



STATE HIGHWAY
ADMINISTRATION

TRANSPORTATION ASSET MANAGEMENT PLAN

Meredith Hill

MDOT SHA, Innovative Planning & Performance Division

November 26, 2019

TRANSPORTATION GOALS

National Goal Areas

- Safety
- Infrastructure condition
- Congestion reduction
- System reliability
- Freight movement and economic vitality
- Environmental sustainability
- Reduced project delivery delays

Maryland Transportation Goals



PBPP PRODUCTS AND PARTNERS

Maryland DOT

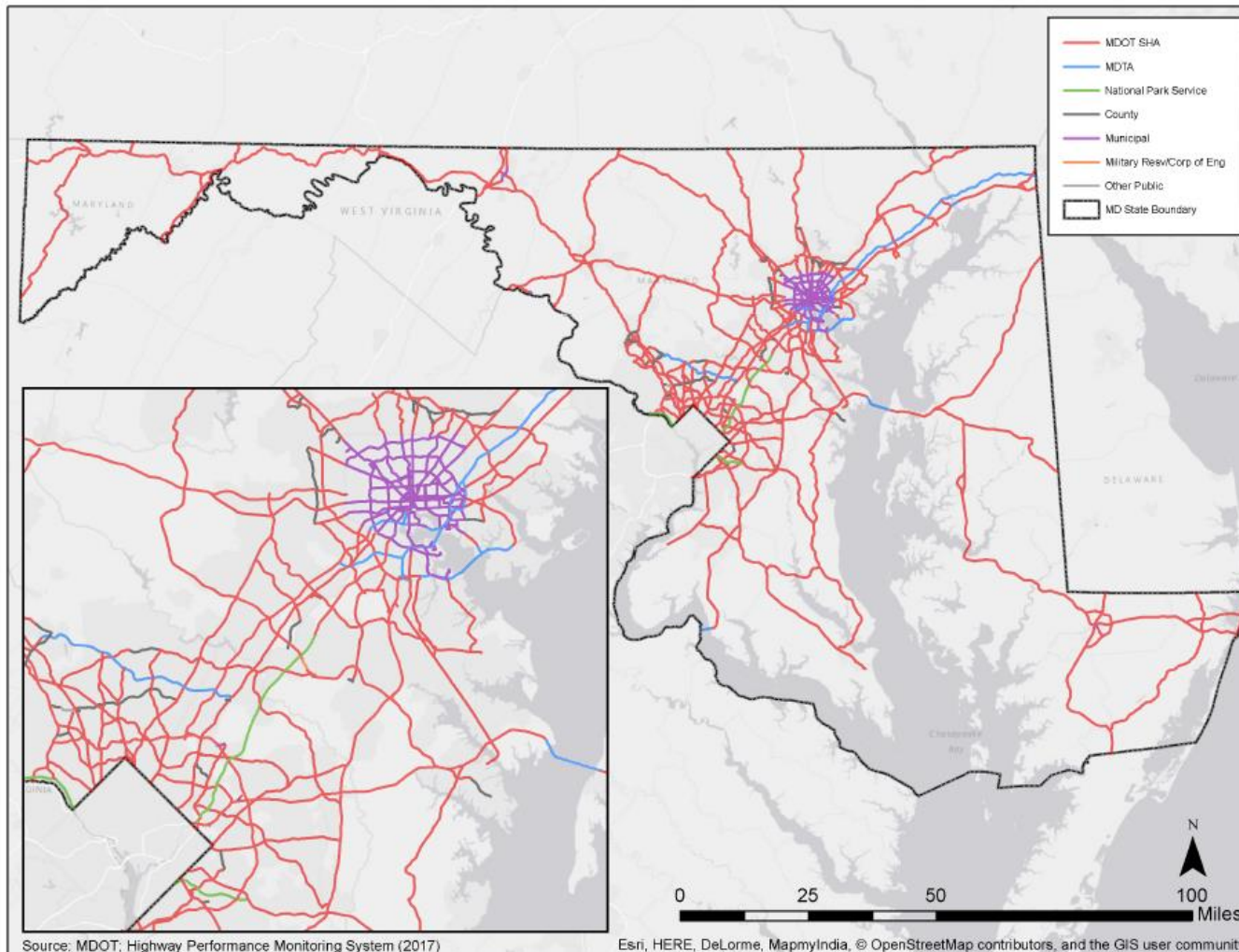
- [Maryland Transportation Plan](#)
- [Consolidated Transportation Plan](#)
 - [Statewide Transportation Improvement Program](#)
- [Annual Attainment Report](#)

- [Maryland Strategic Highway Safety Plan](#)
- [Maryland Transportation Asset Management Plan \(TAMP\)](#)
- [Maryland State Highway Mobility Report](#)

Metropolitan Planning Organizations

- Long Range Transportation Plan
- Transportation Improvement Program
- Transportation Performance Management
- Regional Congestion Mitigation & Air Quality Performance Plan

NATIONAL HIGHWAY SYSTEM IN MARYLAND



PARTNER OWNERS

-  National Park Service
-  ACOE/Military
-  Anne Arundel
-  Baltimore County
-  Howard County
-  Montgomery County
-  Prince George's County
-  Washington County
-  Baltimore City
-  Brunswick
-  Greenbelt
-  Hagerstown
-  Salisbury

NHS BASELINE PERFORMANCE - BRIDGE



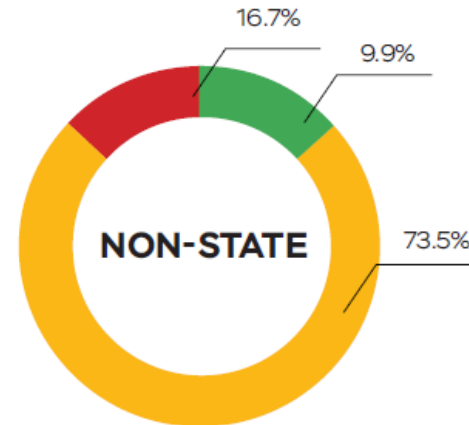
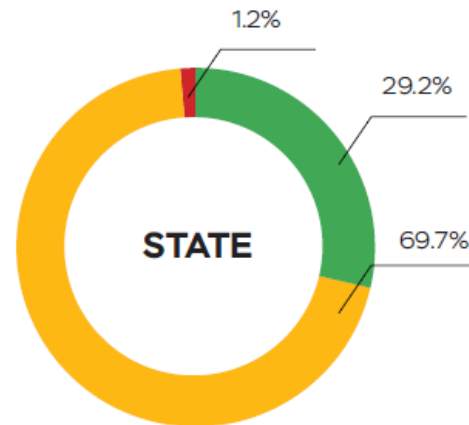
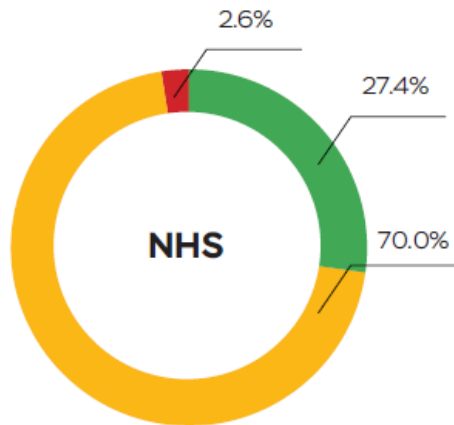
1,877 bridges on NHS  CY2019

35% NHS

5,340 bridges in Maryland



Bridges (M² Deck Area)



NHS BASELINE PERFORMANCE - PAVEMENT

9,035 lane miles on NHS



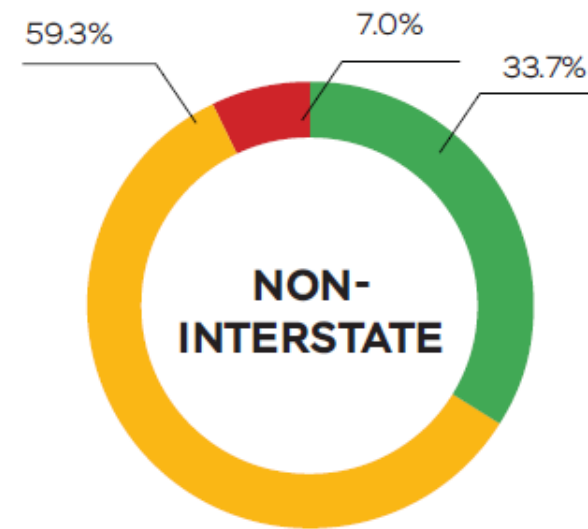
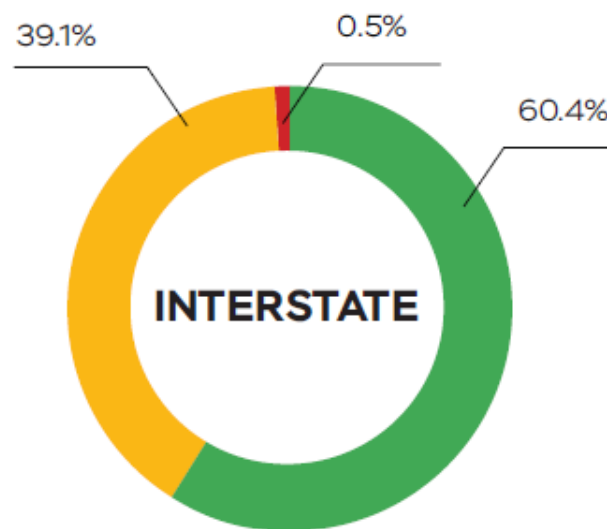
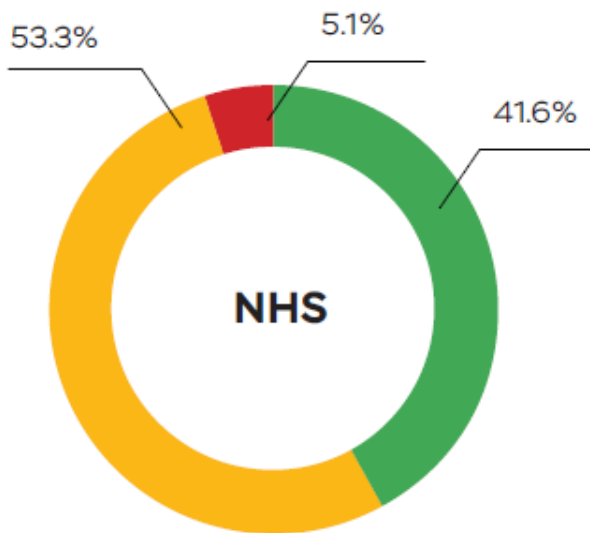
CY2018

12%
NHS

73,566 lane miles in Maryland



Pavement (Lane Miles)



MARYLAND'S NHS PERFORMANCE OBJECTIVES



NHS BRIDGES

| | BASELINE | 2-YEAR | 4-YEAR | 10-YEAR |
|------|----------|--------|--------|---------|
| Good | 27.4% | 27.9% | 28.4% | 30.0% |
| Fair | 70.0% | 69.6% | 69.2% | 68.0% |
| Poor | 2.6% | 2.5% | 2.4% | 2.0% |



NHS PAVEMENT
Interstate System

| | | | | |
|------|-------|-------|-------|-------|
| Good | 60.4% | 60.3% | 60.2% | 60.0% |
| Fair | 39.1% | 38.9% | 38.6% | 38.0% |
| Poor | 0.5% | 0.8% | 1.1% | 2.0% |



NHS PAVEMENT
Non-Interstate System

| | | | | |
|------|-------|-------|-------|-------|
| Good | 33.7% | 34.0% | 34.2% | 35.0% |
| Fair | 59.3% | 58.8% | 58.4% | 57.0% |
| Poor | 7.0% | 7.2% | 7.4% | 8.0% |

Performance Objectives

- Maintain the baseline

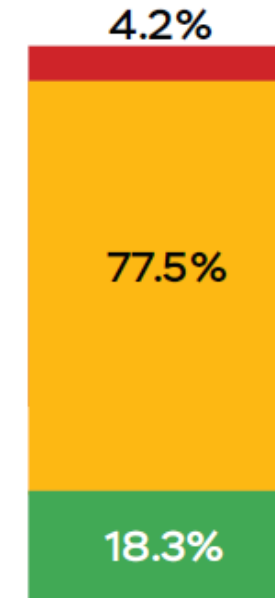
Federal Threshold in Poor Condition

- Bridge – below 10.0% bridge deck area
- Interstate Pavement – below 5.0%

FINANCIAL PLAN – NON-FEDERAL NHS BRIDGES



| WORK TYPES | 10-YEAR AVERAGE ANNUAL INVESTMENTS |
|----------------------------------|------------------------------------|
| 1. Initial Construction | \$0 |
| 2. Maintenance | \$3 |
| 3. Reconstruction | \$268 |
| 4. Rehabilitation | \$64 |
| 5. Preventative | \$40 |
| 6. Other NHS Activities | \$31 |
| NHS Bridge Financial Plan | \$406M/Yr |



NHS Bridge Projections from Reasonably Available Funding (\$406M/Yr)

FINANCIAL GAP – NON-FEDERAL NHS BRIDGES

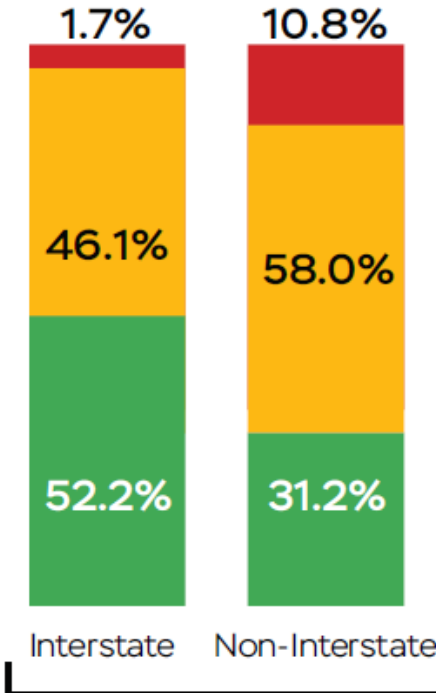


| NHS Bridges | SYSTEM PERFORMANCE | | 10-YEAR | | 10-YEAR GAP ANALYSIS | |
|---------------------------------------|--------------------|--------|-----------|--|----------------------|---------------------------------------|
| | Baseline (Current) | 4-Year | Objective | Projection Based on Reasonably Available Funding | Objective & Baseline | Projection (Available \$) & Objective |
| | A | | B | C | =C-B | |
| Good Condition | 27.4% | 28.4% | 30.0% | 18.3% | No Gap | 11.7% < desired |
| Poor Condition | 2.6% | 2.4% | 2.0% | 4.2% | | 2.2% > desired |
| Financial Gap (average annual in \$M) | | | \$515 | \$406 | \$109M/Yr < desired | |

FINANCIAL PLAN – NHS PAVEMENT



| WORK TYPES | 10-YEAR AVERAGE ANNUAL INVESTMENTS |
|------------------------------------|------------------------------------|
| 1. Initial Construction | \$0 |
| 2. Maintenance | \$4 |
| 3. Reconstruction | \$8 |
| 4. Rehabilitation | \$125 |
| 5. Preventative | \$14 |
| 6. Other NHS Activities | \$42 |
| Non-NHS Activities (Reserves) | \$60 |
| NHS Pavement Financial Plan | \$253M/Yr |



NHS Pavement Projections from Reasonably Available Funding (\$253M/Yr)

FINANCIAL GAP – NHS PAVEMENT



| NHS Pavement | SYSTEM PERFORMANCE | | 10-YEAR | | 10-YEAR GAP ANALYSIS | |
|---------------------------------------|--------------------|--------|-----------|--|----------------------|---------------------------------------|
| | Baseline (Current) | 4-year | Objective | Projection Based on Reasonably Available Funding | Objective & Baseline | Projection (Available \$) & Objective |
| | A | | B | C | | =C-B |
| Interstate | | | | | | |
| Good Condition | 60.4% | 60.2% | 60.0% | 52.2% | No Gap | 7.8% < desired |
| Poor Condition | 0.5% | 1.1% | 2.0% | 1.7% | | objective met |
| Non-Interstate | | | | | | |
| Good Condition | 33.7% | 34.2% | 35.0% | 31.2% | No Gap | 3.8% < desired |
| Poor Condition | 7.0% | 7.4% | 8.0% | 10.8% | | 2.8% > desired |
| Financial Gap (average annual in \$M) | | | \$315 | \$253 | \$62M/Yr < desired | |

NEXT STEPS



Transportation Asset Management Plan

- Annual Consistency Review (June)
 - March Structural Management Plan
 - What did you spend by work type in FY2019?
- MDOT SHA Asset Management Plan
 - Structures, Pavement, Facilities, Fleet, IT Systems (first round)

Transportation Performance Management

- Mid-Point Performance Report (October 2020)
 - Re-evaluate based on CY2019 (bridges) and CY2018 (pavement)
 - MPO target adjustments

MDOT ASSET MANAGEMENT PLANNING



Strategic Asset Management Plan



FINAL March 2019



Maryland Transportation Plan
(Organizational Strategic Plan)

MDOT Asset Management Policy

MDOT Strategic Asset
Management Plan (SAMP)

TBU and MDTA Transportation
Asset Management Plans (TAMPs)

PLAN DEVELOPMENT

Requirements from AM Policy

1. What we Own

2. Condition & Performance

3. Plan for SOGR

4. Practices & Protocols

5. \$ and Management

- Define & Record the Assets We Own
(Know What we Own)
- Determine the Condition of Assets
(Know the Condition and Performance of Assets)
- Establish a Plan for Maintaining a State of Good Repair
- Commit to Asset Management Practices
- Develop Framework & Guidance for Asset Management Software Systems to Leverage & Manage Asset Information

THANK YOU

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IPPD Products and Services

