Regional Transportation Model

- Same tool as that used by Metropolitan Washington Council of Governments
- Reflects county-wide and regional traffic effects
- Output – Policy Area Mobility Review (PAMR) and Transportation Policy Area Review (TPAR) results. Used to evaluate area-wide land use/transportation balance and transportation adequacy.
Regional Model Framework

Four-Step Regional Travel Forecasting Model

1. Trip generation
2. Trip distribution
3. Mode choice
4. Trip assignment

Land use data

Highway and transit networks
Zone-to-zone travel times, costs, etc.

Congested traffic speeds

Highway and transit trips
Traffic volumes
Regional Model Framework

- **Trip Generation**: How may trips are produced?
- **Trip Distribution**: Where are people going?
Regional Model Framework

- **Mode Choice**: What method/mode of travel are people using?
- **Trip Assignment**: What route are people taking?
Transportation Network Assumptions: Constrained Long Range Transportation Plan (CLRP)
GSSC Master Plan

Life Sciences Center

Areas & Enclaves

Municipalities

Road Network/Transit
GSSC Master Plan
Transportation Network

1990 MPOH Network with Grade Separated Interchanges Noted

2009 MPOH Proposed Network with Grade Separated Interchanges Noted
GSSC Master Plan – Land Use/Transportation Balance

PAMR Chart – High Scenario

- Transportation/land use balance achieved
GSSC Master Plan – Land Use/Transportation Balance

PAMR Chart – PHED Committee Scenario

- Transportation/land use balance achieved
Where do LSC workers come from now?

2005 Journey-to-work Trip Patterns – R & D Village PA

Local = trips stay within the R & D Village policy area
Inbound trips = journey to work traveling to the R & D Village policy area
Where **will** LSC workers come from in the future?

2030 Journey-to-work Trip Patterns – R & D Village PA (“High” Scenario)

With more density, more internal trips, but most workers will still live in the I-270 Corridor.
TPAR - 2018 Roadway Adequacy


Note 1: The bars show the range of PM Peak Period Congested Speed relative to "Free Flow Speed" for arterial segments in the Policy Area: (1) averaged by direction of flow, and (2) weighted by the Vehicle-Miles-Traveled.
Note 2: Bottom-of-Bar is the average for the Peak Flow Direction, while the Top-of-Bar is the average for the Non-Peak Flow Direction.

Analysis Combinations
Dev. Forecast | Network
F12-2018 | T12-2018-02
- | -
- | -

Arterial Performance within the Research & Development Village (RDV) Policy Area
Note 3: Roadway sequence left-to-right is in order of their increasing peak-flow avg. congestion

Guidance to reviewers to help better understand these Charts

Revised 3-21-12
TPAR - 2022 Roadway Adequacy

Adequacy of the Main Roads in R&D Village (RDV) (TPAR12-3A): 2022 Development Forecasts with 2018 CIP/CTP + "Conditional Projects"

Proposed Policy Area

Adequacy Standard

Note 1: The bars show the range of PM Peak Period Congested Speed relative to "Free Flow Speed" for arterial segments in the Policy Area: (1) averaged by direction of flow, and (2) weighted by the Vehicle-Miles-Traveled.

Note 2: Bottom-of-Bar is the average for the Peak Flow Direction, while the Top-of-Bar is the average for the Non-Peak Flow Direction.

Analysis Combinations

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Guidance to reviewers to help better understand these Charts

Revised 3-21-12

Arterial Performance within the Research & Development Village (RDV) Policy Area

Note 3: Roadway sequence left-to-right is in order of their increasing peak-flow avg. congestion
TPAR - 2040 Roadway Adequacy


Arterial Performance within the Research & Development Village (RDV) Policy Area

Note 1: The bars show the range of PM Peak Period Congested Speed relative to "Free Flow Speed" for arterial segments in the Policy Area: (1) averaged by direction of flow, and (2) weighted by the Vehicle-Miles-Traveled.

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Revised 3-21-12

Note 3: Roadway sequence left-to-right is in order of their increasing peak-flow avg. congestion.