



Building Community®

Procurement Department Bid Office
Customer Center 1st Floor, Room 002
21 W. Church Street
Jacksonville, Florida 32202

June 30, 2017

ADDENDUM NUMBER: ONE (1)

TITLE: William Burgess – SR200 to Harts Road – 16” Sewer Force Main and Reclaim Water Main

JEA SOLICITATION NUMBER: 105-17

BID DUE DATE: July 11th, 2017

TIME OF RECEIPT: 12:00 PM

TIME OF OPENING: 2:00 PM

THIS ADDENDUM IS FOR THE PURPOSE OF MAKING THE FOLLOWING CHANGES AND CLARIFICATIONS:

Add (1): JEA formally adds the following document(s) to this Solicitation. Additions are in **Red**, Bold, Underlined Font.

- **Addendum 1 – Appendix A – Modified Drawings (Open Cut) Bid (v2)**
These drawings replace the prior “105-17 Modified Drawings (Open Cut) Bid” drawings in their entirety.

Add (2): JEA amends Section **1.1.2 QUESTIONS** as follows. Additions are in **Red**, Bold, Underlined Font. Deletions are in **Red**, Bold, Strikethrough Font.

1.1.2 QUESTIONS

All questions must be submitted in writing to the JEA Buyer listed below at least **five (5) four (4)** business days prior to the opening date. Questions received within **five (5) four (4)** business days prior to the opening date will not be answered.

For Procurement Related Questions:

Buyer: Nickolas Dambrose
E-mail: dambnc@jea.com

For Technical Questions:

Contact: Elizabeth DiMeo
E-mail: dimeea@jea.com

Add (2): JEA amends Section **2.2.23 CRITICAL PATH METHOD (CPM) SCHEDULE** as follows. Additions are in **Red**, Bold, Underlined Font.

2.2.23 CRITICAL PATH METHOD (CPM) SCHEDULE

A schematic display of the sequential and logical relationship of all activities that comprise the Work. Using a combination of duration, early and late start dates, and early and late finish dates, a critical path is established as the path of interdependent activities that must be sequentially performed and that require a longer total time to perform than any other such series. CPM Schedules suitable for use on this Contract use GANNT Precedence formats.

CRITICAL PATH METHOD (CPM) SCHEDULING (UNDER \$5 MILLION)

The Contractor shall use the Critical Path Method (CPM) to schedule and manage the Work. A qualified member of the Contractor's personnel shall do scheduling using CPM. If the Contractor does not have staff capable of preparing and managing CPM schedules, the Contractor shall obtain such qualified personnel on a subcontract basis for the purpose of supporting this Contract.

All CPM scheduling will be performed using CPM precedence diagramming method (PDM) scheduling software such as, Primavera P3, Primavera SureTrak (a low-cost CPM software for small businesses), Primavera P3e/c for construction, Primavera Contractor, Artemis Artviews, or a CPM scheduling software compatible with Primavera P3e import capabilities, integrated as part of a Contractor-wide ERP. The Contractor shall submit all schedules and associated reports to the Contract Administrator in paper and/or electronic formats as described below in order to allow both complete analysis of the schedules and accurate record keeping.

CPM Schedule Terminology:

"Activity" means any single, continuous, identifiable task in the total Work. The project work scope is sub-divided into work tasks that are represented in the schedule software as activities. How finely the project scope is subdivided into tasks determines the "level of detail" within the schedule. JEA retains the right to reject a schedule for insufficient levels of activity detail.

"Milestone" or "Event" means the instant of time at which a significant task within the project is commencing or completing. A milestone or event is an activity in the scheduling software with an estimated duration of zero.

"Precedence relationships" means the logical relationships created in the scheduling software to sequence the performance of the work tasks identified by activities or milestones. Precedence relationships can be categorized in four (4) groups - Finish-to-start, Start-to-Start, Finish-to-Finish, and Start-to-Finish. The interface between activities created by precedence relationships creates a PDM network logic. A PDM logic where estimated durations have not been assigned to the activities constitutes a network "Plan". Once activities are assigned estimated durations, the software interfaces durations and the network logic to calculate a "Schedule" based on the Plan.

"Initial Schedule" means the schedule that is proposed before any work has commenced against the project. The initial schedule differs from a current schedule only such that no activities have begun. Initial Schedules are usually the first schedules submitted for approval to the JEA representative. An Initial Schedule has no standing and is considered a working document or proposal.

"Current Schedule" means the schedule that has progress information (updates) reported against in-progress and completed activities. Update information is used to re-calculate / reforecast the most likely "early start" dates of the remaining incomplete activities as sequenced by the Plan. This calculation establishes to the earliest forecasted completion date of the project which allows project managers to determine if they are ahead, on, or behind schedule to meet the contractual completion date. A current schedule has no standing and is considered a working document to evaluate progress against an Approved Schedule.

"Original Schedule" is the first schedule that is approved by the JEA representative. In some extraordinary cases a Current Schedule may be accepted as the Original Schedule if no Initial Schedule is approved before work commences. The Original Schedule is the first schedule that is "targeted" as an Approved Schedule.

"Target Schedule" means a copy of the schedule where dates are frozen and those dates are not allowed to be modified by progress reporting, schedule changes, or further recalculations. Target Schedules take current schedule information which is dynamic and establishes static schedule data for comparison purposes. A project can have multiple Target Schedules (i.e. - copies of the schedule made at different times during project execution). The Original Schedule is usually the first Target Schedule to be generated within a project.

"Approved Schedule" is the Target Schedule that is approved by the JEA Representative. An Approved Schedule is the official schedule used to measure schedule performance against the Current Schedule. The first Approved Schedule is the Original Schedule and subsequent Approved Schedules are generated when the JEA representative agrees to revision(s) of the Approved Schedule. The Approved Schedule may be referred to as the Baseline Schedule or current Baseline Schedule.

"CPM Network" means a transferable electronic copy of project software data and files and includes, but is not limited to, activities, milestones, calendar definitions, precedence relationships including any relationship lag periods, date constraints (e.g. start on or before, start on or after, finish on, finish on or before, finish on or after, as late as possible, zero free float, zero total float, etc.), target schedules, project and activity code definitions, resource definitions, resource assignments, project values (e.g. the data date/time now value, settings for project-activity processing options, etc.), and all information that can be generated from such data.

Schedule Requirements

General - The Contractor is advised that its schedule and reports as specified herein will be an integral part of JEA's management program. The Contractor's schedules will be used by JEA to monitor project progress, plan the level of effort by its own forces and consultants, and as a critical decision making tool. Accordingly, the Contractor shall ensure that it complies fully with the requirements specified herein and that its schedules are both timely and accurate throughout the duration of the project.

Duration Estimates - The basic time unit for the duration estimate shall be in calendar days, except for plant outage work, which if requested by JEA, shall be measured at JEA's determination by work shifts or clock hours. For the purpose of scheduling, no schedule activity, outside of a plant outage, shall be estimated in duration units other than whole calendar days. The Contractor shall show each estimated duration on each Schedule (Initial or Current), indicating the best estimate of the activity's duration considering the scope of the Work and resources planned for the activity.

Calendars - The Contractor will specify the work pattern (calendar) to be used on the job (default) and the work pattern assigned to each activity - whether it is a four (4) day ten (10) hour/day week, five (5) day- eight (8) hour/day week, a six (6) day ten (10) hour/day week, etc.

Holidays - Holidays are to be observed and shall be identified as non-work days occurring during a regular work week pattern.

Level of Schedule Detail - JEA retains the right to reject an Initial or Current Schedule if insufficient level of detail in the schedule would inhibit meaningful schedule analysis or progress reporting used to evaluate progress of the project. Except for certain non-labor activities such as procurement or delivering of materials, activity durations "should" not exceed fourteen (14) days, nor be shown as less than one (1) working day unless otherwise accepted by JEA. The "guideline" for activity durations not in excess of fourteen (14) days shall apply to all schedule submittals. JEA shall be the final authority regarding the appropriate level of schedule detail for all schedules submitted for approval.

Activity and Project Codes - The Contractor may use activity and project codes to support organization and displays of the schedule information if such information is transmitted to JEA with the Initial schedules. JEA shall be notified if additional codes are defined and utilized over the course of the project. At times, JEA may request that certain codes are applied to activities to facilitate the interface between the Contractor's schedule software and JEA's schedule software.

PDM Network Quality - Each project shall establish a "Start of Project" and "Project Completion/End of Project" milestone. All other activities within the schedule shall have precedence relationships that logically sequence both the start (predecessor) and finish (successor) of each activity. JEA will review the CPM Plan for excessive front loaded and back loaded work activity periods. Heavy front or back loaded schedules may indicate the lack of a well-designed Plan, poor network logic or poor utilization of available resources.

Submittal Process for Establishing an Approved Schedule:

Planning Session - Within three (3) days of Purchase Order issuance, and prior to submission of the Initial Schedule, the Contractor shall schedule and conduct a schedule planning session. During this session, the Contractor shall present its planned approach to the project including but not limited to: the planned construction sequence and phasing, planned crew sizes, summary of equipment types/sizes/numbers to be used, estimated durations of major work activities, the anticipated critical path of the project and a summary of the activities on the critical path, and a summary of the most difficult schedule challenges the Contractor is anticipating and how it plans to manage/control these challenges. This will be an interactive session with JEA. The Contractor's Initial Schedule shall incorporate the information discussed at this schedule planning session.

Initial Schedule - Within 14 days of the Planning Session, the Contractor shall submit a proposed CPM schedule consisting of Schedule deliverables as described herein. This schedule shall indicate project completion within the Contract Time. JEA shall contact a representative of the Contractor to review any discrepancies or items requiring clarification of the proposed Work schedule.

The Initial Schedule shall be reviewed and approved, or rejected by JEA within ten (10) days of submission. Failure to gain approval of the Initial Schedule within twenty-one (21) calendar days of submittal can result in Contract cancellation. The submitted CPM Network and schedule reports, when

approved by JEA, shall constitute the Approved Schedule, until circumstances change and shall warrant the Contractor to request, and JEA to approve, a revised Approved Schedule.

Schedule Deliverables

The Contractor shall submit the following for the Initial Schedule and for each version of their Current schedule where they seek a revision to the Approved Schedule.

1. A tabular schedule report which includes:
 - a. Activity ID, activity description/name, activity calendar, original duration in calendar days, early start date, early finish date, total float, imposed date type, and imposed date (also known as "constrained date"), Approved Schedule Target Start Date, and Approved Schedule Target Finish Date
 - b. Sort criteria used on the report
 - c. Description of Grouping or sectioning criteria if used
 - d. No activities will be filtered, hidden, or removed from these reports.

If any of the above fields are too wide for a single tabular report, then the Contractor shall split some of the fields into a second report that also repeats activity ID and activity name, with the same sectioning, sorting and selection.

2. A second report (a Gantt chart) that includes the following:
 - a. Tabular fields: activity ID, activity name, remaining duration, early start date, early finish date, total float.
 - b. Graphic bars showing:
 - c. Early date set: early start to early finish (including actual start to actual finish if the activity is completed). This bar must highlight activities, preferably in red, with total float values equal to 0 or less.
 - d. Late date set: late start to late finish (a separate, less prominent bar beneath early date set).
 - e. Approved (Target) Schedule date set: a separate, less prominent bar beneath the late date set bar that highlights the original target dates. This bar is static, while the schedule bars for early and late dates will become dynamic during schedule execution.
 - f. Milestone flags and constrained date flags: these are icons that show up as points in time (events). (Normally, they can share the same bar row as early date set).
3. Sort criteria
 - a. Grouping: sectioning appropriate to the scope of the project
 - b. Sorting: sub grouping under each section by early start date (primary sort), by early finish date (secondary sort), total float (third-level sort), and by activity ID (final sort).
4. Selection: all activities
 - a. A document explaining the basis and purpose of any relationship lag values between activities in the CPM network.
 - b. An electronic copy of the Schedule data files from one of the Primavera schedule software systems which will allow JEA to generate the products identified above based on the vendors schedule information/ raw data.

- c. The Contractor shall also submit a list of project definitions including: calendar definitions indicating holidays, other non-work periods, normal planned work pattern (e.g. Eight (8) hours per day, five (5) days per week; ten (10) hours per day, four (4) days per week), any activity code definitions if any of the items have been altered since the previous submission.

Schedule Acceptance

The JEA representative shall inform the Contractor when the Initial Schedule or a Current Schedule has been accepted as the Accepted Schedule. No changes reflected in an Approved Schedule will be construed as authorization to override the contractual completion date agreement. Changes to the contractual completion date must be amended outside the schedule review process.

Schedule Revisions

The Contractor shall modify any portions of the Current Schedule that become infeasible because of "activities or procurement behind schedule" or for any other valid reason. An activity that cannot be completed by its late finish date shall be deemed to be behind schedule. If the Contractor makes logic changes to the CPM network, adds, deletes, or modifies activities and wishes to establish a new Approved Schedule, it will be required to resubmit the same information that was originally submitted for the Approved Schedule. The submittal may be included as part of the update process with the Current Schedule, however none of the additions, deletions, or modifications to the schedule are approved until the JEA Contract Manager formally approves the changes as a revised Approved Schedule. JEA shall approve or reject an Initial or Current schedule submitted for the purpose of establishing an Approved Schedule within ten (10) calendar days of submittal and in any situation before the next periodic update is due. Schedule revisions shall be designed to document how the Contractor intends to accomplish the Work by the date stated for Final Completion.

Change Orders

Upon issuance of a Change Order, the Contractor shall indicate the approved change in the next submittal of the Current schedule by coding criteria and within the activity description so the JEA Representative may easily identify Change Order activities wherever they appear in the schedule.

Schedule Updates

The Contractor shall update the Current Schedule monthly or periodically as indicated in the Contract Documents, in order to show Work that is ahead of or behind the Approved Schedule. The Current schedule may indicate that an activity is ahead of or behind the targeted schedule and may show the Contractor's revised plan to meet the original dates by working overtime, weekends, or in drastic cases, revising the Work sequence/logic to recover time. Such reporting does not infer that changes to the schedule are authorized or agreed to by JEA.

The Contractor shall provide monthly schedule updates using a process which includes:

1. Determining a new data date (time now) value, against which the progress of all activities in the CPM network will be reported. Many activities may not be affected by the update because they remain planned, or were completed during a previous update cycle.
2. Based on the selected data date, review each activity for the following criteria:

- a. If an activity has started and the actual start date has not been previously reported, record an actual start date.
- b. If an activity has finished and the actual finish date has not been previously reported, record an actual finish date.
- c. If the activity has started, but not finished, also report an expected finish date or report a remaining duration in days based on the activity work pattern (calendar).
3. When this data has been recorded analyze the PDM network to recalculate/ reforecast the Current Schedule dates based on progress reporting, remaining durations, relationships, and date constraints.
4. The Contractor shall review the schedule analysis results and determine if they are acceptable. If the results are not acceptable, the Contractor shall notify the JEA Representative such that the Contract Administrator may be aware that corrective action is needed by the Contractor to meet the schedule.
5. The Contractor shall publish and distribute the Current Schedule to show the impact of the progress reporting against the Approved Schedule.

The Contractor, after updating and issuing the Current Schedule, may choose to attempt to recover lost time through improved productivity, additional work hours or logic changes. They may submit their schedule changes to the JEA Contract Manager as a request for a revised Approved Schedule as described in the Schedule Revisions section.

The revised Approved Schedule grants permission to change the Target Schedule as the basis for measuring whether Work is ahead of schedule, on schedule or behind schedule. The documentation required for approval of a revised Approved Schedule will be the same as the documentation required for the initial Approved Schedule.

The current Progress Schedule Submittal should incorporate all proposed Activity, logic and restraint date revisions required to (a) implement changes in the Work, (b) detail all impacts on pre-existing Activities, sequences and restraint dates, (c) recover schedule, (d) reflect the Contractor's current approach for Work remaining, (e) incorporate any Delays that are being negotiated between the JEA and Contractor, and (f) reflect "or equal" or substitution proposals.

Schedule Monitoring

The JEA representative has the right to withhold or delay approval of an Application for Payment based on failure to provide schedule updates or to exhibit project progress as shown on the Current Schedule when compared to the Approved Schedule. This section in no way limits or restricts Application for Payment standards set elsewhere in the contract. The Contractor agrees to and guarantees that they will not: misrepresent its scheduling or execution of the work; utilize schedules substantially different from those submitted to JEA for performance or coordination of the work; or submit schedules that do not accurately reflect the intent or reasonable expectations of the Contractor or its subcontractors.

Use of Float

Contract Float is not for the exclusive use or benefit of either JEA or the Contractor, but must be used in the best interest of completing the project within the Contract Time. If the Early Dates in any Progress Schedule Submittal forecast any slippage or overrun of the Contract Times, the Contractor shall indicate such slippage or overrun by reporting negative Contract Float.

The Contractor shall explain the rationale for use of any: (1) float suppression techniques in the Construction Schedule including but not limited to interim dates imposed by the Contractor other than Contract Time(s) and Contract Milestone(s), or (2) the inclusion of activities or constraints in a path or chain leading to a Contract Milestone which are unrelated to the Work as stated and specified in the Contract Documents, or (3) activity durations or sequences deemed by JEA to be unreasonable in whole or in part.

All Contract Time(s) and Milestones shall be imposed, coded and separately identified in all Progress Schedule Submittals in conformance with the Milestone(s) and Contract Times(s) set forth in the Contract Documents. The Contractor shall impose no other date restraints in the Construction Schedule, unless an explanation of their bases is provided and is acceptable to JEA. Contract Completion and Milestones incorporated in the Contractor's Construction Schedule shall be assigned duration of zero (0) days.

Extensions of time for performance of the Work required under the General Conditions pertaining to equitable time adjustment will be granted only to the extent that the equitable time adjustment for activities affected by any condition or event which entitles the Contractor to a time extension exceed the Contract Float along the path of the activities affected at the time of Notice to Proceed of a Contract Modification or commencement of any delay or condition for which an adjustment is warranted under the Contract Documents.

If the Contractor is delayed in performing the Work, the Contractor shall absorb any related delay, disruption, interference, hindrance, extension or acceleration costs, however caused until all Contract Float, if any, is consumed and performance or completion of the Work or specified part, necessarily extends beyond the corresponding Contract Times. The Contractor shall work cooperatively with JEA, adjacent Contractors, and third parties, to identify and implement to the maximum extent possible, no-cost measures to recover all schedule delays, regardless of the cause of the delays. One example of such measures is no-cost re-sequencing of Work Activities.

Delay Provisions

Review with JEA progress of work at the Construction Progress Meetings. Unless otherwise directed in writing by the JEA, whenever this review as determined by JEA indicates a late completion of the work or should activities shown on the Progress Schedule submittal slip by ten (10) or more days beyond any Contract Time or Milestones, a recovery schedule shall be prepared and submitted. The Contractor shall work cooperatively with JEA's adjacent Contractors, and third parties, to identify and implement to the maximum extent possible, no-cost measures to recover all schedule delays, regardless of the cause of the delays. One example of such measures is no-cost re-sequencing of Work activities. The Contractor shall be required to, at no extra cost to JEA, prepare and submit a recovery schedule which displays how the Contractor intends to reschedule those activities, in order to regain compliance with the Contract Time or Milestones. The Contractor will also submit a narrative, which shall describe the

cause of schedule slippage and actions taken to recover schedule within the shortest reasonable time (e.g., re-sequencing of Work activities, hiring of additional labor, use of additional construction equipment, expediting of deliveries, etc.).

Schedule recovery will be excused if the Contractor requests and demonstrates entitlement to an extension in Contract Time, in writing, due to delay(s) not within the control of the Contractor, and JEA concurs schedule recovery is not required at that time. Any Contractor request for adjustment in Contract Time and Contract Price will not be evaluated unless (a) the Contractor, using the procedures in this Section and the Contract, shows that conditions justifying adjustments in Contract Time and/or Contract Price have arisen, (b) the Contractor's analysis is verifiable through an independent review by JEA of the electronic disk files for the Progress Schedule Submittal provided by the Contractor, and (c) the Contractor provides adequate documentation (in the form of daily field reports, field records, correspondence, photos, videos, invoices, certified payrolls, narratives, U.S. Weather Bureau reports, etc.) to substantiate its position, to the satisfaction of JEA.

The Contractor shall include in the schedule a subnet demonstrating how the Contractor proposes to incorporate each Change Order into the most recently accepted Schedule. A subnet is defined as a sequence of new or revised activities that are proposed to be added to the Schedule.

The extension of Contract Time shall be considered only if the Contractor demonstrates via the timely submittal of a detailed schedule analysis that they are entitled to the time by using a methodology acceptable to JEA. The analysis shall include: a) a detailed narrative which clearly describes the events causing the delay and the resulting impacts to the critical path of the project schedule, b) documentation substantiating and supporting the delay, c) detailed CPM schedules (both electronic and hard copies) clearly delineating the delay, d) a matrix showing delays caused by JEA, delays caused by the Contractor, delays caused by any third party and any force majeure delays; e) any additional information reasonably requested by JEA, in order to enable JEA to perform a timely and informed analysis of the request for extension of Contract Time.

***** Respondent shall acknowledge this Addendum on the Response Form*****