



THE CITY OF  
**BOWIE, MARYLAND**

## Pavement Evaluation and Complete Asset Inventory for the City of Bowie, Maryland

**Scope:** Transconomy, as a division of iENGINEERING, executed a project for the City of Bowie to deliver a roadway asset inventory and pavement evaluation. The project was comprised of three main tasks:



### Data Collection

The initial task involved the collection of right-of-way roadway images across desired streets and routes in Bowie, Maryland. Transconomy established collection areas using the Manager application, and Transconomy staff captured roadway images at 25-foot intervals utilizing the Collector app on a smartphone, mounted on the vehicle's dashboard.



### Data Analysis

Once the images were collected, the app synced the images to Transconomy Hub. Here, the images were processed, and Artificial Intelligence (AI) models were applied. These models included a PASER based pavement condition assessment as well as traffic signs, and other point and linear assets such as sidewalks and drainage inlets, to name a few.



### Data Delivery

The resulting inventory and condition data was delivered to the city in Transconomy's Viewer application, allowing for easy web-based access to a visualization of summary and detailed data, and in an ESRI shapefile geodatabase which could be easily imported into their GIS system for city wide distribution.

### Testimonial



Transconomy performed a complete inventory of our street network including pavement condition and all assets in the right of way. Their commitment to quality and on time delivery was impressive and we are currently using this information to make data-driven decisions that will positively impact the citizens in our community.

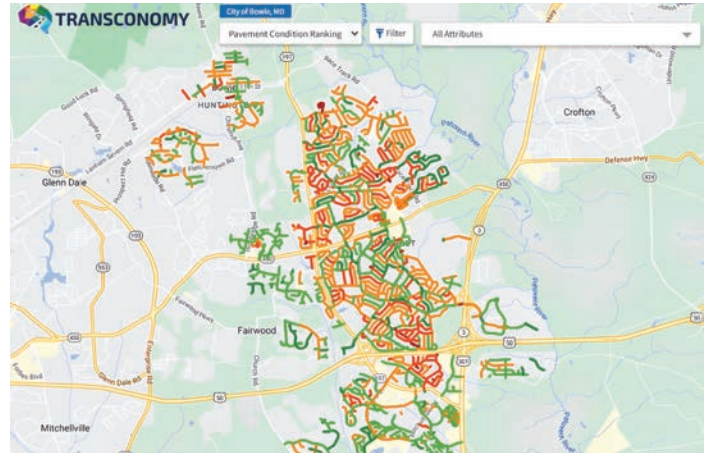


Jose Aldayuz, Public Works Director, City of Bowie, Maryland



## Results: The results were a pavement condition assessment and an asset inventory delivered to the City of Bowie, aligned to the city's provided linear referencing system.

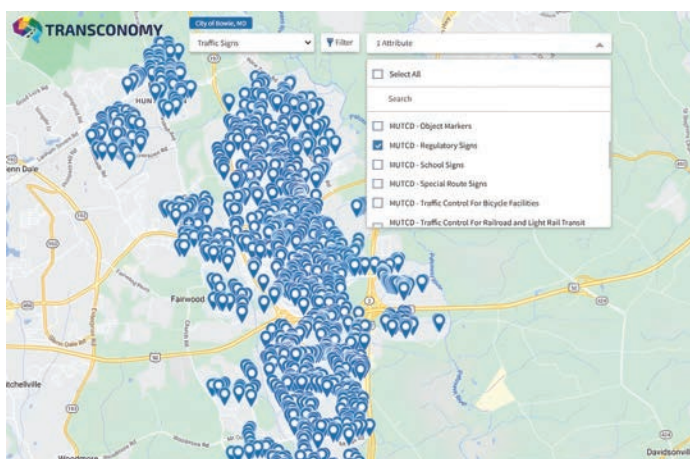
Transconomy conducted a comprehensive Pavement Condition Rating (PCR) assessment, employing a custom ranking scale provided by the city. This thorough evaluation assigned ratings to each road within the network, covering a total of 1104 segments spanning over 400 lane-miles. The analysis encompassed a meticulous inventory process, documenting more than 7,100 signs, 22,000-point assets, and 433 miles of linear features for the city. This data-rich approach ensures a comprehensive understanding of the infrastructure, aiding in strategic planning and maintenance efforts.



### City of Bowie Assets Delivered

- Pavement Condition Rating
- Sidewalks
- Bus Shelters
- Culverts
- Curb and Gutter
- Pedestrian Control Signals
- Traffic Control Devices
- Traffic Signs
- ADA Ramps
- Changeable Message Signs
- Fire Hydrants
- Manholes
- Pet Waste Stations
- Utility Boxes
- Guardrails
- Shoulders
- Medians
- Light Posts
- Pavement Drainage
- Rumble Strips
- Utility Pole Mounted Lighting

### Benefits: The current and detailed pavement condition rating and right of way asset inventory are readily accessible to the City of Bowie through the Transconomy Viewer and the delivered geodatabase.



The spatial referencing of the data to the city's roadway network empowers Bowie to conduct both high-level overviews and detailed reviews based on location, asset type, or condition. This analysis facilitates a nuanced understanding of the infrastructure landscape, enabling the city to fine-tune maintenance and operations plans, pinpoint potential risks, optimize allocation of funding and resources, and formulate long-term planning strategies. Transconomy's low-cost, high-quality solution enabled the City of Bowie to provide an actionable pavement paving plan for the next fiscal year in a fraction of the previously planned time.



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