

Jones Edmunds & Associates, Inc.

WORK ORDER INITIATION FORM for the CITY OF CLEARWATER

Date: <u>January 16, 2019</u>

Consultant Project Number: 95308-354-17

City Project Number: 18-0057-UT

City Plan Set Number: 2019001

1. PROJECT TITLE:

MS WRF Blend Tank Mixer Project # 18-0057-UT

2. SCOPE OF SERVICES:

Jones Edmunds & Associates, Inc. is pleased to provide the City of Clearwater with this proposal to design improvements to the 40-foot diameter Sludge Blending Tank at the Marshall Street WRF. These improvements will include:

- Replacement of the mixer, mixer walkway/structural beam, staircase and potentially the tank cover pending a tank cover assessment.
- Other minor structural repairs to the tank walls will be coated with an elastomeric
 coating to bridge seepage cracks and prevent moisture from further impacting the
 concrete reinforcement, and miscellaneous concrete repairs. Other minor structural
 modifications will be addressed through typical repair details based on the Marshall
 Street WRF Blend Tank Structural Evaluation report (attached) completed by the
 structural engineer under the 2018 Miscellaneous Engineering Services task.
- Install new Dewatering Feed Pumps to pump from the Sludge Storage and Blending Tank to the centrifuge and/or the belt filter press.
- Upgrade and modify piping and valves configuration from the blend tank to the centrifuge and/or belt filter press dewatering systems to allow for system redundancy.
- Upgrade electrical, instrumentation, and control for the above-mentioned unit treatment processes including compliance with Arc Flash requirements.
- Incorporate off-loading station to receive sludge from NE WRF for dewatering.

Modification to other piping systems feeding the Sludge Blending Tank is not anticipated and it is assumed that no other structure modifications beyond those identified in the Marshall Street WRF Blend Tank Structural Evaluation report will be included in this work. The recommended modifications in the report included replacement of the tank cover and walkway/mixer beam support required to support the new mixing system. Other structural repairs will be minor in nature and will not include modification to the tank foundation or tank replacement.

As a part of this Scope of Services, Jones Edmunds will complete the tasks described below.

I. PRE-DESIGN PHASE

Task 1.1 - Develop Basis of Design (30% Submittal)

- a. Meet with the City to discuss design concepts and City requirements. As a part of this meeting, Jones Edmunds will visit the Marshall Street WRF with subconsultant team to review the existing conditions with the City operation, maintenance and engineering staff. As a part of this site visit, decisions will be made as to what tank components will be reused, demolished and replaced.
- b. Prepare and submit a health and safety plan to be approved by the City Project Manager prior to mobilizing at the site.
- c. Develop and obtain City's approval of 30% design concept and technical memorandum based on the following proposed improvements:
 - Demolition and replacement of the steel platform on top of the tank including the walkway and access staircase on the side of the tank.
 - Minor structural repairs to the tank including grinding of steel in the tank 1-inch below the concrete surfaces and coated with inhibitor and bonding agent prior to mortar repair (as specified during the tank inspection). Minor repairs also include the addition of interior and exterior tank coating.
 - Assess if the tank cover can be reused, if not replace tank cover with aluminum flat cover similar to those proposed for installation at the Northeast WRF, and include a tank vent and damper, connection for existing odor control duct, guardrails, and OSHA tie-off point for harnesses.
 - Install a new top-mounted mixer (same as the NE WRF Blend Tank) in the tank along
 with new structural supports to support the mixer on the existing tank. Coordination
 of new structural mixer support with aluminum tank cover manufacturer's
 structural requirements is included.
 - Design new dewatering feed pump and piping pad, expand the containment area and modify drains in the containment area.
 - Replace the three (3) dewatering feed pumps which convey sludge from the blend tank to the centrifuge and/or the belt filter press and modify the controls to allow each pump to convey sludge to each dewatering system and to recirculate sludge back into the blend tank.

- Upgrade and modify above ground piping and valves configuration from the blend tank to the centrifuge and/or belt filter press dewatering systems such that all pumps can be used to pump to each dewatering system and/or to recirculate sludge back into the blend tank.
- Modify above ground piping and valves to incorporate an off-loading connection to receive sludge into the sludge tank from trucks transporting from the City's other WRFs
- Include plant service water (reclaimed) hose racks at the top of the blend tank and at the dewatering pump station.
- Include an appropriate containment area with trench drain for the new pumps, piping and valve assembly.
- Install two new lights in the area for maintenance and accessibility.
- Install local pressure and level sensors and alarms at the top of the blend tank.
- Include local shutoff at the dewatering feed pump pad.
- Develop and summarize electrical requirements and instrumentation and controls protocols for the new mixer and pumping operations.
- Modify controls of the existing centrifuge and belt filter presses to account for pumping configuration modifications.
- Design will include design considerations for Flood Resilience and Sea Level Rise, where applicable.
- Jones Edmunds will include Specification 16075 which requires the contractor to adhere to NFPA 70 E "Standard for Electrical Safety in the Workplace" and requires the Contractor to provide a short circuit study, coordination study, and updated Arc Flash calculations and labeling for new or updated equipment.
- Develop 30% plans (Drawings G-1, G-5, M-1, M-2, M-3, M-4, I-2 and E-2 from Table below).
- Develop Equipment Technical Specifications (Specification Sections 11356 and 11385 from Table below).
- Prepare a 30% engineer's opinion of probable construction costs (EOPCC).
- d. Provide 4 copies of the basis of design (30%) plans and technical memorandum to the City for review and an electronic submittal.
- e. Meet with the City to review the Basis of Design and obtain City comments.

Key Assumptions

- This Scope of Services does not include survey or geotechnical work, which is not
 anticipated since tanks or large structures are not being constructed. The City's
 existing Record Drawings will be the basis of design with instruction for the
 Contractor to confirm dimensions and elevations.
- Structural modifications will include minor repairs to tank wall to address cracking and spalling. Repairs will be developed based on typical details. Modifications or

- repairs to the tank foundation and bottom slab and/or tank replacement are not included in this scope of services.
- All piping modifications are to above ground pipe only, no underground pipe modifications are anticipated.
- Jones Edmunds will verify the new design loads will be similar to the original design loads and are suitable for supporting the loading from the new mixer. Geotechnical assessment and foundation design of the existing tank are not included in this scope of work. The original equipment loads used for the structural evaluation will be based on available historical record drawings and operation and maintenance manuals
- The new mixer, tank cover, and pumps will be similar to those developed for the Northeast WRF Blend Tank design. The equipment and material s specified will be based on the specifications and details developed for the Northeast WRF to provide the City with consistency of systems and equipment to reduce O&M costs.
- The existing odor control piping and system will be reused.
- Existing grinder systems are located upstream of the tank and are therefore not included in the design.
- A cover or canopy over the pump station is not included in this design.
- Not all drawing sheets may be delivered as part of the 30% pre-design design.
- The reliability class requirements for individual unit operations and processes for any facility are not estimated to be changed by the proposed modifications.

II. DESIGN PHASE

Task 2.1 – Site Investigations

As this project includes work only inside of the existing tank structure and work on the dewatering pump station, neither survey nor geotechnical investigation is assumed to be required. The existing Record Drawings will be the basis of design with instruction for the Contractor to confirm dimensions and elevations as necessary for the tank modifications and equipment installation.

III. FINAL DESIGN PHASE

Task 3.1 - 60% Design Documents

- a. Address City comments on the 30% Basis of Design and prepare 60% design plans and remaining technical specifications.
- Prepare initial front-end bid documents (Instructions to Bidders, Bid Form, Bonds, Agreement, General Conditions and Supplementary Conditions) using the latest version of the City's Standard Documents.
- c. Prepare a 60% engineer's opinion of probable construction costs (EOPCC).

- d. Submit three hard copies of the 60% plans, technical specifications and front-end documents and one copy of the 60% OPCC to the City for review along with electronic copy to City Project Manager.
- e. Meet with the City to review the 60% design documents.

Task 3.2 - 90% Design Documents

- a. Address City comments on the 60% Basis of Design and prepare 90% design plans and remaining technical specifications.
- Prepare initial front-end bid documents (Instructions to Bidders, Bid Form, Bonds, Agreement, General Conditions and Supplementary Conditions) using the latest version of the City's Standard Documents.
- c. Prepare a 90% engineer's opinion of probable construction costs (EOPCC).
- d. Submit three hard copies of the 90% plans, technical specifications and front-end documents and one copy of the 90% OPCC to the City for review along with electronic copy to City Project Manager.
- e. Meet with the City to review the 90% design documents.

Task 3.3 - 100% Design Documents

- a. Address City comments on the 60% design documents and prepare 100% design plans, specifications and front-end bid documents.
- b. Prepare a 100% opinion of probable construction costs (OPCC).
- c. Submit three hard copies of the 100% plans, technical specifications and front-end documents and one copy of the 100% OPCC to the City for review along with electronic copy to City Project Manager.
- d. Meet with the City to review the 100% design documents.
- e. Prepare an application for a Minor Modification to Domestic Wastewater Facility Permit for the Marshall Street WRF.
- f. Respond up to one Request for Additional Information (RAI) to the Permit Application. Responses for additional RAIs is excluded from this scope.
- g. Prepare a building permit application for submission to the City including up to eight half-size copies of plans (if needed by the building department).

Key Assumptions

Technical Specifications will be developed using Jones Edmunds' Master
 Specifications and the NE WRF Blend Tank Improvements Specifications will be used

- as a basis for the specification package. Jones Edmunds' specifications will be modified to be consistent with City's standard specifications.
- EOPCC will be developed using MS Excel software with the format of the estimate being broken down by Specification Divisions. Appropriate factors will be used to estimate the undefined scope of work and other contingencies based on the overall level of design completeness.
- The City's standard front end documents (Sections I through IV) will be used and downloaded from the City's website at the time of the 30% design review meeting. Incorporating new versions of the City's front ends after the initial preparation of documents is excluded from this scope of work. Jones Edmunds will provide any requested changes to the City's Supplemental Conditions.
- Design review meetings will include the Engineer of Record and Project Engineer;
 one half day is anticipated for each review meeting.
- City comments on deliverables will be coordinated into two documents (the City's submittal markups and comment summary form) and provided to Jones Edmunds.
- Work related to obtaining a new environmental resource permit is not included in this design.
- The only permit application included in the scope or services and fee estimate is the FDEP Minor Modification to Domestic Wastewater Facility Permit for the Marshall Street WRF. An allowance of \$500 is included in the fee estimate for the permit application fee. If any additional permits are required for the project an amendment to the scope of services and fee will be required.

Below is a preliminary list of drawings expected to be developed as part of this project:

DRAWING	
NO.	DRAWING TITLE
G-1	COVER SHEET
G-2	DRAWING INDEX AND DESIGNATION, ABBREVIATIONS
G-3	GENERAL NOTES AND SYMBOLS
G-4	SITE PLAN
D-1	TANK PLATFORM DEMOLITION PLAN
D-2	DEWATERING PUMPS, PIPING AND PAD DEMOLITION
D-3	DEMOLITION PHOTOS
C-1	STORMWATER POLLUTION PREVENTION PLAN NOTES
C-2	STORMWATER POLLUTION PREVENTATION PLAN NOTES (2)
C-3	STORMWATER POLLUTION PREVENTION PLAN
C-4	CIVIL DETAILS
S-1	GENERAL NOTES AND DEMOLITION PLAN
S-2	BLENDING TANK REPAIR DETAILS I
S-3	BLENDING TANK MIXER STRUCTURAL SUPPORTS PLAN
S-4	BLENDING TANK MIXER STRUCTURAL SUPPORTS SECTIONS AND DETAILS

DRAWING	
NO.	DRAWING TITLE
S-5	BLENDING TANK COVER – PLAN AND SECTIONS
S-6	BLENDING TANK COVER - DETAILS I
S-7	SLUDGE PUMP STATION CONTAINMENT SLAB
M-1	BLENDING TANK MIXER PLAN
M-2	BLENDING TANK MIXER MODIFICATIONS PLAN AND SECTIONS
M-3	SLUDGE PUMP STATION
M-4	SLUDGE PUMP STATION SECTIONS
M-5	DETAILS I
I-1	GENERAL NOTES AND SYMBOLS
I-2	BLENDING TANK P&ID
1-3	DEWATERING PUMP P&ID
I-4	INSTRUMENTATION DETAILS
E-1	SITE PLAN
E-2	POWER AND CONTROLS RISERS
E-3	BLENDING TANK PLANS AND DETAILS
E-4	DEWATERING FEED PUMPS PLANS
E-5	ELECTRICAL ROOM PLAN
E-6	DETAILS

Below is a preliminary list of specifications expected to be developed as part of this project:

SPECIFICATION NO.	SPECIFICATION TITLE		
DIVISION 0 – CITY'S FRONT-END DOCUMENTS			
DIVISION 1 – GENERAL REQUIREMENTS			
01000	PROJECT REQUIREMENTS		
01100	SUMMARY OF WORK		
01200	MEASUREMENT AND PAYMENT		
01290	SCHEDULE OF VALUES		
01300	CONTRACT ADMINISTRATION		
01310	CONSTRUCTION COORDINATION		
01320	PROGRESS SCHEDULE		
01325	CONSTRUCTION PHOTOGRAPHS		
01330	SUBMITTALS AND ACCEPTANCE		
01350	ENVIRONMENTAL PROTECTION PROCEDURES		
01355	SPECIAL PROVISIONS		
01400	QUALITY REQUIREMENTS		
01450	TESTING AND TESTING LABORATORY SERVICES		
01500	TEMPORARY FACILITIES AND CONTROLS		
01600	MATERIALS AND EQUIPMENT		

SPECIFICATION	SPECIFICATION TITLE			
NO.				
01650	DELIVERY, STORAGE, AND HANDLING			
01720	FIELD ENGINEERING			
01730	CUTTING, CORING, AND PATCHING			
01735	CONTROL OF WORK			
01740	FINAL CLEANING			
01755	EQUIPMENT TESTING AND STARTUP			
01770	PROJECT CLOSEOUT			
01780	WARRANTIES AND BONDS			
01785	RECORD DOCUMENTS			
01815	MAINTENANCE OF PLANT OPERATION AND SEQUENCE OF CONSTRUCTION			
01820	TRAINING			
01830	OPERATIONS AND MAINTENANCE MANUALS			
DIVISION 2 – SIT	E CONSTRUCTION			
02220	DEMOLITION AND MODIFICATIONS			
02225	BLEND TANK CLEANING			
02230	SITE PREPARATION			
02370	EROSION AND SEDIMENTATION CONTROL			
02700	PAVEMENT REPAIRS AND RESTORATION			
DIVISION 3 – CO	NCRETE			
03100	CONCRETE FORMWORK			
03200	CONCRETE REINFORCEMENT			
03250	CONCRETE JOINTS AND JOINT ACCESSORIES			
03300	CAST-IN-PLACE CONCRETE			
03360	CONCRETE FINISHES			
03600	GROUT			
03930	MODIFICATIONS AND REPAIR TO CONCRETE			
DIVISION 5 - ME	TALS .			
05120	STRUCTURAL STEEL			
05500	METAL FABRICATIONS			
05520	METAL HANDRAILS AND RAILINGS			
DIVISION 7 – TH	ERMAL AND MOISTURE PROTECTION			
07900	JOINT SEALERS			
DIVISION 9 – FIN	IISHES			
09900	PAINTING AND COATING			
DIVISION 11—E	QUIPMENT			
11000	GENERAL EQUIPMENT REQUIREMENTS			
11356	DEWATERING FEED PUMPS			
11385	11385 TANK MIXING EQUIPMENT			
DIVISION 13—SPECIAL CONSTRUCTION				
13125	ALUMINUM COVERS			

SPECIFICATION	SPECIFICATION TITLE			
NO.				
13401	PROCESS INSTRUMENTATION AND CONTROLS			
DIVISION 15—MECHANICAL				
15055	PIPING SYSTEMS—GENERAL			
15060	PIPE HANGERS AND SUPPORTS			
15075	PROCESS EQUIPMENT, PIPING, AND VALVE IDENTIFICATION			
15105	WALL PIPES, SEEP RINGS, AND PENETRATIONS			
15110	MANUAL, CHECK, AND PROCESS VALVES			
15119	ELECTRICAL MOTOR ACTUATOR FOR VALVES			
15121	MISCELLANEOUS PIPE FITTINGS AND ACCESSORIES			
15122	FLEXIBLE PIPE COUPLINGS AND EXPANSION JOINTS			
15125	PIPING APPURTENANCES			
15144	PRESSURE TESTING OF PIPING			
15155	DUCTILE IRON PIPE AND FITTINGS			
DIVISION 16—EI	LECTRICAL			
16075	ELECTRICAL IDENTIFICATION			
16120	CONDUITS AND CABLE			
16221	MOTORS			
16260	VARIABLE SPEED DRIVES			
16401	LOW VOLTAGE ELECTRICAL WORK – GENERAL REQUIREMENTS			

IV. BIDDING PHASE – (FINAL CONSTRUCTION DOCUMENTS)

Task 4.1 – Bid-Phase Services

- a. Address the final City's comments on the 100% design documents.
- Prepare and submit three signed-and-sealed copies and one electronic copy of the bid documents to the City, incorporating the City's comments on the 100% design documents.
- c. Attend one pre-bid meeting and prepare pre-bid meeting minutes and submit them to the City for distribution.
- d. Respond to requests for information (RFIs) from bidders and issue up to three addenda if necessary. The last addendum, if required, will be issued 7 days before bid opening.
- e. Tabulate and evaluate bids and provide recommendation to the City for award.

Key Assumptions

• There will be a total of 1 bid package.

- Advertising; printing and distribution of Contract Documents including Addenda, opening of bids, and procurement of materials testing and code required Special Inspection services are to be provided by the City.
- Prebid conference will include the Engineer of Record and Project Engineer from Jones Edmunds.

V. CONSTRUCTION PHASE (if applicable)

Construction-phase services are not included and will be provided as a separate Work Order.

3. PROJECT GOALS:

Upgrade/refurbish the Marshall Street Blending Tank System to improve mixing, and provide ease of equipment operation and maintenance. Development of construction contract documents for proposed improvements. Three (3) copies of review submittals and three (3) copies of final bid documents will be provided to the City.

4. BUDGET:

See attachment B. This price includes all labor and expenses anticipated to be incurred by Jones Edmunds & Associates, Inc. for the completion of these tasks in accordance with Professional Services Method "A" — Cost Times Multiplier Basis for a fee not to exceed One-Hundred Sixty-three Thousand Dollars (\$163,000).

The fee for the FDEP Minor Domestic Wastewater Facility Permit for the Marshall Street WRF will be paid by Jones Edmunds and invoiced to the City as a Reimbursable. An allowance of \$500 is included in the fee estimate for this permit fee. Any additional permit fees or increase in fees for this permit may require an amendment to this scope of services and fee estimate.

5. SCHEDULE:

The project is to be completed **8.3**.months from issuance of notice-to-proceed. The project deliverables are to be phased as follows:

Basis of Design (30% Submittal)	45 calendar days from NTP and Kickoff Meeting with City
Basis of Design Review Meeting with City	21 calendar days after Basis of Design Memo Submission
60% Design Documents	45 calendar days after 30% Design Review Meeting
60% Design Review Meeting with City	21 calendar days after 60% Submittal
90% Design Documents	45 calendar days after 60% Design Review Meeting
90% Design Review Meeting with City	21 calendar days after 90% Submittal

100% Design Documents 30 calendar days after 90% Review Meeting

100% Design Review Meeting with City 21 calendar days after 100% Submittal

Bid Documents 21 calendar days after 100% Review Meeting

6. STAFF ASSIGNMENT (Jones Edmunds):

The firm's staff assignments to this project include:

Tom Friedrich, PE, BCEE Client Services Manager/Senior QA/QC

Lisa Rhea, PE Senior Project Manager

Hatim Fadlalla, PhD, PE Senior Engineer

David Yonge, PhD, PE Project Engineer/Task Manager

John Sobczak, PE Structural Engineer

Pete Hoenshelt, PE Electrical, Instrumentation and Controls Engineer

Maraida Balaquer-Barbosa, El Engineering Intern

The City's staff assignments to this project include:

Todd Kuhnel Project Manager

Jeremy Brown, PE Utilities Engineering Manager

Ryan Alexander Public Utilities Site Representative (Marshall Street WRF)

Jason Jennings Public Utilities Wastewater Environmental Tech. Manager

Michael Flanigan Public Utilities Coordinator

Michael Gilliam Public Utilities Infrastructure Maintenance Manager

Kervin St. Aimie Public Utilities Coordinator
Rich Gardner, PE Public Utilities Assistant Director

7. CORRESPONDENCE/REPORTING/COMMUNICATION PROCEDURES:

ENGINEER's project correspondence shall be directed to:

David Yonge, PhD, PE, with copies to Lisa Rhea, PE

All City project correspondence shall be directed to the Project Manager, with copies to the Utilities Engineering Manager and Public Utilities Assistant Director.

ENGINEER shall provide a minimum of forty-eight (48) hours' notice prior to conducting fieldwork/site visits. ENGINEER shall provide a minimum of seven (7) days notification for site visits requiring the assistance of City Operations and Maintenance personnel.

ENGINEER acknowledges that all City directives shall be provided by the City Project Manager.

In addition to the original copies delivered as stated in the scope of work, all project deliverables will be submitted in electronic format on CD or other City approved device prior to approval of final invoice.

8. INVOICING/FUNDING PROCEDURES:

For work performed, invoices shall be submitted monthly to the:

City of Clearwater Engineering Department

Attention: Veronica Josef, Senior Staff Assistant

PO Box 4748

Clearwater, Florida 33758-4748.

Contingency services will be billed as incurred only after written authorization provided by the City to proceed with those services.

City Invoicing Code: 3217321-530100-96213

9. INVOICING PROCEDURES

At a minimum, in addition to the invoice amount(s) the following information shall be provided on all invoices submitted on the Work Order:

- A. Project Number, Purchase Order Number and Contract Amount.
- B. The time period (begin and end date) covered by the invoice.
- C. A short narrative summary of activities completed in the time period
- D. Contract billing method Lump Sum or Cost Times Multiplier
- E. If Lump Sum, the percent completion, amount due, previous amount earned and total earned to date for all tasks (direct costs, if any, shall be included in lump sum amount).
- F. If Cost Times Multiplier, hours, hourly rates, names of individuals being billed, amount due, previous amount earned, total earned to date for each task and other direct costs (receipts will be required for any single item with a cost of \$50 or greater or cumulative monthly expenses greater than \$100).
- G. If the Work Order is funded by multiple funding codes, an itemization of tasks and invoice amounts by funding code.

10. SPECIAL CONSIDERATIONS:

The consultant named above is required to comply with Section 119.0701, Florida Statutes (2013) where applicable.

PREPARED BY:	APPROVED BY:
Stanley F. Ferreira, Jr., PE	D. Scott Rice, PE
Executive President / Chief Executive Officer	City Engineer
Jones Edmunds & Associates, Inc.	City of Clearwater
February 26, 2019	
Date	Date
L.Phea 2/25/2019	

Hunt 2/25/2019



CITY OF CLEARWATER ENGINEERING DEPARTMENT

WORK ORDER INITIATION FORM CITY DELIVERABLES

1. FORMAT

The design plans shall be compiled utilizing the following methods:

- 1. City of Clearwater CAD standards.
- Datum: Horizontal and Vertical datum shall be referenced to North American Vertical Datum of 1988 (vertical) and North American Datum of 1983/90 (horizontal). The unit of measurement shall be the United States Foot. Any deviation from this datum will not be accepted unless reviewed by City of Clearwater Engineering/Geographic Technology Division.

2. DELIVERABLES

The design plans shall be produced on bond material, 24" x 36" at a scale of 1" = 20' unless approved otherwise. Upon completion the consultant shall deliver all drawing files in digital format with all project data in Autodesk Civil 3D file format. If not available Land Desktop files are still acceptable, however the City or Clearwater is currently phasing out Land Desktop.

NOTE: If approved deviation from Clearwater CAD standards are used the Consultant shall include all necessary information to aid in manipulating the drawings including either PCP, CTB file or pen schedule for plotting. The drawing file shall include only authorized fonts, shapes, line types or other attributes contained in the standard release of Autodesk, Inc. software. All block references and references contained within the drawing file shall be included. Please address any questions regarding format to Mr. Tom Mahony, at (727) 562 4762 or email address Tom.Mahony@myClearwater.com.

All electronic files must be delivered upon completion of project or with 100% plan submittal to City of Clearwater.

Attachment "B"

Marshall Street WRF Blend Tank Mixer City Project 18-0057-UT Jones Edmunds & Associates, Inc.

WORK ORDER INITIATION FORM PROJECT BUDGET

Task	Description	Subconsultant Services	Labor	Total
1.0	Pre- Design			
1.1	Basis of Design (30% Design			
	Documents)	\$6,300	\$34,500	\$40,800
3.0	Final Design Plans and Specification	IS		
3.1	60% Design Documents	\$9,800	\$39,300	\$49,100
3.2	90% Design Documents	\$0	\$27,700	\$27,700
3.3	100% Design Documents	\$10,400	\$20,900	\$31,300
				\$108,100
4.0	Bid-Phase Services			
4.1	Bid-Phase Services	\$1,700	\$11,900	\$13,600
Subto	tal, Labor and Subcontractors			\$162,500
Permi	t Review Fees			\$500
Grand Total			\$163,000	