



**Craven Thompson
& Associates, Inc.**
Project Management
Engineering
Landscape Architecture
Surveying & Planning

3563 NW 53rd Street, Fort Lauderdale, FL 33309
Phone: (954) 739-6400

PREPARED FOR

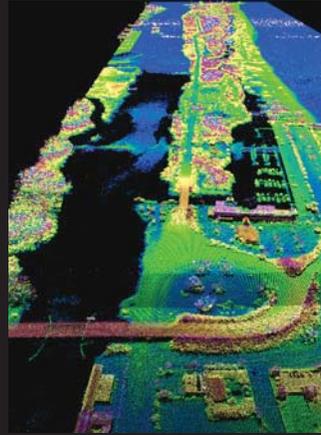


**REQUEST FOR QUALIFICATIONS
TO PROVIDE SURVEYING AND MAPPING CONSULTING SERVICES TO THE
CRA FOR NEIGHBORHOOD LIGHTING & STREETScape ENHANCEMENT**

• DCRA 19-026

AUGUST 27TH, 2019

PDF FORMAT



Section 1: Title Page

SECTION 1 - TITLE PAGE



**Hollywood, Florida
Community Development Agency (CRA)
Request for Qualifications
to Provide
Surveying and Mapping Consulting Services
to the CRA for
Neighborhood Lighting & Streetscape Enhancement
DCRA 19-026**



Submitted to:

City of Hollywood
Office of the City Clerk
2600 Hollywood Boulevard, Room 221
Hollywood, Florida 33020

Submitted by:

Craven, Thompson & Associates, Inc.
3563 NW 53rd Street
Fort Lauderdale, Florida 33309
Phone: (954) 739-6400
Contact: Richard D. Pryce, P.S.M.
Vice President, Surveying & GIS
Email: rpryce@craventhompson.com

CRIVEN THOMPSON



& ASSOCIATES INC.

August 27, 2019



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Section 3: Letter of Transmittal

SECTION 3 - LETTER OF TRANSMITTAL



August 27, 2019

Attn.: Ms. Patricia Cerny, City Clerk
City of Hollywood
Office of the City Clerk
2600 Hollywood Blvd., Room #221
Hollywood, Florida 33020

**RE: SOLICITATION DCRA 19-026
SURVEYING AND MAPPING CONSULTING SERVICES**

Dear Selection Committee Members:

In response to the **Hollywood Florida Community Redevelopment Agency's** request for qualifications "*Surveying and Mapping Consulting Services*", **Craven Thompson and Associates, Inc.** is pleased to submit this Statement of Qualifications. We have recently provided very similar services to many governmental clients. Craven Thompson is very familiar with the many tasks required in the surveying and mapping field.

Craven Thompson understands that the Hollywood Florida Community Redevelopment Agency is seeking a professional surveying and mapping firm to provide surveying and mapping services for Neighborhood Lighting & Streetscape Enhancement project within the Downtown CRA District from Johnson Street to Washington Street between 21st Avenue and US-1. Services to be accomplished under this contract will include, but not be limited to, various, but not as yet identified design surveys, construction layouts, boundary surveys, preparation of sketches and legal descriptions, mapping, AutoCAD drafting, calculations and other related survey and mapping projects

In past four (4) years, Craven Thompson has performed a wide variety of surveying and mapping tasks for municipalities and other governmental entities. This includes: topographic surveys of rights-of-way, both through conventional means and also with the use of mobile LiDAR for the City of Hollywood Downtown CRA. We have a great deal of experience with CRA staff and a thorough understanding of the CRA's expectations.

Authorized Agent and Point of Contact:

Richard D. Pryce, P.S.M., Vice President, Surveying & G.I.S.
Craven Thompson & Associates, Inc.
3563 NW 53rd Street
Fort Lauderdale, Florida 33309
Phone: (954) 739-6400
Email: rpryce@craventhompson.com

Based on this experience, we believe that we are the most qualified firm to undertake the surveying and mapping services for the Hollywood Florida Community Redevelopment Agency. Note that all projects listed and contained in our Standard Form 330 submittal (located in Section 4) were performed four (4) years ago or less.

SECTION 3 - LETTER OF TRANSMITTAL

Craven Thompson is an eighty (80) person corporation with offices in Fort Lauderdale and Delray Beach with twenty-nine (29) civil engineers (14 are registered), four (4) professional surveyors and mappers, four (4) surveying technicians, nine (9) field crews, and four (4) registered landscape architects.

Craven Thompson has assembled a team of experienced surveying and mapping professionals well-suited to provide the Downtown CRA with the best possible service. Through that experience, Craven Thompson has developed the knowledge and expertise necessary to provide comprehensive and accurate services to the CRA. We have included sub-consultants: Langan Engineering & Environmental for Mobile LiDAR; and Ritzel-Mason for Subsurface Utility Engineering.

We currently and for the next foreseeable future have the staff availability both in the office and field to meet the CRA's time schedules. We commit to provide all of the staff, time and resources necessary to successfully execute the services under this solicitation. We sincerely appreciate the opportunity of providing this response to the Hollywood Florida Community Redevelopment Agency and hope to develop a positive working relationship with the CRA and staff.

Sincerely,

CRAVEN THOMPSON & ASSOCIATES, INC.



RICHARD D. PRYCE, P.S.M.
Vice President, Surveying & G.I.S.

RDP/tg

Section 4: Standard Form 330

ARCHITECT - ENGINEER QUALIFICATIONS

PART I - CONTRACT-SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION *(City and State)*

Surveying and Mapping Consulting Services Consulting Services to the CRA for Neighborhood Lighting & Streetscape Enhancement, Hollywood, Florida

2. PUBLIC NOTICE DATE

July 30, 2019

3. SOLICITATION OR PROJECT NUMBER

DCRA 19-026

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE

Richard D. Pryce, P.S.M., Vice President, Surveying & G.I.S.

5. NAME OF FIRM

Craven Thompson & Associates, Inc.

6. TELEPHONE NUMBER

(954) 739-6400

7. FAX NUMBER

(954) 739-6409

8. E-MAIL ADDRESS

rpryce@craventhompson.com

C. PROPOSED TEAM

(Complete this section for the prime contractor and all key subcontractors.)

	<i>(Check)</i>			9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
	PRIME	J-V PARTNER	SUBCON-TRACTOR			
a.	<input checked="" type="checkbox"/>			Craven Thompson & Associates, Inc. <input type="checkbox"/> CHECK IF BRANCH OFFICE	3563 NW 53 rd Street Fort Lauderdale, Florida, 33309	Surveying and Mapping
b.			<input checked="" type="checkbox"/>	Ritzel-Mason, Inc. <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	2131 Hollywood Boulevard Suite 204 Hollywood, Florida 33020	Subsurface Utility Engineering (S.U.E.)
c.			<input checked="" type="checkbox"/>	Langan Engineering & Environmental <input type="checkbox"/> CHECK IF BRANCH OFFICE	110 East Broward Blvd., Suite 1500 Fort Lauderdale, Florida 33301	Mobile LiDAR
d.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		
e.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		
f.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		

D. ORGANIZATIONAL CHART OF PROPOSED TEAM

(Attached)



PART I - CONTRACT-SPECIFIC QUALIFICATIONS



**PRINCIPAL /
PROJECT MANAGER**

Richard D. Pryce, P.S.M.



SURVEYING SERVICES

Nicholas Messina, P.S.M.
Thomas C. Shahan, P.S.M.
Ray Young, P.S.M.



SURVEYING SERVICES
Junior Surveyors
Survey Technicians



SURVEYING SERVICES
Field Crews



**SUBSURFACE UTILITY
LOCATES (S.U.E.)**
Dennis Ritzel, P.S.M.
Clyde Mason, P.S.M.

LANGAN
MOBILE LIDAR
Joseph Romano, PLS
Bryan Merritt, PMS, PLS
Chris Holmes



E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person.)

12. NAME Richard D. Pryce, P.S.M.	13. ROLE IN THIS CONTRACT Principal/Project Manager	14. YEARS EXPERIENCE	
		a. TOTAL 47	b. WITH CURRENT FIRM 13
15. FIRM NAME AND LOCATION (City and State) Craven Thompson & Associates, Inc., 3563 NW 53 rd Street, Fort Lauderdale, Florida 33309			
16. EDUCATION (DEGREE AND SPECIALIZATION) Associates of Science in Criminal Justice, BCC (1978) Certificate in advanced GIS & Remote Sensing, BCC (2002)		17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Surveyor and Mapper Florida No. 4038 (1983)	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) - Current Director, Broward County Chapter of Florida Surveying Mapping Society			

19. RELEVANT PROJECTS

a.	(1) TITLE AND LOCATION (City and State) Watermain Replacement Route Survey Hollywood, Florida (Hollywood Project No. 15-5129)	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Survey Project Manager - Craven Thompson prepared a topographic survey for engineering design purposes for 88,664 linear feet of service and distribution water main replacement in the project limits. The Survey consisted of locations and cross-section elevations in the full Rights-of-Way of the streets within the Project Limits.		
b.	(1) TITLE AND LOCATION (City and State) NW 31 st Avenue Route Survey Lauderdale Lakes, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2016	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Principal Survey Manager. The location of the project is within the right-of-way of NW 31 st Avenue, from NW 44 th Street, to NW 35 th Street. The overall project includes surveying for the reconstruction of the roadway, between these limits, and the addition of a sidewalk on the east side of the right-of-way, which will require the roadway median to be shifted to the west. Craven Thompson prepared a topographic survey for engineering design of a portion of NW 35 th Avenue in the City of Lauderdale Lakes covering 3,500 lineal feet.		
c.	(1) TITLE AND LOCATION (City and State) Pine Island Road Drainage As-builts for BCHCED Broward County, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2018	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Principal Survey Manager - Craven Thompson prepared Record Drawing of Drainage Structures on Pine Island Road for Broward County Highway Construction & Engineering Division. We established horizontal control points within the project area. All survey control horizontal locations were tied into the State Plane, Florida East Zone, NAD 83/90 Coordinate system.		
d.	(1) TITLE AND LOCATION (City and State) Boundary Survey and Sketch & Legal for Ingress/Egress Easement, Southwest Ranches, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Prepared a boundary survey of a portion of Parcel 1, owned by GUS ASSETS, LLC, as defined by the legal description in Certificate of Title, recorded as Instrument Number 113107329, in the Public Records of Broward County, Florida. Prepared a separate sketch and legal description of an ingress and egress easement, running along the existing driveway and extending northerly, to the north boundary of said Parcel 1.		
e.	(1) TITLE AND LOCATION (City and State) Margate Hydrographic Canal Survey Margate, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2016	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Craven Thompson & Associates, Inc. provided professional Surveying services for the proposed canal rehabilitation and pedestrian path. We prepared Boundary, Topographic and Hydrographic Survey of the canal lying along the east side of Parcel "A", "Margate Third Addition". The north-south canal is extremely overgrown with Brazilian Pepper and Australian Pines made it difficult to locate edge of water, top of bank and deep cut line.		



E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person.)

12. NAME Nicholas Messina, Jr., P.S.M.	13. ROLE IN THIS CONTRACT Surveying & Mapping	14. YEARS EXPERIENCE	
		a. TOTAL 29	b. WITH CURRENT FIRM 20
15. FIRM NAME AND LOCATION (City and State) Craven Thompson & Associates, Inc., 3563 NW 53 rd Street, Fort Lauderdale, Florida 33309			
16. EDUCATION (DEGREE AND SPECIALIZATION) Associates of Science - Surveying and Mapping (1999) University of Alaska, Anchorage Alaska		17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Surveyor and Mapper Florida No. 5799 (1998)	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Florida Society of Professional Surveyors and Mappers			

19. RELEVANT PROJECTS

a.	(1) TITLE AND LOCATION (City and State) Filmore Street As-Built Topographic Survey Hollywood, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Messina prepared a topographic (as-built) survey of Filmore Street, between N. 31 st Avenue and N. 32 nd Avenue, in the City of Hollywood, Florida.		
b.	(1) TITLE AND LOCATION (City and State) NE 14 th Avenue Survey, Hallandale Beach, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2016	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Craven Thompson prepared a topographic survey for design purposes within the City owned right of way along N.E. 14 th Avenue between Hallandale Beach Boulevard and Atlantic Shores Boulevard (approximately 3,400 linear feet of roadway which includes 50' on two (2) side streets).		
c.	(2) TITLE AND LOCATION (City and State) Northridge Bus Shelter Survey and Sketch & Legal Oakland Park, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2017	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm This survey included the location of all visible fixed improvements between the north edge of pavement for Commercial Boulevard, north to the back of the existing parking lot. The area surveyed was from the east edge of the west entrance to Northridge Shopping Plaza. He also prepared a sketch and legal description for the "Leased Premises" lands surveyed, based on the final limits, as approved by the City		
d.	(1) TITLE AND LOCATION (City and State) Roadway Maintenance Easement Oakland Park, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Messina prepared a sketch and legal description of the right-of-way of Prospect Road and Andrews Avenue, that is occupied by the improvements to the Plaza. The sketch and legal will be used as an attachment to the Revocable License Agreement prepared by Broward County. The Revocable License Agreement facilitated the planned improvements within the right-of-way.		
e.	(1) TITLE AND LOCATION (City and State) Topographic Survey Intersection of Las Olas Boulevard & SE 3 rd Avenue, Fort Lauderdale, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Surveyor - The survey limits of this project are described as the full rights-of-way of Las Olas Boulevard and Southeast 3 rd Avenue, at their intersection in downtown Fort Lauderdale, together with seventy-five (75) feet north, south, east and west of the edge of curbs at the intersection. The survey includes all of the aboveground visible improvements within the survey limits. The topographic survey includes the recovery of enough boundary and right-of-way corners to tie down the aboveground visible improvements (i.e., sidewalks, ADA ramps, curbs, structures, pavement, trees, slabs, and utility features).		



E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person.)

12. NAME Thomas C. Shahan, P.S.M.	13. ROLE IN THIS CONTRACT Surveying & Mapping	14. YEARS EXPERIENCE	
		a. TOTAL 45	b. WITH CURRENT FIRM 35
15. FIRM NAME AND LOCATION (City and State) Craven Thompson & Associates, Inc., 3563 NW 53 rd Street, Fort Lauderdale, Florida 33309			
16. EDUCATION (DEGREE AND SPECIALIZATION) Two-year Vocational Drafting Degree ICS Mail Correspondence Course for Surveying and Drafting		17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Surveyor and Mapper Florida No. 4387 (1987)	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Florida Society of Professional Surveyors and Mappers			

19. RELEVANT PROJECTS

a.	(1) TITLE AND LOCATION (City and State) 6 th Avenue South Streetscape Survey Lake Worth, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The project limits are 6 th Avenue South - Federal Highway to Dixie Highway. Craven Thompson prepared a topographic survey of 6 th Avenue South right-of-way for design purposes from the west edge of pavement on S. Federal Highway to the east right-of-way line of South Dixie Highway, including 75 feet north and south of 6 th Avenue South on those intersecting roads and alleys lying between the two highways.		
b.	(1) TITLE AND LOCATION (City and State) NE 38 th Street Survey Oakland Park, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2017	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Survey Manager - Craven Thompson prepared a topographic survey of a portion of the right of way for NE 38 th Street lying east of NE 5 th Avenue and lying west of Dixie Highway, approximately 2,850 linear feet. The purpose of this survey was to locate all visible fixed improvements lying between the north edge of pavement and approximately five (5) feet north of the north right of way line, and between the south edge of pavement and approximately five (5) feet south of the south right of way line for NE 38 th Street.		
c.	(1) TITLE AND LOCATION (City and State) Town of Davie 20' Wide Utility Easement Davie, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2016	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Reviewed one (1) sketch and legal description for a 20-foot wide utility easement, running along the northerly boundary of the Nova High School and Nova Blanche Forman Elementary School, extending from the east right-of-way line of College Avenue, easterly to the west right-of-way line of Davie Road, 2,310 feet.		
d.	(1) TITLE AND LOCATION (City and State) Three Island Safe Neighborhood District - Three Island Guardhouses and Traffic Calming Roadway Survey Hallandale Beach, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2018	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Craven Thompson prepared a design survey for design purposes within the city-owned right-of-way along Three Islands Boulevard from the Guard House north of Hallandale Beach Boulevard to the City limits, west on Atlantic Shores Boulevard from Three Islands Boulevard to the Guard House and on Parkview Drive from the bridge to the City Limits. The total length of survey was approximately 6,000 LF of roadway.		
e.	(1) TITLE AND LOCATION (City and State) City of Hollywood Alley Reconstruction Survey (FY2014/2015) Hollywood, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Shahan prepared topographic surveys for engineering design purposes for nineteen (19) individual sites, encompassing a total of 9,650 linear feet for alley reconstruction. The surveys consisted of cross-sections at fifty (50) foot intervals along the route with elevations within the rights-of-way of the alleys at each edge of pavement, and center of alley including five (5) feet outside of the rights-of-way.		



E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person.)

12. NAME Raymond Young, P.S.M.	13. ROLE IN THIS CONTRACT Surveying & Mapping	14. YEARS EXPERIENCE	
		a. TOTAL 38	b. WITH CURRENT FIRM 26
15. FIRM NAME AND LOCATION (City and State) Craven Thompson & Associates, Inc., 3563 NW 53 rd Street, Fort Lauderdale, Florida 33309			
16. EDUCATION (DEGREE AND SPECIALIZATION)		17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Surveyor and Mapper Florida No. 5799 (1998)	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Florida Society of Professional Surveyors and Mappers			

19. RELEVANT PROJECTS

a.	(1) TITLE AND LOCATION (City and State) Miramar Historical Area Complete Streets Project Survey Phase II, Miramar, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2017	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Young was the Survey Project Manager. Craven Thompson prepared a boundary and topographic survey of the rights-of-way covering eight (8) streets, approximately 10,000 linear feet of roadway.		
b.	(1) TITLE AND LOCATION (City and State) Nova Southeastern University – Parking Garage Construction Layout, Davie, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2018 - 2019	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Surveyor. Craven Thompson & Associates, Inc. calculated the position of, and field staked seventy-seven (77) pilings for the parking garage at NSU. We placed a 60d nail or 5/8" iron rod at the center of each piling.		
c.	(1) TITLE AND LOCATION (City and State) Surveys at the Intersections of: NW 123 rd Street and NW 1 st Court, NW 123 rd Street and NW Miami Court, NW 139 th Terrace and NW 5 th Court, North Miami, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2016	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager. Craven Thompson prepared a topographic survey for the project which involved the development of designs for traffic calming features along NW 123 th Street and NW 1 st Court, NW 123 rd Street and NW Miami Court, and 139 th Street NW 5 th Court in the City of North Miami.		
d.	(1) TITLE AND LOCATION (City and State) L-12 Canal ROW Annexation Easement Sketch & Legal Description, Greenacres, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2017	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Assisted in the preparation of a sketch and description for a portion of the LWDD L-12 canal right of way between Raulerson Drive and Military trail as part of the effort to annex the property. This task included calculating the area of the property description.		
e.	(1) TITLE AND LOCATION (City and State) Stirling Road Topographic Survey Southwest Ranches, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager. Craven Thompson prepared a topographic survey of Stirling Road from SW 130 th Avenue, west to Hancock Road, approximately 5,300 linear feet. On the east half of the project, from SW 130 th Avenue, to SW 136 th Avenue, the canal is on the north side of Stirling Road. On the west half of the project, from SW 136 th Avenue, to Hancock Road, the canal is on the south side of Stirling Road.		



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER

1

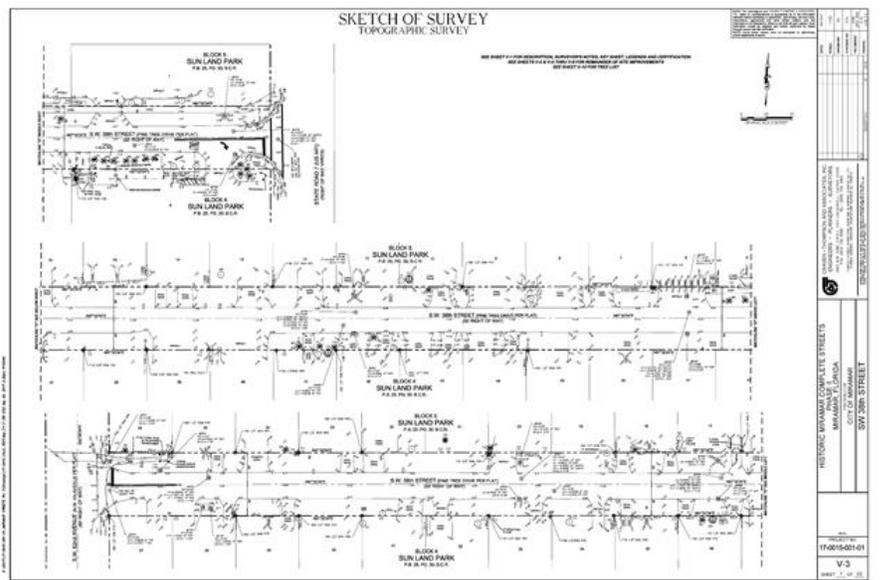
21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
Miramar Historical Area Complete Streets Project Survey – Phase II, Miramar, Florida	PROFESSIONAL SERVICES 2017	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of Miramar	b. POINT OF CONTACT NAME Mr. Salvador Zuniga, P.E. Assistant City Engineer	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 602-3323 Email: sezuniga@miramarfl.gov
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Craven Thompson prepared a boundary and topographic survey of the rights-of-way covering eight (8) streets, approximately 10,000 linear feet of roadway. The survey met the current surveying requirements of the Board of Professional Surveyors and Mappers of the State of Florida, as defined in Chapter 5J-17.050 - .052, Florida Administrative Code. The survey included recovery of sufficient existing boundary and/or right-of-way monumentation to determine the right-of-way lines needed in order to tie all visible improvements to. We included the locations of all aboveground and visible improvements, including valves, pavement, pavement markings, slabs, fences, signs, overhead wires, trees, and utility features, within the limits of the existing platted rights-of-way, including underground utilities as field located by each utility provider and as-built records. The survey included rims and grates elevations will be measured on all sanitary and drainage structures found within the project limits. Existing trees, three (3) inches in diameter and above, at four (4) feet aboveground, were located and identified with diameter and common name. Elevations were taken on an approximate at fifty (50') foot cross-sections, along all roadways and extend approximately 10 feet outside the right-of-way. Elevation datum will be relative to North American Vertical Datum.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER

2

21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
NE 14 th Avenue Survey Hallandale Beach, Florida	PROFESSIONAL SERVICES 2016	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of Hallandale Beach	b. POINT OF CONTACT NAME Mr. Manga Ebbe Project Manager	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 457-3043 Email: mebbe@hallandalebeachfl.gov
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Craven Thompson prepared a topographic survey for design purposes within the City-owned right-of-way along NE 14th Avenue between Hallandale Beach Boulevard and Atlantic Shores Boulevard (approximately 3,400 linear feet of roadway which includes 50' on two (2) side streets). The survey met current surveying requirements of the Board of Professional Surveyors and Mappers of the State of Florida, as defined in Chapter 5J-17.050-.052, Florida Administrative Code. The survey included the recovery of sufficient existing boundary and/or right-of-way monumentation to determine the right-of-way lines needed in order to tie all visible improvements to. Included locations of all aboveground and visible improvements, including all pavement, slabs, fences, signs, overhead wires, trees, and utility features, within the limits of the existing platted rights-of-way. Also included rims and invert elevations were measured on all sanitary and drainage structures found within the project limits. Elevations were taken on an approximate at fifty (50) foot cross-sections, along all roadways from back of walk to back of walk.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER

3

21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
Las Olas Boulevard and Walkability Design Survey Fort Lauderdale, Florida	PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of Fort Lauderdale Transportation & Mobility Dept.	b. POINT OF CONTACT NAME Ms. Catherine Prince, PMP, LEED-AP, STP Mobility Project Manager	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 828-5000 Email: atcprince@fortlauderdale.gov
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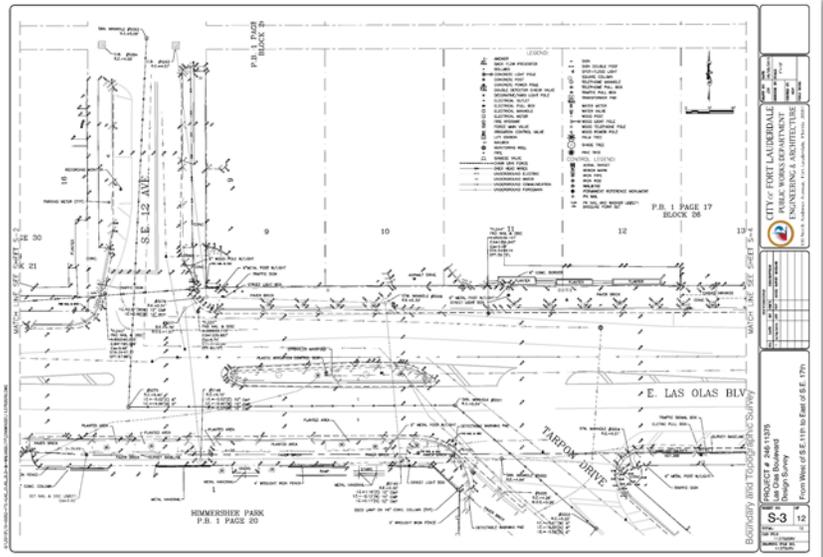
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Under this Work Authorization, Craven Thompson surveyed the following roads and intersections:

- Las Olas Blvd. (full right-of-way) from SE 11th Avenue to the bridge east of SE 17th Avenue, including the following intersecting side streets:
 - SE 12th Avenue (100 feet north of Las Olas Blvd.)
 - SE 13th Avenue (100 feet north of Las Olas Blvd.)
 - SE 15th Avenue (200 feet south of Las Olas Blvd. to 100 feet north of Broward Blvd.)
 - SE 15th Avenue at SE 2nd Street (100 feet east and west)
 - SE 15th Avenue at Broward Blvd. (100 feet east and west)

And also:

- Intersection SE 12th Avenue & SE 1st Street (100 feet north, south and east)
- Intersection SE 13th Avenue & SE 1st Street (100 feet north, south east and west)
- Intersection SE 13th Avenue & SE 2nd Court (100 feet north, south east and west)
- Intersection SE 16th Avenue & SE 1st Street (100 feet north, south east and west)
- Intersection SE 16th Avenue & SE 2nd Court (100 feet north, south east and west)
- 400 feet of NE 1st Street centered between Andrews Avenue and NE 3rd Avenue
- NE 3rd Avenue from 50 feet south of NE 2nd St to 50 feet north of NE 3rd Street including 50 feet east and west of NE 3rd Avenue at NE 2nd and 3rd Streets
- Intersection E. Las Olas Blvd & SE 4th Ave. (50 feet north, south, east and west)
- SE 2nd Street from east side of SE 3rd Avenue to Federal Highway Tunnel wall including 50 feet north and south of the intersection with SE 4th Avenue



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
 (Present as many projects as requested by the agency, or 10 projects, if not specified.
 Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
4

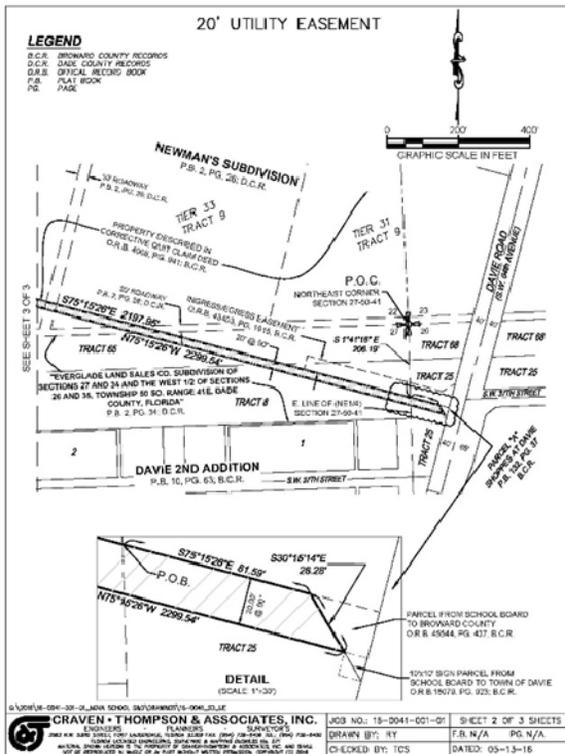
21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
Town of Davie 20' Wide Utility Easement Davie, Florida	PROFESSIONAL SERVICES 2016	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER Town of Davie	b. POINT OF CONTACT NAME Mr. Don Bayler Utilities Director	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 327-3742 Email: don_bayler@davie-fl.gov
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Craven Thompson & Associates prepared a sketch and legal description for a 20-foot wide utility easement, running along the northerly boundary of the Nova High School and Nova Blanche Forman Elementary School, extending from the east right-of-way line of College Avenue, easterly to the west right-of-way line of Davie Road, approximately 2,310 feet.



FOR: TOWN OF DAVIE
SKETCH AND DESCRIPTION
20' UTILITY EASEMENT

LEGAL DESCRIPTION:
 A PORTION OF TRACT 9, TIER 33, A PORTION OF TRACT 9, TIER 35, A PORTION OF TRACT 9, TIER 37 AND A PORTION OF THE 20 FOOT AND 30 FOOT NEARBY, NEWMAN'S SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 2, PAGE 25 OF THE PUBLIC RECORDS OF DADE COUNTY, FLORIDA, TOGETHER WITH A PORTION OF TRACTS 8, 23 AND 24, TIER 33, NEWMAN'S SUBDIVISION OF DADE COUNTY, FLORIDA, TOGETHER WITH A PORTION OF SECTIONS 26 AND 25, TOWNSHIP 30 S., RANGE 41E., DADE COUNTY, FLORIDA, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 2, PAGE 24 OF SAID PUBLIC RECORDS, DESCRIBED AS FOLLOWS:
 COMMENCE AT THE NORTHEAST CORNER OF SECTION 27, TOWNSHIP 30 SOUTH, RANGE 41 EAST, THENCE SOUTH 01°15'15" EAST ALONG THE EAST LINE OF THE NORTHEAST ONE-QUARTER (NE1/4) OF SAID SECTION 27, A DISTANCE OF 208.19 FEET TO THE POINT OF BEGINNING, THENCE SOUTH 75°15'26" EAST ALONG THE SOUTH BOUNDARY OF SAID LANDS AS DESCRIBED IN OFFICIAL RECORDS BOOK 4054, PAGE 841 OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA, A DISTANCE OF 81.59 FEET, THENCE SOUTH 107°31'4" EAST ALONG THE SOUTHWEST BOUNDARY OF SAID CERTAIN PAGES OF LAND AS DESCRIBED IN OFFICIAL RECORDS BOOK 4054A, PAGE 437 OF SAID PUBLIC RECORDS OF BROWARD COUNTY, A DISTANCE OF 28.88 FEET, THENCE NORTH 75°15'26" WEST ALONG A LINE 20 FEET SOUTH OF AND PARALLEL WITH WHEN MEASURED AT RIGHT ANGLES TO SAID SOUTH BOUNDARY, A DISTANCE OF 2,289.54 FEET, THENCE NORTH 14°44'34" EAST ALONG THE EAST RIGHT OF WAY LINE FOR COLLEGE AVENUE, A DISTANCE OF 20.00 FEET, THENCE SOUTH 75°15'26" EAST ALONG SAID SOUTH BOUNDARY, A DISTANCE OF 2,192.85 FEET TO THE POINT OF BEGINNING.
 SAID LANDS SITUATE IN THE TOWN OF DAVIE, BROWARD COUNTY, FLORIDA, CONTAINING 45,791 SQUARE FEET OR 1.051 ACRES MORE OR LESS.

NOTES:
 BEARINGS SHOWN HEREON ARE BASED ON AN ASSUMED BEARING AND ARE REFERENCED TO THE EAST LINE OF THE NORTHEAST ONE-QUARTER (NE1/4) OF SECTION 27, TOWNSHIP 30 SOUTH, RANGE 41 EAST, WHICH IS ASSUMED TO BEAR SOUTH 01°15'15" EAST.

CERTIFICATE:
 THE HEREBY CERTIFY THAT THIS SKETCH AND DESCRIPTION AND OTHER PERTINENT DATA SHOWN HEREOF OF THE ABOVE DESCRIBED PROPERTY FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 54-1.2, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPING, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

LEGEND
 B.C.R. BROWARD COUNTY RECORDS
 D.C.R. DADE COUNTY RECORDS
 O.R.B. OFFICIAL RECORD BOOK
 P.B. PLAT BOOK
 P.G. PAGE

CRAVEN THOMPSON & ASSOCIATES, INC.
 LICENSED BUSINESS NUMBER #271

RAYMOND YOUNG FOR THE FIRM
 PROFESSIONAL SURVEYOR AND MAPPING NO 5789
 STATE OF FLORIDA
 THE SKETCH OF SURVEY AND REPORT OF THE FIRM'S ENERGY SURVEYOR AND MAPPING

THIS IS A SKETCH OF SURVEY AND IS NOT A FINAL SURVEY. THE SKETCH IS FOR INFORMATION ONLY AND IS NOT TO BE USED FOR ANY OTHER PURPOSE. THE SKETCH IS NOT TO BE USED FOR ANY OTHER PURPOSE. THE SKETCH IS NOT TO BE USED FOR ANY OTHER PURPOSE.

CRAVEN THOMPSON & ASSOCIATES, INC.
 JOB NO: 18-2041-001-01 SHEET 1 OF 3 SHEETS
 DRAWN BY: RY F.R. N/A P.G. N/A
 CHECKED BY: TCS DATED: 05-13-18

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION (City and State) 3563 NW 53rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER

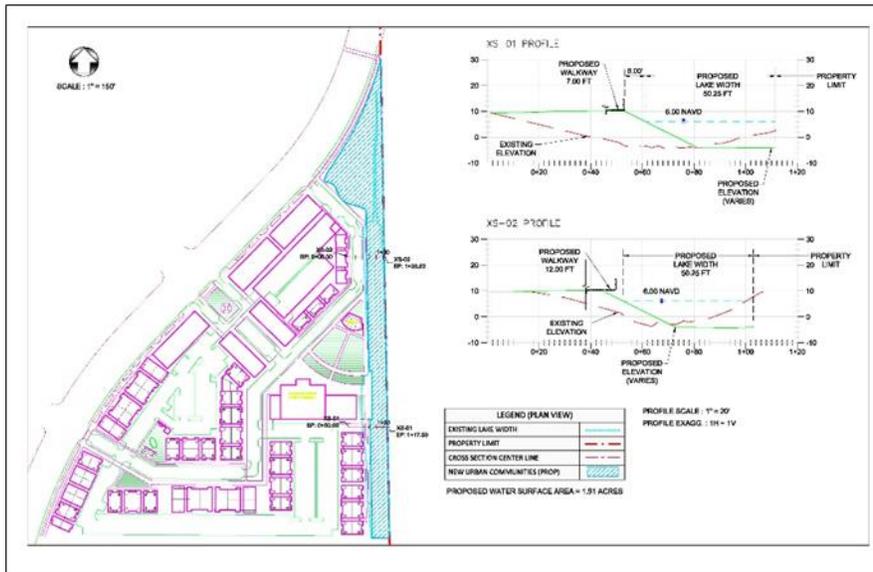
5

21. TITLE AND LOCATION (CITY AND STATE) Margate Hydrographic Canal Survey Margate, Florida	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2016	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of Margate CRA	b. POINT OF CONTACT NAME Mr. Cotter Christian Engineer/Project Manager	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954)935-5458 Email: ccchristian@margatefl.com
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*
 Craven Thompson & Associates provided professional Surveying services for the proposed canal rehabilitation and pedestrian path. We prepared Boundary, Topographic and Hydrographic Survey of the canal lying along the east side of Parcel "A", "Margate Third Addition". The north-south canal is extremely overgrown with Brazilian Pepper and Australian Pines which made it difficult to locate edge of water, top of bank and deep cut line. Clearing these items was essential to the topographic data collection. This increased the accuracy of the survey and decreased the labor effort needed to obtain the as-built conditions. The survey met all the current surveying requirements of the Board of Professional Surveyors and Mappers of the State of Florida, as defined in Chapter 5J-17, Florida Administrative Code.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
a.	Craven Thompson & Associates, Inc.	3563 NW 53 rd Street Fort Lauderdale, Florida 33309	Prime- Surveying & Mapping Services, Hydrographic Survey
b.			
c.			
d.			
e.			



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER

6

21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
Filmore Street As-Built Topographic Survey Hollywood, Florida	PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable

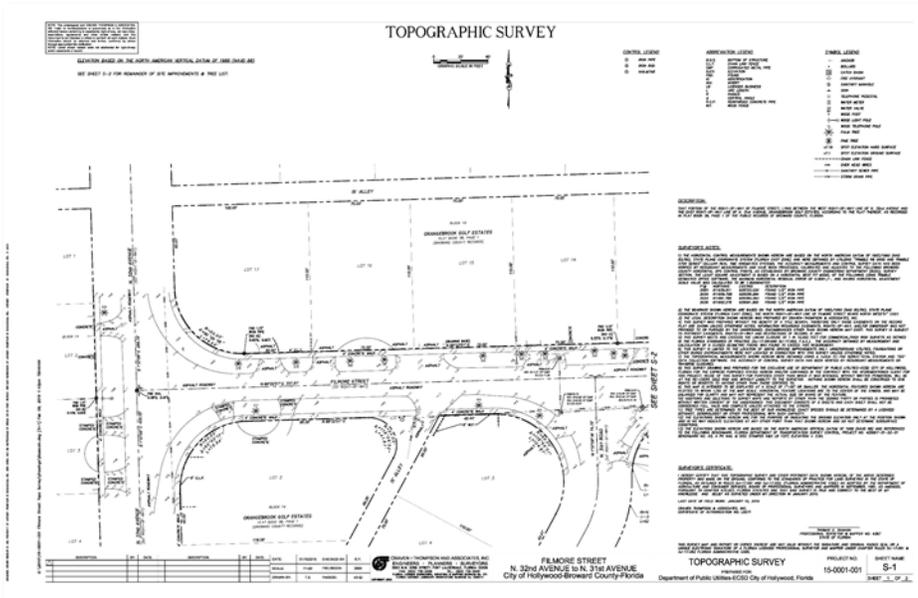
23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of Hollywood	b. POINT OF CONTACT NAME Ms. Wilhelmina Montero, P.E., M.S. Project Manager	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 921-9330 Email: wmontero@hollywoodfl.org
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Craven Thompson & Associates prepared a topographic (as-built) survey of Filmore Street, between N. 31st Avenue and N. 32nd Avenue, in the City of Hollywood, Florida. The survey included all locations and topographic elevations of aboveground visible improvements within the rights-of-way limits, including rims, inverts, and pipe sizes of all sanitary sewer manholes and storm drainage structures, if accessible and unobstructed. If obstructed, the structures were noted on the drawing. We established two (2) site benchmarks within the project limits. All elevations will be relative to North American Vertical Datum of 1988 (NAVD88).

The survey was prepared in AutoCAD Civil 3D, Version 2014 drawing file format, and was delivered digitally in AutoCAD Civil 3D, and on 24" x 36" signed and sealed hard copies.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER

7

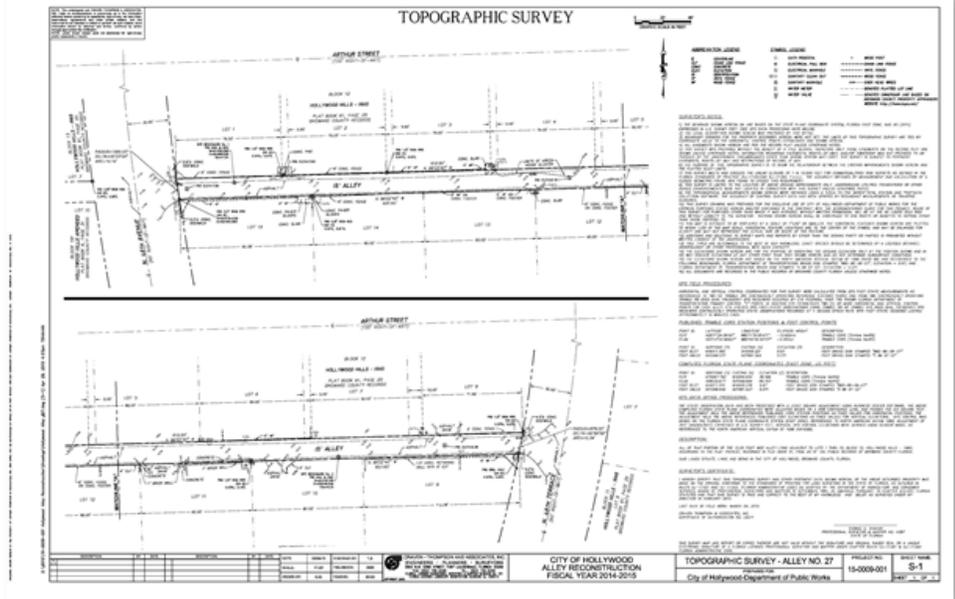
21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
Alley Reconstruction Survey (2014/2015) Hollywood, Florida	PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of Hollywood	b. POINT OF CONTACT NAME Ms. Clarissa Ip, P.E., CFM Engineering Support Services Manager	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 921-3915 Email: cip@hollywood.org
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Craven Thompson prepared topographic surveys for engineering design purposes for nineteen (19) individual sites, encompassing a total of 9,650 linear feet for alley reconstruction. The surveys consisted of cross-sections at fifty (50) foot intervals, along the route with elevations within the rights-of-way of the alleys, at each edge of pavement, and center of alley, including five (5) feet outside of the rights-of-way, where it is accessible and safe for the survey crew members to enter private property. Locations included aboveground, visible improvements, including pavement, curbing, signs, street lights, driveways and utility features within the rights-of-way. Elevations were based on North American Vertical Datum of 1988 (NAVD 88) and referenced to National Geodetic Survey (NGS), or Florida Department of Transportation (FDOT) benchmarks. All survey data meets the current standards for surveying in Florida, as defined under Chapter 5J-17.050-.052, F.A.C.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION (City and State) 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
8

21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
Northridge Bus Shelter Survey and Sketch & Legal Description, Oakland Park, Florida	PROFESSIONAL SERVICES 2017	CONSTRUCTION (If applicable) Not Applicable

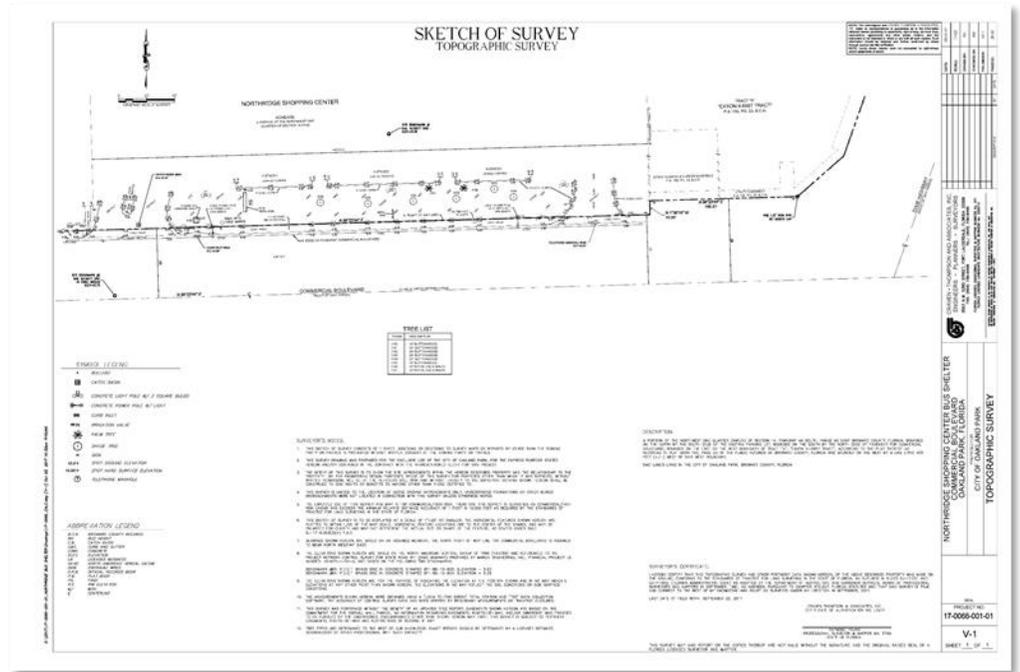
23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of Oakland Park	b. POINT OF CONTACT NAME Ms. Jennifer Frastai, ICMA-CM Director of Engineering & Community Development	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 630-4477 Email: Jenniferf@oaklandparkfl.gov
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

This survey included the location of all visible fixed improvements between the north edge of pavement for Commercial Boulevard, north to the back of the existing parking lot. The area surveyed was from the east edge of the west entrance to Northridge Shopping Plaza, east for approximately 500 feet. The survey also included elevations sufficient for engineering design and will be based on the North American Vertical Datum of 1988 (NAVD 88).

Craven Thompson also prepared a sketch and legal description, for the "Leased Premises" lands surveyed, based on the final limits, as approved by the City of Oakland Park.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services, Sketch & Legal
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
9

21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
Construction Layout for SFRTA Operations Building, Parking Garage & Platform, Pompano Beach, Florida	PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER SFRTA	b. POINT OF CONTACT NAME Mr. Andrew Gershon, RA, LEED-AP Gulf Builders	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 492-9191 Email: andrewg@gulfbuilding.com
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Craven Thompson recovered and/or reset property boundary corners, set reference points to the boundary outside the limits of construction, established survey control within the site, for the purpose of all construction layout and as-builts. Prepared survey utilized throughout the project, to show building tie-in and final site survey information. Established site benchmarks at convenient locations, for construction control of buildings. After recovery and referencing the property corners, Craven Thompson staked the property boundaries at 50-foot stations. We staked and graded operations, platform, and garage buildings, on double 10-foot offsets to building square-out, for pad installation after site demolition. Elevations were set at proposed finish floor of buildings. Staked operations, platform, and garage buildings, on double 10-foot offsets to buildings square-out, for construction and reference control points for future replacement. Established building grid systems for both the operations, platform, and garage buildings, at ground level, consisting of two (2) gridlines in the east-west direction, two (2) gridlines in the north-south direction for both buildings, all at offsets to the grid lines to be determined. Reference points were set outside the limits of construction, along the offset grid lines, for extended site lines. We then located all visible improvements, trees, shrubs and topography. Prepared the final survey of new building, and improvements connected with same. CTA prepared signed and sealed a final topographic survey.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime – Surveying and Construction Layout
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
10

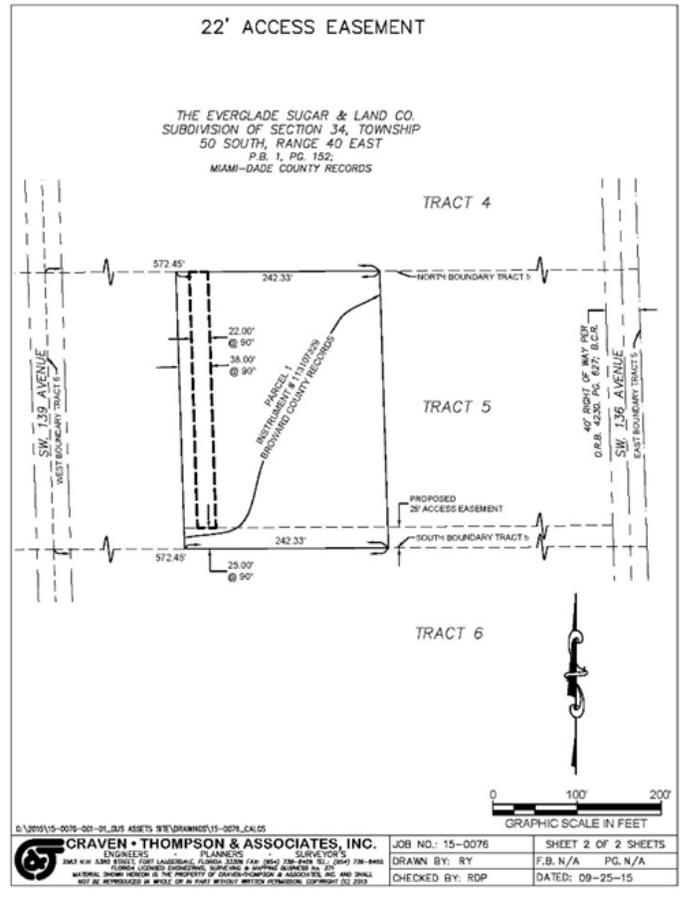
21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
Boundary Survey and Sketch & Legal for Ingress/Egress Easement, Southwest Ranches, Florida	PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER Town of Southwest Ranches	b. POINT OF CONTACT NAME Ms. Emily McCord-Aceti Community Services	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 434-0008 Email: ecaceti@southwestranches.org
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Craven Thompson prepared a boundary survey of a portion of Parcel 1, owned by GUS ASSETS, LLC, as defined by the legal description in Certificate of Title, recorded as Instrument Number 113107329, in the Public Records of Broward County, Florida. Said survey to include just the boundary lines of Parcel 1, together with the location of the existing north-south asphalt driveway, along the westerly line of said Parcel 1, and prepared a separate sketch and legal description of an ingress and egress easement, running along the existing driveway and extending northerly, to the north boundary of said Parcel 1.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services, Sketch & Legal
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
11

21. TITLE AND LOCATION (CITY AND STATE) Stirling Road Topographic Survey Southwest Ranches, Florida	PROFESSIONAL SERVICES	22. YEAR COMPLETED
	2015	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

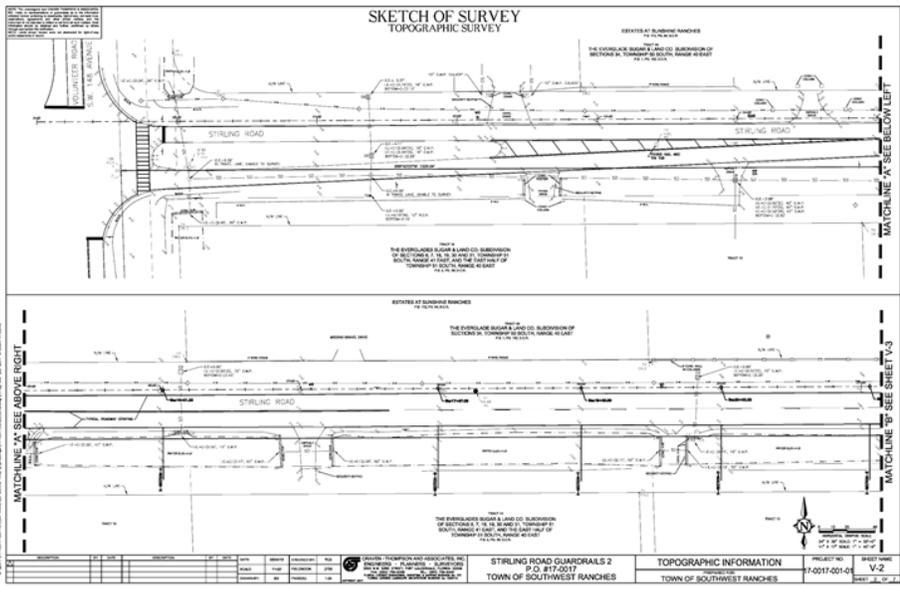
a. PROJECT OWNER Town of Southwest Ranches	b. POINT OF CONTACT NAME Ms. Emily McCord-Aceti Community Services	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 434-0008 Email: eaceti@southwestranches.org
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Craven Thompson prepared a topographic survey of Stirling Road from SW 130th Avenue, west to Hancock Road, approximately 5,300 linear feet. On the east half of the project, from SW 130th Avenue, to SW 136th Avenue, the canal is on the north side of Stirling Road. On the west half of the project, from SW 136th Avenue, to Hancock Road, the canal is on the south side of Stirling Road. The survey met all of the current surveying requirements of the Board of Professional Surveyors and Mappers of the State of Florida, as defined in Chapter 5J-17.050 - .052, Florida Administrative Code.

- The survey included finding or establishing of survey control monumentation for the existing right-of-way, and adjacent properties, in order to tie all improvements to.
- The east half of the project included from the south right-of-way of Stirling Road, to the north edge of the canal, with cross-sections of the canal.
- The west half of the project included from the north right-of-way of Stirling Road, to the south edge of the canal, with cross-sections of the canal.
- The location of all aboveground visible improvements, including pavement, slabs, fences, signs, mailboxes, overhead wires and utility features, within the limits of the survey.
- Private driveways, headwalls and culverts along the canal were located in the field, where they were accessible

- All elevations were relative to North American Vertical Datum of 1988 (NAVD88) and based on National Geodetic Survey (NGS) or Florida Department of Transportation (FDOT) benchmarks.
- Two (2) benchmarks were provided on, or immediately adjacent to the project, for future construction.
- The preparation of the survey drawing was in AutoCAD Civil 3D, version 2014 drawing file format, and provided along with hard copy signed and sealed surveys.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
 (Present as many projects as requested by the agency, or 10 projects, if not specified.
 Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
12

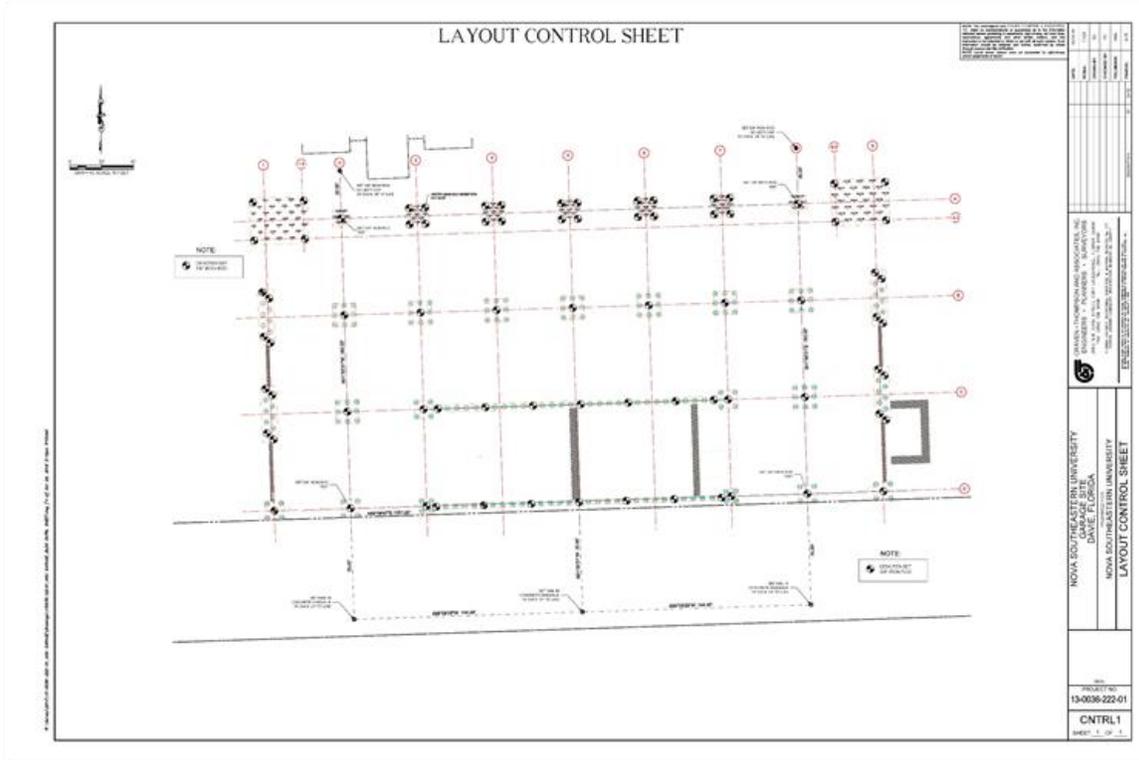
21. TITLE AND LOCATION (CITY AND STATE)		22. YEAR COMPLETED	
Nova Southeastern University – Parking Garage Construction Layout, Davie, Florida		PROFESSIONAL SERVICES 2018 - 2019	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER Grycon (Nova Southeastern University)	b. POINT OF CONTACT NAME Mr. Kris Kibler Vice President	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 626-0451 Email: kkibler@grycon.net
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Craven Thompson & Associates calculated the position of, and field staked seventy-seven (77) pilings for the parking garage at Nova Southeastern University. We placed a 60d nail or 5/8" iron rod at the center of each piling.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION (City and State) 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services, Construction Layout
b.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
 (Present as many projects as requested by the agency, or 10 projects, if not specified.
 Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
13

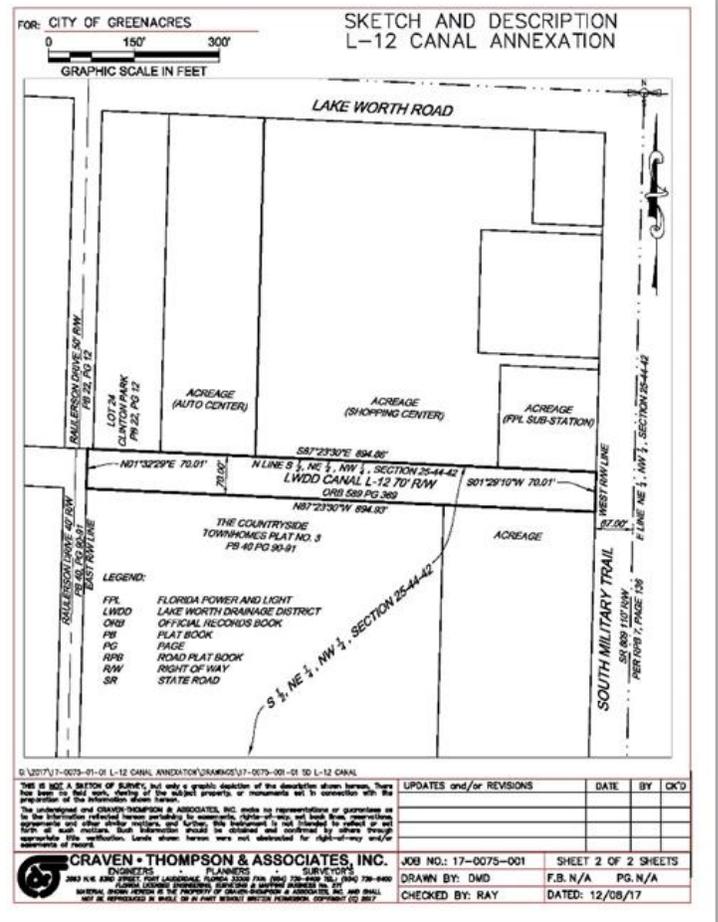
21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
L-12 Canal ROW Annexation Easement Sketch & Legal Description, Greenacres, Florida	PROFESSIONAL SERVICES 2017	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of Greenacres	b. POINT OF CONTACT NAME Ms. Kara L. Irwin - Ferris, AICP Planning and Engineering Director	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (561) 642-2054 Email: kferris@greenacresfl.gov
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Craven Thompson & Associates, Inc. prepared a sketch and description for a portion of the LWDD L-12 canal right-of-way between Raulerson Drive and Military trail as part of the effort to annex the property. This task included calculating the area of the property description.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION (City and State) 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services, Sketch & Legal
b.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER

14

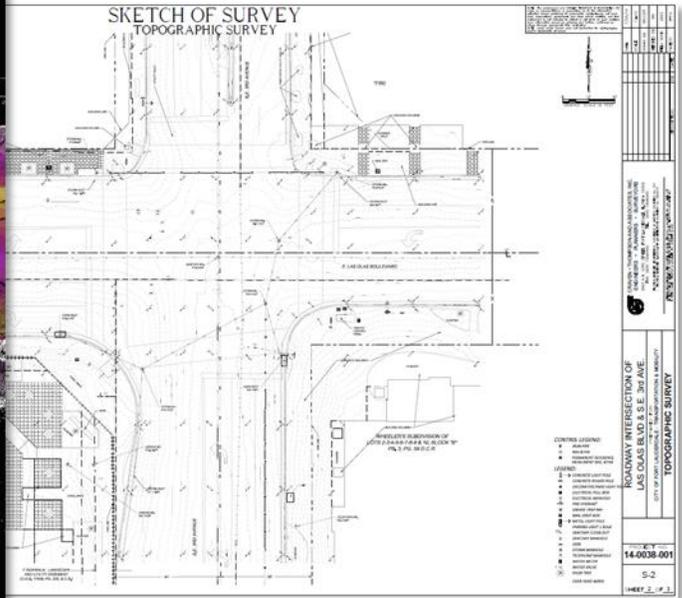
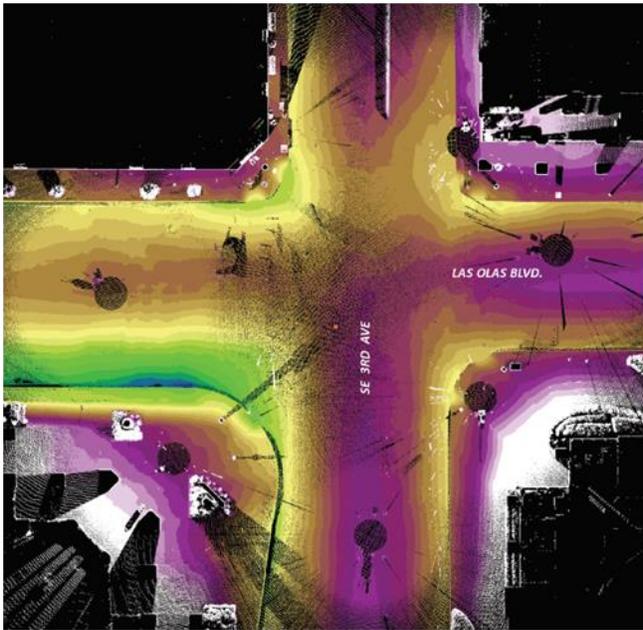
21. TITLE AND LOCATION (CITY AND STATE)		22. YEAR COMPLETED	
Topographic Survey at the Intersection of SE 3 rd Avenue & Las Olas Boulevard Fort Lauderdale, Florida		PROFESSIONAL SERVICES 2015	CONSTRUCTION (if applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of Fort Lauderdale	b. POINT OF CONTACT NAME Ms. Elizabeth Van Zandt, MPA Mobility Manager	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 828-5000 Email: EVanZandt@fortlauderdale.gov
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

The survey limits of this project are described as the full rights-of-way of Las Olas Boulevard and Southeast 3rd Avenue, at their intersection in downtown Fort Lauderdale, together with seventy-five (75) feet north, south, east and west of the edge of curbs, at the intersection. The survey includes all of the aboveground visible improvements within the survey limits. The topographic survey includes the recovery of enough boundary and right-of-way corners, to tie down the aboveground visible improvements (i.e., sidewalks, ADA ramps, curbs, structures, pavement, trees, slabs, and visible utility features), within the survey limits, including the adjacent rights-of-way with lane striping for design. The survey also includes elevations of the improvements and the ground within the survey limits. The adjacent roadway cross-section elevations were taken at twenty-five (25) foot intervals along the roads.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER

15

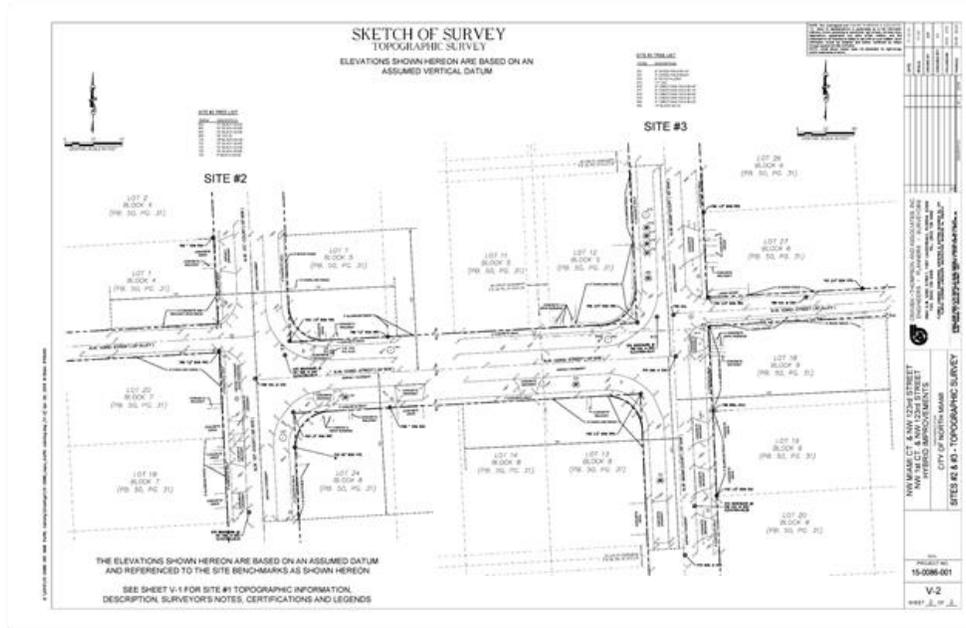
21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
Surveys at the Intersections of: NW 123 rd Street and NW 1 st Court NW 123 rd Street and NW Miami Court NW 139 th Terrace and NW 5 th Court North Miami, Florida	PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of North Miami	b. POINT OF CONTACT NAME Mr. John O'Brien Transportation Manager	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (305) 895-9883 Email: jobrien@northmiamifl.gov
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Craven Thompson prepared a topographic survey for the project which involved the development of designs for traffic calming features along NW 123rd Street and NW 1st Court, NW 123rd Street and NW Miami Court, and 139th Street and NW 5th Court in the City of North Miami. These intersections had large expanses of pavement without traffic control and therefore required the implementation of traffic calming features. Craven Thompson & Associates design elevated intersections, removed pavement and introduced curbing to reduce seeds.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
 (Present as many projects as requested by the agency, or 10 projects, if not specified.
 Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
16

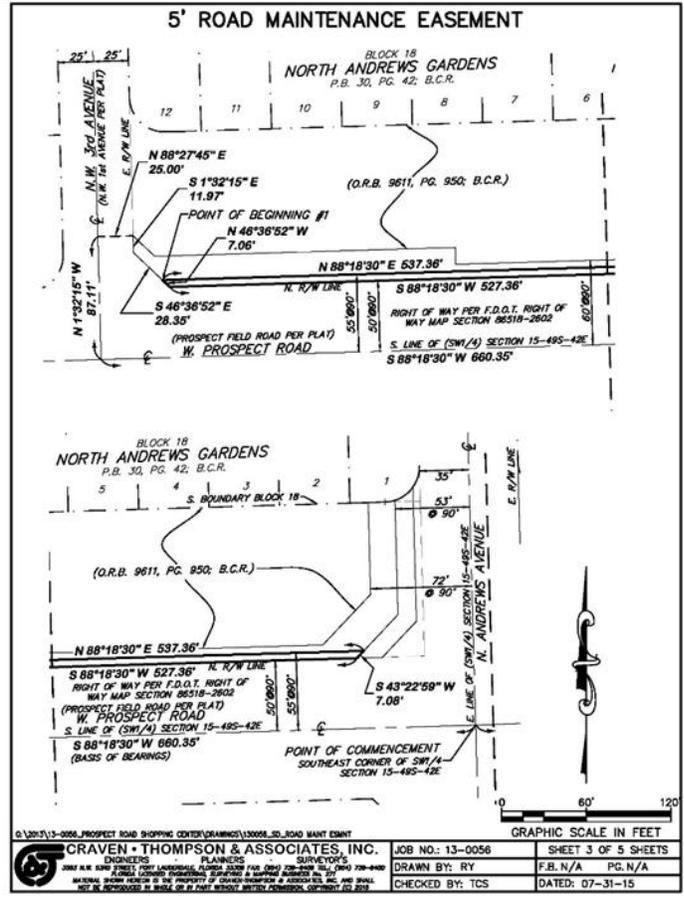
21. TITLE AND LOCATION (CITY AND STATE) Roadway Maintenance Easement Oakland Park, Florida	22. YEAR COMPLETED PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable
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23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of Oakland Park	b. POINT OF CONTACT NAME Ms. Jennifer Frastai, ICMA-CM Director of Engineering & Community Development	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 630-4477 Email: Jenniferf@oaklandparkfl.gov
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Craven Thompson prepared a sketch and legal description of the right-of-way of Prospect Road and Andrews Avenue that is occupied by the improvements to the Plaza. The sketch and legal description will be used as an attachment to the Revocable License Agreement prepared by Broward County. The Revocable License Agreement facilitated the planned improvements within the right-of-way.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION (City and State) 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER

17

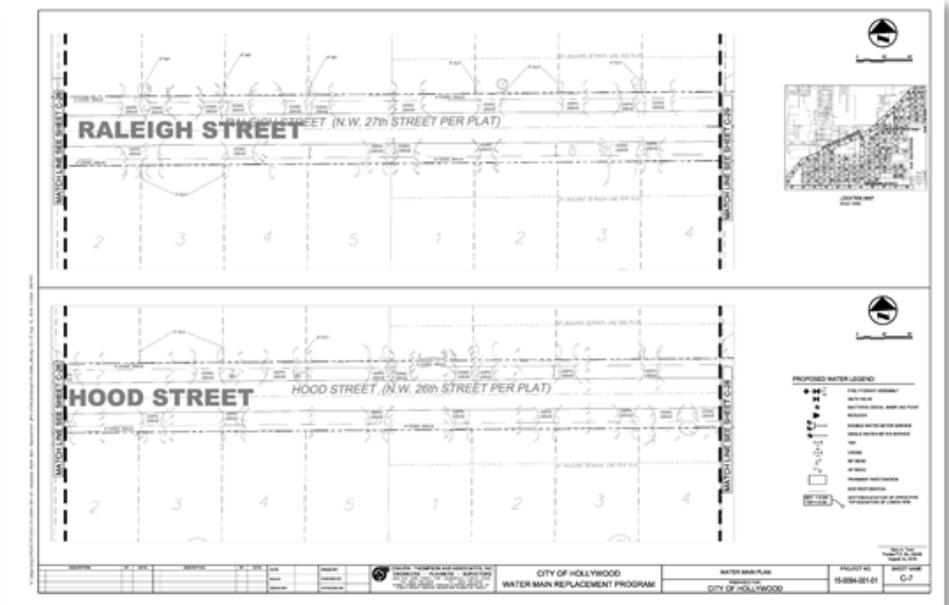
21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
Watermain Replacement Route Survey Hollywood, Florida (Hollywood Project No. 15-5129)	PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of Hollywood	b. POINT OF CONTACT NAME Mr. Clece Aurelus, P.E. Senior Project Manager	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 921-3930 Email: caurelus@hollywoodfl.org
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Craven Thompson prepared a topographic survey for engineering design purposes for 88,664 linear feet of service and distribution water main replacement in the project limits. The Survey consisted of locations and cross-section elevations in the full Rights-of-Way of the streets within the Project Limits. A survey control baseline will be established throughout the Project Limits containing survey control points with both horizontal and vertical coordinate information in the form of x-y-z values, in State Plane, Florida East Zone, NAD83(90), US Survey Feet format. Craven Thompson utilized the survey control baseline to conduct a Topographic Survey of the full rights-of-ways of the streets locating multiple property corners within each block in order to establish a best-fit scenario for the rights-of-way. Utilizing the found survey control and the recorded plats within the Project Limits, we created a BASEMAP for the project. Locations included all aboveground and visible improvements; including pavement, curbing, signs, street lights, sidewalks, driveways, utility features and trees four (4) inches in diameter and above as measured at four (4) feet aboveground level.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
 (Present as many projects as requested by the agency, or 10 projects, if not specified.
 Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
18

21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
SW 190 th Avenue Topographic Survey Southwest Ranches, Florida	PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable

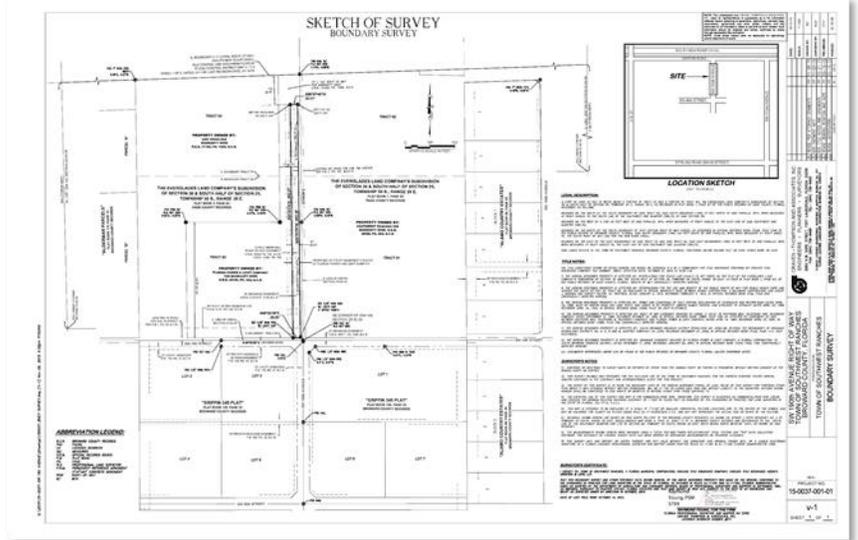
23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER Town of Southwest Ranches	b. POINT OF CONTACT NAME Ms. Emily McCord-Aceti Community Services	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 434-0008 Email: eaceti@southwestranches.org
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Craven Thompson prepared a topographic survey of SW 190th Avenue, from one hundred (100) feet south of SW 49th Street, to the north edge of pavement of Griffin Road, approximately 1,215 linear feet in length. The survey consisted of the existing twenty (20) foot wide of platted right-of-way, and a minimum of thirty (30) feet west and twenty-five (25) feet east of the existing right-of-way, for locations and topographic elevations. At the intersections of Griffin Road and SW 49th Street, the locations included up to one hundred (100) feet east and west of each intersection. The survey met all of the current surveying requirements of the Board of Professional Surveyors and Mappers of the State of Florida, as defined in Chapter 5J-17.050 - .052, Florida Administrative Code.

- The survey included the finding or establishing of the survey control monumentation for the existing right-of-way, and adjacent properties, in order to tie all improvement to.
- The location of all above-ground visible improvements including pavement, slabs, fences, signs, overhead wires and utility features, within the limits of the survey.
- Existing trees three (3) inches in diameter and above, at four (4) feet above ground, were located and identified with diameter and common name.
- Elevations were taken on an approximate one hundred (100) foot grid on natural ground, and on all pavement, slabs, and utilities within the site.
- Rims, inverts and pipe sizes will be measured on all sanitary and drainage structures.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION (City and State) 3563 NW 53rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
19

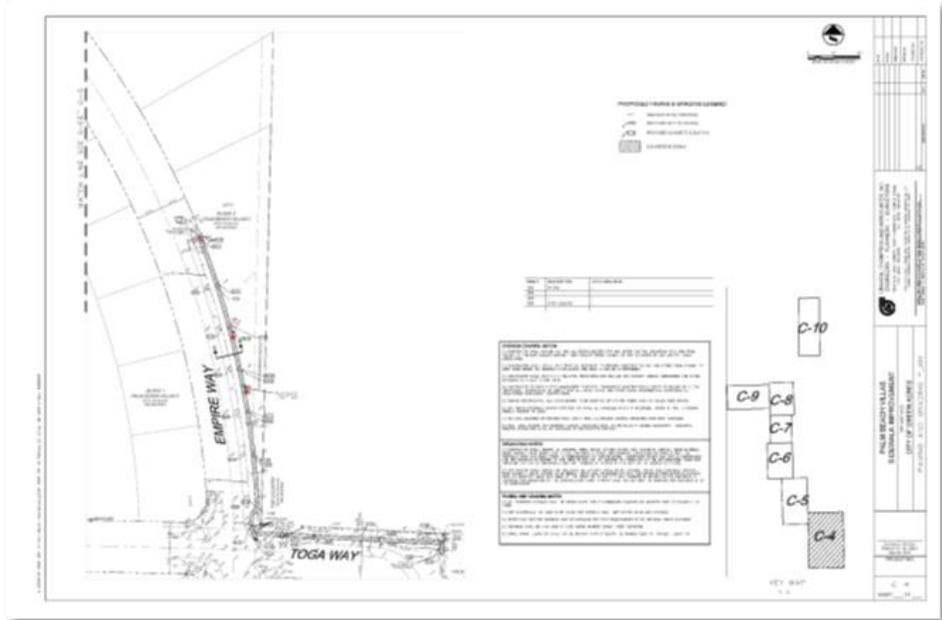
21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
Greenacres Palm Beach Villas Sidewalk Survey Greenacres, Florida	PROFESSIONAL SERVICES 2016	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of Greenacres	b. POINT OF CONTACT NAME Mr. Carlos I. Cedeño Public Works Director	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (561) 642-2074 Email: ccedeno@greenacresfl.gov
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Craven Thompson & Associates provided professional surveying services for the sidewalk project. The survey locations consisted of four sections of Empire Way (2200'), portions of Toga Way (210'), Nicia Way (120'), and Centurian Way (650'). The entire project totaling 3,180 lineal feet was surveyed for sidewalk design. This survey consisted of preparing a design survey of the roadways noted above. The limits of the survey were one-half right-of-way on the side of the proposed sidewalk, from the crown of road to the right-of-way line, plus 5-feet beyond where accessible. The width was expanded to depict the nature of the topography at the lake and canals, along Empire Way, again where accessible. Craven Thompson prepared calculations covering the project area based on the plats, property appraiser records and deeds, to determine the location of the right-of-way lines and property lines. We recovered right-of-way monumentation, property corners and other horizontal survey control in the project area to determine the location of the streets noted above, and the affected properties. Set horizontal control points in convenient locations along the roadways for survey data collection, and established vertical control (benchmarks) on the horizontal control points along the survey route for topographic data collection and future grading. These benchmarks were relative to the North American Vertical Datum of 1988 (NAVD88).



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>	20. EXAMPLE PROJECT KEY NUMBER 20
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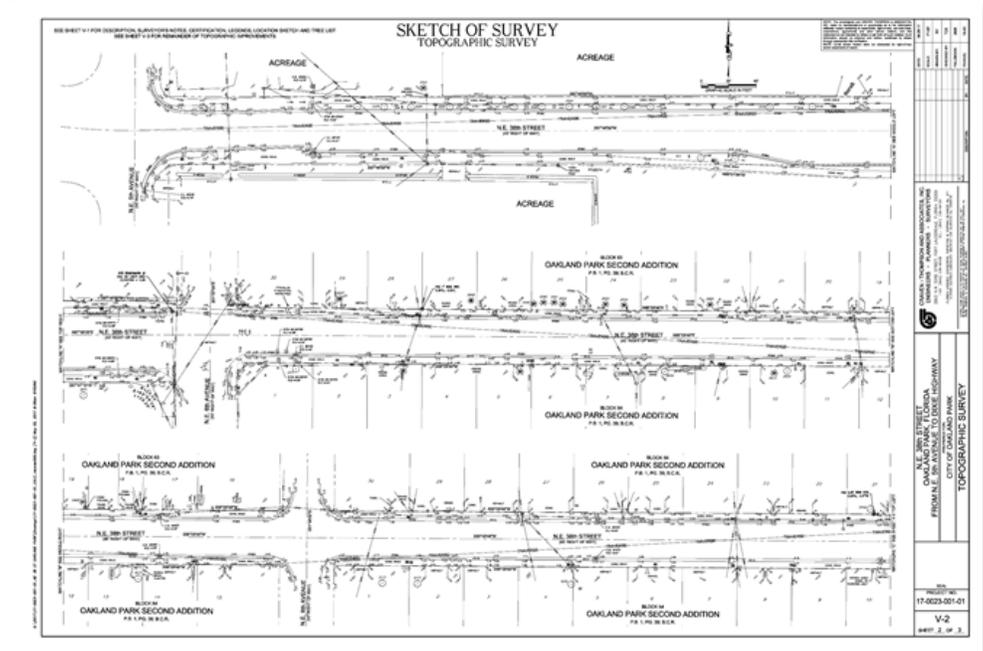
21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
NE 38 th Street Topographic Survey Oakland Park, Florida	PROFESSIONAL SERVICES 2017	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION
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a. PROJECT OWNER City of Oakland Park	b. POINT OF CONTACT NAME Mr. Albert Carbon Public Works Director	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 630-4458 Email: AlbertC@oaklandparkfl.gov
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)
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Craven Thompson prepared a topographic survey of a portion of the right-of-way for NE 38th Street lying east of NE 5th Avenue and lying west of Dixie Highway, approximately 2,850 linear feet. The purpose of this survey was to locate all visible fixed improvements lying between the north edge of pavement and approximately five (5) feet north of the north right-of-way line, and between the south edge of pavement and approximately five (5) feet south of the south right-of-way line for NE 38th Street. The survey met all of the current surveying requirements of the Board of Professional Surveyors and Mappers of the State of Florida, as defined in Chapter 5J-17.050 - .052, Florida Administrative Code).



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT
--

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION (City and State) 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER

21

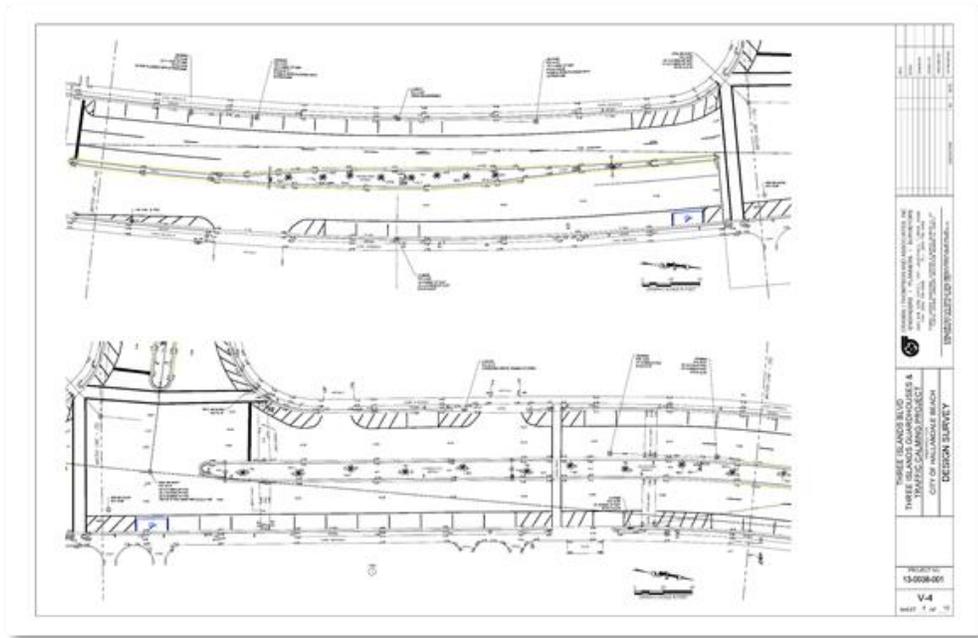
21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
Three Island Safe Neighborhood District – Three Island Guardhouses and Traffic Calming Roadway Survey, Hallandale Beach, Florida	PROFESSIONAL SERVICES 2018	CONSTRUCTION (if applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of Hallandale Beach	b. POINT OF CONTACT NAME Mr. Manga Ebbe Project Manager	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 457-3043 Email: mebbe@hallandalebeachfl.gov
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Craven Thompson prepared a design survey for design purposes within the city-owned right-of-way along Three Islands Boulevard from the Guard House north of Hallandale Beach Boulevard to the City limits, west on Atlantic Shores Boulevard from Three Islands Boulevard to the Guardhouse and on Parkview Drive from the bridge to the City Limits. The total length of survey was approximately 6,000 linear feet of roadway. The survey met current surveying requirements of the Board of Professional Surveyors and Mappers of the State of Florida, as defined in Chapter 5J-17.050-.052, Florida Administrative Code.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
 (Present as many projects as requested by the agency, or 10 projects, if not specified.
 Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
22

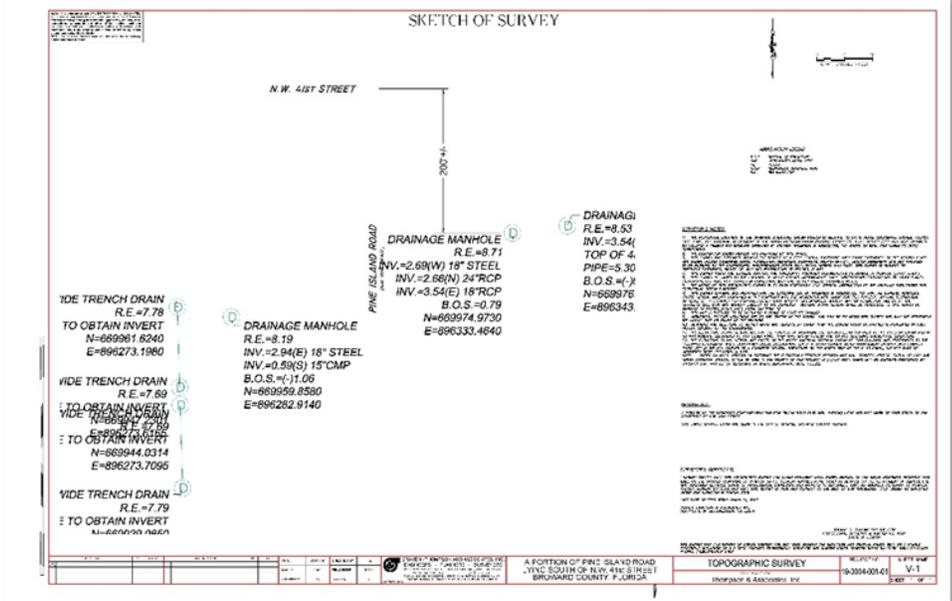
21. TITLE AND LOCATION (CITY AND STATE)	22. YEAR COMPLETED	
Pine Island Road Drainage As-builts for BCHCED Broward County, Florida	PROFESSIONAL SERVICES 2018	CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER Client: Thompson & Associates Owner: BCHECD	b. POINT OF CONTACT NAME Mr. Darren Badore, P.E. Vice President	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 761-1073 Email: darren@thompson-inc.com
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Craven Thompson prepared Record Drawing of Drainage Structures on Pine Island Road for Broward County Highway Construction & Engineering Division. We established horizontal control points within the project area. All survey control horizontal locations were tied into the State Plane, Florida East Zone, NAD 83/90 Coordinate system. The vertical datum was established on the horizontal control points, based on the elevations relative to North American Vertical Datum of 1988 (NAVD88), as tied into NGS control points along the C-13 Canal, south of Oakland Park Boulevard. We obtained horizontal location, rim elevations, invert elevations, and pipe sizes of three (3) drainage structures. Craven Thompson obtained location, dimensions and rim elevations of trench drain, located on the west side of Pine Island Road, connected to the structures noted above. The deliverable of the data collected, was plotted on the CADD files, as provided by County.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION (City and State) 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Sub-Consultant - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
23

21. TITLE AND LOCATION (CITY AND STATE) NW 31 st Avenue Route Survey Lauderdale Lakes, Florida	PROFESSIONAL SERVICES 2016	22. YEAR COMPLETED CONSTRUCTION (If applicable) Not Applicable
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23. PROJECT OWNER'S INFORMATION

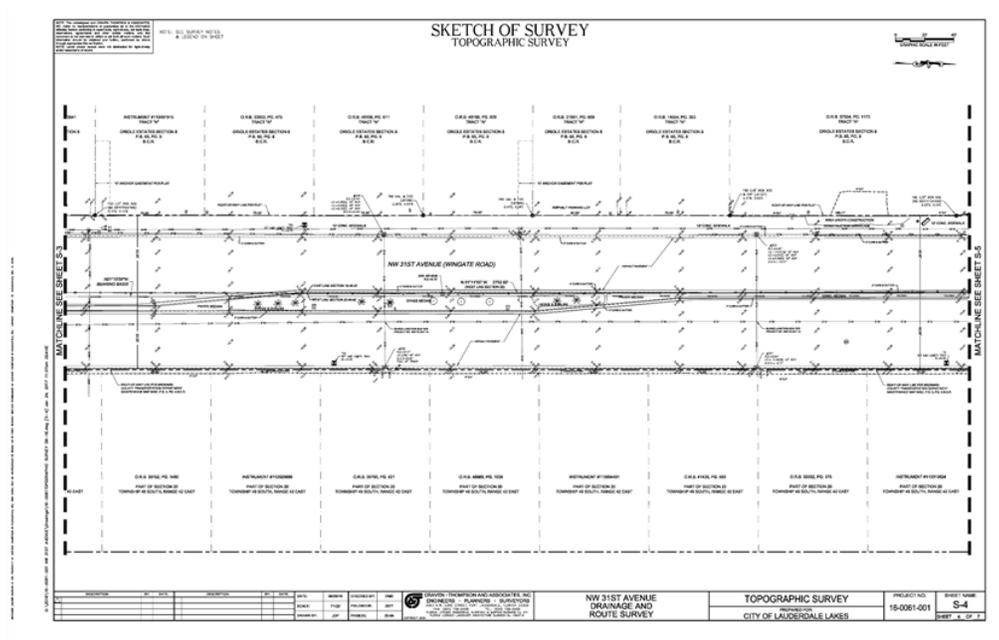
a. PROJECT OWNER City of Lauderdale Lakes	b. POINT OF CONTACT NAME Mr. Ronald Desbrunes, P.E. Director of Public Works	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 535-2778 Email: RonaldD@lauderdalelakes.org
--	--	--

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

The location of the project is within the right-of-way of NW 31st Avenue, from NW 44th Street, to NW 35th Street. The overall project includes surveying for the reconstruction of the roadway, between these limits, and the addition of a sidewalk on the east side of the right-of-way, which will require the roadway median to be shifted to the west.

Craven Thompson prepared a topographic survey for engineering design of a portion of NW 35th Avenue in the City of Lauderdale Lakes covering 3,500 lineal feet.

- The survey met all of the current surveying "Standards of Practice" requirements of the Board of Professional Surveyors and Mappers of the State of Florida, as defined in Chapter 5J-17.050 - .052, Florida Administrative Code.
- The survey included the finding and establishing Survey Control monumentation for the existing right-of-way and adjacent properties to tie all improvements to.
- The location of all aboveground and visible improvements including pavement, slabs, fences, signs, trees, overhead wires and utility features within the limits of this survey as defined.



- Cross-section elevations were taken at 100 intervals along the entire route.
- Rims, Inverts and pipe sizes were measured on all sanitary and drainage structures.
- All elevations were relative to North American Vertical Datum of 1988 (NAVD88) and based on National Geodetic Survey (NGS) or Florida Department of Transportation (FDOT) Benchmarks.
- Two (2) benchmarks were provided on or immediately adjacent to each site for future construction.
- The preparation of the survey drawing was in AutoCAD Civil 3D, Version 2014 and converted to MicroStation format for delivery, and provided along with hard copy signed and sealed surveys.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
 (Present as many projects as requested by the agency, or 10 projects, if not specified.
 Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
24

21. TITLE AND LOCATION (CITY AND STATE)		22. YEAR COMPLETED	
Melaleuca Road Survey Southwest Ranches, Florida		PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable

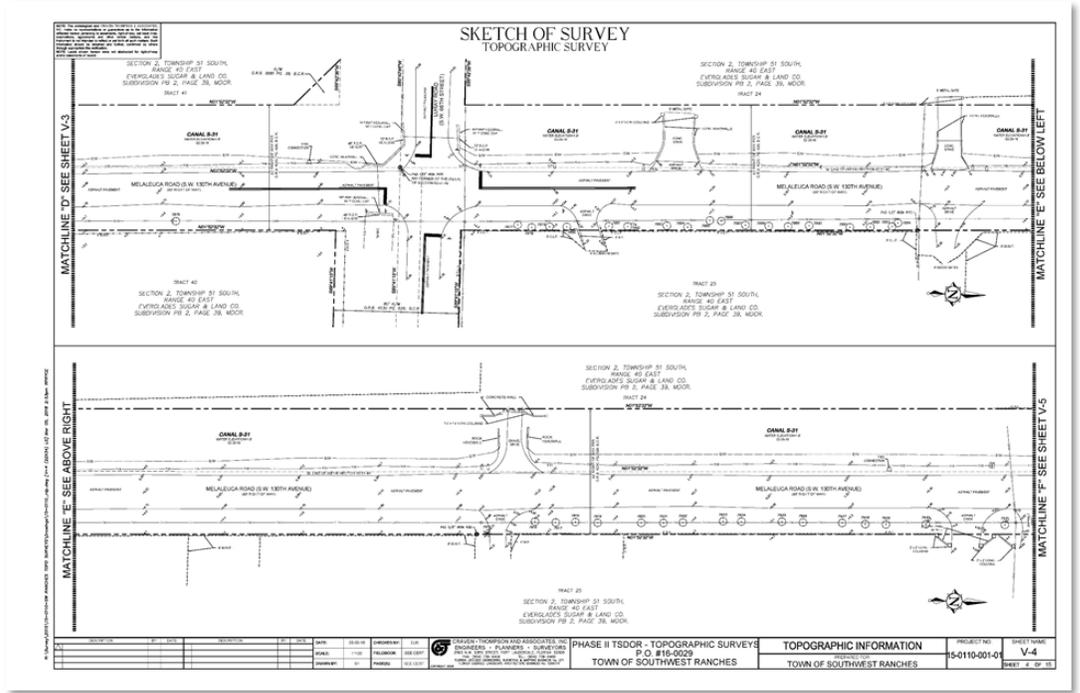
23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER Town of Southwest Ranches	b. POINT OF CONTACT NAME Ms. Emily McCord-Aceti Community Services	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 434-0008 Email: eaceti@southwestranches.org
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Craven Thompson prepared a topographic survey of Melaleuca Road, from Old Sheridan Street north, to six hundred sixty (660) feet north of SW 56th Street, approximately 8,737 linear feet. The survey included one hundred (100) feet east and west of Melaleuca Road, at the intersections of Old Sheridan Street, Mustang Trail, Luray Road, and Stirling Road.

The survey met all of the current surveying requirements of the Board of Professional Surveyors and Mappers of the State of Florida, as defined in the Standards of Practice, Chapter 5J-17.050 - .052, Florida Administrative Code. The purpose of this survey was for conventional roadway design to rehabilitate pavement and provide drainage swales.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION (City and State) 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
25

1. TITLE AND LOCATION (CITY AND STATE)		22. YEAR COMPLETED	
6 th Avenue South Streetscape Survey Lake Worth, Florida		PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Not Applicable

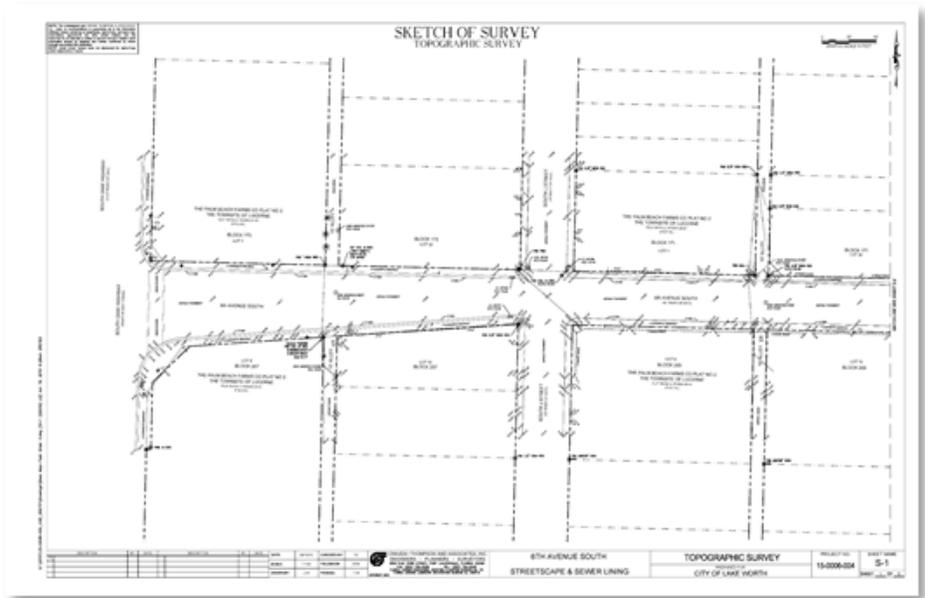
23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER City of Lake Worth	b. POINT OF CONTACT NAME Mr. Felipe Lofaso Assistant Public Services Director	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (561) 586-1720 Email: flofaso@lakeworth.org
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

The project limits are 6th Avenue South – Federal Highway to Dixie Highway. Craven Thompson prepared a topographic survey of 6th Avenue South right-of-way for design purposes from the west edge of pavement on S. Federal Highway to the east right-of-way line of South Dixie Highway, including 75 feet north and south of 6th Avenue South on those intersecting roads and alleys lying between the two highways. The survey met all of the current surveying requirements of the Board of Professional Surveyors and Mappers of the State of Florida, as defined in Chapter 5J-17.050-.052, Florida Administrative Code.

- The survey included the recovery of sufficient existing boundary and/or right-of-way monumentation to determine the right-of-way lines needed in order to tie all visible improvements to.
- Locations of all aboveground and visible improvements, including all pavement, slabs, fences, signs, overhead wires, trees, and utility features, within the limits of the existing platted rights-of-way.
- Rims elevations were measured on all sanitary and drainage structures found within the project limits, if accessible and physically unobstructed.
- Elevations were taken on an approximate at fifty (50) foot cross sections, along all roadways and go from back of walk to back of walk.
- Elevation datum was relative to North American Vertical Datum of 1988 (NAVD88), and based on Palm Beach County, National Geodetic Survey (NGS) or Florida Department of Transportation (FDOT) benchmarks.
- The surveys are in the projection: State Plane, Florida East Zone, NAD 83(90), US Survey feet.
- Two (2) benchmarks were provided on, or immediately adjacent to, for future construction.
- The preparation of the survey drawing was in AutoCAD Civil 3D, Version 2014 or higher, drawing file format.
- The final deliverable was provided in hard copy, signed and sealed surveys (24" x 36").



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION (City and State) 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime – Surveying, Design, Permitting, Landscape Architecture, Construction Services
b.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER
26

21. TITLE AND LOCATION (CITY AND STATE) SW 188 th Avenue Topographic Survey Southwest Ranches, Florida	PROFESSIONAL SERVICES 2018	22. YEAR COMPLETED CONSTRUCTION (If applicable) Not Applicable
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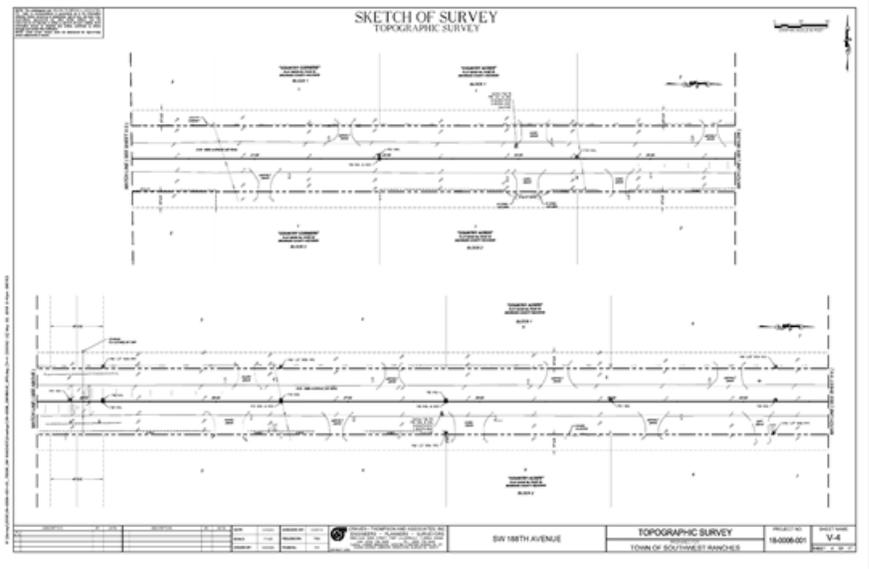
23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER Town of Southwest Ranches	b. POINT OF CONTACT NAME Ms. Emily McCord-Aceti Community Services	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (954) 434-0008 Email: eaceti@southwestranches.org
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Craven Thompson prepared a topographic survey of portions of the following multiple roadways within the Town of Southwest Ranches. The survey included locations within the full right-of-way of the roads listed below. The total project length, including all adjacent side street sections, covers approximately 14,300 lineal feet.

- SW 188th Avenue, from the north edge of pavement of Griffin Road southerly, to the end of the existing asphalt pavement, which covers the existing public right-of-way section only. This section is to include a portion of the existing Griffin Road, pavement only, lying within one hundred (100) feet east and west of the centerline of SW 188th Avenue.
- SW 186th Way, from SW 61st Court southerly, to a cul-de-sac at its southerly end.
- SW 61st Court, lying between SW 185th Way and SW 186th Way. This will include a portion of SW 185th Way, fifty (50) feet north and south of the centerline of SW 61st Court.
- SW 63rd Street, from SW 185th Way westerly, to the canal west of SW 188th Avenue. This will include a portion of SW 185th Way, fifty (50) feet north and south of the centerline of SW 61st Court.
- Stirling Road, straddling SW 188th Avenue, end to end.
- SW 57th Court, straddling SW 188th Avenue, from dead-end, east of SW 188th Avenue, west to the canal.
- SW 54th Place, straddling SW 188th Avenue, from dead-end, east of SW 188th Avenue, west to the canal.
- SW 51st Manor, straddling SW 188th Avenue, end to end.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - Surveying & Mapping Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

26. NAMES OF KEY PERSONNEL (From Section E, Block 12)	27. ROLE IN THIS CONTRACT (From Section E, Block 13)	28. EXAMPLE PROJECTS LISTED IN (Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)																									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Richard Pryce, PSM	Principal/PM	X	X	X	X	X					X	X	X			X	X	X	X		X	X	X	X		X	X
Nicholas Messina, PSM	Surveyor		X	X			X	X				X		X		X	X	X	X						X	X	
Thomas Shahan, PSM	Surveyor	X	X			X	X	X		X		X	X			X	X			X	X	X	X			X	
Ray Young, PSM	Surveyor	X	X		X	X			X	X	X	X	X		X	X		X		X					X		

NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	Miramar Historical Area Complete Streets Project Survey – Phase II, Miramar, Florida	14	Topographic Survey at the Intersection of SE 3 rd Avenue & Las Olas Boulevard Fort Lauderdale, Florida
2	NE 14 th Avenue Survey Hallandale Beach, Florida	15	Surveys at the Intersections of: NW 123 rd St. and NW 1 st Ct.; NW 123 rd St. and NW Miami Ct.; NW 139 th Terr. & NW 5 th Ct.; North Miami, Florida
3	Las Olas Boulevard and Walkability Design Survey Fort Lauderdale, Florida	16	Roadway Maintenance Easement Oakland Park, Florida
4	Town of Davie 20' Wide Utility Easement Davie, Florida	17	Watermain Replacement Route Survey Hollywood, Florida (Hollywood Project No. 15-5129)
5	Margate Hydrographic Canal Survey Margate, Florida	18	SW 190 th Avenue Topographic Survey Southwest Ranches, Florida
6	Filmore Street As-Built Topographic Survey Hollywood, Florida	19	Greenacres Palm Beach Villas Sidewalk Survey Greenacres, Florida
7	Alley Reconstruction Survey (2014/2015) Hollywood, Florida	20	NE 38 th Street Topographic Survey Oakland Park, Florida
8	Northridge Bus Shelter Survey and Sketch & Legal Description, Oakland Park, Florida	21	Three Island Safe Neighborhood District – Three Island Guardhouses and Traffic Calming Roadway Survey, Hallandale Beach, Florida
9	Construction Layout for SFRTA Operations Building, Parking Garage & Platform, Pompano Beach, Florida	22	Pine Island Road Drainage As-builts for BCHCED Broward County, Florida
10	Boundary Survey and Sketch & Legal for Ingress/Egress Easement, Southwest Ranches, Florida	23	NW 31 st Avenue Route Survey Lauderdale Lakes, Florida
11	Stirling Road Topographic Survey Southwest Ranches, Florida	24	SW Ranches Melaleuca Road Topographic Survey Southwest Ranches, Florida
12	Nova Southeastern University – Parking Garage Construction Layout, Davie, Florida	25	6 th Avenue South Streetscape Survey, Lake Worth, Florida
13	L-12 Canal ROW Annexation Easement Sketch & Legal Description, Greenacres, Florida	26	SW 188 th Avenue Topographic Survey Southwest Ranches, Florida



H. ADDITIONAL INFORMATION

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.

The Craven Thompson & Associates, Inc. Surveying & GIS Department has four (4) Professional Surveyors and Mappers, four (4) Survey Technicians and eight (8) Field Crews. Providing Surveying services has been, and continues to be, an important portion of CTA's business since 1962. Craven Thompson has provided surveying services on a significant number of roadway projects including:

- Miramar Historic Area Complete Streets Phase II, Miramar
- NE 29th Place, Aventura
- NW 21st Avenue, Broward County
- State Road 7, Broward County
- Electronics Way, West Palm Beach
- North Riverside Drive, Pompano Beach
- 7th Street, West Palm Beach
- Filmore Street, Hollywood
- NE 34th Court, Oakland Park
- NE 38th Street Complete Streets, Oakland Park
- Pine Island Road (BCHCED)
- Miramar Parkway (BCHCED)
- Spangler Boulevard, Port Everglades
- Fleming Avenue, Greenacres
- NW 125th Street Improvements, North Miami
- Sunrise Boulevard (BCHCED)

Other roadway projects where Craven Thompson's Key Personnel have provided surveying services includes:

- NE 5th Avenue Streetscape and Roadway Reconstruction Project
- Floranada Road Traffic Calming Improvement Project
- North Miami Intersection Traffic Calming

Each of these projects involved traffic calming elements, as well as sidewalks, drainage, pavement marking & signage, landscaping & irrigation, and ADA considerations.

In addition, these Craven Thompson's Key Personnel have undertaken surveying services for roadway milling & resurfacing projects such as:

- 207th Street Milling & Resurfacing, Aventura
- Country Club Drive Milling & Resurfacing, Aventura
- NW 191st Street Milling & Resurfacing, Aventura
- NE 29th Court; NE 201st Terrace, Aventura
- NE 27th Court, Aventura
- Frontage Road along NE 203rd Street Milling & Resurfacing, Aventura
- NE 188th Street, Aventura
- NE 185th Street, Aventura
- NE 31st Avenue Milling & Resurfacing, Aventura

I. AUTHORIZED REPRESENTATIVE
The foregoing is a statement of facts

31. SIGNATURE

32. DATE

August 27, 2019

33. NAME AND TITLE

Richard D. Pryce, P.S.M., Vice President, Surveying & G.I.S.



ARCHITECT ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (If any)
DCRA 19-026

PART II - GENERAL QUALIFICATIONS

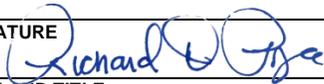
(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME Craven Thompson & Associates, Inc.			3. YEAR ESTABLISHED 1962		4. DUNS NUMBER 06-362-4910	
2b. STREET 3563 NW 53 rd Street			5. OWNERSHIP a. TYPE Corporation b. SMALL BUSINESS STATUS N/A			
2c. CITY Fort Lauderdale		2d. STATE Florida				
6a. POINT OF CONTACT NAME AND TITLE Richard D. Pryce, P.S.M., Vice President, Surveying & GIS			7. NAME OF FIRM (If block 2a is a branch office) Same			
6b. TELEPHONE NUMBER (954) 739-6400		6c. E-MAIL ADDRESS rpryce@craventhompson.com				
8a. FORMER FIRM NAME(S) (If any) Davis & Craven, Inc. / Davis, Craven, Thompson, Inc.			8b. YR. ESTABLISHED 1962 / 1975		8c. DUNS NUMBER	

9. EMPLOYEES BY DISCIPLINE				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS					
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)	a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) FIRM	(2) BRANCH						
02	Administrative	9		A06	Airports; Term. & Hangars	6	L01	Lab.; Med. Research Facilities	3
08	AutoCAD Technicians	2		A08	Animal Facilities	1	L02	Land Surveying	1
12	Civil Engineers	25	4	A11	Auditoriums & Theaters	1	L04	Libraries; Museums; Galleries	2
15	Construction Inspectors	4		B01	Barracks; Dormitories	1	O01	Office Bldgs.; Industrial Parks	5
16	Const. Management	2		B02	Bridges	1	P05	Planning (Comm., Regional)	1
38	Land Surveyor	28		C06	Churches; Chapels	1	P06	Planning (Site, Installation)	2
39	Landscape Architect	5		C10	Commercial Bldg.; Shopping	6	P13	Public Safety Facilities	3
47	Planners; Urban/Regional	1		C11	Community Facilities	4	R03	Railroad; Rapid Transit	3
				D07	Dining Halls; Clubs; Rest.	1	R04	Rec. Fac. (Parks, Marinas)	6
				E02	Educational Facilities	6	R06	Rehabilitation (Buildings)	2
				E09	Environmental Impact Studies	1	R09	Resources Recov.; Recycling	1
				E11	Environmental Planning	1	R11	Rivers; Canals; Waterways	2
				F02	Field Houses; Gyms; Stadiums	1	S04	Sewage Collection, Treatment	5
				G01	Garages; Vehicle Maint. Fac.	4	S07	Solid Wastes; Incin.; Landfill	5
				H01	Harbors; Ship Terminal Fac.	7	S10	Surveying; Platting; Mapping	1
				H06	High-rise	1	S13	Storm Water Handling & Fac.	6
				H07	Hwys.; Streets; Parking Lots	7	T02	Testing and Inspection Serv.	1
				H09	Hospital & Medical Facilities	5	T03	Traffic & Trans. Engineer	4
				H10	Hotels; Motels	4	T04	Topo. Survey & Mapping	1
				H11	Housing (Res., Apts., Condo)	7	U02	Urban Renewals; Comm. Dev.	9
				I01	Industrial Buildings	5	W01	Warehouses & Depots	1
				I06	Irrigation; Drainage	3	W02	Water Resources; Hydrology	2
	Other Employees			J01	Judicial & Courtroom Fac.	3	W03	Water Supply; Treatment	4
	Total	76	4						

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS (Insert revenue index number shown at right)		PROFESSIONAL SERVICES REVENUE INDEX NUMBER			
a. Federal Work	1	1. Less than \$100,000	6. \$2 million to less than \$5 million	7. \$5 million to less than \$10 million	8. \$10 million to less than \$25 million
b. Non-Federal Work	8	2. \$100,000 to less than \$250,000	9. \$25 million to less than \$50 million	10. \$50 million or greater	
c. Total Work	8	3. \$250,000 to less than \$500,000			
		4. \$500,000 to less than \$1 million			
		5. \$1 million to less than \$2 million			

12. AUTHORIZED REPRESENTATIVE
The foregoing is a statement of facts.

a. SIGNATURE 	b. DATE August 27, 2019
c. NAME AND TITLE Richard D. Pryce, P.S.M. Vice President, Surveying & G.I.S.	



ARCHITECT - ENGINEER QUALIFICATIONS

PART I - CONTRACT-SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION <i>(City and State)</i> Surveying and Mapping Consulting Services to the CRA for Neighborhood Lighting & Streetscape Enhancement, Hollywood, Florida	
2. PUBLIC NOTICE DATE 07/30/2019	3. SOLICITATION OR PROJECT NUMBER DCRA 19-026

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE Dennis Ritzel, PSM - Director of Business Operations		
5. NAME OF FIRM Ritzel-Mason, Inc.		
6. TELEPHONE NUMBER 786-472-0358	7. FAX NUMBER N/A	8. E-MAIL ADDRESS dennis@ritzel-mason.com

C. PROPOSED TEAM

(Complete this section for the prime contractor and all key subcontractors.)

	(Check)			9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
	PRIME	J-V PARTNER	SUBCONTRACTOR			
a.			✓	Ritzel-Mason, Inc. <input type="checkbox"/> CHECK IF BRANCH OFFICE	5119 Beechwood Road Delray Beach, FL 33484	Surveying/SUE Services
b.				Ritzel-Mason, Inc. <input type="checkbox"/> CHECK IF BRANCH OFFICE	2131 Hollywood Blvd #204 Hollywood, FL 33020	Surveying/SUE Services
c.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		
d.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		
e.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		
f.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		

D. ORGANIZATIONAL CHART OF PROPOSED TEAM

(Attached)

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME Dennis Ritzel, PSM	13. ROLE IN THIS CONTRACT Licensed Surveyor - Project Manager	14. YEARS EXPERIENCE	
		a. TOTAL 24	b. WITH CURRENT FIRM 7 Months

15. FIRM NAME AND LOCATION *(City and State)*
Ritzel-Mason, Inc. (Delray Beach, FL)

16. EDUCATION <i>(Degree and Specialization)</i> BS / Geomatics Engineering / Florida Atlantic University (2013) AA / Palm Beach Community College (2009)	17. CURRENT PROFESSIONAL REGISTRATION <i>(State and Discipline)</i> FL PSM #6953 (2013) FL EI #1100022325 (2019) UAS107 #1856855 (2018) CST #1102-1681 (2005)
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18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
Trenchless Technology Center (TTC) Utility Investigation School - 40 Hours
Florida Surveying and Mapping Society

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
a. Exxon Mobil Tank Hydrostatic Broward County, Port Everglades, Ft. Lauderdale, FL (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE	6/2019	N/A
<input checked="" type="checkbox"/> Check if project performed with current firm Project Manager to support contractor efforts for this hydrostatic project. Tasked to provide differential leveling to monitor fuel tank settlement as the tank was filled with water. Local site control was set and established for horizontal and vertical data. Project manager prepared a report and submitted to the client.		
b. SR A1A Gulfstream Palm Beach County, Gulfstream, FL (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE	8/2019 (EST.)	N/A
<input checked="" type="checkbox"/> Check if project performed with current firm Project Manager to support surveyor and engineer to designate utilities in a 1.1-mile corridor of State Road A1A. PM coordinated with survey field crews to mark underground utilities within the right-of-way.		
c. Snowy Place Palm Beach County, Delrav Beach, FL (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE	4/2019	N/A
<input checked="" type="checkbox"/> Check if project performed with current firm Project Manager to support engineer to as-built approximately 400 feet of forcemain and 400 feet of watermain. PM was tasked to create a record plan and profile. This as-built drawing was used to complete land owner's permit.		
d. Division Avenue Maintenance Map Palm Beach County, West Palm Beach, FL (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE	5/2019	N/A
<input checked="" type="checkbox"/> Check if project performed with current firm CADD Manager to support the surveyor of record. Ritzel-Mason performed CADD services for 1-mile of a Maintenance Right-of-Way Map for the City of West Palm Beach. Topographic was merged with existing right-of-way data. Parcels to be transferred to the City were delineated.		
e. Bal Harbour Shoppes Miami-Dade County, Bal Harbour, FL (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE	6/2019	N/A
<input checked="" type="checkbox"/> Check if project performed with current firm Project Manager to support the contractor's efforts. PM coordinated with survey field crews to provide subsurface utility designating, soft dig test holes, auger piles stakeout and drainage surveying services. All data was added to a specific purpose survey and provided to the client.		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME Clyde Mason, PSM	13. ROLE IN THIS CONTRACT Licensed Surveyor - Project Manager	14. YEARS EXPERIENCE	
		a. TOTAL 16	b. WITH CURRENT FIRM 10 Months

15. FIRM NAME AND LOCATION *(City and State)*
Ritzel-Mason, Inc. (Delray Beach, FL)

16. EDUCATION <i>(Degree and Specialization)</i> BS / Geomatics Engineering / Florida Atlantic University (2011)	17. CURRENT PROFESSIONAL REGISTRATION <i>(State and Discipline)</i> FL PSM #6905 (2012) OH PS #8601 (2013) NC PLS #5297 (2018)
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18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Florida Surveying and Mapping Society
Gold Coast Land Surveyors Council

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>
Atlantic Coast Pipeline North Carolina	2/2019	N/A
a. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager to support contractor efforts for this 180-mile section of pipeline. PM provided quality control, field crew management and office management for the layout and construction as-built of a oil pipeline.		
Deauville Village Condos Palm Beach County, Delray Beach, FL	5/2019	N/A
b. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager to support home owners association for boundary and topographic survey of the clubhouse. PM coordinated with field survey crews to recover existing property monumentation.		
Longhorn Steakhouse Palm Beach County, Jupiter, FL	7/2019 (EST.)	N/A
c. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager to support contractor efforts for the ground-up construction of a new building. PM was tasked to provide survey control, boundary survey, formboard survey and as-builts. The building foundation was staked and the footers were pinned for wall placement.		
Golf Park Broward County, Pompano Beach, FL	5/2019	N/A
d. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager to support contractor's construction efforts for park improvements. PM coordinated with survey field crews to set on-site control, construction layout of proposed features and as-built surveying.		
Agave Ponce, Miami-Dade County, Coral Gables, FL	6/2019	N/A
e. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager to support the engineer's design efforts to place mast arms at a major urban intersection. Utility designates were performed and surveyed. PM prepared a Specific Purpose Survey and provided to the client.		

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 1
21. TITLE AND LOCATION <i>(City and State)</i> Exxon Mobil Tank Hydrostatic Broward County, Port Everglades, Ft. Lauderdale, FL	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES 6/2019	CONSTRUCTION <i>(If applicable)</i> N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER Attaway Services, Inc.	b. POINT OF CONTACT NAME Luke Andresen	c. POINT OF CONTACT TELEPHONE NUMBER 954-662-7525
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT <i>(Include scope, size, and cost)</i>		

Ritzel-Mason supported the contractor efforts for this hydrostatic project. Ritzel-Mason provided differential leveling to monitor fuel tank settlement as the tank was filled with water. Local site control was set and established for horizontal and vertical data. A report was prepared and submitted to the client. All scheduling efforts were coordinated by the Ritzel-Mason Project Manager. Field survey crews were responsible for following Port Everglades safety guidelines including fire retardant suits.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Ritzel-Mason, Inc.	(2) FIRM LOCATION <i>(City and State)</i> Hollywood, FL	(3) ROLE Surveying Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
f.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 2
21. TITLE AND LOCATION <i>(City and State)</i> SR A1A Gulfstream Palm Beach Countv. Gulfstream. FL	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES 8/2019 (EST.)	CONSTRUCTION <i>(If applicable)</i> N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Baxter & Woodman Company	Thomas English, PSM	954-666-5462

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Ritzel-Mason supported surveyor and engineer to designate utilities within a 1.1-mile corridor of State Road A1A. Existing utility locations were needed to support the design of a new forcemain. Utilities were marked within the right-of-way of SR A1A from Golfview Drive to Little Club Road and the Intracoastal Waterway. Ritzel-Mason Project Manager coordinated with the City and other utility owners for record research. Crew Supervisor was responsible for quality control of utility marks. A KMZ of all found utilities was created and submitted to the client.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Ritzel-Mason, Inc.	(2) FIRM LOCATION <i>(City and State)</i> Hollywood, FL	(3) ROLE Surveying Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
f.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 3
21. TITLE AND LOCATION <i>(City and State)</i> Snowy Place Palm Beach County. Delrav Beach. FL	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES 4/2019	CONSTRUCTION <i>(If applicable)</i> N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Snowy Place	Christopher David Hanaka	508-439-1778

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Ritzel-Mason supported the engineer of record to as-built approximately 400 feet of forcemain and 400 feet of watermain. Utilities were potholed at all bends, tees and other points of interest. Top of pipe elevation data was obtained in reference to an established benchmark. A record plan and profile was created and as-built was used to complete land owner's permit. Crew Supervisor was responsible for quality control of depicted field information.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Ritzel-Mason, Inc.	(2) FIRM LOCATION <i>(City and State)</i> Hollywood, FL	(3) ROLE Surveying Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
f.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 4
21. TITLE AND LOCATION <i>(City and State)</i> Division Avenue Maintenance Map Palm Beach County, West Palm Beach, FL		22. YEAR COMPLETED PROFESSIONAL SERVICES 5/2019 CONSTRUCTION <i>(If applicable)</i> N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER A & B Engineering, Inc.	b. POINT OF CONTACT NAME Dennis Painter, PSM	c. POINT OF CONTACT TELEPHONE NUMBER 561-383-7480
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT <i>(Include scope, size, and cost)</i>		

Ritzel-Mason provided the surveyor of record. Ritzel-Mason performed CADD services for 1-mile of a Maintenance Right-of-Way Map for the City of West Palm Beach. Limits included Tamarind Avenue from Okeechobee Boulevard to Banyan Avenue. Topographic was merged with existing right-of-way data. Parcel takes were delineated as to be transferred to the City.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Ritzel-Mason, Inc.	(2) FIRM LOCATION <i>(City and State)</i> Hollywood, FL	(3) ROLE Surveying Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
f.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 5
21. TITLE AND LOCATION <i>(City and State)</i> Bal Harbour Shoppes Miami-Dade County, Bal Harbour, FL	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES 6/2019	CONSTRUCTION <i>(If applicable)</i> N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER Brodson Construction	b. POINT OF CONTACT NAME Jason Bendas	c. POINT OF CONTACT TELEPHONE NUMBER 786-910-3355
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT <i>(Include scope, size, and cost)</i>		

Ritzel-Mason supported the contractor's efforts for major shopping center improvements. Ritzel-Mason provided subsurface utility designating, soft dig test holes, auger piles stakeout and drainage surveying services. All utility designated followed ASCE-38 standards for subsurface utility locations. All data was added to a specific purpose survey and provided to the client. Test hole data sheets were also provided.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a. (1) FIRM NAME Ritzel-Mason, Inc.	(2) FIRM LOCATION <i>(City and State)</i> Hollywood, FL	(3) ROLE Surveying Services
b. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
c. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
d. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
e. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
f. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 6
21. TITLE AND LOCATION <i>(City and State)</i> Atlantic Coast Pipeline North Carolina	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES 2/2019	CONSTRUCTION <i>(If applicable)</i> N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER Thrasher Group	b. POINT OF CONTACT NAME Douglas Richmond	c. POINT OF CONTACT TELEPHONE NUMBER 540-373-4045
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Ritzel-Mason supported contractor efforts for this 180-mile section pipeline. Ritzel-Mason provided quality control, field crew management and office management for the layout and construction as-built of a oil pipeline. The Project Manager physically resided in Thrasher's offices and worked directly with Thrasher staff.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Ritzel-Mason, Inc.	(2) FIRM LOCATION <i>(City and State)</i> Hollywood, FL	(3) ROLE Surveying Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
f.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 7
21. TITLE AND LOCATION <i>(City and State)</i> Deauville Village Condos Palm Beach County, Delray Beach, FL	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES 5/2019	CONSTRUCTION <i>(If applicable)</i> N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Deauville Village Condominium	Karen Kretschmann	914-522-4541

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Ritzel-Mason supported home owners association for boundary and topographic survey of the clubhouse. PM coordinated with field survey crews to recover existing property monumentation. Monumentation was evaluated to delineate the limits of the clubhouse property. A boundary survey was prepared and submitted to the client. Crew Supervisor was responsible for quality control of final boundary survey.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Ritzel-Mason, Inc.	(2) FIRM LOCATION <i>(City and State)</i> Hollywood, FL	(3) ROLE Surveying Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
f.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 8
21. TITLE AND LOCATION <i>(City and State)</i> Longhorn Steakhouse, Palm Beach County, Jupiter, FL	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES 7/2019 (EST.)	CONSTRUCTION <i>(If applicable)</i> N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER ResCon Group	b. POINT OF CONTACT NAME Cody MacLenna	c. POINT OF CONTACT TELEPHONE NUMBER 386-681-7872
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT <i>(Include scope, size, and cost)</i>		

Ritzel-Mason supported contractor efforts for the ground-up construction of a new building in the new Alton development. Ritzel-Mason was tasked to provide survey control, boundary survey, form-board survey and as-builts. The building foundation was staked and the footers were pinned for wall placement. The Project Manager and Crew Supervisor were responsible for quality control.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a. (1) FIRM NAME Ritzel-Mason, Inc.	(2) FIRM LOCATION <i>(City and State)</i> Hollywood, FL	(3) ROLE Surveying Services
b. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
c. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
d. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
e. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
f. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 9
21. TITLE AND LOCATION <i>(City and State)</i> Golf Park Broward County, Pompano Beach, FL	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES 6/2019	CONSTRUCTION <i>(If applicable)</i> N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER C. Square Development Company	b. POINT OF CONTACT NAME Federico Lacayo	c. POINT OF CONTACT TELEPHONE NUMBER 305-200-6740
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Ritzel-Mason supported contractor's construction efforts for park improvements. Project Manager coordinated with survey field crews to set on-site control, construction layout of proposed features and as-built surveying.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Ritzel-Mason, Inc.	(2) FIRM LOCATION <i>(City and State)</i> Hollywood, FL	(3) ROLE Surveying Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
e.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
f.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 10
21. TITLE AND LOCATION <i>(City and State)</i> Agave Ponce, Miami-Dade County, Coral Gables, FL	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES 7/2019 (EST.)	CONSTRUCTION <i>(If applicable)</i> N/A

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER Hill International, Inc.	b. POINT OF CONTACT NAME Javier Ross	c. POINT OF CONTACT TELEPHONE NUMBER 305-216-9380
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT <i>(Include scope, size, and cost)</i>		

Ritzel-Mason supported the engineer's design efforts to place mast arms at Ponce de Leon Boulevard and Malaga Avenue. Utility designates were performed and surveyed. A Specific Purpose Survey was provided to the client. Project Manager was responsible for coordination with the City Public Works department for permitting. Soft dig test holes are scheduled to be completed in July 2019.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a. (1) FIRM NAME Ritzel-Mason, Inc.	(2) FIRM LOCATION <i>(City and State)</i> Hollywood, FL	(3) ROLE Surveying Services
b. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
c. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
d. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
e. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
f. (1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

H. ADDITIONAL INFORMATION

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.



Who we are:

Ritzel-Mason is a Palm Beach County based professional services company offering a wide range of survey and mapping solutions. We bring to the table a collective 55 years in employee experience. We are laser focused on asking the right questions, understanding the results and taking action to getting it right the first time.

Our mission is to use our combined experience and allocate the appropriate resources to provide the highest level of customer service through technical knowledge, hands on field experience, communication, responsiveness and dependable delivery.

Each of our assignments are tailored to the ultimate needs of our clients which allows us to allocate our resources and experience in such a way that confidently assures that Ritzel-Mason is the right choice to complete the project on time and on budget.

We specialize in most survey and mapping services, including but not limited to: subsurface utility engineering (SUE), topographic, boundary, right-of-way mapping, historic baseline establishment, drone photography, construction layout, laser scanning and conventional and GPS surveying.

Specializing in Subsurface Utility Engineering (SUE):

Ritzel-Mason follows the industry recognized ASCE 38 – “Standard Guideline for the Collection and Depiction of Existing Underground Utility Data where quality levels are noted for all utilities investigated. We treat utility issues using engineering judgment, focusing attention to properly assess the potential utilities impacted on each project. We use the latest utility detection equipment including Ground Penetrating Radar (GPR), pipe and cable locators from Radio Detection and vacuum excavation equipment for soft dig test holes.

Directors:

Dennis Ritzel, PSM, EI has worked in the discipline of surveying and mapping since 1996. His extensive experience includes right-of-way mapping, control surveys, design surveys and sketch & legals. He is proficiency in the latest industry technology and software. Mr. Ritzel has been utilizing laser scanning equipment since 2005 and excels at all aspects of point cloud processing including full 3D modeling and corridor mapping. He has been involved with all aspects of subsurface utility engineering (SUE) since 2006 and is certified to plan and evaluate SUE processes. He is proficient in the use of unmanned aerial vehicles (UAV's) and is UAV certified to operate at a commercial level.

Clyde Mason II, PSM is an experienced Professional Surveyor and Mapper with more than a decade of experience, primarily in the South Florida area, providing right-of-way, control survey, subsurface utility engineering, and topographic design surveys. He is proficient in the latest industry technology and software. Mr. Mason is a skilled problem solver and has been involved with all aspects of subsurface utility engineering (SUE) and survey processes.

I. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

31. SIGNATURE

A handwritten signature in blue ink that reads "Dennis Ritzel".

32. DATE

08/02/2019

33. NAME AND TITLE

Dennis Ritzel, PSM - Director of Business Operations

ARCHITECT - ENGINEER QUALIFICATIONS

PART I - CONTRACT-SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION *(City and State)*

Surveying and Mapping Consulting Services to the CRA for Neighborhood Lighting & Streetscape Enhancement, Hollywood, Florida

2. PUBLIC NOTICE DATE

July 30, 2019

3. SOLICITATION OR PROJECT NUMBER

DCRA 19-026

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE

Vincent Yarina, PG, CEM, Senior Associate/Vice President

5. NAME OF FIRM

Langan Engineering & Environmental Services

6. TELEPHONE NUMBER

(954) 320-2100

7. FAX NUMBER

(954) 320-2101

8. E-MAIL ADDRESS

vyarina@langan.com

C. PROPOSED TEAM

(Complete this section for the prime contractor and all key subcontractors.)

	<i>(Check)</i>			9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
	PRIME	J-V PARTNER	SUBCON-TRACTOR			
a.			X	Langan Engineering & Environmental Services <input type="checkbox"/> CHECK IF BRANCH OFFICE	110 East Broward Blvd. Suite 1500 Fort Lauderdale, Florida 33301	Mobile LiDAR
b.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		
c.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		
d.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		
e.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		
f.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		

D. ORGANIZATIONAL CHART OF PROPOSED TEAM

(Attached)

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME Joseph Romano, PLS	13. ROLE IN THIS CONTRACT Land Surveyor	14. YEARS EXPERIENCE	
		a. TOTAL 37	b. WITH CURRENT FIRM 37
15. FIRM NAME AND LOCATION <i>(City and State)</i> Langan Engineering & Environmental Services, Parsippany, NJ			
16. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> A.S., Construction Technology, 1989		17. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> Professional Land Surveyor: FL, NY, NJ, CT, DC	
18. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i> Florida Survey and Mapping Society; New York State Association of Professional Land Surveyors; New Jersey Society of Professional Land Surveyors; Connecticut Association of Land Surveyors, Inc.; National Society of Professional Surveyors; American Congress on Surveying and Mapping			

19. RELEVANT PROJECTS

	(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION <i>(if applicable)</i>
a.	Miami Marine Stadium Miami, Florida	2016	N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm. Langan utilized our Unmanned Aerial System (UAS) to acquire color aerial photography to create planimetric and topographic mapping at a scale of 1" = 50', with 1' contour intervals. In order to produce mapping and surveying grade data products with the verifiable positional accuracy, 5 ground control targets were placed within the boundaries of the project area. Utilizing the 5 ground control points acquired for this project Langan performed an aerial triangulation process to generate interior and exterior photo parameters for the accurate horizontal and vertical placement of the aerial imagery within the project coordinate system. From the properly oriented imagery a Digital Surface Model (DSM) was generated and delivered as well as a 3D point cloud. A digital orthophoto mosaic with a 1" Ground Sample Distance (GSD) was also produced. The 3D point cloud then integrated with the Static LiDAR point cloud and imported into Revit for BIM modeling and also into Recap for mesh modeling and rendering of the site.		
b.	Faena Bazaar "Atlantic Beach Hotel" Miami Beach, Florida	2014	N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm. Langan has provided environmental consulting, geotechnical engineering, and laser scanning services for this mixed-use project. The Faena Bazaar, a renovation of the historic Atlantic Beach Hotel built in 1939 and designed by prominent Miami Beach architect Roy France, preserves and restores the existing lobby and facades while reprogramming the building for retail.		
c.	Ultimate I-4 Expansion Orlando, Florida	2016	N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm. Langan provided mobile mapping, video logging, field video capture, and geospatial data integration services in support of the major expansion of a 21-mile stretch of U.S. I-4, which includes the addition of four new express lanes, and reconstructed interchanges and bridges. Langan's scope consisted of the documentation of all existing conditions prior to the start of construction, including every exit and entrance ramp, overpass and underpass, and everything within the right-of-way and 100 feet beyond, which includes hundreds of houses. Langan delivered full project video documentation in the form of the Pegasus's imagery for all the traveled lane miles viewable by using the Leica Pegasus Viewer that runs as an add-on to Esri's ArcGIS Explorer. In addition to the video logging, Langan collected hundreds of high definition field videos of the suspect areas. Langan integrated these GPS referenced videos into the final ArcGIS Explorer deliverable for a full project workflow.		
d.	Pier 66 Hotel Fort Lauderdale, Florida	2017	N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm. Survey grade scan to BIM for existing conditions survey of historic hotel and roof top restaurant on the 17 th Street Causeway.		
e.	Port Authority of New York and New Jersey On-Call Surveying New York, New York	1996-Present	N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm. Survey Project Manager - On-Call boundary, topographic utility layout and other types of survey/scanning in support of PANYNJ projects.		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME Bryan A. Merritt, PSM, PLS	13. ROLE IN THIS CONTRACT SR Project Manager/GIS Manager	14. YEARS EXPERIENCE	
		a. TOTAL 36	b. WITH CURRENT FIRM <1
15. FIRM NAME AND LOCATION <i>(City and State)</i> Langan Engineering and Environmental Services, West Palm Beach, Florida			
16. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> AAS/Civil Engineering		17. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> NY/Professional Land Surveyor / FL/Professional Land Surveyor & Mapper / FAA/Remote Pilot (Part 107)	
18. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i> Bryan Merritt, has over 35 years of professional land surveying experience and has been managing projects for the Village of Royal Palm Beach since 2005. In fact, Mr. Merritt has managed more than 100 projects directly for the Village engineer Chris Marsh. He is actively involved in the Village of Royal Palm Beach community and is a volunteer member of the Village's Program for Public Information Committee that establishes practices to better the Village's flood insurance ratings. He is also involved in local organizations from his West Palm Beach office: Palm Beach County GIS (Expo Committee Member), Florida Surveying and Mapping Society (Palm Beach Chapter Scholarship Chair).			

19. RELEVANT PROJECTS

a.	(1) TITLE AND LOCATION <i>(City and State)</i> Village of Royal Palm Beach, Contract for General Surveying Services, Royal Palm Beach, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2003-2018	CONSTRUCTION (If Applicable) N/A
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm	
	Project Manager. Bryan has been in charge of this contract that covered a wide range of general surveying, including baseline stakeout, ground control surveying, boundary surveys, right-of-way surveys, topographic surveys to create digital terrain models, cross-section surveys, wetland location surveys, field stake-out of test boring, GPS surveys, mapping and verification surveys, control surveys, plat reviews, and construction surveys. All work performed was in accordance with applicable Minimum Technical standards and procedures. Over 100 work orders have been completed to date. These work orders have included: Engineering/Topographic Surveys; ROW/Boundary Surveys; Plat Reviews; and GIS services.		
b.	(1) TITLE AND LOCATION <i>(City and State)</i> Village of Royal Palm Beach, Contract for GIS Services Royal Palm Beach, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2013-2015	CONSTRUCTION (If Applicable) N/A
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm	
	Project/GIS Manager. Bryan was the manager of this contract for the provider of GIS Data Collection Services to the Village of Royal Palm Beach. The objective of these services is to work with the Village, contractors, and private developers to incorporate newly constructed or modified features into the Village's GIS schema. This enables Village staff to efficiently add this data to the Village's GIS database. As a part of its GIS program, the Village works to continually update and maintain accurate GIS data for critical infrastructure layers. These layers include, but are not limited to, property boundaries, impervious surfaces, buildings, roadways, stormwater features, water utilities and wastewater features.		
c.	(1) TITLE AND LOCATION <i>(City and State)</i> Village of Royal Palm Beach Canal Survey Royal Palm Beach, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2014	CONSTRUCTION (If Applicable) N/A
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm	
	Project Manager. Mr. Merritt was the project manager for this project and worked with Village engineer to develop a plan to survey over 14.5 miles of Village maintained canals to evaluate the need to clean and dredge the system. Erdman Anthony collected over 128 cross sections as well as 167 pipe outfalls during this survey. The cross sections included locations taken every 5' along the canal bottom and a measurement of the depth of muck was also obtained. Final deliverables included a Surveyor's Report and CADD drafted cross-sections for the engineers to design upon.		
d.	(1) TITLE AND LOCATION <i>(City and State)</i> Robiner Park Topographic Survey Royal Palm Beach, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2018	CONSTRUCTION (If Applicable) N/A
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm	
	Project Manager. The project was to for the development of new walkways/trails within the park. A detailed topographic survey was completed to analyze different cross slope conditions for ADA compliance.		
e.	(1) TITLE AND LOCATION <i>(City and State)</i> RV Park - Topographic Survey Royal Palm Beach, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2017	CONSTRUCTION (If Applicable) N/A
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm	
	Project Manager. Provide topographic survey for the engineering design of an RV storage facility under the FP&L lines along Lamstein Lane. A detailed survey was completed to provide landscape barrier design and access drive and site drainage. Benchmarks were set along the project corridor to fulfill State Technical Standards of Care.		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME Chris T. Holmes	13. ROLE IN THIS CONTRACT Mobile LiDAR and UAS Project Manager and Acquisition Specialist	14. YEARS EXPERIENCE	
		a. TOTAL 31	b. WITH CURRENT FIRM 4

15. FIRM NAME AND LOCATION *(City and State)*
Langan Engineering and Environmental Services, Inc.

16. EDUCATION *(DEGREE AND SPECIALIZATION)*
17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
Federal Aviation Administration – Remote Pilot # 3912949

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
Chris Holmes has over 31 years of remote sensing, photogrammetry, LiDAR processing, surveying and unmanned aerial system experience that includes projects for federal, state and local governments, municipalities and private projects, including residential, commercial and transportation efforts. Mr. Holmes has performed photogrammetric compilation, managed an aerial photography and Airborne LiDAR division as well as coordination of the integration of both Mobile LiDAR and Unmanned Aerial Systems into several company survey work flows. Computer expertise includes: Microstation, AutoCAD, ArcGIS, Leica Cyclone, Map Factory, Global Mapper, TopoDOT, QT Reader, AgiSoft, Pix4D, Drone Deploy.

19. RELEVANT PROJECTS

	(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION (If Applicable)
a.	Postras East Mobile LiDAR Orlando, Florida	Ongoing	N/A
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Aerial Data and Mobile LiDAR Acquisition Manager. Topographic survey of a 2,000-acre undeveloped residential property. Project included Airborne LiDAR acquisition and data processing, ground control survey as well as Mobile LiDAR and conventional surveys to form the basis of design for a combination of new residential housing and commercial development	<input checked="" type="checkbox"/> Check if project performed with current firm	
b.	Green Meadows Mobile LiDAR Southwest Ranches, Florida	2018	N/A
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Mobile LiDAR Acquisition Manager. Mobile laser scanning of approximately 5 miles of public road ROW for the purpose of providing topographic and planimetric 3D point cloud data to support a drainage study. Delivery included the controlled and registered point cloud data as well as corresponding georeferenced color imagery.	<input checked="" type="checkbox"/> Check if project performed with current firm	
c.	Lake Worth Mobile LiDAR Lake Worth, Florida	2019	N/A
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Mobile LiDAR Acquisition Manager. Mobile laser scanning of approximately 7 miles of public road ROW for the purpose of providing topographic and planimetric 3D point cloud data to support a water/wastewater design project. Delivery included the controlled and registered point cloud data as well as corresponding georeferenced color imagery.	<input checked="" type="checkbox"/> Check if project performed with current firm	
d.	Glades Road Landfill St. Lucie County, Florida	2018-2019	N/A
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Aerial Data Acquisition Manager. Topographic survey of a 450-acre County Landfill. Project included recovery and targeting of the existing ground control network and UAS image acquisition for the purpose of planimetric, topographic and orthophoto mapping as well as volumetric calculations for three active landfill cells within the project area.	<input checked="" type="checkbox"/> Check if project performed with current firm	
e.	Leslie Estates Mobile LiDAR Lake Lucerne, Florida	2019	N/A
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Mobile LiDAR Acquisition Manager. Mobile laser scanning of approximately 3 miles of public road ROW for the purpose of providing topographic and planimetric 3D point cloud data to support a water/wastewater design project. Delivery included the controlled and registered point cloud data as well as corresponding georeferenced color imagery.	<input checked="" type="checkbox"/> Check if project performed with current firm	

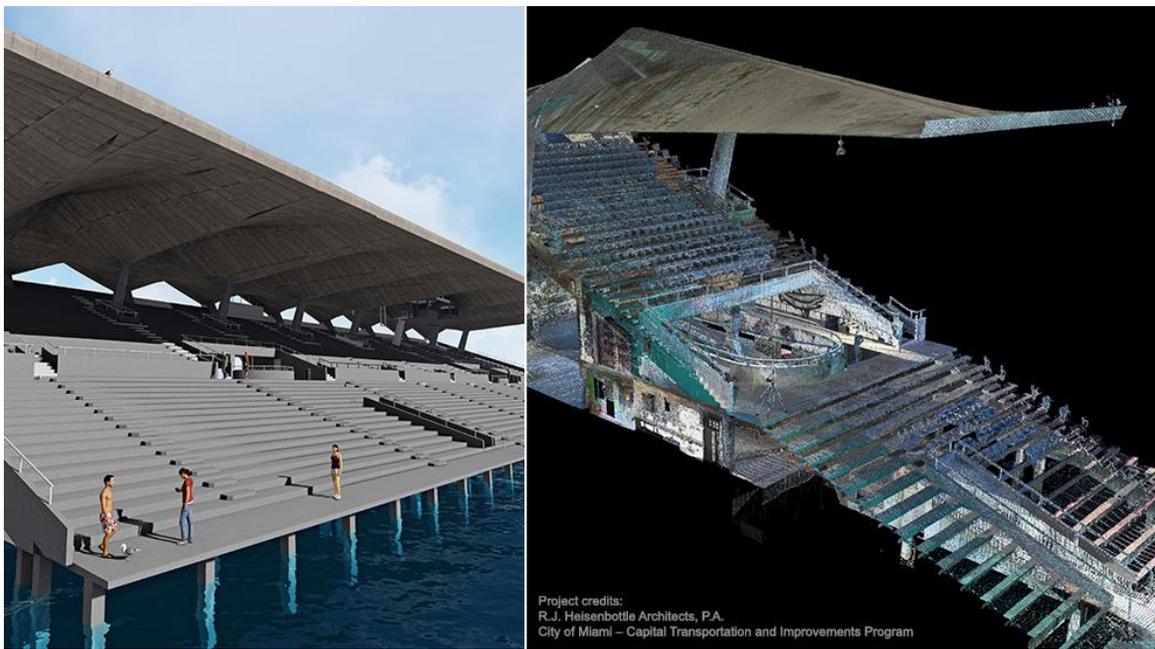
F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER <p style="text-align: center;">1</p>
21. TITLE AND LOCATION (CITY AND STATE) Miami Marine Stadium Miami, Florida		22. YEAR COMPLETED PROFESSIONAL SERVICES <p style="text-align: center;">2016</p> CONSTRUCTION (If applicable) <p style="text-align: center;">Not Applicable</p>

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER R.J. Heisenbottle Architects, P.A.	b. POINT OF CONTACT NAME Mr. Juan Alcala Director of Design	c. POINT OF CONTACT TELEPHONE NUMBER (305) 446-7799
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Langan utilized an Unmanned Aerial System (UAS) to acquire color aerial photography to create planimetric and topographic mapping at a scale of 1" = 50', with 1' contour intervals. In order to produce mapping and surveying grade data products with the verifiable positional accuracy, 5 ground control targets were placed within the boundaries of the project area. Utilizing the 5 ground control points acquired for this project, Langan performed an aerial triangulation process to generate interior and exterior photo parameters for the accurate horizontal and vertical placement of the aerial imagery within the project coordinate system. From the properly oriented imagery, a Digital Surface Model (DSM) was generated and delivered as well as a 3D point cloud. A digital orthophoto mosaic with a 1" Ground Sample Distance (GSD) was also produced. The 3D point cloud then integrated with the Static LiDAR point cloud and imported into Revit for BIM modeling and also into Recap for mesh modeling and rendering of the site.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Langan Environmental and Engineering, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 110 E. Broward Blvd., Suite 1500 Fort Lauderdale, Florida 33301	(3) Role Subconsultant – LiDAR Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role

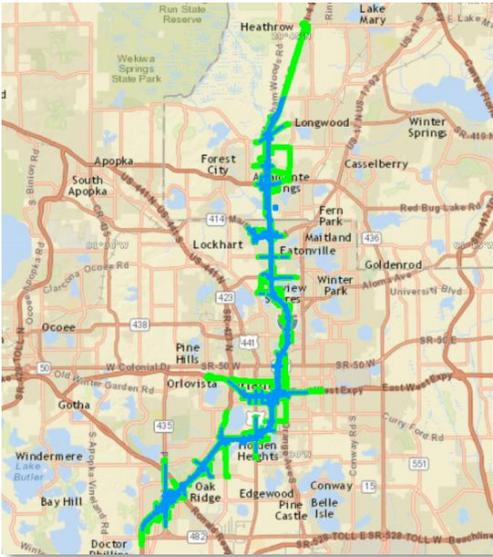
F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER <p style="text-align: center;">2</p>
21. TITLE AND LOCATION (CITY AND STATE) Ultimate I-4 Expansion Orlando, Florida	22. YEAR COMPLETED PROFESSIONAL SERVICES <p style="text-align: center;">2016</p>	CONSTRUCTION (If applicable) <p style="text-align: center;">2021 (Estimated)</p>

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER Skanska / Granite Lane Joint Venture (SGL)	b. POINT OF CONTACT NAME Mr. Johnny Gray	c. POINT OF CONTACT TELEPHONE NUMBER (407) 623-6300
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Langan provided mobile mapping, video logging, field video capture, and geospatial data integration services in support of the major expansion of a 21-mile stretch of U.S. I-4, which includes the addition of four new express lanes, and reconstructed interchanges and bridges.



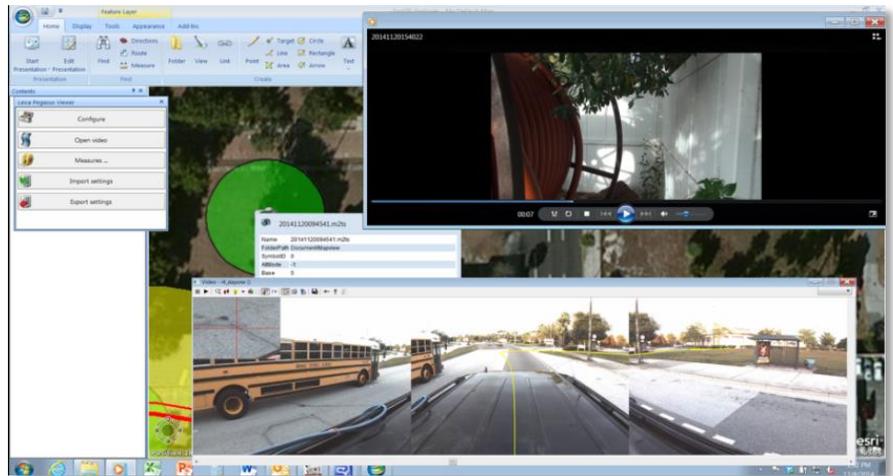
Langan's scope consisted of the documentation of all existing conditions prior to the start of construction, including every exit and entrance ramp, overpass and underpass, and everything within the right-of-way and 100 feet beyond, which includes hundreds of houses.

Langan delivered full project video documentation in the form of the Pegasus's imagery for all the traveled lane miles viewable by using the Leica Pegasus Viewer that runs as an add-on to Esri's ArcGIS Explorer. In addition to the video logging, Langan collected hundreds of high definition field videos of the suspect areas. Langan integrated these GPS referenced videos into the final ArcGIS Explorer deliverable for a full project workflow.

Langan also provided training to the SGL and FDOT project personnel.

SERVICES:

- Mobile Mapping
- Video Logging
- Field Video Capture
- Geospatial Data Integration



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Langan Environmental and Engineering, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 110 E. Broward Blvd., Suite 1500 Fort Lauderdale, Florida 33301	(3) Role Subconsultant – LiDAR Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 3
21. TITLE AND LOCATION (CITY AND STATE) Poitras East Orlando, Florida		22. YEAR COMPLETED PROFESSIONAL SERVICES Ongoing CONSTRUCTION (If applicable) Not Applicable

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER Tavistock Development Company	b. POINT OF CONTACT NAME Mr. Lance Jackson Director of Development	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (407) 313-8233
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

The Poitras East property is a 1,300-acre undeveloped tract of land located minutes from Orlando International Airport. At full build out, Poitras East will include 2,700 residential units (single-family lots and multifamily units), a neighborhood center and commercial outparcels with a combined total of 100,000 SF, a K-8 school, and a community park. Langan is providing survey, mass grading, and master stormwater design and permitting services.

The survey component of this project comprised the utilization of many technologies and multiple approvals. The overall area was surveyed using aerial LiDAR due to the density of the foliage. A very stringent approval process with FAA was required to complete the aerial mission due to the proximity to the Orlando airport. Langan used in-house mobile LiDAR system to collect more detailed survey information along Boggy Creek Road and Narcossee Road. Bathymetric surveys were also required in the many ponds/lakes on the property as well. These technologies as well as conventional methods combined to provide the final topographic survey of the property.

Utilizing this survey as the basis of design, Langan is providing platting and full civil engineering design services for the first phase of residential development (200 single-family lots) and commercial development (45,000 SF), which will consist of retail and restaurant uses.

It is anticipated that 6 more phases will be completed within the next 12 months to complete the project build out.

SERVICES:

- Site/Civil Engineering
- Surveying



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME Langan Environmental and Engineering, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 110 E. Broward Blvd., Suite 1500 Fort Lauderdale, Florida 33301	(3) Role Subconsultant – LiDAR Services
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role

G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

26. NAMES OF KEY PERSONNEL (From Section E, Block 12)	27. ROLE IN THIS CONTRACT (From Section E, Block 13)	28. EXAMPLE PROJECTS LISTED IN (Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)									
		1	2	3	4	5	6	7	8	9	10
Joseph E. Romano, P.L.S.	Principal Surveyor	X	X	X							
Bryan A. Merritt, P.M.S., P.L.S.	Sr. Project Manager / GIS	X	X	X							
Chris T. Holmes	Mobile LiDAR & UAS Project Mgr./Acquisition Specialist	X	X	X							

NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	Miami Marine Stadium, Miami, Florida	6	
2	Ultimate I-4 Expansion, Orlando, Florida	7	
3	Poitras East, Orlando, Florida	8	
4		9	
5		10	

H. ADDITIONAL INFORMATION

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.

Langan Engineering & Environmental Services provides surveying, site development engineering and environmental consulting for private developers, public agencies, property owners, and institutional clients around the world.

Founded in 1970, Langan employs nearly 1,100 professionals among offices in:

- West Palm Beach, FL
- Fort Lauderdale, FL
- Miami, FL
- Tampa, FL
- Orlando, FL
- Parsippany, NJ
- New York City, NY
- White Plains, NY
- Trenton, NJ
- Philadelphia, PA
- Bethlehem, PA
- Doylestown, PA
- Pittsburgh, PA
- New Haven, CT
- Arlington, VA
- San Francisco, CA
- Oakland, CA
- Sacramento, CA
- San Jose, CA
- Irvine, CA
- Cleveland, OH
- Houston, TX

Langan is listed among the Top Design Firms and Top Green Design Firms in *Engineering News Record (ENR)*.

Langan approaches surveying problems with a combination of knowledge, experience and innovation that we believe renders the most efficient solutions while maintaining cost effectiveness. Our staff of professionals and specialists combine their knowledge and experience to provide comprehensive services to our clients. They are supported by field personnel who possess an understanding of both the technical aspects of survey and the practical potentials of design/construction and land acquisition. We apply the same degree of professionalism and interest to both large and small scale project assignments.

The Langan Survey Group is a respected award-winning industry leader in the practice of land surveying. We are comprised of licensed professional land surveyors and associated highly skilled technicians utilizing the latest equipment and technology. Integrated with our other in-house services, Langan's Survey Group provides fast field response times and flexibility to meet client needs and maintain schedules on fast - track projects. Our interdisciplinary communication saves time and money, allowing survey staff to meet face to face with agencies, clients and other project team members to make timely and efficient decisions on project needs and scheduling.

The Langan Florida survey staff consists of three Professional Surveyors and 20 associated survey technicians, with experience throughout the eastern United States. They have experience in all phases of surveying from property boundary surveys, right-of-way surveys, topographic surveys, wetland delineation surveys, hydrographic surveys to first order control surveys, construction monitoring and layout, hazardous waste site surveying, GPS, 3-D Laser Scanning, Modeling, GIS along with tunnel surveys, roadway surveys, and pipeline route surveys.

The Langan Survey Group makes full use of the firm's state of the art CADD Center. Whether in the field or office, computers play an important role in the Survey Department's daily tasks. Langan's field crews utilize current high technology surveying equipment including electronic data collectors, Global Positioning System (GPS) receivers, robotic total stations, and 3-D laser scanners. Our commitment to the latest technology allows our field crews to be more productive and achieve greater survey accuracies. We are fully equipped with wireless field to office connectivity to accommodate on demand communication with our office staff.

Field data is electronically collected using hand held mini-computers and an innovative combination of traditional, GPS and scanning survey techniques. Using fully automated procedures, the data is downloaded into the firm's computer network, edited, adjusted, and analyzed using software that is project matched to allow for the greatest productivity possible. Our CADD Center/Survey Department maintains a high level of proficiency in several software packages to produce the firm's mapping. These include AutoCAD, AutoCAD, Civil 3D, Revit, Microstation, Intergraph, GDS, Terramodel, Carlson Arc/VIEW and others.

I. AUTHORIZED REPRESENTATIVE
The foregoing is a statement of facts

31. SIGNATURE



32. DATE

August 23, 2019

33. NAME AND TITLE

Vincent Yarina, PG, CEM, Senior Associate/Vice President

ARCHITECT-ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (if any)
DCRA 19-026

PART II – CONTRACT-SPECIFIC QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME Langan Engineering & Environmental Services			3. YEAR ESTABLISHED 1970	4. DUNS NUMBER 191411016
2b. STREET 110 East Broward Boulevard, Ste 1500			5. OWNERSHIP a. TYPE Corporation	
2c. CITY Ft. Lauderdale	2d. STATE FL	2e. ZIP CODE 33301		
6a. POINT OF CONTACT NAME AND TITLE Vincent Yarina, PG, CEM, Senior Associate/Vice President			b. SMALL BUSINESS STATUS N/A	
6b. TELEPHONE NUMBER 954.320.2100		6c. E-MAIL ADDRESS vyarina@langan.com		7. NAME OF FIRM (If block 2a is a branch office) Langan Engineering & Environmental Services
8a. FORMER FIRM NAME(S) (If any)			8b. YR. ESTABLISHED	

9. EMPLOYEES BY DISCIPLINE				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS		
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) FIRM	(2) BRANCH			
02	Administrative	204		A10	Asbestos Abatement	6
08	CADD Technician	12		C07	Coastal Engineering	5
11	Chemist	1		C15	Construction Management	
12	Civil Engineer	243	3	D02	Dams (Earth; Rock); Dikes; Levees	
19	Ecologist	16		E01	Ecological /Archeological Investigations	4
23	Environmental Engineer	177		E06	Embassies and Chanceries	6
24	Environmental Scientist	48		E09	Envir. Impact Studies, Assessm'ts	5
27	Foundation/Geotechnical Engineers	218	1	E12	Environmental Remediation	7
29	GIS Specialist	17		G04	GIS... and Data Collection	4
30	Geologist	64	2	L02	Land Surveying	8
34	Hydrologist	1		L03	Landscape Architecture	6
36	Industrial Hygienist	1		P06	Planning (Site, Installation, Project)	4
38	Land Surveyor	68		S05	Soils/Geologic Studies; Foundations	10
39	Landscape Architect	15		S11	Sustainable Design	4
47	Planner: Urban/Regional	4		T03	Traffic & Transportation Eng.	7
57	Structural Engineer	1		W02	Water Resources; Hydrology...	4
60	Transportation Engineer	26	2	Z01	Zoning; Land Use Studies	5
(OTHER)	Asbestos/Lead/Mold Specialists	8			Site/Civil Engineering	10
TOTAL		1124	8		Due Diligence	5

<p>11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS <i>(Insert revenue index number shown at right)</i></p> <table style="width: 100%;"> <tr><td>a. Federal Work</td><td style="text-align: center;">6</td></tr> <tr><td>b. Non-Federal Work</td><td style="text-align: center;">10</td></tr> <tr><td>c. Total Work</td><td style="text-align: center;">10</td></tr> </table>	a. Federal Work	6	b. Non-Federal Work	10	c. Total Work	10	<p>PROFESSIONAL SERVICES REVENUE INDEX NUMBER</p> <table style="width: 100%;"> <tr> <td>1. Less than \$100,000</td> <td>6. \$2 million to less than \$5 million</td> </tr> <tr> <td>2. \$100,000 to less than \$250,000</td> <td>7. \$5 million to less than \$10 million</td> </tr> <tr> <td>3. \$250,000 to less than \$500,000</td> <td>8. \$10 million to less than \$25 million</td> </tr> <tr> <td>4. \$500,000 to less than \$1 million</td> <td>9. \$25 million to less than \$50 million</td> </tr> <tr> <td>5. \$1 million to less than \$2 million</td> <td>10. \$50 million or greater</td> </tr> </table>	1. Less than \$100,000	6. \$2 million to less than \$5 million	2. \$100,000 to less than \$250,000	7. \$5 million to less than \$10 million	3. \$250,000 to less than \$500,000	8. \$10 million to less than \$25 million	4. \$500,000 to less than \$1 million	9. \$25 million to less than \$50 million	5. \$1 million to less than \$2 million	10. \$50 million or greater
a. Federal Work	6																
b. Non-Federal Work	10																
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4. \$500,000 to less than \$1 million	9. \$25 million to less than \$50 million																
5. \$1 million to less than \$2 million	10. \$50 million or greater																

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

<p>a. SIGNATURE </p>	<p>b. DATE August 23, 2019</p>
<p>c. NAME AND TITLE Vincent Yarina, PG, CEM, Senior Associate/Vice President</p>	

Section 5: Profile of Consultant

SECTION 5 - PROFILE OF CONSULTANT

a. State whether your organization is national, regional or local.

Craven Thompson & Associates, Inc. is a local organization

b. State the location of the office from which your work is to be performed.

Craven Thompson & Associates, Inc
3563 NW 53rd Street
Fort Lauderdale, Florida 33309

c. Describe the firm, including the size, range of activities, etc.

Size

Craven Thompson is an eighty (80) person corporation with offices in Fort Lauderdale and Delray Beach with nine (9) administrative personnel, two (2) AutoCAD technicians, twenty-nine (29) civil engineers (14 are registered), four (4) construction inspectors, two (2) construction managers, four (4) professional surveyors and mappers, four (4) surveying technicians, ten (10) field crews, and four (4) registered landscape architects, one (1) landscape designer, and one (1) urban planner.

Range of Activities

For over fifty-seven (57) years Craven Thompson has provided consulting services to governmental agencies throughout South Florida. We have provided some or all of the following services to numerous municipalities and governmental agencies including: civil engineering, surveying, G.I.S., landscape architectural and construction management services. These entities include:

- City of Greenacres
- City of Boca Raton
- City of West Palm Beach
- City of Lake Worth
- City of Dania Beach
- City of North Lauderdale
- City of Hallandale Beach
- City of Sunrise
- City of Plantation
- City of Lauderdale Lakes
- City of Fort Lauderdale
- City of Hollywood
- City of Pompano Beach
- City of Oakland Park
- City of Coconut Creek
- City of Coral Springs
- City of Deerfield Beach
- City of Lauderhill
- City of Miramar
- City of Margate CRA
- City of Miami Gardens
- City of Miami Springs
- City of North Miami
- City of North Miami Beach
- City of Miami Beach
- City of Aventura
- Town of Lauderdale-by-the-Sea
- Town of Davie
- Town of Lake Park
- Village of Palm Springs
- Broward County Highway Construction and Engineering Division
- Broward County Water and Wastewater Services
- School Board of Broward County
- Port Everglades
- Central Broward Water Control District
- Tindall Hammock Irrigation and Soil Conservation District
- Tri-County Commuter Rail Authority

SECTION 5 - PROFILE OF CONSULTANT

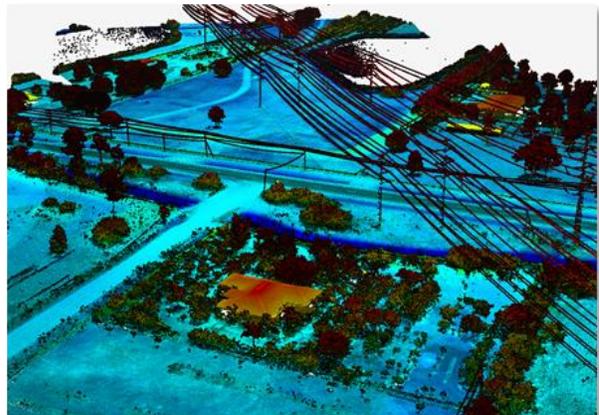
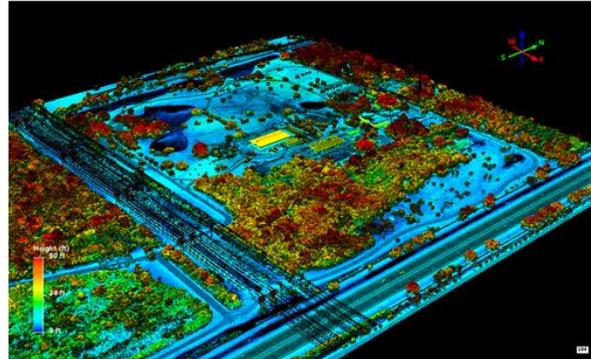
We have a successful track record in providing infrastructure survey, studies, design, permitting and construction related services to numerous municipalities and governmental agencies.

SURVEYING AND MAPPING

Providing Surveying services has been, and continues to be, an important portion of Craven Thompson's business since 1962. Through selection and training of personnel and a program to obtain the best equipment available, we have developed a skilled and technically equipped Surveying Department, capable of conducting almost any type of survey. We are qualified and certified by the State of Florida, Department of Natural Resources, for both horizontal and vertical control for Second Order accuracy. In addition to conventional boundary topographic and construction surveys, we have the experience to provide the latest in 3D Laser Scanning - High Definition Surveying, Geodetic Control, PLSS Retracement, Hydrographic, Cadastral, Photogrammetric Control, Right-of-Way and Construction Surveys.

Over the years, we have provided surveying services to over twenty-five municipalities and the following governmental and quasi-governmental agencies, including:

- Florida Department of Environmental Protection
- Florida East Coast Railway
- Florida Department of Transportation
- Florida GAS
- Port Everglades Authority
- Broward County Highway Construction and Engineering Division
- Broward County Water and Wastewater Services
- Waste Management Inc.
- Central Broward Water Control District
- Tri-County Commuter Rail Authority
- Seminole Tribe of Florida



SECTION 5 - PROFILE OF CONSULTANT

Some of our recent projects include:

- Lake Worth 2020 Master Plan Year 1 Improvements Survey
- Lake Worth 2" Watermain Replacement Program Phase 2 Survey
- Greenacres Original Section Survey
- Greenacres Hydrographic Survey
- Lake Park Canal Outfall Survey
- Pompano Beach North Riverside Right-of-Way Survey
- Hallandale Beach City-Wide Survey
- Plantation Watermain Rehabilitation Route Survey
- Pompano Beach Apollo Park Survey
- Port Everglades Sketch and Legal Descriptions
- Broward County Convention Center Boundary Survey
- Lauderdale Lakes Canal Cross-Sections
- Central Broward Water Control District Canal Cross-Sections
- Greenacres 10th Avenue North Intersection and Sanitary Sewer Survey
- City of Oakland Park NE 38th Avenue Complete Streets Survey
- City of North Miami Survey and Plat Review

In addition, Craven Thompson's GIS project experience includes:

- Broward County Regional Reuse Water Master Plan through Broward County Natural Resources Department
- Fire Hydrant Maintenance Program for the City of Sunrise
- City of North Miami Beach Water & Sewer Service Area G.I.S. system
- Commercial Stormwater Assessment GIS database for the City of Oakland Park

CIVIL ENGINEERING

At Craven Thompson we offer a wide range of civil engineering capabilities that we coordinate with our planners, surveyors, landscape architects and G.I.S. specialists, to provide a total coordinated project from site evaluation to a completion. We take pride in our ability as "problem solvers". This includes preparing studies, plans, calculations, and specifications, permitting, conducting the necessary public meetings and hearings, bidding projects, coordination with affected private property owners for the construction of the project, inspecting the construction, performing contract administration for the construction, and final certification of the project.

Neighborhood Infrastructure Improvements, Roadway Improvements, Stormwater / Drainage Improvements / Water / Reuse Water / Sanitary Improvements

Craven Thompson has designed numerous projects which have included water distribution and transmission systems, water services, fire hydrants, deep sewer systems, complex multiple pumping stations, storm drainage, and roadway/right-of-way restoration for neighborhood revitalization projects. Designs have included neighborhood improvements, roadways, sidewalks, ADA improvements, water distribution systems, pumping stations,

SECTION 5 - PROFILE OF CONSULTANT

sanitary lift stations, sanitary collection systems, force main, water quality BMPs, storm drainage, stormwater quality improvements, and stormwater management.

We have extensive experience, knowledge and insight in the public outreach, design, permitting, bidding and construction services of major infrastructure projects. Our experience includes hundreds of miles of pipe installation for public entities.

Water and Sanitary

Craven Thompson has completed numerous sections of the Utility Zone Analysis (UAZ) Program (including both water and sanitary sewer), City of Lake Worth Watermain Replacement, City of Hollywood Watermain Replacement, City of Plantation Watermain Replacement, the City of Oakland Park Watermain and Sanitary Replacement, and the Town of Davie Watermain and Sanitary Replacement. Craven Thompson has surveyed, designed, permitted, bid and managed the construction of thousands of acres/feet of watermain, sanitary, and lift station infrastructure.

The following table demonstrates our extensive experience in the potable water & wastewater design discipline:

Governmental Entity	Watermain (LF)	Sanitary (LF)	Forcemain (LF)	ROW Rest. (LF)	Water Services (EA)	Lift Stations (EA)
Broward County	690,000	676,000	73,000	700,000	5,000	45
Oakland Park	49,000	7,000	7,000	41,200	800	9
Hollywood	246,000	-	-	123,000	1,500	2
Lake Worth	20,000	-	-	14,300	510	-
Plantation	51,000	-	-	43,500	520	-
North Miami Beach	14,500	-	-	4,600	170	-
Davie	28,000	12,750	3,000	29,800	260	-
Greenacres	1,000	7,500	-	6,400	-	-
TOTAL	1,099,500	703,250	83,000	962,800	8,760	56

Craven Thompson has not only designed, permitted, bid and constructed over a million feet of pipe, but we have provided accurate estimating of construction costs which is a critical aspect in appropriating proper funding for these projects. Craven Thompson has estimated, on average, construction costs to within 6% of the actual Bid Cost.

Neighborhood Infrastructure Improvements

Craven Thompson has acted as the prime consultant on all of our neighborhood improvement projects. Many of our large neighborhood projects have included extensive lengths of roadway and right-of-way reconstruction.

- North County Neighborhood Improvement Project, NE Quadrant, Bid Package 9**
 The North County Neighborhood Improvement Project (NCNIP) Northeast Quadrant, Bid Package 9 included approximately 152 acres of land between Dixie Highway and Federal

SECTION 5 - PROFILE OF CONSULTANT

Highway, north of Sample Road. Designed improvements included 38,863 linear feet of roadway, 23,000 linear feet of sidewalk, and 14,000 linear feet of swale, 6,560 linear feet of storm sewer, 8,920 linear feet of exfiltration trench and two (2) stormwater control structures, a reuse water distribution system consisting of 22,000 linear feet of 4" diameter, and 1,800 linear feet of 12" diameter main, 57,000 linear feet of domestic water main and 40,000 linear feet of sanitary sewer collection and transmission systems. Craven Thompson provided topographic survey, design, permitting landscape architecture, and construction engineering and inspection services. The project was completed in 2012.

- **Neighborhood County Neighborhood Improvement Projects, NE Quadrant Bid, Package 10**

The North County Neighborhood Improvement Project (NCNIP) Northeast Quadrant, Bid Package 10 included approximately 213 acres of land. The project included 47,520 linear feet of roadway reconstruction, and 53,460 linear feet of sidewalk construction. Also, included were 15,283 linear feet of swale, 6,508 linear feet of storm sewer, and 8,074 linear feet of exfiltration trench. Several traffic calming devices were designed and constructed as part of this Project. A reuse water distribution system consisting of 32,900 linear feet was



constructed on Bid Package 10, as well as approximately 4,740 linear feet of water main, 21 water services, 27,755 linear feet of sanitary sewer collection and transmission lines, and 475 laterals. Craven Thompson provided topographic survey, design, permitting landscape architecture, and construction engineering and inspection services. The project was completed in 2013.

- **Neighborhood County Neighborhood Improvement Projects, NE Quadrant Bid, Package 11**

The North County Neighborhood Improvement Project (NCNIP) Northeast Quadrant, Bid Package 11 included approximately 357 acres of land between Dixie Highway and Federal Highway, north of Sample Road in Broward County. The project included over 50,688 linear feet of new roadway construction, sidewalks, driveway aprons, and sodded swales. In addition, the project included over 14,777 linear feet of new storm sewer, 12,993 linear feet of exfiltration trench, 64,000 linear feet of water main, 553 water services (many of these



services were moved from the rear of the lot to the front), 49,700 linear feet of reuse water main, 796 reclaimed water services, 43,805 linear feet of gravity sewer main, 750

SECTION 5 - PROFILE OF CONSULTANT



sewer laterals, lift station, and 1,630 linear feet of force main. Craven Thompson provided surveying, civil engineering, landscape architecture, and CEI services on the project. The project was completed in 2014.

- **Neighborhood County Neighborhood Improvement Projects, NW Quadrant**

The North County Neighborhood Improvement Project (NCNIP) NW Quadrant is a project which includes approximately 650 acres of land between Dixie Highway and I-95, North of Sample Road, Roadway improvements included 115,596 linear feet of roadway, along with 104,637 linear feet of sidewalk, and storm sewer included 17,006 linear feet of pipe, and there were 33,191 linear feet of exfiltration trench. Additionally, the sanitary sewer collection system consisted of 70,783 linear feet of gravity main, 14,253 linear feet of force main, and four (4) lift stations. The water distribution system additions included 86,112 linear feet of watermain and 1,590 water services Craven Thompson provided topographic survey, design, permitting landscape architecture, and construction engineering and inspection services. The project was completed in 2012.

- **South County Neighborhood Improvement Project**

The South County Neighborhood Improvement Project (SCNIP) includes approximately 1,400 acres of land between State Road 7 and I-95, south of Pembroke Road. The project included the design, permitting, bidding and construction consisting of 53 miles of roadway, 181,000 linear feet of storm sewer (including exfiltration trench), 140,618 linear feet of water main, 236,226 linear feet of gravity sanitary sewer, and 80 miles of sidewalk. This project also included abandoning in-place and grouting over 50,000 linear feet of existing water main. Craven Thompson provided topographic survey, design, permitting landscape architecture, and construction engineering and inspection services on each of these projects. The project was completed 2007.

- **Miami Gardens Livable Neighborhoods Improvement Project**

The Livable Neighborhoods Improvement Project includes approximately 222 total acres of land subdivided among four separate sites; namely *Garden Circle*, *Kings Garden I & II*, *Kings Garden III* and *Vista Verde*. The project includes: 34,200 linear feet of roadway, 7,840 linear feet of sidewalk, 19,000 linear feet of storm sewer, 151 drainage structures, the regrading of 22,500 linear feet of swales, and the addition of 112 street lights, along with street trees and landscape/hardscape. The project began in 2009 and is continuing at the present. Four phases are complete.

- **Garden Acres Neighborhood Improvement Project**

Garden Acres is a single-family residential neighborhood with an area of approximately 24 acres. The new drainage system consists of 4" deep roadway swales, drainage pipes and structures, exfiltration trenches and two controlled discharge points into an existing drainage system located within the NE 6th Avenue right-of-way. The roadway swales help with the storage and convey the runoff from the roadway and the house lots. The swales and exfiltration trenches handle the water quality volume generated by the roadway right-of-way area. Craven Thompson analyzed the system using ICPR software. Craven Thompson provided design, permitting and CEI services for the project. The roadway restoration consisted of 4,985 linear feet of roadway. The drainage system consisted of

SECTION 5 - PROFILE OF CONSULTANT

2,136 linear feet of storm sewer, 4,171 linear feet and of exfiltration trench. The project also included major roadway, water and sanitary sewer improvements. The water improvements consisted of 5,591 linear feet of 6" diameter main, and 962 linear feet of 8" diameter main. The sanitary improvements consisted of 7,045 linear feet of 8" diameter sewer, 218 linear feet of 4" diameter forcemain, and 1,044 linear feet of 6" diameter forcemain. Improvements included two lift stations. The project was completed in 2014.

Street/Roadway

Craven Thompson is working on or has recently completed the design and permitting of a significant number of roadway projects including:

- 6th Avenue South Roadway and Streetscape Improvements, Lake Worth
- Floranada Avenue Traffic Calming Improvements, Oakland Park
- Davie CRA Parking Areas
- NE 5th Avenue Streetscape, Oakland Park
- NE 34th Court Complete Streets Project, Oakland Park
- NW 38th Street Complete Streets Project, Oakland Park
- Miramar Historic Area Complete Streets – Phase II, Miramar
- NW 21st Avenue, Broward County
- SW 41st Place, Davie
- Roadway improvements involving: North M Street, North K Street, North F Street, North J Street, 11th Avenue North, and 15th Avenue North, Lake Worth

Additionally, we have completed the design of intersection traffic calming improvements to the following intersections in 2015 for the City of North Miami:

- NW 123rd Street/NW Miami Court
- NW 123rd Street/NW 1st Court
- NW 139th Terrace/NW 5th Court

These roadways included utilities such as sanitary and water, and drainage improvements. In addition, we surveyed, designed, permitted and provided CEI services for hundreds of miles of reconstructed roadway in our Neighborhood Improvement Projects.

Stormwater/Storm Sewer/Drainage

Craven Thompson has prepared master plans, conceptual permits, and studies. We have designed, permitted, bid and managed the construction of thousands of acres of stormwater infrastructure improvements. Craven Thompson understands the importance of flood



SECTION 5 - PROFILE OF CONSULTANT

protection measures, as standing water promotes unhealthy conditions as well as inhibits essential services from accessing the area.

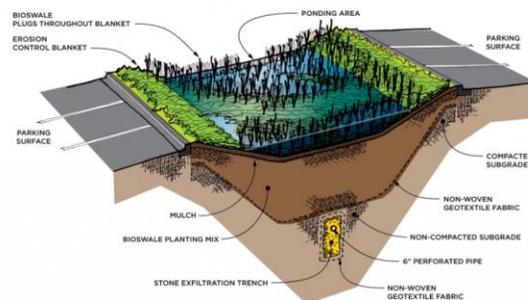


Craven Thompson has prepared comprehensive stormwater management plans for the Cities of Aventura, Hallandale Beach, Sunrise, Miami Gardens, Greenacres, the Town of Davie, and the Study Area #1 modification for Pompano Beach. In addition, we are the drainage engineers for Tindall Hammock Irrigation and Soil Conservation District (THISCD), and the Central Broward Water Control District (CBWCD) providing planning, capital improvements costs, design and construction administration services which resolved flooding and environmental concerns for the Cities. We have

performed major and minor stormwater basin studies and have implemented recommendations of those studies through design, permitting, & CEI of basin-wide improvements. Our stormwater master planning projects include computer modeling using Streamline Technologies ICPR Software as well as PCSWMM, the commercial version of US EPA SWMM5 Software. Craven Thompson has used the ICPR for the past twenty (20) years, and utilizes the latest update, V4.

We have designed and permitted over 400,000 linear feet of storm sewer and exfiltration trench. These designs have included sustainable practices such as the design of bioswales, exfiltration trench, tidal backflow devices, STORMCEPTORS, and wetland/retention preserve areas.

Craven Thompson has recently created the Stormwater Master Plan for the City of Hallandale Beach (2,816 Acres), the Western C-11 Basin Study for the Central Broward Water Control District (CBWCD) (15,952 acres), and for a major portion of the City of Greenacres known as Original Section (250 Acres). These projects included development of scheduled improvements to be implemented over a number of fiscal years to mitigate flooding conditions. We are currently working as the Prime with our sub-consultant, Hazen and Sawyer, on the Comprehensive Stormwater Master Plan for Aventura; and we are a sub-consultant to Hazen and Sawyer (the Prime) on the City of Fort Lauderdale Durrs & River Oaks Neighborhood Storm Water Improvement Implementation Project, and also are in the process of completing the East Basin Study (14,938 acres) for the CBWCD.



SECTION 5 - PROFILE OF CONSULTANT



LANDSCAPE ARCHITECTURE SERVICES

The Landscape Architecture Department at Craven Thompson was created in 1985 when its first Registered Landscape Architect joined the team. The Landscape Architecture Department was created in response to increased public and private concern for natural systems, environmental quality and community appearance. Craven Thompson has been actively engaged in Landscape Architecture ever since, resulting in hundreds of impressive landscape architectural projects in South Florida. Our Landscape Architects are readily available to provide services to conduct site planning for the initial conceptual planning stages of a project, as well as the landscape, hardscape, site amenity and irrigation plans.

Craven Thompson has designed many projects within the tri-county area, including complete streets, streetscape, parks, median beautification, traffic calming, and irrigation design. Aesthetic features, such as street lights, trees, berming, shrubs and other landscaping can contribute to the unique character of a street and assist in mitigating resident concerns with regards to traffic, noise, and security concerns.



Within the past four (4) years, Craven Thompson has completed two complete streets projects in Oakland Park (NE 34th Court & NE 38th Street) and are currently designing the Miramar Historical Area Complete Streets Project – Phase II. Recently, we also developed the Bicycle/Pedestrian Greenways & Trails Master Plan for the City of Sunrise. Craven Thompson has also finished a number of streetscape and traffic calming projects including: NE 5th Avenue Streetscape & Reconstruction; 6th Avenue South Streetscape; North Miami Roadway Intersection Traffic Calming (3 intersections); the Floranda Road Traffic Calming Project; and we are nearing completion of the NE 14th Avenue Streetscape Project.

Craven Thompson's median beautification projects include: Oakland Park Boulevard Median Beautification; Powerline Road Median Enhancements; and we are working on the Miramar Parkway & Miramar Boulevard Median Enhancements. Our experience also includes the Miami Springs Citywide ADA Ramp Improvements, and the Hallandale Beach CDBG Sidewalk Improvements Project. Our experience includes many additional roadway and landscape architectural projects over the past four (4) years.

Craven Thompson designed approximately seventy (70) miles of Greenways in Broward County. These included the C-14 Canal/Cypress Creek Greenway, New River/SR 84 Greenway, Flamingo Road Trail, Dixie Highway/FEC Trail and Griffin/Orange Drive Greenway. Many of our other projects include master plans, design, permitting and construction services for streetscapes, median landscaping and hardscape, right-of-way enhancements, active and passive parks, recreational amenities for upscale residential projects, landscape and hardscape for libraries, community centers, fire stations, city halls, and urban redevelopment throughout South Florida.

SECTION 5 - PROFILE OF CONSULTANT

Craven Thompson's active park design, permitting, and construction experience involves preparing design documents that include sports fields, path systems, exercise trails, vehicular circulation, stormwater detention, play areas, visitor facilities and interpretive signage. Our passive park projects incorporate elements, including a number of nature trails, picnic areas, and gathering spaces that take advantage of existing natural features. Passive parks can also act as social spaces for people to interact. The maintaining of natural green space is not only environmentally important, but moreover, is much less costly from a maintenance perspective. Recently completed or current park projects include: Bluesten Park, Sawgrass Sanctuary Park, Pine Island Road & NW 50th Street Athletic Complex, Oak Hammock Park, Oscar Wind Park, Flamingo Park, the Urban Art Park, Jaco Pastorius Park, and Waterways Park.

Our landscape architects create master plans, designs for public facilities such as libraries, community centers, city halls and other municipal facilities that promote the building architecture and emphasize the character of the surrounding neighborhood. We consider that a building is not an invasion of the landscape, but a vital extension of it. Where a building rests on the land, and how it rests on the land, sets the context for its evolving construction, development, and use. We have designed a number of right-of-way landscaping and traffic calming projects in the South Florida area. Aesthetic features, such as street lights, trees, berming, shrubs and other landscaping, can contribute to the unique character of a street and assist in mitigating resident concerns with regards to traffic, noise, and security concerns.

CONSTRUCTION ENGINEERING AND INSPECTION

Craven Thompson has extensive experience with Construction Administration Services such as Resident Project Representative Services, and Construction Inspection Services, and various other services during construction of improvements. Our services include inspections, progress meetings, reports, pay request processing, change order negotiation and processing, and all other aspects involved in providing Resident Project Representative Services to our Clients. Craven Thompson has provided Construction Administration services for over 6,000 acres of infrastructure replacement / rehabilitation for the past twenty-five (25) years. Craven Thompson's vast wealth of experience in Construction Administration for Neighborhood Redevelopment Improvement Projects in both suburban and urban settings is unrivaled by any firm in South Florida. Our Construction Management Department has provided these services to Private and Public clients with great success in the past and moving into the future.

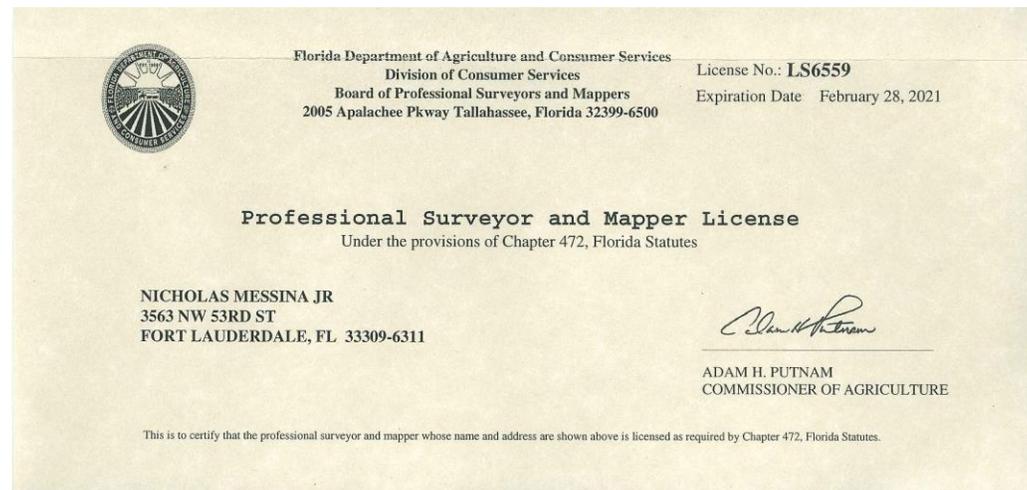
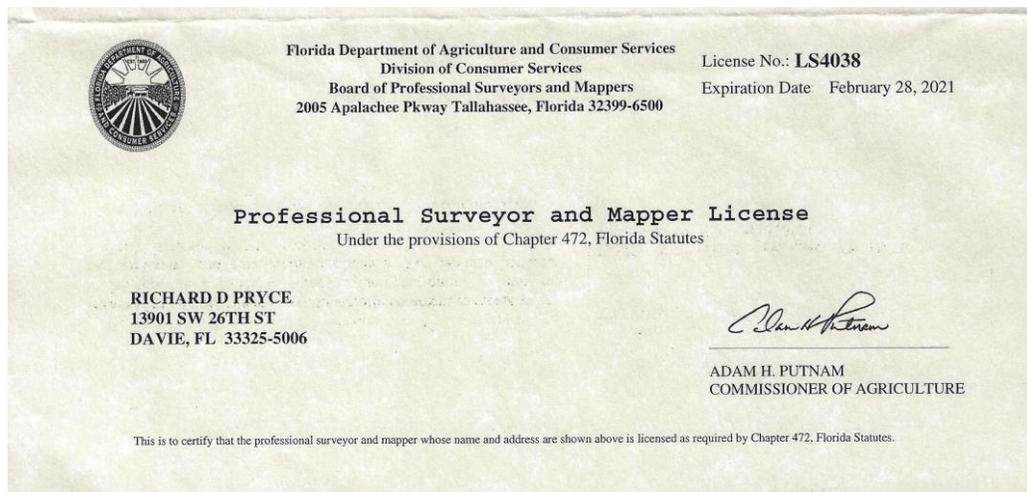
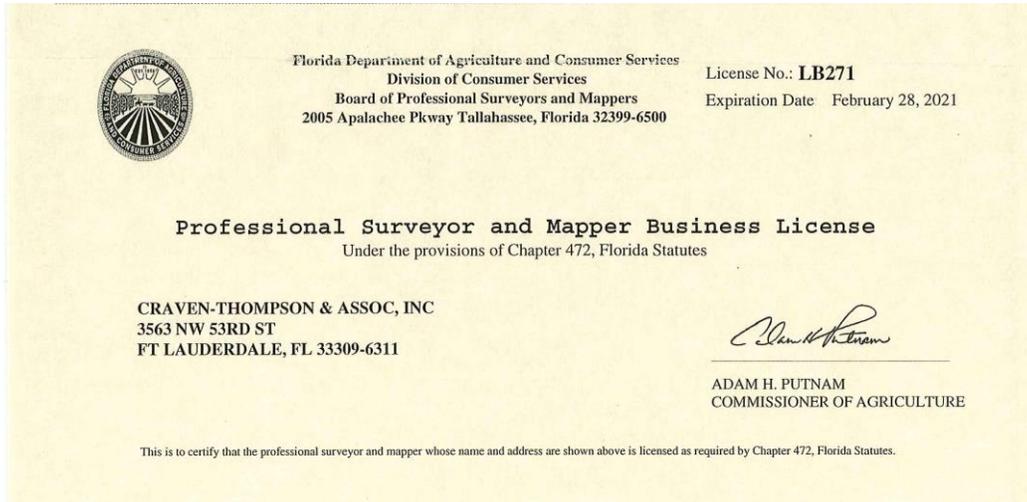


SECTION 5 - PROFILE OF CONSULTANT

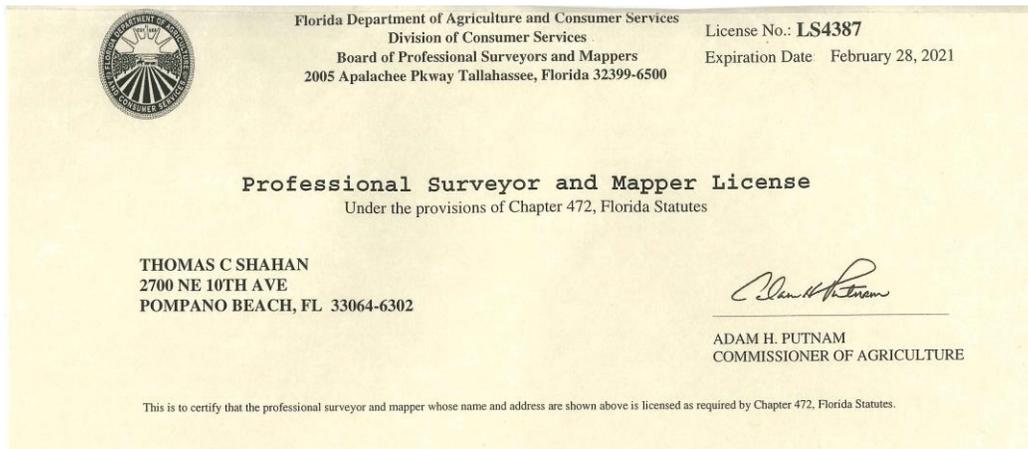
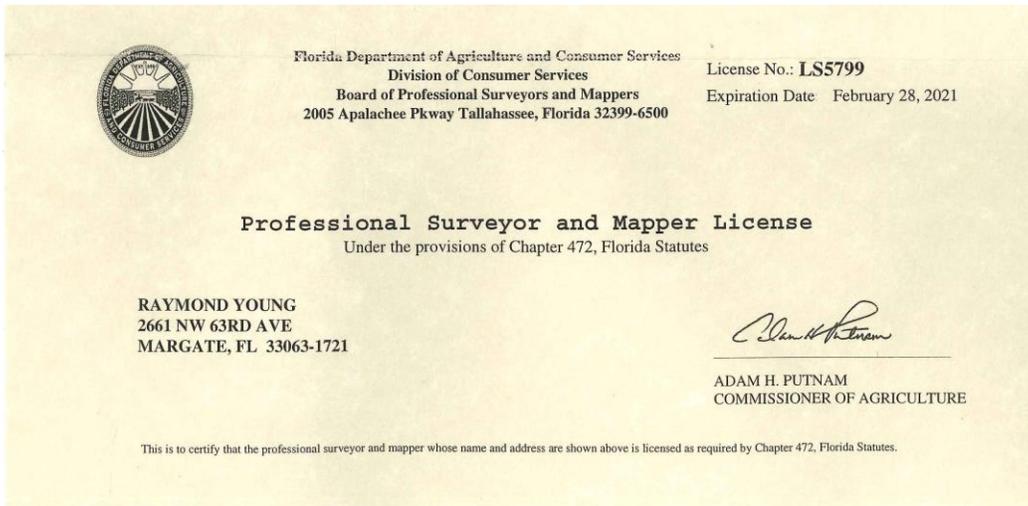


PROFESSIONAL LICENSES / CORPORATE CHARTERS / INSURANCE

CRAVEN THOMPSON & ASSOCIATES



SECTION 5 - PROFILE OF CONSULTANT



State of Florida Department of State

I certify from the records of this office that CRAVEN, THOMPSON & ASSOCIATES, INC. is a corporation organized under the laws of the State of Florida, filed on January 1, 1962.

The document number of this corporation is 254407.

I further certify that said corporation has paid all fees due this office through December 31, 2019, that its most recent annual report/uniform business report was filed on January 18, 2019, and that its status is active.

I further certify that said corporation has not filed Articles of Dissolution.

*Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this
the Eighteenth day of January,
2019*



A. J. S.
Secretary of State

Tracking Number: 1932292654CC

To authenticate this certificate, visit the following site, enter this number, and then follow the instructions displayed.

<https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication>

SECTION 5 - PROFILE OF CONSULTANT



LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, INC.

 Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500

License No.: **LB8172**
Expiration Date February 28, 2021

Professional Surveyor and Mapper Business License
Under the provisions of Chapter 472, Florida Statutes

LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC.
300 KIMBALL DR STE 4
PARSIPPANY, NJ 07054-2184

Nicole Fried

NICOLE "NIKKI" FRIED
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.

 Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500

License No.: **LS7085**
Expiration Date February 28, 2021

Professional Surveyor and Mapper License
Under the provisions of Chapter 472, Florida Statutes

JOSEPH E ROMANO
16 KNOLL TER
WEST CALDWELL, NJ 07006-7306

Nicole Fried

NICOLE "NIKKI" FRIED
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.

 Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500

License No.: **LS6558**
Expiration Date February 28, 2021

Professional Surveyor and Mapper License
Under the provisions of Chapter 472, Florida Statutes

BRYAN ALAN MERRITT
134 KINGS WAY
ROYAL PALM BEACH, FL 33411-1512

Nicole Fried

NICOLE "NIKKI" FRIED
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.



State of Florida Department of State

I certify from the records of this office that LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC. is a New Jersey corporation authorized to transact business in the State of Florida, qualified on March 16, 1993.

The document number of this corporation is F93000001369.

I further certify that said corporation has paid all fees due this office through December 31, 2019, that its most recent annual report/uniform business report was filed on January 4, 2019, and that its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

*Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this
the Fourth day of January, 2019*



Ken Detjmer
Secretary of State

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SECTION 5 - PROFILE OF CONSULTANT



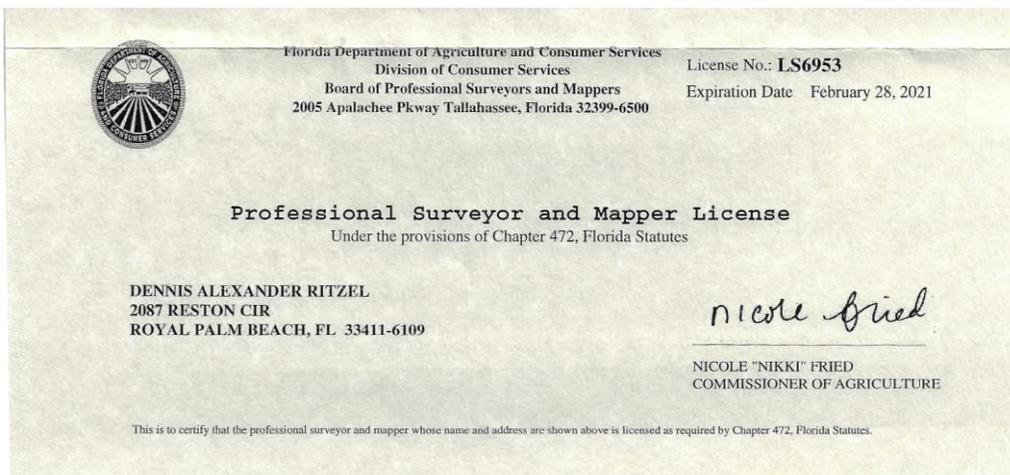
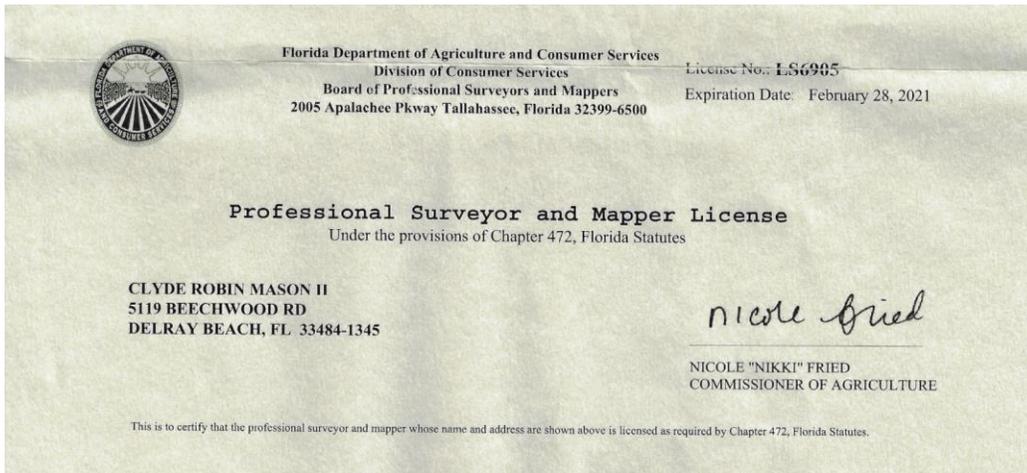
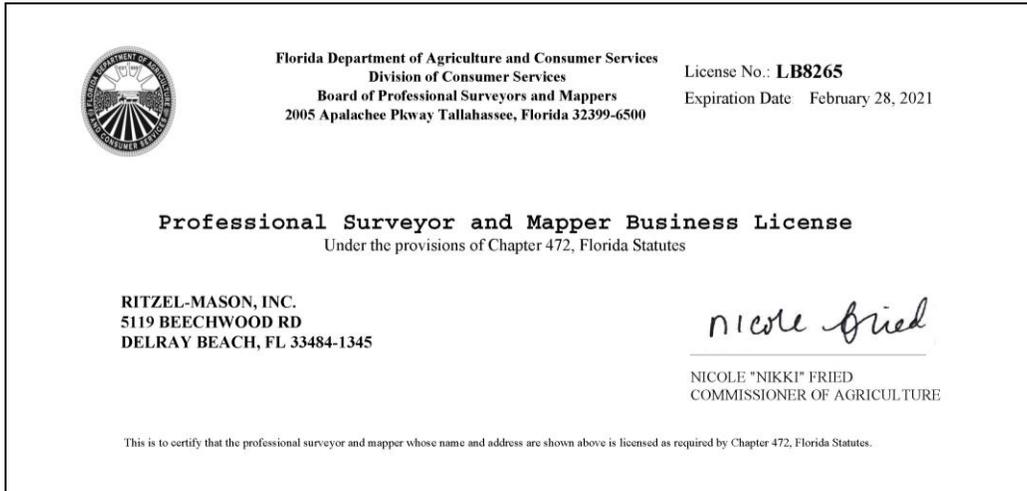
Client#: 25364	LANGENGI	DATE (MM/DD/YYYY) 3/19/2019													
ACORD™ CERTIFICATE OF LIABILITY INSURANCE															
<p>THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.</p> <p>IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer any rights to the certificate holder in lieu of such endorsement(s).</p>															
PRODUCER Greyling Ins. Brokerage/EPIC 3780 Mansell Road, Suite 370 Alpharetta, GA 30022	CONTACT NAME: Jerry Noyola PHONE (A/C, No, Ext): 770-552-4225 FAX (A/C, No): 866-550-4082 E-MAIL ADDRESS: jerry.noyola@greyling.com														
INSURED Langan Engineering & Environmental Services, Inc. 300 Kimball Drive Parsippany, NJ 07054	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:80%;">INSURER(S) AFFORDING COVERAGE</th> <th style="width:20%;">NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A : Valley Forge Insurance Co</td> <td>20508</td> </tr> <tr> <td>INSURER B : The Continental Insurance Company</td> <td>35289</td> </tr> <tr> <td>INSURER C : American Casualty Company of Reading, PA</td> <td>20427</td> </tr> <tr> <td>INSURER D : Evanston Insurance Company</td> <td>35378</td> </tr> <tr> <td>INSURER E :</td> <td></td> </tr> <tr> <td>INSURER F :</td> <td></td> </tr> </tbody> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A : Valley Forge Insurance Co	20508	INSURER B : The Continental Insurance Company	35289	INSURER C : American Casualty Company of Reading, PA	20427	INSURER D : Evanston Insurance Company	35378	INSURER E :		INSURER F :	
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<p>THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.</p>															
INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS									
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC OTHER:		6016359887	04/01/2019	04/01/2020	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$500,000 MED EXP (Any one person) \$15,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000 \$									
B	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY		6016359856	04/01/2019	04/01/2020	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$									
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$10,000		6045964169	04/01/2019	04/01/2020	EACH OCCURRENCE \$5,000,000 AGGREGATE \$5,000,000 \$									
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY		6016359842 (AOS)	04/01/2019	04/01/2020	X PER STATUTE OTH-ER									
C	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NJ)	Y/N	6016359873 (CA)	04/01/2019	04/01/2020	E.L. EACH ACCIDENT \$1,000,000									
A	If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	6057485432 (NJ)	04/01/2019	04/01/2020	E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000									
D	Professional Liab incl. Poll. Liab.		MKLV7PL0003583	04/01/2019	04/01/2020	Per Claim \$1,000,000 Aggregate \$1,000,000									
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)															
CERTIFICATE HOLDER				CANCELLATION											
Sample Certificate				SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.											
				AUTHORIZED REPRESENTATIVE 											
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SECTION 5 - PROFILE OF CONSULTANT



RITZEL-MASON, INC.



SECTION 5 - PROFILE OF CONSULTANT



2019 FLORIDA PROFIT CORPORATION ANNUAL REPORT

DOCUMENT# P18000062406

Entity Name: RITZEL-MASON, INC.

Current Principal Place of Business:

5119 BEECHWOOD RD
DELRAY BEACH, FL 33484

Current Mailing Address:

5119 BEECHWOOD RD
DELRAY BEACH, FL 33484

FEI Number: 83-1269368

Certificate of Status Desired: No

Name and Address of Current Registered Agent:

MASON, CLYDE R II
5119 BEECHWOOD RD
DELRAY BEACH, FL 33484 US

The above named entity submits this statement for the purpose of changing its registered office or registered agent, or both, in the State of Florida.

SIGNATURE: _____

Electronic Signature of Registered Agent

_____ Date

Officer/Director Detail :

Title	P	Title	V
Name	MASON, CLYDE R II	Name	RITZEL, DENNIS A
Address	5119 BEECHWOOD RD	Address	2087 RESTON CIR
City-State-Zip:	DELRAY BEACH FL 33484	City-State-Zip:	ROYAL PALM BEACH FL 33411

I hereby certify that the information indicated on this report or supplemental report is true and accurate and that my electronic signature shall have the same legal effect as if made under oath; that I am an officer or director of the corporation or the receiver or trustee empowered to execute this report as required by Chapter 607, Florida Statutes, and that my name appears above, or on an attachment with all other like empowered.

SIGNATURE: DENNIS RITZEL

VICE PRESIDENT

01/31/2019

_____ Electronic Signature of Signing Officer/Director Detail

_____ Date



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- d. Provide a list and description of similar municipal and other engagements satisfactorily performed within the past four (4) years. For each engagement listed, include the name and telephone number of a representative for whom the engagement was undertaken who can verify satisfactory performance.

The twenty-six (26) projects in Section 4 – Standard Form 330 are similar projects within the past four (4) years. An example of some additional Projects includes:

PROJECT	YEAR COMPLETE	CONTACT/PHONE NUMBER
Topographic/Hydrographic Surveys for Boat Ramps Improvements, Seven (7) separate sites, Sunrise, Florida	2018	Mr. Tery Glunt, P.E. (954) 481-2812
Hallandale Beach City-Wide Survey (Aerial LiDAR) Hallandale Beach, Florida	2015	Ms. Beatriz Alvarez, E.I., LEED AP (954) 457-1333
Southwest Ranches Town Hall Survey Southwest Ranches, Florida.	2015	Ms. Emily McCord-Aceti (954) 434-0008
Lift Station W14 As-Built Survey Hollywood, Florida	2017	Mr. Clece Aurelus, P.E. (954) 921-3930
As-Built Survey of Security Gate Southwest Ranches, Florida	2016	Ms. Emily McCord-Aceti (954) 434-0008
Boundary Survey of FPL Parcel Southwest Ranches, Florida	2015	Ms. Emily McCord-Aceti (954) 434-0008
FLL Terminal 4 Gate Replacement, Interior Utility As-Built, Hollywood/Fort Lauderdale International Airport, Florida	2015	Mr. David Taylor (954) 736-3000
Survey Plat Review Services North Miami, Florida	2002 - Present	Ms. Tanya Wilson-Sejour, AICP (305) 895-9825

- e. Provide information on any litigation (settled or pending) the firm has been involved in within the last five (5) years.

- **Project Name: The Edge Condominium, West Palm Beach, Florida**
Case No.: Palm Beach County Case No. 502013CA007785XXXXMBAJ

Date: Case filed June 4, 2013 / Dismissed February 2015

Case No.: Palm Beach County Case No. 502016CA006688XXXXMB

Date: Case re-opened March 2017 – Case Settled September 2017

Monetary Amount Involved: \$15,000.00

Name of Case: The Edge No. One Condominium Association, Inc. vs. The Edge Investors, L.P.; Coastal Construction of South Florida, Inc.; Trans Coastal Construction Company; Steven Feller, P.E., P.L.; Cohen, Freedman, Encinosa & Associates-Architects, P.A.; CHM Consulting Engineers, Inc.; Craven Thompson & Associates, Inc.

Explanation: Plaintiff claimed unspecified problems with the building. It was unclear what civil engineering issues were relevant. The contractor, architect and the entire design team were defendants.

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- **Project Name:** North County Neighborhood Improvement Project, NE Quadrant, Broward County, Florida

Case No.: Broward County Case No. 14-002381 (21)

Date: Case filed June 9, 2015 / Settled December 9, 2016

Monetary Amount Involved: \$30,000

Name of Case: - Randy Ezekowitz vs. Giannetti Contracting Corporation, E&N Construction, Inc., Asphalt Milling Services, Inc., Bon's Barricades, Inc., Florida Department of Transportation, Craven Thompson & Associates, Inc. and Transfield Services Infrastructure, Inc.

Explanation: Plaintiff claimed that CTA failed to warn motorists of the difference in elevation of pavement. Plaintiff did not specify a specific claim related to Civil Engineering.

- f. Describe the experience in conducting similar projects for each of the staff assigned to the engagement. Describe the relevant educational background of each individual.

See Resumes in Section 4 – Standard Form 330.

- g. Describe the organization of the proposed project team, stressing level of experience and qualification, detailing the level of involvement, field of expertise and estimated hours for each member of the team.

Key Personnel	Capacity / Education	Level of Involvement	Expertise	Company / Location
Richard Pryce, P.S.M. Prof. License No. 4038	Project Manager/ Associates of Science in Criminal Justice, BCC	Dedicate up to 10 hours / week	Management, Topo & Boundary Surveys, Right-of-Way Surveys, LiDAR Surveys, Sketch & Legal Descriptions, G.I.S.	Craven Thompson & Associates, Fort Lauderdale
Nicholas Messina, Jr., P.S.M. Prof. License No. 5799	Professional Surveyor/Associates of Science - Surveying and Mapping Univ. of Alaska	Dedicate up to 16 hours / week	Boundary & Topography, Hydrographic, As-built Surveys, Right-of-Way Surveys, Digital Terrain Modeling, G.I.S.	Craven Thompson & Associates, Fort Lauderdale
Thomas Shahan, P.S.M. Prof. License No. 4387	Professional Surveyor/Two- year Vocational Drafting Degree	Dedicate up to 16 hours / week	Topo & Boundary Surveys Sketch & Legal Descriptions, Specific Purpose, Construction Layout, As-built Surveys	Craven Thompson & Associates, Fort Lauderdale
Raymond Young, P.S.M. Prof. License No. 5799	Professional Surveyor / N/A	Dedicate up to 10 hours / week	Hydrographic, As-built Surveys, Right-of-Way Surveys Sketch & Legal Descriptions, Specific Purpose Surveys	Craven Thompson & Associates, Fort Lauderdale

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Key Personnel	Capacity / Education	Level of Involvement	Expertise	Company / Location
Surveying Technicians	Office Training, AutoCAD, Trimble, ESRI	One Technician for 40 hours each week for contract	Digital Terrain Modeling, AutoCAD (Comparable to Eagle Point), Data manipulation	Craven Thompson & Associates, Fort Lauderdale
Field Crew	Past field experience	One crew full time each week	Data Gathering, Operating GPS equipment	Craven Thompson & Associates, Fort Lauderdale
Joseph Romano, P.L.S. Prof. License No. 7085	Mobile LiDAR	Mr. Romano will be available on an on-call basis in the event that Mobile LiDAR is required	Surveying and mapping, mobile LiDAR services	Langan Environmental & Engineering, Fort Lauderdale
Bryan Merritt, P.M.S., P.L.S. Prof. License No. 6558	Mobile LiDAR	Mr. Merritt will be available on an on-call basis in the event that Mobile LiDAR is required	Surveying and mapping, mobile LiDAR services	Langan Environmental & Engineering, Fort Lauderdale
Chris Holmes, Federal Aviation Admin., Remote Pilot #3912949	Mobile LiDAR	Mr. Holmes will be available on an on-call basis in the event that Mobile LiDAR is required	Surveying and mapping, mobile LiDAR services	Langan Environmental & Engineering, Fort Lauderdale
Dennis Ritzel, P.S.M. Prof. License No. 6953	Subsurface Utility Locates / BS - Geomatics Engineering, Florida Atlantic University	Mr. Ritzel will be available on an on-call basis in the event that S.U.E. is required	Underground Utility Location and Mapping	Ritzel-Mason, Hollywood
Clyde Mason, P.S.M. Prof. License No.	Subsurface Utility Locates / BS - Geomatics Engineering, Florida Atlantic University	Mr. Mason will be available on an on-call basis in the event that S.U.E. is required	Underground Utility Location and Mapping	Ritzel-Mason, Hollywood

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h. Describe what municipal staff support is anticipated for this type of engagement.

We anticipate only needing a point of contact from the CRA. This representative may have to make various decisions on behalf of the CRA.

i. Describe your approach to performing the work. This should include the following points:

- 1) Your role and that of other parties involved in the data gathering, data analysis and recommendation process.**
- 2) Your plan for this project outlining major tasks and responsibilities, project time schedule and staff assigned.**

Approach

Craven Thompson is the prime consultant for this contract, and will perform all work with the exception of acquiring and processing LiDAR data. The LiDAR will be addressed by our sub-consultant, **Langan Environmental & Engineering, Inc.** Also, included in our team is **Ritzel-Mason, Inc.** for Subsurface Utility Engineering (S.U.E.) services.

Approach to Various Survey Tasks

Craven Thompson offers the following approach for CRA survey tasks:

- Perform preliminary research of subject properties to determine exact limits, available survey data on and near the site, and assign a Project Manager best suited for the type of survey requested.
- Dependent on the complexity of the Statement of Work and if required, we will meet with CRA staff either in person, by phone, or through e-mail to discuss details of the Statement of Work, Project Schedule, CRA's cost limitations and deliverables.
- The Project Manager will then visit the site to review existing field conditions and note any issues that may arise as to access, safety, available horizontal and vertical control on or near the site, obstructions and unique conditions that will affect the cost and schedule in completion of the requested task.
- We will then prepare and submit a proposal that includes a detailed level of effort, project and staffing schedules, firm fixed price based on proposed labor effort applying the pre-determined rate schedule, project completion date and deliverables.
- If applicable, innovative and alternative survey methods will be proposed to give the CRA options as to possible reduction of the project schedule and costs. Some of these methods would include GPS (Global Positioning System) Fast Static Control Survey and data collection, 3D fixed base Laser Scanning, and/or Mobile LiDAR Scanning.

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- Once the CRA has reviewed our proposal, we fine tune the labor effort, cost and schedule, and submit a revised proposal for approval and Work Order Authorization.

All survey projects will adhere to the following Methodology:

- Work will begin immediately after receipt of the Work Order Authorization. The Project Manager will compile any additional survey data required to perform office calculations and materials for the use of field and office staff to perform the tasks as outlined in the Work Order. A meeting will then be held with staff to review the project's details, objectives and schedule.
- During the field data collection and office preparation of the survey, daily evaluations of the collected information will be reviewed to assure accuracy and conformance to the scope. As a part of this process, the project will be analyzed and tracked to assure the ability to conform to the project scope, cost and schedule.
- Upon completion of the project survey, an independent Project Manager employed by our firm will perform a Quality Assurance and Quality Control review of the final product vs. the CRA's Detailed Statement of Work, City/CRA Standards, the proposed scope of services, Florida State Statute Chapter 472 - Land Surveying and Mapping, Florida Standards of Practice for Land Surveying under Florida Administrative Code Chapter 5J-17 and any other applicable City Codes.
- All during the survey process, the Project Manager will maintain close communications with survey staff and sub-consultants, managing the project in order to immediately solve any issues that may arise as to schedule, costs, and deliverables. This will assure that the Project Manager can communicate regularly and accurately with CRA Project Managers the status of the project at any given time and guarantee quality products delivered on time as required by the Work Order.
- The final steps will be to deliver the project survey to the CRA in the required format(s) for review. If there are any comments during the review by the CRA, address those issues immediately and resubmit.

SPECIFIC SURVEY PROJECT APPROACHES

All of the surveys involving field crews and sub-consultants will follow the above procedures. The types of survey and survey tasks will include:

- **Topographic Survey, Record As-Built Survey, Specific Purpose Survey**

We pride ourselves being on the cutting edge of technology when deciding on which data collection method(s) to use when addressing the needs of our clients as to level of accuracy, cost and timeframe when proposing and executing a project. For these types of surveys, we use conventional data collection methods for smaller projects to be cost effective. For medium and for large-scale projects we will analyze which method of data collection will be most efficient. These innovative methods would include GPS (Global

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Positioning System) Fast Static Control Survey and data collection, 3D fixed base Laser Scanning, Mobile LiDAR Scanning, Aerial Photogrammetry, and Aerial LiDAR Scanning. We have the capability to combine these diverse data acquisition methods resulting in quality and cost-effective products.

- **Sketch & Descriptions and Preparation of Easements**

Our procedures for preparing sketch and descriptions and easements are virtually identical but dependent on the type of document required. These items are quite similar where a sketch and description could include any type of property and easements would include a sketch and description of a portion of a certain property covering a utility, access, sidewalk or other type of improvement. The procedure would include reviewing the CRA's Detailed Statement of Work; determining the purpose of the sketch and description, research of the property to determine ownership limits which would also establish the limits of the sketch and description and/or easement. All sketch and descriptions are prepared using AutoCAD Civil 3D software. We also strive to prepare the base calculations and final document in the state plane coordinate system thus providing a seamless importation into current databases.

- **GPS Surveys**

We use GPS (Global Positioning System) equipment on almost all of the surveys we prepare. This provides unified survey data that is easily brought into GIS databases with little need for adjustment. Our equipment ranges from hand-held models with 3-meter accuracy to the latest survey-grade receivers and base stations with sub-centimeter accuracy. We also manage our own Continuously Operating Reference Station (CORS) located at our office which is partnered with Trimble Navigation. This CORS, along with continually upgrading our field equipment provides the ability to provide our clients with survey solutions faster, more accurately and at less cost. Types of GPS surveys usually are Project Network Control (field monumentation for localized survey networks) or Regional GPS Survey Control.

- **Laser Scanning**

We often use 3D laser scanning to prepare topographic and as-built surveys of roadways, parking lots, buildings, utility plants and interiors of most any structure. The scanner will capture every aspect needed for design purposes in a point cloud of laser data, consisting of millions of 3D points. From this data we are able to prepare an AutoCAD drawing from any aspect in extreme detail in either 2D or 3D formats. This procedure consists of establishing survey control points at strategic locations around the property in an X-Y-Z format. With these control points set, the 3D scanner can then be positioned on, or near each of these controls and tied down to orientate the laser point clouds collected in the field. Multiple scanning positions are run that capture horizontal and vertical point positions in an X-Y-Z format detailing the facility. Then those scanned points will be registered together to form a seamless overall point cloud of the subject improvements. Each scanner position will capture everything in a 360-degree arc

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around the scanner in a 100-200-foot radius buffer, above and below the scanner along with digitally registered photographs of each area scanned. These points are then extracted and imported into an AutoCAD Civil3D base for preparation of the drawing.

- **Construction Layout**

Construction layout surveys require precise accuracy to assure the proper placement of facilities. All elements required for staking are calculated in the office based on design plans that are verified for accuracy. Once the components are staked, the field crew then uses independent field control to check the precision of the stakeout to assure the location if the facility meets the tolerance of the design plans. The field notes are then office checked that afternoon to verify the improvement is properly placed. This procedure confirms the fieldwork was accomplished successfully.

- **Utilization of Existing Data or Management Systems**

Our staff utilizes a multitude of existing data systems to manage different projects. We utilize our accounting system (Deltek 7.5) to manage the budget and the time from individual employees throughout the project, it provides regular updates and alerts by email to run the project efficiently. We utilize ArcGIS to collect existing data from CRA, County, and State agencies within the areas we are surveying to help organize and define the limits and the surrounding property information. We use various surveying software and hardware packages to do the Survey field and office operations as cost effectively as possible. And we utilize various County sites to access records and plans available for land information.

- **Web/Cloud Based Solution Platforms**

We use the Trimble Terra-Flex system which is a cloud-based solution that allows the organization and control of the field data collection process. The power behind Terra-Flex is the integration between data collection and Geographic Information System, GIS, through a plug-in within GIS. A geodatabase that is created within GIS full of domains and schemas is uploaded to the cloud-based Terra-Flex system. From there forms are created based on the geodatabase and crafted to fit the constraints of the project complete with drop down menus and check boxes. These forms dictate how the field crews are to perform their surveys and ensure that all necessary information is recorded including multiple pictures of the target objects if desired. The field crews are able to view and edit these forms directly from a cell phone and/or tablet which provides great versatility in the field. These forms are then synced back to the cloud-based Terra-Flex system as soon as the form editing is complete and sends that information straight into the GIS attribute tables in the office where real time processing and analysis can happen.

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OTHER SURVEYS

- **Right-of-Way Surveys**

Using existing records such as rights-of-way maps, plats, dedications and maintenance maps, we will establish the limits of the corridor and survey the boundaries. The improvements in and adjacent to the right-of-way are then located with either 3D fixed base Laser Scanning, and Mobile LiDAR Scanning. We have utilized all of these methods in the past singly or in combination. These methods keep our field crews away from traffic thereby increasing the safety of our staff and the driving public.

- **ALTA Surveys**

Part of the process of the Detailed Statement of Work Order will be to make available to the City/CRA the Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys. We will work with the CRA to determine the exact purpose of the survey and tailor the final product that best suits the CRA's needs and meet the ALTA/ASPS requirements upon delivery.

- **Canal and Embankments Cross Sections and Profiles (Hydrographic)**

We use the latest survey-grade sonar equipment integrated with our GPS data collection systems to collect thousands of points in the given body of water. Also using GPS, we collect the embankment topography and then import both sets of data into one seamless 3D drawing. This allows us to then cut cross-sections, profiles at any required position. We can also prepare quantity calculations of the subject site based on this data. The time to collect data and accuracy using our equipment and procedures has been greatly improved over previous standard survey methods.

- **Field Reconnaissance**

Prior to performing field reconnaissance, the Project Manager researches all available record documents such as plats, right-of-way maps, previous surveys, state and county survey resources in and around the subject site. The Project Manager then visits the site, to help determine the level of effort and time it will take to complete the proposed task. Reconnaissance will determine availability of horizontal and vertical control along with any unique characteristics of the property that will affect the Detailed Statement of Work and Schedule.

- **Underground Utilities Detection**

We will engage a Subsurface Utility Engineering (S.U.E.) location sub-contractor, **Ritzel Mason, Inc.**, to designate (paint and flag) the locations of the subject facility. We then horizontally locate the utility and plot on the base survey. During the design process, once proposed utilities and located, we will then stake the conflict points and locate test holes (vacuum excavation points) performed by the sub-contractor. This data is added to the survey and provided to the design engineer to resolve any issues in the design.

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Plan Review Services Including Plan Review Per F.S. Chapter 177

We are currently the plat reviewing surveyors for a number of municipalities in the tri-county area. We have developed a simplified checklist that mirrors Florida Statutes, Chapter 177, Land Boundaries Platting Law. We have also prepared checklists for each CRA that directly corresponds with the specific platting code in the Land Development Code for each municipality. We find these checklists made available to the owner and/or developer at their initial meeting with the CRA greatly increases the completeness and consistency of preliminary and final plats thereby saving time and costs for both the CRA and platting client. In conjunction with the checklists, we also prepare red-lined mark-ups of the plats during the office review and field check of monumentation of the plat boundaries. The documents are all then scanned and emailed to the CRA and if desired, directly to the platting surveyor thus reducing the paper trail and time it takes to complete the plat process.

Scheduling

Varying types of CCNA surveying and mapping projects have diverse tasks, are of differing magnitudes of size and scope, and assorted time frames. Therefore, giving a timeline for a typical project is not possible as there is no typical timeline. Smaller projects that take less than one month to complete will be done on a strict timeline designated in a simple and clear proposal that spells out the exact scope and deliverables. However, below is the type of software and how it would function for CCNA surveying and mapping projects that are large in scale and takes 2 months or longer to complete.



SECTION 5 - PROFILE OF CONSULTANT

Craven Thompson proposes using the critical path method (CPM) for scheduling, with *Microsoft Project* software. This method calculates the minimum completion time for a project along with the possible start and finish times for the project activities. The critical path itself represents the set or sequence of predecessor/successor activities which will take the longest time to complete. The duration of the critical path is the sum of the activities' durations along the path. Thus, the critical path can be defined as the longest possible path through the "network" of project activities. The duration of the critical path represents the minimum time required to complete a project. Any delays along the critical path would imply that additional time would be required to complete the project. There may be more than one critical path among all the project activities, so completion of the entire project could be delayed by delaying activities along any one of the critical paths. Formally, critical path scheduling assumes that a project has been divided into activities of fixed duration and well-defined predecessor relationships. A predecessor relationship implies that one activity must come before another in the schedule.

The actual computer representation of the project schedule generally consists of a list of activities along with their associated durations, required resources and predecessor activities. The schedule will be presented in a graphical representation bar or Gantt chart illustrating the scheduled time for each activity. The bar chart lists activities and shows their scheduled start, finish and duration. Activities will be listed in the vertical axis of this figure, while time since project commencement is shown along the horizontal axis.