Maryland’s NHS Infrastructure Conditions

BRTB Technical Committee
June 5, 2018

Transportation Asset Management Plan
&
Transportation Performance Management
Federal Approach: MAP-21/FAST Act

• Transportation Asset Management Plan for National Highway System (NHS)

  • State DOTs must develop and implement an asset management plan to improve or preserve the condition of the assets and improve the performance of the NHS (Bridges and Pavement) – 23 U.S.C. Part 515

  • TAMPs must include
    1. Inventory and condition of system assets, regardless of ownership
    2. Objectives, measures, and targets for asset condition & performance
      • TPM 2 Infrastructure Condition targets (23 U.S.C. 490 – National Performance Management Measures)
    3. Performance gap identification
    4. Life-cycle planning
    5. Risk management analysis (including Part 667: Extreme Weather)
    6. Investment strategies and 10-year financial plan
1. Inventory and Condition

- National Bridge Inventory – 2016 conditions
- Bridge elements
  - deck, superstructure, and substructure
  - >20 feet and on public road
- 3.9M Square Meters
  - 56% - MDOT SHA
  - 35% - MDTA
  - 8% - Baltimore City
  - <1% - Federal and County
2. Performance Measures

Bridges

- Pre-certified National Bridge Inventory
  - 5.3 million square meters (partial data)

- Federal Performance Measures
  - Percentage of NHS bridges classified as in:
    - Good condition
    - Poor condition
      (federal threshold – no more than 10% poor)
  - Projections for the state and local portion of the NHS were developed by OOS
  - 10-year projected conditions for the system are based on reasonably available funding estimates for state-owned facilities

![2017 conditions and including box culverts](image)

*Baselines were generated using conditions as reported in 2018 with best information available on federally-owned bridges.*
1. Inventory and Condition Pavement

- HPMS – 2016 Conditions
- Pavement elements
  - Directional lane miles
  - IRI, percent cracking, faulting & rutting
- 9,037 lane miles
  - Interstate (29%)
    - 83% - MDOT SHA
    - 5% - MDTA
    - 0.3% - Baltimore City
  - Non- Interstate (71%)
    - 58% - MDOT SHA
    - 2% - MDTA
    - 2% - Baltimore City
2. Performance Measures
Pavement

- Federal Performance Measures
  - Percentage of NHS pavements on the:
    - Interstate
      - Good condition
      - Poor condition
        (*Federal threshold – no more than 5% poor*)
    - Non-Interstate
      - Good condition
      - Poor condition

- Projections for the system were developed by OMT for the NHS system, regardless of ownership
  - Conservative assumptions based on programmed and planned projects for corridors or segments

- 10-year projected conditions for the system are based on reasonably available funding estimates as reflected in the CTP and S/TIPs
TAMP 10-Year Projections

• Asset management investment strategies are guidance for resource allocation to deliver the best asset performance given available funds
  • What is the cost effective program to achieve and sustain a state of good repair?
Maryland Open Data

Layers Available -
http://data.imap.maryland.gov/pages/mdot/

- Pavement Condition NHS 2016

- Bridge Condition NHS 2016
Next Steps

• TPM
  • Continue collaboration with MPOs to share information and develop targets
  • All conditions will be reported in the State’s baseline performance period report due by October 1, 2018 to FHWA
  • MPOs must either support the State’s targets or establish their own quantifiable four-year targets by Board resolution before November 16, 2018

• Final TAMP (due June 2019)
  • Certification by FHWA of Initial TAMP
  • Convene an after action meeting with all owners of NHS assets to
    • Review the Initial TAMP
    • Discuss opportunities for a more comprehensive financial plan
More Information or Questions

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