# Winnipeg Sewage Treatment Program Integrated Management System





# **Consultant Services Management Plan Minimum Requirements**

**DOCUMENT NUMBER: CD-CP-PL-01** 

Rev	Prepared by	Reviewed by	Date	Approved by	Date
2013-06-16	Philippe Biesse	Jackie Veilleux	2013-06-18		
	George Vercelli				
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WSTP IMS Document Print 2013-06-05 09:50

### **Table of Contents**

1.	INT	RODUC	CTION	3
	1.1	Applica	ation and Purpose	3
	1.2	Object	ives	3
	1.3	Consu	Itant Services Management Plan (CSMP) Scope	3
2.	PR	OCESS	MANAGEMENT	3
	2.1	Plannii	ng Processes	4
	2.2	Execut	ting Processes	5
		2.2.1	Risk Management	5
		2.2.2	Quality Management	5
		2.2.3	Cost Management	5
		2.2.4	Records Management	
	2.3	Contro	Illing and Monitoring Processes	
		2.3.1	Scope Change Management	7
		2.3.2	Design Review and Approval	7
		2.3.3	Release of Documents for Use	7
		2.3.4	Design Control	
		2.3.5	Performance Reporting	8
		2.3.6	Cost Control	8
		2.3.7	Consultant Services Invoicing	8
	2.4	Service	es Closeout and Turnover Packages	9
3.	PR	DJECT	MANAGEMENT REQUIREMENTS	9
	3.1	Comm	unication Management	9
		3.1.1	Consultant Services Monthly Status Review Meetings	10
		3.1.2	Weekly Meetings	10
		3.1.3	Workshops	10
	3.2	Docum	nentation Submission Requirements	11
APP	END	ICES		12
	1.	Appen	dix 1: Relevant Templates from Integrated Management System	12
	2.	Appen	dix 2: Relevant Management Documents	12
	3.	Appen	dix 3: Project Specific Documents	12

WSTP IMS Document Print 2013-06-05 09:50

#### 1. INTRODUCTION

#### 1.1 Application and Purpose

Upon assignment award the Consultant shall prepare a comprehensive Consultant Services Management Plan (CSMP) detailing the processes that will be applied during the provision of the assigned Services.

The initial Consultant Services Management Plan shall be supplied for approval within one (1) month of assignment award unless specified otherwise in the RFP documents.

As refined planning for some Services may require preceding Services to be underway or completed, a phased submission for those plan components may be acceptable, however, the initial Consultant Services Management Plan submission is expected to cover the complete assignment awarded to a level of detail acceptable by the City that allows a reasonable vision of the assignment delivery.

The Consultant shall update the CSMP to further levels of detail at least two (2) weeks prior to the start of a new Service to ensure that the CSMP is always detailed enough to allow for the minimum controls required in this document.

This Plan should build on the Project Understanding and Methodology and Project Schedule the Consultant provided during the proposal stage.

#### 1.2 Objectives

The Consultant Services Management Plan objective is to provide a detailed plan to identify and track the processes used by the Consultant during the provision of the assigned Services in order to ensure the delivery of Consultant Services as per City requirements. It will be used by the Consultant and the City as a management and control tool.

The present document is not intended to detail exhaustively all project management techniques and aspects, but rather it lists the minimum requirements that the Consultant has to incorporate in the CSMP

#### 1.3 Consultant Services Management Plan (CSMP) Scope

The Consultant Services Management Plan shall encompass the assignment as detailed in the RFP / Bid Opportunity, including, as applicable the following Services:

- (a) Advisory Services
- (b) Project Definition Design
- (c) Preliminary Design
- (d) Detailed Design
- (e) Contract Administration Services (required and optional)
- (f) Commissioning Services
- (g) Additional Services

#### 2. PROCESS MANAGEMENT

The Consultant Services Management Plan shall identify and detail the following processes for the complete assignment as well as for each of the assigned

Rev 2013-06-16 Page 3 of 12

WSTP IMS Document

Print 2013-06-05 09:50

- Services:
- (a) Initiating
- (b) Planning
- (c) Executing
- (d) Controlling and Monitoring
- (e) Closing

#### 2.1 Planning Processes

The plan must be specific to the project being worked on and it must include the project controls required by the City.

Planning forms the basis for the Consultants development of the CSMP which will identify the Work Breakdown Structure (WBS) of the assignment deliverables and detail manpower requirements, manpower costs and provide the critical path schedule for the development and issuance of the deliverables.

The CSMP shall, as a minimum, identify for the Services of Section 1.3 the following:

- (a) A WBS that identifies major elements relative to how the assignment will be managed and in terms of tangible and verifiable results (including milestones, critical triggers, deliverables, % completion of design, posting to Materials Management site, etc.)
- (b) The number of the work packages required and description of each;
- (c) List of Drawings/documents planned for each discipline and work package
- (d) Resource requirements, responsibilities, effort, duration, manpower costs and associated disbursements by work package;
- (e) Information required to support the scope of work for each work package
- (f) Schedule requirements for Services relative to each work package;
- (g) Progress meetings
- (h) Presentation/review meeting/ workshops, identifying anticipated City personnel and/or resources required
- (i) Required information inputs, third party inputs
- (j) Reviewers/Verifiers; including constructability aspects
- (k) Reviews and approval
- (I) The type and format of documentation for each work package;
- (m) The timing and sequence in which procurement documentation is to be produced;
- (n) Quality Management elements
- (o) A Risk Management Plan
- (p) Communication management elements

The Consultant shall prepare a detailed schedule for the Services, identifying the critical path using critical path method (CPM) and utilizing MS Project or compatible software. The CPM schedule may be used as the presentation tool for many of the above. Once approved by the Project Manager the schedule shall be

Rev 2013-06-16 Page 4 of 12

WSTP IMS Document Print 2013-06-05 09:50

frozen as a baseline for the Services' duration. The schedule shall be updated weekly and submitted to the Project Manager monthly in MS Project native format. Review of the schedule with the Consultant will occur during the designated Consultant Services monthly status review meetings. Should slippage to the baseline occur, the Consultant shall provide the Project Manager with a mitigation strategy to bring the schedule back to baseline.

#### 2.2 Executing Processes

The Consultant shall have detailed in the planning stage how each of the executing processes will be undertaken, taking into account the following City requirements.

#### 2.2.1 Risk Management

Risk Management Plan issued by the Consultant shall be consistent with the Risk Management Process identified bythe City, including distinct activities for risk identification and analysis, evaluation, response planning, and control through monitoring and review processes using the risk register as a key management tool.

Criteria for using the risk register are delineated in Use of the Project Risk Register (see Appendix 2).

#### 2.2.2 Quality Management

The Winnipeg Sewage Treatment Program requires for the delivery of Services a quality management approach. Quality Management includes the processes required to ensure that the Services will satisfy the needs for which they are undertaken. It includes all activities that determine the quality policy, objectives and responsibilities. The Consultant shall submit a plan specific to the project detailing how the following quality components will be achieved:

- (b) Quality Planning
- (c) Quality Assurance
- (d) Quality Control

#### 2.2.3 Cost Management

Cost Management for Services includes the processes required to ensure the assignment is completed within the value of award and includes the following aspects:

- (e) Resource Planning
- (f) Resource Costing
- (g) Cost Monitoring

The Plan shall also detail (when applicable) how to achieve and control the cost for the overall project and propose methodology with regard to procurement delivery strategy.

#### 2.2.4 Records Management

To assist in facilitating Records Management the City is developing a Document Management System (DMS) utilizing the performance capabilities of Share Point in a Microsoft 365 environment. The Consultant shall propose a system for managing documentation that includes the following bullets. Once the City DMS is

Rev 2013-06-16 Page 5 of 12

WSTP IMS Document Print 2013-06-05 09:50

operational, the Consultant will be required to transfer prior assignment project records into the City DMS and utilize the City DMS for the remainder of the project.

- (h) Issue of documents for review, action or record;
- (i) Reports, Technical Memorandum and other like submissions
- (j) Receipt of Reviewer's comments;
- (k) Issue of "Bid Opportunity" documents;
- (I) Issue of Contract Administration documentation;
- (m) Transmittal of documents to third parties,
- (n) Transmittal of letters and memos;
- (o) Change Management documents, and tracking of their status/history;
- (p) Contractor Submittals for review and response
- (q) Design review and approval process
- (r) Release of documents for use
- (s) Meeting Minutes
- (t) Inspection and QC records
- (u) Verifications and Certifications
- (v) Issuance of Project Turnover Records

The use of the DMS is to be considered in developing the Plan and its detailed document management processes. In particular, for contractors and suppliers' documentation, submittals such as Shop Drawings, Temporary Works drawings, Manufacturers Data sheets, Material test reports, Factory Inspection Tests shall be submitted via DMS c/w a copy of the transmittal sent to the Administrator of the specific Contract. The Consultant's review of such submittals shall be for acceptability and conformance to all applicable design documents and the Consultant shall respond at Contract Administrator level within the defined time frame of 10 business days unless otherwise specified. All submittals shall be accompanied by a transmittal identifying the sender, recipient, date of transmission, expected date of return as well as the content description.

#### 2.3 Controlling and Monitoring Processes

Processes must be measured regularly to identify variances from plan. The CSMP shall include high level details of the following processes:

- (a) Scope Change Management
- (b) Design Review and Approval
- (c) Release of Documents for Use
- (d) Design Control
- (e) Performance Reporting
- (f) Cost Control
- (g) Consultant Invoicing.

The CSMP shall be updated to capture changing conditions as the Project evolves. Some City standard forms and formats, which the Consultant shall use for the above processes, are referenced in the Appendices.

Rev 2013-06-16 Page 6 of 12

WSTP IMS Document Print 2013-06-05 09:50

#### 2.3.1 Scope Change Management

A Change Control System defines the procedures by which the assignment's scope may be changed. It includes the documents, tracking system and approval processes necessary to authorize change to the assignment.

The Consultant's scope change management process shall take into account all the requirements of contract documents including the requirements of the General Conditions and in the Contract Administration Manual, which is found in the Appendix 2

#### 2.3.2 Design Review and Approval

All design deliverable documents require review and approval. The Design Review and Approval Process shall be defined in the Consultant's quality management plan and shall address the following:

- (h) Engineering Practice Reviews
- (i) Inter-discipline coordination (IDC)
- (j) Design Verification / Peer review
- (k) Operability and Maintainability review
- (I) Constructability and cost reviews
- (m) Design Certification
- (n) City of Winnipeg reviews

All documents must undergo the Consultant's planned internal review processes before issuance to the City (note: approval of any document by the City does not limit the liability of the Consultant). The transmittal of documents by the Consultant shall include a transmittal letter listing what is being transmitted, for what purpose it is being transmitted, and the names of all reviewers of the submittal along with the subject matter reviewed by each reviewer. All calculations (including those using computerzed software) shall include the initials of the person performing the calculations and the reviewer.

The CSMP's schedule shall detail the applicable review and approval elements. Unless noted otherwise, Design submissions shall be made to the Project Manager at:

- (a) 30% design completion or Preliminary Design;
- (b) 60% design completion; and
- (c) 95% design completion.

Documents to be presented or reviewed in a meeting or workshop shall be issued a minimum of ten working days prior to the presentation. Comments and/or decisions made reached and recorded at the applicable meeting shall be incorporated into the documents and shall be re-issued for approval.

For any document, the City requires a minimum of fifteen (15) working days for review or approval.

#### 2.3.3 Release of Documents for Use

There are a number of milestone stages where the Consultant's documents are required to be released for use. As documents move through the creation, checking, review, comment, verification, certification and approval processes for

Rev 2013-06-16 Page 7 of 12

WSTP IMS Document Print 2013-06-05 09:50

each stage, the Consultant shall provide for tracking and monitoring the document movement through these processes. These processes shall be defined in the Consultant's quality management plan and shall anticipate the use of the City DMS (Microsoft SharePoint Online). The process of releasing documents for use shall be managed through the DMS. City approval is required prior to releasing any documents for use.

#### 2.3.4 Design Control

The Consultant is required to use the P&ID(s) as the primary and sole interface document(s) to generate and automatically update equipment/instruments and piping line lists.

The Consultant must provide a strategy and the tools for the control of the documentation, including the change management control requirements, for process and instrumentation/electrical equipment during the complete design and construction cycle, from the beginning of design phase to start of operation and maintenance.

#### 2.3.5 Performance Reporting

Performance reporting involves collecting and disseminating performance information in order to provide stakeholders with information about how the resources are being used to achieve assignment objectives. This process includes status reporting which identifies where the assignment is at, progress reporting which describes what has been accomplished and forecast reporting which predicts when the assignment is expected to complete. Work progress and costs have to be measured in parallel.

For the assigned Services, the Consultant shall submit monthly performance reports to the Project Manager so that it may be reviewed at monthly status review meetings. Should deviation to the baseline occur the Consultant shall provide the Project Manager with a mitigation strategy to bring the performance in line with baseline plan.

This obligation will be expanded to include contractor performance if the consultant services assignment includes contract administration services, as detailed in the City Contract Administration Manual. (See reference in Appendix 2)

#### 2.3.6 Cost Control

Cost control includes monitoring cost performance to detect variances from plan and ensuring changes are recorded accurately.

When the assignment scope includes Contract Administration, cost control includes the measurement of the performance of Contract Administration where applicable.

The Consultant shall continually control cost and shall use Earned Value Analysis (EVA) reporting and Estimate at Completion (EAC) forecasting measured against baseline cost. Consultant Services are further detailed in the following section.

#### 2.3.7 Consultant Services Invoicing

Consultant Services monthly progress invoicing documents shall be presented in order to allow close control of the works performed and those forecasted.

The minimum information to be presented on the monthly summary of fees is

Rev 2013-06-16 Page 8 of 12

WSTP IMS Document Print 2013-06-05 09:50

based on the detailed task structure of the proposal. The proposal must be filled with horizontal indication of assignments referred to as phases and their respective sub assignments, and with vertical information related to Previous values at month N-1, current values achieved during the month N, Total value at the end of month N, base line value and percentage of Total value over baseline.

For the purpose of control and validation of work performed, the Consultant shall develop a further level of details with indication of the components of work within each sub assignment as identified in WBS. A matrix format with indication of personnel, discipline, rates and time assigned and provision for time spent up to and within the current month and forecast total time and costs for each work component will be developed by the Consultant. This development is to be submitted to the City Project Manager for approval with the issue of the CSMP.

Once all monthly detailed sheets are approved by the City Project Manager, the monthly summary of fees will be validated and will support the invoices to be issued by the Consultant in accordance with the Invoice Template that the City will transmit at award.

In order to reduce the time for review, the documents shall be prepared and submitted in both paper and electronic versions in native format.

Invoicing for Services which exceeds individual fee amounts at task level will not be approved or payable without the prior written approval of the Project Manager or unless indicated otherwise in the RFP.

#### 2.4 Services Closeout and Turnover Packages

Closeout processes consist of verifying and documenting the results of the services for their entire assignment to formalize their acceptance. This includes the collection and turnover of all records generated and described in detail in the CSMP.

When establishing the closeout processes, the Consultant must, in coordination with the Project Manager, take into account the general requirements for the overall project and all other contracts contributing to the project delivery.

Note: In regard to the Project closeout, Turnover documentation shall include as a minimum the following:

- (a) As-built Drawings
- (b) O&M manuals c/w associated warranty documentation
- (c) Area Manuals
- (d) Standard Operating Procedures
- (e) Operational Data including Asset Data schedules (Active and Decommissioned)
- (f) Commissioning turn over documentation including Training Documentation and Records

#### 3. PROJECT MANAGEMENT REQUIREMENTS

#### 3.1 Communication Management

Communication management provides the critical links among people, ideas and information that are necessary for success.

Rev 2013-06-16 Page 9 of 12

WSTP IMS Document Print 2013-06-05 09:50

The Consultant will include a communication plan, as part of the CSMP. The plan shall identify all interfaces (organizational, technical and interpersonal) and the roles and responsibilities of each stakeholder. It will identify who needs what information, when it will be needed and how it will be given.

The Plan shall use forms and templates specific for the project the Consultant shall develop in conjunction with the City of Winnipeg for facilitating communication and will integrate the use of the City DMS.

#### 3.1.1 Consultant Services Monthly Status Review Meetings

The Consultant shall conduct monthly status review meetings and present monthly status reports. The meeting will include key management personnel from both the Consultant and City of Winnipeg. The Consultant shall record minutes.

The monthly status report shall contain as minimum:

- (b) Assignment Status
- (c) Cost performance
- (d) Schedule performance
- (e) Quality performance
- (f) Risk review

#### 3.1.2 Weekly Meetings (Or at frequency identified in the RFP)

The Consultant shall conduct weekly design team meetings and record minutes. The weekly meetings will be attended by at least one City of Winnipeg representative unless otherwise agreed by the Project Manager. As a minimum, the weekly meeting will review the following:

- (g) Recap of past week progress (including man hours and cost)
- (h) Two week look ahead of planned activities (including man hours and forecast)
- (i) Review of issues
- (j) Decisions required and made

During construction and commissioning phases similar types of meetings shall be conducted and the Consultant shall be required to attend either as lead or as participant. Optimization of the project meetings may be proposed by the Project Manager.

#### 3.1.3 Workshops

The Consultant shall provide outlines and methods including participants and projected costs for each workshop and shall be approved by the Project Manager prior to undertaking arrangement of the workshops.

When applicable, the following workshops shall be included and follow the City procedures:

- (k) CD-PD-PC-01 HAZOP Procedure
- (I) <u>CD-CP-PC-01 CHAIR Procedure</u>
- (m) CD-CP-PC-02 Value Engineering Procedure

Rev 2013-06-16 Page 10 of 12

WSTP IMS Document Print 2013-06-05 09:50

#### 3.2 Documentation Submission Requirements

The Consultant shall base submittals on the following requirements:

- (a) Form <u>CD-CP-TO-05 Project Documentation Requirement sheet</u> (Appendix 3) specifies for each category, the quantity and format of document copies to be submitted to the City by the Consultant.
- (b) Drawing submission status codes shall be as defined in the DMS
- (c) Official submission status will be the electronic file submission through the City DMS. Hard copy submissions without a corresponding electronic DMS submission will not be recognized as an official submission.
- (d) The hard copy sets shall be delivered as directed by the City Project Manager.
- (e) Prior to any submission the Consultant shall confirm with the City Project Manager the required format(s) and quantities of the submission.
- (f) The Consultant shall contact the Project Manager for direction on requirements for any submittals not identified.
- (g) All sets of documents should be collated and fastened or bound as appropriate in view of the size and use of the documents.
- (h) Unless otherwise specified, the standard format for electronic submission of documents and drawings to be uploaded in the DMS is an unrestricted searchable electronic Adobe .pdf file.
- (i) Other native file(s), in addition to those noted in Form CD-CP-TO-05 Project Documentation Requirement sheet, shall be provided by the Consultant if requested by the Project Manager.

Rev 2013-06-16 Page 11 of 12

WSTP IMS Document Print 2013-06-05 09:50

#### **APPENDICES**

The versions of the documents listed in the appendices are representative of the type of documentation to be used for the Project. They allow the Consultant to assess with sufficient accuracy the principles and the magnitude of any work associated with their use for the purpose of quotation.

Applicable revisions of the documents will be transmitted to the Consultant for use at award stage.

### APPENDIX 1: RELEVANT TEMPLATES FROM INTEGRATED MANAGEMENT SYSTEM

- a) Tool CD-CP-TO-01 Standard Operating Procedure Template
- b) Tool CD-CP-TO-02 SYNERGEN Asset List
- c) Tool <u>CD-CP-TO-03 Shop Drawings Template</u>
- d) Tool CD-CP-TO-04 Area Manual template

#### **APPENDIX 2: RELEVANT MANAGEMENT DOCUMENTS**

- a) Reference Document PG-RC-RF-06 DMS File Structure and Definitions
- b) Procedure PG-RM-PC-01 Use of the Project Risk Register
- c) Procedure CD-PM-PC-01 Contract Administration Manual

#### 1. APPENDIX 3: AVAILABLE PROJECT SPECIFIC DOCUMENTS

- a) Tool CD-CP-TO-05 Project Documentation Requirement sheet
- b) Form CD-PM-TO-06 Request For Information (form)
- c) Form CD-PM-TO-26 Cost Report
- d) Form CD-PM-TO-27 Consultant Scope Change Order
- e) Form CD-PM-TO-30 Travel Authorization Form
- f) Form CD-PM-TO-34 Consultant Progress Estimate
- g) Form CD-PM-TO-37 Action Issue Item List.xlsx

Rev 2013-06-16 Page 12 of 12

#### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

Consultant:	Project Name:	Consultant Project Manager:
XYZ Consultants, Inc.	EEWPCC Pump Replacement	Todd Fzzzzz
Consultant Project No.	Winnipeg Project Manager:	Date & Status:
2014-1893	H.R Ross	October xx, 2014 <b>DRAFT</b>

#### **Consultant Approvals:**

Principal-In-Charge: Name:_ R.T. Jacobs	Signature:	Date:
Project Manager: Name:_ Todd Fzzzzz	Signature:	Date:

#### **TABLE OF CONTENTS**

- 1. INTRODUCTION
- 2. PROCESS MANAGEMENT
  - 1. Work Breakdown Structure
  - 2. Preliminary List of Deliverables
  - 3. Preliminary List of Drawings and Technical Documents
  - 4. Budget Breakdown
  - 5. Preliminary List of Information Required
- 3. PROJECT IMPLEMENTATION
  - 1. Preliminary CPM Schedule
  - 2. Progress Meetings
  - 3. Third Party Inputs
  - 4. Reviews and Approvals
  - 5. Submittals
    - i. Format & Documentation
    - ii. Timing & Sequencing
  - 6. Communications
  - 7. Quality Management
  - 8. Risk Management
- 4. **CONTROLLING & MONITORING** 
  - 1. Cost Monitoring
  - 2. Scope Change Management
  - 3. Schedule Management
- 5. Closeout and Turnover
  - 1. Documentation received from City
  - 2. Documentation Generated During the Project

#### **LIST OF ATTACHMENTS**

#### SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT

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#### HYPERLINKED DOCUMENTS

#### 1. INTRODUCTION

XYZ Consultants is providing the final design, bidding, and construction administration services in accordance with City's Letter of Intent which includes Attachments (LOI) (i.e. Attachments include: RFP; Proposal; Results of any negotiations, etc.)(For the purposes of this Sample CSMP the Letter of Intent with Attachments is referred to as the LOI) to replace the three constant speed plunger type sludge pumps in the primary clarifier area to three variable speed rotary lobe type pumps complete with new starters and suction and discharge valves to allow remote operation. Suction and discharge piping will be revised as necessary to allow proper installation and operation of the new rotary lobe pumps. The controls will also be updated to allow the variable speed operation of the new pumps to be paced off the influent flow meter with remote adjustable settings by the operator. The City is also requesting an overhead door be installed in the building where there is a brick/block wall now which will require Architectural, structural, electrical and lighting, I&C services and some civil site work including drainage, pavement etc.

XYZ Consultants will use existing as-built drawings as the base plans which are to be updated as necessary by XYZ Consultants. Due to the nature of the work and as per the LOI, design submittals will include:

- 10% Submittal = Project Definition
- 30% Submittal = Preliminary Design
- 60% Submittal = 60% of Bid Opportunity Documents
- 95% Submittal = Detailed Design = 95% of Bid Opportunity Documents
- 100% without P. Eng. Stamps = all City comments incorporated and ready for bid
- 100% with P.Eng. Stamps = Bid Opportunity Documents (Issue for Construction Drawings)

The supply, delivery and installation of the pumps will be put out to tender by the City of Winnipeg; however, XYZ Consultants will prepare the tender documents using the City's template for such work. XYZ Consultants will also provide assistance during the bid period as detailed the LOI. Once the construction contract is awarded to a contractor, XYZ Consultants will provide Contract Administration Services including commissioning and 1-year on-call warranty services as defined in the LOI.

#### 2. PROCESS MANAGEMENT

As agreed to at the project kick-off meeting, this Consultant Services Management Plan is detailed for the Project Management and Definition Phases and will be updated 2 weeks prior to commencement of subsequent phases of the work.

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#### 2.1 Work Breakdown Structure

There will be multiple work packages as indicated in the attached CPM schedule; however, the Primary WBS Nos. along with the reference to the LOI, the location where the work will primarily be performed and the responsible professionals and reviewers are indicated in Table 2.1 Work Breakdown Structure (WBS).

#### 2.2 Preliminary List of Deliverables

At this stage of the project, we have prepared a preliminary list of deliverables (i.e. documents and drawings) per phase in the Tables 2.2 through 2.9. As the work becomes more defined we will provide a more detailed list of deliverables.

#### 2.3 Preliminary List of Drawings and Technical Documents

Table 2.10 Preliminary List of Drawings and Technical Documents are attached hereto.

#### 2.4 Cost Breakdown

Resources requirements, responsibilities, effort, duration, manpower costs and disbursements by work package are shown on Table 2.11 which was initially prepared for and included in the Proposal and has been subsequently subdivided by work packages and is attached hereto.

#### 2.5 Information Required

The following is an initial list of information required; additional items may be required as the work progresses. When requesting information from the City, XYZ Consultants will use the City's "Request for Information" form <a href="CD-PM-TO-06">CD-PM-TO-06</a> and track the progress of RFIs using the City's RFI Log <a href="CD-PM-TO-10">CD-PM-TO-06</a> and track the progress of RFIs using the City's RFI Log

- As-built drawings
  - o Pump area
  - Discharge piping for hydraulic calculations
  - Electrical
  - o 1&C
  - Structural
- Existing O&M Manuals
- Sludge Pump Flow Requirements (average, peak and seasonal)
- Electrical Standards
- I&C Standards
- Shut down constraints
- Work Hours for Installation LOI
- Operators' Constraints

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#### 3. PROJECT IMPLEMENTATION

#### 3.1 Preliminary CPM Schedule

Schedule requirements for each work package are included in the attached Microsoft Project CPM schedules. There is a summary CPM Schedule and a more detailed CPM schedule attached hereto.

XYZ Consultant's schedule submission includes the following:

- Major Deliverable submission dates identified in the RFP and/or Proposal;
- Major activities for own forces differentiated by process area and discipline;
- Major Sub-consultant activities differentiated by process area and discipline;
- Identification of design and engineering phases, (definition, conceptual, preliminary and detailed);
- Start and Completion Dates for each phase;
- Identification of Critical Path Activities;
- Durations attached to each deliverable and supporting activities;
- Trigger Points, Milestones and key decision points;
- Activities identifying "owners review" for each design related submission; and
- Activities representing Presentations, meetings and workshops;

We believe sufficient time has been allocated for review of milestones with internal City Managers, include (Operations, Engineering, Water Services, Environmental Services and IT) as required.

The schedule is realistic and confirms that XYZ Consultants have a good understanding of its scope and the degree of effort required for each deliverable. The schedule is structured such that it demonstrates we are organized with respect to managing the sub-consultants. This can be seen through identification and integration of sub consultant deliverables within the schedule.

#### 3.2 Progress Meetings

Progress meetings during the design phase will be held at the City offices at 1199 Pacific Ave., Winnipeg, Manitoba, R3E3S8 at 9:00am, the 2<sup>nd</sup> and 4<sup>th</sup> Thursday of the month.

- XYZ Consultants will have the Project Manager at each meeting and will produce notes of each meeting within 5 business days for review by the City.
- Design engineers may be present when XYZ Consultants deem appropriate based on the status of the work and any prevailing questions or as requested by the City. Staff from

#### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

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outside of Winnipeg will participate in these Progress Meetings as appropriate by phone.

The second meeting each month will be designated as the Monthly Meeting. At the Monthly meeting XYZ Consultants will present a status report including activities of the previous month, anticipated work in the coming month, outstanding issues to be resolved, review of the risk register, scope changes (if any), updated CPM Schedule, percent complete, cost to date, and the draft invoice to review with the City's PM. The Preliminary Agenda for the meetings will be as shown in Sample Meeting Agenda attached hereto with specific details added as required and be forwarded to the City PM at least 3 working days prior to the meeting date. XYZ Consultants will discuss City's attendance and City resource requirements with the City PM prior to the sessions.

During those weeks when a progress meeting is not scheduled the XYZ Consultant PM will originate a call to the City PM to provide a verbal update of the work in progress.

#### 3.3 Third Party Inputs

Third party inputs are not required for this project. (NOTE: Third party services might include highway, water department, Manitoba Hydro, cable companies, gas company, etc)

#### 3.4 Reviews and Approval

The reviews and approvals will be performed by the Reviewers/verifiers listed in the Work Breakdown Structure in Table in 2.1. Each drawing or calculation will be initialed by the Responsible Professional and the reviewer/verifier prior to submitting to the City. Please note that reviews will be only for establishing that the work is satisfactory for the applicable submittal. Unless specifically required by P.Eng guidelines or the City, only the Bid Opportunity documents and modifications thereto will be sealed.

#### 3.5 Submittals

- Format and documentation for each work package: XYZ Consultants will follow the City's Project Documentation Requirement sheet CD-CP-TO-05 attached hereto.
- The timing and sequencing in which procurement documentation is to be produced: Please see the attached CPM Schedule provided under 3.1.

#### 3.6 Communications

Official communications will be between the City PM and XYZ Consultant's PM. Each submittal will include a transmittal letter listing what is being transmitted, for what purpose it is being transmitted, and, as appropriate, the names of any reviewers of the submittal along with the subject matter reviewed by each reviewer. During the project implementation, other avenues of communications may

#### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

need to be established but they will be established by agreement between the City PM and XYZ Consultant's PM.

#### 3.7 Quality Management

Quality Management is tied to our project schedule. Table 3.2 Quality Planning Schedule provides the City with the quality planning schedule we will implement in performing QA/QC activities.

The Document Tracking Matrix (attached) will be used throughout the project to track the location of documents and utilized in Project Closing as a check that all documents have been returned to the City and newly created documents have been properly filed.

#### 3.8 Risk Management

The Risk register included as part of the RFP issued by the City will be updated during the Project Definition phase. A Risk & Opportunity Workshop will be held with the City upon submittal of the 60% documents and will build upon the risk register. The Risk Management workshop will follow project risk procedures of the City in PG-RM-TO-02 Risk Project Statement Form.

#### 4. CONTROL & MONITORING

#### 4.1 Cost Monitoring

XYZ Consultants will maintain the attached Progress Estimate Cost Monitoring form (Attached hereto), indicating the overall approximate percent complete per task, which will be updated for and reviewed at each Progress Meeting. At the monthly meetings, XYZ consultants will bring their own more detailed analysis (format not defined by the City) of the overall percent complete. The percentages indicated in Table 4.1, are a check on progress and are not to be used to justify or deny progress payments and amounts and numbers on the forms are generally rounded.

The monthly invoices shall be Time & Material in accordance with the detailed requirements of the LOI. NOTE to User: The monthly invoice must follow the agreed to payment language and supporting documentation in the LOI and may not always be Time & Material as in this example.)

#### **4.2 Scope Change Management**

Scope Change Management: Upon realization by XYZ Consultants of a scope change XYZ's PM will notify the City PM in writing of the pending scope change using the City's "Contemplated Change Notice" form <a href="https://creativecommons.org/length/">CD-PM-TO-03</a>.

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#### 4.3 Schedule Management

XYZ Consultant's schedule has been primarily developed from the Work Breakdown Structure indicated above and identifies all of the deliverables contained within the RFP and associated XYZ Consultant's proposal. We will be reviewing the schedule with the City at each progress meeting and updating the schedule at least 2 weeks prior to the commencement of the subsequent phase. Any scope changes will be reflected in an updated schedule; however, without a scope change the completion date will not change.

#### **5.0 CLOSEOUT AND TURNOVER**

#### 5.1 Documentation received from the City

A matrix of all documentation received from the City of Winnipeg - Water & Waste Department will be maintained (See attached Documentation Matrix) by XYZ Consultants and include who received the documentation, who it was transmitted from, the date of transmittal, and if it needs to be returned to the City upon Closeout. When the documentation is returned to the City the date it was returned, by whom and to whom it was returned to will be recorded.

#### 5.2 Documentation Generated During the Project

Submission Requirements: All submittals will be in accordance with the requirements of Paragraph 3.2 Consultant Services Management Plan Minimum Requirements as herein stated:

Submittals will be in accordance with the following requirements:

- (a) Form CD-CP-TO-05 Project Documentation Requirement sheet (Appendix 3) specifies for each category, the quantity and format of document copies to be submitted to the City by the Consultant.
- (b) Drawing submission status codes shall be as defined in the DMS
- (c) Official submission status will be the electronic file submission through the City DMS. Hard copy submissions without a corresponding electronic DMS submission will not be recognized as an official submission.
- (d) The hard copy sets shall be delivered as directed by the City Project Manager.
- (e) Prior to any submission the Consultant shall confirm with the City Project Manager the required format(s) and quantities of the submission.
- (f) The Consultant shall contact the Project Manager for direction on requirements for any submittals not identified.

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

- (g) All sets of documents should be collated and fastened or bound as appropriate in view of the size and use of the documents.
- (h) Unless otherwise specified, the standard format for electronic submission of documents and drawings to be uploaded in the DMS is in native format and an unrestricted searchable electronic Adobe .pdf file.
- (i) Other native file(s), in addition to those noted in Form CD-CP-TO-05 Project Documentation Requirement sheet, shall be provided by the Consultant if requested by the Project Manager.



#### SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT

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#### **LIST OF ATTACHMENTS:**

The following attachments are those which are not a standard from of the City of Winnipeg.

- Table 2.1 Work Breakdown Structure (WBS)
- Table 2.2 Project Management Phase Deliverables
- Table 2.3 Project Definition Phase Deliverables
- Table 2.4 Preliminary Design (30%) Phase Deliverables
- Table 2.5 Detailed Design (60%) Phase Deliverables
- Table 2.6 Detailed Design (95%) Phase Deliverables
- Table 2.7 Bid Phase Deliverables
- Table 2.8 Construction Phase Deliverables
- Table 2.9 Closeout Phase Deliverables
- Table 2. 10 Preliminary List of Drawings and Technical Documents
- Table 2.11 Cost Breakdown by Work Package. (From Proposal and as modified during LOI negotiation)
- Sample Minimum Meeting Agenda Topics & Meeting Minutes
- Document Tracking Matrix
- Cost Monitoring Form
- CPM Schedule Summary
- CPM Schedule Detailed

#### **Hyperlinked Documents:**

- CD-PM-TO-06 Request For Information
- CD-PM-TO-10 RFI Log
- CD-CP-TO-05 Project Documentation Requirement Sheet
- PG-RM-TO-02 Risk Project Statement Form
- CD-PM-TO-03 Contemplated Change notice

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**



### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

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Table 2.1 Work Breakdown Structure (WBS)

Primary WBS No.	Contract Ref Item No.	Description	Location	Responsible Professional*	Reviewer/ Verifier**
1	TBD	Project Management (includes Interdiscipline Coordination; approval of documents for release; Scope Changes)	Winnipeg	Todd F., P.Eng	R.T. Jacobs, P.Eng., Principal In- Charge
2	TBD	Project Definition (10%+-)	Winnipeg	Todd F., P.Eng	Harry P., P.Eng
3	TBD	Preliminary Design (30%)	Fort Conner	Todd F., P.Eng	Harry P., P.Eng
4	TBD	Detailed Design (60 & 95%)	Fort Conner	Todd F., P.Eng	Harry P., P.Eng
5	TBD	Bidding Services (100%)	Winnipeg	Todd F., P.Eng	Harry P., P.Eng
6	TBD	Contract Administration Services	Winnipeg	Paul Q., P. Eng	Todd F., P.Eng
7	TBD	Commissioning Services	Winnipeg	Steve R., P.Eng	Todd F., P.Eng
8	TBD	Additional Services	TBD	Todd F., P.Eng	R.T. Jacobs, P.Eng., Principal In- Charge
9	TBD	Project Closeout	Winnipeg	Todd F., P.Eng	R.T. Jacobs, P.Eng., Principal In- Charge

Notes: \* Responsible Professional for each disciplines' work will be the P.Eng stamping the documents (In this case the Key Personnel listed in RFP); however their work will have the oversight by the senior staff listed above; \*\* Reviewers/Verifiers are specialists in their field performing quality checks of the documents. \*\*\*City's Letter of Intent which includes Attachments (LOI) (i.e. Attachments include: RFP; Proposal; Results of any negotiations, etc.)

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

#### Table 2.2 PROJECT MANAGEMENT PHASE – DELIVERABLES

Deliverables	Description	Туре	Format	Comments
Draft Invoice	For approval		pdf	Within 30 days
Draft Financial Report	For approval		pdf	Within 30 days
Invoices	Monthly		pdf	For each phase
Financial	Monthly		pdf	For each phase
CSMP	Consultant	Report	Word & pdf	Draft within 30
	Services			days then once
	Management			approved, 2
	Plan			weeks prior to
				next phase
Monthly project	Organize, chair,	Distribute	Word & pdf	For each phase
status review	record meeting	agendas &		
meetings	minutes	minutes		
Monthly Project Status Reports	Status of work	Report	Word & pdf	For each phase
Initial & semi-	Projected	Report with	Word & pdf	March &
annual cash flow	expenditures on	projection by		October for
forecasts	project	month		semi-annual
				forecasts
Weekly Meetings	Organize, chair, record meeting minutes	Meeting Minutes	Word & pdf	For each phase
Workshop - Risk	Organize, chair,	Meeting Minutes	Word & pdf and	Update risk
	record meeting		Risk Register	register in each
	minutes			phase
Workshop – CHAIR	Organize, chair, record meeting	Meeting Minutes	Word & pdf	Chair 1 in Project Definition Phase.
CHAIR	minutes			CHAIR 2 & 3
	minutes			after 95%
				submittal
Workshop -	Organize, chair,	Meeting Minutes	Word & pdf	HAZOP after 95%
HAZOP	record meeting	<b>G</b>		submittal
	minutes			
Workshop –	Organize	VE Report	Word & pdf	Formal VE Not
Value				Applicable to this
Engineering				project (include
				in review
				sessions)
Invoices	Monthly Invoices	Invoice	Word & pdf	Will come
				directly from
				Finance

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

				Department to City
Cash Flow Forecasts	Quarterly	Spreadsheet	Excel & pdf	Due in March & September each year



### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

**Table 2.3 PROJECT DEFINITION PHASE - DELIVERABLES** 

Deliverable	Description	Type	Format	Comments
Verification of	Listing of City	Technical Memo	Word & pdf	For verification
City	Requirements			
Requirements				
Notifications	Requests for	RFI Form	Uses City RFI	Uses City RFI
	Information		Format	Format
Meeting Minutes			pdf and native	See PM
			formats	Responsibilities
				above
Workshops			pdf and native	See PM
			formats	Responsibilities
				above
Technical			pdf and native	Each section of
Memorandums			formats	the PD Report a
(including				Technical
Business Cases)				Memorandum.
				An Executive
				Summary with
				the Technical
				Memorandums
				attached will
				comprise the PD
				Report
Draft PD	Draft Project	Report	pdf and native	Bound submittal
Documents (60%	Definition		formats	
complete)	documents			
Risk &	Risk register	Matrix	Excel Matrix and	
Opportunity	prior to		notes from	
Workshop	workshop		Workshop in	
			Word & pdf	
Final PD	Project	Report	pdf and native	Bound submittal
Documents	Definition		formats	
(100% complete)	documents			
Drawings	Drawings to	Appended to	.pdf	5 drawings may
-	support PD	Report		be appended to
	Documents	-		the PD Report
Comment Log	Word document	Transmitted with	Word & pdf	·
	to be support all	revised	•	
	revised	documents		
	submittals by			
	Consultant			

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Update of CSMP	As necessary		Word, excel, Microsoft project, pdf as necessary	Due two weeks prior to authorization to proceed into next phase
Outline and list of	As part of the	Report	pdf and native	
drawings for the	appendices to		formats	
Preliminary	the Project			
Design Phase	Definition Report			
Report				
Presentation of	Power Point		Power Point	
PD Report to City				
Phase	Submittal of	TBD	pdf and native	
Documentation	phase		formats	
	documentation			
	required for			
	phase closeout			

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

#### Table 2.4 PRELIMINARY DESIGN PHASE – DELIVERABLES

(To be updated 2 weeks prior to phase start date)

Deliverable	Description	Туре	Format	Comments
Preliminary				
Design report at				
60% complete				
HAZOP				
workshop &				
technical memo				
CHAIR Workshop				
& Technical				
memo				
Risk &				
Opportunity				
Workshop				
Comment Log	Word document	Transmitted with	Word & pdf	
	to be support all	revised		
	revised	documents		
	submittals by			
	Consultant			
Draft Preliminary	Word document		Word & pdf	
Design Report	to be support all			
	revised			
	submittals by			
	Consultant			
Preliminary	Word document		Word & pdf	
Design Report	to be support all		-	
(100%)	revised			
	submittals by			
	Consultant			
Cost Estimate	Based on unit	Draft	Excel Document	
(Draft)	costs and area	Transmitted with	with transmittal	
	costs	10 days of	letter	
	appropriate for	submittal of		
	this level of	draft Preliminary		
	design	Design Report		
Cost Estimate	Based on unit	Revised Cost	Excel Document	
(Revised)	costs and area	Estimate to be	with transmittal	
	costs	transmitted with	letter	
	appropriate for	10 days of		
	this level of	submittal of		
	design	100%		

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

		Preliminary		
		Design Report		
Update of CSMP	As necessary		Word, excel, Microsoft project, pdf as necessary	Due two weeks prior to authorization to proceed into next phase
Phase Documentation	Submittal of phase documentation required for phase closeout	TBD	pdf and native formats	



### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

### Table 2.5 DETAILED DESIGN (60%) PHASE – DELIVERABLES (To be updated 2 weeks prior to phase start date)

Deliverable	Description	Туре	Format	Comments
Comment Log	Word document	Transmitted with	Word & pdf	
	to be support all	revised		
	revised	documents		
	submittals by			
	Consultant			
Value				
Engineering				
Update of CSMP	As necessary		Word, excel,	Due two weeks
			Microsoft	prior to
			project, pdf as	authorization to
			necessary	proceed into
				next phase

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

### Table 2.6 DETAILED DESIGN (95%) PHASE – DELIVERABLES

(To be updated 2 weeks prior to phase start date)

Deliverable	Description	Type	Format	Comments
	•	,,		
Comment Log	Word document	Transmitted with	Word & pdf	
	to be support all	revised		
	revised	documents		
	submittals by			
	Consultant			
Risk Register &				
Workshop				
Minutes				
HAZOP				
Workshop &				
Technical Memo				
Chair Workshops				
& Technical				
Memos				
Opex				
Adjustment				
Model				
Asset Data				
Schedule				
De-				
Commissioned				
Assets Schedule				
Capital				
Replacement				
Plan				
Spares				
Cost Estimate				
95% Submittal				
Update of CSMP	As necessary		Word, excel,	Due two weeks
			Microsoft	prior to
			project, pdf as	authorization to
			necessary	proceed into
				next phase
100% Submittal				
with Comment				
Log Completed				
Phase	Submittal of	TBD	pdf and native	

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Documentation	phase	formats	
	documentation		
	required for		
	phase closeout		



### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

#### **Table 2.7 BID PHASE - DELIVERABLES**

(To be updated 2 weeks prior to phase start date)

Deliverable	Description	Туре	Format	Comments
Bid Opportunity				
Documents				
Minutes of Site				
Meeting with				
Bidders				
Response to				
Questions				
Addendas				
Bid Evaluation				
Conformed				
Documents				
Update of CSMP	As necessary		Word, excel,	Due two weeks
			Microsoft	prior to
			project, pdf as	authorization to
			necessary	proceed into
				next phase
Phase	Submittal of	TBD	pdf and native	
Documentation	phase		formats	
	documentation			
	required for			
	phase closeout			

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

#### **Table 2.8 CONSTRUCTION PHASE – DELIVERABLES**

(To be updated 2 weeks prior to phase start date)

Deliverable	Description	Туре	Format	Comments
Deliverable	Description	Турс	Torritat	Comments
Daily Reports				
Responses to				
Contractor RFIs				
Reviews of				
Contractor				
Requests for				
Modifications/				
Substitutions				
Accepted Third				
Party testing				
Reports				
Updated Opex				
Adjustment				
Model				
Updated Asset				
Data Schedule				
Certification of				
Contractor's				
Monthly				
Payment				
Applications				
Evaluation of				
Contractor				
Change Requests				
Approved				
Contractor				
Submittals				
Approved				
Construction				
Change Orders				
Commissioning				
Plan				
Warranties				
Training				
Documentation				
O&M Manuals				
As-builts				
713 Dulles				

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Update of CSMP	As necessary		Word, excel, Microsoft project, pdf as necessary	Due two weeks prior to authorization to proceed into next phase
Phase Documentation	Submittal of phase documentation required for phase closeout	TBD	pdf and native formats	next phase



### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

#### **Table 2.9 CLOSEOUT PHASE – DELIVERABLES**

(To be updated 2 weeks prior to phase start date)

Deliverable	Description	Туре	Format	Comments
Revised As-Builts				
Revised O&M				
Manuals				
Revised Standard				
Operating				
Procedures				
Certification of				
Acceptance				
Phase	Submittal of	TBD	pdf and native	
Documentation	phase		formats	
	documentation			
	required for			
	phase closeout			

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

# TABLE 2.10 - Preliminary List of Drawings & Documents (subject to change as the work proceeds)

(Document and Drawing Nos. to follow City Numbering System)

Drawing	Document	Title	10%	30	60	95%	100%	Bid
No.	No.		(Project	%	%		(w/o	Opportunity*
(To Follow	(To Follow		Definitio				P.Eng	*
City	City		n Report)				stamps	
Numbering	Numbering						)	
System)	System)*							
	DOCU	MENTS:						
		CSMP	Y	-	_	-	-	-
		CSMP -	N	Y	Υ	Υ	N	Υ
		Updates						
		Monthly	Υ	Y	Υ	Υ	Υ	Υ
		Progress		`				
		Report						
		Invoices	Υ	Υ	Υ	Y	Υ	Υ
		Monthly	Y	Υ	Y	Υ	Υ	Υ
		Financial						
		Reports						
		СРМ	Υ	Υ	Υ	Υ	Υ	Υ
		Schedules						
		Insurance	Υ	Υ	Υ	Υ	Υ	Y
		Certificates						
		Meeting	Υ	Υ	Υ	Υ	Υ	Y
		Agendas						
		Meeting	Y	Υ	Υ	Υ	Υ	Y
		Minutes						
		Design	Y	Υ	N**	N**	N***	N***
		Criteria			*	*		
		Design		Υ	Υ	Υ	N***	N***
		Calculations						
		Equipment	Υ	N	N**	N**	N***	N***
		Selection			*	*		
		Business Case						
		Cost Estimate		Υ	Υ	Υ	N***	Υ
		CHAIR	Υ	N	N	Y/Y	N	N
		Documentatio						

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

	T	ı			1		
	n (Sessions 1,						
	2, and 3)						
	HAZOP			Υ			
	Documentatio						
	n						
	Value			Υ			
	Engineering						
	Documentatio						
	n						
	RFIs	As					
		Required					
	Change Order	As					
	Requests	Required					
	Geotechnical	Y					
	Report						
	Survey	Υ					
	Risk &	Υ	Υ	Υ	Υ	Υ	N
	Opportunity						
	Assessment						
	Project	Υ					
	Definition						
	Report						
	(Draft/Revisio						
	ns & Final)						
	Preliminary		Υ				
	Design Report						
	(Draft/Revisio						
	ns & Final)						
Design	Drawings:						
	rawings to be						
	sted						
	Title Page &		Υ	Υ	Υ		Υ
	Index		-	•	-		•
	Civil / Site						
	Architectural						
	Piping,		Υ	Υ	Υ		Υ
	Equipment &				•		-
	Structural						
	Demolition						
	Electrical and		Υ	Υ	Υ		Υ
	I&C				•		-
	Demolition						
		l	<u> </u>		l		

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

		T	1		1		ı	
		Equip Layout		Υ	Y	Υ		Υ
		New Pumps						
		Plan And						
		Sections						
		New Pumps		N	N	Υ		Υ
		Details						
		Structural		N	N	Υ		Υ
		Electrical –		Υ	Υ	Υ		Υ
		One line &						
		MCC#4						
		Modifications						
		I&C P&ID		Υ	Υ	Υ		Υ
		I&C Details		N	N	Υ		Y
	SPECIFI	CATIONS:			.,			-
		specification			Υ	Υ	Υ	Υ
		to be listed			Y	Y	Y	Y
	360110113	to be listed			Y	Y	Y	Y
					Y	Y	Y	Y
						Y		
					Y		Y	Y
					Y	Υ		Y
					Υ	Υ	Υ	Y
					Υ	Y	Y	Υ
					Υ	Υ	Y	Υ
					Y	Y	Y	Υ
					Y	Υ	Y	Υ
	BID OPP	ORTUNITY						
	DOCU	MENTS:						
						Υ	Υ	Υ
CONTRAC	T ADAME!	CTDATION		-D\/'	CCC			
		STRATION F	THASE SE	KVI	CE2			
Drawing	Document	Title						
No.	No.							
(To Follow	(To Follow							
City	City							
Numbering	Numbering							
System)	System)*							
	CONTRACT	DOCUMENTS:						

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

			1	1	ı	T	
		Title Page &					
		Index					
		Civil Site					
		Architectural					
		Piping,					
		Equipment &					
		Structural					
		Demolition					
		Electrical and					
		I&C					
		Demolition					
		Equip Layout					
		New Pumps					
		Plan And					
		Sections					
		New Pumps					
		Details					
		Structural					
		Electrical –					
		One line &					
		MCC#4					
		Modifications					
		I&C P&ID					
		<b>I&amp;C Details</b>					
	As-I	Builts:					
<u> </u>			1	i	L	<u> </u>	

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

OTHER DO	OCUMENTS:			
01112112	Contractor			
	Progress			
	Payments			
	RFIs			
	Change Order			
	Requests			
	Construction			
	Schedule			
	Asset Data			
	Sheets			
	0&M			
	Manuals			
	SOPs			
	Training			
	Documents			
	Certificate of			
	Substantial			
	Performance			
	Certificate of Final			
	Performance			
	Warranty Documents			
	Documents			

<sup>\*</sup>Documents are to be submitted in accordance with the LOI and agreed to submittal schedule.

<sup>\*\*</sup>Bid Opportunity documents to be sealed by the Responsible Professional indicated in Table 2.1 (a)

<sup>\*\*\*</sup> All Work Pkgs. to be resubmitted when changes occur.

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

Table 3.1 Cost Breakdown by Work Package

#### TABLE 2.11 - COST BREAKDOWN BY WORK PACKAGE SAMPLE FOR SMALL CAPITAL PROJECT

DRAFT 31-Oct-14

				KEY PERSON	NNEL			Design &	Support Staff																							
	ର ଷ ହ	1	1 1	. /	-	PRIME CONSU	LIANT /	1	, ,	/ / -	/~	SUB-CONSULTANT	A / +	SU /	B-CONSULTANT B	/ +	1	PRIME CONSUI	LIANT			SUB-CONSULTA	ANI A			SUB-CONSULTAN	IR	-	<del></del>	T T	TOTAL PROJEC	.1
WBS Description	Resource (Discipline & name)  (Discipline & name)	\$100 \$100	Electrical (Harra)	\$95 \$85	Structural (Sal)	\$110 \$80 \$110 \$80	84 Process Sh 8 222	Struct Eng 8 252	\$75 \$65	Admin Support	Elect Eng (Elaine	00 \$100 \$	Admin Support  Admin Support  22 \$32 \$20	Com Specialist (Secialist	Inspectors 200 S20	S45 S55	Sub-Totals	Other Sub- Consultants Sub Type	Allowable Disbursables TOTAL COST	Sub-Total:	Sub-sub- s Consultants		Allowable Disbursables TOTA	AL COST S	Sub-sub- iub-Totals Consultants	A Sub Type D	Allowable Disbursables TO	TOTAL COST SI	Or Sub-Totals Co	Other Sub- Consultants	Sub Type	Allowable Disbursables TOTAL CO
1 Project Management	Hours 8									40 200			40 200			20 200	268				248 \$				228 \$3				744			
1.1 LOI Financial & Admin 1.2 Project Management											80			8		200 200	268 1080	\$1 \$1	\$3,500		248 \$3 280 \$3	2	\$300		228 \$3 208 \$3		\$250		1.568	\$6		\$0 \$4,050
1.2 Project Management WBS 1 Subtotal Hours	80 88	800 820	0	0 0	0 0	0 0	0	0 0	0 (	200	80 88 (	0 0	200 0 240 200	0 0	0 0	200 220 200 9,900 \$11,000	1348	, i			528				420	-			2,296 \$159,380	7.0		
WBS 1 Subtotal Dollars	\$9,680	\$82,000	\$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$	\$0 \$0	\$0 \$0	\$9,600 \$10,000	\$8,800 \$1	0 \$0	\$8,400 \$10,000	\$0 \$1	0 \$0 \$9	9,900 \$11,000	\$111,280	\$2	\$3,500 \$114,	782 \$27,2	200 \$	4	\$300	\$27,504	\$20,900 \$6		\$250	\$21,156	\$159,380			\$4,050 \$163
2 Project Definition 2.1 Initiation	12	24	40	40 24	24 24						12			12			164				12				12		-		12	\$0 \$0		\$0
2.1 Initiation 2.2 Planning	8	24 60	20	16 8	8 8						8			8			120				8				8				8	\$0		\$0
2.3 Execution		8	12			4						4					0	\$3,000 Survey	\$500		4 \$5.00	O Soil Borings	\$1,000		6004		-	+	6004	\$8,000		\$0 \$1,500 \$15
2.3.1 Investigations 2.3.2 Business Case	4	24	48	8 4	4 4	8 4	4	4 2	2	4	4 4	4 8	4	4		4	120	\$2,000 Cost Estimato				Cost Est	\$1,000		2020 \$2,000	Cost Est			4020	\$6,000	Cost Est	\$0 \$10
2.3.3 Prepare & Submit PD Report	40	240	240	80 40	10 40	40 16	400 8	30 40	40	40	40 16	0 40	40	40	8	40	1,336				280				280				280	\$0		\$0
2.3.4 Workshops 2.3.4.1 Risk & Opportunity	12	20	8	8	8	8				10	12		10	12		10	74				22				22		-		22	\$0 \$0		\$0
2.3.4.2 CHAIR 1	4		8	8	4	4				6	4		6	4		6	42				10				10				10	\$0		\$0
2.3.5 Revise & Re-submit PD Report 2.3.6 Obtain City approval of PD	24 16	80 24	48	2 8	8 8	16 8	100 1	12 12	20	40	24 2	4 16	40	24	4	40	378			-	20				104		$\longrightarrow$		104	\$0 \$0		\$0 \$0
2.3.7/8/9 Prepare, Review, Revise Class 5 Cost Est										-	12		-	12		-	44	\$3,000 Cost Estimato	or		12 \$3,00	Cost Est			3012 \$3,000	Cost Est			6012	\$9,000	Cost Est	\$0 \$1
2.4 Controlling & Monitoring	12 16	80								16	16		16	16		16	112				32				32				32	\$0		\$0
2.5 Closing WBS 2 Subtotal Hours	12 160	80 680	424	162 84	34 96	68 40	504 9	96 54	62 (	40 0 160 0	12 160 181	8 68	40 0 160 0	12	2 0	40 160 0	132 2,590				576				52 11576				52 16576	\$0		50
WBS 2 Subtotal Hours WBS 2 Subtotal Dollars	\$17,600	\$68,000	\$40,280 \$15				\$37,800 \$7,68			\$6,400 \$0	\$16,000 \$15,040		50 \$5,600 \$0	\$18,400 \$1,020	0 \$0 \$7	160 0 7,200 \$0	\$227,830	\$8,000	\$500 \$236,	330 \$43,4	\$10,000	0		\$53,440	\$26,620 \$5,000			\$31,620	\$297,890	\$23,000		\$320
3.1 Initiation		20								4			4			4	0			_	12						$\longrightarrow$		$\longrightarrow$	\$0		\$0
3.2 Planning	8	20								4	8		4	8		4	32				12								+	\$0		\$0
3.3 Execution		400	200				200										0	-			0									\$0		\$0
3.3.1 Prepare & Submit Draft Prelim Design Reports Workshops	ort 24 20	120 40	200 40	100 60	50 80	40 20	280 10	00 120	120	40 8	24 20	0 40	40 8	24 20	0	40 8	1,304 108				28						-			\$0 \$0		\$0 \$0
3.3.2.1 Value Engineering	8	120 40 24	40	8 8	8 8	8 8			8	8	8	8	8	8	8	8	128				24									\$0		\$0
3.3.3 Prepare & Submit Class 3 Cost Est	4	24 24			+		<del> </del>				4			4			28	\$3,000 Cost Est			4 \$3,000	Cost Est			\$3,000	Cost Est			<del></del>	\$9,000 C	Cost Est	\$0 \$9
3.3.4 City Review Period 3.3.5 Revise & Resubmit Prelim Design	16		120	24 24	24 20	24 8			8	40	16	24	40	16	8	40	364				80						-		+	\$0 \$0		\$0
3.3.6 Revise & Resubmit Class 3 Cost Est	4	8	24							2	4		2	4		2	38	\$500 Cost Est			6 \$50	Cost Est			\$500	Cost Est				\$1,500	Cost Est	\$0 \$1
3.3.7 Obtain City Approval of Prelim Design 3.4 Controlling & Monitoring	8	24 32		-	+		<del>                                     </del>	+		2 4	8		2	8		4	34 44				10							-	$\longrightarrow$	\$0 \$0		\$0 \$0
3.5 Closing	8	40	8	8 8	8 8	8 4			8	20	8	8	20	8	4	20	120				36									\$0		\$0
WBS 3 Subtotal Hours WBS 3 Subtotal Dollars	120	456	432	140 100 300 \$8.500	00 116		280 10 \$21,000 \$8,00	00 120	144 (	132 0 55,280 \$0	120 200 \$12,000 \$16,000	0 80	0 132 0 50 \$4,620 \$0	120 40 \$13,800 \$3,400	0 0 0 \$0 \$5	132 0	2,260 \$197.580		\$197.	580 \$40.6	532			\$40,620	0 \$23.140			\$23.140	9 \$261.340			\$261
4 Detailed Design	\$13,200	340,000 I	p+1,040 \$13,	300 38,500	000,85	33,2UL	321,000 \$8,00	39,000 \$	10,000 \$1	33,260 \$0	\$12,000 \$16,000	30,000	50 \$4,020 \$L	\$13,600 \$3,40	o 50 \$5	50,540	0 0 0 0		\$197,	\$40,0	0			\$40,020	323,14U		-	\$23,140	201,340	\$0		\$0
																	0				0									\$0		\$0
WBS 4 Subtotal Hours	0	0	0	0 0	0 0	0 0	0	0 0	0 (	0 0	0 4	0 0	0 0 0	0	0 0	0 0	0				0				0		$\rightarrow$	$\longrightarrow$		\$0		\$0
WBS 4 Subtotal Dollars	\$0	\$0	\$0	\$0 \$0	50 \$0	\$0 \$0	\$0 \$	50 \$0	\$0 \$0	\$0 \$0	\$0 \$1	0 \$0	50 \$0 \$0	\$0 \$1	0 \$0	\$0 \$0	\$0				\$0			\$0	\$0			\$0	\$0			
5 Bidding Services	+	$-\Box$	$-\Gamma$	1	$\perp$					H T							0				0							==	$ \mp$	\$0		\$0
																	0				0						-		+	\$0 \$0		\$0 \$0
WBS 5 Subtotal Hours	0										0			0			.0			.1	0											
WBS 5 Subtotal Dollars 6 Contract Admin Services	\$0			_	+ +		<del>                                     </del>			<del>                                     </del>	\$0 \$1	0 \$0	\$0 \$0 \$0	\$0 \$0	0 \$0	\$0 \$0	\$0			\$0	\$0			\$0	\$0		-	\$0	\$0	ŝ		\$n
									2000	)							2,000				0									\$0		\$0
																	0				0									\$0 \$0		\$0
																	0				0						-		+	\$0 \$0		\$0
																	0				0									\$0		\$0
WBS 6 Subtotal Hours	0	0	0	0 0	0 0	0 0	0	0 0	0 2000	0 0	0			0			2.000				0						-		$\longrightarrow$	\$0		\$0
WBS 6 Subtotal Dollars	\$0	\$0	\$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$	\$0 \$0	\$0 \$130,000		\$0 \$1	0 \$0	so so so	\$0 \$0	0 \$0	\$0 \$0	\$130,000		\$130,	000	\$0			\$0	\$0			\$0	\$130,000			\$13
7 Commissioning Services																	0				0									\$0		\$0
																	0				0						-			\$0 \$0		\$0
																	0				0									\$0		\$0
				-	+		<del>                                     </del>	+									0				0							-	$\longrightarrow$	\$0 \$0		\$0 \$0
WBS 7 Subtotal Hours	0										0			0			0				0									30		
WBS 7 Subtotal Dollars	\$0	-			$+ \Box$		$\vdash$	+		+	\$0 \$1	0 \$0	\$0 \$0 \$0	\$0 \$1	0 \$0	\$0 \$0	\$0		T	\$0	\$0			\$0	\$0			\$0	\$0			
8 Additional Services					+ +												0			-	0							-		\$0 \$0		\$0 \$0
																	0				0									\$0		\$0
WBS 8 Subtotal Hours	0				+		<del>                                     </del>				0			0			0			-	0							$\longrightarrow$	$\longrightarrow$	\$0 \$0		\$0
WBS 8 Subtotal Pollars	\$0										\$0 \$1	0 \$0	so so so	\$0 \$0	0 \$0	\$0 \$0	\$0			\$0	\$0			\$0	\$0			\$0	\$0	30		
O Design Classes																	0				0									\$0		\$0
9 Project Closeout	0	-+	_	-	+ +		<del>                                     </del>				0			0			0				0								$\longrightarrow$	\$0		\$0
WBS 9 Subtotal Hours											\$0 \$1	0 \$0	so so so	\$0 \$0	0 \$0	\$0 \$0	0			\$0	\$0			\$0	\$0			\$0	\$0			
WBS 9 Subtotal Hours WBS 9 Subtotal Dollars	\$0																															
	\$0				+					1 1																						
	\$0																										$\rightarrow$	$\rightarrow$				
	\$0	1956	856	302 184	34 212	148 80	784 19	96 174	206 2000	532 200	368 38	8 148	0 532 200 00 \$36,800 \$36,800	) 280 5: 0 \$32,200 \$4,42	2 0	512 200 3,040 \$11,000	8198 \$666,690	\$8,002	\$4,000 \$678,	0 16 592 \$1,368,3	536	0	\$300		11996 \$2,178,944 \$5,006		\$250		18872 \$4,214,018	\$23.012		

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

**Table 3.2 – Quality Planning Schedule** 

Submission	Closing Date for	Internal QA/QC	Submittal Date to	Receipt of City	Respond to City	Sign Off by City
	Submittal for QA/QC Session*	Session Date	City	Comments	Comments	
10%	March 15th	+ 3 days (March 18 <sup>th</sup> )	+ 1 week (March 25 <sup>th</sup> )	+ 3 weeks (April 15 <sup>th</sup> )	+ 2 weeks (April 29 <sup>th</sup> )	+ 3 Weeks (May 20 <sup>th</sup> )
30%	TBD	+ 3 days	+ 1 week	+ 3 weeks	+ 2 weeks	+ 3 Weeks
60%	TBD	+ 3 days	+ 1 week	+ 3 weeks	+ 2 weeks	+ 3 Weeks
95%	TBD	+ 3 days	+ 1 week	+ 3 weeks	+ 2 weeks	+ 3 Weeks
Bid Opportunity Documents	TBD	+ 3 days	+ 1 week	+ 3 weeks	+ 2 weeks	+ 3 Weeks
Notes: * Date	s to be establis	hed upon ar	onroval of ha	se schedule		

The QA/QC sessions are held in XYZ Consultants' Offices and are to be attended by the Reviewer/Verifier identified in Table 2.1 WBS structure table.

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

# Sample Minimum Meeting Agenda Topics & Meeting Minutes

#### **PROGRESS MEETING NO. XX**

#### **SAMPLE - MINIMUM AGENDA TOPICS & MEETING MINUTES**

PROJECT NAME: BID OPPORTUNIT	Y NO.:
Meeting Date:	October 31, 2014
In Attendance:	
WWD Staff:	
Consultant:	
Recorded by:	

AGENDA ITEM	TOPIC	DISCUSSION	ACTION REQUIRED BY:	ACTION REQUIRED WHEN
1	Safety			
2	Previous Period Activities			
3	Anticipated Work Next Period			
4	Outstanding Issues to be resolved			
5	New Issues to be Discussed			
6	Review of Risk Register			
7	CPM Review			
8	Schedule Mitigation Steps			
9	Percent Complete			
10	Cost to Date			
11	Draft Invoice Review (At Monthly Meetings)			
12	Round Table			
13	Wrap-Up			
14	Next Meeting Date/Time /Location			
15				

ATTACHMENTS:

END OF MEETING AGENDA / MINUTES

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

### **Document Tracking Matrix**





#### Water and Waste Department • Service des eaux et des déchets

	Project No	; Bid Opportunity No	
PROJECT NAME:			
		DOCUMENT TRACKING MATRIX	

#### **DOCUMENT TRACKING MATRIX**

Line No.	Document No.	Document Name	City Original To-Be- Returned (Y/N)	Document Submittal / Received Date	Action Needed*	Action Taken**	Date Action Taken	Date Approved or Returned to City	Comments

#### Notes:

<sup>\*</sup>Action Needed = "I" For Information; "RC" For Review & Comment; "RA" For Review and Approval

<sup>\*\*</sup>Action Taken = "RF" Returned to City for File; "R/C" Returned with Comments; "R/A" Returned with Approval

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

**Table 4.1 Cost Monitoring** 



TABLE 4.1 Cost Control Management (Project Definiton & Preliminary Design Phases)

#### **SAMPLE**

	1 Cost Control Managen	ierre (i rejece	Deminton a		23.6				<u> </u>					
		Labour												
WBS	Tasks	Budget	April	May	June	July	August	Sept	Oct	Nov	Dec	Jan	Feb	Cumulative
BCWS (P	anned Value)													
	1 Project Management	\$10,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000		\$10,000
	2 Project Definition	\$20,000	\$2,000	\$4,000	\$4,000	\$6,000	\$4,000							\$20,000
	3 Preliminary Design	\$120,000				\$6,000	\$24,000	\$60,000	\$30,000					\$120,000
	4 Detail Design to 60%	\$240,000							\$70,000	\$50,000	\$80,000	\$40,000		\$240,000
	Monthly Total		\$3,000	\$5,000	\$5,000	\$13,000	\$29,000	\$61,000	\$101,000	\$51,000	\$81,000	\$41,000		
	Cumulative BCWS	\$390,000	\$3,000	\$8,000	\$13,000	\$26,000	\$55,000	\$116,000	\$217,000	\$268,000	\$349,000	\$390,000		\$390,000
ACWP (A	ctual Cost of Work Com	pleted)												
	1 Project Management		\$800	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000			\$8,800
	2 Project Definition		\$1,000	\$4,000	\$5,000	\$5,000	\$4,000	\$1,000						\$20,000
	3 Preliminary Design					\$5,000	\$50,000	\$40,000	\$15,000	\$10,000				\$120,000
	4 Detail Design to 60%									\$8,000	\$30,000			\$38,000
	Monthly Total		\$1,800	\$5,000	\$6,000	\$11,000	\$55,000	\$42,000	\$16,000	\$19,000	\$31,000	\$0		\$186,800
	Cumulative ACWP		\$1,800				\$78,800	\$120,800	\$136,800	\$155,800	\$186,800	\$186,800		
BCWP (E	arned Value)													
	1 Project Management		5.00%	10.00%	15.00%	20.00%	25.00%	30.00%	35.00%	40.00%	45.00%			
	2 Project Definition		10.00%	20.00%	50.00%	80.00%	100.00%	100.00%	100.00%	100.00%	100.00%			
	3 Preliminary Design							25.00%	60.00%	100.00%	100.00%			
	4 Detail Design to 60%									10.00%	20.00%			
	Monthly Total													
	Cumulative BCWP		\$2,500	\$5,000	\$11,500	\$18,000	\$22,500	\$53,000	\$95,500	\$168,000	\$192,500	\$0		
ETC (Esti	mate to Complete)													
-	1 Project Management													8000
	2 Project Definition													
	3 Preliminary Design							ĺ						
	4 Detail Design to 60%													200000
	Monthly Total													
	ETC (Estimate to Com	plete)												208000
	EAC (Estimate at Com	· · · · · · · · · · · · · · · · · · ·												\$394,800

#### SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT

Please note that this is not from a real project!

**Notes to Project Managers**: (The example Table 4.1 follows the project for this sample CSMP; however, the principles are based on the City's Asset Management Project Management Manual, Final Draft, and Version 2.0, dated April 22, 2014)

The above example in Table 4.1 is for the Consultant's Project Definition and Preliminary Design phases of the project sample project. The sample is constructed according to the WBS rolled up to the first level. For a particular project, the City may want the consultant to have further breakdown of lower levels of the WBS for the project but it should be consistent with their internal accounting systems so as not to impart undue effort to create separate manual accounting. In all cases the consultant should have further breakdown of the Earned Value percent complete for each WBS. There could also be a line for Allowable Disbursements.

The above example is completed as follows:

- Planned Value: The budget cost of the work scheduled (BCWS) is entered as planned for each task. This must include the work package level detail in the time increments to be monitored and controlled.
- Actual Cost of the Work Completed (ACWC): Actual costs are based on the most current information available, which in many cases may be consultant or contract billings.
- **Earned Value (EV)**: An earned value estimate is entered for each item for each time increment based on a bonafided estimate of the work completed. The example is structured in terms of percent completed. Backup documentation is required to support the percent complete (see attached sample)
- Estimate to Complete (ETC): The estimate to complete is a bonafided estimate of the amount of work remaining to be needed to complete each work package for each time increment. The value is reported in terms of cost estimates to complete, but the basis for estimating would normally be in terms of working time. Where the Estimate to Complete indicates the Estimate at Completion is overrunning the contract amount and the Scope of Work has not changed, the Consultant should provide a mitigation plan to bring the project back in line with the amount without modifying the Scope of Services. (This is often done by the Consultant's salaried staff working overtime on a project and/or the Consultant not billing for some work of its non-salaried staff; therefore, the City does not incur additional costs.)
- Estimate at Completion (EAC): The estimate at completion is calculated from the addition of the accumulated ACWC and ETC.

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**



### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

**Earner Value Backup Documentation - Sample** 



# WATER POLLUTION CONTROL FACILITY UPGRADE NUTRIENT REMOVAL UPGRADE PROJECTS 1 THRU 6 (Not Including Construction Phase Services) CWSRF 3209 STATUS OF CONSULTANT'S WORK AS OF July 30, 2010

Project	Description		Lump Sum	% of	% Complete	% Complete	Earned	Comments
No.	-		Fee	Total	of Line Item	of Each	Value	
				Project		Project		
			\$				\$	
1	ACTIFLO, Generator, Primary		\$382,584					
	Power							
	Additional Design Services		\$81,000					
	Total Project #1 Design		\$463,584	100	89	89	\$412,590	
	Services =							
	Design Development Phase	(Assume Work Commenced at						
		20% Level) 30 to 40% Design		15	100	15	\$69,538	
		Update Basis of Design Report		4		4		
		Cost estimate		3		3		
		Project Schedule		5		5		
		. reject concaut			.00	0		
	Discipline Package Development					0		
	3							
	80% Submittal	80% Level Plans		15	100	15	\$69,538	
		80% Level Specs		15	100	15		
-		Update Basis of Design Report		5		5		
		Update Cost Estimate		4		4		
		Develop MOPO		5		5		
		Develop QA/QC Program		3		3		
	Finalize Design and & Obtain			8	100	8	\$37,087	
	Approvals to Bid					_	<b>^</b> ^	
	Develop Bid Packages and					0	\$0	
	Assist with Solicitation	Electrical & Instrumentation		3	60	1.8	\$8,345	
		Gen Civil and Concrete		3		1.8	\$8,345	
		Sole Source - ACTIFLO process		2		1.3	\$6,027	
		SoleSource other Equip		1		0.6		
	Assist with Award of Discipline				00	0.0	+ , -	
	Contracts					· ·	Ψ**	
		Electrical & Instrumentation		3	0	0	\$0	
		Gen Civil and Concrete		3	0	0		
		Sole Source - ACTIFLO process		1	50	0.5	\$2,318	
		SoleSource other Equip		1		0		
	Finalize Project Schedule Based			1	100	1	\$4,636	
	on Sub-Contract Awards							
	TOTALS FOR	PROJECT 1		100		89	\$412,590	
			40.00				***	
2	Aeration Tank Upgrade	(Work Commencing at 0% Level)	\$253,281	100	34.2	34.2	\$86,622	
	Design Development Phase	(Work Commencing at 0% Level)						
		Preliminary Design Memo		36	85	30.6	\$77,504	
		30 to 40% Design		5		2		
		Update Basis of Design Report		2		0.8	\$2,026	
		Cost Estimate		2		0.8	\$2,026	
		Project Schedule		1	0	0	. ,	
		•			0		\$0	
	Discipline Package Development				0		\$0	
	80% Submittal	80% Level Plans		15		0		
		80% Level specs		15		0		
	1	Update Basis of Design Report		2		0		
		Update Cost Estimate	J	2		0		
		Develop MOPO		1		0		
	Einelize Decize and 9 Observe	Develop MOPO Develop QA/QC Program		1	0	0	\$0	
	Finalize Design and & Obtain	Develop MOPO Develop QA/QC Program			0		\$0	
	Approvals to Bid	Develop MOPO Develop QA/QC Program		1	0	0	\$0 \$0	
		Develop MOPO Develop QA/QC Program		1	0	0	\$0	

		SCADA		2	0	0	\$0	
		Gen Civil and Concrete		2	0	0	\$0	
		SoleSource other Equip		1	0	0	\$0	
	Assist with Award of Discipline Contracts				0		\$0	
	Contracts	Electrical & Instrumentation		2	0	0	\$0	
		SCADA		2	0	0	\$0	
		Gen Civil and Concrete		1	0	0	\$0	
		SoleSource other Equip		1	0	0	\$0	
	Finalize Project Schedule Based on Sub-Contract Awards			1	0	0	\$0	
	TOTALS FO	R PROJECT 2		100		34.2	\$86,622	
3	Bio-P removal	(Apply Total % Complete for Project 2 - if Project 3 is a Go)	\$65,958	100	0	0	\$0	
4	Aeration Tank Structural Wall		\$17,000	100	10	10	\$1,700	
5	Energy Audit Fall Brook, RAS, Screw Pumps		\$25,000	100	0	0	\$0	
6	Eval Life Cycle Cost for Bio-P Improvements		\$16,738	100	30	30	\$5,021	
	TOTALS FOR	PROJECTS 1-6	\$841,561				\$505,933	

#### **ACTIFLO, GENERATOR, AND PRIMARY POWER - SPECIFICATIONS**

DIVISION	SECTION TITLE NUMBER	WEIGHT (as % of total specs)	APPRX % Complete of spec section	Apprx % Complete of Overall specs	Commen ts (Notes to Self)
			0.5	4	
0	Bidding and Contract Requirements	5	95	4.75	
1	General Requirements	5	100	5	
2	Site Work	5	100	5	
3	Concrete	5	100	5	
4	Masonry	5	100	5	
5	Metals	5	100	5	
6	Wood and Plastics	5	100	5	
7	Thermal & Moisture	5	100	5	
			100		
8	Doors and Windows	5	100	5	
9	Finishes	5	100	5	
10	Specialities	5	100	5	
11	Equipment	10	100	10	
12	XXXXXXXX	5	100	5	
13	Special Construction	5	100	5	
13	Opecial Construction	<u> </u>	100	<u>J</u>	
14	Conveying Systems	5	100	5	
15	Mechanical	5	100	5	
16	Electrical	7	100	7	
17	Instrumentation and Controls	8	95	7.6	
	TOTALS	100		99.35	
	TOTALO	100		33.33	

#### WATER POLLUTION CONTROL FACILITY UPGRADE NUTRIENT REMOVAL UPGRADE PROJECT #1

#### **STATUS OF DRAWINGS SUBMITTTED June 2, 2010**

Number	DWG NO.	TITLE	WEIGHT (as	APPRX %	Apprx %	Comments
of	in				Complete of	
-	Submittal		plans)	Dwg	Overall	(11010010001)
Drawnigs	Oubillittal		pians	Dirg	Plans	
1	Title	Title	0.25	100	0.25	
2	G-1	Drawing Index	0.5	100	0.5	
3	C-1	General Civil Notes, legend &	0.75	100	0.75	
		Abbreviations				
4	C-2	Site Key Plan	1	100	1	
5	C-3	Existing Conditions and	1.5	100	1.5	
		Demolition Plan				
	C-4	Site Layout Plan I	0.75	100	0.75	
	C-5	Site Layout Plan II	0.75	100	0.75	
8	C-6	Site Grading Plan	1	100	1	
9	C-7	Site Piping Plan	1.5	100	1.5	
10	C-8	Civil Details I	0.75	100	0.75	
11	C-9	Civil Details II	0.75	100	0.75	
12	C-10	Erosion Control & Sedimentation	1.5	100	1.5	
		Plan				
13	C-11	Compensatory Storage	1.5	100	1.5	
14	A-1	Architectural Notes, Legend &	0.75	100	0.75	
		Abbreviations				
15	A-2	Lower Level Plan & Elev	1	100	1	
16	A-3	Floor Plan	1.5	100	1.5	
	A-4	Elevations	1	100	1	
18	A-5	Sections	1	100	1	
	A-6	Roof Plans & Details	1	100	1	
	A-7	Schedules & Details	1	100	1	
21	A-8	Details	1	100	1	
22	A-9	Electrical Room Modifications	1	100	1	
23	S-1	Structural Notes	0.75	100	0.75	
24	S-2	ACTIFLO Process Tank - Base	2.25	100	2.25	
		Plan				
25	S-3	ACTIFLO Process Tank - Top	2.25	100	2.25	
		Plan				
26	S-4	ACTIFLO Process Tank - Roof	2.5	100	2.5	
		Plan				
27	S-5	ACTIFLO Process Tank -	2	100	2	
		Section and Details I				
28	S-6	ACTIFLO Process Tank -	1.5	100	1.5	
		Section and Details II				
29	S-7	ACTIFLO Process Tank -	1.5	100	1.5	
		Section and Details III				
30	S-8	Generator Pad Plan & Detail	1	100	1	
31	S-9	Junction Structure 5A Plan &	1	100	1	
		Sections				
32	S-10	Typical Structural Details I	1	100	1	
33	S-11	Typical Structural Details II	1	100	1	
34	PR-1	General Civil Notes	1	100	1	Check if for this project
		Abbreviations & Legend				. ,
	PR-2	Process Flow Diagram I	1.5	100	1.5	
36	PR-3	Hydraulic Profile I	2	100		

#### WATER POLLUTION CONTROL FACILITY UPGRADE NUTRIENT REMOVAL UPGRADE PROJECT #1

#### STATUS OF DRAWINGS SUBMITTTED June 2, 2010

Number	DWG NO.	TITLE	WEIGHT (as	APPRX %	Apprx %	Comments
of	in		% of total		Complete of	(Notes to Self)
Drawings	Submittal		plans)	Dwg	Overall	
					Plans	
37	PR-4	ACTIFLO Process Tank	2	100	2	
		Elevation Plan I				
38	PR-5	ACTIFLO Process Tank	2	100	2	
		Elevation Plan II				
39	PR-6	ACTIFLO Process Tank	2	100	2	
		Sections I	_		_	
40	PR-7	ACTIFLO Process Tank	2	100	2	
		Sections II and Chemical Feed				
4.4	DD 0	Building		400	4	
	PR-8	Structure 5A Plan and Sections	1 4 75	100	1 75	
42	PR-9	Existing Process Building	1.75	100	1.75	
42	PR-10	Demolition Plan Process Building First Floor	1.75	100	1.75	
43	PK-10	Demo Plan	1.75	100	1.75	
11	PR-11	Process Building Partial	1.75	100	1.75	
44	LV-11	Basement Plan I	1.75	100	1.75	
15	PR-12	Process Building Partial	1.75	100	1.75	
45	F IX-12	Basement Plan II	1.75	100	1.75	
46	PR-13	Process Building Modification	1.75	100	1.75	
40	110	Sections	1.73	100	1.75	
47	PR-14	Main Pipe Gallery Tunnel	1	100	1	
1,	11017	Chemical Piping Demo &		100		
		Modifications				
48	PR-15	Primary Gallery Chemical Piping	1	100	1	
		Demo				
49	PR-16	Primary Gallery Chemical Piping	1	100	1	
		Modifications				
50	PR-17	Chemical Feed Schmatics I	1	100	1	
51	PR-18	Chemical Feed Schmatics II &	1	100	1	
		Misc Process Details				
	PR-19	Misc. Process Details II	1	100	1	
	M-1	Mechanical Plan	0.75		0.75	
54	M-2	Chemical Feed Building Mech .	0.75	100	0.75	
		Plan & Process Bldg Demo				
	<b>5</b> 4	notes				
55	P-1	Process Building Basement	1	100	1	
	D 0	Plumbing Plan	2 -	400	2.5	
56	P-2	Process Building First Floor	0.5	100	0.5	
E7	P-3	Plumbing Plan Chemical Feed Building	0.5	100	0.5	
5/	r <b>-</b> 3	Plumbing Plan, Notes	0.5	100	0.5	
58	I_1	Instrumentation Notes and	0.75	100	0.75	
50	1-1	Legend	0.75	100	0.75	
59	I <b>-</b> 2	Network Diagram	0.75	95	0.7125	
60		Instrumentation Loops I	0.75			
61		Instrumentation Loops II	0.75			
62		Instrumentation Loops III	0.75			

#### WATER POLLUTION CONTROL FACILITY UPGRADE NUTRIENT REMOVAL UPGRADE PROJECT #1

#### STATUS OF DRAWINGS SUBMITTTED June 2, 2010

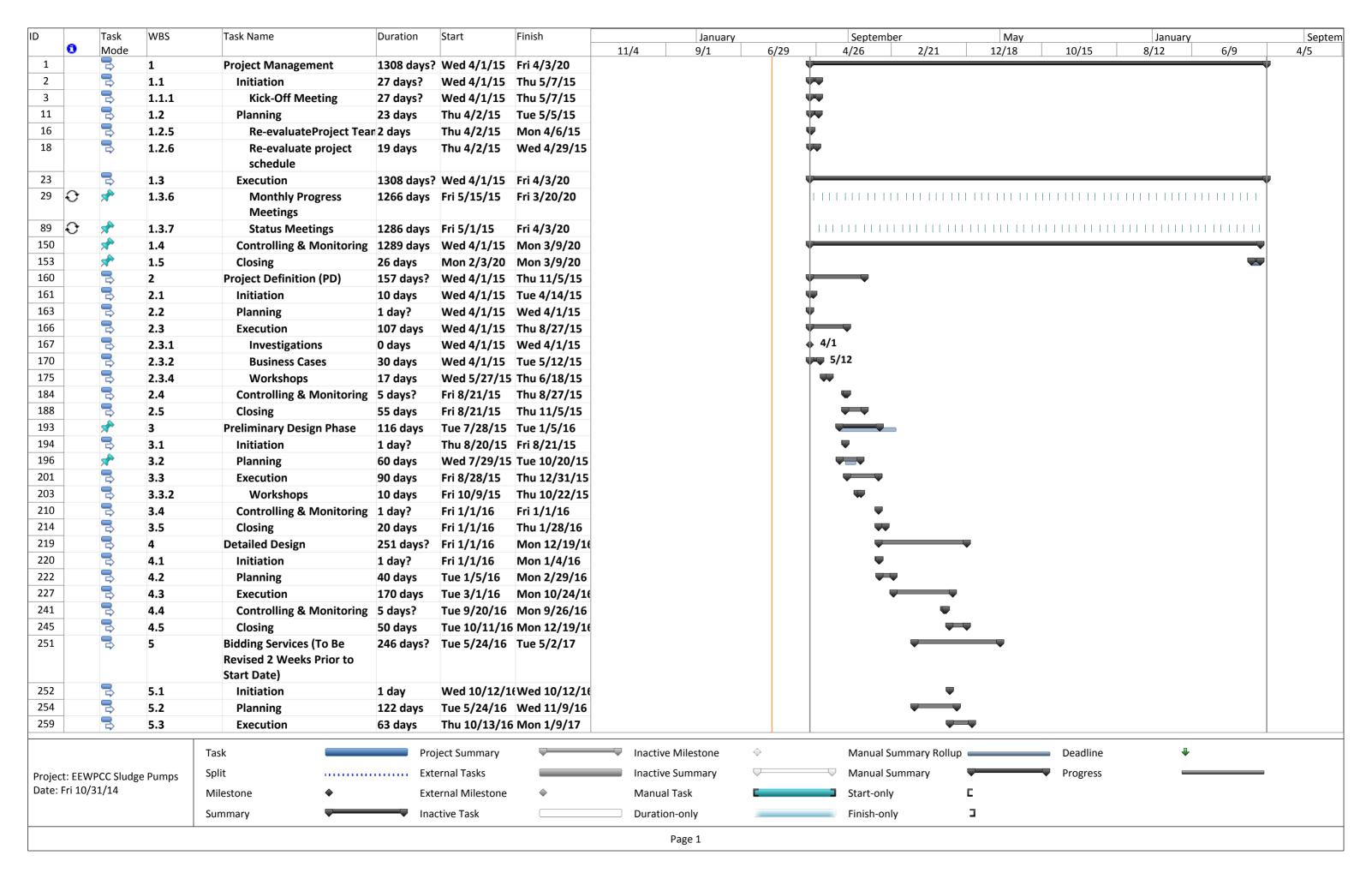
Number	DWG NO.	TITLE	WEIGHT (as	APPRX %	Apprx %	Comments
of	in		% of total		Complete of	(Notes to Self)
Drawings	Submittal		plans)	Dwg	Overall	
			' '		Plans	
63	E-1	Electrical Legend and NEMA	0.75	95	0.7125	
		Classification Schedule				
64	E-2	Electrical Abbreviations and	0.75	95	0.7125	
		General Notes				
	E-3	Electrical Site Plan	1.25	95	1.1875	
	E-4	Electrical Site Details	1.75	95	1.6625	
67	E-5	Electrical Main Single Line	1.25	95	1.1875	
		Diagram - Existing				
68	E-6	Electrical Main Single Line	2	95	1.9	
		Diagram - New				
69	E-7	Electrical Single Line Diagram	2	95	1.9	
		MCC-7				
70	E-8	ACTIFLO Process Tank -	1.5	95	1.425	
		Lighting and System Plan				
71	E-9	Actiflo Process Tank Lower	1.5	95	1.425	
		Level Power Plan				
72	E-10	ACTIFLO Process Tank Top	1.5	95	1.425	
		Level Power Plan				
73	E-11	Process Building Electrical Plans	1.5	95	1.425	
74	E-12	Process Building Electrical	1.5	95	1.425	
		Modification Plans				
75	E-13	Miscellaneous Site Structures	1.5	95	1.425	
		Electrical Plan				
76	E-14	Electrical Riser Diagrams	1.5		1.425	
	E-15	Electrical Schematics	1.5		1.425	
	E-16	Electrical Schedules Sheet 1	2.5	95	2.375	
	E-17	Electrical Schedules Sheet II	1	95	0.95	
80	E-18	Electrical Schedules Sheet II	0.75	95	0.7125	
		TOTALS	100		98.55	
						<u> </u>

### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

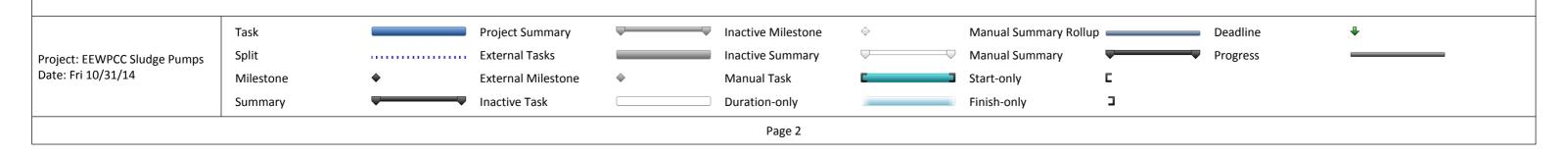
Please note that this is not from a real project!

• CPM Schedule – Summary





D	Task	WBS	Task Name	Duration	Start	Finish		January		Sep	ptember	May		January		Septer
0	Mode						11/4	9/1	6/29	4/26	2/21	12/18	10/15	8/12	6/9	4/5
270	3	5.4	<b>Controlling &amp; Monitoring</b>	30 days?	Tue 12/20/	16 Mon 1/30/17										
275	=	5.5	Closing	96 days	Tue 12/20/	16 Tue 5/2/17										
282		6	Contract Administration Services (To be defined 2 weeks prior to Start Date)	630 days	Tue 3/14/1	7 Mon 8/12/19						<u> </u>				
288	₽	7	Commissioning Services (To be defined 2 weks prio to start date)	120 days	Tue 4/9/19	Mon 9/23/19								-		
294	₽	8	Additional Services (To be defined when preparing scope of additional services)	-	Wed 4/1/1!	5 Wed 4/1/15				•						
300	<b>-</b>	9	Project Closeout (To be defined 2 weeks prior to start date)	120 days	Tue 9/24/1	9 Mon 3/9/20										



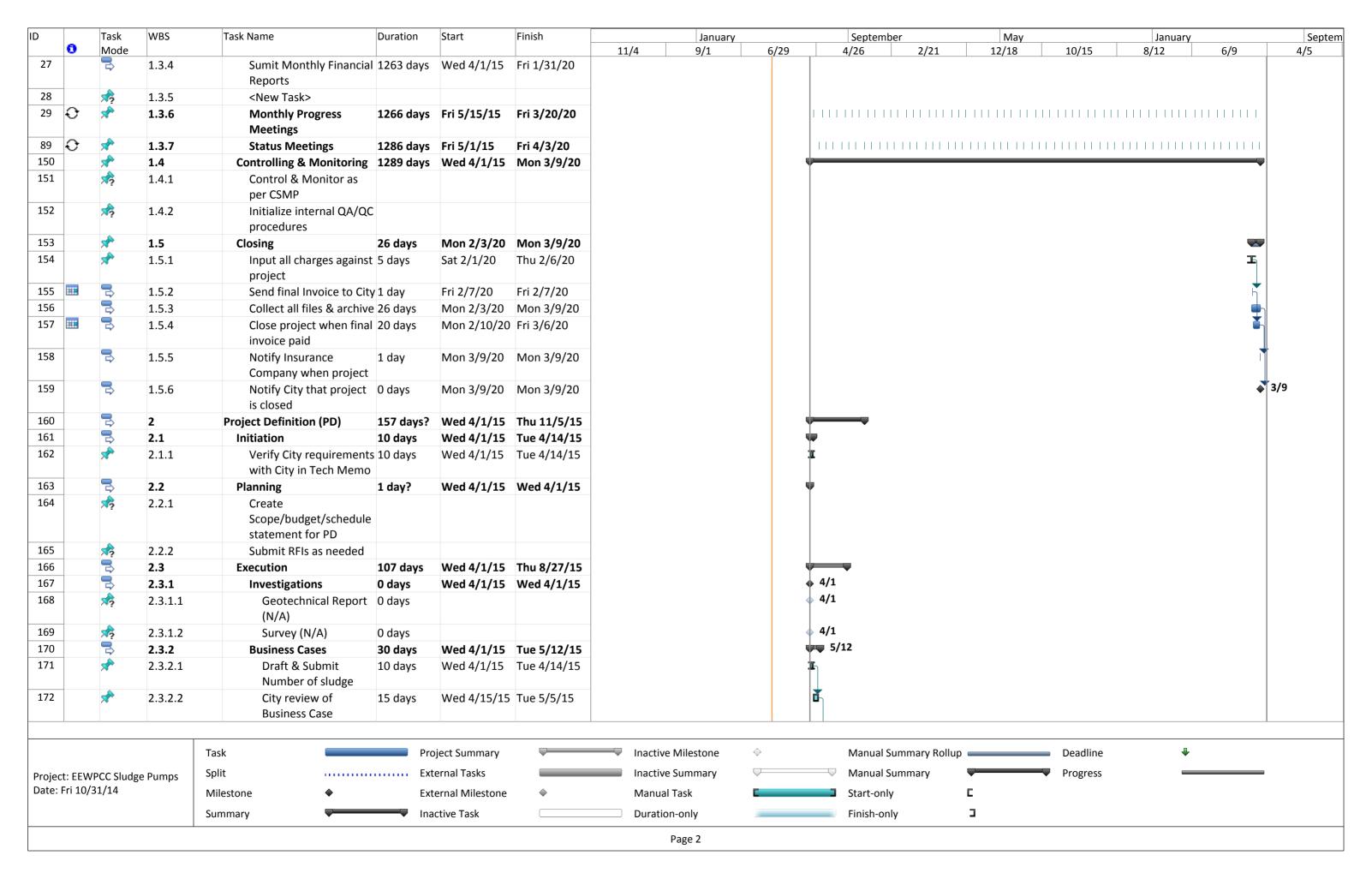
### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

Please note that this is not from a real project!

CPM Schedule – Detailed



	Task	WBS	Task Name	Duration	Start	Finish			January			Septem	ber		May		Jar	uary		Septe
0	Mode						11/4		9/1	6/29	9	4/26	2/21	1	.2/18	10/15	8/12		6/9	4/5
1	3	1	Project Management	-	Wed 4/1/15						<b>*</b>									•
2	3	1.1	Initiation	27 days?	Wed 4/1/15						***									
3	3	1.1.1	Kick-Off Meeting	27 days?	Wed 4/1/15						4									
4	*	1.1.1.1	Receipt of Notice to Proceed	0 days	Wed 4/1/15	Wed 4/1/15					4/	1								
5	₹ <sup>*</sup>	1.1.1.2	Develop Internal Project Number	3 days	Wed 4/1/15	Fri 4/3/15					=									
6	*	1.1.1.3	Attend Kick-off Meet	ir 1 day	Wed 4/1/15	Wed 4/1/15					==									
7	*	1.1.1.4	Prepare & Distribute Meeting Minutes	1 day?	Thu 4/2/15	Thu 4/2/15														
8	*	1.1.1.5	City Review Period	15 days	Fri 4/3/15	Thu 4/23/15														
9	*	1.1.1.6	Finalize minutes based on comments	10 days	Fri 4/24/15	Thu 5/7/15														
10	3	1.1.1.7	Hold Internal Kick-Off Meeting	f 1 day	Wed 4/1/15	Wed 4/1/15														
11	3	1.2	Planning	23 days	Thu 4/2/15	Tue 5/5/15					#									
12	A <sup>P</sup>	1.2.1	Prepare & Submit Draft Invoice for City Approva			Tue 4/14/15														
13	*	1.2.2	City Review Period	15 days	Wed 4/15/15	Tue 5/5/15														
14	*	1.2.3	Prepare & Submit Draft Financial Report for City Approval		Wed 4/8/15	Tue 4/14/15					. <b>16</b>									
15	*	1.2.4	City Review Period	15 days	Wed 4/15/15	Tue 5/5/15														
16	3	1.2.5	Re-evaluateProject Tea	r 2 days	Thu 4/2/15	Mon 4/6/15					₩									
17	**?	1.2.5.1	Notify City of any changes from	2 days							-									
18	3	1.2.6	Re-evaluate project schedule	19 days	Thu 4/2/15	Wed 4/29/15														
19	*	1.2.6.1	Notify City of any changes from	2 days	Thu 4/2/15	Mon 4/6/15														
20	*	1.2.6.2	City Review Period	15 days		Mon 4/27/15					ď									
21	*	1.2.6.3	Finalize schedule based on City comments and use as	2 days	Tue 4/28/15	Wed 4/29/15														
22	3	1.2.7	Finalize internal project plan	3 days	Thu 4/30/15	Mon 5/4/15					7									
23	3	1.3	Execution	1308 days?	Wed 4/1/15	Fri 4/3/20					<b>\</b>									<b>\psi</b>
24	*	1.3.1	Prepare & Submit CSMF	30 days	Tue 4/7/15	Tue 5/19/15														
25	*	1.3.2	Finalize CSMP based on City comments	15 days	Wed 5/20/15	Tue 6/9/15														
26	3	1.3.3	Submit Monthly Invoice	es 1263 days	Wed 4/1/15	Fri 1/31/20														
			Task	Pro	eject Summary	<b>—</b>	Inac	ctive Mil	lestone	<b>\langle</b>		Manual	Summary Ro	ollup		<ul><li>Deadline</li></ul>		•		
roiect: FF	WPCC Sludg	re Pumns	Split	Ext	ernal Tasks		Inac	ctive Sur	mmary			Manual	Summary	_		Progress				a
ate: Fri 10	_	c i unips	Milestone •		ernal Milestone	<b>*</b>		nual Tas	-			Start-on	-	С		<u>-</u>				
	· 		Summary		ctive Task	<u> </u>		ration-or				Finish-or	•	_						
								Pag	e 1											_



	Task	WBS	Task Name	Duration	Start	Finish			January			Septe	mber		May		Janu	ary	Sept
€							11/4		9/1	6/29		4/26	2/2:	1	12/18	10/15	8/12	6/9	4/5
73	*	2.3.2.3	Revise Business Case based on City's Comments	5 days	Wed 5/6/15	Tue 5/12/15					Ī								
.74	=	2.3.3	Prepare & Submit Draft PD Report	40 days	Wed 4/1/15	Tue 5/26/15													
.75	3	2.3.4	Workshops	17 days	Wed 5/27/15	Thu 6/18/15						ı							
176	*	2.3.4.1	Risk & Oppportunity Assessment	1 day	Wed 5/27/15	Wed 5/27/15													
.77	₹ <sup>*</sup>	2.3.4.2	Perform CHAIR 1 Workshop	1 day	Thu 5/28/15	Thu 5/28/15													
178	*	2.3.4.3	City Review of 60%, Risk and CHAIR	15 days	Fri 5/29/15	Thu 6/18/15													
.79	₽	2.3.5	Revise PD & re-submit based on City	,		Thu 7/30/15													
80	₽	2.3.6	Obtain City approval of PD (with comments if applicable)	15 days	Fri 7/31/15	Thu 8/20/15													
181	₹ <sup>*</sup>	2.3.7	Prepare & review with City Class 5 cost est	15 days	Wed 5/27/15	Tue 6/16/15													
L82	<b>₹</b>	2.3.8	City Review of Class 5 es	15 days	Wed 6/17/15	Tue 7/7/15													
183	*	2.3.9	Revise Class 5 cost est based on comemnts and re-submit		Fri 8/21/15	Thu 8/27/15						Ĭ							
L84	3	2.4	Controlling & Monitoring	5 days?	Fri 8/21/15	Thu 8/27/15													
185	*2	2.4.1	Weekly calls to City PM																
186	*2	2.4.2	Status meetings as per CSMP																
187	3	2.4.3	Presentation of Approved PD to City	5 days		Thu 8/27/15						0							
188	3	2.5	Closing	55 days		Thu 11/5/15													
189	3	2.5.1	Close out all charges to PD Phase	30 days		Thu 10/1/15													
.90	3	2.5.2	invoice	5 days		Thu 10/8/15													
191	3	2.5.3	documentation to City	15 days		Thu 9/10/15													
192	3	2.5.4	Followup to assure retainage & retainage has been paid	20 days		Thu 11/5/15													
193	<u>**</u>	3		116 days															
194	3	3.1	Initiation	1 day?	Thu 8/20/15	Fri 8/21/15						<b>■</b>							
			Task		roject Summary			ctive Mile		<b>\$</b>			al Summary F	Rollup				•	
-	EEWPCC Sludg	,c i amps	Split		kternal Tasks			ctive Sum	-				al Summary			Progress			
ate: Fri	i 10/31/14		Milestone ♦ Summary		kternal Milestone active Task	<b>♦</b>		nual Task ation-on				Start-o Finish-	•	_ 					
								Page	2 3										

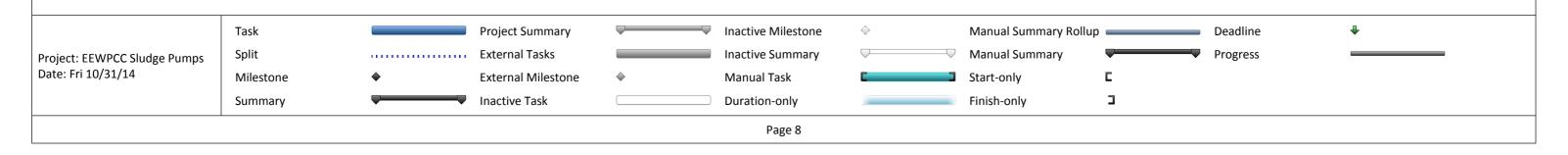
)	Task	WBS	Task Name	Duration	Start	Finish		January		Septer	nber	May		January		Septe
0	Mode						11/4	9/1	6/29	4/26	2/21	12/18	10/15	8/12	6/9	4/5
195	<b>*</b> ?	3.1.1	Receipt of written authorization from City to Proceed													
196	*	3.2	Planning	60 days	Wed 7/29/1	Tue 10/20/15										
197	3	3.2.1	Verify design constraint with City at Phase kick-off meeting and	s 5 days		Thu 8/27/15										
198	*	3.2.2	City Review Period	15 days	Fri 8/28/15	Thu 9/17/15										
199	3	3.2.3	Revise minutes as needed and	5 days	Fri 9/18/15	Thu 9/24/15										
200	*	3.2.4	Update CSMI	5 days	Fri 9/25/15	Thu 10/1/15										
201	=	3.3	Execution	90 days	Fri 8/28/15	Thu 12/31/15				-	ı					
202	3	3.3.1	Prepare & Submit Prelim Design Draft to	30 days	Fri 8/28/15	Thu 10/8/15										
203	3	3.3.2	Workshops	10 days	Fri 10/9/15	Thu 10/22/15				-						
204	3	3.3.2.1	Value Engineering	10 days	Fri 10/9/15	Thu 10/22/15										
205	3	3.3.3	Prepare & Submit Class 5 Cost Est to City	10 days	Fri 10/9/15	Thu 10/22/15										
206	*	3.3.4	City Review Period	15 days	Fri 10/23/15	Thu 11/12/15										
207	3	3.3.5	Revise and resubmit PD to City	15 days	Fri 11/13/15	Thu 12/3/15										
208	*	3.3.6	Revise and resubmit Class 5 Cost Est to City	5 days	Fri 12/4/15	Thu 12/10/15										
209	3	3.3.7	Obtain City approval of Preliminary design (with conditions, if any)	-	Fri 12/11/15	Thu 12/31/15				*						
210	=	3.4	Controlling & Monitoring	1 day?	Fri 1/1/16	Fri 1/1/16				-						
211	*	3.4.1	Weekly calls to City PM	-												
212	<b>₹</b> ?	3.4.2	Status meetings as per CSMP													
213	3	3.4.3	Presentation of Approved Prelim Design	1 day	Fri 1/1/16	Fri 1/1/16				F						
214	=	3.5	Closing	20 days	Fri 1/1/16	Thu 1/28/16				•	-					
215	3	3.5.1	Close out all charges to Prelim Design Phase	20 days	Fri 1/1/16	Thu 1/28/16										
216	3	3.6	Initiate final Prelim Design phase invoice	10 days	Fri 1/29/16	Thu 2/11/16										
217	3	3.7	Submit all phase documentation to City	15 days		Thu 2/18/16										
218	3	3.8	Followup to assure retainage & retainage has	20 days	Fri 2/12/16	Thu 3/10/16					ď					
219	3	4	<b>Detailed Design</b>	251 days?	Fri 1/1/16	Mon 12/19/16										
			Task	Pr	roject Summary	<b>—</b>	Inactive	Milestone	<b>\$</b>	Manua	l Summary Rollı	ıp	Deadline	•		
	(DCC C' '	D	Split		kternal Tasks			Summary			l Summary		Progress			
Project: EEW Date: Fri 10/		ge Pumps						-	_		•	<b>▼</b>	◆ LINRIE222	_		
vale. FII 10/	<b>31/14</b>		Milestone • Summary		kternal Milestone Jactive Task	<b>♦</b>	Manual Duration			Start-o	•					
								-								
							I	Page 4								

D _	Task	WBS	Task Name	Duration	Start	Finish		January		September		May		January		Septe
0	Mode					_	11/4	9/1	6/29	4/26	2/21	12/18	10/15	8/12	6/9	4/5
220	3	4.1	Initiation	1 day?	Fri 1/1/16	Mon 1/4/16				<b>■</b>						
221	<b>7</b> 2	4.1.1	Receipt of written authorization to													
222	3	4.2	Planning	40 days	Tue 1/5/16	Mon 2/29/16				<u> </u>						
223	*	4.2.1	Verify design constraint with City at Phase kick-off meeting and	ts 5 days	Tue 1/5/16	Mon 1/11/16										
224	₹ <sup>*</sup>	4.2.2	City Review Period	15 days	Tue 1/12/16	Mon 2/1/16										
225	*	4.2.3	Revise minutes as needed and	5 days	Tue 2/2/16	Mon 2/8/16										
226	*	4.2.4	Update CSMP	15 days	Tue 2/9/16	Mon 2/29/16										
227	3	4.3	Execution	170 days	Tue 3/1/16	Mon 10/24/16				_						
228	*	4.3.1	Prepare & Submit 60% Submittal	60 days	Tue 3/1/16	Mon 5/23/16										
229	A.	4.3.2	City Review Period	15 days	Tue 5/24/16	Mon 6/13/16										
230	3	4.3.3	Perform HAZOP Workshop & followup	5 days	Tue 5/24/16	Mon 5/30/16										
231	*	4.3.4	City Review Period	15 days	Tue 5/31/16	Mon 6/20/16					ă,					
232	*	4.3.5	Revise 60% submittal based on HAZOP and City comments (if	10 days	Tue 6/21/16	Mon 7/4/16										
233	AP.	4.3.6	Prepare and Submit 95% Submittal	40 days	Tue 7/5/16	Mon 8/29/16										
234	3	4.3.7	Final Review by City	15 days	Tue 8/30/16	Mon 9/19/16					<b>*</b>					
235	3	4.3.8	CHAIR 2 and 3 Workshops & followup	10 days	Tue 9/20/16	Mon 10/3/16										
236	*	4.3.9	City Review of CHAIR 2 and 3	15 days	Tue 10/4/16	Mon 10/24/16										
237	3	4.3.10	Prepare and Submit Class 3 Cost Estimate	15 days	Tue 8/30/16	Mon 9/19/16										
238	*	4.3.11	City Review Period	15 days		Mon 10/10/1€					<u> </u>					
239	3	4.3.12	Revise Class 3 Est if needed	15 days	Tue 9/20/16	Mon 10/10/16										
240	3	4.3.13	Bring 95% to 100% Bid ready documents	•	Tue 9/20/16	Mon 10/10/16										
241	3	4.4	Controlling & Monitoring	-	Tue 9/20/16	Mon 9/26/16					<b>\ </b>					
242	<b>7</b> ?	4.4.1	Weekly calls to City PM													
243	<b>*</b> ?	4.4.2	Status meetings as per CSMP													
244	3	4.4.3	Presentation of Approved Design to City			Mon 9/26/16										
245	3	4.5	Closing	50 days	Tue 10/11/1	6 Mon 12/19/16										
			Task		roject Summary			e Milestone	<b>\$</b>		nmary Rollup =		Deadline	•		_
roject: EEW	-	ge Pumps	Split		xternal Tasks			e Summary	<u> </u>	Manual Sun	ımary		Progress			•
Date: Fri 10/	31/14		Milestone	E	xternal Milestone	<b>♦</b>	Manua	al Task		Start-only	Г					
			Summary	■ Ir	nactive Task		Durati	on-only		Finish-only	3	l				
		1						Page 5								

	Task	WBS	Task Name	Duration	Start	Finish		Jan	nuary		Septe	ember		May		Jan	uary		Septe
0	Mode						11/4	9/1		6/29	4/26		2/21	12/18	10/15	8/12		6/9	4/5
46	3	4.5.1	Obtain appoval of detailed design from	1 day	Tue 10/11/16	Tue 10/11/16							H						
47	3	4.5.2	Close out all charges to Final Design Phase	30 days	Tue 10/11/16	Mon 11/21/16													
48	=	4.5.3	Initiate final Final Desig	n 15 days	Tue 11/22/16	Mon								· )					
			phase invoice			12/12/16													
249	3	4.5.4	Submit all phase documentation to City	20 days	Tue 10/11/16	6 Mon 11/7/16													
250		4.5.5	Follow up to assure all invoices and retainage in any is paid	-	Tue 12/13/16	5 Mon 12/19/16							1	•					
251		5	Bidding Services (To Be Revised 2 Weeks Prior to Start Date)	246 days?	Tue 5/24/16	Tue 5/2/17						-							
52	=	5.1	Initiation	1 day	Wed 10/12/1	l(Wed 10/12/16													
253	<b>-</b>	5.1.1	Written receipt of authorization to proceed from City	1 day	Wed 10/12/16	Wed 10/12/16													
254	=	5.2	Planning	122 days	Tue 5/24/16	Wed 11/9/16						-							
255	x <b>₽</b>	5.2.1	Hold Phase kick-off meeting and distribute minutes	5 days	Thu 10/13/16								Ī						
256	<b>₹</b>	5.2.2	Verify City Constraints	5 days	Thu 10/13/16	Wed 10/19/16													
257	*	5.2.3	Review procedures with City and Team for document control and communications during bid phase		Tue 5/24/16	Mon 5/30/16						I							
258	A.	5.2.4	City Review Period	15 days	Thu 10/20/16	Wed 11/9/16							10						
:59	=	5.3	Execution	63 days	Thu 10/13/1	6 Mon 1/9/17													
260	3	5.3.1	Final checking of Bid Opportunity Document	10 days	Thu 10/13/16	6 Wed 10/26/16													
261	3	5.3.2	Mark as Bid Opportunit Documents and Stamp	y 3 days	Thu 10/27/16	Mon 10/31/16													
262	3	5.3.3	Post Bid opportunity	5 days	Tue 11/1/16	Mon 11/7/16							'n						
63	3	5.3.4	Hold Site meeting	10 days		Mon 11/21/16													
64	3	5.3.5	Respond to Questions	20 days	Tue 11/8/16	Mon 12/5/16							Ĭ						
65	3	5.3.6	Bid period	30 days	Tue 11/8/16	Mon 12/19/16							Ť	)					
266	3	5.3.7	Issue Addendums	25 days	Tue 11/8/16	Mon 12/12/16								L					
.67	3	5.3.8	Open Bids	0 days	Mon 12/19/1	.6Mon 12/19/16							•	12/19					
.68	3	5.3.9	Evaluate bids	10 days	Tue 12/20/16	6 Mon 1/2/17								Н					
			Task	Pro	oject Summary	<b></b>	Ina	ctive Mileston	ne	<b>\( \rightarrow\)</b>	Manu	ual Summa	ary Rollup		Deadline		•		
roject: FF	MDCC 514-	to Dumns	Split		ternal Tasks			ctive Summar		V-		ual Summa	•	<b>-</b>	Progress				
roject: EE\ ate: Fri 10	WPCC Sludg 0/31/14	ge Pumps	Milestone •		ternal Milestone	<b>*</b>		nual Task	1		Start-		,	<u> </u>	. 11081633				
			Summary	Ina	active Task		Dur	ration-only			Finish	n-only		3					
								Page 6											

)	Task	WBS	Task Name	Duration	Start	Finish		January			Septembe	r	May		Januar	у	Sept
Ð	Mode						11/4	9/1	6/2	9	4/26	2/21	12/18	10/15	8/12	6/9	4/5
269	3	5.3.10	Issue Engineer's recommendation of bid	5 days s	Tue 1/3/17	Mon 1/9/17							0				
270	=	5.4	Controlling & Monitoring	30 days?	Tue 12/20/16	Mon 1/30/17							<b>+</b>				
271	*	5.4.1	Maintain list of potentia bidders	al 30 days	Tue 12/20/16	Mon 1/30/17											
272	*	5.4.2	Maintain list of addendums	30 days	Tue 12/20/16	Mon 1/30/17											
273	**	5.4.3	Weekly calls to City PM														
274	**	5.4.4	Status meetings as per CSMP														
275	=	5.5	Closing	96 days	Tue 12/20/16	Tue 5/2/17							-				
276	3	5.5.1	City Award period	60 days	Tue 12/20/16	Mon 3/13/17											
277		5.5.2	Obtain copy of Letter of Award to Contractor with conditions, if any	f 1 day	Tue 3/14/17	Tue 3/14/17											
278	=	5.5.3	Close out all charges to phase	30 days	Wed 3/15/17	Tue 4/25/17							Ť				
279	3	5.5.4	Final Phase Invoice to C	it 15 days	Wed 3/15/17	Tue 4/4/17							<b>*</b>				
280	3	5.5.5	Submit all phase documentation to City	20 days	Wed 3/15/17	Tue 4/11/17											
281	=	5.5.6	Follow-up to assure fina invoice and retainange has been paid	al 20 days	Wed 4/5/17	Tue 5/2/17											
282	<b>-</b>	6	Contract Administration Services (To be defined 2 weeks prior to Start Date)	630 days	Tue 3/14/17	Mon 8/12/19											
283	7P	6.1	Initiation	20 days	Tue 3/14/17	Mon 4/10/17							<b>*</b>				
284	*	6.2	Planning	20 days	Tue 3/14/17	Mon 4/10/17							ă				
285	=	6.3	Execution	540 days	Tue 3/14/17	Mon 4/8/19											
286	=	6.4	Controlling & Monitoring	540 days	Tue 3/14/17	Mon 4/8/19											
287	3	6.5	Closing	90 days	Tue 4/9/19	Mon 8/12/19									Ĭ		
288	₽	7	Commissioning Services (To be defined 2 weks prio to start date)	120 days	Tue 4/9/19	Mon 9/23/19										•	
289	=	7.1	Initiation	20 days	Tue 4/9/19	Mon 5/6/19									*		
290	3	7.2	Planning	30 days	Tue 4/9/19	Mon 5/20/19											
291	3	7.3	Execution	60 days		Mon 7/1/19											
292	3	7.4	Controlling & Monitoring	90 days		Mon 8/12/19											
293	3	7.5	Closing	30 days		Mon 9/23/19										<b>—</b>	
294	\$	8	Additional Services (To be defined when preparing scope of additional services)	1 day?	Wed 4/1/15	Wed 4/1/15											
			Task		Project Summary	<b>-</b>		tive Milestone	<b>\$</b>			nmary Rollu	0	Deadline	1	+	
roject: EEV		ge Pumps	Split		External Tasks		Inac	tive Summary			Manual Sur	mmary		Progress			
ate: Fri 10,	/31/14		Milestone	E	External Milestone	<b>♦</b>	Mar	ual Task			Start-only						
			Summary		Inactive Task		Dur	ation-only			Finish-only		3				
		I						Page 7									

D <b>1</b>	Task	WBS	Task Name	Duration	Start	Finish	January			Septemb	September		May		January	
	Mode						11/4	9/1	6/29	4/26	2/21	12/18	10/15	8/12	6/9	Septem 4/5
295	<b>*</b> ?	8.1	Initiation													
296	**?	8.2	Planning													
297	**	8.3	Execution													
298	**	8.4	Controlling & Monitoring													
299	1/2	8.5	Closing													
300		9	Project Closeout (To be defined 2 weeks prior to start date)	120 days	Tue 9/24/19	Mon 3/9/20										
301	*	9.1	Initiation	5 days	Tue 9/24/19	Mon 9/30/19									1	
302	*	9.2	Planning	5 days	Tue 9/24/19	Mon 9/30/19									<b>1</b>	
303	*	9.3	Execution	60 days	Tue 9/24/19	Mon 12/16/19										
304	*	9.4	Controlling & Monitoring	60 days	Tue 9/24/19	Mon 12/16/19										
305	*	9.5	Closing	60 days	Tue 12/17/19	Mon 3/9/20										



### **SAMPLE for SMALL (<\$10 Million) CAPITAL PROJECT**

