

**Report to
The Legislative Finance Committee**

Status Review

**Statewide Interoperable Radio
Communications Internet Transport System
(SIRCITS)**

May 2012

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Status Review

Debra Goeller, IT Consultant

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OBJECTIVES:

At the direction of the LFC, a limited status review of the Department of Information Technology's Statewide Interoperable Radio Communications Internet Transport System (SIRCITS) project was conducted in May 2012. The review consisted of the following objectives:

- Identify all funding sources and expenditures and identify risks for costs over budget.
- Assess the project's adherence to required timelines for milestones and deliverables.
- Assess overall progress and potential risks to achieving stated project goals for New Mexico.
- Assess the quality of the contracted IV&V services for the project.

EXECUTIVE SUMMARY:

DoIT was awarded an ARRA (American Recovery and Reinvestment Act) grant in August 2010 through the Broadband Technology Opportunities Program (BTOP). The revenue sources include \$38,699,997 from federal sources, a state cash match of \$5,399,999, and an in-kind match of \$11,600,004. The total project is \$55,700,000.

SIRCITS is fundamentally a construction and installation project consisting of telecommunications, radio kits, backup batteries, generators, shelters and towers. The SIRCITS project has required environmental assessments, land-use leases or agreements, and engineering site designs. Construction and installation of equipment began in April and will continue throughout 2012.

The project team was re-organized in April 2012 to improve project management and the project has since been on schedule with procurement, delivery and construction of the Digital Microwave upgrade.

Risks to the Digital Microwave project are primarily external. Catastrophic events such as fire or flooding can result in blocked access to remote sites and delay the progress of the project.

The National Telecommunication and Information Administration (NTIA) has delayed equipment procurements for the Broadband 700 MHz pilot between Albuquerque and Santa Fe. Until the First Responder Network Authority (FirstNet) is established (followed by an advisory board which will oversee the national operability standards for communications between first responders on a national level), the funding authority has requested that states awarded grant money limit activities to design and site acquisitions. DoIT is looking toward November or December 2012 for resolution on these issues.

Not included in the original grant or project scope is funding for further needs assessment and analysis for the modernization of Land-to-Mobile radio (LMR) equipment for public safety entities; DoIT received a \$1,500,000 general fund appropriation for FY13.

POD is the Independent Validation and Verification (IV&V) Contractor. To date, POD has issued four reports that track the evolution of the project. Project management, scheduling, procurement, deliverables, documentation and executive involvement have all been included in detailed IV&V reports to DoIT. POD has identified problems, made recommendations, and documented the solutions DoIT implemented to address project concerns.

Findings:

SIRCITS has benefited from executive level support. Over the course of the project, the project team was able to address scope, schedule, budget and IV&V-identified issues on a timely basis. The overall trend of SIRCITS is stable, however at one 90-day reporting period, project issues required executive intervention. The project was reorganized in April 2012 to strengthen the project management team as the implementation phase began. Critical milestones and contractor deliverables required an improved task-oriented management approach. The project is now on course and the Digital Microwave Upgrade is “under construction” in several locations.

The nature of this project is a multifaceted multi-location construction effort. Implementation requires environmental assessments, construction management, engineers, telecommunication experts, and a massive coordination effort, yet DoIT is confident that the project will stay on course (excluding any catastrophic event). All indications are that this project will be completed within the project schedule estimates.

Background:

DoIT applied to the Broadband Technology Opportunities Program (BTOP) for a grant to complete upgrades and service enhancements to New Mexico's 626 -mile Statewide Interoperable Radio Communications Internet Transport System. (SIRCITS). The grant includes two aspects of a three-track modernization effort.

- **DIGITAL MICROWARE UPGRADE (78% funded by BTOP Grant):**
Legacy analog equipment at 59 existing public safety system sites will be upgraded or replaced with high-capacity broadband digital telecommunications equipment. Replacement towers will be erected at 20 of these sites, some of which will also require new communications and/or generator shelters. This upgrade will expand the capacity of the network and create a middle mile backbone that can be used to backhaul broadband traffic throughout the state, including remote, hard-to-access areas.
- **PUBLIC-SAFETY BROADBAND 700 MHz PILOT (22% funded by BTOP Grant)**
Grant funds will also be used to establish a 4G 700 MHz long-term evolution (LTE) wireless mobile communications system in Albuquerque and Santa Fe. A total of 13 sites in Albuquerque and Santa Fe will be equipped with 700 MHz radios, antennas, and related network equipment needed to provide mobile 4G communications. This component will enable **mobile** broadband interoperability between state, county, and local public safety entities.

The third tack of modernization is not included in the grant, but is funded by general funds for initial analysis and needs assessment.

- **GAP Analysis for Land-to-Mobile Radios (general fund 2012)** Needs analysis and assessment for Modernization and augmentation of Land-to-Mobile "push-to-talk" hand held Radio equipment (LMR) that serves law enforcement and emergency management agencies on a state and local level. The operation budget and project plan will begin in the upcoming fiscal year.

Revenue Sources and Budget:

DoIT was awarded a three-year Broadband Technology Opportunities Program Grant (BTOP) under the National Telecommunication and Information Administration (NTIA) in August 2010 for \$38,699,997. The grant identifies funding for 1) the Digital Microwave Tower / wireless network upgrade; and 2) the pilot between Albuquerque and Santa Fe to install and implement 700 MHz systems that meet Federal safety requirements. The grant required that the state's share would total \$17,000,003. Which has been identified as a state cash match of \$5,399,999, and in-kind state match of \$11,600,004. (**Appendix A: Grant Notification Letter**)

The in-kind match includes \$4,265,539 of which was re-appropriated in 2010, Special Session. The original appropriation was to continue telecommunication infrastructure in the Southeast quadrant of New Mexico. The project was rolled into the scope of the SIRCITS project.

The third aspect of the project is not grant funded. The state has funded a GAP analysis (feasibility and needs assessment) to modernize land-to-mobile communications equipment for first responders and emergency services agencies. These funds were appropriated during the 2012 Legislative Session for \$1,500,000.

On May 22, 2011 DoIT requested the first project certification and release of \$7,175,000. The certification included project initiation and planning.

On January 18, 2012 DoIT requested a second certification and release of \$25,335,000. Phase two includes the planning and implementation of the Digital Microwave upgrade.

The LTE pilot between Santa Fe and Albuquerque has had some initial work performed, but equipment purchasing has been suspended at the direction of the National Telecommunications and Information Administration (NTIA) until a First Responder Network Authority (FirstNet) is established, followed by the creation of a public-safety advisory committee. This national effort will establish the relationships and partnerships between states and federal users, as well as the operability between vendors.

BTOP Grant Revenues				
Revenue Source	Amount	1st Certification	2nd Certification	Remaining Appropriation not certified
BTOP Grant	38,699,997	7,175,000	25,335,000	6,189,997*
State Cash Match	5,399,999			
In-Kind Match	11,600,004			
	55,700,000	7,175,000	25,335,000	

*Remaining grant allocation for LTE

Budget	FY 10 & Prior	FY11	FY12	FY13	Fy14 & After	TOTALS
Staff Internal			218,124	436,248	145,395	799,767
Consulting Services		889,697	1,000,000	8,389,997		10,279,694
Hardware			16,000,000	7,000,000		23,000,000
Software						
Other costs		20,535	4,000,000	6,000,000		10,020,535
In-kind	11,600,004					11,600,004
Total	11,600,004	910,232	21,218,124	21,826,245	145,395	55,700,000

Timelines, Milestones and Deliverables

Deliverables	Budget	Due Date	Project Phase
Hire Grant Management staff: Principal Investigator – Darryl Ackley Grant Administrator – Irene Sanchez Technical PM – Mike Neitzey Environmental Consultants - Complete RFP for Towers	\$1,250,000	Complete	Initiation
Execute contracts in five regions for: a) Contractor Project Management, and b) site and systems design and Planning Legal Services	\$7,175,000 (includes \$1,250,000 from previous certification)	Complete	Planning
Complete upgrade of identified tower sites and 155mb backhaul	\$27,674,996	02/2013	Construction
Deploy LTE in Santa Fe and Albuquerque	\$8,000,000	TBD	Construct

Digital Microwave Status:

Project Initiation:

The Grant management staff, including the Principal Investigator/Grant Administrator, Technical Project Manager, and Environmental engineers were hired during the first initiation phases of the project.

The RFP for Digital Microwave tower upgrade was completed and awarded to suppliers of equipment and to Installation contractors.

Project Planning:

DoIT completed an environmental assessment for this project in November 2011. The National Telecommunications and Information Administration (NTIA) reviewed the assessment and determined it is adequate and sufficient. NTIA issued a Finding Of No Significant Impact (FONSI) on December 5, 2011. Based on the review and finding, DoIT was able to proceed with project planning, design, construction and implementation.

The RFP for the Digital Microwave Upgrade was developed into three phases: Design, Construction, and Implementation. Each phase predetermines the level of effort and specific deliverables for each region of the state as well as individual tower requirements. In order to determine the construction costs the design phase had to be completed. Once the design scope was known, each construction site was then developed. Based on the construction details, equipment could then be configured and ordered. Planned amendments to the contracts are based on the progressive knowledge of each phase of design, construction, and implementation.

In addition to the environmental assessments, DoIT undertook a review of all leases for the placement of towers across the state. The towers are private and public lands requiring leases, memorandum of understanding, right-of-way, special use permits, or sharing agreements. Many sites needed to be authorized and/or negotiated.

- Eighty-seven percent (87%) of the leases do not have significant issues; minor changes may be required.
- Ten percent (10%) have some changes such as indemnity clauses for the US Forest Service. The DoIT internal legal team is addressing these concerns.
- Three percent (3%), two sites Comanche Hill and ABQ NOAA. NOAA is requiring a letter from the City of Albuquerque giving DoIT permission to build. This letter has not yet been received.

The table below identifies the lessors and type of lease agreements.

Digital Microwave sites and lease agreements

Site No.	Site Name	Lessor	Agreement	Site No.	Site Name	Lessor	Agreement
1	Alamogordo SP	SP		31	Las Vegas Air	City LV Tri-State	Lease
2	Albuq. NOAA	Nat'l Oceanic		32	Las Vegas RCB	DOT	Lease
3	Albuq. RCB	DOT	MOU	33	Las Vegas SP 2 (New)	SP	MOU
4	Albuq. SP	SP		34	Little Florida	Tri-State	Share Agmt
5	Apache Springs	SLO	Lease	35	Maljamar	SLO	Lease
6	Benson Ridge	Forest S.	Lease	36	Miami Mesa	Springer Elec Tri-State	Lease
7	Bernal (Starvation Peak)	Private Tri-State	Lease	37	Milan HD	DOT	Lease
8	Blanco Trading Post	Tri-State	Share Agmt	38	Moon Ranch	American Tower	Lease
9	Black Mountain	Forest S.	Lease	39	Palomas	Beasley	Lease
10	Capilla Peak	Forest S. Tri-State	Share Agmt	40	Rabbit	NM G&F	Lease
11	Carlsbad East	BLM	Lease	41	Raton SP	SP	MOU
12	Carlsbad Living Desert	Living Desert	MOU	42	Rio Puerco	Tri-State	
13	Cathey Ridge	Forest S.	Lease	43	Roswell HD	DOT	Lease
14	Cedar Point	BLM	Right-of-Way	44	Roy	Ebell	Lease
15	Cedro Peak	Forest S.	Special Use Permit	45	San Antonio Mountain	Forest S Tri-State	Lease
16	Cerro Pelon	Forest S.	Special Use Permit	46	Sandia Crest	Forest S Tri-State	Lease
17	Claud	Pipken	MOU	47	Santa Fe RCB	SONM GSD PCD	Space Assignment Understanding
18	Clayton HD Yard	DOT	Lease	48	Sierra Grande	DOT Tri-State	Right-of-Way
19	Comanche Hill	DOI		49	Socorro SP	Forest S.	MOU
20	Coyote West	Forest S.	Special Use Permit	50	Socorro Mountain	SLO	Lease
21	Elida	SLO	Lease	51	Socorro SP	SP	MOU
22	Espanola SP	SP	MOU	52	South Mesa	BLM	Right-of-Way
23	Eureka	Forest S.	Lease	53	Taos SP	SP	MOU
24	Farmington SP	SP	Right-of-way	54	Taos Sub	Tri-State	Share Agmt
25	Gallinas	Forest S.	Lease	55	Tesuque Peak	Forest S Tri-State	Lease
26	Gila Regional Med Center		MOU	56	Touch Me Not	Tri-State	Share Agmt
27	High Lonesome	BLM	Right-of-Way	57	Tucumcari SP	SP	MOU
28	Huerfano Mesa	BLM	Right-of-Way	58	Turkey Mountain	Union Land & Grazing Tri-State	Lease
29	La Mosca	Forest S.	Lease	59	West Mesa	DOT	Permit Agmt
30	Las Cruces SP (New)	SP	MOU				

Project Design

The design and implementation contractors are Crestino, TowerComm, and AVIAT. Feasibility analysis, Radio Frequency (RF) requirements and site design has been completed at all sites. Any minor changes or adjustments that may occur will be handled through normal business processes.

The site designs have identified:

- Upgrading or replacing existing analog equipment with digital telecommunications
- Replacing towers at 29 of the 59 existing tower sites
- Installing one new digital microwave antennas at 47 existing tower sites
- Installing one new digital microwave radios at 48 existing tower sites
- Installing a communications shelter at 25 existing sites
- Installing a generator shelter at 28 existing sites
- Installing heating, ventilating, and air conditioning systems at 2 sites

The contracts were developed in three phases: Design, Implementation, and Construction. A **base** contract was established for the design effort of each site. The second phase, **Implementation**, was added as an amendment for each site detailing engineering and equipment necessary for each site. A second amendment was added to cover the **construction** for those sites. Each contract for the Base, Implementation and Construction contractor is amended with specific detailed site-specific scope and deliverables.

Price agreements were established for those vendors that supplied equipment for the project. These price agreements include telecommunications equipment, digital microwave radios, antennas, towers, shelters, and generators, heating and cooling systems.

Project Contractors and Price Agreements

Contractor	Purpose	Amount	Amendments	
Towner Services				
	Environmental Assessments	\$202,898.75		
	Environmental Assessments	\$205,627.25		
	Design, Walkthrough, Inspection	\$225,984.00		
Catalano & Plache, PLC	Legal Services	\$180,000.00		
POD	IV&V Sept 2011	\$82,111.07		
	IV&V Jan 2012		\$76175.33	
AVIAT				
	Northeast Base Contract	\$544,274.29		
	Northeast Adm. FCC Lic Coord.		\$153,874.62	
	Northeast Implementation		\$1,021,208.52	
	Northeast Construction		\$2,756,875.77	
	Southeast Base	315,733.69		
	Southeast Construction		486,345.04	
	Southeast Construction		1,242,726.02	
Crestino				
	Environmental Assessments	\$204,156.00		
	Metro Base Contract	\$102,666.50		
	Metro Construction		\$573,217.62	
	Southwest Base Contract	86,359.70		
	Southwest Construction		\$481,970.82	
INX/Presido	Equip, network design, testing, implementation	\$898,880.25		
Cisco	Network Equip 59 Sites	Price Agreement		
Cummings	24 Generators	Price Agreement		
NGH	33 Backup Battery Systems	Price Agreement		
Sabre	25 Towers	Price Agreement		
TowerComm	Base Contract	476,789.04		
	Construction Metro / Southwest		722,036.00	
	Construction Northwest		4,149,998.00	

Project Construction:

Construction has begun at the following sites:

- Las Vegas State Police
- Santa Fe RCB
- Roswell HD
- Milan (initial walkthrough)
- Sandia Crest (initial walkthrough)

Construction Contractors:

TowerComm:

TowerComm is a 20-year veteran of wireless and broadcast tower services whose core business is network and construction services, including new site builds, site modifications and radio work. The certified radio division offers radio integration, reconditioning, repair, assembly, testing, installation and commissioning. The TowerComm staff includes radio technicians, line and antenna crews, network technicians and civil construction managers.

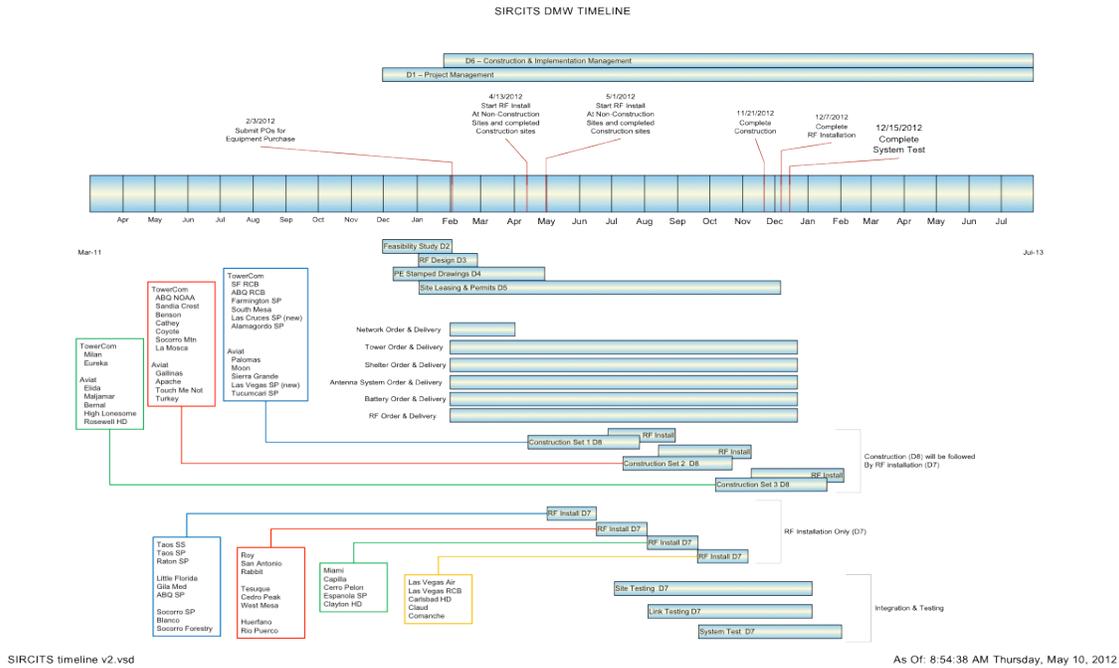
TowerComm provides construction, grading and excavation, trenching for ground rings, directional boring and core drilling, installation of equipment, and shelter pads

Tower Services include installation and testing of lines & antennas. Microwave line of sight (LOS) and path alignment. Structural upgrades & modifications, tower erection, tower inspection & repair.

AVIAT:

Aviat Networks, Inc. has expertise in microwave networking solutions. They build a carrier class foundation for mobile and fixed broadband networks. Aviat offers solutions for LTE-proven microwave backhaul and options for public and private telecommunications operators.

Equipment, Construction, Installation Milestones and Timelines Digital Microwave:



Equipment has been ordered for all sites. Equipment is stored at vendor locations where preassembly and testing is conducted. Based on construction timelines, equipment is then shipped to tower sites. Delivery is scheduled from April to December 2012 as each site is constructed or renovated.

Construction is scheduled 90 – 120 days followed by the installation of Radio Frequency kits (RF) at each location. Some sites only require the installation of RF kits. Construction is divided into five regions around the state:

- NW Sector construction by TowerComm
- NE Sector construction by AVIAT
- SW Sector construction by TowerComm
- SE Sector construction by AVIAT
- Metro construction by TowerComm

Site, link, and system testing will follow the tower installations beginning in July and ending in February 2013.

Project Risks Digital Microwave Upgrade:

External Risks:

Weather and fire restrictions can cause significant delays to the project. Many of the towers that will be upgraded or constructed are located in remote areas of the state; some are on mountaintops in forest areas. The fire season in New Mexico can be volatile and unpredictable. Not only a presence of fire, but a drought condition can cause the Forest Service to close access to areas. Use of construction equipment can “spark” a fire as easily as natural causes or human error.

DoIT is working with BLM to establish a fire plan for threatened sites.

Demolition of old equipment:

The removal of old equipment and scrap metal was not funded. DoIT is exploring ways to have equipment removed by partnerships with scrap metal companies and NM State Surplus.

Leases at tower sites:

DoIT undertook a review of all 59 site leases for the placement of towers across the state. The towers are located on private and public lands requiring leases, memorandums of understanding, right-of-ways, special use permits, or sharing agreements. Many sites needed to be authorized and/or negotiated. DoIT is confident the remaining leases can be completed without major issues.

- Eighty-seven percent (87%) of the leases do not have significant issues; minor changes may be required.
- Ten percent (10%) have some changes such as indemnity clauses for the U.S Forest Service. The DoIT internal legal team is addressing these concerns.
- Three percent (3%), Comanche Hill and ABQ NOAA, are require letters from the City of Albuquerque granting DoIT permission to build. These letters have not been received; however risks are not viewed as insurmountable.

Public-Safety Broadband 700 MHz Pilot Status:

Grant funds were awarded to establish a 4G 700 MHz long-term evolution (LTE) wireless mobile communications system in Albuquerque and Santa Fe. A total of 13 sites in Albuquerque and Santa Fe will be equipped with 700 MHz radios, antennas, and related network equipment needed to provide mobile 4G communications. This component will enable **mobile** broadband interoperability between state, county, and local public safety entities.

The LTE pilot between Santa Fe and Albuquerque has had some initial work performed, but equipment purchasing has been suspended at the direction of the National Telecommunications and Information Administration (NTIA) until a First Responder Network Authority (FirstNet) is established, followed by the creation of a public-safety advisory committee. This national effort will establish the relationships and partnerships between states and federal users, as well as the operability between vendors.

Project efforts continue and focus on site analysis, site selections, and design. An RFP has been initiated for 700 MHz build. The RFP will cover the design phase for the project. Price agreements for equipment will be addressed once NTIA has determined that procurements can continue. DOIT will develop a roles and responsibility matrix for the project. At this writing, only grant money for administrative and legal services has been expended. (Appendix B: LTE Low Risk Activities and Suspension of equipment procurements.)

The Project includes:

- Establishing 11 new mobile wireless telecommunication sites at existing industrial and commercial facilities
- Installing mobile wireless equipment (700 MHz radios and antennas) at 2 of the 59 existing tower sites and 11 new telecommunications sites in the cities of Albuquerque and Santa Fe.

Contractors	Purpose	Amount	Amendments
Catalano & Plache Plc	Legal Services 700 MHG		
Crestino	Environment assessments	\$181,201.50	
Televate	Feasibility Study RFP Development	\$50,000.00	

Project Risks for LTE 700MHz Pilot:

External:

The greatest external risks to the LTE pilot are political factors surrounding the governance and control of the core project. An advisory board controlled at the national level will set interoperability standards. Until these issues are determined, states are uncertain of project control.

Independent Validation and Verification: Quality of Services

POD, Inc., was established in 1988 and provides government, commercial and non-profit organizations with Information Technology (IT) solutions. As a recognized Independent Validation and Verification Contractor (IV&V), POD has been performing IV&V to New Mexico State government for several years.

POD issues Initial, Interim and Final Project Assessments throughout the life cycle of the project. Each phase, initiation through implementation is reported. Executive summaries have been included for Jan 2011, Dec, 2011 and March 2012. The next interim report will be release May 31, 2012. Detail reports have been submitted electronically.

The reports issued by POD to DoIT have been reviewed and recommendations or necessary changes have been implemented. In particular, the March 2012 report changed the overall project from green to yellow, and trends changed from green to red. The report pointed out a significant drop in project control/management work products. Consequently, DoIT reorganized the project April 3, 2012, which included a new program manager and the change improved the overall project management and performance.

LFC consultant for project review has had the opportunity to talk with POD independently. POD is confident that the current management team has taken definite steps to address project control/management issues. In addition, risk factors have been mitigated.

Potential risks to the project have been identified within this report. DoIT identified the potential risks for legal reviews and lease modifications in the implementation phase of the Digital Microwave Upgrade. They have been ongoing tasks and have resolutions to the majority of sites.

Appendix A: Grant Award Notification

FORM CD-450 (REV. 6-08) DAO 203-26		U.S. DEPARTMENT OF COMMERCE		<input checked="" type="checkbox"/> GRANT <input type="checkbox"/> COOPERATIVE AGREEMENT	
FINANCIAL ASSISTANCE AWARD				AWARD NUMBER NT10BIX5570097	
RECIPIENT NAME Department of Information Technology					
STREET ADDRESS 715 Alta Vista			FEDERAL SHARE OF COST \$38,699,997		
CITY, STATE, ZIP CODE Santa Fe, NM 87505-4108			RECIPIENT SHARE OF COST \$17,000,003		
AWARD PERIOD 2010-08-01		2013-07-31		TOTAL ESTIMATED COST \$55,700,000	
AUTHORITY The American Recovery and Reinvestment Act of 2009, Pub. L. 111-5 (2009)					
CFDA NO. AND PROJECT TITLE					
11.557		Recovery Act - New Mexico Statewide Interoperable Radio Communication Internet Transport System (SIRCITS)			
<p>This award offer approved by the Grants Officer constitutes an obligation of Federal funding. By accepting this award offer, the Recipient agrees to comply with the award Terms and Conditions checked below. If this was a paper issued award offer, please send two signed documents to the Grants Officer and retain one set of signed award documents for your files. If this award offer is not accepted without modification within 30 days of receipt, the Grants Officer may unilaterally withdraw this award offer and de-obligate the funds.</p>					
<input checked="" type="checkbox"/> Department of Commerce Financial Assistance Standard Terms and Conditions <input type="checkbox"/> Government Wide Research Time and Conditions <input type="checkbox"/> Bureau Specific Administrative Standard Award Conditions <input checked="" type="checkbox"/> Award Specific Special Award Conditions <input checked="" type="checkbox"/> Line Item Budget <input type="checkbox"/> 15 CFR Part 14, Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, Other Nonprofit, and Commercial Organizations <input checked="" type="checkbox"/> 15 CFR Part 24, Uniform Administrative Requirements for Grants and Agreements to State and Local Governments <input type="checkbox"/> OMB Circular A-21, Cost Principles for Educational Institutions <input type="checkbox"/> OMB Circular A-87, Cost Principles for State, Local, and Indian Tribal Governments <input type="checkbox"/> OMB Circular A-122, Cost Principles for Nonprofit Organizations <input type="checkbox"/> 48 CFR Part 31, Contract Cost Principles and Procedures <input checked="" type="checkbox"/> OMB Circular A-133, Audits of States, Local Governments, and Nonprofit Organizations <input checked="" type="checkbox"/> Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements REF: Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements, <input checked="" type="checkbox"/> Other(s): Department of Commerce American Recovery and Reinvestment Act Award Terms: 75 FR 3792 January 22, 2010 75 FR 10454 March 8, 2010 75 FR 14131 March 24, 2010					
SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER Sonja Wyatt			TITLE Grants Officer		DATE 2010-08-04
TYPED NAME AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL Marlin L. Mackey			TITLE		DATE 2010-08-30
Disclaimer: This Form does not represent the formal award that was issued by the grant organization. The data displayed in the form provides a visual of key data to assist with post-award grants administration.					

ADMINISTRATION/PSG ELECTRONIC FORM



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
OFFICE OF ACQUISITION AND GRANTS

MAY 11 2012

Darryl Ackley, Cabinet Secretary & State Chief Information Officer
New Mexico Department of Information Technology
715 Alta Vista St.
Santa Fe, NM 87502-0110

Re: Broadband Technology Opportunities Program (BTOP)
New Mexico Department of Information Technology (Grant Award #NT10BIX5570097)
Notice of Partial Suspension of Long Term Evolution (LTE) activities

Dear Mr. Ackley:

Upon acceptance of a grant from the U.S. Department of Commerce (Grant Award No. NT10BIX5570097), your organization agreed to comply with requirements specified in the terms and conditions of the Broadband Technology Opportunities Program (BTOP) award. Although we understand that you have made every effort to comply with the terms and conditions of your award, Congress has enacted subsequent legislation that will prevent you from remaining in compliance with certain terms and conditions of your award. As a result, the National Telecommunications and Information Administration (NTIA) recommended that the National Oceanic and Atmospheric Administration (NOAA) Grants Office partially suspend your project in order to address the potential effect of Title VI of the Middle Class Tax Relief and Job Creation Act of 2012 ("Act") on your award. This letter addresses the steps that you must take in the next 45 days to provide information in order to proceed with your project.

BACKGROUND:

In 2007, the FCC designated the Public Safety Spectrum Trust (PSST) as the Public Safety Broadband Licensee for the ten megahertz (MHz) of 700 MHz public safety broadband spectrum.¹ On May 11, 2010, the FCC adopted FCC 10-79, an order that permits certain state and local governmental entities to deploy public safety broadband systems using the 700 MHz spectrum licensed to PSST.²

In 2010, NTIA made the decision to award seven BTOP grants to build public safety networks that would utilize the 700 MHz public safety broadband spectrum.

¹ Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, Order, 22 F.C.C. Rec. 20453 (2007).

² Requests for Waiver of Various Petitioners to Allow the Establishment of 700 MHz Interoperable Public Safety Wireless Broadband Networks, Order, PS Dkt. No. 06-229, FCC 10-79 (adopted May 11, 2010), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-79A1.pdf.

The seven BTOP public safety recipients have the legal authority to use the 700 MHz spectrum only through the waivers of FCC rules and through lease agreements executed with the PSST. Accordingly, NTIA and NOAA incorporated a special award condition (SAC) into each of the awards that requires the recipients to comply with FCC's extant requirements and all subsequent orders and public notices regarding the use of the 700 MHz public safety broadband spectrum. The SAC further provides that "[i]f any future regulatory requirement (from the FCC or other governmental entity) results in a material technical or financial change in the project, the recipient must submit a revised budget, associated documentation, and other material, as applicable, for review and approval by the Grants Office."³

On February 22, 2012, the President signed the Act, Title VI of which created the First Responder Network Authority (FirstNet), an independent authority within NTIA, and requires the FCC to reallocate and grant a license for the use of the 700 MHz D block spectrum and existing public safety broadband spectrum to FirstNet.⁴ In effect, this statutory mandate requires the FCC to transfer or rescind the current 700 MHz license for ten megahertz of spectrum from PSST and to grant a single license for 20 megahertz of 700 MHz spectrum to FirstNet.

New Mexico Department of Information Technology spectrum lease agreement with the PSST will expire in September 2012, by which time the 700 MHz license authority is likely to have been granted to FirstNet or to be in the process of being granted to FirstNet. You will need to work with FirstNet to seek to use the 700 MHz spectrum. However, when — and under what conditions — FirstNet will allow such use is currently unknown.

In summary, once the current public safety lease agreements expire in September 2012, or when PSST or the FCC takes other action, the New Mexico Department of Information Technology will lose access to the 700 MHz public safety spectrum that is necessary to operate its BTOP-funded network. Moreover, the likelihood that new minimum technical standards to be developed for operation in the 700 MHz band may conflict with your existing network designs

³ BTOP Public Safety Award, Special Award Condition, "FCC Compliance and Notification SAC":

The recipient shall comply with the requirements established in the Federal Communications Commission's (FCC) Order in PS Docket 06-229, adopted on May 11, 2010 (FCC 10-79), and all subsequent orders and public notices regarding the use of the 700 MHz public safety broadband spectrum (763-768 MHz and 793-798 MHz). If any future regulatory requirement (from the FCC or other governmental entity) results in a material technical or financial change in the project, the recipient must submit a revised budget, associated documentation, and other material, as applicable, for review and approval by the Grants Office.

⁴ Title VI, Middle Class Tax Relief and Job Creation Act of 2012, P.L. 112-96, § 6201(a):

Reallocation and Grant of License.- Notwithstanding any other provision of law, and subject to the provisions of the Act, the Commission shall reallocate and grant a license to the First Responder Network Authority for the use of the 700 MHz D block spectrum and existing public safety broadband spectrum.

creates a significant risk that further BTOP expenditures for Long Term Evolution (LTE) infrastructure may result in stranded investments.⁵

REASON FOR PARTIAL SUSPENSION:

Under the Department of Commerce Uniform Administrative Requirements at 15 C.F.R. § 14.62 and 15 C.F.R. § 24.43, as a remedy for material noncompliance, the Grants Office may “[w]holly or partly suspend or terminate the current award.”⁶ Although Title VI of the Act does not immediately place New Mexico Department of Information Technology out of compliance with the terms and conditions of your award, it is clear that you will, through no fault of your own, be in material noncompliance with the terms and conditions of your grant award in being unable to comply fully with FCC rules as required by the SAC incorporated into your award.

RESULT:

The NOAA Grants Office has placed New Mexico Department of Information Technology’s Automated Standard Application for Payments (ASAP) account on agency review status. In addition, the NOAA Grants Office will partially suspend your award with respect to all LTE-related activities (including, for example, the acquisition of LTE-related equipment, such as eNodeB and the evolved packet core, and end-user devices). During this partial suspension, you will not be allowed to incur any costs for LTE-related activities.

REQUIRED RECIPIENT ACTION:

Within 45 days, New Mexico Department of Information Technology must provide NOAA and NTIA an initial detailed accounting of the scope of LTE-related and non-LTE-related activities and the associated budget with the amounts obligated and expended in each category to date.

You will have the opportunity to propose revisions to the activities and budget for the current project to reallocate funds from LTE-related items to non-LTE-related items. The BTOP staff has developed a list of “low risk” project activities that each recipient’s revised statement of work and budget can address. This list is included as Attachment 1.

To the extent that you cannot identify appropriate, non-LTE uses for some or all of your remaining grant funds, you will need to provide a statement acknowledging that the LTE portion of the project associated with those funds will be on suspension (*i.e.*, no costs will be incurred and no work will be performed) until New Mexico Department of Information Technology regains authority to utilize the 700 MHz public safety spectrum.

Please provide all necessary information by **Monday, June 25, 2012**. Please contact Mr. Lance Johnson at 202-482-5032 or ljohnson@ntia.doc.gov if you have any questions or require any

⁵ See *id.*, § 6203 (establishing the Public Safety Interoperability Board to recommend minimum technical standards to FirstNet); *id.*, § 6206(b)-(c) (authorizing FirstNet to issue requests for proposals using these minimum technical standards).

⁶ 15 C.F.R. §§ 24.43(a)(3). The Grants Office may impose special conditions such as payment on a reimbursement only basis where a grantee “is otherwise not responsible.” 15 C.F.R. §§ 24.12. Here, NOAA and NTIA note that your organization is unable to be “responsible” for a reason completely outside your control.

additional clarification. Failure to respond to this letter in a timely or comprehensive manner may result in additional enforcement action being taken. Thank you for your cooperation.

Sincerely,



Arlene Simpson-Porter, Director
Grants Management Division

Cc: Anthony G. Wilhelm, Ph.D.
Laura Pettus
Lance Johnson
Aimee Meacham

Appendix B: LTE Low Risk Activities and Suspension of Equipment Procurements.



BROADBANDUSA
CONNECTING AMERICA'S COMMUNITIES

FACT SHEET
Broadband Technology Opportunities Program
Public Safety – 700 MHz projects
"Low Risk" Project List

Purpose:

Develop a list of potential "low risk" projects for BTOP public safety 700 Megahertz (MHz) projects that support and prepare for the nationwide public safety broadband network.

Background:

In February 2012, Congress enacted The Middle Class Tax Relief and Job Creation Act of 2012, which directed the creation of a nationwide interoperable public safety broadband network (PSBN). NTIA wants to be prudent with any investments that are made before FirstNet, the entity charged by Congress with overseeing the PSBN, develops its blueprint for the nationwide network's architecture. Specifically, NTIA wants to avoid investments that would need to be replaced if they are incompatible with the nationwide network. NTIA has created a list of "low risk" project investments for the public safety 700 MHz waiver recipients that have BTOP funding. This list outlines investments that are likely to be at a lower risk of being incompatible with the ultimate nationwide network.

Categories	Potential "Low Risk" Activities
Backhaul	<ul style="list-style-type: none"> ▪ Documenting and/or upgrading connectivity capabilities for public safety broadband ▪ Documenting existing wire/wireless backhaul resources to determine what is already in place and not used/underused (e.g., existing Public Safety Answering Points' fiber capacity) ▪ Analyzing existing Internet Protocol (IP) backbone to determine gaps in supporting high bandwidth PSBN ▪ Planning and modeling network capacity to ensure backhaul links and aggregation points are appropriately provisioned ▪ Upgrading existing backbone upgrades to support advanced capabilities [i.e., Multiprotocol Label Switching (MPLS)] ▪ Installing fiber-optic connections to support high-bandwidth data capabilities ▪ Installing sufficient microwave connectivity to support high-bandwidth data capabilities
Site Upgrade	<ul style="list-style-type: none"> ▪ Documenting and/or upgrading existing site capabilities ▪ Installing/expanding battery backup systems and/or generators to support additional broadband hardware ▪ Expanding or enhancing existing shelters for broadband equipment ▪ Conducting tower analyses to determine feasibility of supporting 700 MHz antennas for broadband ▪ Documenting and analyzing site power/grounding to determine upgrades needed to support additional eNodeB and routing hardware
Ancillary Equipment	<ul style="list-style-type: none"> ▪ Acquiring Long Term Evolution (LTE) test equipment - handheld spectrum analyzers, cable testers, or drive test tools ▪ Analyzing existing cell on wheel/cell on light truck (COWCOLT) capabilities

Made possible by the Broadband Technology Opportunities Program
Funded by the American Recovery and Reinvestment Act of 2009



Appendix C:

IV&V Executive Summary, January 31, 2011
IV&V Executive Summary, December 2, 2011
IV&V Executive Summary, March 20, 1012

<p>*All scope, budget, schedule or IV&V project issues are manageable by the project team & issues are resolved within an appropriate time period, e.g. 30 days for short-term projects to 90-days for long-term projects.</p>	<p>*All scope, budget, schedule or IV&V project issues are manageable; but one or more is escalated to the Executive Steering Committee or require(s) executive management intervention for resolution in accordance with the project's Issue Escalation and Resolution Procedure, e.g. 60 days for short-term projects to 120 days for long-term projects. Includes all Watchlist projects.</p>	<p>*Scope, budget, schedule or IV&V project issues have been escalated to the Executive Sponsor in accordance with the project's Issue Escalation and Resolution Procedure and the project requires DoIT assistance. Includes all projects with outstanding issues that cannot be resolved by the Executive Sponsor within 45 days and all At Risk projects.</p>
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**Project Reporting Period: Interim Report
January 31, 2011**

Executive Summary:

The PM and project team continued to address issues and sustain meaningful progress during the reporting period. The project's GREEN dashboard rating is based on the project team's ability to address scope, schedule, budget and IV&V-identified issues within a 90-day period. Reporting regularly to the Principal Investigator, the SIRCITS project benefits from executive level support on an ongoing basis.

Scope Issues

- The Broadband 700MHz LTE steering committee convened during the reporting period. The committee plans to initiate user group meetings.
- The project planned for requirements meetings for the Broadband project. Requirements meeting outcomes will drive definition of the system specifications.
- The PM directed development of a marketing plan to drive usage of the microwave network.

Schedule Issues

- Revision to the construction project schedule continues in development, pending completion of planning and other tasks from the high-level project schedule.
- PM status commented on commitment for turnaround times from vendors following finalization of the POs.
- The PM directed two new team members to complete planning activities for logistics for hardware, and for development of network integration and test plan.

Budget Issues

- The Federal customer has required the project to reach a 67% of expended budget by August 2012.
- The PM feels the project team can reach the \$7M level by August.
- The Federal customer accepted the recent Quarterly Grant Progress report. Federal review of the project annual report continues.
- For the five hardware areas, purchase orders are in process at NM DFA or in preparation in DoIT.

Risk Issues

- With the addition of DoIT legal counsel, the project team and outside legal support have moved forward addressing the 32 (of 59) leases requiring some form of modification.
- Lease modification remains the highest risk for the project.

- The project faces some schedule pressure related to the relatively late start of some activities. POD IV&V notes that the project team addresses this (and other risks) in a direct and orderly manner.

POD IV&V notes that the project team works to identify problems and address issues openly. The team has sustained forward momentum, as documented in the seventeen items listed in the *Accomplishments* section of this report. POD IV&V projects progressive completion of project goals and milestones for the two months until the next IV&V report.

Overall Status: Green

POD IV&V observed that management maintains sustained due diligence for the project. Communication with stakeholders continued during the reporting period. The project team continued activities to establish a SharePoint site for sustained collaboration, document control, process flow and communication. The addition of the SharePoint site should facilitate the flow of information needed for comprehensive IV&V reporting.

POD IV&V found that the PM and team systematically keep executive management, and the Federal customer, apprised of project progress, plans and issues. With schedule pressures (the Federal customer has required use of funds and completion status to attain a 67% completion by August 2012) will require very careful scheduling and logistics by the team.

Overall Trend: Static

Several factors contribute to the POD IV&V evaluation regarding project performance. The bullet list below highlights some of the key items contributing to POD IV&V's assessment for project trend.

- Ongoing dialogue with the executive sponsor regarding project needs, issues and status.
- Identification of legal counsel and start of work to address issues and required modifications to leases.
- Ongoing project management and due diligence for all tasks. POD IV&V observed that the project team takes ownership of actions and issues.
- Realistic and orderly discussion of issues, followed by practical steps to address
- Succinct presentation of project management elements in the Project Charter and PMP.
- Clear alignment with project goals as articulated in project work products.
- Understanding of constraints, risks, challenges, dependencies and reporting requirements as discussed at project meetings.
- Clear definition of project controls, roles and responsibilities.

High Risks:

- 32 or the 59 microwave sites require some modification.
- Delays in lease modifications could delay completion at some sites.

Detail Report:

Description: **GREEN**

Report Summary: GREEN

Documentation: **Green**

Project Risks and Risk Management: **Green**

Project Schedules: **Green**

Procurement, Contracts and Vendor Management: **Green**

System Component Security: TBD

Training: **Green**

Transition to Operations: **Green**

<p>*All scope, budget, schedule or IV&V project issues are manageable by the project team & issues are resolved within an appropriate time period, e.g. 30 days for short-term projects to 90-days for long-term projects.</p>	<p>*All scope, budget, schedule or IV&V project issues are manageable; but one or more is escalated to the Executive Steering Committee or require(s) executive management intervention for resolution in accordance with the project's Issue Escalation and Resolution Procedure, e.g. 60 days for short-term projects to 120 days for long-term projects. Includes all Watchlist projects.</p>	<p>*Scope, budget, schedule or IV&V project issues have been escalated to the Executive Sponsor in accordance with the project's Issue Escalation and Resolution Procedure and the project requires DoIT assistance. Includes all projects with outstanding issues that cannot be resolved by the Executive Sponsor within 45 days and all At Risk projects.</p>
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**Project Reporting Period: Interim Report
December 2, 2011**

Executive Summary

The NM DoIT SIRCITS team completed the major project event during this reporting period – the completion of the project kickoff meeting involving all project contractors. The project tem sustained forward momentum, including scheduling of upcoming planned events; completion of staffing for the NM DoIT core team; progress in contracting and purchase order activities; and refinement of project scheduling. POD IV&V has documented a GREEN overall assessment for the project for the reporting period. The rest of this executive summary addresses scope, schedule, budget and risk for the project.

Scope

- The NM DoIT core team explained project scope and timeline during the kickoff meeting.
- POD IV&V found the hard copy materials used in the meeting well prepared and aligned with the goals and objective from the project charter and PMP.
- POD IV&V observed active discussion of and clarification for project scope.
- The NM DoIT core team began preparing the case for funding for the 12 out-of-scope sites identified.

Schedule

- With the addition of the business analyst, the project team began refinement and expansion of the schedule to include contractor plans.
- The kickoff meeting occurred according to the current schedule.
- The overall schedule plans for in-progress activities, including completion of POs and contracts; planning for the 700 MHz long-term evolution project; development of detail plans by the contractors; and the need to resolve risks related to lease management.

Budget

- The NM DoIT core team presented the Grant budget and processes for financial reporting and invoicing.
- The NM DoIT project team continues to monitor budget, including activities to forecast and control budget versus expenditures for services and equipment.

Risk

- For the reporting period, the project tracks and manages to eleven risks.
- The highest project risk concerns leases. Both NM DoIT and contractors have identified lease-related exposures as their highest risks.
- The NM DoIT PM continues to highlight project risk in up-line project status meetings.

POD IV&V has observed meaningful and incremental progress in project proceedings. POD IV&V finds all stakeholders actively engaged in completing present tasks. Expansion of the master schedule has commenced, with contractors providing detailed schedules for rollup into the master schedule. POD IV&V observed that all participants at the kickoff meeting demonstrated functional knowledge and expertise of the work required for this project. In POD IV&V's estimation, project momentum and due diligence point to sustained performance at a GREEN level going into the next scheduled IV&V report in January 2012.

Overall Status: GREEN

Overall Trend: GREEN

Description: GREEN
Report Summary: YELLOW
Documentation: GREEN
Project Risks and Risk Management: GREEN
Project Schedules: GREEN
Procurement, Contracts and Vendor Management: GREEN
Training: GREEN
Transition to Operations: GREEN

<p>*All scope, budget, schedule or IV&V project issues are manageable by the project team & issues are resolved within an appropriate time period, e.g. 30 days for short-term projects to 90-days for long-term projects.</p>	<p>*All scope, budget, schedule or IV&V project issues are manageable; but one or more is escalated to the Executive Steering Committee or require(s) executive management intervention for resolution in accordance with the project's Issue Escalation and Resolution Procedure, e.g. 60 days for short-term projects to 120 days for long-term projects. Includes all Watchlist projects.</p>	<p>*Scope, budget, schedule or IV&V project issues have been escalated to the Executive Sponsor in accordance with the project's Issue Escalation and Resolution Procedure and the project requires DoIT assistance. Includes all projects with outstanding issues that cannot be resolved by the Executive Sponsor within 45 days and all At Risk projects.</p>
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Project Reporting Period: Interim Report

March 20, 2012

Executive Summary

POD IV&V has issued a YELLOW overall status for the project at this time. POD IV&V believes the PM will need to address schedule, scope and budget issues rapidly. The PM will also need to enlist executive support to facilitate the team's ability to address a critical mass of tasks for the microwave site retrofit, the 700 MHz LTE pilot project and a re-emphasis on some aspects of project management due diligence. The 4-up list below elaborates.

Scope Issues

- The 700 MHz project completed requirements definition. Work on the RFP began, estimating completion on 6/30/12.
- Scope for the marketing plan simplified with definition of a smaller set of CAIs to address.
- The project team placed some orders with some price quotes pending.
- A critical mass of project activities remains for completion in only 14 months.

Schedule Issues

- The project still depends on general contractor schedules for finalization of activities to upgrade the microwave sites.
- The MS Project schedule addresses 13 of the 59 microwave sites.
- POD IV&V recommends development of an overall schedule addressing **all** project activities.

Budget Issues

- The project reported (DoIT POCD report for March 2012) having spent approximately 2% of the grant budget. If pace continues as represented in the report, the project will not attain the 67% federally expected level by August 2012.
- The project team has defined budget for milestones using the new DoIT POCD reporting template.

Risk Issues

- The project team has not maintained (or at least not made available) the project control workbook reviewed in prior IV&V reporting. The workbook provides due diligence PM support for management of action items, risks, issues, decisions and schedules. POD IV&V has recommended the PM's continuation of this key project-management work-product.

- The project faces elements of uncertainty (e.g., weather, limited skill sets, and resource availability).
- The project runs a high risk of not completing all work on time at the current pace. POD IV&V believes review of full schedule, and re-implementation of PM practices from the PMP will go a long way towards a reset of project pace.

Overall Status: YELLOW

- Partial definition of overall schedule related to microwave sites. The MS Project schedule tracks construction, addressing routers and construction activities related to thirteen of the fifty-nine sites. As of this report, completion of the MS Project depended upon completion of contractor schedules. As a result, the MS Project schedule showed no completions, and flagged significant over allocation of resources. With 57% of project time elapsed (19 of 33 months), POD IV&V expresses concern that the project can face unwieldy rescheduling efforts to address time related milestones.
- The MS Project schedule does not address the 700MHz LTE pilot project.
- The MS Project schedule does not track or synchronize with non-construction activities (e.g., environmental assessments, purchasing, elements of design, management/remediation of leases) of the digital microwave middle mile project or the 700 MHz LTE project. Additionally, estimated and actual completion dates should remain consistent across all project documents.
- The project has not maintained the project control book for tracking of action items, issues, risks, key decisions and parking lot. Regardless of format (e.g., MS Word, MS Excel), POD IV&V points out to risk of over reliance on informal modes of tracking.
- Aside from minutes of discussions with the Principal Investigator, POD IV&V is unaware of other minutes of meetings for the project.

Overall Trend: RED

High Risks:

POD IV&V believes that management of project time has risen to status as the highest exposure at this time. POD IV&V has recommended throughout this report the need for development of a master schedule to address all project activities. POD IV&V believes the project faces a critical mass of project activities to address over a diminishing available time-frame with a constrained set of resources. Aggravating the situation, the potential for fires in wooded areas may cause rescheduling. POD IV&V has escalated this as a stand-alone risk, and believes that slack or margin has diminished to a point calling for action now rather than later.

Description: GREEN

Report Summary: YELLOW

Documentation: YELLOW

Project Risks and Risk Management: YELLOW

Project Schedules: RED

Procurement, Contracts and Vendor Management: GREEN

Training: TBD

Transition to Operations: TBD