Waukesha County

And

Milwaukee County

PROJECT MANAGEMENT PLAN

FOR CONSULTING SERVICES: TRUNKED RADIO

Prepared and Submitted by:

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Overview and Scope

This Project Management Plan (PMP) defines the project management approach that shall govern the activities of CDX Wireless, Waukesha County, and Milwaukee County for the Consulting Services: Trunked Radio project. This Project Management Plan addresses the following topics related to project control:

- Project Charter
- Project Governance
- Project Schedule
- Project Reporting and Control
- Management Processes: Issues & Changes

Order of Precedence

This (PMP) in no way supersedes any Agreement or Purchase Order (i.e., the "Contract for Service") executed by CDX Wireless, Waukesha County, and/or Milwaukee County.

Project Charter

Background and Problem

Waukesha and Milwaukee Counties currently own and operate two separate radio systems that provide critical links between the public safety agencies that serve their citizens. Through their age the systems have become difficult and expensive to maintain and by their outdated design they do not provide the necessary levels of service required by their users, particularly in the areas of interoperability and control (security over system operation and subscriber provisioning). The technology of the two Counties' systems does not allow them to interconnect to each other nor to other, important external systems.

Justification and Goal

Replacing these two separate systems with one that is combined, interoperable, and standards-based will improve the level of public safety communications across the two counties as well as the overall operational cost to both counties of providing such services. The initial steps in replacing these systems are to understand and define user needs, document expected system costs, prepare system design concepts, specify requirements for potential vendors, and conduct procurement and vendor-selection activities. Following these activities, the counties can work with a selected vendor to deploy and integrate the replacement system.

Intended Outcomes

To achieve the above-stated goal, CDX Wireless, a consulting firm specializing in public safety communications technology, has been contracted to complete, in three phases, the following deliverables and activities:

- In Phase 1: The development of a "Phase 1 Report" that describes: The needs of the users from Waukesha and Milwaukee Counties; design concepts that meet those needs and that include descriptions of

various options for capacity, spectrum, technology (including P25 Phase I or Phase II), equipment reuse, and subscriber deployment approaches; and a total budget for the project that includes capital ("project") costs as well as ongoing ("operational") costs.

- In Phase 2: The development of a Final Infrastructure Design Report and a Final Request for Proposals (RFP) Specifications Document. The former is to describe (in text and diagrams) the following attributes of the selected conceptual design: core/controller configuration (including redundancy), backhaul links, radio sites and towers, dispatch consoles, encryption capabilities, Interoperability/mutual aid capabilities, and management capabilities. The latter is to provide a clear description to potential vendors of the Counties' needs regarding the following topics: proposal format and conditions; general operations; coverage; features; existing infrastructure and dispatch centers; site and tower requirements; acceptance test plans and remedy requirements; proposal pricing; system and product warranties; deployment, maintenance, and management services; training requirements; vendor reference customers; and other requirements pertinent to the project.

- Also in Phase 2: The assistance in the licensing and coordination of frequencies including preparing and submitting the necessary documents to the Region 54 Regional Planning Committee (RPC), a chosen coordination firm, and the Federal Communications Commission (FCC).

- In Phase 3: The provision of assistance to the Counties (who will act in a lead role) during the RFP release, response and evaluation periods. Consulting tasks will include: supporting a proposer pre-bid conference, supporting site walks, answering proposer questions regarding the RFP, developing evaluation guides for the evaluation team, supporting the evaluation team by providing technical background and insight, and assisting in the assembly of pricing tables and scoring matrices.

Project Governance

To conduct this project efficiently and effectively, a governance structure has been developed to accurately define each party's roles and responsibilities while ensuring that sufficient authorization and assistance exists from the project's managers and subject matter experts.

Project Managers

CDX Wireless, Waukesha County, and Milwaukee County shall each contribute a Project Manager to this project. The Project Managers shall serve as the single point of contact for their organizations and shall be authorized to make decisions on behalf of their organizations regarding the conduct of this project. The general responsibilities for the Project Managers shall be to drive completion of the project, and the composite deliverables, per the Purchase Orders and Agreement and this Project Management Plan as well as to communicate project status to their counterpart Project Managers and within their respective organization. The Project Managers shall be responsible to provide project status information and any other necessary project direction information to their counterpart Project Manager. Furthermore, it is the Project Manager's responsibility to present the status of the project to their organization's executive staff. The Project Managers will likewise be responsible to oversee the activities of the staff

of their respective organization. Finally, the Project Managers shall have the authority to approve deliverables and Change Orders as presented by each other.

The CDX Wireless Project Manager shall hold responsibilities for the additional specific duties:

- Develop the Project Management Plan
- Conduct Project Updates with the Project Managers from Waukesha and Milwaukee Counties
- Present deliverables to the Project Managers from Waukesha and Milwaukee Counties
- Present project invoices to the Project Managers from Waukesha and Milwaukee Counties

The Project Managers from Waukesha and Milwaukee Counties shall hold responsibilities for the additional specific duties:

- Review and comment to or accept the Project Management Plan
- Attend and participate in project status meetings
- Review and approve project status reports
- Accept invoices, confirm their appropriateness and drive internal processes to deliver payment

The Project Manager for CDX Wireless will be Mr. Steve Surwillo. The Project Managers for Waukesha County and Milwaukee County will be Mr. Chris Petterson, Radio Communications Administrator, and Mr. Hugh Morris, County Radio Administrator, respectively.

Project Sponsors

This project exists through the support of Project Sponsors within both CDX Wireless, Inc. and Waukesha and Milwaukee Counties. These sponsors are executives that have the

authority to commit resources (personnel and finances) to ensure this project's success.

The Project Managers shall take the actions necessary to keep their respective Project Sponsors informed and engaged at the appropriate level for their organization. Additionally, should the Project Managers be unable to resolve a project issue, change, or risk, they shall escalate the discussions to the Project Sponsors for their consideration, discussion, and action.

The Project Sponsors for this project are Mr. Steve Surwillo (for CDX Wireless) and Mr. Richard Tuma and Mr. Chris Lindberg for Waukesha and Milwaukee Counties, respectively.

Project Team/Subject Matter Experts

Completion of this project will require input from subject matter experts as well as the delivery of support services from other resources from CDX Wireless and Waukesha and Milwaukee Counties. Such resources will assist the Project Managers in the completion of this Project Management Plan.

As subject matter experts, selected staff will have the responsibilities to provide their insight and knowledge on technical and operational issues. Such activities may involve the creation of deliverables, the creation of sections of deliverables and/or the review and comment on deliverables created by others. Input from subject matter experts may also be provided as direct engagement in interviews or focus groups in which the experts answer questions and work through process/flow discussion with the Project Manager or their designee.

For this project, CDX Wireless will provide the following Subject Matter Experts to support the following areas:

- Bob Simmons, Public Safety Technology
- Clement Ng, Outreach and Deliverable Assembly

For this project, Waukesha and Milwaukee Counties shall provide or facilitate discussions with Subject Matter Experts on an as-needed basis in order to prepare and provide CDX Wireless with cost, operational, and technical information about public safety communications.

It shall be the responsibility of the Project Managers to plan and manage the activities of the members of the Project Team from their respective organizations and to involve them in the appropriate project activities. All members of the Project Team shall coordinate their activities and, unless specifically designated by the Project Managers, all communications between Project Team members of the different organizations (inter-organization communications) shall flow through the Project Managers.

Project Organizational Chart

An organization chart for the Project Managers, Project Sponsors, and Project Teams for this project is shown below in Figure 1 - Project Organization Chart:
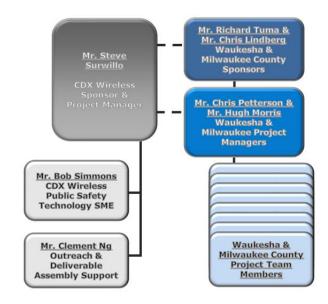

Figure 1 - Project Organization Chart

Project Schedule and Key Project Milestones

This project includes the completion of a number of uniquely-identifiable but interconnected milestones that are listed in the Agreement and that shall be carried out over the duration of the project. To support project management, tracking, and reporting, a simplified project schedule in Gantt Chart format and a listing of the scheduled is included in the following Figure 2 – Simplified Project Schedule. Two rows are shown for each activity: the top row shows the "Planned" schedule (depicted with a "P") and the lower row will be used to track the "Actual" (or "as-completed") schedule (depicted with an "A").

As activities are initiated and completed, their status will be recorded in the "Actual" row according to the colors shown in Figure 3 – Legend for Tracking Actual Schedule Performance. Also, CDX Wireless will track and record the schedule of deliverables according to the table shown below in Figure 4, Milestone Tracking Table. This table shows the milestones along with their planned date of submission, their revised date of submission (for any variance form plan), their actual date of submission, and any notes regarding their status (including reasons for variance from plan).

Figure 2: Simplified Project Schedule, Phase 1

Project Week (Week Ending Date & Week #):

Activity Schedule:	Plan/Actual	Jul 13 (01)	Jul 20 (02)	Jul 27 (03)	Aug 03 (04)	Aug 10 (05)	Aug 17 (06)	Aug 24 (07)	Aug 31 (08)	Sep 7 (09)	Sep 14 (10)	Sep 21 (11)	Sep 28 (12)	Oct 05 (13)	Oct 12 (14)	Oct 19 (15)	Oct 26 (16)	Nov 23 (17)	Nov 30 (18)	Dec 07 (19)	Dec 14 (20)	Dec 21 (21)	Dec 28 (22)	Jan 04 (23)
Develop Project Management Summary	P	■																						
	A																							
Prepare, Conduct Kickoff	P	■	■																					
	A																							
Conduct Interviews, Visits	P		■	■	■																			
	P																							
Develop Needs Assessment Report	A				■																			
	S																							
Prepare System Concepts	P					■	■																	
	A																							
Develop Criteria for System Concepts	P						■		■	■														
	A																							
Discuss Concepts and Criteria	P									■	■													
	A																							
Develop Alternatives & Recommendations Report	P										■													
	A																							
Develop Model for Project & Operational Budget	P					■																		
	A																							
Populate Budget Model	P								■	■														
	A																							
Prepare Draft "Phase 1 Study"	P										■													
	A																							
Counties Review Draft "Phase 1 Study"	P											■												
	A																							
Revise Draft, Submit Final "Phase 1 Study"	P											■												
	A																							

Figure 2: Simplified Project Schedule, Phase 2

Activity Schedule / Project Week (Week Ending Date & Week #):	Plan/Actual	Jul 13 (01)	Jul 20 (02)	Jul 27 (03)	Aug 03 (04)	Aug 10 (05)	Aug 17 (06)	Aug 24 (07)	Aug 31 (08)	Sep 7 (09)	Sep 14 (10)	Sep 21 (11)	Sep 28 (12)	Oct 05 (13)	Oct 12 (14)	Oct 19 (15)	Oct 26 (16)	Nov 23 (17)	Nov 30 (18)	Dec 07 (19)	Dec 14 (20)	Dec 21 (21)	Dec 28 (22)	Jan 04 (23)
Review, Confirm Decisions from Phase 1	P											▇												
	A																							
Develop Infrastructure Design	P											▇	▇	▇										
	A																							
Present & Confirm Infrastructure Design	P													▇										
	A																							
Develop Deployment Roadmap	P													▇	▇									
	A																							
Present & Confirm Deployment Plan	P													▇										
	A																							
Create & Confirm Outline for Request for Proposal (RFP)	P															▇								
	A																							
Develop Detailed Specifications for Draft RFP	P															▇	▇	▇	▇					
	A																							
Perform Traceability Review of RFP	P																		▇					
	A																							
Prepare Revised Draft of RFP	P																		▇					
	A																							
Prepare Evaluation Criteria for RFP	P																		▇					
	A																							
Submit Revised Draft of RFP (with Criteria)	P																		▇					
	A																							
Counties Review Revised Draft of RFP	P																			▇				
	A																							
Perform Final Revisions to RFP, Submit Final RFP	P																				▇			
	A																							

Legend		
	Current Month	
	Planned Schedule	
	Task Completed On-Time	
	Task In Progress with Completion Expected On-Time	
	Task In Progress with Completion Expected Late but with No Expected Impact to On-Time Project Closure	
	Task In Progress with Completion Expected Late and with Impact Expected to On-Time Project Closure	
	Task Completed Late with No Impact to On-Time Project Closure	
	Task Completed Late with Expected Impact to On-Time Project Closure	

Figure 3 – Legend for Tracking Actual Schedule Performance

Activity	Deliverable(s)	Planned Date	Revised Date	Actual Date	Notes	Invoice Amount(s)
Completion of Phase 1	"Phase 1 Report"	September 21, 2012				**$36,680.00** (Waukesha Co: $16,139.20, Milwaukee Co: $20,540.80)
Completion of Phase 2, RFP Specifications	"RFP Specifications"	December 14, 2012				**$40,116.00** (Waukesha Co: $18,453.36, Milwaukee Co: $21,662.64)
Completion of Phase 2, Licensing Assistance	Completion of FCC License Applications (including Coordination)	tbd				**$10,029.00** (Waukesha Co: $5,415.66 , Milwaukee Co: $4,613.34)
Completion of Phase 3	"Final Vendor Selection Scoring Matrix"	tbd				**$19,715.00** (Waukesha Co: $8,674.60, Milwaukee Co: $11,040.40)

Figure 4 – Milestone (Deliverables and Invoices) Tracking Table

Note: Neither the Simplified Project Schedule nor the Milestone tracking table include dates for the completion of activities related to the assistance to be given to the licensing and coordination of frequencies (part of Phase 2) nor to the tasks of assisting with RFP evaluation and selection (Phase 3) as the dates those dates for those activities are subject to the outcomes of the other activities of Phases 1 and 2, including decisions to be made based on the results of those Phases. Waukesha County, Milwaukee County, and CDX Wireless will establish schedules for these activities by the completion of the activities included in the Schedule and Milestone Table included above.

Project Communications: Meetings and Reports

To facilitate optimal project management and control, CDX Wireless shall prepare and facilitate, and Waukesha and Milwaukee Counties shall attend and participate in, attend Project Status Meetings. Additionally CDX Wireless shall develop and submit, and Waukesha and Milwaukee Counties shall approve, Project Status Reports.

Project Status Meetings

The Project Status Meetings are to be held no less frequently that on a bi-weekly (every other week) basis. The Project Managers may agree to hold such Meetings more frequently either regularly or on an as-needed basis. The Project Managers shall prepare the necessary materials (as identified below) for the meetings and they shall ensure the attendance of the necessary members of the Project Team.

The Project Status Meetings are to include discussions of the following topics:

- Accomplishments: A description of the major activities that have been completed since the prior Project Status Meeting.
- Project Schedule: A review of progress toward milestones, as compared to the agreed-to project schedule and agreement to adjustments to the completion dates for project milestones

- Project Issues: A discussion of situations, actions, problems, or questions that have arisen during the performance of the project and that require subsequent action before progress can continue toward the completion of a milestone. Discussion shall include description of the issue, suggestions for resolution, next actions to be taken, and timeframes for completion of agreed-to actions.
- Project Risks: A discussion of situations, actions, problems, or questions that have the potential to arise during the performance of the project that may cause the project to deviate from the plan by critically impacting cost, scope, or schedule; and that require management through planning and mitigation efforts. Discussion shall include description of the risk, analysis of its impact, suggestions for resolution including planning and mitigation, next actions to be taken, and timeframes for completion of agreed-to actions.
- Project Changes: A discussion of project alterations, desired by at least one party, to the activities or milestones of the project outside its original scope (and, potentially, cost). Discussion shall include an overview of

the requested change (including the scope and reason for the request), analysis of its impact (including changes to performance, schedule, and/or cost), next actions to be taken, and timeframes for completion of agreed-to actions.

- Financial Status: A discussion of project invoices and payments as well as of overall project budget issues.
- Immediate Work Plan: Agreement to the activities that are expected to be completed prior to the next Project Status Meeting.

Project Status Meetings may also include "compartmentalized" discussions of special topics, such as frequency licensing or site civil work, so long as such special discussions include a review of any or all Accomplishments, Schedule, Issues, Risks, Changes, Financials, and Work Plans related to that topic.

Project Status Reports

CDX Wireless shall record in writing the discussions and minutes from the Project Status Meetings and shall distribute such written records to Waukesha and Milwaukee Counties as a Project Status Report for review and approval. The Project Status Reports shall address the same subjects as are included in the Project Status Meetings, namely:

- Accomplishments
- Project Schedule: To include a summary table showing the following information for each milestone: Original Scheduled Completion Date, Revised Completion Date, Actual Completion Date (for completed milestones), Notes (short descriptions of relevant issues).
- Project Issues: To include a summary table showing the following for each identified project issue: Issue Identifier

(unique and numeric), Date Opened (or age), Issue Originator (name of individual that identified the issue), Issue Status (new, open, closed), Issue Description, Issue Action Plan, Issue Owner (name of individual responsible for the next action(s)), Forecasted Completion Date, Actual Completion Date (for issues that are closed).

- Project Risks: To include a summary table showing the following for each identified project risk: Risk Identifier (unique and numeric), Date Opened (or age), Risk Originator (name of individual that identified the risk), Risk Description (see below), Risk Priority (see below), Risk Action Plan (see below), Risk Owner (name of individual responsible for the next action(s)), Forecasted Completion Date, Actual Completion Date (for risks that are closed).

o Risk Descriptions are to be expressed as "(IF [Situation] by [Date] then [Consequence])". For example, "If all survey results are not received within two weeks, then the delivery of the Gap Analysis will be delayed." Risk Descriptions may also include identification of the root cause of the Risk, to the degree it is known.

o Risk Priority is to be expressed as the multiplication of: i) the Probability percentage (P%) of the risk's occurrence (to range for 100% for actual problems, to 90% for risks that are highly likely, 70% for risks that are likely, 50% for risks that are moderate likely, etc., and that shall be agreed to by the Project Managers) and ii) the Impact (I) of the risk should it occur (to range from 100 for a risk that would prevent a major project objective from being accomplished to 80 for a risk that would significantly change a project objective or that would significantly impact the

project's quality, cost, or schedule to 60 for a risk that would moderate impact an objective or the project's performance, etc.). In this way, the Risk Priority for a risk can be expressed as "P * I" and the Project Managers can agree to plan and manage he risk with the highest priority.

o The Risk Action Plan for shall be specific to each risk and shall following one of the four following strategies: i) Accept Risk: the project managers accept the risk, including its consequences, if it/they will not significantly impact the schedule, scope, or cost of the project; ii) Reject Risk: the project managers reject the risk if it is not relevant or significant to the success of the project; iii) Mitigate Risk: the project managers develop a plan to reduce or eliminate the risk, continually monitor the risk and any

identified residual risk and prepare a back-up (contingency) plan to address the impacts form the risk if it arises.

• Project Changes: To include a summary table showing the following for each identified project change: Change Request Number (unique and numeric), Date Opened (or age), Change Request Originator (name of individual that requested the change), Change Description (nature of the change that has been requested), Change Impact Summary (description of what aspects of project would change if request is and is not implemented), Change Owner (name of individual responsible for the next action(s)), Forecasted Completion Date, Actual Completion Date (for change requested that are completed).

Project Change Control

As identified in Section XIII of the Contract for Service, "All changes that are mutually agreed upon by and between the COUNTIES and the CONTRACTOR, including any increase or decrease in the amount of the CONTRACTOR'S compensation, shall be in writing and designated as written amendments to the Contract."

This section of this Project Management Plan describes the steps by which the Project Managers and Project Team Members can request changes and the processes for reviewing and approving or rejecting requested changes.

Change Control Process

The key objectives of this Change Control process are:

• To identify changes in scope, or other unplanned activity, in advance of their occurrence and control them

• To protect the integrity of milestone s that have been completed and approved

• To ensure that new tasks and other requested changes are justified and cost justifiable, and that affected milestones are identified and modified accordingly (newly baselined)

• To obtain authorization and contract (Agreement) modifications, if required, to proceed with the new tasks/changes and assign them to appropriate individuals to be completed

• To monitor the progress and cost of the changes

This change control process will apply to any change of project scope, unplanned activity, or the work on an unplanned milestone (i.e. any

task not explicitly within the agreed-to Scope of Work).

It is important to note that no project member is authorized to begin work on an activity or task that is not included in the Agreement or for which there has not been explicit approval of a Change Request following the exercise of this Project Change process.

The following table (Figure 2 - Project Change Control Process) defines the events and responsibilities in the Project Change Control process. During the Project Change Control process, the Change will continue to be discussed in Project Status Meetings and reported through Project Status Reports as described above.

Step	Responsibility	Action
1	Originator (any Project Team Member)	Requirement for new task/enhancement identified and documented on a Change Request (CR) form - see following. If possible, change analysis fields should also be completed. Pass to Project Manager for review. If Project Manager agrees with CR, it will be assigned to a Project Team Member.
2	CDX Wireless Project Manager	Assign a unique number to CR, log the request.
3	Assigned Project Team Member	Analyze impact to project of change including cost, scope, outcomes, and schedule.
4	Project Managers	Regularly review new CRs and allocate for further analysis. The Counties Project Managers may approve change (if analysis is complete), reject, or put it in a hold status.
5	Counties Project Managers	If deemed necessary appropriate by the County Project Manager, issue a Change Order to execute the Change and put it in force via a change to the Agreement.

Figure 2 - Project Change Control Process

Change Control Request Form

The following form shall be used to request (initiate), analyze (investigate), track, and record changes. Instructions for this form as are follows:

Section A - To be completed by the originator:

- Requester/ Originator

- Description of Change

- Reasons for Change, and Anticipated Benefits.

Section B - To be completed by the Project Office:

- CR Number (Change Request Number)

- Date Received

- Date Completed

- The date the last of the deliverables subject to change control was approved (signed-off)

Section C - Analysis of change (to be completed by the person analyzing the impact of the change):

- Allocated for analysis to person allocated to undertake analysis of change, if this has not been done

- Action required to implement the change

- Milestones affected (name and any applicable reference numbers)

- Impact to schedule

- Impact to cost (Note: estimated cost may be negative, if a change saves cost (e.g. by reducing planned scope))

- Impact to the outcome of a milestone or to a Project Objective

- Other impacts of change

Section D – Change Decision to completed by the Counties Project Managers

- Approved/rejection by signature authorizing/denying the change

- Approval/rejection date

- Notes regarding decision, including reasons for decision and/or impacts or next actions regarding Agreement, etc.

SECTION A [Originator]		SECTION B [Project Manager]	
Requester/Originator Name:		CR Number (ID):	
Origination Date:		Date Received:	
		Date Completed:	

Description of Change (what is the change being requested, what are the anticipated benefits if the change request, and what are the anticipated consequences if the change is rejected):

SECTION C – Analysis of Change

Allocated for Analysis To:	
Analysis Due:	
Change to Project Schedule:	
Change to Project Cost:	

Change to Project Objectives or Change in Performance of a Milestone :	
Other Impacts of Change:	

SECTION D: Change Decision and Actions					
Change Approved by:		Change Rejected by:		Decision Date:	
Notes Regarding Approval/ Reasons for Rejection (including next actions)					