

**Oakland County
Department of Information Technology
Project Scope and Approach**

Project Name: Critical Services Network Split

Project ID: TP7186CS

Leadership Group: CLEMIS				
Department: Information Technology			Division: Technical Systems and Networking	
Project Sponsor: David Veit		Date Requested: 07/03/07		PM Customer No. 186
Request Type: <input checked="" type="checkbox"/> New Development <i>Enhancement</i> <i>Customer Support</i> <i>Planned System Maintenance or Upgrade</i>				
IT Team Name: Network Services			IT Team No: P	
Project Manager/Leader: David Bates				
Account Number: 17030	Account Description:	Technical Systems and Networking	Customer Name:	Information Technology
Grant Funded? Yes <input checked="" type="checkbox"/> No	Mandate? Yes <input checked="" type="checkbox"/> No		Mandate Source:	

Project Goal

To build a physically separate critical services network environment that is governed by a rigid change management process, so that the risk of service interruptions is reduced to critical Public Safety voice services.

Business Objective

To perform project management activities, so that project execution is timely with appropriate quality and cost controls.

Major Deliverables

- Updated Project Plan
- Project Issues Log
- Project Scope Management Log

Approach

To utilize Technical Systems and Networking staff to perform the following activities:

- Develop Initial Project Documents, and
- Develop and Maintain Project Data.

IT management will provide expertise and approval of project documentation requiring management approval.

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Business Objective

Improve network reliability for digital wireless and next generation 911 voice services by building a network backbone that is isolated from current OAKNet Intranet Services network backbone, along with implementing stringent change management tools, policies and/or processes.

Major Deliverables

- Acquired fiber for the critical services network backbone
- Post installation fiber inspection and transition from McLeod USA executed

Approach

To utilize internal Technical Systems and Networking staff supplemented by contracted services to perform the following activities:

- Select provider,
- Inspect fiber installation,

To engage McLeod USA to perform the following activities:

- Install fiber,
- Perform fiber testing, and
- Perform fiber infrastructure transition.

Business Objective (Preliminary)

Improve network reliability for digital wireless and next generation 911 voice services by building a network backbone that is isolated from current OAKNet Intranet Services network backbone, along with implementing stringent change management tools, policies and/or processes.

Major Deliverables

- Network design developed
- Network components procured
- Network core components installed
- Network core components and design tested
- Network edge components pilot site installed
- Pilot site tested
- Remaining network edge components installed
- Remaining 25 (of 26) PSAP facilities cut-over to the critical services network backbone
- Network auditing tool to support change management audit selected
- Network auditing tool procured
- Network auditing tool implemented
- Rigid change management policies and/or processes developed and implemented

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Approach

To utilize internal Technical Systems and Networking staff supplemented by contracted services to perform the following activities:

- Develop network design,
- Procure network components,
- Install network components,
- Test network components, design, and pilot site,
- Coordinate cut-over of PSAP facilities with M/A COM and AWT,
- Select and implement a network auditing tool,
- Develop and implement a rigid change management policy and/or process, and
- Develop and maintain project data.

To utilize M/A COM and AWT to perform the following activities:

- Execute any equipment and software changes necessary,
- Coordinate cut-over with PSAP sites, and
- Provide onsite support during the cut-over.

IT management will provide expertise and approval of plans and project documentation requiring management approval as needed.

Benefits

See Return on Investment (ROI) Analysis Document

Intangible

Improved Service

- Reduce service interruption risks to critical Public Safety voice services by physically separating the networks into environments that fit the deployment requirements: A dynamic flexible OAKNet Intranet Services environment (current), and A static OAKNet Critical Services environment (new).
- Reduce service interruption risks services by using a dedicated design to significantly reduce the complexity of the environment that will provide critical Public Safety voice services.
- Reduce service interruptions by physically separating Intranet traffic that can produce denial of services attacks originating from any current Customer connected to the OAKNet Intranet Services environment including: Cities, Villages, Townships, and County internal networks.
- Reduce service interruptions by physically separating Intranet traffic that can produce Worm, Virus, and Trogon attacks originating from any current Customer in a six County region connected to the OAKNet Intranet Services environment including:

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Cities, Villages, Townships, and Counties internal networks.

- Reduce service interruption risks to critical Public Safety voice services by implementing strictly enforced change management policies, tools, and/or processes on the new OAKNet Critical Services network.

Product/Service Accuracy

- None identified

Product/Service Productivity

- Improved network performance by creating an isolated network backbone with only digital wireless and next generation 911 services equipment and users.

Impact

Number of Users All law enforcement, 911 operators, and Oakland County citizens that use the next generation 911 services.

Divisions CLEMIS

Leadership Groups Information Technology, CLEMIS

Risk

Business Environment Low - Little or no impact to existing business processes.

Technical Environment Medium - Previously implemented technologies with new aspects and/or new requirements.

Assumptions

Staffing IT Staffing: resources will be available for the hours indicated per the attached project plan.

Other Staffing: additional staffing will be available as follows:

<u>Role:</u>	<u>Name</u>	<u>Hours per Day</u>
Project Sponsor:	David Veit	As needed.

Facilities

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- No additional networking rooms, closets, or buildings are required.

Technical

- Required: Dedicated fiber, dedicated redundant network components (dual power, dual supervisor modules)
- Existing cabinets where other core switches sufficient.
- Migration will be core build-out and test, then a pilot site, then one-by-one site migration.
- Network auditing tool to support change management audit required.
- See attached diagram for a list of sites, along with the number and distance of the fiber runs.

Funding

- IT

Other

- OAKNet Critical Services = digital wireless services, next generation 911 services (these services are collocated at the same PSAP facilities).
- OAKNet Intranet Services = all currently deployed data, voice, and video services.
- No RFP for equipment. Specify equipment based on vendor compatibility and cut purchase orders (will follow bid processes for best prices).
- McCleod USA to pull the fiber.
- Change management policy / process is required to support static environment and any Tariff(s) developed.
- No known delivery time constraints.

Priority 3 (CLEMIS)

Constraints

- TSN works on network components only (not any of the equipment supplied by M/A Comm or AWT – we will coordinate efforts with them).

Exclusions

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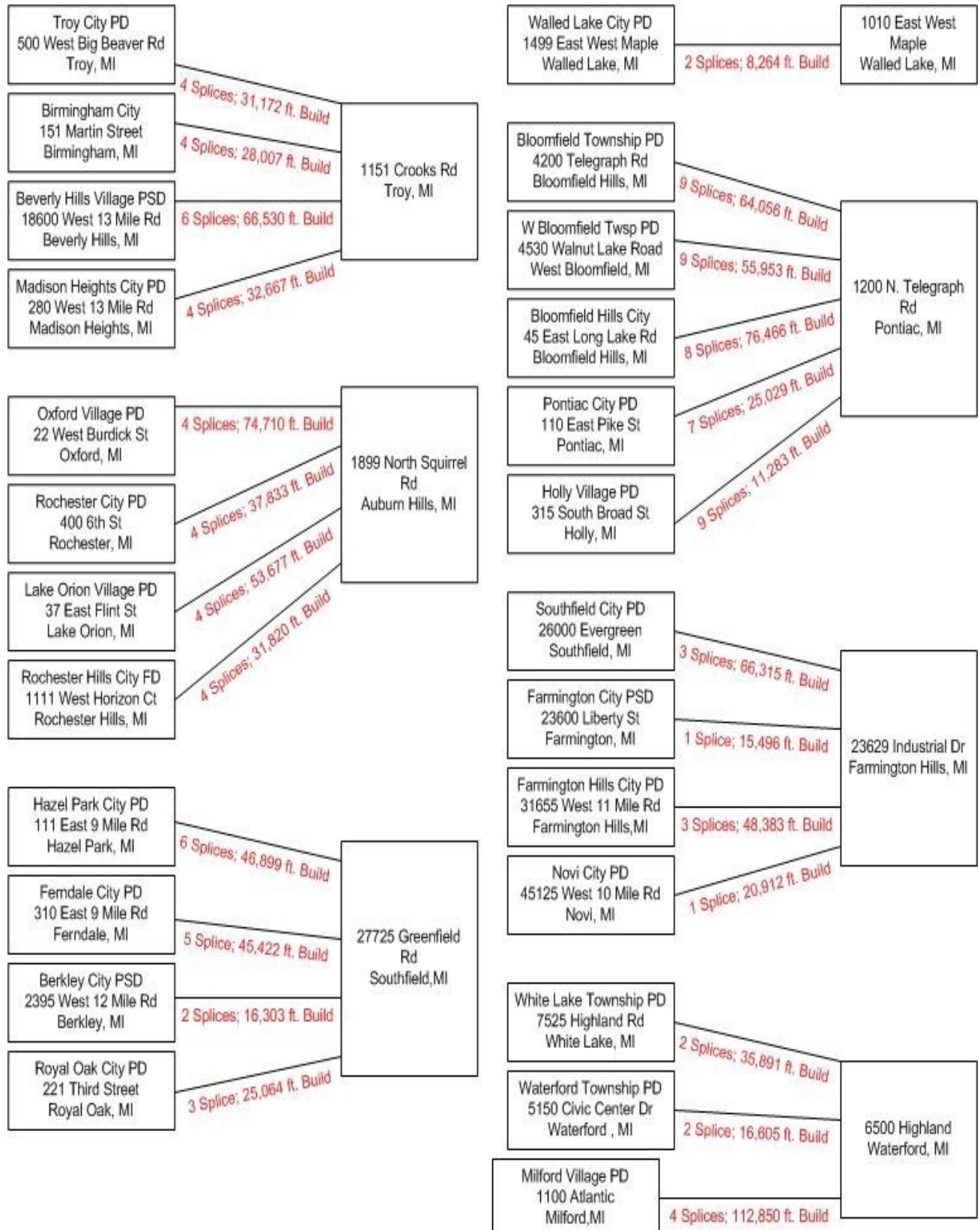
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- Any Tariff(s) required will be developed by the NG911 project.

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PROJECT PHASE AUTHORIZATION

Phase(s): Fiber Infrastructure, Project Management	
Total Estimated Application Services	Hours: Cost:
Total Estimated Technical Systems	Hours: 288 Cost: 16,210
Total Estimated eGovernment Services	Hours: Cost:
Total Estimated CLEMIS	Hours: Cost:
Total Estimated Internal Services	Hours: Cost:
IT Application Services Division Manager Approval:	Date:
IT Technical Systems Division Manager Approval:	Date:
IT eGovernment Services Division Manager Approval:	Date:
IT CLEMIS Division Manager Approval:	Date:
IT Internal Services Division Manager Approval:	Date:
IT Management Approval:	
Approved: Yes No	Date:
Reason:	
Project Sponsor Approval:	
Title:	Date:

PROJECT SUMMARY

Authorized Development (see above)	Hours: 288	Cost: 16,210
Preliminary Estimated Development for Future Phases	Hours: 4,437	Cost: 180,438
Grand Total Estimated Development	Hours: 4,725	Cost: 196,648

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PROJECT COMPLETION AUTHORIZATION

Customer Acceptance of Product:	
Title:	Date:
Project Office Review:	Date:

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Return on Investment Analysis

Project Summary

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Benefits/Savings:							
Tangible Benefits Subtotal:	0	0	0	0	0	0	0
Cost Avoidance Subtotal:	0	0	0	0	0	0	0
Costs:							
Development Services Subtotal:	20,680	0	0	0	0	0	20,680
Hardware Subtotal:	0	0	0	0	0	0	0
Software Subtotal:	0	0	0	0	0	0	0
Infrastructure Subtotal:	1,215,000	0	0	0	0	0	1,215,000
Training Subtotal:	0	0	0	0	0	0	0
Other Subtotal:	0	0	0	0	0	0	0
Annual Statistics:							
Annual Total Savings	0	0	0	0	0	0	0
Annual Total Costs	1,235,680	0	0	0	0	0	1,235,680
Annual Return on Investment	(1,235,680)						(1,235,680)
Annual Costs/Savings Ratio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Project Cumulative Statistics:							
Cumulative Total Savings	0	0	0	0	0	0	0
Cumulative Total Costs	1,235,680	1,235,680	1,235,680	1,235,680	1,235,680	1,235,680	1,235,680
Cumulative Return on Investment	(1,235,680)	(1,235,680)	(1,235,680)	(1,235,680)	(1,235,680)	(1,235,680)	(1,235,680)
Cumulative Cost/Savings Ratio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Year Positive Payback Achieved							NO PAYBACK
State or Federal Mandate?							
Signatures:							
Benefits Reviewed By Project Sponsor	Date: _____						
Costs (including IT Resources) Reviewed By Information Technology Project Manager	Date: _____						
Costs (including IT Resources) Reviewed By Technical Services Manager	Date: _____						

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Return on Investment Analysis

Cost Summary

Cost Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Development Services:							
IT Hours - New Development - ETM	2,205						2,205
IT Hours - New Development - CTM	9,744						9,744
IT Hours - New Development - ETP	4,756						4,756
IT Hours - New Development - CNT	2,625						2,625
IT Hours - New Development - SCP	1,350						1,350
IT Hours - New Development - Preliminary Phases - NS		121,278					
IT Hours - New Development - Preliminary Phases - CP		56,145					
IT Hours - New Development - Preliminary Phases - CNT		44,400					
IT Hours - New Development - Preliminary Phases - SCP		22,200					
M/A Comm and AWT Consulting		150,000					
<i>Development Services Subtotal:</i>	20,680						20,680
Hardware:							
<i>Hardware Subtotal:</i>							
Software:							
<i>Software Subtotal:</i>							
Infrastructure:							
Fiber Optic Cabling	565,000						565,000
Networking Equipment	600,000						600,000
Internal Wiring and Grounding	50,000						50,000
<i>Infrastructure Subtotal</i>	1,215,000						1,215,000
Training:							
<i>Training Subtotal:</i>							
Other:							
<i>Other Subtotal:</i>							
Costs Total:	1,235,680						1,235,680

