DEPARTMENT OF TRANSPORTATION

Asset Management Program Office
395 John Ireland Blvd.
St. Paul, MN 55155

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Asset Management for Construction

Emerging new technology is changing the transportation construction industry. Some major construction trends include building information modeling (BIM), "smart" equipment, innovations around workers' safety, and advancing the use of more sustainable and carbon-neutral methods and materials. Data is front and center as today's technologies track thousands of pieces of information, such as real-time information from equipment sensors, site photographs, material overruns, and weather impacts.

Construction data is essential in managing transportation assets. Asset type, material, location, cost, material testing results, etc., become the baseline for future asset tracking and performance.

MnDOT believes it is vital to practice and continue to advance Transportation Asset Management because TAM:

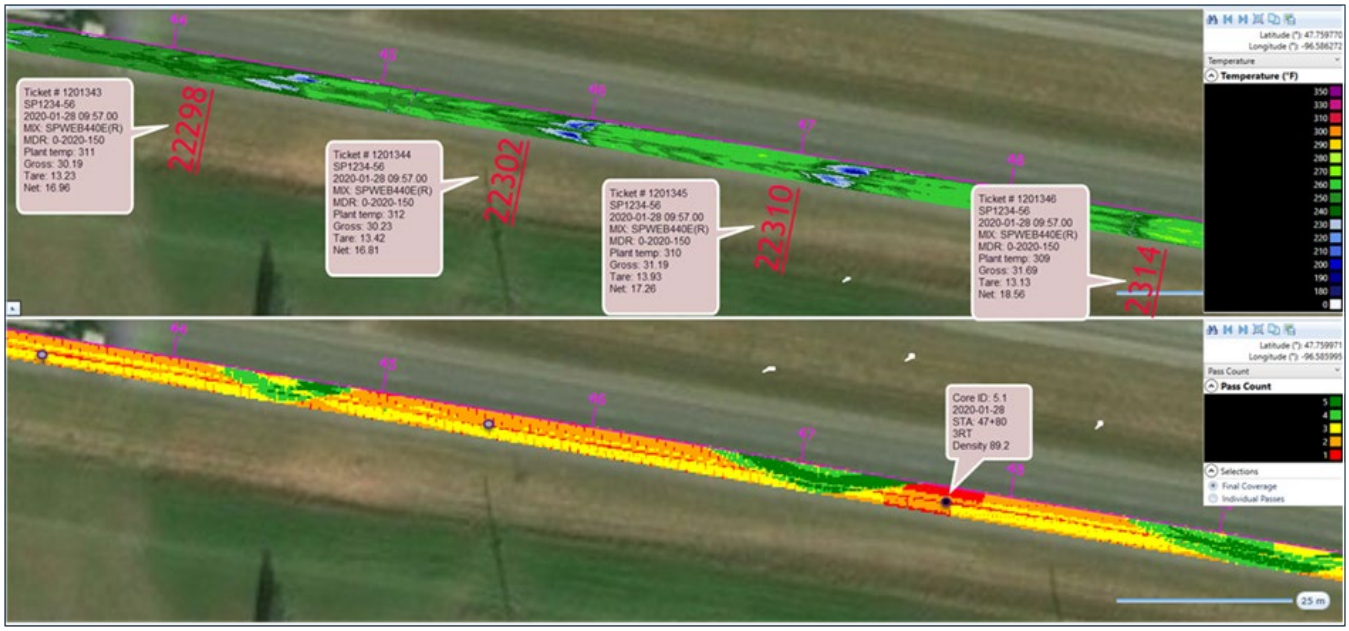
- Is a performance-based approach that uses agency goals and objectives to drive resource allocation. Asset management relates resource needs to the construction, maintenance, and operation of transportation infrastructure assets.
- Enables transportation agencies to improve accountability, decision-making, and coordination between maintenance and capital programs and better manage the available funding.

The collection, management, and analysis of quality asset inventory and condition data is a critical part of asset management. Asset management implementation benefits from well-planned information technology systems that consider the decision-making processes that agencies use to keep assets operational and safe.

MnDOT has made a strong commitment to managing our assets by adopting an Asset Management Strategic Implementation Plan, which sets a departmental vision and set of strategic objectives and action plans. In other

words, MnDOT is committed "*to effectively manage transportation assets by mitigating risk, optimizing return on investment, and using the best available information and tools.*"

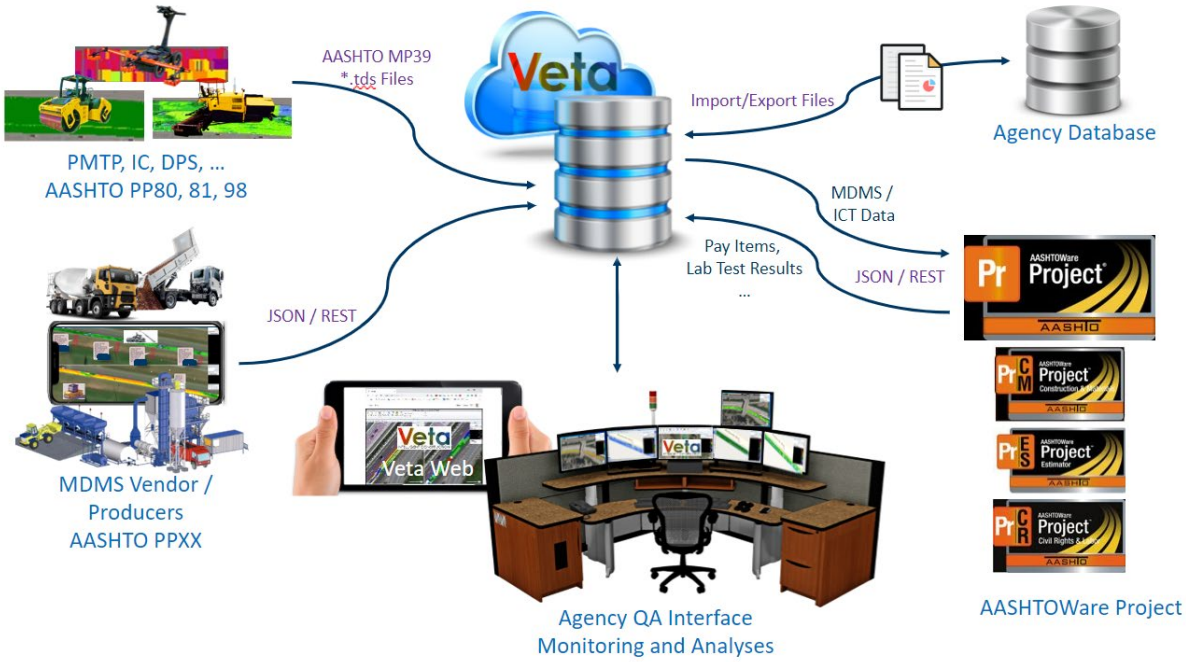
Maturing Construction Asset Management at MnDOT



The following are a few of the additional ways construction staff help to mature asset management:

1. Supporting the capture of as-built inventory information and ultimate management of TAMS data accuracy. Data is useful not only for lifetime management of assets, but also research using historical data.
2. Promoting data interoperability throughout MnDOT software systems for building information modeling to reduce duplicate data entry.
3. Being the champions for quality construction, especially for roadside assets, which can reduce asset failures and extend asset life.
4. Collaborating with various groups such as maintenance, hydraulics, and traffic to gain asset feedback and assure all project work is complete.

Construction staff oversee the implementation of a wide variety of transportation infrastructure projects. Their work is essential to promote quality asset construction reducing costs to the public, as well as MnDOT. Their work supporting good asset data will not only help to enhance MnDOT's effectiveness but help develop systems and technologies which will ultimately help to integrate and streamline how their work is done.


AASHTO MP39
*.tds Files
Veta
Import/Export Files
Agency Database
PMTP, IC, DPS, …
AASHTO PP80, 81, 98
MDMS /
ICT Data
Pay Items,
Lab Test Results
…
JSON / REST
JSON / REST
MDMS Vendor /
Producers
AASHTO PPXX
Veta Web
Agency QA Interface
Monitoring and Analyses
AASHTOWare Project