



**LAUDERDALE • BY • THE • SEA**  
**Agenda Item Memorandum**

**Municipal Services**

Department

**Don Prince**

Department Director

<b>COMMISSION MEETING DATE - 7:00 PM</b>	<b>Deadline to Town Clerk</b>
September 24, 2012	September 21

- Presentation   
 Reports   
 **Consent**   
 Ordinance

**SUBJECT TITLE:** Hibiscus, Allenwood and Tropic (HAT) Neighborhood Improvement Project/ Drainage

**EXPLANATION:** On March 13, 2012 the Commission approved the HAT Neighborhood Improvement Project to be completed in fiscal year 2012/13 and that project is budgeted. The project involves planting various types of trees in the swales in the neighborhood. At the time, the Commission agreed with the staff's recommendation that the Town fund a swale restoration project in conjunction with the landscape project. Since the western end of the HAT neighborhood experiences flooding during heavy rains, staff does not believe swale restoration will resolve the problem in entirety and that a relatively simple drainage system upgrade in the western part of the neighborhood should be incorporated into the swale restoration project. In the FY 2013 capital budget, we included \$300,000 for the swale restoration/drainage project.

Currently there are two catch basins connected to outfall pipes that discharge into the Intracoastal Waterway. One catch basin is located at the northwest corner of Tropic Drive and has a four (4) inch outfall and a under sized catch basin. The second catch basin is located at the western end of Hibiscus with a fifteen (15) inch outfall. The drainage plan would be to install a third catch basin at the southwestern corner where Allenwood and Tropic intersect. About six hundred 600 feet of reinforced concrete pipe would connect all three basins together providing extra storage for the stormwater. The existing outfall pipe on Hibiscus would be enlarged to accommodate more of the stormwater if permission is granted by FDEP. The swale restoration is critical to convincing FDEP to grant permission to enlarge the outfall.

Most of the residents in the area have signed a petition agreeing to have their swales restored as part of the project.



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We have negotiated a design price of \$20,313 with Chen Moore to design the drainage and swale restoration project under their Town engineer contract. They have done an excellent job on design of other drainage projects and we have negotiated the design fee down to an amount that we believe is reasonable.

**RECOMMENDATION:** Authorize the Town Manager to execute a work authorization with Chen Moore & Associates for the design of the HAT Project for \$20,313.

**EXHIBITS:**

**Exhibit 1: Quote from Chen Moore and Associates for \$20,313**

On Town Attorney approved form

Yes     No

Town Manager Initials CP

**TOWN OF LAUDERDALE BY-THE-SEA  
WORK AUTHORIZATION FOR PROFESSIONAL SERVICES**

<b>Contractor:</b> Chen Moore & Associates			
<b>Address:</b> 500 West Cypress Creek Road Suite 630 – Fort Lauderdale FL 33309			
<b>Contract No.</b> Agreement Description: Continuing Professional Services Contract <u>April 24, 2007</u>		<b>Work Authorization No.:</b> Effective Date _____	
<b>P.O. # For Work Authorization:</b>		Budget \$20,313	
<b>Brief Task Description:</b> H.A.T. Neighborhood Improvement Project			
<b>In accordance with the above referenced agreement, you are authorized to perform the tasks detailed in attached Exhibit A (Scope of Services). All required services will be completed on or before: See Exhibit C</b>			
<b>The total amount or the limiting amount of the compensation will be: <u>\$23,623</u> unless additional services are authorized by the Town in writing.</b>			
<b>Compensation elements are as follows:</b>			
	<b>Method of Compensation (Lump Sum, Hourly NTE)</b>	<b>Amount (\$)</b>	<b>Project Code</b>
Task 1 – Site Investigation	Lump Sum	\$10,404	
Task 2 – Progress Submittals	Lump Sum	\$6,867	
Task 3 – Construction Administration	Lump Sum	\$3,042	
<b>Total</b>		\$20,313	
<b>Other Notes:</b> This Work Authorization is subject to the same terms and conditions of the <u>Continuing Professional Services Contract</u> dated April 24, 2007. Please acknowledge receipt of, and agreement with, this Work Authorization by signing and dating and returning three (3) original signed copies to the Town Manager. <u>The Town will send you one fully executed copy.</u>			
<b>Town of Lauderdale by-the-Sea Approval:</b>			
Constance Hoffmann, Town Manager	_____	_____	
	(Signature)	(Date)	
June White, Town Clerk	_____	_____	
	(Signature)	(Date)	
<b>Contractor Acceptance:</b>			
Contractor Name:	_____	_____	
Title:	(Signature)	(Date)	

## EXHIBIT A

### **H.A.T. NEIGHBORHOOD DRAINAGE IMPROVEMENTS** **SCOPE OF SERVICES**

#### **PROJECT BACKGROUND:**

The Town of Lauderdale by the Sea (TOWN) wishes to implement drainage improvements within the “H.A.T.” neighborhood. The project area includes the full length of Hibiscus Avenue, Allenwood Drive, and Tropic Drive to the west of US A1A, which includes approximately 3,800 linear feet of public right of way. The stormwater improvements are necessary within the neighborhood to provide additional flood protection to this very low lying area. The flooding has been observed by Town staff within the neighborhood during past rainfall events. The flooding issues within the neighborhood are chiefly due to the low ground surface elevation relative to the groundwater table and tidal levels at the existing outfalls, which limits the infiltration of stormwater runoff into the ground surface and the flow of stormwater runoff via the existing outfalls. Stormwater improvements are necessary to reduce the extent of flooding during and after heavy rainfall events.

The proposed stormwater improvements for this project include the replacement of one existing drainage outfall into the Intracoastal Waterway from West Tropic Drive at Hibiscus Drive. The proposed stormwater improvements also include the installation of new drainage piping along West Tropic Drive to interconnect the upsized outfall to the existing outfall. The proposed improvements for this project also include the regrading of existing grass swale areas throughout the project area and the conversion of selected paved roadway shoulder areas into new grass swale area to provide additional storage volume for stormwater runoff. The Town has requested a fee proposal from Chen Moore and Associates (CMA) to prepare the construction documents for the H.A.T. Neighborhood Drainage Improvements. CMA shall be responsible for providing engineering services for the proposed improvements according to the scope of services defined below.

#### **SCOPE OF SERVICES:**

The following is a detailed breakdown of the above described scope of services which had been broken down into deliverable based tasks:

##### **Task 1: Site Investigation**

In order to complete the stormwater calculations and develop preliminary design plans, CMA will collect and review information related to the project area, which includes but is not limited to the following items:

##### **1.1 Document Review**

CMA will review all available surveys, atlases, design drawings, and/or record drawings for the existing utilities within the project area to determine the configuration of existing underground utilities and to avoid any conflicts with any proposed stormwater improvements. CMA shall contact the Sunshine State One Call Service to determine the existing utilities which are located in the project area. CMA will perform necessary site visits to the project area for verification purposes. The approximate location of all existing underground utilities will be incorporated into the preliminary design plans based on any available drawings. CMA shall complete this task within 30 calendar days from the issuance of a notice to proceed (NTP) by the TOWN.

## 1.2 Topographic Survey

CMA shall coordinate with a surveyor in order obtain the required topographic data for the section of the project area to include underground drainage installation. The limits of the survey shall include West Tropic Drive between Allenwood Drive and North Tropic Drive, which is approximately 600 LF of 50 feet wide ROW. CMA shall retain a licensed land surveyor to complete the topographic survey as follows:

(a) Establish a control traverse and bench marks (North American Vertical Datum) at sufficient intervals to support the topographic survey to be utilized on the design plans.

(b) Locate all above ground features within the right-of-way of the existing roads according to the following schedule, including pavement, paved swales, sidewalks, fences, light poles, handrails, storm manholes, catch basins, electric boxes, handholes, curbs, valve boxes, sanitary sewer manholes, driveway types, edges and corners, trees, overhanging trees in the right-of-way, meter boxes, centerline and crown of the roads, irrigation systems, fire hydrants and valves, overhead utilities.

(c) Locate underground features of sanitary manholes, storm manholes, and catch basins. Measure the invert elevations of pipes and determine the pipe materials and size when possible.

(d) Tie in any subdivision corners, lot corners and plat corners which can be located along the right-of-way lines. This will not constitute a boundary or right-of-way survey as defined in the Minimum Technical Standards for Land Surveying and Mapping. Ownership and title searches are not included. Easements will be based on information obtained from record plats.

CMA shall review topographic data upon completion of the survey to all appropriate information was included within the topographic survey. CMA shall complete this task within 30 calendar days from the issuance of a notice to proceed (NTP) by the TOWN.

## 1.3 Subsurface Utility Verification

Since there are extensive existing utilities within the project area, the location of existing underground utilities is necessary to avoid conflict with any proposed underground stormwater improvements. CMA shall enter into an agreement with a local Subsurface Utility Engineering (SUE) firm to acquire the size, material, depth and horizontal location of existing underground utilities. This task includes the completion of 6 utility testholes within the project area to verify the configuration of the existing utilities. CMA shall complete this task within 15 calendar days from completion of Task 1.1 and Task 1.2.

## 1.4 Stormwater Calculations

CMA shall utilize the information acquired to complete the stormwater calculations required to properly configure the proposed drainage improvements. CMA shall utilize Streamline Technologies Interconnected Channel and Pond Routing (ICPR) Software to complete a stormwater model of this area. CMA shall provide a copy of the model results to the TOWN. CMA shall complete this task within 30 calendar days from the completion of Task 1.1, Task 1.2, Task 1.3, and Task 1.4.

**Task 2: Progress Submittals**

2.1 90% Design Submittal

CMA will prepare and submit required sets of design drawings to TOWN. These drawings will consist of the existing conditions, horizontal layout, profiles, and engineering details for review by the TOWN. CMA will prepare and submit required sets of technical specifications to TOWN. CMA will utilize the 90% design plans to prepare a construction cost estimate. CMA will attend one review meeting with TOWN staff to discuss comments after the 90% submittal. CMA shall complete this task within 30 calendar days from completion of Task 1.

2.2 Regulatory Permit Submittal

CMA will obtain, review, and complete permit applications and will prepared backup documentation required by the regulatory permitting agencies. CMA will be responsible for coordination with all regulatory agencies during the permitting process. CMA will then send applications to CMA for review, signature and check(s) for all permit and application fees. Regulatory agencies anticipated to be involved are as follows:

- South Florida Water Management District (SFWMD)
- Broward County Environmental Protection and Growth Management (BCEPGM)

CMA will revise applications, plans, and technical specifications as per comments from these regulatory agencies. CMA shall assemble permit application packages within 15 calendar days after the receipt of review comments from the TOWN on the 90% design submittal. The regulatory agencies typically complete their review within 30 calendar days after the permit submittal.

2.3 Final Design Submittal

CMA will utilize the 90% plan and specification review to prepare the bid set of construction documents. CMA will produce required sets of design drawing and technical specifications for bidding. CMA shall complete this task within 15 calendar days after the receipt of review comments from the TOWN on the 90% design submittal.

**Task 3: Construction Administration**

3.1 Bidding Assistance

CMA will attend the Pre-Bid Meeting and will answer all questions and clarifications that are technical in nature. CMA will respond to all written questions requesting clarification of the technical documents for this project. CMA will review the bid results and make a recommendation for bid award. TOWN shall be responsible for bid advertisement, distribution of bid documents to interested bidders, processing all bid submittals, and verification that each bid submittal meets all Purchasing related requirements. CMA shall complete this task according to the schedule defined by the TOWN for the bidding process.

### 3.2 Document Review

CMA will review shop drawings submitted by the contractor prior to commencement of construction and respond to Requests For Information (RFI) from the contractor during construction operations with an estimated duration of 4 months. As necessary, CMA shall prepare any documentation required to clarify issues included within a RFI from the contractor. CMA will review all pay applications from the contractor to verify the accuracy of their progress.

### 3.3 Construction Oversight

CMA will prepare for and attend one preconstruction meeting with the contractor, TOWN staff, and other project stakeholders upon issuance of a notice to proceed. TOWN shall be responsible for daily inspection of the construction operations. CMA shall assist the TOWN with the administration and inspection of the project during the construction phase on an as requested by TOWN staff. CMA will be available to conduct periodic site inspections of the work during construction operations throughout the construction duration. The budget for this task was developed based on the assumption of 16 total inspection hours over the estimated construction duration of 4 months. Any construction inspection services required in excess of this amount will be billed at the hourly rate. CMA will meet with TOWN staff to prepare a punch list. CMA will walk the site with the contractor to go over the punch list until completion for final acceptance. CMA will certify the project at completion to the TOWN staff and jurisdictional agencies.

#### **SCOPE ASSUMPTIONS:**

- The topographic survey will be limited to West Tropic Drive and does not include other portions of the project area where swale restoration and tree installations are planned.
- All drawings prepared for swale restoration and tree installation outside of West Tropic Drive will be conceptual GIS figures, not detailed CAD drawings.
- TOWN will provide television inspection reports for all existing drainage piping within the project area.
- TOWN will provide timely responses to information included within each deliverable.
- TOWN will provide all required permit fees.
- TOWN will provide the standard front end contract documents to CMA to incorporate into the bid documents.
- TOWN shall be responsible for bid advertisement, distribution of bid documents to interested bidders, processing all bid submittals, and verification that each bid submittal meets all Purchasing related requirements.
- TOWN shall be responsible for daily inspection of the construction operations.

**Exhibit B**

**Hourly Compensation Rates**

<b>Category</b>	<b>Unit Rate</b>
Town Engineer	\$ 159.14
Firm Principal	\$ 223.85
Professional Engineer	\$ 143.22
Senior Construction Inspector	\$ 143.22
Senior Engineer	\$ 97.60
Associate Engineer	\$ 85.93
Construction Inspector	\$ 85.93
Clerical	\$ 50.92

## Exhibit C

### Work Authorization Schedule

<b>Task</b>	<b>Task Duration</b>	<b>Completion Date</b>
Task 1.1 – Document Review	30 days	30 days after NTP
Task 1.2 – Topographic Survey	30 days	30 days after NTP
Task 1.3 – Subsurface Utility Verification	15 days	15 days after Task 1.1/1.2
Task 1.4 – Stormwater Calculations	30 days	30 days after Task 1.1/1.2/1.3/1.4
Task 2.1 – 90% Design Submittal	30 days	30 days after Task 1.5
Task 2.2 – Regulatory Permit Submittal	30 days	30 days after Task 2.1
Task 2.3 – Final Design Submittal	15 days	15 days after Task 2.2
Task 3.1 – Bidding Assistance	TBD	TBD
Task 3.2 – Document Review	120 days	120 days after Contractor NTP
Task 3.4 – Construction Oversight	120 days	120 days after Contractor NTP

**EXHIBIT D  
HAT NEIGHBORHOOD DRAINAGE IMPROVEMENTS  
STAFF TIME ESTIMATE**

TASK NO.	TASK DESCRIPTION	SUBCONSULTANT COSTS	PRINCIPAL	TOWN ENGINEER	PROFESSIONAL ENGINEER	PROJECT ENGINEER	ASSOCIATE ENGINEER	TECHNICIAN	INSPECTOR	TOTAL HOURS	TOTAL COST
1.0	<b>SITE INVESTIGATION</b>										
1.1	DOCUMENT REVIEW				2	10		2		14	\$1,376
1.2	TOPOGRAPHIC SURVEY	\$4,000				2		2		4	\$4,340
1.3	SUBSURFACE UTILITY VERIFICATION	\$2,100				2				2	\$2,290
1.4	STORMWATER CALCULATIONS				8	12		2		22	\$2,400
	<b>TOTAL - TASK 1</b>										<b>\$10,404</b>
2.0	<b>PROGRESS SUBMITTALS</b>										
2.1	90% DESIGN SUBMITTAL				2	16		24		42	\$3,594
2.2	REGULATORY PERMIT SUBMITTAL				2	12		12		26	\$2,315
2.3	FINAL DESIGN SUBMITTAL				2	4		4		10	\$867
	<b>TOTAL - TASK 2</b>										<b>\$6,867</b>
3.0	<b>CONSTRUCTION ADMINISTRATION</b>										
3.1	BIDDING ASSISTANCE				2	2				4	\$468
3.2	DOCUMENT REVIEW				4	4				8	\$935
3.3	CONSTRUCTION OVERSIGHT				4	4			8	16	\$1,839
	<b>TOTAL - TASK 3</b>										<b>\$3,042</b>
	<b>TOTAL HOURS</b>		0	0	10	26	0	6	0	42	
	<b>TOTAL FEE ESTIMATE</b>										<b>\$20,313</b>
	Hourly Rates (FY 2009)		\$217.33	\$154.50	\$139.05	\$94.76	\$83.43	\$75.00	\$88.00		