



TXDOT STATEWIDE CITY STREET LINEAR REFERENCING LAYER

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Federal Mandate:

- § Report Full Extent of GIS Transportation Network
 - Now Includes local city streets

Why?

- § Requirement for Texas' Annual Submittal to Federal Highway Administration (FHWA) 2014
- § All Roads Network of Linear-Referenced Data (ARNOLD)

Options – Project Management

Contractor / Vendor

Purchase Data



Manual Digitization

Recreate Data



Work with Local Data Maintainers

Integrate disparate data sets into a cohesive data layer.



Local Data

Data Sources

§ COG (Councils of Government)

§ MPO (Metropolitan Planning Organizations)

§ County

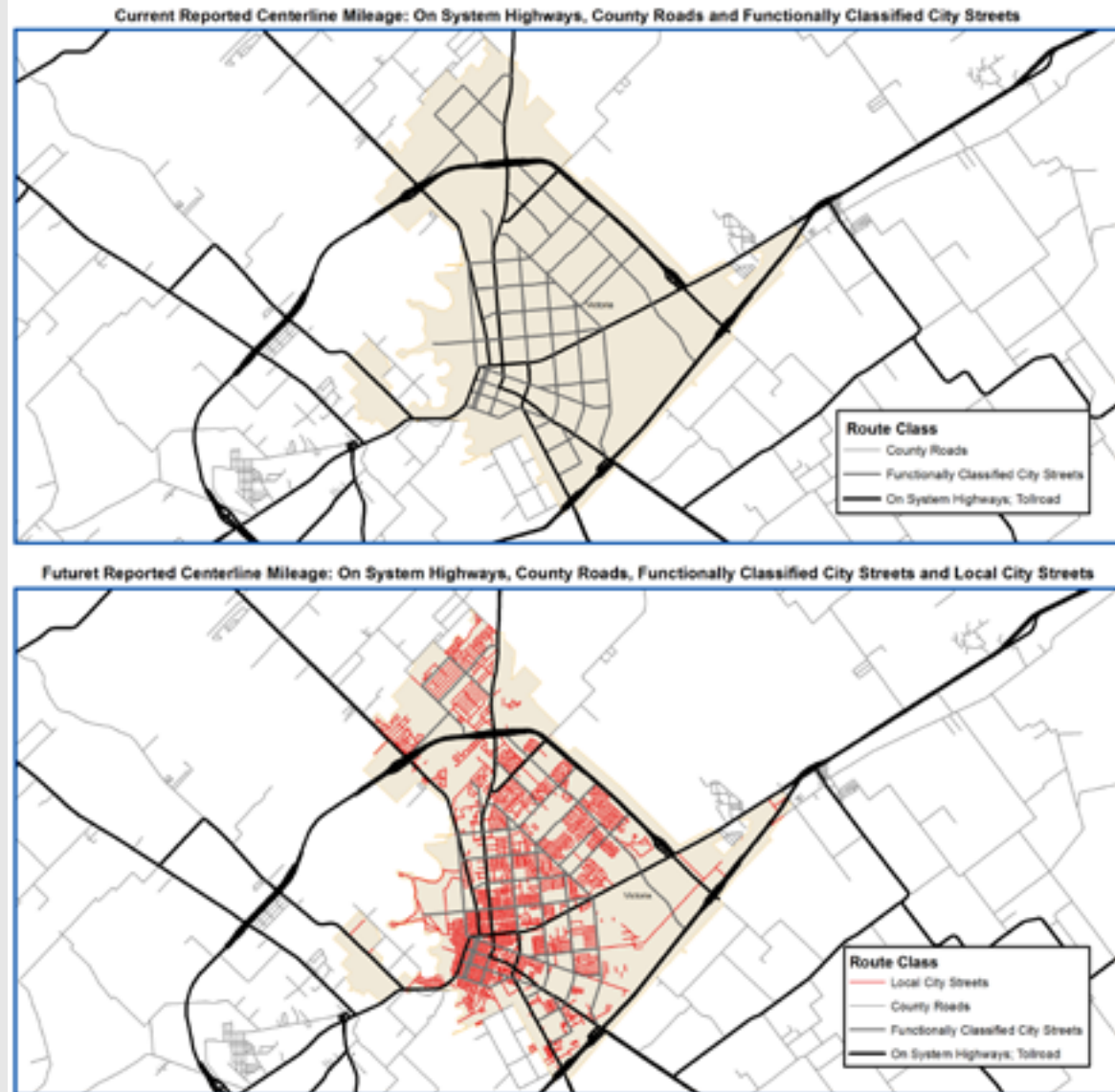
§ City

§ E-911 (Emergency Management Districts)

§ These organizations provided TxDOT with spatial data for 99% of Counties in the state of Texas

What Were We Missing?

- All non-state maintained roads within incorporated cities, that are open to the public



City Street Data Goals



Mileage Reporting Requirements
(2014 Deadline)



Informs Funding Allocation, Planning
and Transportation Development



City Street Basemap Layer



Make Available Statewide Roadway
Data



Increased Communication Between
Data Partners

Data Collection Process

§ TPP-GIS Group Project

- Analysts collect data from local data maintainers

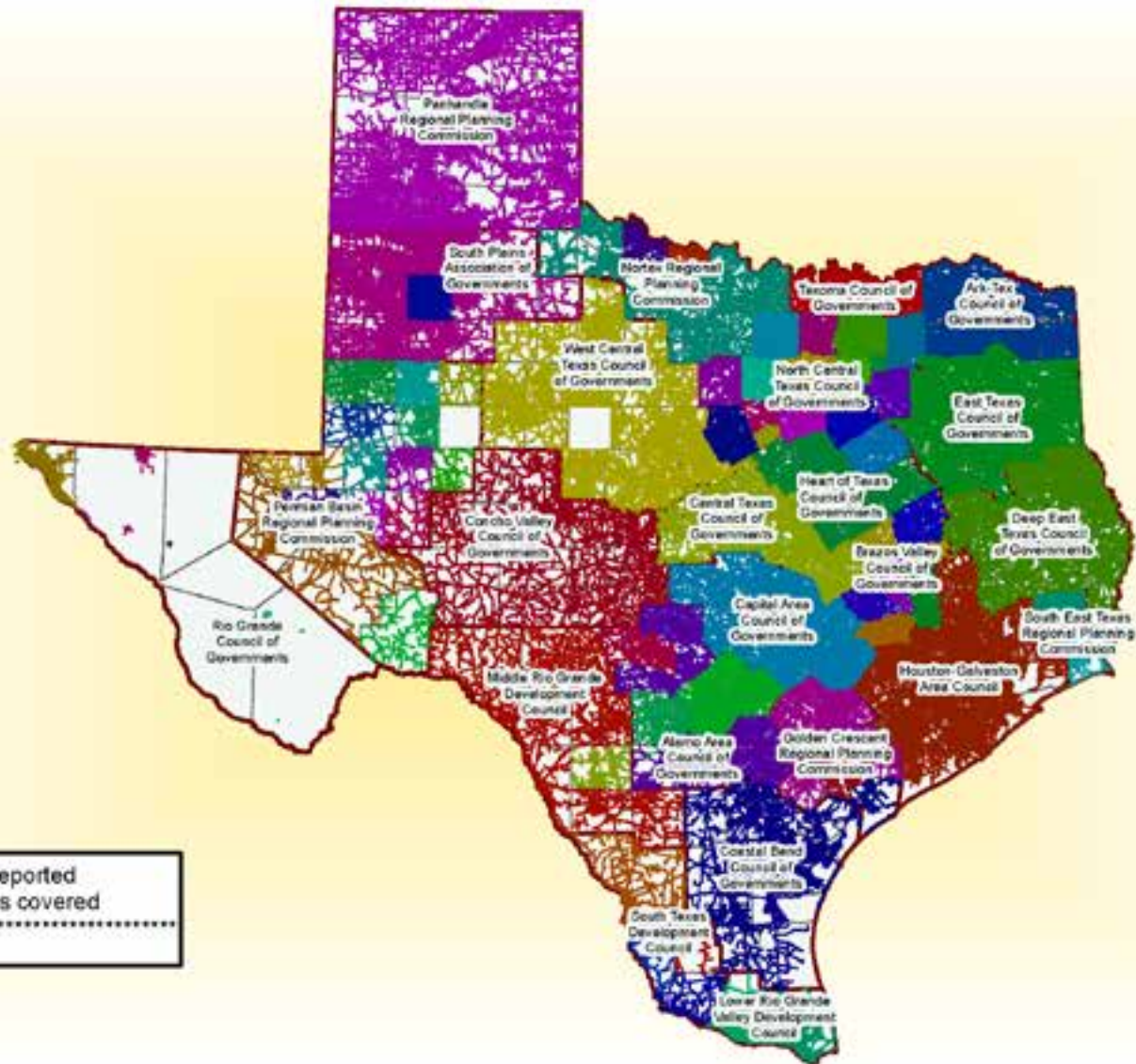
§ COGs and MPOs the Preferred Data Source

- Largest aggregators of local data in their region
- County, E 9-1-1 District, and City data were also used

§ Data Formats:

- ESRI Shapefiles
- ESRI Geodatabases

Data Received



98% of COGs reported
99% of Counties covered
.....
[Red Box] COGs

2 Data Models:

Statewide Linear Referencing Layer (Final Goal)

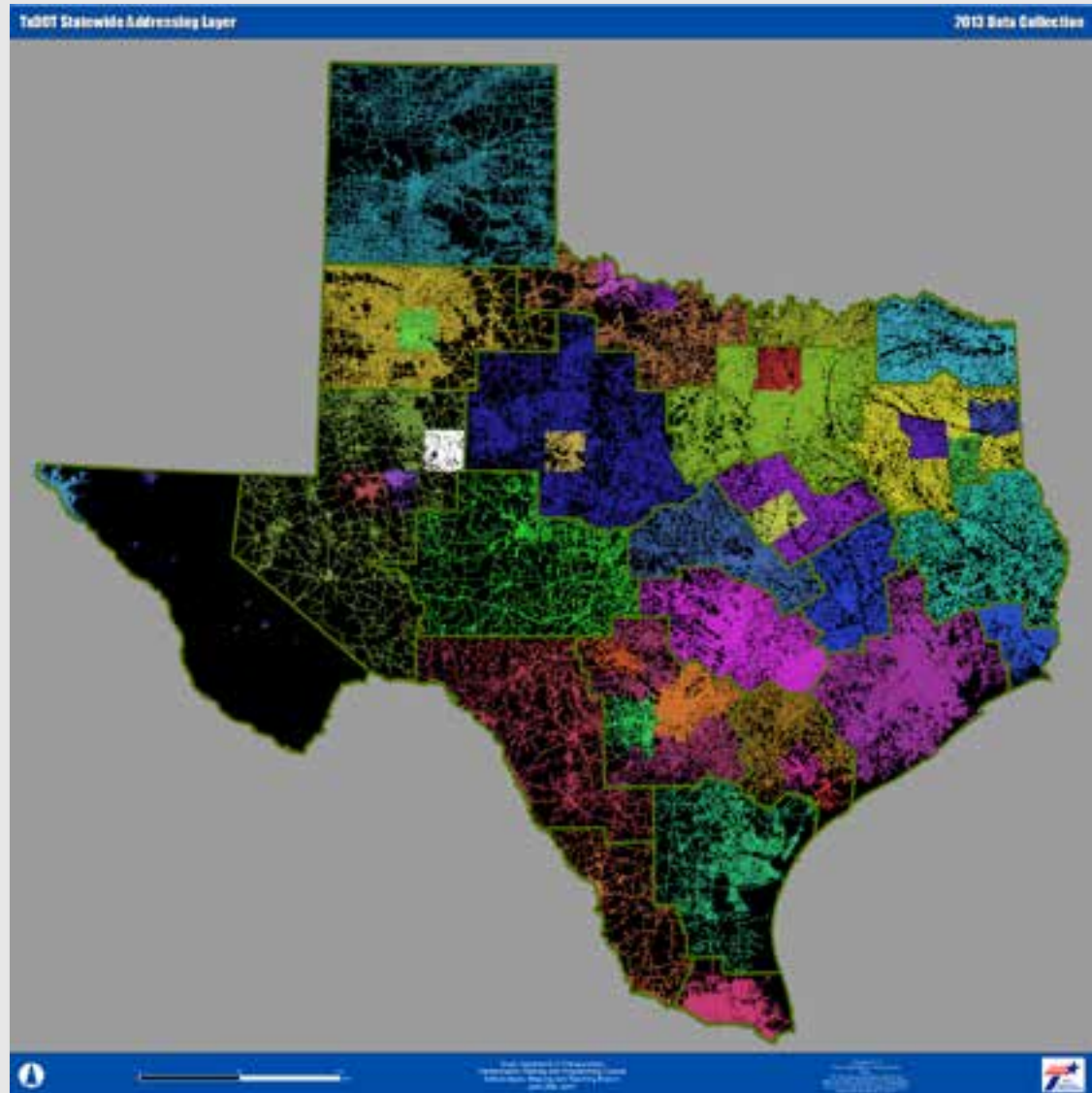
- Local City Streets Only
- Contiguous measured linear features
- Integrated into existing data at TxDOT
- Report to FHWA
- More advanced data processing

Statewide Addressing Layer (Intermediate Repository)

- All Inclusive
 - All data received from each source included
- Focused on Addressing
- Classified by Route Type
- Modeled to fit the TxDOT TPP-GIS Data Structure
 - Minimal Data Processing

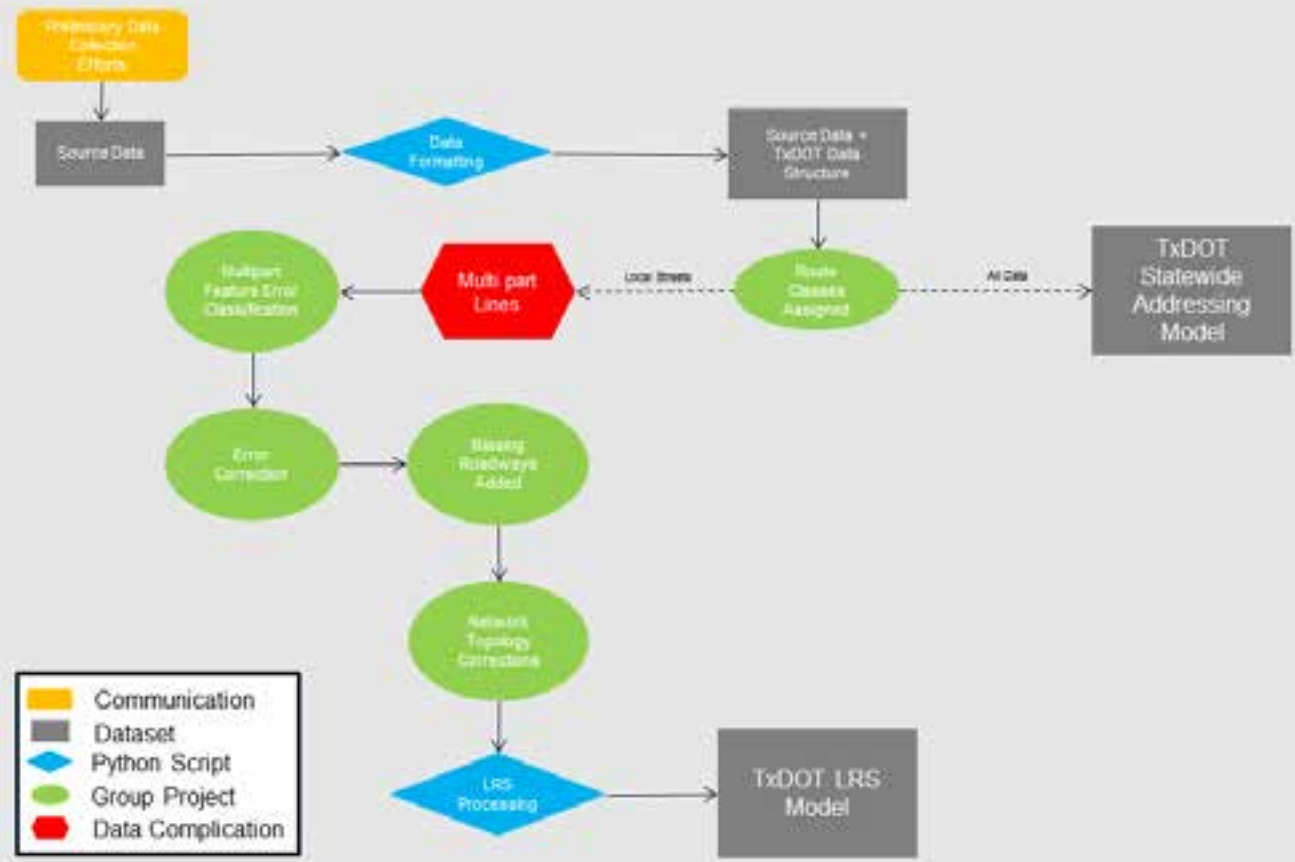
Statewide Addressing Layer

- All Data collected compiled into TxDOT structure
- Data remains 'as is' geometrically
- Addressing information retained
- Used as the data layer for future data maintenance
- Local maintainers can see how their data lines up with their neighbors

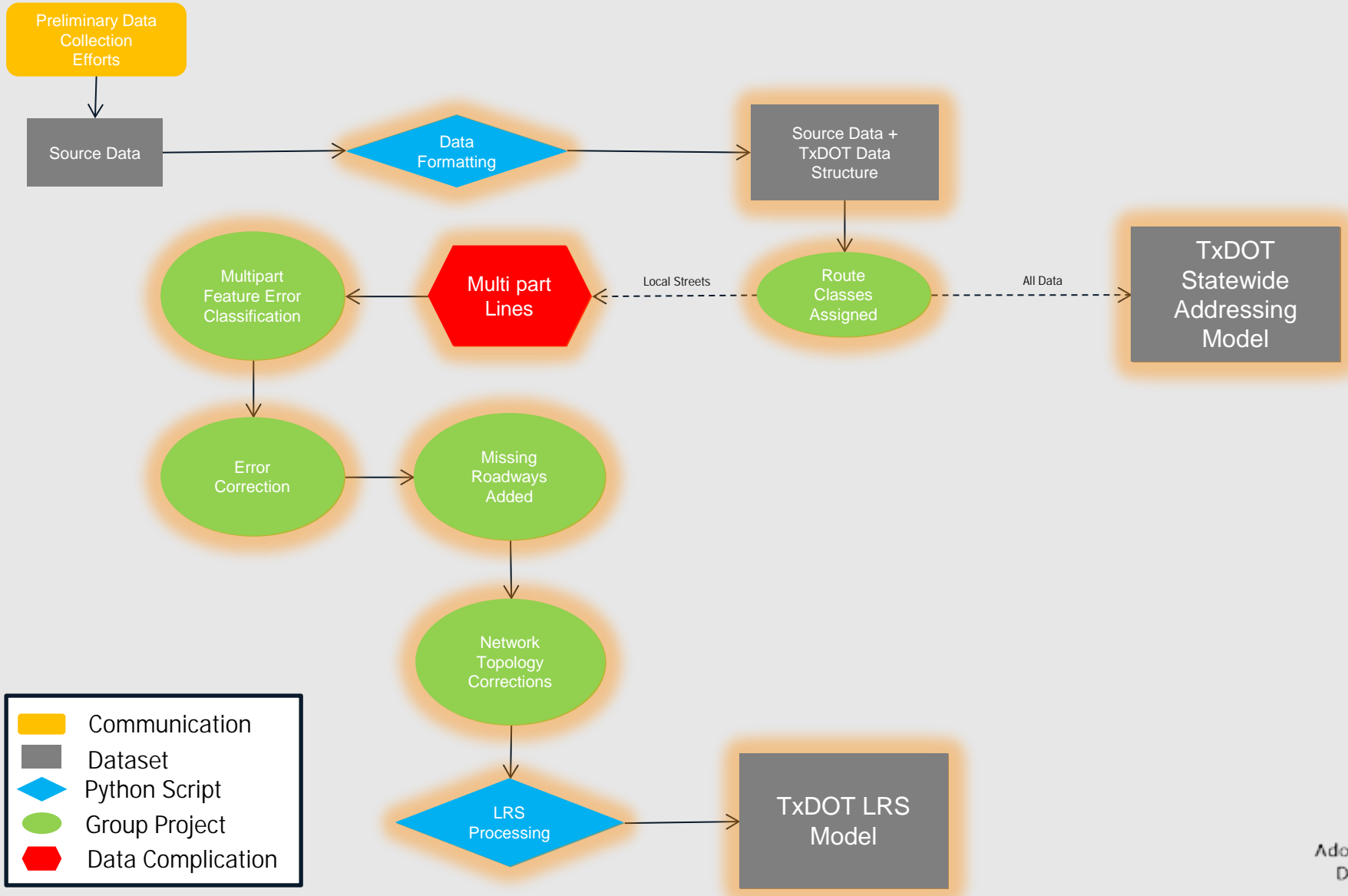


Data Processing

- § Incoming data has to be processed to fit within the two data models
- § Processing is a combination of data documentation, manual cleanup, and Python scripts



Data Processing – In Detail



Data Processing – City of Victoria

Source
Data with Route
Classes
Assigned



§ 2 Statewide Data Layers

- Statewide Addressing Layer for use by participating data providers and the general public
- Statewide Linear Referencing Layer for use by TxDOT, FHWA, and the general public

§ All data will be available for download from both the TxDOT TPP website, and from TNRIS

§ Data will also be viewable on the Texas Statewide Planning Map



THANK YOU!

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Questions?