

Houston IT Services (HITS)



Public Safety Radio Replacement Project Update

Public Safety Committee
February 26, 2013

Presentation Topics



- » Scope and History
- » Funding
- » Progress to Date
 - > Construction
 - > High Noise Testing
 - > Coverage Acceptance Testing
- » Project Delay
- » Next Steps
- » Risks
- » Upcoming Requests for Council Action



Existing Systems



- » Antiquated
- » Low Capacity
- » Low Reliability
- » Poor Coverage
- » Poorly Maintained



Consolidated System



- » Modern
- » Ultra High Capacity
 - > Room to Share
- » Incredibly Reliable
- » Dramatically Improved Coverage
- » Enhanced Security with Voice Encryption
- » Well Maintained



Consolidated System



- » RCA Approved – October 2008
 - > \$132.3 million contract value
- » Increased Coverage (16 to 48 sites)
- » Increased Capacity (5X)
- » Increased Reliability through redundancy
- » Increased Interoperability

Safety of First Responders and the Public They Serve



Funding Sources



- » Police CIP
 - » PWE CUS
 - » HAS
 - » Grants
 - » Total Funding
- » \$ 34.0 Million
 - » \$ 10.3 Million
 - » \$ 2.02 Million
 - » \$ 91.7 Million
 - » \$ 138.02 Million

MWBE Goal = 11%

Current Performance = 10.51%



Progress to Date



- » Completed Project Milestones 1-6
- » Completed:
 - > All Site Construction
 - > High Noise Audio Testing
 - > Microwave Backhaul System Completed & Operational
 - > Installation and Optimization of both General Government and Public Safety Layers of the system
- » Completed & Passed Functional and Coverage Acceptance Testing for Public Safety Layer
 - > City divided into half-mile grids ($\approx 8,200$)
 - > Goal was $< 5\%$ failure of tested grids
 - > Result was $< 1\%$ failed grids



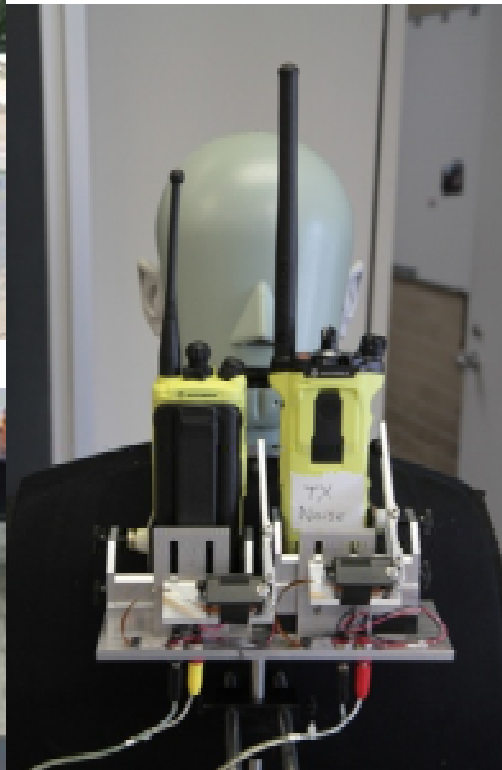
Construction



Construction



High Noise Testing



Coverage Testing



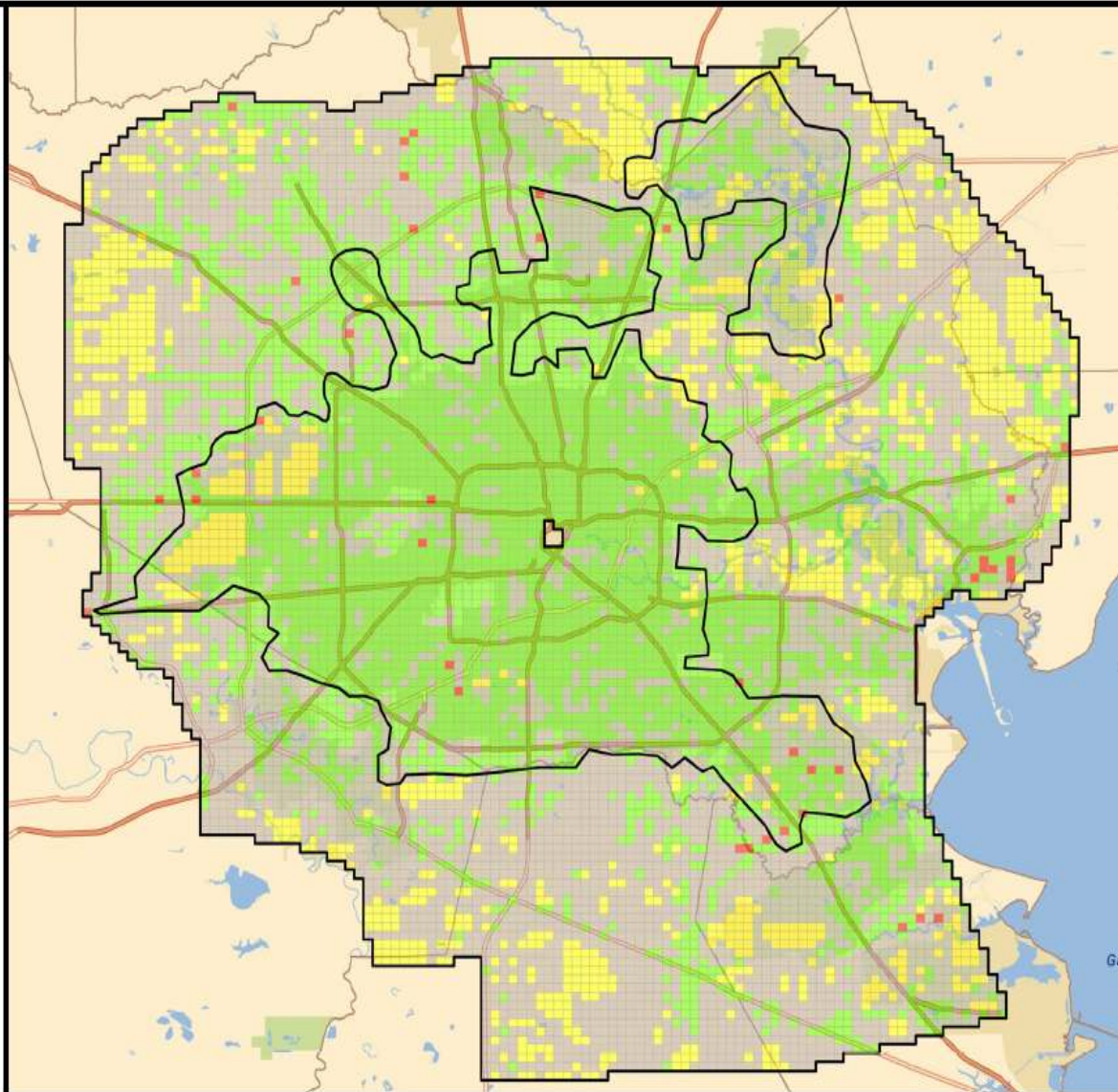
Coverage Testing



Public Safety M3 Coverage Test Random Buildings

- Passed
- Failed
- Inaccessible
- No Building

Grids Tested : 4,003
Grids Failed : 41
Tested & Passed : 99.0%



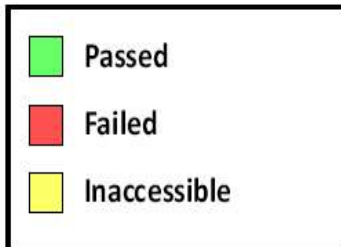
Coverage Testing



Public Safety

M3 Coverage Test

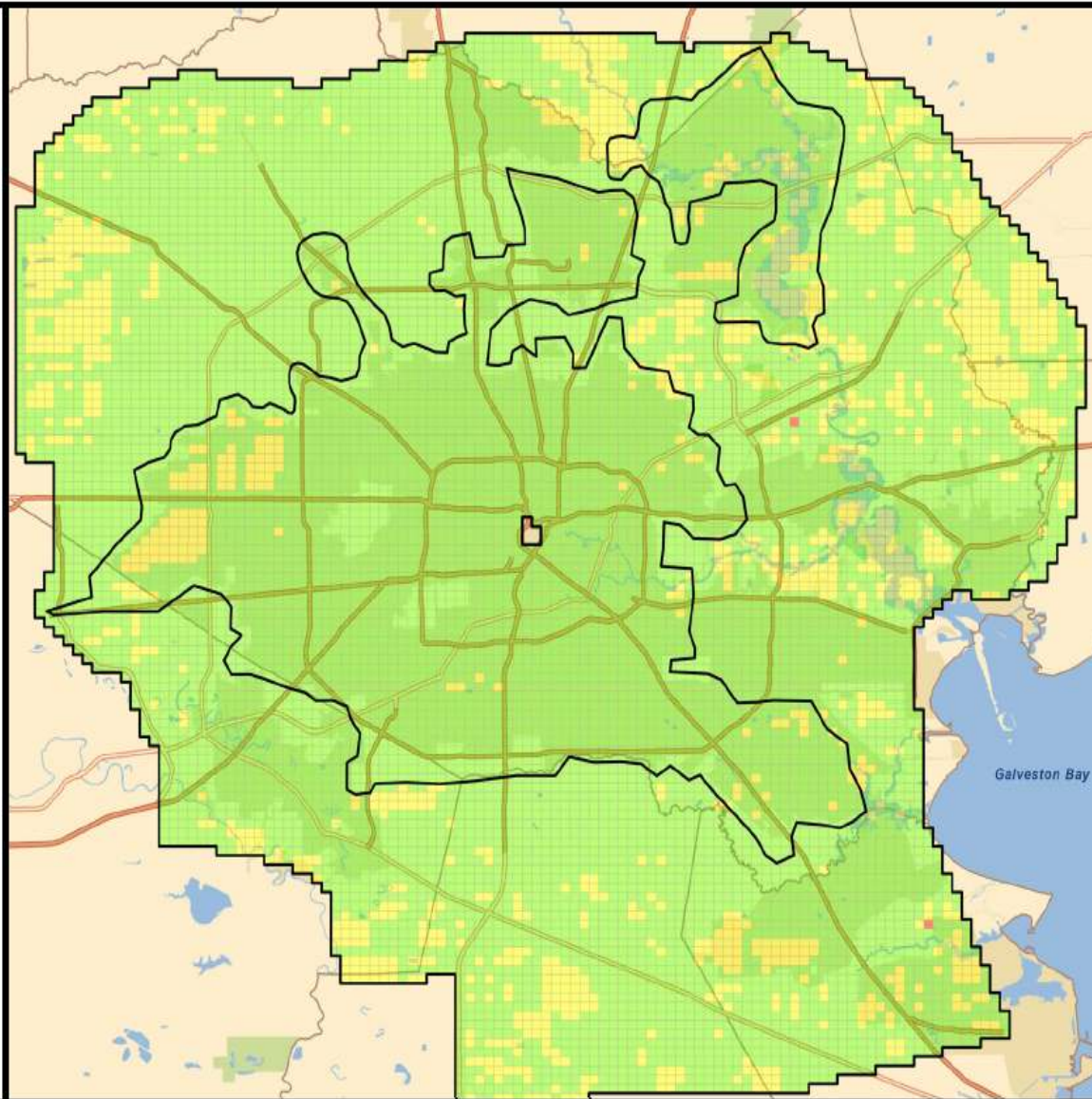
Portable On-Street



Grids Tested : 8,623

Grids Failed : 2

Tested & Passed : 99.98%

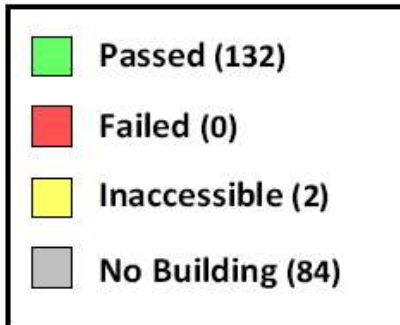


Coverage Testing



Public Safety M3 Coverage Test

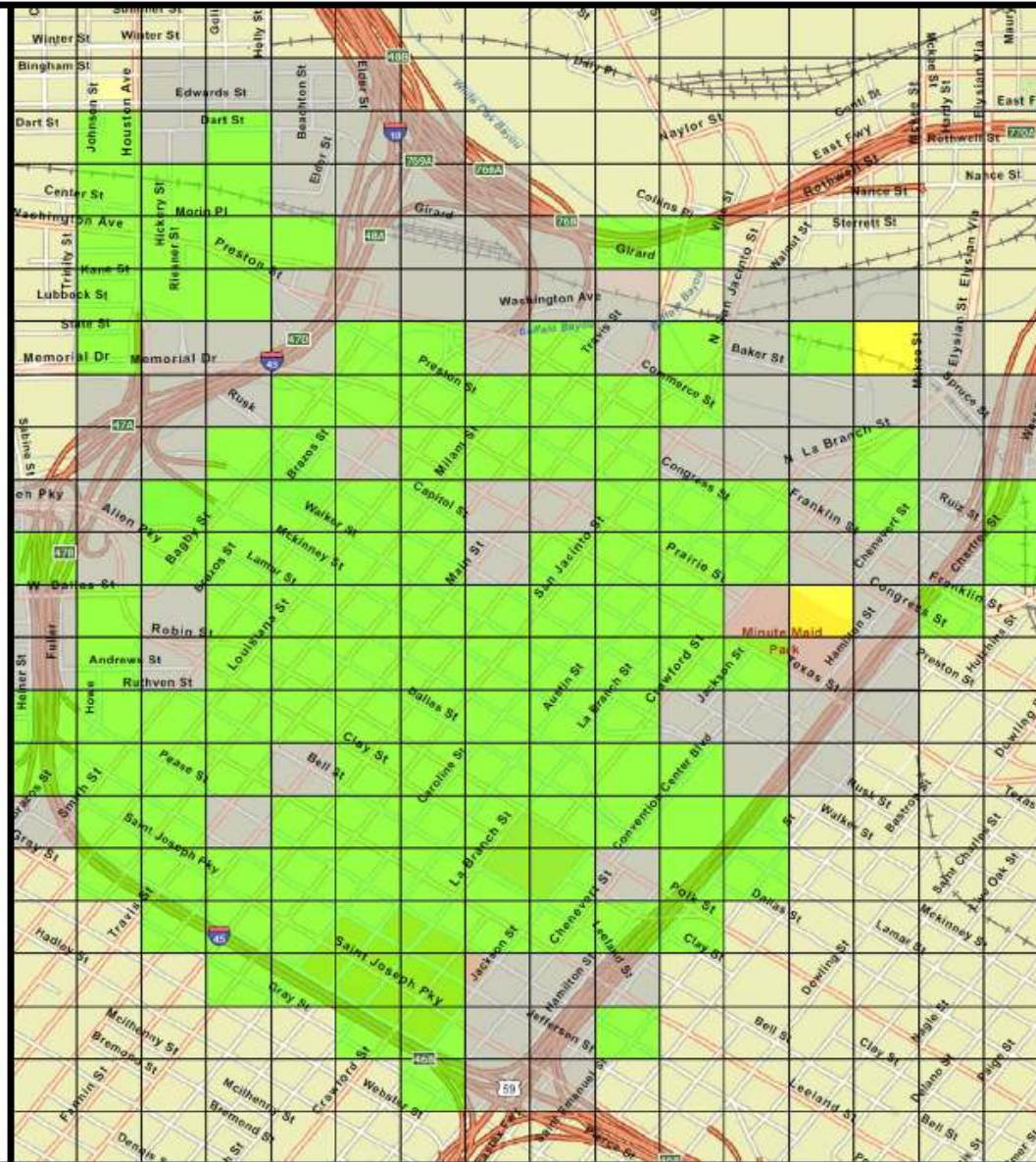
Random Buildings Downtown



Grids Tested : 132

Grids Failed : 0

Tested & Passed : 100%



Coverage Testing

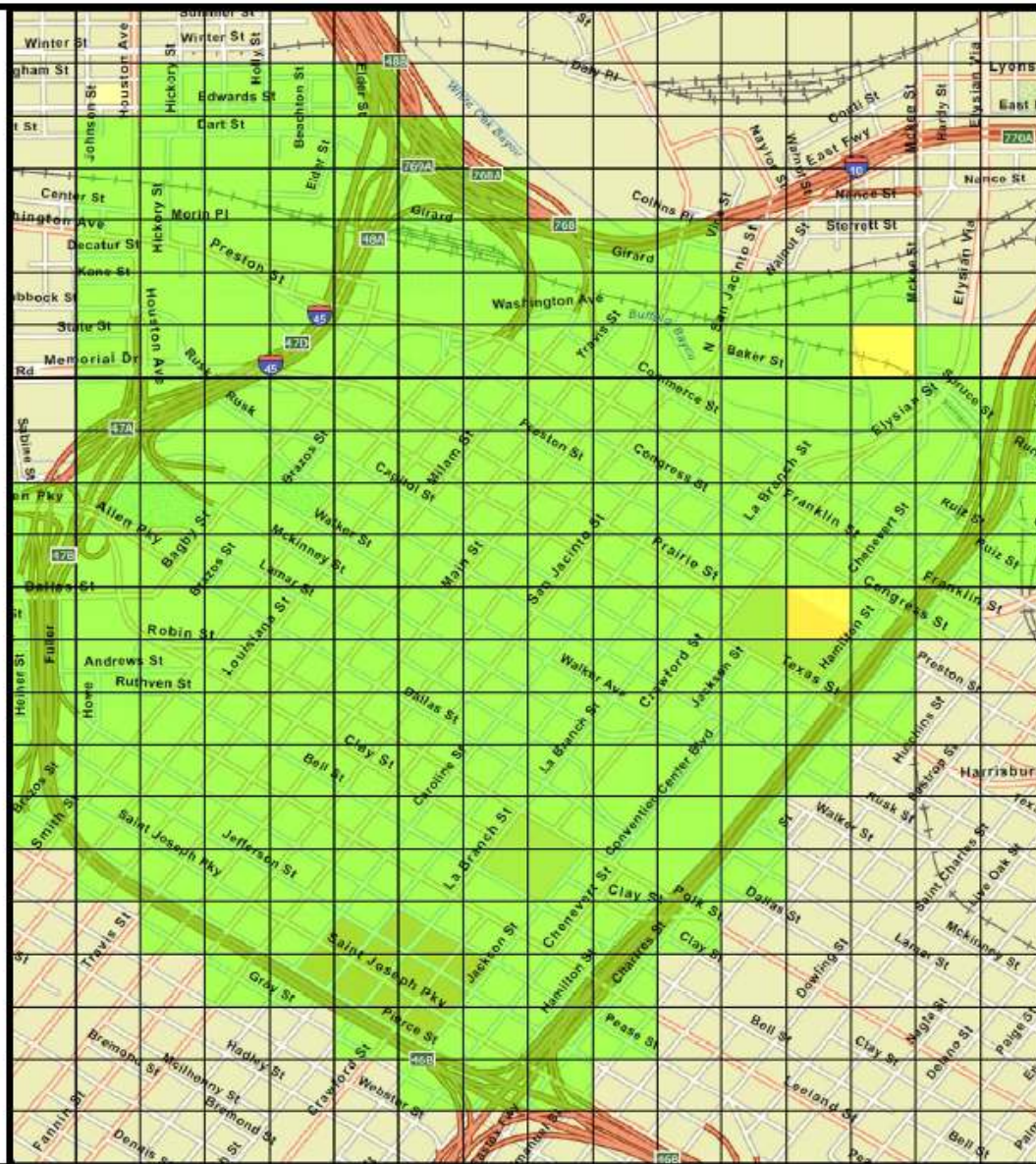


Public Safety M3 Coverage Test

Portable On-Street Downtown



Grids Tested : 217
Grids Failed : 0
Tested & Passed : 100%



Related Progress



- » Completed Downtown Tunnel Coverage Agreement
(Approved by Council – 8/8/12)
 - > Provides system for Cellular and Radio Coverage
 - > 4 Major Carriers
 - > Zero dollars to the City
- » Completed Agreement for Joint Radio Facility with Harris County (Approved by Council - 10/10/12)
 - > Approximately 50,000 Sq. Ft. Facility
 - > Joint Network Operations
 - > To be Built on Land acquired from HAS at 2318 Greens Road



Project Delay



- » Motorola Firmware Bug impacting radio subscriber performance
 - > Retouch, Retune, Reprogram more than 13,000 radios
 - > Estimated 90 day impact to schedule
- » Required waiver from FCC for Narrowbanding of existing UHF channels (Received Approval January 2nd)
- » End of this process now matches to a planned infrastructure upgrade further delaying cutover
- » New estimated cutover – April 2013



Next Steps



- » Complete Migration to Public Safety Layer by May 2013
- » Begin remediation of critical buildings
 - > Target completion – December 2013
- » Provide Radio & Cell Phone Coverage in Downtown Tunnels
 - > Complete Building Owner Agreements (17 out of 44 as of 2/1/13)
 - > Complete Contractor Site Walks & Receive Detailed Design Documents
 - + Target completion – March 31, 2013
 - > Approve Design and Installation Plan
 - > System Activation Target – December 31, 2013



Risks



» Post Project Operating Costs Impact to General Fund

- > Staffing from 20 to 37
- > Maintenance Costs for Software and Hardware
- > Equipment Refresh not covered by grants
- > General Fund FY2013 ≈ \$2.6m versus FY2014 ≈ \$6.2m

» New Construction Impacting Coverage

- > Microwave Paths
- > In-building Coverage



Price of Excellence



Old Systems

- » System Ops \approx \$1.55m
- » Software Maint = \$0
- » Subscriber Svcs \approx \$1.1m
- » Total Budget \approx \$2.6m
- » Personnel \approx 20



New System

- » System Ops \approx \$3.37m
- » Software Maint \approx \$1.1m
- » Subscriber Svcs \approx \$1.8m
- » Total Budget \approx \$6.2
- » Personnel \approx 37 (FY2014)





Support Level Reductions

Consolidation of Radio Services into IT Occurred January 2010

Agency	FY2002	FY2010 (pre)	FY2010 (post)	FY2012
HPD*	48	36	28	20
HFD	24	12	0	0
PWE	10	10	2	0
IT	0	0	28	20
City-wide Total	82	58	58	40

*HPD staff handle more than just radios

The 40 total represents *current* Police and IT radio FTEs. When IT adds the 17 additional needed employees it will bring the total to 57.



Upcoming RCA



- » **Final Project Funding Appropriation (3/20/2013)**
 - > Final \$9m of the planned \$24m in CIP for FY 2013
 - > Implementation Expenses (City Project Staff, Leases, Grant Matching, etc.)
- » **In-building Amplification Ordinance (April/May 2013)**
 - > Impacts 50,000 Square Feet or 4 Stories (50 feet in height)
 - > Major Remodels and New Construction
 - > Draft created vetting with Industry and Houston Fire

