

COVER PAGE
Governor's Office of Information Technology

FY 2015-16 CAPITAL CONSTRUCTION REQUESTS (listed in OSPB priority order)

Recommended for funding:

- Public Safety Communications Network Microwave Infrastructure Replacement (*new*)

Total: FY 2015-16 Capital Construction State-Funded Request Amount = \$ 26,625,594

FY 2015-16 CONTROLLED MAINTENANCE REQUESTS (1)

Level I:

- Replace Microwave Site Towers – B Group, Ph 2 of 3 (\$939,345)

ISSUES RAISED DURING FALL 2014 JOINT BUDGET COMMITTEE BRIEFINGS

1. Statewide prioritized list. OIT provided a prioritized list of all IT-related budget requests, including both operating and capital construction requests, across all executive branch agencies. The list (Attachment A) includes a total of 24 projects, of which 15 are submitted by executive branch agencies and 9 are submitted with OIT as the lead agency for new funding in FY 2015-16. The Public Safety Communications Network Microwave Infrastructure Replacement project was originally submitted as an IT budget request to be considered by the Joint Technology Committee. However, under Joint Rule 45, it was determined that the request would be more appropriately reviewed by the Capital Development Committee.

HISTORY OF STATE FUNDING

- **\$45.9 million** has been appropriated on behalf of capital projects at the department since FY 2010-11. This represents **6.4 percent** of the total amount appropriated on behalf of all capital construction and controlled maintenance projects during this period.
- **\$21.1 million** was appropriated in **FY 2014-15** for three capital construction projects and two controlled maintenance projects.

INVENTORY OF GENERAL FUND SUPPORTED FACILITIES

- The General Fund supported inventory of department facilities totals **25,114 GSF**. This total represents **0.1 percent** of the entire General Fund supported inventory of state buildings.

Fiscal Year 2015-16 Capital Construction Request

Office of Information Technology

Public Safety Communications Network Microwave Infrastructure Replacement

PROGRAM PLAN STATUS

2016-011

Approved Program Plan? Date Approved:

In FY 2013-14, OIT received a \$300,000 operating budget appropriation to conduct an assessment of the state microwave system. The assessment recommended immediate equipment replacement and upgrades to prevent system failure.

PRIORITY NUMBERS

Prioritized By	Priority	
DeptInst	3 of 24	Priority #3 of 24 (statewide priority list, includes operating).
OSPB	2 of 47	Priority #2 of 11 information technology projects.

PRIOR APPROPRIATION AND REQUEST INFORMATION

Fund Source	Prior Approp.	FY 2015-16	FY 2016-17	Future Requests	Total Cost
GF	\$0	\$26,625,594	\$7,325,145	\$21,975,435	\$55,926,174
Total	\$0	\$26,625,594	\$7,325,145	\$21,975,435	\$55,926,174

ITEMIZED COST INFORMATION

Cost Item	Prior Approp.	FY 2015-16	FY 2016-17	Future Requests	Total Cost
Land Acquisition	\$0	\$0	\$0	\$0	\$0
Professional Services	\$0	\$8,073,175	\$2,018,294	\$6,054,882	\$16,146,351
Construction	\$0	\$2,342,800	\$585,700	\$1,757,100	\$4,685,600
Equipment	\$0	\$15,039,250	\$3,759,813	\$11,279,439	\$30,078,502
Miscellaneous	\$0	\$834,664	\$877,412	\$2,632,236	\$4,344,312
Contingency	\$0	\$335,705	\$83,926	\$251,778	\$671,409
Software Acquisition	\$0	\$0	\$0	\$0	\$0
Total	\$0	\$26,625,594	\$7,325,145	\$21,975,435	\$55,926,174

PROJECT STATUS

This is a new, never-before-requested project. Funding for the Digital Trunked Radio System (DTRS) was awarded in nine years between FY 1998-99 and FY 2008-09. Funding for a software upgrade for the DTRS was awarded for FY 2013-14 and FY 2014-15. Several recent controlled maintenance projects have addressed deteriorating microwave tower infrastructure. Additional funding for projects associated with the DTRS was also awarded through House Bill 14-1203.

PROJECT DESCRIPTION / SCOPE OF WORK

The Governor's Office of Information Technology is requesting state funds for the first phase of a multi-phase project to replace the state microwave system with a system that creates more communication safeguards through redundancies. The microwave system provides connectivity between the DTRS transmitter sites. The DTRS is a statewide public safety, two-way radio communication system. The system is used by state and local government agencies like the Department of Corrections and local sheriffs for day-to-day communications and to improve interagency cooperation and coordination in first responder situations. The request addresses all of the equipment associated with the operation of the microwave transmitter system. The project will be financed through a lease-purchase agreement and include out-year equipment upgrades.

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Office of Information Technology

Public Safety Communications Network Microwave Infrastructure Replacement

Microwave connections are used to provide connectivity between remote transceiver sites and dispatchers at centralized or regional communication centers. The term microwave refers to the part of the radio spectrum that is used to transmit data from one radio site to another. Microwave transmitters must have a direct line-of-site connection to the device with which it is communicating. Therefore, a network of transmitters, typically located on tall buildings, transmission towers, or mountaintops, is required to connect across large distances.

The existing microwave transmitter system operates like a chain — each site consists of a main and backup microwave transmitter, and each site is linked to another site in a series or chain. OIT explains that a failure at one site may reduce the communication capabilities of transmitter sites later in the chain. The proposed new system allows for radio traffic to be rerouted in several directions (away from a failed site) in order to avoid large-scale communication outages. The project creates five rings, or loops, using existing communication sites. A future request may construct additional transmitter sites.

The project funds:

- a network monitoring/management system;
- the replacement of obsolete microwave radios (60 percent of state system);
- upgrades to manufacturer-supported microwave radios (40 percent of state system);
- new battery backup power systems;
- test equipment;
- ancillary equipment;
- costs associated with Federal Communications Commission licensing;
- training for vendor-supported equipment;
- project management costs;
- administration costs;
- project engineering; and
- installation.

This year's request for Phase I replaces and upgrades the Western Slope (Ring 1, 120 backbone sites) and the Southeast (Ring 2, 12 backbone sites) portions. OIT explains that these upgrades will have the greatest impact on system connectivity. Phase II replaces and upgrades the Northeast (Ring 3) and Southwest (Ring 4, 32 backbone sites) portions. It also replaces associated spur sites for Rings 1 through 4. Phase III upgrades and replaces the six backbone sites and associated spur sites for the Denver Metro area.

PROJECT JUSTIFICATION

OIT says that if the project is not funded, the system may experience an unrecoverable electronic failure which would negatively impact first responders. The independent consultant who conducted the recent system assessment found that 60 percent of the 377 microwave radio stations could no longer be supported with existing parts and services. In order to optimize the system, OIT says the system components and equipment should be replaced or upgraded to ensure the same level of redundancy. OIT explains that all of the DTRS partner agencies have already replaced their obsolete microwave system equipment.

OIT says the project will increase system circuit capability and monitoring. It will also minimize ongoing maintenance costs and free up staff to address routine maintenance rather than system failures. Finally, it will improve the office's ability to test and diagnose the entire microwave transmitter system from a centralized location.

PROGRAM INFORMATION

According to OIT, about 1,000 local, state, and federal government agencies currently use the DTRS. The system processes about 91 million transmissions a year. The primary stakeholders of the DTRS include the Departments of Corrections, Natural Resources, Public Safety, and Transportation, local government public safety entities, and several federal agencies. An agency may opt to use the DTRS as its primary radio system or for interoperability only, especially during first responder situations. The state's components of the microwave system (91 percent of the

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Public Safety Communications Network Microwave Infrastructure Replacement

overall system) are supported through state appropriations, grants from various agencies and groups, local government general funds, and user fees.

PROJECT SCHEDULE

	Start Date	Completion Date
Phase I	July 2015	
Phase II	July 2016	
Phase III	July 2017	January 2018

HIGH PERFORMANCE CERTIFICATION PROGRAM

The project is not required to comply with the requirements of the High Performance Certification Program because it purchases equipment and does not build or renovate a physical facility.

SOURCE OF CASH FUNDS

The project is not funded from cash sources.

OPERATING BUDGET

The operating budget will increase 9.0 FTE to accommodate an increase in workload, including circuit administration, system monitoring, testing, and failure diagnostics.

STAFF QUESTIONS AND ISSUES

Suggested questions for OIT:

1. Please clarify whether the project constructs two (or more) new microwave sites in the second phase. The narrative project description does not consistently address this detail.
2. Does the capital request include new, permanent FTE, thus driving out-year operational costs? Or has a separate request for additional FTE been submitted to the JBC?
3. Please clarify the FY 2015-16 amount requested for funding. The totals reported by JBC staff differ from those submitted by OSPB.

FY 2015-16 Complete Statewide Information Technology Prioritized Request List					
Statewide Priority	Category Type	Requesting Agency	Request Title	FY 2015-16 Total Funds Request	FY 2015-16 General Fund Request
1	Capital	Revenue	DMV Drives	\$52,350,833	\$52,350,833
2	Capital	Personnel	Human Resource Information System	9,407,500	9,407,500
3	Capital	OIT	Public Safety Communications Network (PSCN) Microwave Infrastructure Replacement	11,151,036	11,151,036
4	Capital	Corrections	Offender Management System, Phase II	11,409,761	11,409,761
5	Operating	Labor and Employment	Technology Fund Automation Project	7,395,468	0
6	Capital	Human Services	Electronic Health Record, Phase II	4,863,145	4,863,145
7	Capital	Public Safety	Capitol Complex Security Surveillance System Replacement	812,000	812,000
8	Operating	Higher Education	Geologic Hazard Mitigation FTE	105,494	105,494
9	Capital	Human Services	Modernization of Child Welfare Case Management System	6,824,567	4,648,707
10	Operating	OIT	IT Infrastructure Refresh	3,407,200	3,407,200
11	Operating	OIT	Colorado Information Marketplace	65,000	65,000
12	Operating	Corrections	Radio Replacement Plan	2,081,665	2,081,665
13	Operating	OIT	Active Directory Consolidation	606,956	606,956
14	Operating	Health Care Policy and Financing	DDDWeb Stabilization	205,260	102,629
15	Operating	OIT	Infrastructure Staff	796,726	796,726
16	Operating	OIT	Enterprise Wireless	300,000	300,000
17	Capital	Human Services	IT Interoperability	14,139,300	1,413,930
18	Operating	Revenue	Colorado Automated Testing System (CATS) Maintenance and Support	179,010	179,010
19	Operating	Health Care Policy and Financing	Personal Health Records and Online Health Education	772,570	122,257
20	Operating	OIT	Data Governance and Analytics Planning	226,800	226,800
21	Capital	Human Services	Enterprise Content Management	500,000	500,000
22	Capital	Human Services	Data Integration and System Analysis	1,893,364	1,200,949
23	Operating	OIT	Elevation Data Acquisition and Comprehensive GIS Coordination	2,574,716	2,574,716
24	Operating	OIT	CDPHE Network Infrastructure	508,200	0
Total				\$132,576,571	\$108,326,314