

## **MDPC AGENDA ITEM 5**

### **TPB Regional Mobility and Accessibility Study**

This document contains the descriptions and jurisdiction-specific work assignments for the five alternative land use scenarios for the TPB Regional Mobility and Accessibility study: “High Household Growth”; “Transit-Oriented Development”; “The Region Undivided”; “More Household Growth in Inner Areas”; and “More Job Growth in Outer Areas”

**As agreed during the April 11 Planning Directors Technical Advisory Committee meeting, committee members will work to prepare the TAZ forecasts for each scenario for the May 9 meeting. In the event a jurisdiction needs assistance from COG, the Planning Director (or other appropriate local staff) would identify the Regional Activity Clusters, transit centers, and/or other areas where the additional household and job growth could be logically accommodated. COG staff will then sub-allocate the household or job growth increment to TAZs.**

Should you have any questions or need assistance, please contact Bob Griffiths of the COG/TPB staff (phone: 202-962-3280; e-mail: [reg@mwkog.org](mailto:reg@mwkog.org) ) or Paul DesJardin of the COG staff (phone: 202-962-3293; e-mail: [pdesjardin@mwkog.org](mailto:pdesjardin@mwkog.org) ).

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## **TPB Regional Mobility and Accessibility Study Five Draft Land Use Scenarios**

### **1. High Household Growth Scenario**

#### Definition of Scenario:

Additional households beyond the Round 6.3 2030 forecasts would be added to the metropolitan Washington region. Correspondingly, commuting and other vehicle trips from areas outside the region would be reduced by an amount equivalent to the number of trips that would have been made by the additional households if they had located outside of the Washington region.

#### Rationale:

To examine the transportation impacts of reducing the forecast growth in long distance commuting trips to the Washington region from these external areas.

#### Assumptions:

- An additional 231,000 households beyond the Round 6.3 forecasts will be added to region by 2030.
- The additional 231,000 households would be sub-allocated to the inner suburban and core area jurisdictions in direct proportion to their 2030 employment. No additional households would be sub-allocated to the outer suburban jurisdictions, which are already forecast to increase by 286,000 households.
- The appropriate Planning Director will sub-allocate their jurisdiction's additional high household growth increment to regional activity clusters, transit centers, and/or other areas within their jurisdictions where the Planning Director believed that the additional household growth increment could be logically accommodated in a concentrated fashion. As much as possible, emphasis will be placed on adding growth in the Activity Clusters.
- Allocation of growth will not necessarily be based on existing planning (or zoning), in other words, Planning Directors can allocate growth beyond what is outlined in their existing plans or zoning.
- COG staff will reduce forecast vehicle trips from outside the TPB modeled region equivalent to those that would have been made by the additional 231,000 households.

#### Assignment:

Planning Directors in the Central Jurisdictions and Inner Suburbs will provide COG staff with a sub-allocation of their jurisdiction's additional high household growth increment by TAZ by May 9.

**Scenario 1:  
High Household Growth Scenario**

<b>JURISDICTION</b>	<b>Additional Household Growth to Be Allocated</b>
District of Columbia	57,477
Arlington County	20,876
City of Alexandria	10,241
<b>Central Jurisdictions</b>	<b>88,594</b>
Montgomery County	48,750
Prince George's County	38,032
Fairfax County	52,477
City of Fairfax	2,406
City of Falls Church	740
<b>Inner Suburbs</b>	<b>142,405</b>
Loudoun County	0
Prince William County	0
City of Manassas	0
City of Manassas Park	0
Calvert County	0
Charles County	0
Frederick County	0
Stafford County	0
<b>Outer Suburbs</b>	<b>0</b>
<b>REGIONAL TOTAL (6)</b>	<b>231,000</b>

## 1. 2. Transit-Oriented Development Scenario

### Definition of Scenario:

Place more 2010 to 2030 household and employment growth in areas around current and planned Metrorail stations, commuter rail stations or other transit centers<sup>1</sup>.

### Rationale:

To examine the transportation impacts of concentrating this future growth in areas around current and planned Metrorail stations, commuter rail stations or other transit centers.

### Assumptions:

- Round 6.3 regional increment of household and employment growth forecast for the 2010 to 2030 period would be allocated to the maximum extent possible to areas within ½ mile of a current or planned Metrorail station, commuter rail station or other transit center.
- The development pattern within these station areas would include a mix of land uses and activities in a pedestrian-friendly environment that promotes easy access to the transit station.
- Allocation of growth will not necessarily be based on existing planning (or zoning), in other words, Planning Directors can allocate growth beyond what is outlined in their existing plans or zoning. Also, each Planning Director may determine transit projects beyond the CLRP and place additional growth there.
- Planning Directors will allocate as much of their own jurisdiction's growth within the current and planned transit station areas (including new transit projects beyond the CLRP, if appropriate). Any remaining growth that a Planning Director believes cannot be logically accommodated around a current or planned station area will be placed in an unallocated regional "pool". This pool will be assessed collectively by the Planning Directors during the May 9 meeting and sub-allocated to jurisdictions that could accommodate additional growth in their current or planned transit station areas.
- This scenario does not assume any change in forecast regional household and employment totals. Correspondingly, forecast 2010 to 2030 household and employment growth in areas outside transit station areas would be proportionately reduced by the amount of additional growth allocated to the transit station areas with available development capacity. Any additional growth allocated to transit station areas would be offset by reductions in forecast household and employment growth outside of transit station areas.
- In this scenario, future jobs and households may be shifted to those jurisdictions having transit stations with available development capacity and thus the 2030 jurisdictional distribution of jobs and household in this scenario could be different from the Round 6.3 forecasts.

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<sup>1</sup> Transit Centers are Bus Rapid Transit Stations. Although there are no such stations currently in the CLRP, this scenario can include these projects.

Assignment:

1. Identify currently-open transit stations and funded new (“in the CLRP”) stations that can accommodate additional growth beyond the current forecasts.
2. Identify other planned new transit stations not in the CLRP.
3. Place as much additional job and housing growth within a ½ mile radius of existing and CLRP transit stations as possible. (Note: because of the likely difficulty in locating significant numbers of additional households within a ½ mile radius of a transit station, additional household growth may be allocated in adjacent TAZs up to a 1½ mile radius of transit stations. **Because the intent of this scenario is to examine the impacts of concentrating mixed-use development around transit station areas, it is expected that at least some of the additional household growth would be allocated within a ½ mile radius of the stations.**)
4. After allocating as much growth as can be reasonably added to the current and CLRP stations, additional jobs and households may be placed within ½ mile of the new station areas (i.e., “beyond the CLRP”) that the Planning Director believes could be feasibly accommodated from both a land use and financial (cost of the new transit project) perspective in their jurisdiction.
5. Identify the number of households and jobs for each jurisdiction that cannot be placed in transit station areas. This additional growth will be “pooled” for all jurisdictions for sub-allocation at the next PDTAC meeting (May 9).
6. During the May 9 PDTAC meeting, committee members will:
  - a. Identify which jurisdictions have growth to be contributed to the regional “pool”.
  - b. Determine which jurisdiction(s) need additional growth to be placed at existing / CLRP transit stations. The “pool” of jobs and households would be placed there first.
  - c. Determine which jurisdiction(s) need growth to allocate to new station areas beyond the CLRP.
  - d. Reach agreement on how the remaining household and job growth in the regional “pool” will be sub-allocated.

### 3. Region Undivided Scenario

Definition of Scenario:

More future job and household growth in areas east of 16th NW in the District of Columbia, east of I-95 in Maryland and east of I-95 in Virginia.

Rationale:

The purpose of scenario is to examine the transportation impacts of a land use scenario that addresses the problem of uneven growth in the region noted in the Brookings' "A Region Divided"<sup>2</sup> report.

Assumptions:

- More 2010-2030 household and employment growth will be assumed for areas east of 16th NW in the District of Columbia, east of I-95 in Prince George's County (and part of Montgomery County between 16th NW in DC, and I-95 in Prince Georges's) in Maryland and east of I-95 in Arlington County, Alexandria, Fairfax County and Prince William County in Virginia, particularly in areas around transit stations.
- No change in forecast 2030 regional jobs and household totals would be assumed for this scenario.
- All 2010 to 2030 job growth outside of Regional Activity Clusters in the western portion of the region (120,700 jobs) will be re-allocated to the eastern portion of the region. The number of jobs re-allocated from the west to the east will be sub-allocated by jurisdiction in direction proportion to the Round 6.3 2030 employment forecasts for the eastern portion of the region. For example, 35.2% of the 2030 jobs in the eastern portion of region are in the District of Columbia, thus, 35.2% of the 120,700 re-allocated jobs (+42,428 jobs) are sub-allocated to the District. (See Table 2 below).
- The reason that the Round 6.3 employment forecasts for the eastern portion of the region is used for sub-allocation to jurisdiction is because that distribution appears to most equitably address the greatest problems of uneven economic growth noted in the Brookings report. It also takes into account the fact that in Round 6.3 a 2010-2030 growth increment of +146,000 jobs is forecast for the eastern portion of Prince George's compared to a 2010-2030 growth increment of +77,000 jobs forecast for the eastern portion of DC. In total, a 2010 to 2030 growth increment of +182,000 jobs for the eastern portion of Prince George's County and a growth increment of 119,000 jobs is assumed for DC in the Region Undivided Scenario.
- Some of the forecast household growth outside of Regional Activity Clusters in the west (77,457 households) will also be shifted to the east. The total amount of household growth re-allocated to the east will be determined by calculating the number of

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<sup>2</sup> "A Region Divided, The State of Growth in Greater Washington, D.C.", 1999, The Brookings Institution. The report documents a number of disparities in the eastern versus western portions of the region. Among the issues cited by the report are: "The Income Divide"; "The Race Divide"; "The School Divide"; "The Job Divide"; and "The Transportation Divide".

households that would need to be shifted to maintain a 1.75 jobs/housing ratio in both the eastern and western portions of the region. The number of households re-allocated from the west to the east will be sub-allocated by jurisdiction by dividing the number of jobs re-allocated by the total jobs/households re-allocation ratio (120,700 jobs / 77,457 households = 1.558). For example, an additional 42,428 jobs were re-allocated to the District in this scenario, thus, an additional 27,228 households (42,428 jobs/1.558 = 27,228 households) were also re-allocated to the District. (See Table 2 below). The 1.558 job/household ratio used for this calculation also maintains or slightly improves the jobs/household ratios in most every jurisdiction.

- Jurisdictions in the eastern portion of the region receiving additional job and household growth will place it within their Regional Activity Clusters, near transit centers, or in other areas within their jurisdiction in a concentrated fashion (e.g. new Regional Activity Clusters).

Assignment:

*Planning Directors in the jurisdictions sub-allocated additional jobs and households in Table 2 (DC, Montgomery, Prince George's, Charles, Arlington, Alexandria, Fairfax, and Prince William) will provide COG staff with a sub-allocation of their jurisdiction's additional job and household growth increment to TAZs for the eastern portion of their jurisdiction by May 9. All decreases will automatically come from TAZs in the western portion of the region that are outside of Regional Activity Clusters.*

**Table 2**  
**Scenario 3 - Region Undivided Scenario: Employment**

Jurisdiction	Round 6.3 Employment 2030	2010-2030 EMP Decreases From West	2010-2030 EMP Increases to East	Scenario 3 Employment 2030	Difference from R6.3 2030
District of Columbia	831,200	-100	42,428	873,528	42,328
Arlington County	301,900	-8,000	7,138	301,038	-862
City of Alexandria	148,100	0	9,816	157,916	9,816
Core Jurisdictions	1,281,200	-8,100	59,383	1,332,483	51,283
Montgomery County	705,000	-10,400	4,278	698,878	-6,122
Prince George's County	550,000	-3,800	40,228	586,428	36,428
Fairfax County/Cities	804,400	-11,200	8,170	801,370	-3,030
Inner Suburbs	2,059,400	-25,400	52,677	2,086,677	27,277
Loudoun County	253,600	-48,400	0	205,200	-48,400
Prince William County/Cities	200,600	-18,300	3,399	185,699	-14,901
Stafford County	54,400	0	0	54,400	0
Frederick County	177,800	-20,500	0	157,300	-20,500
Charles County	69,100	0	5,242	74,342	5,242
Calvert County	35,600	0	0	35,600	0
Outer Suburbs	791,100	-87,200	8,640	712,540	-78,560
Total Washington Region	4,131,700	-120,700	120,700	4,131,700	0

**Scenario 3 - Region Undivided Scenario: Households**

Jurisdiction	Round 6.3 Households 2030	2010-2030 HHS Decreases From West	2010-2030 HHS Increases to East	Scenario 3 Households 2030	Difference from R6.3 2030
District of Columbia	304,400	0	27,228	331,628	27,228
Arlington County	106,200	0	4,581	110,781	4,581
City of Alexandria	75,300	0	6,299	81,599	6,299
Core Jurisdictions	485,900	0	38,108	524,008	38,108
Montgomery County	420,000	-5,101	2,746	417,645	-2,355
Prince George's County	369,800	0	25,816	395,616	25,816
Fairfax County/Cities	453,100	-2,525	5,243	455,818	2,718
Inner Suburbs	1,242,900	-7,626	33,804	1,269,079	26,179
Loudoun County	156,700	-40,331	0	116,369	-40,331
Prince William County/Cities	170,200	-12,417	2,181	159,964	-10,236
Stafford County	59,900	0	0	59,900	0
Frederick County	120,200	-17,082	0	103,118	-17,082
Charles County	80,200	0	3,364	83,564	3,364
Calvert County	39,700	0	0	39,700	0
Outer Suburbs	626,900	-69,831	5,545	562,614	-64,286
Total Washington Region	2,355,700	-77,457	77,457	2,355,700	0

## 4A. More Household Growth in Inner Areas

### Definition of Scenario:

Place more of the forecast 2010 to 2030 household growth in areas closer to major regional employment concentrations primarily inside and around the beltway and, to the extent possible, improve the mix of job and housing opportunities within all regional activity clusters.

### Rationale:

To examine the transportation impacts of reducing average commuting distances by providing more housing opportunities closer to major regional employment concentrations primarily inside the beltway and in improving the mix of job and housing opportunities within all regional activity clusters.

### Assumptions:

- Round 6.3 regional increment of household growth forecast for the 2010 to 2030 period would be re-allocated closer to regional employment concentrations primarily inside the beltway. Specifically, some of the 2010 to 2030 household growth forecasted for areas primarily outside the beltway would be re-allocated to areas inside and around the beltway.
- The 2010 to 2030 household growth increment assumed for core area jurisdictions (DC, Arlington and Alexandria) will be doubled. Slightly more additional households were added to Arlington and slightly less additional households were added to DC to achieve an equal 2.49-jobs/household ratio for both DC and Arlington. (See Table 3).
- The 2010 to 2030 household growth increment for the outer suburban jurisdictions of Prince William, Stafford, Charles and Calvert will be reduced by one-half. Because Loudoun County forecasts a desirable 1.62 jobs/household ratio for 2030, the Round 6.3 household growth increment will remain unchanged for this scenario. The 2010-2030 household growth increment for Frederick will be reduced by 10,447 households so it also attains a desirable 1.62 jobs/household ratio. (See Table 3).
- The 2010 to 2030 household growth increment for Montgomery, Prince George's and Fairfax County/Cities will be adjusted such that each of the Inner Suburban Jurisdictions has a 1.66 jobs/household ratio. (See Table 3). This equal 1.66 jobs/households ratio is achieved by reducing the forecasted 2010 to 2030 household growth increment for Prince George's County by 38,000 households, increasing Fairfax County/Cities growth increment by 32,000 households and increasing Montgomery County's growth increment by 5,500 households.
- Increasing the number of new households in areas inside and around the beltway and reducing the number of new households in areas primarily outside the beltway will improve the jobs-housing balance in both parts of the region.

### Assignment:

*Planning Directors in the jurisdictions sub-allocated additional households in Table 3 (DC, Arlington, Alexandria, Montgomery, Fairfax will provide COG staff with a sub-allocation of their jurisdiction's additional household growth increment to TAZs by May 9. Unless otherwise requested by the Planning Director, all decreases in household*

*growth increment will be proportionally reduced in all TAZs outside of Regional Activity Clusters. Additionally, all Planning Directors are encouraged to recommend increases in the number households to be allocated to TAZs in Regional Activity Clusters and TAZs adjacent to Regional Activity Clusters.*

**Table 3****Scenario 4A - More Household Growth in Inner Areas Scenario**

Jurisdiction	Round 6.3 Cooperative Forecasts			Scenario 4A	Difference
	2010 Households	2030 Households	HH CHG 2010-2030	HH CHG 2010-2030	from R6.3 2010-2030
District of Columbia	272,200	304,400	32,200	61,131	28,931
Arlington County	94,600	106,200	11,600	26,469	14,869
City of Alexandria	70,000	75,300	5,300	10,600	5,300
Core Jurisdictions	436,800	485,900	49,100	98,200	49,100
Montgomery County	370,000	420,000	50,000	55,518	5,518
Prince George's County	319,000	369,800	50,800	12,965	-37,835
Fairfax County/Cities	422,500	453,100	30,600	63,013	32,413
Inner Suburbs	1,111,500	1,242,900	131,400	131,497	97
Loudoun County	106,600	156,700	50,100	50,100	0
Prince William County/Cities	144,400	170,200	25,800	12,900	-12,900
Stafford County	42,500	59,900	17,400	8,700	-8,700
Frederick County	84,700	120,200	35,500	25,053	-10,447
Charles County	54,100	80,200	26,100	13,050	-13,050
Calvert County	31,500	39,700	8,200	4,100	-4,100
Outer Suburbs	463,800	626,900	163,100	113,903	-49,197
Total Washington Region	2,012,100	2,355,700	343,600	343,600	0

**Scenario 4A v. Round 6.3 Jobs/Households Ratios**

Jurisdiction	Round 6.3 2030 Jobs	Round 6.3 2030 HHS	Scenario 4A 2030 HHS	R63 HH CHG 2030 Jobs/HH	Scenario 4A 2030 Jobs/HH
District of Columbia	831,200	304,400	333,331	2.73	2.49
Arlington County	301,900	106,200	121,069	2.84	2.49
City of Alexandria	148,100	75,300	80,600	1.97	1.84
Core Jurisdictions	1,281,200	485,900	535,000	2.64	2.39
Montgomery County	705,000	420,000	425,518	1.68	1.66
Prince George's County	550,000	369,800	331,965	1.49	1.66
Fairfax County/Cities	804,400	453,100	485,513	1.78	1.66
Inner Suburbs	2,059,400	1,242,900	1,242,997	1.66	1.66
Loudoun County	253,600	156,700	156,700	1.62	1.62
Prince William County/Cities	200,600	170,200	157,300	1.18	1.28
Stafford County	54,400	59,900	51,200	0.91	1.06
Frederick County	177,800	120,200	109,753	1.48	1.62
Charles County	69,100	80,200	67,150	0.86	1.03
Calvert County	35,600	39,700	35,600	0.90	1.00
Outer Suburbs	791,100	626,900	577,703	1.26	1.37
Total Washington Region	4,131,700	2,355,700	2,355,700	1.75	1.75

## **4B. More Job Growth in Outer Areas**

### Definition of Scenario:

Place more of the forecast 2010 to 2030 jobs in areas, primarily outside the beltway, that are anticipating significant future household growth.

### Rationale:

To examine the transportation impacts of reducing average commuting distances by providing more jobs closer to large numbers of new households.

### Assumptions:

- Round 6.3 regional increment of job growth forecast for the 2010 to 2030 period would be re-allocated to areas primarily outside the beltway that are anticipating significant household growth. Specifically, some of the 2010 to 2030 job growth forecast would be reallocated to areas primarily outside the beltway from areas inside the beltway.
- The 2010 to 2030 employment growth increment assumed for the Outer Suburbs will be increased by 78,700 jobs. (This is equivalent to 1.6 times the number of households shifted from the Outer Suburbs to Core Area jurisdictions in Scenario 4A).
- The 2010 to 2030 employment growth increment for the Outer Suburban jurisdictions will be adjusted such that Loudoun and Frederick Counties have a 1.62 jobs/household ratio, Prince William Counties/Cities has 1.39 jobs/household ratio, and Stafford, Charles and Calvert have a 1.03 jobs/household ratio. (See Table 4).
- The 2010 to 2030 employment growth increment for Core Area jurisdictions will be reduced by 78,700 and the District and Arlington will have a 2.60 jobs/household ratio.(See Table 4).
- The 2010 to 2030 employment growth increment for the Inner Suburbs will remain unchanged from Round 6.3.

### Assignment:

*Planning Directors in the jurisdictions sub-allocated additional jobs Table 4 (Prince William, Stafford, Charles, Calvert) will provide COG staff with a sub-allocation of their jurisdiction's additional employment growth increment to TAZs by May 9. Unless otherwise requested by the Planning Director, all decreases in employment growth increment will be reduced in all TAZs outside of Regional Activity Clusters, first, and followed by proportionate reductions in TAZs inside of Regional Activity Cluster to the extent necessary.*

**Table 4**  
**Scenario 4B - More Jobs in Outer Areas Scenario**

Jurisdiction	Round 6.3 Cooperative Forecasts			Scenario 4B EMP CHG 2010-2030	Difference from R6.3 2010-2030
	2010 Jobs	2030 Jobs	EMP CHG 2010-2030		
District of Columbia	752,000	831,200	79,200	39,440	-39,760
Arlington County	236,000	301,900	65,900	40,120	-25,780
City of Alexandria	120,700	148,100	27,400	14,240	-13,160
Core Jurisdictions	1,108,700	1,281,200	172,500	93,800	-78,700
Montgomery County	630,000	705,000	75,000	75,000	0
Prince George's County	399,900	550,000	150,100	150,100	0
Fairfax County/Cities	698,000	804,400	106,400	106,400	0
Inner Suburbs	1,727,900	2,059,400	331,500	331,500	0
Loudoun County	137,100	253,600	116,500	116,500	0
Prince William County/Cities	150,100	200,600	50,500	86,200	35,700
Stafford County	34,900	54,400	19,500	26,800	7,300
Frederick County	120,700	177,800	57,100	74,000	16,900
Charles County	62,900	69,100	6,200	19,700	13,500
Calvert County	32,900	35,600	2,700	8,000	5,300
Outer Suburbs	538,600	791,100	252,500	331,200	78,700
Total Washington Region	3,375,200	4,131,700	756,500	756,500	0

**Scenario 4B v. Round 6.3 Jobs/Households Ratios**

Jurisdiction	Round 6.3 2030 HHS	Round 6.3 2030 HHS	Scenario 4B 2030 HHS	R63 HH CHG 2030 Jobs/HH	Scenario 4B 2030 Jobs/HH
District of Columbia	304,400	831,200	791,440	2.73	2.60
Arlington County	106,200	301,900	276,120	2.84	2.60
City of Alexandria	75,300	148,100	134,940	1.97	1.79
Core Jurisdictions	485,900	1,281,200	1,202,500	2.64	2.47
Montgomery County	420,000	705,000	705,000	1.68	1.68
Prince George's County	369,800	550,000	550,000	1.49	1.49
Fairfax County/Cities	453,100	804,400	804,400	1.78	1.78
Inner Suburbs	1,242,900	2,059,400	2,059,400	1.66	1.66
Loudoun County	156,700	253,600	253,600	1.62	1.62
Prince William County/Cities	170,200	200,600	236,300	1.18	1.39
Stafford County	59,900	54,400	61,700	0.91	1.03
Frederick County	120,200	177,800	194,700	1.48	1.62
Charles County	80,200	69,100	82,600	0.86	1.03
Calvert County	39,700	35,600	40,900	0.90	1.03
Outer Suburbs	626,900	791,100	869,800	1.26	1.39
Total Washington Region	2,355,700	4,131,700	4,131,700	1.75	1.75

