff and key members of the Consulting team shall set the final parameters for the project and formally initiate the study.

**Cost: \$0**

**1.2 Project Status Meetings**

M&A shall attend periodic meetings (up to 10 meetings) with the Orange County Project Manager and staff to discuss project progress and status, upcoming events and action items. The purpose of these meetings is to maintain clear communication between the County and the Consultant team. For the purposes of this study and scope, the Project Team shall be defined as the County Project Manager/Team and the Consulting Team. M&A will assist Harris in preparation of meeting minutes following each of these meetings.

**Cost: \$380.00 X 10 meetings = \$3,800.00**



#### 1.4 RCA Project Schedule

M&A will assist Harris in preparation of a detailed project schedule for the RCA process identifying major tasks, their duration and tasks relationships.

**Cost: \$380.00**

## 2.0 Public Involvement

The public involvement element of this project is a primary component distinguishing this project from a roadway design project. The purpose of the public involvement element is to get the community involved in the project development and decision-making process so the County can develop a project that not only meets the transportation needs of the area, but is also supported by the community it is intended to serve. M&A will participate in the following public involvement activities throughout the project.

#### 2.1 Public Involvement Plan

M&A will assist Harris with preparation of a Public Involvement Plan (PIP). The PIP shall delineate the Consultant's efforts to inform and involve the citizens of the county, appropriate state and local agencies and responsible appointed and elected public officials in the project planning, review and approval process. At a minimum, The PIP should identify a) stakeholders, b) public outreach methods with particular attention to low income, elderly, minority and disabled persons, c) estimated schedule of public/community meetings, d) limited English proficiency strategies and e) other opportunities for the public to provide input.

**Cost: \$0**

#### 2.2 Coordination Meetings

M&A will participate in one initial meeting and up to five (5) follow-up meetings/telephone calls with the following local and state organizations, as applicable, to inform them of the project and solicit their input:

- United States Fish & Wildlife Service (USFWS)
- Army Corps of Engineers (ACOE)
- Florida Fish & Wildlife Conservation Commission (FWC)
- South Florida Water Management District
- Orange County Environmental Protection Department (EPD)
- Orange County Utilities Department
- Florida Department of Transportation (FDOT)

<b>Costs: Preparation and Initial Meeting</b>	<b>\$1,330.00</b>
<b>Follow-up Meetings (\$380.00 x 5) =</b>	<b>\$2,660.00</b>
	<b>\$3,990.00</b>

**2.3 Small Group Meetings**

M&A shall be available to participate in up to four (4) small group meetings with organizations interested in the Study. These meetings / presentations may be made to homeowners, formal homeowner associations, business owners or other formal organizations such as a Citizens Advisory Committee.

**Cost: \$0**

**2.8 Public Information Meetings**

M&A shall prepare for and participate in two (2) public information meetings as described below:

**Cost: \$0**

**2.9 Staff Presentation**

M&A shall prepare for and participate in a presentation to the Public Works Director and other senior staff at least two (2) weeks prior to the LPA Work Session. The presentation shall be the final draft of the PowerPoint presentation and script to be presented at the LPA Work Session. The Consultant shall modify the presentation to address comments received from county management and staff at that time.

**Cost: \$950.00**

**2.10 Local Planning Agency Work Session and Public Hearing**

M&A shall prepare for and participate in a Work Session and Public Hearing with the LPA. The Work Session and the Public Hearing presentations shall reflect the Recommended Improvement Concept.

**Cost: \$950.00**

**2.11 Board of County Commissioners Work Session and Public Hearing**

M&A shall prepare for and participate in a Work Session and Public Hearing with the BCC. The Final Public Hearing presentation shall reflect the Recommended Improvement Concept and any comments received from the LPA and BCC Work Sessions and LPA Public Hearing.

**Cost: \$1,900.00**

**3.0 Data Collection**

Immediately upon receipt of the notice to proceed, M&A shall begin collecting the environmental data necessary to develop and evaluate a reasonable range of alternative improvement concepts as defined in Section 6.0 to meet the existing and future travel demand within the Orange Avenue Study Area. M&A shall use information gathered in previous science, engineering, cultural and ecological reports and/or other existing right-of-way documentation.



Prior to the presentation to executive staff, M&A shall conduct a field review with County project staff to identify features proposed in the Recommended Concept.

### **3.9 Environmental Site Assessment**

M&A shall conduct a Contamination Screening Evaluation Report (CSER) including Sanborn Maps, if available, and any data contained on the FDEP websites for the properties affected by each alignment being considered. The Environmental Site Assessment shall be mapped and documented in a CSER report, which shall be summarized in and appended to the *Orange Avenue Roadway Conceptual Analysis Report*.

**Cost: \$3,990.00**

### **3.13 Hydrologic and Natural Features**

M&A shall review existing information, including, but not limited to, the data and maps of the US Army Corps of Engineers, Florida Natural Areas Inventory, St. Johns River and South Florida Water Management District Databases, Florida Department of Environmental Protection, Florida Land Use and Cover Classification Systems, Natural Resources Conservation Service, Orange County Stormwater including Federal Emergency Management Agency basin studies, Florida Fish and Wildlife Conservation Commission Habitat Model Data, US Fish and Wildlife IPaC tool and specific site indicators such as topography, vegetation, soils data, floodplain information, and other field observations to identify significant hydrologic and natural features found within the study area.

M&A shall supplement existing literature/resource documents with field reviews of the study area. If the field review identifies the potential presence of a listed feature within the study area, M&A shall document and map the location(s) and extent relative to the occurrence within the study area. Information to be documented shall, at a minimum, include the following:

- Wetlands, Uplands or both according to quality and conservation value
- Wildlife Corridors
- Wildlife Crossing Recommendation(s)
- Critical and Strategic Habitat
- Conservation, Refuge and Management Areas
- Mitigation Sites / Conservation Easements
- Water Quality
- Floodplains and Floodways
- Drainage Outfalls
- Recommendations for the Maintenance of Watershed Water Flows and Volumes

Wildlife Corridor shall be defined as a route that permits the direct travel or spread of animals or plants from one area or region to another, either by the gradual spread of a population of a species along the route or by actual movement of animals, seeds, pollen, spores or microbes, as defined in Florida's State Wildlife Action Plan (formerly Comprehensive Wildlife Conservation Strategy). Critical and Strategic Habitat shall be defined as areas designated or proposed in accordance with the US Fish and Wildlife Endangered Species Act or FWC

modeled areas of habitat that have been identified as essential to sustain a minimum viable population for focal terrestrial vertebrate species that were not adequately protected on existing conservation lands, respectively.

M&A shall make recommendations as appropriate, to accommodate, wildlife crossing(s) and to preserve wildlife corridors.

M&A shall document offsite and bypass drainage features occurring within the study corridor and shall make recommendations to preserve and maintain water flows and volumes within watersheds.

M&A shall also evaluate corridor-wide permit-related information on environmental resource permits, dredge and fill permits, water quality permits, or stormwater discharge permits. This activity shall include coordinating with all applicable permitting agencies and identifying all existing permits and their conditions and influence on this Study.

M&A shall document in report and map format, in the *Orange Avenue Roadway Conceptual Analysis Report*, all information that may influence the location and evaluation of alternative improvement concepts.

**Cost: \$4,560.00**

### **3.14 Threatened and Endangered Species**

M&A shall review existing information to determine the potential presence of threatened or endangered plant and animal species within the study area. If the review identifies the potential presence of threatened or endangered plant or animal species, M&A shall document and map their locations relative to the findings/recommendations in Section 3.13. M&A shall supplement documented information with field reviews of the study area. M&A shall document in report and map format, in the *Orange Avenue Roadway Conceptual Analysis Report*, all information that may influence the location and evaluation of alternative improvement concepts.

**Cost: \$1,900.00**

### **3.15 Deliverables**

Work to be completed under this section by M&A shall require the following items to be submitted to and accepted by the County:

- Environmental Site Assessment Report
- Wildlife Crossing Recommendation(s)
- Wildlife Corridors and Critical and Strategic Habitat, Management Areas and Mitigation Sites
- Mapping and Documentation of:
  - Cultural features including trails



- Archaeological and Historical Sites
- Hydrologic and Natural Features
- Wildlife Corridors and Critical and Strategic Habitat
- Threatened & Endangered Species

#### **4.0 Right-of-Way Engineering Projects (Right-of-Way Identification Maps)**

##### **4.2 Parcels**

###### **4.2.1 Review of Title Work**

M&A will assist in review of the title work as provided by the County, supplemental surveys and investigations and/or other record information. The size, location, and dimensions of each parent tract, parcel and property interest (easements, leases, etc.) shall be determined by the Consultant from this review. This information shall be shown on the Right-of-Way I.D. Maps/miscellaneous surveys and parcel sketches, as appropriate. Recorded and Unrecorded easements shall be shown to the extent they can be identified and located on the Right-of-Way I.D. Map and parcel sketches.

**Cost: \$475.00**

#### **4.4 Minimization of Compensable Impacts**

M&A shall participate in the final design phase of the project to review the design corridor to minimize compensable impacts to private properties. M&A will participate in identification and evaluation of alternatives to acquisition (e.g., retaining walls instead of fill slope easements, closed drainage instead of ditch systems, etc.) to determine the most cost effective option(s) to meet the project needs.

Tasks to be conducted by M&A may include:

- Meet as necessary with the County and property owners.
- Perform site inspections with the County and property owners as may be necessary.
- Coordinate with the County to identify cost effective ways to reduce compensable impacts.
- Consult with the County as may be necessary during the design process with respect to right-of-way issues.

**Cost: Hourly @ \$95.00, Not to Exceed \$2,660.00**

#### **5.0 Corridor Analysis and Project Need Documentation**

Following completion of the data collection and evaluation activities, M&A shall assist in preparation of the corridor analysis for the study area. This analysis shall determine the characteristics within the study area and potential corridors therein that could influence the development of alternative alignments and improvement concepts.

The Corridor Analysis activities shall identify the improvement need, the existing and projected travel demand, the current and projected land use development patterns and the presence of any environmental, cultural, archaeological/historical, hydrologic and natural sensitive area(s) within the corridor.

M&A shall prepare relevant section of the draft *Corridor Analysis Technical Memorandum* that shall document the Corridor Analysis activities.

Relevant sections of the *Corridor Analysis Technical Memorandum* to be prepared by M&A shall contain, at a minimum, the following information in the body of the memorandum (including maps as appropriate):

#### Characteristics of the Study Area

- Areas of Potential Contamination
- Cultural Features including Trails
- Archeological and Historic Features
- Wildlife Corridors
- Critical and Strategic Habitat
- Threatened and Endangered Species

**Cost: Hourly @ \$95.00, Not to Exceed \$3,040.00**

#### **6.4 Analyze Alternative Improvement Concepts**

M&A shall assist Harris in the analysis of benefits and impacts associated with the Alternative Alignment Improvement Concept as well as the No-Build Concept. The results of the analysis of the Alternative Improvement Concepts shall be documented in the in the *Orange Avenue Roadway Conceptual Analysis Report*. The analysis to be performed for each alternative shall specifically include safety, cost, conformance to long range plans, good engineering practices and environmental considerations, some of which are more particularly described below:

- Compensable Impacts Analysis – M&A will assist Harris in the development of the Alternative Improvement Concepts to minimize compensable impacts to private properties associated with each viable alternative. This evaluation effort shall include:
  - Inspection of potential affected properties in the field to determine the extent of compensable impacts on each parcel associated with each viable alternative, and whether such impacts can be reduced in a cost-effective manner.
  - Consideration of site access, onsite drainage, onsite parking, onsite utilities, including septic systems, and any other existing facilities that may be impacted by each viable alternative improvement concept, including financial impacts to existing businesses.
  - Meetings with potentially affected property owners to obtain their input on viable alternative alignments and configurations of the proposed improvements



in those cases where various options exist, for example, where the shape and location of retention ponds can be configured to meet property owner's preferences.

- Incorporation of comments in the recommended alternative such as to minimize the number and extent of such compensable impacts.

The above described investigations, findings and recommendations shall be documented in the *Orange Avenue Roadway Conceptual Analysis Report*.

**Cost: Hourly @ \$95.00, Not to Exceed \$1,520.00**

- Wetland and/or Upland Impacts – M&A shall estimate the acres of wetlands and/or equivalent uplands impacted by each alternative and identify potential mitigation strategies, including costs.
- Critical and Strategic Habitat Impact – M&A shall quantify/qualify the potential impacts to US Endangered Species Act critical habitats and FWC identified strategic habitat associated with each alternative, and shall identify potential alignment alternatives and/or mitigation strategies and costs.
- Wildlife Corridor Impact – M&A shall quantify/qualify the potential impacts to wildlife corridors associated with each alternative and shall identify potential mitigation strategies and costs. The Consultant shall coordinate with regulatory agencies to identify engineered controls and other means of preserving wildlife corridors.
- Threatened & Endangered Species Impacts – M&A shall quantify/qualify the potential impacts to threatened and endangered plant and animal species and their habitats associated with each alternative and shall identify potential mitigation strategies and costs. The Consultant shall coordinate with regulatory agencies to identify permissibility of impacts of the recommended alignment to Threatened and Endangered Species.
- Archaeological and Historic Feature Impacts – M&A shall estimate the location and extent of impacts caused to significant archaeological or historical structures or sites. The Consultant shall identify alternatives to avoid, minimize and/or mitigate impacts and shall identify costs associated with each alternative.
- Contaminated Sites Impacted – M&A shall identify the location of any contaminated or potentially contaminated sites, known extent of contaminated soil, groundwater and/or surface water and the location of pollutant storage tanks or other regulated materials storage areas or vessels in each alternative and shall recommend whether a Phase II Environmental Site Assessment is necessary.

**Cost: Hourly @ \$95.00, Not to Exceed \$4,560.00**

### **6.5 Alternatives Comparison Matrix**

M&A shall assist Harris in the preparation of an Alternatives Evaluation and Comparison Matrix to document and compare the results of the evaluation tasks. This matrix shall be used to clearly identify the most viable improvement concept.

**Cost: \$475.00**

### **7.0 Recommended Alternative Improvement Evaluation**

Following completion of the alternative analysis and Alternatives Information Public Meeting, M&A will assist Harris with preparation of the final recommended improvement concept to be evaluated at a more detailed level.

M&A will identify the ecological components of the final Recommended Alternative Improvement concept to finalize the major elements of the project. The evaluation matrix shall be updated to reflect the impacts of the final recommended improvement concept. Impacts that are not quantifiable shall be documented in the *Orange Avenue Roadway Conceptual Analysis Report*.

#### **7.1 Roadway Conceptual Analysis Report**

M&A will prepare ecological and environmental components of the *Orange Avenue Roadway Conceptual Analysis Report*. This document shall record all public involvement activities, alternatives developed, analysis efforts, and the final recommendation. It shall contain summaries and recommendations pertaining to the recommended alternative and potential impacts associated with it.

The *Orange Avenue Roadway Conceptual Analysis Report* shall be amended, if necessary, in accordance with the results of the Recommended Improvement Concept Public Meeting and subsequent LPA Work Session and Public Hearing.

M&A will assist Harris with preparing technical memoranda throughout the course of the study to document interim decision on the initial corridor analysis processes. These technical memoranda shall be formally summarized in the body of the report and incorporated in their entirety into the *Orange Avenue Roadway Conceptual Analysis Report*.

Those section of the *Roadway Conceptual Analysis Report* to be prepared by M&A shall include the following (including maps as appropriate):

- Existing Conditions
- Environmental Site Assessment Issues
- Cultural Features including Trails
- Archeological and Historic Features
- Hydrologic and Natural Features
- Critical and Strategic Habitat
- Wildlife Corridors



- Threatened and Endangered Species
- Cost Estimates

In addition, M&A will prepare the following reports as appendices or as separate volumes of the report:

- Environmental Site Assessment Report
- Hydrologic and Natural Features Report
- Threatened and Endangered Species Report

**Cost:     \$3,990.00**

August 15, 2016

Harris Civil Engineers, LLC  
1200 East Hillcrest St. Suite 200  
Orlando, FL 32803



Attrn: Mr. Abdul Alkadry, P.E.  
Office: (407) 629-4777 ext 252  
Direct: (407) 428-2652  
Fax: (407) 629-7888  
E: abdula@harriscivilengineers.com

Re: Proposal for Geotechnical Engineering Services  
Orange Avenue Widening  
From Mary Louis Lane to Turnpike  
Orlando, Orange County, Florida  
Terracon Proposal No. PH1165255

Dear Mr. Alkadry:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this proposal to provide geotechnical engineering services for the above-referenced project. The purpose of the geotechnical study will be to evaluate the pertinent geotechnical conditions at the site and to develop geotechnical parameters, which will assist in the design and construction of Orange Avenue roadway expansion from Mary Louis Lane to Turnpike. This proposal outlines our understanding of the project and scope of services and provides a lump sum fee for our services.

## 1.0 PROJECT INFORMATION

### 1.1. Site Location and Project Description

The existing Orange Avenue from Mary Louis Lane to Turnpike is a 2-lane roadway, running through an existing wetland from near the center point of the alignment to the intersection with the Turnpike. Two existing ponds are located to the west and to the east of Orange Avenue. Just south of the existing ponds, there is an existing box culvert connecting the wetland on each side of Orange Avenue.

It is our understanding the proposed expansion along Orange Avenue consist of approximately 4,400 feet of roadway widening on both side (2 lanes expand to 4 lanes).

Should any of the above information or assumptions be inconsistent with the planned construction, please let us know so that we may make any necessary modifications to this proposal.



Terracon Consultants, Inc. 1675 Lea Road Winter Park, Florida 32789  
P [407] 740 6110 F [407] 740 8112 terracon.com

Geotechnical ■ Environmental ■ Construction Materials ■ Facilities



**Proposal for Geotechnical Engineering Services**  
 Orange Avenue Widening from Mary Louis Lane to Turnpike  
 Orlando, Orange County, Florida  
 August 15, 2016 ■ Terracon Proposal No. PH1165255



## 2.0 SCOPE OF SERVICES

The project will consist of field exploration and laboratory testing under the guidance of a geotechnical engineer to characterize the subsurface conditions and geotechnical engineering to develop geotechnical design and construction recommendations. The following sections provide an overview of the work scope for each of these aspects of the project.

### 2.1 Field Exploration

Our field exploration work includes the drilling and sampling of exploratory soil borings. The following boring schedule is planned:

Number of Borings	Boring Depth (ft)	Planned Location
88 Hand Auger (1 boring at every 100 feet, 8,800 feet total)	5	Roadway Widening (4,400 feet widening each side, total 8,800 feet)
18 SPT borings (1 boring at every 500 feet, 8,800 feet total)	15	Roadway Widening (4,400 feet widening each side, total 8,800 feet)
4 SPT borings (two at both side)	20	Existing Box Culvert Expansion
8 hours of probing (4 hours at each side)	surface	Existing Box Culvert Expansion

1. We will also collect samples for corrosion tests for box culvert expansion and LBR tests.
2. Proposed laboratory testing include: 2 corrosion, 6 LBR, 18 Full Sieve Analysis, 10 organic content, 10 Atterberg Limits, 30 single sieve analysis (sieve No. 200), and 68 moisture content

#### 2.1.1 Procedures

We will locate the soil borings by field measurements with the assistance of hand-held GPS devices which are capable of locating the exploration points with an accuracy of about 20 feet. Elevations will be estimated from local USGS topographic maps.

The hand auger boring procedure consisted of manually turning a 3-inch diameter, 6-inch long sampler into the soil until it was full. The sampler was then retrieved and the soils in the sampler were visually examined and classified. The procedure was repeated until the desired termination depth was achieved. Samples of representative strata were obtained for further visual examination and classification in our laboratory.

**Proposal for Geotechnical Engineering Services**  
 Orange Avenue Widening from Mary Louis Lane to Turnpike  
 Orlando, Orange County, Florida  
 August 15, 2016 ■ Terracon Proposal No. PH1165255



The SPT borings will be sampled using split spoon sampling devices consistent with ASTM D1586. Sampling will be in general accordance with industry standard procedures wherein split-barrel samples are obtained. Five samples will be obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter.

The field exploration will also include observations for groundwater. This will occur during the exploration program while the borehole is being advanced. No provisions have been made to collect water level data other than the observations made during the advancement of the borings.

### **2.1.2 Site Access**

For the proposed SPT borings, we expect that the site is accessible to our truck-mounted drilling equipment with tree or shrub clearing and possible wet ground conditions. We expect no repair of landscape damage or location of underground utilities beyond contacting Sunshine State One Call of Florida (SSOCOF) locate service is required. If such conditions are known to exist on the site, Terracon should be notified so that we may adjust our scope of services and fee, if necessary.

In order to conduct our exploration of the project site, we must be granted access by the property owner. By acceptance of this proposal without information to the contrary, we consider that you have provided access to our exploration equipment for the conduct of our work consistent with the agreed work scope.

### **2.1.3 Property Disturbance**

We will take reasonable efforts to reduce damage to the property as a result of our exploration activities, such as rutting of the ground surface. However, in the normal course of our work some such disturbance will occur. We have not budgeted to restore the site beyond backfilling our boreholes. If there are any restrictions or special requirements regarding this site or exploration, please provide them with your acceptance of this proposal.

All borings will be backfilled immediately after their completion with auger cuttings. Excess auger cuttings will be disposed of on the site by spreading in the area of each exploration point. Because backfill material often settles below the surface after a period of time, you should observe the exploration points periodically for signs of depressions and backfill them if necessary. We could provide this service at your request, but this would involve additional costs.

### **2.1.4 Safety**

We are committed to the conduct of our work safely. Our field exploration work on this project will be conducted under the guidance of a site-specific safety plan that takes into account the information that we know about this site as it relates to safety and potential safety hazards.

Our field crews will make excavations to sample the soils. Such excavations could encounter subsurface utilities and/or environmental hazards. We will file appropriate notification to the local



**Proposal for Geotechnical Engineering Services**  
 Orange Avenue Widening from Mary Louis Lane to Turnpike  
 Orlando, Orange County, Florida  
 August 15, 2016 ■ Terracon Proposal No. PH1165255



and/or state mandated excavation permit office(s), as required by state law, and we will not perform excavations without an understanding of the subsurface utilities present based upon markings made by the various responsible parties. However, such utility location services only delineate subsurface utilities in public easements, and the potential to encounter other, unknown underground hazards remains. Also, we are not aware of environmental concerns at this project site that would create health or safety hazards associated with our exploration program. Our scope considers that standard Type D Personal Protection Equipment (PPE) is appropriate.

In order to more completely address the potential for underground utilities or environmental hazards, and, in order to more completely understand other potential safety hazards associated with our field exploration program, we will interview you or a representative that you suggest to obtain information about these concerns. The results of our interview will be included in the site-specific safety plan. We are not responsible for damage to private utilities that are not made known to us.

## **2.2 Laboratory Testing**

Representative soil samples will be tested in our laboratory to determine pertinent engineering characteristics. Testing will include LBR tests, corrosion, moisture content, organic content determination, and Atterberg limits, as appropriate. Our laboratory procedures will follow ASTM standards.

The project engineer will review the field data from the exploration, and then assign the types and numbers of tests. Our fees have been developed with an assumption of typical types and numbers of tests for a project of this nature in this location. In the event additional testing is necessary we will notify you of this need prior to initiating the additional testing.

## **2.3 Geotechnical Engineering Analysis and Report**

The results of our field and laboratory programs will be evaluated by a professional geotechnical engineer. The engineer will develop an analysis of subsurface conditions, perform the engineering calculations necessary to evaluate foundation alternatives and develop appropriate geotechnical engineering design criteria for earth connected phases of the project. At the completion of our engineering analyses, we will prepare a geotechnical engineering report that provides the following:

1. Soil boring logs with field and laboratory data, soil stratification based on visual soil classification
2. Groundwater levels observed during drilling
3. Site and Boring location plans

**Proposal for Geotechnical Engineering Services**  
Orange Avenue Widening from Mary Louie Lane to Turnpike  
Orlando, Orange County, Florida  
August 15, 2016 ■ Terracon Proposal No. PH1165255



4. Subsurface exploration procedures
5. Description of subsurface conditions
6. A discussion of general site preparation techniques, excavation, backfilling and fill compaction for installation of the proposed pipeline
7. Geotechnical engineering recommendations for roadway embankment construction

### **3.0 SCHEDULE**

We have developed a schedule to complete the scope of work stated in Sections 2.1 through 2.3 based upon our existing availability at the date of this proposal. We anticipate starting the field work within about 3 to 5 working days of receiving written notice to proceed and written authorization, and the field exploration will take about 6 to 7 days to complete. We estimate the final Geotechnical Engineering Report can be completed within two weeks after the soil borings are completed.

The schedule above is predicated upon our current availability and our understanding of your schedule needs. In the event the schedule provided is inconsistent with your needs, please contact us, and we will consider alternatives.

Because the schedule suggested above is tentative and dependent upon receipt of your notice to proceed, we will provide you with a specific schedule for the conduct of the project at the time of your issuance of notice to proceed.

### **4.0 COMPENSATION**

Using our estimate of the work scope as outlined in Section 2, and our unit rates for the various work items, we have developed an estimate of fees for this project.

#### **4.1 Basic Services**

We will provide the basic geotechnical services work scope as stated in Section 2.1 through 2.3 for a fee of \$28,500.00. Unless instructed otherwise, we will submit our invoice(s) to the address shown at the beginning of this proposal.

In the event that we encounter unanticipated conditions that would require variation in the work scopes as noted in Section 2.1 through 2.3, we will notify you of this variation, and we will send a supplemental proposal stating the modified work scope as well as its impact on our fee. We will not proceed without your authorization, as evidenced by your signature on the Supplemental Agreement form.



**Proposal for Geotechnical Engineering Services**  
Orange Avenue Widening from Mary Louis Lane to Turnpike  
Orlando, Orange County, Florida  
August 15, 2016 ■ Terracon Proposal No. PH1165255



## 5.0 AUTHORIZATION

Work will be performed under the provisions of the attached Agreement for Services. Your authorization for Terracon to proceed in accordance with this proposal can be issued by signing the attached Agreement for Services along with this proposal and returning an original copy of these documents to our Winter Park, Florida office.

A fax or email of the signed Agreement for Services can also be submitted to expedite the commencement of services, but we request that a signed original follow.

We appreciate the opportunity to provide this proposal and look forward to the opportunity of working with you.

Sincerely,  
Terracon Consultants, Inc.

A handwritten signature in black ink that reads "Xuebing Zheng". The signature is written in a cursive, flowing style.

Xuebing Zheng, E.I.  
Staff Engineer

A handwritten signature in black ink that reads "Bruce H. Woloshin". The signature is written in a cursive, flowing style.

Bruce H. Woloshin, P.E.  
Department Manager

Attachments: Agreement for Services  
cc: email



# Terracon

Reference Number: PH1163235

## AGREEMENT FOR SERVICES

This **AGREEMENT** is between Harris Civil Engineers, LLC ("Client") and Terracon Consultants, Inc. ("Consultant") for Services to be provided by Consultant for Client on the Orange Ave Widening from Mary Louis Lane to Turnpike project ("Project"), as described in the Project Information section of Consultant's Proposal dated 08/12/2016 ("Proposal") unless the Project is otherwise described in Exhibit A to this Agreement (which section or Exhibit is incorporated into this Agreement).

1. **Scope of Services.** The scope of Consultant's services is described in the Scope of Services section of the Proposal ("Services"), unless Services are otherwise described in Exhibit B to this Agreement (which section or exhibit is incorporated into this Agreement). Portions of the Services may be subcontracted. Consultant's Services do not include the investigation or detection of, nor do recommendations in Consultant's reports address the presence or prevention of biological pollutants (e.g., mold, fungi, bacteria, viruses, or their byproducts) or occupant safety issues, such as vulnerability to natural disasters, terrorism, or violence. If Services include purchase of software, Client will execute a separate software license agreement. Consultant's findings, opinions, and recommendations are based solely upon data and information obtained by and furnished to Consultant at the time of the Services.
2. **Acceptance/ Termination.** Client agrees that execution of this Agreement is a material element of the consideration Consultant requires to execute the Services, and if Services are initiated by Consultant prior to execution of this Agreement as an accommodation for Client at Client's request, both parties shall consider that commencement of Services constitutes formal acceptance of all terms and conditions of this Agreement. Additional terms and conditions may be added or changed only by written amendment to this Agreement signed by both parties. In the event Client uses a purchase order or other form to administer this Agreement, the use of such form shall be for convenience purposes only and any additional or conflicting terms it contains are stricken. This Agreement shall not be assigned by either party without prior written consent of the other party. Either party may terminate this Agreement or the Services upon written notice to the other. In such case, Consultant shall be paid costs incurred and fees earned to the date of termination plus reasonable costs of closing the Project.
3. **Change Orders.** Client may request changes to the scope of Services by altering or adding to the Services to be performed. If Client so requests, Consultant will return to Client a statement (or supplemental proposal) of the change setting forth an adjustment to the Services and fees for the requested changes. Following Client's review, Client shall provide written acceptance. If Client does not follow these procedures, but instead directs, authorizes, or permits Consultant to perform changed or additional work, the Services are changed accordingly and Consultant will be paid for this work according to the fees stated or its current fee schedule. If project conditions change materially from those observed at the site or described to Consultant at the time of proposal, Consultant is entitled to a change order equitably adjusting its Services and fee.
4. **Compensation and Terms of Payment.** Client shall pay compensation for the Services performed at the fees stated in the Compensation section of the Proposal unless fees are otherwise stated in Exhibit C to this Agreement (which section or Exhibit is incorporated into this Agreement). If not stated in either, fees will be according to Consultant's current fee schedule. Fee schedules are valid for the calendar year in which they are issued. Fees do not include sales tax. Client will pay applicable sales tax as required by law. Consultant may invoice Client at least monthly and payment is due upon receipt of invoice. Client shall notify Consultant in writing, at the address below, within 15 days of the date of the invoice if Client objects to any portion of the charges on the invoice, and shall promptly pay the undisputed portion. Client shall pay a finance fee of 1.5% per month, but not exceeding the maximum rate allowed by law, for all unpaid amounts 30 days or older. Client agrees to pay all collection-related costs that Consultant incurs, including attorney fees. Consultant may suspend Services for lack of timely payment. It is the responsibility of Client to determine whether federal, state, or local prevailing wage requirements apply and to notify Consultant if prevailing wages apply. If it is later determined that prevailing wages apply, and Consultant was not previously notified by Client, Client agrees to pay the prevailing wage from that point forward, as well as a retroactive payment adjustment to bring previously paid amounts in line with prevailing wages. Client also agrees to defend, indemnify, and hold harmless Consultant from any alleged violations made by any governmental agency regulating prevailing wage activity for failing to pay prevailing wages, including the payment of any fines or penalties.
5. **Third Party Reliance.** This Agreement and the Services provided are for Consultant and Client's sole benefit and exclusive use with no third party beneficiaries intended. Reliance upon the Services and any work product is limited to Client, and is not intended for third parties. For a limited time period not to exceed three months from the date of the report, Consultant may, at its discretion, issue additional reports to others agreed upon with Client, however Client understands that such reliance will not be granted until those parties sign and return Consultant's reliance agreement and Consultant receives the agreed-upon reliance fee.
6. **LIMITATION OF LIABILITY. CLIENT AND CONSULTANT HAVE EVALUATED THE RISKS AND REWARDS ASSOCIATED WITH THIS PROJECT, INCLUDING CONSULTANT'S FEE RELATIVE TO THE RISKS ASSUMED, AND AGREE TO ALLOCATE CERTAIN OF THE ASSOCIATED RISKS. TO THE FULLEST EXTENT PERMITTED BY LAW, THE TOTAL AGGREGATE LIABILITY OF CONSULTANT (AND ITS RELATED CORPORATIONS AND EMPLOYEES) TO CLIENT AND THIRD PARTIES GRANTED RELIANCE IS LIMITED TO THE GREATER OF \$50,000 OR CONSULTANT'S FEE, FOR ANY AND ALL INJURIES, DAMAGES, CLAIMS, LOSSES, OR EXPENSES (INCLUDING ATTORNEY AND EXPERT FEES) ARISING OUT OF CONSULTANT'S SERVICES OR THIS AGREEMENT. PRIOR TO ACCEPTANCE OF THIS AGREEMENT AND UPON WRITTEN REQUEST FROM CLIENT, CONSULTANT MAY NEGOTIATE A HIGHER LIMITATION FOR ADDITIONAL CONSIDERATION IN THE FORM OF A SURCHARGE TO BE ADDED TO THE AMOUNT STATED IN THE COMPENSATION SECTION OF THE PROPOSAL. THIS LIMITATION SHALL APPLY REGARDLESS OF AVAILABLE PROFESSIONAL LIABILITY INSURANCE COVERAGE, CAUSE(S), OR THE THEORY OF LIABILITY, INCLUDING NEGLIGENCE, INDEMNITY, OR OTHER RECOVERY. THIS LIMITATION SHALL NOT APPLY TO THE EXTENT THE DAMAGE IS PAID UNDER CONSULTANT'S COMMERCIAL GENERAL LIABILITY POLICY.**
7. **Indemnity/Statute of Limitations.** Consultant and Client shall indemnify and hold harmless the other and their respective employees from and against legal liability for claims, losses, damages, and expenses to the extent such claims, losses, damages, or expenses are legally determined to be caused by their negligent acts, errors, or omissions. In the event such claims, losses, damages, or expenses are legally determined to be caused by the joint or concurrent negligence of Consultant and Client, they shall be borne by each party in proportion to its own negligence under comparative fault principles. Neither party shall have a duty to defend the other party, and no duty to defend is hereby created by this indemnity provision and such duty is explicitly waived under this Agreement. Causes of action arising out of Consultant's Services or this Agreement regardless of cause(s) or the theory of liability, including negligence, indemnity or other recovery shall be deemed to have accrued and the applicable statute of limitations shall commence to run not later than the date of Consultant's substantial completion of services on the project.
8. **Warranty.** Consultant will perform the Services in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. EXCEPT FOR THE STANDARD OF CARE PREVIOUSLY STATED, CONSULTANT MAKES NO WARRANTIES OR GUARANTEES, EXPRESS OR IMPLIED, RELATING TO CONSULTANT'S SERVICES AND CONSULTANT DISCLAIMS ANY IMPLIED WARRANTIES OR WARRANTIES IMPOSED BY LAW, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
9. **Insurance.** Consultant represents that it now carries, and will continue to carry: (i) workers' compensation insurance in accordance with the laws of the states having jurisdiction over Consultant's employees who are engaged in the Services, and employer's liability insurance (\$1,000,000); (ii)





commercial general liability insurance (\$1,000,000 occ / \$2,000,000 agg); (iii) automobile liability insurance (\$1,000,000 B.I. and P.D. combined single limit); and (iv) professional liability insurance (\$1,000,000 claim / agg). Certificates of insurance will be provided upon request. Client and Consultant shall waive subrogation against the other party on all general liability and property coverage.

- 10. CONSEQUENTIAL DAMAGES. NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR LOSS OF PROFITS OR REVENUE; LOSS OF USE OR OPPORTUNITY; LOSS OF GOOD WILL; COST OF SUBSTITUTE FACILITIES, GOODS, OR SERVICES; COST OF CAPITAL; OR FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, PUNITIVE, OR EXEMPLARY DAMAGES.**
- 11. Dispute Resolution.** Client shall not be entitled to assert a Claim against Consultant based on any theory of professional negligence unless and until Client has obtained the written opinion from a registered, independent, and reputable engineer, architect, or geologist that Consultant has violated the standard of care applicable to Consultant's performance of the Services. Client shall provide this opinion to Consultant and the parties shall endeavor to resolve the dispute within 30 days, after which Client may pursue its remedies at law. This Agreement shall be governed by and construed according to Kansas law.
- 12. Subsurface Explorations.** Subsurface conditions throughout the site may vary from those depicted on logs of discrete borings, test pits, or other exploratory services. Client understands Consultant's layout of boring and test locations is approximate and that Consultant may deviate a reasonable distance from those locations. Consultant will take reasonable precautions to reduce damage to the site when performing Services; however, Client accepts that invasive services such as drilling or sampling may damage or alter the site. Site restoration is not provided unless specifically included in the Services.
- 13. Testing and Observations.** Client understands that testing and observation are discrete sampling procedures, and that such procedures indicate conditions only at the depths, locations, and times the procedures were performed. Consultant will provide test results and opinions based on tests and field observations only for the work tested. Client understands that testing and observation are not continuous or exhaustive, and are conducted to reduce - not eliminate - project risk. Client shall cause all tests and inspections of the site, materials, and Services performed by Consultant or others to be timely and properly scheduled in order for the Services to be performed in accordance with the plans, specifications, contract documents, and Consultant's recommendations. No claims for loss or damage or injury shall be brought against Consultant by Client or any third party unless all tests and inspections have been so performed and Consultant's recommendations have been followed. Unless otherwise stated in the Proposal, Client assumes sole responsibility for determining whether the quantity and the nature of Services ordered by Client is adequate and sufficient for Client's intended purpose. Client is responsible (even if delegated to contractor) for requesting services, and notifying and scheduling Consultant so Consultant can perform these Services. Consultant is not responsible for damages caused by Services not performed due to a failure to request or schedule Consultant's Services. Consultant shall not be responsible for the quality and completeness of Client's contractor's work or their adherence to the project documents, and Consultant's performance of testing and observation services shall not relieve Client's contractor in any way from its responsibility for defects discovered in its work, or create a warranty or guarantee. Consultant will not supervise or direct the work performed by Client's contractor or its subcontractors and is not responsible for their means and methods.
- 14. Sample Disposition, Affected Materials, and Indemnity.** Samples are consumed in testing or disposed of upon completion of tests (unless stated otherwise in the Services). Client shall furnish or cause to be furnished to Consultant all documents and information known or available to Client that relate to the identity, location, quantity, nature, or characteristic of any hazardous waste, toxic, radioactive, or contaminated materials ("Affected Materials") at or near the site, and shall immediately transmit new, updated, or revised information as it becomes available. Client agrees that Consultant is not responsible for the disposition of Affected Materials unless specifically provided in the Services, and that Client is responsible for directing such disposition. In the event that test samples obtained during the performance of Services (i) contain substances hazardous to health, safety, or the environment, or (ii) equipment used during the Services cannot reasonably be decontaminated, Client shall sign documentation (if necessary) required to ensure the equipment and/or samples are transported and disposed of properly, and agrees to pay Consultant the fair market value of this equipment and reasonable disposal costs. In no event shall Consultant be required to sign a hazardous waste manifest or take title to any Affected Materials. Client shall have the obligation to make all spill or release notifications to appropriate governmental agencies. The Client agrees that Consultant neither created nor contributed to the creation or existence of any Affected Materials conditions at the site. Accordingly, Client waives any claim against Consultant and agrees to indemnify and save Consultant, its agents, employees, and related companies harmless from any claim, liability or defense cost, including attorney and expert fees, for injury or loss sustained by any party from such exposures allegedly arising out of Consultant's non-negligent performance of Services hereunder, or for any claims against Consultant as a generator, disposer, or arranger of Affected Materials under federal, state, or local law or ordinance.
- 15. Ownership of Documents.** Work product, such as reports, logs, data, notes, or calculations, prepared by Consultant shall remain Consultant's property. Proprietary concepts, systems, and ideas developed during performance of the Services shall remain the sole property of Consultant. Files shall be maintained in general accordance with Consultant's document retention policies and practices.
- 16. Utilities.** Client shall provide the location and/or arrange for the marking of private utilities and subterranean structures. Consultant shall take reasonable precautions to avoid damage or injury to subterranean structures or utilities. Consultant shall not be responsible for damage to subterranean structures or utilities that are not called to Consultant's attention, are not correctly marked, including by a utility locate service, or are incorrectly shown on the plans furnished to Consultant.
- 17. Site Access and Safety.** Client shall secure all necessary site related approvals, permits, licenses, and consents necessary to commence and complete the Services and will execute any necessary site access agreement. Consultant will be responsible for supervision and site safety measures for its own employees, but shall not be responsible for the supervision or health and safety precautions for any other parties, including Client, Client's contractors, subcontractors, or other parties present at the site.

**PURSUANT TO SECTION 558.0035 OF FLORIDA STATUTES, AN INDIVIDUAL EMPLOYEE OR AGENT OF CONSULTANT MAY NOT BE HELD INDIVIDUALLY LIABLE.**

Consultant: **Terracon Consultants, Inc.**  
 By: Bruce H. Woloshin Date: 8/15/2016  
 Name/Title: Bruce H Woloshin, P.E. / Principal  
 Address: 1675 Lee Rd  
Winter Park, FL 32789-2207  
 Phone: (407) 740-8110 Fax: (407) 740-8112  
 Email: Bruce.Woloshin@terracon.com

Client: **Harris Civil Engineers, LLC**  
 By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name/Title: Abdul Alkady / Project Engineer  
 Address: 1200 Hillcrest Street, Suite 200  
Orlando, FL 32803  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: abdula@harriscivilengineers.com

Reference Number: PH1165255





June 20, 2016

Mr. Abdul Alkadry, P.E.  
Project Manager  
Harris Civil Engineers, LLC  
1200 East Hillcrest St. Suite 200  
Orlando, Florida 32803

Re: **Orange Avenue Study**  
**Mary Louls Lane to Town Center Boulevard**  
TPD № P16-5389

Dear Abdul:

This letter is in response to your request for traffic planning/ engineering services for the above-referenced project. The Scope of Work as outlined below has been prepared as per Orange County's Roadway Conceptual Analysis (RCA) requirements.

#### **SCOPE OF WORK**

##### **Task 1 – Existing Roadway Characteristics**

- Conduct field investigations to collect pertinent information on existing roadway characteristics to be used in the development and evaluation alternative improvement concepts.
- Analyze/tabulate data collected as appropriate on the physical and traffic characteristics of the corridor including lane and lane widths, side streets and driveways/curb-cuts, sidewalks and other observed characteristics.

##### **Task 2 – Traffic Data Collection**

- Obtain available traffic count data from FDOT and Orange County as may be available.
- Conduct 72-hour classification counts at two locations on Orange Avenue.
- Conduct eight (hour) turning movement counts by 15-minute intervals at two intersections during the A.M. and P.M. peak hours.
- Prepare/document existing conditions analysis.

---

**Traffic Planning and Design, Inc.**

535 Versailles Drive, Maitland, Florida 32751 ■ Phone (407) 628-9955 ■ Fax (407) 628-8850 ■ [www.tpdtraffic.com](http://www.tpdtraffic.com)



Mr. Abdul Alkadry  
TPD No. P16-5389  
June 20, 2016  
Page 2

Task 3 – Development of Traffic Factors

- Develop current and future year values for the following traffic factors:
  - (K) Factor (Peak to Daily Ratio)
  - (D) Factor (Directional Split)
  - (T) Truck Factor

Task 4 – Design Traffic Projections

- Prepare opening year, interim year and design year travel forecasts for No-Build and Build conditions. This will be based upon the latest adopted OUATS travel forecasting model and historical data. The traffic projections shall be presented as average annual daily traffic (AADT) based upon comparison of model and trends-based growth rates.
- Prepare peak hour turning movement forecasts for the intersections and perform an intersection LOS analysis for each intersection for both the Build and No-Build scenarios to establish the required lane geometry, including queue lengths.
- Establish the basic design requirements for the roadway typical section and each intersection.

Task 5 – Crash Data Analysis

- Analyze crash data to be provided by the County for the most recent three (3) years.
- Prepare crash diagram summaries by type, location, fatality/injury, cause and conditions.

Task 6 – Design Traffic Technical Memorandum

- Summarize the traffic data, traffic forecasts and crash analysis activities in a Design Traffic Technical Memorandum.
- Update the technical memorandum based upon comments received.

Task 7 – Design Traffic Engineering Report

- Prepare a detailed Design Traffic Engineering Report describing the traffic data collection effort, modelling and analysis. The report will contain tabulations of all data collected and recommendations as to traffic control methods and turn lane geometry. A draft report will be submitted for review and finalized after receipt of comments.

Mr. Abdul Alkadry  
TPD No. P16-5389  
June 20, 2016  
Page 3

**Task 8 - Meetings**

- It is anticipated that we will be required to attend up to six meetings during the course of the study.

**TIME SCHEDULE**

Work on this project will start upon receipt of notice to proceed. The work will be completed within deadlines to be established by the project.

**FEES**

The fees for providing the tasks of the Scope of Work will be as follows:

Task 1 – Existing Roadway Characteristics .....	\$ 1,500.00
Task 2 – Traffic Data Collection.....	\$ 3,500.00
Task 3 – Development of Traffic Factors.....	\$ 2,500.00
Task 4 – Design Traffic Projections.....	\$10,000.00
Task 5 – Crash Data Analysis .....	\$ 1,500.00
Task 6 – Design Traffic Technical Memorandum .....	\$ 3,500.00
Task 7 – Design Traffic Engineering Record.....	\$ 7,500.00
Task 8 – Meetings/Hourly Proposed Budget.....	\$ 5,000.00

**DIRECT COSTS**

All reimbursable costs including travel, subsistence and other direct expenses including postage/delivery, blueines and reproducibles will be billed at cost. Standard rates for in-house direct costs are as follows: the current standard mileage IRS tax rate per mile, \$0.18 per copy, \$1.00 per facsimile page, \$2.50 per blueine and \$10.00 per mylar.

**TERMS OF AGREEMENT**

During the course of the work if the Client finds it necessary to terminate work on this project, the Consultant will cease all work upon receipt of a letter to that effect. The Client will pay for the services incurred to the point of termination based upon the Consultant's estimate of percent of work completed. A copy of our hourly rate schedule is attached.



Mr. Abdul Alkadry  
TPD No. P16-5389  
June 20, 2016  
Page 4

The owner/client will be billed monthly based upon our estimate of work completed. Invoices are due and payable upon receipt. Invoices outstanding over 30 days will be assessed a service charge at the rate of 1.5% per month.

Additional services which are not included within this Scope of Work will be treated as extra work. All extra work authorized by the Client will be charged on an hourly basis based upon actual time spent on the project plus additional expenses incurred.

Should it become necessary for the Consultant to utilize attorneys to collect fees, the Client agrees to bear the cost of reasonable attorney fees. The parties agree that the laws of the State of Florida shall govern this agreement, and further legal venue shall be Orange County, Florida.

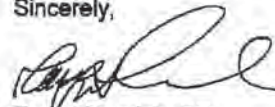
In recognition of the relative risks, rewards and benefits of the project to both the Client and the Consultant, the risks have been allocated so that the Client agrees that, to the fullest extent permitted by law, the Consultant's total liability to the Client, for any and all injuries, claims, losses, expenses, damages or claim expenses arising out of this agreement, from any cause or causes, shall not exceed the total amount of the Consultant's fee. Such causes include but not limited to the Consultant's negligence, errors, omissions, strict liability, breach of contract or breach of warranty.

While all work will be accomplished to the highest caliber, the Consultant cannot guarantee the action of government officials and agencies during the project review and approval process. This proposal is valid for 90 days.

\* \* \* \* \*

If you are in agreement with this proposal, you may execute it and return one copy as our Notice to Proceed. We thank you for this opportunity and we look forward to working with you on this project.

Sincerely,



Turgut Dervish, PE  
President

SIGNATURE: \_\_\_\_\_

NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

COMPANY: \_\_\_\_\_

DATE: \_\_\_\_\_



HOURLY RATE SCHEDULE

<u>Employee Category</u>	<u>Hourly Rate</u>
Principal Engineer.....	\$ 200.00
Senior Engineer.....	150.00
Senior Planner.....	125.00
Engineer/Planner.....	100.00
Traffic Analyst.....	75.00
Traffic Designer.....	75.00
Technical/CADD Operator.....	65.00
Secretary/Typist.....	55.00



## RED-ROC Consulting, LLC

January 18, 2017

Mr. Abdul Alkadry, P.E.  
Harris Civil Engineers, LLC  
1200 East Hillcrest Street, Suite 200  
Orlando, Florida 32803

Reference: Orange Ave. Roadway Conceptual Analysis – Administrative Management and Data Collection - Proposal

Dear Mr. Alkadry:

RED-ROC Consulting, LLC is pleased to present this proposal for consulting services to assist with the referenced project.

### **Task 1 – Administrative / Public Meetings and Workshops**

Our scope includes supporting Harris Civil Engineers with the planning, scheduling/notification and management of the Public Improvement Plan including Project Management, Schedule Management and Quality Control, Coordination Meetings (ACOE, USFWS, LYNX, OCPS, Etc.), Small Group Meetings, the management of Newsletters, Website/News Releases and Advertising as well as Public Information Meetings, Work Sessions and presentations as required as part of the RCA process.

Lump Sum Fee: \$ 15,600

### **Task 2 – Data Collection**

Our scope includes assisting with research and data collection associated with the engineering, land use/zoning, traffic and crash, transit, drainage, hydraulic, geotechnical and environmental data required to develop and evaluate alternative improvement concepts required. RED-ROC Consulting will assist with the sourcing of and management/oversight of subconsultants to perform this work if required.

Lump Sum Fee: \$ 3,200

496 Delaney Ave  
Suite 406B  
Orlando, Florida 32801

Telephone: (863) 231-4586  
mrogers@roc-v.com

## **RED-ROC Consulting, LLC**

The terms and conditions for this proposal would be as detailed in our standard agreement for professional services. The lump sum fees are shown above, with reimbursables not included.

We appreciate being considered for this assignment and look forward to working for you.

Sincerely yours,

**RED-ROC CONSULTING, LLC**

Marc A. Rogers

496 Delaney Ave  
Suite 406B  
Orlando, Florida 32801

Telephone: (863) 231-4586  
mrogers@roc-v.com





PANAMERICAN CONSULTANTS, INC.



Contract Holder

Terrestrial Archaeology • Architectural History • Maritime Archaeology • Geophysics

August 18, 2016

Abdul Alkadry, P.E.  
Harris Civil Engineers, LLC  
1200 East Hillcrest St. Suite 200  
Orlando, FL 32803

Re: Cost proposal for a Cultural Resources Review for the Orange Avenue Roadway Conceptual Analysis, Orange County, Florida

Mr, Alkadry:

Per your request for cost proposal for a Cultural Resources Review for the Orange Avenue Roadway Conceptual Analysis, Orange County, Florida, as mapped in Exhibit 1, I am providing the following information: Panamerican Consultants, Inc. (PCI) can provide a qualified team for a Phase I cultural resources survey review that will meet state, federal, and local requirements. This review will identify cultural facilities that are located within the vicinity of the study area. Cultural facilities shall include, but not be limited to, trails, parks, schools and recreational areas as well as the neighborhoods. The review will also search state and local sources to identify recorded historical and archaeological sites within the study area. A report will list any resources found and map any sites that may influence the location and evaluation of alternative improvement concepts. We estimate the project will require three days for background research and report preparation.

PCI can provide all necessary personnel and equipment to conduct the investigation and prepare the report for a lump-sum cost of \$540.00. Should an in-person meeting in Orange County be required, an additional fee of \$719.00 will be charged.

Thank you for contacting us, and thank you for the opportunity.

Respectfully,

A handwritten signature in black ink, appearing to read 'Steven Meredith'.

Steven Meredith, RPA  
Southeastern Regional Director

2301 Paul W. Bryant Drive, Tuscaloosa, Alabama 35401  
Phone (205) 556-3096

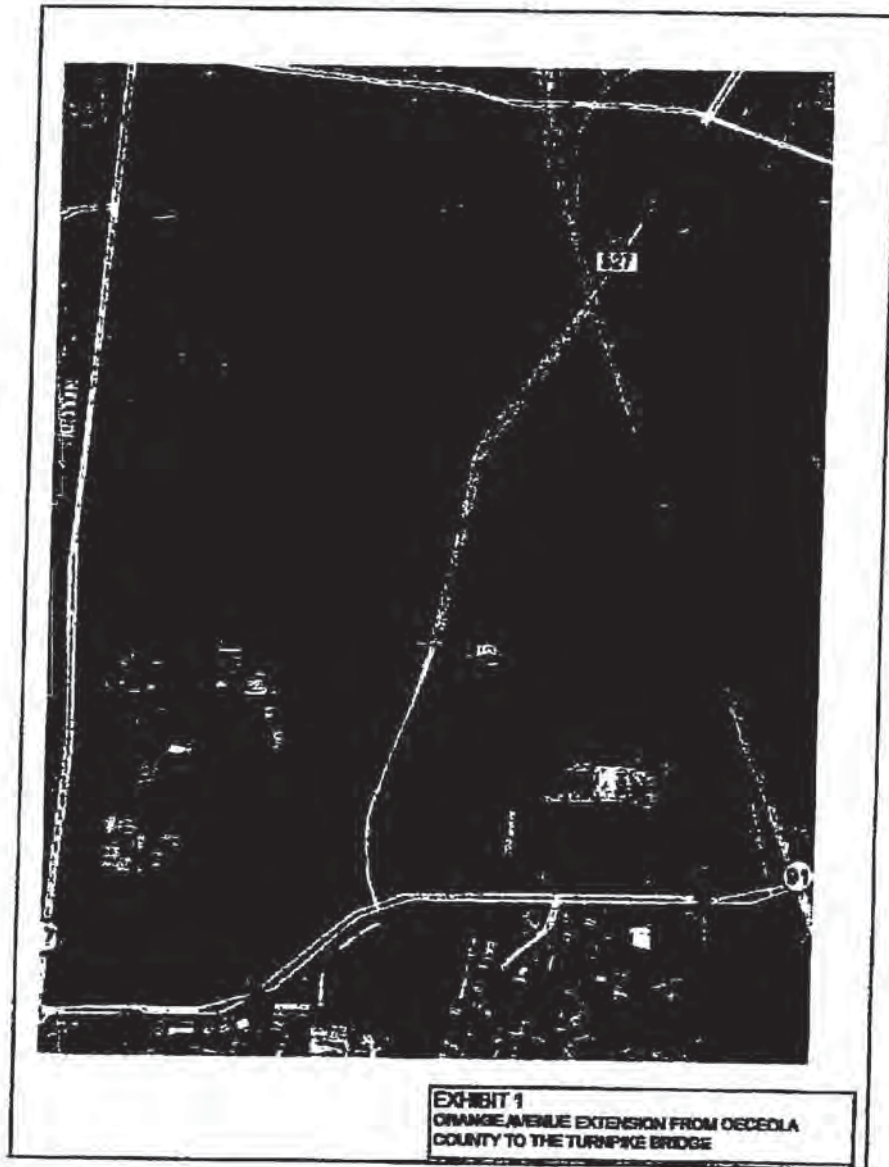
Alabama • Florida • Georgia • New York • Tennessee  
[www.panamconsultants.com](http://www.panamconsultants.com)



PANAMERICAN CONSULTANTS, INC.

GSA Contract Holder

Terrestrial Archaeology • Architectural History • Maritime Archaeology • Geophysics



**EXHIBIT 1**  
ORANGE AVENUE EXTENSION FROM OCEOLA  
COUNTY TO THE TURNPIKE BRIDGE

2301 Paul W. Bryant Drive, Tuscaloosa, Alabama 35401  
Phone (205) 556-3096

Alabama • Florida • Georgia • New York • Tennessee  
[www.panamconsultants.com](http://www.panamconsultants.com)



# Tinklepaugh SURVEYING SERVICES

November 8, 2016

Deerfield Land Corporation  
14901 South Orange Blossom Trail  
Orlando, Florida 32821

ATTN: Tom Roehlk

RE: Orange Avenue Right of Way Mapping  
Proposal # 16-086-R1

Dear Tom,

As requested, we have reviewed the extent of surveying services required for this task as outlined in the **RIGHT OF WAY MAPPING REQUIREMENTS** listed below. This firm will address all surveyor related items as contained therein. The limits of surveying and mapping are from the Orange-Osceola County line and heading Northerly along Orange Avenue to the Florida Turnpike for a distance of approximately 0.9 miles in length.

### SCOPE OF SERVICE

#### RIGHT OF WAY MAPPING SURVEY

Prepared in accordance with the Standards of Practice of the Board of Professional Surveyors and Mappers as set forth in Chapter 6J-17 of the Florida Administrative Code Pursuant to Section 472.027, Florida Statutes. Indications of property Boundaries such as fences and walls will be shown on the survey.

**FEE: \$27,500.00**

This proposal does not include excavation for verification of any underground improvements.

Should additional services beyond the scope of this proposal be identified, all such services whether authorized by a change order, supplemental proposal, e-mail authorization, or verbal authorization, they shall be considered a continuation to the original / master proposal for this project.

The terms of this agreement shall be valid for client acceptance for thirty (30) days.

See Item 4.6 for Deliverables.

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5125 ADANSON STREET, SUITE 800 • ORLANDO, FLORIDA 32804

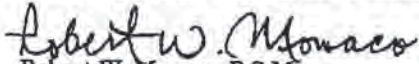
TELEPHONE (407) 262-0957  
www.tinklepaugh.com

Deerfield Land Corporation  
Proposal # 16-086-R1  
November 8, 2016  
Page 2

We sincerely appreciate your choosing Tinklepaugh Surveying Services, Inc. for a proposal and look forward to working with you on this project.

Sincerely,

TINKLEPAUGH SURVEYING SERVICES, INC.

  
Robert W. Monaco, P.S.M.  
Vice President

If this proposal is satisfactory, please have the financially responsible party fully execute below and return one copy to this office as our authorization to proceed.

*The undersigned affirms that he or she is responsible for the fees as stated in this proposal and agrees to the terms contained therein.*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name Title Date

\_\_\_\_\_  
Company Name Phone Number

RWM/vc



Deerfield Land Corporation  
Proposal # 16-086-R1  
November 8, 2016  
Page-3-

The Consultant shall have a licensed Professional Surveyor and Mapper monument the center line of construction/survey at stations that are not more than 600 feet apart and at all P.C.'s, P.T.'s, side street intersections and changes in direction. Stationing shall be shown on the Right-of-Way I. D. Maps at all changes of direction, property lines, points of curvature and proposed parcel takes. The centerline of construction/survey shall be referenced to permanent monumentation (Section Corners, subdivision corners, roadway monumentation) located outside the limits of construction at the beginning and end of project, all P.C.'s and P.T.'s, all changes in direction, and intermediate points such that referenced points are spaced not more than 600 feet apart. Horizontal control, as stated above shall be tied to the Florida State Plane Coordinate System, North American Datum of 1983/1990 Adjustment East Zone and shall be shown on the final Right-of-Way I.D. Maps/miscellaneous surveys. Map Dimensions shall be shown in U.S. feet.

#### 4.4 Minimization of Compensable Impacts

The Consultant shall, in coordination with the Orange County Project Manager, coordinate with Orange County Public Works Engineering, the County Attorney's Office and Orange County Real Estate early in the final design phase of the project to review the design corridor and make the necessary revisions to the design to minimize compensable impacts to private properties. The Consultant shall also identify and evaluate alternatives to acquisition (e.g., retaining walls instead of fill slope easements, closed drainage instead of ditch systems, etc.) to determine the most cost effective option(s) to meet the project needs.

The Consultant shall perform the following services during this phase:

- Meet as necessary with the County and property owners.
- Perform site inspections with the County and property owners as may be necessary.
- Coordinate with the County to identify cost effective ways to reduce compensable impacts.
- Consult with the County as may be necessary during the design process with respect to right-of-way issues.

During this phase, the Consultant shall inspect affected properties in the field to determine the extent of compensable impacts on each parcel and whether such impacts can be reduced in a cost-effective manner. Consideration shall, at a minimum, be given to site access, onsite drainage, onsite parking, onsite utilities, including septic systems, and any other existing facilities impacted by the proposed improvements. This effort shall include meetings with property owners to obtain their input on the configuration of the proposed improvements in those cases where various options exist. The Consultant shall modify the design, where possible, to minimize the number and extent of such compensable impacts and to accommodate property owner preferences where appropriate.

Deerfield Land Corporation  
Proposal # 16-086-R1  
November 8, 2016  
Page 4

The Consultant shall document the above-described investigations and their findings and recommendations. This work should occur early in the design process and prior to completion of 60% plans.

The Consultant shall meet with all property owners where the proposed right-of-way exceeds the limits shown on the Right-of-Way Identification Maps prepared during Phase I.

#### 4.5 Changes to Documents during Right-of-Way Acquisition (Not Used)

#### 4.6 Deliverables

Work to be completed under this section shall require the following items to be delivered and accepted by the County:

Right-of-Way I.D. Maps (60%, 90%, 100%)/miscellaneous surveys in PDF format and three (3) hardcopy paper sets with each submittal – signed and sealed at 100%.

Right-of-Way Survey Field Books. In original format signed and sealed.

Right-of-Way Computation Book (Raw Data Files, Coordinate data files, benchmarks, etc.) In original format signed and sealed.

Title Work for Parcels where parcel takes are involved. In PDF format. Depict all encumbrances (if any) found in Title Work on Right-of-Way I.D. Maps, Sketches and Surveys.

Electronic PDF and CAD format on disc at project completion of all final set(s).

#### 4.7 Pay Items

Work to be completed under this section by the Consultant shall be paid for under the following pay items as listed in the Activity and Fee Schedule.

Right-of-Way Identification Maps  
Right-of-Way Survey Field Books  
Right-of-Way Computation Books  
Real Estate Evaluation Documentation



# Tinklepaugh

## SURVEYING SERVICES

January 17, 2017

Abdul Alkadry, P.E.  
Harris Civil Engineers, LLC  
1200 E. Hillcrest St., Suite 200  
Orlando, Florida 32803

**RE: Orange Ave RCA**  
**(Proposal # 16-086-R2)**

Dear Abdul,

See the listing below for 18 days of surveying services @ 1,520.00 per day = approx. \$27,500.00

18 Crew days @ \$1,120 per day (144hrs X 140 per hour) = \$20,160.00

9 Tech days @ \$600 per day (72 hrs X 75 per hour) = \$5,400.00

19.4 P.S.M. hours @ 100 per hour = \$1,940.00

**TOTAL FEE = \$27,500.00**

If you have any questions, please free to call.

Sincerely,

**TINKLEPAUGH SURVEYING SERVICES, INC.**

*Robert W. Monaco*

Robert W. Monaco, P.S.M.

RWM/vc

5125 ADANSON STREET, SUITE 800 • ORLANDO, FLORIDA 32804

TELEPHONE (407) 262-0957

[www.tinklepaugh.com](http://www.tinklepaugh.com)



**Exhibit "D"**  
**Cost Estimate**

**[See attached 1 page]**



**Exhibit "D"**  
**Cost Estimate**

<b>Lump Sum.....</b>	<b>\$255,280</b>
<b>Reimbursable Fees.....</b>	<b>\$ 24,150.00</b>
<b>Total.....</b>	<b>\$279,430.00</b>