Bus Stop Field Assessments

Methodology and Benefits
The humble bus stop

• Most basic element of fixed route bus service

• First interaction point between service and the customer

• Influence on perceived quality and safety of service

• New user experience

• Not all stops are created equal
750 bus stops
50 shelters

1,875 bus stops
150 shelters

2,750 bus stops
350 shelters

3,300 bus stops
325 shelters

3,800 bus stops
275 shelters
Contributing Factors

- General Wear & Tear
- Vandalism
- Maintenance Jurisdictions
- Vehicle Collisions
- Agency Resource Levels
- Asset Management Procedures
- Under Reporting
- Construction Impacts
- Inter-department Communication
- Work Order Procedures
Bus Stop Field Assessment

- Inventory agency assets & stop conditions
- ~100% sample of all stops
- Catalogue physical condition of assets
- Confirm accuracy public facing information
- Develop photographic record of assets
- Identify priority needs & inputs into capital plan
Existing Conditions

• GTFS used as base condition

• Facilitates field work planning

• Verify internal data matches customer-facing information

• Efficient progress tracking
Data Collection Platforms

- Smartphone-based minimizes equipment
- Flexible & customizable forms
- Automatic, real-time record uploads
- Ability to modify questionnaire or function
- Syncs with ArcGIS
Inventory Questionnaire

Keep it short, but effective

Limit potential for user error

Clear direction on qualitative responses

Prior training session is essential
Inventory Questionnaire

Ped infrastructure = passenger experience

Identify stops for priority investment

Data can inform & support:

1. Cost sharing agreements
2. Capital plans
3. Grant applications for ADA and access to transit programs
Photo Record

Consistent set of photos at each stop

Used to review conditions and assess needs

Confirm condition assessments and determine priorities

Provides agency staff with reference database

More photos = More data = More costs
Stop Pe Shelter & Amenity Focus
Interactive Dashboard

Is there a bus stop sign?

- Yes 2.2k
- No 118

Bus stop sign condition:

- Good 1.5k
- Damaged 78
- Poor 668

Does the Stop ID on the Sign match the Stop ID in GTFS?

- Yes 2.1k
- No 67
- Null 88

Last update: 1 minute ago

Bus Stop Info (Condition, ID, etc.)  Bus Stop Amenities  Sidewalk Info  ADA Info

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Capital Planning

- Address missing, incorrect, or damaged signs
- Prioritize repair and replacement of assets
- Cost sharing agreements for infrastructure issues
- Utilize data to support grant applications
Informing Capital Investment - BMTS
**BENEFITS**

- Full inventory of roadside assets
- Identify missing or incorrect signs
- Identify infrastructure condition issues
- Develop short-term action plan
- Inform medium-term capital plan
- Support grant applications
- Identify gaps in workflow processes

**COSTS**

- Time & manpower intensive
- Training & oversight costs
- Data validation could require revisits
- Provides only a snapshot in time
- Transfer of GIS project could incur additional costs
- May not be compatible with other asset management or HASTUS
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Thank You!

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