

City of Houston  
Information Technology Department (ITD)



Public Safety Radio  
Replacement  
Project Update

# Presentation Topics



- » Scope and History
- » Funding
- » Progress to Date
  - > Construction
  - > High Noise Testing
  - > Coverage Acceptance Testing
- » 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 = 12.9%



# Progress to Date



- » Completed Project Milestones 1-3
- » All Site Construction Completed
- » Microwave Backhaul System Completed & Operational
- » Completed & Passed High Noise Audio Testing
- » Completed & Passed Functional and Coverage Acceptance Testing for General Government Services Layer
  - > City divided into half-mile grids ( $\approx 8,400$ )
  - > Goal was  $< 5\%$  failure of tested grids
  - > Result was  $< 0.5\%$  failed grids



# Construction





# Construction



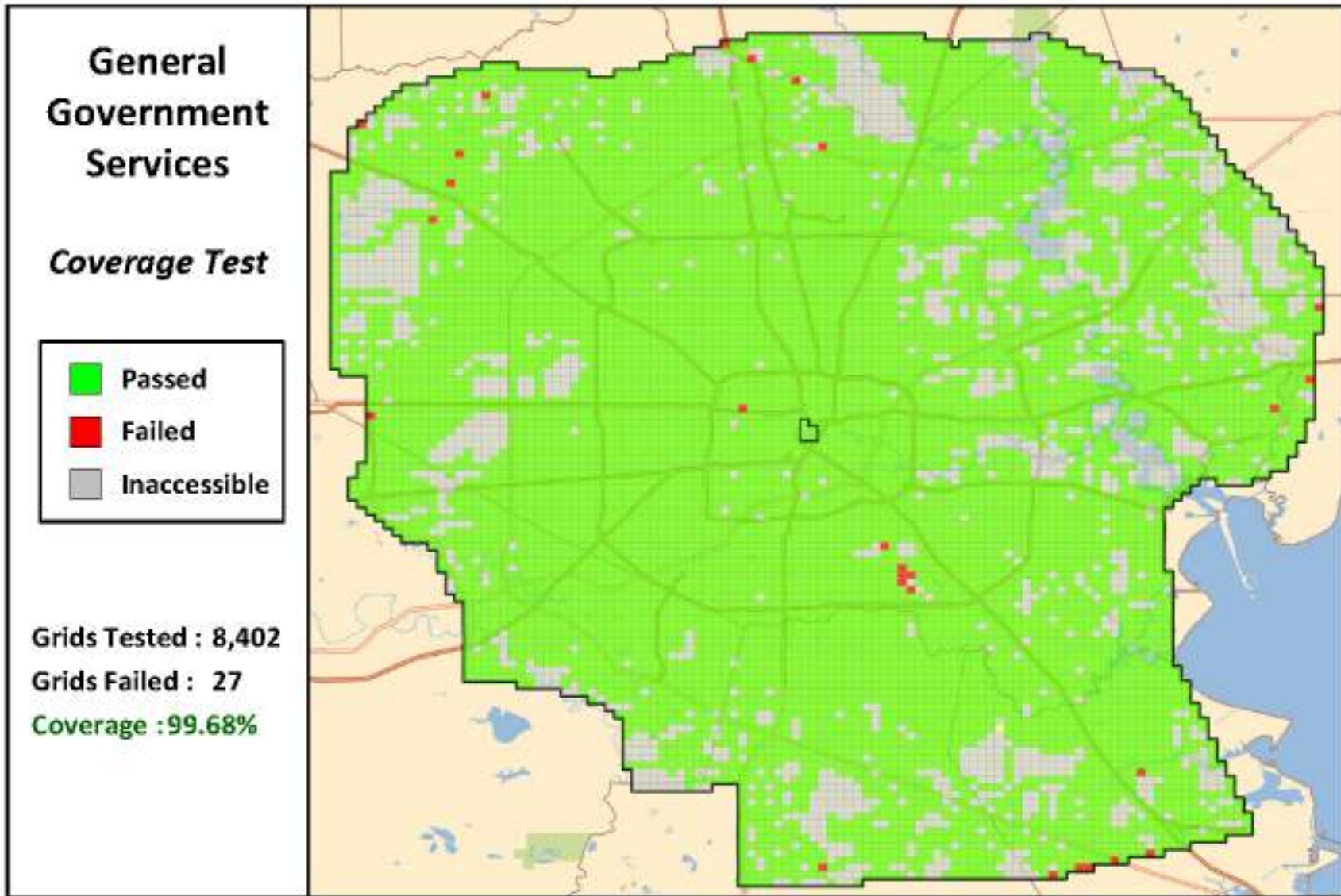
# High Noise Testing



# Coverage Testing



# Coverage Testing



# Next Steps



- » Complete Migration to General Government Services Layer by 8/31/2012
- » Complete Coverage Acceptance Testing for Public Safety Layer by 11/15/2012
- » Completed Project Milestones 4-8 by 12/31/2012
  - > Transition users to the new system
  - > Begin testing & remediation of critical buildings
- » Provide Radio & Cell Phone Coverage in Downtown Tunnels
  - > Execute Tunnel Agreement with Carriers
  - > Building Owners Execute Addendum to City/Carriers agreement



# 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  $\approx$  \$2.6m versus FY2014  $\approx$  \$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



- » Annual Project Funding Appropriation (8/1/2012)
  - > \$15m of the planned \$24m in CIP for FY 2013
  - > Implementation Expenses (City Project Staff, Leases, Grant Matching, etc.)
- » Tunnel Coverage System Agreement (30 Days)
  - > Provides system for Cellular and Radio Coverage
  - > 4 Major Carriers
  - > Zero dollars to the City
- » Joint Radio Facility with Harris County (60 Days)
  - > Approximately 50,000 Sq. Ft. Facility
  - > Joint Network Operations
  - > Plans and Documents are being negotiated
- » In-building Amplification Ordinance (90-180 Days)
  - > 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

