



# Words Matter: Getting the Most from GIS Contract Deliverables

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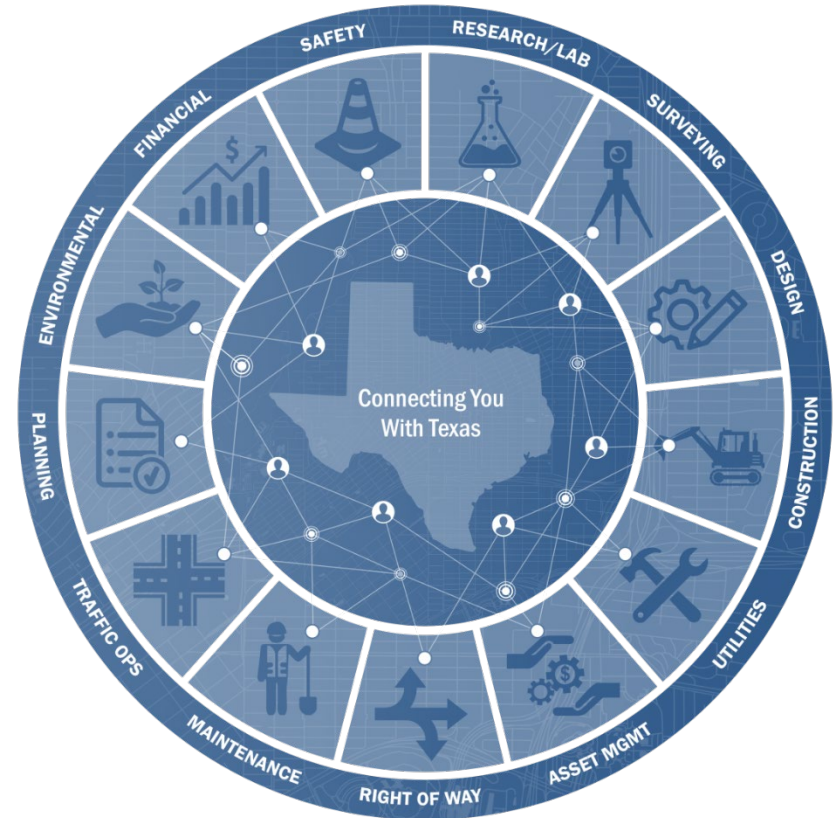
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# **How Does GIS Impact TxDOT**

*And why do we care about standards?*



- TxDOT has many systems that share information in a geographic location
- All work that we do at the agency happens “at a location”
- Hundreds of contracts include GIS components
  - Surveys
  - Asset Inventory Collections
- We are lacking standard deliverables structures and enforcement



# **Engineering Contracts**

*Overview of Category 1.9.1*



## This category includes:

- Services in the creation of cartographic product and visualizations
- Geospatial analysis and geoprocessing, data analysis, metadata/documentation
- Geospatial database creation, organization, and maintenance
- Production of cartographic elements and data to be used in various reports and presentations

Databases and visualizations produced under this category must meet TxDOT and industry standards and be organized in a manner that can be easily utilized and understood.

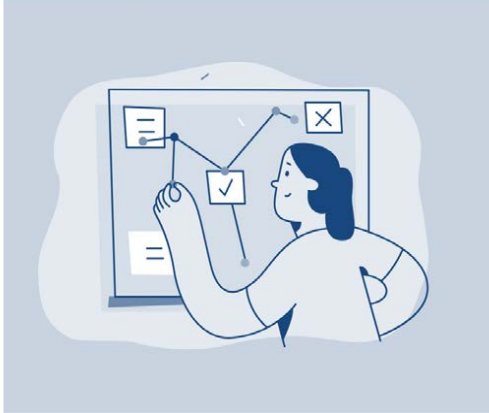


TxDOT GIS Deliverable Standard

- The firm must employ one individual with a **minimum of five years of experience in Geographic Information Systems** with demonstrated experience using Geographic Information System software to gather, manage, and analyze data and relate it to spatial locations.

# **Vision for TxDOT**

*Standard GIS Deliverables*



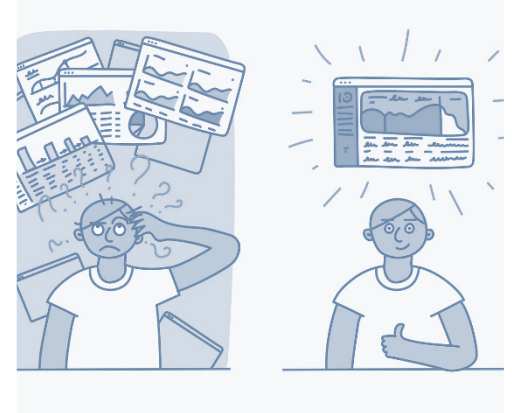
Will the data integrate?

**Schema**



How will it be packaged?

**Format**



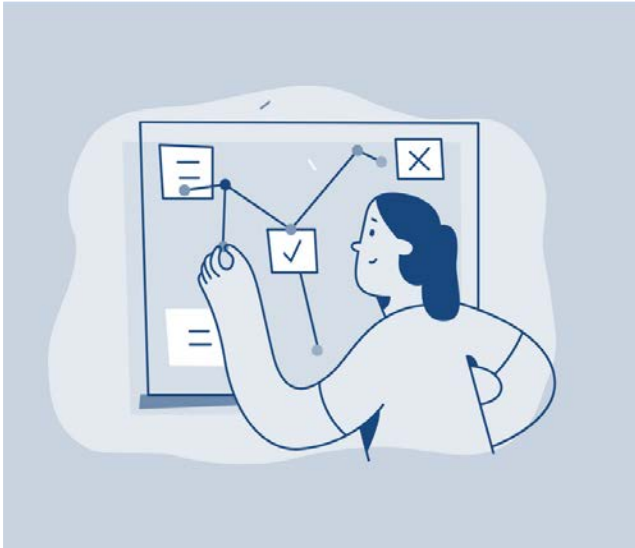
Who will share it with us?

**Delivery**





- The collected information that will assure our data can come together for integration into our existing data systems



## Important Geographic Components in Schema

- ✓ Coordinate Systems (NAD83, State Plane)
- ✓ Field Names (Interstate Highway 35, IH35, I-35)
- ✓ Measurement Units (Feet vs Meter)
- ✓ Application Files (GIS, CAD, Imagery Files)



- How our contracted requests are put together as deliverable products

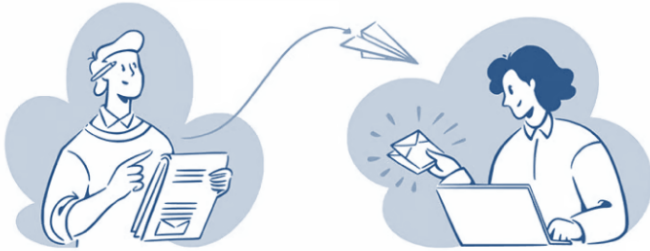
## Types of Deliverable Reviews & File Types Preferred

### ❖ District & Division Leadership

- PDF: Map and Supporting Design Info
- Excel Spreadsheet: Quantity Estimates
- KML Google Earth File: Survey Stationing Points

### ❖ District/Division Databases & Analyst

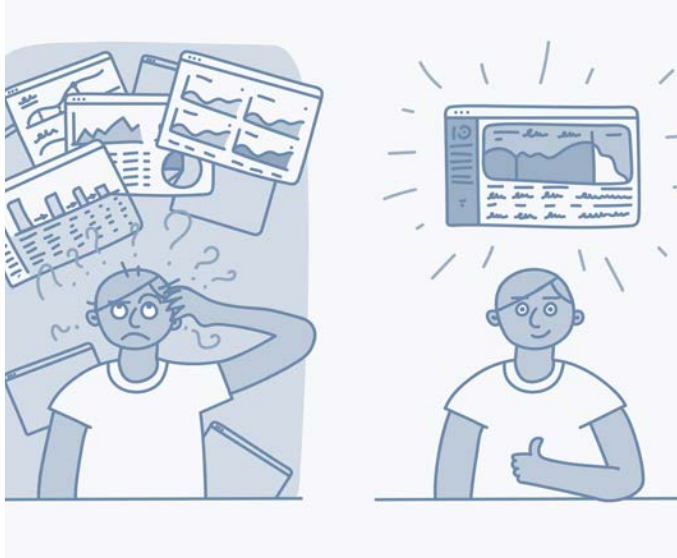
- CAD Bentley Design Files DGN, TIN, Land XML
- GIS Esri ArcPro Project Files
- Esri File Geodatabases
- Trimble Job XML Files





- The method our final deliverable document is transitioned from our vendor to TxDOT

## Ways to Deliver Products to TxDOT



- ❖ Traditional Document Sharing
  - Physical Dropoff with External Storage
    - USB/External Hard Drive – Where do they go?
    - What if someone retires?
  - DocuShare
- ❖ Digital Deliverable
  - Esri ArcGIS Online Map & Web Applications
  - Esri Field Applications
  - Esri Feature Services
  - TxDOT SharePoint

# **Why Words Matter**

*Contract Language & Defined Requirements*



## ❖ Attachment C

- GIS Deliverables intended to be loaded into enterprise datasets (e.g., ROWIS, RULIS) should be in the standard format and schema for those systems.
  - This needs to be very clear in the contract and all work authorizations that result in a GIS deliverable.
- Contracts resulting in unique or custom GIS deliverables should define the expectation of the schema and structure and include the GIS Deliverables Guideline ***as a Service Provided by the State.***

## ❖ Geographic Information Management Section Support

- The Statewide Data and Applications team can assist with language and requirements for custom deliverables.



# **Ensuring Quality**

*Project Managers Call to Action*



- 1. Awareness** – Create an awareness for geospatial data deliverables and what is needed and why
- 2. Know Your Team** – Reach out and often for assistance in deciphering the geospatial world
- 3. Adopt a Process** – Add a stop and review step into your deliverables process with your vendor



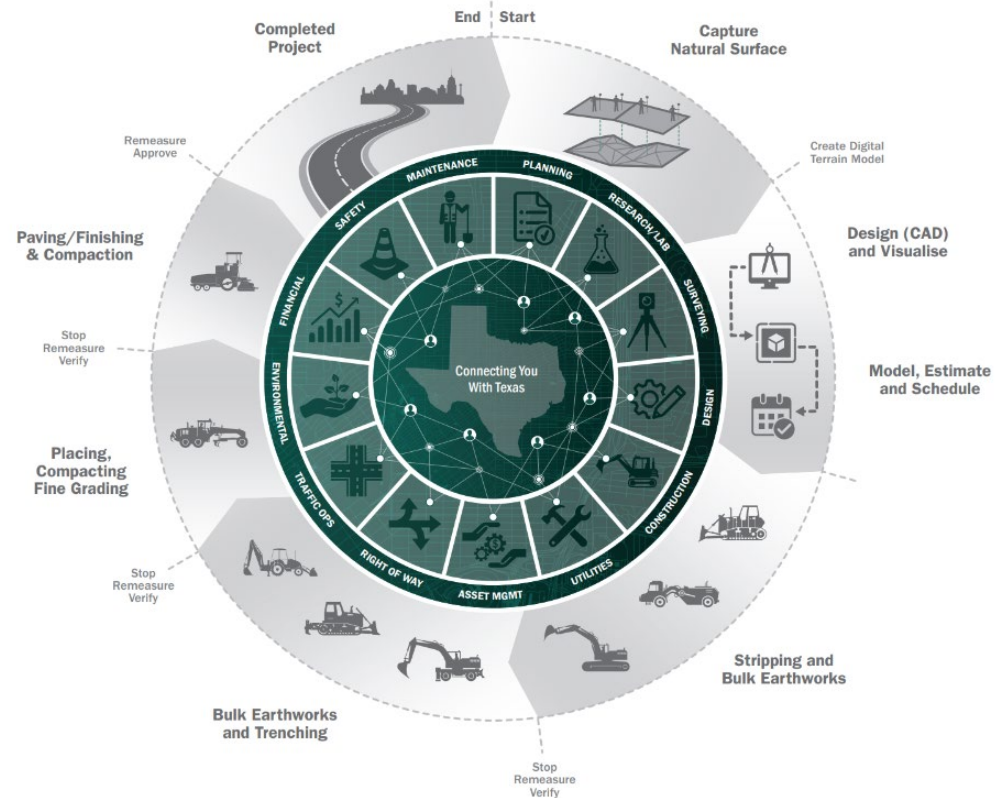
# **Conclusion**

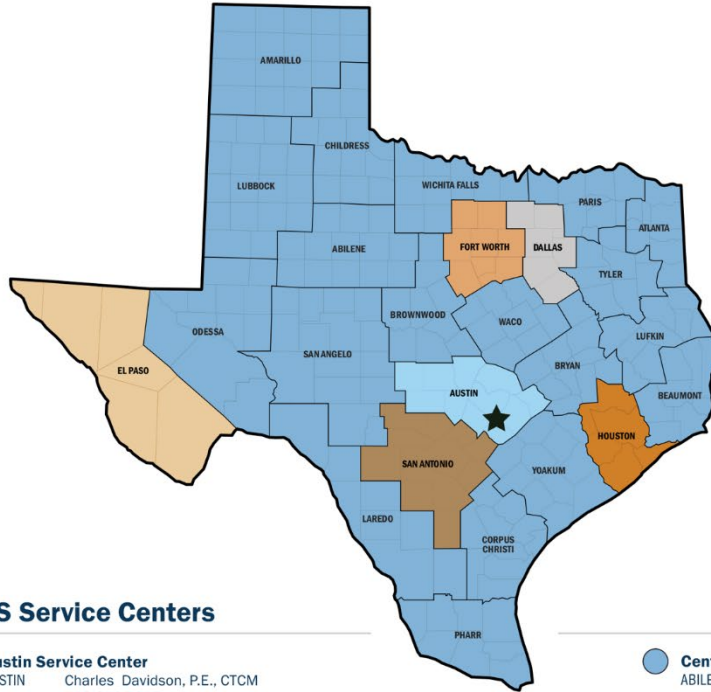
*Looking Ahead to an Integrated TxDOT*





- TxDOT is an inherently spatial organization
- A new GIS category was created to guide TxDOT contractors and consultants
- Quality spatial deliverables provide an opportunity for larger data integration initiatives
- Project Managers hold the keys to ensuring deliverable standards are met
- When in doubt – ask! We are here to help





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# Questions and Discussion



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