Locally Maintained Pavement Condition Assessment

July 18, 2013

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Background
How Did We Get Here?

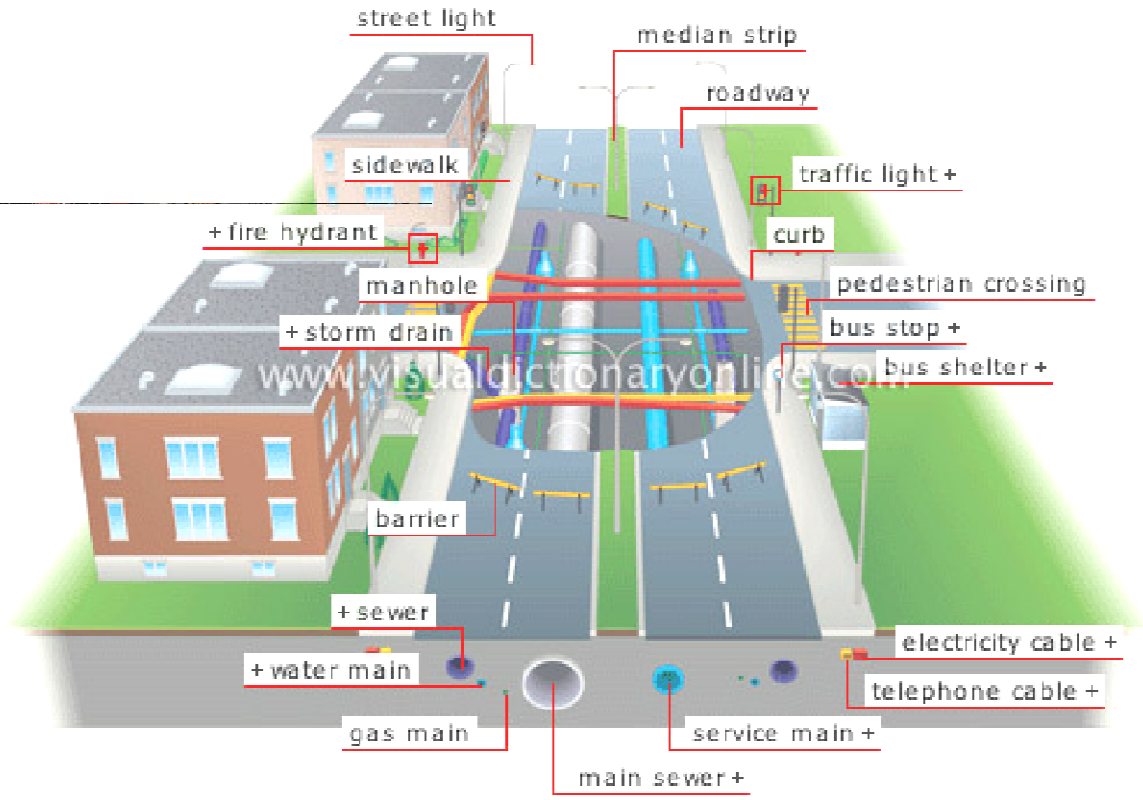
- **CTB discussion / questions regarding the equitable distribution of maintenance funds across systems and localities**
  - **Payments to Municipalities (functional class)**
  - **Payments to Arlington & Henrico (all roads)**
  - **Spending on VDOT Primary and Secondary System by District/Urban vs Rural**
  - **MN funding may be more equitably distributed by a formula that incorporates a prioritized needs-based factor along with a commitment to maintain our statewide assets, regardless of maintenance responsibility.**
- **CTB Requested Additional Review over 2011 / 2012**
  - **CTB subcommittee & Reformation of Local Govt Wrkgrp to:**
    - Evaluate equalization of maintenance fund allocations
    - Develop recommendations for the effective and equitable distribution of maintenance funds
    - Develop recommendations to collect add'l local system condition and performance data

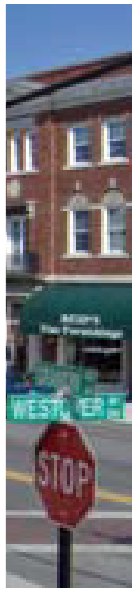
Background

- **Results of Local Workgroup (presented to CTB June 2012):**
  - **Maintenance activities in urban localities that maintain their own systems are substantially different than that on most VDOT-maintained county roads.**
  - **It is very difficult to make direct comparisons between VDOT & Local performance/spending/needs**
  - **Performance measures must keep the differences in mind when implementing statewide standards**
  - **An analysis and comparison of needs across systems is desired before recommending changes.**
  - **Utilize VDOT's pavement condition contract to collect data on local arterial system**

Background

Maintenance activities in urban localities that maintain their own systems are substantially different than on most VDOT maintained county roads.





Background
Local System Spending

Based on FY08 – FY11 Certified Expenditures (Weldon-Cooper)

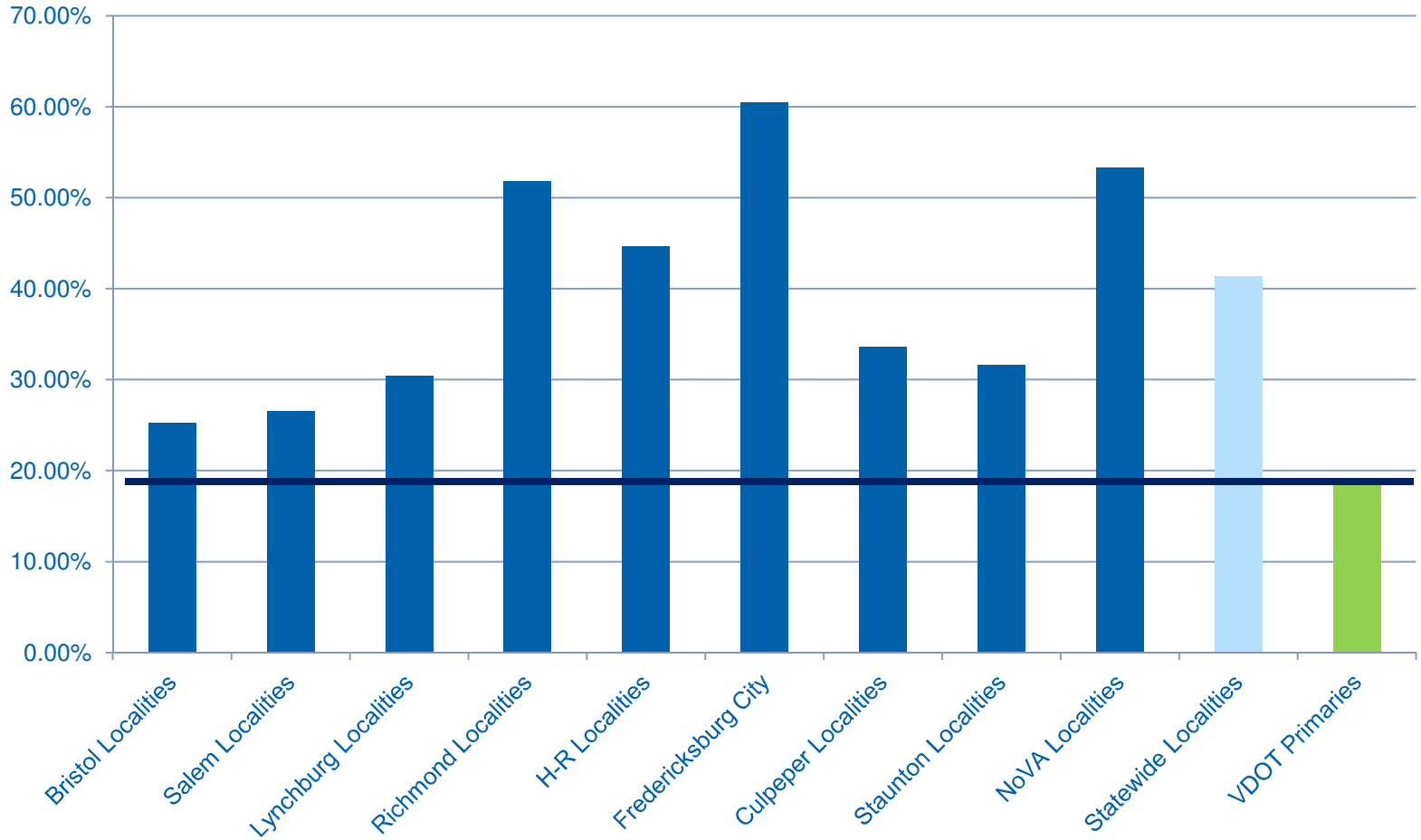
- Urban Localities Average Spending:
  - *Pvmt/Drainage – $6,941/ln-ml; 44% of total spending*
  - *Traffic Devices/Operations – $2,740/ln-ml; 24% of total spending*
- Arlington Average Spending:
  - *Pvmt/Drainage – $9,879/ln-ml; 30% of total spending*
  - *Traffic Devices/Operations – $9,936/ln-ml; 30% of total spending*
- Henrico Average Spending:
  - *Pvmt/Drainage – $1,845/ln-ml; 20% of total spending*
  - *Traffic Devices/Operations – $877/ln-ml; 13% of total spending*
- VDOT Budgets approx. 36% for P/S Pavements

**Accounts for additional 36% Municipalities and 111% Arlington Spends on Street Maintenance above VDOT MN payments*
**Does not account for differences between arterial and collector/local spending*

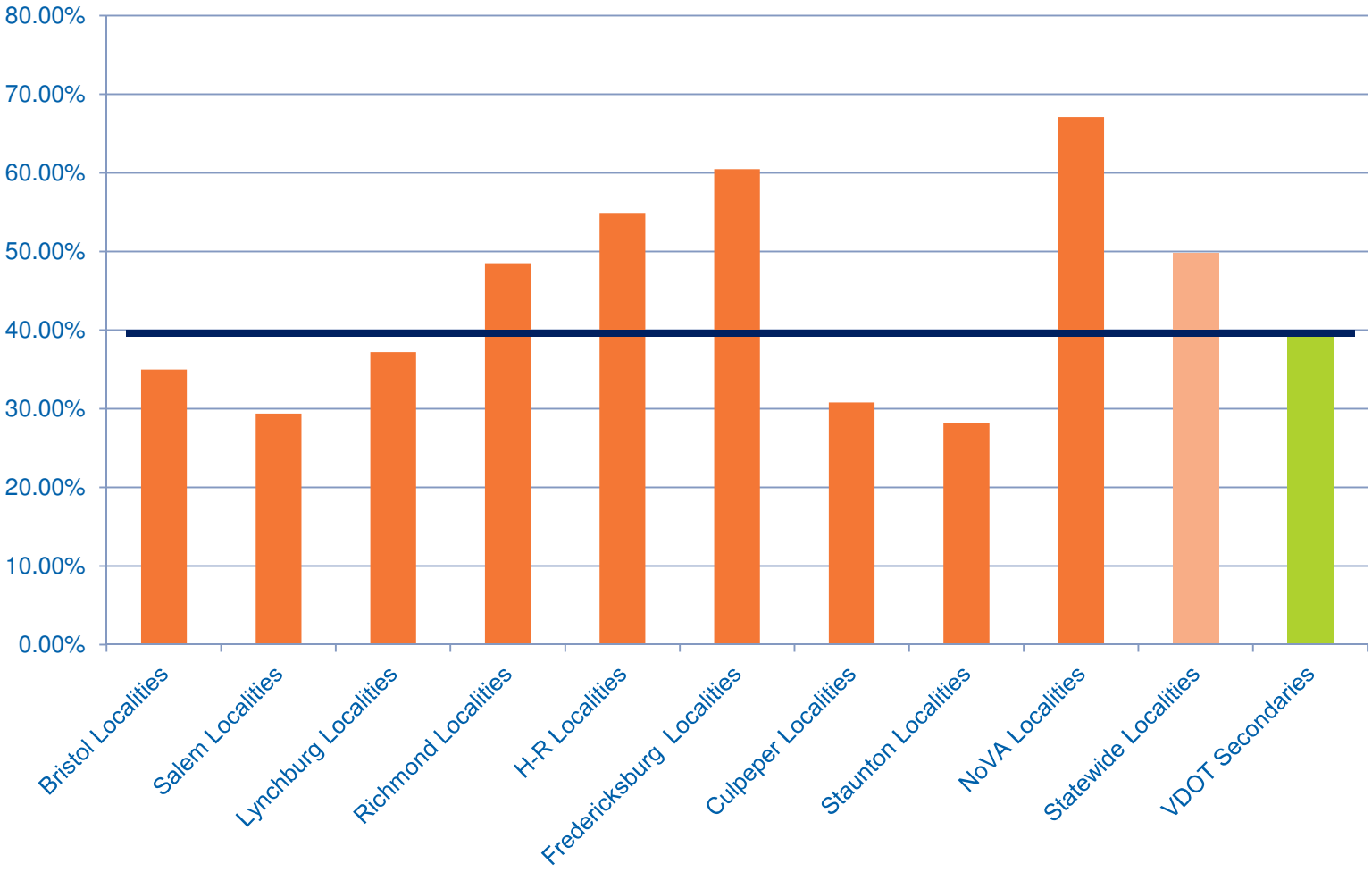
Local Pavement Data Collection
As requested by CTB

- **Local Arterials Pavement Condition Analysis**
  - Summer 2012 – Spring 2013
  - 84 Localities (82 Cities/Towns, Arlington & Henrico Counties)
  - Collected Arterial Routes Only
    - Collected 5,875 Lane Miles (**approximately 20% of Locally Maintained Lane Miles**)
- **Local Arterial Routes consist of 63% Primary Routes**
  - Compared Locality Primary Extensions to VDOT Primary Routes
  - Compared Locality Non-Primary Routes to VDOT Secondary Routes
- **Looked at "Deficient" Arterial Pavements**
  - Critical Condition Index (CCI) below 60
    - Scale 0 to 100 (100 represents pavement with no visible distresses)

% Deficient Pavement
Local Primaries / VDOT Primaries



% Deficient Pavement
Local Non-Primary / VDOT Secondary



* Does not represent most local roads (37% of Arterial Routes)

Local Government Workgroup – Conclusions

- Local arterial pavement is generally in the same or worse condition than similar roadways maintained by VDOT; This is more significant in more urbanized areas
- Localities are expending ~44% of total spending on pavements
  - VDOT budgets ~36% of maintenance funds for Primary/Secondary pavements
- 71 of the 86 Localities that receive maintenance payments are expending more on maintenance than the amount received from VDOT
- Urbanized streets are not necessarily the same as VDOT maintained streets
- Negligible correlation between deficiency in pavement when compared to:
  - Spending
  - % Truck Traffic
  - AVMT
  - % Population
- Possible Causes:
  - Age
  - Quality of CN
  - Utility Conflicts
- Even with the data, this is still an incomplete picture.

Local Government Workgroup – Recommendations

- Make no changes in current methodology for Local Government maintenance payment
- Continue to track overall system performance, monitor progress, and assess needs over time

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