# Transportation Asset Management Plan
TAMP

**SASHTO Technical Session August 20th 2019**

Approach for Federally Compliant TAMP

- Focused on National Highway System (NHS) pavement and bridge assets only

- Consideration of entire state system for pavement and bridge assets

- Comparison of leading practices of asset management vs Federal Compliance

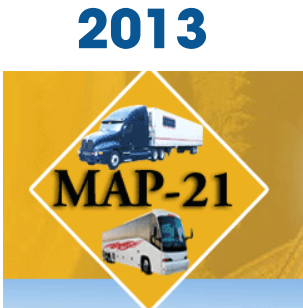- Identified future opportunities for enhancement
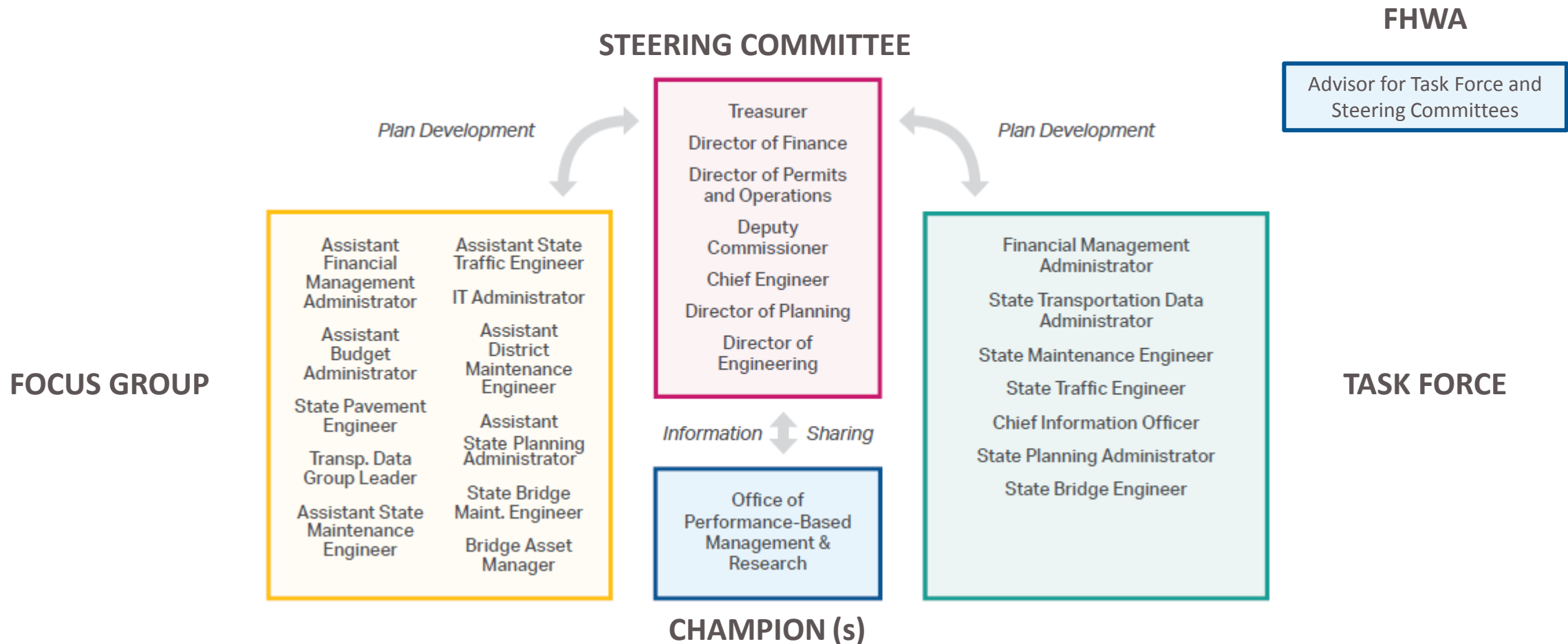
GDOT and Asset Management Plans

2009

2019

2013

2016

2017

TAMP Final Rule Published
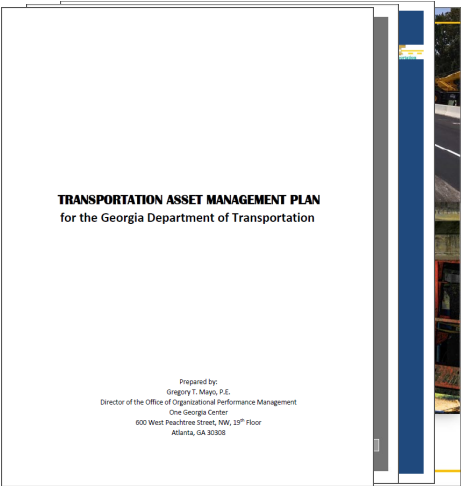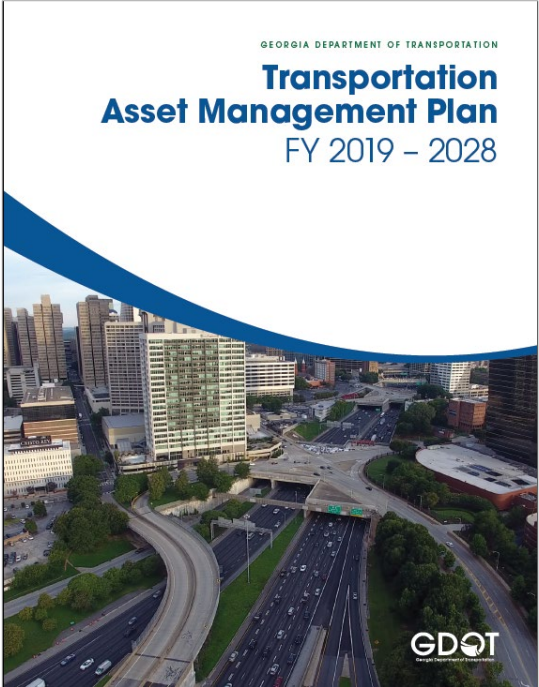
TAMP Committee Structure

Historical Pavement Evaluation

- **COPACES**

  (**CO**mputerized **PA**vement **C**ondition **E**valuation **S**ystem)

- Performed every year

- Field Offices inspected each State Route (visual)

- Districts inspected low scoring routes

- Central Office inspected sample set

- Additional QA inspections

COPACES

Why change what we're doing?

- Safety

- Ability to collect entire network

- Visual vs. Automated

- Cost Savings

Automated Data Collection –"The New"

- Detailed information on entire network

- Objective

- Consistent results

- Frees up labor hours

The PathRunner

Pathway 3D for Surface Imaging Rutting, Faulting & Automated Crack Detection

360 Degree camera (30 Megapixel)

Safety Lighting (front and back)

Super HD Roadway Imaging (3 Cameras, 2750 X 2200 per camera)

Laser Illumination to Remove Shadows

DMI

Onboard IMU for Grade, Cross Slope, Horizontal and Vertical Curvature

South Dakota Style Class 1 Profiler (Line Lasers)

Pathway Services Inc.

Historical Bridge Management

- Spreadsheets utilized to analyze program

- Funding Silos

- Manual Updates

- Funding levels for work types was based on engineering judgement

Why change what we're doing?

- Better predict which bridges require maintenance or replacement

- Work programs can be predicted for a set number or years using various funding scenarios

- Current state of bridges as work is completed

- Funding for various work types can be optimized

Process Enhancements

LIFE-CYCLE PLANNING

Evaluate alternative life-cycle planning strategies to achieve targets. Complete PMS and BMS Implementation.

FINANCIAL PLAN

Identify additional funding available for the NHS.

INVESTMENT STRATEGIES

Evaluate alternative investment strategies for the NHS in conjunction with broader SRS outcomes.

PERFORMANCE GAP ANALYSIS

Define the long-term vision (performance goals and targets) of a state of good repair.

- Consider different mixes of work types

- Quantify work undertaken by Districts and impact of Capital improvements

- Identify the benefit of investing less or more funding

- Set long term performance targets

TAM Implementation

- Aligned with actions defined in TAMP

- Develop a detailed implementation plan for TAM throughout the Department

- Incorporate implementable long and short term strategies

Item	Action	Discussion	Timeframe for Implementation
1	Further benefit-cost analysis to evaluate alternative actions/ strategies for managing pavement and bridge asset condition to achieve GDOT targets.	As an example, there is currently a strong focus on bridge replacement to achieve the 4-year target of 60% of bridges in good condition. Future analysis will consider alternative splits between work types (Maintenance, Preservation, Rehabilitation, Reconstruction) to maintain this (or future) targets.	Late 2020 (Calendar Year)
2	Complete PMS implementation.	GDOT is well advanced in implementation of the PMS, but needs to continue refining the model to be confident in the analysis required to deliver some of the other actions identified as process enhancements (e.g. evaluating strategies and setting targets).	Late 2020 (Calendar Year)
3	Complete BMS implementation, including adding the ability to undertake element-level analysis.	GDOT has identified activities for full BMS implementation that includes: • Complete training, develop model inputs and calibrate BrM • Update life-cycle analysis and adjust GDOT processes/ targets etc. where/if necessary • Incorporate outputs into STIP development process and share new targets • Continue to evaluate and improve the system	Calendar Years: 2020 2021 2023 and beyond

Questions ?