

NARRATIVE: Pages 44-46
SCHEDULE: Figure 6-1

6.0 Implementation Plans

This section provides detailed migration plans for each of the two viable selected system designs. The migration plan includes the procurement method and an implementation schedule. We clearly outline a migration path for MERA agencies and the system upgrades that must be included. The implementation plan takes into consideration operational concerns and the need to ensure that uninterrupted voice radio service is provided during the transition.

AECOM has overseen the procurement and implementation of numerous communications projects. Some clients desire a hands-off approach where the project is under control of the Land Mobile Radio (LMR) vendor to deliver a turnkey radio system. Other clients prefer to expend the effort to manage the process, perhaps manage several vendors, and in the process, receive the radio system they wanted at significantly reduced cost. We believe that Marin County fits in the latter category, and with AECOM's help, can construct the recommended radio system in an affordable manner. The experience and expertise of a qualified communication consultant, like AECOM, can lead to significant cost savings and can dramatically improve the functionality and effectiveness of the system installed by the vendor.

Either of the two system designs presented here will meet the long term needs of the County. Ultimately, the choice will be determined based on operational feasibility, practical implementation limitations and cost. Our intent is that the implementation plans discussed here will assist the County in making this important decision. In Section 7, we provide an opinion of probable costs for each system design.

6.1 Critical Implementation Aspects

We have provided a summary of several important "critical implementation" aspects that should be considered during the implementation and procurement process. A majority of the recommendations in this section are "best practices" that we have developed as part of our process. Each of the following points applied to either of the system designs should be considered as the County implements either solution. Throughout this section, you will see our recommendations and we will highlight some of the value added by having an experienced consultant involved in the implementation process.

Preliminary System Design

The 700 MHz P25 Phase 2 system or the UHF T-Band P25 Phase 2 system described in Section 5 of this report are both viable preliminary system designs. AECOM has developed each of these system designs to validate the feasibility of a countywide simulcast and to provide site selection, connectivity and capacity recommendations based on our LMR radio system development experience. During the RFP process, the County should expect each vendor to provide their own solution and each vendor may make recommendations that differ from the System Design presented in this report. We encourage the County to use our system design as a baseline and any changes recommended by the vendor should be validated using the Marin County Project Team.

RFP Specification Writing

AECOM has developed dozens of RFP specifications and we can, upon request, assist the County with this process. AECOM can develop the technical specifications portion of the procurement documentation for either radio system design. State-of-the-art integrated wide-area radio systems are complex, and by necessity unique to each situation. Our functional/operational approach to specifications allow system proposers the latitude to design around their own proprietary configurations, while retaining the essential attributes and operational characteristics developed specifically for Marin County consistent with the County's overall telecommunications plan. Our process includes physical facilities requirements, evaluation criteria, draft specifications, vendor review process and the final specifications. We would encourage the County to ensure that these critical components are part of the specification process, regardless of who the County uses to develop the RFP Specification.

Radio Site EIS / EIR, Access and Development

Appendix C contains a summary of the EIS / EIR considerations for Marin County. We understand the unique circumstances and history of the existing MERA system implementation / approval process and we have provided sufficient detail to help the County account for the EIS / EIR considerations of either radio system design.

Dispatch Center Development

None of the existing consoles and dispatch center equipment is compatible with a P25 Phase 2 radio system. We have included the cost and timeline to upgrade these facilities. A detailed dispatch center assessment was not part of the scope of work for this project; however AECOM is able to assist the County in planning for this type of upgrade. We have decades of experience in helping agencies upgrade their dispatch centers.

Procurement and Negotiations

The Procurement Phase entails the period beginning with the issuance of the system specifications, and concludes with the signing of the contract between Marin County / MERA and the system supplier. The procurement process will have been defined prior to issuing the procurement documentation, and should be carefully and strictly followed in order to mitigate the risk of vendor protest. AECOM's process includes responding to vendor questions, an evaluation process that mitigates the risk of protest by unsuccessful vendor(s), a detailed technical evaluation of proposals received, a price evaluation of each proposal received, and an evaluation report. Finally, we will work with Marin County in the negotiation process for the selected vendor. Each of these components is critical in order for the contract to meet the needs of the County.

System Acceptance Testing

We recommend that actual test procedures be developed mutually between the selected vendor and Marin County. AECOM's process includes a thorough review and approval process for the test procedures that are aligned with the test plan requirements established in the Final Specifications. System testing procedures should be included in the Detailed Design Review and formal testing should be part of Staging and will continue in the field with complementary site and system tests that exercise and demonstrate all critical functions and properties of the Implemented System. We recommend that the County (or their representative) monitor and provide general oversight for acceptance testing, which will address four systems test areas: Coverage, Fixed Infrastructure, Interference, and Telecommunications Subsystem. It is essential that the infrastructure system tests be critically observed and that the County requires that the selected vendor to spot check specific equipment tests to establish consistency with tests done previously in the factory or the shop.

System Acceptance

The Acceptance Phase entails the period beginning with the system staging tests, including inspection of the installation at each site, and concludes with the acceptance of the project after cutover. The goal is that System Acceptance Tests demonstrate the initial Systems Attributes developed at the beginning of the project. System Acceptance will include staging tests, facility and infrastructure inspections, acceptance tests, thirty-day operational tests, a review of training plan, review of as-built drawings, and the reporting process.

Training

Training should include at least three distinct areas: Field user Training, Dispatcher / Operator Training, Administration Training, and Maintenance Training. The Field User Training should focus on making sure every radio user is trained on the proper use of the radio. Although digital P25 trunked radios are not overly complex, they may be slightly "different" from the existing MERA system, and offer many new features to the users. Training for field radio users should utilize a train-the-trainer approach. Trainers from each agency would attend this training and then the agency trainers will train all their personnel on all shifts. These trainers will then train new personnel as they are added, as well as provide refresher training.

Dispatcher Training: It is also important that dispatchers receive training on the new radio system. Formal user training for dispatchers will make the users knowledgeable and comfortable with their communications tools. Since new consoles will be utilized on the new radio system, dispatchers will need to be trained on the new features and

functionality, as well as on the new radio system itself. Also, if the dispatch centers are connected to the microwave system, they will need to learn the operation of a backup radio.

Vendor-provided training allows questions to be fully answered and explained, and can provide for a more thorough initial training. When every dispatcher receives training from the vendor, a thorough foundation is established for the dispatch operations. Subsequent dispatcher training for new personnel or for refresher training is then accomplished through agency-provided train-the-trainer. It is recommended that every dispatcher receive operator training. Operator training is conducted on-site on the agency's consoles. There should be two to three people per available console used for training. At a minimum, there should be three to four training sessions to accommodate all shifts and people's work schedules.

Administration Training: Administration and management of a P25 radio system is complex. A successful implementation of the radio system will require careful planning of operations at all levels. Radio System Administration Training is very important for the successful implementation of the system. It provides the administrators with the knowledge necessary for planning the operations of the system, as well as the knowledge of how to use the tools required for implementation, such as the database computers and radio programming. Since system-wide planning is important, Administration Training should be early in the implementation schedule. This allows the administrators to appropriately plan for the system as it is being built. It is recommended that this course be held at the factory where all the features and functionality can be demonstrated on a fully-functional system, since their own system may not be implemented. While travel expenses will be incurred, this expense is offset by having a satisfactory training experience. Furthermore, we recommend that robust System Administrator software be included in the RFP Specification.

Maintenance Training: Since the components of the P25 system will be very similar to the existing MERA trunked radio system, the maintenance training should focus on filling in the gaps and differences with the new system. Clearly, the benefits of a preventative maintenance program will be essential to keep the new system running dependably. Radio system maintenance courses can be two weeks in length for overall systems maintenance, with base station and mobile / portable maintenance course being typically one week.

System Migration

During the Implementation process, it is important to understand that the existing MERA system must remain active and fully functional through the process. In an earlier report, we highlighted the challenge this would present on the existing facilities. Since the existing MERA system will have to remain in place and operational during the build-out of the 700 MHz system, all sites must be capable, and have the physical space, to support UHF T-Band equipment for the existing system and for 700 MHz equipment for the new system. In addition, the microwave backbone and dispatch centers must support both systems simultaneously, as well. It will be important that the RFP Specification address this need.

In addition, the upgrade to UHF T-Band P25 Simulcast will also require additional equipment and antennas be installed in some shelters and on some of the existing towers. It will be important that the physical constraints at each site are considered. If it is determined that the sites and / or towers do not have the physical space for equipment to support both systems during the cutover, then the County will have to work with the selected vendor in developing a solution that will address this critical need. In addition, some of the dispatch centers may not have the physical space to accommodate both systems during the cutover. Detailed site surveys and dispatch surveys were beyond the scope of this project, but should be conducted if the County decides to move forward with either radio system design discussed in this report.

6.2 700 MHz P25 Phase 2 Option

This section provides a comprehensive migration plan for a countywide 700 MHz P25 Phase 2 standard-based digital trunking system. The 700 MHz P25 Phase 2 system option is described in detail in Section 5.1 of this report. As we begin to discuss the implementation process, it is important to understand some of the procurement implementations offered by P25. The P25 standard is a long awaited breakthrough because it introduces competition in the radio

ID	Task Name	Resource Names	Duration	Start	Finish	Year											
						2011	2012		2013		2014						
						H2	H1	H2	H1	H2	H1	H2	H1	H2			
0	AECOM Project Work Plan		971.01 days	Mon 1/3/11	Tue 9/23/14												
1	Notice to Proceed	Marin	1 day	Mon 1/3/11	Mon 1/3/11												
2	Specification Initialization Letter	AECOM	1 day	Tue 1/4/11	Tue 1/4/11												
3	Licensing		270 days	Wed 1/5/11	Tue 1/17/12												
4	License Application Preparation	AECOM	30 days	Wed 1/5/11	Tue 2/15/11												
5	License Approval	FCC	240 days	Wed 2/16/11	Tue 1/17/12												
6	Radio		286 days	Wed 1/5/11	Wed 2/8/12												
7	Phase 2 Specifications		109 days	Wed 1/5/11	Mon 6/6/11												
8	Draft Radio Specification		103 days	Wed 1/5/11	Fri 5/27/11												
9	Rough-Out Meeting	Meeting	1 day	Wed 1/5/11	Wed 1/5/11												
10	Equipment Specifications	AECOM,Marin	29 days	Wed 1/5/11	Mon 2/14/11												
11	Propagation Finalization	AECOM	10 days	Thu 1/6/11	Wed 1/19/11												
12	Sample Terms & Conditions	AECOM	3 days	Thu 1/13/11	Mon 1/17/11												
13	Terms & Conditions	Marin	46 days	Tue 1/18/11	Tue 3/22/11												
14	Final System Design	AECOM	10 days	Thu 1/20/11	Wed 2/2/11												
15	Evaluation Criteria	AECOM	5 days	Wed 3/23/11	Tue 3/29/11												
16	Non-Fixed Equipment Finalization	Marin	20 days	Wed 2/2/11	Tue 3/1/11												
17	Vendor Pre-Qualifications	AECOM	8 days	Thu 2/24/11	Mon 3/7/11												
18	System Service Specifications	AECOM	39 days	Wed 2/2/11	Mon 3/28/11												
19	Cost Sheet Preparation	AECOM	20 days	Tue 3/1/11	Mon 3/28/11												
20	Radio Draft Assembly	AECOM	2 days	Wed 3/30/11	Thu 3/31/11												
21	Vendor Invitation Letter	Marin	11 days	Tue 3/8/11	Tue 3/22/11												
22	Radio PM Review	AECOM	3 days	Fri 4/1/11	Tue 4/5/11												
23	Radio Technical Edit	AECOM	5 days	Wed 4/6/11	Tue 4/12/11												
24	Radio - Finalize Draft Specifications	AECOM	20 days	Wed 4/13/11	Tue 5/10/11												
25	Radio - Publish Draft Specifications	AECOM	3 days	Wed 5/11/11	Fri 5/13/11												
26	Radio - Proposer Review	Proposer	10 days	Mon 5/16/11	Fri 5/27/11												
27	Radio - Client Review / Approval	Marin	10 days	Mon 5/16/11	Fri 5/27/11												
28	Final Specifications		6 days	Mon 5/30/11	Mon 6/6/11												
29	Radio - Finalize Document	AECOM	3 days	Mon 5/30/11	Wed 6/1/11												
30	Radio - Publish Final Specifications	AECOM	2 days	Thu 6/2/11	Fri 6/3/11												
31	Release Radio RFP	Marin	1 day	Mon 6/6/11	Mon 6/6/11												
32	End Phase 2A Radio		0 days	Mon 6/6/11	Mon 6/6/11												
33	Phase 3 Procurement		177 days	Tue 6/7/11	Wed 2/8/12												
34	Radio - Procurement Initialization Letter	AECOM	2 days	Tue 6/7/11	Wed 6/8/11												

Figure 6-1
700MHz P 25 Implementation Schedule

ID	Task Name	Resource Names	Duration	Start	Finish	2011		2012		2013		2014	
						H1	H2	H1	H2	H1	H2	H1	H2
35	Proposal Preparation	Proposer	34 days	Tue 6/7/11	Fri 7/22/11								
36	Pre-Proposal Conference	AECOM	4 days	Tue 6/21/11	Fri 6/24/11								
37	Addenda	AECOM	9 days	Mon 6/27/11	Thu 7/7/11								
38	Technical Evaluation		36 days	Mon 7/25/11	Mon 9/12/11								
39	Technical Proposal Opening	Marin	1 day	Mon 7/25/11	Mon 7/25/11								
40	First Pass Evaluation	AECOM/Marin	15 days	Tue 7/26/11	Mon 8/15/11								
41	Request Clarifications	AECOM	5 days	Tue 8/16/11	Mon 8/22/11								
42	Clarification Response	Proposer	5 days	Tue 8/23/11	Mon 8/29/11								
43	Final Technical Evaluation	AECOM/Marin	5 days	Tue 8/30/11	Mon 9/5/11								
44	Evaluation Team Meeting	Meeting	5 days	Tue 9/6/11	Mon 9/12/11								
45	Proposer Presentation	Proposer	5 days	Tue 9/6/11	Mon 9/12/11								
46	Cost Evaluation		6 days	Tue 9/13/11	Tue 9/20/11								
47	Cost Proposal Opening	Marin	1 day	Tue 9/13/11	Tue 9/13/11								
48	Cost Evaluation	AECOM/Marin	5 days	Wed 9/14/11	Tue 9/20/11								
49	Recommendations	AECOM	10 days	Wed 9/21/11	Tue 10/4/11								
50	Executive Presentation	Meeting	1 day	Wed 10/5/11	Wed 10/5/11								
51	Negotiations	Marin	45 days	Thu 10/6/11	Wed 12/7/11								
52	Approve Contract	Marin	6 days	Thu 12/8/11	Wed 2/8/12								
53	Contract Sign	Marin	6 days	Thu 12/8/11	Tue 2/7/12								
54	End Phase 3A Radio		1 day	Wed 2/8/12	Wed 2/8/12								
55	Microwave		327.01 days	Tue 6/7/11	Thu 9/6/12								
56	Phase 2 - Specifications		250.01 days	Tue 6/7/11	Tue 5/22/12								
57	Draft Specifications		81 days	Tue 6/7/11	Tue 9/27/11								
58	Microwave Specification	AECOM	53 days	Tue 6/7/11	Thu 8/18/11								
59	MW Draft Assembly	AECOM	2 days	Fri 8/19/11	Mon 8/22/11								
60	MW - PM Review	AECOM	3 days	Tue 8/23/11	Thu 8/25/11								
61	MW Technical Edit	AECOM	5 days	Fri 8/26/11	Thu 9/1/11								
62	MW Finalize Draft Specifications	AECOM	5 days	Fri 9/2/11	Thu 9/8/11								
63	MW Publish Draft Specs	AECOM	3 days	Fri 9/9/11	Tue 9/13/11								
64	MW - Client Review/Approval	Marin	10 days	Wed 9/14/11	Tue 9/27/11								
65	Final Specifications		164.01 days	Wed 10/5/11	Tue 5/22/12								
66	Finalize Microwave RFP	AECOM	55 days	Wed 10/5/11	Tue 12/20/11								
67	Publish Final MW RFP	AECOM	9 days	Wed 12/21/11	Mon 3/5/12								
68	Release RFP Microwave	Marin	4 days	Tue 3/6/12	Thu 5/17/12								
69	End Phase 2 B MW		3 days	Thu 5/17/12	Tue 5/22/12								

Figure 6-1
700MHz P 25 Implementation Schedule

ID	Task Name	Resource Names	Duration	Start	Finish	2011		2012		2013		2014	
						H2	H1	H1	H2	H1	H2	H1	H2
70	Phase 3 - Procurement		80 days	Thu 5/17/12	Thu 9/6/12								
71	MW Procurement Initial Letter	AECOM	11 days	Thu 5/17/12	Fri 6/1/12								
72	Proposal Prep	Microwave Vendor	29 days	Thu 5/17/12	Wed 6/27/12								
73	MW Pre-Proposal Conference	AECOM/Marin	1 day	Fri 6/1/12	Mon 6/4/12								
74	MW Addenda	AECOM	7 days	Mon 6/4/12	Wed 6/13/12								
75	Technical Evaluation		21 days	Wed 6/27/12	Thu 7/26/12								
76	MW Proposal Opening	Marin	1 day	Wed 6/27/12	Thu 6/28/12								
77	Technical Evaluation	AECOM/Marin	15 days	Thu 6/28/12	Thu 7/19/12								
78	Evaluation Team Meeting	Meeting	5 days	Thu 7/19/12	Thu 7/26/12								
79	Cost Evaluation		5 days	Thu 7/26/12	Thu 8/2/12								
80	Cost and Proposal Opening	Marin	1 day	Thu 7/26/12	Fri 7/27/12								
81	Cost Evaluation	AECOM/Marin	5 days	Thu 7/26/12	Thu 8/2/12								
82	Recommendations	AECOM	13 days	Thu 8/2/12	Tue 8/21/12								
83	Negotiations	AECOM/Marin	10 days	Tue 8/21/12	Tue 9/4/12								
84	Microwave Contract Sign	Marin	2 days	Tue 9/4/12	Thu 9/6/12								
85	End Phase 3B MW		0 days	Thu 9/6/12	Thu 9/6/12								
86	Physical Facilities		117 days	Tue 5/22/12	Thu 11/1/12								
87	Phase 2 - Specifications		117 days	Tue 5/22/12	Thu 11/1/12								
88	Phy Fac Draft Specification		30 days	Tue 5/22/12	Tue 7/3/12								
89	Physical Facilities Specifications	AECOM	7 days	Tue 5/22/12	Thu 5/31/12								
90	Phy Fac Draft Assembly	AECOM	2 days	Thu 5/31/12	Mon 6/4/12								
91	Phy Fac PM Review	AECOM	2 days	Mon 6/4/12	Wed 6/6/12								
92	Phy Fac Technical Edit	AECOM	3 days	Wed 6/6/12	Mon 6/11/12								
93	Phy Fac Finalize Draft Specifications	AECOM	3 days	Mon 6/11/12	Thu 6/14/12								
94	Phy Fac Publish Draft Specs	AECOM	3 days	Thu 6/14/12	Tue 6/19/12								
95	Phy Fac - Client Review/Approval	Marin	10 days	Tue 6/19/12	Tue 7/3/12								
96	Phy Fac Final Specification		12 days	Tue 7/3/12	Thu 7/19/12								
97	Finalize Facility RFP	AECOM	10 days	Tue 7/3/12	Tue 7/17/12								
98	Publish Final Facility Specs	AECOM	1 day	Tue 7/17/12	Wed 7/18/12								
99	Release Facility RFP	Marin	1 day	Wed 7/18/12	Thu 7/19/12								
100	End Phase 2D Phy Fac		0 days	Wed 7/18/12	Wed 7/18/12								
101	Phase 3 - Procurement		36 days	Thu 7/19/12	Fri 9/7/12								
102	Procurement Initial Letter	AECOM	5 days	Thu 7/19/12	Thu 7/26/12								
103	Proposal Prep	Facility Vendor	30 days	Thu 7/26/12	Thu 9/6/12								
104	Pre-Proposal Conference	Meeting	10 days	Thu 7/19/12	Thu 8/2/12								

Figure 6-1
700MHz P 25 Implementation Schedule

ID	Task Name	Resource Names	Duration	Start	Finish	2011		2012		2013		2014	
						H1	H2	H1	H2	H1	H2	H1	H2
105	Addenda	AECOM	10 days	Thu 8/2/12	Thu 8/16/12								
106	Proposed Opening	Marin	1 day	Thu 9/6/12	Fri 9/7/12								
107	Technical Evaluation		20 days	Fri 9/7/12	Fri 10/5/12								
108	Tech Evaluation	AECOM/Marin	15 days	Fri 9/7/12	Fri 9/28/12								
109	Evaluation Team Meeting	Meeting	5 days	Fri 9/28/12	Fri 10/5/12								
110	Cost Evaluation	AECOM/Marin	1 day	Fri 10/5/12	Mon 10/8/12								
111	Cost Proposal Opening & Evaluation	AECOM/Marin	1 day	Mon 10/8/12	Tue 10/9/12								
112	Recommendations	AECOM	5 days	Tue 10/9/12	Tue 10/16/12								
113	Negotiations	AECOM/Marin	10 days	Tue 10/16/12	Tue 10/30/12								
114	Physical Facilities Contract Sign	Marin	2 days	Tue 10/30/12	Thu 11/1/12								
115	End Phase 3D Phy Fac		0 days	Thu 11/1/12	Thu 11/1/12								
116	Phase 4 - Implementation & Acceptance		493 days	Thu 11/1/12	Tue 9/23/14								
117	DESIGN REVIEW		61 days	Thu 11/1/12	Fri 1/25/13								
118	Design Materials	Contractors	60 days	Thu 11/1/12	Thu 1/24/13								
119	Implementation Plan	Contractors	10 days	Thu 11/1/12	Thu 11/15/12								
120	Finalize Detailed Design	rin/AECOM/Contractors	40 days	Thu 11/15/12	Thu 1/10/13								
121	DDR Meeting	rin/AECOM/Contractors	1 day	Thu 1/10/13	Fri 1/11/13								
122	DDR Approval	AECOM/Marin	10 days	Fri 1/11/13	Fri 1/25/13								
123	TEST PLAN		230 days	Fri 1/25/13	Fri 12/13/13								
124	Staging Test Plan Submittal	Contractors	40 days	Fri 1/25/13	Fri 3/22/13								
125	Staging Test Plans Approval	AECOM/Marin	20 days	Fri 3/22/13	Fri 4/19/13								
126	Acceptance Test Plan Submittal	Contractors	40 days	Fri 8/23/13	Fri 10/18/13								
127	Acceptance Test Plan Approval	AECOM/Marin	40 days	Fri 10/18/13	Fri 12/13/13								
128	RADIO		295 days	Fri 1/25/13	Fri 3/14/14								
129	Manufacture Radio System	Contractors	60 days	Fri 1/25/13	Fri 4/19/13								
130	Stage Radio System	rin/AECOM/Contractors	20 days	Fri 7/26/13	Fri 8/23/13								
131	Ship Non-Fixed Equipment	Contractors	65 days	Fri 8/23/13	Fri 11/22/13								
132	Ship Infrastructure	Contractors	10 days	Fri 11/22/13	Fri 12/6/13								
133	Non-Fixed Equipment Installation	Contractors	75 days	Fri 11/22/13	Fri 3/7/14								
134	Infrastructure Installation	Contractors	30 days	Fri 12/6/13	Fri 1/17/14								
135	Final Inspection	AECOM	20 days	Fri 1/17/14	Fri 2/14/14								
136	Optimization	Contractors	30 days	Fri 1/17/14	Fri 2/28/14								
137	Telecom Test	Contractors	5 days	Fri 2/28/14	Fri 3/7/14								
138	Punch List Update	AECOM	5 days	Fri 2/14/14	Fri 2/21/14								
139	Pre-Test Punch List Resolution	Contractors	15 days	Fri 2/21/14	Fri 3/14/14								

Figure 6-1
700MHz P 25 Implementation Schedule

ID	Task Name	Resource Names	Duration	Start	Finish	2011		2012		2013		2014	
						H2	H1	H1	H2	H1	H2	H1	H2
140	MICROWAVE		120 days	Fri 1/25/13	Fri 7/12/13								
141	Microwave Path Survey	Contractors	40 days	Fri 1/25/13	Fri 3/22/13								
142	Manufacture Microwave	Contractors	60 days	Fri 3/22/13	Fri 6/14/13								
143	Microwave Staging Test Plan Submittal	Contractors	20 days	Fri 3/22/13	Fri 4/19/13								
144	Microwave Staging Test Plan Approval	AECOM/Marin	10 days	Fri 4/19/13	Fri 5/3/13								
145	Microwave Staging	rin/AECOM/Contractors	20 days	Fri 6/14/13	Fri 7/12/13								
146	PHYSICAL FACILITIES		225 days	Fri 1/25/13	Fri 12/6/13								
147	Site Acquisition	Marin	130 days	Fri 1/25/13	Fri 7/26/13								
148	Site Development	Contractors	40 days	Fri 7/26/13	Fri 9/20/13								
149	Tower Procurement	Contractors	28 days	Fri 7/26/13	Wed 9/4/13								
150	Building Implementation	Contractors	45 days	Fri 9/20/13	Fri 11/22/13								
151	Tower Implementation	Contractors	45 days	Fri 9/20/13	Fri 11/22/13								
152	Facility Inspection	AECOM	10 days	Fri 11/22/13	Fri 12/6/13								
153	TRAINING		150 days	Fri 8/23/13	Fri 3/21/14								
154	System Administrative Support Training	Contractors	10 days	Fri 8/23/13	Fri 9/6/13								
155	Maintenance Training	Contractors	45 days	Fri 1/17/14	Fri 3/21/14								
156	FINAL TEST		70 days	Fri 3/14/14	Fri 6/20/14								
157	Interference Test	Contractors	5 days	Fri 3/14/14	Fri 3/21/14								
158	Infrastructure Test	Contractors/AECOM	10 days	Fri 3/21/14	Fri 4/4/14								
159	Operations Training	Contractors	10 days	Fri 4/4/14	Fri 4/18/14								
160	Punch List Resolution	Contractors	40 days	Fri 4/4/14	Fri 5/30/14								
161	Coverage Test	Contractors/AECOM	15 days	Fri 4/4/14	Fri 4/25/14								
162	User Training	Contractors	15 days	Fri 4/4/14	Fri 4/25/14								
163	Test Report Submittal	Contractors	20 days	Fri 4/25/14	Fri 5/23/14								
164	Test Report Approval	AECOM	10 days	Fri 5/23/14	Fri 6/6/14								
165	System Maintenance Manual Submittal	Contractors	10 days	Fri 4/25/14	Fri 5/9/14								
166	System Maintenance Manual Review	AECOM	10 days	Fri 5/9/14	Fri 5/23/14								
167	As Built Document Submittal	Contractors	30 days	Fri 4/25/14	Fri 6/6/14								
168	As Built Document Review	AECOM	10 days	Fri 6/6/14	Fri 6/20/14								
169	Burn In Test	Contractors	20 days	Fri 4/25/14	Fri 5/23/14								
170	CUTOVER		87 days	Fri 5/23/14	Tue 9/23/14								
171	Cutover Recommendation	AECOM	3 days	Fri 5/23/14	Wed 5/28/14								
172	Cutover	Contractors	10 days	Wed 5/28/14	Wed 6/11/14								
173	Final System Acceptance	AECOM	2 days	Fri 6/20/14	Tue 6/24/14								
174	System Commissioning	Marin	65 days	Tue 6/24/14	Tue 9/23/14								