HPMS Future AADT

Office of Highway Policy Information
2017 Highway Information Seminar
Nov 13 - 16
Office Organizational Chart

FHWA Office of Highway Policy Information
David Winter, PE

Motor Fuel and Highway Finance
- Ralph Davis
- Mike Dougherty
- Clarissa Smith
- Bryant Gross
- Brian Lomax
- Helen Davidson

Highway System Performance
- Chris Allen
- Rob Rozycki
- Tom Roff
- Ron Erickson
- Ronald Vaughn, PMP
- Justin Clarke, AICP
- Jeromy Barnes, GISP
- Seemeen Hashem\(^1\)

Travel Monitoring and Surveys
- Dr. Tianjia Tang, PE
- Steven Jessberger
- Danny Jenkins, PE
- Dr. Patrick Zhang, PE
- Dr. Wenjing Pu, PE
- Dawn Edwards
- Vacant
- Apara Banerjee\(^1\)

\(^1\) Indicates contractor
Outlines

• Why FHWA needs Future AADT
• Future AADT C&P Applications
• Future AADT Requirements & QA/QC
• FHWA future VMT study
Why We Need Future AADT

Congressional Mandated “Conditions and Performance Report”
Why We Need Future AADT

Congressional Mandated “Conditions and Performance Report”

Answering two questions for the nation:

1) what is the traffic demand in the future?
2) What’s the investment need to meet the future need?
Where the C&P Gets Its Future Traffic Data

• HPMS Sample Future AADT data covering NHS highways
• State by State
• Aggregated together as a national total
How It Looks Like In the C&P Report

C&P Report Exhibit 9-4 State-Provided Long-Term VMT Forecasts Compared with Actual VMT, 1965–2031
Basic C&P Procedure

HPMS Future AADT Sample Data

Estimate Future Travel Demand for All Highways

Congestion Analyses

Investment Options
# Future AADT – Sample Panel Data

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FE = Full Extent  
R = Ramp  
SP = Sample Panel
Future AADT - Requirements

• Required for all HPMS sample sections
• Future AADT year and Expansion Factor also reported
• Should be 20-year forecast
• Can be 18-25 year reported
• Should be distinct by area (rural, small urban, urbanized area), and functional class
Future AADT – Requirements

• Should be sourced from a technically supportable procedure (State, MPO, other local)
• Data may be available from travel demand models, State/Local planning activities, socio-economic forecasts
• Motor vehicle/fuel trends, travel projections, other statistical analyses
Common Issues for HPMS Future AADT data

• Missing data – null or zero
• Extreme values – Annual Average Growth Rate (AAGR) negative and/or positive value
• Negative growth rates – pay attention to these negative value
• Random Numbers – Future AADT was generated at different database and linked to HPMS database incorrectly
Future AADT QA/QC

• Missing AADT data: Facility_Type_VN ≤3, Is_sample=1, Future_AADT_VN=null?

• Calculate Average Annual Growth Rate (AAGR) for all sample panel segments

\[
AAGR = \left(\frac{AADT_{future}}{AADT_{today}}\right)^{1/(future \ year - current \ year)} - 1
\]
### Future AADT QA/QC

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New National Scenario – FHWA’s Own Assessment

- FHWA has developed a national vehicle miles travel model relying on state level:
  - Population
  - GDP
  - Fuel
  - Labor
  - other factors
  - Not link level AADT
FHWA Future VMT Study at National Level
Fuel Consumption Forecast at National Level
FHWA Future VMT at State Level (ID, NY, FL, CO, UT)
Summary

• The future AADT data from states are critical in deciphering what the future is.
• The data offers foundational information for Congress to act in new surface transportation.
• State’s attention to this data item is needed and appreciated.
• Let’s work together to deliver the best data possible.
Questions/Comments

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