



STREET PAVEMENT MAINTENANCE & MANAGEMENT
THE NEXT GENERATION
TRANSPORTATION, TECHNOLOGY & INFRASTRUCTURE
COMMITTEE PRESENTATION

JULY 16, 2015

SSAV-Pavement Data Collection

(SSAV-Street Surface Assessment Vehicle)

- ❖ **COH acquired 6-years of Pavement Condition Data from 2 runs of Street Network which COH never had before**
- ❖ **SSAV was State-of-the-Art in 2008 but the technology is now outdated**
- ❖ **Value is in the Pavement Condition Data collected, not the SSAV itself**
- ❖ **Shift staff focus from “Data Collection” to “Data Analysis”**
- ❖ **Recommend using a Service Provider for Data Collection rather than a new SSAV**

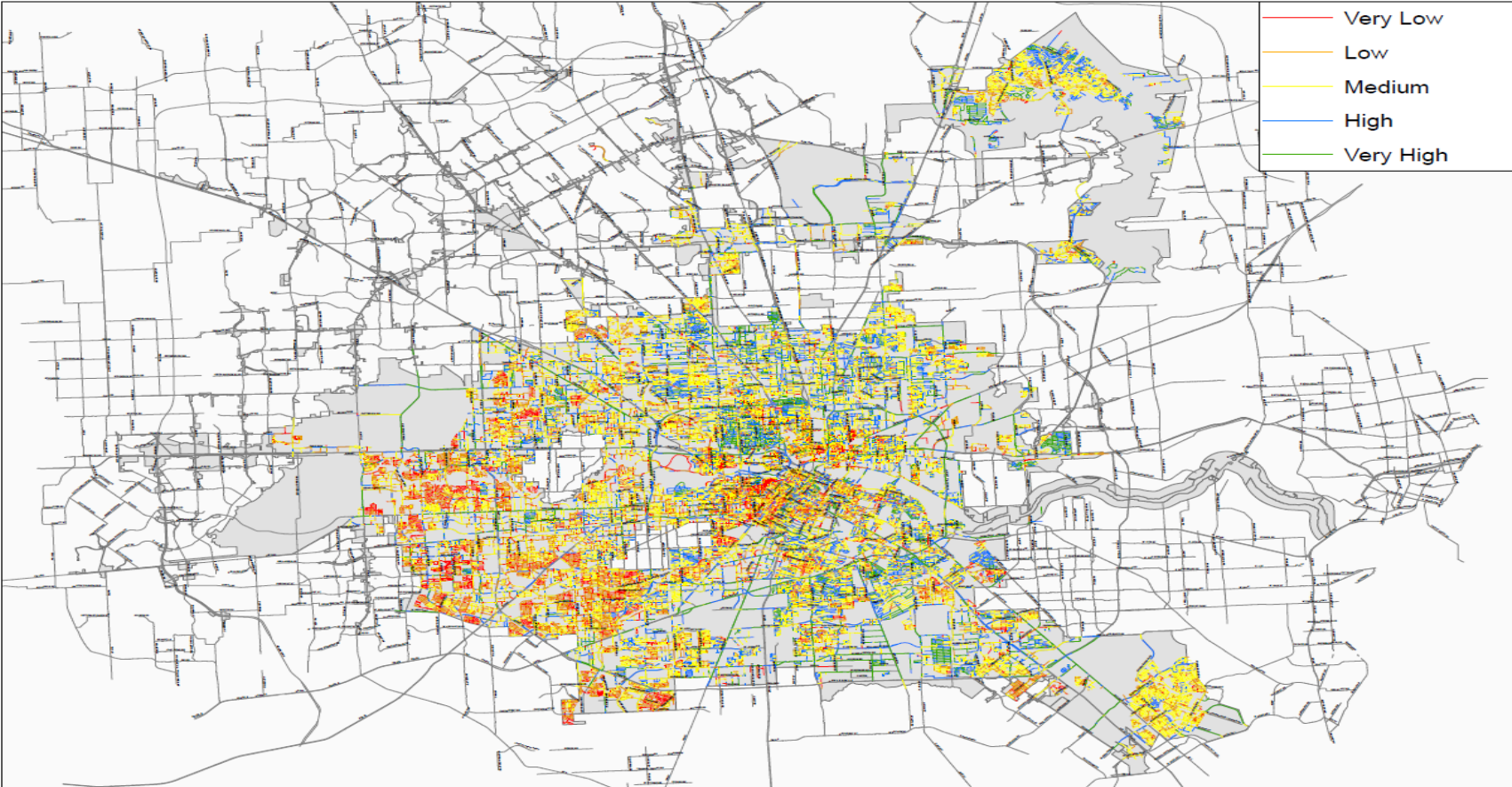
Existing SSAV Van Status

- ❖ **Crackscope no longer operational/repairable – SSAV out-of-service**
- ❖ **Profiler – Manufacturer issued End-of-Life Notice**
- ❖ **Profiler computer system (MDR-Mobile Data Recorder) is based on Windows XP which is no longer supported and requires replacement**
- ❖ **Video Camera is no longer supported and has low resolution compared to current technology**
- ❖ **Do not recommend investing \$500k for newer Crackscope technology**

1st Run Data 2009-2011 Mapped

Similar Map for 2nd Run Data 2012-2014

STREET ASSESSMENTS - 2011



SOURCE:
City of Houston Planning & Development
City of Houston Public Works & Engineering
Houston Urban Area Traffic & Engineering
Database 2011

CITY OF HOUSTON
Department of Public Works & Engineering
Street & Drainage Division

THESE MAPS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.
THE CITY OF HOUSTON DOES NOT WARRANT THE ACCURACY OF THE DATA.
FIELD OPERATIONS DIVISION IS NOT RESPONSIBLE FOR THE DATA.

DATE: 08/14/12
BY: [unreadable]
APP: [unreadable]
SCALE: 1 inch = 2,250 feet



Who is DTS (Data Transfer Solutions, LLC) ?

Corporate History

- ❖ **Formed in 2004 and Headquartered in Orlando, Florida**
- ❖ **Regional offices in San Antonio and Dallas**
- ❖ **Over 100 Data Collection projects totaling over 150,000 miles of pavement data collection and asset condition assessment**
- ❖ **Over 1,000,000 assets collected and rated in the last 5 years**
- ❖ **HGAC-Buy approved vendor**

DTS City & County Clients

In TEXAS:

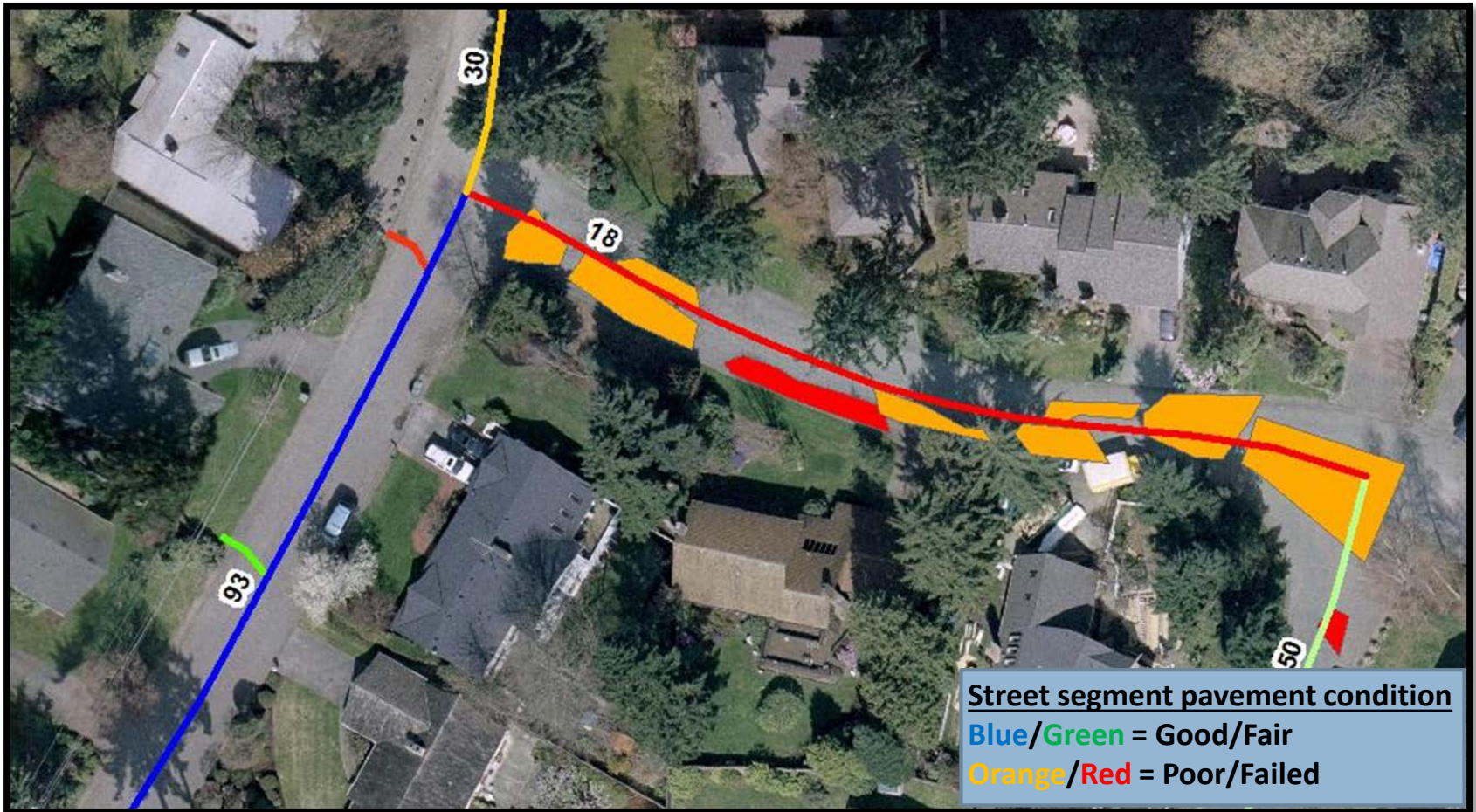
- Arlington, TX
- Bexar County, TX
- San Antonio, TX
- Fredericksburg, TX
- Duncanville, TX
- New Braunfels, TX
- Bastrop County, TX
- El Campo, TX
- Lewisville, TX
- Brownsville, TX
- Little Elm, TX
- Sherman, TX
- Colleyville, TX
- Williamson County, TX

OUTSIDE of TEXAS:

- Albuquerque, NM
- Jefferson County, CO
- Charleston County, SC
- West Palm Beach, FL
- Charlotte, NC
- Des Moines, IA



DTS – GIS Display





Year: 2013

Region:

Route: 001A



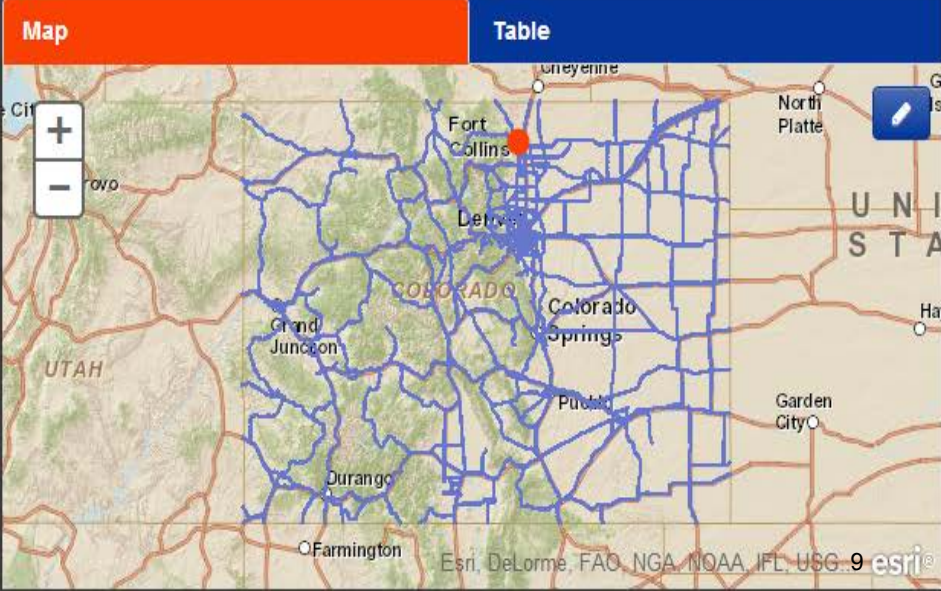
Direction: 1

Play Speed: [Slider]

Ref Point: 0.004 [Slider]

Help Contact Us

- 2013
- 2012
- 2011
- 2010
- 2009
- 2008
- 2007



DTS -- Asset Extraction - ROW Assets

Sidewalks, Curb Ramps, Curb & Gutter, Pavement Width, Obstructions



DTS – Quality Control/Quality Assurance

Pre-Data Collection:

- ❖ **Calibration Site** - Collected at the beginning and end of each day to ensure accuracy
- ❖ **Perform a daily check** - camera's exposure rate, image quality, GPS and Inertial Measuring Unit operation.

DTS - QA/QC

Post-Data Collection:

- ❖ **Distress Maps** - created using GIS
- ❖ **Field Sheets** - created from GIS layers
- ❖ **Field Verification** - conducted to validate results
- ❖ **Anomalies** - investigated and corrected
- ❖ **Final Deliverables** are mapped and delivered



Quote via HGAC-Buy for SSAV Services for 3rd RUN w/Discount from DTS and Comparisons (Low to High - descending)

Note: DTS runs Locals Streets in Both Directions

Description	Major Streets +	Local Streets =	All Streets
Subtotal Group 1 - Pavement	\$400,540	\$1,056,400	\$1,456,940
Subtotal Group 2 - Street Asset Tagging	\$164,970	\$659,020	\$823,990
Totals =	\$565,510	\$1,715,420	\$2,280,930

Cost per Mile Table	Major Streets +	Local Streets =	All Streets
Subtotal Group 1 - Pavement	\$262	\$215	\$226
Subtotal Group 2 - Street Asset Tagging	\$108	\$134	\$128
Totals =	\$371	\$349	\$354

City of Tyler (Fugro)	Major	Local	All (640 mi)
Total Cost			\$ 146,150
Cost per Mile			\$ 228
San Antonio (DTSGIS)	Major	Local	All (4,000 mi)
Total Cost			\$ 1,000,000
Cost per Mile			\$ 250
City of Arlington (DTSGIS)	Major	Local	All (1,500 mi)
Total Cost			\$ 396,896
Cost per Mile			\$ 265
Bexar County (with some Asset Tagging)(DTSGIS)	Major	Local	All (1,200 mi)
Total Cost			\$ 400,000
Cost per Mile			\$ 333

Estimated Comparison for SSAV covering:

Vendor has fleet of 5 MAC Vans & ~22-50 staff/sub-contractors thus they can complete in 1-year



	ACTUAL IN-HOUSE 2 RUNS in 6-Years	DTS 1 RUN in 1-Year *	ESTIMATED IN-HOUSE 1 RUN in 3-Years *
Description	All Streets	All Streets	All Streets
Initial Capital Costs to acquire 1 SSAV or 1 DTS MAC Van	\$1,300,000	\$0	\$953,389
Annual SSAV or DTS MAC Maintenance/Service Contract	\$529,418	\$0	\$330,000
Pavement Data Collection/Rating Costs by DTS or COH Labor Costs	\$1,915,000	\$1,456,940	\$911,891
Street Asset Tagging by DTS or COH Labor Costs	N/A	\$823,990	\$1,900,125
Totals =	\$3,744,418	\$2,280,930	\$4,095,404
Average Cost per RUN	\$1,872,209	\$2,280,930	\$4,095,404
Average Cost per Mile	\$344	\$354	\$636

1-way pass LOCAL Streets	2-way pass LOCAL Streets
2-way pass MAJOR Streets	2-way up to 4-way pass MAJOR Streets

* = no asset tagging
 = w/asset tagging

DTS - MWBE Commitment

- ❖ **The proposed MWBE goal is 15%.**
 - ❖ **Identified local certified COH MWBE subcontractors**
- ❖ **Proposed MWBE Types of Work**
 - ❖ **route planning, local vehicle driver, providing ground control survey points, field QA/QC and field operators**
- ❖ **DTS Previous MWBE Achievements:**
 - ❖ **Brownsville, Texas Pavement Condition Survey – No Goal; achieved 5%**
 - ❖ **TxDOT Traffic Analysis & Reporting – No goal; achieved 6%**

Questions ?

