Background:

• Tarrant County is a decentralized county with four precincts

• The County adopted Cartegraph in 1998 with each precinct using its own street identification system and work orders

• An enterprise GIS was developed in 2004 based on the ESRI platform

• Coordination was necessary to tie together the disparate databases from Cartegraph users and GIS users
Cartegraph/GIS Integration

Challenges:

• Standardization of data related to County-maintained roads

• Need to link and report data from four Commissioner precincts

• No streamlined, user-friendly work order processing system

• Reports, forms and road information housed at each precinct, making access by Transportation Services staff difficult

• Need to develop work order processing for new signage and culvert installations
Cartegraph/GIS Integration

Solutions:

Establish a centralized database

Combine the four precinct databases into one central database accessible by Transportation Services staff.

Difficulties:

None. We have great IT support!

Data Base Inquiries contact:
Frank Cangelosi
fjcangelosi@tarrantcounty.com
Cartegraph/GIS Integration

Solutions:

Standardize All Forms and Reports

Create standard forms, reports and maps that each precinct will use. This will primarily impact work orders and forms to support Federal GASB reporting, state MS4 drainage reporting, future Retroreflectivity inspections.

Difficulties:

Reaching consensus from all precincts on the Design of each form and report. Addressing the “this is not how we have always done it” syndrome. Standardizing data entry so that GIS Analyst and Auditors understood pavement terminology.
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Solutions:

Standardize County Road Data

Create unique segment identification numbers for each roadway maintained by the County. This ID will serve as the link for all current and future applications that use County-maintained road data.

Difficulties:

Determining the extent of each segment and establishing an unique identification protocol.
GIS Integration With Geodataconnect

Eliminate duplication of data

Create methods to ensure that precinct data is not duplicated in the master database.

Eliminate duplicate editing in GIS and Cartegraph

Difficulties:

Not knowing then what we know now regarding naming conventions, geocoding and addressing.
Cartegraph/GIS Integration

Standard Operating Procedures

Seamless work flow

Ensure a seamless workflow from the time a call is received to the preparation of the Work order request, work orders, and data entry into the Asset Management section.

Difficulties:

Required training of precinct staff to ensure consistency in reporting. Internal work flow processes are reviewed and modified as necessary.
REQUEST FOR CULVERT

Date Observed: 2/22/2011  8:54:11 AM
Precinct: Pct 1
Permit Number: 2011-030

Work Order Type: Pct 1 Culvert Installation
Issue: Culverts
Date Return Culvert Permit:

CONTACT INFORMATION

First Name: David  Stanley
Citizen Address Number: 121339  PO Box  Fort Worth  76121
Phone Number: 817-614-9339
Mobile Number: 

STAKED LOCATION

Address Number: 5271  Pyramid  Fort Worth  76121
Subdivision: Pyramid Acres
Segment ID: 1275-010
Mapsco: 99W

DEPARTMENTAL USE ONLY

New Driveway: Yes  Additional Culvert: No  Culvert Length: 42 Ft
Install By County: Yes  Install By Applicant: No
Surveys Date:

Qty 1  Pipe Diameter: 24 Inches  Installed Length: 15 Ft

Work Order: Pct 1-Cul-CI-11
Request Number: Pct 1-Cul-REQ-20-11
Details

Labor: $0.00
Equipment: $0.00
Materials: $0.00
Cost:

Close Date:
Entered By: amkey

Notes:
# Sign Shop Daily Project Report

**Date**: Friday, February 25, 2011  
**Precinct**: Pct 2  
**Work Order Type**: Pct 2 Maintenance  
**Work Order Number**: Pct 2-M-238-11

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- ☐ High
- ☐ Engineer
- ☐ AAE

**Notes**

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**Sign Activities**  
- 501 Mailbox  
- 502 Install/Replace Sign/Post  
- 503 Fabricate Signs  
- 504 Sign Documentation  
- 505 Sign Maintenance  
- 506 Sign Inspection  
- 507 Install/Remove Construction Signs  
- 508 NEW SIGN

**Sign Changes In Sign View History**

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**Work Order Number**: Pct 2-M-238-11  
**Court Order**:
Cartegraph/GIS Integration

Return on Investment:

- Elimination of duplicate data entry (Cartegraph Geodata Connect /GIS)

- GIS provides a graphic display of County-maintained roads to assist precinct staff with request forms

- Assists precincts with tracking related constituent complaints using GIS mapping, eliminating duplicate work in the field

- Standardized forms for meeting federal asset reporting requirements, reducing the need to “interpret” individual reports.
Cartegraph/GIS Integration

QUESTIONS?

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rvskinner@tarrantcounty.com

Anne Mackey, GISP
GIS Analyst
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ammackey@tarrantcounty.com