

FIRST AMENDMENT TO AGREEMENT BETWEEN BROWARD COUNTY AND KIMLEY-HORN AND ASSOCIATES, INC. FOR CONSULTANT SERVICES FOR PROFESSIONAL SERVICES FOR REHABILITATION OF NORTH AIRFIELD PAVEMENTS AND ENGINEERED MATERIAL ARRESTING SYSTEM BEDS

This First Amendment to the Agreement (hereinafter defined) between Broward County, a political subdivision of the State of Florida ("County"), and Kimley-Horn and Associates, Inc., a corporation authorized to do business in the State of Florida ("Consultant"), is entered into effective as of the date this First Amendment is fully executed by the parties ("Effective Date").

RECITALS:

A. County and Consultant (collectively, the "Parties") entered into an agreement dated March 17, 2015 (the "Agreement") for Consultant Services for Professional Services for Rehabilitation of North Airfield Pavements and Engineered Material Arresting System Beds.

B. The Parties desire to amend the Agreement to increase the Maximum Compensation Payable to Consultant to address changes in the design and design phase of the North Airfield project, miscellaneous other design changes, and construction phase services.

C. This First Amendment increases the budget by an additional amount of One Million Eight Hundred Thirty-Six Thousand Two Hundred Fifty-Two Dollars (\$1,836,252).

D. The Parties desire to update Exhibits B, B-1, C, and F and Attachment III to the Agreement and other terms of the Agreement.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties amend the Agreement as follows:

1. The foregoing Recitals are true and correct, and are incorporated herein by reference.
2. Throughout this First Amendment, stricken-through language indicates deletions, and underlined language (except for the title) indicates additions.
3. Section 5.1.0.1 of the Agreement is amended as follows:

5.1.0.1 Maximum Compensation Payable to Consultant

County agrees to pay Consultant as compensation for performance of all services as related to Exhibit A required under the terms of this Agreement,

Salary Costs, as described in Section 5.2 , or Lump Sum fees, up to a maximum amount of ~~(\$1,660,834)~~ Three Million Four Hundred Seventy Six Thousand and Two Hundred and Fifty Two Dollars (\$3,476,252) and to reimburse Consultant for Reimbursables as described in Section 5.3, up to a maximum amount of ~~\$60,000~~ One Hundred Ten Thousand Dollars (\$110,000) and to pay Consultant as compensation for Optional Services as described in subsection 5.1.3, below, up to a maximum amount of ~~\$379,166~~ Three Hundred Fifty Thousand Dollars (\$350,000) for a total maximum amount payable to the Consultant under this Agreement of ~~(\$2,100,000)~~ Three Million Nine Hundred Thirty-Six Thousand and Two Hundred and Fifty-Two Dollars (\$3,936,252).

4. Section 5.1.3 of the Agreement is amended as follows:

5.1.3 Optional Services

County has established an amount of ~~\$379,166~~ Three Hundred Fifty Thousand Dollars (\$350,000) for potential Optional Services identified in Exhibit "F" which may be utilized pursuant to Article 6. Unused amounts of these Optional Services monies shall be retained by County.

5. Section 5.1.4 of the Agreement is amended as follows:

5.1.4 Reimbursable Expenses

County has established a maximum amount not-to-exceed of ~~\$60,000~~ One Hundred Ten Thousand Dollars (\$110,000) for potential reimbursable expenses which may be utilized pursuant to Article 5.3. Unused amounts of those monies established for reimbursable expenses shall be retained by County.

6. The chart within Section 5.1.6 of the Agreement is deleted in its entirety and replaced with the following:

PROJECT PHASE/TASK	Method	Fee
LS: Lump Sum/MNTE: Maximum Not To Exceed		
Phase 1 - Program Verification Phase (PVP)		
Tasks 1.1 - 1.10	LS	\$680,237
Tasks 1.8.4 & 1.11	MNTE	\$50,000
Sub Total - Phase 1 PVP		\$730,237
Phase 2 - Design Phase (Construction Documents)		
Phase 2A - Design Development (30% Complete)	LS	\$424,487
Phase 2B - Construction Documents (60% Complete)	LS	\$371,210
Phase 2C - Construction Documents (90% Complete)	LS	\$301,767

Phase 2D - Construction Documents (100% Complete)	LS	\$237,143
Public Outreach	MNTE	\$40,000
Phase 2E - Permitting Phase Services	LS	\$38,431
Phase 2F - Bid and Award Services	LS	\$62,977
Sub Total Phase 2 - Design Phase (Construction Documents)		\$1,476,015
Phase 3 - Construction Phase Services		
Phase 3A - Construction Administration	LS/MNTE	\$1,270,000
Total Basic Services Fee		\$3,476,252

7. Section 10.4 of the Agreement is deleted in its entirety and replaced with the following:

10.4 Public Records. To the extent CONSULTANT is acting on behalf of COUNTY as stated in Section 119.0701, Florida Statutes, CONSULTANT shall:

- a. Keep and maintain public records required by COUNTY to perform the services under this Agreement;
- b. Upon request from COUNTY, provide COUNTY with a copy of the requested records or allow the records to be inspected or copied within a reasonable time and at a cost that does not exceed that provided in Chapter 119, Florida Statutes, or as otherwise provided by law;
- c. Ensure that public records that are exempt or confidential and exempt from public record requirements are not disclosed except as authorized by law for the duration of this Agreement and following completion or termination of this Agreement if the records are not transferred to COUNTY; and
- d. Upon completion or termination of this Agreement, transfer to COUNTY, at no cost, all public records in possession of CONSULTANT or keep and maintain public records required by COUNTY to perform the services. If CONSULTANT transfers the records to COUNTY, CONSULTANT shall destroy any duplicate public records that are exempt or confidential and exempt. If CONSULTANT keeps and maintains public records, CONSULTANT shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to COUNTY upon request in a format that is compatible with the information technology systems of COUNTY.

The failure of CONSULTANT to comply with the provisions of this section shall constitute a material breach of this Agreement entitling COUNTY to exercise any

remedy provided in this Agreement or under applicable law.

A request for public records regarding this Agreement must be made directly to COUNTY, who will be responsible for responding to any such public records requests. CONSULTANT will provide any requested records to COUNTY to enable COUNTY to respond to the public records request.

Any material submitted to COUNTY that CONSULTANT contends constitutes or contains trade secrets or is otherwise exempt from production under Florida public records laws (including Florida Statutes Chapter 119) ("Trade Secret Materials") must be separately submitted and conspicuously labeled "EXEMPT FROM PUBLIC RECORD PRODUCT – TRADE SECRET." In addition, CONSULTANT must, simultaneous with the submission of any Trade Secret Materials, provide a sworn affidavit from a person with personal knowledge attesting that the Trade Secret Materials constitute trade secrets under Florida Statutes Section 812.081 and stating the factual basis for same. In the event that a third party submits a request to COUNTY for records designated by CONSULTANT as Trade Secret Materials, COUNTY shall refrain from disclosing the Trade Secret Materials, unless otherwise ordered by a court of competent jurisdiction or authorized in writing by CONSULTANT. CONSULTANT shall indemnify and defend COUNTY and its employees and agents from any and all claims, causes of action, losses, fines, penalties, damages, judgments, and liabilities of any kind, including attorneys' fees, litigation expenses, and court costs, relating to the non-disclosure of any Trade Secret Materials in response to a records request by a third party.

IF CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF FLORIDA STATUTES CHAPTER 119 TO CONSULTANT'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT (954) 359-2581 JCHAMBERS@BROWARD.ORG, 2200 SW 45TH STREET, SUITE 101, DANIA BEACH, FL 33312.

10.4.1 Audit Rights, and Retention of Records. COUNTY shall have the right to audit the books, records, and accounts of CONSULTANT and its Subconsultants that are related to this Agreement. CONSULTANT and its Subconsultants shall keep such books, records, and accounts as may be necessary in order to record complete and correct entries related to this Agreement and performance thereunder. All books, records, and accounts of CONSULTANT and its Subconsultants shall be kept in written form, or in a form capable of conversion into written form within a reasonable time, and upon request to do so, CONSULTANT or its Subconsultant, as applicable, shall make same available at no cost to COUNTY in written form.

CONSULTANT and its Subconsultants shall preserve and make available, at reasonable times within Broward County for examination and audit by COUNTY, all financial records, supporting documents, statistical records, and any other documents pertinent to this Agreement for a minimum period of three (3) years after expiration or termination of this Agreement or until resolution of any audit findings, whichever is longer. COUNTY audits and inspections pursuant to this Section may be performed by any COUNTY representative (including any outside representative engaged by COUNTY). COUNTY reserves the right to conduct such audit or review at CONSULTANT's place of business, if deemed appropriate by COUNTY, with seventy-two (72) hours' advance notice.

Any incomplete or incorrect entry in such books, records, and accounts shall be a basis for COUNTY's disallowance and recovery of any payment upon such entry. If an audit or inspection in accordance with this Section discloses overpricing or overcharges to COUNTY of any nature by the CONSULTANT in excess of five percent (5%) of the total contract billings reviewed by COUNTY, the reasonable actual cost of COUNTY's audit shall be reimbursed to the COUNTY by the CONSULTANT in addition to making adjustments for the overcharges. Any adjustments and/or payments due as a result of such audit or inspection shall be made within thirty (30) days from presentation of COUNTY's findings to CONSULTANT.

CONSULTANT shall ensure that the requirements of this section are included in all agreements with its Subconsultant(s).

8. Exhibits B, B-1, C, and F and Attachment III to the Agreement are hereby deleted in their entireties and replaced with Exhibits B, B-1, C, and F and Attachment III attached hereto and made a part of this First Amendment. As of the effective date of this First Amendment, all references to Exhibits B, B-1, C, and F and Attachment III in the Agreement shall refer to the form of Exhibits B, B-1, C, and F and Attachment III attached to this First Amendment.

9. In the event of any conflict or ambiguity between this First Amendment and the Agreement, the Parties agree that this First Amendment shall control.

10. Capitalized terms not otherwise defined herein shall have the meanings set forth in the Agreement.

11. The Agreement, as amended herein, incorporates and includes all prior negotiations, correspondence, conversations, agreements, and understandings applicable to the matters contained herein, and the Parties agree that there are no commitments, agreements, or understandings concerning the subject matter hereof that are not contained in the Agreement and this First Amendment to the Agreement. Accordingly, the Parties agree that no deviation from the terms hereof shall be predicated upon any prior representations or agreements, whether oral or written.

12. Preparation of this First Amendment has been a joint effort of the Parties and the resulting document shall not, solely as a matter of judicial construction, be construed more severely against one of the Parties than any other.

13. Except as modified herein, all terms and conditions of the Agreement shall remain in full force and effect.

14. This First Amendment may be executed in multiple counterparts, each of which shall be deemed to be an original.

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the Parties hereto have made and executed this First Amendment: Broward County, through its Board of County Commissioners, signing by and through its Mayor or Vice-Mayor, authorized to execute same by Board action on the _____ day of _____, 2018, and Kimley-Horn and Associates, Inc., signing by and through its _____, duly authorized to execute same.

COUNTY

ATTEST:

BROWARD COUNTY, by and through
its Board of County Commissioners

Broward County Administrator, as
Ex-officio Clerk of the Broward County
Board of County Commissioners

By _____ Mayor
____ day of _____, 2018

Insurance requirements
approved by Broward County
Risk Management Division

Approved as to form by
Andrew J. Meyers
Broward County Attorney
Aviation Office
2200 SW 45th Street, Suite 101
Dania Beach, Florida 33312
Telephone: (954) 359-6100
Telecopier: (954) 359-1292

By 5-15-18
Tracy Meyer, Esq. (Date)
Risk Insurance and Contracts Manager

By 5/15/18
Alexander J. Williams, Jr. (Date)
Senior Assistant County Attorney

FIRST AMENDMENT TO AGREEMENT FOR CONSULTANT SERVICES FOR
PROFESSIONAL SERVICES FOR REHABILITATION OF NORTH AIRFIELD
PAVEMENTS AND ENGINEERED MATERIAL ARRESTING SYSTEM BEDS

CONSULTANT

WITNESSES:

KIMLEY-HORN AND ASSOCIATES, INC.

[Signature]
Signature

By: [Signature]
Authorized Signor

Shanda S. Layne.
Print Name of Witness above

GARY R RATAJ SENIOR ASSOCIATE
Print Name and Title

[Signature]
Signature

14 day of MAY, 2018

JULIA FOCARACCI
Print Name of Witness above

ATTEST:
[Signature]
Corporate Secretary or other person
authorized to attest

(CORPORATE SEAL OR NOTARY)



EXHIBIT

EXHIBIT B
SALARY COSTS

Project No: RLI# R1083508R1
Project Title: Professional Services for the Rehabilitation of North Air Pavements and Engineered Material Arresting System I
Consultant/Subconsultant Name: Kimley-Horn and Associates, Inc.

FILL IN POSITIONS AS APPLICABLE

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE
			2.90		(\$/HR)
Principal	\$86.21		2.90		\$250.00
Chief Engineer	\$82.70		2.90		\$239.83
Project Manager	\$82.70		2.90		\$239.83
Senior Project Engineer	\$64.72		2.90		\$187.69
Resident Project Representative	60.00		2.90		\$174.00
Engineer	\$45.42		2.90		\$131.72
Senior Designer	\$43.91		2.90		\$127.34
Project Coordinator/Specialist	37.27				108.08
Junior Engineer (Analyst)	\$31.86		2.90		\$92.39
Administrative Assistant	\$29.55		2.90		\$85.70

Multiplier of 2.90 is calculated as follows:

OVERHEAD = HOURLY RATE X OVERHEAD (137.27)%

FRINGE = HOURLY RATE X FRINGE (33.36)%

PROFIT = (HOURLY RATE + OVERHEAD + FRINGE) X PROFIT (7.16)%

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + PROFIT) / HOURLY RATE

EXHIBIT B
SALARY COSTS

Project No: RLI#1083508R1
Project Title: Professional Services – Rehab of North Airfield Paver
Consultant/Subconsultant Name: Chen Moore & Associates

FILL IN POSITIONS AS APPLICABLE

	MAXIMUM HOURLY RATE (\$/HR)		MULTIPLIER		MAXIMUM BILLING RATE (\$/HR)
TITLE		X	2.90	=	
Principal	\$75.74		2.90		\$219.6
Project Manager	\$58.34		2.90		\$169.1
Senior Engineer	\$46.39		2.90		\$134.5
Project Engineer	\$42.21		2.90		\$122.4
Engineer	\$34.37		2.90		\$99.6
Designer	\$37.81		2.90		\$109.6
Senior CADD Technician	\$28.05		2.90		\$81.3
Senior Construction Specialist	\$38.30		2.90		\$111.0
Construction Specialist	\$29.35		2.90		\$85.1
Administrative Assistant	\$31.76		2.90		\$92.1

Multiplier of 2.90 is calculated as follows:

OVERHEAD = HOURLY RATE X OVERHEAD (152.02)%

FRINGE = HOURLY RATE X FRINGE (33.38)%

PROFIT = (HOURLY RATE + OVERHEAD + FRINGE) X PROFIT (1.61)%

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + PROFIT) / HOURLY RATE

EXHIBIT B-1
KEY STAFF

Project No.:	RLI #R1083508R1
Project Title:	Professional Engineering Services for Rehabilitation of North Airfield Pavements and Engineered Material Arresting System Beds
Facility Name:	Fort Lauderdale Hollywood International Airport (FLL)

NO.	POSITION	NAME	FIRM
1	Principal	Mark Manning, P.E.	Kimley-Horn
2	Project Manager	Michael Carey, P.E.	Kimley-Horn
3	Chief Engineer	Paul Piro, P.E.	Kimley-Horn
4	Senior Project Engineer	Eileen Velez Vega, P.E.	Kimley-Horn
5	Professional	Stephanie Lopez, P.E.	Kimley-Horn
6	Senior Designer	Julia Focaracci, E.I.	Kimley-Horn
7	EMAS Design/Airfield Engineering	Christopher Bowker, P.E.	Jacobs Engineering Group
8	Civil and Utilit Engineering	Michael Adeife, P.E.	EAC Consulting
9	Stormwater Permitting and Design	Jason McClair, P.E.	Chen-Moore
10	Pavement Design	Roy McQueen, P.E.	Roy D. McQueen
11	Non-Destructive Testing and Analysis	Brian J. Orandello	Pavement Technical Solutions
12	Surveyor	James D. Stoner, P.S.M.	Stoner & Associates
13	Electrical Engineering	Gregory S. Mundy	IMDC
14	Public Outreach	Sheryl A. Dickey	Dickey Consulting Services
15	Public Outreach	Yvonne Garth	Garth Solutions
16	Geotechnical Engineering	Kumar Vedula, P.E.	Tierra South Florida
17	EMAS Evaluation and Design	Trip Thomas, C.M.	Engineered Arresting System Corporation - Zodiac Aerospace; d/b/a Zodiac Arresting Systems (ZAS)

EXHIBIT C
SCHEDULE OF SUBCONSULTANTS

Project No.:	RLI #R1083508R1
Project Title:	Professional Engineering Services for Rehabilitation of North Airfield Pavements and Engineered Material Arresting System Beds
Facility Name:	Fort Lauderdale Hollywood International Airport (FLL)

NO.	POSITION	NAME
1	Jacobs Engineering Group	EMAS Design, Civil Engineering
2	EAC Consulting, Inc.	Civil and Utilities Engineering
3	Chen Moore and Associates	Stormwater Design and Permitting
4	Roy D. McQueen Engineering Consultants, P.L.C.	Pavement Analysis and Design
5	Pavement Technical Solutions, Inc.	Non-Destructive Deflection Testing & Data Analysis
6	Stoner & Associates, Inc.	Surveying
7	IMDC Inc.	Electrical Engineering
8	Dickey Consulting Services, Inc.	Public Outreach
9	Tierra South Florida, Inc.	Geotechnical Engineering
10	Engineered Arresting System Corporation - Zodiac Aerospace; d/b/a Zodiac Arresting Systems (ZAS)	EMAS Evaluation and Design
11	Garth Solutions	Public Outreach
12	Ace Blueprinting	Printing and Reproductions

REVISED CONTRACT AMOUNTS - EXHIBIT F OPTIONAL SERVICES	
<u>OPTIONAL SERVICES (INCLUDING LABOR & EXPENSES)</u>	<u>AMOUNT</u>
<u>DESIGN PHASE</u>	<u>\$250,000</u>
<u>Includes undefined tasks, Environmental Services, Evaluations, Meetings, Coordination, Analysis of Impacts, Peer Review, Safety Risk Analysis, Additional Design, Survey, Utility Location, Geotechnical Investigation, Permit Fees, Etc</u>	
<u>Sub Total</u>	<u>\$250,000</u>
<u>CONSTRUCTION PHASE SERVICES</u>	
<u>CONSTRUCTION ADMINISTRATION</u>	<u>\$100,000</u>
<u>Includes additional services for construction administration and additional design and or survey during construction</u>	
<u>Sub Total</u>	<u>\$100,000</u>
<u>TOTAL</u>	<u>\$350,000</u>

**BROWARD COUNTY AVIATION DEPARTMENT (BCAD) ELECTRONIC MEDIA
SUBMITTAL REQUIREMENTS**
Last Revised 04/26/2017

Broward County Aviation Department (BCAD) utilizes electronic media as the principal way to develop, communicate and archive information concerning its various airport programs. Electronic media encompasses all methods of conveying digital information and files including e-mail, File Transfer Protocol (FTP), Compact Disc (CD) / Digital Video Disc (DVD), web-based file-sharing services, Universal Serial Bus (USB) and physical drives.

Prior to development of scope of services, BCAD will specify the deliverables to be provided via electronic media. **Prior to commencing work under any Contract, the Consultant/ Contractor must contact the Contract Administrator and/or designated Project Manager to verify they have a copy of the latest version of BCAD's Electronic Media Submittal Requirements, as well as any associated standards, specifications, procedures, or templates related to their scope of services.** BCAD modifies these documents as needed to make corrections and/or to keep up with latest industry trends, best practices, guidelines, standards and regulations, as well as to improve its internal processes. Some requirements below may not apply, or additional requirements may be needed, based on the nature of the scope of services and associated deliverables. Any deviations from the requirements below must be approved by BCAD's Contract Administrator or the Project Manager designated to approve or deny such requests.

Refer to BCAD GIS, CAD and BIM standards at:
<http://www.broward.org/Airport/Business/Standards>

(A) General Requirements:

- 1) All work, including surveying work, drawings, maps, details or other drawing information to be provided in electronic media by Consultant/Contractor shall be developed using computer-aided design (CAD), geographic information system (GIS), Building Information Modeling (BIM), and/or other software and procedures conforming to the following criteria. Electronic data submittals shall also include Portable Document Format (PDF) versions of specific pages and drawing sheets, as specified in the Contract.
- 2) All electronic media should be readable and function as intended without conversion or modification on the Microsoft Windows Operating System. All electronic media should be in their original editable file or data format, or accompanied by the original editable format (e.g., a PDF engineering drawing file must be accompanied by an original CAD file).

(B) Software Formats:

CAD Format

- 1) Provide all CAD data in Autodesk, Inc.'s AutoCAD release 2013 or later for Windows in native .DWG electronic file format. Consultants who do not use AutoCAD must ensure that translated DWGs that are provided can be used within AutoCAD.
- 2) Ensure that all digital files, data (e.g., constructs, elements, base files, prototype drawings, externally referenced files (XREFs), blocks, attribute links), and other files external to the drawing itself are compatible with the BCAD approved CAD and GIS software as noted above.

GIS Format

- 3) All GIS data shall be delivered in formats compatible with Esri ArcGIS version 10.1 or higher file geodatabase. Federal Aviation Administration Airports GIS (AGIS) data shall be submitted in Esri File Geodatabase format unless otherwise specified by BCAD.
- 4) All deliverables must include appropriate metadata conforming to BCAD and where applicable FAA standards. Metadata shall be in Extensible Markup Language (XML) format, unless specified otherwise in writing by the BCAD Contract Administrator or Project Manager.
- 5) When requested, the Consultant/Contractor will be required to ensure that all GIS data is formatted for successful submission to the FAA AGIS portal without any additional changes required by BCAD staff. Consultant/Contractor GIS and CAD data deliverables shall conform to the latest BCAD, and where applicable, FAA standards.
- 6) All database tables: conform to the structure and field-naming guidance provided by BCAD. Specifically, all database tables shall conform to applicable FAA and BCAD standards and guidelines. All databases shall be compliant with at least MS Access 2007 and/or other format (DBF, XML, Esri geodatabase, other) as requested by BCAD. Formats may change, at BCAD's request, depending on the particulars of the projects. Consultant/Contractor shall inform BCAD of the most suitable format for a given project and explain, in writing, the benefits of that format versus alternatives. BCAD has the final decision as to format regardless of Consultant's/Contractor's written explanation.

Additional Deliverable Requirements

- 7) The term "compatible" means that data can be accessed directly by the target CAD and GIS software without conversion, translation, pre-processing, or post-processing of the electronic data files.
- 8) Non-geospatial database delivered with CAD/GIS files must be provided in relational database format compatible with Microsoft Access 2007 or higher, and other compatible format requested by BCAD. See Section (E) (1) below, "Non-Graphical Format", for additional requirements for non-geospatial databases.
- 9) Maintain all linkages of non-spatial data with spatial elements, relationships between database tables, and report formats. Consultant/ Contractor should work with BCAD to ensure linkages will conform with and match those already in place or generated to create such links.
- 10) All CAD and GIS files shall meet FAA spatial accuracy requirements and be georeferenced as follows:
North American Datum (NAD) 83, HARN, US Survey Feet State Plane Coordinate System,
Florida East Zone North American Vertical Datum (NAVD) 88, US Survey Feet

(C) Standards:

- 1) Standard plotted drawing size: 22 inch x 34 inch sheets unless otherwise specified by BCAD. All drawings shall be formatted to use the BCAD standard Cover Page and Title Block.
- 2) CAD files should be named as described in BCAD's CAD Standard.
- 3) Layering:
 - a) CAD layers must be named according to BCAD's CAD Standard.
 - b) Submission of layers that do not conform to the standards listed above will require a written request using the form specified in BCAD's CAD standard and advance written BCAD approval.

- c) All raster files shall be delivered in georeferenced TIFF and compressed SID or JPEG2000 formats. If files must be tiled, a reference map will be provided depicting the location of each tile image. All raster files shall be tiled if file size reaches a size in excess of what BCAD finds difficult to use.
- 4) Attribute Definitions:
 - a) Obtain latest guidance from BCAD concerning attribute definition, database linking and other information embedding requirements prior to production of data. All database information shall conform to the latest versions of FAA ACs 150/5300-16, 17, and 18, and other BCAD standards. Additional attributes may be required at the discretion of BCAD.
 - b) CAD data shall be attributed following Section 4.2, "Object Data", of the BCAD CAD Standard, and by utilizing the standard object data tables included in each BCAD CAD template file. The specific object data tables and attributes to be populated should be coordinated and established with the BCAD Project Manager and BCAD GIS. BCAD requires object data functionality in its CAD Standard to accommodate asset attribution and allow BCAD to simplify the data migration process from CAD to GIS.
- 5) Conformance:
 - a) No deviations from BCAD's established CAD/GIS standards will be permitted unless prior written approval of such deviation has been received from BCAD's Contract Administrator.
 - b) Pre-coordinate the development, use and submittal of photorealistic renderings, animations, presentations and other visualization/ information tools utilized during the design and construction process to ensure compatibility of submittal with County's uses and information systems.
 - c) Building Information Modeling (BIM) files should conform to BCAD's BIM guidelines and standards.

(D) Digital Photography:

Provide digital photography files and other miscellaneous graphics in JPEG format, unless required in an alternate format such as that needed for CAD, GIS, and/or BIM.

- 1) Photographs should be oriented properly for viewing without rotating the image (i.e., "up" should appear at the top).
- 2) Exchangeable Image File Format (Exif) data should be embedded in the JPEG photo files and included the data on which the photo was taken. Exterior photos should also include tags indicating the latitude and longitude at which the photo was taken.

(E) Non-Graphic Format:

- 1) Provide database files in relational database format compatible with Microsoft Access 2007 or higher, and/or other compatible SQL format database including all tables, form and report formats, fonts, typefaces, bit-map and vector graphics and other information necessary for printing. Ensure integrity of relational database structure. Consultant/Contractor may be required to ensure that database formats conform to and can be integrated with other BCAD legacy applications and systems.

- 2) **ADA Compliance.** As used in this section, ADA means the Americans with Disabilities Act, 42 U.S.C. 126, *et seq.*, and any of its regulations, and includes any Florida statute or County ordinance, policy or regulation intended to comply with any provision or regulation of the ADA.
- a) If requested by BCAD, The Consultant shall provide BCAD with fully ADA accessible electronic files (the ADA Files) for posting on County's website, including but not limited to fill.net.
 - 1. The ADA Files may include but are not limited to contracts, flyers, reports, or newsletters.
 - 2. County, in its sole discretion, may approve or reject the format and content of the ADA Files before posting the files on County's website.
 - b) If Consultant is creating a separate website as part of its contract, the website must be fully ADA accessible, including any attachments to the website. County, in its sole discretion, may approve or reject the format and content of the fully accessible ADA website, including any attachments to the website.

(F) Delivery Media and Format:

- 1) Submit electronic media in conformance with this document when and as specified in Contracts and Work Authorizations.
- 2) Electronic data and files shall be provided on CD/DVD, as an e-mail attachment, via a Secure File Transfer Protocol (FTP) site, or via a password-protected web-based file sharing service (e.g., DropBox, Box, SharePoint, or Basecamp).
- 3) Large data or file sets, (e.g., high-resolution imagery in TIFF format) may be shipped via USB flash drive, external SSD drive, or external HDD drive. Drives must be scanned for viruses by the Consultant/Contractor, and certified as per submittal requirements in Section (H)(2)(c) below.
- 4) The electronic media shall be in the format which can be readily read and processed by the BCAD's target CAD/GIS systems.
- 5) The external label for physical media such as CD/DVD shall contain, as a minimum, the following information:
 - a) The Contract or Project number, title, and date. If a contract or project number has not yet been issued, then it is permissible to use a BCAD issued Request For Proposal (RFP) or Request for Letters of Interest (RLI) number.
 - b) The Facility Name (e.g. "Fort Lauderdale - Hollywood International Airport" or "North Perry Airport")
 - c) The date of the submittal as well as the date on which the electronic data can be considered valid, if different than the submittal.
 - d) The sequence number and total number of physical media if more than once is required to provide the electronic data being delivered.
 - e) Special requirements for Sensitive Security Information (SSI):
 - 1. SSI transmitted by e-mail must be in a password-protected attachment. SSI is not

authorized for posting on the internet/intranet except for postings on secure sites as specifically authorized by the BCAD Project Manager.

2. The following text must appear on either (a), the exterior label of any media, (b) in the email body of any attachment, or (c) as a text file named README.TXT in the same secured online file-sharing service or FTP folder, containing SSI as defined by 49 CFR 1520. *WARNING: This record contains Sensitive Security Information that is controlled under 49 CFR parts 15 and 1520. No part of this record may be disclosed to persons without a "need to know", as defined in 49 CFR parts 15 and 1520, except with the written permission of the Administrator of the Transportation Security Administration or the Secretary of Transportation. Unauthorized release may result in civil penalty or other action. For U.S. government agencies, public disclosure is governed by 5 U.S.C. 552 and 49 CFR parts 15 and 1520.*
- 6) Before all files are placed on the delivery electronic digital media, the following procedures shall be performed:
 - a) Ensure that drawing sheets, viewports, paperspace, line weights, fonts, and other drawing components are correctly configured for BCAD's viewing and plotting.
 - b) Make sure all reference files are attached without device or directory specifications. Reference files should not be bound.
 - c) Compress and reduce all design files using compatible file compression/ decompression software approved by BCAD. If the file compression/decompression software is different from that approved by BCAD, then an electronic copy of the file compression/ decompression software shall be purchased and licensed for BCAD and provided to BCAD with the delivery media.
 - d) Include all files, both graphic and non-graphic, required for the project. All blocks not provided as BCAD-furnished materials must be provided to BCAD as a part of the electronic deliverables.
 - e) Make sure that all support files, such as those listed above, are in the same directory and that references to those files do not include device or directory specifications. Files opened on BCAD's computer systems must have referenced/linked support files, such as AutoCAD blocks and XREFs, automatically load without additional referencing/linking by BCAD staff.
 - f) Include any standard sheets (i.e., abbreviation sheets, standard symbol sheets, or other listing) necessary for a complete project. These shall conform to BCAD standard cover sheet and title block pages.
 - g) Do not bind or explode any drawing references such as blocks and XREFs.
 - h) Document any fonts, tables, or other similar customized drawing element(s) developed by Consultant/Contractor or not provided among BCAD furnished materials. The Consultant/Contractor shall obtain BCAD's approval before using anything other than BCAD's standard fonts, line types, tables, blocks, or other drawing elements available from BCAD.

(G) Drawing Development Documentation:

- 1) Provide the following information for each finished drawing:

- a) How the data were input (e.g., keyed in, downloaded from a survey total station instrument (include name and model), and other identification data).
- b) Brief drawing development history (e.g., date started, modification date(s) with brief description of item(s) modified, author's name, and other identifying data.).
- c) The names of the reference, blocks, symbols, details, tables, and schedule files required for the finished drawing.
- d) Layer assignments and lock settings.
- e) Text fonts, line styles\types used, and GIS layer file settings.
- f) Any additional information per FAA ACs and BCAD standards.

(H) Submittal:

- 1) Submit as Project Record Documents, conforming to requirements above, and as required for project phase submittals and project record documents. Where Electronic Project Record Documents are required, Consultant will provide BCAD one set of AutoCAD electronic file format contract drawings, to be used for as-built drawings. In addition, provide scanned PDF's of the signed and sealed as-built AutoCAD file(s).
- 2) Submit electronic media with a transmittal letter containing, as a minimum, the following information:
 - a) The information included on the external label of each media unit, along with the total number of units being delivered, and a list of the names and descriptions of the files on each one.
 - b) Brief instructions for transferring the files from the media.
 - c) Certification that all delivery media are free of known computer viruses. A statement including the name(s) and release date(s) of the virus-scanning software used to analyze the delivery media, the date the virus-scan was performed, and the operator's name shall also be included with the certification. The release or version date of the virus-scanning software shall be the current version which has detected the latest known viruses at the time of delivery of the digital media.
 - d) The following "File Development and Project Documentation Information" as an enclosure or attachment to the transmittal letter provided with each electronic digital media submittal.
 - (1) Documentation of the plot file for each drawing which will be needed to be able to duplicate the creation of the file by BCAD at a later date. This documentation shall include configuration settings (e.g., drawing size and configuration), and any other special instructions.
 - (2) List of any deviations from BCAD's standard layer/level scheme and file-naming conventions.
 - (3) List of all new symbol blocks created for project, which was not provided to Consultant/Contractor with the BCAD-furnished materials.
 - (4) List of all new figures, symbols, tables, schedules, details, and other blocks created for the project, which were not provided to Consultant/Contractor with the BCAD-furnished materials, and any associated properties.

- (5) List of all database files associated with each drawing, as well as a description and documentation of the database format and schema design. All information shall conform to BCAD standards.
- (6) All metadata per BCAD, FAA, and FDOT requirements and those of other entities if specified by BCAD.
- (7) Provide the following information for each finished drawing in a PDF document:
 - (a) How the data was inputted (e.g., keyed in, downloaded from a survey total station instrument (include name and model), and other identification data).
 - (b) Brief drawing development history (e.g., date started, modification date(s) with brief description of item(s) modified, author's name, and other identifying data).
 - (c) The names of the reference, blocks, symbols, details, tables, and schedule files required for the finished drawing.
 - (d) Layer assignments and lock settings. Refer to layering standards Section (C)(3)(b) for layer list documentation requirements.
 - (e) Text fonts, line styles\types used, and GIS layer file settings.

(I) Ownership:

- 1) County will have ownership, including any copyright, of information and materials developed under these and other contractual requirements, including but not limited to reports, listings, and all other items pertaining to the work created or developed under the Contract with Broward County.
- 2) Ownership rights under the contract are rights to use, re-use, duplicate, or disclose text, data, drawings, and information, in whole or in part, in any manner and for any purpose whatsoever without compensation to or approval from Consultant/Contractor.
- 3) BCAD will, at all reasonable times, have the right to inspect the work and will have access to and the right to make copies of the above-mentioned items.
- 4) All text, electronic digital files, data, and other products generated under this contract shall become the property of County except where otherwise limited within the Contract.

(J) BCAD-Furnished Materials to the Consultant/Contractor:

- 1) BCAD may make various electronic files available to the Contractor during the Pre-Construction and Construction phases of the Project. "Consultant" or "Consultant/Contractor" refers to the planning, engineering, design, and/or survey firm or entity. "Contractor" refers to the firm or entity performing actual construction. To this end, BCAD shall make the following information available to the Contractor in electronic format:
 - a) Work files: Selected work product files, reports, spreadsheets, databases, specifications, drawings and other documentation of Consultant's work in progress may be provided to the Contractor, Managing General Contractor, or other County consultant on an as required basis.
 - b) Where electronic media submittals of final site surveys are required, BCAD will provide electronic copies of any existing site survey data.

- c) BCAD will supply Consultant with all necessary BCAD standard cover page and title block files and formats, GIS schema, CAD layering.

(K) Other Digital Information:

- 1) A variety of digital information may be generated by participants in the design process including BCAD, Consultant, sub consultants, Contractor, subcontractors, BCAD's commissioning authority, local jurisdictional authorities, and other project team members.
- 2) Consultant/Contractor shall facilitate and participate wherever possible in this digital exchange of information by conforming to the standards expressed above.