Existing Ride-On Service

There are nine Ride-On routes that serve the general Gaithersburg West planning area. The extent to which they operate in the planning area varies so the daily ridership shown in the table to the right includes passengers boarding outside the planning area.

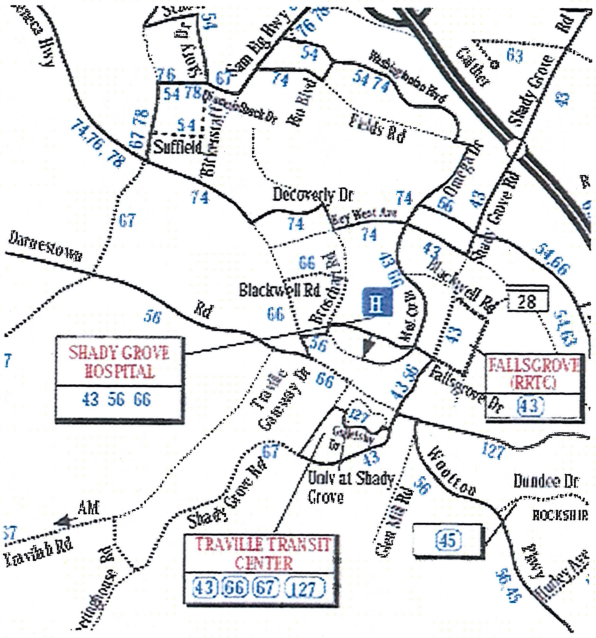


Figure 5: Ride-On Routes and Average Ridership

Route No.	From	To	Peak Period Frequency	Average Weekday Ridership
43	Shady Grove Metrorail	Shady Grove Hospital	15	900
54	Rockville	Lake Forest	20	2,200
55	Rockville	Germantown Transit Center	15	6,900
56	Rockville	Lake Forest	20	2,500
66	Shady Grove Metrorail	Traville Transit Center	30	110
67	Shady Grove Metrorail	Traville Transit Center	30	130
74	Shady Grove Metrorail	Germantown Transit Center	30	750
76	Shady Grove Metrorail	Poolesville	30	600
78	Shady Grove Metrorail	Kingsview Park & Ride	30	230

Ride – On Strategic Plan

The September 2008 Draft Strategic Plan for Ride-On indicated Travilah as an underserved area of the County. Additional service in that area would likely result in additional service in the Gaithersburg West area.

Potential Bus Service Changes In Response To Introduction of CCT

Project planning for the CCT takes into account the need to re-configure the existing bus service in order to avoid duplication and insure the most efficient allocation of vehicles and personnel. Preliminary concept level planning of how a route network might evolve if the CCT were in place has been conducted by the MTA – in consultation with the County's Ride-On staff as well as WMATA's Metrobus staff.

As of this writing, the operating plan for the bus service envisioned under the BRT alternative for the CCT calls for improved service frequencies on the above routes and does not call for any route terminals to change. Under the LRT alternative, the Rockville

routes and Route 43 would have improved service frequencies with no change in where these routes begin or end. The balance of the routes (those more oriented to the LSC area) would be shorter, operate more frequently, and be designed as feeder routes for the CCT.

Preliminary Ridership, Cost, and Cost-Effectiveness Estimates for the CCT

The MTA project team has released the following preliminary ridership (year 2030) estimates for the CCT using Round 6.4 demographic projections. The average weekday ridership is estimated to range from 21,000 to 30,000. The estimates reflect Round 6.4 demographic forecasts and the current CCT alignment.

Figure 6: Round 6.4 Ridership for existing CCT alignment

CCT Alternatives Preliminary Travel Demand Forecasts & Cost Estimates				
Transit Alternative	**Travel Time Shady Grove to COMSAT (minutes)**	**Ridership (Daily Boardings)**	**Capital Cost (millions-2007$)**	**Annual Operations and Maintenance Costs (millions-2007$)**
Hwy 1 and Trans. TSM	60	6,000 - 7,000	$86.9	$14.8
Hwy 1 and Light Rail	36	24,000 - 30,000	$777.5	$28.1
Hwy 1 and Bus Rapid	38	21,000 - 27,000	$449.9	$26.8
Hwy 2 and Light Rail	36	24,000 - 30,000	$777.5	$28.1
Hwy 2 and Bus Rapid	38	21,000 - 27,000	$449.9	$26.8

Both Hwy 1 and Hwy 2 have four general purpose and two express toll lanes on I-270 in each direction in Montgomery County north of I-370 to the future interchange with Newcut Road (between MD 121 and West Old Baltimore Road). Both have two general purpose lanes on I-270 in each direction from the future Newcut Road interchange to I-70. Hwy 1 has two express toll lanes in this segment while Hwy 2 has one express toll lane.

In addition, the MTA has released estimates of the cost effectiveness of the alternatives under consideration (see table below).

Figure 7: Cost Effectiveness of the Existing CCT alignment.

		A	B	C	D
	Total Capital Costs (2007 dollars)	Annualized Capital Costs (2007 dollars)	Annual Operating Costs (2007 dollars)	Annual User Benefit (Hours)	Annualized Cost per Hour of User Benefit
TSM	86,860,000	7,440,700	14,793,000	1,890,000	--
Build Alternatives					
Alternative 6A (LRT)	777,530,000	62,202,400	28,129,000	3,960,000	$32.90
Alternative 6B (BRT)	449,920,000	36,443,500	26,859,000	4,110,000	$18.50
Alternative 7A (LRT)	777,530,000	62,202,400	28,129,000	3,990,000	$32.43
Alternative 7B (BRT)	449,920,000	36,443,500	26,859,000	4,140,000	$18.25

The "Annualized Cost Per Hour of User Benefit" (column "D" in the table) is a variable that takes into account the annualized costs of the respective alternatives and the extent to which travel time benefits occur when compared to the "TSM" or Transportation System Management alternative.[4] This variable is used by the Federal Transit Administration (FTA) to evaluate projects across the country that are competing for federal funds to help construct the project. Under the current guidelines used by the FTA, the cost per hour for the Light Rail Transit (LRT) alternatives exceeds the amount that the FTA would consider competitive for funding. The BRT alternatives are well below the FY 2009 threshold cost of $23.99 per hour, indicating greater funding potential for BRT. The cost estimates are not expected to change prior to the availability of the AA/EA document in May 2009 but are expected to change when the alignment through the Life Sciences Center area is examined by the MTA project team.

Transit Supportive Density Considerations

There is a considerable amount of existing and evolving research on station area densities, pedestrian accessibility and connectivity, transit mode share, and other issues related to transit oriented development

[4] The TSM alternative is an alternative that includes improved bus service operating over existing roadways. There is no transitway that would be constructed under this alternative.

The Planning Department has reviewed available current material on this issue and provides the following examples as representative.

The Federal Transit Administration has sponsored a report by Reconnecting America, "Station Area Planning: How to Make Great Transit-oriented Places," that identifies different types of activity centers in the context of function, density and level of transit service as shown in the following tables.

Figure 8: Characteristics of Transit Oriented Development

DISTRICTS			CORRIDOR
Urban Neighborhood	Transit Neighborhood	Special Use/ Employment District	Mixed-Use Corridor
Predominantly residential district with good access to regional and subregional centers	Predominantly residential district organized around transit station	Local focus of economic and community activity without distinct center	Local focus of economic and community activity without distinct center
Heavy rail, LRT/streetcar, BRT, commuter rail, local bus	LRT/streetcar, BRT, commuter rail, local bus	LRT/streetcar, BRT, potentially heavy rail	LRT/streetcar, BRT, local bus
5-15 minutes	15-30 minutes	15-30 minutes	5-15 minutes
Moderate- to high-density residential uses with supporting commercial and employment uses	Low- to moderate-density residential uses with supporting commercial and employment uses	Concentrations of commercial, employment and civic/cultural uses, potentially with some residential	Moderate-density mix of residential, commercial, employment and civic/cultural uses
Primarily local-serving retail opportunity; need for some community-serving retail	Primarily local-serving retail opportunity	Potential for community- and regional-serving retail but need to balance demands for access	Primarily local-serving retail opportunity; need for some community-serving retail
Expanding local-serving retail opportunities and increasing high-density housing	Integrating moderate-density housing and supporting local-serving retail	Creating sustainable off-peak uses and accommodating peak travel demand	Expanding local-serving retail opportunities and high-density housing opportunities
Fruitvale in Oakland, Greenwich Village in New York City, the Pearl District in Portland, University City in Philadelphia	Ohlone-Chynoweth outside San Jose; Plano, Texas; Barrio Logan in San Diego; Capitol Hill in Washington D.C.	South of Market in San Francisco, Camden Station in Baltimore, South Waterfront in Portland	International Boulevard in Oakland, Washington Street in Boston, University Avenue in St. Paul, Minnesota

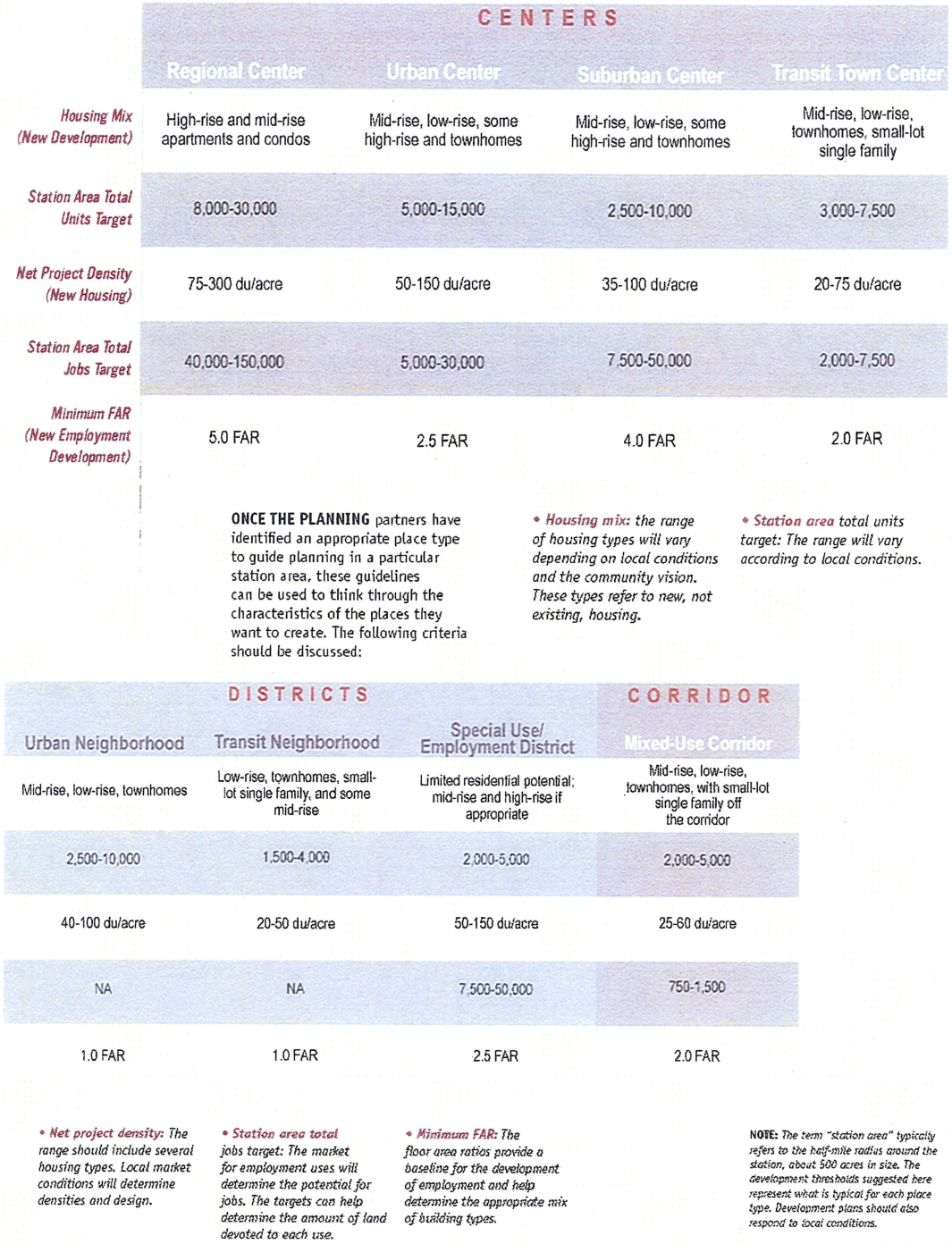
QUESTIONS ARE POSED in this table to help all the station area planning partners identify the areas they are planning within the place typology. The place types in the typology are generalized so as to highlight similarities and differences as well as the parameters that tend to define their land use mix, housing densities, and transit service. Because of this a particular place may not fit exactly into one of these types. All of the characteristics that are identified, defined and quantified are intended to be descriptive and not prescriptive, in the recognition that all places are unique.

Note: *The term "station area" typically refers to the half-mile radius around the station, about 500 acres in size. The term "primary transit mode" refers to the transit types that typically support the place type.*

Source: Station Area Planning, Reconnecting America and the Center for Transit-Oriented Development, February 2008, page 8.

Some representative or general TOD residential categories include the following:

Figure 9: Characteristics of Residential Transit Oriented Development



CENTERS

	Regional Center	Urban Center	Suburban Center	Transit Town Center
Housing Mix (New Development)	High-rise and mid-rise apartments and condos	Mid-rise, low-rise, some high-rise and townhomes	Mid-rise, low-rise, some high-rise and townhomes	Mid-rise, low-rise, townhomes, small-lot single family
Station Area Total Units Target	8,000-30,000	5,000-15,000	2,500-10,000	3,000-7,500
Net Project Density (New Housing)	75-300 du/acre	50-150 du/acre	35-100 du/acre	20-75 du/acre
Station Area Total Jobs Target	40,000-150,000	5,000-30,000	7,500-50,000	2,000-7,500
Minimum FAR (New Employment Development)	5.0 FAR	2.5 FAR	4.0 FAR	2.0 FAR

ONCE THE PLANNING partners have identified an appropriate place type to guide planning in a particular station area, these guidelines can be used to think through the characteristics of the places they want to create. The following criteria should be discussed:

- *Housing mix: the range of housing types will vary depending on local conditions and the community vision. These types refer to new, not existing, housing.*
- *Station area total units target: The range will vary according to local conditions.*

DISTRICTS / CORRIDOR

Urban Neighborhood	Transit Neighborhood	Special Use/ Employment District	Mixed-Use Corridor
Mid-rise, low-rise, townhomes	Low-rise, townhomes, small-lot single family, and some mid-rise	Limited residential potential; mid-rise and high-rise if appropriate	Mid-rise, low-rise, townhomes, with small-lot single family off the corridor
2,500-10,000	1,500-4,000	2,000-5,000	2,000-5,000
40-100 du/acre	20-50 du/acre	50-150 du/acre	25-60 du/acre
NA	NA	7,500-50,000	750-1,500
1.0 FAR	1.0 FAR	2.5 FAR	2.0 FAR

- *Net project density: The range should include several housing types. Local market conditions will determine densities and design.*
- *Station area total jobs target: The market for employment uses will determine the potential for jobs. The targets can help determine the amount of land devoted to each use.*
- *Minimum FAR: The floor area ratios provide a baseline for the development of employment and help determine the appropriate mix of building types.*

NOTE: *The term "station area" typically refers to the half-mile radius around the station, about 500 acres in size. The development thresholds suggested here represent what is typical for each place type. Development plans should also respond to local conditions.*

Source: Station Area Planning, Reconnecting America and the Center for Transit-Oriented Development, February 2008, page 12.

An example of a similar typology for mixed use sites is presented below:

Figure 10: Characteristics of Mixed Use Transit Oriented Development

	Net Density	Characteristics	Construction Type	Parking Configuration	
MIXED USE TYPES					
Mid-Rise Residential Over Commercial	40-90 du/acre	3-6 stories with apartments, single- or double-loaded corridors with lobby entrance, off-street parking in structure or below grade	Type I/II (max 6 stories with building code modification/65 feet)	Groundfloor podium/ subgrade or elevated structure	
High-Rise Residential Over Commercial	60+ du/acre	7+ stories, usually with base and point tower, single- or double-loaded corridors with lobby entrance, off-street parking in structure or below grade	Type I/II (max 12 stories/120 feet/no limits on Type 1)	Off-street parking in structure or below grade	
Low-Rise Office/Commercial	0.5-2.5 FAR	1-3 stories with lobby entrance to upper floors; retail, office or mixed-use with mix of tenant types, including limited large-footprint retail uses; parking in surface lots or structures	Type III/IV/V (max 4 stories/65 feet)	Off-street parking in groundfloor podium or surface	
Mid-Rise Office/Commercial	2.0-5.0 FAR	3-7 stories, with lobby entrance to upper floors, office with potential groundfloor retail, parking in structure or below grade	Type I/II (max 12 stories/160 feet)	Off-street parking in structure or below grade	
High-Rise Office/Commercial	4.0+ FAR	6+ stories with lobby entrance to upper floors sometimes with point tower over base, office with potential groundfloor retail, parking in structure or below grade	Type 1 (no limits)	Off-street parking in structure or below grade	
Institutional/Other Employment	varies	schools, civic uses, stadiums, hospitals, other entertainment uses; range of densities and sizes; parking often in structures or below grade	Varies	Parking often in structures or below grade	
EMPLOYMENT TYPES					

Source: Station Area Planning, Reconnecting America and the Center for Transit-Oriented Development, February 2008, page 13.