National Capital Region Federal Parking Study

An Accessibility-Based Approach for Federal Facilities Parking Policies

Makeover Montgomery 4 Presentation
May 11, 2018
NCPC is a federal agency.

Core responsibilities include:
• Comprehensive Planning
• Project and Master Plan Review
The Federal Government in the National Capital Region

- **14%** of region’s land is federal
- **29%** of DC’s land is federal
- Includes parks, federal campuses, military installations

- U.S. General Services Administration manages 100 million sq. ft. in 697 buildings
- U.S. Department of Defense controls 75 million sq. ft. in 3,415 buildings
Federal Interests in Regional Transportation

• Regional good neighbor
• Efficient operations, federal transportation assets, and infrastructure funding
• 420,000 federal employees comprise 14% of region’s workforce
• Federal spending accounts for 1/3 of regional GDP
• 42% of peak period Metrorail passengers are federal employees
Comprehensive Plan Used for Master Plan Reviews

NCPC Review of Federal Master Plans, including Transportation Management Plans
NCPC’s Parking Ratios

- Established in the 1980’s
- Set parking maximums
- Based on number of employees
- Updated in 2004 to emphasize transit access

Historic Boundary of Washington
Parking Ratios Today

1:1.5 1:2
Suburban with less transit access

1:3
Suburban with transit access

1:4
Historic DC Boundary (Inner Suburbs)

1:5
Central DC (Employment Area)

Metrail Stations

Less Transit Access

More Transit Access

Historic Boundary of Washington
Case Study: **Washington Navy Yard**

1:5 *Central DC (Employment Area)*

- Secure facility
- Near Metrorail station
- Current = 1:3.7
- Approved target = 1:4.5
- Parking => green space
Case Study: Pentagon Reservation

Historic DC Boundary (Inner Suburbs)

- Completed in 1943
- 238 acres, main building is 6.5 million GSF
- 23,000 employees
- 8,494 employee parking spaces
- Includes Metrorail station
- Existing parking ratio: 1:2.7
- Proposed future parking ratio: 1:3.2
- Long range plan adds employees and eliminates parking
Case Study: **National Institutes of Health**

**1:3** Suburban with transit access

- Urbanizing area
- Near Metrorail station
- Very large, secure facility
- “Special employees”
- Current = 1:2.3
- Future target = 1.3
Case Study: National Institute of Standards and Technology

1:1.5 - 1:2 Suburban with less transit access

- Secure facility
- Distant from Metrorail
- Near future BRT
- Non-federal employees and visitors
- Current = 1:1.5
- Proposed target = 1:2
Why review our parking ratios?

- Update Comprehensive Plan
- Be aspirational, but achievable
- More responsive to facilities, e.g. inner suburban campuses
- A predictable and fair process regardless of circumstance
- Consistency with local standards and national trends
- Take advantage of new modelling capabilities
Literature Review
Assess the transportation literature and industry best practices

Local Parking Comparison
Consider local approaches to parking policy

Modeling Analysis
Assess NCPC policies in light of the regional transportation model (2016 and 2030)
**Initial Reaction**
On-street parking bans/limits

**Early Adaptation**
Off-street parking minimums and metered curb-side parking

**Analytical Methods**
Car usage promoted and accommodated through generously supplied parking.

**Environmental Awakening**
Downtown parking caps and TDM in response to environmental legislation and oil crisis.

**Accessibility Focus**
Parking maximums and emphasize sustainability and multi-modalism.
NCPC has similar goals to local jurisdictions but different review tools and authorities.

Local jurisdictions increasingly encourage transit and more efficient land use patterns. To achieve this, they are:

- **Limiting/Eliminating parking requirements** (e.g., DC).
- **Allowing flexibility** (e.g., Arlington Co.).
- **Implementing ongoing Transportation Demand Management (TDM) Monitoring** (e.g., Montgomery Co.).
What is Accessibility?

Calculate the **transit-shed** and **drive-shed** of a **federal facility/TAZ**

\[ \frac{\text{HH accessible by transit}}{\text{HH accessible by car}} = \text{Accessibility Ratio} \]

**Ratio under 1**: more homes can reach a particular location by car than by taking transit

**Ratio over 1**: transit provides access to more homes than driving
HH accessible by transit / HH accessible by car = Accessibility Ratio

**Ratio under 1:** more homes can reach a particular location by car than by taking transit

**Ratio over 1:** transit provides access to more homes than driving

**Metro Center**
\[
\frac{956K \text{ Households (Transit)}}{286K \text{ Households (Car)}} = 3.34
\]

**Takoma**
\[
\frac{412K \text{ Households (Transit)}}{473K \text{ Households (Car)}} = 0.87
\]

**Gaithersburg**
\[
\frac{246K \text{ Households (Transit)}}{328K \text{ Households (Car)}} = 0.75
\]
Transit accessibility:
- very high in the core
- moderate radiating along Metrorail
- relatively limited elsewhere
Accessibility generally declines away from Metro Center/Gallery Place.
Anticipated regional growth, highway/transit projects, congestion by 2030...

... will improve accessibility in the Downtown core and near new transit capacity.
Accessibility ratio predicts 62% of the variation in parking supply at facilities

(92% without outliers - NSA-Bethesda, St. Elizabeths, and Naval Observatory)
Accessibility at Federal Facilities

Significant accessibility increases for centrally located facilities by 2030. More modest increases in suburban facilities.
High variability in Historic DC Boundary zone
Comprehensive Plan vs. Observed Parking Ratios

- Observed (Current Parking Ratio)
- Comprehensive Plan Parking Ratio
- Modified Parking Ratio

Current 1:4 Historic DC Boundary Zone
Policies remain aspirational but more possible with additional TDM strategies.
Policies should be both aspirational and realistically achievable.

Ratios should better align with regional accessibility.

Majority of facilities in the Historic DC Boundary Zone (1:4) provide twice as much parking as the underlying policy.

Break off parts of 1:4 zone - combine with suburban zones.
Ratios should better align with regional accessibility (2016 and 2030).

The majority of facilities in the Historic DC Boundary Zone (1:4) provide twice as much parking as the underlying policy.

Policies should be both aspirational and realistically achievable.

Parts of 1:4 zone should be “broken off” and combined with suburban zones.
Develop a more transparent and equitable parking ratio variance process.

- Revised boundaries will help but not eliminate the need for case-by-case considerations.
- Needs and missions of federal facilities are as unique and varied as their locations.
- For variance - conduct lifecycle cost, accessibility, and mission analyses.
Strengthen TDM program with more continuous monitoring and reporting.

- TDM programs work best with annual or biennial monitoring.
- NCPC only requires TMPs when master plans or projects increase employment by at least 500 employees.
- Continual follow-up is a significant opportunity to meet goals.

Recommendation # 3: Performance-Based Monitoring