# University Corridor LRT

## Houston, Texas

## (November 2009)

The Metropolitan Transit Authority of Harris County (METRO) is proposing to construct an 11.3-mile, 19-station, light rail transit (LRT) line from the Hillcroft Transit Center to the Eastwood Transit Center. The LRT line would operate in an exclusive guideway with limited mixed traffic operations. The majority of the LRT line would operate at-grade (11 miles), while the remaining 0.36 miles would be elevated to avoid Union Pacific Railroad's tracks (between the proposed Newcastle and Weslayan stations) and US 59 near the proposed Cummins Station The project also includes the purchase of 32 light rail vehicles. Service would operate every six minutes during peak and off peak periods, including weekends, and would provide a transfer to the current METRO Rail Red Line for trips to downtown Houston and the Texas Medical Center. A total of 3,000 parking spaces would be also built.

Three major roads serve the corridor: US 59 (freeway), Westpark Road (major arterial) and Richmond Avenue (minor arterial). Currently, most segments of US 59 in the project corridor are very congested during peak hours. Traffic delays along Westpark Road and Richmond Avenue are excessive due to low roadway capacity and a large number of signalized intersections. Fifteen local bus routes currently serve the corridor with a combined ridership of 57,000 daily boardings. The LRT line would improve transit travel time and travel time reliability over enhanced bus service in the corridor because it will operate in a semi-exclusive right of way.

| Summary Description | |
|---|---|
| **Proposed Project:** | Light Rail Transit<br>11.36 Miles<br>19 Stations |
| **Total Capital Cost ($YOE):** | $1,496.94 Million (includes $170.2 million in finance charges) |
| **Section 5309 New Starts Share ($YOE):** | $748.47 Million (50.0%) |
| **Annual Forecast Year Operating Cost:** | $15.84 Million |
| **Ridership Forecast (2030):** | 49,000 Average Weekday Boardings |
| | 11,100 Daily New Riders |
| **Opening Year Ridership Forecast (2014):** | 32,100 Average Weekday Boardings |
| **FY 2011 Local Financial Commitment Rating:** | **Medium** |
| **FY 2011 Project Justification Rating:** | **Medium** |
| **FY 2011 Overall Project Rating:** | **Medium** |

METRO plans to use an innovative project delivery method. A Facility Provider team of engineering, construction management, and vehicle firms would complete design, finalize the construction phasing approach, and expedite construction. METRO and FTA plan to work closely to facilitate this project implementation approach.

## Project Development History and Current Status

METRO completed a Draft Environmental Impact Statement (DEIS) in August 2007. LRT was the preferred alternative. The DEIS did not include a recommendation for a specific route. In July 2008, in response to local community concerns regarding neighborhood disruption to an historic area, METRO altered an LRT alignment option in the corridor's eastern segment on Wheeler Avenue east of the current

Main Street LRT line. METRO plans to complete a Final EIS in early 2010._ The project is included in the Houston-Galveston Area Council's *2035 Regional Transportation Plan* and the 2008-2011 Transportation Improvement Program. The project is also included in the *2025 METRO Solutions Plan* that was passed by voters in November 2003. FTA notified Congress of its intent to approve the project into preliminary engineering in November 2009 and took formal approval action in December 2009.

## Project Justification Rating: Medium

The project justification rating is based on the weighted average of the ratings assigned to each of the following criteria: the cost-effectiveness criterion is weighted 20 percent; the transit supportive land use criterion is weighted 20 percent; the economic development criterion is weighted 20 percent; the mobility improvements criterion is weighted 20 percent; the environmental benefits criterion is weighted 10 percent; and the operating efficiencies criterion is weighted 10 percent.

### *Cost Effectiveness Rating: Medium*

The rating reflects the level of travel-time benefits (14,300 hours each weekday, including special events) relative to the project's capital and operating costs based upon a comparison to a baseline alternative.

| Cost Effectiveness | |
|---|---|
| | **New Start vs. Baseline** |
| Cost per Hour of Transportation System User Benefit | $19.71* |
| Incremental Cost per Incremental Trip | $22.00 |

* Indicates that measure is a component of Cost Effectiveness rating.

### *Transit-Supportive Land Use Rating: Medium-Low*

The land use rating reflects the population and employment densities within ½-mile of proposed station areas.

- A total of 99,500 jobs are located in proximity to the University Corridor's stations, with the largest concentration near the stations serving Greenway Plaza. Population densities are moderate, averaging 8,000 people per square mile.
- Although development is intensifying in certain proposed station areas, most of the University Corridor is characterized by low-density commercial, light industrial, and mixed residential development. Streets are generally in a grid pattern, but pedestrian access is hindered by wide streets, elevated highways and overpasses, expansive parking lots, and in some cases missing sidewalks. Two universities are present, with many of their athletic facilities, housing and academic buildings within a half mile of the planned LRT route.

### *Economic Development Rating: Medium*

The economic development rating is based upon the average of the ratings assigned to the subfactors below.

**Transit-Supportive Plans and Policies: Medium-Low**

- Limited efforts have been made at regional planning and growth management. In 2005 the Houston-Galveston Area Council (H-GAC) – local metropolitan planning organization – joined with the citizen-led Blueprint Houston to undertake Envision Houston Region, an initiative designed to create a regional "vision" for the future growth of the area. The results informed the 2035 Regional Transportation Plan to increase transit, but have not yet led to further implementation activities to shape regional land use patterns.

- Some station area planning activities have been initiated. METRO is undertaking a Station Area Work Program to address barriers to station area development, tools to leverage development, and a policy for the development of each station area. The City of Houston is developing an Urban Corridor Planning Ordinance, which will provide a planning framework for development in high capacity transit corridors and in specific station areas. METRO has established a joint development/transit-oriented development (TOD) program that will initiate specific development projects.
- The City of Houston is not zoned. Private deed restrictions are often used for both residential and commercial land development to ensure that standards for land use are maintained, but many of the neighborhoods in the University Corridor lack such covenants. Plans for the Tax Increment Reinvestment Zones (TIRZ) in the corridor include design guidelines to promote a more densely developed, pedestrian-friendly, walkable environment, but do not identify implementation mechanisms aside from financing infrastructure improvements.

**Performance and Impacts of Policies: Medium**

- Local officials believe the existing Red Line, which opened in January 2004, has been a catalyst for residential and commercial development in the city's downtown and Midtown areas. Moderate to strong growth is forecast for the University Corridor and small and large vacant and underutilized lots throughout the corridor provide additional development potential, if land use policies and market forces can be aligned.

## *Other Project Justification Criteria*

| **Mobility Improvements Rating: Medium-High** | |
|---|---|
| | **New Start vs. Baseline** |
| **Transportation System User Benefits Per Passenger Mile (Minutes)** | 5.5 |
| **Number of Transit Dependents Using the Project** | 20,500 |
| **Transit Dependent User Benefits per Passenger Mile (Minutes)** | 6.5 |

| **Environmental Benefits Rating: High** | |
|---|---|
| **Criteria Pollutant Status** | **EPA Designation** |
| 8-Hour Ozone ($O_3$) | Severe Non-Attainment Area |

| **Operating Efficiencies Rating: Medium** | | |
|---|---|---|
| | **Baseline** | **New Start** |
| **System Operating Cost per Passenger Mile (current year dollars)** | 0.34 | 0.34 |

# Local Financial Commitment Rating: Medium

The local financial commitment rating is based on the weighted average of the ratings assigned to each of the following criteria: the New Starts share of project costs is weighted 20 percent; the strength of the capital finance plan is weighted 50 percent; and the strength of the operating finance plan is weighted 30 percent.

## *Section 5309 New Starts Share of Total Project Costs: 50.0%*
## *Rating: Medium*

| Locally Proposed Financial Plan | | |
|---|---|---|
| **Source of Funds** | **Total Funds ($million)** | **Percent of Total** |
| **Federal:**<br>Section 5309 New Starts | $748.47 | 50.0% |
| **Local:**<br>METRO Dedicated Sales Tax | $748.47 | 50.0% |
| **Total:** | **$1,496.94** | 100.0% |

**NOTE**: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

## *Capital Finance Plan Rating: Medium*

The capital finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

**Agency Capital Condition: Medium-Low**

- The average age of METRO's bus fleet is 8.8 years, which is slightly older than the industry average.
- METRO has no outstanding debt. Therefore, no bond ratings have been issued.

**Commitment of Capital Funds: Medium**

- The non-Section 5309 New Starts funds would be provided by bond proceeds backed by sales tax revenues. The amount of bond financing contemplated in METRO's financial plan exceeds METRO's current authorized debt capacity, and it is likely that voter approval will be required for METRO to take on the additional debt beyond the currently approved limit. Thus, the funds are considered planned.

**Capital Cost Estimate, Planning Assumptions, and Financial Capacity: Medium**

- Assumptions on sales tax growth, inflation, and Federal funding are reasonable compared to historical experience.
- The capital cost estimate is reasonable.

## *Operating Finance Plan Rating: Medium*

The operating finance plan rating is based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

**Agency Operating Condition: Medium-Low**

- METRO’s current ratio of assets to liabilities, as reported in its most recent audited financial statements, was just over 1.0 in FY 2008.
- METRO’s transit services have increased in the last five years.

**Commitment of Operating Funds: High**

- Over 75 percent of operating funding, including fare revenues, sales tax revenues, operating grants, miscellaneous revenue (advertising and ID card fees), and interest income, is committed.

**Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-Low**

- Projections of growth in operating and maintenance costs and farebox revenues are optimistic compared to historical experience.
- The financial plan shows projected cash balances exceeding 25 percent of annual operating costs.

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