

TRANSIT DEMAND FORECASTS UPTOWN TRANSIT PROJECTS

Uptown Houston utilized the existing regional transportation modeling system to estimate transit ridership for the Uptown Transit Projects. This modeling system utilizes population and employment projections to estimate both highway and transit trips for proposed transportation scenarios. Regional population and employment forecasts for the anticipated opening year of the Uptown Transit Projects (2018) and for approximately 20 years after opening (2035) were utilized.

We analyzed the proposed transit service on the Post Oak Boulevard Dedicated Bus Lanes. This service is to interface with the High Occupancy Vehicle Express / Park & Ride Services for the Katy Freeway and US 290 Corridors at the Northwest Transit Center (NWTC), and with the Southwest Freeway and Westpark Corridors at a proposed Bellaire Uptown Transit Center (BUTC). In addition, we also analyzed a scenario including the proposed IH 610 Dedicated Bus Lanes from the NWTC to the Post Oak Boulevard DBL.

For the Uptown Transit Projects, the ridership estimates for the typical weekday are shown in Table 1.

TABLE 1
DAILY RIDERSHIP

Forecast Year	2018	2035
Post Oak Boulevard DBL with NWTC and BUTC	14,100	20,500
Post Oak Boulevard DBL with NWTC and BUTC Plus IH610 DBL	19,100	27,700

A key ridership trait used to design transit service is the “maximum load point”. The ridership forecast for the Max Load Point is used to estimate the number and size of the buses needed to satisfy the morning and evening peak hour demand. The peak hour demand estimates for the Post Oak Boulevard DBL are shown in Table 2.

TABLE 2
MAXIMUM LOAD POINTS

	Max Load Points	2018	2035
AM Peak Hour	Southbound from NWTC	1,040	1,420
	Northbound at Westheimer	820	1,090
PM Peak Hour	Northbound to NWTC	980	1,310
	Southbound at Westheimer	770	1,040

These Max Load Point transit demand numbers can be met with articulated buses operating on five minute headways.

The regional population and employment forecasts generally assume that development happens on “green field” sites and, as a result, often underestimates redevelopment of existing land uses into higher density land uses. Although the 2018 forecasts have been modified to reflect this potential for redevelopment at higher densities, the 2035 forecasts do not generally take this redevelopment into account. Therefore, we conducted a sensitivity test utilizing a more ambitious redevelopment scenario for the Uptown Houston area. Although the transit ridership forecasts using the regional population / employment projections are the “official” transit ridership forecasts, the sensitivity test results indicate a potential higher level of transit ridership, as shown in Table 3.

TABLE 3
RESULTS OF SENSITIVITY TEST

Forecast Year	2035 with Standard Forecasts	2035 with Redevelopment Forecasts
Post Oak Boulevard DBL with NWTC and BUTC	20,500	24,700
Post Oak Boulevard DBL with NWTC and BUTC Plus IH610 DBL	27,700	33,200