U.S. Department of Transportation

Federal Transit Administration

PROPOSED NEW STARTS AND SMALL STARTS POLICY GUIDANCE

January 9, 2013

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I. INTRODUCTION

As described in the Final Rule published today governing how the Federal Transit Administration (FTA) evaluates and rates major new transit investments seeking funding under the discretionary "New Starts" and "Small Starts" programs authorized by Section 5309 of Title 49, U.S. Code, FTA is making available this proposed policy guidance for public comment. This proposed policy guidance, if adopted as final after review and response to comments received, would replace FTA's previous policy guidance documents located on its website at http://fta.dot.gov/12304_213.html.

This document describes the measures and methods for calculating the project justification and local financial commitment criteria required by statute for New and Small Starts projects and included in the Final Rule. The regulation and its appendix act as a framework for the New and Small Starts project evaluation process, and the policy guidance fills in the details. FTA welcomes feedback on the proposals contained in this policy guidance and will consider them before issuing final policy guidance.

The final rule being published today and this accompanying revised proposed policy guidance cover the New and Small Starts evaluation criteria and rating process defined in MAP-21 and the before and after study requirements for New Starts projects. They do not cover new items included in MAP-21 that have not yet been the subject of a rulemaking process such as the core capacity improvement program evaluation and rating process, the program of interrelated projects evaluation and rating process, the pilot program for expedited project delivery, and the process for an expedited technical capacity review for project sponsors that have recently and successfully completed at least one new fixed guideway or core capacity project. They also do not cover exactly how the steps in the New and Small Starts process will be implemented by FTA because of changes made in MAP-21 to those steps that were not considered in the NPRM. Specifically, MAP-21 eliminated the requirement that a New Starts or Small Starts project be the result of an alternatives analysis and instead relies on the similar evaluation of alternatives performed as part of the environmental review process conducted in accordance with the requirements of National Environmental Policy Act (NEPA). Additionally, MAP-21 reduced the number of steps in the process when FTA must evaluate and rate proposed projects. While the final rule includes the names of the steps in the New and Small Starts process as defined in MAP-21, further detail on how those steps will be implemented will be the subject of future interim policy guidance and rulemaking, after an opportunity for public comment is provided.

Proposed New and Small Starts projects are evaluated and rated according to criteria set forth in law. The statutory project justification criteria include: mobility improvements, environmental benefits, congestion relief, economic development effects, land use, and cost-effectiveness. The statute also requires FTA to examine the following when evaluating and rating local financial commitment: availability of reasonable contingency amounts, availability of stable and dependable capital and operating funding sources, and availability of local resources to recapitalize, maintain, and operate the overall existing and proposed public transportation system without requiring a reduction in existing services.

The following principles were considered while developing the New and Small Starts project evaluation measures in the Final Rule and this proposed policy guidance:

Establishing Breakpoints for Ratings

FTA is proposing breakpoints for determining the five rating categories for the various criteria and measures in this proposed policy guidance. When possible, FTA has established the proposed breakpoints based on available research that recommends the value. When such research is not available for a particular criterion or measure, FTA has established an initial set of breakpoints based on the performance measures available from projects currently in the pipeline of projects. FTA will revisit the breakpoints as performance measures are accumulated from additional projects over time. Any changes in the breakpoints will be proposed in future policy guidance for comment by the public.

Time Horizons for Calculating Measures

FTA believes project evaluation based on existing conditions provides the most easily understood, most reliable, and most readily available information for decision-making. Thus, FTA is requiring all project sponsors to calculate the measures for the evaluation criteria based on current year inputs. Use of current year data increases the reliability of the projected future performance of the project by avoiding reliance on future population, employment, and transit service levels that are themselves forecasts. Consequently, FTA is defining "current year" as close to today as the data (including the American Community Survey) will permit.

FTA recognizes these projects are long term investments. Additionally, because some projects are designed to address and accommodate future growth more so than current congestion problems, they may not generate sufficient benefits to rate well based only on current year conditions. Thus, FTA will allow a sponsor, at its option, to calculate the evaluation criteria using horizon year based estimates as well as current year estimates. FTA is allowing project sponsors to determine the horizon year they wish to use -- either 10 years in the future or 20 years in the future.

Given the need to balance the enhanced reliability of short-term estimates with the need to account for longer term benefits, when a project sponsor chooses to quantify the measures in both the current year and a horizon year, FTA will compute each criterion rating as a weighted average that considers both years. FTA proposes a weight of 50 percent for the current year data and a weight of 50 percent for the horizon year data and seeks comments on these proposed weights.

Basis for Comparison

To simplify and streamline the process project sponsors go through to develop materials for submittal to FTA, where possible, FTA has adopted measures that use absolute values rather than incremental values requiring a basis for comparison. However, in some cases, incremental measures remain necessary. When a basis for comparison is required because a measure is based on an incremental value, FTA will use the existing system as a point of comparison when developing current year information. When a project sponsor chooses to submit 10-year horizon information, the no-build alternative (which includes the existing transportation system as well as those transportation investments committed in the Transportation Improvement Plan (TIP) pursuant to 23 CFR Part 450) would be the point of comparison. When a project sponsor choses to submit 20-year horizon information, the existing transportation network plus all projects identified in the Metropolitan Planning Organization's fiscally constrained long range plan (excluding the proposed build alternative) will serve as the point of comparison.

Weighting of Criteria and Measures

The statute requires FTA to give "comparable, but not necessarily equal" weight to the evaluation criteria. FTA is proposing to give each of the project justification criteria equal weight. FTA currently gives equal weight to these criteria, had proposed to continue to do so in the NPRM, and proposes to do so again here. FTA believes that each of the project justification criteria provides important information about project merit and thus, feels that equal weights are appropriate. Some types of projects may do well on one of the criteria, but not as well on other criteria. Thus, examining the merits of the project as a whole against all of the criteria combined balances what can be competing policy goals. Additionally, the statutory text implies that Congress intended for each to be given similar weights.

FTA has included in this proposed policy guidance proposed weights for the local financial commitment subfactors and seeks feedback on them.

Overall Project Rating

Because of changes made by MAP-21, the final rule does not address how FTA will develop overall New Starts project ratings. Instead, this will be the subject of future subsequent rulemaking. As an interim approach until that rulemaking process is complete, FTA is proposing in this policy guidance to give 50 percent weight to the summary project justification rating and 50 percent to the summary local financial commitment rating to arrive at an overall rating. FTA also proposes to continue requiring at least a medium rating on both project justification and local financial commitment to obtain a medium or better rating overall, consistent with the regulations being replaced by the final rule published today.

Use of Standard Factors Rather than Detailed Analysis

One of FTA's goals in the development of the Final Rule and this policy guidance has been to establish measures that support streamlining of the New Starts and Small Starts process, while maintaining a solid basis on which to make major capital investment funding decisions. Thus, FTA is proposing in this policy guidance to calculate various measures using simplified factoring approaches in order to eliminate undue burden on project sponsors. FTA is proposing to use factors based on national data.

II. PROJECT JUSTIFICATION CRITERIA

MOBILITY IMPROVEMENTS

Measure:
FTA will evaluate mobility improvements for both New and Small Starts projects as the total number of linked trips using the proposed project, with extra weight given to trips that would be made on the project by transit dependent persons. Linked trips using the proposed project include all trips made on the project whether or not the rider boards or alights on the project or elsewhere in the transit system. If a project sponsor chooses to estimate trips using the simplified national model FTA is developing, trips made by transit dependent persons would be trips made by persons in households that do not own a car. If a project sponsor chooses to estimate trips using their local travel forecasting model, trips made by transit dependent persons are defined in local travel models generally in one of two ways: as trips made by persons in households having no cars or as trips made by persons living in households in the lowest income bracket as defined locally.) Each trip by a transit dependent person would be equivalent to two trips by a non-transit dependent person under the proposed mobility improvements measure.

FTA is assigning a weight of two to trips by transit dependent persons based on information from the 2009 National Household Transportation Survey, which indicates that 8.7 percent of US Households own zero vehicles but make only 4.3 percent of the nation's person trips. If zero car households had equal opportunity to make trips, i.e., their mobility was not limited by the existing public transportation system, one would infer that zero car households would make more than 4.3 percent of the nation's person trips. To ensure that federal investments in major capital investment transit projects address the travel demand of zero car households equitably, FTA will use a factor of two for the number of trips made by transit dependent persons (8.7% / 4.3% = 2.02).

If the project sponsor chooses to develop project trip estimates based on inputs for a horizon year in addition to estimates based on current year inputs, each will be given 50 percent weight when establishing the overall mobility improvements rating. The trips measure proposed is an absolute value rather than an incremental value, so a basis for comparison is not required.

Calculation:
The mobility improvements measure would be computed by adding together the estimated number of linked transit trips on the project taken by non-transit dependent persons and the number of linked transit trips taken by transit dependent persons multiplied by a factor of two, thereby giving extra weight to these trips.

Sources of Information:
Number of Transit Trips Using the Project:

- The number of linked transit trips estimated on the project using current year inputs will be generated either by the FTA developed simplified national model (which uses census data and ridership experience on existing fixed guideway systems to estimate trips) or the local travel model at the project sponsor's option. Should a sponsor choose to use the local travel model, FTA expects to continue to review the validity of the model, as in past practice, to assure the validity of the results.

- If the project sponsor wishes to calculate a horizon year forecast of trips for consideration in the rating, the number of trips in the horizon year would be based upon the either the FTA developed simplified national model or the local travel model at the project sponsor's option.
- If the project sponsor chooses to calculate a horizon year forecast in addition to a current year forecast, the mobility improvements rating will be based on a weighted average that gives 50 percent weight to each.

Number of Trips by Transit Dependents Using the Project:

- The number of trips on the project made by transit dependent persons using current year inputs will be generated either by the FTA developed simplified national model or the local travel model at the project sponsor's option. Local travel models stratify trips taken in one of two ways – based on household income level or household auto ownership. The FTA simplified national model uses auto ownership to stratify trips. Thus, trips made by transit dependent persons estimated by the FTA model will be those made by households with no cars.

Breakpoints
Below are the proposed breakpoints for the Mobility Improvements criterion for New and Small Starts projects.

Rating	Mobility Improvements Estimated Annual Trips (Trips by Non-Transit Dependent Persons plus Trips by Transit Dependent Persons multiplied by 2)
High	> 25.0 Million
Medium-High	15 Million – 24.9 Million
Medium	9 Million – 14.9 Million
Medium-Low	4.5 Million – 8.9 Million
Low	0 - 4.49 Million

ECONOMIC DEVELOPMENT EFFECTS

Measures:
The measure of economic development effects is the extent to which a proposed project is likely to enhance additional, transit-supportive development in the future based on a qualitative examination of the existing local plans and policies to support economic development proximate to the project.

Calculation

- FTA would evaluate transit supportive plans and policies in a manner that is similar to the existing practice (http://www.fta.dot.gov/documents/FY13_Evaluation_Process.pdf) with the addition of an

examination of the plans and policies to preserve and/or increase the supply of affordable housing units in the corridor. FTA would also report the project sponsor's estimate of the number of U.S. jobs related to design, construction, operation and maintenance of the project although this would not be used in developing the rating.

- At the project sponsor's option, an additional quantitative analysis (scenario based estimate) may be undertaken that would consider[1]:
    - The extent to which the proposed project would produce changes in development patterns around the transit investment and the resulting magnitude of changes in population and employment, considering:
        - the economic conditions in the project corridor;
        - the mechanisms by which the project would improve those conditions;
        - the availability of land in station areas for development and redevelopment; and
        - a pro forma assessment of the feasibility of specific development scenarios.
    - The estimated change in VMT attributable to the estimated changes in development patterns.
    - The estimated environmental benefits that would come from the VMT change attributable to the estimated change in development patterns. Note that these benefits would be counted in the economic development criterion and would not be added to the benefits assessed in the environmental benefits criterion. These benefits are above and beyond the benefits which come from changes in mode choice that are addressed in the environmental benefits criterion.

  The environmental benefits derived from the optional quantitative economic development scenario analysis would be monetized and compared to the same annualized capital and operating cost of the proposed project as used in the cost-effectiveness calculation. FTA will multiply the resulting ratio by 100 and express the environmental benefits derived from the optional quantitative economic development scenario as a percentage.

[1] Economic Development - Future Growth Scenarios: Based upon the current economic conditions, amount of developable land and efforts to improve economic conditions and market demand, local project sponsors and partner agencies may forecast future economic growth scenarios for the proposed station areas. The forecast of various future economic development scenarios should be based upon future development potential based upon various zoning densities, mixes of land use types, comprehensive planning, regional growth boundaries, or other efforts to focus development. This analysis may be used to influence local decisions to adopt policies to improve the economic development potential within a proposed project corridor.

Sources of information:

- Transit Supportive Plans and Policies
    - Growth Management;
    - Transit Supportive Corridor Policies;
    - Supportive Zoning Regulations Near Transit Stations; and
    - Tools to Implement Land Use Policies.
- Performance and Impacts of Policies:
    - Performance of Land Use Policies; and
    - Potential Impact of Transit Project on Regional Land Use.
- Tools to maintain or increase the share of affordable housing in the project corridor:
    - Plans and Policies to support affordable housing such as:
        - Inclusionary zoning and/or density bonuses for affordable housing
        - Employer assisted housing policies
        - Voluntary or mandatory inclusionary housing policies
        - Rent controls or condominium conversion controls
        - Zoning to promote housing diversity
        - Affordability covenants
    - Financial Incentives to support affordable housing such as:
        - Target property acquisition, rehabilitation, and development funding for low-income housing within the corridor, including:
            - Low Income Housing Tax Credits
            - Ongoing affordable housing operating subsidies
            - Weatherization and utilities support program
            - Local tax abatements for low-income or senior housing
            - Mortgage or other home ownership assistance for lower income and senior households
        - Established land banking programs or transfer tax programs
        - Local or regional affordable housing trust funds
        - Targeted tax increment financing or other value-capture strategies for low-income housing

The optional scenario analysis could include, but is not required to include, information such as change in station area access to regional work force:

- U.S. Census data analyzed with a Geographic Information System to estimate the work-force population within a 40 minute transit commute of the proposed station locations.

Breakpoints

Breakpoints for Transit Supportive Plans and Policies and Performance of Plans and Policies

Growth Management **(DOES NOT APPLY TO SMALL STARTS)**		
Engineering and FFGA	HIGH	Adopted and enforceable growth management and land conservation policies are in place throughout the region. Existing and planned densities, along with market trends in the region and corridor are strongly compatible with transit.
	MEDIUM	Significant progress has been made toward implementing growth management and land conservation policies. Strong policies may be adopted in some jurisdictions but not others, or only moderately enforceable policies (e.g., incentive-based) may be adopted region wide. Existing and/or planned densities and market trends are moderately compatible with transit.
	LOW	Limited consideration has been given to implementing growth management and land conservation policies; adopted policies may be weak and apply to only a limited area. Existing and/or planned densities and market trends are minimally or not supportive of transit.
Ratings based on assessment of the following: • Concentration of development around established activity centers and regional transit; and • Land conservation and management.		
Transit-Supportive Corridor Policies		
FFGA	HIGH	Conceptual plans for the corridor and station areas have been developed. Local jurisdictions have adopted or drafted revisions to comprehensive and/or small area plans in most or all station areas. Land use patterns proposed in conceptual plans and local and institutional plan revisions are strongly supportive of a major transit investment.
	MEDIUM	Conceptual plans for the corridor and station areas have been developed. Local jurisdictions have initiated the process of revising comprehensive and/or small area plans. Land use patterns proposed in conceptual plans and local and institutional plan revisions are at least moderately supportive of a major transit investment.
	LOW	Limited progress, to date, has been made toward developing station area conceptual plans or revising local comprehensive or small area plans. Existing station area land uses identified in local comprehensive plans are marginally or not transit-supportive.
Engineering	HIGH	Conceptual plans for the corridor and station areas have been developed. Discussions have been undertaken with local jurisdictions about revising comprehensive plans. Land use patterns proposed in conceptual plans for station areas (or in existing comprehensive plans and institutional master plans throughout the corridor) are strongly supportive of a major transit investment.
	MEDIUM	Conceptual plans for the corridor and station areas are being developed. Discussions have been undertaken with local jurisdictions about revising comprehensive plans. Land use patterns proposed in conceptual plans for station areas (or existing in local comprehensive plans and institutional master plans) are at least moderately supportive of a major transit investment.
	LOW	Limited progress, to date, has been made toward developing station area conceptual plans or working with local jurisdictions to revise comprehensive plans. Existing station area land uses identified in local comprehensive plans are marginally or not transit-supportive.

Ratings based on assessment of the following:

- Plans and policies to increase corridor and station area development;
- Plans and policies to enhance transit-friendly character of corridor and station area development;
- Plans to improve pedestrian facilities, including facilities for persons with disabilities; and
- Parking policies.

Tools to Implement Land Use Policies		
FFGA	HIGH	Transit agencies and/or regional agencies are working proactively with local jurisdictions, developers, and the public to promote transit-supportive land use planning and station area development. The transit agency has established a joint development program and identified development opportunities. Agencies have adopted effective regulatory and financial incentives to promote transit-oriented development. Public and private capital improvements are being programmed in the corridor and station areas which implement the local land use policies and which leverage the Federal investment in the proposed corridor.
	MEDIUM	Transit agencies and/or regional agencies have conducted some outreach to promote transit-supportive land use planning and station area development. Regulatory and financial incentives to promote transit-oriented development are being developed, or have been adopted but are only moderately effective. Capital improvements are being identified that support station area land use plans and leverage the Federal investment in the proposed major transit corridor.
	LOW	Limited effort has been made to reach out to jurisdictions, developers, or the public to promote transit-supportive land use planning; to identify regulatory and financial incentives to promote development; or to identify capital improvements.
Engineering	HIGH	Transit agencies and/or regional agencies are working proactively with local jurisdictions, developers, and the public to promote transit-supportive land use planning and station area development. Local agencies are making recommendations for effective regulatory and financial incentives to promote transit-oriented development. Capital improvement programs are being developed that support station area land use plans and leverage the Federal investment in the proposed major transit corridor.
	MEDIUM	Transit agencies and/or regional agencies have conducted some outreach to promote transit-supportive land use planning and station area development. Agencies are investigating regulatory and financial incentives to promote transit-oriented development. Capital improvements are being identified that support station area land use plans and leverage the Federal investment in the proposed major transit corridor.
	LOW	Limited effort has been made to reach out to jurisdictions, developers, or the public to promote transit-supportive land use planning; to identify regulatory and financial incentives to promote development; or to identify capital improvements.

Ratings based on assessment of the following:

- Outreach to government agencies and the community in support of land use planning;
- Regulatory and financial incentives to promote transit-supportive development; and
- Efforts to engage the development community in station area planning and transit-supportive development.

Performance of Land Use Policies		
FFGA	HIGH	A significant number of development proposals are being received for transit-supportive housing and employment in station areas. Significant amounts of transit-supportive development have occurred in other, existing transit corridors and station areas in the region.
	MEDIUM	Some development proposals are being received for transit-supportive housing and employment in station areas. Moderate amounts of transit-supportive development have occurred in other existing transit corridors and station areas in the region.
	LOW	A limited number of proposals for transit-supportive housing and employment development in the corridor are being received. Other existing transit corridors and station areas in the region lack significant examples of transit-supportive housing and employment development.
Engineering	HIGH	Transit-supportive housing and employment development is occurring in the corridor. Significant amounts of transit-supportive development have occurred in other, existing transit corridors and station areas in the region.
	MEDIUM	Station locations have not been established with finality, and therefore, development would not be expected. Moderate amounts of transit-supportive housing and employment development have occurred in other, existing transit corridors and station areas in the region.
	LOW	Other existing transit corridors and station areas in the region lack significant examples of transit-supportive housing and employment development.
Ratings based on assessment of the following: • Demonstrated cases of development affected by transit-oriented policies; and • Station area development proposals and status.		
Potential Impact of Transit Project on Regional Land Use		
Engineering and FFGA	HIGH	A significant amount of land in station areas is available for new development or redevelopment at transit-supportive densities. Local plans, policies, and development programs, as well as real estate market conditions, strongly support such development.
	MEDIUM	A moderate amount of land in station areas is available for new development or redevelopment at transit-supportive densities. Local plans, policies, and development programs, as well as real estate market conditions, moderately support such development.
	LOW	Only a modest amount of land in station areas is available for new development or redevelopment. Local plans, policies, and development programs, as well as real estate market conditions, provide marginal support for new development in station areas.
Ratings based on assessment of the following: • Adaptability of station area land for development; and • Corridor economic environment.		

Plans and Policies to Maintain or Increase Affordable Housing in Corridor		
FFGA	HIGH	Comprehensive affordable housing plans, policies are in place and robust financial incentives are available at the regional level and along the proposed corridor to support affordable housing development. Land use policies and zoning codes support and encourage affordable housing development in transit corridors.
	MEDIUM	Some affordable housing plans and policies are in place on a regional and/or local level, and some financial incentives are available along the proposed corridor to support affordable housing development. Land use policies and zoning codes support affordable housing development in and near transit corridors to a moderate extent.
	LOW	Affordable housing plans and policies are in development or non-existent. Little or no financial incentives are available to support affordable housing development. Land use policies and zoning codes support affordable housing development in and near transit corridors to a lesser extent.
Engineering	HIGH	Plans and policies are in place that identify and address the specific housing affordability needs along the corridor, including income target levels, tenure, and unit types. Financing commitments and/or sources of funding are identified and secured to preserve and/or build new affordable housing consistent with adopted plans. Developers are actively working in the corridor to secure priority development sites and/or maintain affordability levels in existing housing units.
	MEDIUM	Plans and policies are being prepared that identify and address the specific housing affordability needs along the corridor, including income target levels, tenure, and unit types. Some financing commitments and/or sources of funding have been identified and secured to preserve and/or build new affordable housing consistent with adopted plans. Developers are starting to work in the corridor to secure priority development sites and/or maintain affordability levels in existing housing units.
	LOW	Plans and policies are not in place that identify and address the specific housing affordability needs along the corridor. Financing commitments and/or sources of funding have not been identified and secured to preserve and/or build new affordable housing consistent with adopted plans. There is little or no affordable housing development activity in the corridor.
Ratings based on assessment of the following: • Plans and policies to preserve or increase affordable housing in region and/or corridor • Adopted financing tools and strategies targeted to preserving or increasing affordable housing in the region and/or corridor • Documented evaluation of corridor-specific affordable housing needs and supply. • Corridor-specific plans and policies to preserve or increase affordable housing in corridor • Evidence of developer activity to preserve or increase affordable housing in the corridor.		

Optional Quantitative Economic Development Scenario

FTA is not specifying a methodology for the optional quantitative economic development scenario. Thus, it is difficult to establish breakpoints. As data is submitted by project sponsors over time, and methodologies are proposed, breakpoints may be established in the future that would be subject to public comment before being finalized. At least initially, FTA intends to examine any optional analyses prepared by project sponsors and assign ratings based on FTA's qualitative assessment of the reasonableness of the analysis and the magnitude of the numbers presented in it.

Rating	Range
High	TBD
Medium-High	TBD
Medium	TBD
Low-Medium	TBD
Low	TBD

ENVIRONMENTAL BENEFITS

Measures:
FTA will evaluate and rate the environmental benefits criterion for New Starts projects based upon the dollar value of the anticipated direct and indirect benefits to human health, safety, energy, and the air quality environment scaled by the cost of the project. These benefits will be computed based on the change in vehicle miles travelled (VMT) resulting from implementation of the proposed project. Because change in VMT is an incremental measure, a point of comparison is necessary to calculate environmental benefits. To prepare estimates of the measures using current year data, the point of comparison is the existing transit system. If the project sponsor also opts to estimate the measures based on 10-year horizon data, the point of comparison is the no-build transit system (which includes the existing transportation system as well as those transportation investments committed in the Transportation Improvement Plan (TIP) pursuant to 23 CFR Part 450). If the project sponsor chooses to estimate the measures based on 20-year horizon data, the point of comparison is the projects identified in the Metropolitan Planning Organization's fiscally constrained long range plan (excluding the proposed build alternative.) The estimated environmental benefits will be monetized and compared to the same annualized capital and operating cost of the proposed project as used in the cost effectiveness calculation.

For Small Starts projects, MAP-21 requires that the benefits be compared to the Federal share of the project rather than the total cost. Thus, FTA will evaluate and rate the environmental benefits criterion for Small Starts projects based on the same benefits calculation as described above for New Starts, but will compare the benefits to the annualized federal share of the proposed project as directed in law. Federal share will include not only the Small Starts funds being sought, but also other sources of Federal funding.

The factors for calculating environmental benefits and data sources used by FTA to develop the factors are found in the tables below. FTA is using data from the Transit Cooperative Research Program study on environmental benefits, "Assessing and Comparing Environmental Performance of Major Transit Investments", to inform the selection of factors and is relying on Federal government data sources to the greatest extent possible.

Calculation:

- Environmental benefits will include the following subfactors: change in air quality criteria pollutants, change in energy use, change in greenhouse gas emissions, and change in safety. Values for change in energy use and greenhouse gas emissions will be established so as to not double count. (Thus, the valuation of energy use reductions is based only on the economic cost of petroleum dependence identified in Paul N. Leiby, "Estimating the U.S. Oil Security Premium for

the 2017-2025 Light -Duty Vehicle GHG/Fuel Economy Rule", Oak Ridge National Laboratory (ORNL), July 15, 2012. The subfactors will be calculated from estimates of changes in automobile and transit vehicle miles traveled (VMT). All measures will be converted from VMT into their native units (e.g., tons of emissions or total accidents) using national-level standard conversion factors. The native units will be monetized based on standard dollar values. For air quality subfactors, the standard dollar values recognize that a ton of emissions reduced in non-attainment and maintenance areas for a given pollutant is worth more than a ton of emissions reduced in an attainment area. FTA notes a significant part of the benefits that come from reducing energy use is accounted for by the resulting reduction in pollutant and greenhouse gas emissions. The monetized values of the various environmental benefits will be summed and compared to the same annualized capital and operating cost of the proposed project as is used in the cost effectiveness calculation.

- If the project sponsor chooses to calculate horizon year estimates in addition to current year estimates, the overall measure of environmental benefits would be a weighted average that considers both years. For the reasons provided above in earlier sections of the proposed policy guidance, FTA proposes a weight of 50 percent for the forecast using current year data and a weight of 50 percent for the forecast using horizon year data.

Sources of Information:

FTA has developed a spreadsheet with conversion factors to calculate changes in air quality, energy use, greenhouse gas emissions, and safety resulting from the changes in highway and transit VMT. The factors included in the spreadsheet are discussed and shown below.

Change in Total Air Quality Criteria Pollutants – Carbon Monoxide (CO), Nitrous Oxide(NO_x), Particulate Matter ($PM_{2.5}$), and Volatile Organic Compounds (VOC)

For the change in air quality measure, FTA will use a variety of sources to develop emission rates per VMT for automobiles (cars and light trucks) and transit vehicles including buses (diesel, hybrid-electric, and CNG), diesel commuter rail and diesel multiple unit vehicles (DMU), light rail transit vehicles, streetcars, electric commuter rail and electric multiple unit (EMU) vehicles, heavy rail vehicles, and electric buses. Because of the potential for double counting the value in reductions of $PM_{2.5}$ and PM_{10}, FTA will only include $PM_{2.5}$ in the air quality measure.

Change in Air Quality Emissions Factors

Mode	For Current Year Estimates				For 10-year Horizon Estimates				For 20-year Horizon Estimates			
	(grams/VMT)											
	CO	NO_x	VOC	$PM_{2.5}$	CO	NO_x	VOC	$PM_{2.5}$	CO	NO_x	VOC	$PM_{2.5}$
Automobile	16.77	0.91	0.60	0.010	11.46	0.28	0.27	0.010	10.26	0.20	0.21	0.010
Bus - Diesel	5.83	8.67	0.73	0.48	3.26	2.08	0.24	0.09	2.89	1.14	0.16	0.03
Bus - Hybrid	5.83	8.67	0.73	0.480	3.26	2.08	0.24	0.09	2.89	1.14	0.16	0.03
Bus - CNG	39.62	3.84	1.46	0.010	20.30	3.41	1.15	0.010	17.16	3.35	1.11	0.010
Bus - Electric	6.45	5.83	0.12	0.378	5.39	4.39	0.10	0.313	5.04	3.98	0.10	0.299
Heavy Rail	7.06	6.38	0.13	0.413	6.85	5.58	0.13	0.398	6.73	5.32	0.13	0.399
Light Rail and Streetcar	10.51	9.50	0.19	0.615	10.20	8.31	0.19	0.593	10.01	7.91	0.20	0.593
Commuter Rail - Diesel locomotive (new) and DMU	16.80	13.20	0.55	0.190	16.80	13.20	0.55	0.190	16.80	13.20	0.55	0.190
Commuter Rail - Diesel locomotive (used) and DMU	16.80	93.00	4.36	4.600	16.80	43.00	1.26	1.330	16.80	20.90	0.44	0.470
Commuter Rail – Electric and EMU	12.81	11.57	0.24	0.750	12.43	10.12	0.23	0.722	12.19	9.64	0.24	0.723

Change in Air Quality Factors Data Sources and Assumptions

Factor	Data Source or Assumption
Emission rates – automobiles, diesel and CNG transit buses	MOVES2010a – runs using national default inputs for 2013, 2025, 2035
Emission rates – commuter rail (diesel) and DMU	New locomotives: U.S. EPA Tier 4 emissions standards (U.S. EPA 2009) Reused locomotives: Average emission factor for U.S. passenger locomotives by year from U.S. EPA
Emission rates – electric modes	NO_x emissions forecasts based U.S. Department of Energy (DOE) Annual Energy Outlook (AEO) 2012 Reference Scenario PM, VOC, and CO forecasts based on current emission levels Argonne National Laboratory Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model (GREET) and forecast generating mix from AEO
Value of change in emissions	U.S. EPA (2012) health damage using PM2.5 and precursor (VOC and NOx) costs by source type – adjusted for horizon year estimates based on EPA estimates for 2015, 2020, 2030 Delucchi (2004) midpoint value for urban areas for CO Adjusted 50% upwards for nonattainment areas and 25% upwards for maintenance areas to account for the higher value of a change in emissions in an area with worse air quality, based on FTA judgment.

Change in Air Quality Monetization Factors

	Year	CO	NOx - Mobile	NOx – EGU	VOC	PM2.5 - Mobile	PM2.5 - EGU
				$ / KG			
Attainment	Current Year	$0.08	$12.96	$18.36	$3.02	$680.40	$561.60
	10-Year Horizon	$0.08	$15.66	$22.95	$3.75	$861.30	$688.50
	20-Year Horizon	$0.08	$16.20	$23.76	$3.89	$896.40	$712.80
Nonattainment 1.5 times value of attainment	Current Year	$0.12	$19.44	$27.54	$4.53	$1,020.60	$842.40
	10-Year Horizon	$0.12	$23.49	$34.43	$5.63	$1,291.95	$1,032.75
	20-Year Horizon	$0.12	$24.30	$35.64	$5.84	$1,344.60	$1,069.20
Maintenance area 1.25 times value of attainment	Current Year	$0.10	$16.20	$22.95	$3.78	$850.50	$702.00
	10-Year Horizon	$0.10	$19.58	$28.69	$4.69	$1,076.63	$860.63
	20-Year Horizon	$0.10	$20.25	$29.70	$4.86	$1,120.50	$891.00

Change in Energy Use

For the energy use measure, FTA will estimate the change in energy consumption rates for transit and automobile modes based on the change in VMT.

Change in Energy Use Factors

MODE	Current Year	10-year Horizon	20-year Horizon
		Btu/VMT	
Automobile	7,559	6,167	5,633
Bus – Diesel	41,436	35,635	33,978
Bus – Hybrid	33,149	28,508	27,182
Bus – CNG	39,738	34,175	32,585
Bus - Electric	41,436	35,635	33,978
Heavy Rail	45,348	45,348	45,348
Light Rail and Streetcar	67,496	67,496	67,496
Commuter Rail - Diesel (new) and DMU	96,138	96,138	96,138
Commuter Rail - Diesel (used)	96,138	96,138	96,138
Commuter Rail - Electric and EMU	82,225	82,225	82,225

Change in Energy Use Data Sources and Assumptions

Factor	Data Source or Assumption
Assumed fuel blends for gasoline and diesel	Gasoline: 10% ethanol Diesel: 10% biodiesel
Full fuel-cycle energy factors (measure of energy consumed by the transportation vehicle and energy associated with the extraction, transmission, and processing of fuels)_	GREET model for 2020
Automobile fuel economy	Projections from AEO 2012 (including Model Year 2012-2016 standards)
Transit vehicle energy intensity (Btu per mile)_ – (2010)	NTD averages by mode for diesel bus, heavy and light rail and commuter rail Trolleybus and CNG = diesel bus; hybrid = 20% improvement vs. diesel; streetcar = light rail vehicle DMU and EMU = commuter rail diesel or electric
Transit vehicle energy intensity – improvement factors (current year, 10-year horizon, 20-year horizon)	Buses - AEO average efficiency improvement for heavy duty vehicles (HDV) (18% by 2035) Diesel and electric rail - AEO average efficiency improvement for freight rail (3% by 2035)

FTA will value the change in energy use based on the economic cost of dependence on imported petroleum for fuels. FTA will use a value of $0.20 per gallon of petroleum fuel (Leiby/ORNL 2012).

Change in Greenhouse Gas Emissions

The calculation of the proposed unit rates for GHG emissions will use the same assumptions and data sources as the calculation of the change in energy and include the application of emissions factors by fuel type.

Change in Greenhouse Gas (CO2e) Emissions Factors

Mode	2013	2025	2035
		(g CO2e/VMT)	
Automobile	532	434	397
Bus – Diesel	3319	2854	2721
Bus – Hybrid	2655	2283	2177
Bus – CNG	2935	2524	2406
Bus - Electric	2934	2441	2303
Heavy Rail	3211	3106	3073
Light Rail and Streetcar	4779	4623	4574
Commuter Rail - Diesel (new) and DMU	7970	7970	7970
Commuter Rail - Diesel (used)	7970	7970	7970
Commuter Rail - Electric and EMU	5821	5632	5572

NOTE: The factor is CO2 equivalents (CO2e). This means that other greenhouse gas emissions (other than CO2) that have different rates of affecting global warming are converted into CO2 terms because that is the most prevalent greenhouse gas emission.

Change in Greenhouse Gas Emissions Data Sources and Assumptions

Factor	Data Source or Assumption
CO_2 emission factors by fuel type – liquid fuels and natural gas (kg/gal)	U.S. Energy Information Administration (EIA), Voluntary Reporting of Greenhouse Gases Program
GHG emission factors for electricity generation (kg/kWh)	AEO Reference Case (11% improvement by 2035)
CO_2equivelant to CO_2 scale factors by fuel type	GREET model
Full fuel-cycle GHG factors (ratio of fuel-cycle to operating GHG emissions)	GREET model for 2020

To capture the monetary value of change of GHG emissions, FTA will use the midrange damage estimate from National Research Council (2009) of $30 per ton of CO_2 equivalent.

Change in Safety

To measure change in safety, FTA will use the change in VMT to estimate changes in injuries and fatalities for automobiles and transit. FTA has not attempted to capture the changes in pedestrian or bicyclist accidents or injuries resulting from changes in VMT, because of the difficulty in accounting for such changes using readily available national data.

Change in Safety Factor

	Current Year		10-year Horizon		20-year Horizon	
Mode	*Fatalities*	*Injuries*	Fatalities	Injuries	Fatalities	Injuries
			(per million VMT)			
Automobile	0.013	0.195	0.013	0.195	0.013	0.195
Bus - Diesel	0.004	1.824	0.004	1.824	0.004	1.824
Bus - Hybrid	0.004	1.824	0.004	1.824	0.004	1.824
Bus - CNG	0.004	1.824	0.004	1.824	0.004	1.824
Bus - Electric	0.004	1.458	0.004	1.458	0.004	1.458
Heavy Rail	0.007	0.155	0.007	0.155	0.007	0.155
Light Rail and Streetcar	0.009	1.696	0.009	1.696	0.009	1.696
Commuter Rail - Diesel (new) and DMU	0.012	1.746	0.012	1.746	0.012	1.746
Commuter Rail - Diesel (used)	0.012	1.746	0.012	1.746	0.012	1.746
Commuter Rail - Electric and EMU	0.012	1.746	0.012	1.746	0.012	1.746

Change in Safety Data Sources and Assumptions

Factor	Data Source or Assumption
Fatality rates – automobiles	National Highway Traffic Safety Administration (NHTSA) - Fatal Accident Reporting System, 2000 – 2009
Injury rates – automobiles	Bureau of Transportation Statistics (BTS) reported motor vehicle safety data, 2000 - 2009
Fatality rates – transit (except commuter rail)	National Transit Database (NTD) 2000-2011 for bus, light rail, and heavy rail Electric bus, streetcar, DMU and EMU rates based on most similar corresponding mode from NTD
Injury rates – transit (except commuter rail)	NTD 2000-2011 for all reporting modes Streetcar, DMU, and EMU based on most similar corresponding mode from NTD
Fatality and injury rates – transit (commuter rail)	BTS reporting for passenger rail, 2000 – 2010
Value of a statistical life	2011 U.S. DOT memorandum on Value of a Statistical Life
Value of an injury by severity level	Federal Highway Administration (FHWA) Highway Safety Manual (2009), based on KABCO scale
Distribution of injuries by severity level – automobile	NHTSA General Estimates System 2010 crash data, disabling injuries only to match what is available through NTD reporting requirements
Distribution of injuries by severity level – transit	Disabling injuries only, based on NTD reporting requirements

To monetize the estimated changes in safety, FTA will use U.S. DOT guidance on the value of a statistical life and injuries. According to the most recent guidance, published in 2011, the current U.S. DOT value of a statistical life is $6.2 million and the value for a disabling injury for both transit and automobiles is $323,300. FTA will update these figures whenever U.S. DOT publishes revised values.

Environmental Benefits Breakpoints

The environmental benefits measure for New Starts projects is the sum of the monetized value of the benefits resulting from the changes in air quality and GHG emissions, energy use, and safety divided by the same annualized capital and operating cost of the project as used in the cost effectiveness measure. FTA will multiply the resulting ratio by 100 and express the environmental benefit measure as a percentage.

The environmental benefits measure for Small Starts projects is the sum of the monetized value of the benefits resulting from the changes in air quality and GHG emissions, energy use, and safety divided by the federal share of the project as used in the cost effectiveness measure. FTA will multiply the resulting ratio by 100 and express the environmental benefit measure as a percentage.

Below are the proposed environmental benefits breakpoints for both New and Small Starts projects

Rating	Range
High	> 10%
Medium-High	5 to 10%
Medium	0 to 5%
Low-Medium	-5 to -10%
Low	< -10%

Citations

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U.S. Environmental Protection Agency (2012). "PM2.5 Benefit per Ton Estimates." http://www.epa.gov/oaqps001/benmap/bpt.html.

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passenger cars and light trucks. Volatile Organic Compounds (VOC) is reported for automobile and diesel bus and Non-methane hydrocarbons (NMHC) for CNG bus.

COST EFFECTIVENESS

Measures:
The cost effectiveness measure for New Starts projects is the annual capital and operating cost per trip on the project. For Small Starts projects, the cost effectiveness measure is the annualized federal share of the project per trip on the project. The number of trips on the project is not an incremental measure but simply total estimated trips on the project. The cost part of the New Starts cost-effectiveness calculation is an incremental measure requiring a point of comparison. For estimates based on current year data, the annual capital and operating cost for the proposed project will be compared to the existing transit system. If a project sponsor also chooses to estimate the measure based on 10-year horizon data, the annual capital and operating cost of the proposed project will be compared to the no-build transit system (which includes the existing transportation system as well as those transportation investments committed in the Transportation Improvement Plan (TIP) pursuant to 23 CFR Part 450.) If a project sponsor chooses to estimate the measure based on 20-year horizon data, the annual capital and operating cost of the proposed project will be compared to the annual capital and operating cost of the projects identified in the Metropolitan Planning Organization's fiscally constrained long range plan (excluding the proposed build alternative.)

Calculation:
For New Starts projects, the cost-effectiveness measure will be computed as the annualized capital cost plus annual operating cost of the project divided by the annual number of estimated trips on the project. For calculation of this measure, the capital costs of scope elements considered "enrichments" will be either reduced by an FTA defined percentage or eliminated entirely from the calculation. "Enrichments" are defined in the final rule as improvements to the transit project that are desired by the project sponsor but are non-integral to the planned functioning of the project, and whose benefits are not captured in whole by the criteria. The "enrichments" will be allowable expenses for reimbursement under a future Federal New Starts construction grant.

The "enrichments" will be based on costs associated with certain Activity Line Items (ALIs) in the FTA Standard Cost Category worksheet. FTA, through its Project Management Oversight Contractors, will verify "enrichments" claimed by project sponsors. FTA will allow the following "enrichments" to be excluded from the New Starts cost effectiveness calculation:

- **ALI 40.06 Artwork, Landscaping, and Bicycle and Pedestrian Improvements** – All costs of this line item may be removed from the cost effectiveness calculation. All proposed bicycle and pedestrian improvements must be consistent with FTA's Bicycle and Pedestrian policy.
- **ALIs 20.01 through 20.04 and 30.01 through 30.04 Sustainable Building Design Features --** Up to 2.5 percent of the cost of facilities designed to achieve U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) or a comparable third-party certification (i.e., ENERGY STAR, BREEAM) may be removed from the cost effectiveness calculation. Projects that include buildings optimized to use less energy, consume less water and reduce greenhouse gas emissions may also claim the credit, even if the improvements do not lead directly to an official certification. Examples of eligible improvements include landscape and exterior site designs that improve water efficiency and management, and renewable and alternative energy

technologies that support greenhouse gas emissions reduction. The 2.5 percent factor is based on studies completed in 2003 and 2004 by the General Services Administration (GSA) and State of California that estimated the average incremental construction cost associated with achieving LEED certification. FTA does not propose to credit the professional services cost of sustainable building design because the studies indicated that this is a very small fraction of a capital project's cost (0.1 to 0.3 percent).

- **ALI 70.04 Alternative Energy Vehicles**. Fifty percent of the purchase cost of "green" buses may be removed from the cost effectiveness calculation. Any type of clean fuel bus is eligible for the credit, including buses with compressed natural gas (CNG), hybrid, electric, or fuel cell propulsion. This allowance is based on a 2007 TCRP report, *Assessing and Comparing Environmental Performance of Major Transit Investment,* that found the average cost difference between a conventional diesel bus and a CNG or hybrid bus is approximately 50 percent.
- **ALI 20.05 Joint Development** – This ALI's identifies items eligible for Federal participation per Section 5302(a)(1)(g) of Chapter 49 USC and FTA's Joint Development Circular. All costs on this line item may be removed from the cost effectiveness calculation. Per FTA's Joint Development Guidance, "Joint development is any income-producing activity with a transit nexus related to a real estate asset in which FTA has an interest. Joint development projects are commercial, residential, industrial, or mixed-use developments that are induced by or enhance the effectiveness of transit projects. . ." FTA hopes that the credit will encourage sponsors to undertake joint development efforts as part of New and Small Starts projects; few to date have included joint development-related costs.

For Small Starts projects the cost-effectiveness measure will be computed as the annualized federal share of the project divided by the annual number of trips using the project.

- If the project sponsor chooses to develop estimates based on horizon year data in addition to developing estimates based on current year data, the overall measure of cost effectiveness would be a weighted average that considers both years. FTA will weight each 50 percent for the reasons described earlier in this guidance.

Sources of Information:
As is done today, annualized capital costs for New Starts projects will be taken directly from the FTA Standard Cost Categories (SCC) spreadsheet, specifically the annualization worksheet.

- As is done currently, capital costs will be expressed in the current year's dollar value.
- As is done currently, the annualization worksheet of the SCC spreadsheet will convert the capital cost of individual scope items into their equivalent annual cost based on their economic lifetimes and a discount rate. The discount rate will now be 2.0 percent rather than the 7.0 percent used previously.

Operating and maintenance (O&M) costs for New Starts projects would be taken directly from the O&M cost model(s) of current and proposed transit facilities and services.

- O&M costs from the model(s) for the current system in the current year would be required to match the current O&M budget and reflect any changes anticipated in the existing transit system to integrate the project into the system, as documented in the transit service plan for the project.
- If the project sponsor chooses to calculate the measure in a horizon year as well, the O&M cost estimates would be required to reflect the transit service plans for both the point of comparison and the project, including changes made to the point of comparison service plan needed to integrate the project into the system. Horizon-year O&M costs would be expressed in the current year's dollars.

Annualized Federal share for Small Starts projects will be calculated in the same way annualized capital cost is calculated for New Starts projects. The project sponsor will report capital costs in the standard cost category worksheets as they do today.

- As is done currently, capital costs will be expressed in the current year's dollar value.
- The annualization worksheet of the SCC spreadsheet will convert the capital cost of individual scope items into their equivalent Federal share based on the overall Federal share for the project. The Federal share for each individual scope item will be converted into its equivalent annual cost based on the item's economic lifetime and a discount rate. The discount rate will be 2.0 percent.

Trips on the project would be the number of linked trips using the project. Trips may be calculated using either the FTA developed simplified national model or the local travel model at the project sponsor's option.

Breakpoints

FTA examined data from projects currently in the New and Small Starts process and developed the proposed breakpoints below based on that information. FTA further compared the proposed New Starts breakpoints below to data contained on average annual capital and operating cost per trip of various modes in the National Transit Database and determined them to be reasonable and in line with expectations.

New Starts Cost Effectiveness Breakpoints
Annualized Capital and Operating Cost per Trip

Rating	Range
High	< $4.00
Medium-High	Between $4.00 and $5.99
Medium	Between $6.00 and $9.99
Medium-Low	Between $10.00 and $14.99
Low	> $15.00

Small Starts Cost Effectiveness Breakpoints
Annualized Federal Share per Trip

Rating	Range
High	< $1.00
Medium-High	Between $1.01 and $1.99
Medium	Between $2.00 and $3.99
Medium-Low	Between $4.00 and $5.00
Low	> $5.00

LAND USE

Measures:
The land use measure for both New and Small Starts projects will include an examination of existing corridor and station area development; existing corridor and station area development character; existing station area pedestrian facilities, including access for persons with disabilities; existing corridor and station area parking supply; and existing "legally binding affordability restricted" housing in the corridor and station areas.

A legally binding affordability restriction is a lien, deed of trust or other legal instrument attached to a property and/or housing structure that restricts the cost of housing units to be affordable to households at specified income levels for a defined period of time and requires that households at these income levels occupy these units. This definition, includes, but is not limited to, state or federally supported public housing, and housing owned by a non-profit organization dedicated to providing affordable housing.

One reason FTA chose to include affordable housing in this criterion was to ensure that neighborhoods surrounding proposed transit stations have the fundamentals in place to ensure that as service is improved over time there is a mix of housing options for existing and future residents. One measure of the readiness of a community to accept a new transit investment and avoid significant gentrification that can occur over time is the presence of "legally binding affordability restricted" units. These units have protections in place to ensure that they will continue to be available to low and moderate income households as changes in the corridor occur. Below FTA provides a set of breakpoints for evaluating the supply of existing "legally binding affordability restricted" units in the study area compared to the quantity of "legally binding affordability restricted" units in the region as a whole. FTA seeks feedback on this measure and the proposed breakpoints, including suggested alternatives to this approach. FTA notes that all of the land use measures proposed focus on the existing land use features in the corridor. In contrast, the economic development criterion focuses on the local plans and policies to impact future development, as well as future amounts of affordable housing.

Calculation:
FTA will base the rating primarily on quantitative measures, including station area population densities, total employment served by the project, and the share of "legally binding affordability restricted" housing in the corridor compared to total housing in the corridor. Poor pedestrian accessibility may reduce the rating, as it reduces the effective amount of population and employment directly served by the system. Otherwise, the presence of high trip generators, a pedestrian-accessible and friendly station area environment, and limited availability of parking all serve to support the rating.

Project sponsors will obtain population and employment information from census data.

To develop information on "legally binding affordability restricted" housing located in the proposed corridor and the region as a whole, project sponsors should consult with area housing agencies and obtain a certification from the applicable agency head(s) that states the number of rental and owner housing units with legally binding affordability restrictions. Project sponsors will submit this information, including a signed certification by the head(s) of the housing agency(ies) from the relevant jurisdictions. FTA is proposing to assign a value to this measure by comparing the share of "legally binding affordability

restricted" housing in the corridor with the region's share overall of "legally binding affordability restricted" housing.

FTA invites comments on its proposed approach for examining affordable housing as well as on potential alternative way to measure existing affordable housing in the corridor. Alternative measures could include a simple total affordable housing quantity measure and/or a ratio such as affordable housing units per low income household. FTA would appreciate comments that provide a brief discussion of the pros and cons of any alternative approaches suggested.

Breakpoints

Two of the individual measures under the land use criterion, station area population and employment densities, are proposed to have the same breakpoints as currently defined, which are shown in the table below. These breakpoints apply to both New and Small Starts projects.

	Station Area Development		Parking Supply	
Rating	**Employment served by system**	**Avg Population density (persons/square mile)**	**CBD typical cost per day**	**CBD spaces per employee**
High	> 250,000	> 15,000	> $16	< 0.2
Medium-High	175,000-250,000	10,000 - 15,000	$12 - $16	0.2 – 0.3
Medium	125,000-175,000	6,667 - 10,000	$8 - $12	0.3 – 0.4
Medium-Low	75,000-125,000	3,333 - 6,667	$4 - $8	0.4 – 0.5
Low	<75,000	< 3,333	< $4	> 0.5

The breakpoints for the share of "legally binding affordability restricted" housing in the corridor compared to the region's share of "legally binding affordability restricted" housing are shown in the table below. These breakpoints apply to both New and Small Starts projects.

Rating	**Legally Binding Affordability Restricted Housing Corridor's Share compared to Region's Share**
High	> 10%
Medium-High	5% - 10%
Medium	0% - 5%
Medium-Low	-10% - 0%
Low	> -10%

CONGESTION RELIEF

Until such time as FTA can undertake a subsequent rulemaking process to implement all of the provisions of MAP-21, including development of a measure for the congestion relief resulting from implementation of a proposed New or Small Starts project, FTA will assign a medium rating to this criterion for all projects seeking New or Small Starts funds.

III. LOCAL FINANCIAL COMMITMENT

Measures:
Section 5309 (d) and (h) of Title 49 USC requires that proposed New and Small Starts projects be supported by an acceptable degree of local financial commitment, including evidence of stable and dependable financing sources to construct, maintain and operate the transit system or extension, and maintain and operate the entire public transportation system without requiring a reduction in existing services. The measures to be used for the evaluation of the local financial commitment for proposed New and Small Starts projects are:

- The proposed share of total project capital costs from sources other than the Section 5309 major capital investment program;
- The current financial condition, both capital and operating, of the project sponsor;
- The commitment of funds for both the proposed project and the ongoing operation, including whether there is private participation; and, maintenance of the project sponsor's system once the project is built.
- The reasonableness of financial plan, including planning assumptions, cost estimates, and the capacity to withstand funding shortfalls or cost overruns.

As is done currently, Small Starts projects are proposed to qualify for a highly simplified financial evaluation if the project sponsor can demonstrate the following:

- A reasonable plan to secure funding for the local share of capital costs or sufficient available funds for the local share;
- The additional operating and maintenance cost to the agency of the proposed Small Starts project is less than five percent of the project sponsor's existing operating budget; and
- The project sponsor is in reasonably good financial condition, as demonstrated by the past three years' audited financial statements indicating a positive cash flow over the period, a reasonable current ratio, and no material findings.

Small Starts projects that meet these measures and request greater than 50 percent Small Starts funding will receive a local financial commitment rating of *Medium*. Small Starts projects that request 50 percent or less in Small Starts funding will receive a *High* rating for local financial commitment. Small Starts projects which cannot qualify for this highly simplified financial evaluation will be evaluated and rated in the same manner as New Starts projects.

Calculation:
Individual ratings will be given to each of the following measures:

1. The rating for the current operating and capital condition of the project sponsor will be based upon the average fleet age, the project sponsor's bond rating if given within the last two years, the project sponsor's current ratio as shown in its most recent audited financial statement (ratio of

current assets to current liabilities), and the project sponsor's service history including whether there have been recent significant cuts in service.

2. The level of commitment of capital and O&M funds, including consideration of whether there is private participation;
3. The rating for the reasonableness of the financial plan will be based upon whether capital and operating planning assumptions are comparable to historical experience, the reasonableness of the capital cost estimate of the project, adequacy of meeting state of good repair needs, and the project sponsor's financial capacity to withstand cost increases or funding shortfalls.

The summary local financial commitment rating will also take into consideration the share of Section 5309 major capital investment funding requested. If the Section 5309 share is less than 50 percent of the project's capital cost (i.e., the project sponsor is providing significant overmatch), then the summary local financial commitment rating will be raised one level.

	High	Medium-High	Medium	Medium-Low	Low
Current Capital and Operating Condition (25% of local financial commitment rating)	• Average bus fleet age under 6 years. • Bond ratings less than 2 years old (if any) of AAA (Fitch/S&P) or Aaa (Moody's) • Historical and actual positive cash flow. No cash flow shortfalls. • Current ratio exceeding 2.0 • No service cutbacks in recent years.	• Average bus fleet age under 6 years. • Bond ratings less than 2 years old (if any) of A (Fitch/S&P) or A2 (Moody's) or better • Historical and actual positive cash flow. No cash flow shortfalls. • Current ratio exceeding 1.5 • No service cutbacks in recent years.	• Average bus fleet age under 8 years. • Bond ratings less than 2 years old (if any) of A- (Fitch/S&P) or A3 (Moody's) or better • Historical and actual positive cash flow. No cash flow shortfalls. • Current ratio exceeding 1.2 • No service cutbacks in recent years	• Average bus fleet age under 12 years. • Bond ratings less than 2 years old (if any) of BBB+ (Fitch/S&P) or Baa (Moody's) or better • Historical and actual positive cash flow. No cash flow shortfalls. • Current ratio exceeding 1.0 • Major service cutbacks in recent years.	• Average bus fleet age of 12 years or more. • Bond ratings less than 2 years old (if any) of BBB (Fitch/S&P) or Baa3 (Moody's) or below • Historical and actual positive cash flow. No cash flow shortfalls. • Current ratio less than1.0 • Major service cutbacks in recent years.
Commitment of capital and operating funds (25% of local financial commitment rating)	• At least 75% of the Non-Section 5309 capital funds are committed or budgeted. • At least 75% of the funds needed to operate and maintain the proposed transit system are committed or budgeted.	• At least 50% of the Non-Section 5309 capital funds are committed or budgeted. • At least 50% of the funds needed to operate and maintain the proposed transit system are committed or budgeted.	• At least 25% of the Non-Section 5309 capital funds are committed or budgeted. • At least 25% of the funds needed to operate and maintain the proposed transit system are committed or budgeted.	• At least 10% of the Non-Section 5309 capital funds are committed or budgeted. • While no additional operating and maintenance funding has been committed, a reasonable plan to secure funding commitments has been presented.	• Less than 10% of the Non-Section 5309 capital funds are committed or budgeted. • The applicant does not have a reasonable plan to secure operating and maintenance funding.
Reasonableness of capital and operating cost estimates and planning assumptions/capital funding capacity (50% of local financial commitment rating)	• Financial plan contains very conservative planning assumptions and cost estimates when compared with recent historical experience. • The applicant has access to funds via additional debt capacity, cash reserves, or other committed funds to cover cost increases or funding shortfalls equal to at least 50% of estimated project cost and 50% (6 months) of annual system wide operating expenses.	• Financial plan contains conservative planning assumptions and cost estimates when compared with recent historical experience. • The applicant has access to funds via additional debt capacity, cash reserves, or other committed funds to cover cost increases or funding shortfalls equal to at least 25% of estimated project cost and 25% (3 months) of annual system wide operating expenses.	• Financial plan contains planning assumptions and cost estimates that are in line with recent historical experience. • The applicant has access to funds via additional debt capacity, cash reserves, or other committed funds to cover cost increases or funding shortfalls equal to at least 15% of estimated project cost and 12% (1.5 months) of annual system wide operating expenses.	• Financial plan contains optimistic planning assumptions and cost estimates when compared to recent historical experience. • The applicant has access to funds via additional debt capacity, cash reserves, or other committed funds to cover cost increases or funding shortfalls equal to at least 10% of estimated project cost and 8% (1 month) of annual system wide operating expenses.	• Financial plan contains planning assumptions and cost estimates that are far more optimistic than recent history suggests. • The applicant has a reasonable plan to cover only minor (under 10%) capital cost increases or funding shortfalls. • Projected operating cash balances are insufficient to maintain balanced budgets.