

An Historical Analysis of Community Survey Data and Street Condition

City of Austin
Public Works Department
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and Street Condition



Research Question

How can we improve community satisfaction with neighborhood street condition?

Community Survey

The annual Community Survey report gives a general sense of how the City's services are perceived relative to prior year results and benchmarked against other cities. We can also gauge and rank the relative importance and satisfaction with Public Works' services among the City of Austin's services.

The Need

In 2014, the overall maintenance of City streets and sidewalks ranked first among all city services on the importance-satisfaction metric.

How do we transform this global metric into actionable intelligence?



Who We Are

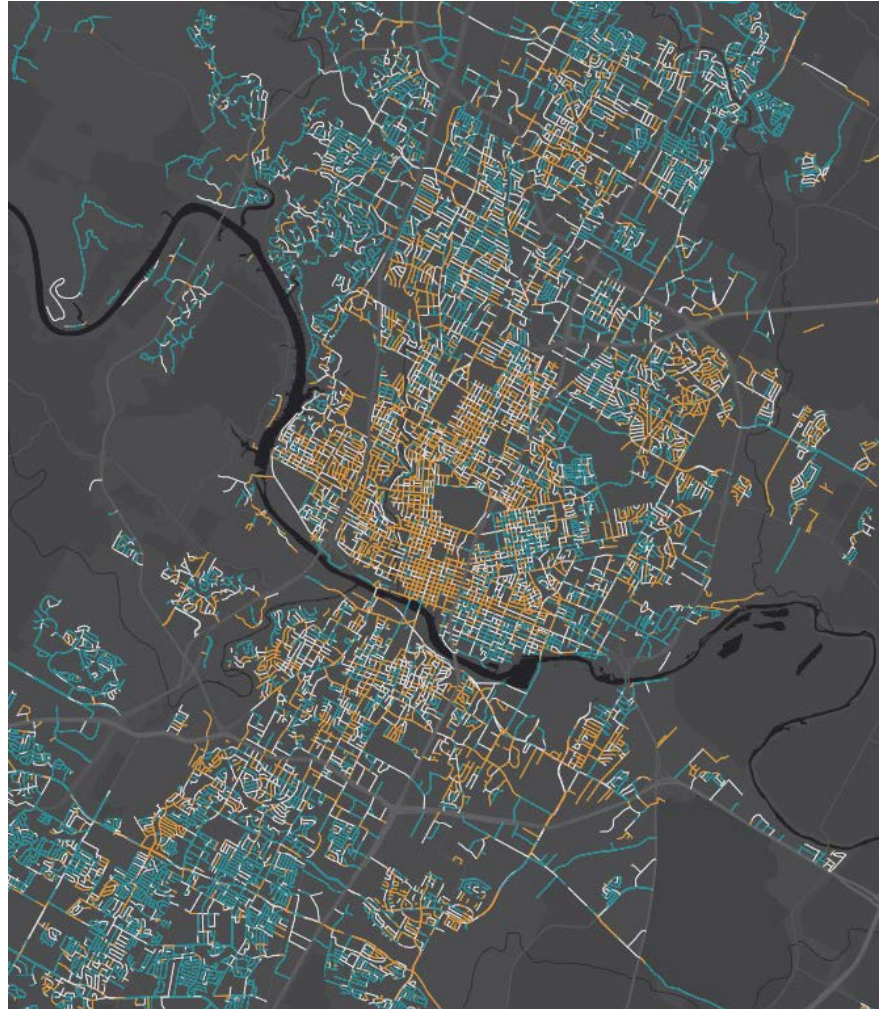
The Public Works Department designs, manages and inspects capital improvement projects; promotes active transportation; plans and builds sidewalks and urban trails; partners with communities to bring improvements to neighborhoods; and maintains the City's network of trails, roadways, sidewalks and bridges.



Street and Bridge Operations Office of the City Engineer

Street Condition Assessment

Public works retains pavement condition consulting services on an ongoing schedule and the data is stored in our pavement management information system. The data is generalized to a grade of A,B,C,D,& F.



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Survey Instrument

- ❖ City of Austin contracts out an annual survey to gauge the satisfaction with service delivery and the priorities of the community
- ❖ Five-page survey sent to a stratified random sample of 3,000 households with follow-ups by phone for those who do not send back the survey
- ❖ For the 2014 survey, 1,225 were completed (tend to have 1,200-1,300)
- ❖ Five questions relate to services Public Works provides – Citizens are asked to rate their satisfaction with:
 - Overall maintenance of city streets and sidewalks
 - Condition of major city streets
 - Condition of sidewalks in your neighborhood
 - Pedestrian accessibility (the City's sidewalk system/network; number/availability of sidewalks)
 - Condition of streets in your neighborhood



Methodology

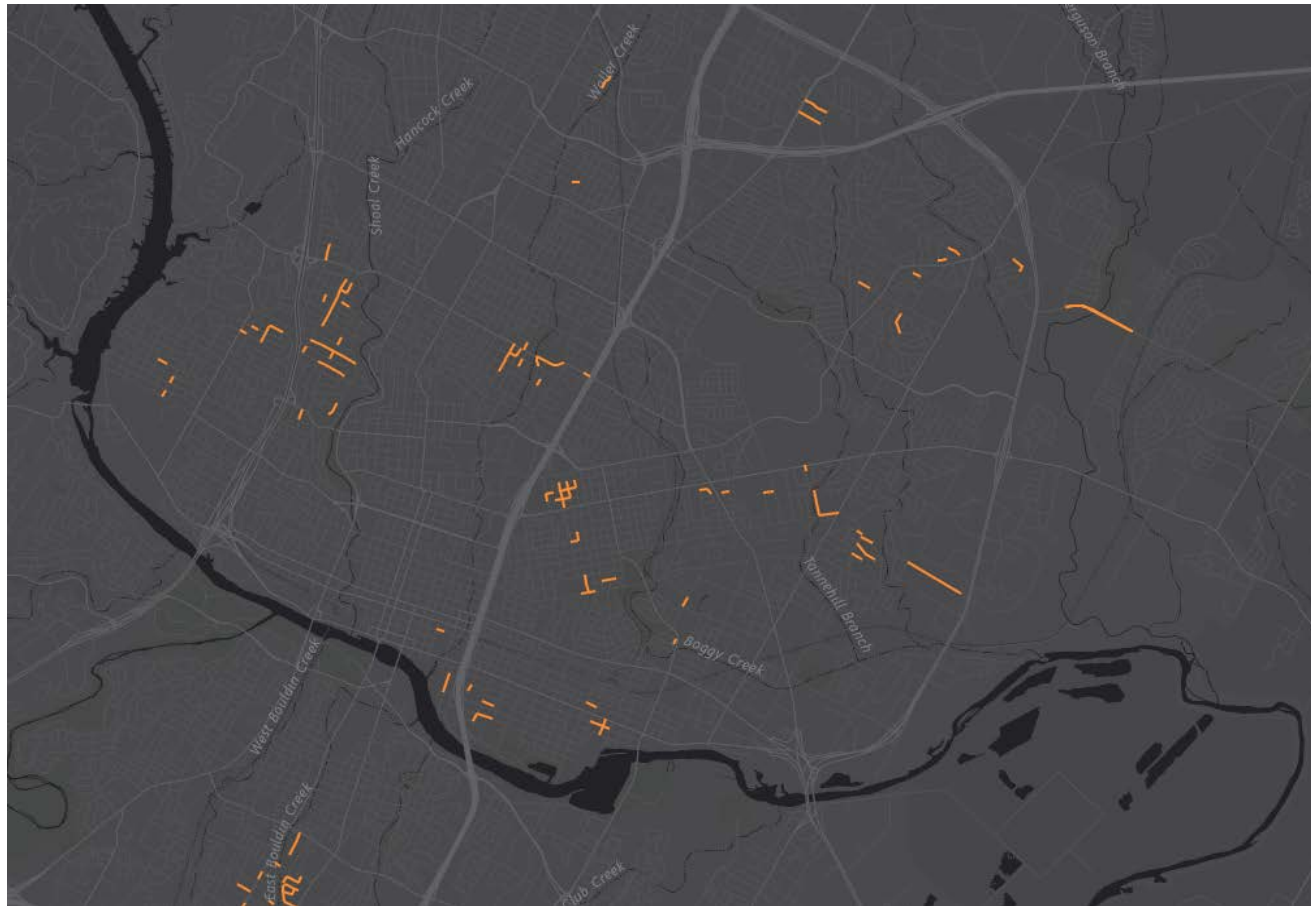
Both our infrastructure streets assets and our household-level survey data are place-based. We can use a GIS to geocode raw household-level survey data and then derive finer resolution metrics of satisfaction with specific PWD services.

- ❖ Begin with household survey data points
- ❖ Assign neighborhood street satisfaction rating
- ❖ Add in street condition assessments
- ❖ Perform a spatial join between the household survey points and street segments. In this step, take the mean of all surveys taken within ½ mile of each street segment. This is now treated as a perceived condition score for each street segment



Findings

The perceived condition can now be compared to the technical condition assessment. This can be visualized along a few dimensions by screening out segments with discrepancy/accordance for low/high rating categories.



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Next Steps

Condition Agreement - Use this information to inform and augment our Street and Bridge Operations annual maintenance plan.

Condition Disagreement - Conduct further research and investigation through public engagement activities to discover the reasons for this disagreement.

Conduct Analysis to determine if adjustments in our maintenance plan impact future satisfaction surveys



Questions?

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