9th Annual Statewide Communications Interoperability Planning Conference

August 12, 2015

SWIC Updates

SWIC Accomplishments and Strategic Advisory Groups

Office of the SWIC

Regional Standard Operating Procedures

* **Purpose:**
  * Review existing Regional SOP template from the Regional Interoperable Communications Plan (RICP) and update it
* **Accomplishments:**
  * The RSOP SAG met approximately 8 times
  * The SAG reviewed, updated, and finalized the template to be available for any organization needing this resource

Regional Standard Operating Procedures

* **Next steps:**
  * SEC Vote on RSOP Template
  * Post on PublicSafetyTools.info Library
  * As part of the 2016 Focus Groups: Request each region to review current SOPs and update them using the new template.

Training

* **Purpose:**
  * To create a basic communications training curriculum to be incorporated into academies
* **Accomplishments:**
  * A training template and an exercise template for interoperability was developed and approved by the SAG

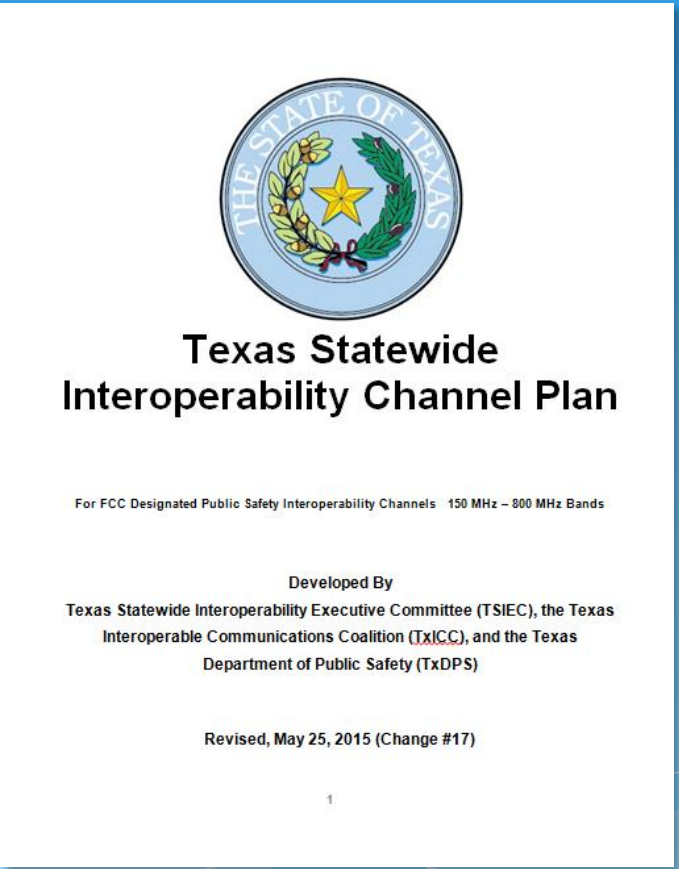
Training

* **Next steps:**
  * SEC Vote on Training and Exercise Templates
  * Develop an implementation plan to encourage adoption at training academies and other training entities

Texas Statewide Interoperability Channel Plan (TSICP)

Purpose:

To provide permissions and guidelines for the use of interoperability or mutual-aid radio channels



Texas Statewide Interoperability Channel Plan

For FCC Designated Public Safety Interoperability Channels 150 MHz – 800 MHz Bands

Developed By
Texas Statewide Interoperability Executive Committee (TSIEC), the Texas Interoperable Communications Coalition (TxICC), and the Texas Department of Public Safety (TxDPS)

Revised, May 25, 2015 (Change #17)

1

Texas Statewide Interoperability Channel Plan (TSICP)

* **Accomplishments:**
  * Group released v17 with a vote by the SEC delegates and posted to PublicSafetyTools.info
  * Added recommended short list of VHF and 700 channels for programming
  * Added 7CALL70 and 7CALL70D channels

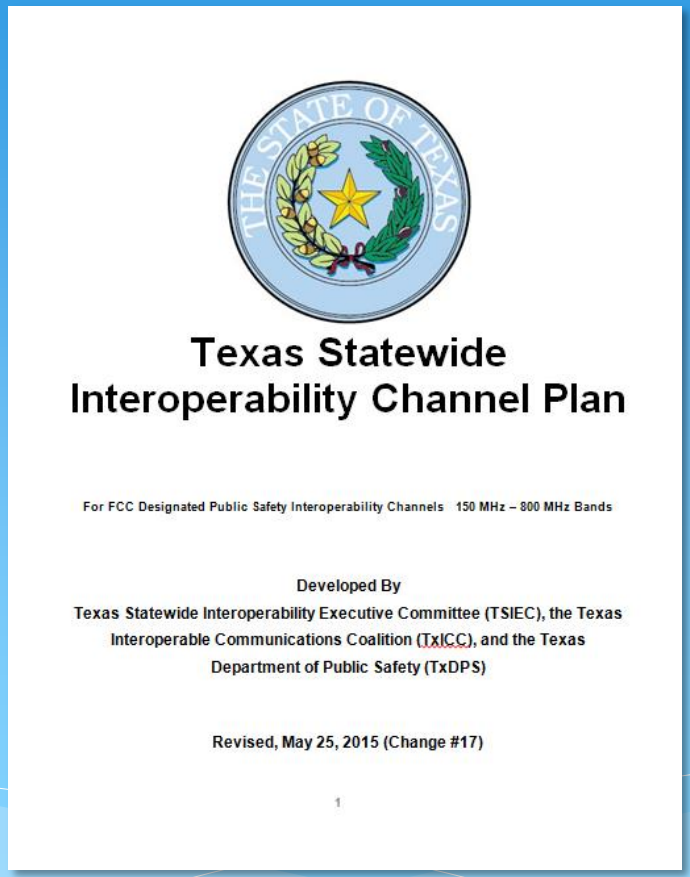
Texas Statewide Interoperability Channel Plan (TSICP)

* **Accomplishments:**
  * Removed emission designators 11K2G2E and 11K3F3E
  * Updated Station Class field in 700 MHZ and 800 MHz channel tables
  * Indicated which 700 MHz channels should not be used within 70 miles of the US / Mexico border

Texas Statewide Interoperability Channel Plan (TSICP)

Next Steps:

To continually review the document in comparison with Federal guidelines, and to provide clarifications and improvements



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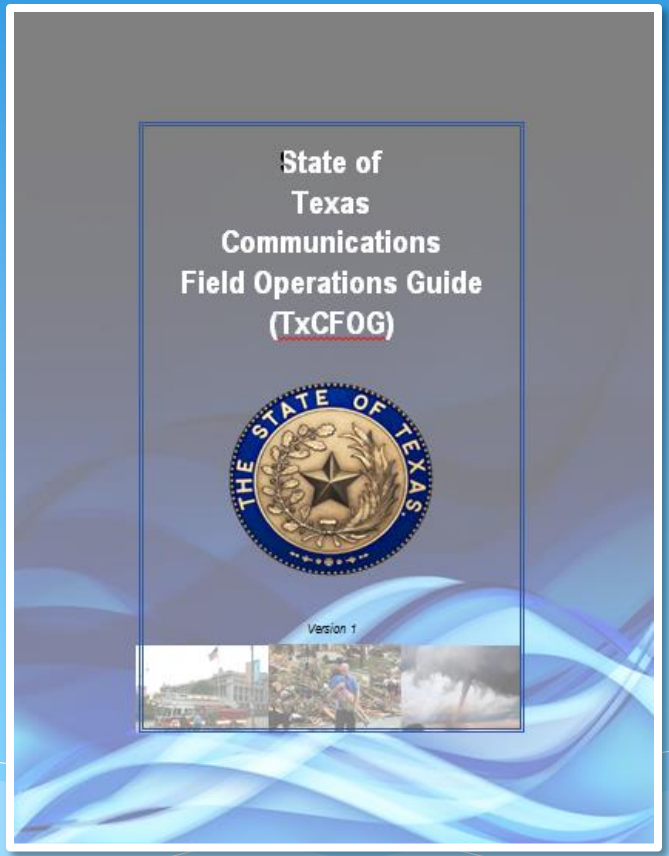
Revised, May 25, 2015 (Change #17)

1

Texas Communications Field Operations Guide (TxCFOG)

Purpose:

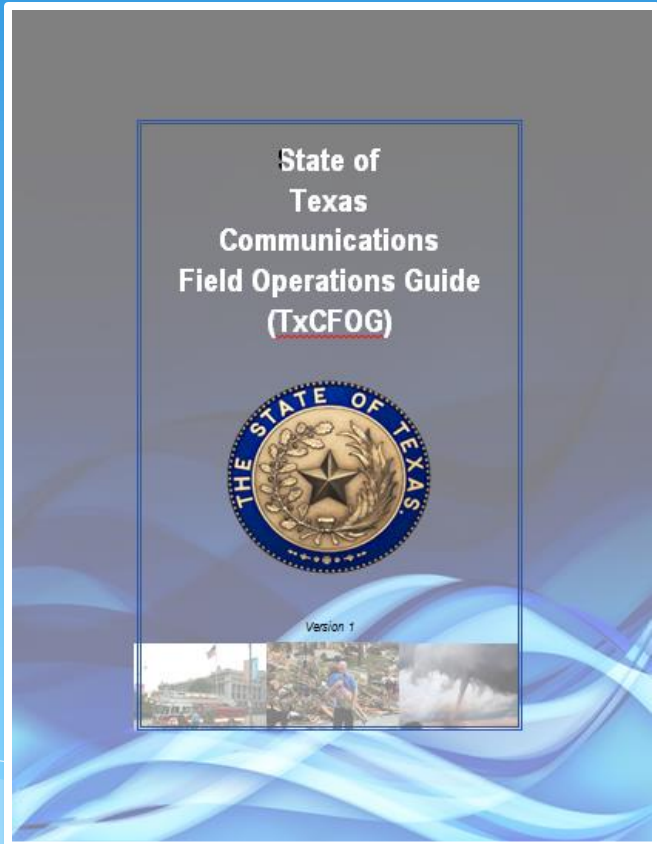
To create a pocket guide specifically for Texas in line with the national-level National Interoperability Field Operations Guide (NIFOG)



Texas Communications Field Operations Guide (TxCFOG)

Accomplishments:

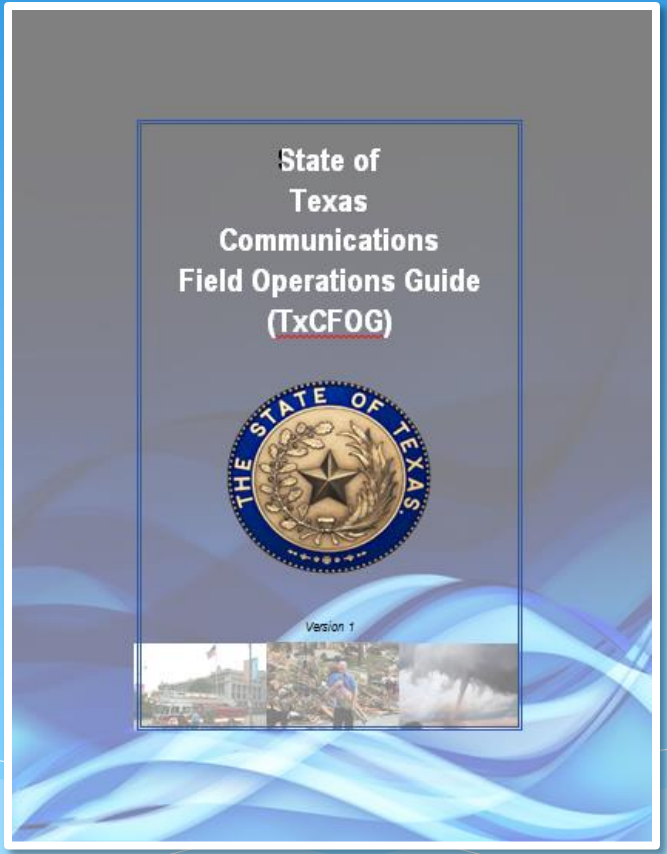
TxCFOG finalized, approved by SEC vote, posted to PublicSafetyTools.info



Texas Communications Field Operations Guide (TxCFOG)

Next Steps:

Investigating printing options for limited printing.



Cache Radio User Training

Purpose:

To develop a 'Just In Time' training template to be used with Cache Radio deployments

Cache Radio User Training

Purpose:

Training gives an overall view of the Texas Channel Plan, but allows agencies to customize for their model of radio and programming

Cache Radio User Training

Accomplishments:

Template presentation finalized by the working group; approved by SEC vote; posted on PublicSafetyTools.info

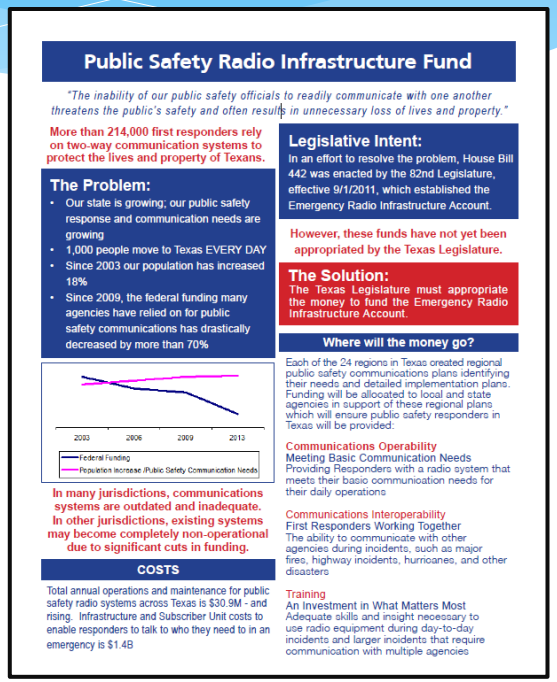
Cache Radio User Training

Next Steps:

Agencies to save customized presentation on USB drives and include with their cache radios

Infrastructure Funding

- **Purpose:**
  - To discuss approaches to increase funding opportunities and how to best leverage existing resources
- **Accomplishments:**
  - One-page funding flyer updated



Public Safety Radio Infrastructure Fund

"The inability of our public safety officials to readily communicate with one another threatens the public's safety and often results in unnecessary loss of lives and property."

More than 214,000 first responders rely on two-way communication systems to protect the lives and property of Texans.

The Problem:

- Our state is growing; our public safety response and communication needs are growing
- 1,000 people move to Texas EVERY DAY
- Since 2003 our population has increased 18%
- Since 2009, the federal funding many agencies have relied on for public safety communications has drastically decreased by more than 70%

2003 2006 2009 2013

Federal Funding

Population Increase /Public Safety Communication Needs

In many jurisdictions, communications systems are outdated and inadequate. In other jurisdictions, existing systems may become completely non-operational due to significant cuts in funding.

COSTS

Total annual operations and maintenance for public safety radio systems across Texas is $30.9M - and rising. Infrastructure and Subscriber Unit costs to enable responders to talk to who they need to in an emergency is $1.4B

Legislative Intent:

In an effort to resolve the problem, House Bill 442 was enacted by the 82nd Legislature, effective 9/1/2011, which established the Emergency Radio Infrastructure Account.

However, these funds have not yet been appropriated by the Texas Legislature.

The Solution:

The Texas Legislature must appropriate the money to fund the Emergency Radio Infrastructure Account.

Where will the money go?

Each of the 24 regions in Texas created regional public safety communications plans identifying their needs and detailed implementation plans. Funding will be allocated to local and state agencies in support of these regional plans which will ensure public safety responders in Texas will be provided:

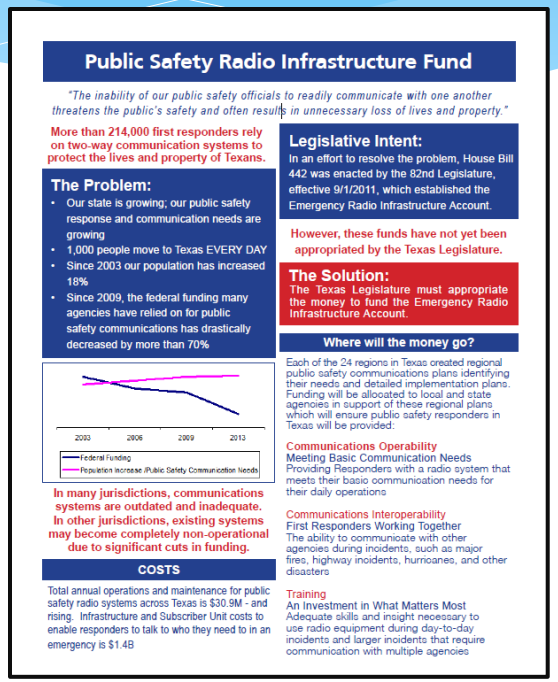
Communications Operability
Meeting Basic Communication Needs
Providing Responders with a radio system that meets their basic communication needs for their daily operations

Communications Interoperability
First Responders Working Together
The ability to communicate with other agencies during incidents, such as major fires, highway incidents, hurricanes, and other disasters

Training
An Investment in What Matters Most
Adequate skills and insight necessary to use radio equipment during day-to-day incidents and larger incidents that require communication with multiple agencies

Infrastructure Funding

- **Next Steps:**
  - Template letters
  - Finalize one-page flyer



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National Emergency Communications Plan

Emergency Communications Ecosystem

TxICC

The Future of First Responder Communications

PAST

- Limited communication options
- Reliance on voice
- Scarcity of information

FUTURE

- Many communication networks
- Increase in mobile to mobile/data communications
- Abundance of information

Emergency Communications Ecosystem

Governmental Agencies
(Federal, State, Local, Tribal, Territorial)

Incident Response and Coordination

Governmental Agencies
(Federal, State, Local, Tribal, Territorial)

Notifications,
Alerts & Warnings

Reporting, &
Requests for
Assistance

Public, NGOs, Private Sector

Public Information Exchange

Public, NGOs, Private Sector

2015 Focus Group Highlights

2015 Focus Group Highlights

* **Governance**
  * Each COG accepted the additional public safety broadband responsibilities identified through the updated TxICC charter.
  * All 24 COGs hosted a regional broadband meeting!!

2015 Focus Group Highlights

* **Standard Operating Procedures (SOPs)**
  * Most COGs have SOPs in place, many are reviewing, updating, and training on them on a regular basis.
  * Some COGs still say the SOPs are not widely known or exercised.

2015 Focus Group Updates

* **Technology**
  * Many COGs have P25 systems or they are able to communicate with P25 systems.
  * Many volunteer fire departments are NOT P25 compliant due to lack of funding.
  * Larger COGs are migrating P25 radio unit IDs to their recommended allocated statewide ID range.
  * Many COGs are programming radios in accordance with the TSICP.

2015 Focus Group Highlights

* **Training and Exercises**
  * Conducted some level of training (including Communication Leader and Communication Leader 'Train the Trainer' training) and/or tested interoperability capabilities during an exercise.
  * Concerns about future training and exercises being eliminated due to funding problems.

2015 Focus Group Updates

* **Usage**
  * Each COG has at least one trained Communications Leader (COML), and most have numerous trained COMLs.
  * Many COGs are testing use of radio interoperability channels or are at least promoting their use.

2015 Focus Group Updates

* **Funding**
  * Some COGs are pursuing creative funding approaches as Federal funding has rapidly decreased and State funds have not yet been appropriated. Creative approaches include:
    * Charging user fees to agencies using the system.
    * Local agencies working together to acquire and share communication resources.

* Break

2015 Focus Group Updates

* **Funding**
  * Many State agencies have system infrastructure sharing agreements with local entities for interoperable communications.
  * More extensive efforts to apply for additional grants.

SCIP Workshop Update

* SCIP Workshop Updates
  * 51 people attended

* Updated Initiatives and Goals

System Owners Meeting March 2015 Hosted by Ft. Worth

* March 24, 2015: 53 attendees from across the State
* Discussions included:
  * System Owners Roundtable: Updates from all System Owners
  * Overview of North Texas Interoperability Projects
  * State P25 Radio Unit ID Management and Planning '101'

System Owners Meeting March 2015 Hosted by Ft. Worth

* Cross-border Communication MOUs
* Updates to the TSICP
* Encryption – Federal Partnership for Interoperable Communications (FPIC) Recap
* T-Band, 700MHz Reserve Channels and 700 MHz Air-to-Ground Channels
* System Keys
* DHS Office of Emergency Communication's Life Cycle Planning Guide

System Owners Meeting Next Steps

Next Steps:

* System-of-Systems Strategic Advisory Group – sign up!
  * Email: ashley.kimbell@dps.texas.gov
* Next Meeting - January/February, 2016

Southwest Border Regulatory Issues Update

TxICC 2015 Strategic Planning Conference
August, 12 2015
Holiday Inn – Midtown
6000 Middle Fiskville Road
Austin, Texas 78752

For Those Who Don't Know Me

Federal Communications Commission

Public Safety and Homeland Security Bureau

Brian Marenco

Electrical Engineer
Policy and Licensing Division

445 12th Street, NW
Washington, DC 20554

Phone: 202-418-0838
Email: Brian.Marenco@fcc.gov

What Does the Division Do?

At the Policy and Licensing Division We:

- License land mobile systems for Public Safety entities
- Establish policies to maximize efficient use of Public Safety spectrum while minimizing interference
- Incorporate standards into our rules to promote interoperability and access to the latest technology
- Participate in negotiations with Canada and Mexico over international agreements impacting public safety radio communications along common borders

I'll Be Discussing the Following

I. Public Safety Spectrum and Status of Agreements with Mexico

II. Update on 800 MHz Task Force Discussions

III. Update on 700 MHz Cross-Border Issues

IV. Questions?

I. Public Safety Spectrum and Status of Agreements with Mexico

I. Public Safety Spectrum and Status of Agreements with Mexico

Status of Agreements with Mexico

Country	Frequency Band	Agreement	Type of Sharing
	150 MHz / 450 MHz	**No**	--
	700 MHz (PS & Commercial)*	✔ **Yes**	PS (50-50) Commercial (Co-Primary)
	800 MHz	✔ **Yes**	Lower (50-50) Upper (Co-Primary)
	4.9 GHz	✔ **Yes**	Co-Primary

* Agreement Based Upon Pre-2007 US Domestic Band Plan

I. Public Safety Spectrum and Status of Agreements with Mexico

US Designated Interoperability Channels by Frequency Band

150-170 MHz

Interoperability Channel (MHz)	Label *	Purpose
151.1375 MHz (base/mobile)	VTAC11	Tactical
154.4525 MHz (base/mobile)	VTAC12	Tactical
155.7525 MHz (base/mobile)	VCALL10	Calling
158.7375 MHz (base/mobile)	VTAC13	Tactical
159.4725 MHz (base/mobile)	VTAC14	Tactical

450-470 MHz

Interoperability Channel (MHz)	Label *	Purpose
453.2125 MHz (base/mobile) 458.2125 MHz (mobile)	UCALL40 UCALL40D	Calling
453.4625 MHz (base/mobile) 458.4625 MHz (mobile)	UTAC41 UTAC41D	Tactical
453.7125 MHz (base/mobile) 458.7125 MHz (mobile)	UTAC42 UTAC42D	Tactical
453.8625 MHz (base/mobile) 458.8625 MHz (mobile)	UTAC43 UTAC43D	Tactical

* Industry adopted channel nomenclature but not specified in FCC rules.

I. Public Safety Spectrum and Status of Agreements with Mexico

US Designated Interoperability Channels by Frequency Band (cont)

800 MHz NPSPAC

Interoperability Channel (MHz)	Label *	Purpose
851.0125 MHz (base/mobile) 806.0125 MHz (mobile)	8CALL90 8CALL90D	Calling
851.5125 MHz (base/mobile) 806.5125 MHz (mobile)	8TAC91 8TAC91D	Tactical
852.0125 MHz (base/mobile) 807.0125 MHz (mobile)	8TAC92 8TAC92D	Tactical
852.5125 MHz (base/mobile) 807.0125 MHz (mobile)	8TAC93 8TAC93D	Tactical
853.0125 MHz (base/mobile) 808.0125 MHz (mobile)	8TAC94 8TAC94D	Tactical

* Industry adopted channel nomenclature but not specified in FCC rules.

700 MHz Narrowband

Interoperability Channel (MHz)	Label **	Purpose
769.14375 MHz (base/mobile) 799.14375 MHz (mobile)	--	Tactical
769.24375 MHz (base/mobile) 799.24375 MHz (mobile)	--	Calling
769.39375 MHz (base/mobile) 769.39375 MHz (mobile)	--	Tactical
769.49375 MHz (base/mobile) 799.49375 MHz (mobile)	--	Tactical
769.64375 MHz (base/mobile) 799.64375 MHz (mobile)	--	Tactical
769.74375 MHz (base/mobile) 799.74375 MHz (mobile)	--	Tactical
769.99375 MHz (base/mobile) 799.99375 MHz (mobile)	--	Tactical
770.14375 MHz (base/mobile) 800.14375 MHz (mobile)	--	Tactical
770.24375 MHz (base/mobile) 800.24375 MHz (mobile)	--	Tactical
770.39375 MHz (base/mobile) 800.39375 MHz (mobile)	--	Tactical
770.49375 MHz (base/mobile) 800.49375 MHz (mobile)	--	Tactical
770.64375 MHz (base/mobile) 800.64375 MHz (mobile)	--	Tactical
770.89375 MHz (base/mobile) 800.89375 MHz (mobile)	--	Tactical
770.99375 MHz (base/mobile) 800.99375 MHz (mobile)	--	Tactical
773.00625 MHz (base/mobile) 803.00625 MHz (mobile)	--	Tactical
773.10625 MHz (base/mobile) 803.10625 MHz (mobile)	--	Tactical
773.25625 MHz (base/mobile) 803.25625 MHz (mobile)	--	Calling
773.35625 MHz (base/mobile) 803.35625 MHz (mobile)	--	Tactical
773.50625 MHz (base/mobile) 803.50625 MHz (mobile)	--	Tactical
773.60625 MHz (base/mobile) 803.60625 MHz (mobile)	--	Tactical
773.75625 MHz (base/mobile) 803.75625 MHz (mobile)	--	Tactical
773.85625 MHz (base/mobile) 803.85625 MHz (mobile)	--	Tactical
774.00625 MHz (base/mobile)		Tactical

I. Public Safety Spectrum and Status of Agreements with Mexico

Designated Cross-Border Interoperability Channels with Mexico?

Frequency Band	Cross-Border I/O Channels	Comments
150-174 MHz	No	Future Discussions?
450-470 MHz	No	Future Discussions?
700 MHz (Narrowband)	No	Mexico Proposes to Deploy APT Band Plan
800 MHz NPSPAC	✓ Yes	Same as US Domestic

II. Update on 800 MHz Task Force Discussions

II. Update on 800 MHz Task Force Discussions

800 MHz Protocol with Mexico

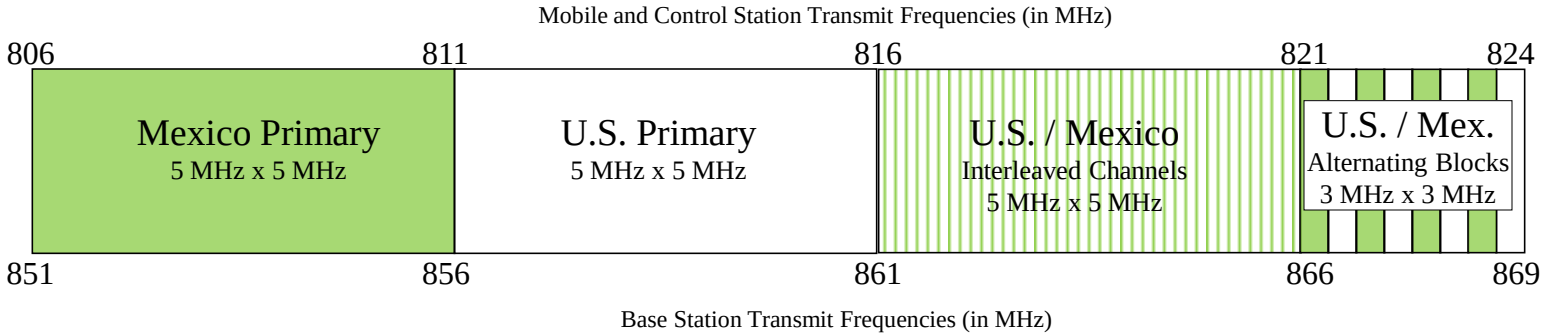
- In <u>June 2012</u>, the U.S. reached agreement with Mexico on a new Protocol which allows 800 MHz Rebanding to proceed along border with Mexico.

- In <u>April 2013</u>, the Bureau released a post-Rebanding channel plan for licensees in NPSPAC Regions bordering Mexico.

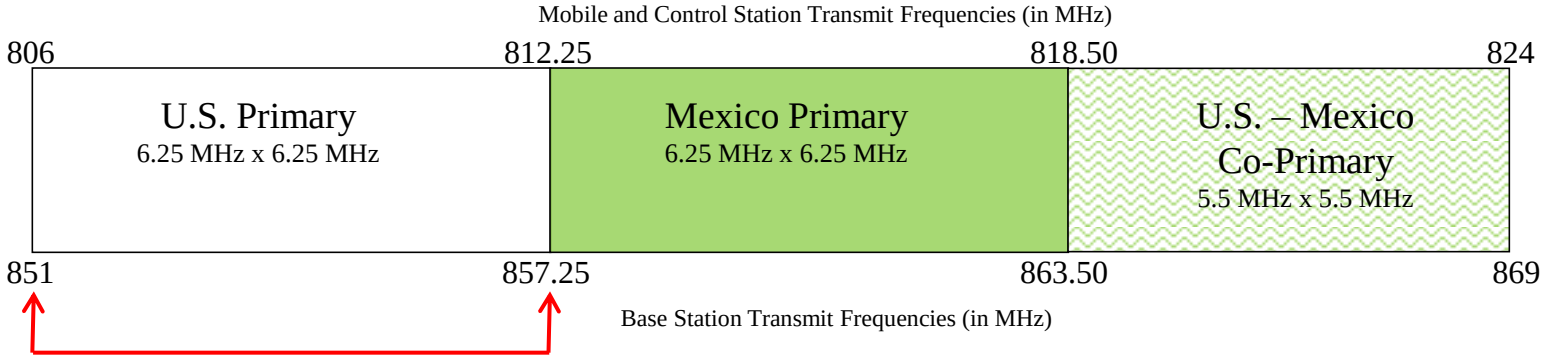
- In <u>August 2013</u>, the Bureau officially kicked-off Rebanding activity along the border with Mexico.

II. Update on 800 MHz Task Force Discussions

Previous 800 MHz Band Plan for Sharing Zone



Current 800 MHz Band Plan for Sharing Zone Based Upon New Protocol



PS and Business LMR Licensees Relocate Here

U.S. Primary

Mexico Primary

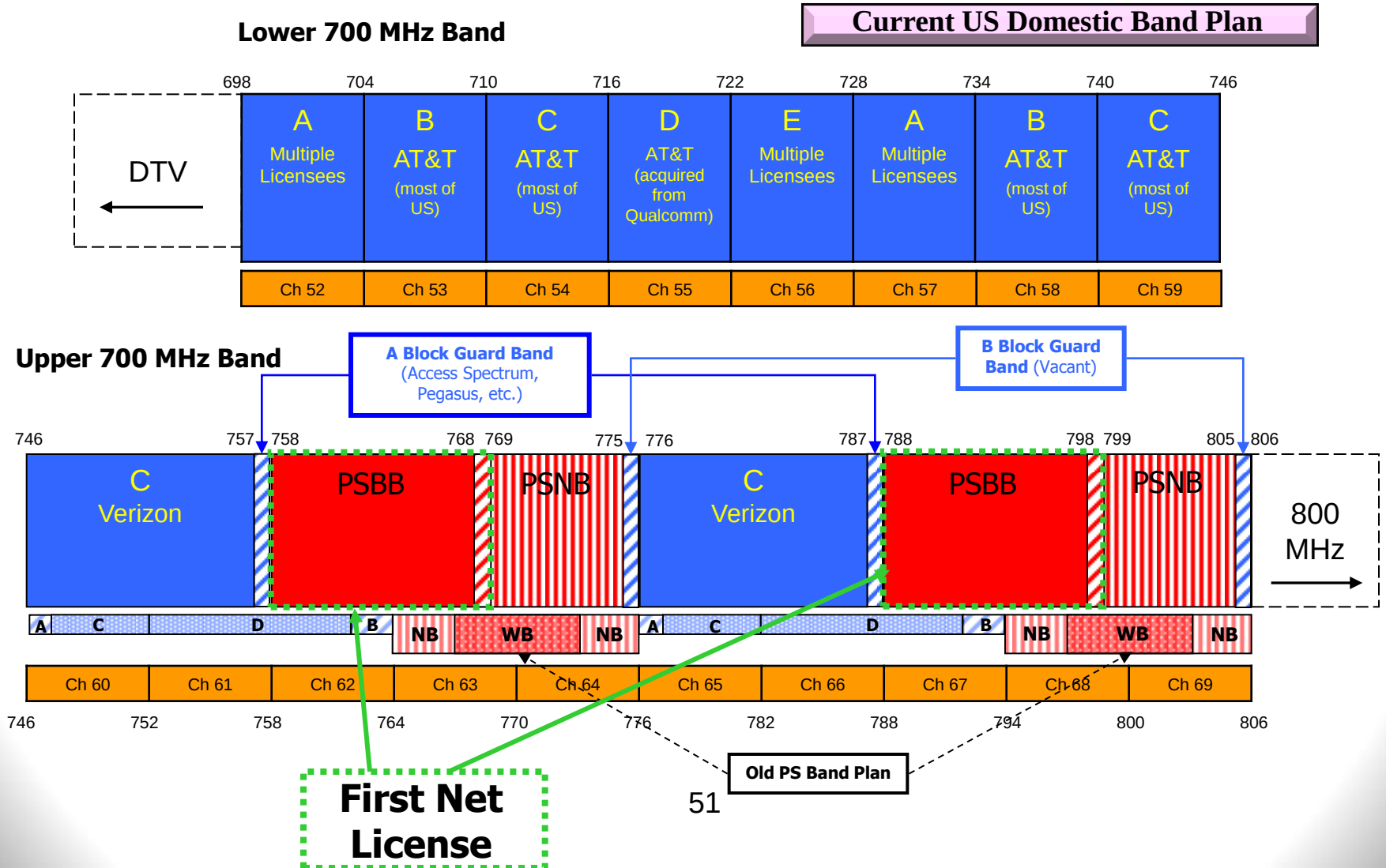
II. Update on 800 MHz Task Force Discussions

800 MHz Task Force Discussions Focused on Coordinating Frequency Retunes on Both Sides of Border. Talks Have Focused on……

- **Retuning Trunking Operators in Mexico to Channels Above 857.25 MHz or to Another Band.**
- **Retuning U.S. Public Safety and Business Licensees to Channels Between 851-857.25 MHz.**
- **Retuning the Nextel Mexico Network (now owned by AT&T) on a Rolling Basis to Channels in Upper Segment of the Band.**

III. Update on 700 MHz Cross-Border Issues

III. Update on 700 MHz Cross-Border Issues



III. Update on 700 MHz Cross-Border Issues

700 MHz Protocol with Mexico

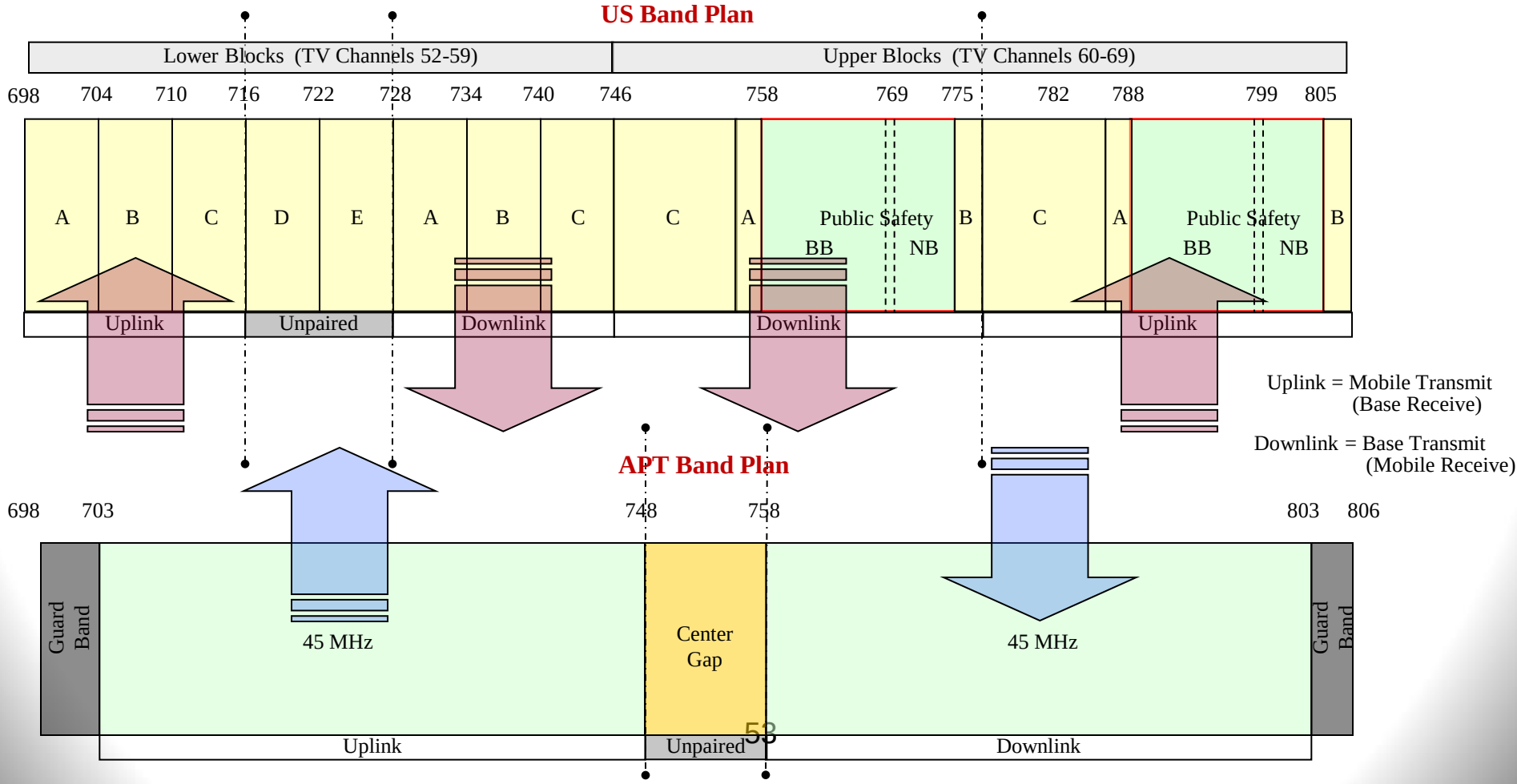
- In November 2006, the U.S. and Mexico signed a Protocol covering operations along the border in the 700 MHz band.

- The 2006 Protocol was based upon the U.S. domestic band plan at that time. The U.S. has attempted to update the Protocol to reflect FirstNet and consolidated Narrowband spectrum.

- Mexico, however, has more recently announced its intention to deploy the Asia Pacific Telecommunity (APT) band plan.

III. Update on 700 MHz Negotiations

US Band Plan vs. Asia Pacific Telecommunity (APT) Band Plan



III. Update on 700 MHz Cross-Border Issues

U.S. and Mexico Forming a Task Force on 700 MHz to Discuss Technical Issues Related to the Possible Deployment of APT Band Plan in Mexico and Protecting U.S. Licensees from Harmful Interference.

Discussions are ongoing…..

IV. Questions?

* Lunch – be back by 1:00

* 1:00 LIVE demo of the Harris County-LTE Network in action in Brazos County

Texas Public Safety Broadband Program

TxPSBP Overview

* Initial Consultation
* Draft RFP Response
* Early Builder Project – Harris County
* Key Learning Conditions
* Outreach
* Broadband Strategic Advisory Groups
* MDS and High-level of requirements gathering
* September data submission

Texas Public Safety Broadband Program

FirstNet and Texas: Initial Consultation Meeting
February 11, 2015
Omni Hotel - Austin, Texas
Texas Public Safety
Broadband Program

142 representatives from:

- Texas public safety disciplines - local, regional, and state governments
- Federal government;
- two tribes; and
- seven other states

Texas Public Safety Broadband Program

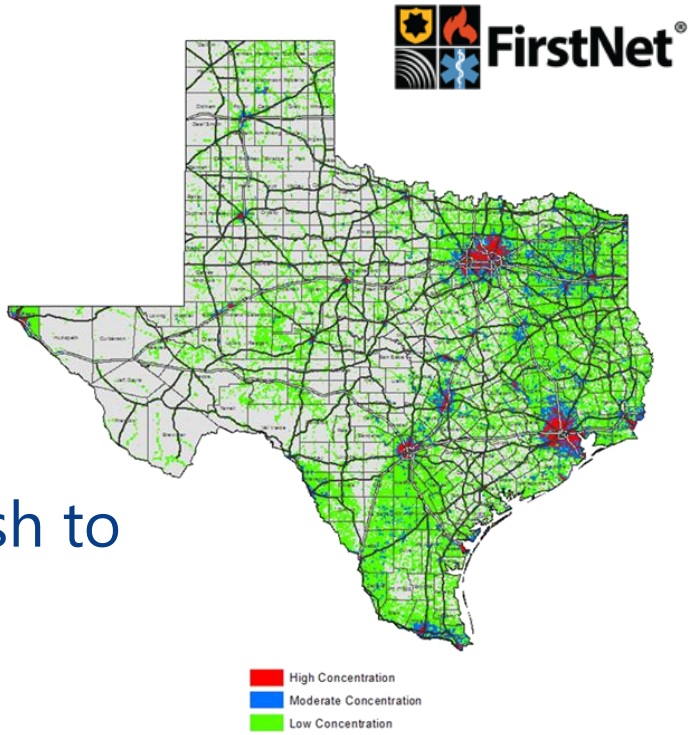
The purpose was to provide an opportunity for the Texas public safety community to have a direct dialogue with FirstNet to:

- Discuss wireless broadband communication needs,
- ask questions, and
- learn more about FirstNet's plans to implement a dedicated nationwide public safety broadband network

Texas Public Safety Broadband Program

Draft RFP Response

* Encourage ongoing consultation between Texas and FirstNet vendor(s)
* Clarification of coverage objectives
  * Data rates
  * **Rural coverage**
* Incorporating Early Builder Band 14 equipment
* Cost-sharing with jurisdictions that wish to fund supplemental equipment
* Reponses posted on txlte.com website



Early Builder Project – Harris County

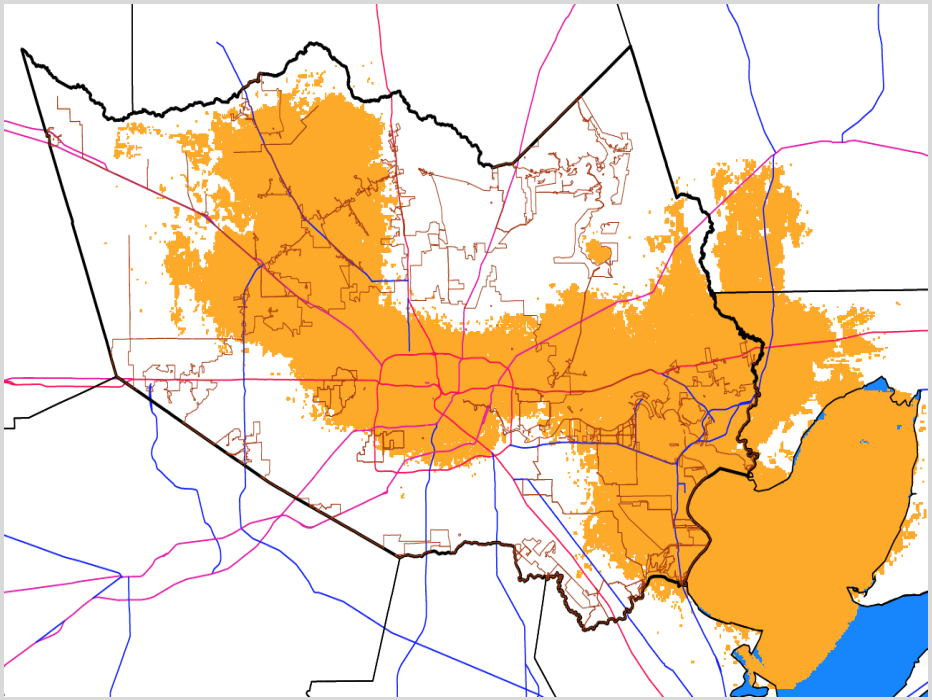
Harris County
Public Safety LTE

Build Out Status

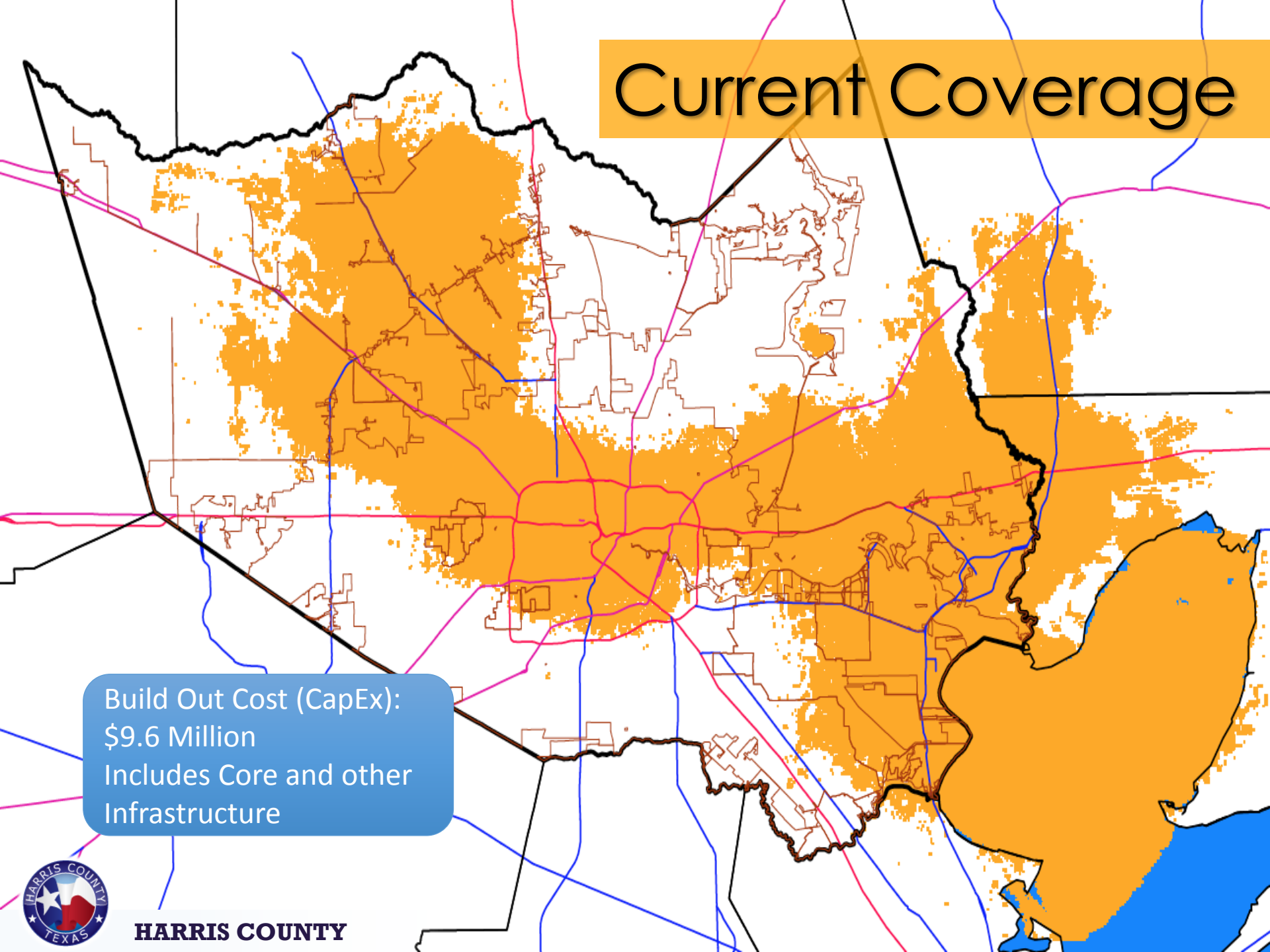
Current Status

- 13 Sites in Harris County service area
- 1 Site in Brazos County (Extended range test site)
- 1 Mobile Unit

5 Additional Sites in build out: on air August 2015



Current Coverage



Build Out Cost (CapEx):
$9.6 Million
Includes Core and other Infrastructure

HARRIS COUNTY

Coverage Strategy

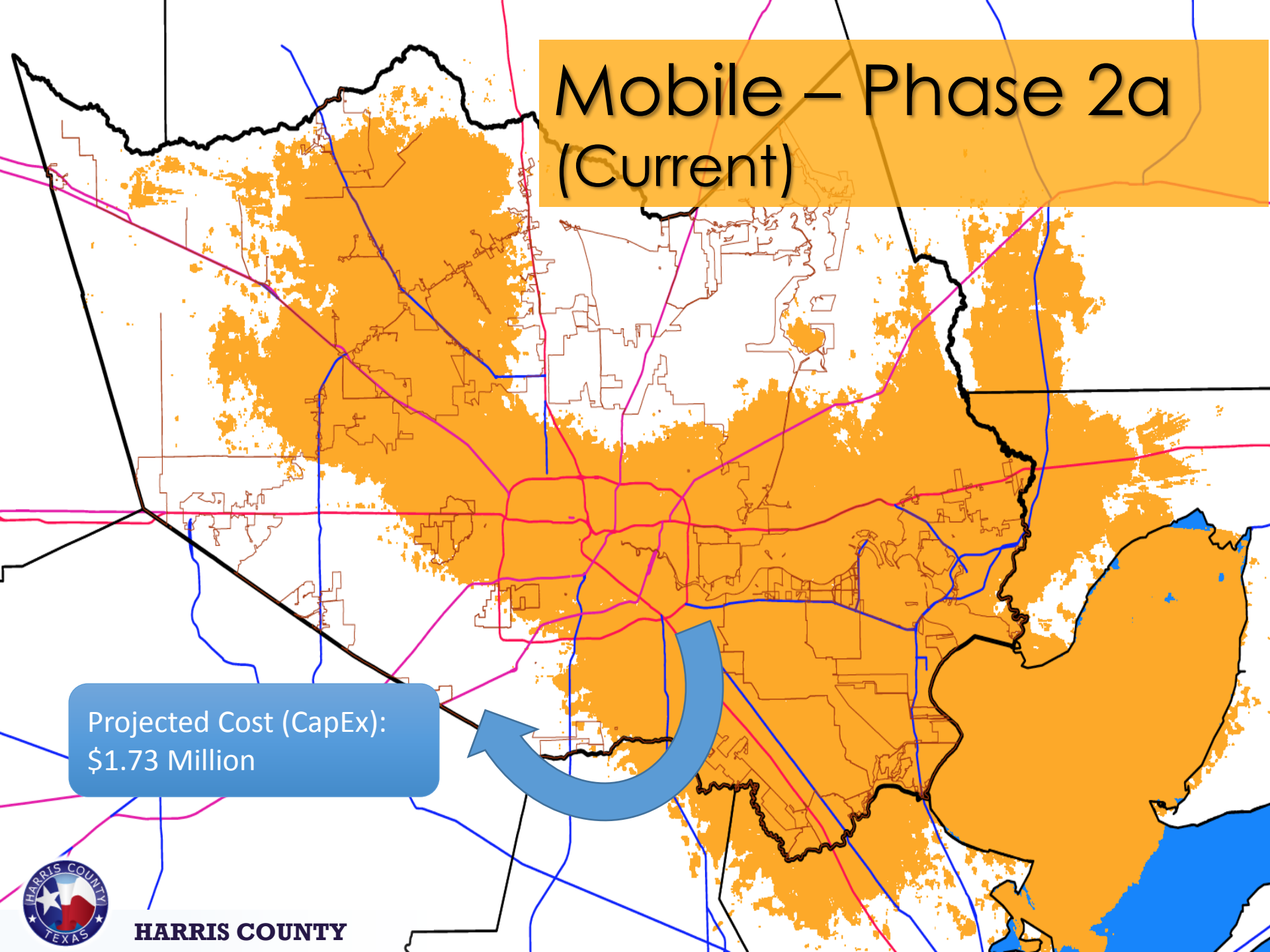
Mobile vs. Portable

95%

Build Out Strategy

- Phased approach
- Mobile Coverage First (33 sites – min level of support)
- Portable Coverage to follow (+60 sites)
- VoLTE in the future

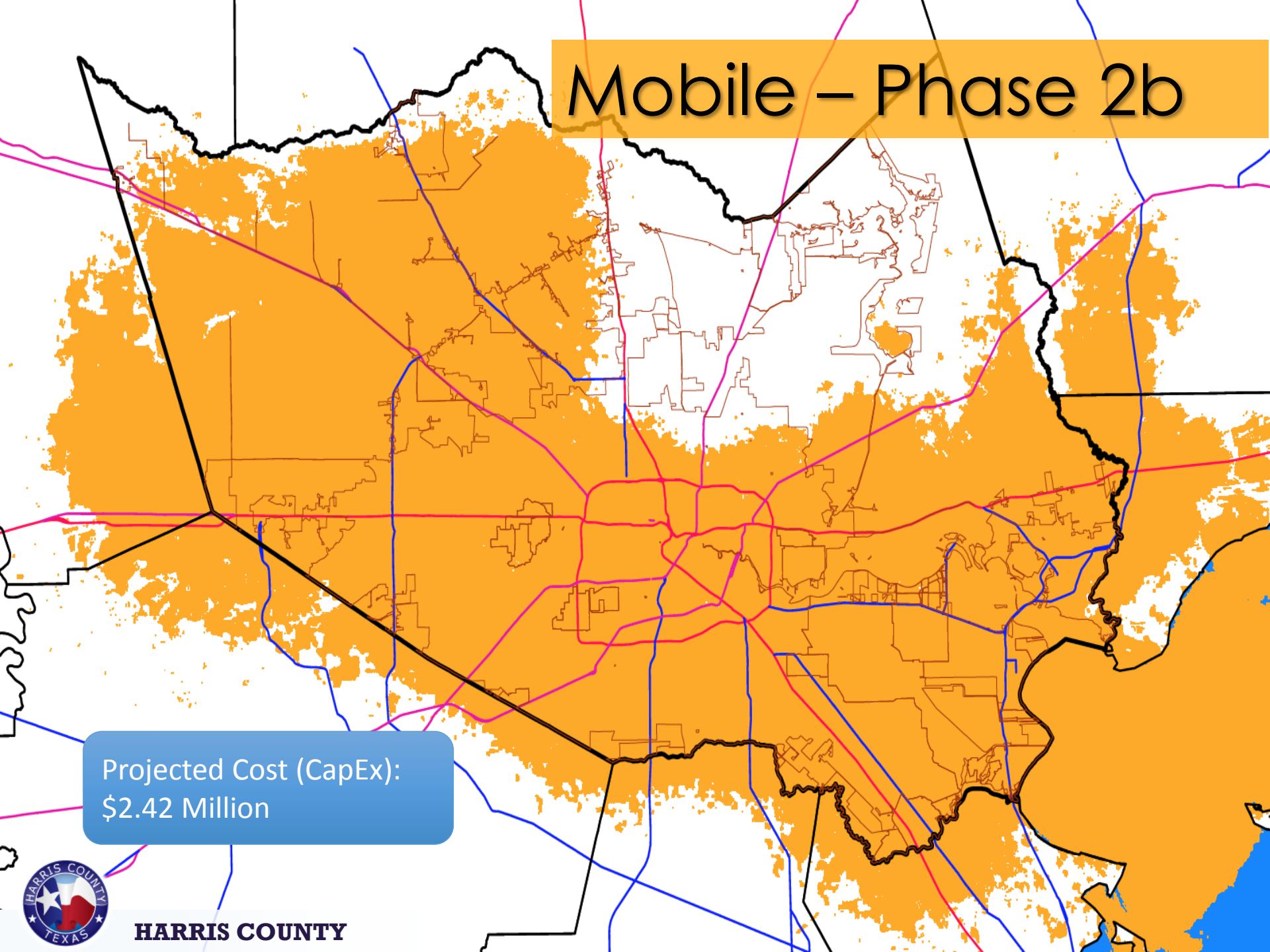
Mobile – Phase 2a (Current)



Projected Cost (CapEx):
$1.73 Million

HARRIS COUNTY

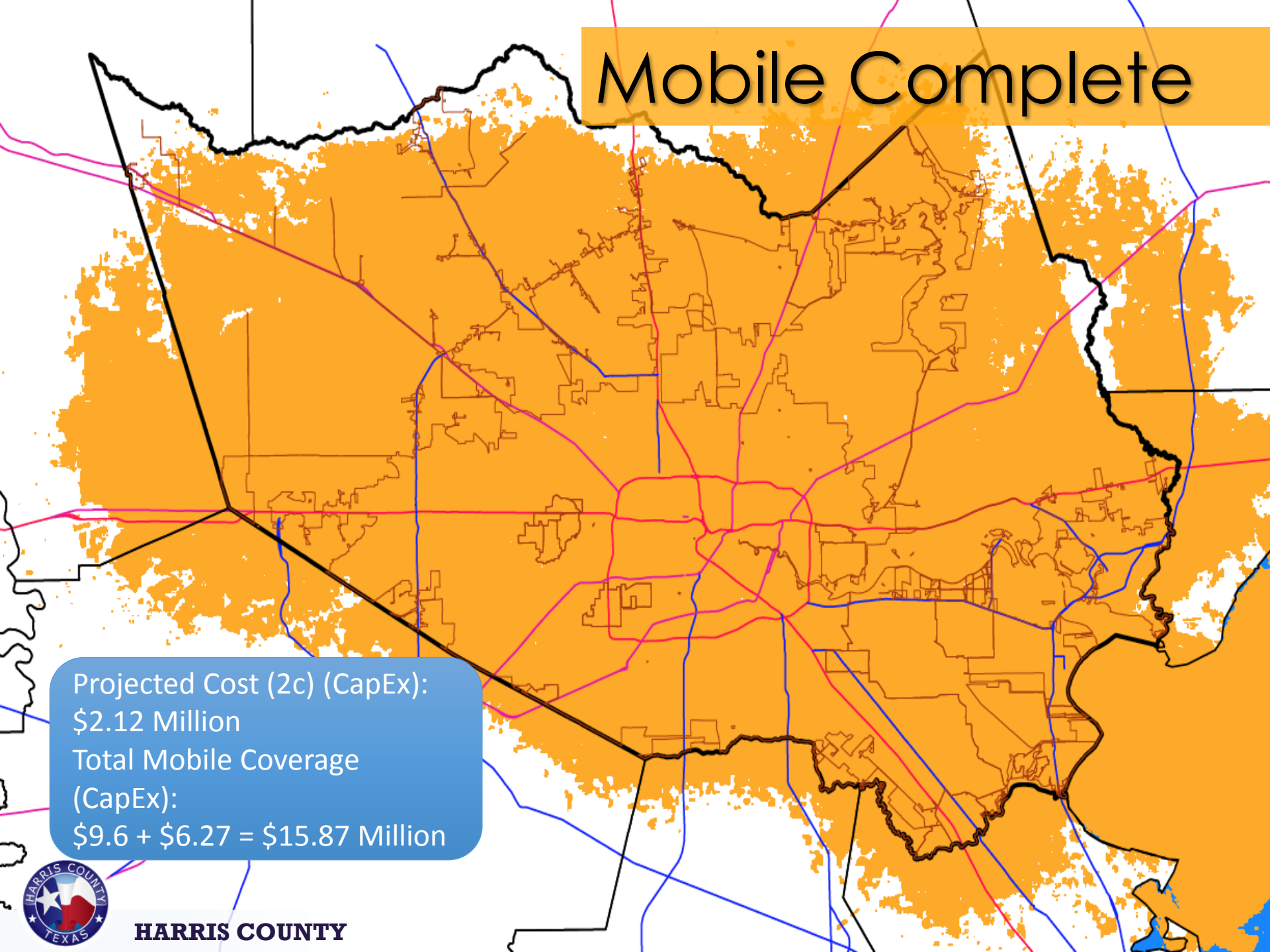
Mobile – Phase 2b



Projected Cost (CapEx):
$2.42 Million

HARRIS COUNTY

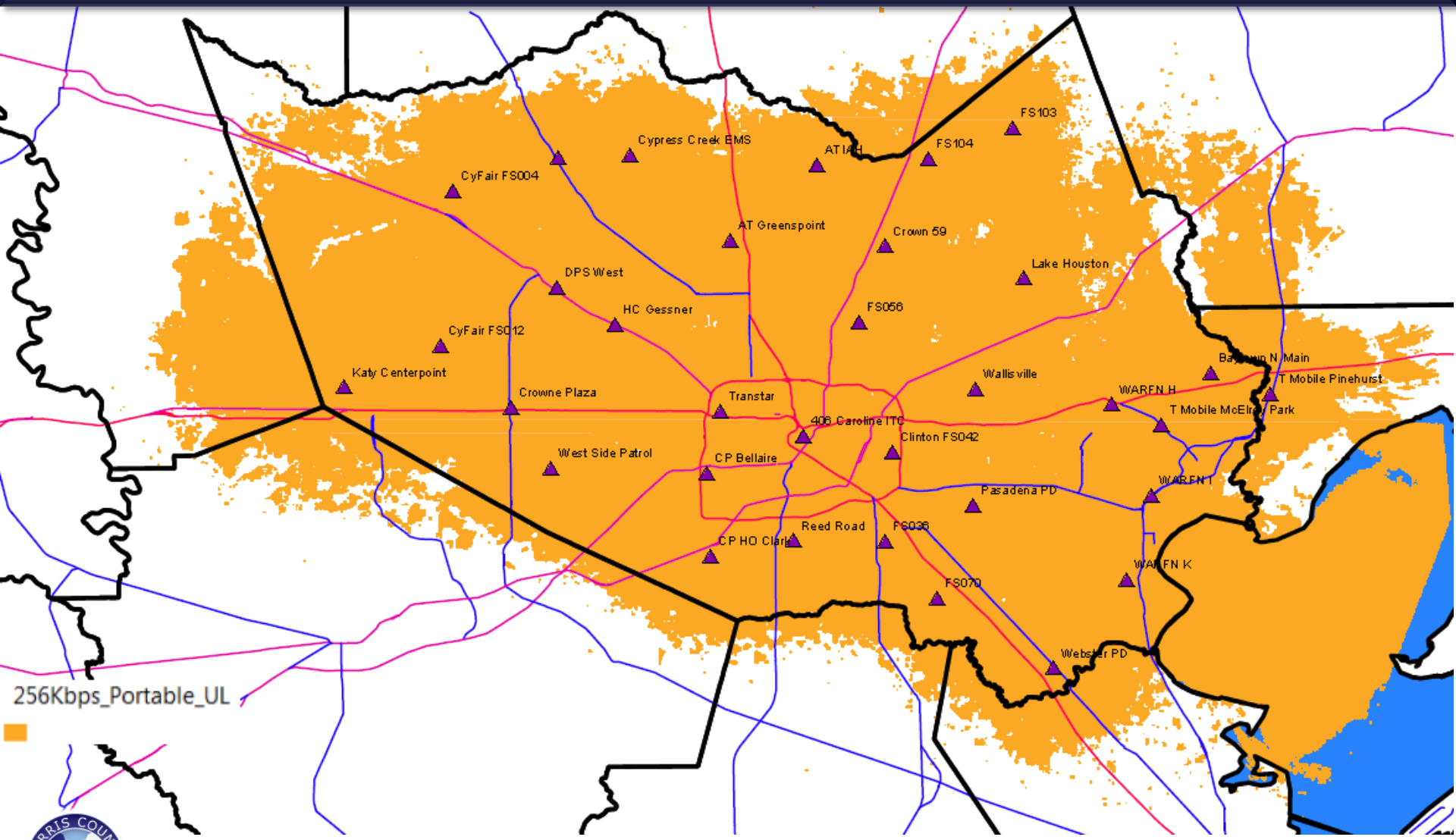
Mobile Complete



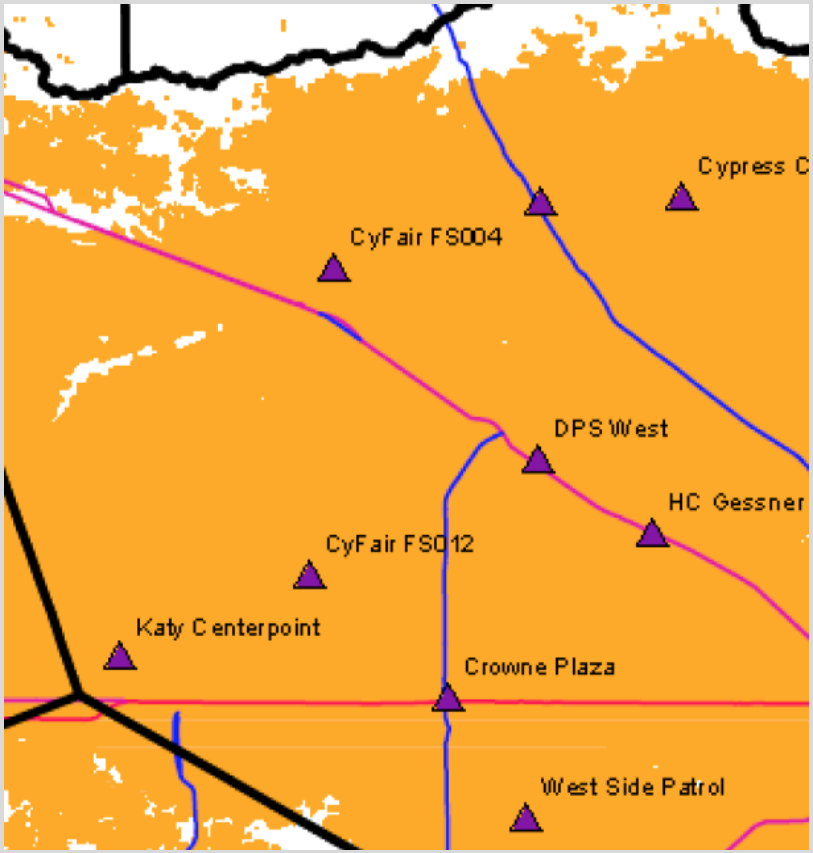
Projected Cost (2c) (CapEx):
$2.12 Million
Total Mobile Coverage (CapEx):
$9.6 + $6.27 = $15.87 Million

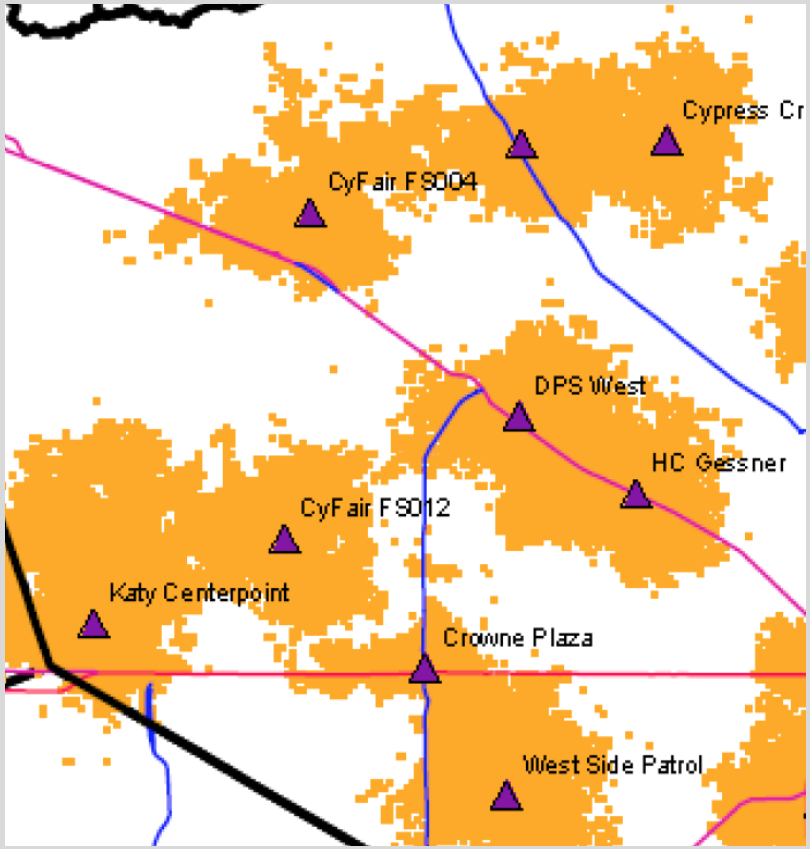
HARRIS COUNTY

All Phases – Proposed Mobile Coverage

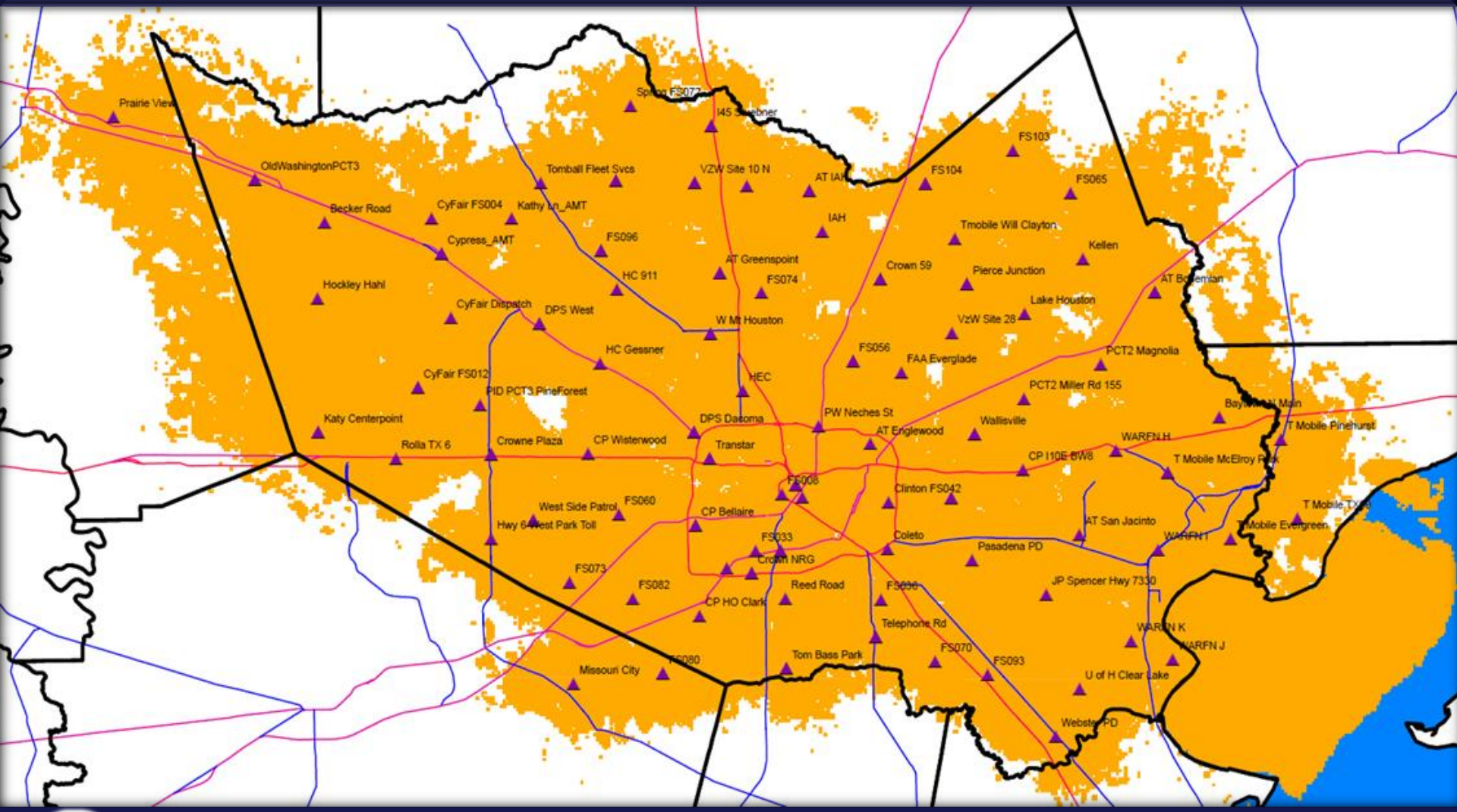


Mobile vs. Portable Coverage



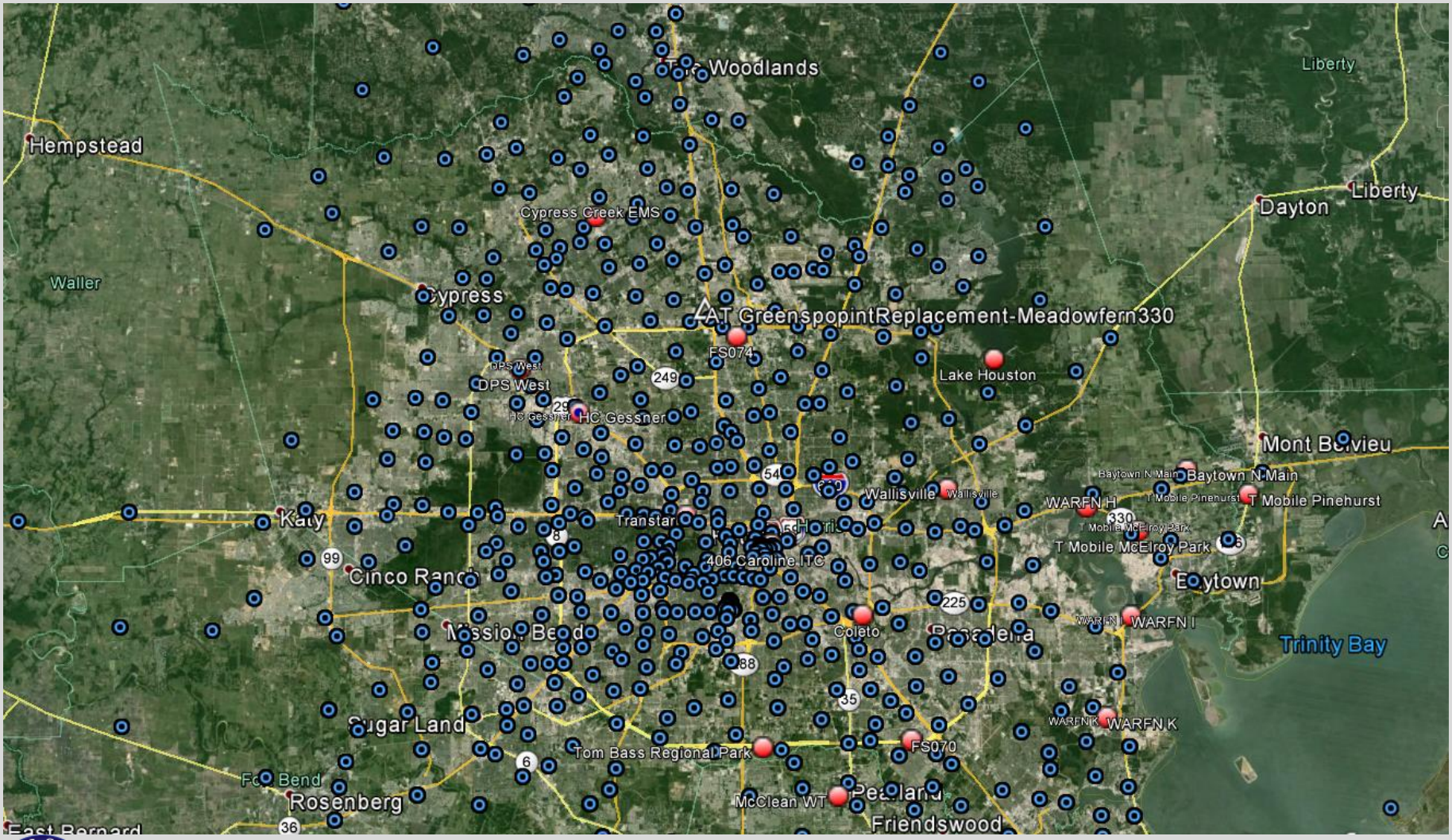


All Phases – Proposed Combined Coverage

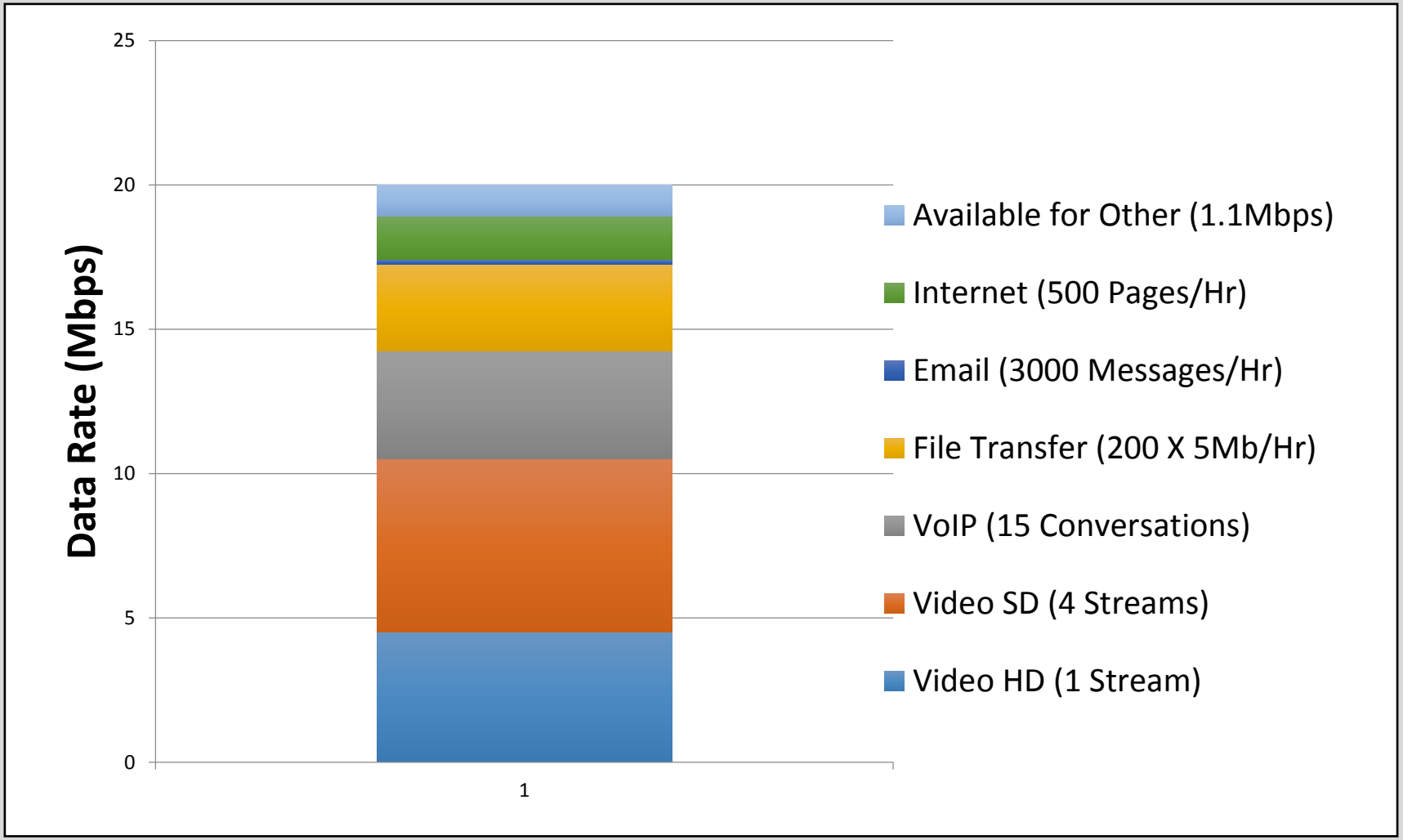


HARRIS COUNTY

Commercial Carrier vs Public Safety



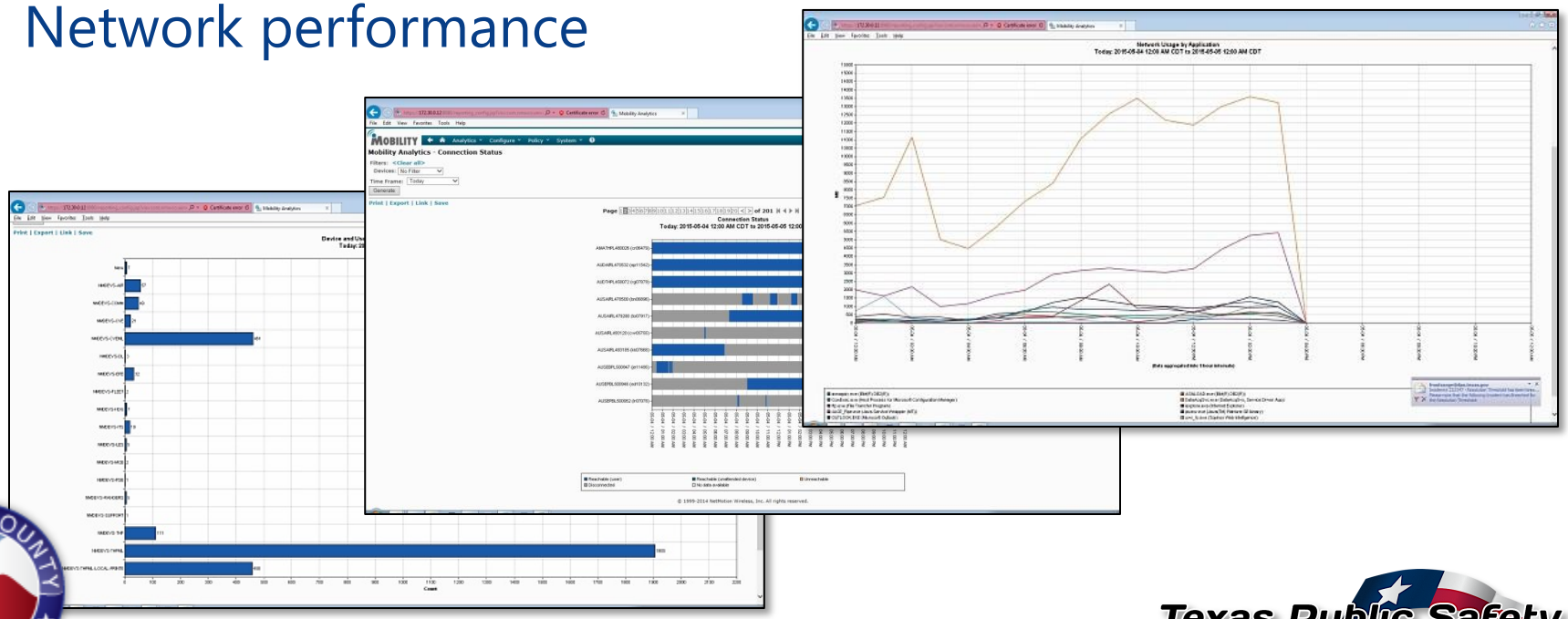
What Can Be Expected?



Key Learning Conditions– Harris County

Key Learning Conditions

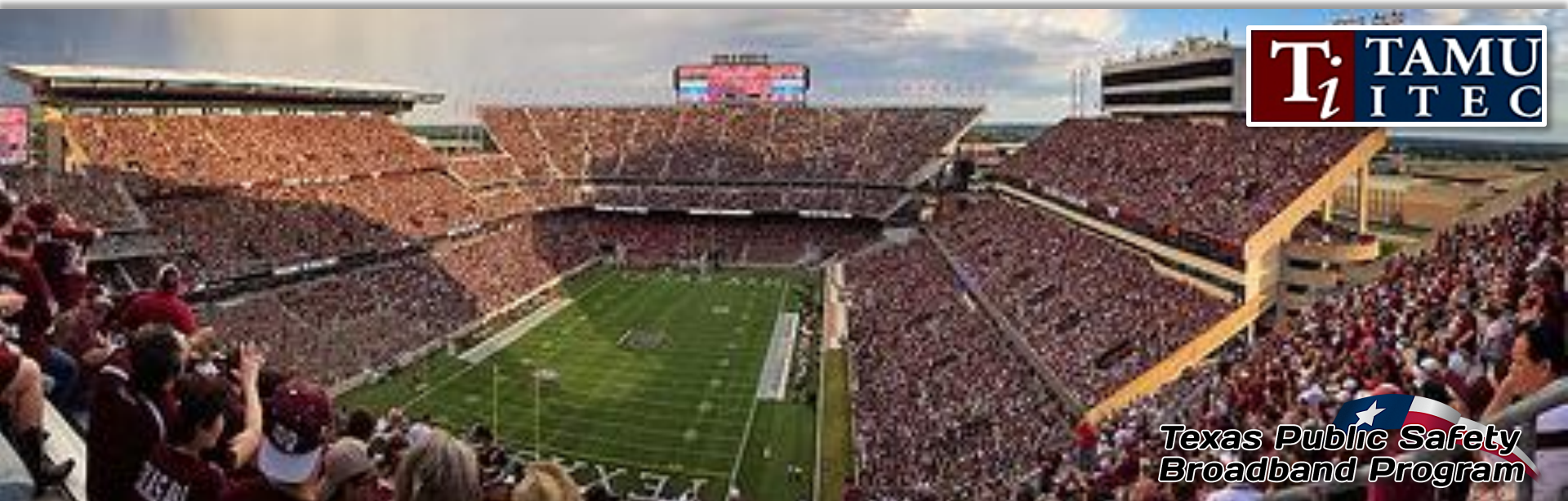
- **Harris County network analytics**
  - Usage patterns
  - Network performance



Texas Public Safety Broadband Program

Key Learning Conditions

* **Special events:**
  * Houston Rodeo, Mar. 1-20, 2016
  * Super Bowl LI, Feb. 5, 2017
* **Extended mode – beyond 15 km range**



Key Learning Conditions

* **Training materials:**
  * Integrating PS LTE into FEMA-approved first responder training
  * Recommendations for optimizing public safety LTE operations

TEXAS A&M ENGINEERING
TEEX
EXTENSION SERVICE

Texas Public Safety Broadband Program

Key Learning Conditions

* **Harris County core transition**
  * Migration planning and transfer of all users from Harris County core to FirstNet's core.

Texas Public Safety Broadband Program

Outreach

Stakeholder interactions - Speeches, meetings, workshops, webinars

* Program Goal: 11,130
* Attainment to Date: 13,507

Outreach material distribution - Brochures, flyers, posters, cards

* Program Goal: 155,707
* Attainment to date: 205,113

eLearning

Introduction to Public Safety Broadband:

* Two versions: For CE credit and Without CE credit
* 2 hours of credit: Fire, Law Enforcement, EMS

Mobile Data Survey Tutorial:

* Step-by-Step instructions on MDS as well as tips to make taking the survey easier

289 learners in the first six weeks and picking up steam!

TxPSBP eLearning Portal

Texas Public Safety Broadband Program

Menu

- Desktop
  - Welcome and Viewing Needs
  - Navigating the Course
  - Course Overview
  - Wireless Broadband Network
  - Public Safety Current Uses
  - Fact or Myth
  - Public Safety Broadband Net...
  - National Disasters
  - Growth of Consumer Traffic
  - Current Data Communication
  - Commercial Carrier Limitations
  - Differences
  - Similarities
  - Land-Mobile Radio (LMR)
  - Continued LMR Use
  - Applications – Interdisciplina...
  - Applications – Discipline Spe...
  - New Cellular Broadband Net...
  - FirstNet
  - Benefits of FirstNet
  - The Road to the Public Safet...
  - Funding Model
  - Costs
  - Texas Participation
  - Texas Public Safety Broadband
  - State and Local Implementat...
  - Whole Community Impacts
  - Local Input
  - BIG-Net
  - Public Safety Broadband Net...
  - Summary

DPSOnline

Resources

Texas Public Safety Broadband Program

Introduction to Public Safety Broadband

Welcome to

Introduction to Public Safety Broadband

Choose your viewing needs to begin.

Desktop/ Laptop

Assistive Device User

TxPSBP eLearning Portal

Texas Public Safety Broadband Program

Texas Public Safety Broadband Program

Introduction to Public Safety Broadband

Differences

Select each characteristic below to learn more about the differences between commercial networks and the Public Safety Broadband Network.

Commercial Broadband

- Consumer oriented
- Not hardened
- Carrier band class

Number of Users

Devices

Network Resilienc

Priority

Security

Speed

Applications

Control

Public Safety Broadband

- Hardened devices available
- Band Class 14 only for public safety
- Potentially marginally higher priced than consumer devices

← Back Next →

TxPSBP eLearning Portal

Texas Public Safety Broadband Program

Texas Public Safety Broadband Program

Introduction to Public Safety Broadband

Public Safety Broadband Network: Example Scenario

Pitcher Bridge Collapse

At 7:34am an international vessel, The Curie, struck the pylons of the Pitcher bridge. At the time of impact, 12 cars were on the bridge with 17 passengers, and 100 crew members were on the ship with 24 seriously injured.

The number of responding agencies grows as more information is discovered. Interoperable communications is key in saving lives and property.

Select the next button to review the communication efforts during this incident.

← Back Next →

TxPSBP eLearning Portal

Texas Public Safety Broadband Program

Texas Public Safety Broadband Program

Introduction to Public Safety Broadband

Public Safety Broadband Network: Example Scenario

This network will open the door to the possibility of applications that are region-specific, or incident-specific. For this exercise, the application is incident specific to the bridge impact and subsequent collapse. This is only an example of the capabilities the Public Safety Broadband Network could open up.

Back Next

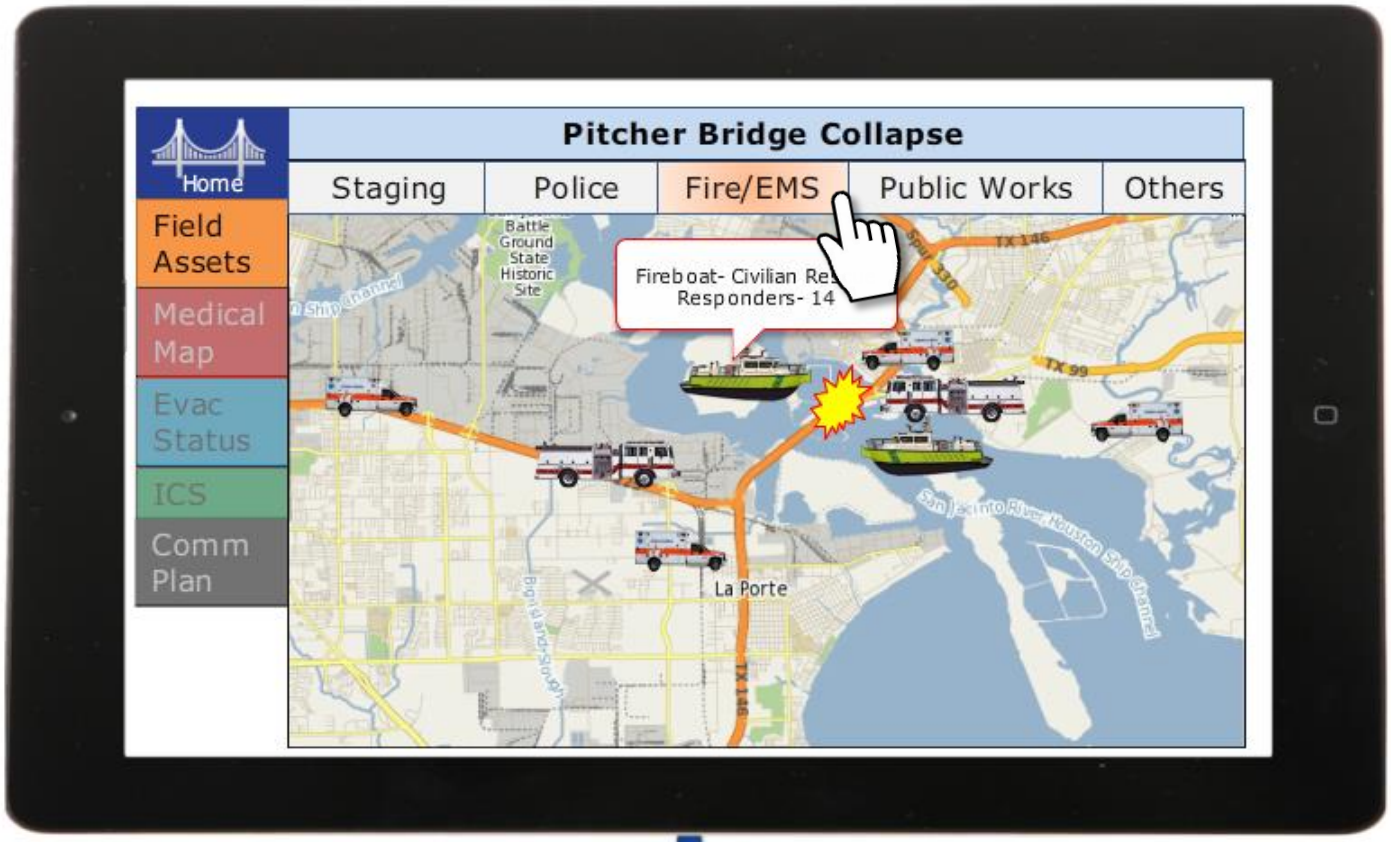
TxPSBP eLearning Portal

Texas Public Safety Broadband Program

Texas Public Safety Broadband Program

Introduction to Public Safety Broadband

Public Safety Broadband Network: Example Scenario



← Back Next →

Strategic Advisory Groups

Texas Public Safety Broadband Program

Texas Public Safety Broadband Program

SCIP Executive Council (SEC)

Purpose:

* To serve as regional representatives and the voting public safety governing body for voice and data communications, and also the LTE lead for their region

Texas Public Safety Broadband Program

SCIP Executive Council (SEC)

Accomplishments

* 34 delegates attended the FirstNet Consultation Meeting

* SEC held six calls since the last conference in November
  * Average of 10 attendees / 9 COGs per meeting
  * 7 COGs haven't attended any of the calls

* Received presentation from FirstNet Director of Technology on Priority, Preemption and Quality of Service

Texas Public Safety Broadband Program

SCIP Executive Council (SEC)

Next Steps

* Continue serving as the POC for their region
* Encourage completion of the Mobile Data Survey
* Gather input on coverage maps

Texas Public Safety Broadband Program

Rural

* **Objectives**
  * Focus on Public Safety Need, high level geographical coverage objectives and "rural area" definitions
  * Use proven analytical techniques to create objective, data-driven model of phased PSBN coverage objectives baseline
    * Not the final answer! … just one of many "layers"

Texas Public Safety Broadband Program

Rural

* **Near Term Next Steps**
  * Complete Rural Definitions Whitepaper, dialog with FirstNet
  * Finish compiling data to complete Ranking tool
  * Develop phased deployment approach for Texas
  * Continue outreach and documentation efforts

Texas Public Safety Broadband Program

Tribal

Purpose:

* Continue to develop relationships with each Federally-recognized Tribal Nations in Texas and understand their unique requirements for Public Safety Broadband

Texas Public Safety Broadband Program

Tribal

Accomplishments:

* Meetings with Tribal representatives have taken place, both in person and via conference calls

Next Steps:

* Hold Monthly Tribal Conference Calls
* Complete Tribal Report
* Continue meetings with individual Tribes

Texas Public Safety Broadband Program

NEW Strategic Advisory Groups

First Responder SAG

* Law Enforcement
* Fire Rescue
* EMS / Health
* Emergency Management

Texas Public Safety Broadband Program

NEW Strategic Advisory Groups

* **PSAP / NG9-1-1**
* **VOAD / Private Sector Response**
* **Education**

Texas Public Safety Broadband Program

NEW Strategic Advisory Groups

Purpose:

* Represent your area of expertise in providing Texas input and requirements for the future PSBN
* Identify eligible users for each discipline / area

Texas Public Safety Broadband Program

* Break

Data Collection

Mobile Data Survey and
Coverage Objectives Requirements

Texas Public Safety
Broadband Program

Mobile Data Survey

Purpose:

* To collect information around current users of mobile data communications today.
* Texas entities/agencies are asked to complete this survey to inform FirstNet of current network capacity, pricing and application uses.

Texas Public Safety Broadband Program

Mobile Data Survey: Completed By COG

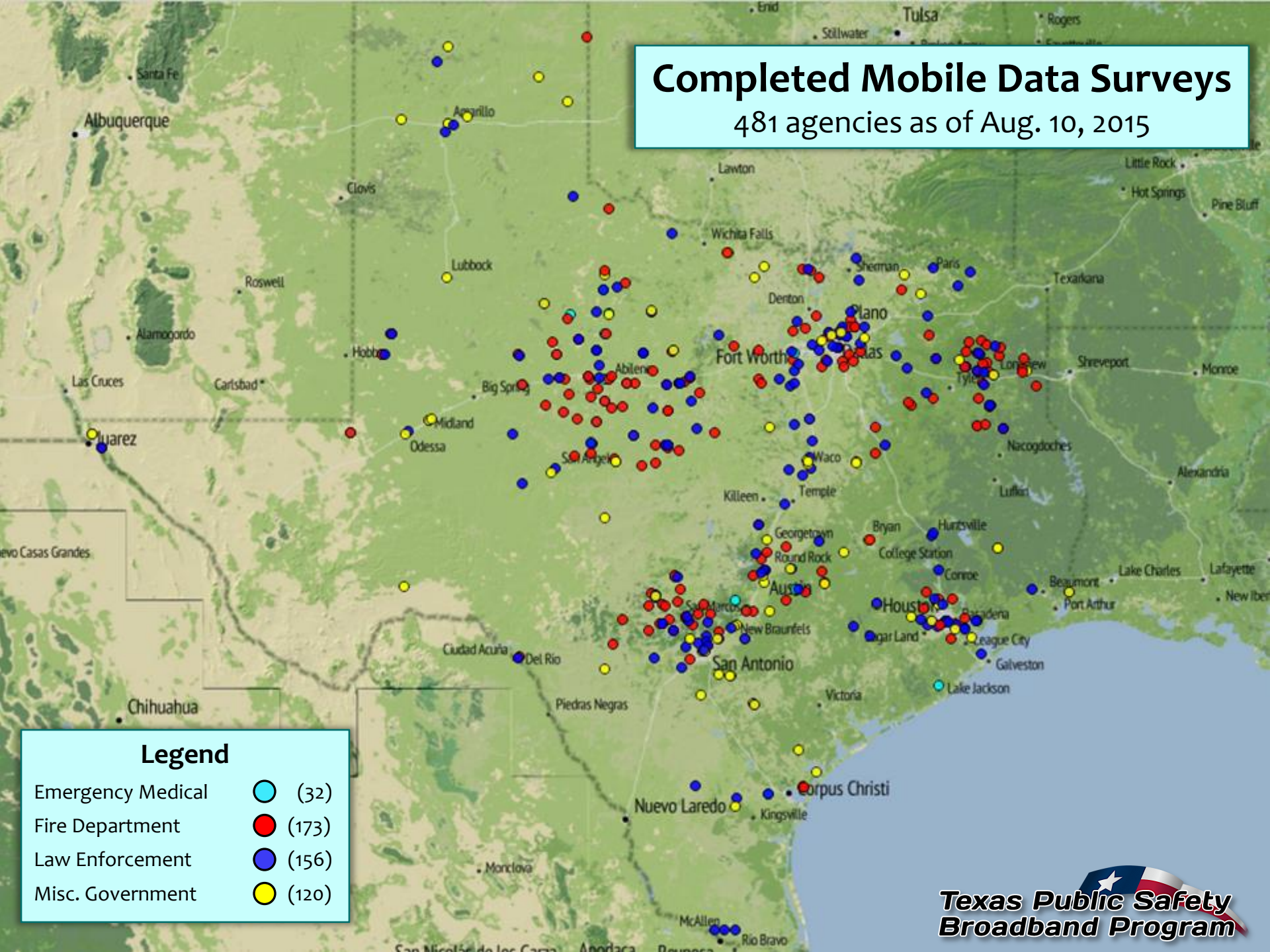
* Totals include LE, Fire, EMS/Health, Emergency Mgmt only

* AACOG: 61 =23.7%
* ATCOG: 5 = 2.9%
* BVCOG: 3= 2
* CAPCOG: 22 = 8.5%
* CBCOG: 7 = 4.7%
* CTCOG: 2 = 1.4%
* CVCOG: 4 = 3.7%
* DETCOG: 3= 1.1%
* ETCOG: 49 = 16.3%
* HGAC: 41 = 5%
* HOTCOG: 14 = 7.5%
* GCPRC: 1 = .9%
* LRGVDC: 2 = 1.6%
* MRGDC: 3 = 4.1%
* NCTCOG: 43 = 7.3%
* NORTEX: 5 = 4%
* PBRPC: 15 = 10.7%
* PRPC: 10 = 3.4%
* RGCOG: 4 = 6.3%
* SETRPC: 3 = 3.9%
* SPAG: 0
* STDC: 0
* TEXOMA: 7 = 7.4%
* WCTCOG: 103 = 38.1%

Texas Public Safety Broadband Program

Completed Mobile Data Surveys

481 agencies as of Aug. 10, 2015



Coverage Objectives Development

Phased Deployment Approach

Objective

* Gather data and perform analysis regarding the physical location where public safety broadband coverage should be provided.

* ***Achieve purposeful consensus around Coverage Objectives in order to move Texas to earlier place in deployment queue***

v2

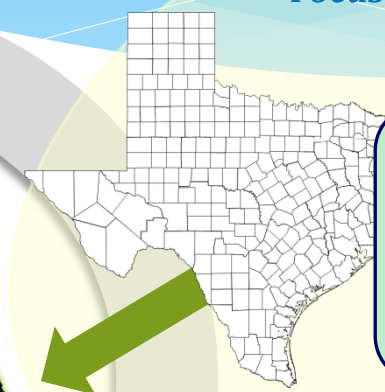
Multiple Factors Considered to Get to Final System Design

System Design Considerations

- Hardening
- Capacity
- FIBER, Backhaul availability
- Hub, Aggregation Locations
- LTE equipment location
- Type of Coverage Solution

Texas PSBN Final Deployment Plan

Focus of Current Efforts



Coverage Objectives

- Desired B14 footprint
- Public Safety Needs

Need to Incorporate PS User Inputs and Needs

Topography & Terrain

Readiness, Level of Engagement

- Site Readiness
- LTE App Readiness
- B14 Device readiness
- Incremental Funding

Texas Budget

- Budget from NTIA w/State Plan!
- Cost considerations
- Overall Cost to Deploy
- Business Case, Revenue

Existing Wireless

- Existing LMR/P25
- Commercial LTE

Strategy

* MODEL entire state using verifiable data and proven analytical techniques to measure Public Safety Needs
  * Rural SAG's *Public Safety Needs Ranking Tool*
  * Add phasing
  * "Top down" approach
* Use localized data to create coverage objective maps by gathering direct inputs from stakeholders
  * Coverage Objectives Mapping Tool
  * "Bottom up" approach
* Combine these, and other aspects to create a Layered Map view

v6

Combining Tools for Best Results

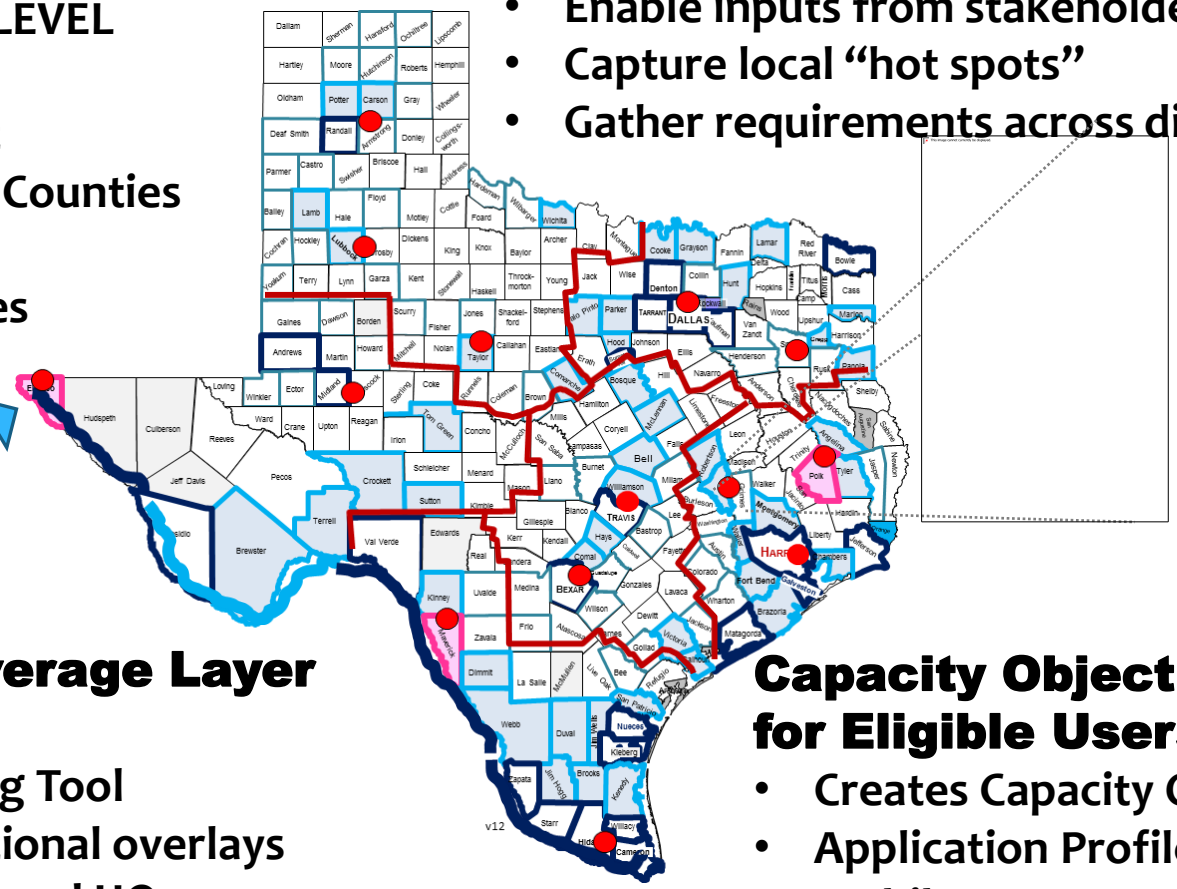
Public Safety Needs Ranking Tool Rural SAG

- PS Needs at COUNTY LEVEL
  - Not just Rural
- Entire Texas footprint
- ~60 parameters x 254 Counties >15,000 pieces of data
- Rural & Tribal Priorities embedded
  - Per Congress

Counties with greater PS Need or priority will be shown by outlines & shading

Mapping Tool – Detailed Coverage Objectives

- Enable inputs from stakeholders
- Capture local "hot spots"
- Gather requirements across disciplines


DALLAS
TRAVIS
BEXAR
Bell
Williamson
Denton
Tarrant
Harris
Fort Bend
Brazoria
Galveston
Nueces
Kleberg
Hidalgo
Cameron
Willacy
Starr
Webb
Zapata
Jim Hogg
Brooks
Duval
Jim Wells
Live Oak
McMullen
La Salle
Dimmit
Maverick
Zavala
Frio
Atascosa
Wilson
Karnes
Goliad
Victoria
Bee
Refugio
Aransas
Calhoun
Jackson
Matagorda
Wharton
Colorado
Fayette
Lavaca
Gonzales
Dewitt
Medina
Uvalde
Kinney
Val Verde
Edwards
Real
Kerr
Bandera
Kendall
Comal
Hays
Caldwell
Guadalupe
Bastrop
Lee
Milam
Burleson
Washington
Brazos
Grimes
Waller
Montgomery
Liberty
Chambers
Jefferson
Orange
Polk
Tyler
Angelina
Trinity
Houston
Madison
Leon
Robertson
Brazos
Burnet
Llano
Mason
Kimble
Sutton
Schleicher
Menard
Concho
Coke
Runnels
Coleman
Brown
Callahan
Eastland
Erath
Hood
Johnson
Ellis
Navarro
Henderson
Van Zandt
Rusk
Panola
Shelby
Sabine
Newton
Hardin
Jasper
Tyler
Polk
Cherokee
Anderson
Freestone
Limestone
Falls
McLennan
Hill
Bosque
Hamilton
Mills
Comanche
Coleman
Brown
Callahan
Taylor
Jones
Shackelford
Stephens
Palo Pinto
Parker
Wise
Jack
Clay
Montague
Cooke
Grayson
Collin
Hunt
Fannin
Lamar
Red River
Bowie
Cass
Marion
Harrison
Upshur
Wood
Titus
Franklin
Delta
Hopkins
Rockwall
Kaufman
Van Zandt
Smith
Gregg
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Angelina
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Cherokee
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Freestone
Limestone
Leon
Madison
Walker
Trinity
Houston
Angelina
Jasper
Newton
Orange
Jefferson
Liberty
Chambers
Hardin
Montgomery
Harris
Fort Bend
Galveston
Brazoria
Matagorda
Wharton
Jackson
Victoria
Calhoun
Aransas
Refugio
Goliad
Bee
Live Oak
McMullen
La Salle
Dimmit
Maverick
Zavala
Frio
Atascosa
Wilson
Karnes
Gonzales
Lavaca
Fayette
Colorado
Lee
Milam
Burleson
Washington
Brazos
Grimes
Waller
Montgomery
Liberty
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Jefferson
Orange
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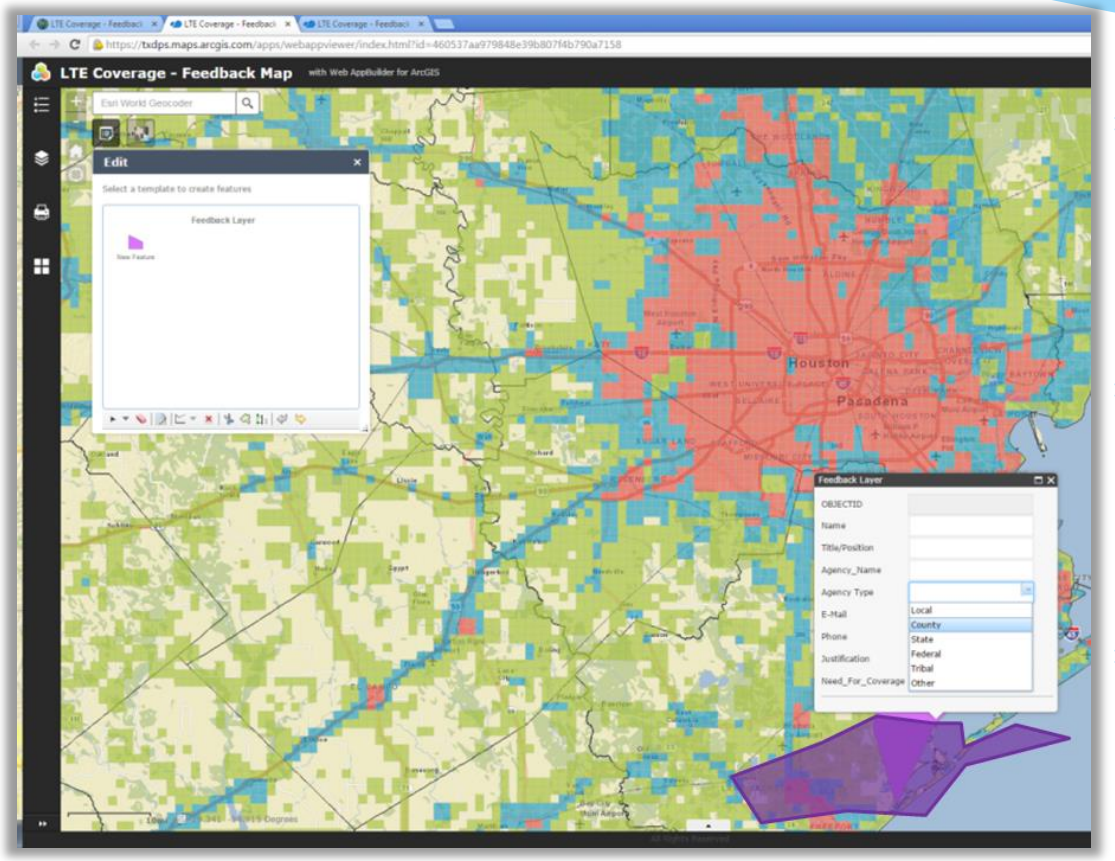
Angelina
Nacogdoches
Cherokee
Anderson
Freestone
Limestone

Coverage Feedback Tool



* Present initial coverage objectives for Texas
* Solicit feedback on PSBN coverage gaps at the local level
* Release after Mobile Data Survey

Call to Action

What can YOU do for Texas Public Safety Communications?

SEC Vote

* **SCIP Initiatives and Priorities**
* **Regional Standard Operating Procedures Template**
* **Interoperability Training Template**

SEC Vote

* **Programing of radios in alignment with the TSICP**
* **Standardized training and exercises on equipment and interoperability**
* **Regular use of statewide interoperability channels, plain language, and mutual aid resources, incorporated into local agencies' daily operations in compliance with NIMS/ICS**
* **Increased awareness of the importance of interoperability for incident/event response**
* **Sustainable funding sources for emergency interoperable communications based on stakeholder needs**

Questions?

Texas Public Safety Broadband Program

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