TASK ORDER No. 43

Dated this	day of	, 2015
FORT LAUDERDALE	E PUBLIC WORKS DEPA	ARTMENT

PROJECT No. 12106

GT LOHMEYER WWTP STORMWATER IMPROVEMENTS

PROFESSIONAL SERVICES

This Task Order is being entered into pursuant to the Continuing Contract for Civil Engineering Consultant Services Agreement (Contract 626-10881-3) between the City of Fort Lauderdale, a municipal corporation of the State of Florida, ("CITY") and CRAVEN THOMPSON & ASSOCIATES, INC., a Florida corporation, ("CONSULTANT") in accordance with the terms of the agreement for professional services dated November 6, 2012 and renewed on October 21, 2014 between CITY and CONSULTANT ("MASTER AGREEMENT").

PROJECT BACKGROUND

The George T Lohmeyer Waste Water Treatment Plant (GT Lohmeyer WWTP) has historically experienced regular flooding events on the northside of the site. The flooding occurs during 1" plus rainfall events and not only causes flooding within the Site but also overflows the perimeter elevations causing flooding on SE 18th Street and within the adjacent properties to the north. This task order requires the CONSULTANT to develop a conceptual design to alleviate the onsite and offsite flooding issues.

Once the conceptual design is approved, the CONSULTANT will provide final construction documents, engineering permits and construction observation services for the **GT Lohmeyer WWTP** stormwater improvements.

PROJECT DESCRIPTION

The GT Lohmeyer WWTP stormwater improvements project will consist of the following phases:

- Phase I Feasibility Analysis
- Phase II Permitting and development of 30% and 75% construction documents
- Phase III Development of 100% construction documents and specifications
- Phase IV Construction Observation Services

Project location and limits of work are identified in **Exhibit 1.** The Project area is bounded on the north by SE 18th Street, on the south by Plant, on the west by Harbor Shops Development and on the east by Eisenhower Boulevard. The work area is limited to the roadway along the northern boundary of the Site and SE 18th Street from approximately 750 LF west of Eisenhower Boulevard to Eisenhower Boulevard.

The main objectives of this task order are to obtain all design permits and develop construction documents that would allow the City to bid out the construction of the project.

Major deliverables are described within the Scope section, which include providing final construction documents and design permits that would allow the City to bid out the construction of the project.

Consultant: Craven Thompson & Associates, Inc.

SCOPE OF SERVICES AND DELIVERABLES

This Task Order will cover the engineering, and surveying services required to complete plans and obtain permits for the **GT Lohmeyer WWTP** storm water improvements.

The CONSULTANT is responsible for all work of their sub consultants/subcontractors to meet the deliverables included on this task order.

PHASE I – Feasibility Analysis

Task 1 – Data Gathering

• 1.1 Review all available documentation regarding previous studies, surveys, as-builts, atlas', etc. The documents will be used to create a base for which to apply improvements to in order to resolve the flooding issues within the Project Area.

Task 2 – Preliminary Design Development

• 2.1 CONSULTANT shall develop a maximum of two (2) potential alternative designs to alleviate the flooding issues within the Project Area. These two (2) alternatives will be presented to the City with preliminary construction costs for evaluation. A coordination meeting will be held to discuss and determine which alternate will be utilized for Phase II and III. CONSULTANT shall prepare and submit the meeting agenda and meeting minutes.

PHASE II - Permitting and 75% Design

Task 3 - Surveying

e 3.1 CONSULTANT shall prepare a Topographic Survey of that portion of the above referenced project, shown on Exhibit "1", (attached). This survey lies from the East line of the Pretreatment Building to the west Right-of-Way Line of Eisenhower Blvd., 1,485± L.F. The survey will include recovery of pertinent boundary corners, location of aboveground visible improvements, including pavement, slabs, fences, trees, utility features and the perimeter wall along the north property line of the subject property including S.E. 18th Street. In addition, the CONSULTANT will obtain rim elevations of utility structures with invert elevations, pipe size and type of drainage & sanitary structures. The survey will meet current surveying requirements of the Board of Professional Surveyors and Mappers, of the State of Florida, and will comply with the City of Fort Lauderdale CAD standards. The survey will be prepared in AutoCAD Civil 3D, Version 2014 drawing file format. Elevations will be based on the North American Vertical Datum of 1988 (NAVD 88), and referenced to National Geodetic Survey benchmarks.

Task 4 – Stormwater Design

4.1 CONSULTANT shall complete the stormwater engineering design of the <u>GT Lohmeyer WWTP Stormwater Improvements</u> to the 30% and 75% design stage. The stormwater engineering design will include complying with the 2014 City adopted roadway flood protection criteria for a 10 YR / 24 HR storm and all associated permit agencies' requirements. It should be noted that due to CITY budget, existing physical conditions and regulatory requirements, the 10 YR / 24 HR roadway flood protection may not be achievable in certain areas within the Project. All

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associated hydraulic modeling must be done with the U.S. Environmental Protection Agency (EPA) Storm Water Management Model (SWMM), Interconnected Pond Routing (ICPR), or equal.

- o 4.1.1 Conduct Hydraulic Modeling.
- o 4.1.2 Design of a pollution prevention and sediment erosion control plan.
- 4.1.3 Design of the drainage system, including but not limited to exfiltration trenches, berms, swales, structures, drainage wells and related storm infrastructure. The design must protect the existing property located on the north side of SE 18th Street within the Project Area.
- 4.1.4 Prepare drainage calculations and reports to satisfy permitting agencies requirements, including NPDES MS4 program.
- 4.1.5 CONSULTANT shall review options to incorporate alternative sustainable stormwater features.
- 4.16 CONSULTANT shall conduct Underground Utility Locates within the Project Area. It is anticipated that a maximum of ten (10) utility locates will be utilized under this Task.

Task 5 - Permitting

• 5.1 CONSULTANT shall obtain all design permits for <u>GT Lohmeyer WWTP Stormwater Improvements Project</u> to allow the City to bid out the construction of the project. This item includes responding to all permit agencies comments. This item does not include permits fees, which are reimbursable expenses paid per contract agreement clauses.

o 5.1.1 PERMITS GT Lohmeyer WWTP Stormwater Improvements

SFWMD ERP Surface Water
 FDEP/BCEPD ERP Surface Water
 FDOT* Drainage Connection

City of Fort Lauderdale Engineering and Building Department

Task 6 – Project coordination and information meetings

- 6.1 CONSULTANT shall provide project coordination meetings at the following project milestones: project kick-off, 30% and 75% design.
 - 6.1.1 Each meeting shall not extend more than 2 hours in duration and be charged per actual meeting duration.
 - 6.1.2 Any unused meeting time can be used for subsequent meetings if needed and as approved by CITY.
 - 6.1.3 CONSULTANT staff attending the meetings shall be approved by CITY prior to CONSULTANT conducting any meeting.
 - 6.1.4 CONSULTANT shall prepare meeting agenda and meeting minutes and submit to CITY for review.

Task 7 - Reimbursable

• 7.1 Printing costs and postage are included in reimbursables and shall be billed per contract terms and agreement.

^{*} Potential Permit

Consultant: Craven Thompson & Associates, Inc.

PHASE III – Development of 100% construction documents and specifications

Task 8 – Development of construction documents for <u>GT Lohmeyer WWTP Stormwater Improvements</u>

- 8.1 CONSULTANT shall prepare civil engineering design plans for 100% submittals to City Staff for review.
 - o 8.1.1 CONSULTANT shall prepare quantity and cost estimates for 100% submittal.
 - 8.1.2 Final design shall include revisions to plans per CITY comments and Permitting agency's comments.
 - 8.1.3 CONSULTANT shall prepare detailed Construction Documents and Specifications for bidding purposes.
 - o 8.1.4 CONSULTANT shall attend Pre-Bid Meeting.
 - 8.1.5 CONSULTANT shall respond to questions and comments during bidding process and assist the CITY in preparing Addendums.
 - 8.1.5 CONSULTANT shall review submitted Bids for accuracy and pricing and present results to the CITY.

Task 9 – Project coordination and information meetings

- 9.1 CONSULTANT shall provide project coordination meetings at the following project milestones: 100% design.
 - o 9.1.1 One meeting shall not extend more than 2 hours in duration and be charged per actual meeting duration.
 - 9.1.2 Any unused meeting time can be used for subsequent meetings if needed and as approved by CITY.
 - 9.1.3 CONSULTANT staff attending the meetings shall be approved by CITY prior to CONSULTANT conducting any meeting.
 - 9.1.4 CONSULTANT shall prepare meeting agenda and meeting minutes and submit to CITY for review.

Task 10-Reimbursable

 10.1 Printing costs and postage are included in reimbursables and shall be billed per contract terms and agreement.

PHASE IV - Construction Services

Task 11 - Construction Administration

 11.1 CONSULTANT shall also review the shop drawings and submittals, answer RFI's, and respond to requests for changes.

Task 12 - Construction Observation Services

• 12.1 CONSULTANT shall provide field observation and inspection services for the proposed project. The field observations and inspections are estimated at twelve (12) hours per week for a construction period of nine (9) months for a senior inspector (468 hrs. total). Services include site visits, testing observation, attendance at meetings (up to 40 hours), coordination with contractor and city, part time on-site observations/verification of construction in progress (including specialized field tests) to determine if construction is proceeding in substantial accordance with the Contract Documents and consider and evaluate Construction Contractor's suggestions for modifications in drawings or specifications.

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Consultant: Craven Thompson & Associates, Inc.

Task 13 - Project Closeout Services

13.1 Before issuance of a determination of substantial completion or final completion, participate
in a joint inspection with City and Contractor and assist in preparation of a list of items requiring
completion or correction (punch-list) for approval by the City. Provide Construction Contractor with
an approved copy of the punch list. Update punch-list as corrections are made. Participate in the
final inspection. Assist the CITY with the review and approval of closeout document to include but
not limited to change orders, final payments, finals inspections and review as-builts for permitting
and close out.

Phase I Deliverables

CONSULTANT shall provide the following deliverables to CITY for review and written approval:

- I. Conceptual Alternative to alleviate the flooding issues experienced within the Project Area.
- II. Alternative presented will have associated preliminary costs.

Phase II Deliverables

CONSULTANT shall provide the following deliverables to CITY for review and written approval:

- I. Design plans, design permits, reports, survey data for the <u>GT Lohmeyer WWTP Stormwater</u> Improvements to allow the City to bid out the construction of the project.
- II. All deliverables shall be submitted to the City FTP site. Create a new entry under Site manager and use the settings User Name: EngVendor; Password: #Structure#. Use folders to organize submittals (invoices, drawings, PDFs, excel, SWMM files, report, etc.)
- III. CONSULTANT shall deliver a schedule in Microsoft Project of the task order work break down as part of this task order for City review and approval. <u>Schedule shall include deliverables dates</u>, <u>milestones</u>, <u>QA/QC time</u>. <u>City review time frame shall be not less than 7 business days per submittal, etc.</u>
- IV. CONSULTANT shall deliver 30%, 75% plans, calculations and project reports of the design solution of the project.
- V. CONSULTANT shall deliver all project files in native format and upload to the City's FTP site at the 30%, 75% phases. All AutoCad files shall be 2014 or newer version and shall comply with the City's AutoCad standards.
- VI. CONSULTANT shall deliver permits issued from all permit agencies to the City.
- VII. At least two (2) Signed and Sealed hard copies of final plans and associated design reports or calculations.

Phase III Deliverables

- I. Design plans, design permits, reports, survey data for the <u>GT Lohmeyer WWTP Stormwater</u> Improvements to allow the City to bid out the construction of the project.
- II. All deliverables shall be submitted to the City FTP site. Create a new entry under Site manager and use the settings User Name: EngVendor; Password: #Structure#. Use folders to organize submittals (invoices, drawings, PDFs, excel, SWMM/ICPR files, report, etc.)

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III. CONSULTANT shall deliver a schedule in Microsoft Project of the task order work break down as part of this task order for City review and approval. Schedule shall include deliverables dates, milestones, QA/QC time, City review time frame not less than 7 business days per submittal, etc.

- IV. CONSULTANT shall deliver 100% plans, calculations and project reports of the design solution of the project.
- V. CONSULTANT shall deliver all project files in native format and upload to the City's FTP site at the 100% phase. All AutoCad files shall be 2014 or newer version and shall comply with the City's AutoCad standards.
- VI. CONSULTANT shall deliver permits issued from all permit agencies to the City.
- VII. At least two (2) Signed and Sealed hard copies of final plans and associated design reports or calculations.

Phase IV Deliverables

- I. Construction Administration including review of shop drawings, submittals, and RFI's.
- **II.** Project Certifications to permitting agencies based on information provided by Contractor. Well certifications by Contractor.

PROJECT ASSUMPTIONS

Specific assumptions for the project:

- ICPR shall be used to model the Stormwater Management System.
- CITY shall provide additional construction services during Construction to supplement CONSULTANTS staff.
- CITY shall provide all available information regarding the Project Area, As-builts, Atlases, Easements, Plats, etc. in Electronic and Hard Copy form.

CONSULTANT'S RESPONSIBILITIES

- CONSULTANT shall review all City, County State records, data and/or other documentation available
 to review land ownership, easements or other restrictions, provided by the CITY that may affect the
 project. CONSULTANT shall use survey equipment and data collection systems capable to deliver
 complete surveys and task order deliverables as stated by the scope of work section of this task
 order.
- CONSULTANT shall assist CITY in coordination with adjacent property owners- as applicable- to obtain access to project sites and to send deliverables of this task order to CITY.
- CONSULTANT shall prepare hydraulic, water quality, flood plain watershed modeling and analysis
 utilizing EPA's Storm Water Management Model (SWMM), ICPR or equal for the design of the
 stormwater solutions associated with the Project. CONSULTANT shall calibrate the models to be
 consistent with observable and proposed conditions.

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Consultant: Craven Thompson & Associates, Inc.

CITY'S RESPONSIBILITIES

- CITY will provide decision on preliminary design prior to the development of 30% design plans.
- The CITY's project manager, or a designated representative, will coordinate the project for the CITY.
- Meeting Attendance.
- Provide supplemental Construction Observation and Inspections services and Project Certifications.
- CITY will provide previous survey data, project records, drawings, reports, studies, etc.
- Timely review of submittals.
- Access to project site as required.
- Usual Open Hole Percolation Tests (Minimum 3) and Soil Borings. Locations to be determined.
- Permit Fees
- Reasonable Assurance Report and Well Certification fees for Class IV wells.

ADDITIONAL SERVICES

If authorized in writing by the City as an amendment to this Task Order, the Consultant shall furnish, or obtain from others, Additional Services of the types as listed in the Master Agreement. The CITY, as indicated in the Master Agreement, will pay for these services.

PERFORMANCE SCHEDULE

The CONSULTANT shall perform the services identified in Task 1 through 10 inclusive within 201 working days of written Notice to Proceed and Task 12 through 14 approximately eleven (11) months after the Construction Notice to Proceed as shown on the task order schedule on **Exhibit 2.**

METHOD OF COMPENSATION

The services performed shall be accomplished using the Not to Exceed method of compensation. Reimbursable expenses associated with these services are not included in the fees and will be itemized separately, subject to an established Not to Exceed limit. A fee schedule and cost breakdown for reimbursable expenditures is included on **Exhibit 3**. CITY may process CONSULTANT invoices by percentage of task order completed, accepted and delivered as described in previous task order sections.

Billing shall be per the final negotiated not to exceed price. CITY will have to go back to the Commission for approval of the overall contract once the not to exceed price is detailed / documented and finalized to be incorporated in the contract. A detailed breakdown of price will need to be included as an exhibit in this task order.

CONSULTANT shall keep detailed timesheets of all hours spent for <u>GT Lohmeyer WWTP Stormwater Improvements.</u>

o Timesheets and back up billing documentation shall be submitted with each invoice.

Consultant: Craven Thompson & Associates, Inc.

TERMS OF COMPENSATION

Services shall be provided for the following Not to Exceed amounts as identified in Exhibit 3.

Phase I

GT Lohmeyer WWTP Stormwater Improvements Labor Effort is estimated at 88 hours and Not to Exceed amount of \$9,984.00.

TOTAL PHASE I Not to Exceed Amount \$9,984.00

Phase II

GT Lohmeyer WWTP Stormwater Improvements Labor Effort is estimated at 368 hours and Not to Exceed amount of \$37,640.00.

Test Hole Locations are estimated at \$3,000

Reimbursables are estimated in the amount of \$500.00

TOTAL PHASE II Not to Exceed Amount \$41,140.00

Phase III

GT Lohmeyer WWTP Stormwater Improvements Labor Effort is estimated at 123 hours and Not to Exceed amount of \$13,000.00.

Reimbursables are estimated in the amount of \$500.00

TOTAL PHASE III Not to Exceed Amount \$13,500.00

Phase IV

GT Lohmeyer WWTP Stormwater Improvements Labor Effort is estimated at 650 hours and Not to Exceed amount of \$62,816.00.

TOTAL PHASE IV Not to Exceed Amount \$62,816.00

Consultant: Craven Thompson & Associates, Inc.

CITY CONTACTS

Requests for payments should be directed to City of Fort Lauderdale Accounts Payable via e-mail to AcctsPayble@FortLauderdale.gov after getting approval from the Project Manager. All other correspondence and submittals should be directed to the attention of Daniel Rey, at the address shown below.

Daniel Rey
Project Manager II
City of Fort Lauderdale
City Hall, 4th Floor Engineering
100 North Andrews Avenue
Fort Lauderdale, FL 33301
Drey@fortlauderdale.gov
(954) 828-7150

Annalise Mannix, P.E., M.S. Senior Project Manager Design Section, Public Works City of Fort Lauderdale 100 N. Andrews Ave. Fort Lauderdale, FL 33301 Amannix@Fortlauderdale.gov (954) 828-4355 Pedram Zohrevand, Ph.D., P.E. Assistant City Engineer City of Fort Lauderdale City Hall, 4th Floor Engineering 100 North Andrews Avenue Fort Lauderdale, FL 33301 PZohrevand@fortlauderdale.gov (954) 828-6134

Michael Donaldson, PSL City Surveyor City of Fort Lauderdale City Hall, 4th Floor – Engineering 100 North Andrews Avenue Fort Lauderdale, FL 33301

CONSULTANT CONTACTS

CONSULTANT Name Craven Thompson & Associates

CONSULTANT Address 3563 NW 53rd Street Fort Lauderdale, FL 33309

CONSULTANT Project Manager Name: Patrick J. Gibney, P.E.

CONSULTANT Project Manager Email: pgibney@craventhompson.com

CONSULTANT Project Manager Phone: 954-739-6400 CONSULTANT Project Manager Fax: 954-739-6409

Consultant: Craven Thompson & Associates, Inc.

Department Signatures

Approved by:	
Daniel Rey, E.I. Project Manager	Date:
Approved by:	
Pedram Zohverand, P.E. Assistant City Engineer	Date:
Approved by:	
Hardeep Anand, P.E. Public Works Director	Date:

Consultant: Craven Thompson & Associates, Inc.

<u>CITY</u>

IN WITNESS OF THE FOREGOING, the parties have set their hands and seals the day and year first above written.

	CITY OF FORT LAUDERDALE, a municipal corporation of the State of Florida:
	By LEE R. FELDMAN, City Manager
CORPORATE SEAL)	ATTEST:
	JONDA K. JOSEPH, City Clerk
	Approved as to form:
	RHONDA MONTOYA HASAN Assistant City Attorney

Task Order No.: 4 3 Project: 12106 Consultant: Craven Thompson & Associates, Inc.

CONSULTANT

WITNESSES:	Craven Thompson & Associates Inc.
Signature Print Name	By: □Thomas McDonald, President or □Richard Pryce, Vice President or □Patrick J. Gibney, Vice President
Signature Print Name	ATTEST: By: Joseph D. Handley, Secretary
(CORPORATE SEAL)	
STATE OF FLORIDA: COUNTY OF BROWARD: The foregoing instrument was	acknowledged before me thisday of
Craven, Thompson & Associates, Inc	as of c., a Florida corporation, who is personally as identification.
(SEAL)	Notary Public, State of Florida (Signature of Notary taking Acknowledgement)
	Name of Notary Typed, Printed or Stamped
	My Commission Expires
	Commission No.

Task Order No.: 4 3

Project: 12106

Consultant: Craven Thompson & Associates, Inc.

EXHIBITS

Exhibit 1 Location Map

Exhibit 2 Project Schedule

Exhibit 3 Work Break Down Fee Schedule

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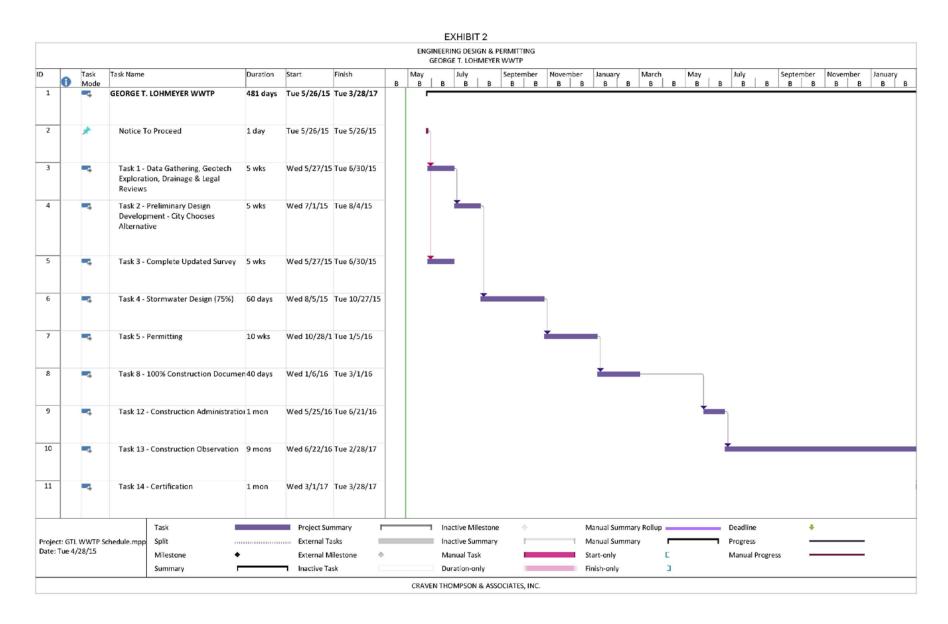
EXHIBIT 1



George T. Lohmeyer WWTP Work Limits

Task Order No.: 4 3 Project: 12106

Consultant: Craven Thompson & Associates, Inc.



Project: 12106

Consultant: Craven Thompson & Associates, Inc.

GT Lohmeyer WWTP City of Fort Lauderdale

EXHIBIT 3 PHASE I FEASIBILITY ANALYSIS

City	Project No.	12106
T	Order No. 4	

			CONSULTANT WORK BREAKDOWN AND FEE SCHEDULE														
			CRAVEN THOMPSON INFR.											AMAP			
Principal Clerical Sr. Supervising Senior Project Sr. CADD Principal Professional Sr. Engineer Sr Field 2 Man Laser										Test	SUB-TOTAL	SUB-TOTAL					
		Engineer		Engineer	Engineer	Engineer	Tech	Surveyor	Land Surveyor	(Construction)	Representative	Survey Crew	Survey Crew		Holes	HOURS	FEES
	Hourly Rate	\$176.00	\$50.00	\$150.00	\$120.00	\$105.00	\$80.00	\$130.00	\$110.00	\$120.00	\$90.00	\$100.00	\$250.00				
Task 1	Data Gathering	2		4	12	24										42	\$4,912.00
Task 2	Preliminary Design Development	2		4	8	24	8									46	\$5,072.00
	·															88	\$9,984.00

PHASE II

			CONSULTANT WORK BREAKDOWN AND FEE SCHEDULE														
			CRAVEN THOMPSON											INFRA	MAP		
	Principal Clerical Sr. Supervising Senior Project Sr. CADO Principal Professional Sr. Engineer Sr Field 2 Man Laser											Test	SUB-TOTAL	SUB-TOTAL			
		Engineer		Engineer	Engineer	Engineer	Tech	Surveyor	Land Surveyor	(Construction)	Representative	Survey Crew	Survey Crew		Holes	HOURS	FEES
	Hourly Rate	\$176.00	\$50.00	\$150.00	\$120.00	\$105.00	\$80.00	\$130.00	\$110.00	\$120.00	\$90.00	\$100.00	\$250.00				
Task 3	Design Survey						40		20			80				140	\$13,400.00
Task 4	Stormwater Design			16	32	40	64								\$3,000	152	\$18,560.00
Task 5	Permitting			4	16	24	8									52	\$5,680.00
Task 6	Project Coordination			8	8	8										24	\$3,000.00
Task 7	Remibursable																\$500.00
																368	\$41,140.00

PHASE III

		CONSULTANT WORK BREAKDOWN AND FEE SCHEDULE														
						CRAVEN	THOMPSON						INFRA	MAP		
	Principal	Clerical	Sr. Supervising	Senior	Project	Sr. CADD	Principal	Professional	Sr. Engineer	Sr Field	2 Man	Laser		Test	SUB-TOTAL	SUB-TOTAL
	Engineer		Engineer	Engineer	Engineer	Tech	Surveyor	Land Surveyor	(Construction)	Representative	Survey Crew	Survey Crew		Holes	HOURS	FEES
Hourly Rate	\$176.00	\$50.00	\$150.00	\$120.00	\$105.00	\$80.00	\$130.00	\$110.00	\$120.00	\$90.00	\$100.00	\$250.00				
Construction Documents		8	8	16	40	24									96	\$9,640.00
Project Coordination			8	31	8										27	\$3,360.00
Reimbursables																\$500.00
															123	\$13,500.00
	Construction Documents Project Coordination	Hourly Rate \$170.00 Construction Documents Project Coordination	Engineer	Engineer Engineer Hourly Rate \$170.00 \$50.00 \$150.00 Construction Documents 8 8 Project Coordination 8 8	Engineer Engineer Engineer Engineer Hourly Rate \$170.00 \$50.00 \$150.00 \$120.00 Construction Documents 8 8 16 Project Coordination 8 11	Engineer Engineer Engineer Engineer Engineer Engineer Engineer	Principal Clerical Sr. Supervising Senior Project Sr. CADD	Principal Citerical Sr. Supervising Senior Project Sr. CADD Principal Engineer Engineer Engineer Engineer Engineer Texh Surveyor	Principal Clerical Sr. Supervising Senior Project Sr. CADD Principal Professional Engineer Engineer Engineer Engineer Tech Surveyor Land Surveyor Construction Documents 8 8 16 40 24 Project Coordination 8 11 8 Project Coordination 8 11 8 Project Coordination 18 18 18 Project Coordination 18 18 Project Coordination 18 18 Project Coordination 18 18 Project Coordination 18 Project Coordin	Principal Clerical Sr. Supervising Senior Project Sr. CADO Principal Professional Sr. Engineer Engineer Engineer Engineer Tech Surveyor Construction		Principal Ciercal Sr. Supervising Senior Project Sr. CADD Principal Professional Sr. Engineer Sr. Field 2 M and Surveyor Construction Documents Sr. Supervising Senior Engineer Engineer Engineer Tech Surveyor Cand Surveyor Construction Representative Survey Crew Surveyor Construction Representative Surveyor Crew Sr. Engineer Sr. Field 2 M and Surveyor Construction Representative Surveyor Crew Sr. Engineer Surveyor Crew Construction Surveyor Crew Surveyor Crew Surveyor Construction Sr. Engineer Sr. E	Certical Sr. Supervising Senior Project Sr. CADO Principal Sr. Engineer Sr. Field 2 M an Laser Land Surveyor Land Surveyor Construction Documents Sr. Supervising Sr. Supervising Senior Project Sr. CADO Principal Sr. Engineer Sr. Field 2 M an Laser Land Surveyor Land Surveyor Construction Representative Survey Crew Survey Crew Survey Crew Survey Crew Survey Crew Survey Crew Surveyor Construction Documents Sr. Engineer Sr. Field 2 M an Laser Surveyor Surveyor	Principal Clerical Sr. Supervising Engineer E	Principal Clerical Sr. Supervising Engineer E	Principal Cierical Engineer Engineer

PHASE IV

			CONSULTANT WORK BREAKDOWN AND FEE SCHEDULE														
			CRAVEN THOMPSON											INFRAMAP			
		Principal	rencipal Clerical Sr. Supervising Senior Project Sr. CADD Principal Professional Sr. Engineer Sr Field 2 Man Laser											Test	SUB-TOTAL	SUB-TOTAL	
		Engineer		Engineer	Engineer	Engineer	Tech	Surveyor	Land Surveyor	(Construction)	Representative	Survey Crew	Survey Crew		Holes	HOURS	FEES
	Hourly Rate	\$176.00	\$50.00	\$150.00	\$120.00	\$105.00	\$80.00	\$130.00	\$110.00	\$120.00	\$90.00	\$100.00	\$250.00				
Task 11	Construction Administration	2	8	4	12					16						42	\$4,712.00
Task 12	Construction Observation	2		4	24					40	468					538	\$50,752.00
Task 13	Project Closeout Services	2	8	4	8					24	24					70	\$7,352.00
																0	\$0.00
																650	\$62,816.00

TOTAL HOURS	10	24	64	147	168	144	0	20	80	492	80	0	
TOTAL FEE	\$1,760	\$1,200	\$9,600	\$17,640	\$17,640	\$11,520	\$0	\$2,200	\$9,600	\$44,280	\$8,000	\$0	\$3,000

Construction Schedule	270	D ays	39 Weeks	Task 14 is based on 12 hours per week for a Senior Inspector
Cortification Package	30	Dones	4.10(note	for the 39 week Construction Period nive Supervision

	HOURS	LABOR	REIMBURSABLE	TESTS	
PHASE I	88	\$9,984			\$9,984
PHASE II & III	491	\$50,640	\$1,000.00	\$3,000	\$54,640
PHASE IV	650	62,816			\$62,816

TOTAL \$127,440.00