



METS

COMPREHENSIVE OPERATIONS ANALYSIS

Five Year Service Plan

December 2015

RESOLUTION NO. 2015-01

**A RESOLUTION OF THE EVANSVILLE METROPOLITAN PLANNING ORGANIZATION
ADOPTING THE METROPOLITAN EVANSVILLE TRANSIT SYSTEM COMPREHENSIVE
OPERATIONS ANALYSIS FINAL REPORT**

WHEREAS, the Evansville Metropolitan Planning Organization is the organization designated by the Governor as the Metropolitan Planning Organization responsible, together with the State, for carrying out the provisions of 23 U.S.C. 134 and 135 (metropolitan and statewide transportation planning), and 49 U.S.C. 5303 (metropolitan transportation planning) in the Evansville Urbanized Area; and

WHEREAS, the Evansville Metropolitan Planning Organization ensured the planning process for the Metropolitan Evansville Transit System Comprehensive Operations Analysis was conducted in an open, participatory manner, as required by the Moving Ahead for Progress in the 21st Century Act (MAP-21); and

WHEREAS, it is the intent of the Evansville Metropolitan Planning Organization to support the City of Evansville and the Metropolitan Evansville Transit System in providing safe, efficient, convenient and affordable public transportation for the citizens of the City of Evansville; and

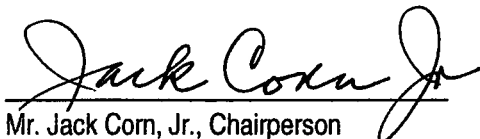
WHEREAS, the Evansville Metropolitan Planning Organization intends to assist the City of Evansville and the Metropolitan Evansville Transit System in implementing the public transportation improvements outlined in the Comprehensive Operations Analysis Final Report; and

WHEREAS, the Evansville Metropolitan Planning Organization is committed to providing a public transportation service which will improve access and mobility for all, reduce auto emissions and congestion, and encourage the use of alternative modes of transportation, while increasing the quality of life for residents within the planning areas of Vanderburgh, Warrick, and Henderson counties; and

WHEREAS, the Metropolitan Evansville Transit System Comprehensive Operations Analysis Final Report is consistent with the Vision, Goals, and Objectives presented in the 2040 Metropolitan Transportation Plan and the themes presented in The Millennial Plan for 2040: A Regional Plan for Sustainable Development.

NOW, THEREFORE, BE IT RESOLVED, that the Evansville Metropolitan Planning Organization hereby adopted the Metropolitan Evansville Transit System Comprehensive Operations Analysis Final Report.

ADOPTED by the Policy Committee of the Evansville Metropolitan Planning Organization on this 3rd day of December, 2015.



Mr. Jack Corn, Jr., Chairperson
Evansville Metropolitan Planning Organization
Policy Committee

ACKNOWLEDGEMENTS

The Evansville Metropolitan Planning Organization, the City of Evansville, and the Lochmueller Group appreciates the efforts of the hundreds of citizens and community members who participated in the development of the Metropolitan Evansville Transit System Comprehensive Operations Analysis through the stakeholder meetings, public meetings, website comments, and public surveys. Their creativity, passion, enthusiasm, and commitment to a brighter future for public transit were integral to the success of this planning effort. The following citizens, City staff, and agency and organization representatives significantly contributed to the development of the plan.

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FIVE YEAR SERVICE PLAN

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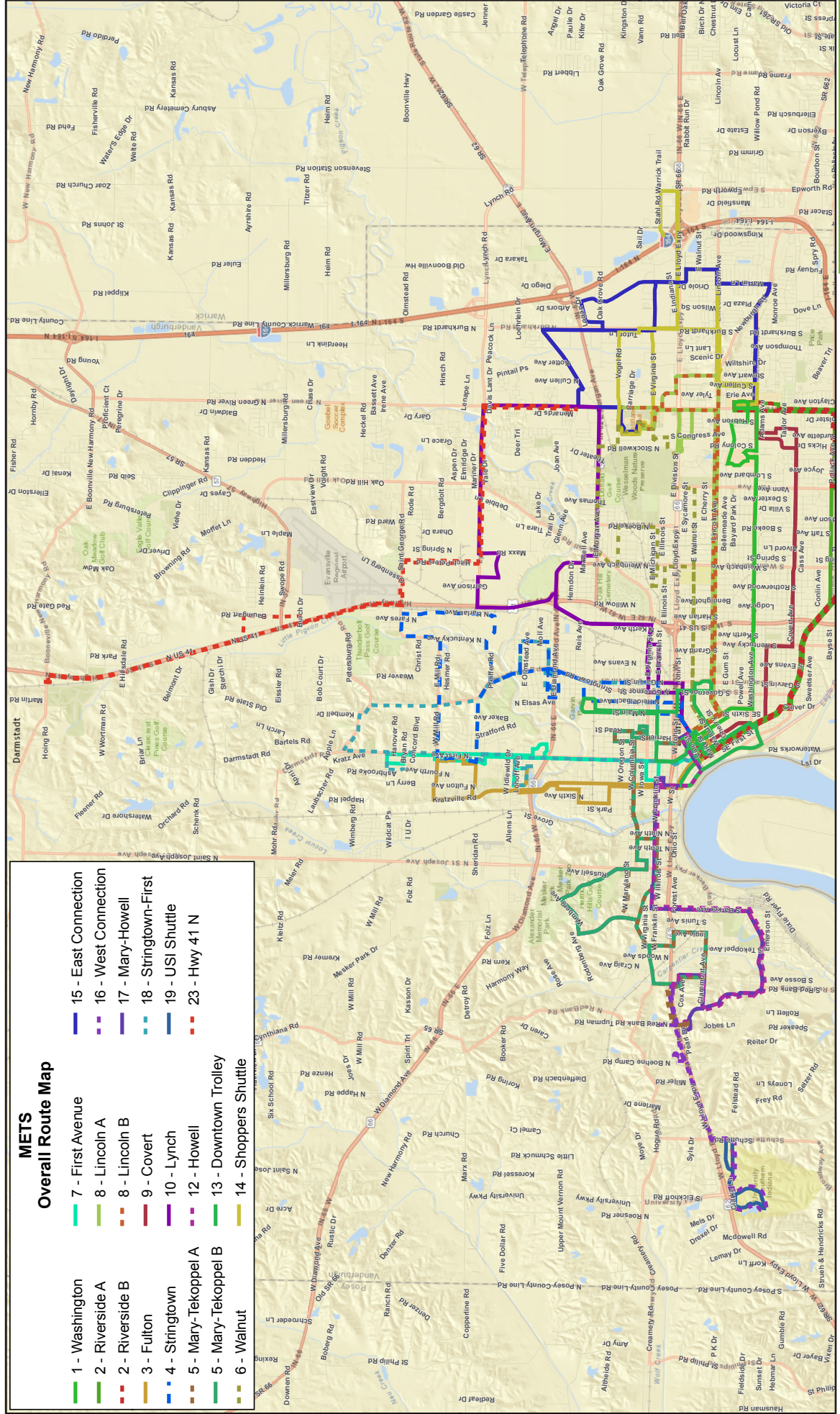
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METS

Evansville MPO



Henderson • Vanderburgh • Warrick



METS Overall Route Map

- | | | |
|---------------------|-----------------------|-----------------------|
| 1 - Washington | 7 - First Avenue | 15 - East Connection |
| 2 - Riverside A | 8 - Lincoln A | 16 - West Connection |
| 2 - Riverside B | 8 - Lincoln B | 17 - Mary-Howell |
| 3 - Fulton | 9 - Covert | 18 - Stringtown-First |
| 4 - Stringtown | 10 - Lynch | 19 - USI Shuttle |
| 5 - Mary-Tekoppel A | 12 - Howell | 23 - Hwy 41 N |
| 5 - Mary-Tekoppel B | 13 - Downtown Trolley | |
| 6 - Walnut | 14 - Shoppers Shuttle | |

Key Findings And Recommendations

Following are the key findings from the Comprehensive Operations Analysis of the Metropolitan Evansville Transit System (METS). These findings are further described in this Executive Summary, and are presented in detail in the full Five-Year Service Plan Report.

- **Significant capital investment in the METS fixed-route bus fleet is required.** As of January 1, 2015 18 of 36 (50%) of the METS fixed-route bus fleet was at or beyond its useful life. For this reason, the Five-Year Service Plan does not recommend increases in peak buses operated until 2018. We recommend METS acquire three new full-size transit coaches per year in 2016 through 2018, and that it acquire four new full-sized transit coaches in each of 2019 and 2020. This program will bring the METS fixed-route fleet up to industry standards by the year 2020.
- **METS routes and schedules require major simplification; this is a major obstacle to attracting choice ridership.** Key initiatives include simplifying routes to eliminate multiple variations; providing public schedules which list every trip, including time points; designating routes by route number; and eliminating “A” and “B” variations.
- **METS has a significant need for professional management and added professional staffing.** The METS Director vacancy should be filled with an individual with significant transit managerial experience. This may require using the services of a management company. A vital new staff position at METS is a Manager of Service Planning, Schedules and Marketing.
- **This added professional staffing is essential to implement the Five-Year Service Plan in a cost-effective manner.** Without a Manager of Service Planning, Scheduling and Marketing, METS lacks the capacity and professional experience to successfully implement the Five-Year Service Plan. It is likely that the service increases recommended in the Five-Year Service Plan would be implemented in a very **cost-ineffective** manner without added professional staffing.
- **Formal service standards are needed to provide METS routes and schedules in an understandable and cost-effective way.** Many METS routes and schedules are very confusing. This is in large part due to a lack of formal, quantitative service guidelines. These are recommended as part of the Five-Year Service Plan.
- **There is significant opportunity to operate METS Mobility more cost-effectively.** METS Mobility costs are about 25% of METS total operating costs. This is a much higher percentage than for other large bus systems in Indiana. The 2013 INDOT Statewide Public Transit Report shows that Indiana’s 7 other Group 1 (large) systems spend an average of 12% of total operating expenses on demand-response service.
- **A common theme of many key findings is the need for METS to adopt standard transit business practices. An important step to achieve this is to operate METS as a Public Transportation Corporation.** METS should become a Public Transportation Corporation, as provided in Indiana Code IC 36-9-4. Of eight transit systems classified by INDOT as Group 1 systems, only Evansville is not operated as a PTC. A PTC provides dedicated local funding. A separate PTC board of directors oversees professional system managers.

FIVE YEAR SERVICE PLAN

Introduction

This Executive Summary gives the findings and recommendations of the Five-Year Service Plan Report (Five-Year Service Plan) for the METS Transit Comprehensive Operations Analysis (COA). The COA is a year-long top-to-bottom review of the service and operations of the Metropolitan Evansville Transit System (METS). A COA is a standard transit business practice. Typically, it includes a detailed review of routes, schedules, operating practices and the state of a system's physical assets. It evaluates a transit system by comparison with peer operations. It compares the efficiency and effectiveness of individual routes.

This report is the summary of the final Five-Year Service Plan. A draft report was issued in July 2015. Potential service changes were grouped in three potential five-year service plans for public and stakeholder input and review. This final Five-Year Service Plan is based upon this input and review. It will serve as the basis for METS service planning efforts going forward. It also includes fare changes and operating cost savings which support the elements of the Five-Year Service Plan.

In addition to service and fare changes (Section 5 of the Five-Year Service Plan Report), this Executive Summary discusses other parts of the Five-Year Service Plan Report.

- **Section 1 – Evaluating Demand for Improved Service.** Forecasting methods for predicting ridership impacts for fare and service changes are summarized.
- **Section 2 – Fleet, Facilities, Technology and Passenger Communications.** A major topic of this section is the importance of bringing the METS fleet into a “state of good repair.”¹ This requires increases in new bus purchases over those programmed in the 2016 – 2019 Transportation Improvement Program (TIP) of the Evansville MPO (EMPO).
- **Section 3 – Service Standards.** Formal service standards are provided. After approval, these will constitute formal “rules” by which fixed route bus service is provided.
- **Section 4 – Website Comments and Survey Summary.** Over 200 comments were received on the project website. In addition, a web-based public survey was taken in January and February, 2015. This survey sought input on service plan elements.
- **Section 6 – Review and Evaluate Transfer Centers.** An assessment was made of all METS transfer centers. Recommendations are provided for upgrades to each.
- **Section 7 – Title VI Policy and Evaluation.** A revised and updated Title VI policy is provided. This policy (which incorporates the Service Standards provided in Section 3) requires approval by ordinance by the Evansville City Council.
- **Section 8 – METS Mobility/ADA Analysis.** Recommended operating economies are made for METS Mobility service. METS Mobility uses a much higher portion of total system operating budget than any other peer system in Indiana. A recommendation also is made to strongly consider contracting the METS Mobility service.
- **Section 9 – Staffing and Organizational Assessment.** It is recommended that the METS Director vacancy be filled with an experienced transit manager. Recommendations are made for a review of other managerial assignments. This section identifies the need for two new staff

¹ “State of good repair” is a transit industry term which describes major capital resources (fleet, passenger facilities and maintenance/repair facilities) in an age and condition which conform to accepted industry guidelines. For a fixed route bus fleet of standard transit coaches to be in a “state of good repair,” average vehicle age should be about six years, with vehicles purchased at relatively even intervals in time. This is based upon a standard transit coach having a useful life of 12 years or 500,000 miles.

FIVE-YEAR SERVICE PLAN – EXECUTIVE SUMMARY

positions to support the service plan recommendations. It also recommends that METS be reorganized to be operated as a Public Transportation Corporation.

- **Section 10 – Scheduling and Run-Cutting Recommendations.** A detailed evaluation of METS scheduling practices identified areas for significant improvement. This review identified standard bus transit scheduling practices, and how they can be implemented at METS. Recommendations include a major overhaul of bus operator schedules and public timetables. Hiring a Manager of Service Planning, Scheduling and Marketing is critical to implementing sound bus operator scheduling practices, as well as implementing the Five-Year Service Plan. Recommendations also include adoption of Scheduled Transit Operations (STO) -based budgeting for METS bus operators. Existing budgetary practices requires separate approval for each new bus operator position. STO-based budgeting entails approval of a pay-hour budget rather than a headcount quota. Present headcount-based budgeting has led to excessive bus operator overtime costs.
- **Section 11 – Marketing.** A professional market research firm surveyed several hundred users and non-users of METS service in Evansville. The survey sought to learn how to make METS service attractive to those with other transportation options (choice riders) who currently do not use METS service. The primary conclusion drawn from this research was that METS routes and schedules require significant simplification. Initiatives to achieve this goal include eliminating confusing route variations, emphasizing route numbers, providing public schedules with individual trips with time points, and eliminating the “A” and “B” trip designations.

1 Evaluating Demand for Improved Service

Demand for transit service and fare changes was evaluated using guidance from recent FTA-sponsored research. This research indicated that external factors (such as median household income, carless households, population density and vehicles per household) are not statistically significant predictors for transit bus ridership. Ridership impacts of service changes were forecasted using appropriate transit service elasticities from published research, as well as route-specific information from onboard surveys and ride counts conducted as part of this study.

2 Fleet, Facilities, Technology and Passenger Communications (Section 2 of Five-Year Service Plan Report)

This section identifies the need for a significant increase in fixed route bus purchases to bring the METS fleet to a “state of good repair.” As of January 1, 2015, one-half of the vehicles in the METS fixed route fleet were at or beyond their useful lives. The recommendations call for an acceleration of bus purchases to 3 vehicles/year starting in 2016, increasing to 4 vehicles/year in 2019 and 2020. The age of the METS fixed route fleet is a major constraint on METS’ ability to expand service.

The Evansville MPO’s (EMPO) 2016 – 2019 Transportation Improvement Program (TIP) provides for purchasing one transit bus in each of these four years, at a cost of \$468,000.² The recommended purchase of 3 – 4 buses per year beginning in 2016 (at \$468,000 per bus) requires capital spending of \$936,000 to \$1,404,000 annually in addition to what is included in the current TIP.

² A TIP amendment approved in September 2015 increased 2016 bus purchases to two full-sized buses.

FIVE YEAR SERVICE PLAN

It also is recommended that significant investments in additional technology (such as automatic passenger counters and fareboxes) be deferred. Capital spending should focus on bringing the fixed route fleet to a state of good repair.

3 Service Standards (Section 3 of Five-Year Service Plan Report)

Formal service standards are proposed for METS fixed route operations. There are specific service standards for the following aspects of transit service.

- *Route coverage* – Percentage of population within specified walking distance of a route.
- *Bus stop spacing* – Specifies minimum bus stop spacing.
- *Span of service* – How early and late a route operates, by day of the week, as a function of ridership.
- *Frequency* – How often buses operate on a route, as a function of ridership.
- *Loading* – Relationship between peak loading and capacity of vehicles assigned to a route.
- *Route spacing and directness* – Standards for distance routes can deviate from a main arterial, as a function of deviation time and ridership.
- *On time performance* – Specifies how “on-time” service is defined and monitored.
- *Service amenities* – Specifies when shelters and benches are provided, as a function of numbers of passengers boarding.
- *Service expansion and reduction* – Specifies the process by which service is increased or decreased by applying standards specified above.
- *Public participation* – Defines “major” changes in fares, facilities and service, and governs public participation in such major changes.

4 Website Comments and Survey (Section 4 of Five-Year Service Plan Report)

The project website for the COA (<http://metstransitstudy.info>) provided public input throughout the study. Dozens of comments on all aspects of METS service have been provided. In addition, a public input survey was conducted via the project website during portions of January and February 2015.

4.1 Website Comments

Through the end of July 2015, 233 comments were provided to the project website. All comments were carefully considered and used to guide the study’s recommendations. Points of emphasis for these comments include:

- **Requests for increased service and schedule modifications.** Multiple requests were received to operate Sunday service and later evening service on certain routes.
- **Requests for specific route improvements and modifications.**
- **Bus stops and bus stop signage.** Comments addressed bus stops, their location, signage, and route/schedule information at bus stops.
- **Rider Safety.** Comments were received regarding safety issues at the Downtown Transfer Center. Safety issues were cited regarding specific stops.
- **Bus and Equipment Condition.** Many issues were noted with specific buses. Comments addressed heating and air conditioning issues, as well as the general condition of older buses.

4.2 Web-Based Customer Survey

Between Monday, January 26 and Saturday, February 21 a web-based survey was conducted. A total of 291 survey responses were received. Questions were directed to the following issues.

- **Sunday service.** Respondents were asked about routes on which Sunday service should be provided. Many comments were received regarding specific destinations or trip purposes which should be served on Sunday.
- **More frequent service.** Both specific routes and major employers were identified which would benefit from more frequent service.
- **Longer hours of service.** Requests were received for both earlier and later service on a number of routes. Broader spans of service would allow more workers starting early and/or ending work later to use METS service. Requests for later service also cited social and entertainment trips.
- **Bus stop and transfer terminal improvements.** Many requests were made for improvements to specific bus stops. These included shelters, benches and improved passenger information. Multiple requests were made for safety improvements at the Downtown Transfer Center.
- **Geographic areas lacking service.** Locations lacking bus service were identified. Many of these are outside of Evansville (including Vanderburgh County, as well as Warrick, Gibson and Henderson counties).

5 Recommended New/Modified Fixed Routes, Services and Fares (Section 5 of Five-Year Service Plan Report)

This is the “core” of the COA’s recommendations. A draft report with many possible service changes was issued in July 2015 for public and stakeholder review. This final Five-Year Service Plan is based upon this input and review. It will serve as the basis for future METS service planning efforts. It also includes fare changes and operating cost savings to support the Five-Year Service Plan.

5.1 Route, Service and Fare Changes

Following are the elements of the recommended Five-Year Service Plan.

March 2016 Implementation

- Sunday service on Routes 1- Washington, 2 – Riverside, 5 – Mary/Tekoppel, 6 – Walnut, 7 – First Avenue, 9 – Covert and 14 – Shoppers Shuttle.
- Consolidate Routes 14 – Shoppers Shuttle & 15 – East Connection.
- Implement fixed route adult fare increase to \$1.25, and implement \$0.25 transfer charge. Other fares (elderly/disabled, student, tokens and Mobility) are raised proportionately. Monthly pass prices remain unchanged from present levels.
- Implement Mobility fare changes to allow ADA-eligible riders and convenience fare riders to use fixed route service without payment of fare. Discontinue availability of Mobility service to convenience fare riders.

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September 2016 Implementation

- Realignments of Routes 2 – Riverside, 3 – Fulton, 4 – Stringtown, 5 – Mary/Tekoppel, 8 – Lincoln, 13 – Downtown Trolley, 18 – Stringtown/First, 23 – US Highway 41 North.
- Establish new northeast side crosstown services on Routes 6 – Walnut, 10 – Lynch and 11 – Morgan.
- Establish Downtown-USI Express service.
- Consolidate Routes 5 – Mary/Tekoppel and 12 – Howell. Discontinue evening-only Route 17 – Mary/Howell.

2017 Implementation

- Provide evening service on Routes 4 – Stringtown, 6 – Walnut, 7 – First Avenue and 10 – Lynch. Discontinue evening-only Route 18 – Stringtown/First Ave.

2018 Implementation

- Increase daytime frequencies on Route 7 – First Avenue from 1 bus/hour to 2 buses/hour.
- Implement new Green River Road crosstown.

2020 Implementation

- Implement weekday peak period Warrick-Lawndale-Downtown Express service.

5.2 Financial/Funding Projections

Table ES.1 shows projected yearly METS operating revenues from all sources, as well as total operating costs. Details are provided in Section 5.3 of the Five-Year Service Plan Report. These forecasts assume that all service plan elements (including fixed-route fare changes, Mobility fare policy changes and operating economies) are implemented as described in this document. These forecasts assume that Five-Year Service Plan elements for 2017 to 2020 are implemented in September of each year. Table references within Table ES.4 are to tables in the main Five-Year Service Plan Report.

Table ES.1 – METS Five-Year Service Plan – Forecasted Operating Costs and Revenues

METS Five-Year Service Plan - Funding Status (Thousands of Dollars)						
Year	Table 5.13	Table 5.9	Total Operating Costs	Table 5.18	Funding Overage/(Shortfall)	
	Baseline Operating Costs	Added Service Plan Costs		Available Funds	Year	Cumulative
2016	\$ 9,030	\$ 208	\$ 9,238	\$ 9,570	\$ 332	\$ 332
2017	\$ 9,450	\$ 445	\$ 9,895	\$ 10,124	\$ 229	\$ 561
2018	\$ 9,880	\$ 719	\$ 10,599	\$ 10,500	\$ (99)	\$ 462
2019	\$ 10,320	\$ 909	\$ 11,229	\$ 10,896	\$ (333)	\$ 129
2020	\$ 10,800	\$ 945	\$ 11,745	\$ 11,313	\$ (432)	\$ (303)

In years 1 and 2 of the Five-Year Service Plan (2016 and 2017) projected funding is slightly higher (by 2 – 3%) than projected operating expenses. However, by Year 3 (2018), operating expenses exceed available funding. By Year 5, the projected operational funding shortfall is over \$400,000.

FIVE-YEAR SERVICE PLAN – EXECUTIVE SUMMARY

These projections (especially for government funding) are quite assumption-sensitive. These projections do indicate that the initial years of the Five-Year Service Plan fall within reasonably available funding. These projections also assume that the following are implemented in March or September 2016, as described in Section 5.3 of the main Five-Year Service Plan Report.

- Increase in base fare
- Institution of a transfer charge
- Service economies from route consolidations
- Operational economies from METS Mobility fare policy changes

In addition, these forecasts assume that other study recommendations are implemented. These include:

- Fixed-route fleet upgrades, which will reduce vehicle maintenance costs.
- Additional drivers are hired as shown for the various service improvements. This will avoid excessive overtime costs.

Without these changes in operating policies and business practices, recommended improvements (such as Sunday Service) are not financially feasible.

To the extent that these major initiatives do not occur in 2016, or government funding is less than estimated, other sources of funding will need to be identified. Any added funding needs likely will need to be identified at the local and regional level. One of the recommendations of this project is the establishment of a Public Transportation Corporation (PTC) for Evansville. A PTC would have a dedicated source of local funding which could supplement other sources of revenue.

6 Review and Evaluate Transfer Centers (Section 6 of Five-Year Service Plan Report)

The study determined that existing METS transfer centers are in appropriate locations. No new transfer center is recommended. A review of existing transfer centers recommends improvements to each. Highlights include:

- Lighting, public information and other improvements at the Downtown Transfer Center. Estimated cost is \$73,000.
- New facilities constructed at Eastland Mall, West Side Schnucks, and North Park. Estimated costs range from \$30,000 to \$89,000.
- Upgrades to the ITT-Newburgh Campus transfer center (shared with Warrick County Area Transit (WATS). Estimated cost is \$25,000.
- New Park-and-Ride facility and transfer center at Lawndale. Estimated cost is \$1,408,000.

7 Title VI Policy and Evaluation (Section 7 of Five-Year Service Plan Report)

METS is committed to a policy of nondiscrimination. METS has a Title VI Program as required by Circular 4702.1B, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients." The program reflects METS' commitment to ensuring that no person shall, on the grounds of race, color, or

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national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any METS program or activity.

A revised and updated Title VI policy is provided in the main Five-Year Service Plan Report. There also is a Title VI review of the Five-Year Service Plan. This Title VI review determined that METS riders in minority and low income areas are not disproportionately impacted by the recommended plan.

The Title VI policy provides that METS will conduct a Title VI review of each element of the Five-Year Service Plan as it is implemented.

8 METS Mobility (Section 8 of Five-Year Service Plan Report)

This section summarizes information regarding METS Mobility service presented throughout the Five-Year Service Plan Report. Key findings include:

- METS Mobility costs are a much higher percentage of total system operating costs than any peer system in Indiana. METS Mobility costs average about 25% of METS total operating costs. By comparison, the 2013 INDOT Public Transit Annual Report showed that the average of other Group 1 (large) systems was 12%. Four of these systems (Lafayette, Gary, Bloomington and South Bend) expended between 4% and 11% of operating costs on demand response service.
- Offering free fixed-route service to METS Mobility riders who are ADA eligible is proposed as a cost-savings measure. These riders would continue to be offered METS Mobility service for a \$2.00 fare.
- Existing METS Mobility riders who pay the convenience fare (\$3.00) would be allowed to ride fixed route service without payment of fare. They no longer would be offered METS Mobility service.
- Consideration of contracting METS Mobility service is recommended. Under any such scenario, METS management would remain responsible for service quality and service delivery.
- A key consideration in these recommendations is the expense in serving trips on METS Mobility. METS' 2014 National Transit Database (NTD) submittal to FTA shows operating costs of \$41.71 for each METS Mobility passenger trip; by comparison, operating costs per passenger on fixed-route service are \$2.94. The cost of a typical round trip on METS Mobility service is over \$83. Focusing the METS Mobility service on those who meet full FTA-eligibility requirements is necessary to provide this service in a cost-effective manner.

9 Staffing and Organizational Assessment (Section 9 of Five-Year Service Plan Report)

At the time this document was produced, the position of METS Director was vacant. This position should be staffed by an individual with significant transit managerial experience. Historically, this has not been the case. Many issues identified in this report have the common theme that METS management is unfamiliar with standard transit business practices. Hiring an experienced transit manager as METS Director may require engaging a management company. Such firms employ directly transit professionals who provide high-level management under contract to local transit systems. Presently, transit systems in Ft. Wayne, South Bend, Muncie and Bloomington use a management company to furnish their General Managers.

FIVE-YEAR SERVICE PLAN – EXECUTIVE SUMMARY

Several recommendations are made to use existing managerial staff in a more effective manner. These recommendations involve responsibilities for grant administration, overall data reporting, supervision of late evening and night service, and office manager responsibilities.

Recommendations also are made to add two professional staff. These staff are needed to implement important transit business practices which are not provided at current staffing levels. These include:

- **Service Planning, Scheduling and Marketing Manager.** This individual will oversee transit route planning, schedule preparation, public involvement and marketing. This individual will be responsible for preparing and implementing recommendations for new routes, revised schedules, modified hours of service, bus stop location, bus stop information, and bus shelters. He/she will apply the METS service guidelines to evaluate routes and schedules on a continuing basis.
- **Service Support Manager.** This individual will oversee employee training, extra board management, absenteeism monitoring, schedule preparation support and provide other human resource support. This employee's most important responsibility will be to oversee new employee training, as well as ongoing training for all employees.

Finally, it is recommended that METS become a Public Transportation Corporation, as provided in Indiana Code IC 36-9-4. Of the eight transit systems classified by INDOT as Group 1 systems, only Evansville is not a PTC. A PTC provides a dedicated and stable source of local funding (via a millage³). A PTC allows professional management to be chosen and evaluated by an independent board of directors.

10 Scheduling and Run-Cutting Recommendations (Section 10 of Five-Year Service Plan Report)

The study team (led by Transportation Management and Design (TMD), a firm nationally-recognized for its practice in transit schedule consulting) evaluated METS' scheduling and run-cutting practices. This detailed evaluation identified that METS is particularly lacking in most fundamentals of transit schedule-making practices. These needs, with specific recommendations for METS, are detailed in the Five-Year Service Plan report. It is our assessment that METS must add professional staffing in this area (see recommendation for Service Planning, Scheduling and Marketing Manager in previous section) to implement the Five-Year Service Plan in a cost-effective manner. At the time this document was produced, METS schedules and hours of service were determined to a large degree by its need to use a simplistic approach to bus operator scheduling. This issue will be further exacerbated by implementing the Five-Year Service Plan.

Recommendations also include adoption of Scheduled Transit Operations (STO) -based budgeting for METS bus operators. Existing budgetary practices requires separate approval for each new bus operator position. STO-based budgeting entails approval of a pay-hour budget rather than a headcount quota. Present headcount-based budgeting has led to excessive bus operator overtime costs.

³ A millage rate is the amount of tax, in dollars on every \$1,000 of taxable value that is required to satisfy the part of the budget to be funded by tax dollars.

11 Marketing Recommendations (Section 11 of Five-Year Service Plan Report)

The key marketing issue identified is the great complexity of METS routes and schedules. Service which is difficult to understand is a “hard sell” for a potential customer. In our judgment, METS’ key marketing issue is that too many potential customers find its service ***too difficult to understand***.

Making routes and schedules understandable requires the following key initiatives. These require added professional staffing discussed in the previous two sections.

- Simplifying routes to eliminate multiple variations.
- Designating routes by number.
- Providing schedules which list every trip.
- Providing schedules with mid-route time points and scheduled times at both termini for each trip.
- Eliminating “A” and “B” designations.

A related, key observation is that METS’ public information materials are dated. Travel information is available only on printed schedules (which are displayed as PDF documents on the METS website). Trip planning assistance is not available; riders must review multiple individual route schedules to plan their trips. The consultant team investigated the feasibility of using Google Transit to provide trip planning information on the METS website. Initial investigations determined that the complexity of METS’ route structure, along with the very sparse schedule information available, makes implementation of Google Transit trip planning software problematic at the time this document was produced.

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INTRODUCTION

Introduction

This report summarizes the findings and recommendations of the Metropolitan Evansville Transit System Comprehensive Operations Analysis (COA). The COA is a year-long top-to-bottom review of the service and operations provided by the Metropolitan Evansville Transit System (METS). A COA is a standard transit business practice. Typically, it includes a detailed review of routes, schedules, operating practices and the state of a system's physical assets. It evaluates a transit system by comparison with peer operations. It also reviews individual routes to compare their efficiency and effectiveness.

The key element of this report is provided in Section 5, *Recommended New/Modified Fixed Routes, Services and Fares*. This section provides a wide range of operational changes. This final report incorporates public and stakeholder input and presents a single Five-Year Service Plan, which will serve as the basis for METS service planning efforts going forward.

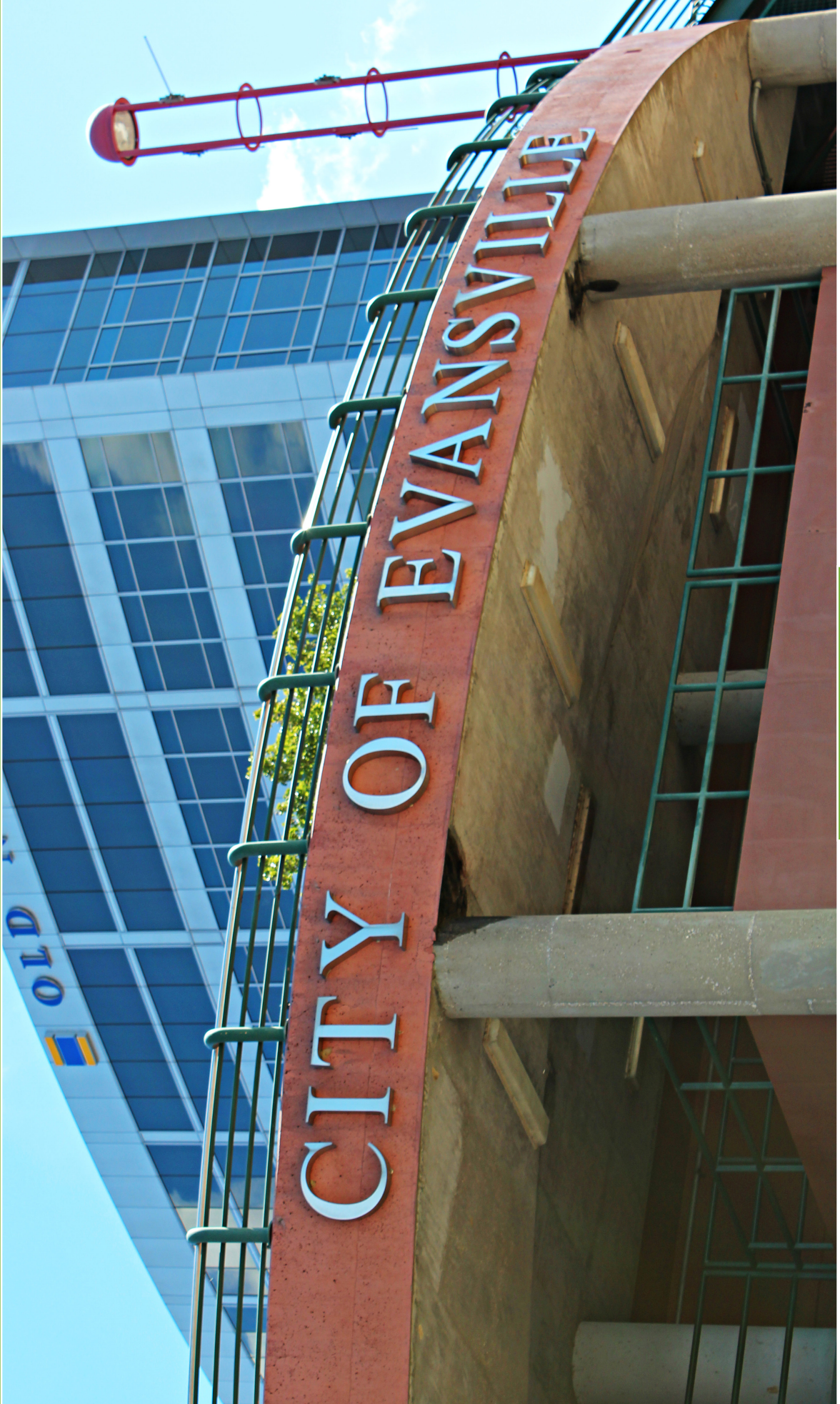
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1 Evaluating Demands for Improved Service

Demand for transit service and fare changes was evaluated using guidance from recent FTA-sponsored research.¹ This research indicated that external factors (such as median household income, carless households, population density and vehicles per household) are not statistically significant predictors for transit bus ridership. Details of these FTA findings are provided in Appendix E.

Ridership impacts of service changes were forecasted using appropriate transit service elasticities from published research, as well as route-specific information from onboard surveys and ride counts conducted as part of this study. These methods were applied in Section 5 of this report. Appendix E provides documentation of data sources and analytical techniques used to forecast ridership changes.

¹ *Investigating the Determining Factors for Transit Travel Demand by Bus Mode in US Metropolitan Statistical Areas*, Mineta Transportation Institute, Report 12-30, 2015.

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2 Fleet, Facilities, Technology and Passenger Communications

This section summarizes recommendations regarding fleet, facilities, technology and passenger communications. The COA evaluation has identified that there has been inadequate investment in the METS fixed route fleet for some time. It is recommended that the emphasis of the METS capital program be shifted to stress significant purchases of new 30-foot transit coaches through the year 2020. As detailed below, purchases in other areas (especially technology) should be de-emphasized to bring the METS fixed route bus fleet into a “state of good repair.”² Our recommendation is that beginning in the year 2016, METS purchase three to four new 30-foot transit coaches each year.

2.1 METS Fixed Route Fleet

This section discusses the significant investments which will be needed to bring the METS fixed route fleet to a state of good repair. A heavy-duty transit coach has a useful life of 12 years. As of January 1, 2015, METS’ fixed-route fleet roster included 24 heavy-duty (30 foot) coaches with an average age of 8.5 years. Eight of these 24 coaches (33%) were 14 to 18 years old, or 2 to 6 years beyond their useful lives. Two of these eight have been determined to be no longer safe to operate, and have been retired.

METS also owns 12 cutaway-style vehicles, which have a useful life of 5 years. Ten of these 12 vehicles were purchased in 2009 and 2010, and are at or beyond their useful lives. These were purchased using ARRA funds as a temporary measure, with the intent that they would be replaced with full-sized transit coaches. The average age of these cutaway vehicles is 5.3 years, which is greater than their useful life.

Of the 36 vehicles in METS fixed-route fleet as of January 1, 2015, 18 (or 50%) were at or beyond their useful lives. Significant upgrades to METS service requires major new bus purchases for a multi-year period.

The following discussion of the fixed route fleet identifies that beginning in 2016, METS will need to purchase 3 to 4 new 30-foot coaches each year until the year 2020. At that point, the fixed route fleet will be in a “state of good repair.” This bus acquisition recommendation provides for going from a 36 bus fleet at the beginning of 2015 to a 34 bus fleet by the end of 2020. This recommendation, if implemented, will result in a 34-bus fixed fleet, of which only five buses are 1 to 2 years past their useful lives. However, with the fleet in a state of good repair, it will allow assigning 28 buses for peak service, as compared to a peak assignment of 24 buses at present.

Table 2.1 shows the proposed fleet replacement schedule to bring the fixed route fleet to a state of good repair. Tables 2.2 and 2.3 show the composition of the METS fixed route fleet at the beginning of 2015 and the end of 2020 under this fleet replacement schedule.

² “State of good repair” is used in the transit industry to refer to major capital resources (such as fleet, passenger facilities and maintenance/repair facilities) being in an age and condition which conform to accepted industry guidelines. For a fixed route bus fleet of standard transit coaches to be considered in a “state of good repair,” its vehicles should average about six years in age, with vehicles purchased at relatively even intervals in time. This is based upon a full-size transit coach having a useful life of 12 years or 500,000 miles.

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Table 2.1 – Fixed Route Bus Replacement Schedule

Fixed Route Bus Replacement Schedule									
Year	Fleet Size During Year				Replaced	Peak Reqts.		Spare Ratio	
	Start	New	Retired	End		All	Excl. Trolleys	All	Excl. Trolleys
2015	36	1	3	34	117, 129 (1997); 40 (2009)	24	23	42%	39%
2016	34	3	3	34	102, 104 (2001); 41 (2009)	25	24	36%	33%
2017	34	3	4	33	108, 110, 114, 116 (2001)	26	25	27%	24%
2018	33	3	4	32	42, 50, 51, 54 (2009)	26	25	23%	20%
2019	32	4	4	32	55 (2009); 10-07, 10-08, 10-09 (2010)	27	26	19%	15%
2020	32	4	2	34	12-17, 12-18 (2012)	28	27	21%	19%

Table 2.2 – METS Fixed Route Bus Fleet, January 2015

METS Fixed Route Bus Fleet, January 2015			
Bus #	Year	Useful Life	Age
102	2001	12	14
104	2001	12	14
105	2006	12	9
106	2006	12	9
108	2001	12	14
110	2001	12	14
112	2006	12	9
114	2001	12	14
116	2001	12	14
117	1997	12	18
118	2006	12	9

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METS Fixed Route Bus Fleet, January 2015			
Bus #	Year	Useful Life	Age
129	1997	12	18
140	2007	12	8
10-01	2010	12	5
10-02	2010	12	5
10-03	2010	12	5
10-04	2010	12	5
10-05	2010	12	5
10-06	2010	12	5
40	2009	5	6
41	2009	5	6
42	2009	5	6
50	2009	5	6
51	2009	5	6
54	2009	5	6
55	2009	5	6
10-07	2010	5	5
10-08	2010	5	5
10-09	2010	5	5
12-13	2012	12	3
12-14	2012	12	3
12-15	2012	12	3
12-17	2012	5	3
12-18	2012	5	3
14-20	2014	12	1
14-21	2014	12	1
Buses in Fleet			36
30-foot	Cutaway	Trolley	

Table 2.3 – METS Fixed Route Bus Fleet, End of 2020

METS Fixed Route Bus Fleet, End of 2020			
Bus #	Year	Useful Life	Age
105	2006	12	14
106	2006	12	14
112	2006	12	14
118	2006	12	14
140	2007	12	13
10-01	2010	12	10
10-02	2010	12	10
10-03	2010	12	10
10-04	2010	12	10
10-05	2010	12	10
10-06	2010	12	10
12-13	2012	12	8
12-14	2012	12	8
12-15	2012	12	8
14-20	2014	12	6
14-21	2014	12	6
15-01	2015	12	5
16-01	2016	12	4
16-02	2016	12	4
16-03	2016	12	4
17-01	2017	12	3
17-02	2017	12	3
17-03	2017	12	3
18-01	2018	12	2
18-02	2018	12	2
18-03	2018	12	2
19-01	2019	12	1
19-02	2019	12	1
19-03	2019	12	1
19-04	2019	12	1
20-01	2020	12	0
20-02	2020	12	0

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METS Fixed Route Bus Fleet, End of 2020			
Bus #	Year	Useful Life	Age
20-03	2020	12	0
20-04	2020	12	0
Buses in Fleet			34
30-foot		Trolley	

Transit industry standard practice regards a full-size transit coach to have a useful life of 12 years. With a 36-bus fixed route fleet, METS needs to acquire 3 buses/year to maintain a state of good repair. The recommended replacement schedule provides for acquiring at least 3 new buses per year, beginning in 2016. Acquisition of 4 new buses annually is recommended in 2019 and 2020 to compensate for shortfalls in bus purchases in recent years. If this recommended implementation schedule is adopted, by the end of 2020 the METS fixed route fleet will be in a state of good repair. In addition, it will allow a modest expansion of the peak bus assignment (1 per year in most years) going forward.

The Evansville MPO's (EMPO) 2016 – 2019 Transportation Improvement Program (TIP) adopted in May 2015 provided for purchasing one transit bus in each of these four years, at a cost of \$468,000.³ The recommended purchase of 3 – 4 buses per year beginning in 2016 (at \$468,000 per bus) requires capital spending of \$468,000 to \$1,404,000 annually in addition to what is included in the current TIP as amended.

As described in Section 5, many potential service improvements require additional peak period buses⁴. The improvements which are most likely to attract additional choice riders (improved weekday frequencies, new crosstown routes, new express routes) also are those which require additional peak period buses. As Section 5 describes, the need to take several years to bring the fixed route fleet to a state of good repair requires that METS “pick and choose” among improvements which require added peak period buses.

Appendix A contains a technical memo (*METS Comprehensive Operations Analysis Technical Memo – Existing Conditions. Fleet Information*) describing the status of the existing fixed route and demand response fleet. Section 2.2 presents recommendations for the METS Mobility (demand response) fleet.

2.2 METS Mobility (Demand Response)

Section 8 contains recommendations for the METS Mobility service. These include:

- Offering free transportation on the fixed route service to ADA-eligible passengers. METS Mobility service will continue to be provided to these passengers at the regular METS Mobility fare;

³ A TIP amendment approved in September 2015 increased 2016 bus purchases to two full-sized buses.

⁴ “Peak period bus” refers to a vehicle scheduled for service during the time period that the number of scheduled vehicles is at its daily maximum.

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- Offering free transportation on the fixed route service to existing METS Mobility riders who now are eligible for the convenience fare. These passengers no longer would be able to use METS Mobility service; and
- Consider contracting the METS Mobility Service.

Each of these recommendations, if adopted, will decrease the vehicle requirements for METS Mobility Service. Pending implementation of some or all these recommendation, the METS Mobility fleet may be significantly reduced in size. Pending a final determination for implementing these recommendations, procurement of one new METS Mobility vehicle per year is suggested.

The status of the existing METS Mobility fleet is provided in the *Fleet Information* memo already cited above.

2.3 Technology

The project team evaluated METS existing technology systems, plans for potential upgrades, and recommendations for new technology. This evaluation, with recommendations, is included in Appendix A as *METS Comprehensive Operations Analysis Recommended New/Modified Technology and Passenger Communications*. This evaluation recognizes that METS recently has made very significant technology purchases, all for fixed-route operations. These include:

- A computer-aided dispatch and automatic vehicle location system
- Interior “next stop” voice and visual annunciator system
- “Next bus” information systems for smart phones and computers

It is good business practice for transit systems to monitor technological developments which can improve their operations and better serve their riders. However, as is discussed in Section 9 (Staffing Recommendations), METS is significantly understaffed in its professional (non-managerial) staff. Implementation of these technologies further overextend its staff.

The *Technology* assessment also made recommendations regarding two additional technology acquisitions. These are automatic passenger counters (for fixed route buses) and an upgraded farebox system. It is our recommendation that neither of these be pursued in the near future. Key reasons include:

- Implementation and use of these technologies would be staff-intensive. This is especially true for automatic passenger counters (APCs).
- Farebox technology is at a major inflection point. To date, smart card-type fare collection has required a proprietary, custom-developed application at individual transit systems. Some of these systems have taken years longer than expected to implement. The industry is beginning to migrate to credit-card based fare collection systems. Farebox system designs are very likely to change in ways not currently anticipated. Any major hardware acquisition in the near future could be incompatible with future standardized protocols for farebox systems.
- APCs are used primarily by much larger systems which regularly fine-tune their services. METS regular ridership-reporting needs (such as NTD trip sampling) could not be collected in a cost-effective way using APCs.

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- The basic need to bring the METS fixed route fleet to a state of good repair will require between \$1.5 million and \$2.0 million annually for several years for new bus purchases. These basic fleet needs are a higher priority than additional technology purchases.

2.4 Existing Bus Garage and Maintenance Facility

Appendix A contains an evaluation of the existing bus garage and maintenance facility. It is entitled *METS Comprehensive Operations Analysis Technical Memo – Existing Conditions, Bus Garage and Maintenance Facility*. Its key findings include:

- A significant number of buses (a large portion of the smaller buses used in METS Mobility and fixed route service) are stored out-of-doors.
- Better lighting is needed in the maintenance area.
- Wi-Fi within the maintenance area is needed to support new generations of diagnostic equipment.
- The bus washer can accommodate only 30-foot buses; 35- and 40-foot buses are commonly used at most other properties.
- The garage interior is overdue for interior painting.

A new bus washer is included in the METS portion of the Evansville MPO (EMPO) Transportation Improvement Program (TIP)⁵ for 2017. Issues related to outside storage should be revisited once the recommendations on fleet replacement and the METS Mobility Service are finalized. In particular, various initiatives will reduce the number of vehicles needed to provide METS Mobility Service. If the decision is made to contract the service, the METS vehicle storage needs could change significantly. It is recommended that the Wi-Fi and lighting upgrades and interior painting be included in future capital program elements.

2.5 Potential Maintenance-Related Efficiencies

Recently (2014) the Transit Cooperative Research Program (TCRP) issued Synthesis 112, *Maintaining Transit Effectiveness Under Major Fiscal Constraints*.⁶ From the background of the “Great Recession” of 2008-09, this synthesis examined the many ways transit agencies have reduced their costs and generated new revenues to help provide as many dollars as possible to maintain or increase service and thereby maintain their effectiveness. It has a number of service planning related recommendations which are incorporated throughout this document. Several of its recommendations regarding fleet and facility operations and maintenance are cited here. These include:

- Use of supply-chain consultants to encourage joint purchasing among multiple transit agencies. Reports of up to 15% savings on parts costs were reported.
- Use of synthetic motor oil was found to increase by a factor of three the mileage required between motor oil changes.
- If the operator has sufficient storage capacity, significant savings have been realized by purchasing fuel in large quantities during times of low prices. A limiting factor is that fuel has a shelf life of about 18 months.
- Savings of up to 10% in utility costs have been realized by such steps as:

⁵ 2016 – 2019 TIP, Adopted May 7, 2015.

⁶ Available at http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_syn_112.pdf.

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- Cleaning offices during the day (when lights and HVAC already are in use).
- Installing motion detector light switches.
- Installing more energy efficient HVAC systems.
- Installing LED lighting wherever possible.
- Installing film on south-facing windows.
- Considering wind power capture on building roofs or other appropriate locations.

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3 Service Standards

Appendix B contains draft Service Standards for METS fixed route service. When finalized, these guidelines will be applied system-wide to all METS routes to ensure that service is provided in an effective and equitable manner. A summary of the guidance on the attributes of fixed-route service is given in these bullet points. Refer to the draft Service Standards for details.

- **Route Coverage.** Route coverage will be provided such that fixed route bus service is provided within a $\frac{3}{4}$ mile walking distance to 90% of the residents of the METS service area.
- **Bus Stop Spacing.** Bus stops will be provided one-quarter mile apart, unless the location of major transfer points or major traffic generators requires closer spacing in specific locations.
- **Span of Service.** On weekdays, ridership must meet one of two criteria for service to be provided. Criterion one is that a route must average at least 20 passengers per round trip during the first three hours of service or last three hours of service. Criterion two is that there must be at least 10 riders on the first/last trip, and an average of 15 riders per trip on the first/last three trips. Ridership must meet one of these criteria to provide service on weekdays. Span of service guidelines are not proposed for Saturday or Sunday, pending route-level counts by trip on Saturday and Sunday service.
- **Service Frequency.** Service is proposed to correspond to round trip riders per hour on a route:
 - **15 to 40 riders.** Service operates every 60 minutes.
 - **41 to 70 riders.** Service operates every 30 minutes.
 - **71 to 100 riders.** Service operates every 20 minutes.
 - **101 to 140 riders.** Service operates every 15 minutes.
- **Route Directness.** Routes will be designed to operate as directly as possible using major arterial streets. Route deviations will be operated only if 1) the one-way deviation is three minutes or less and 2) the added travel time for through passengers is minimized (numerical criteria provided in Appendix B).
- **Vehicle Loading.** Maximum load factors are specified by vehicle type. For 30-foot coaches loading factors are 72 for high-floor coaches, 38 for pre-2007 low-floor coaches, and 33 for coaches built in 2007 and later. For cutaway vehicles, the loading factor corresponds to the number of seats on the vehicle, which is either 17 or 21 persons.
- **On-Time Performance.** Service will be considered “on time” when buses arrive at designated time points between one minute early and five minutes late. The goal for this indicator is that 90% of bus trips will operate “on time.”
- **Distribution of Transit Amenities.** Providing passenger shelters or bus benches requires that a stop have a minimum of 30 passenger boardings per weekday. The discretion also exists to provide benches on request at locations such as medical facilities and senior citizen centers.
- **Vehicle Assignments.** Given the range of vehicle capacities in the METS fleet, vehicles will be assigned to routes based upon expected passenger loadings. Within this requirement, vehicles are assigned by age on a random/rotating basis to ensure an equitable vehicle assignment.

These service guidelines also are incorporated into the METS Title VI Policy (Appendix C). The Title VI Policy provides that these service guidelines are adopted by ordinance by the Evansville City Council.

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4 Website Comments and Survey Summary

Public comments were received via the project website through the end of July 2015. This input is summarized in Section 4.1. Section 4.2 summarizes a public input survey conducted via the project web site between Monday, January 26 and Saturday, February 21, 2015.

4.1 Website Comments Summary

From August 2014 through July 2015, 233 comments were submitted to the METS COA website (www.metstransitstudy.info).⁷ One commenter provided the vast majority of the comments. A summary of each month's comments is provided in Appendix F.

4.1.1 Increased Service and Scheduling

Most commenters requested adding Sunday service with some requests for holiday service. One suggested more frequent service during peak hours. Extended hours of service were also seen as a need, especially for employees who work late or very early hours. Running Lynch until midnight was a suggestion.

Adding a connection to Henderson, Ky., and Posey County were also suggested. The need for summer service to USI and service to the airport was also noted. Prior notice for upcoming detours was requested on more than one occasion.

Multiple comments were made about buses leaving or arriving late or early and the need to operate on time. One suggested having buses leave the transfer area on the hour and half hour instead of on the quarter hour. Comments were received on the difficulty of reaching staff at the METS office. Also, one commenter suggested planning community events for when the buses were running.

4.1.2 Specific Route Improvements

Dozens of specific route modifications were suggested. For example, one recommended the 12 – Howell and 17 – Mary/Howell run down Middle Mt. Vernon to Boehne Camp to Pearl to Schnucks outbound, and run inbound from Pearl to Boehne Camp to Middle Mt. Vernon to Broadway in order to increase ridership. One saw a need for METS to be more responsive to making changes when development occurs. For instance, he suggested rerouting the Fulton Avenue bus to run by Cedar Trace Apartments on Seventh Avenue, a fairly new development.

Another suggested a bus or trolley run back and forth on Franklin from Leroy's to Mary Street and possibly connect with Main Street.

4.1.3 Bus Stops and Signs

Bus stops, their locations and signage or lack of were a popular topic for commenters. One suggested analyzing routes for bus stop signs that are in locations where the bus stop no longer stops.⁸ Other comments were that some stops do not have bus stop signs, and spacing of bus stop signs is improper.

⁷ No comments were received after July 31, 2015. The comment feature was available until September 22, 2015.

⁸ This COA compiled a complete inventory of METS bus stops. This was provided to METS management in electronic form.

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One suggested removing signs on Tekoppel between Forest and Claremont because the bus does not travel there.

Several suggestions were made concerning adding bus stops. For instance, one suggestion was to add a bus stop at the FSSA Office on 711 John St., with the State of Indiana being responsible for the cost because it moved its office from a location on a bus route. A commenter cited the need for bus stop signs at the pick-up locations at the Fall Festival. One suggested adding information on the route and schedules at each bus stop and at bus shelters. One suggested bus stops be located at the entrances to major venues when possible.

4.1.4 Rider Safety

Several commented on the lack of safety at the downtown terminal, with a need for a full-time police presence. They cited drug sales and other criminal activity, people asking for money, and no-smoking signs being ignored. The need to enforce the no-smoking policy at the Downtown Terminal was mentioned. Another requested the back door of buses sitting at the Downtown Terminal be kept closed while waiting.

Because buses are not able to pull to the curb in some locations, some wheelchair passengers must wait in the road for pick up at some bus stops, one reported. One commented that walking a half-mile with no sidewalk on a narrow road to the bus stop from Westwood Apartments is a safety hazard. One stated roads on bus routes should be better maintained. One said high-mileage buses rode rough and caused air pollution.

One stressed the importance of running on time during frigid weather.

4.1.5 Bus and Equipment Condition

Many individual bus equipment problems were noted, such as: no heat, no air conditioning, dirty buses, destination signs out of order or incorrect, rough rides, and incorrect times on clocks at the downtown terminal. One mentioned a hole in the floor of a bus. These maintenance issues were forwarded to METS management.

4.1.6 Other Issues

One commenter suggested drivers announce street names. One suggested monthly meetings between METS management and staff to deal with employee and bus system issues. Improvements in technology, such as mobile apps and real-time bus tracking were suggested. Using Twitter to announce detours was requested. The need for route brochures and system maps on-board fixed routes was mentioned, as were system maps at bus shelters. More than one complaint of a rider being passed up by the driver was noted.

4.2 Web-Based Customer Survey Summary

Following is a summary of comments received from six questions asked on METS' General Public Transit Information Survey. A total of 291 survey responses were received. The survey was available between Monday, January 26 and Saturday, February 21, 2015. Appendix G provides a detailed enumeration of

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responses provided in each subject area. It also includes charts and tables summarizing the responses to each question.

Those surveyed were queried about Sunday service, frequency of service, earlier or later service, improvements to transfer terminals and bus stops, other improvements, and areas of the city lacking bus service.

4.2.1 Sunday Service

Responses called for Sunday service for transportation to and from employment, including many requesting service for Ameriquel Foods. Others mentioned needing transportation to employment on Highway 41, on the Lynch and Fulton routes, the Eastland Mall and to fast food restaurants and hotels. Improved bus transportation to these locations would also help employers fill vacancies, it was noted.

Other reasons for Sunday service offered by several people included: shopping, running errands, going to church, and attending social activities and other events. One requested bus service to the Vanderburgh County Jail and another to the Mesker Park Zoo. Also, several highlighted a need for University of Evansville students to have Sunday bus service. Several suggested all routes run on Sunday, while another said only the busiest weekday routes should run on Sunday. Only one respondent did not approve of Sunday service.

4.2.2 More Frequent Service

Multiple respondents emphasized that more frequent service generally would make riding the bus more practical for busy people whose only choice now is often to arrive very early or late for work or appointments. Also, multiple respondents stated that overcrowding on some routes could be addressed with more frequent runs, with the 8 – Lincoln Route mentioned several times in this regard. (This crowding is in part attributable to assigning a smaller cutaway vehicle to this route for half the weekday daytime trips.) Multiple respondents requested shorter wait times, especially in inclement weather.

Multiple requests were made for more frequent service to large employers: Ameriquel Foods, hospitals, Berry Plastics, downtown banks, retail stores, restaurants, hotels and government offices. One respondent explained that a 20 to 30 minute car trip across Evansville takes one hour by bus. More frequent service to Ivy Tech and for University of Evansville students was also requested.

4.2.3 Longer Hours of Service

This summarizes the answers to two related survey questions regarding needs for both earlier and later bus service. Dozens of responses requested earlier and/or later bus service to employment locations. Needs cited included work shifts starting at 6 a.m., as well as second and third shift work.

Other requests for later service focused on social aspects of entertainment, restaurants, bars, the Ford Center and riverfront. Downtown destinations were specifically highlighted as needing evening service. Multiple comments focused on the need for transportation for students taking evening classes.

4.2.4 Transfer Terminal and Bus Stop Improvements

Respondents offered many suggestions for improvements to specific bus stops. Many requested adding bus shelters and improved signs at Ameriqua Foods. Multiple requests were made to add bus shelters, benches and sidewalk on Covert Avenue. Bus shelters and benches were requested at Lynch and Highway 41. Shelters and benches were also requested in the 600 block of Lincoln to Highway 41 and also at Ivy Tech. A bus shelter was requested for the Covert/Jeanette stop heading downtown and the Walmart at Burkhardt. Another request was for shelters at Lawndale and the West side transfer stations. Noted was a lack of a bus stop sign, bench or shelter at the North Park Transfer Terminal on First Avenue.

Multiple suggestions were made for adding lighting and security cameras at shelters. Also there were multiple requests to add trash cans at bus stops with benches. There were multiple requests for having hours of operation and pick-up times posted at bus stops with bigger and easier to read signs.

For the downtown terminal, multiple requests were made for having safe restrooms open at all times. Also, requested for the downtown terminal were security guards or police, enforcement of no-smoking rules, a water fountain and an interior waiting room.

Other suggestions included: removing graffiti from shelters, emergency phones and blue lights, electrical outlets at bus stops, sidewalks with ramps for better access, bilingual signs, platforms at commercial venues, and removing shelters, bus stop signs and benches that have no bus stops.

4.2.5 Geographic Areas Lacking Service

About two dozen suggestions were made to provide bus service to areas not now being served. These varied widely. Multiple requests were made to add service to the Evansville Airport and also the North Side. Respondents also suggested bus service to all Evansville schools, to the McDonald's north of Ameriqua Foods, to Goodwill, Save-a-Lot and the Social Security office. Other suggestions also included adding service to Williamsburg Road, the far Westside, Morgan Avenue, Peach Blossom Lane, Bellemeade Avenue and outer St. Joseph Avenue.

Respondents requested service outside the city limits, running the East Connection to the Warrick County line. Other requests were for service to Newburgh, Toyota, as well as an Evansville-to-Henderson route.

4.2.6 Other Suggested Improvements

Suggestions for making bus riding easier were quite varied, ranging from requests to spruce up and clean the downtown terminal to adding more bike racks on buses. Many of the respondents indicated a need to make the bus schedules and routes easier to understand. Many requested live-tracking of individual buses by smart phone apps. Others suggested using Twitter to communicate information on delays, etc. Posting route and arrival times at stops was suggested.

There were multiple requests to simplify and improve the METS website. Multiple respondents requested the addition of a planning service feature to the METS website, in which the rider enters pickup and drop off locations, and is provided route and schedule information for his/her specific trip. Adding bus stop locations to the website was also requested. Adding a "how to ride the bus" tutorial to the website for new riders was suggested.

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Others requested larger buses (full-sized buses rather than the cutaway vehicles now operated on many routes), better access for the handicapped on the fixed-route service, announcing free-ride days, toll-free service number, more bus shelters, fewer transfers, better safety and security, buses running on time, more driver training and making routes obvious and simple.

Also, multiple requests were made that inbound and outbound routes should be the same. Many requested better cleaning of buses. As for fares, suggestions were made for using a fast-pass card, not needing exact fare, a \$3 day pass, transit cards, providing easier access to tokens for students, and discounted monthly pass for seniors and the disabled.

4.2.7 Additional Comments

When asked for additional comments, many respondents reiterated requests for such improvements as Sunday service and extending hours of service, especially to Ameriquel Foods. In addition, there were multiple requests not previously mentioned. Multiple respondents asked METS to improve the image of the bus system. Multiple requests were made to increase efficiency and to simplify the routes and schedules. There were also multiple suggestions to improve customer service when people telephone the METS office. One individual suggested forming a regional transportation authority.

Other comments included: market METS extensively; design ad wraps with portholes; work with developers to encourage a transit-oriented environment; provide pickups at major shopping venues at store entrances; lower monthly pass to \$35 or \$40; sell passes at grocery stores; purchase larger buses; space stops on Washington further apart and stop picking up riders between stops.

Others complimented METS, and one encouraged METS to continue making great changes for the city.

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NETS

Evansville MPO



Henderson • Vanderburgh • Warrick



Recommended New/Modified
Fixed Routes, Services and Fares

5 Recommended New/Modified Fixed Routes, Services and Fares

The first section (5.1) describes the service changes which were considered in one or more of the draft five-year service plans released in July 2015. The second section (5.2) presents the recommended five-year service plan. The third section (5.3) provides a five-year financial projection including recommended fare changes and operating policy changes to fund the Five-Year Service Plan.

5.1 Fixed Route Plan Elements

The entire roster of potential fixed route service improvements and changes are enumerated here. These are based upon extensive input, ridership counts and surveys, technical analysis, and peer review efforts since the beginning of the COA. This section (5.1) presents fixed route service change elements by category. Each category (subsections 5.1.1, 5.1.2, etc.) gives details of any changes proposed for routes affected. Each category also identifies which element(s) in that category are included in the recommended five-year service plan.

Since the July 2015 draft version of this document, this section has added the number of full-time equivalent bus operators (FTEs) required for each recommended element which is included in the Five-Year Service Plan in Section 5.2. Hiring of these additional bus operators is an essential part of each recommendation. In recent years, METS has implemented significant increases in service (e.g., Route 23 – US 41 North Connection) without hiring the bus operators to provide the service. This has resulted in significant overtime costs. The recommendations of this Five-Year Service Plan cannot be implemented in a cost-effective manner without hiring these additional bus operators.

Section 5.1 estimates annual changes in operating costs resulting from each recommended service change. The baseline financial assumptions presented in Section 5.3 for the five year service plan forecast the additional effects of changes in METS Mobility fare policies, changes in scheduling and overtime practices, and lower operating costs as the METS fixed route fleet is upgraded.

5.1.1 Improved Service Frequencies (Element A)

METS fixed routes currently provide service only every 30 to 60 minutes. Service provided at these wide intervals is unlikely to attract significant numbers of choice riders. This element of the service plan proposes that more frequent service be operated on five routes. More frequent service would be operated for 10 hours on weekdays, between approximately 7 am and 5 pm. Service would be improved to every 20 minutes (from the present 30 minute service) on routes 1 – Washington, 2 – Riverside, 8 – Lincoln and 9 – Covert. Service would be improved to every 30 minutes (from the present 60 minute service) on Route 7 – First Avenue. These were among the most often-requested routes for improved frequencies on the project website survey (see Section 4). Each of these routes was requested for consideration for more frequent service by between 19 and 28% of respondents.

Figure 5.1 depicts these routes. Table 5.1 provides estimated changes in annual passengers, farebox revenues, operating cost, and peak buses required for each.

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Figure 5.1 – Routes Proposed for Improved Weekday Frequencies

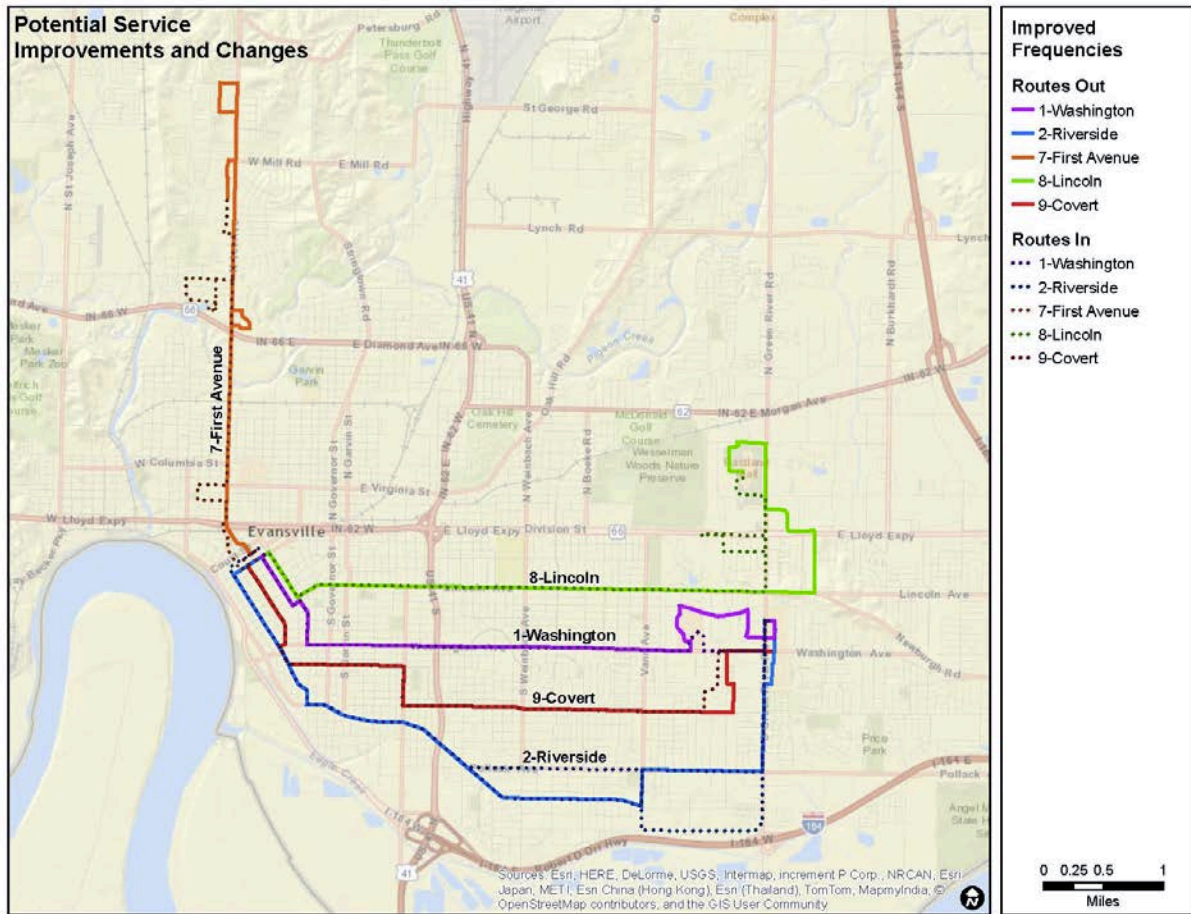


Table 5.1 – Forecasted Ridership and Cost Increases – Improved Weekday Frequencies

Forecasted Ridership and Cost Increases - Improved Weekday Frequencies					
Route	Forecasted Annual Change In				Added Service Revenue/Cost
	Passengers	Revenues	Cost	Peak Buses	
1 - Washington	23,000	\$ 10,000	\$ 117,000	1	9%
2 - Riverside	28,000	\$ 15,000	\$ 130,000	1	12%
7 - First Avenue	56,000	\$ 20,000	\$ 117,000	1	17%
8 - Lincoln	23,000	\$ 10,000	\$ 128,000	1	8%
9 - Covert	20,000	\$ 10,000	\$ 122,000	1	8%

As part of this change, the distinction between “A” and “B” trips no longer will be used, since it corresponds to routes which operate only every half hour. The rationale for discontinuing the “A” and “B” designation is presented further in Sections 5.1.6 and 11.

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The only element in this category recommended for implementation in the Five-Year Service Plan is the increase in frequency on Route 7 – First Avenue in 2018. Implementing this service requires adding approximately 1.6 bus operators (FTE)⁹ to the METS staff. The primary reason for not recommending additional increases in frequency is that each such change requires an added peak period bus. As is detailed in Section 2.1, METS needs to undertake an aggressive fleet replacement plan to bring its fixed route bus fleet up to industry standards. This significantly limits METS's ability to implement service changes which require added peak period buses. Route 7 – First Avenue is the route most in need of added peak period service. This improvement is recommended for 2018 to allow for newer buses to be delivered in significant numbers.

5.1.2 Added Sunday Service (Element B)

Currently, METS operates only Monday through Saturday. It does not operate on Sundays or holidays. There are seven other Group 1 transit systems in Indiana (as classified by INDOT). Of these systems:

- Bloomington, Indianapolis, Lafayette and South Bend provide Sunday service.
- Fort Wayne, Gary, and Muncie do not provide Sunday service.

By a wide margin, Sunday service is the most-frequently requested service improvement during this COA. In the September 2014 on-board rider survey, about two-thirds (66%) of respondents requested that METS begin to provide Sunday service. The next most frequently-requested improvement (operate later service) was requested by less than one-third (27%) of the respondents.

Sunday service is proposed for a network of seven routes. These routes were identified by considering their weekday performance, system coverage, and responses to the web-based survey (which asked riders to identify routes on which they would like to see Sunday service operated). It would operate for about 12 hours, between approximately 7 am and 7 pm on Sunday and holidays. It is anticipated that the primary market for Sunday service will be workers in retail and service industries. The routes proposed for Sunday operation are:

- 1 – Washington
- 2 – Riverside
- 5 – Mary/Tekoppel
- 6 – Walnut
- 7 – First Avenue
- 9 – Covert
- 14 – Shoppers Shuttle

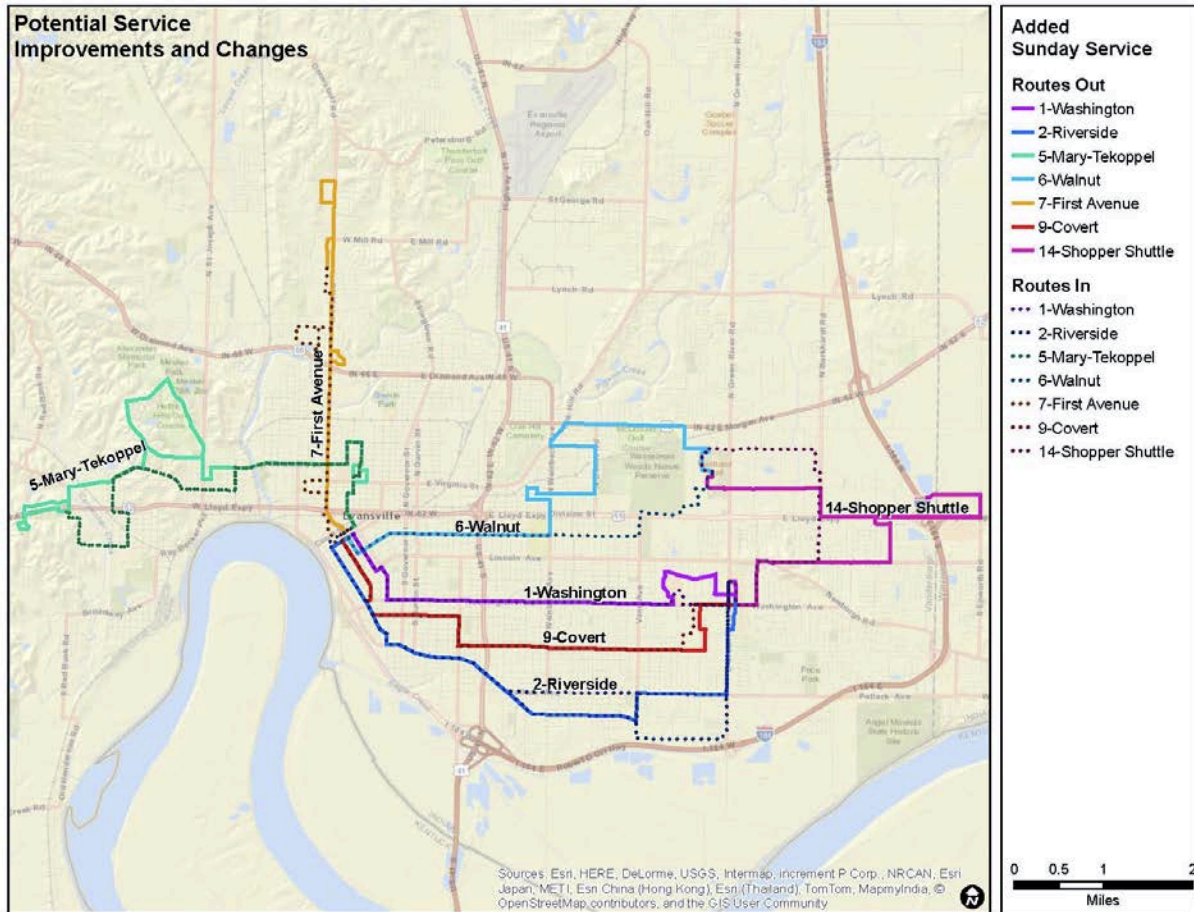
Figure 5.2 depicts these routes. Table 5.2 provides estimated changes in annual passengers, farebox revenues, direct operating cost, and peak buses required for each. Note that in addition to direct operating cost (for bus operators, fuel and maintenance) that METS will incur additional fixed managerial costs, as well as costs for providing METS Mobility service on Sunday. The NTD reports from 2011 to 2013 which were used to estimate direct operating costs also were used to determine an average daily

⁹ Based upon a review of METS' current labor contract, it is estimated that each bus operator is required, on average, for each 1,558 bus hours operated annually. This factor is applied to estimated annual bus hours for all service changes to forecast the number of bus operators which must be hired to operate the service in a cost-effective manner.

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cost/peak vehicle (to estimate fixed managerial costs for an additional day of operation). These costs were estimated at \$760 per Sunday, or \$44,000 annually. From 2011 to 2013, METS Mobility costs on average were 31% of fixed route operating costs. Applying this ratio to total costs of Sunday service provides an estimate of \$86,000 in annual METS Mobility costs to operate Sunday service.

Figure 5.2 – Routes Proposed for Sunday Service



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Table 5.2 – Forecasted Ridership and Cost Increases – Sunday Service

Forecasted Ridership and Cost Increases - Sunday Service					
Route	Forecasted Annual Change In				Added Service Revenue/Cost
	Passengers	Revenues	Cost	Peak Buses	
1 - Washington	10,000	\$ 5,000	\$ 32,000	0	16%
2 - Riverside	12,000	\$ 6,000	\$ 35,000	0	17%
5 - Mary/Tekoppel	7,000	\$ 3,000	\$ 34,000	0	9%
6 - Walnut	4,000	\$ 2,000	\$ 34,000	0	6%
7 - First Avenue	6,000	\$ 2,000	\$ 32,000	0	6%
9 - Covert	9,000	\$ 5,000	\$ 34,000	0	15%
14 - Shoppers Shuttle	6,000	\$ 2,000	\$ 34,000	0	6%

Sunday service on all of these routes is recommended for implementation in March 2016. Implementing these improvements requires adding approximately 3.1 FTE bus operators to the METS staff. Implementation of Sunday service was cited as the most-requested need in multiple venues. These include comments submitted to the project web site throughout the study (see Section 4.1), the January/February 2015 web-based survey (see Section 4.2), and comments on the September 2015 on-board origin-destination survey. Implementing this improvement will not affect peak vehicle requirements. The total annual cost of this Sunday service will be \$235,000 for direct fixed-route operating costs (sum of individual route costs in Table 5.2), \$44,000 for added managerial costs, and \$86,000 for added METS Mobility costs. The total cost of Sunday service is estimated at \$365,000. Note that these costs assume that the METS contract is renegotiated to permit Sunday service to be operated at straight time.

In addition, it is our professional opinion that successful implementation of this improvement requires that the position of Manager, Service Planning, Scheduling and Marketing be staffed by late 2015. We do not believe that the service can be planned and scheduled in a cost-effective manner with existing staffing levels. If it is not possible to staff this position by late 2015, it is our recommendation that these changes be postponed until at least September 2016.

5.1.3 Added Weekday and Saturday Evening Service (Element C)

Several routes which currently do not operate after 6 pm on weekdays serve significant numbers of riders on their final trips. These routes, and the riders served on their last two weekday trips¹⁰, include:

- 4 – Stringtown. 15 riders (leaving downtown 3:45 pm), 18 riders (leaving downtown 4:45 pm)
- 6 – Walnut. 25 riders (leaving downtown 4:15 pm), 23 riders (leaving downtown 5:15 pm)
- 7 – First Ave. 36 riders (leaving downtown 4:15 pm), 32 riders (leaving downtown 5:15 pm)
- 10 – Lynch. 34 riders (leaving downtown 4:15 pm), 24 riders (leaving downtown 5:15 pm)

¹⁰ Ridership by trip from counts taken in September 2014.

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The higher levels of ridership on the last two trips of the day indicate that there is potential for demand for evening service. Ridership levels on each of these routes on their last trips is above the thresholds for considering increases in span of service, as described in the Service Guidelines in Section 4.

Figure 5.3 depicts these routes. Table 5.3 provides estimated changes in annual passengers, farebox revenues, operating cost, and peak buses required for each.

Figure 5.3 – Proposed Added Evening Service (Weekday and Saturday)

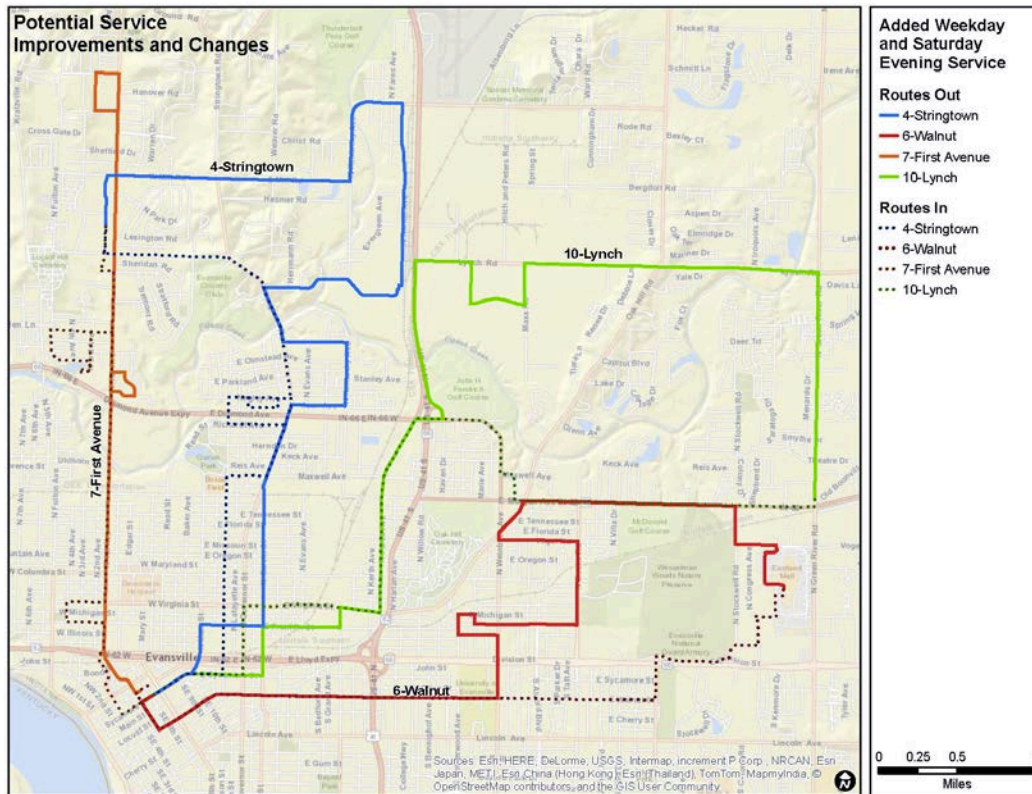


Table 5.3 – Forecasted Ridership and Cost Increases – Added Weekday/Saturday Evening Service

Forecasted Ridership and Cost Increases - Added Weekday/Saturday Evening Service					
Route	Forecasted Annual Change In				Added Service Revenue/Cost
	Passengers	Revenues	Cost	Peak Buses	
4 - Stringtown	18,000	\$ 6,000	\$ 92,000	0	7%
6 - Walnut	21,000	\$ 9,000	\$ 89,000	0	10%
7 - First Avenue	34,000	\$ 12,000	\$ 86,000	0	14%
10 - Lynch	31,000	\$ 9,000	\$ 92,000	0	10%
18 - Stringtown/1st (Discontinue)	(31,000)	\$(12,000)	\$(89,000)	0	13%

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Adding evening service to these routes is proposed for implementation in September 2017. Implementing these improvements requires adding approximately 3.5 FTE bus operators to the METS staff. These improvements will address an often-cited gap in METS service (the lack of evening service to Evansville's northeast side). The latest weekday trips serving this area have high levels of ridership. In addition, there are many employers in this area of Evansville whose employees would benefit from later service.

5.1.4 Added Crosstown Service (Element D)

Two existing routes (6 – Walnut and 10 – Lynch) operate most of their routes in a large loop with service provided in only one direction. This means that riders often must travel long distances opposite their intended direction of travel. Both of these routes are among METS' most productive; each of them ranks in the top seven of all METS routes for all productivity measures (riders/hour, riders/trip, riders/mile and cost recovery). Providing two-way service on the streets which each serves is likely to increase ridership, especially among choice riders.

There also is a significant opportunity to provide added travel connections by implementing crosstown services on the east side of Evansville. Presently, north-south travel by bus either requires transferring in downtown Evansville, or taking an indirect trip on route 14 – Shoppers Shuttle or 15 – East Connection. Both Green River Road and the Weinbach Ave./Oakhill Rd. corridors have potential to serve passengers on Evansville's east side who do not wish to travel downtown.

Figure 5.4 shows the conceptual routes for five new crosstown routes. Three of them (with the provisional designation 6 – Walnut, 11 – Morgan and 12 – Lynch) would operate east-west in both directions on streets presently served via large, one-way loops. Two of them (with the provisional designation 20 – Oakhill/Weinbach and 21 – Green River) would operate between Lynch Rd. and Pollack Ave. /Riverside Dr. The routings in Figure 5.4 are illustrative, and must be refined prior to implementation. Table 5.4 provides estimated changes in annual passengers, farebox revenues, operating cost, and peak buses required for each. These estimates assume service is provided weekdays and Saturdays between approximately 6 am and 6 pm. In the draft report issued in July 2015, service was assumed to operate weekdays only. These estimates show the cost, ridership and revenue impacts of also providing Saturday service.

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Figure 5.4 – Proposed Added Crosstown Service

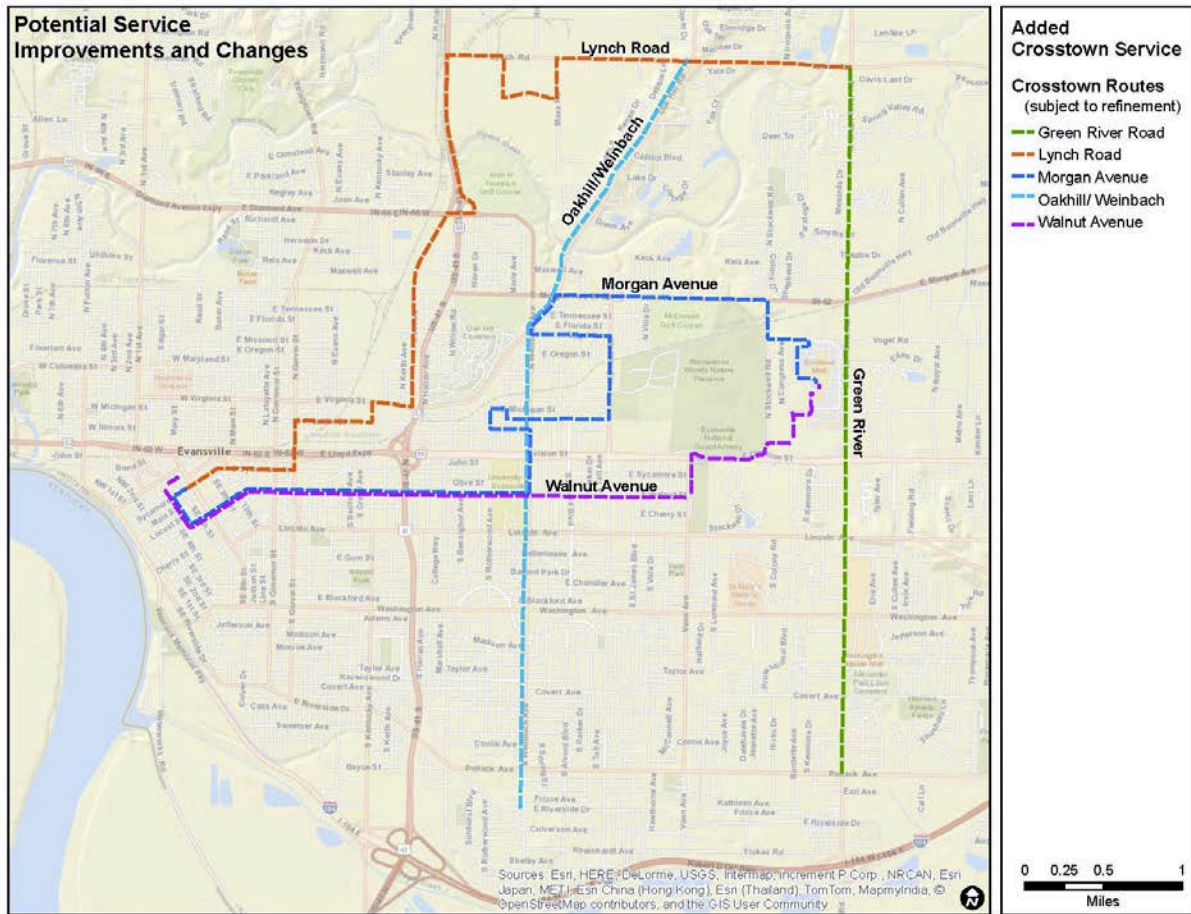


Table 5.4 – Forecasted Ridership and Cost Increases – Added Crosstown Service

Forecasted Ridership and Cost Increases - Added Crosstown Service					
Route	Forecasted Annual Change In				Added Service Revenue/Cost
	Passengers	Revenues	Cost	Peak Buses	
Green River Road	55,000	\$ 28,000	\$ 166,000	1	17%
Oak Hill/Weinbach	55,000	\$ 28,000	\$ 172,000	1	16%
Lynch Road	98,000	\$ 31,000	\$ 184,000	1	17%
Morgan Avenue	86,000	\$ 31,000	\$ 178,000	1	17%
Walnut	74,000	\$ 28,000	\$ 178,000	1	16%
Existing Walnut & Lynch Disc.	(175,000)	\$ (61,000)	\$ (365,000)	-2	17%

Implementing the crosstown services on 6 – Walnut, 10 – Lynch Rd. and 11 – Morgan (new service) is recommended for September of 2016. The route consolidation of 14 – Shoppers

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Shuttle and 15 – East Connection (see Section 5.1.5) is required to furnish the one net added peak bus which this new group of crosstown services will require. Implementing this package of improvements requires adding approximately 2.0 FTE bus operators to the METS staff.

Implementing the 21 – Green River Road Crosstown is recommended for 2018. Its implementation is recommended for 2018 to allow METS to purchase significant numbers of new buses, to support this expansion of peak period service. Implementing this new crosstown service requires adding approximately 2.0 FTE bus operators to the METS staff.

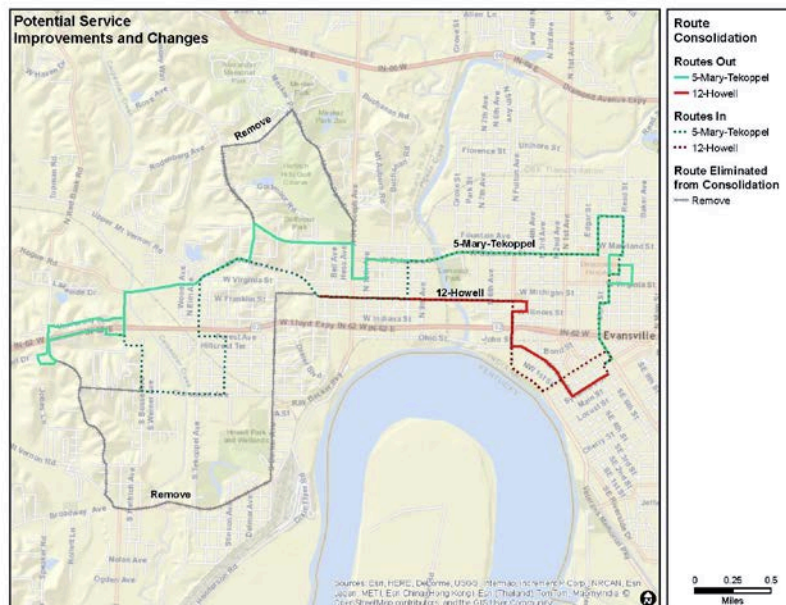
5.1.5 Route Consolidations (Element E)

The COA evaluated existing METS operations to determine where there are opportunities to consolidate existing routes, to save on existing costs and bus requirements with very little effects on existing ridership. Two such opportunities have been identified. These entail consolidating routes 5-Mary/Tekoppel with 12 – Howell, and routes 14 – Shoppers Shuttle with 15 – East Connection.

5.1.5.1 5 – Mary/Tekoppel and 12 – Howell Consolidation

Figure 5.5 overlays the routing of 5 – Mary/Tekoppel and 12 – Howell routes. Both routes operate proximate to each other on the west side, and terminate at the Schnuck's Transfer Terminal. A route consolidation would involve discontinuing very poorly utilized sections of each route. These sections are identified in this figure. Figures 5.6 and 5.7 show total weekday ridership/route mile¹¹ for all trips during the entire weekday (6 am to 6 pm) on each route.

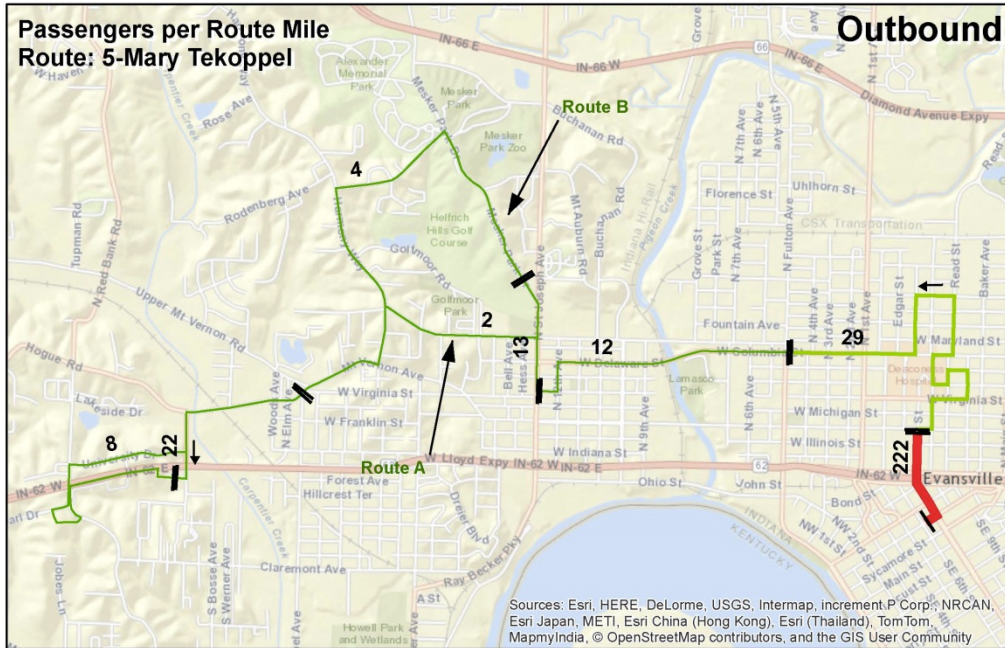
Figure 5.5 – Consolidation of 5 – Mary/Tekoppel and 12 – Howell routes



¹¹ Ridership cited in this section taken from September 2014 complete on-off counts on all METS routes.

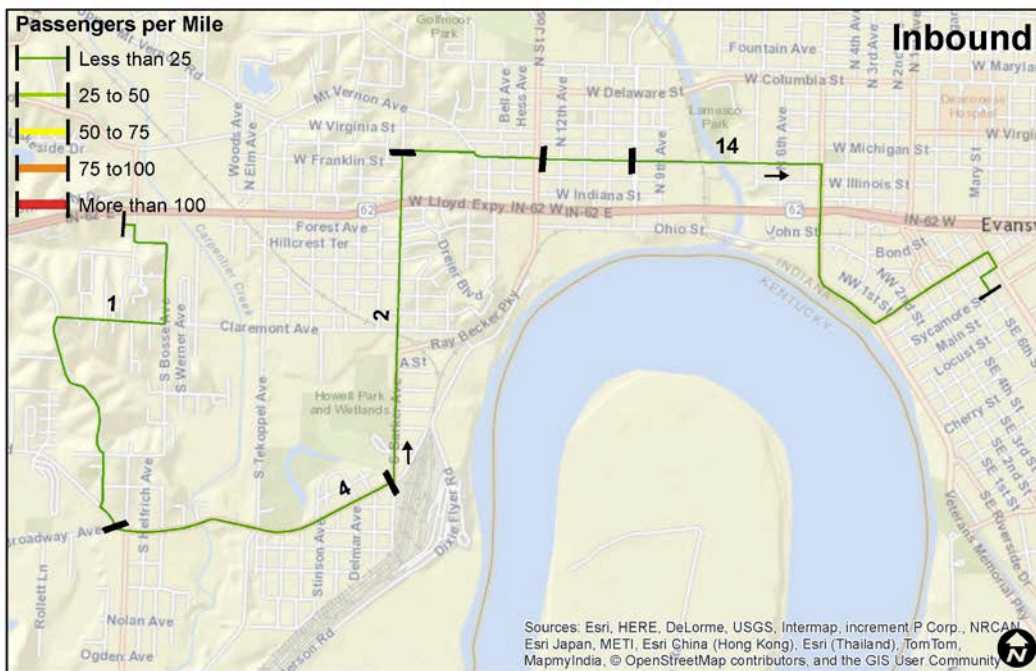
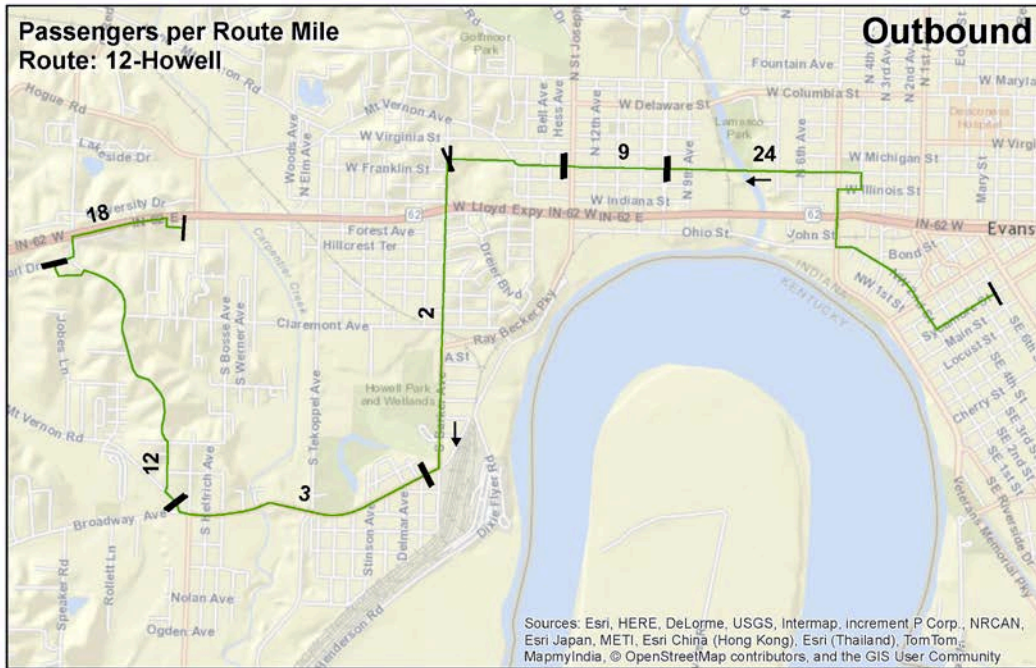
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Figure 5.6 – Ridership/Route Mile, Route 5 – Mary/Tekoppel (all weekday trips)



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Figure 5.7 - Ridership/Route Mile, Route 12 – Howell (all weekday trips)



The portions of these two routes proposed to no longer be operated serve very low volumes of riders. For example, the inbound portion of 12 – Howell between Schnucks Transfer terminal and

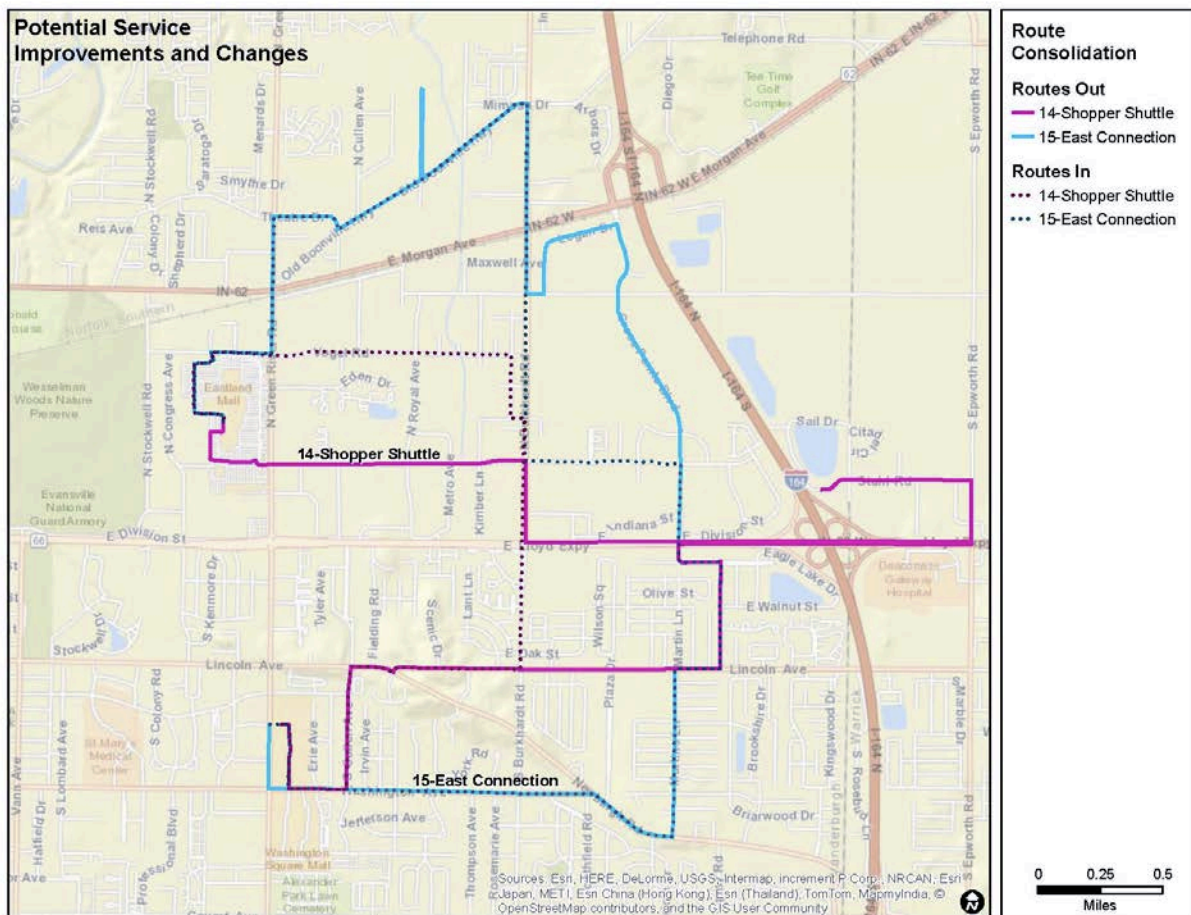
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Barker/Franklin serves between only 1 and 4 passengers/route mile all day (total over 13 trips). This represents an average of **1.2 passengers per trip** boarding or deboarding on this approximately 3.4 miles of route.

5.1.5.2 14 – Shoppers Shuttle and 15 East Connection Consolidation

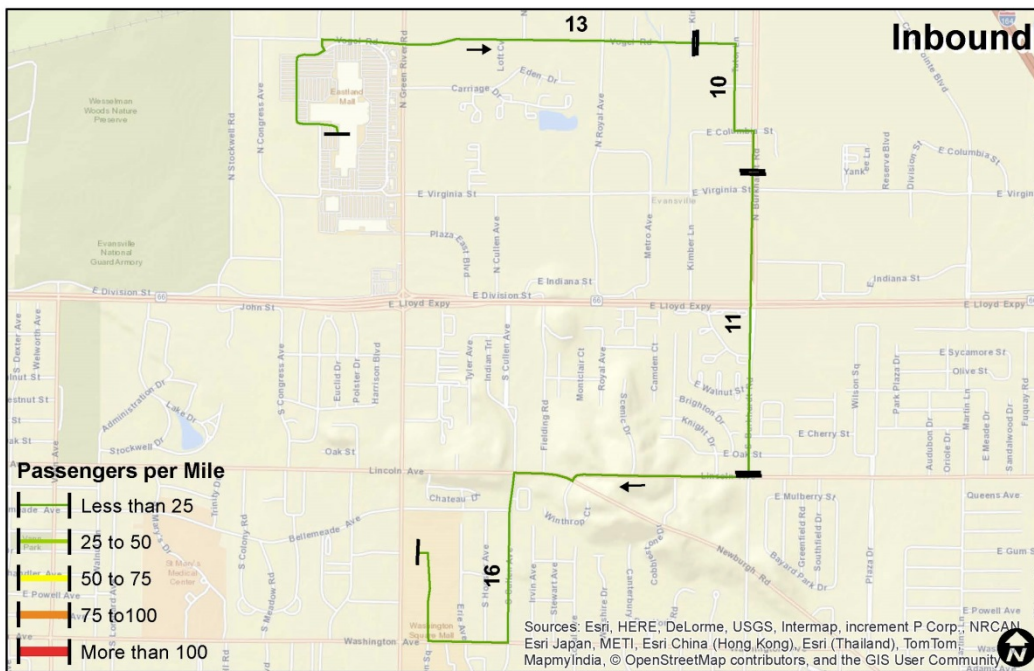
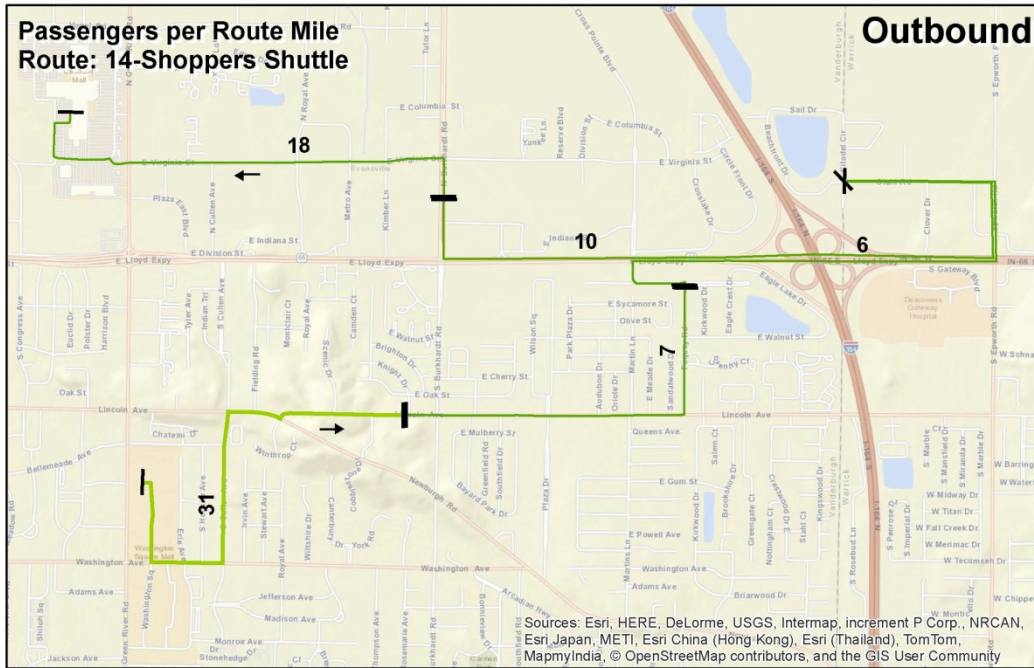
Figure 5.8 overlays the routing of 14 – Shoppers Shuttle and 15 – East Connection routes. Both routes operate proximate to each other on the east side. They have two common termini (Eastland Mall Transfer Center and Lawndale Transfer Center). A route consolidation would involve discontinuing very poorly utilized sections of each route. These sections are identified in this figure. Figures 5.9 and 5.10 show ridership/route mile for the entire weekday on each route.

Figure 5.8 – Consolidation of 14 - Shoppers Shuttle and 15 – East Connection routes



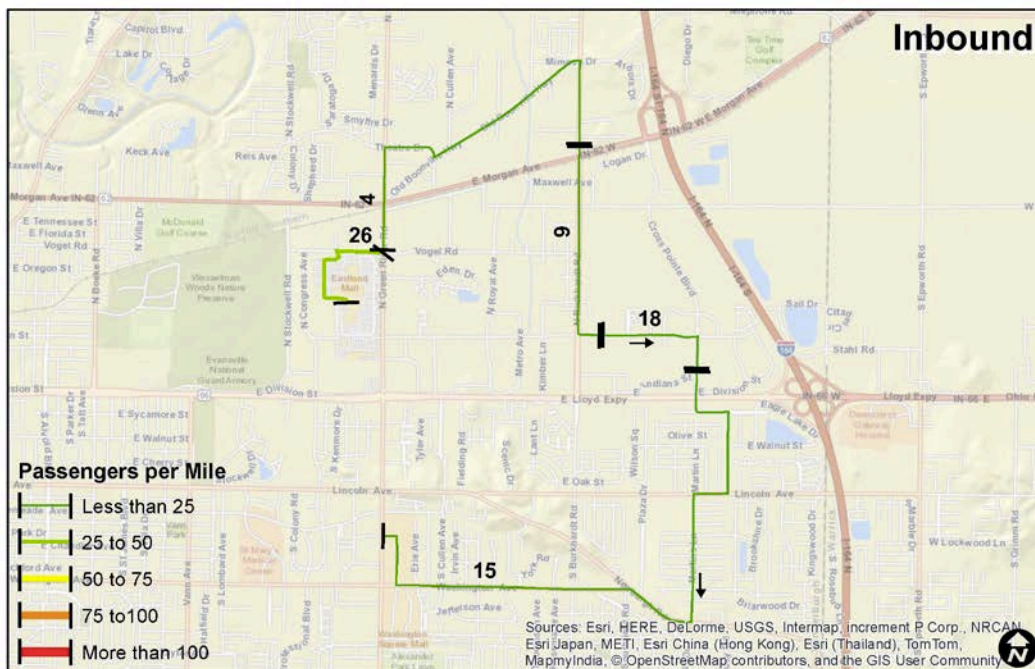
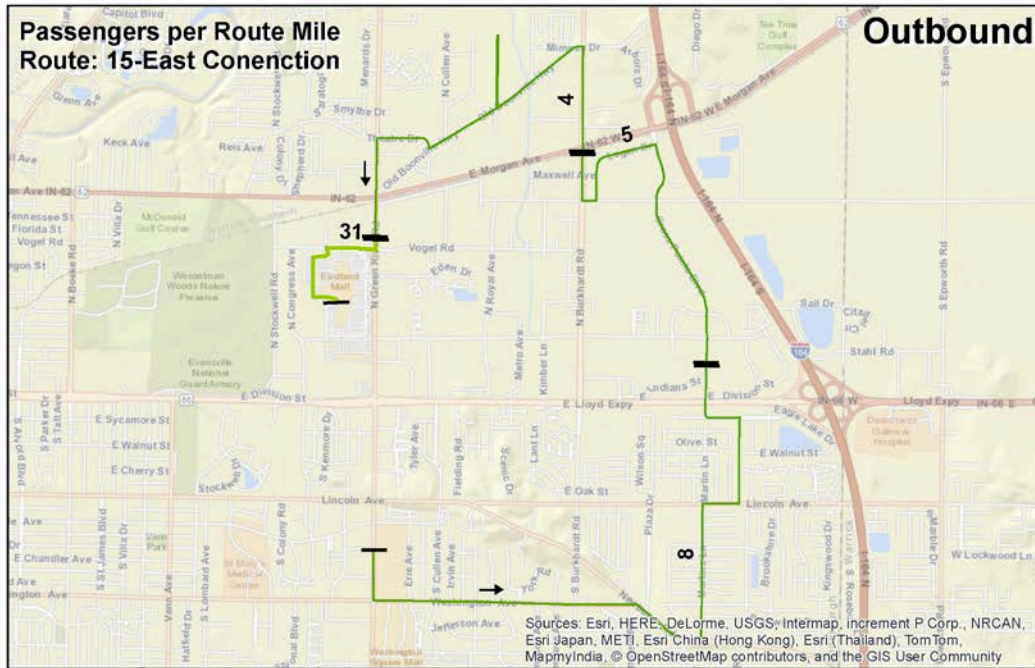
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Figure 5.9 - Ridership/Route Mile, Route 14 – Shoppers Shuttle (all weekday trips)



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Figure 5.10 - Ridership/Route Mile, Route 15 – East Connection (all weekday trips)



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A detailed service planning effort will be required to finalize a consolidated routing for these two services. Initial observations include the following:

- Nearly all of the ridership on these routes boards or alights (i.e., deboards) at their common termini.
 - On 14 – Shoppers Shuttle, 146 of 189 daily riders (77%) board or alight at Lawndale Transfer Center. Also, 52 of 189 daily riders (28%) board or alight at Eastland Mall Transfer Center.
 - On 15 – Shoppers Shuttle, 188 of 260 daily riders (72%) board or alight at Lawndale Transfer Center. Also, 112 of 260 daily riders (43%) board or alight at Eastland Mall Transfer Center.
- For route segments not serving one of the route termini, ridership/route mile generally is higher on 14 – Shoppers Shuttle than on 15 – East Connection.
- The only non-terminal section of the 15 – East Connection which is comparatively well-used is along Virginia between Burkhardt Rd. and Crosse Point Blvd. This portion of the route serves the Wal-Mart shopping plaza area south and east of Burkhardt Rd. /Virginia Ave. 14 – Shoppers Shuttle already serves this destination on Burkhardt Rd.
- Schedule adherence on 15 – East Connection is among the poorest of all METS routes. Input from drivers and the public states that the “on call” nature of the route is a major underlying cause. The ridership counts show that the “on call” feature attracts low levels of ridership. A consolidated route should no longer offer on-call service.
- Generally, a consolidated route should follow the route of the current 14 – Shoppers Shuttle. A final routing will require a detailed evaluation prior to implementation.

5.1.5.3 Ridership, Revenue and Cost Estimates

Table 5.5 provides forecasts of ridership and revenue resulting from the route consolidations. These forecasts show that these consolidations are expected to save over \$370,000 in annual operating costs with very little loss of ridership or farebox revenue. Each also saves a peak period bus. These savings in costs and buses can be used for other service improvements. These forecasts have been updated from those provided in the July 2015 draft report to also include the savings from consolidated operations on Saturday; the earlier estimates showed only the savings from a Monday through Friday consolidation.

Table 5.5 – Forecasted Ridership Loss and Cost Savings – Route Consolidations

Forecasted Ridership Loss and Cost Savings - Route Consolidations				
	Forecasted Annual Change In			
Route	Passengers	Revenues	Cost	Peak Buses
14-Shoppers Sh & 15 - E Conn.	(12,000)	\$ (6,000)	\$ (193,000)	-1
5 - Mary T & 12 - Howell	(6,000)	\$ (3,000)	\$ (184,000)	-1

The consolidation of Routes 14 – Shoppers Shuttle and 15 – East Connection is recommended for March 2016 implementation. The consolidation of Routes 5 – Mary/Tekoppel and 12 – Howell is

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recommended for September 2016 implementation. Implementation of each of these consolidations will reduce the number of bus operators which METS must have on staff by 2.4 FTEs (total of 4.8 FTE savings for both consolidations). The consolidation of Routes 14 and 15 (based upon the complete on-off ride counts taken as part of this project) are forecasted to impact at least twice as many existing riders (who are assumed to no longer use METS for the trips they are making on these services). In daily terms, about 10 passenger round trips daily (20 one-way trips) which presently are made on routes 5 or 12 no longer would be made. Likewise, about 20 passenger round trips daily (40 one-way trips) which presently are made on routes 14 or 15 no longer would be made. In other words, the number of riders affected on routes 5 and 12 are approximately one-half the number of those affected on routes 14 and 15.

During the public comment period after the release of the draft five year plan on July 2, 2015, the proposed consolidation of routes 5 and 12 received a significant number of comments in opposition. By comparison, the proposed consolidation of routes 14 and 15 (which would affect more riders) did not receive any comments in opposition.

For this reason, it is proposed that the consolidation of routes 14 and 15 be implemented in March 2016. We recommend that the consolidation of routes 5 and 12 not occur until September 2016. This is to allow METS to staff the position of Manager of Service Planning, Schedules and Marketing, so that the consolidation of routes 5 and 12 can be analyzed in further detail.

Note also that each of these consolidations is required to provide an additional peak bus for other improvements. The consolidation of routes 5 and 12 is required to provide the added peak bus to operate the USI – Downtown Express (see Section 5.1.7). The consolidation of routes 14 and 15 is required to provide the added peak bus for new crosstown service on the northeast side (see Section 5.1.4).

5.1.6 Route Realignment and “Straightening” (Element F)

This section describes minor realignments to existing routes. These are proposed to rationalize service on these routes and make them easier for riders (especially new, choice riders) to understand service patterns. Most of these routes operate in a confusing pattern of different inbound and outbound routings. In some cases, routes also take different paths depending upon the times they leave the Downtown Transfer Terminal. Designations of “A” and “B” routes are used to distinguish these differentiations by leaving time from the Downtown Transfer Terminal. This terminology is very confusing, and is a real barrier to transit use by those not already very familiar with the METS system. As part of this element, the designation of “A” and “B” trips will be discontinued.

In the case of 23 – US Highway 41 North Connection, a reroute to North Park Transfer Center is proposed to improve connections to the rest of the METS system. These improved connections are intended to attract more ridership to this route, which currently is METS poorest performing route. It also is intended to shorten the route and address very severe schedule adherence issues with this route.

Section 5.1.6.9 provides a forecast of cost and ridership impacts of these changes.

5.1.6.1 Route 2 – Riverside Realignment

Figure 5.11 shows the proposed realignment of 2 – Riverside. It provides for operation in both directions via Riverside Dr., Vann Ave. and Pollack Ave. Inbound service by some trips via Fickas Rd. and Pollack Ave. (between Vann Ave. and Riverside Dr.) will no longer be operated.

Figure 5.11 – Route 2 – Riverside Realignment

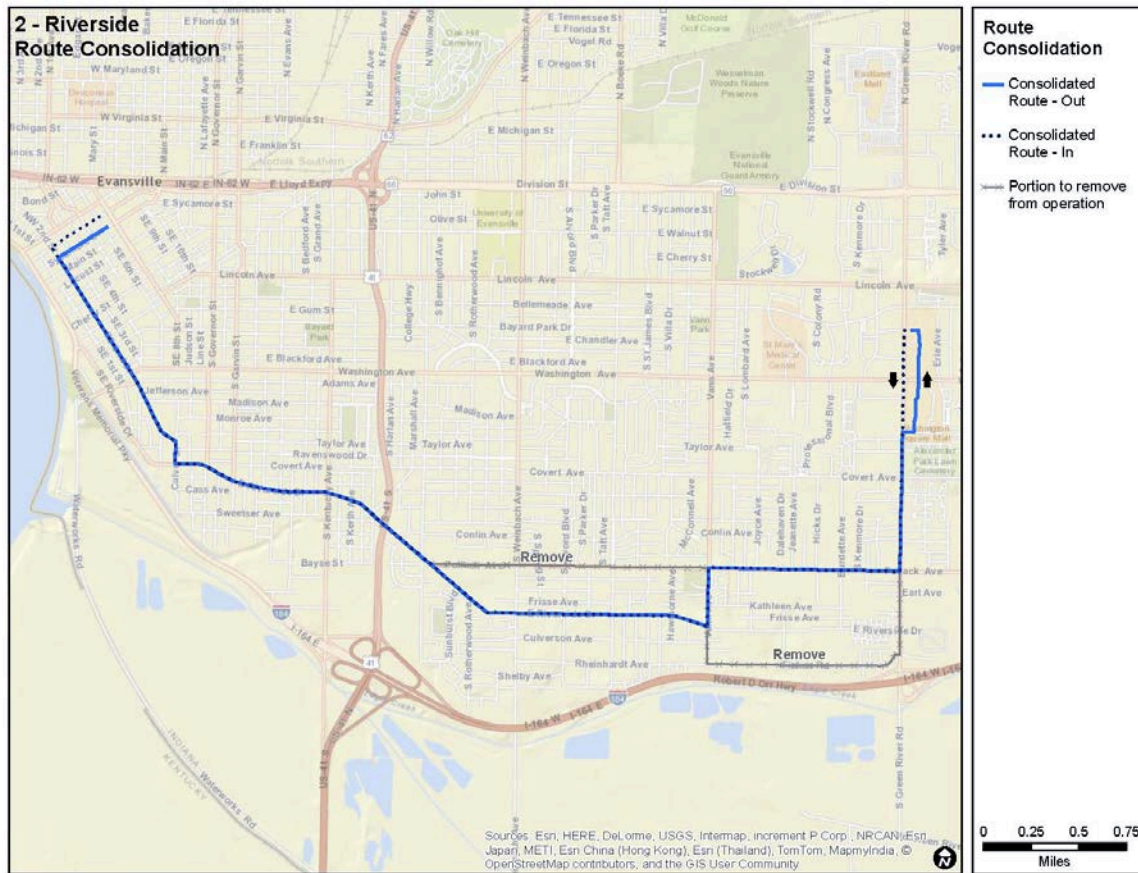
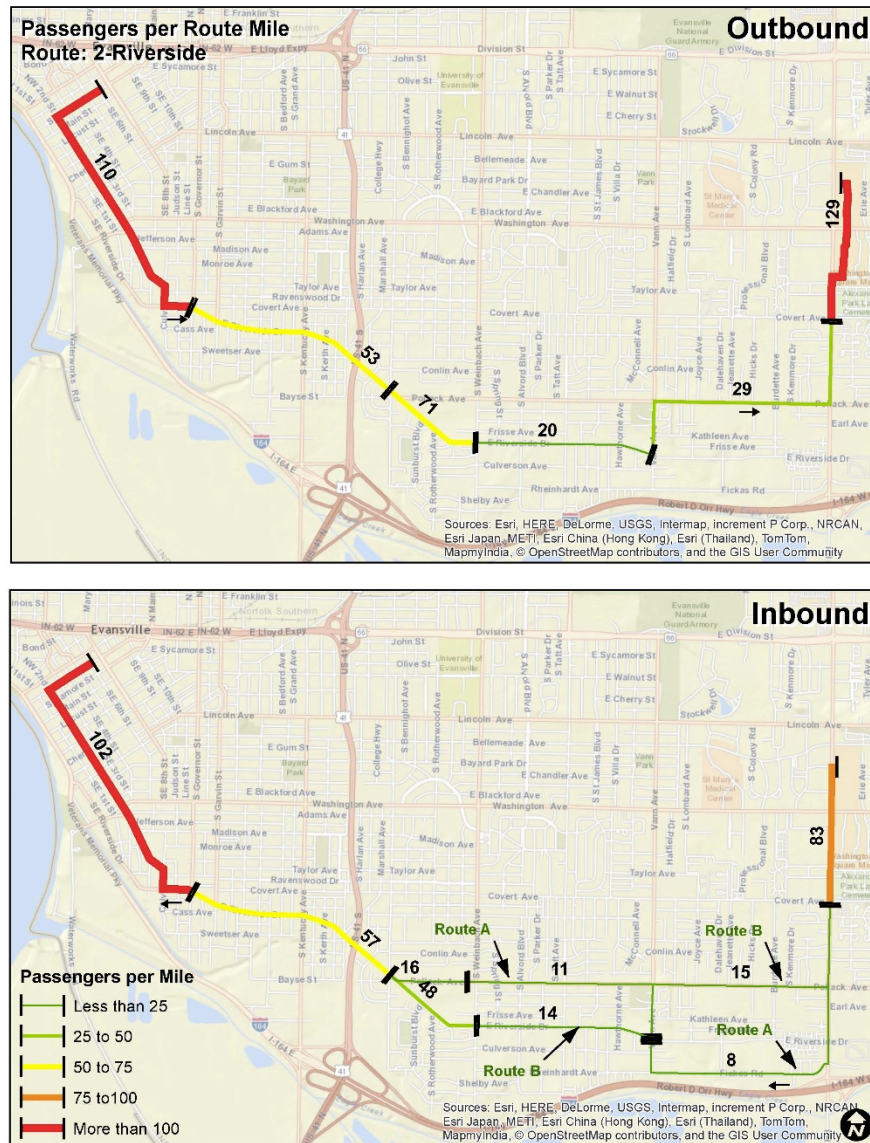


Figure 5.12 shows ridership by segment on Route 2 – Riverside. The segments which no longer will be operated have significantly lower ridership than other portions of the route. In addition, those presently using stops along Pollack Ave. between Vann Ave. and Riverside Dr. can use service on 2 – Riverside (on Riverside Dr.) or on 9 – Covert (on Covert Ave.). Ridecounts showed only 12 passengers boarding and 5 alighting all day on Green River Rd. south of Pollack Ave. and on Fickas Ave. By comparison, 70 through riders daily will have faster service due to the shortened route.

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Figure 5.12 - Ridership/Route Mile, Route 2 - Riverside (all weekday trips)



5.1.6.2 Route 3 – Fulton Realignment

Figure 5.13 shows the proposed realignment of Route 3 – Fulton. It provides for the route to operate via First Ave. north of Diamond Ave. It also removes service in one direction via Fifth and 7th Aves. The route will be scheduled to operate at offset intervals with Route 7 – First Ave. This will provide service every 30 minutes to Ivy Tech, and alleviate overcrowding on Route 7 – First Ave. This change will allow overcrowding on 7 – First Ave. to be addressed in the short term.

Figure 5.13 – Route 3 – Fulton Realignment

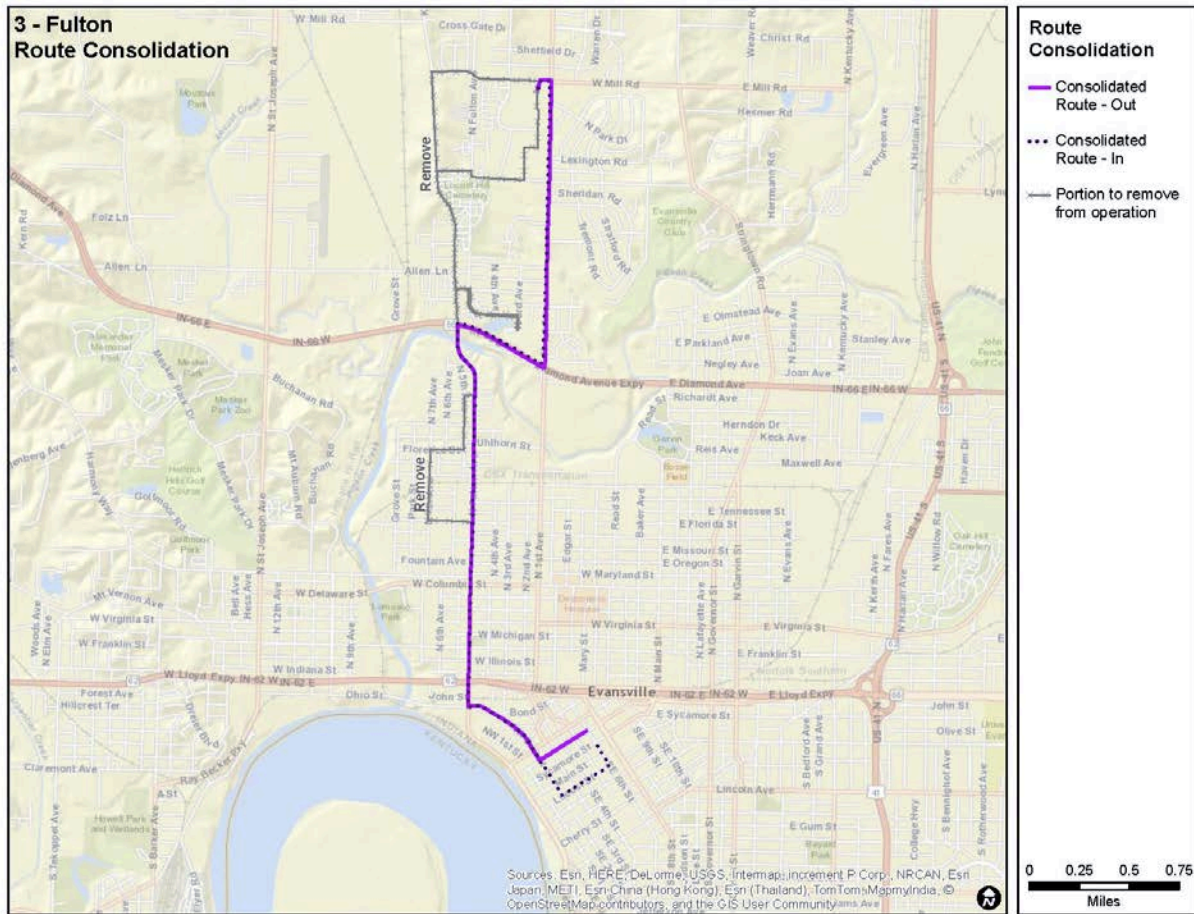
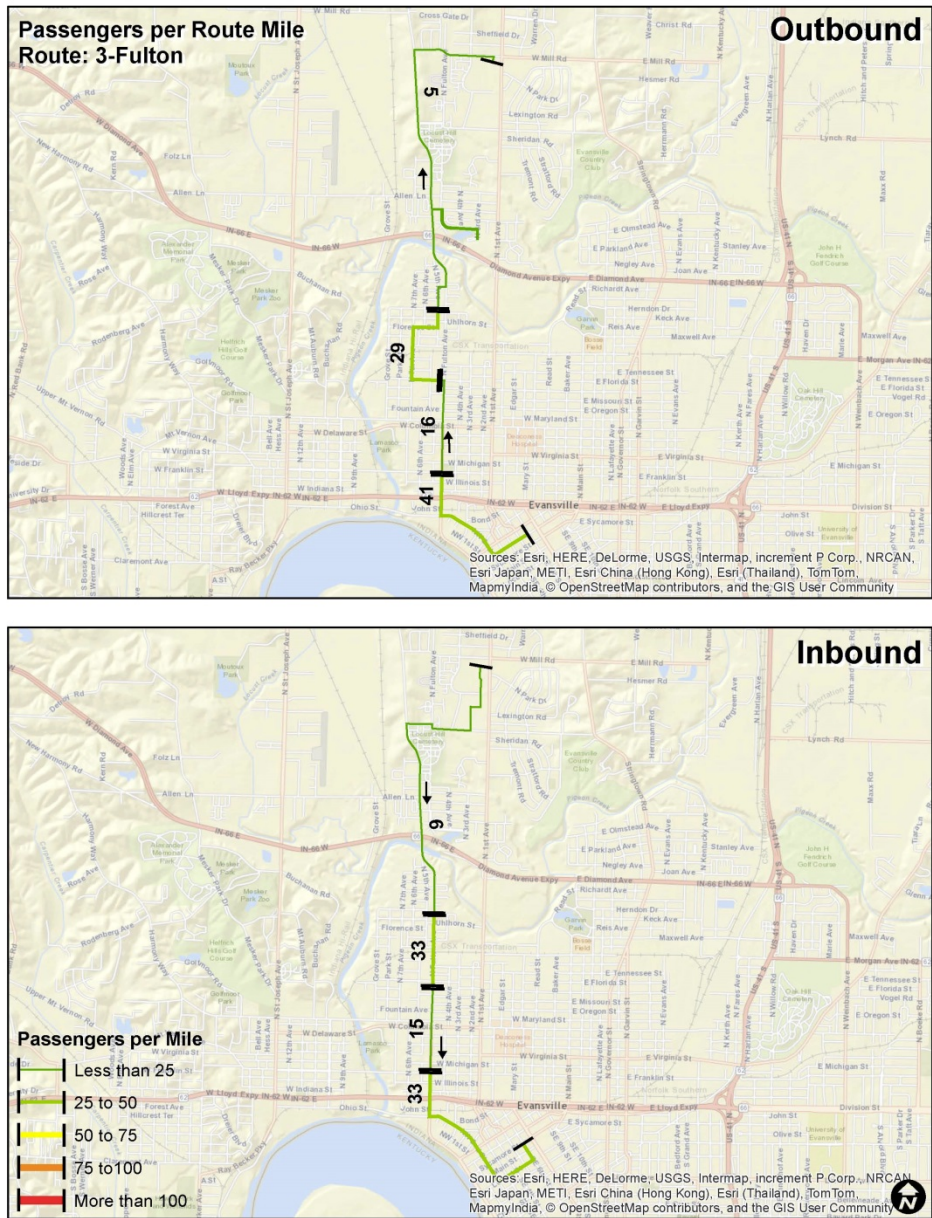


Figure 5.14 shows ridership per route mile on Route 3 – Fulton Ave. Ridership north of Diamond Ave. in both directions is quite low. Ridership on the segment along Fifth and Seventh Aves. is high (29 daily passengers per route mile – in the northbound direction only). However, this actually is slightly less than ridership in the same segment along Fulton Ave. in the southbound direction (33 daily passengers per route mile). This is a clear indication that passengers can easily access service on either location. Providing service in both directions on Fulton Ave. will make the service more understandable, and provide northbound passengers with a shorter ride.

Ridership on the discontinued segments along 7th Ave. is 7 boarding and 16 alighting all day; 63 through riders would have faster service. The deviation via Fulton Parkway to Grandview Towers serves 6 boarding and 8 alighting all day; 49 through riders would have faster service. Also, this second group of riders would continue to have service via Route 7 – First Avenue.

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Figure 5.14 - Ridership/Route Mile, Route 3 - Fulton (all weekday trips)



5.1.6.3 Route 4 – Stringtown Realignment

Figure 5.15 shows the proposed realignment of Route 4 – Stringtown. It provides for elimination of two lightly patronized detours in the vicinity of Diamond Ave. which significantly delay through riders. It also provides for reversing the north end loop to use with a relocated North Park transfer terminal. Finally, it restores a routing through the County Jail property which was operated until a few years ago. This change will save at least five minutes in running time, and provide a much faster trip for through riders.

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Reinstating this routing will require the approval and continued support of the Vanderburgh County Sheriff and Vanderburgh County government.

Figure 5.15 – Route 4 – Stringtown Realignment

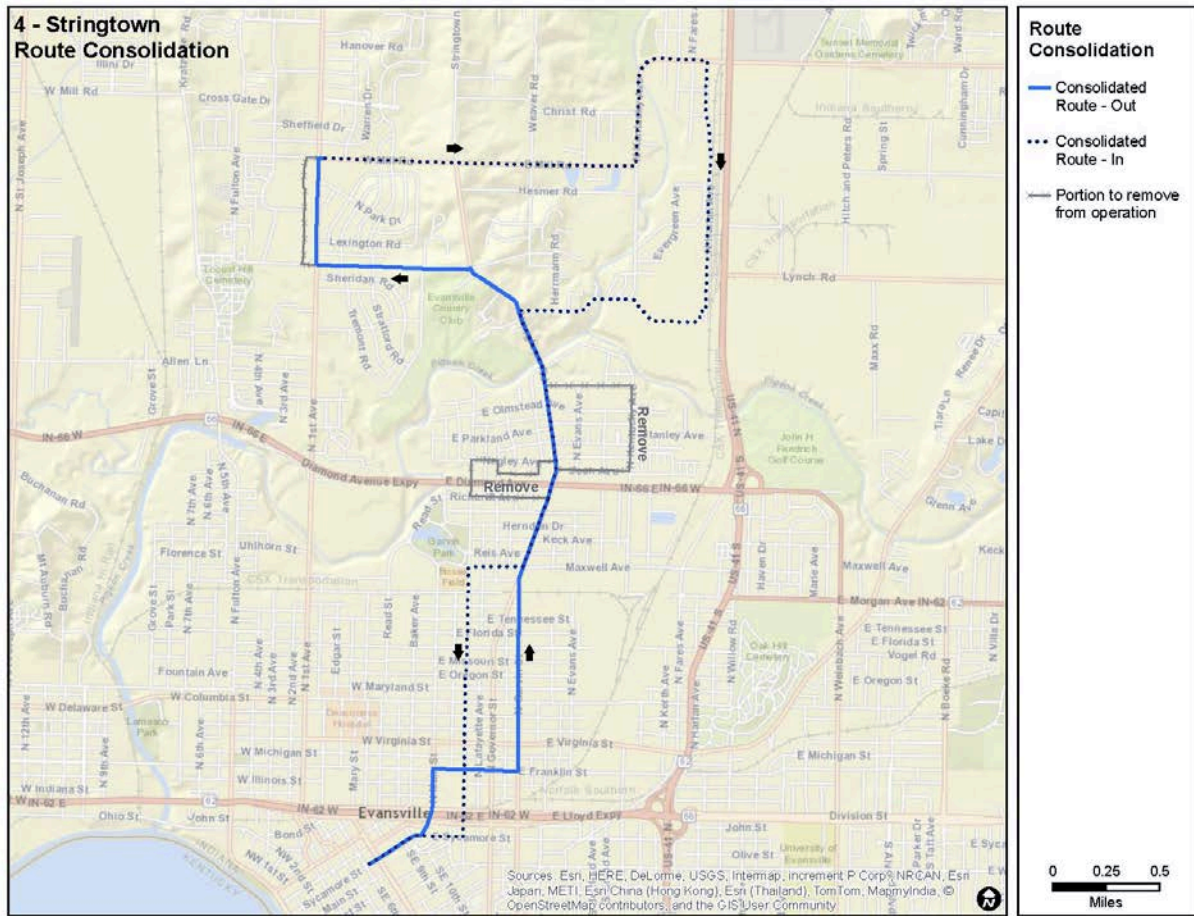
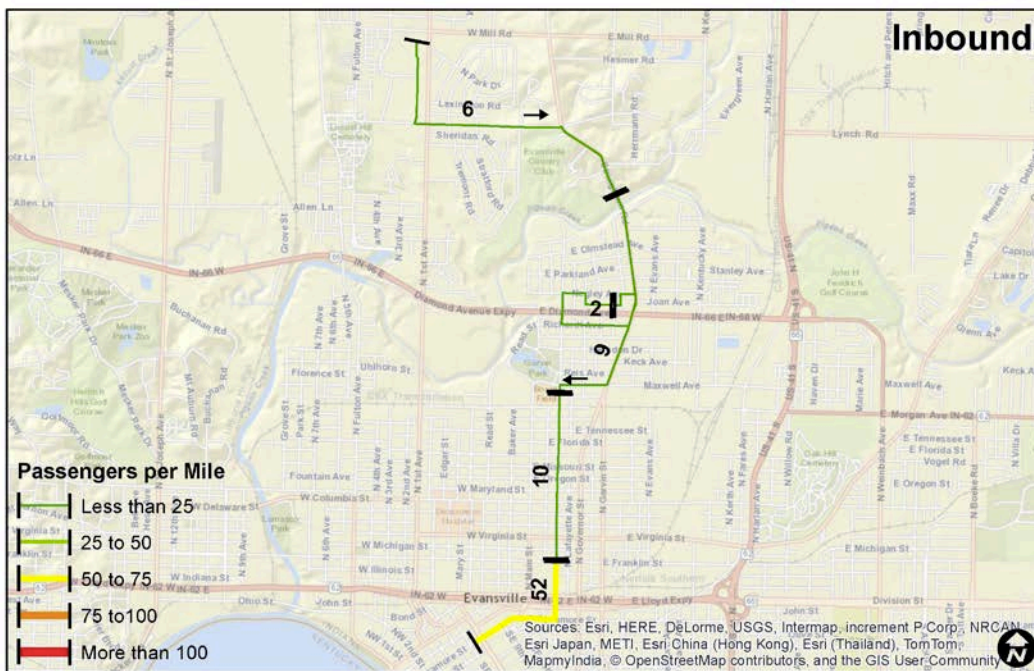
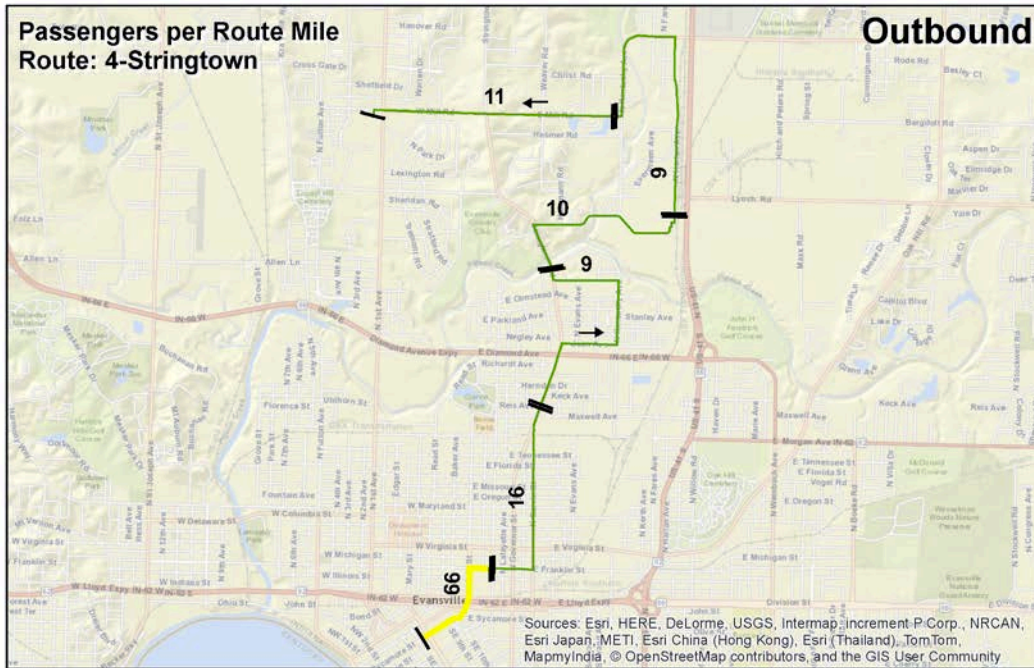


Figure 5.16 shows riders per weekday route mile on Route 4. The portions recommended for removal from operation have low levels of daily ridership. Ride counts showed the outbound section along Joan, Kentucky and Tulip Aves. with only 5 passengers boarding and 7 alighting all day; 71 through riders will have a faster trip. The same counts showed only 4 passengers boarding and 2 alighting on all inbound trips through Town Center Shopping Center; 56 through riders will have a faster trip.

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Figure 5.16 - Ridership/Route Mile, Route 4 - Stringtown (all weekday trips)



5.1.6.4 Route 5 – Mary/Tekoppel Realignment

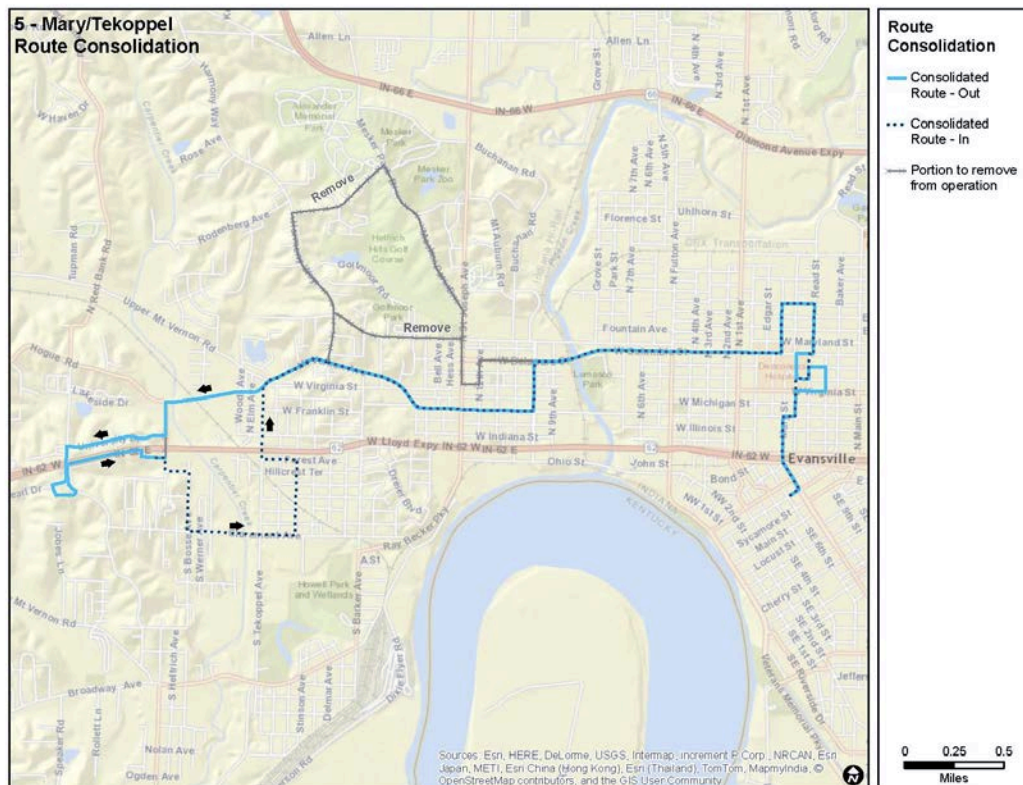
Route 5 – Mary Tekoppel has a very confusing service pattern. It has two different outbound routings, both of which are different from its inbound routing.

Figure 5.17 shows the proposed realignment of Route 5 – Mary/Tekoppel. It provides for elimination of operation along several streets in the western portion of the route which are very lightly-patronized. On both outbound (westbound) routes, 13 daily passengers board and 5 alight in the segments between Maryland/St. Joseph Aves. and Mt. Vernon Ave. /Harmony Way. Two-way service will be provided on Mount Vernon Ave., Franklin St., and Delaware/Columbia St. By comparison, 104 through riders will have a much shorter trip.

Service south of the Lloyd Expressway between Schnucks Transfer center and Ingle Ave. will be provided inbound every 30 minutes, serving most of the riders presently using Route 12 – Howell in this segment. Riders using stops along portions of Maryland St. and Columbia St. where service no longer will be provided will have a two to three block walk to streets where service is provided.

Route 5 also would operate with this routing until the end of service (last trip leaving Downtown Transfer Center at 11:15 pm). The evening-only Route 17 – Mary/Howell would be discontinued.

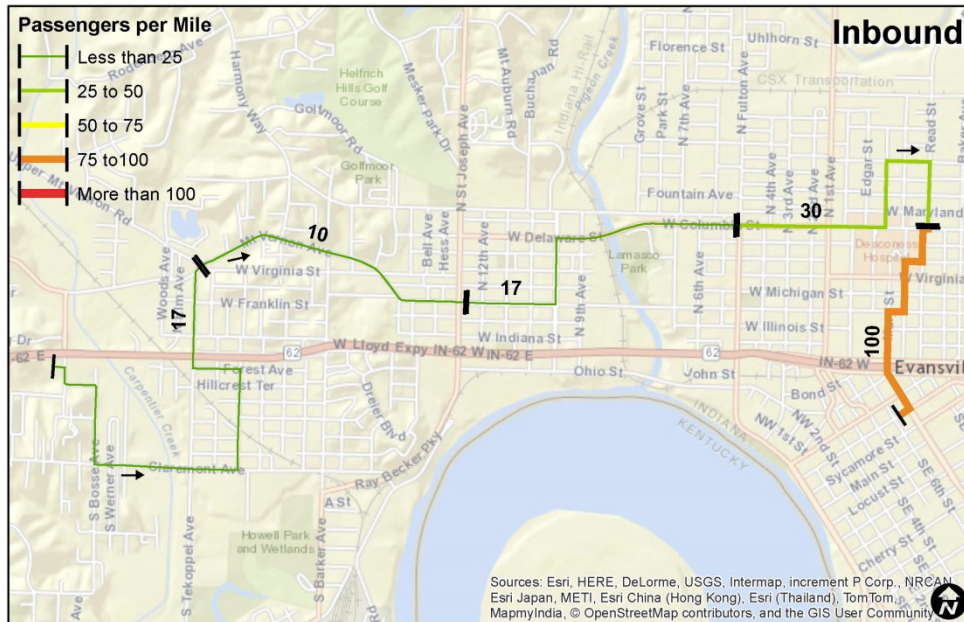
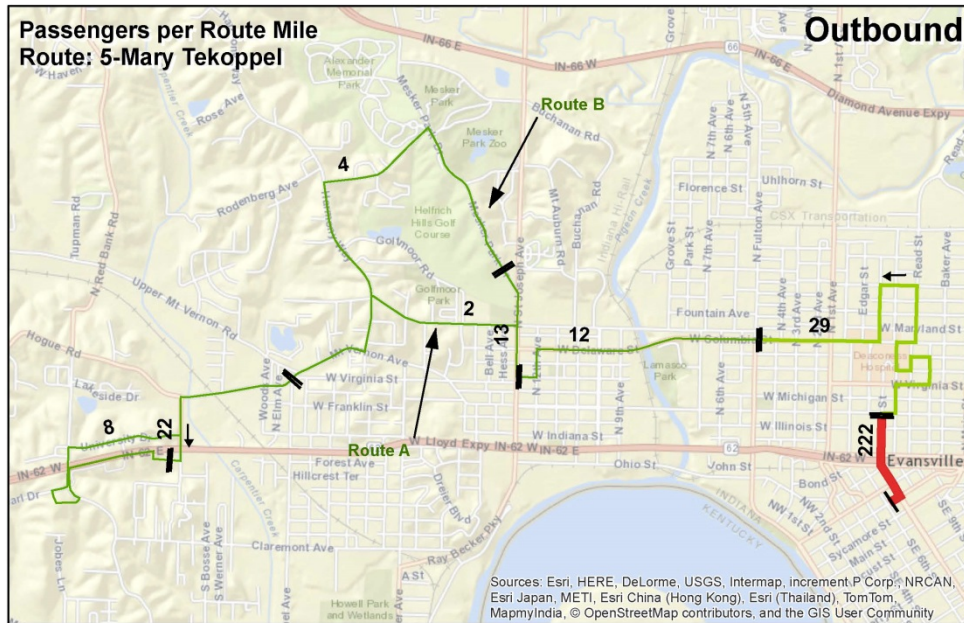
Figure 5.17 – Route 5 – Mary/Tekoppel Realignment



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Figure 5.18 shows riders per weekday route mile on Route 5. The portions along Maryland St. and serving the Mesker Park Zoo have extremely low levels of ridership.

Figure 5.18 - Ridership/Route Mile, Route 5 – Mary/Tekoppel (all weekday trips)



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5.1.6.5 Route 8 – Lincoln Realignment

Route 8 – Lincoln has two lightly-used deviations at the east end of the route which are proposed for elimination. This will provide consistent two-way service along Green River Rd. between Eastland Mall and Lincoln. Ave.

Figure 5.19 shows the proposed realignment of Route 8 – Lincoln. Operation at Eastland Mall is consistent with construction of a new Transfer Center on Vogel Road west of Green River Road.

Figure 5.19 – Route 8 – Lincoln Realignment

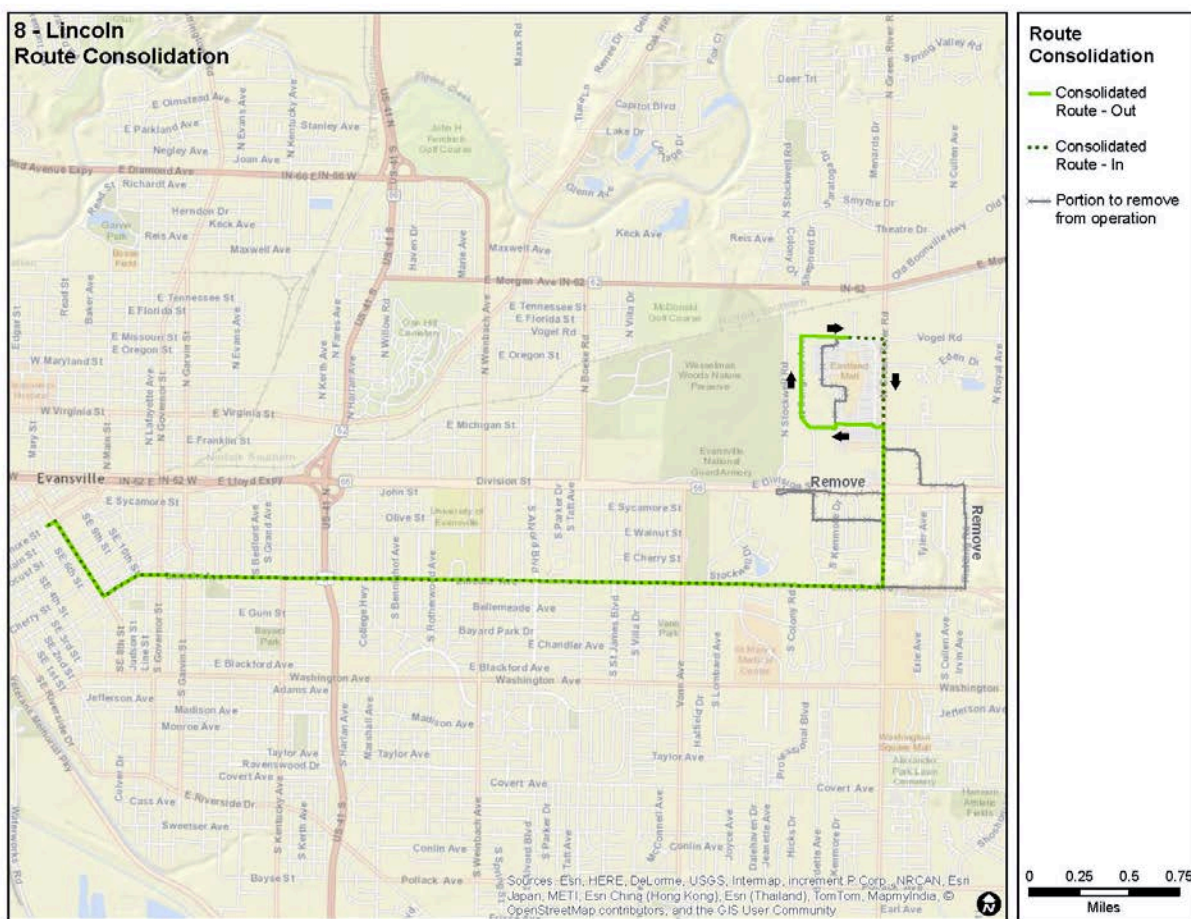
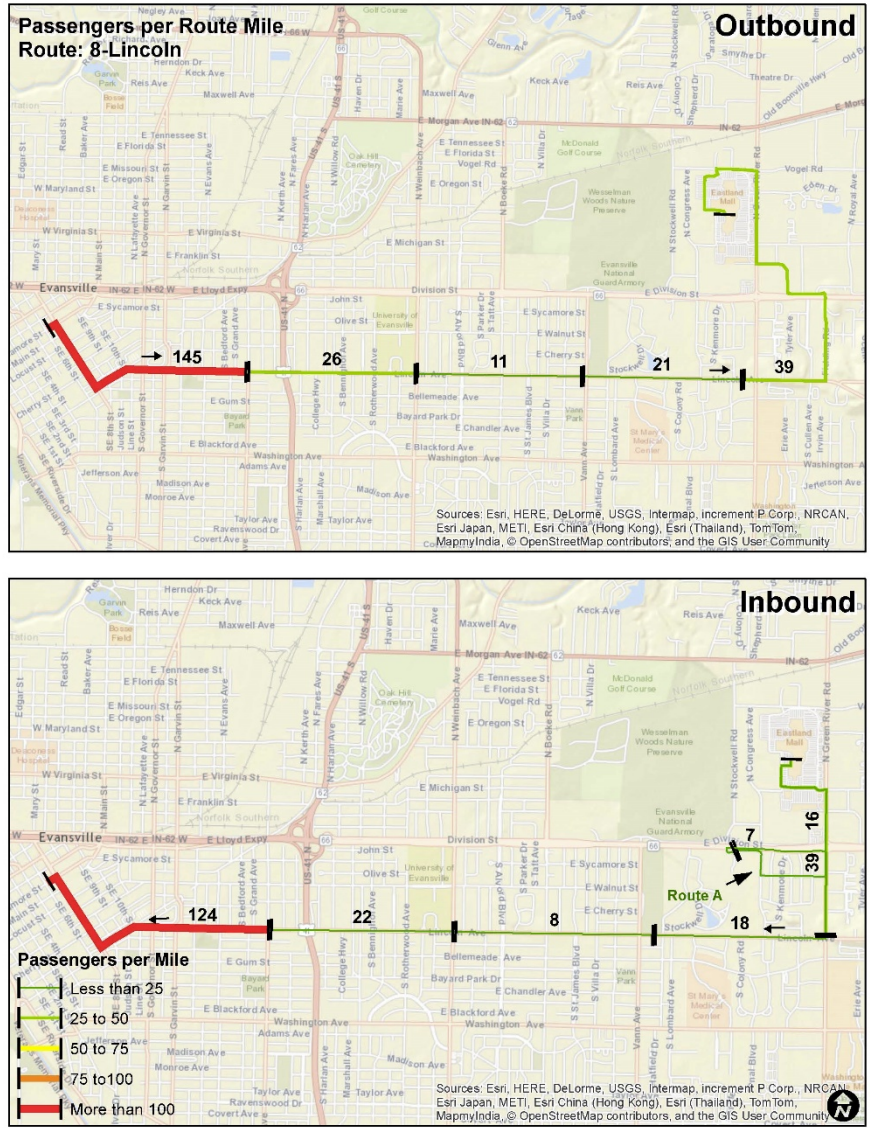


Figure 5.20 shows riders per weekday route mile on Route 5. Ridership on the outbound segment east of Green River Rd. includes passengers using stops along Green River Road and at Eastland Mall. Ride counts show 33 riders/day (between 1 and 2 passengers per trip) alight at stops east of Green River Rd. By comparison, 140 riders alight on Green River Road (north of Division) and at Eastland Mall. Nearly all of these riders are taken several minutes out of their way by this routing. Also, two-directional service in this area east of Green River Rd. is provided by Route 14 – Shoppers Shuttle.

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For inbound trips, ride counts show a total of 9 passengers boarding and 9 alighting all day in the deviation east of Green River Road. By comparison, this deviation requires that 53 through riders travel several minutes out of their way.

Figure 5.20 - Ridership/Route Mile, Route 8 – Lincoln (all weekday trips)



5.1.6.6 Route 13 – Downtown Trolley Realignment

Route 13 – Downtown Trolley has a very confusing service pattern. This is reflected in its very low ridership at most stops. Of its 34 designated stops, only 11 serve at least 4 daily riders. Table 5.6 shows ridership counted at these 11 stops during the September 2014 complete on-off counts.

Table 5.6 – 13-Downtown Trolley Daily Usage, 12 Best-Patronized Stops

13-Downtown Trolley Daily Usage, 12 Best-Patronized Stops					
Stop	Direction	Alighting	Boarding	Total Stop	% Total Riders
Main Terminal (Downtown)	In	47	0	47	28%
Main Terminal (Downtown)	Out	0	35	35	21%
W Franklin St/N Main St	In	5	9	14	8%
W Illinois St/N Main St	In	1	11	12	7%
E Michigan St/N Main St	Out	4	5	9	5%
E Columbia St/N Main St	Out	6	2	8	5%
Adams Ave/SE Second St	Out	4	2	6	4%
E Florida St/N Main St	Out	3	3	6	4%
W Tennessee St/N Main St	In	0	5	5	3%
E Iowa St/N Main St	Out	2	2	4	2%
E Morgan Ave/N Main St	Out	1	3	4	2%
E Walnut St/S Elliott St	In	2	2	4	2%

Nearly all riders on this route start or end their trips at the Downtown Transfer Center. There were a total of 85 riders counted using the service during the ride counts. Of these, 82 began or ended their trips at the Downtown Transfer Center (assuming that no one took a round trip both beginning and ending at the Downtown Transfer Center). Of the 10 stops (other than the Downtown Transfer Center) which served at least four passengers per day, 8 are along North Main Street.

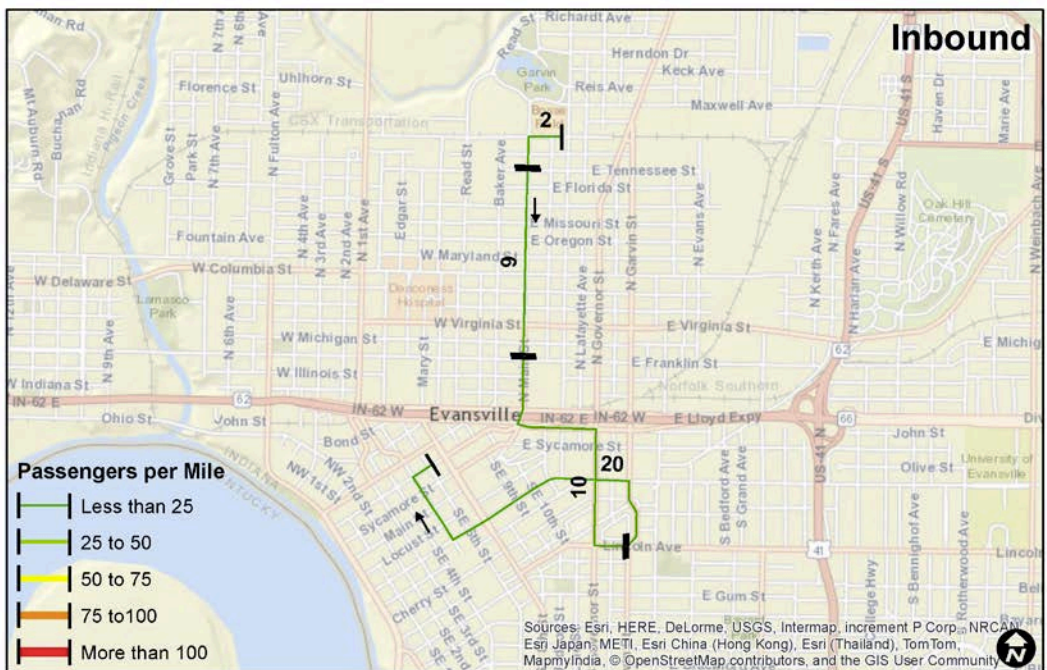
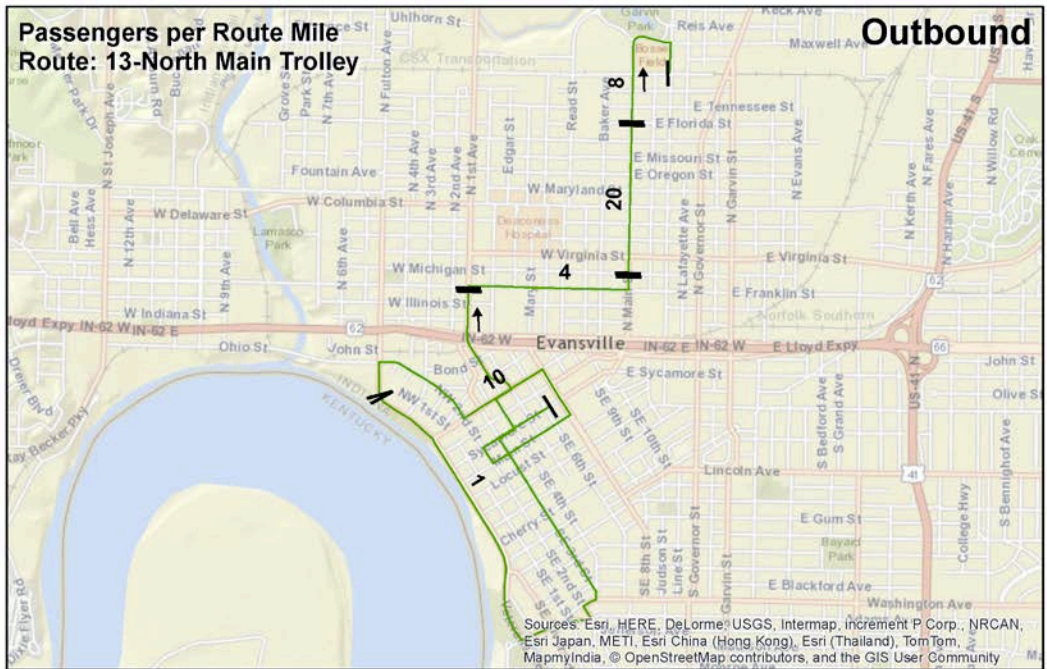
The portions of Route 13 – Downtown Trolley on Main St. serve all but 8 of the boarding and 10 of the alighting passengers counted for the entire day. Nearly 80% of the route’s riders travel entirely on the Main St. portion of the route, nearly all of which travel to or from the Downtown Transfer Center.

Figure 5.21 shows ridership per route mile along the entire Route 13 – Downtown Trolley. Note that for route segments beginning or ending at the Downtown Transfer Center, virtually all ridership is using the Downtown Transfer Center.

A specific routing recommendation for Route 13 – Downtown Trolley is not provided at this time. A general recommendation (for follow up by METS staff) is to provide service between the Downtown Transfer Center and North Main Street. Eliminating service south of the Downtown Transfer Center could allow service to be operated as often as every 30 minutes, using the one vehicle now assigned to this route.

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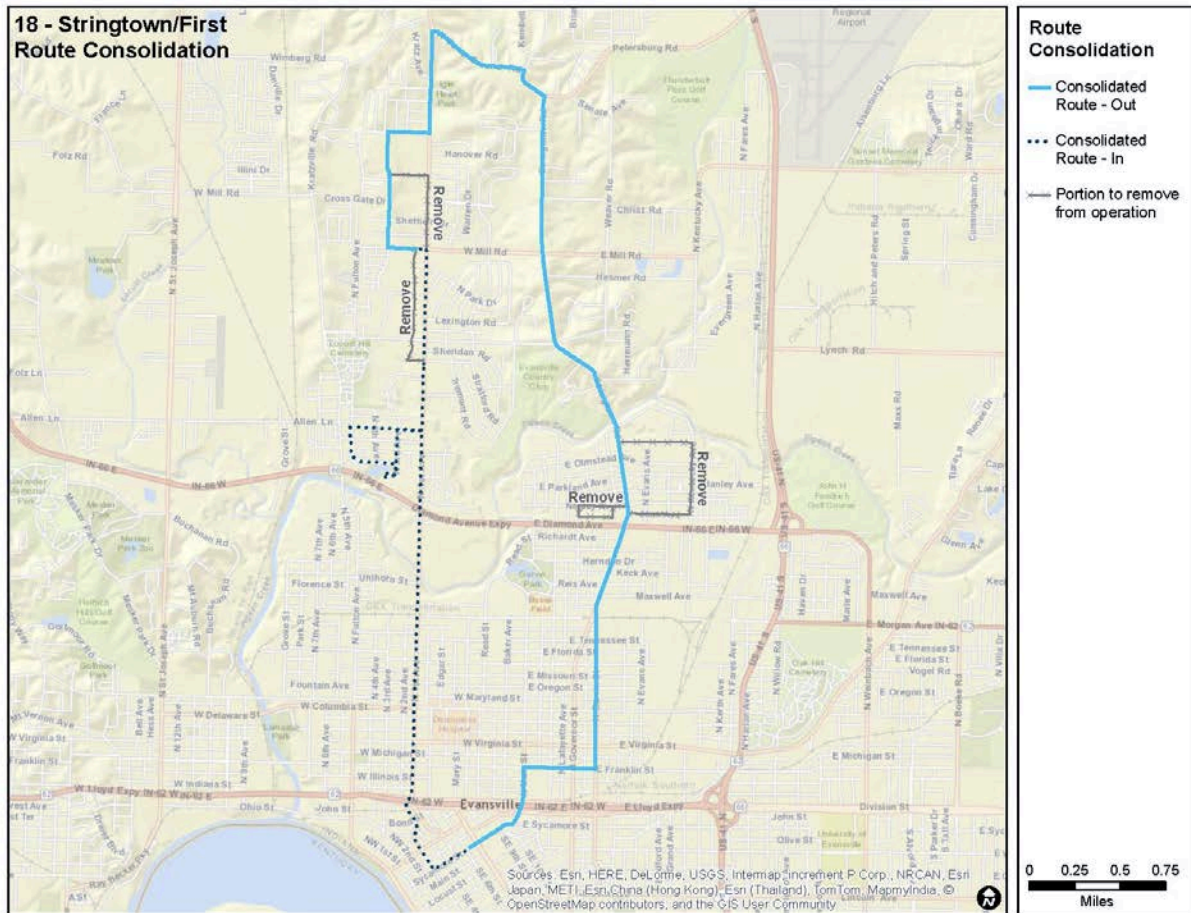
Figure 5.21 - Ridership/Route Mile, Route 13 – Downtown Trolley (all weekday trips)



5.1.6.7 Route 18 – Stringtown/First Realignment

Figure 5.22 shows the proposed realignment of nighttime Route 18 – Stringtown/First. These changes reflect comparable changes to Route 4 – Stringtown (see Section 5.1.6.3). Three passengers board and 8 alight on all trips on the portions of the route which no longer would be served. By comparison, 36 through riders would have a 5 – 7 minute shorter trip.

Figure 5.22 – Route 18 – Stringtown/First Realignment



5.1.6.8 Route 23 – US Highway 41 N Connection Realignment

Route 23 – US Highway 41 North Connection (US 41 Connection) is the poorest performing of all METS routes. Our assessment identified two significant issues which contribute to this poor performance. These are:

- It offers poor connections with the rest of the METS system. Its southern terminal is on north Green River Road, where it offers connections only with routes 10 – Lynch and 15 – East Connection.

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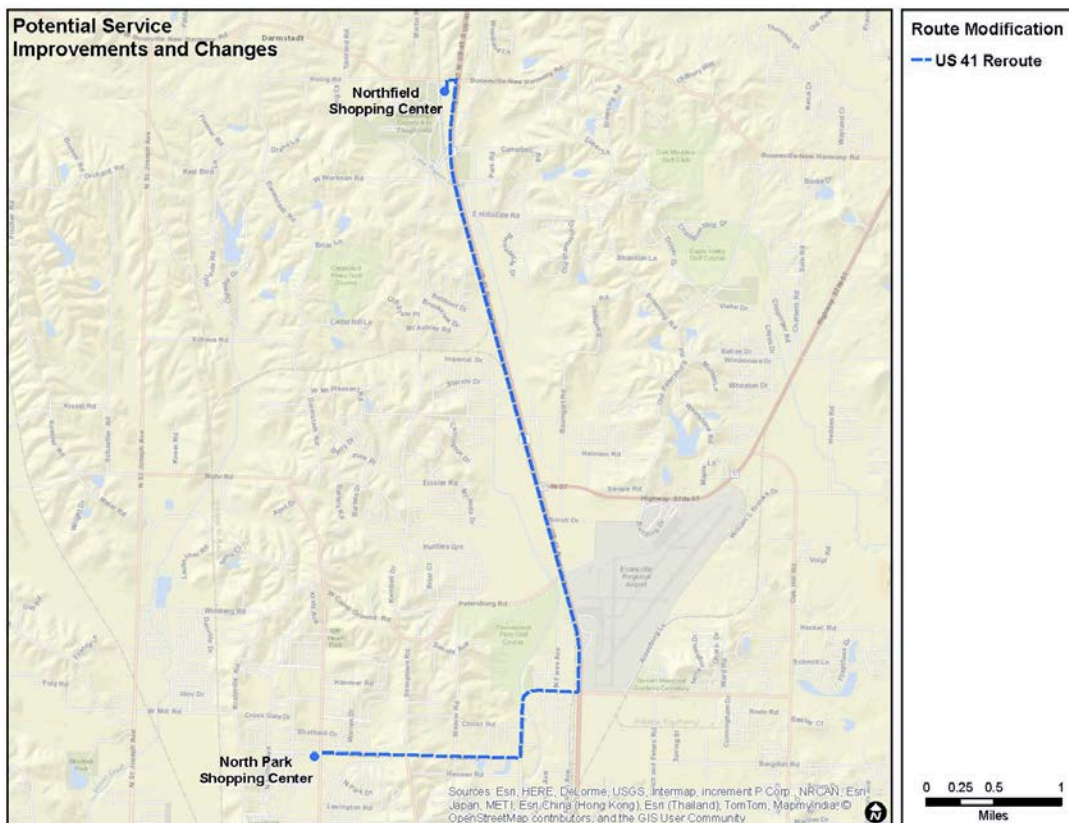
- It has the most severe schedule adherence issues of any METS route. During the on-board counts, its average round-trip running time was 59 minutes. Only three of 11 trips for which running time was obtained operated in less than one hour. This means that the service simply operates later and later as the day continues. The route is too long, and needs to be shortened.

It is proposed that the North Park Transfer Center become the new south terminal for this route. This will provide a shorter, more direct route. Connections will be available with three other METS routes (3 – Fulton, 4 – Stringtown and 7 – First Ave.). Figure 5.23 shows this proposed route change. This proposed change would remove service used by 25 boarding and 28 alighting passengers daily. However, all but one of these passengers board or alight at a stop already served by Route 10 – Lynch.

A frequent request has been for extension of this route north to the McDonalds truck stop area just south of Interstate 64. After the rerouting to North Park terminal is implemented, the running time for the new route can be reviewed to determine if this extension is feasible. It would represent an additional 1.6 – 1.8 added round trip miles on this route.

Significant input has been received that the on-call nature of this service is problematic. Once a service planning/scheduling manager is hired, the on-call nature of this service should be reviewed.

Figure 5.23 – Route 23 – US Highway 41 North Connection Realignment



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5.1.6.9 Realignment – Cost and Ridership Forecasts

Table 5.7 provides forecasted ridership and revenue impacts for implementing these route realignments. In every case, forecasted loss of ridership due to stops no longer being served is less than forecasted increases in ridership. These increases in ridership are forecasted based upon increases in the number of through riders who would be provided with faster, more direct service. In addition to these ridership increases, approximately 700 present riders would be provided with faster, more direct trips every day. These 700 riders are approximately 12% of the 5,700 METS weekday fixed route riders (excluding those using USI service).

Due to the significant nature of the changes to Route 23 – US 41 North Connection, estimates of changes in ridership and revenue are not provided.

Table 5.7 – Forecasted Ridership and Revenue Effects of Route Streamlining

Forecasted Ridership and Revenue Effects of Route Streamlining									
Route	Daily Riders						Rev. per Rider	Annual Change In	
	Stops Disc.		Thru Riders Benefitted		Net Change				
	Total	Riders Lost	Number	Riders Gained	Daily	Annual		Riders	Revenue
2 - Riverside	17	6	70	12	6	1,500	\$ 0.51	1,500	\$ 800
3 - Fulton	37	6	112	19	13	3,300	\$ 0.45	3,300	\$ 1,500
4 - Stringtown	18	6	127	21	15	3,800	\$ 0.40	3,800	\$ 1,500
5 - Mary/Tekoppel	18	6	104	17	11	2,800	\$ 0.38	2,800	\$ 1,100
8 - Lincoln	42	14	193	32	18	4,600	\$ 0.41	4,600	\$ 1,900
13 - Downtown Trolley	18	6	64	11	5	1,300	\$ 0.38	1,300	\$ 500
18 - Stringtown/First	11	4	36	6	2	500	\$ 0.43	500	\$ 200
Total - All Services	161	48	706	118	70	17,800		17,800	\$ 7,500

These realignments are recommended for implementation in September 2016. They are not forecasted to affect the number of FTE bus operators required to operate METS service. These modifications will address some of the key findings of the marketing and branding analysis (see Section 11). METS now operates a very confusing route structure. These include multiple route variations, as well as many indirect and circuitous routings. To someone who is not a current METS rider, we have concluded that the inability to understand the METS routes and schedules is a significant barrier to use of METS service. This recommendation addresses these findings. As part of these realignments, the designation of “A” and “B” trips will be discontinued.

5.1.7 Weekday Express Service (Element G)

Three new express services are considered. These are:

- **An Evansville-to-Henderson Express.** A connection between Evansville and Henderson was recommended in the Sustainable Evansville Area Coalition’s *Millennial Plan for 2040*.

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- **A Warrick County/Lawndale Transfer Center/Downtown Express.** This route provides express service connecting the Warrick Area Transit System, a new park-and-ride facility at Lawndale Transfer Center, and downtown Evansville.
- **An USI/Downtown Transfer Center Express.** This route provides an express connection between METS Downtown Transit Center and the USI Campus. After a follow up analysis of running time for this service, a mid-route stop at the Schnuck's Transfer Center could be considered.

Following a description of the proposed services, forecasts of cost, ridership and fare revenue are provided in Section 5.1.7.3.

An important note should be added to this discussion. These services, like most of those proposed in Section 5, require a significant increase in METS bus purchases and replacement of many over-age fixed route buses. If this fleet replacement program is not implemented, few if any of these services requiring increased peak period buses can be implemented using METS vehicles.

One other option for providing these express services is by contracting with outside (private) providers. Since these are totally new services, they would not be subject to some of the restrictions (e.g., Section 13 (c) labor protection requirements) which would apply to contracting service on existing fixed routes. It is possible that a city agency other than METS could be the contracting agency. The costs provided here would not necessarily reflect costs associated with contracted service.

5.1.7.1 Evansville-Henderson Express

The feasibility for this service is presented in a stand-alone report. This report is contained in Appendix D to this document, *Evansville-to-Henderson Service Analysis*. Our assessment of this service identified a number of issues which need to be addressed in follow up coordination among the cities of Evansville, Henderson, and the Evansville MPO (EMPO).

This analysis in Appendix D identifies forecasted ridership, revenue and operating costs for an Evansville-to-Henderson transit connection. It also identified that key items to be addressed by the parties involved include:

- Designated operator for the service
- Fare structure
- Cost and revenue sharing
- Legal and liability issues, especially for interstate operation
- The need to provide alternative ADA service (applicable FTA regulations are under revision)

Appendix D also includes summaries of interviews with transit properties in 12 peer regions. These peer regions are located throughout the United States. These peer regions each feature transit service provided across state lines separated by a major river crossing.

5.1.7.2 Warrick County/Lawndale Park-and-Ride Express

The Lawndale Transfer Center is (by a significant margin) the most heavily-used bus stop other than the Downtown Transfer Center. The report in Appendix A, *METS Comprehensive Operations Analysis*,

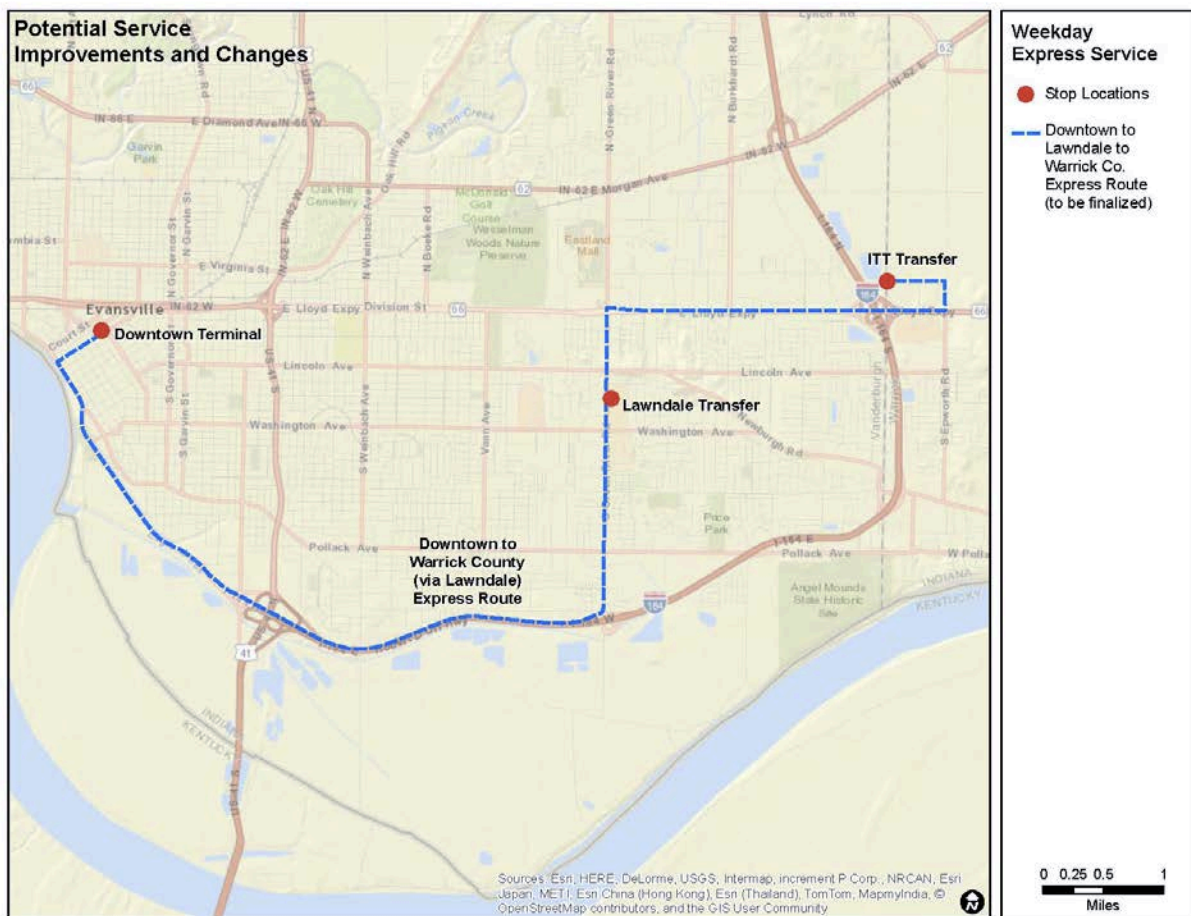
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Transfer Center Recommendations documents that over 950 weekday passengers (about 17% of total METS fixed-route ridership, excluding USI service) board or alight here. This report in Appendix A recommends construction of a park-and-ride terminal for express service to downtown.

This service is proposed to have one other stop, at the existing transfer center to WATS service at ITT-Newburgh Campus. Figure 5.24 shows a potential routing for this service. Detailed service planning studies are required to finalize the routing between Lawndale and the Downtown Transfer Center. These studies should evaluate operation to downtown via either the Lloyd Expressway or I-69. The implementation of this service needs to be coordinated with funding and construction of Lawndale Park and Ride. In advance of construction of a formal Park and Ride, it may be desirable to negotiate interim use of a portion of the Lawndale Shopping Center parking lot by METS express bus riders.

Service initially would be provided by two buses, each making two trips in both the am and pm peak periods. It is assumed that each bus would serve an average of 15 riders, paying an express fare of \$2.00. This fare would include a free transfer to another METS route. Riders transferring from another METS route would pay the differential between the local fare and express fare of \$2.00.

Figure 5.24 – Proposed Warrick County-Lawndale-Downtown Express



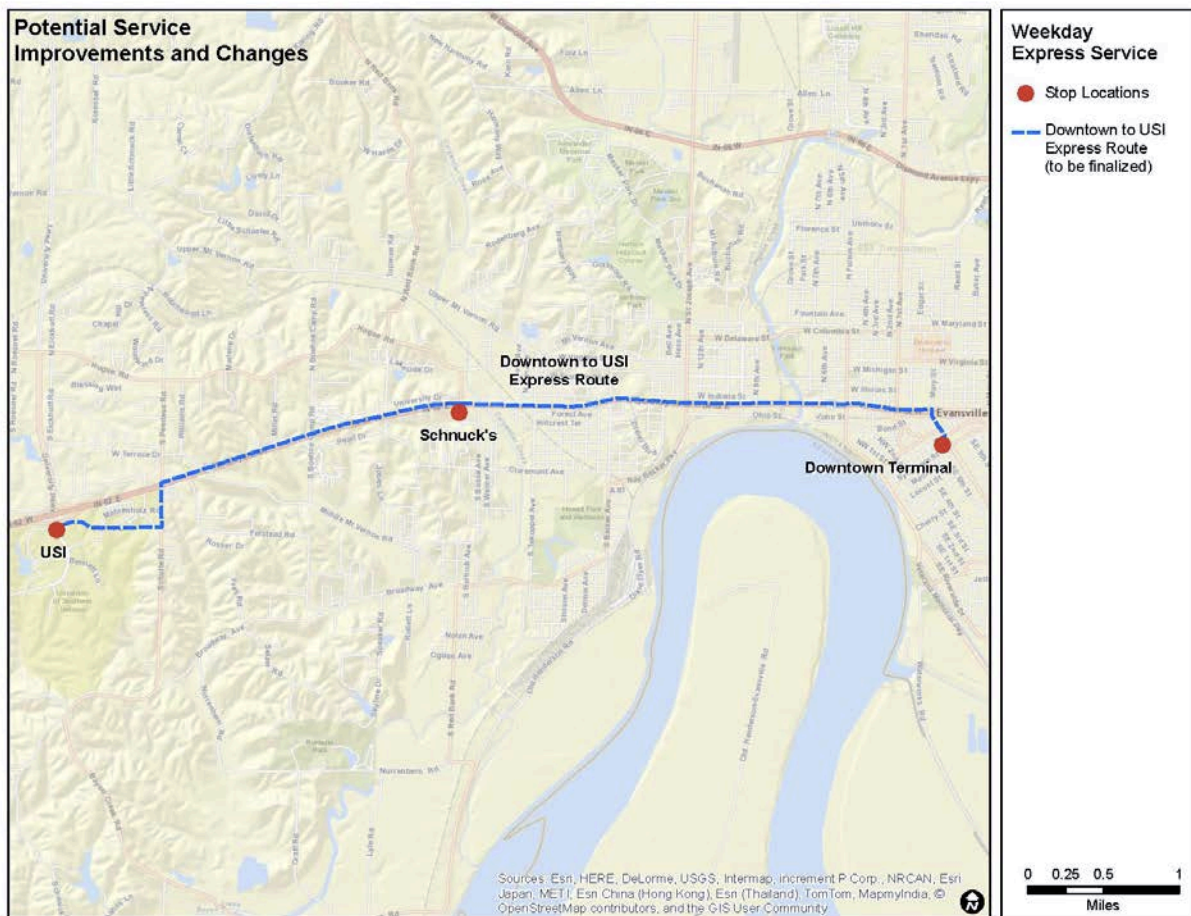
5.1.7.3 USI Express

Presently, riders traveling to the University of Southern Indiana (USI) need to take two buses from the Downtown Transfer Center to reach the USI campus. This is a three-bus ride for riders from the north or east side. One bus could provide express service on an hourly basis between the Downtown Transfer Center and USI. If a detailed service planning analysis determines that running time would be adequate, it would be desirable to add one mid-route stop at Schnucks Transfer Terminal.

It is assumed that each bus would serve an average of 15 riders per round trip, paying an express fare of \$2.00. This fare would include a free transfer to another METS route. Riders transferring from another METS route would pay the differential between the local fare and express fare of \$2.00. The express fare would apply only to passengers traveling between the Downtown and Schnucks Transfer Terminal.

Figure 5.25 shows the proposed USI Express.

Figure 5.25 – Proposed USI-Downtown Express



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5.1.7.4 Express Bus Service – Cost, Ridership and Fare Revenue

Table 5.8 provides forecasted costs, ridership and revenue for the Warrick County/Lawndale and USI express bus services.

Table 5.8 – Forecasted Ridership, Fare Revenue and Operating Costs for Express Bus Service

Table 5.8 – Forecasted Ridership, Fare Revenue and Operating Costs for Express Bus Service									
Service	Daily					Annual			
	Hours	Miles	Op. Cost	Ridership	Revenue	PK Buses	Ridership	Revenue	Op. Cost
USI Express	12	288	\$ 720	120	\$ 180	1	30,600	\$ 45,900	\$183,600
Lawndale-Newburgh Express	8	144	\$ 430	120	\$ 180	2	30,600	\$ 45,900	\$109,700
Total	20	432	\$ 1,150	240	\$ 360	3	61,200	\$ 91,800	\$293,300

As noted in the introduction to this section, if the recommended bus procurement plan described in Section 2.1 cannot be implemented, these express services could be provided by contracting with an outside provider. In that case the operating costs would have to be determined through the competitive procurement process.

The USI Express service is recommended for implementation in September 2016. It will require the addition of 2.0 FTE bus operators to the METS staff. The Lawndale-Newburgh Express service is recommended for implementation in 2020. It will require the addition of 1.3 FTE bus operators to the METS staff. Implementation of the USI Express assumes that the peak period bus required to operate it is provided by the consolidation of routes 5 and 12. This consolidation also is recommended for implementation in September 2016. If this consolidation does not occur, it is our recommendation that the USI Express service be provided by contract with an outside provider, in order to not increase METS peak bus requirements in the short term. Implementation of the Lawndale-Newburgh Express service also assumed to be coordinated with opening of the Lawndale Park and Ride (See Section 6).

5.2 Recommended Five-Year Service Plan

Following are the elements of the recommended Five-Year Service Plan.

March 2016 Implementation

- Sunday service on Routes 1- Washington, 2 – Riverside, 5 – Mary/Tekoppel, 6 – Walnut, 7 – First Avenue, 9 – Covert, 14 – Shoppers Shuttle (Section 5.1.2 – Element B)
- Consolidate Routes 14 – Shoppers Shuttle & 15 – East Connection (Section 5.1.5 – Element E)

September 2016 Implementation

- Route realignments on Routes 2 – Riverside, 3 – Fulton, 4 – Stringtown, 5 – Mary/Tekoppel, 8 – Lincoln, 13 – Downtown Trolley, 18 – Stringtown/First, 23 – US Highway 41 North (Section 5.1.6 – Element F)
 - Establish new northeast side crosstown services on Routes 6 – Walnut, 10 – Lynch and 11 – Morgan (Section 5.1.4 – Element D)
-

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- Establish Downtown-USI Express service (Section 5.1.7 – Element G)
- Consolidate Routes 5 – Mary/Tekoppel and 12 – Howell. Discontinue evening-only Route 17 – Mary/Howell (Section 5.1.5 – Element E).

2017 Implementation

- Provide evening service on Routes 4 – Stringtown, 6 – Walnut, 7 – First Avenue and 10 – Lynch. Discontinue evening-only Route 18 – Stringtown/First Ave. (Section 5.1.3 – Element C)

2018 Implementation

- Increase daytime frequencies on Route 7 – First Avenue from 1 bus/hour to 2 buses/hour (Section 5.1.1 – Element A). **Note:** Realignment of Route 3 – Fulton in 2016 provides for it to operate via First Avenue north of Diamond Avenue. Schedules of Routes 4 and 7 will be coordinated to evenly split intervals.
- Implement new Green River Road crosstown (Section 5.1.4 – Element D)

2020 Implementation

- Implement weekday peak period Warrick-Lawndale-Downtown Express Service (Section 5.1.7 – Element G)

Table 5.9 provides forecasted increases in METS baseline ridership, revenue, operating costs and peak bus requirements in each year upon implementation of this five-year plan. This baseline projection is provided in Section 5.3.1. Plan elements after 2016 are assumed to be implemented in September of year indicated. Added ridership, revenue and operating costs are cumulative, and are shown as occurring for the complete year for all years after the year of implementation.

Table 5.9 – Ridership, Cost and Peak Bus Increases – Five-Year Service Plan

Ridership, Cost and Peak Bus Increases - Five-Year Service Plan				
	Increase in Baseline			
Year	Ridership	Fares	Operating Cost	Peak Buses
2016	81,000	\$ 44,000	\$ 208,000	0
2017	197,000	\$ 109,000	\$ 445,000	0
2018	283,000	\$ 141,000	\$ 719,000	2
2019	357,000	\$ 173,000	\$ 909,000	2
2020	367,000	\$ 189,000	\$ 945,000	4

5.3 Financial/Funding Projections

A forecast of future year METS operating costs and funding uses as its baseline the operating costs and funding sources shown in the current version of METS 2014 National Transit Database (NTD) report. These 2014 operating costs and funding sources are provided in Tables 5.10 and 5.11.

Table 5.10 – METS 2014 Operating Revenues by Source

METS 2014 Operating Revenues by Source								
Directly Generated Revenue				Government Assistance				Total Op. Funding
Fares		Other	Total	Local	State	Federal	Total	
Fixed Route	METS Mobility							
\$1,484,838	\$474,922	\$218,433	\$2,178,193	\$2,042,189	\$2,392,953	\$1,466,244	\$5,901,386	\$ 8,079,579

Source: 2014 National Transit Database (NTD) submittal. Revision 2, May 19, 2015

Table 5.11 – 2014 METS Operating Cost Breakdown

2014 METS Operating Cost Breakdown					
	Vehicle Ops.	Veh. Maint.	Non-Veh. Maint.	Adm.	Total
Fixed Route	\$4,334,335	\$1,118,727	\$100,876	\$521,453	\$6,075,391
METS Mobility	\$1,238,019	\$ 465,121	\$ 43,318	\$257,730	\$2,004,188
Total	\$5,572,354	\$1,583,848	\$144,194	\$779,183	\$8,079,579

Source: 2014 National Transit Database (NTD) submittal. Revision 2, May 19, 2015

5.3.1 Baseline Financial Projections – No Changes in Service/Fares

The following assumptions for revenue and cost increases going forward were made based upon a review of recent trends. The specific assumptions regarding each are discussed below.

Operating Revenues

- Fixed route fare revenues increased at an annual rate of 5.6% between 2012 and 2014. As a conservative assumption, they are assumed to increase at a future annual rate of 3%.
- Demand-response fares include payments by Vanderburgh County to subsidize County METS Mobility Service. In 2014, these payments totaled approximately \$317,000, which is roughly two-thirds of all METS Mobility fare revenues. Going forward, the METS Mobility fare revenues also are assumed to increase at 3%.
- Direct non-transportation revenues (e.g., advertising and concessions) have varied widely from year to year. 2014 revenues were 44% higher than in 2012. However, 2014 revenues also were about \$150,000 **less** than in 2013. As a conservative assumption, these are assumed to increase at a rate of 5% annually.

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- Going forward, local government assistance is assumed to increase at an annual rate of 5%.
- The State of Indiana operating assistance provided by the Indiana Public Mass Transportation Fund has been under major financial constraints in recent years. It is appropriated as a fixed amount by the state legislature, and allocated among all Indiana transit properties on a formula basis. In the recent legislative session, PMTF funding was increased by over \$400,000 statewide. Going forward, the amount of state assistance is assumed to increase at an annual rate of 4%.
- In 2012, only \$33,000 of \$1.514 million in federal funds were used for operating expenses. The remainder (nearly all) were used for capital expenditures. In 2014, most of \$2.367 million of federal funds (\$1.466 million) were used for operating expenses; only \$902,000 were used for capital expenses.¹² Our projections assume that Federal funding for operating expenses increases at a rate of only 3% annually going forward.

Operating Costs

- Fixed route vehicle operating expenses have increased at an annual rate of 8 – 9% over the last 2 to 3 years. We anticipate that addition of scheduling staff (a recommendation of this report) will allow METS to slow this rate of increase. Going forward, these costs are assumed to increase by 5% annually.
- Fixed route vehicle maintenance expenses have increase by 12% annually since 2011 and 19% annually since 2012. This high rate of increase is attributable to the age of the METS fleet. METS management notes that these large increases in recent years reflect a high rate of major component failures. These failures are regarded as atypical, and not indicative of what may be expected under a stepped-up fixed route fleet replacement program. These expenses are assumed to increase by 10% in 2015 and 2016, and 5% in 2017 and beyond. This reflects the recommended fleet replacement schedule in Section 2.1.
- Non-vehicle maintenance expenses have increased by a large amount in the past several years, but their total (approximately \$100,000 in 2014) is a small portion of METS operating costs. These costs are projected to remain constant at 2014 levels.
- Administrative costs have decreased at 3% to 4% compounded over the last 2 to 3 years. Study recommendations for additional staffing will require a reversal of this trend. These costs will be forecasted to increase by \$60,000 annually in 2016 and 2017, and increase by 3% annually thereafter.
- Separate recommendations regarding the METS Mobility service are provided in Sections 5.3.4 and 8. These recommendations may significantly affect future METS Mobility expenses. Baseline METS Mobility expenses are forecasted to increase at an annual rate of 4% in all categories.

¹² Prior to FY 2014, transit agencies located in a Transportation Management Area (TMA) (an area designated by the Secretary of Transportation, having an urbanized area population of over 200,000) could not use Federal FTA Section 5307 Funds (Urbanized Area Formula Program) for operating assistance. Beginning in FY 2014, Federal legislation created a special rule to allow transit agencies to utilize their Section 5307 funds for operating expenses up to a "capped" level. The bulk of METS Federal assistance comes from the Section 5307 program.

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Table 5.12 provides forecasts of METS fixed route operating costs through 2020. Table 5.13 provides forecasts of METS operating revenues from current sources. Table 5.14 compares the forecasted costs for all services (fixed route and METS Mobility) with forecasted operating revenues.

These forecasts indicate that current trends in funding and costs show that costs would exceed available funding by about 6% by the year 2020. These trends do not provide for the increases in service recommended in the Five-Year Service Plan. Several observations are offered. There is a follow up analysis regarding most of these points in following sections.

- The METS Mobility costs are about 25% of total operating costs throughout the period between 2015 and 2020. This is a much higher percentage than any other larger city (Group 1) system in Indiana expends for demand-response service. The 2013 INDOT Public Transit Annual Report gives the following costs for demand response (DR) and total system operating costs for other Group 1 properties. If METS Mobility expenses were comparable to its Indiana peers (which average 12% of total operating costs), approximately \$1 million in forecasted annual expenses could be saved.
 - Fort Wayne – DR is \$1.44 million out of total operating costs of \$10.12 million (14%)
 - Bloomington – DR is \$0.54 million out of total operating costs of \$6.44 million (8%)
 - Gary – DR is \$0.38 million out of total operating costs of \$5.87 million (6%)
 - Indianapolis – DR is \$8.46 million out of total operating costs of \$48.34 million (18%)
 - Lafayette – DR is \$0.36 million out of total operating costs of \$10.25 million (4%)
 - Muncie – DR is \$1.47 million out of total operating costs of \$6.61 million (22%)
 - South Bend – DR is \$1.00 million out of total operating costs of \$8.98 million (11%)
- METS fares have not changed since approximately 1999. Section 5.3.2 suggests as small, periodic fare increases and charging for transfers, to increase revenues.
- Changes in fare policies on METS Mobility service can provide major operating cost savings.
- The trend for large year-to-year increases in fixed route vehicle maintenance costs in recent years can be reversed by bringing the fixed route fleet to a state of good repair. See Section 2.1.
- Opportunities to expand local government funding should be explored. Section 9 proposes the establishment of a Public Transportation Corporation (PTC) for Evansville. Establishing such an entity would provide a dedicated local source of transit funding. Of the eight Group 1 transit systems in Indiana, Evansville is the only system operated as part of a larger unit of government. The other seven systems cited in the bulleted list just above all are operated as PTCs.

Table 5.12 – METS Fixed Route Operating Cost Baseline Forecasts

METS Fixed Route Operating Cost Baseline Forecasts					
Year	Vehicle Ops.	Veh. Maint.	Non-Veh. Maint.	Adm.	Total
2014	\$ 4,334,335	\$ 1,118,727	\$ 100,876	\$ 521,453	\$ 6,075,391
2015	\$ 4,550,000	\$ 1,230,000	\$ 100,000	\$ 580,000	\$ 6,460,000
2016	\$ 4,780,000	\$ 1,350,000	\$ 100,000	\$ 640,000	\$ 6,870,000
2017	\$ 5,020,000	\$ 1,420,000	\$ 100,000	\$ 660,000	\$ 7,200,000
2018	\$ 5,270,000	\$ 1,490,000	\$ 100,000	\$ 680,000	\$ 7,540,000
2019	\$ 5,530,000	\$ 1,560,000	\$ 100,000	\$ 700,000	\$ 7,890,000
2020	\$ 5,810,000	\$ 1,640,000	\$ 100,000	\$ 720,000	\$ 8,270,000

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Table 5.13 – Forecasted Baseline METS Operating Revenues by Source

Forecasted METS Operating Revenues by Source									
Year	Directly Generated Revenue				Government Assistance				Total Op. Funding
	Fares		Other	Total	Local	State	Federal	Total	
	Fixed Route	METS Mobility							
2014	\$1,484,838	\$474,922	\$218,433	\$2,178,193	\$2,042,189	\$2,392,953	\$1,466,244	\$5,901,386	\$ 8,079,579
2015	\$1,530,000	\$490,000	\$230,000	\$2,250,000	\$2,140,000	\$2,490,000	\$1,510,000	\$6,140,000	\$ 8,390,000
2016	\$1,580,000	\$500,000	\$240,000	\$2,320,000	\$2,250,000	\$2,590,000	\$1,560,000	\$6,400,000	\$ 8,720,000
2017	\$1,630,000	\$520,000	\$250,000	\$2,400,000	\$2,360,000	\$2,690,000	\$1,610,000	\$6,660,000	\$ 9,060,000
2018	\$1,680,000	\$540,000	\$260,000	\$2,480,000	\$2,480,000	\$2,800,000	\$1,660,000	\$6,940,000	\$ 9,420,000
2019	\$1,730,000	\$560,000	\$270,000	\$2,560,000	\$2,600,000	\$2,910,000	\$1,710,000	\$7,220,000	\$ 9,780,000
2020	\$1,780,000	\$580,000	\$280,000	\$2,640,000	\$2,730,000	\$3,030,000	\$1,760,000	\$7,520,000	\$ 10,160,000

Table 5.14 – Comparison of METS Forecasted Baseline Operating Expenses and Funding

Comparison of Forecasted Operating Expenses and Funding					
Year	Operating Expenses			Operating Funding	Funding Overage / Shortfall
	Fixed Route	METS Mobility	Total		
2014	\$6,075,391	\$2,004,188	\$ 8,079,579	\$ 8,079,579	\$ -
2015	\$6,460,000	\$2,080,000	\$ 8,540,000	\$ 8,390,000	\$ (150,000)
2016	\$6,870,000	\$2,160,000	\$ 9,030,000	\$ 8,720,000	\$ (310,000)
2017	\$7,200,000	\$2,250,000	\$ 9,450,000	\$ 9,060,000	\$ (390,000)
2018	\$7,540,000	\$2,340,000	\$ 9,880,000	\$ 9,420,000	\$ (460,000)
2019	\$7,890,000	\$2,430,000	\$10,320,000	\$ 9,780,000	\$ (540,000)
2020	\$8,270,000	\$2,530,000	\$10,800,000	\$ 10,160,000	\$ (640,000)

5.3.2 Fare Policy Options – Financial Projections

The following fare policy options are proposed to accomplish the following objectives.

- Provide a reasonable increase in passenger support of METS service over time.
- Provide dedicated and stable sources of funding for METS operations.
- Allow fare support to match cost increases due to inflation.
- To provide revenue support commensurate with the amount of service used/provided.

Ridership forecasts used results of the onboard origin/destination survey to determine the relationship between linked trips (complete start-to-finish trips, which may use multiple buses) and unlinked trips (each separate boarding of a bus constitutes one unlinked trip). Respondents to the onboard survey identified the following patterns of use:

- 28% of riders reported using only 1 bus on their linked trip.
- 57% of riders reported using 2 buses on their linked trip.

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- 15% of riders reported using 3 or more buses on their linked trip.¹³

As a conservative assumption, all riders in the last category were assumed to use 3 buses on their linked trip.

These assumptions permitted determination of how various changes in fare policy would affect the total fare a rider paid. For example, a full fare rider who used three buses presently would pay \$2.00 for the entire trip, paying \$1 on the first bus, using a free transfer on the second bus, and paying \$1 on the third bus. The average fare per unlinked trip for this rider would be \$0.67 (\$2.00 divided by 3 buses). If the adult fare were to be increased to \$1.25, this same rider would have an average fare per unlinked trip of \$0.83 (\$2.50 divided by 3 buses). The cost of the average fare per unlinked trip would increase by 25%.

A literature review identified published research used to forecast changes in METS ridership due to fare changes. In April 2014, the Victoria Transport Policy Institute published a compendium of decades of transit fare related research entitled *Transit Price Elasticities and Cross-Elasticities*. It identified research by Gillen¹⁴ which determined that transit fare elasticities¹⁵ were -0.10 for people without a car, and -0.41 for car owners. The onboard survey identified that 13% of METS riders had an auto available for their trip, while 87% did not. These percentages were weighted by the corresponding elasticities to specify the price elasticity for fare changes on the METS system is -0.14. That means, for example, that an average fare increase per unlinked trip of 10% would result in a ridership decrease of 1.4%. This elasticity was used to forecast the ridership and revenue impacts of fare changes.

5.3.2.1 Institute Transfer Charges

Historically, METS passengers have been able to request a free transfer, which allows them to continue their trip on a second bus without payment of an additional fare. If their trips require they take three buses, another fare must be paid to ride the third bus.

Transit systems commonly require that passengers purchase a transfer for a charge equal to a fraction of the regular fare. One of the reasons for requiring passengers to purchase a transfer is to curtail the opportunities for fare abuse, by which a passenger who actually does not need to ride another bus would request a transfer and then sell it at a discount to the regular fare. It is not known how widespread transfer abuse is within the METS system, but it has been cited often as an issue by bus operators and METS management.

Table 5.15 projects the effects of the recommendation to institute a transfer charge of \$0.25 for full fare and student riders, and \$0.10 for elderly and disabled riders, on March 1, 2016. This increase will coincide with the recommended provision of METS Sunday service. "Baseline revenue" in this and following tables is from Table 5.13, which is the forecasted revenue in the absence of any fare policy

¹³ These survey findings also provide an estimate of the total number of linked trips made daily on the METS system. The ride counts taken as part of this study show approximately 5,700 daily boardings (other than on USI service). Let x be the number of linked trips made on weekdays. Then, $5,700 = .28x + .57(2x) + .15(3x)$. Solving for x provides a daily estimate of 3,000 linked trips. This can also be used to show that on a typical weekday, about 800 linked trips use 1 bus, 1,700 linked trips use 2 buses, and 500 linked trips use 3 buses.

¹⁴ David Gillen (1994), "Peak Pricing Strategies in Transportation, Utilities, and Telecommunications: Lessons for Road Pricing." *Curbing Gridlock*. TRB. Pp. 115-151.

¹⁵ An elasticity measures the percent change in consumption of any good or service, resulting from a one percent change in price, all other factors held constant.

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changes. It shows that imposing this transfer charge would result in a 1.5 % reduction in the annual number of unlinked trips which would have occurred in the absence of imposing a transfer charge.¹⁶ This transfer charge also would result in an increase in annual fixed route fare revenue of \$140,000 in 2016. The forecasted increase in revenue would rise to \$180,000 annually by 2020.

Table 5.15 – Instituting Transfer Charge of \$0.25 in March 2016

Instituting Transfer Charge of \$0.25 in March 2016							
Year	Fixed Route			% Ridership Loss	Revised		Added Revenue
	Baseline Revenue	Est. Unlinked Trips	Avg. Fare		Trips	Revenue	
2016	\$ 1,580,000	2,630,000	\$ 0.66	-1.3%	2,600,000	\$1,720,000	\$ 140,000
2017	\$ 1,630,000	2,720,000	\$ 0.67	-1.5%	2,680,000	\$1,800,000	\$ 170,000
2018	\$ 1,680,000	2,800,000	\$ 0.67	-1.5%	2,760,000	\$1,850,000	\$ 170,000
2019	\$ 1,730,000	2,880,000	\$ 0.67	-1.5%	2,840,000	\$1,900,000	\$ 170,000
2020	\$ 1,780,000	2,970,000	\$ 0.67	-1.5%	2,930,000	\$1,960,000	\$ 180,000

5.3.2.2 Increase Base Fare – Regular Programmed Increases

The present METS cash fares of \$1.00 for adults, \$0.75 for students, and \$0.50 for the elderly and disabled has been in effect since 1999 (16 years). During that period, consumer prices (as measured by the Consumer Price Index for all Urban Consumers) has increased by 40%. If the METS cash fare had changed to reflect changes in consumer prices, it would now be \$1.40 for adults, \$1.00 for students, and \$0.70 for the elderly and disabled.

Table 5.16 illustrates the effects of instituting a fare increase of \$0.25 for full fare and student riders, and \$0.10 for elderly and disabled riders, as of March 1, 2016. “Baseline revenue” is from Table 5.15, which is the forecasted revenue in the absence of any fare policy changes. It shows that imposing this fare increase would result in a 3.8% reduction in the number of unlinked trips which would have occurred in the absence of the increase. This also would result in an increase in annual fixed route fare revenue of \$280,000 in 2016. The forecasted increase in revenue would rise to \$390,000 annually by 2020.

Table 5.16 – Increase in Base Fare of \$0.25 in March 2016

Increase in Base Fare of \$0.25 in March 2016							
Year	Fixed Route			% Ridership Loss	Revised		Added Revenue
	Baseline Revenue	Est. Unlinked Trips	Avg. Fare		Trips	Revenue	
2016	\$ 1,580,000	2,630,000	\$ 0.73	-3.1%	2,550,000	\$1,860,000	\$ 280,000
2017	\$ 1,630,000	2,720,000	\$ 0.76	-3.8%	2,620,000	\$1,990,000	\$ 360,000
2018	\$ 1,680,000	2,800,000	\$ 0.76	-3.8%	2,690,000	\$2,040,000	\$ 360,000
2019	\$ 1,730,000	2,880,000	\$ 0.76	-3.8%	2,770,000	\$2,110,000	\$ 380,000
2020	\$ 1,780,000	2,970,000	\$ 0.76	-3.8%	2,860,000	\$2,170,000	\$ 390,000

¹⁶ The 1.3% change forecasted for 2016 reflects this transfer charge being in effect for only part of the year.

5.3.2.3 Pass Price Modifications

Currently, monthly pass users make a negligible portion of trips on METS fixed route service. Total passes sold in calendar 2014 by category were as follows:

- 249 full fare passes (average, 21 per month) – cost \$60
- 144 student passes (average, 12 per month) – cost \$45
- 144 elderly/disabled passes (average, 12 per month) – cost \$30

Typically, transit properties price their monthly passes at a discount to the cash fare price. This policy encourages transit use, lessens cash handling costs, and provides a revenue stream earlier in time than provided by cash fares. However, the METS passes are priced at a significant premium to the cash fare price. For example, someone who makes a round trip on a bus every weekday and uses two buses on each one way trip would pay \$40 to \$44 per month in cash fares.

As described in a footnote in Section 5.3.2, there are approximately 500 linked trips made daily on the METS system which require using 3 or more buses. It is at this level of usage that the cost of a pass is less than the comparable cash fares. (For example, a full-fare rider who makes a daily round trip, taking three buses on each one-way journey, would pay \$4 per day, or \$80 to \$88/month). A conservative assumption would be that of the 500 daily linked trips using three or more vehicles, 90% of these (450) of were made by about 225 individuals making a round trip. Average pass sales in all categories were 50 per month in 2014. Even with a significant price advantage, market penetration for passes was no more than about 22%.¹⁷

In conjunction with the recommended increases in base fare and imposition of transfer charges in March 2016, we recommend no change in pass prices. This would make a monthly pass purchase a break-even purchase for riders who make a two-vehicle trip twice daily on every weekday. The monthly pass price of \$60 would be comparable to cash fares of \$3/day.

Currently, riders who pre-register with METS may purchase passes by mail (using a personal check). Passes also may be purchased in-person at the Evansville Civic Center during normal business hours. Even if pass prices are unchanged while cash fares increase, we do not anticipate a significant change in pass sales, given the limited opportunities for pass purchases.

Once a Manager of Service Planning, Scheduling and Marketing is on staff, METS can investigate various opportunities to increase pass sales. For example, dozens of transit providers throughout the United States have arrangements with employers it serves to furnish transit passes to these firms' employees. Federal tax regulations currently allow employers to furnish monthly benefits of up to \$130 for transit use to their employees as a pre-tax benefit. Employers may offer transit passes as a fringe benefit, or allow employees to purchase them with tax-free dollars as part of a cafeteria benefit plan. Transit systems commonly sell passes through retail outlets, such as major grocery stores or other retailers.

¹⁷ This percentage likely is lower than 22%. Some will purchase passes as a convenience, even when it offers no cost advantage.

5.3.2.4 Other Options Not Recommended

Other common fare strategies were considered but not evaluated for the METS study. These included higher peak period fares, as well as distance-based fares.

The nature of METS ridership patterns is such that ridership in the am peak is less than midday ridership on many routes. The early afternoon (between about 2 and 4 pm) generally is the peak ridership period. Peak period fares are an appropriate strategy where there is a well-defined peak period (associated with typical work commutes) and riders have little flexibility to change their travel times. This does not appear to be the case for METS ridership.

Distance-based fares on a bus-only system like METS would be very challenging to implement. Adding a transfer charge is in many respects a surrogate for a distance-based fare structure.

5.3.3 METS Mobility Changes – Funding Projections

As discussed in Section 5.3.1, METS Mobility operating costs, as a percentage of total system operating costs, are 200% to 300% higher than most peer systems in Indiana. The 2014 NTD report showed that average weekday ridership on fixed route service is about 6,740, as compared with 160 on METS Mobility service. It is not sustainable to expend 25% of operating funds to serve less than 2.5% of METS ridership. There are several suggestions for achieving METS Mobility operating cost savings.

Several properties (such as Grand Rapids, Michigan and Lafayette, Indiana) offer customers who are ADA-eligible the option to ride regular fixed-route service at no charge. This is a classic “win-win” opportunity for both METS disabled riders and the agency. In 2014, each rider served on the METS Mobility system was served at a cost of \$41.71 per rider (one-way trip). Grand Rapids found that implementing this policy of offering free fixed route rides to those who are ADA-eligible resulted in a 20 – 25% diversion of riders to fixed route service.

METS 2014 NTD submittal reported 48,048 METS Mobility riders. Information provided by METS indicates that 76.19% of these were regular ADA eligible riders.¹⁸ This equates to 36,600 ADA eligible riders served in 2014. If 20% of these trips are diverted to fixed route service, 7,300 riders per year would be diverted to fixed route service. At a cost per rider of \$41.21 (less \$2.00/rider for fares no longer paid), this would provide an annual savings of \$290,000.

METS Mobility serves some riders who are classified in the “convenience fare” category. METS is not required to provide point-to-point demand response service to these individuals. However, it has had the policy in place for some time to provide service to individuals who “can use buses under certain circumstances, but need van service for certain trips.”¹⁹ We have not been able to determine the exact point in time this policy has been in place; INDOT Annual Public Transit Reports going back to 1998 show this policy in existence.

While the aims of this policy are commendable, it is an accommodation which (to the best of our knowledge) is provided by no other transit system. The 2014 dispatching reports cited above show that in

¹⁸ E-mail from Rick Wilson to Michael Grovak, May 5, 2015. This e-mail provided summary information of METS Mobility usage reported from the Route Match dispatching system.

¹⁹ Quoted from current METS Mobility brochure.

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2014, 12.18% of METS Mobility trips were made by passengers in the convenience fare category. It is recommended that all riders presently in the convenience fare category be offered free fixed route transportation, in conjunction with convenience fare service no longer being offered to them on METS Mobility. There were an estimated 5,900 convenience fare trips made in 2014, and the annual cost savings by discontinuing convenience fare service would be \$228,000. This net savings includes the \$3.00 fare which METS Mobility convenience fare riders no longer would pay.

Table 5.17 shows the annual savings from implementing these two changes in METS Mobility fare policy. It assumes these changes are implemented in March 2016. It assumes (as was also done for the baseline analysis in Table 5.13) that METS Mobility ridership trends upward by 3% annually.

Table 5.17 – METS Mobility Fare Policy Changes – Cost Savings

METS Mobility Fare Policy Cost Savings			
Year	Free Fare, Regular Riders	Discontinue Convenience Fare	Total
2016	\$ 241,000	\$ 189,000	\$ 430,000
2017	\$ 299,000	\$ 235,000	\$ 534,000
2018	\$ 308,000	\$ 242,000	\$ 550,000
2019	\$ 317,000	\$ 249,000	\$ 566,000
2020	\$ 327,000	\$ 256,000	\$ 583,000

The recommendation for providing Sunday service (see Section 5.1.2) forecasted \$86,000 in added annual operating costs for METS Mobility service on Sunday. These costs are included in the financial projections for the Five-Year Service Plan in Section 5.3.4. We do not anticipate that any other recommended service plan elements would require an increase in METS Mobility service.²⁰

5.3.4 Five-Year Service Plan – Funding Projections

Table 5.18 shows projections of total operating funds available to fund METS service during the Five-Year Service Plan (2016 – 2020). Funds available are from baseline revenue projections, added fare revenues from fare increases recommended for March 2016, and METS Mobility fare policy changes recommended for March 2016. Table 5.19 compares METS operating costs including the Five-Year Service Plan with forecasted available funding.

²⁰ As noted in Appendix D, *Evansville-to-Henderson Service Analysis*, pending FTA regulations could require that ADA alternative service if an Evansville-to-Henderson transit connection is provided. This determination can be made after the final FTA circular on the subject is issued. This determination may also require further coordination with FTA.

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Table 5.18 – METS Operations – Projections of Total Operational Funding Available

METS Operations - Projections of Total Operational Funding Available (Thousands of Dollars)									
Year	Baseline Operating Funding (Table 5.13)				Govt. Assistance	Total Revenue	Tables 5.15, 5.16	Table 5.17	Total Funds Available for Operations
	Fixed Rte.	METS Mobility	Other	Total			Added Fare Rev.	METS Mobility Fare Policies	
2016	\$ 1,580	\$ 500	\$ 240	\$ 2,320	\$ 6,400	\$ 8,720	\$ 420	\$ 430	\$ 9,570
2017	\$ 1,630	\$ 520	\$ 250	\$ 2,400	\$ 6,660	\$ 9,060	\$ 530	\$ 534	\$ 10,124
2018	\$ 1,680	\$ 540	\$ 260	\$ 2,480	\$ 6,940	\$ 9,420	\$ 530	\$ 550	\$ 10,500
2019	\$ 1,730	\$ 560	\$ 270	\$ 2,560	\$ 7,220	\$ 9,780	\$ 550	\$ 566	\$ 10,896
2020	\$ 1,780	\$ 580	\$ 280	\$ 2,640	\$ 7,520	\$ 10,160	\$ 570	\$ 583	\$ 11,313

Table 5.19 – METS Five-Year Service Plan – Funding Status

Table 5.19 - METS Five-Year Service Plan - Funding Status (Thousands of Dollars)							
Year	Table 5.13	Table 5.9	Total Operating Costs	Table 5.18	Funding Overage/(Shortfall)		
	Baseline Operating Costs	Added Service Plan Costs		Available Funds	Year	Cumulative	
2016	\$ 9,030	\$ 208	\$ 9,238	\$ 9,570	\$ 332	\$ 332	
2017	\$ 9,450	\$ 445	\$ 9,895	\$ 10,124	\$ 229	\$ 561	
2018	\$ 9,880	\$ 719	\$ 10,599	\$ 10,500	\$ (99)	\$ 462	
2019	\$ 10,320	\$ 909	\$ 11,229	\$ 10,896	\$ (333)	\$ 129	
2020	\$ 10,800	\$ 945	\$ 11,745	\$ 11,313	\$ (432)	\$ (303)	

In years 1 and 2 of the Five Year Plan (2016 and 2017) projected operations funding is slightly higher (by 2 – 3%) than projected operating expenses (including the costs of the first two years of the Five Year Plan). However, by Year 3 (2018), operating expenses exceed available funding. By Year 5, the projected operational funding shortfall is over \$400,000.

These projections (especially for government funding) are quite assumption-sensitive. These projections do indicate that the initial years of the Five Year Plan fall within reasonably available funding. These projections also assume that the following are implemented in March or September 2016.

- Increase in base fare
- Institution of a transfer charge
- Service economies from route consolidations
- Operational economies from METS Mobility fare policy changes

To the extent that these major initiatives do not occur in 2016, or government funding is less than forecasted, other sources of funding will need to be identified. Any added funding needs likely will need to be identified at the local and regional level. One of the recommendations of this project (see Section 9) will be the establishment of a Public Transportation Corporation (PTC) for Evansville. Under Indiana Code 36-9-4, the Evansville City Council may establish an Evansville PTC by ordinance. PTCs have a dedicated source of funding (via a local property tax millage within its service area). Of the eight transit systems in Indiana which INDOT categorizes as Group 1 (largest urban systems) Evansville is the only

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transit system which is **not** a PTC. The other seven (Bloomington, Fort Wayne, Gary, Indianapolis, Lafayette, Muncie, and South Bend) all are operated as a PTC.

Another source of local funding which should be pursued once a service planning and scheduling manager has been hired is public-private partnerships, particularly for funding transit service to businesses whose employees benefit from that service. Some specific service plan elements for which this is seen as a particularly promising form of funding are for service extensions to the industrial area on the northeast side (both added evening service and new crosstown service), consolidated service on Routes 14 and 15, and Sunday service to east side businesses in the Green River Road area.

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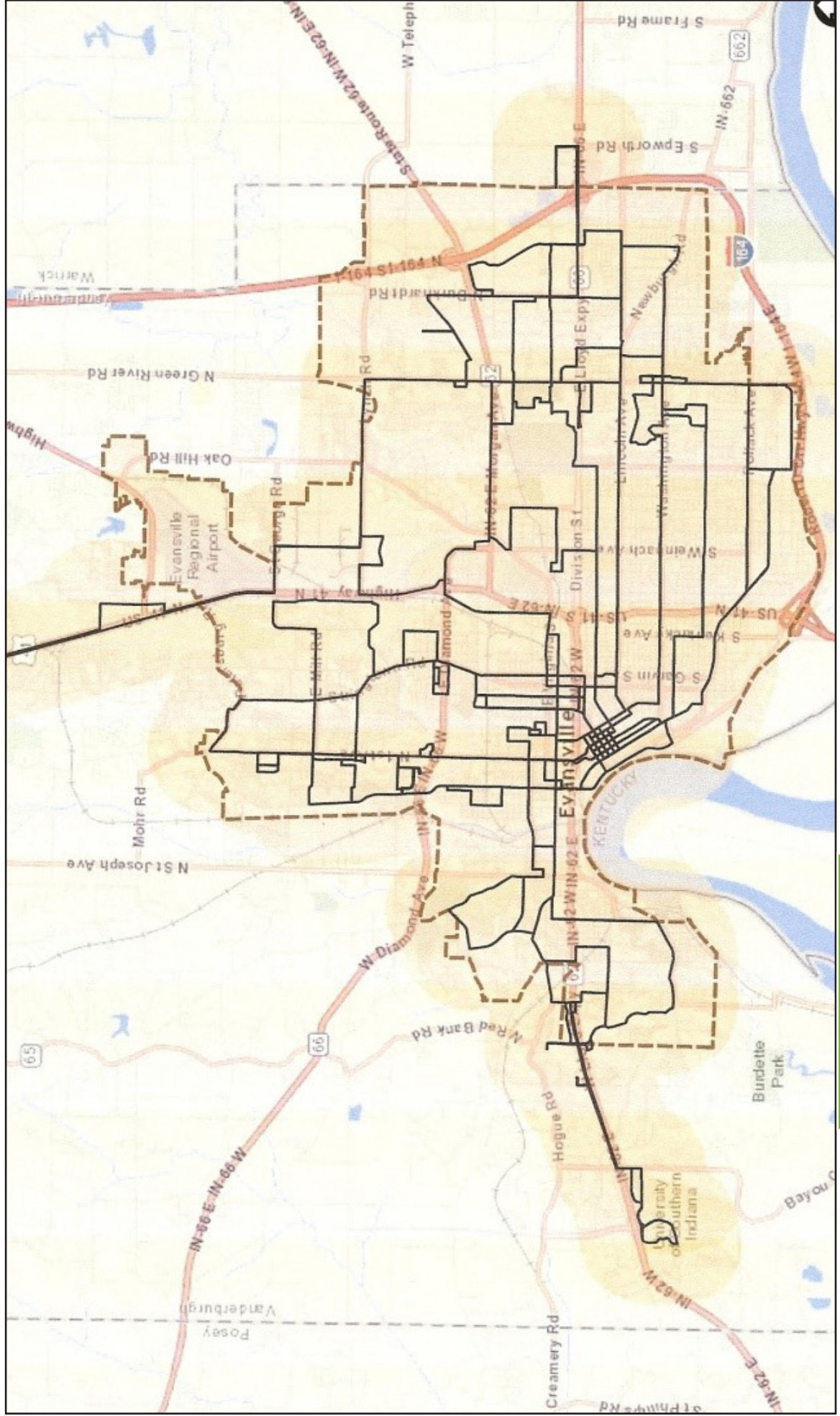
6 Review and Evaluate Transfer Centers

Appendix A contains a report *METS Comprehensive Operations Analysis, Transfer Center Recommendations*. This report reviews all METS transfer facilities, and makes recommendations for upgrades to each. As described in Section 5, the service plan review did not identify the need for new or relocated transfer facilities.

The following points list (in priority order) the recommended improvements to METS existing transit facilities.

- **Downtown Transfer Center (\$73,000).** New lighting, public information facilities, raising center platform. The METS portion of the EMPO TIP currently includes funding for Downtown Transit Center Improvements in the amount of \$239,000 in 2016 and \$260,000 in 2017.
- **Eastland Mall Transfer Center (\$89,000).** New transfer center on south curb of Vogel Road west of Green River Road. Replaces current location within Eastland Mall property.
- **Schnucks Transfer Center (\$32,000).** New transfer center on west curb of Rosenberger Avenue.
- **North Park Transfer Center (\$30,000).** New transfer center on south curb of Mill Road east of First Avenue.
- **ITT-Newburgh Campus (\$25,000).** Provide passenger shelter, lighting and information kiosk at existing transfer location with Warrick County service.
- **Lawndale Park-and-Ride/Transfer Center (\$1,408,000).** This includes construction of a Park-and-Ride lot which would serve a proposed express service from the ITT Newburgh Campus transfer center. The ITT location and this new Park and Ride center would be the two stops made by the service before operating as an express to downtown. Given the status of the METS fixed-route fleet, this service (if provided) probably would not be implemented until the out years of the five-year service plan.

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7 Title VI Policy and Evaluation

METS is committed to a policy of nondiscrimination. METS has a Title VI Program as required by Circular 4702.1B, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients." The program reflects METS's commitment to ensuring that no person shall, on the grounds of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any METS program or activity. Further, the program includes Environmental Justice principles to ensure that minority and low-income populations are considered throughout the planning and development process.

A revised and updated Title VI policy is provided in Appendix C, *METS Title VI Policy*. It includes the following elements.

- A placeholder for an ordinance to approve the updated METS Title VI program and policy.
- A METS Title VI Policy Statement
- Title VI Procedure and Complaint Form
- METS Public Participation Plan
- Policy for Title VI Equity Analysis of METS facility location decisions
- METS Service Standards and policies.
- A Title VI analysis of the recommended Five Year Plan (including fixed-route fare changes and METS Mobility fare policy changes).

A Title VI review of the Five Year Plan is provided in Appendix C. It made the following findings (see pp. 43 – 44 of Appendix C):

- All route changes in this Five-Year Service Plan conform to METS written service standards and policies.
- The majority of the changes in the proposed plan are service improvements, but resources to implement these improvements are not diverted from minority or low-income populations. Minority and low-income areas benefit with the addition of two new bus routes. Minority and low-income populations also benefit from the realignment of routes through increased speed and improved travel times.
- There are no specific transit amenities required by the proposed plan. In fact, the plan proposes a decrease in the overall fleet size from 36 vehicles to 34 vehicles. However, the plan recommends accelerating bus purchases over the next five years to bring the METS fleet age in conformance with FTA guidelines. This recommendation will improve the on-board transit environment for all riders. Improvements to existing METS transfer centers are recommended, and when implemented, will benefit all riders who use these locations.
- The potential positive impacts of the recommended plan on current and future riders include the following: faster travel times due to route realignments and consolidations, improved service availability through provision of new Sunday and evening service hours, improved service availability and travel time through the implementation of two new crosstown routes and two new express routes, and improved frequency of service (less waiting time) on one bus route. The negative impacts include possibly longer walks to access service due to route realignments and

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consolidations, and an increase in fare for most riders. Based on comments received at the public meetings, the positive impacts outweigh the negative impacts.

- No impacts to the environment are anticipated with this plan.
- Riders in minority and low income areas are not disproportionately impacted by the recommended plan.

The Title VI policy provides that METS will conduct a Title VI review of each element of the Five Year Plan as it is implemented. The Title VI review (see pp. 37 – 38 of Appendix C) identifies which elements of the Five Year Plan are major changes, requiring public meeting and formal solicitation of public input.

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8 METS Mobility/ADA Analysis

Previous sections have addressed various aspects of METS Mobility service. These include:

- **Section 2.2.** This provides an overview of the METS Mobility fleet and fleet related issues, with reference to an appendix which provides more detail.
- **Section 2.4.** This provides an overview of facility issues related to METS Mobility service, with reference to an appendix which provides more details.
- **Section 5.1.7.4.** This discusses costs associated with a potential Evansville-to-Henderson express service.
- **Section 5.3.** This discusses METS Mobility costs as a component of total METS operating costs. It documents that METS Mobility costs are a significantly excessive portion of METS operating costs, when compared to peer properties across Indiana.
- **Section 5.3.1.** This discusses five-year baseline projections of METS Mobility costs and fare revenues.
- **Section 5.3.3.** This proposes changes in METS Mobility operating and eligibility policies to achieve operating cost reductions. Recommendations include providing free transportation on fixed route service to existing METS Mobility riders who are ADA eligible, as well as those presently riding as convenience fare passengers. It also recommends that METS Mobility service no longer be offered to convenience fare passengers.
- **Section 5.3.4.** This discusses METS Mobility operating costs and cost increases in the context of overall service plan costs.

A final recommendation is that contracting out METS Mobility service be given careful consideration. Within Indiana, Indianapolis currently contracts its ADA service, while Gary, Lafayette and Bloomington have done so in the past. In the case of Gary, the service was brought in-house when Mr. Riley Stewart (currently Gary's Transportation Director) came to work for the agency from the contractor which formerly provided the service. Muncie has considered contracting its ADA service, but has not seriously pursued doing so.

This is proposed to achieve three aims. First, the competitive nature of contracting is likely to result in downward pressures on METS Mobility operating costs. METS Mobility operating costs have increased from \$1.33 million in 2009 to \$2.00 million in 2014. This is a 9% increase in cost (compounded annually). During this same period, the number of passengers served **decreased** slightly (from 48,688 reported in 2009 to 48,048 reported in 2014).

Second, our analysis has identified that METS is significantly understaffed in professional positions. Some staff time could be made available if METS management could contract a significant part of the responsibility for providing the actual METS Mobility service.²¹

Third, contracting the service would allow the METS operating facility to function much more efficiently. As noted in *METS Comprehensive Operations Analysis Technical Memo – Existing Conditions, Bus*

²¹ It must be emphasized that if Mobility service were contracted, METS management would remain responsible for service quality. Those using a contracted service would remain METS customers. One of METS' most important responsibilities is to serve the transportation needs of the disabled community, and ensure that members of that community have full access to work, school, shopping, entertainment and all other destinations within its service area.

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Garage and Maintenance Facility (see Appendix A) the METS garage was designed and put into operation when METS contracted its ADA service. The garage was designed to accommodate only METS' fixed route fleet. This technical memo describes the constraints which this imposes upon METS operations.

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9 Staffing and Organizational Assessment

A review of METS organization and staffing provided recommendations in two primary areas. The first of these is that existing managerial staff assignments need to be reviewed to ensure that existing staff are appropriately utilized. The second recommendation identifies two key areas of standard transit business practice which are not currently done and which require added staff to implement. Both of these areas must be staffed to support this study's recommendations.

It also is recommended that METS undergo a governance change to be operated as a Public Transportation Corporation.

9.1 Staffing and Organizational Assessment

A high-level review of assignments for METS administrative and managerial staff has identified the following issues for further evaluation and action by the METS Director.

- Historically, the METS Director has not had a significant background in transit operations prior to assuming this position. This position should be held by a seasoned transit professional. Strong consideration should be given to using the services of a management company²² to fill the current vacancy in this position.
- There is an overlap of responsibilities for grants and grant administration between a designated grant manager and the Operations Manager. There appears to be an opportunity for added efficiencies by relieving the Operations Manager from any grant administration responsibilities.
- No one individual is responsible for how overall financial, ridership and operating data are compiled, audited and reported. Inconsistencies in these data, especially on a year-to-year basis, have been noted. This responsibility needs to be assigned to a single individual.
- Supervision of late afternoon and evening service and garage operations needs to be better coordinated with overall service management. Presently, two supervisors who report to the Operations Manager are on duty for a morning and evening shift. Their work shifts have little or no time overlap. The METS Director has indicated this makes it difficult to coordinate responsibilities between the two individuals.
- An office manager is responsible for all billing, invoices, payments as well as fare media sales. Fare media sales and marketing are recommended for assumption by new managers, as described in Section 9.2.

9.2 Additional Professional Staffing

To support the recommendations of the COA, we have identified that METS needs two additional professional staff in the near term. Presently, the responsibilities of both positions are (to a very limited extent) fulfilled by the METS Operations Manager. The Operations Manager is very capable, but severely overworked. Both of these positions would oversee several functions which are an important part of standard transit business practice.

²² Several national firms provide transit system general managers and other high level transit managers on a competitive basis. The General Managers in Bloomington, Muncie, Fort Wayne and South Bend currently are provided by a management firm.

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A key theme in our recommendations is that improving METS operations requires implementing standard transit business practices which presently are not provided. These are functions which any transit operation should perform. In a system of METS size, these require dedicated staff. One of the two added staff will oversee product development and marketing (service planning, scheduling, marketing, public information and public involvement). The second staff member will oversee service support (employee training, extra board management, absenteeism monitoring, schedule preparation support and human resources support). Also, as identified above, one of these two new positions should assume responsibility for fare media sales (passes, tokens, and tickets). Which of these two individuals should assume these responsibilities should be further evaluated by the METS Director before making a final determination.

9.2.1 Service Planning, Scheduling and Marketing Manager

One added staff member will oversee transit route planning, schedule preparation, public involvement and marketing. This individual will be responsible for preparing and implementing recommendations for new routes, revised schedules, modified hours of service, bus stop location, bus stop information, and bus shelters. This individual also will oversee public involvement material preparation, web-based and printed route and schedule information and other public information. He/she also will meet with community groups and other stakeholders. In short, this person will be responsible for implementing this study's recommendations.

A key theme of the COA is that service development and planning is an **ongoing process**, based upon application of **quantitative service standards**. Service development is a continuing process which responds to growth and changes within the METS service area. It is guided by applying the service standards described in Section 3. It will require 2 – 3 years of effort by this manager to review all METS fixed route operations and put forward plans to bring these operations into compliance with the service standards. The service plans described in Section 5 represent recommendations to implement these service standards within the constraints of available data and available financial and capital resources. This manager will refine these recommendations and identify other service changes going forward by applying these service standards as an ongoing, standard business practice.

9.2.2 Service Support Manager

A second added staff member will oversee employee training, extra board management, absenteeism monitoring, schedule preparation support and provide other human resource support. Standard transit business practice at a property METS' size requires a full-time instruction manager. This manager will both oversee new employee training, as well as ongoing training for all employees. Presently, METS has no such designated service support/instruction manager.

METS presently is unable to furnish sufficient training for new operators. Classroom training for new operators is limited, confined to 2 to 2½ days. After two weeks of supervised bus operation, operators typically are considered qualified to operate a bus in regular service. A main responsibility of the service support manager would be to oversee an appropriate new employee training program. This entails:

- A more extensive new bus operator training program (at least one week in length).

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- Preparing and updating a formal course of study. This includes a training manual which is updated regularly.
- Scheduling training revenue operation for new employees (presently, this is scheduled ad hoc, with the new employee partly responsible for scheduling his own training).
- Supervising the new employee in a qualification run (in service) to determine that employee is ready for unsupervised operation.

The service support manager also will provide ongoing operator training, formally monitor operator absenteeism, provide more detailed extra board management, disseminate schedule-related documents (such as operator “paddles”) and support progressive discipline and other human resource functions.

9.3 Formation of Public Transportation Corporation (PTC)

Under Indiana Code IC 36-9-4, a municipality may create a Public Transportation Corporation (PTC) by ordinance of the municipal legislative body. Of the eight transit systems classified by INDOT as Group 1 systems, only Evansville is not operated as a PTC. The other seven systems (Bloomington, Fort Wayne, Gary, Indianapolis, Lafayette, Muncie and South Bend) have operated as PTCs for decades.

Establishing a PTC provides a dedicated and stable source of local funding (via a millage). It also enables professional management to be chosen and evaluated by an independent board of directors. We recommend that the Evansville City Council enact an ordinance to establish a PTC. The other personnel and organizational recommendations can proceed independent of the establishment of a PTC.

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10 Scheduling and Run-Cutting Recommendations

The study team (led by Transportation Management and Design (TMD), a firm nationally-recognized for its practice in transit schedule consulting) prepared an evaluation of METS scheduling and run-cutting practices. The full report is provided in Appendix H (*Scheduling Analysis*). The appendix is prepared to guide the activities of METS' Manager of Service Planning, Scheduling and Marketing (see Section 9.2.1). It also emphasizes the critical role of this recommended new hire in implementing the recommended Five-Year Service Plan.

Appendix H includes the following major elements:

- **A review of standard transit industry scheduling practices.** These include techniques for blocking, providing scheduled recovery time, interlining practices, determining route running time, basics of run-cutting, standard scheduling and run-cutting reports, and absenteeism tracking.
- **METS-specific higher level scheduling recommendations.** The primary recommendation is that it is essential that METS hire a Manager of Service Planning, Scheduling and Marketing. It is our professional opinion that the successful implementation of the Five-Year Service Plan requires this position be staffed. This section also discusses the need for mid-route time points, the importance and proper use of scheduled recovery time and the need for scheduled recovery time to be explicitly provided at both route terminals.
- **Route-specific running time issues.** More than half of METS routes are identified as having insufficient running time to operate on schedule. Recommendations contained in this report (especially route rationalization, or "route straightening") will reduce the required running time on many of these routes and improve on-time operation.
- **Detailed run-cutting recommendations.** A number of detailed recommendations are made. These include:
 - **New formats for driver schedules and public timetables.** This includes showing individual trips, with scheduled times at intermediate time points.
 - **Improving scheduling capabilities to provide flexibility in changing hours of operation on individual routes.** Scheduling practices should not be the reason for inefficiently operating service later or earlier than ridership levels justify.
 - **The key role of the Manager of Service Planning, Scheduling and Marketing.** This key staff member is essential for implementing the Five-Year Service Plan.
 - **Recommendations for evening service.** Sunday service is recommended to operate initially no later than 8 or 9 pm. Other routes may operate more efficiently if their evening service Monday through Saturday ends earlier than at present (approximately midnight). This requires modification of existing run-cutting practices.
 - **Documenting that there is no contractual requirement that bus operator work be scheduled in four-hour increments.** This misunderstanding of the contract has been conveyed in some conversations with client staff. METS has the flexibility to provide operator work assignments in other than four-hour pieces.
 - **Recommendation that part-time operators be used more flexibly.** This includes operating work other than 6-hour evening runs, as well as allowing part-time operators to be assigned to the METS extra board.

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- **Considerations in implementing Sunday service.** The present contract provides that any represented employee who works on Sunday be paid at double-time. This provision needs to be renegotiated in the upcoming contract. Also, the number of consecutive days-off combinations which can be provided may change when Sunday service is implemented.
- **Discussion of Scheduled Transit Operations (STO) methods for budgeting bus operator costs.** METS is required to budget for its bus operations service by operator 'head count' rather than the standard industry practice of STO (Scheduled Transit Operations) -based budgeting for operators. STO-based budgeting provides that METS' budget for bus operators be expressed as pay-hours rather than a head count. Presently, METS is incurring excessive overtime costs, and adding service would worsen this significantly. This approach to budgeting also will require added professional staffing with more transit technical scheduling skills.

In addition, Appendix H contains several examples of standard scheduling-related reports which METS should begin providing as part of its routine schedule preparation.

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1 1 Marketing

The Evansville-based marketing research firm of Fire and Rain, in conjunction with Product Acceptance Research (PAR) conducted market research of potential METS customers in its service area. The objective of this market research was to learn how to make using METS service attractive to people who have other transportation options (choice riders) and who currently do not use METS service.

The market research was conducted by surveying two groups. One of these groups were members of the general public, including a combination of users and non-users of METS service. Those in this first group were surveyed via the internet. The other group were “Key Opinion Leaders” (KOL). KOLs are individuals who in their role within their employer or organization work with individuals who have transportation challenges. Organizations included such groups as social service agencies, government/policy makers, economic/urban development groups and neighborhood associations. METS employees also were included in the KOL category. KOLs were surveyed primarily via the internet; some were surveyed via telephone.

The survey findings are provided in Appendix I (*METS Perceptions Research*). The primary objectives of the survey to determine the following:

- Are respondents aware of METS?
- Have respondents ever used METS service?
- What are the key drivers which determine whether people will or will not use METS?
- What attributes are important in a public transportation service?
- How well does METS perform on those attributes?
- How likely are people to use or recommend METS services in the future?
- What attributes, if any, are lacking in public transportation in Evansville?

Surveys were conducted between February 4 and February 22, 2015. A total of 406 surveys were received. Of these, 272 were general population surveys, and 134 were KOL surveys.

11.1 Key Survey Findings

Following are the key survey findings.

General awareness of METS is high. However, there is an opportunity to increase community awareness of key information such as routes, schedules and service coverage. Nearly all surveyed (97%) knew about METS service. However, fewer than four in ten know such basic information such as routes, days/hours of operation, service area, telephone number or system website. Some open-ended comments specifically requested more information about cost, routes and schedules.

METS key strengths are punctuality and safety on board vehicles. Providing more convenient service is a key area for improvement. Cost was cited as a reason for using METS service among the approximately two in 10 respondents who have used METS within the last five years. Key areas for improving service include providing service during days and hours needed, and providing convenient routes. Convenient routes were more important than service coverage. Adding Sunday service as well as providing service to 2nd and 3rd shift workers is important.

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Current use of METS service is low. This is primarily due to most potential users using other transportation options. Four respondents in 10 have used the service at some time in the past. Within the last five years, slightly less than one respondent in four has used the service. Slightly less than one respondent in ten describes themselves as current METS riders.

There are significant opportunities to improve satisfaction with METS services. Eight in ten of those who have used METS services responded that it met their expectations. However, of the remaining respondents, those who said the service did not meet their expectations were nearly triple the number of respondents who stated that it exceeded their expectations. There is significant opportunity to increase promotion of METS service by word-of-mouth.

Safety is perceived as a greater issue with METS service for those who have never used it. About one in six who never have used METS service cite safety as an important concern. By comparison, only one person in 25 among those who have used METS service within the last five years cited safety concerns. One of the survey questions asked about respondents' willingness to use METS service if it were offered free (no fare required) for a month. Of the non-riders who stated they would not use a free service, 27% cited safety concerns as a factor.

11.2 Key Recommendations

The following key recommendations were provided by the market research survey.

Hours of service should be expanded to serve a wider range of work-related trips. The most-cited need is for Sunday service. Providing service for second and third shift workers, as well as early starts by first-shift workers, also was cited.

Expand service beyond the Evansville city limits. Service should be expanded on a measured, strategic basis, focusing on where there are specific travel needs and destinations.

Routes and schedules must be easy to understand and widely available. The METS website must be easily accessible.²³ It includes only PDF copies of printed timetables for individual route and schedule information. It recently added a real-time bus locator feature. However, it does not include any trip planning guidance or software. The advertising and marketing coverage recommended in the next section should occur after a major rework of the METS web site (including the route and schedule information it provides). These web site upgrades will be the responsibility of the Manager of Service Planning, Scheduling and Marketing.

As described in Section 10, METS schedules must be revised to show individual trips. This includes the scheduled time at both terminals as well as intermediate time points for each trip.

In addition, the METS route structure (with its large number of route variations) needs to be **significantly** simplified. Several recommendations in Section 5 provide for route simplification. Routes should be designated primarily by **number** (e.g., 1 – Washington, 2 – Riverside, etc.), to reflect common practice in

²³ METS printed schedules currently provide www.evansvillegov.org/Mets as the METS website. This link is not active (and has not been for some time). The actual web site to access METS information currently is <http://evansvillegov.org/index.aspx?page=765>. This web site address is extremely difficult to remember, and needs to be simplified into an address associated with bus service.

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the transit industry. The use of 'A' and 'B' designations is very confusing, especially to a new or occasional user. The use of A and B designations should be discontinued.

Wider dissemination of route and schedule information should occur after the schedules have been revised to show individual trips and mid-route time points along each route. The major effort at route simplification (including many realignments to eliminate deviations on only some trips and/or in one direction of service) is recommended for September 2016. This should be accompanied by a major effort to increase the dissemination of METS route and schedule information.

As example of the need for route simplification is provided by the Lochmueller Group's team of possible implementation of Google Transit trip planning software on the METS system. The team's findings are that Google Transit probably could not be successfully implemented for the existing METS system. The key reason is that the number of route and schedule variations make implementation of Google Transit problematic.

Some key negatives cited about METS service included "lack of coverage" and "inconvenient routes." METS current route structure has many variations operated by only some trips in order to provide "wider coverage" (as portrayed on a map). It appears that providing such a large number of variations has made the service "inconvenient." In other words, there are so many variations that many people find the routes not understandable. "Lack of coverage" actually corresponds to routes and schedules which are difficult to understand. Since routes and schedules are not understandable, they are (in the minds of many potential users) not ever there in the first place.

Provide advertising/marketing coverage with positive testimonials about METS service. Those who actually use METS service have a significantly more positive view of it than those who never have used it. This applies even to those who have used it in the past, but not recently. Key issues which this advertising should emphasize are METS cost advantages and the sense of safety which METS riders enjoy.

We recommended that any significant promotional efforts occur only after the route simplification and restructuring in September 2016. "Selling" potential new riders about the ease and safety of using METS service needs to be backed up with a simple and understandable route structure. Simple routes and schedules contribute significantly to perceptions of safety by those who are not familiar with the METS system. If a potential new rider finds routes and schedules difficult to understand, he/she may regard using that service as an "adventure into the unknown" with an undesired level of associated risk.

11.3 Marketing – Summary

The key marketing issue we've identified is the unnecessary complexity of METS routes and schedules. Service which the potential customer cannot understand is service which (in his/her mind) you are not providing. In our judgment, METS' key marketing issue is that it is not "selling" an **understandable product**. Any **advertising and promotional activities** are of limited use without an understandable product.

Making routes and schedules understandable requires the following key initiatives:

- Simplifying routes to eliminate multiple variations.

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- Designating routes by number.
- Providing schedules which list every trip.
- Providing schedules which show mid-route time points, as well as scheduled times at both termini for each trip.
- Eliminating “A” and “B” designations.

Once the product (routes and schedules) is understandable, a variety of advertising and promotional activities can and should occur.

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Appendix A

Fleet, Facilities and Technology

Appendix A1 - Technical Memo - Existing
Conditions, Fleet Information

Appendix A2 - Recommended New/Modified
Technology and Passenger Communications

Appendix A3 - Technical Memo -Existing
Conditions, Bus Garage and Maintenance
Facility

Appendix A-4 - Transfer Center
Recommendations

Appendix A1 -
Technical Memo -
Existing Conditions,
Fleet Information

I. Existing Fleet

The Metropolitan Evansville Transit System (METS) directly operates all service with a bus fleet of 50 vehicles consisting of two types:

- 24 small (30 foot¹) standard diesel transit-type buses for the fixed route service. All of these were manufactured by Gillig; 13 are diesel-electric hybrid vehicles while the rest use normal automatic transmissions. Most of these are low-floor buses (including two with a trolley-style body); the oldest six are high-floor buses.
- 26 “cutaway” type of buses, 12 of which are assigned to fixed-route service and 14 to demand-response service. All but one of the cutaway vehicles were manufactured by Ford (the other is a Chevrolet) and most are about 25 feet in length. Three are 30 feet long; these are in fixed-route service. All of the cutaways are diesel-powered, except one, which is CNG-powered; it is fueled at the Vectren fueling station, which is just north of the Lloyd Expressway near the garage.



Figure 1- Fixed Route Transit Bus Manufactured by Gillig

¹ METS identifies the Gillig Transit buses as “29 foot” buses. However, the manufacturer reports they are 29 feet, 11.5 inches. Thus, it is more accurate to round the length up to 30 feet.

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The agency has 13 non-revenue vehicles, including 3 for the Maintenance Dept., 5 for Administration, and 6 minivans for Bus Support, used by drivers making street reliefs (driver changes).



Figure 2 –Cutaway Vehicle Manufactured by Ford

METS fleet characteristics, including number of buses, average age, general condition, and spare ratio were compared with peer properties in other cities based on 2012 National Transit Database (NTD) data. The peer properties were selected because they are similar to METS in terms of size (peak buses required) and comparable ridership levels and they operate within the same geographic region as Evansville.

The peer properties are:

- Fort Wayne Public Transportation Corporation (IN)
- Rockford Mass Transit District (IL)
- The Tri-State Transit Authority-Huntington, (WV)
- Clarksville Transit System (TN)
- Belle Urban System- Racine (WI)
- South Bend Public Transportation Corporation (IN)
- Springfield Mass Transit District (IL)

**METS Comprehensive Operations Analysis
Technical Memo - Existing Conditions
Fleet Information**

A. Size of Fleet

There are 50 vehicles in the METS fleet, consisting of 36 fixed route vehicles and 14 demand response vehicles². The vehicles operated by METS vary in their capacity to meet ridership demand, depending on the service type (fixed route or demand response) and type of vehicle used.

B. Age of Fleet

The average age of the vehicles operated by METS is 5 years for fixed-route buses, and 4 years for demand-response vehicles. The small transit buses operated by METS are typically designed for a life span of 12 years or 500,000 miles, (although the FTA has a provision that allows for the replacement of these vehicles after 10 years, since they are just below 30 feet in length), while cutaway vehicles have an expected life of 5 years. Most fixed route vehicles are 5 years old or less, with 30% of the buses between 6 and 11 years of age, and only three vehicles over 12 years old. This makes METS' fixed-route rolling stock the newest among its peers. However, the age of the demand-response vehicles is the third highest among the peer agencies.

Tables 1 and 2 show the remaining service life of the METS fleet. A third of the small transit buses have exceeded their useful lives and all but two of their cutaway vehicles that are used in fixed route service have exceeded their useful lives. Of the 14 cutaways used in demand response service, only two have not reached their useful lives, and over half exceed it.

Table 1: Useful Life of Demand-Response Vehicles

BUS #	Year	Useful Life	Age
52m	2009	5	6
53m	2009	5	6
59m	2006	5	9
60m	2006	5	9
62m	2006	5	9
63m	2006	5	9
64m	2007	5	8
65m	2007	5	8
66m	2007	5	8

² One new replacement bus was very seriously damaged in a collision shortly after entering service and is not the roster but it is out of service pending repairs, which are anticipated to be lengthy. This bus is considered a spare.

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 Fleet Information**

Table 1: Useful Life of Demand-Response Vehicles

BUS #	Year	Useful Life	Age		
10-10m	2010	5	5		
10-11m	2010	5	5		
10-12m	2010	5	5		
10-16m	2012	5	3		
13-19	2013	5	2		
				Remaining Life	Used Life
Total Service Life				70	92
				0%	100%

Pink = Cutaway Vehicles

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Table 2: Useful Life of Fixed-Route Vehicles

BUS #	Year	Useful Life	Age
102	2001	12	14
104	2001	12	14
105	2006	12	9
106	2006	12	9
108	2001	12	14
110	2001	12	14
112	2006	12	9
114	2001	12	14
116	2001	12	14
117	1997	12	18
118	2006	12	9
129	1997	12	18
140	2007	12	8
10-01	2010	12	5
10-02	2010	12	5
10-03	2010	12	5
10-04	2010	12	5
10-05	2010	12	5
10-06	2010	12	5
40	2009	5	6
41	2009	5	6
42	2009	5	6
50	2009	5	6
51	2009	5	6
54	2009	5	6
55	2009	5	6
10-07	2010	5	5
10-08	2010	5	5
10-09	2010	5	5
12-13	2012	12	3
12-14	2012	12	3
12-15	2012	12	3
12-17	2012	5	3
12-18	2012	5	3

Blue = Small (30-foot) Transit Vehicles

Pink = Cutaway Vehicles

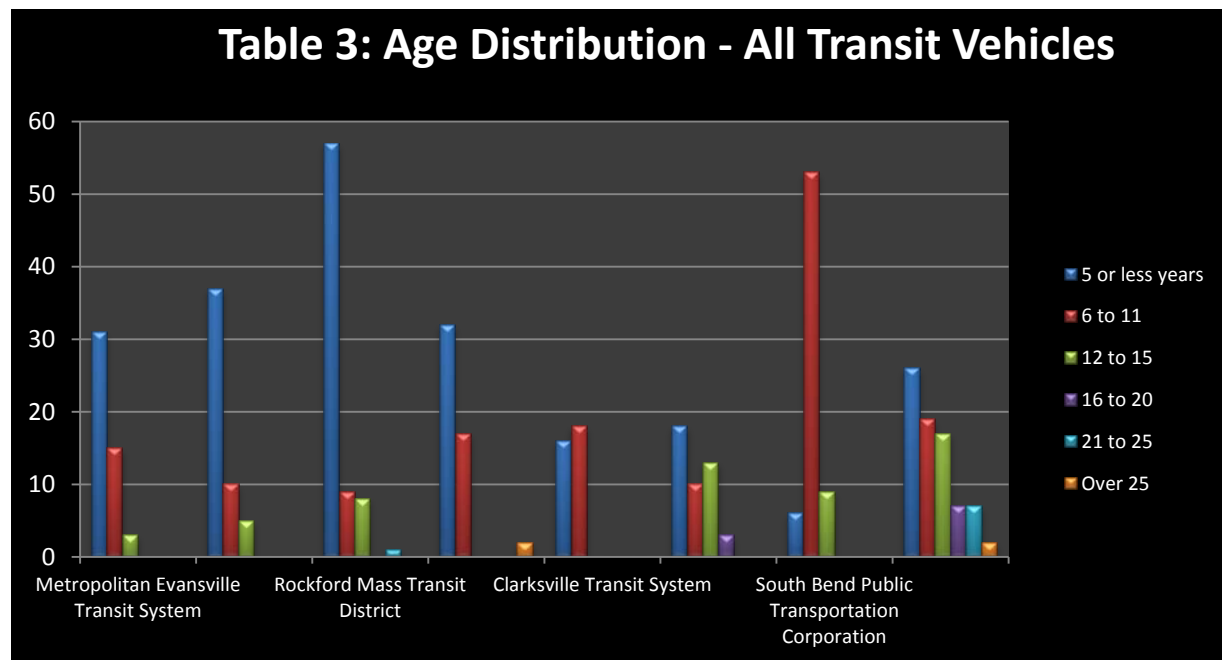
**METS Comprehensive Operations Analysis
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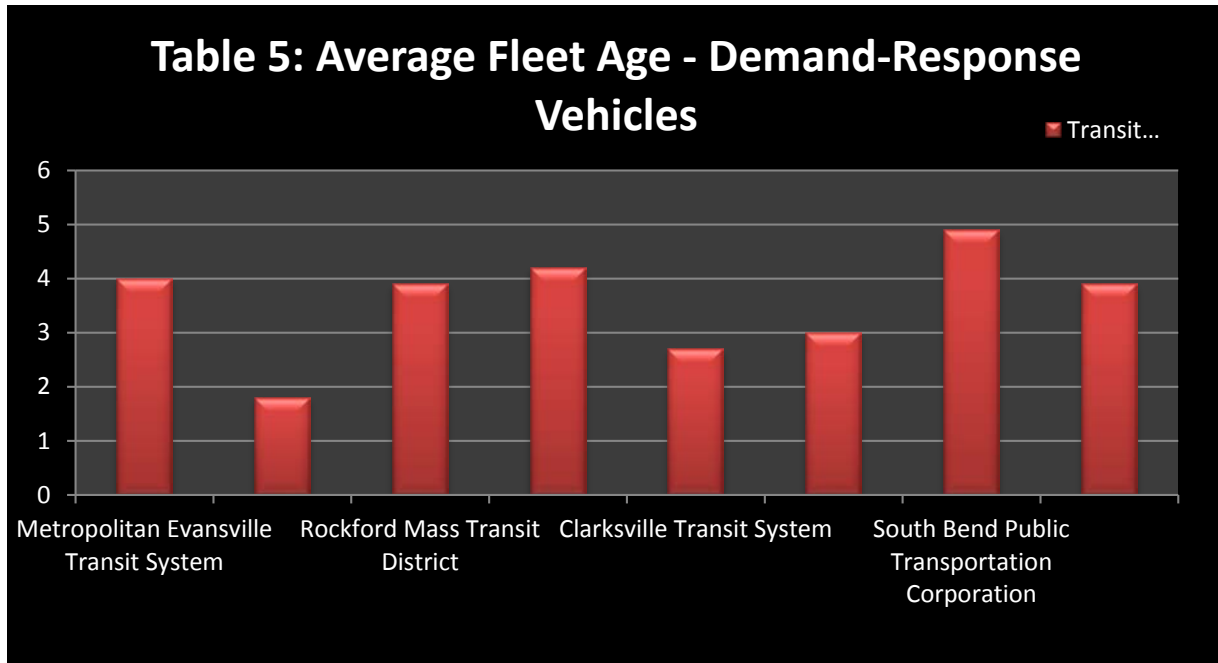
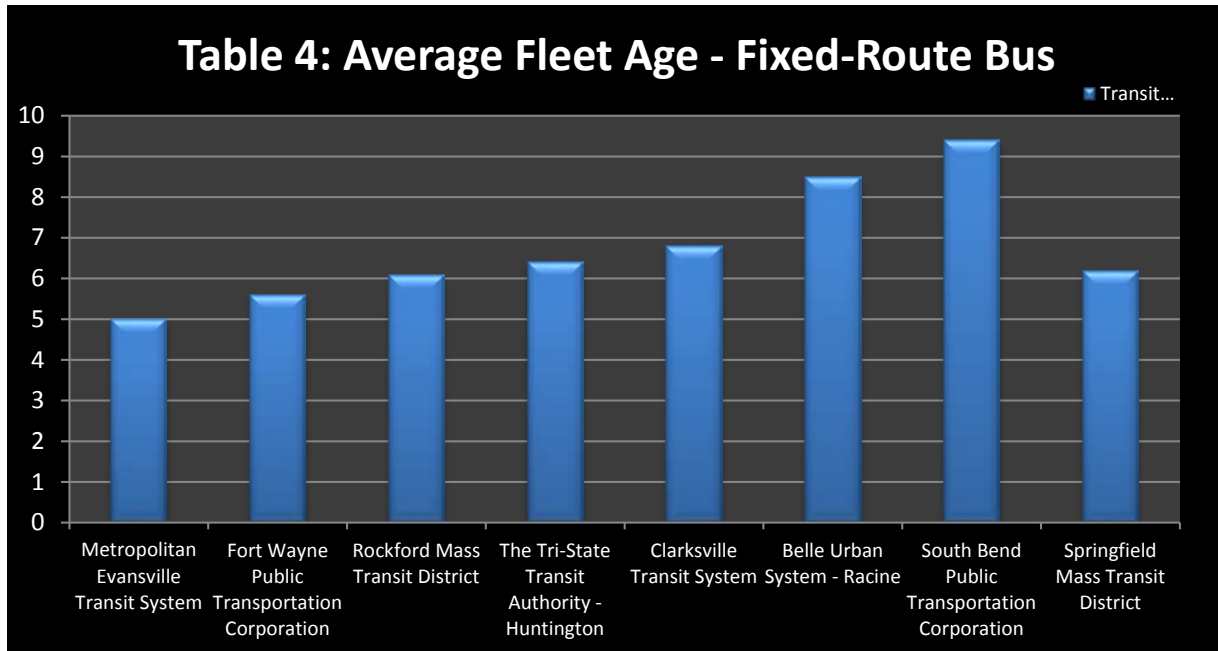
Table 2: Useful Life of Fixed-Route Vehicles

14-20	2014	12	1		
14-21	2014	12	1		
				Remaining Life	Used Life
Total Service Life		348	268	23%	77%

Peer agency statistics in this area vary widely. Fort Wayne and Rockford show a similar age profile (although Rockford has many more new buses), but there are more buses that are older in South Bend's fleet. The Springfield fleet seems to indicate that new buses are ordered as older buses break down as the age of their fleet does not vary widely and they have the highest percentage of buses over 16 years old (15%) of any of the agencies. Refer to Tables 3, 4 and 5.

Table 3: Age Distribution - All Transit Vehicles



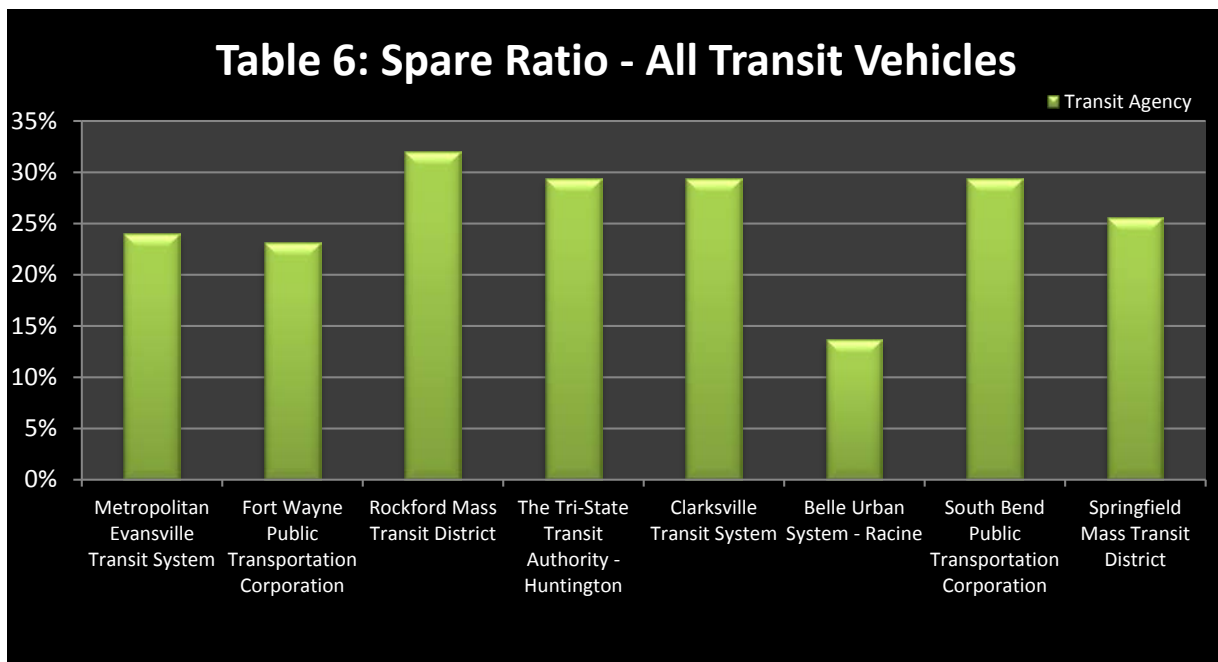


B. Spare Ratio

As indicated in Table 6, METS has an overall spare ratio of 24 %. Compared to peer agencies (using 2012 NTD data), the ratio is in the lower half, with the Rockford Mass Transit District

**METS Comprehensive Operations Analysis
 Technical Memo - Existing Conditions
 Fleet Information**

having the highest spare ratio at 32.0% and Belle Urban System (Racine) having the lowest at 13.6%. The FTA generally prefers that spare ratios be no more than 20%, so Evansville is above that number. Larger agencies tend to have a lower spare ratio than smaller agencies, due to more robust maintenance staffs and facilities allowing them to get disabled buses back on the road faster. Given the large percentage of fixed-route vehicles which are at or beyond their useful lives, this may not be an unreasonable percentage.



C. Vehicle Size and Seating Capacity

At 24.8 passengers, Evansville has the lowest average seating capacity on their fixed-route buses of any of its peers.³ This is because the majority of the METS fixed-route fleet consists of 30 foot buses, with the rest consisting of cutaway vehicles. The oldest Gilligs in the fleet are high floor buses and have a capacity of 29 seated and 43 standing passengers, a total of 72 passengers (there are now only six of these remaining in the fleet). The larger hybrid buses in the fleet have the lowest capacity due to vehicle design, so overall bus capacity has decreased as newer buses have been purchased. The newer Gilligs are low floor buses, which have 26 seats. METS

³ Note that the Belle Urban System - Racine number is skewed by the fact that it operates a high capacity transit route to Milwaukee using coach-type buses which have greater capacity than vehicles typically used for fixed route transit.

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management has identified a need to add larger (35 foot) buses to the fleet; the garage will need to be modified to accommodate larger buses.

Some of the newer Gillig buses are hybrids, which are rated to carry only 7 standees. This lower weight limit due is to the added weight of the batteries used for traction power. This means these buses have a very low nominal capacity of only 31 passengers, especially compared to their peers (as shown in Table 7). The newest Gilligs in the fleet, delivered in 2014, are not hybrids and can accommodate 19 standees, a total of 45 passengers.

METS' demand-response vehicle fleet, on the other hand, has some of the highest seating capacities among their peers with an average number of 15 seats. Refer to Table 8. This is due to the large size of the cutaway vehicles that METS operates. Since some of the cutaway vehicles were intended to supplement the Gillig transit buses in the fixed-route fleet, their seating capacity is higher than normal. Thus, the fixed-route fleet and the demand response fleet of METS have more similar passenger capacities than its peer systems.

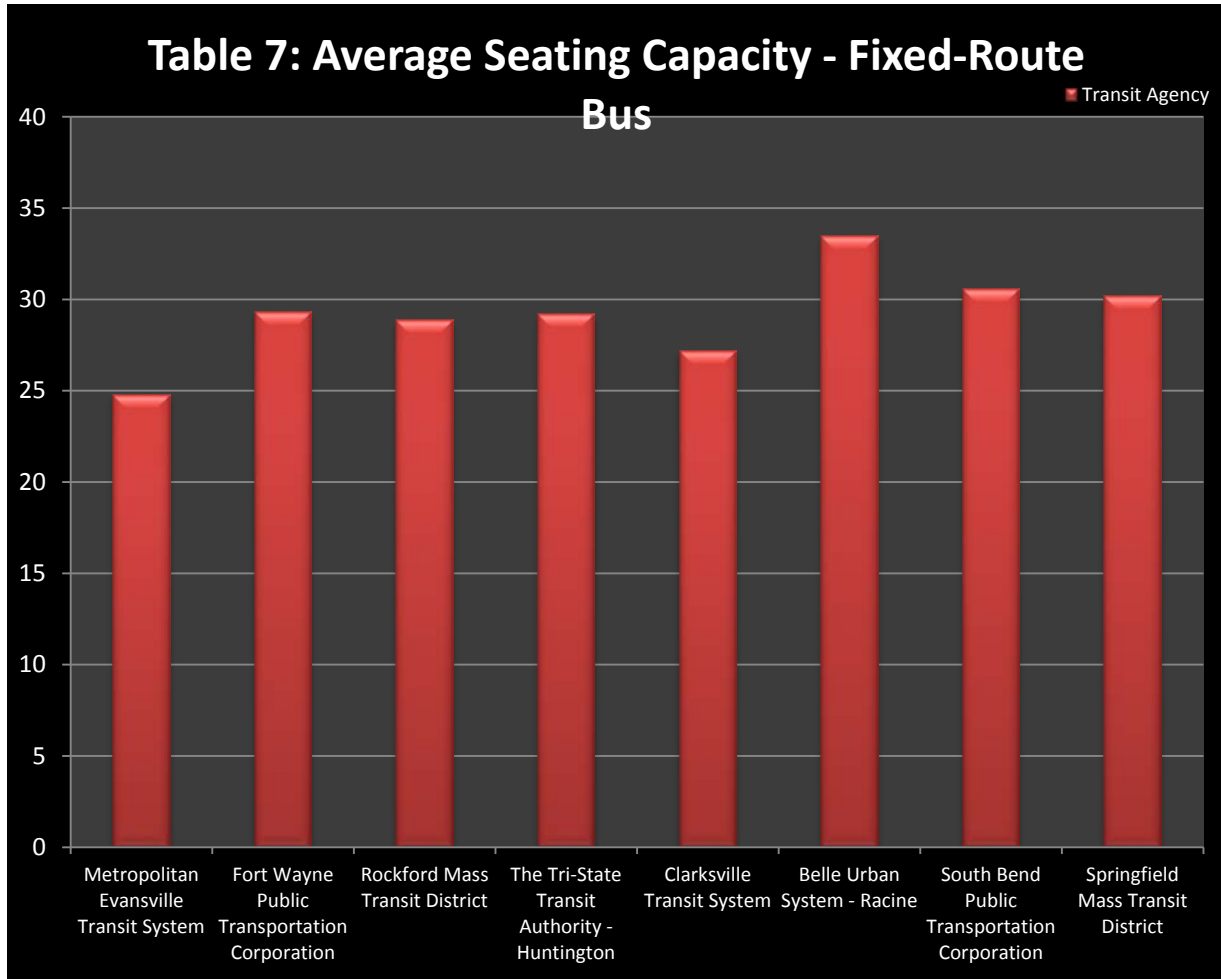
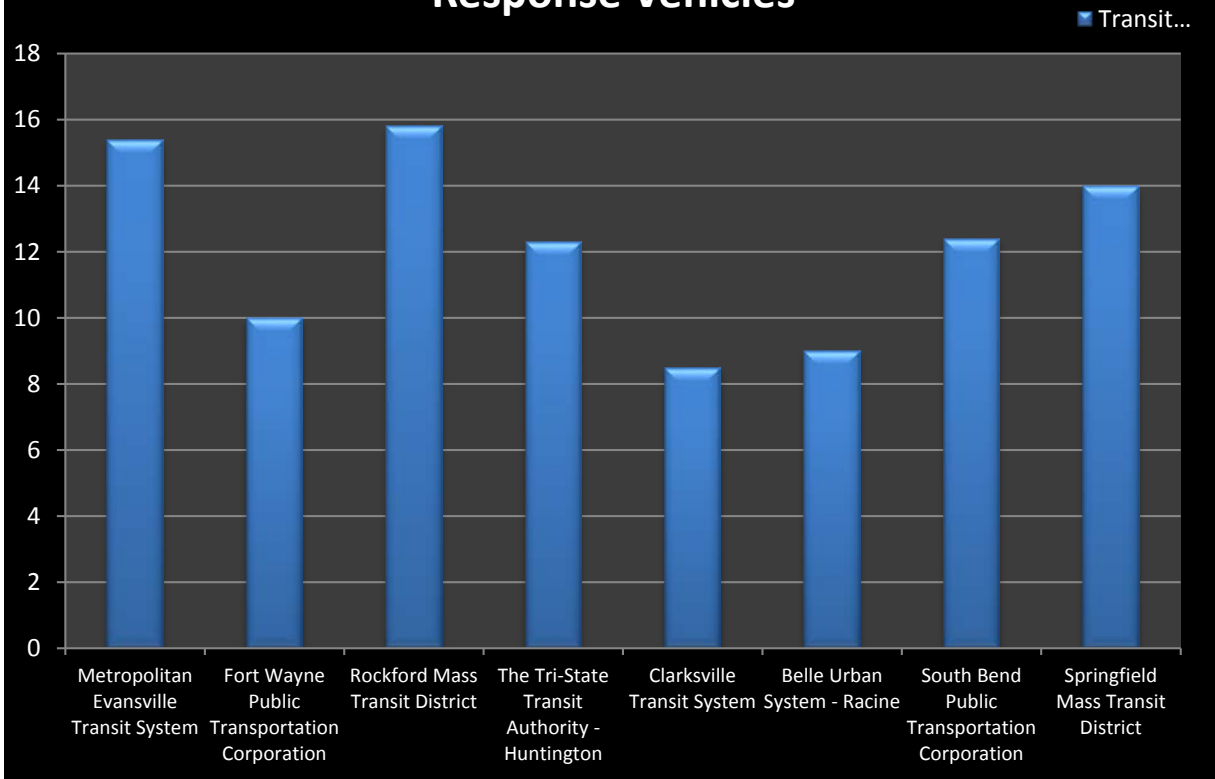


Table 8: Average Seating Capacity - Demand-Response Vehicles



Appendix A2 -
Recommended
New/Modified
Technology and
Passenger
Communications

I. Introduction

The following is a brief analysis of the METS agency's existing technology systems, its plans for technology upgrades, and recommendations for new technology.

Introducing new technology at transit systems is a major undertaking. It is a particular challenge to do so at smaller systems since the much of the cost for most technology systems is fixed; it is not reduced in proportion to the size of the operation. Probably even more of an issue is that the staffing required for implementation and ongoing management and maintenance of these systems is disproportionately high and requires highly skilled individuals. An important aspect of technology systems is that they are information-intensive; they both **require** a great deal of information as well as **produce** a tremendous amount of information.

In addition, technology systems are produced by multiple vendors. Without adequate upfront planning (beginning in the procurement stages) information often is incompatible between systems. Many agencies engage consultants to assist in the procurement of technology systems. It is understood that, to date, METS has used its own staff to procure all of its systems. Results to date have been satisfactory. However, our staffing and organizational evaluation has identified that METS is significantly understaffed in professional and managerial areas. This evaluation (see Task 3 Report, Section 3.9) also identifies that most key study recommendations will require added staffing to be implemented. Significant additional technology procurements should be viewed in the same way. Our recommendation is not to avoid introduction of new technology; rather, such procurements must recognize the staffing required for successful implementation.

A. Communications - Computer-Aided Dispatch/Automatic Vehicle Location (CAD/AVL) system

METS has had its own voice radio system for many years. All buses and non-revenue vehicles are equipped. The system was upgraded to digital in November, 2012 as part of the effort to convert to 12.5 MHz channels ("half channels") as required nationwide by the Federal Communications Commission. The system shares a transmission building and tower with the Evansville Water Department; another city department is joining this group. The group will raise the tower height this summer for better transmission. METS would like to install some repeating stations to improve the quality of coverage on the outer parts of the system. While digital radio is well-suited to handling data, with the addition of interface terminals, there has been a shift by

**METS Comprehensive Operations Analysis
Recommended New/Modified Technology and Passenger Communications**

vendors in the industry to using cellular-based data service. Having separate voice and data systems does provide an element of redundancy.

The Mobility system has used software from Route Match, a well-respected vendor, for several years. Initially, it was used only by dispatchers in the office. However, the system was recently updated and, at the same time, drivers were issued tablets which are used for transmission of trip requests and other communications. These enhancements are working out very well.

METS contracted in December 2014 with Double Map for installation of a CAD/AVL System for the fixed route buses. This will allow dispatchers to view bus location and schedule adherence in real time. Since a fixed route CAD/AVL system constantly updates this information, it typically supports other systems, as outlined below. Installation of the system will require some changes in METS operating practices. Most notably, a schedule database is required. The schedule adherence function requires multiple timepoints along the routes. METS schedules now show only a departure time at the start of each trip. (Adding such timepoints is one of our team's recommendations for scheduling and run cutting improvements.) Onboard equipment is scheduled for installation in late March/early April 2015.

Recommendations: METS must be prepared to invest significant resources into the system for it to provide its anticipated benefits. The added staffing we are recommending for planning, scheduling, public information and human resources will provide these resources.

B. Interior "Next Stop" Voice and Visual Annunciator System

METS has purchased an interior "next stop" voice and visual annunciator system as part of the fixed route CAD/AVL system. Such systems were initially installed as an aid for people with hearing or vision disabilities. Over time many passengers appreciate this information, particularly when traveling on routes they are not familiar with. This feature can be marketed to choice riders to help them be more willing to use METS service. This part of the system is expected to be installed in June or July 2015.

Recommendations: The system should announce every stop (not just "major" as required by ADA). There should always be something displayed on the sign, typically a rotation between the name of the next stop and date/time. A "stop requested" function is sometimes included.

C. "Next Bus" Information System

Another system that METS has purchased in conjunction with the CAD/AVL system is a passenger information system that can provide "next bus" information on computers and smart

**METS Comprehensive Operations Analysis
Recommended New/Modified Technology and Passenger Communications**

phones. The CAD/AVL system also could provide information for displays on dynamic message signs installed at transit stops/transfer points or in public areas of businesses or institutions (these were not included in METS' initial procurement). In cities that have these systems they have quickly become very popular with smartphone users. This is an increasingly large proportion of the population. This part of the CAD/AVL system also is expected to be installed in June or July 2015.

Recommendations: It is critical that the information be accurate before it is made available to the public. Experience has shown that systems need a long time to recover their credibility if they have a problematic roll out. It is important that the CAD/AVL provide data in a standardized format. The transit industry has adopted the General Transit Feed Specification (GTFS) which defines a common format for public transportation schedules and associated geographic information. GTFS "feeds" allow public transit agencies to publish their transit data and developers to write applications that consume that data in an interoperable way. The CAD/AVL system which METS recently purchased provides data in GTFS. This will allow METS to buy real-time signs on a competitive basis.

D. Automatic Passenger Counters (APC)

Another system that is often connected to a CAD/AVL system is an automatic passenger counter system. It shares the CAD/AVL system's location data. At this point in time, there are no immediate plans by METS to install an APC system, although there has been some staff discussion about it with the project team.

Recommendations: Experience shows these systems have taken many years to perfect. They are especially labor-intensive to manage and maintain. Ideally, they will share the onboard data processing and storage capability as well as the garage communications system with the CAD/AVL system. APCs are used primarily by large city systems that are constantly fine-tuning their service. Our assessment is that an APC system would not be a cost-effective way to collect required National Transportation Database (NTD) ridership trip sampling information. We recommend that a significant analysis be undertaken to ensure that APCs represent a reasonable and cost-effective technology before making any serious efforts toward a procurement.

E. Fare Collection

METS uses a very simple, traditional fare collection system from Genfare, probably the biggest fare collection system supplier in the U.S. It is the only vendor that sells advanced systems to

**METS Comprehensive Operations Analysis
Recommended New/Modified Technology and Passenger Communications**

smaller cities. METS staff has stated its desire to greatly reduce the amount of cash it handles. It is aware of industry trends to smart card-based fare collection. Most large cities now have a smart card system. However, each of these was custom-developed to match their fare structure and network. Each of these cost millions of dollars. Some have taken years longer than expected to implement. Operating expenses are also high, especially given the need to purchase and maintain vending machines. As a result only two of the 23 U.S. systems with smart cards are bus-only (Milwaukee, and Spokane). The remaining 21 are multimodal systems, which make the most use of them in turnstile, and/or proof of payment fare collection.

A promising development is that a convergence is taking place between transit smart cards and credit cards. U.S. credit cards are in the process of being equipped with chips (most of those in the rest of the world already are) that will enable them to quickly interact with bus fareboxes. Several large U.S. transit systems are in the process of fully integrating their transit cards with credit card systems in the expectation that they will be able to phase out their smart cards. Credit card operators accept small interchange fees for this type of high-volume, automated transaction.

Recommendation: We recommend that METS defer any major investments in fare collection systems until the full impact of the use of credit cards as transit cards becomes apparent. Designs will probably need to be adapted in ways that are not now anticipated. If the systems become truly standardized there may be competition for sales to smaller systems like METS.

**Appendix A3 -
Technical Memo -
Existing Conditions,
Bus Garage and
Maintenance Facility**

I. Bus Garage and Maintenance Facility

A. Facility Description

The bus garage, located at 601 John Street, is METS' only location for bus storage and maintenance. The facility is also the reporting location for bus operators and the location for the METS administrative offices, including fixed route and demand-responsive dispatch/call taking. The facility is centrally located in an industrial/warehouse area of Evansville, about 0.75 miles from the downtown transit center. The facility is bounded by John Street to the north, Garvin Street on the west, Morton Avenue on the east and Sycamore Street on the south. It is within one block of the on/off ramps to IN Route 62/ Lloyd Expressway, which allows buses to get to/from outer terminals of most routes quickly.

The red brick building was constructed in 1987. It is about 37,000 square feet in size. The exterior of the building appears to be in good condition with little need for maintenance. The public and office entrance to the facility is located on John Street, where twelve visitor parking spaces are provided. Buses normally enter from Garvin Street (which is one-way northbound) and exit onto Morton Avenue (which is one-way southbound). The employee parking lot (about 55 spaces) is accessed from Sycamore.

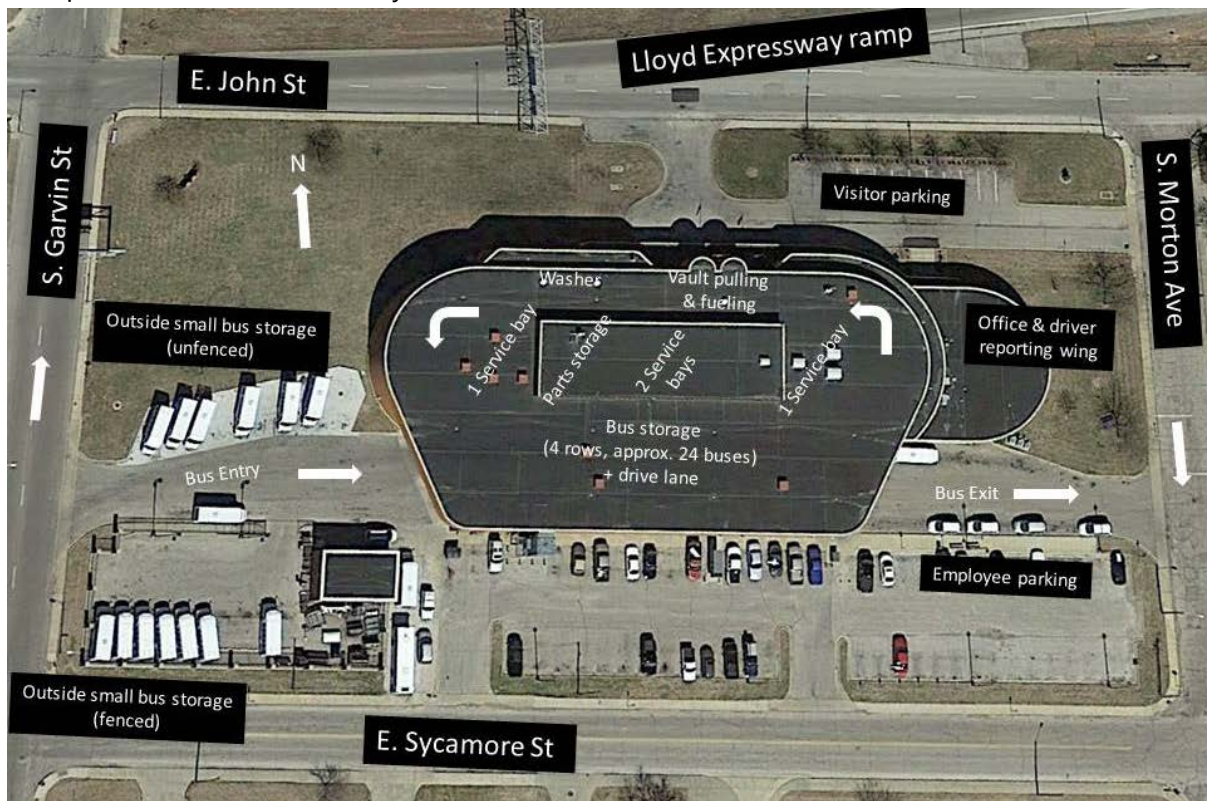


Figure 1- METS Bus Garage and Maintenance Facility

METS Comprehensive Operations Analysis
Technical Memo -Existing Conditions
Bus Garage and Maintenance Facility

The facility is an unusual shape, designed around the counter-clockwise flow of routine servicing of buses (farebox vault pulling, fluid check, fueling, and washing). Offices (including the counter for ticket sales and the driver room) are located in the low wing on the northeast corner of the building. Inside bus storage (used primarily for the transit bus fleet) is located on the south side of the main part of the building. Storage is linear, with space for four rows, each long enough for about six 30 foot buses (24 total), with an additional circulation aisle. Vault pulling and fueling facilities, and the bus washer, are located along the north wall. The four service bays, parts storage, and the mechanics' office are located in the center. There are no pits or built-in hoists; there are four sets of portable hoists.

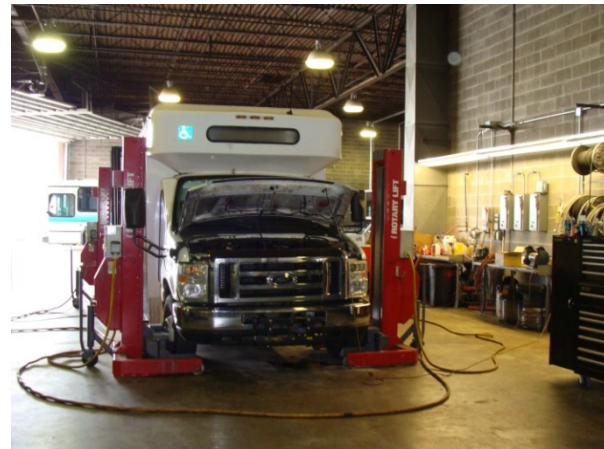
There is additional bus storage located outside. This is used for the small buses and the "cutaway" style vehicles used for the demand-response service. There is space for ten buses in an area with a decorative wrought iron fence on the southwest corner of the site. Space for an additional ten was recently created by paving an area on the west side, north of the bus entry drive. This area is not fenced. Outside spaces are equipped for block heaters on the buses.

All parking lots and driveways appear to be in relatively good condition. There is attractive landscaping is located on the front (John Street) side of the building and there is additional green space on the east side along Morton Avenue. Over 25,000 square feet on the northwest corner of the site is available for expansion, although there are fuel tanks under a portion of this.

B. Facility Constraints and Issues

When it was constructed, the bus garage/maintenance facility provided inside storage for the entire METS fleet which then included only fixed-route transit buses. Since that time, the demand-response operation (now branded as "Mobility"), which used to be contracted, has been brought in-house and has greatly expanded. Mobility now represents 30% of the fleet (15 vehicles), although all of the Mobility buses are the cutaway-style vehicle (most are smaller, i.e. typically 25 feet long). As a result, the Mobility buses, as well as some of the smaller fixed route buses, are normally stored outside. METS staff reports that on nights when snow is predicted a major effort is mounted to bring all of the buses inside by parking them in every space available in the garage, i.e. the circulation aisles and the maintenance bays. This is very inefficient; buses have to be moved out in the same order in which they were packed into the garage.

**METS Comprehensive Operations Analysis
Technical Memo -Existing Conditions
Bus Garage and Maintenance Facility**



In addition to storage issues, the maintenance area is also constrained in the type of vehicles it can service. The bus washer can accommodate only buses that are a maximum of 30 feet long due to tight geometrics for entry and exit. It is not clear whether the maintenance bays can accommodate longer buses. These issues would need to be addressed to permit larger buses to be operated.



There some other issues with the bus maintenance facilities which have been pointed out by METS staff:

- Better lighting is required in the maintenance area
- WiFi is need to support a new generation of diagnostic equipment
- The interior is overdue for interior repainting to brighten up the facility

Appendix A-4 -
Transfer Center
Recommendations

I. Assessment of Transfer Facilities

Each of the existing METS transfer facilities were reviewed in order to identify whether they meet the needs of the agency, and its riders, and whether they are adequate to support future transit operations. Although five “Transfer Terminals” are designated on the METS system map, only the downtown transit center has what most transit agencies would consider even minimum passenger accommodations. The others consist of informal use of shopping center parking lots. They are, essentially, invisible; none of the other four have even a bus stop sign.

Recommendations on capital improvements, likely to attract more riders, were identified. It is proposed that all transfer points have, at least, lighting, shelter, a bench, trash can, and METS passenger information. In addition to recommendations for upgrading existing transfer points, several proposed transfer facilities are also discussed.

A. Downtown Transfer Center

The Downtown Transit Center is the hub of METS operations, the largest of the METS transfer locations. It requires several improvements. To increase safety and to deter vandalism, the lighting under the canopy is currently being replaced. However, the parking lot is currently unlit; it is recommended that it be completely illuminated to benefit passengers who walk across the driving lanes to access the center. Better lighting will also increase the effectiveness of the high definition video cameras that are planned to be installed. HD should make the camera images more useful in identifying and prosecuting those responsible for any incidents. The table below shows ridership by route at the transit center.

Downtown Transfer Center Weekday Passengers				Entire Route	
Route	Alighting	Boarding	Total	Riders	% at DT Tfr. Center
1 - Washington	237	224	461	743	62%
2 - Riverside	275	281	556	925	60%
3 - Fulton Ave.	82	79	161	182	88%
4 - Stringtown	81	87	168	203	83%
5 - Mary/Tekoppel	156	179	335	423	79%
6 - Walnut	74	124	198	245	81%
7 - First Ave.	141	178	319	380	84%
8 - Lincoln	231	254	485	676	72%
9 - Covert	182	180	362	642	56%
10 - Lynch	132	138	270	324	83%

**METS Comprehensive Operations Analysis
Transfer Center Recommendations**

Downtown Transfer Center Weekday Passengers				Entire Route	
Route	Alighting	Boarding	Total	Riders	% at DT Tfr. Center
12 - Howell	39	64	103	122	84%
13 - DT Trolley	47	35	82	85	96%
17 - Mary/Howell	33	56	89	108	82%
18 - Stringtown/First	41	51	92	102	90%
Total	1,751	1,930	3,681	5,160	71%
Source - On-Off Ride Checks Taken Week of September 22 - 26, 2014					

This tabulation shows that, on average, over 70% of riders on routes serving the downtown transit center use the transit center at the start or end of their trips. The approximately 3,700 riders counted at the downtown transit center are slightly over half of all METS riders (7,000) counted during the systemwide ride checks.

Additional passenger amenities should include an information kiosk in the center of the sheltered area that would include a system map, a diagram of the transit center showing location of bus bays, and schedules of all routes. In addition, each bus bay should be provided with a route-specific map and schedule for the route(s) using that bay.

To assist people with mobility issues to board buses, the "midway" (the walkway in the center) should be raised 6 inches, to standard sidewalk height. This would also discourage non-motorized vehicles (bikes, skateboards, scooters) from using the transit center as a throughway. The information kiosk should also be placed (along with additional benches as necessary) to discourage this practice, as long as there is sufficient space on either side to allow for wheelchairs to pass. A cost estimate is provided below.

Downtown Transfer Center – Proposed Improvement Cost Estimates			
	Unit	Unit Cost	Total
New lighting for the parking lot (LED) ¹	24	\$1,000 each	\$24,000
Light poles	8	\$1,600 each	\$13,000
Information Kiosk	1	\$3,000 each	\$3,000

¹ "Demonstration Assessment of Light-Emitting Diode (LED) Parking Lot Lighting" US Department of Energy, May 2011. Area to light is about 38,000 sq. ft. Assumes each LED can light 1,400 sq ft, and three lights are mounted on each pole.

METS Comprehensive Operations Analysis
Transfer Center Recommendations

Downtown Transfer Center – Proposed Improvement Cost Estimates			
	Unit	Unit Cost	Total
Raising the transit center platform 6 inches ²	108	\$93 per cubic yard	\$10,000
Curb and gutter ³	465	\$10.95 per foot	\$5,000
Individual Route maps	12	\$1,500 each	\$18,000
Total cost			\$73,000

² The Concrete Network (<http://www.concretenetwork.com/concrete-prices.html>)

³ State of Michigan Subdivision Development Costs

**METS Comprehensive Operations Analysis
Transfer Center Recommendations**

Figure 1: Example of an Informational Kiosk



B. Lawndale Transfer Center

The Lawndale Transfer Center, located in the Washington Lawndale Commons Shopping Center, is the only transfer point outside of downtown which has any facilities (a passenger shelter). It has no other amenities. It is the most heavily used METS stop/transfer center other than the Downtown Transit Center. It is the terminal for five routes (1-Washington, 2-Riverside, 9-Covert, 14-Shoppers Shuttle 15-Eastside Connection). Three of these routes (2-Riverside, 1-Washington and 9-Covert) have, respectively, the highest, 2nd highest and 4th highest weekday ridership of all METS routes. The table below shows counts of passengers boarding and alighting at the Lawndale Transfer. It shows that nearly 1,000 daily passengers, or about 14% of all METS weekday riders, use this facility either to begin or end their trips.

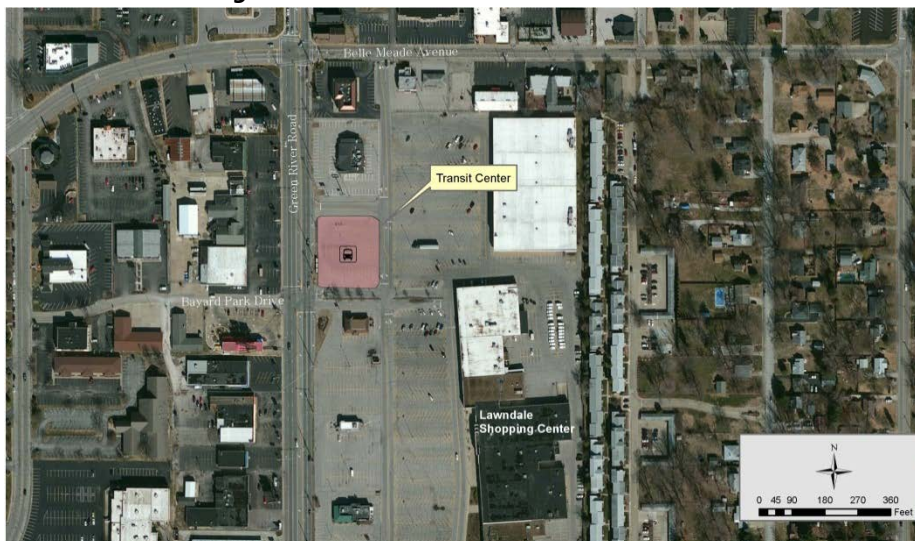
Lawndale Transfer Center - Weekday Passengers			
Route	Alighting	Boarding	Total
1 - Washington	110	117	227
2 - Riverside	113	114	227
9 - Covert	82	89	171
14 - Shoppers Shuttle	51	91	142
15 - East Connection	90	98	188
Total	446	509	955
Source - On-Off Ride Checks Taken Week of September 22 - 26, 2014			

METS Comprehensive Operations Analysis Transfer Center Recommendations

It is recommended that the site be developed as a METS-owned transit center. In addition to facilitating transfers, it would provide a suitable facility for several heavily-traveled routes to take scheduled recovery time. Also, this could serve as a park-n-ride terminal for express service to downtown Evansville.

There are no good nearby options for relocating this facility. Thus, it is recommended that METS either purchase or enter into a long term lease agreement with Renaissance Realty Investment, owner of the approximately $\frac{3}{4}$ acre outlot, for property to develop a formal transfer facility (See Figure 2). The transit center should include a raised concrete platform with space for six buses (three on each side, in a sawtooth pattern, to use the space most efficiently, as shown in Figure 3). A canopy should extend the entire length of the platform, which would also include trash cans, bike racks, and lighting. A cost estimate for this investment is provided below.

Figure 2: Potential Location of Transit Center



**METS Comprehensive Operations Analysis
Transfer Center Recommendations**

Figure 3: An Example of Sawtooth Berthing at a Transit Center



Lawndale Transfer Center – Proposed Improvement Cost Estimates			
	Unit	Unit cost	Total
Canopy	3600 ft ²	140 per ft ²	\$504,000
Site improvement	0.78 acres	\$552,000 per acre	\$431,000
Contingency	20% of total	\$186,912	\$187,000
Professional Services	10% of total	\$61,747	\$62,000
Land Cost	0.78 acres	\$287,220 per acre	\$224,000
Total			\$1,408,000

C. Eastland Mall Transfer Center

Four routes currently serve Eastland Mall. The table below shows the number of weekday riders using the Eastland Mall Transfer Center.

Eastland Mall Transfer Center - Weekday Passengers			
Route	Alighting	Boarding	Total
6 - Walnut	36	13	49
8 - Lincoln	70	94	164
14 - Shoppers Shuttle	27	25	52
15 - East Connection	53	59	112
Total	186	191	377

Source - On-Off Ride Checks Taken Week of September 22 - 26, 2014

The mall does not allow METS buses to stop for longer than a few minutes at their designated bus stop at the south entrance to the Mall; no bus stop sign is permitted. This forces buses arriving early to wait in the parking lot some distance from the stop, adding to the running time, and inconveniencing passengers needing to make a transfer. In addition, the Mall some time ago moved the bus stop to the rear entrance, forcing METS to cut one route back (10 – Lynch Road), since it no longer had enough running time in its schedule to serve the Mall.

Due to the restrictions the Mall has put on bus operations, it is not feasible for the transfer location to remain where it is. The best alternative solution would be to move the transfer/layover location to the south side of Vogel Road between the two exits of Eastland Mall as shown in Figure 4. This would require building a bus lane, approximately 350 feet long, to fit up to six buses. To accommodate the bus lane, the left turn lane onto Hebron Avenue would need to be eliminated, and left turns onto that road restricted. Traffic counts would need to be done to confirm the feasibility of this proposal. Access to the Woodlands Shopping Plaza will continue to be provided via two additional left turn lanes further east on Vogel Road. Shelters (see discussion of shelter options on page 6) should be provided to accommodate transferring riders, along with a sidewalk running from the transfer site along Vogel Road to Green River Road. Trash cans, two bike racks, and an information kiosk should be included in the design.

Shelters

METS shelters are, generally, very utilitarian. It is recommended that more attractive shelters be purchased in the future. Various styles are available, and can be procured competitively from several

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suppliers. The price differential compared to standard designs is quite modest. Examples of decorative and more modern designs are shown on the following page.

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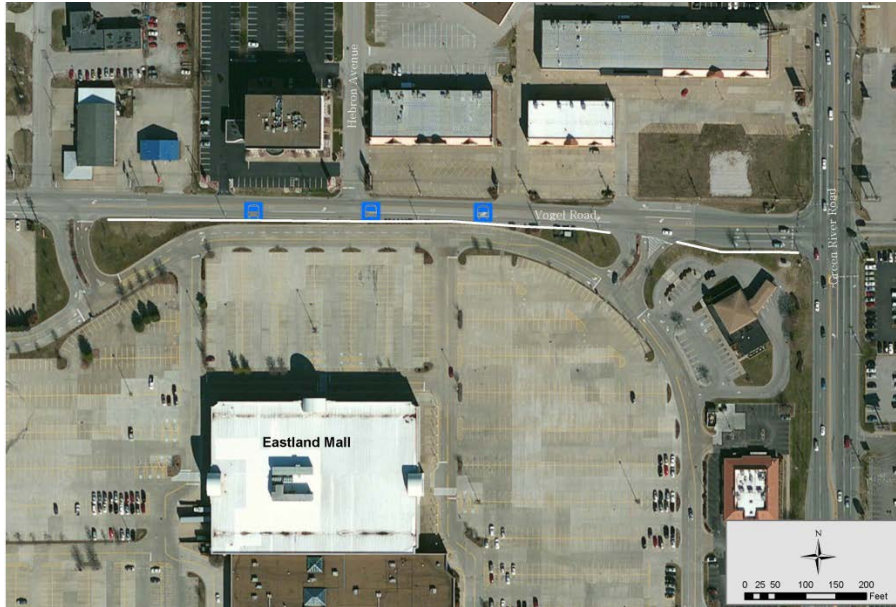


Locating the transfer point closer to the main roads, off Mall property, would allow 10 Lynch Road route to resume serving the Mall. This also would provide METS control over its transfer facility. The Mall would continue to be served. A construction cost estimate has been provided below.

An alternate approach to relocating the transfer facility to the side of the roadway would be to enter into a long-term lease with the Mall to build a facility somewhere within the Mall parking lot near the south entrance. A linear concrete island about 325 feet long and about 10 feet wide would be required. The same amenities could be provided here, as those proposed for the Vogel Road site. A construction cost estimate also is provided below.

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Figure 4: Potential Vogel Road Transfer Location



Eastland Mall Transfer Center – Proposed Improvement Cost Estimates			
Vogel Road site	Unit	Unit cost	Total
Shelter	3	\$9,000 each	\$27,000
Sidewalk/Paving	7,355 ft ²	\$5 per ft ²	\$37,000
Information Kiosk	1	\$3,000 each	\$3,000
Bike Racks	4	\$540 each	\$2,000
Restriping Roadway	350 ft	\$57 per foot	\$20,000
Total			\$89,000

Figure 5: Example of a Transfer Location within a Mall Parking Lot

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Eastland Mall Transfer Center – Proposed Improvement Cost Estimates			
Eastland Mall On Site	Unit	Unit cost	Total
Shelter	3	\$9,000	\$27,000
6 inch high platform	60 yd ³	\$93 per cubic yard	\$6,000
Information Kiosk	1	\$3,000	\$3,000
Total			\$36,000

D. Schnucks Transfer Center

This transfer center is currently located in the parking lot of the Schnucks Pharmacy. The table below shows weekday ridership at the Schnucks Transfer Center by route.

Schnucks Transfer Center - Weekday Passengers			
Route	Alighting	Boarding	Total
5 - Mary/Tekoppel	38	39	77
12 - Howell	12	2	14
16 - West Connection	28	27	55
17 - Mary/Howell	7	9	16
Total	85	77	162

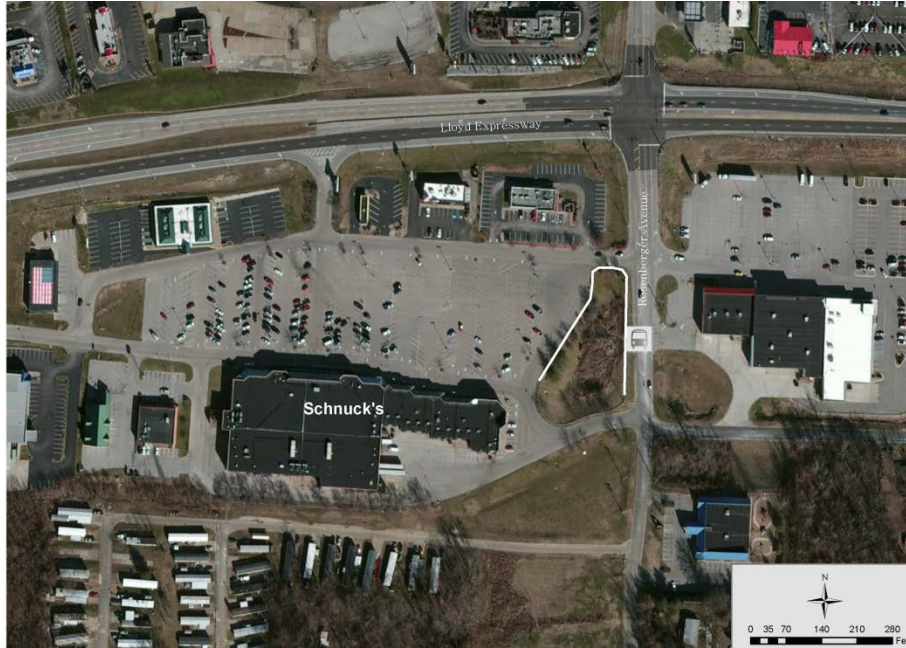
Source - On-Off Ride Checks Taken Week of September 22 - 26, 2014

This transfer location should be moved off-site due to safety concerns for passengers transferring between buses in the middle of a busy parking lot. The west side of Rosenberg Avenue between the two entrances to the Schnucks parking lot can easily accommodate the three buses that need to take recovery time and transfer passengers here, as shown in Figure 6. The current roadway includes an extremely long left turn lane serving an O'Reilly Auto Parts. Since there is already an additional turn lane into the lot, it is recommended that this lane be removed to make room for the bus-only lane and that left turns be prohibited into this entrance (exit should be converted into a right in right out entrance/exit). Trucks would still have access to the back of the shopping center via Cox Avenue.

Elimination of this turn lane would allow for about 200 feet of bus layover space. A shelter should also be installed, along with a sidewalk between the shelter and transfer location. This could be extended on private property into the shopping center. Out of the approximately total 585 linear feet, 335 feet are on private property. The cost estimate shown below assumes that Schnucks will pay for the sidewalk costs on their property. There is already a street light at this location to provide lighting, and a trash can and a bike rack should also be provided. Since fewer riders use this location as a transfer location than at Eastland Mall or Lawndale, a smaller, less costly informational kiosk that simply shows the route maps and schedules of the routes serving this location should be sufficient.

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Figure 6: Potential Rosenberger Avenue Transfer Location



Schnucks Transfer Center – Proposed Improvement Cost Estimates			
	Unit	Unit cost	Total
Shelter	1	\$9,000 each	\$9,000
Sidewalk/Paving	1,250 ft ²	\$5 per ft ²	\$6,250
Individual Route maps	1	\$1,500 each	\$1,500
Bike Rack	1	\$540 each	\$540
Restriping roadway	57 ft	250 per ft	\$14,250
Total			\$32,000

E. North Park Transfer Center

The North Park Transfer Center is located in the North Park Shopping Center. The table below shows weekday ridership at the North Park Transfer Center by route.

North Park Transfer Center - Weekday Passengers			
Route	Alighting	Boarding	Total
3 - Fulton Ave.	16	18	34
4 - Stringtown	31	13	44
7 - First Ave.	12	17	29
18 - Stringtown/First Ave.	4	7	11
Total	63	55	118
Source - On-Off Ride Checks Taken Week of September 22 - 26, 2014			

Similar to the Schnucks location, transfers are made in an unsafe environment in a parking lot. Therefore, the transfers should be moved to a site where passengers are stepping onto a sidewalk. A concept for a location along Mill Road, just east of First Avenue roadway, is shown in Figure 7. The area already has a cutout of approximately 600 feet on the south side of the road, more than sufficient space for the maximum of the two buses that currently take schedule recovery time here simultaneously. Due to its length, the Mill Road location opens up the possibility of additional buses taking recovery time at this location, if the long-term recommendations for routes in this area are implemented. The 7-First Avenue route will need to be rerouted. This will require reversing the routing of the loop at the north end of this route. Another operational change that would need to be made is to reverse the Buena Vista–Mill–Harlan–Kentucky loop on the 4-Stringtown route in order for the bus to be on the correct side of Mill Road for its layover. This transfer location can include a shelter, trash can, bike rack, and a small informational sign, similar to that proposed at Schnucks. There will need to be a sidewalk built along Mill Road between First Avenue and the power lines behind IGA to join two disjointed segments of existing sidewalk.

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Figure 7: Potential Mill Road Transfer Location



North Park Transfer Center – Proposed Improvement Cost Estimates			
	Unit	Unit cost	Total
Shelter	1	\$9,000	\$9,000
Sidewalk/Paving	3935 ft ²	\$5 per ft ²	\$20,000
Bike Rack	1	\$540 each	\$540
Total			\$30,000

F. ITT-Newburgh Campus

This location, just northeast of the I-69/Lloyd Expressway interchange, serves as a transfer point between METS and three routes of the Warrick Area Transit System (WATS) (Newburgh East, Newburgh West and Chandler routes). METS Route 14 – Shoppers Shuttle had 23 riders alighting and 27 boarding all day here during the September 2014 ride checks. Transfer counts taken by WATS during this same week showed an average of 10 riders daily transferring from METS to WATS service.

Due to its rural location, there is no lighting and it should be added. Other recommended amenities include a sidewalk, which can serve as a pad for a shelter, along with an information

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kiosk detailing both transit systems. A bus shelter can be installed and ITT may want to extend the proposed sidewalk connecting the shelter to the ITT Campus. Out of the approximately total 375 linear feet of pavement needed, 80 feet are on private property.

ITT Transfer Center – Proposed Improvement Cost Estimates			
	Unit	Unit cost	Total
Shelter	1	\$9000 each	\$9,000
Sidewalk/Paving	1495 ft ²	\$5 per ft ²	\$8,000
Pedestrian Level Street Lighting	1	\$5000 each	\$5,000
Information Kiosk	1	\$3,000	\$3,000
Total			\$25,000

G. Henderson

Across the river from Evansville, Henderson has a transit provider, HART that operates 5 fixed routes, all of which meet at the bus shelter at 3rd and Water shown in Figure 9. If service connecting Evansville to Henderson is implemented, HART should identify a space along 3rd Street for a bus to take schedule recovery time. No additional infrastructure would need to be provided except for a bus stop sign.

Figure 9: HART Transfer Location

**H. IU-Medical School**

When the IU Medical School is built, METS should work with the facility to ensure that its passengers will have easy access. Any on-site transfers should be located where riders can wait indoors. The cost of any transit facility would depend on the number of routes that will serve it, as well as any sharing of the costs of amenities with the school. If an indoor waiting area is not available, at the very least lighting, sidewalks, a shelter, bench, and a trash should be provided.

METS

Evansville MPO



Henderson • Vanderburgh • Warrick



Appendix B

METS Service Standards

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1 Executive Summary

Service Standards are guidelines that direct the design, quality and efficiency of transit service. The Service Standards contained in this document are applied system-wide to all METS bus routes to ensure that METS resources are distributed in a fair and equitable manner. The Service Standards provide guidance on the following service provision attributes:

- *Route Coverage* describes the distance between transit service and residents' homes;
- *Bus Stop Spacing* recommends the distance between bus stops;
- *Span of Service* specifies the hours and days a route operates;
- *Service Frequency* determines how long customers wait for service;
- *Vehicle Load* determines how crowded the vehicle will be;
- *Route Spacing and Directness* addresses general route location;
- *On Time Performance* recommends a percentage of vehicles that will arrive on time;
- *Distribution of Transit Amenities* specifies how and when amenities are provided; and
- *Vehicle Assignment* describes how vehicles are assigned to routes.

Transit agencies are often pulled between the desire to improve service, and the economic need to reduce service under certain circumstances. Included in this document are guidelines to assist METS staff when considering the expansion or reduction of service.

To recognize the importance of public participation in decision making, METS has adopted a separate Public Participation Plan. This document acknowledges the Public Participation Plan, and includes a description of the public participation activities required for major service and fare changes.

The METS Service Standards fulfill the requirements contained in the Federal Transit Administration Circular C4702.1B, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients" dated October 1, 2012. Adoption of these Service Standards provides a basis for service provision that is fair and equitable for the region.

2 Overview

The Metropolitan Evansville Transit System (METS) was created in 1971 as a City of Evansville department within the Division of Transportation and Services. The METS fixed route service area generally is within the City of Evansville. It encompasses roughly 45 square miles, with a population of about 123,000 as based upon the 2013 National Transit Database (NTD) Report. METS provides fixed route public transportation on 18 bus routes, plus shuttle service on the University of Southern Indiana campus¹. METS also provides paratransit service (METS Mobility), for persons 60 years or older or those with a documentable disability that limits their use of the METS fixed route system. METS Mobility

¹ Service on the University of Southern Indiana (USI) campus is governed by a contract between USI and the City of Evansville. Service to USI under this arrangement is not governed by these service guidelines.

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Service is provided throughout Vanderburgh County via a funding arrangement with the Vanderburgh County Commissioners.

Service is provided weekdays and Saturdays. Weekday service between 6 a.m. and 6 p.m. is provided with 30 to 60 minute frequencies. Weekdays between the hours of 6 p.m. and 12 midnight and all day Saturdays, service is provided every 60 minutes. METS currently maintains a fleet of 33 buses for fixed route service, and 24 buses are required for peak periods. All METS vehicles are accessible to persons with disabilities. The paratransit fleet is composed of 15 buses and 14 are required for daily service.²

This document outlines METS Service Standards as required by The Federal Transit Administration Circular C4702.1B, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients" dated October 1, 2012. The purpose of the Circular is to provide guidance to FTA funding recipients in enacting Title VI requirements. The program objectives are to:

- Ensure that the level and quality of public transportation service is provided in a nondiscriminatory manner;
- Promote full and fair participation in public transportation decision-making without regard to race, color, or national origin; and
- Ensure meaningful access to transit-related programs and activities by persons with limited English proficiency.

The Circular requires providers of fixed route public transportation to adopt system-wide service guidelines and policies to ensure service design and operating practices do not result in discrimination on the basis of race, color, or national origin.

3 Service Delivery Guidelines

Service Delivery Guidelines are the basic building blocks that define service access and service levels. Unless otherwise noted, these guidelines apply to both fixed route and paratransit services.

3.1 Data Sources and Staffing

Full implementation of these service guidelines requires added staffing in service planning and marketing. This additional staff will oversee appropriate use of the existing farebox data reporting capabilities. Data to support many of these guidelines (e.g., ridership per trip, peak ridership counts) will require on-bus counts. Such counts/surveys are a standard transit business practice. These counts/surveys require periodic use of temporary staffing supervised by the service planning and marketing staff.

² Fleet size as shown in 2013 NTD submission, dated 6-23-14. Fleet size will be updated as fleet size changes.

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3.2 Service Availability

3.2.1 Route Coverage

Service availability relates to the geographic availability of bus service. A standard for service availability is often related to population density. High density areas will have bus routes spaced closer together than low density regions. For paratransit service, ADA regulations require that service be provided within an area ¼ mile on each side of fixed route service.

METS will distribute transit service throughout the service area to serve the highest number of residents possible with available resources. The METS Service Availability Standard is to provide fixed route bus service within a ¼ mile walk to 90% of all residents in the service area.

3.2.2 Bus Stop Spacing

The table below shows average bus stop spacing by route for METS services.

METS Fixed Route Bus Routes - Average Stop Spacing				
Number	Name	Variation	Average Stop Spacing (Feet)	
			Outbound	Inbound
1	Washington		720	740
2	Riverside	A	920	1,120
2	Riverside	B	920	1,070
3	Fulton		1,130	1,500
4	Stringtown		1,210	1,140
5	Mary-Tekoppel	A	970	940
5	Mary-Tekoppel	B	920	940
6	Walnut		1,410	1,290
7	First Ave.		980	1,240
8	Lincoln	A	840	910
8	Lincoln	B	840	810
9	Covert		890	1,000
10	Lynch		1,210	1,260
12	Howell		860	970
13	Downtown Shuttle		1,450	1,060
14	Shoppers Shuttle		2,070	1,170
15	East Connection		1,820	1,370
16	West Connection		3,770	3,970
17	Mary-Howell		1,060	880
18	Stringtown- First Ave.		1,070	1,240
23	US 41 Highway N		2,430	3,140
	Avg. - All Routes		1,380	1,380
	Avg. - Routes Serving DT Terminal		1,050	1,090

Source - Lochmueller Group Bus Stop Inventory

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There is a significant variation in bus stop spacing by route. A significant opportunity exists to improve service by instituting a policy which calls for wider stop spacing than is presently provided on several routes. Quarter-mile spacing is consistent with existing stop spacing on many routes. Providing such a stop spacing will provide faster service to riders who will not need to wait through boardings and alightings at closely-spaced stops. In addition, wider stop spacing assists in improving bus running times on routes where schedule adherence is an issue. On local routes, it is recommended that bus stops be spaced $\frac{1}{4}$ mile (1,320 feet) apart, unless the location of major transfer points and major traffic generators require closer stop spacing in specific locations.

3.3 Span of Service

The Span of Service Standard identifies the times that service is provided on each day of the week. This standard is often adopted as a minimum policy standard for all routes in the system, while individual routes may exceed the minimum based on ridership. For paratransit service, ADA regulations require that service is provided during the same hours and days as the fixed route service. If service on certain days and time periods is not provided in all portions of the fixed-route service area, ADA service is required only during those days and hours when fixed route service is available in those portions of the service area.

Hours of transit service are specified to serve the majority of residents traveling to school, work and other purposes. The METS Span of Service Standard is to provide service on weekdays between the hours of 6 a.m. through 6 p.m. Some routes with very low levels of demand during the midday may only provide service during the peak periods. Service during the evening hours and on Saturday is provided on routes with a demonstrated need based on ridership. Sunday service is not provided at present.

Attached to this report are two tabulations of ridership by trip and route. Table 1 shows ridership on the last three weekday trips before 6 pm on each route. Table 2 shows ridership on all weekday trips after 6 pm. Both tables contain the same information sorted in three different ways – by passengers per trip, passengers per route mile and passengers on last trip during each time period. Based upon these existing patterns, the following guidelines regarding span of service are proposed:

- **Weekdays.** In order for service to be provided during a given time period, ridership must satisfy one of two criteria. The first criterion is that ridership must average at least 20 passengers per round trip during the first three hours of service or the last three hours of service provided. The second criterion is that there must be at least 10 riders served on the first/last round trip, **and** an average of 15 riders served per round trip during the initial/final three hours of service. Service will not be provided during time periods when routes do not serve the minimum number of riders under **either** criterion. Routes which do not satisfy one of these criteria will be evaluated for modification; if the modifications do not result in ridership meeting these

Metropolitan Evansville Transit System (METS) Service Standards

minimum criteria, service will not be operated during this time span. In addition, routes which have ridership significantly higher than these criteria will be considered for extending hours of service.

- **Saturdays and Sundays.** At present, no ridership counts have been taken for Saturday or Sunday service. These draft guidelines recommend that such counts be taken within the near future. Pending those counts being taken, it is recommended that the weekday service criteria be applied to assess Saturday and Sunday span of service.

3.4 Service Frequency

Frequency of service is defined as the amount of time between buses traveling in the same direction on the same street. The frequency standard establishes a maximum waiting time between buses. Scheduled waiting times may shorten if the level of ridership on a given route is sufficient to justify more frequent service. Paratransit service requires advance reservations, and therefore the frequency standard does not apply to this type of service.

Service frequency is a function of ridership and vehicle capacity and is closely related to Vehicle Load which is discussed in the next section. The Service Frequency Standard is 60 minutes or less for METS fixed route service. More frequent service may be provided during the peak hours or when ridership is sufficient to warrant more frequent service. The following table provides a guideline for the provision of more frequent service.

Round Trip Riders per Hour	Frequency (in minutes)	Round Trip Riders per Bus
< 15	No fixed route service	
15 – 40	60	15 - 40
41 – 70	30	21 - 35
71 – 100	20	24 - 33
101 – 140	15	25 - 35

These guidelines are applicable either as averages during the entire AM/PM Peak Period, midday, or evening on a given route. For Saturday or Sunday service, they are applicable for any period of 4 to 6 hours with relatively consistent ridership levels.

3.5 Vehicle Load

Vehicle Load refers to the maximum number of passengers scheduled on a bus at the route's busiest location. This standard is often related to the number of seats available and is expressed as the ratio of passengers to seats.

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The maximum scheduled vehicle load should not exceed the vehicle manufacturers' recommended capacity for passengers seated and standing. The maximum load factors for the current METS revenue vehicle fleet range from 2.5 for high floor buses to 1.0 for cutaway vehicles, as shown in the Table below.

Vehicle Type	Vehicle Capacity			Maximum Load Factor
	Seated	Standing	Total	
High Floor	29	43	72	2.5
Low Floor Hybrid (pre '07)	26	12	38	1.7
Low Floor Hybrid	26	7	33	1.3
Cutaway	21	0	21	1.0
Cutaway	17	0	17	1.0

Due to the wide range in load factors by vehicle type, METS will assign higher capacity vehicles to those routes with the highest passenger demand, and lower capacity vehicles to routes with low demand. The remaining vehicles will be assigned in a random or rotating fashion to provide riders on all routes similar experiences in terms of vehicle age and condition. Therefore, the maximum scheduled vehicle load is 2.5 (72 passengers) for routes assigned the High Floor vehicles and 1.0 (17 to 21 passengers) for low ridership routes using the cutaway vehicles. This standard will be reevaluated as the fleet composition changes.

The maximum load factor for paratransit service is 1.0, and standees are not permitted.

3.6 Route Spacing and Directness

Significant portions of the METS service area³ have topographical and street grid features which make it inappropriate to specify strict route spacing guidelines. For this reason, specific route spacing guidelines are not proposed. Route coverage guidelines, along with service frequency guidelines, will ensure appropriate access to fixed route service through the METS service area.

Route Directness, or the operation of a route along the most direct possible path, is a standard to improve travel speed and reliability. Routes will be designed to operate as directly as possible, using major arterial streets. Route deviations to serve traffic generators located away from the direct path will only be considered if: 1) The deviation's one-way travel time is three minutes or less; and 2) The total additional travel time for all through passengers, divided by the number of passengers using the deviation, is less than five minutes. This is expressed in the following calculation:

³ Includes areas around Pigeon Creek on Evansville's near west side, near north side, and northeast side, as well as hilly areas in significant portions of Evansville's west side.

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$$(X * Y) / Z \leq 5 \text{ minutes}$$

Where: X = Number of through passengers
Y = The additional one-way vehicle travel time
Z = Number of passengers served by the deviation

3.7 On Time Performance

Service reliability is essential to retain and attract transit customers. On-time performance is one of the best indicators of service reliability. Typically, on-time performance is defined as the vehicle arriving within a certain number of minutes of the scheduled time.

For paratransit service a maximum response time standard, (the time between the service request scheduled time and when service was provided), can be employed for these systems.

Service is considered on time if the bus arrives not more than sixty (60) seconds early or more than five minutes late at established time points when compared to scheduled arrival times. The proposed METS On-Time Performance Standard is to provide on time service 90% of the time. Monitoring on-time performance is a standard transit business practice for service supervision and dispatching staff. Monitoring typically is done on an occasional sampling basis, or in response to specific requests/customer input.

Paratransit service is considered on time if the paratransit vehicle arrives within 30 minutes before or after the scheduled trip time. The METS On-Time Performance Standard is to provide on-time service 90% of the time.

3.8 Service Amenities Guidelines

Service Amenities are provisions for the passenger which improve the overall transit experience by providing added comfort or convenience. Service Amenities include capital infrastructure and equipment such as passenger shelters and transit vehicles.

3.8.1 Transit Amenities Distribution

Transit Amenities include passenger shelters, benches, and bicycle racks. These amenities are distributed based on passenger volume and activity. Placement of amenities may be influenced by physical space requirements, safety concerns, or pedestrian infrastructure.

The METS Transit Amenities Distribution Standard for each amenity is as follows:

- Provision of a passenger shelter requires a minimum daily boarding of 30 passengers and adequate space in the right of way.

Metropolitan Evansville Transit System (METS) Service Standards

- Benches are provided at locations with minimum daily boardings of 30 passengers and adequate space in the right of way. Benches may also be provided upon request, and when resources are available, at bus stops serving medical facilities and trip generators patronized primarily by senior citizens.
- The location of bicycle racks is evaluated on a case by case basis.

3.8.2 Vehicle Assignment

Vehicle assignment refers to the allocation of buses to a route. Transit agencies can operate many different types of vehicles, and these may have a wide range of age and condition. To ensure fair and equitable service provision, it is important that riders on all routes encounter similar experiences with regard to the vehicles that they ride.

The METS bus fleet contains several vehicle types of differing sizes. Certain routes require larger vehicles due to ridership demand, while other routes are more suited to smaller vehicles. For this reason, the largest and smallest vehicles in the fleet are assigned to routes based on vehicle size. For the remaining vehicles, METS assigns buses on a random or rotating basis amongst the routes to ensure that vehicles are assigned equitably throughout the service area.

3.9 Service Expansion/Reduction Guidelines

Increases and decreases in transit ridership necessitate changes to routes and/or schedules. When ridership is increasing, improvements in service availability, span of service, or frequency may be needed. Similarly, reductions in service may be necessary when ridership declines. This section provides guidance on typical service expansion or reduction issues.

New or extended bus routes may be provided to serve new high density developments. New developments come to the attention of transit providers through the media or direct requests for more service. If resources are available and there is potential to expand ridership and revenue, new service should be provided on an explicitly experimental basis. Operating the service for six months to a year will provide the ridership and revenue data necessary to determine if the change should become permanent.

Changes in population and employment density often require changes to routes. As neighborhood demographics change, average household size may decrease, reducing the population density and thus the demand for service. In this case, the need to reduce service will be evidenced in a downward ridership trend.

A determination on whether the Span of Service should be expanded or reduced is discussed in a previous section. As a general rule, if the number of riders on the first or last trip of the day is higher

Metropolitan Evansville Transit System (METS) Service Standards

than the one or two adjacent trips, then additional service often is warranted. Conversely, if the first and last trips have consistently low ridership, then elimination of that trip is usually justified.

Guidance related to changes in service frequency is included in the table in the Service Frequency section. Service frequency is a function of ridership and vehicle size. When ridership exceeds vehicle capacity, then one of two steps must be taken. The most cost efficient step is to assign higher capacity vehicles. If that is not an option, the number of buses serving the route must increase, improving frequency. Conversely, as ridership on a route declines, the number of vehicles required on the route, and therefore, the frequency, declines.

The addition of Sunday service has been frequently requested by customers. For properties that do not offer Sunday service, adding Sunday service to the span of service requires assignment of office, maintenance, and supervisory staff in addition to the bus operators. Provision of fixed route Sunday service will also expand provision of ADA paratransit service to Sundays along those routes which were expanded to Sundays. This entails significant financial resources. When making the decision to expand service to Sundays, it should be noted that typically ridership and revenue from Sunday service may be less than 50 percent of Saturday service on the same route.

3.10 Public Participation

Public participation is an important component of the service change process. This ensures that METS service continues to meet the needs and expectations of its customers. Public participation includes direct, unsolicited feedback from METS customers, as well as outreach to individuals and groups to elicit comments on proposed adjustments.

An on-going, regular dialogue with Evansville residents, businesses and elected officials is the goal of the METS public participation process. In addition to on-going communication, more formal and specific outreach efforts are required when major changes to service or fares are contemplated.

The public participation process for major changes in fares, facilities and/or service applies under any of the following circumstances:

- Route changes that affect more than 25 percent of any route or service's passengers, route miles, or vehicle miles;
- Service changes that require new facilities and/or capital expenditures at a cost that requires city council approval;
- A fare increase of 10 percent or more on any fare type or media.

For major service changes or fare increases as defined above, METS will conduct a public meeting to present the proposed change(s) and obtain public comments. The public meeting will be scheduled at a

Metropolitan Evansville Transit System (METS)
Service Standards

time and place accessible and convenient for the general public to attend. Legal notice of the public meeting will be published in a local newspaper of general distribution at least 30 calendar days prior to the meeting. Additional notices will be placed on transit vehicles and on the METS webpage. Notices will be provided in English and Spanish. Social media also will be used to disseminate service change information and seek public input.

A staff person will record and prepare formal minutes of the public meeting. In addition, written or verbal comments will be accepted for at least one week following the meeting. Comments will be evaluated and considered prior to making a decision on the final recommendation.

Metropolitan Evansville Transit System (METS) Service Standards

Sorted by Pass/Trip

Number	Route Name	Last Three Trips before 6 PM									Avg. 3 Trips Before 6 PM	
		Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Pass	Pass/RM
10	Lynch	3:15 PM	41	5.4	4:15 PM	34	4.5	5:15 PM	24	3.2	33	4.4
7	First Avenue	3:15 PM	28	5.1	4:15 PM	36	6.5	5:15 PM	32	5.8	32	5.8
2	Riverside	4:15 PM	47	6.4	4:45 PM	17	2.2	5:15 PM	26	3.6	30	4.1
1	Washington	4:15 PM	39	7.0	4:45 PM	24	4.3	5:15 PM	18	3.2	27	4.8
8	Lincoln	4:15 PM	26	4.0	4:45 PM	27	3.8	5:15 PM	26	4.0	26	3.9
9	Covert	4:15 PM	28	4.4	4:45 PM	24	3.8	5:15 PM	26	4.1	26	4.1
5	Mary-Tekoppel	4:15 PM	26	3.7	4:45 PM	21	2.9	5:15 PM	22	3.1	23	3.2
6	Walnut	3:15 PM	21	3.3	4:15 PM	25	3.9	5:15 PM	23	3.6	23	3.6
15	E Connection	3:15 PM	26	3.0	4:15 PM	21	2.4	5:15 PM	14	1.6	20	2.3
3	Fulton	3:15 PM	21	3.9	4:15 PM	20	3.7	5:15 PM	18	3.3	20	3.6
4	Stringtown	2:45 PM	15	2.1	3:45 PM	15	2.1	4:45 PM	18	2.5	16	2.2
14	Shpr Shuttle	3:45 PM	17	2.4	4:45 PM	21	3.0	5:45 PM	3	0.4	14	1.9
12	Howell	3:15 PM	9	1.3	4:15 PM	16	2.2	5:15 PM	9	1.3	11	1.6
13	DT Shuttle	3:15 PM	8	1.6	4:15 PM	8	1.6	5:15 PM	6	1.2	7	1.5
23	US Highway 41	3:30 PM	8	0.8	4:30 PM	1	0.1	5:30 PM	5	0.5	5	0.5
16	W Connection	4:45 PM	1	0.2	5:15 PM	4	0.9	5:45 PM	0	0.0	2	0.4

Sorted by Pass/RM

Number	Route Name	Last Three Trips before 6 PM									Avg. 3 Trips Before 6 PM	
		Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Pass	Pass/RM
7	First Avenue	3:15 PM	28	5.1	4:15 PM	36	6.5	5:15 PM	32	5.8	32	5.8
1	Washington	4:15 PM	39	7.0	4:45 PM	24	4.3	5:15 PM	18	3.2	27	4.8
10	Lynch	3:15 PM	41	5.4	4:15 PM	34	4.5	5:15 PM	24	3.2	33	4.4
9	Covert	4:15 PM	28	4.4	4:45 PM	24	3.8	5:15 PM	26	4.1	26	4.1
2	Riverside	4:15 PM	47	6.4	4:45 PM	17	2.2	5:15 PM	26	3.6	30	4.1
8	Lincoln	4:15 PM	26	4.0	4:45 PM	27	3.8	5:15 PM	26	4.0	26	3.9
3	Fulton	3:15 PM	21	3.9	4:15 PM	20	3.7	5:15 PM	18	3.3	20	3.6
6	Walnut	3:15 PM	21	3.3	4:15 PM	25	3.9	5:15 PM	23	3.6	23	3.6
5	Mary-Tekoppel	4:15 PM	26	3.7	4:45 PM	21	2.9	5:15 PM	22	3.1	23	3.2
15	E Connection	3:15 PM	26	3.0	4:15 PM	21	2.4	5:15 PM	14	1.6	20	2.3
4	Stringtown	2:45 PM	15	2.1	3:45 PM	15	2.1	4:45 PM	18	2.5	16	2.2
14	Shpr Shuttle	3:45 PM	17	2.4	4:45 PM	21	3.0	5:45 PM	3	0.4	14	1.9
12	Howell	3:15 PM	9	1.3	4:15 PM	16	2.2	5:15 PM	9	1.3	11	1.6
13	DT Shuttle	3:15 PM	8	1.6	4:15 PM	8	1.6	5:15 PM	6	1.2	7	1.5
23	US Highway 41	3:30 PM	8	0.8	4:30 PM	1	0.1	5:30 PM	5	0.5	5	0.5
16	W Connection	4:45 PM	1	0.2	5:15 PM	4	0.9	5:45 PM	0	0.0	2	0.4

Sorted by Pass on Last Trip

Number	Route Name	Last Three Trips before 6 PM									Avg. 3 Trips Before 6 PM	
		Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Pass	Pass/RM
7	First Avenue	3:15 PM	28	5.1	4:15 PM	36	6.5	5:15 PM	32	5.8	32	5.8
2	Riverside	4:15 PM	47	6.4	4:45 PM	17	2.2	5:15 PM	26	3.6	30	4.1
8	Lincoln	4:15 PM	26	4.0	4:45 PM	27	3.8	5:15 PM	26	4.0	26	3.9
9	Covert	4:15 PM	28	4.4	4:45 PM	24	3.8	5:15 PM	26	4.1	26	4.1
10	Lynch	3:15 PM	41	5.4	4:15 PM	34	4.5	5:15 PM	24	3.2	33	4.4
6	Walnut	3:15 PM	21	3.3	4:15 PM	25	3.9	5:15 PM	23	3.6	23	3.6
5	Mary-Tekoppel	4:15 PM	26	3.7	4:45 PM	21	2.9	5:15 PM	22	3.1	23	3.2
1	Washington	4:15 PM	39	7.0	4:45 PM	24	4.3	5:15 PM	18	3.2	27	4.8
3	Fulton	3:15 PM	21	3.9	4:15 PM	20	3.7	5:15 PM	18	3.3	20	3.6
4	Stringtown	2:45 PM	15	2.1	3:45 PM	15	2.1	4:45 PM	18	2.5	16	2.2
15	E Connection	3:15 PM	26	3.0	4:15 PM	21	2.4	5:15 PM	14	1.6	20	2.3
12	Howell	3:15 PM	9	1.3	4:15 PM	16	2.2	5:15 PM	9	1.3	11	1.6
13	DT Shuttle	3:15 PM	8	1.6	4:15 PM	8	1.6	5:15 PM	6	1.2	7	1.5
23	US Highway 41	3:30 PM	8	0.8	4:30 PM	1	0.1	5:30 PM	5	0.5	5	0.5
14	Shpr Shuttle	3:45 PM	17	2.4	4:45 PM	21	3.0	5:45 PM	3	0.4	14	1.9
16	W Connection	4:45 PM	1	0.2	5:15 PM	4	0.9	5:45 PM	0	0.0	2	0.4

Pass/RM - Passengers Per Route Mile

Table 1 – METS Fixed Route Service – Riders by Trip on Last Three Trips before 6 pm.

Metropolitan Evansville Transit System (METS) Service Standards

		Trips After 6 pm												Avg. Trips After 6 PM							
Number	Route Name	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Pass	Pass/RM			
2	Riverside	6:15 PM	24	3.3	7:15 PM	18	2.5	8:15 PM	35	4.8	9:15 PM	28	3.8	10:15 PM	29	4.0	11:15 PM	18	2.5	25	3.5
9	Covert	6:15 PM	27	4.3	7:15 PM	26	4.1	8:15 PM	29	4.4	9:15 PM	22	3.5	10:15 PM	22	3.5	11:15 PM	14	2.2	23	3.7
1	Washington	6:15 PM	22	3.9	7:15 PM	23	4.1	8:15 PM	24	4.3	9:15 PM	25	4.5	10:15 PM	12	2.1	11:15 PM	5	0.9	19	3.3
17	Mary-Howell	6:15 PM	29	3.5	7:15 PM	25	3.0	8:15 PM	23	2.8	9:15 PM	13	1.6	10:15 PM	12	1.5	11:15 PM	6	0.7	18	2.2
8	Lincoln	6:15 PM	31	4.8	7:15 PM	22	3.4	8:15 PM	21	2.5	9:15 PM	16	2.5	10:15 PM	13	2.0	11:15 PM	9	1.4	18	2.8
18	Stringtown-First	6:15 PM	17	2.4	7:15 PM	25	3.6	8:15 PM	21	3.0	9:15 PM	19	2.7	10:15 PM	19	2.7	11:15 PM	1	0.1	17	2.4
17	Mary-Howell	6:15 PM	29	3.5	7:15 PM	25	3.0	8:15 PM	23	2.8	9:15 PM	13	1.6	10:15 PM	12	1.5	11:15 PM	6	0.7	18	2.2
15	E Connection	6:45 PM	3	0.3	7:45 PM	11	1.3	8:45 PM	12	1.4	9:45 PM	26	3.0	10:45 PM	7	0.8	11:15 PM	1	0.1	17	2.4
16	W Connection	6:15 PM	1	0.2	6:45 PM	3	0.7	7:15 PM	0	0.0	7:45 PM	4	0.9	8:15 PM	0	0.0	8:45 PM	0	0.0	1	0.3

		Trips After 6 pm												Avg. Trips After 6 PM							
Number	Route Name	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Pass	Pass/RM			
9	Covert	6:15 PM	27	4.3	7:15 PM	26	4.1	8:15 PM	28	4.4	9:15 PM	22	3.5	10:15 PM	22	3.5	11:15 PM	14	2.2	23	3.7
2	Riverside	6:15 PM	24	3.3	7:15 PM	18	2.5	8:15 PM	35	4.8	9:15 PM	28	3.8	10:15 PM	29	4.0	11:15 PM	18	2.5	25	3.5
1	Washington	6:15 PM	22	3.9	7:15 PM	23	4.1	8:15 PM	24	4.3	9:15 PM	25	4.5	10:15 PM	12	2.1	11:15 PM	5	0.9	19	3.3
8	Lincoln	6:15 PM	31	4.8	7:15 PM	22	3.4	8:15 PM	16	2.5	9:15 PM	16	2.5	10:15 PM	13	2.0	11:15 PM	9	1.4	18	2.8
18	Stringtown-First	6:15 PM	17	2.4	7:15 PM	25	3.6	8:15 PM	21	3.0	9:15 PM	19	2.7	10:15 PM	19	2.7	11:15 PM	1	0.1	17	2.4
17	Mary-Howell	6:15 PM	29	3.5	7:15 PM	25	3.0	8:15 PM	23	2.8	9:15 PM	13	1.6	10:15 PM	12	1.5	11:15 PM	6	0.7	18	2.2
15	E Connection	6:45 PM	3	0.3	7:45 PM	11	1.3	8:45 PM	12	1.4	9:45 PM	26	3.0	10:45 PM	7	0.8	11:15 PM	1	0.1	17	2.4
16	W Connection	6:15 PM	1	0.2	6:45 PM	3	0.7	7:15 PM	0	0.0	7:45 PM	4	0.9	8:15 PM	0	0.0	8:45 PM	0	0.0	1	0.3

		Trips After 6 pm												Avg. Trips After 6 PM							
Number	Route Name	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Pass	Pass/RM			
2	Riverside	6:15 PM	24	3.3	7:15 PM	18	2.5	8:15 PM	35	4.8	9:15 PM	28	3.8	10:15 PM	29	4.0	11:15 PM	18	2.5	25	3.5
9	Covert	6:15 PM	27	4.3	7:15 PM	26	4.1	8:15 PM	29	4.4	9:15 PM	22	3.5	10:15 PM	22	3.5	11:15 PM	14	2.2	23	3.7
8	Lincoln	6:15 PM	31	4.8	7:15 PM	22	3.4	8:15 PM	16	2.5	9:15 PM	16	2.5	10:15 PM	13	2.0	11:15 PM	9	1.4	18	2.8
15	E Connection	6:45 PM	3	0.3	7:45 PM	11	1.3	8:45 PM	12	1.4	9:45 PM	26	3.0	10:45 PM	7	0.8	11:15 PM	1	0.1	17	2.4
17	Mary-Howell	6:15 PM	29	3.5	7:15 PM	25	3.0	8:15 PM	23	2.8	9:15 PM	13	1.6	10:15 PM	12	1.5	11:15 PM	6	0.7	18	2.2
1	Washington	6:15 PM	22	3.9	7:15 PM	23	4.1	8:15 PM	24	4.3	9:15 PM	25	4.5	10:15 PM	12	2.1	11:15 PM	5	0.9	19	3.3
18	Stringtown-First	6:15 PM	17	2.4	7:15 PM	25	3.6	8:15 PM	21	3.0	9:15 PM	19	2.7	10:15 PM	19	2.7	11:15 PM	1	0.1	17	2.4
16	W Connection	6:15 PM	1	0.2	6:45 PM	3	0.7	7:15 PM	0	0.0	7:45 PM	4	0.9	8:15 PM	0	0.0	8:45 PM	0	0.0	1	0.3

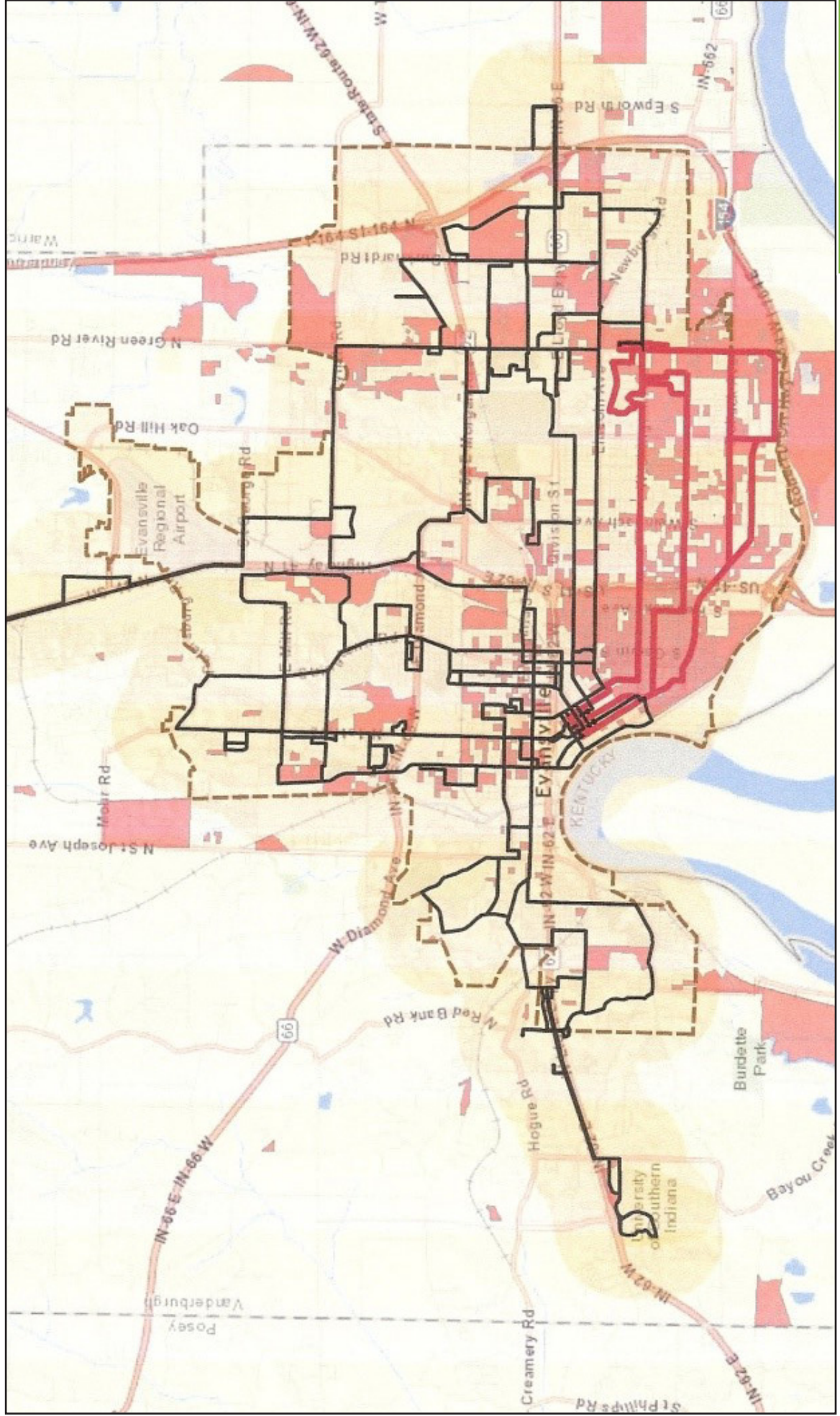
Table 2 – METS Fixed Route Service, Routes with Evening Service Riders by Trip on Last Three Weekday Trips.

NETS

Evansville MPO



Henderson • Vanderburgh • Warrick



Appendix C

METS Title VI Policy

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Metropolitan Evansville Transit System Title VI Program

Introduction

The Metropolitan Evansville Transit System (METS) is committed to a policy of nondiscrimination. This document contains the METS Title VI Program as required by Circular 4702.1B, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients." The program reflects METS's commitment to ensuring that no person shall, on the grounds of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any METS program or activity. Further, the program includes Environmental Justice principles to ensure that minority and low-income populations are considered throughout the planning and development process.

Approved Title VI Program

A copy of the ordinance approving this Title VI Program is included in Appendix 1.

Title VI Policy Statement

The METS Title VI Policy Statement states that METS, as a department of the City of Evansville, assures that no person shall, on the grounds of race, color, sex, age, disability or national origin, as provided by Title VI of the Civil Rights Act of 1964 and the Civil Rights Restoration Act of 1987, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any of METS' programs or activities. METS further assures every effort will be made to ensure nondiscrimination in all of its programs and activities, whether those programs and activities are federally funded or not.

In the event that METS distributes federal funds to other entities, METS will include Title VI language in all written agreements and will monitor for compliance.

The policy statement is signed by the Director of METS, who is responsible for all Title VI requirements, and approved by the Evansville City Council through ordinance. A copy of the policy statement is provided in Appendix 2.

The METS Title VI Policy Statement and instructions on filing a Title VI complaint are posted at the following locations:

METS Administration
601 John Street
Evansville, IN 47713

METS Transfer Terminal
Sixth and Sycamore Streets
Evansville, IN 47708

Civic Center Complex
Transportation and Services
1 NW Martin Luther King Jr. Blvd. Room 321
Evansville, IN 47708

On the internet at: <http://www.evansville.in.gov/index.aspx?page=1969>

Complaint Procedure and Complaint Form

Pursuant to its goal of nondiscrimination, and to ensure fairness for all persons, METS has developed a standard process for investigating all complaints. The complaint procedure is outlined below and a Complaint Form is included in Appendix 3.

1. Complaints shall be filed in writing and contain the name and address of the complainant. Complaints should be addressed to:
Civic Center Complex
Transportation and Services Office
1 N.W. Martin Luther King Jr. Blvd., Room 321
Evansville, IN 47708
2. A complaint should be filed within 30 calendar days after the complainant becomes aware of the alleged violation.
3. An investigation, as may be appropriate, shall follow the filing of a complaint. The investigation shall be informal but thorough and afford all interested persons and their representative, if any, an opportunity to submit evidence relevant to the complaint.
4. The Executive Director of Transportation and Services shall, within 15 days of completion of the investigation, respond to the complainant in writing, as follows:
 - a. Indicate the complaint has been resolved as requested, or
 - b. Indicate the complaint has been resolved in another manner, and outline the action taken or,
 - c. Indicate that the investigation revealed that the complaint does not appear to be valid for reasons identified.
5. After the investigation has been completed and the complainant has received the response, or at any time in the investigation, the complainant may provide further information in writing or in person that might influence the investigations.
6. If the complainant is not satisfied with the decision of the Executive Director of Transportation and Services, an appeal may be made within 180 days of the incident to one of the following offices:

City County/Human Relations
1 N.W. Martin Luther King Jr. Blvd.
Room 209
Evansville, IN 47708
812-436-4927

Federal Transit Administration
Office of Civil Rights
Attention: Complaint Team
East Building, 5th Floor – TCR
1200 New Jersey Ave., SE
Washington, DC 20590

**Metropolitan Evansville Transit System
Title VI Program**

Title VI Investigations, Complaints and Lawsuits

There have been no investigations, lawsuits, or complaints alleging discrimination on the basis of race, color, or national origin filed in the past three years. In the event that any of these activities had occurred in the last three years, they would be listed in the following table.

Complainant	Date	Description and Basis of Complaint (Race, Color, Nat Origin)	Status	Action Taken
Investigations				
None				
Lawsuits				
None				
Complaints				
None				

Public Participation Plan

The METS Public Participation Plan is included in Appendix 4. In the past three years, METS has participated in the outreach events listed in the following table.

Date	Location	Purpose	Outreach Method(s)
8/27/14	Evansville Vanderburgh Public Library	Solicit public input on COA process and obtain information to improve service	Facebook page, Press Release, Study Website
12/11/14	Evansville Vanderburgh Public Library	Solicit public input to improve service	Facebook page, Press Release, Study Website
7/9/15	Evansville Vanderburgh Public Library	Solicit public input to improve service	Facebook page, Press Release, Study Website

Language Assistance Plan

The METS Language Assistance Plan for Persons with Limited English Proficiency (LEP) is included in Appendix 5.

Membership of Non-Elected Committees and Councils

The City of Evansville and METS encourages diversity in the membership of non-elected planning boards, advisory councils, and committees. A breakdown of each organization by race is shown in the following table.

**Metropolitan Evansville Transit System
Title VI Program**

Organization	Native American	African American	Asian	Hispanic	Caucasian
Board of Public Works	--	33%	--	--	67%
EMPO Policy Committee	--	8%	--	--	92%
EMPO Technical Committee	--	1.9%	--	--	98.1%
Advisory Board on Disability Services	--	12.5%	--	12.5%	75%

The members of the Board of Public Works are appointed by the Mayor of Evansville. Members of the Evansville Metropolitan Planning Organization (EMPO) Policy Committee are selected by the local governing bodies within the EMPO Urbanized Area, in addition to INDOT and KYTC. The members of the EMPO Technical Committee are representatives of local public agencies and include freight, transit, port authorities, railroads, schools, and State and Federal agencies and sub recipients of Section 5310 funds. The eight-member Advisory Board on Disability Services are residents of Vanderburgh County and four members are individuals with disabling conditions. The Board consists of three members appointed by the Mayor of Evansville, three members appointed by the Board of Commissions of Vanderburgh County, one member appointed by the City Council of the City of Evansville, and one member appointed by the County Council of Vanderburgh County.

Monitoring Sub-recipients

METS does not have sub-recipients of Federal financial assistance at the current time. In the future, should METS distribute federal funds to other entities, METS will include Title VI requirements in all written agreements and will monitor sub-recipients for compliance.

Title VI Equity Analysis on Facility Location

Decisions regarding the location of facilities, (such as storage facilities, maintenance facilities, or operations centers), shall not be made on the basis of race, color, or national origin. METS will ensure that Title VI and Environmental Justice principles are incorporated into the scope of planning work for all facility projects.

1. METS will complete a Title VI equity analysis during the planning stage with regard to where a project is located to ensure the location is selected without regard to race, color, or national origin. METS will contact residents and businesses that may be impacted by the proposed locations, and will review the equity impacts of various alternatives before selection of the preferred site.
2. When evaluating locations of facilities, the presence of other facilities with similar impacts shall be noted to determine if any cumulative adverse impacts might result. Analysis will be conducted to reveal impacts at the local level.

Metropolitan Evansville Transit System Title VI Program

3. If location of the facility will result in a disparate impact on the basis of race, color, or national origin, METS will provide a substantial legitimate justification for locating the project there, and stipulate that there are no alternative locations that would have a less disparate impact. The least discriminatory alternative shall be implemented.

METS has not constructed any facilities in the past three years.

Service Standards and Service Policies

Service Standards and Policies are basic requisites for transit operations to ensure the fair and equitable delivery of transit services. The METS Service Standards, which are included in Appendix 6, set the parameters for service design and service levels within the City of Evansville. METS's Service Standards were developed in 2013 and revised in 2015. The revised Service Standards will be adopted by ordinance.

Service and Fare Change Process

The Title VI Circular requires that service providers with 50 or more vehicles and which are located in urbanized areas with a population greater than 200,000, conduct additional tasks as part of a Title VI Program. Although METS does not meet the vehicle and population thresholds that would trigger the implementation of these additional tasks, it does wish to ensure that transit service is provided in a fair and non-discriminatory fashion. Further, METS believes that it is good business practice to periodically acquire data on the transit market through census data and surveys, and to analyze that data with maps and charts. METS can then utilize that data when planning service or fare changes to ensure that the changes are fair and equitable. As part of the Service Standards update in 2015, METS adopted the following process when planning service and fare changes.

1. Define the type of change being considered. A service change that affects more than 25 percent of riders on a route, route miles or annual vehicle miles is considered a major service change. A ten percent increase in any fare or fare medium is also considered a major change. Major changes shall be presented to the public for review and comment before a final decision on the change is made. METS will follow guidelines in the Public Participation Plan.
2. Ensure that the cost of the change is incorporated in the annual budget.
3. Refer to the most recent data analysis regarding minority and low-income routes and census blocks in the service area. Identify whether the proposed service change is within a minority or low-income area, or if the service change is proposed to a route designated as either a minority or low-income route. If a new service, determine if the route qualifies as a minority or low-income route. Document the findings and provide the reason or justification for the service change. For fare changes, document the justification for the change.
4. Review the following Title VI Checklist and document the answers:
 - a. Does this service change conform to METS written Service Standards and Policies?
 - b. If this is a service improvement, is it being made to the detriment of other services used by minority or low income populations? (e.g., are resources being diverted?)
 - c. Are the transit amenities associated with this change equitably distributed?

**Metropolitan Evansville Transit System
Title VI Program**

- d. What are the potential impacts of the change on current and future riders? (e.g., a change in wait time, travel time, access, transfers, etc.) Include positive and negative impacts.
 - e. What are the potential impacts of the change on the environment? (e.g., changes in traffic volume, bus noise, air pollution, pedestrian safety, etc.) Include positive and negative impacts.
 - f. Do the impacts on riders and the environment disproportionately affect minority or low-income riders or areas of the city? If the service or fare change will result in disparate treatment, then investigate alternatives to avoid, minimize, or mitigate the impacts. Document the findings and consult with the impacted community.
5. Prepare summary documenting steps 1 through 4, and describe the final recommendation.

The analysis of the five-year service change plan provided as part of the 2015 Comprehensive Operational Analysis is shown in Appendix 7.

APPENDIX 1: Ordinance Approving METS Title VI Program (when adopted)

APPENDIX 2: METS Title VI Policy Statement

Metropolitan Evansville Transit System
Title VI Program



CITY OF EVANSVILLE
Metropolitan Evansville Transit System
601 John Street
Evansville, Indiana 47713

Phone (812) 435-6166 TDD/Hearing Impaired (812) 435-6172 Fax (812) 435-6159

Lloyd Winnecke
Mayor

Todd Robertson
Executive Director

Tony A. Kirkland
General Manager

As a major provider of public transportation and whose employees have extensive daily contact with the public, the Metropolitan Evansville Transit System (METS) recognized its responsibility to the community which it serves and is committed to a policy of nondiscrimination. METS will take every necessary and reasonable step under 49 CFR Part 26 US Department of Transportation regulations to ensure nondiscrimination in the award and administration of Federal Administration assisted contracts.

The Metropolitan Evansville Transit System (METS), requests that any qualified DBE firm that may be able to supply transit parts, supplies, or services submit a summary of services, brochure, catalog, and/or letter of interest stipulating qualifications in area of service to:

METS, Attention DBE Program, 601 John Street, Evansville, IN 47713.

Title VI

Policy Statement

The Metropolitan Evansville Transit System as a department of the City of Evansville assures that no person shall, on the grounds of race, color, sex, age, disability or national origin, as provided by Title VI of the Civil Rights Act of 1964, and the Civil Rights Restoration Act of 1987 (P.S. 100.259) be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any of METS' programs or activities. METS further assures every effort will be made to ensure nondiscrimination in all of its programs and activities, whether those programs and activities are federally funded or not.

Complaints should be addressed to the City of Evansville's Executive Director of Transportation & Services— 1 NW Martin Luther King, Jr. Blvd., Evansville, IN 47708.

1. A complaint should be filed in writing, contain the name and address of the person filing it, and briefly describing the alleged violation of the regulations.
2. A complaint should be filed within **30 calendar days** after the complainant becomes aware of the alleged violation.
3. An investigation, as may be appropriate, shall follow the filing of a complaint. The investigation shall be informal but thorough and afford all interested persons and their representatives, if any, an opportunity to submit evidence relevant to the complaint.
4. After the investigation is completed, the Executive Director of Transportation and Services will, **within 15 days**, respond to the complainant in writing, as follows:
 - a. Indicate the complaint has been resolved as requested, or
 - b. Indicate the complaint has been resolved in another manner, and outline the action taken or,
 - c. Indicate that the investigation revealed that the complaint does not appear to be valid for reasons identified.
5. After the investigation has been completed and the complainant has received the response, or at any time in the investigation, the complainant may provide further information in writing or in person that might influence the investigations.
6. If the complainant is not satisfied with the decision of the Executive Director of Transportation and Services, an appeal may be made **within 180 days of the incident** to one of the following offices:

City County/ Human Relations
1 NW MLK Jr. Blvd.
Room 209
Evansville, IN 47708
812-436-4927

Director of Office for Civil Rights
300 South Wacker Drive
Chicago, IL 60606

APPENDIX 3: Title VI Complaint Form

**Metropolitan Evansville Transit System
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CITY OF EVANSVILLE
Metropolitan Evansville Transit System
601 John Street
Evansville, Indiana 47713
Phone (812) 435-6166 Fax (812) 435-6159
TDD/Hearing Impaired - please use Relay Indiana 1-800-743-3333

Title VI Civil Rights -- Complaint Form

Section I

Name: _____

Address: _____
Street City State Zip

Telephone Numbers:

Home: _____ Work: _____ Other: _____

E-Mail Address: _____

Accessible Format Requirements?

Large Print: Yes _____ No _____ Audio Tape: Yes _____ No _____

TDD: Yes _____ No _____ Other: _____

The Federal Transit Administration (FTA) Office of Civil Rights is responsible for civil rights compliance and monitoring, which includes ensuring that providers of public transportation properly abide by Title VI of the Civil Rights Act of 1964, Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations", and the Department of Transportation's Guidance to Recipients on Special Language Services to Limited English Proficient (LEP) Beneficiaries.

Section II:

Are you filing this complaint on your own behalf? Yes _____ No _____

(If you answered "yes" to this question, go to Section III)

If not, please supply the name and relationship of the person for whom you are complaining:

Name: _____ Relationship: _____

Please explain why you have filed for a third party. _____

Please confirm that you have obtained the permission of the aggrieved party if you are filing on behalf of a third party.
Yes _____ No _____

What is the basis for your complaint? Race _____ Color _____ National Origin _____

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Section III

Have you previously filed a Title VI complaint with City of Evansville or METS? Yes _____ No _____

yes, what was your City of Evansville or METS Complaint date? _____

(Note: This information is needed for administration purposes; we will assign the same complaint number to the new complaint.)

Have you filed this complaint with any of the following agencies? Yes _____ No _____

(If you answered yes, who did you file the complaint with?)

Federal Transit Administration: _____ U. S. Department of Transportation: _____

Indiana Dept. of Transportation: _____ Department of Justice: _____

Equal Employment Opportunity Commission: _____ The City of Evansville and or Transportation and Services: _____

Have you filed a lawsuit regarding this complaint? Yes _____ No _____

If yes, please provide a copy of the complaint form. (Note: This above information is helpful for administrative tracking purposes. However, if litigation is pending regarding the same issues, we defer to the decision of the Court.

Section IV:

Complaint is against: _____

Contact Person: _____ Title: _____

Telephone Number: _____

Attached is a blank sheet of paper to describe your complaint. Please use additional sheets if necessary.

Section V:

Please sign here: _____ Date: _____

(Note: We cannot accept your complaint without a signature)

Please mail your completed form to:

**Metropolitan Evansville Transit System
Title VI - Civil Rights Official
601 John Street
Evansville, Indiana 47713**

APPENDIX 4: METS Public Participation Plan

**Metropolitan Evansville Transit System
Public Participation Plan**

Introduction

The Metropolitan Evansville Transit System, (METS), is the public transit system that serves the City of Evansville. This Public Participation Plan was created to establish procedures that promote and encourage meaningful participation for all residents in the METS service area. All residents deserve meaningful participation, but it is especially important to address the concerns of populations that are low income, minority, or have Limited English Proficiency (LEP). METS will take all reasonable steps in order to provide opportunities for historically underserved populations such as low income, minority and LEP, to meaningfully participate in the public transportation planning process. The Participation Plan is available at the METS office at 601 John Street and on the METS webpage (<http://evansvillegov.org/index.aspx?page=765>).

Goals and Objectives

The goal of the METS Public Participation Plan is to provide opportunities for meaningful participation of all the citizens of the City of Evansville in the public transportation planning process. The objectives of the Plan are:

- To allow for improved flow of information to and from the public;
- To provide general notification of meetings which is inclusive to all segments of the population in the METS service area;
- To address any cultural barriers to public participation in the METS service area;
- To use a variety of techniques to improve the flow of information to the public and enable them to participate in decision making; and
- To hold meetings in locations that are accessible to all population segments in the METS service area.

Service Area Demographics

Data from the 2010 Decennial Census was analyzed to ascertain the racial make-up of the METS service area. For this analysis, the METS service area is defined as the area within ¼ mile around all METS bus routes merged with the city limits.

Table 1 shown below illustrates that of the 145,601 people living in the METS service area, 17 percent are minority. Approximately 11 percent are Black or African American, and 2.5 percent are Hispanic.

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Table 1: Minority Population within the METS Service Area

Race	Population	Minority Population	Percent Minority
Total Population	145,601		
White Alone	120,707		
Black or African American Alone	15,791	24,894	17%
American Indian or Alaska Native Alone	297		
Asian Alone	1,563		
Native Hawaiian and Other Pacific Islander Alone	76		
Some Other Race Alone	349		
Two or More Races	3,361		
Hispanic or Latino	3,457		

* Data from 2010 Decennial Census Summary File 1

There are approximately 25,000 people in the service area that are below the poverty level, according to data from the American Community Survey, as shown in Table 2.

Table 2: Poverty Status of Individuals within the METS Service Area

Poverty Status	Population	Percent of Individuals Below Poverty
Population for whom poverty status is determined	137,325	
Individuals Above Poverty	112,048	
Individuals Below Poverty	25,277	18%

Table 3 illustrates the population over age five in the METS service area that have Limited English Proficiency (LEP). Approximately two percent, or 2,220 people, speak English less than “Very Well” and are considered LEP individuals. The majority of the LEP individuals speak Spanish.

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Table 3: Languages Spoken within the METS Service Area

Language Spoken	Population	Percent of Population	Speak English			
			Very Well	Well	Not Well	Not at All
Population 5 and over	134,440		98%	0.9%	0.6%	0.1%
Speak only English	129,032	96.0%				
Speak Spanish	2,714	2.0%	1,501	640	484	89
			55%	24%	18%	3%
Speak other Indo-European languages	1,552	1.2%	1,009	287	180	76
			65%	18%	12%	5%
Speak Asian or Pacific Island languages	911	0.7%	485	271	144	10
			53%	30%	16%	1%
Speak other languages	231	0.2%	191	39	0	0
			83%	17%	0%	0%

* Data from 2009-2013 5-Year Estimate American Community Survey

Outreach Methods

In order to meet the Plan’s Goals and Objectives, METS has developed a variety of methods to include residents and interested stakeholders in decision-making.

- Informational Flyers/Posters are displayed on all transit vehicles and at the terminal.
- Public notices are published in the local newspaper, which serves the Tri-State area.
- Public meetings are held prior to route modifications.
- The City of Evansville’s website has a page devoted to METS.
- The Evansville Board of Public Works, which is METS’ governing body, meets weekly and public comments are encouraged.
- A “Traveling City Hall” is a monthly meeting where City of Evansville department heads are available for the public to ask questions and make comments.
- METS officials participate in meetings of the Evansville Metropolitan Planning Organization’s Technical Committee and Policy Committee.
- The Director of METS regularly meets with Neighborhood Associations, faith-based organizations, educational institutions, and community groups.
- Occasionally, METS is the subject of feature stories in the Evansville media, including television and radio.
- The METS phone number is displayed on all METS bus stop signs, and comments from the public are received daily by phone, in person, or through the mail.

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In the future, METS will attempt to improve its outreach efforts through the use of social media such as Facebook.

Major Service and Fare Changes

Public participation is an important component of the service change process. This ensures that METS service continues to meet the needs and expectations of its customers. Public participation includes direct, unsolicited feedback from METS customers, as well as outreach to individuals and groups to elicit comments on proposed adjustments.

An on-going, regular dialogue with Evansville residents, businesses and elected officials is the goal of the METS public participation process. In addition to on-going communication, more formal and specific outreach efforts are required when major changes to service or fares are contemplated.

The public participation process for major changes in fares, facilities and/or service applies under any of the following circumstances:

- Route changes that affect more than 25 percent of any route or service's passengers, route miles, or vehicle miles;
- Service changes that require new facilities and/or capital expenditures at a cost that requires city council approval;
- A fare increase of 10 percent or more on any fare type or media.

For major service changes or fare increases as defined above, METS will conduct a public meeting to present the proposed change(s) and obtain public comments. The public meeting will be scheduled at a time and place accessible and convenient for the general public to attend. Legal notice of the public meeting will be published in a local newspaper of general distribution at least 30 calendar days prior to the meeting. Additional notices will be placed on transit vehicles and on the METS webpage. Notices will be provided in English and Spanish. Social media also will be used to disseminate service change information and seek public input.

A staff person will record and prepare formal minutes of the public meeting. In addition, written or verbal comments will be accepted for at least one week following the meeting. Comments will be evaluated and considered prior to making a decision on the final recommendation.

APPENDIX 5: METS Language Assistance Plan

**Metropolitan Evansville Transit System
Language Assistance Plan**

Introduction

The Metropolitan Evansville Transit System, (METS), is the public transit system that serves the City of Evansville. METS is a department within the City of Evansville. The purpose of this Language Assistance Plan is to provide guidance on the strategies used to provide language assistance to those residents and riders who are not proficient in the English language.

This Language Assistance Plan has been produced to meet the requirements of Executive Order 13166, "Improving Access to Service for Persons with Limited English Proficiency." METS shall take reasonable steps to ensure meaningful access to benefits, services, information, and other important portions of their programs and activities for individuals who have Limited English Proficiency (LEP).

Four Factor Analysis

The Four Factor Analysis ensures that recipients of Federal financial assistance are providing meaningful access to programs and activities for LEP populations. METS has addressed each of the four factors as described below.

- 1) The number or proportion of LEP persons eligible to be served or likely to be encountered by METS services.

Data from 2009-2013 (5-year estimate) American Community Survey was used to calculate the population over age five in the METS service area that have Limited English Proficiency (LEP). The METS service area has a total of 134,440 persons over the age of five. Approximately two percent, or 2,220 people, speak English less than "Very Well" and are considered LEP individuals. The majority of the LEP individuals who speak English less than "Very Well" speak Spanish. There are 1,213 Spanish-speaking individuals, (55%), who speak English less than "Very Well". Of the remaining individuals who speak English less than "Very Well", there are 543 individuals, (24%), who speak other Indo-European Languages, 425, (19%), who speak Asian or Pacific Island Languages, and 39, (2%), who speak another language.

- 2) The frequency with which LEP persons come into contact with METS services.

It is difficult to measure how frequently LEP individuals come into contact with METS services. Discussions with METS bus operators and administrative staff indicate that there have been no instances where front-line staff have become aware of LEP individuals utilizing METS services. It

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is possible that LEP individuals have simply not tried to communicate with METS staff. Staff will report any instance of contact with LEP individuals in order to improve upon this plan.

- 3) The nature and importance of METS services to people's lives.

A 2007 study commissioned by the United Way of Southwestern Indiana found that the most frequent desire of respondents was "available and affordable public services", of which public transportation was a part. This indicates that METS service is vital to the residents of Evansville, which includes LEP individuals.

- 4) The resources available to METS for LEP outreach, as well as the costs associated with that outreach.

While METS's resources are very limited, it recognizes that providing access to METS service for all individuals is essential. The primary resource for LEP outreach at the current time is the METS webpage on the City of Evansville website. The annual cost of a professional interpreter for 10 hours of interpretive services is estimated at \$200 to \$400; and translation services for vital documents is estimated at approximately \$500 per document.

Language Assistance Strategies

Based on the Four Factor Analysis conducted above, the most predominant language spoken by LEP individuals is Spanish. Therefore, METS will focus its language assistance services on Spanish-speaking individuals. METS has identified the following strategies to provide language assistance to LEP persons:

- The City of Evansville website has a translator feature.
- The City of Evansville employs several bilingual (English/Spanish) employees. These employees can answer telephone questions from Spanish-speaking callers.
- Vital documents are translated into Spanish and made available in several locations including administrative offices and on METS vehicles. A language interpreter will be available at public meetings if advanced notice is provided.

LEP Outreach

METS maintains contact with many community organizations that are active in Evansville. Specific to Spanish-speaking persons, there is a church with a large number of Spanish-speaking members, a Spanish-speaking advocacy group, and a small number of Spanish-speaking students in the Evansville Vanderburgh County School Corporation. METS will continue to maintain these contacts, as well as develop new contacts, in order to provide outreach to the LEP community.

METS Staff Training

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METS staff are aware that there may be a segment of the METS service area population who have Limited English Proficiency and may need special attention. At public meetings, METS staff greet all participants to ascertain an individual's ability to understand the proceedings. Every effort is made to ensure that an LEP individual is able to participate in the meeting.

Monitoring/Updating the Language Assistance Plan

METS bus operators and administrative staff are asked to report instances when an LEP individual inquires about, or uses, METS service. This information is kept on file and used to update the Language Assistance Plan.

The Language Assistance Plan will be reviewed every three years to determine if changes are required. The review will consider the following:

- The number of LEP individuals making contact with METS and its service;
- Instances of LEP accommodations made by METS;
- METS's assessment on the effectiveness of the plan, community reaction to the plan, and any suggestions made to modify the plan;
- Technological advances that may assist the plan;
- Changes in the LEP population.

APPENDIX 6: METS Service Standards and Policies

Metropolitan Evansville Transit System

Service Standards and Policies

Executive Summary

Service Standards are guidelines that direct the design, quality and efficiency of transit service. The Service Standards contained in this document are applied system-wide to all METS bus routes to ensure that METS resources are distributed in a fair and equitable manner. The Service Standards provide guidance on the following service provision attributes:

- *Route Coverage* describes the distance between transit service and residents' homes;
- *Bus Stop Spacing* recommends the distance between bus stops;
- *Span of Service* specifies the hours and days a route operates;
- *Service Frequency* determines how long customers wait for service;
- *Vehicle Load* determines how crowded the vehicle will be;
- *Route Spacing and Directness* addresses general route location;
- *On Time Performance* recommends a percentage of vehicles that will arrive on time;
- *Distribution of Transit Amenities* specifies how and when amenities are provided; and
- *Vehicle Assignment* describes how vehicles are assigned to routes.

Transit agencies are often pulled between the desire to improve service, and the economic need to reduce service under certain circumstances. Included in this document are guidelines to assist METS staff when considering the expansion or reduction of service.

To recognize the importance of public participation in decision-making, METS has adopted a separate Public Participation Plan. This document acknowledges the Public Participation Plan, and includes a description of the public participation activities required for major service and fare changes.

The METS Service Standards fulfill the requirements contained in the Federal Transit Administration Circular C4702.1B, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients" dated October 1, 2012. Adoption of these Service Standards provides a basis for service provision that is fair and equitable for the region.

Overview

The Metropolitan Evansville Transit System (METS) was created in 1971 as a City of Evansville department within the Division of Transportation and Services. The METS fixed route service area generally is within the City of Evansville. It encompasses roughly 45 square miles, with a population of about 123,000 as based upon the 2013 National Transit Database (NTD) Report. METS provides fixed route public transportation on 18 bus routes, plus shuttle service on the University of Southern Indiana

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campus¹. METS also provides paratransit service (METS Mobility), for persons 60 years or older or those with a documentable disability that limits their use of the METS fixed route system. METS Mobility Service is provided throughout Vanderburgh County via a funding arrangement with the Vanderburgh County Commissioners.

Service is provided weekdays and Saturdays. Weekday service between 6 a.m. and 6 p.m. is provided with 30 to 60 minute frequencies. Weekdays between the hours of 6 p.m. and 12 midnight and all day Saturdays, service is provided every 60 minutes. METS currently maintains a fleet of 33 buses for fixed route service, and 24 buses are required for peak periods. All METS vehicles are accessible to persons with disabilities. The paratransit fleet is composed of 15 buses and 14 are required for daily service.²

This document outlines METS Service Standards as required by The Federal Transit Administration Circular C4702.1B, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients" dated October 1, 2012. The purpose of the Circular is to provide guidance to FTA funding recipients in enacting Title VI requirements. The program objectives are to:

- Ensure that the level and quality of public transportation service is provided in a nondiscriminatory manner;
- Promote full and fair participation in public transportation decision-making without regard to race, color, or national origin; and
- Ensure meaningful access to transit-related programs and activities by persons with limited English proficiency.

The Circular requires providers of fixed route public transportation to adopt system-wide service guidelines and policies to ensure service design and operating practices do not result in discrimination on the basis of race, color, or national origin.

Service Delivery Guidelines

Service Delivery Guidelines are the basic building blocks that define service access and service levels. Unless otherwise noted, these guidelines apply to both fixed route and paratransit services.

Data Sources and Staffing

Full implementation of these service guidelines requires added staffing in service planning and marketing. This additional staff will oversee appropriate use of the existing farebox data reporting capabilities. Data to support many of these guidelines (e.g., ridership per trip, peak ridership counts) will require on-bus counts. Such counts/surveys are a standard transit business practice. These

¹ Service on the University of Southern Indiana (USI) campus is governed by a contract between USI and the City of Evansville. Service to USI under this arrangement is not governed by these service guidelines.

² Fleet size as shown in 2013 NTD submission, dated 6-23-14. Fleet size will be updated as fleet size changes.

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counts/surveys require periodic use of temporary staffing supervised by the service planning and marketing staff.

Service Availability*Route Coverage*

Service availability relates to the geographic availability of bus service. A standard for service availability is often related to population density. High-density areas will have bus routes spaced closer together than low-density regions. For paratransit service, ADA regulations require that service be provided within an area $\frac{3}{4}$ mile on each side of fixed route service.

METS will distribute transit service throughout the service area to serve the highest number of residents possible with available resources. The METS Service Availability Standard is to provide fixed route bus service within a $\frac{3}{4}$ mile walk to 90% of all residents in the service area.

Bus Stop Spacing

The table on the next page shows average bus stop spacing by route for METS services.

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METS Fixed Route Bus Routes - Average Stop Spacing				
Number	Name	Variation	Average Stop Spacing (Feet)	
			Outbound	Inbound
1	Washington		720	740
2	Riverside	A	920	1,120
2	Riverside	B	920	1,070
3	Fulton		1,130	1,500
4	Stringtown		1,210	1,140
5	Mary-Tekoppel	A	970	940
5	Mary-Tekoppel	B	920	940
6	Walnut		1,410	1,290
7	First Ave.		980	1,240
8	Lincoln	A	840	910
8	Lincoln	B	840	810
9	Covert		890	1,000
10	Lynch		1,210	1,260
12	Howell		860	970
13	Downtown Shuttle		1,450	1,060
14	Shoppers Shuttle		2,070	1,170
15	East Connection		1,820	1,370
16	West Connection		3,770	3,970
17	Mary-Howell		1,060	880
18	Stringtown- First Ave.		1,070	1,240
23	US 41 Highway N		2,430	3,140
	Avg. - All Routes		1,380	1,380
	Avg. - Routes Serving DT Terminal		1,050	1,090
<i>Source - Lochmueller Group Bus Stop Inventory</i>				

There is a significant variation in bus stop spacing by route. A significant opportunity exists to improve service by instituting a policy, which calls for wider stop spacing than is presently provided on several routes. Quarter-mile spacing is consistent with existing stop spacing on many routes. Providing such a stop spacing will provide faster service to riders who will not need to wait for boardings and alightings at closely spaced stops. In addition, wider stop spacing assists in improving bus running times on routes where schedule adherence is an issue. On local routes, it is recommended that bus stops be spaced ¼ mile (1,320 feet) apart, unless the location of major transfer points and major traffic generators require closer stop spacing in specific locations.

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Span of Service

The Span of Service Standard identifies the times that service is provided on each day of the week. This standard is often adopted as a minimum policy standard for all routes in the system, while individual routes may exceed the minimum based on ridership. For paratransit service, ADA regulations require that service is provided during the same hours and days as the fixed route service. If service on certain days and time periods is not provided in all portions of the fixed-route service area, ADA service is required only during those days and hours when fixed route service is available in those portions of the service area.

Hours of transit service are specified to serve the majority of residents traveling to school, work and other purposes. The METS Span of Service Standard is to provide service on weekdays between the hours of 6 a.m. through 6 p.m. Some routes with very low levels of demand during the midday may only provide service during the peak periods. Service during the evening hours and on Saturday is provided on routes with a demonstrated need based on ridership. Sunday service is not provided at present.

Attached to this report are two tabulations of ridership by trip and route. The first table shows ridership on the last three weekday trips before 6 pm on each route. The second table shows ridership on all weekday trips after 6 pm. Both tables contain the same information sorted in three different ways – by passengers per trip, passengers per route mile and passengers on last trip during each time period. Based upon these existing patterns, the following guidelines regarding span of service are proposed:

- **Weekdays.** In order for service to be provided during a given time period, ridership must satisfy one of two criteria. The first criterion is that ridership must average at least 20 passengers per round trip during the first three hours of service or the last three hours of service provided. The second criterion is that there must be at least 10 riders served on the first/last round trip, **and** an average of 15 riders served per round trip during the initial/final three hours of service. Service will not be provided during time periods when routes do not serve the minimum number of riders under **either** criterion. Routes that do not satisfy one of these criteria will be evaluated for modification; if the modifications do not result in ridership meeting these minimum criteria, service will not be operated during this time span. In addition, routes that have ridership significantly higher than these criteria will be considered for extending hours of service.
- **Saturdays and Sundays.** At present, no ridership counts have been taken for Saturday or Sunday service. These draft guidelines recommend that such counts be taken within the near future. Pending those counts being taken, it is recommended that the weekday service criteria be applied to assess Saturday and Sunday span of service.

Service Frequency

Frequency of service is defined as the amount of time between buses traveling in the same direction on the same street. The frequency standard establishes a maximum waiting time between buses. Scheduled waiting times may shorten if the level of ridership on a given route is sufficient to justify more

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frequent service. Paratransit service requires advance reservations, and therefore the frequency standard does not apply to this type of service.

Service frequency is a function of ridership and vehicle capacity and is closely related to Vehicle Load, which is discussed in the next section. The Service Frequency Standard is 60 minutes or less for METS fixed route service. More frequent service may be provided during the peak hours or when ridership is sufficient to warrant more frequent service. The following table provides a guideline for the provision of more frequent service.

Round Trip Riders per Hour	Frequency (in minutes)	Round Trip Riders per Bus
< 15	No fixed route service	
15 – 40	60	15 - 40
41 – 70	30	21 - 35
71 – 100	20	24 - 33
101 – 140	15	25 - 35

These guidelines are applicable either as averages during the entire AM/PM Peak Period, midday, or evening on a given route. For Saturday or Sunday service, they are applicable for any period of 4 to 6 hours with relatively consistent ridership levels.

Vehicle Load

Vehicle Load refers to the maximum number of passengers scheduled on a bus at the route’s busiest location. This standard is often related to the number of seats available and is expressed as the ratio of passengers to seats.

The maximum scheduled vehicle load should not exceed the vehicle manufacturers’ recommended capacity for passengers seated and standing. The maximum load factors for the current METS revenue vehicle fleet range from 2.5 for high floor buses to 1.0 for cutaway vehicles, as shown in the Table below.

Vehicle Type	Vehicle Capacity			Maximum Load Factor
	Seated	Standing	Total	
High Floor	29	43	72	2.5
Low Floor Hybrid (pre '07)	26	12	38	1.7
Low Floor Hybrid	26	7	33	1.3
Cutaway	21	0	21	1.0
Cutaway	17	0	17	1.0

Due to the wide range in load factors by vehicle type, METS will assign higher capacity vehicles to those routes with the highest passenger demand, and lower capacity vehicles to routes with low demand. The remaining vehicles will be assigned in a random or rotating fashion to provide riders on all routes similar

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experiences in terms of vehicle age and condition. Therefore, the maximum scheduled vehicle load is 2.5 (72 passengers) for routes assigned the High Floor vehicles and 1.0 (17 to 21 passengers) for low ridership routes using the cutaway vehicles. This standard will be reevaluated as the fleet composition changes.

The maximum load factor for paratransit service is 1.0, and standees are not permitted.

Route Spacing and Directness

Significant portions of the METS service area³ have topographical and street grid features that make it inappropriate to specify strict route spacing guidelines. For this reason, specific route spacing guidelines are not proposed. Route coverage guidelines, along with service frequency guidelines, will ensure appropriate access to fixed route service through the METS service area.

Route Directness, or the operation of a route along the most direct possible path, is a standard to improve travel speed and reliability. Routes will be designed to operate as directly as possible, using major arterial streets. Route deviations to serve traffic generators located away from the direct path will only be considered if: 1) The deviation's one-way travel time is three minutes or less; and 2) The total additional travel time for all through passengers, divided by the number of passengers using the deviation, is less than five minutes. This is expressed in the following calculation:

$$(X * Y) / Z \leq 5 \text{ minutes}$$

Where: X = Number of through passengers
Y = The additional one-way vehicle travel time
Z = Number of passengers served by the deviation

On Time Performance

Service reliability is essential to retain and attract transit customers. On-time performance is one of the best indicators of service reliability. Typically, on-time performance is defined as the vehicle arriving within a certain number of minutes of the scheduled time.

For paratransit service a maximum response time standard, (the time between the service request scheduled time and when service was provided), can be employed for these systems.

Service is considered on time if the bus arrives not more than sixty (60) seconds early or more than five minutes late at established time points when compared to scheduled arrival times. The proposed METS On-Time Performance Standard is to provide on time service 90% of the time. Monitoring on-time performance is a standard transit business practice for service supervision and dispatching staff. Monitoring typically is done on an occasional sampling basis, or in response to specific requests/customer input.

³ Includes areas around Pigeon Creek on Evansville's near west side, near north side, and northeast side, as well as hilly areas in significant portions of Evansville's west side.

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Paratransit service is considered on time if the paratransit vehicle arrives within 30 minutes before or after the scheduled trip time. The METS On-Time Performance Standard is to provide on-time service 90% of the time.

Service Amenities Guidelines

Service Amenities are provisions for the passenger, which improve the overall transit experience by providing added comfort or convenience. Service Amenities include capital infrastructure and equipment such as passenger shelters and transit vehicles.

Transit Amenities Distribution

Transit Amenities include passenger shelters, benches, and bicycle racks. These amenities are distributed based on passenger volume and activity. Placement of amenities may be influenced by physical space requirements, safety concerns, or pedestrian infrastructure.

The METS Transit Amenities Distribution Standard for each amenity is as follows:

- Provision of a passenger shelter requires a minimum daily boarding of 30 passengers and adequate space in the right of way.
- Benches are provided at locations with minimum daily boardings of 30 passengers and adequate space in the right of way. Benches may also be provided upon request, and when resources are available, at bus stops serving medical facilities and trip generators patronized primarily by senior citizens.
- The location of bicycle racks is evaluated on a case by case basis.

Vehicle Assignment

Vehicle assignment refers to the allocation of buses to a route. Transit agencies can operate many different types of vehicles, and these may have a wide range of age and condition. To ensure fair and equitable service provision, it is important that riders on all routes encounter similar experiences with regard to the vehicles that they ride.

The METS bus fleet contains several vehicle types of differing sizes. Certain routes require larger vehicles due to ridership demand, while other routes are more suited to smaller vehicles. For this reason, the largest and smallest vehicles in the fleet are assigned to routes based on vehicle size. For the remaining vehicles, METS assigns buses on a random or rotating basis amongst the routes to ensure that vehicles are assigned equitably throughout the service area.

Service Expansion/Reduction Guidelines

Increases and decreases in transit ridership necessitate changes to routes and/or schedules. When ridership is increasing, improvements in service availability, span of service, or frequency may be

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needed. Similarly, reductions in service may be necessary when ridership declines. This section provides guidance on typical service expansion or reduction issues.

New or extended bus routes may be provided to serve new high density developments. New developments come to the attention of transit providers through the media or direct requests for more service. If resources are available and there is potential to expand ridership and revenue, new service should be provided on an explicitly experimental basis. Operating the service for six months to a year will provide the ridership and revenue data necessary to determine if the change should become permanent.

Changes in population and employment density often require changes to routes. As neighborhood demographics change, average household size may decrease, reducing the population density and thus the demand for service. In this case, the need to reduce service will be evidenced in a downward ridership trend.

A determination on whether the Span of Service should be expanded or reduced is discussed in a previous section. As a general rule, if the number of riders on the first or last trip of the day is higher than the one or two adjacent trips, then additional service often is warranted. Conversely, if the first and last trips have consistently low ridership, then elimination of that trip is usually justified.

Guidance related to changes in service frequency is included in the table in the Service Frequency section. Service frequency is a function of ridership and vehicle size. When ridership exceeds vehicle capacity, then one of two steps must be taken. The most cost efficient step is to assign higher capacity vehicles. If that is not an option, the number of buses serving the route must increase, improving frequency. Conversely, as ridership on a route declines, the number of vehicles required on the route, and therefore, the frequency, declines.

The addition of Sunday service has been frequently requested by customers. For properties that do not offer Sunday service, adding Sunday service to the span of service requires assignment of office, maintenance, and supervisory staff in addition to the bus operators. Provision of fixed route Sunday service will also expand provision of ADA paratransit service to Sundays along those routes that were expanded to Sundays. This entails significant financial resources. When making the decision to expand service to Sundays, it should be noted that ridership and revenue from Sunday service may be less than 50 percent of Saturday service on the same route.

Public Participation

Public participation is an important component of the service change process. This ensures that METS service continues to meet the needs and expectations of its customers. Public participation includes direct, unsolicited feedback from METS customers, as well as outreach to individuals and groups to elicit comments on proposed adjustments.

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An on-going, regular dialogue with Evansville residents, businesses and elected officials is the goal of the METS public participation process. In addition to on-going communication, more formal and specific outreach efforts are required when major changes to service or fares are contemplated.

The public participation process for major changes in fares, facilities and/or service applies under any of the following circumstances:

- Route changes that affect more than 25 percent of any route or service's passengers, route miles, or vehicle miles;
- Service changes that require new facilities and/or capital expenditures at a cost that requires city council approval;
- A fare increase of 10 percent or more on any fare type or media.

For major service changes or fare increases as defined above, METS will conduct a public meeting to present the proposed change(s) and obtain public comments. The public meeting will be scheduled at a time and place accessible and convenient for the general public to attend. Legal notice of the public meeting will be published in a local newspaper of general distribution at least 30 calendar days prior to the meeting. Additional notices will be placed on transit vehicles and on the METS webpage. Notices will be provided in English and Spanish. Social media also will be used to disseminate service change information and seek public input.

A staff person will record and prepare formal minutes of the public meeting. In addition, written or verbal comments will be accepted for at least one week following the meeting. Comments will be evaluated and considered prior to making a decision on the final recommendation.

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Attachment Table 1

Riders per Trip - Late PM-Evening												Late Afternoon Trips			
Sorted by Pass/Trip															
Number	Route Name	Last Three Trips before 6 PM									Avg. 3 Trips Before 6 PM				
		Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Pass	Pass/RM			
10	Lynch	3:15 PM	41	5.4	4:15 PM	34	4.5	5:15 PM	24	3.2	33	4.4			
7	First Avenue	3:15 PM	28	5.1	4:15 PM	36	6.5	5:15 PM	32	5.8	32	5.8			
2	Riverside	4:15 PM	47	6.4	4:45 PM	17	2.2	5:15 PM	26	3.6	30	4.1			
1	Washington	4:15 PM	39	7.0	4:45 PM	24	4.3	5:15 PM	18	3.2	27	4.8			
8	Lincoln	4:15 PM	26	4.0	4:45 PM	27	3.8	5:15 PM	26	4.0	26	3.9			
9	Covert	4:15 PM	28	4.4	4:45 PM	24	3.8	5:15 PM	26	4.1	26	4.1			
5	Mary-Tekoppel	4:15 PM	26	3.7	4:45 PM	21	2.9	5:15 PM	22	3.1	23	3.2			
6	Walnut	3:15 PM	21	3.3	4:15 PM	25	3.9	5:15 PM	23	3.6	23	3.6			
15	E Connection	3:15 PM	26	3.0	4:15 PM	21	2.4	5:15 PM	14	1.6	20	2.3			
3	Fulton	3:15 PM	21	3.9	4:15 PM	20	3.7	5:15 PM	18	3.3	20	3.6			
4	Stringtown	2:45 PM	15	2.1	3:45 PM	15	2.1	4:45 PM	18	2.5	16	2.2			
14	Shpr Shuttle	3:45 PM	17	2.4	4:45 PM	21	3.0	5:45 PM	3	0.4	14	1.9			
12	Howell	3:15 PM	9	1.3	4:15 PM	16	2.2	5:15 PM	9	1.3	11	1.6			
13	DT Shuttle	3:15 PM	8	1.6	4:15 PM	8	1.6	5:15 PM	6	1.2	7	1.5			
23	US Highway 41	3:30 PM	8	0.8	4:30 PM	1	0.1	5:30 PM	5	0.5	5	0.5			
16	W Connection	4:45 PM	1	0.2	5:15 PM	4	0.9	5:45 PM	0	0.0	2	0.4			

Sorted by Pass/RM															
Number	Route Name	Last Three Trips before 6 PM									Avg. 3 Trips Before 6 PM				
		Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Pass	Pass/RM			
7	First Avenue	3:15 PM	28	5.1	4:15 PM	36	6.5	5:15 PM	32	5.8	32	5.8			
1	Washington	4:15 PM	39	7.0	4:45 PM	24	4.3	5:15 PM	18	3.2	27	4.8			
10	Lynch	3:15 PM	41	5.4	4:15 PM	34	4.5	5:15 PM	24	3.2	33	4.4			
9	Covert	4:15 PM	28	4.4	4:45 PM	24	3.8	5:15 PM	26	4.1	26	4.1			
2	Riverside	4:15 PM	47	6.4	4:45 PM	17	2.2	5:15 PM	26	3.6	30	4.1			
8	Lincoln	4:15 PM	26	4.0	4:45 PM	27	3.8	5:15 PM	26	4.0	26	3.9			
3	Fulton	3:15 PM	21	3.9	4:15 PM	20	3.7	5:15 PM	18	3.3	20	3.6			
6	Walnut	3:15 PM	21	3.3	4:15 PM	25	3.9	5:15 PM	23	3.6	23	3.6			
5	Mary-Tekoppel	4:15 PM	26	3.7	4:45 PM	21	2.9	5:15 PM	22	3.1	23	3.2			
15	E Connection	3:15 PM	26	3.0	4:15 PM	21	2.4	5:15 PM	14	1.6	20	2.3			
4	Stringtown	2:45 PM	15	2.1	3:45 PM	15	2.1	4:45 PM	18	2.5	16	2.2			
14	Shpr Shuttle	3:45 PM	17	2.4	4:45 PM	21	3.0	5:45 PM	3	0.4	14	1.9			
12	Howell	3:15 PM	9	1.3	4:15 PM	16	2.2	5:15 PM	9	1.3	11	1.6			
13	DT Shuttle	3:15 PM	8	1.6	4:15 PM	8	1.6	5:15 PM	6	1.2	7	1.5			
23	US Highway 41	3:30 PM	8	0.8	4:30 PM	1	0.1	5:30 PM	5	0.5	5	0.5			
16	W Connection	4:45 PM	1	0.2	5:15 PM	4	0.9	5:45 PM	0	0.0	2	0.4			

Sorted by Pass on Last Trip															
Number	Route Name	Last Three Trips before 6 PM									Avg. 3 Trips Before 6 PM				
		Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Pass	Pass/RM			
7	First Avenue	3:15 PM	28	5.1	4:15 PM	36	6.5	5:15 PM	32	5.8	32	5.8			
2	Riverside	4:15 PM	47	6.4	4:45 PM	17	2.2	5:15 PM	26	3.6	30	4.1			
8	Lincoln	4:15 PM	26	4.0	4:45 PM	27	3.8	5:15 PM	26	4.0	26	3.9			
9	Covert	4:15 PM	28	4.4	4:45 PM	24	3.8	5:15 PM	26	4.1	26	4.1			
10	Lynch	3:15 PM	41	5.4	4:15 PM	34	4.5	5:15 PM	24	3.2	33	4.4			
6	Walnut	3:15 PM	21	3.3	4:15 PM	25	3.9	5:15 PM	23	3.6	23	3.6			
5	Mary-Tekoppel	4:15 PM	26	3.7	4:45 PM	21	2.9	5:15 PM	22	3.1	23	3.2			
1	Washington	4:15 PM	39	7.0	4:45 PM	24	4.3	5:15 PM	18	3.2	27	4.8			
3	Fulton	3:15 PM	21	3.9	4:15 PM	20	3.7	5:15 PM	18	3.3	20	3.6			
4	Stringtown	2:45 PM	15	2.1	3:45 PM	15	2.1	4:45 PM	18	2.5	16	2.2			
15	E Connection	3:15 PM	26	3.0	4:15 PM	21	2.4	5:15 PM	14	1.6	20	2.3			
12	Howell	3:15 PM	9	1.3	4:15 PM	16	2.2	5:15 PM	9	1.3	11	1.6			
13	DT Shuttle	3:15 PM	8	1.6	4:15 PM	8	1.6	5:15 PM	6	1.2	7	1.5			
23	US Highway 41	3:30 PM	8	0.8	4:30 PM	1	0.1	5:30 PM	5	0.5	5	0.5			
14	Shpr Shuttle	3:45 PM	17	2.4	4:45 PM	21	3.0	5:45 PM	3	0.4	14	1.9			
16	W Connection	4:45 PM	1	0.2	5:15 PM	4	0.9	5:45 PM	0	0.0	2	0.4			

Pass/RM - Passengers Per Route Mile

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Attachment Table 2

Riders per Trip - Late PM-Evening		Evening Trips																			
		Sorted by Pass/Trip																			
		Trips After 6 pm																		Avg. Trips After 6 PM	
Number	Route Name	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Pass	Pass/RM
2	Riverside	6:15 PM	24	3.3	7:15 PM	18	2.5	8:15 PM	35	4.8	9:15 PM	28	3.8	10:15 PM	29	4.0	11:15 PM	18	2.5	25	3.5
9	Covert	6:15 PM	27	4.3	7:15 PM	26	4.1	8:15 PM	28	4.4	9:15 PM	22	3.5	10:15 PM	22	3.5	11:15 PM	14	2.2	23	3.7
1	Washington	6:15 PM	22	3.9	7:15 PM	23	4.1	8:15 PM	24	4.3	9:15 PM	25	4.5	10:15 PM	12	2.1	11:15 PM	5	0.9	19	3.3
17	Mary-Howell	6:15 PM	29	3.5	7:15 PM	25	3.0	8:15 PM	23	2.8	9:15 PM	13	1.6	10:15 PM	12	1.5	11:15 PM	6	0.7	18	2.2
8	Lincoln	6:15 PM	31	4.8	7:15 PM	22	3.4	8:15 PM	16	2.5	9:15 PM	16	2.5	10:15 PM	13	2.0	11:15 PM	9	1.4	18	2.8
18	Stringtown-First	6:15 PM	17	2.4	7:15 PM	25	3.6	8:15 PM	21	3.0	9:15 PM	19	2.7	10:15 PM	19	2.7	11:15 PM	1	0.1	17	2.4
15	E Connection	6:45 PM	3	0.3	7:45 PM	11	1.3	8:45 PM	12	1.4	9:45 PM	26	3.0	10:45 PM	7	0.8				12	1.4
16	W Connection	6:15 PM	1	0.2	6:45 PM	3	0.7	7:15 PM	0	0.0	7:45 PM	4	0.9	8:15 PM	0	0.0	8:45 PM	0	0.0	1	0.3

		Sorted by Pass/RM																			
		Trips After 6 pm																		Avg. Trips After 6 PM	
Number	Route Name	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Pass	Pass/RM
9	Covert	6:15 PM	27	4.3	7:15 PM	26	4.1	8:15 PM	28	4.4	9:15 PM	22	3.5	10:15 PM	22	3.5	11:15 PM	14	2.2	23	3.7
2	Riverside	6:15 PM	24	3.3	7:15 PM	18	2.5	8:15 PM	35	4.8	9:15 PM	28	3.8	10:15 PM	29	4.0	11:15 PM	18	2.5	25	3.5
1	Washington	6:15 PM	22	3.9	7:15 PM	23	4.1	8:15 PM	24	4.3	9:15 PM	25	4.5	10:15 PM	12	2.1	11:15 PM	5	0.9	19	3.3
8	Lincoln	6:15 PM	31	4.8	7:15 PM	22	3.4	8:15 PM	16	2.5	9:15 PM	16	2.5	10:15 PM	13	2.0	11:15 PM	9	1.4	18	2.8
18	Stringtown-First	6:15 PM	17	2.4	7:15 PM	25	3.6	8:15 PM	21	3.0	9:15 PM	19	2.7	10:15 PM	19	2.7	11:15 PM	1	0.1	17	2.4
17	Mary-Howell	6:15 PM	29	3.5	7:15 PM	25	3.0	8:15 PM	23	2.8	9:15 PM	13	1.6	10:15 PM	12	1.5	11:15 PM	6	0.7	18	2.2
15	E Connection	6:45 PM	3	0.3	7:45 PM	11	1.3	8:45 PM	12	1.4	9:45 PM	26	3.0	10:45 PM	7	0.8				12	1.4
16	W Connection	6:15 PM	1	0.2	6:45 PM	3	0.7	7:15 PM	0	0.0	7:45 PM	4	0.9	8:15 PM	0	0.0	8:45 PM	0	0.0	1	0.3

		Sorted by Pass on Last Trip																			
		Trips After 6 pm																		Avg. Trips After 6 PM	
Number	Route Name	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Lv Term.	Pass	Pass/RM	Pass	Pass/RM
2	Riverside	6:15 PM	24	3.3	7:15 PM	18	2.5	8:15 PM	35	4.8	9:15 PM	28	3.8	10:15 PM	29	4.0	11:15 PM	18	2.5	25	3.5
9	Covert	6:15 PM	27	4.3	7:15 PM	26	4.1	8:15 PM	28	4.4	9:15 PM	22	3.5	10:15 PM	22	3.5	11:15 PM	14	2.2	23	3.7
8	Lincoln	6:15 PM	31	4.8	7:15 PM	22	3.4	8:15 PM	16	2.5	9:15 PM	16	2.5	10:15 PM	13	2.0	11:15 PM	9	1.4	18	2.8
15	E Connection	6:45 PM	3	0.3	7:45 PM	11	1.3	8:45 PM	12	1.4	9:45 PM	26	3.0	10:45 PM	7	0.8				12	1.4
17	Mary-Howell	6:15 PM	29	3.5	7:15 PM	25	3.0	8:15 PM	23	2.8	9:15 PM	13	1.6	10:15 PM	12	1.5	11:15 PM	6	0.7	18	2.2
1	Washington	6:15 PM	22	3.9	7:15 PM	23	4.1	8:15 PM	24	4.3	9:15 PM	25	4.5	10:15 PM	12	2.1	11:15 PM	5	0.9	19	3.3
18	Stringtown-First	6:15 PM	17	2.4	7:15 PM	25	3.6	8:15 PM	21	3.0	9:15 PM	19	2.7	10:15 PM	19	2.7	11:15 PM	1	0.1	17	2.4
16	W Connection	6:15 PM	1	0.2	6:45 PM	3	0.7	7:15 PM	0	0.0	7:45 PM	4	0.9	8:15 PM	0	0.0	8:45 PM	0	0.0	1	0.3

APPENDIX 7: 2015 Service Change Analysis

**Metropolitan Evansville Transit System
2015 Service Change Analysis**

Introduction

In 2014 and 2015 the Lochmueller Group produced a Comprehensive Operational Analysis (COA) of the METS system. One of the tasks of the COA was to develop a Service and Fare Change Process that reviewed proposed changes for consistency with Title VI principles. The service change recommendations produced in the COA were then subject to this review process, which includes the following steps:

1. Determine if the change is a major change. A service change that affects more than 25 percent of riders on a route, route miles or annual vehicle miles is considered a major service change. A ten percent increase in any fare or fare medium is also considered a major change.
2. Ensure that the cost of the change is incorporated in the annual budget.
3. Refer to the most recent data analysis regarding minority and low-income routes and census blocks in the service area, and identify whether the proposed service change is within a minority or low-income area.
4. Review the following Title VI Checklist and document the answers:
 - a. Does this service change conform to METS written Service Standards and Policies?
 - b. If this is a service improvement, is it made to the detriment of other services used by minority or low income populations? (e.g., are resources being diverted?)
 - c. Are the transit amenities associated with this change equitably distributed?
 - d. What are the potential impacts of the change on current and future riders? (e.g., a change in wait time, travel time, access, transfers, etc.) Include positive and negative impacts.
 - e. What are the potential impacts of the change on the environment? (e.g., changes in traffic volume, bus noise, air pollution, pedestrian safety, etc.) Include positive and negative impacts.
 - f. Do the impacts on riders and the environment disproportionately affect minority or low-income riders or areas of the city? If the service or fare change will result in disparate treatment, then investigate alternatives to avoid, minimize, or mitigate the impacts. Document the findings and consult with the impacted community.
5. Summarize steps 1 through 4.

Type of Change

The first step in the process is to determine if the proposed change to service or fare structure is a major change. A major change in fares, facilities, and/or service is defined as:

- Route changes that affect more than 25 percent of any route or service's passengers, route miles, or vehicle miles;
- Service changes that require new facilities and/or capital expenditures at a cost that requires city council approval;
- A fare increase of 10 percent or more on any fare type or media.

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A major change requires that METS conduct a public meeting to present the proposed change(s) and obtain input from the public. The COA resulted in a number of service and fare change proposals. Each route in the METS system was recommended for some sort of change. In addition, the COA recommended a number of new routes. Many of the proposed changes are major changes. A series of three public meetings were conducted to receive public input and present the proposed changes. The following table illustrates the proposed service changes for each route.

Route #	Route Name	Type of Change
1	Washington	Add Sunday Service
2	Riverside	Add Sunday Service/Realign route
3	Fulton	Realign route
4	Stringtown	Realign route/Evening Service
5	Mary-Tekoppel	Add Sunday Service/Consolidate with 12-Howell/Realign
6	Walnut	Add Sunday Service/Realign route (out & inbound same as existing inbound; existing outbound is future 11-Morgan)/Evening Service
7	First Avenue	Add Sunday Service/Evening Service/30 min daytime frequency
8	Lincoln	Realign route
9	Covert	Add Sunday Service
10	Lynch	Realign route (out & inbound same as existing outbound)/existing inbound is future 11- Morgan/Evening Service
12	Howell	Consolidate with 5-Mary-Tekoppel
13	Downtown Trolley	Realign route
14	Shopper Shuttle	Add Sunday Service/Consolidate together
15	East Connection	
16	West Connection	
17	Mary-Howell	Discontinue with consolidation of 5-Mary-Tekoppel & 12-Howell
18	Stringtown-First	Realign route/Consolidate with 4-Stringtown & 7-First and discontinue north of Buena Vista
19	USI Shuttle	
23	Highway 41 North	Realign route
11	Morgan	New crosstown route (from existing 6-Walnut outbound)
20	USI Express	New express route
21	DT-Lawndale-Warrick Exp	New express route
24	Green River	New crosstown route

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Most of the METS bus routes are recommended for some type of service change. The following table shows whether the proposal for each route is considered a major change based on route miles and vehicle miles.

Rte #	Route	Route Miles (weekday)				Vehicle Miles (annual)			
		Existing	Proposed	% Change	Major Change?	Existing	Proposed	% Change	Major Change?
1	Washington	11.2	11.2	0.0%	No	95,222	102,812	8.0%	No
2	Riverside	18.1	14.6	-19.1%	No	133,910	144,560	8.0%	No
3	Fulton	10.8	9.8	-9.7%	No	40,959	40,959	0.0%	No
4	Stringtown	14.5	12.4	-14.5%	No	57,658	86,028	49.2%	Yes
5	Mary-Tekoppel	17.6	13.8	-21.6%	No	94,474	134,025	41.9%	Yes
6	Walnut	12.9	10.3	-20.4%	No	49,046	92,803	89.2%	Yes
7	First Avenue	11.0	11.0	0.0%	No	39,499	93,439	136.6%	Yes
8	Lincoln	14.3	12.2	-14.9%	No	124,051	124,051	0.0%	No
9	Covert	12.7	12.7	0.0%	No	112,258	121,238	8.0%	No
10	Lynch	15.2	15.8	4.0%	No	56,160	101,027	79.9%	Yes
12	Howell	14.2		-100.0%	Yes	53,315		-100.0%	Yes
13	Downtown Trolley	10.1	7.9	-21.6%	No	42,307	42,307	0.0%	No
14	Shopper Shuttle	14.1	14.1	0.0%	No	52,416	101,128	92.9%	Yes
15	East Connection	17.6		-100.0%	Yes	91,388		-100.0%	Yes
16	West Connection	8.7	8.7	0.0%	No	56,056	56,056	0.0%	No
17	Mary-Howell	16.5	16.5	0.0%	No	29,952		-100.0%	Yes
18	Stringtown-First	14.1		-100.0%	Yes	25,834		-100.0%	Yes
19	USI Shuttle	2.9	2.9	0.0%	No		*	NA	Yes
23	Highway 41 North	19.6	14.4	-26.8%	Yes	99,965	99,965	0.0%	No
11	Morgan		15.5	100.0%	Yes		11,117	100.0%	Yes
20	USI Express		13.2	100.0%	Yes		*	NA	Yes
21	DT-Lawndale- Warrick Exp		24.5	100.0%	Yes		*	NA	Yes
24	Green River		9.0	100.0%	Yes		*	NA	Yes
* Vehicle miles for these new routes will be calculated at a later date.									
NA Not Available									

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In addition to service changes, the plan proposes changes to the existing fare structure. All of the proposed fare changes are considered major changes. The fare changes are summarized in the following table.

Type of Fare Change	Current	Proposed	% Increase	Major Change?
Raise adult fare	\$1.00	\$1.25	25.0%	Yes
Raise senior/disabled fare	\$0.50	\$0.60	20.0%	Yes
New adult transfer charge	\$0.00	\$0.25	*	Yes
New senior/disabled transfer charge	\$0.00	\$0.10	*	Yes
Raise student tickets	\$0.75	\$0.90	20.0%	Yes
Raise token price	\$0.85	\$1.00	17.6%	Yes
Raise METS Mobility fare [^]	\$2.00	\$2.50	25.0%	Yes
<p>* The % fare increase for those requiring one transfer is 50% for adult fares and 40% for senior/disabled fares. For riders requiring two transfers, this change results in a decrease of 25% for adult fares and 30% for senior/disabled fares.</p> <p>[^] METS Mobility customers who are ADA eligible, as well as convenience fare customers, may ride the fixed-route system for free. Convenience fare customers may no longer ride METS Mobility.</p>				

Budget

The second step in the Service and Fare Change Process is to ensure that the cost of the proposed changes is included in the annual budget. The timeframe to implement the recommended changes will occur over the next four years beginning in 2016. The proposed changes identified for implementation in 2016 include the following:

- New Sunday service on routes 1-Washington, 2-Riverside, 5-Mary-Tekoppel, 6-Walnut, 7-First Avenue, 9-Covert, and 14 Shoppers Shuttle
- New crosstown service on routes 10-Lynch, 11-Morgan, and 6-Walnut
- New Downtown-USI Express service
- Route realignments on routes 2-Riverside, 3-Fulton, 4-Stringtown, 5-Mary-Tekoppel, 8-Lincoln, 13-Downtown Trolley, 18-Stringtown-First, and 23-US Highway 41 North
- Consolidate routes 14-Shoppers Shuttle and 15-East Connection
- Consolidate routes 5-Mary-Tekoppel and 12-Howell
- Free fixed-route fares to METS Mobility customers
- Discontinue Mobility service to convenience fare riders
- General fare increase

As currently planned, these changes will be cost neutral. The resources saved with changes to the METS Mobility policy, the fare increase, and the route consolidations of routes 5 & 12 and 14 and 15 will cover the added expenses associated with the service improvements. Implementation of the five-year plan in years 2017 through 2020 will require a budget review each year.

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Review Minority/Low Income Census Data

The third step in the Service and Fare Change Process is to review area demographics and identify impacts of the proposed changes on minority and low-income populations. Data from the 2010 Decennial Census was analyzed to ascertain the racial make-up of the METS service area. For this analysis the METS service area is defined as the area within ¾ mile around all METS bus routes merged with the city limits. The table below illustrates that of the 145,601 people living in the METS service area, 17 percent are minority.

Minority Population within the METS Service Area

Race	Population	Minority Population	Percent Minority
Total Population	145,601	24,894 17%	
White Alone	120,707		
Black or African American Alone	15,791		
American Indian or Alaska Native Alone	297		
Asian Alone	1,563		
Native Hawaiian and Other Pacific Islander Alone	76		
Some Other Race Alone	349		
Two or More Races	3,361		
Hispanic or Latino	3,457		

* Data from 2010 Decennial Census Summary File 1

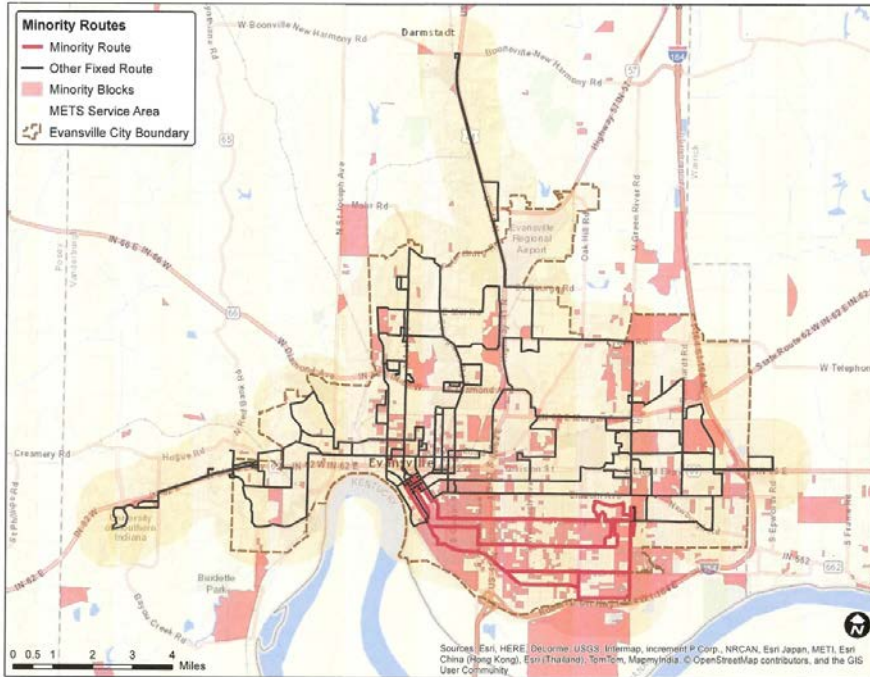
Figures 1 - 3 illustrate METS service area, minority census blocks and bus routes, and low-income census blocks and bus routes.

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Figure 1 METS Service Area

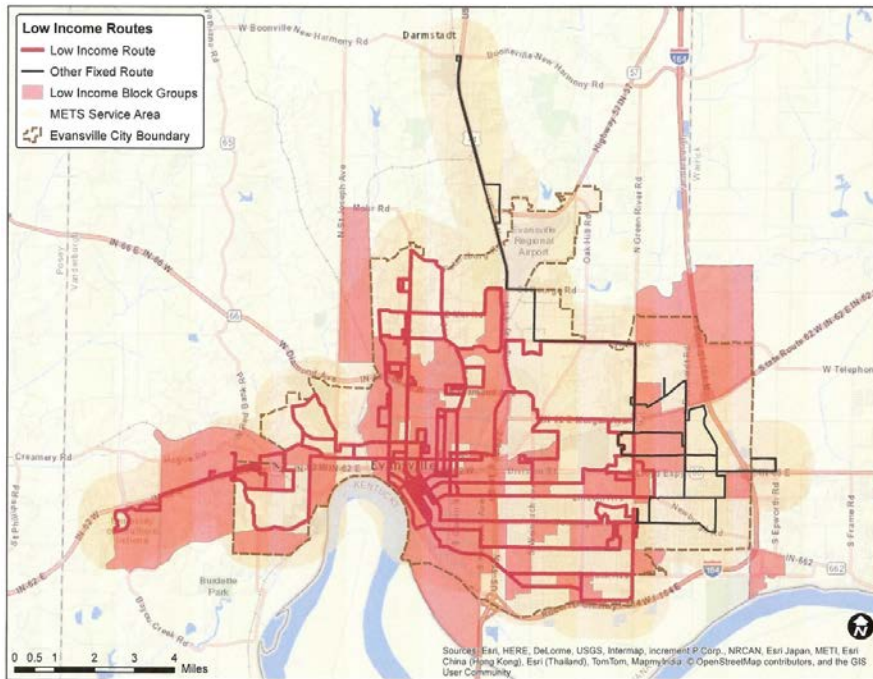


Figure 2 METS Minority Bus Routes



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Figure 3 METS Low Income Bus Routes



Impact of Proposed Changes on Minority/Low Income Populations

METS currently operates 19 bus routes. Of those, 16 are characterized as low-income routes and three routes are characterized as minority routes. The designation as either minority or low-income means that over one-third of the route operates through a minority or low-income area. The table below shows each METS bus route with its current minority or low income designation, and the designation of the route under the proposed restructuring plan. Routes that are currently designated as minority or low-income retain that designation once all proposed service changes are implemented.

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Rte #	Route	Existing Routes		Type of Change	5-Year Plan	
		Minority Route	Low Income Route		Minority Route	Low Income Route
1	Washington	Yes	Yes	Add Sunday Service	Yes	Yes
2	Riverside	Yes	Yes	Add Sunday Service/Realign	Yes	Yes
3	Fulton		Yes	Realign		Yes
4	Stringtown		Yes	Realign/Evening Service		Yes
5	Mary-Tekoppel		Yes	Add Sunday Service/Consolidate with 12-Howell/Realign		Yes
6	Walnut		Yes	Add Sunday Service/Realign/Evening Service		Yes
7	First Avenue		Yes	Add Sunday Service, Evening Service, Increase Frequency		Yes
8	Lincoln		Yes	Realign		Yes
9	Covert	Yes	Yes	Add Sunday Service	Yes	Yes
10	Lynch		Yes	Realign/Evening Service		Yes
12	Howell		Yes	Consolidate with 5-Mary-Tekoppel	Discontinued	
13	Downtown Trolley		Yes	Realigned		Yes
14	Shopper Shuttle			Add Sunday Service/ Consolidate together		
15	East Connection				Discontinued	
16	West Connection		Yes			Yes
17	Mary-Howell		Yes		Discontinued	
18	Stringtown-First		Yes	Realign/Discontinue	Discontinued	
19	USI Shuttle		Yes			Yes
23	Highway 41 North			Realign		
11	Morgan	New Route		New crosstown route		Yes
20	USI Express	New Route		New express route		
21	DT-Lawndale-Warrick Exp	New Route		New express route		
24	Green River	New Route		New crosstown route	Yes	Yes

The proposed plan is an overall service improvement, however, some poor performing route segments and routes with circuitous routings are eliminated or realigned to provide resources for improvements. These improvements include the addition of Sunday service on seven routes, the addition of evening service on four routes, and four new bus routes. The plan proposes realignments of ten routes and the discontinuance of four routes, which includes two instances of consolidating two routes into one route, (routes 5 and 12, and routes 14 and 15.)

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Changes to the fare structure are also proposed, and any fare change is difficult for riders to accept. It is especially hard for low-income customers, as transportation costs will now take a greater percentage of their limited resources. METS considered the impact that fare changes would have on their customers and determined that the monthly pass price would remain unchanged. The pass will provide a discount for customers who ride most weekdays and utilize a transfer for each trip. Revenue from fares has not kept up with inflation and fares are covering less and less of daily operating costs. METS fares have not changed since 1999 and a fare increase is long overdue to support the existing system. The proposed fare increase may represent a high percentage increase, but the proposed fare is in conformance with fare structures at other peer transit agencies as shown below.

Transit Agency	Full	Full Transfer	Senior	Senior Transfer
METS Proposed	\$1.25	\$0.25	\$0.60	\$0.10
Ft Wayne PTC	\$1.25	Not Offered*	\$0.60	Not Offered*
Rockford MTD	\$1.50	Free	Free	Free
Tri-State Transit Auth	\$1.00	Zone fare \$0.25	\$0.50	Zone fare \$0.25
Belle Urban System	\$2.00	Free	\$1.00	Free
South Bend PTC	\$1.00	Not Offered*	\$0.50	Not Offered*
Springfield MTD	\$1.25	Free	\$0.60	Free
* Transfers are not offered - a full fare is paid on boarding each vehicle				

Review Title VI Checklist

The fourth step in the Service and Fare Change Process is to answer the following questions for each major service change and document the answers.

1. Does this service change conform to METS written Service Standards and Policies?
All route changes conform to METS written Service Standards and Policies.

2. If this is a service improvement, is it being made to the detriment of other services used by minority or low income populations? (e.g., are resources being diverted?)
The majority of the changes in the proposed plan are service improvements, but resources to implement these improvements are not diverted from minority or low-income populations. Minority and low-income areas benefit with the addition of two new bus routes. Minority and low-income populations also benefit from the realignment of routes through increased speed and improved travel times.

3. Are the transit amenities associated with this change equitably distributed?
There are no specific transit amenities required by the proposed plan. In fact, the plan proposes a decrease in the overall fleet size from 36 vehicles to 34 vehicles. However, the plan

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recommends accelerating bus purchases over the next five years to bring the METS fleet to a “state of good repair”. This recommendation will improve the on-board transit environment for all riders. Improvements to existing METS transfer centers are recommended, and when implemented, will benefit all riders who use these locations.

4. What are the potential impacts of the change on current and future riders? (e.g., a change in wait time, travel time, access, transfers, etc.) Include positive and negative impacts.

The potential positive impacts of the recommended plan on current and future riders include the following; faster travel times due to route realignments and consolidations, improved service availability through provision of new Sunday and evening service hours, improved service availability and travel time through the implementation of two new crosstown routes and two new express routes, and improved frequency of service (less waiting time) on one bus route. The negative impacts include possibly longer walks to access service due to route realignments and consolidations, and an increase in fare for most riders. Based on comments received at the public meetings, the positive impacts outweigh the negative impacts.

5. What are the potential impacts of the change on the environment? (e.g., changes in traffic volume, bus noise, air pollution, pedestrian safety, etc.) Include positive and negative impacts.

No impacts to the environment are anticipated with this plan.

6. Do the impacts on riders and the environment disproportionately affect minority or low income riders or areas of the city? If the service or fare change will result in disparate treatment, then investigate alternatives to avoid, minimize, or mitigate the impacts. Document the findings and consult with the impacted community.

Riders in minority and low income areas are not disproportionately impacted by the recommended plan.

Results Summary

The recommendations proposed for the 5-year plan are generally service improvements. Some riders may experience longer walks to access service due to route realignments or consolidations, but these changes will improve travel time for all riders and will simplify routes in order to attract new riders. An overwhelming number of public comments were in support of instituting Sunday service and extending service hours into the evening on weekdays and Saturdays. The plan proposes adding Sunday service to seven routes and extending service into the evening on four routes. One route is proposed for improved frequency, which will improve overall travel time, decrease wait times, and attract new riders.

Four route numbers are discontinued in the plan; however, there will be little disruption to existing riders for the following reasons.

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- Two of the routes operate only in the evening hours to supplement service on daytime routes. Discontinuance of the evening-only routes will occur with implementation of evening hours on the daytime routes.
- The remaining two route numbers discontinued are the result of consolidating two routes into one. The proposal is to consolidate routes 5 and 12 into one route, as well as consolidate routes 14 and 15. In both cases, the routes operate proximate to each other and serve common terminals. Segments of the routes with the lowest ridership will be eliminated with the route consolidations.

The plan proposes four new routes: two crosstown routes and two express routes. One of the crosstown routes will provide new bi-directional north-south service on the east side of Evansville. The second crosstown route will provide bi-directional east-west service on a street that formerly operated in only one direction. The two new express routes will provide fast service between downtown to Warwick County and to University of Southern Indiana (USI).

Three public meetings were conducted to review these proposals with the community. All of the bus route changes will improve transit service to minority and low-income populations. The proposed fare increases will impact all riders, but will more acutely impact those with low-incomes due to their limited resources. However, monthly pass prices remain the same to provide a better bargain for those riders with low-incomes who make transfers.

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Appendix D

Evansville-to- Henderson Service Analysis

Appendix 1

Summary of Peer Region Surveys

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Evansville-Henderson Cross River Service Summary of Peer Property Interviews

Introduction

For purposes of the analysis of a cross-river transit connection, Lochmueller Group, Inc. identified 13 “peer” areas as having “peer” to the Evansville, Indiana/Henderson, Kentucky area. The areas were identified as peer areas based upon sharing the following characteristics:

- The areas have cities separated by a river crossing;
- Both cities operate fixed route transit service; and
- There is existing fixed-route transit service which connects the two cities.

These 13 peer areas include (rivers crossed shown in parentheses):

1. Quad Cities (Moline, Davenport, Rock Island, Bettendorf) (Mississippi River)
2. Memphis TN/East Memphis AK (Mississippi River)
3. Augusta GA/North Augusta SC (Savannah River)
4. Omaha NB/Council Bluffs IA (Missouri River)
5. Sioux City IA/South Sioux City NB (Missouri River)
6. Grand Forks ND/East Grand Forks MN (Red River)
7. Fargo ND/Moorhead MN (Red River)
8. Dover-Portsmouth NH/Kittery-Berwick ME (Piscataqua River)
9. Portland OR/Vancouver WA (Columbia River)
10. Wheeling WV/Bridgeport OH (Ohio River)
11. Weirton WV/Steubenville OH (Ohio River)
12. LaCrosse WI/La Crescent MN (Mississippi River)
13. Louisville KY/Clarksville-New Albany IN (Ohio River)

Each of these peer areas were contacted by e-mail to request an interview. The agenda for each interview included the following topics:

- Confirming that nature of the existing cross-river, cross jurisdictional service.
- Hours and days of cross-river service, including ridership levels and trends.
- Type of rolling stock used for service.
- Operating costs, cost-sharing and revenue allocation.
- “Lessons learned,” especially those which may be transferrable to the Evansville-Henderson region.

Of the 13 peer areas contacted, interviews were conducted with all but area 11 (Weirton WV/Steubenville OH). Following are summaries of the interviews. The header for each summary gives the date on which it was conducted.

Evansville-Henderson Cross River Service Summary of Peer Property Interviews

Interview Summaries

1. Quad Cities Area (Davenport & Bettendorf IA; Rock Island and Moline IL); July 15, 2013.

Overall

The interview was conducted by Michael Grovak with Becky Passman. Ms. Passman is Project Manager and Iowa Quad Cities Transit Coordinator for the Bi-State Regional Commission (area MPO).

The MPO (at <http://www.bistateonline.org/qctransit/index.shtml>) provides information on the three transit systems operating in this region. Davenport CitiBus and Bettendorf Transit serve these respective cities in Iowa as departments of city government. Metro Transit serves Rock Island and Moline IL. One Davenport route (Route 7) and one Bettendorf Route (Route 1) cross the Mississippi River into Illinois.

Ridership Levels and Service; Equipment

Bettendorf Route 1 is the best-patronized route in the Bettendorf system (about 54,000 of the system's annual ridership of 187,000). Davenport Route 7 serves about 170,000 riders annually, approximately one-sixth of approximately 1,000,000 annual riders on the entire Davenport system. Each route operates between a transit center on the Iowa and Illinois side of the Mississippi River. Both systems operate 35 to 40 passenger transit coaches on the cross-river service.

Service History

Cross-river service was in place from Davenport since at least the mid- 1970's; the Bettendorf cross-river service was in place since at least the mid 1980's.

Revenue and Cost Sharing

There is no cost or revenue sharing among the separate transit operators. Davenport CitiBus, Bettendorf Transit, and Metro Transit all honor a regional universal bus pass, the "QC Passport." The pass costs \$30 per calendar month, and allows unlimited rides on all three systems for that calendar month. The pass is a non-machine-readable "flash pass." Each system retains all revenues from passes which it sells. Cash fares are \$1 per ride. The first transfer generally is free; certain trip combinations require an additional charge of 5 or 10 cents for the first transfer. Each system receives funding which is based in part on ridership levels.

As departments of city government, the Davenport and Bettendorf systems compete with other city services for funding. The Rock Island County Mass Transit District (Metro Transit) has more state funding than the Iowa systems; it also has authorization for a property tax levy.

Lessons Learned

Cooperation among different systems at the staff level is vital. It is important that as many service attributes as possible be similar among the different systems. Until 2 years ago, the three systems had 3 different fare structures; since city governments involved did not wish to raise their fares by even 25 cents or less (what it took to make fares consistent). Ease of transfers also is vital. Schedules need to provide for timed transfers; asking riders to wait an additional 15 to 20 minutes at a transfer point will significantly discourage ridership. Riders may be anxious that transfers will be quick and reliable.

Evansville-Henderson Cross River Service Summary of Peer Property Interviews

Branding of the different systems is important. Riders use the differences in appearance between the systems to confirm that they are using the desired route. To implement connector service, we will want to consider a joint rider's guide, which provides information about both systems in one location. It's important to assume that connecting service is used – riders will want to use both systems.

2. Memphis TN/East Memphis AK (Mississippi River); June 21, 2013

Overall

The interview was conducted by Michael Grovak with Lawson Albritton, Director of Bus and Paratransit Operations for the Memphis Area Transit Authority (MATA) (<http://www.matatransit.com/>). MATA is the public transportation provider for the Memphis area, and is the largest transit operator in the state of Tennessee. It serves nearly 11 million riders a year in the City of Memphis, other parts of Shelby County, and the City of West Memphis on fixed-route bus, paratransit, and vintage rail trolleys. The system is governed by a seven-member policy board appointed by the City Mayor and approved by the Memphis City Council. Routes 75 and 77 operate entirely within West Memphis between 7 am and 5:30 pm weekdays; Route 78 provides weekday peak-only service between West Memphis and Memphis.

Ridership Levels and Service; Equipment

Due to interlining among MATA services, ridership statistics by route on these services are not available. The services use standard 40 foot transit coaches (Gilligs or Novas). Existing

Service History

This service has been in place since 1999. It was instituted at the request and advocacy of West Memphis public officials (including the West Memphis Mayor). The costs of service are fully underwritten by the City of West Memphis.

Revenue and Cost Sharing

Service is provided free of charge to Arkansas residents, as well as to those riding entirely within Arkansas. Tennessee residents pay cash fare of \$1.75 to ride between Arkansas and Tennessee. West Memphis is billed each month for the fully-allocated cost of service, and has a history of prompt payments. Any fares collected are retained by MATA. West Memphis has a local dedicated source of funding for this transit service – it is derived from tourism revenues. There are a large number of hotels and restaurants along I-40 in West Memphis, just a short distance from Memphis

Lessons Learned

Mr. Albritton was quite complimentary of the working relationship with West Memphis; it is a great partnership for MATA. The city really did not understand transit operations when it requested the service, and it has allowed MATA to operate the service with relatively little interference. The West Memphis police are helpful if there are any public safety types of issues (e.g., misbehaving school riders). If we would like to follow up further with the City of West Memphis, he provided Paul Luker (870-732-7521; pluker@citywm.com) as a contact.

Evansville-Henderson Cross River Service Summary of Peer Property Interviews

3. Augusta GA/North Augusta SC (Savannah River) July 16, 2013

Overall

The interview was conducted by Michael Grovak with Dana Luttrull of the Lower Savannah Council of Governments (LSCOG – www.lscog.org). LSCOG is a regional organization which coordinates cooperative development of the region among local governments; it is **not** the region's MPO (which is the Augusta-Richmond County Planning Commission <http://www.augustaga.gov/index.aspx?nid=305>.)

LSCOG operates three routes (Red, Blue, and Green) as the Best Friends Express (BFE). The Red and Green routes operate only within South Carolina; the Blue Route crosses the Savannah River and provides service into Augusta, where connections to Savannah city transit services are available. The Blue Route operates weekdays only every two hours, inbound to Savannah from 9:30 am to 5:30 pm and outbound from Savannah from 10:00 am to 6:00 pm.

Ridership Levels and Service; Equipment

NTD reports for the most recent year show total rides on all BFE routes as 24,000/year; this is similar to ridership on the Henderson system. The Blue Route is one of the most popular routes. In the fourth quarter of 2012, there were 853 transfers from the Blue Route to August Public Transit and 385 from Augusta Public Transit to the Blue Route. A VA hospital is located immediately across the river in Savannah. It is a popular destination for Blue Route riders, as is the University Hospital located nearby. Many of those who use to Blue Route to travel from Augusta come to retail shopping areas in North Augusta. The retail environment in North Augusta has newer stores which are more attractive to shoppers. As noted above to a nicer retail environment. Taking note of the differences in directional ridership, Ms. Luttrull has observed that many riders who use the Blue Route service to reach Augusta make other arrangements for their return trips.

At one time, service was provided with 22 passenger diesel-powered vehicles. Presently, service is provided using 15 passenger gasoline-powered vehicles.

Presently, LSCOG uses Route Match software. There are IP protocol issues for this software to communicate with onboard computers. In the near future, the existing computers will be replaced with tablets. This will provide increased functionality and enable real time ridership reporting; presently, the Route Match software provides only an Automatic Vehicle Location (AVL) function.

LSCOG is pursuing a grant for security cameras. It plans a turnkey contract, buying the cameras with FTA funds and providing the equipment to its service provider. LSCOG does not directly employ transportation personnel. The security cameras will enable it to better manage and oversee its contractor's operating personnel.

Service History

BFE has been in operation for eight years. At that time, LSCOG became the FTA Section 5307 grantee for Aiken County. The urbanized portion of LSCOG is part of the local MPO. LSCOG is involved with the FTA only with regard to its urban service; rural transit funding is through the State of South Carolina. Recently, the Augusta city system began to outsource its transit operations; staff-level cooperation has suffered as a result.

Evansville-Henderson Cross River Service Summary of Peer Property Interviews

Revenue and Cost Sharing

There are no revenue or cost sharing arrangements among LSCOG constituent agencies; there is no MOA or similar document. Augusta funds and maintains a transfer center in Augusta. This transfer facility provides restrooms for operating personnel. This transfer station is the largest consumer of BFE's published material (schedules and maps).

Transfers between the Augusta city system and BFE require payment of two fares – there is no joint arrangement between the two systems

Lessons Learned

Ms. Luttrull advised we become familiar with FTA regulations regarding commuter service vs. regular fixed-route service. Commuter routes¹ are not required to provide alternative point-to-point transportation under the Americans with Disabilities Act (ADA). She offered that especially if service were provided under one of the options I described (a dedicated shuttle connecting the Henderson and Evansville Transit Centers) it would qualify as a commuter service. In this case, the vehicles themselves would have to be accessible, but alternative ADA paratransit service would not be required. The Blue Route does not qualify as a commuter route; therefore, BFE sometimes needs to provide paratransit service to some traveling between North Augusta and Augusta.

Ms. Luttrull advised that we should carefully define what is a fixed route vs. what is a commuter route. For example, during Triennial Reviews all marketing materials and brochures will be examined.

4. Omaha NB/Council Bluffs IA (Missouri River) June 17, 2013

Overall

This interview was conducted by Laurie Miller. She spoke with Curt Simon, Executive Director of Omaha Metro Transit (www.ometro.com). Service is provided by the Metro Transit, whose board is appointed by the Mayor of Omaha and confirmed by the Omaha City Council. Two routes (Yellow Route and Blue Route) operate between the Omaha Downtown Transit Center and Council Bluffs IA. Significant circulation provided within Council Bluffs. An express version of the Yellow Route also is provided. There is no Sunday service to Council Bluffs but Omaha's routes do operate on Sunday.

Ridership Levels and Service; Equipment

¹ FTA's ADA regulations state the following regarding commuter bus service, "Typically, commuter bus service does not attempt to cover an area comprehensively, but rather has a limited route structure connecting a limited number of origins and destinations. Typically, this service is intended to interface with another mode of transportation (e.g., the automobile, with the connection occurring at a park-and-ride facility). Trips are often primarily for limited purposes (e.g., work trips).

"We construe the commuter bus category to apply to a range of services which differ significantly from the model of urban mass transportation fixed route service to which Congress attached the complementary paratransit obligation. For this range of services, because of their differences from urban mass transportation fixed route service, paratransit is not a necessary or appropriate complement." (http://www.fta.dot.gov/12876_4058.html - §37.3 Definitions.)

Evansville-Henderson Cross River Service Summary of Peer Property Interviews

The two routes that serve Council Bluffs serve approximately 192,000 passenger trips a year. By comparison, the entire Metro system served approximately 4.5 million passenger trips between May of 2012 and May of 2013. Service is provided with standard 35-foot transit coaches.

Service History

Cross-river service has been operated for approximately 100 years.

Revenue and Cost Sharing

Metro's operating funds are in part provided by a property tax levied within the City of Omaha. These tax levies cannot be used for service outside of the city limits of Omaha. Arrangements for service outside of Omaha are funded by service contracts with the communities served (two in Nebraska as well as Council Bluffs, Iowa).

The contract for the Omaha-Council Bluffs service is an inter-local government agreement; this agreement has the option for other counties to connect to the service in the future. Cost sharing ratios are determined by population served. Council Bluffs pays its portion using general fund revenues while Omaha pays for its portion of the service with using property tax dollars. Mr. Simon stated that he would like to see Council Bluffs to also start using property tax dollars; this would make service cutbacks less likely when budgets get tight.

Council Bluffs is home to a number of casinos but the routes serving Council Bluffs do not operate past 9 pm. Service in Omaha operates until midnight. Casinos have shown no interest in funding later service.

Lessons Learned

There is no cross-river ADA paratransit service provided, and no interest to start operating it. (NB – this seems to be related to the issue of commuter service cited in the Augusta area interview).

5. [Sioux City IA/South Sioux City NB \(Missouri River\) July 16, 2013](#)

Overall

The interview was conducted by Laurie Miller with Mike Collett, Director of Transit for Sioux City. One of Sioux City's routes (Route 9, South Sioux City) operates across the Missouri River into South Sioux City, Nebraska. Hours of operation for Route 9 are Monday through Friday, 6am to 6pm. Unlike the rest of the system, there is no Saturday service.

Ridership Levels and Service; Equipment

Approximately 35,000 riders annually use Route 9; total system ridership is 1.2 million. Route 9 ridership is a small fraction (3%) of total system ridership. Service is provided with standard 35 to 40 foot transit coaches.

Service History

In the late 70s, early 80s service was expanded in to South Sioux City (SSC), Nebraska. The existing route has changes little over the last few decades. SSC has ultimate control of where the route and bus stops are located. SSC has been trying to add a few more stops to serve some larger employers.

Evansville-Henderson Cross River Service Summary of Peer Property Interviews

Because the route is so long, adding more stops will require eliminating other stops. A second route is not an option for SSC due to operating cost constraints.

Revenue and Cost Sharing

The costs of the service are defrayed by an allocation of Section 5307 funds from Nebraska and farebox revenues. There is a formal contract between Sioux City and South Sioux City to provide this service.

Lessons Learned

Mr. Collett offered his view that it would be desirable that Henderson be willing to give allow METS to operate all transit service in both Evansville and Henderson. He felt that otherwise operating a route to Henderson may be difficult. He also said we should consider consolidating tax levies in the entire service area the help pay for the increased service.

6. Grand Forks ND/East Grand Forks MN (Red River) July 25, 2013

Overall

The interview was conducted by Laurie Miller with Dale Bergman, Superintendent of Cities Area Transit, which operates the service in Grand Forks. Also participating was Earl Haugen from the Grand Forks/East Grand Forks MPO. Two routes (Routes 10 and 11) serve the downtown Grand Forks transit center, and cross the Red River to provide service throughout the city of East Grand Forks. Service is provided from 7 am to 6pm, Monday through Friday, 8am to 6pm on Saturdays.

Ridership Levels and Service; Equipment

The East Grand Forks routes provide about one-eighth (13%) of the total system service (vehicle hours and vehicle miles). Rolling stock is standard 40' buses. Ridership information was not provided.

Service History

Cities Area Transit (CAT) started in the 1930's after the bankruptcy of the local streetcar system. In the 1980's CAT began offering the black route (also known as Route 10 and 11) which serves all of East Grand Forks (MN) and connects to the other CAT routes in downtown Grand Forks (ND). Service has changed little since it was first implemented.

Revenue and Cost Sharing

East Grand Forks contracts with CAT to provide service. Minnesota DOT (MnDOT) has stringent policies against paying for services that are provided outside of state lines. For this reason, CAT service in East Grand Forks, is structured formally as provided by a separate company.

Lessons Learned

Both cities have a long history of working well together. The interviewees feel that MnDot fails to fully recognize East Grand Forks' position. Specifically, without the help of Grand Forks ND, East Grand Forks probably would not be able to sustain its own transit service.

Evansville-Henderson Cross River Service Summary of Peer Property Interviews

7. Fargo ND/Moorhead MN (Red River) June 17, 2013

Overall

Michael Grovak interviewed Lori Van Beek, Transit Manager for the City of Moorhead. She has been employed by the City of Moorhead for 31 years and has served as its transit manager since 1990. Service is provided by MATBUS (<http://www.matbus.com/>), the public transportation system serving the communities of Fargo & West Fargo, North Dakota, and Moorhead & Dilworth, Minnesota. Three routes (1, 2 and 4) cross the Red River between Fargo and Moorhead; two other routes (3 and 5) operate exclusively on the east (Minnesota) side of the Red River. At night, separately-designated routes (Route 7 and 8) provide the cross-river service. These are designated as insets on other schedules. Cross-river service operates between 6 am and 11 pm on weekdays; service on Saturdays starts one hour later.

Ridership Levels and Service; Equipment

Fargo (population 105,000) is the destination for work trips. The Minnesota side of the Red River is somewhat of a bedroom community for Fargo; by comparison, the population of Moorhead is 38,000.

Service History

This cooperation began with joint paratransit service operations in 1996. The cross-river fixed route service came about subsequently. Ms. Van Beek subsequently provided a three-page history of transit service cooperation between the two cities, as well as a draft joint powers agreement for the two cities.

Revenue and Cost Sharing

The Moorhead and Fargo systems are separate formal entities, but operate with a single brand and logo. The transfer facility which both systems use in Fargo is owned and operated by the City of Fargo. Moorhead furnishes one-third of the facility's operating cost. Since 2007, both systems have operated from a garage in Fargo which is jointly owned by both systems. Building-related costs are allocated to the two systems based upon the number of vehicles. Fargo and Moorhead each have its own fleet of city-owned vehicles. Maintenance employees all are employees of the City of Fargo. Moorhead is billed for work on its buses through the electronic work orders in the maintenance system.

Lessons Learned

The two states have different state insurance requirements. Fargo had to increase its insurance coverage to match Minnesota's coverage, especially as it pertains to paratransit service; North Dakota requires \$250,000 in liability insurance; Minnesota requires \$2 million in liability coverage. However, workman's compensation coverage is much more extensive in North Dakota. ADA paratransit trips on both sides of the Red River can be served by buses operated by either system.

The two systems work closely to coordinate service changes. They hold joint informational meetings ahead of public hearings. MATBUS has a coordinating board with representatives of both cities. There also is a joint citizen/government advisory board.

Transit staffs have learned to work well cooperatively together. Moorhead is more of a "small town," while Fargo has more of a "big town" attitude.

Evansville-Henderson Cross River Service Summary of Peer Property Interviews

8 Dover-Portsmouth NH/Kittery-Berwick ME (Piscatagua River) July 16, 2013

Overall

Michael Grovak interviewed Jeremy LaRose, Manager of Operations and Planning for COAST, and his assistant Brian Deguzis. COAST (www.coastbus.org) is a regional coordination agency governed by a board of directors made up of representatives from all towns served by COAST routes, as well as partner or community organizations. Three numbered routes (1, 2 and 41) provide various levels of service from New Hampshire into Maine. In addition, COAST recently began to operate the Clipper Connection, an employee-oriented service to a major shipyard.

Ridership Levels and Service; Equipment

Ridership varies wildly. Route 1 local service has a one mile loop into Maine. This service has operated for some time. It averages 240/day with 13 trips hourly on all portions of the route. COAST's busiest route is Route 2, which functions as the "backbone" of the COAST system. However, it operates only 1 trip daily into Maine. The Clipper Connection a recent addition – specifically designed for Naval Shipyard at the New Hampshire/Main border. It serves civilian employees at the Shipyard. Service began in January 2012. Last month it served 191 riders/day. Ridership is very high with a limited (1 or 2 scheduled times daily on each of three routes). Sometimes loading requires that a second bus be scheduled for a specific trip (as would be done by an intercity service such as Greyhound). Most of buses are Gillig or New Flyer transit buses which seat 35 to 40.

Service History

Route 1 service started about 1986/7. Originally it was employment-focused, carrying people from New Hampshire to a tannery in Maine. Its focus now is to provide access to employment in Portsmouth NH.

Revenue and Cost Sharing

The Clipper Connection service is different from rest of the system. Funding for COAST's core system is provided based on an annual assessment of its members. This assessment is based upon miles and hours of service, as well as ridership.

By contrast, the Clipper Connection is an employer-based premium service with minimal stops. It also provides a "guaranteed ride home" to Shipyard workers. Fares (which are high compared to other COAST services) cover out-of-pocket operating expenses. (Regular COAST fares are \$0.50 for local routes and \$1.50 for regional routes; fares for the Clipper Connection are \$3.00 for a cash fare or \$120 for a monthly pass). The Division of the Navy provided funding to start the service, which served as a match for a CMAQ grant. The area was a non-attainment area until this past year, when it became a maintenance area for air quality purposes.

Lessons Learned

Employment-based services have offered the best opportunities for service expansion in recent years. COAST's cross-river services are employment-oriented. There also is a demand for tourist-related service in coastal areas.

Evansville-Henderson Cross River Service Summary of Peer Property Interviews

It is much easier to work with larger employers. For example, the Naval Shipyard had a directive to be more environmentally-conscious. The Naval Shipyard hired a sustainability coordinator. Mr. LaRose met him at a sustainability conference. The Shipyard is on an island in the harbor and had some significant traffic issues. There are only 2 ways in or out of the island, and one of those gates will be under construction for next several years. Their meeting was a convenient matter of timing. There also was an unused CMAQ grant which could be used for the project.

Overall, employer-initiated services work better. When COAST initiates service, it is a harder, more drawn-out process.

The river is a major barrier to travel in their area. There are three bridges between Portsmouth and Kittery, and one is quite a distance north (upstream). One each of the two remaining bridges will be undergoing rebuilding and be out of service for several years. The respective DOTs did not provide support for alternative services when taking these bridges out of service.

9. [Portland OR/Vancouver WA \(Columbia River\) June 3, 2013](#)

Overall

Michael Grovak and Laurie Miller interviewed Tom Shook, Senior Service Planner for C-TRAN (<http://www.c-tran.com>), the public transit provider in Vancouver WA. Service across the Columbia River into Portland is provided by 7 C-TRAN commuter routes (105, 134, 157, 164, 177, 190 and 199) which provide weekday peak period service to/from Portland; 4 limited routes (41, 44, 47, and 65) which provide weekday peak period service to/from Portland; and one local route (4) which provides service 7 days/week to Portland. C-TRAN, the Clark County Public Transportation Benefit Area, serves the greater Vancouver WA community. Vancouver is located directly across the Columbia River from Portland OR. The Portland transit system (Tri-Met) does not provide service north of the Columbia River.

Ridership Levels and Service; Equipment

No information on ridership levels was provided. Service is provided by standard transit coaches.

Service History

C-TRAN was started in the early 1980's. Portland is not part of its service area. Portland is a focal point for commuter trips from the Vancouver area, especially after the Portland light rail (the MAX system, short for Metropolitan Area Express) was opened in stages beginning in the mid-1980's.

Revenue and Cost Sharing

C-TRAN has two types of fares – C-zone and All-zone. There is also a regional fare medium (pass) which is valid for use on both C-TRAN and Tri-Met light rail or bus. A survey several years ago indicated that most C-TRAN riders use the MAX system. On this basis, Tri-Met has requested a share of revenues from pass sales purchased in the C-TRAN service area. Mr. Shook acknowledged that Tri-Met's position is value. Tri-Met has a position about what annual amount of C-TRAN pass sales it considers its "fair share." While C-TRAN has begun making annual payments to Tri-Met, it is less than what Tri-Met

Evansville-Henderson Cross River Service Summary of Peer Property Interviews

believes it should receive. The system fareboxes are being updated as part of a regional fare collection system. When this system is in place, it will establish the basis for further negotiations on funding. C-TRAN operates into one of the MAX stations. It pays Tri-Met some costs for maintenance and facility upgrades.

Lessons Learned

The two systems serve areas with different attitudes toward transit, which is reflected in the culture of the two systems. Tri-Met's service area is more receptive to transit. C-TRAN's service area is less so. This has created issues in developing other modes. A mega-project (the Columbia River Crossing, a multi-billion dollar combination of a new I-5 crossing with light rail service into Vancouver) was rejected by voters last year.

10. [Wheeling WV/Bridgeport OH \(Ohio River\) July 16, 2013](#)

Overall

Laurie Miller interviewed Tom Hvidos, Executive Director of the Ohio Valley Regional Transportation Authority (OVRTA), the Wheeling WV transit operator.

Ridership Levels and Service; Equipment

All routes operate Monday through Friday 6am to 6:30pm and Saturday, 6am to 6pm. There are four fixed routes that travel to Bridgeport. These four routes also serve communities north and west of Bridgeport. All Routes connect to one central location in downtown Wheeling. Total ridership for entire system is 421,085. EORTA ridership is 118,836 and OVRTA ridership is 302,249. The majority of riders are senior citizens; very few riders use the service to commute to work. Since increases in free parking in both communities, there has been a noticeable effect upon ridership. The systems use a variety of buses 14 30' medium duty 24 passenger vehicles and 5 Gilligs that can seat up to 27 passengers.

Service History

Service in Wheeling, WV began in the 1860's. Service in Bridgeport began in the early 70s as an employee owned system to bring workers from Bridgeport to Wheeling. In the 1975 this operation ceased for financial reasons, and a year later it was restored by the City of Bridgeport. EORTA is staffed by the OVRTA Authority; however, the service is under the direction of its own board. The two transit boards work really well together and it has been very beneficial to have only one authority to manage day to day operations

Revenue and Cost Sharing

A memorandum outlines cost sharing to be determined by equally weighing revenue, vehicle miles and vehicle hours. Currently 68% of expenses are funded by OVRTA and 32% by EORTA. Each bus service is responsible for its own capital expenses.

Lessons Learned

Try to keep one authority over the two services. Mr. Hvidos felt that having a single operator makes it easier for the two boards to work together for the collective good of both organizations.

Evansville-Henderson Cross River Service Summary of Peer Property Interviews

11. Weirton WV/Steubenville OH (Ohio River) – Did not respond to inquiries for an interview.
12. LaCrosse WI/La Crescent MN (Mississippi River) June 25, 2013

Overall

Laurie Miller interviewed Keith Carlson, Transit Manager for the LaCrosse Municipal Transit Authority. Route 10 of the La Crosse Municipal Transit Utility (MTU) provides the only service to La Crescent, MN.

Ridership Levels and Service; Equipment

The route uses a 35ft heavy duty transit bus.

Service History

This is a flex route that originally began in 2000 with the operating hours of 6 am to 10 am and 3 pm to 7pm, Monday through Friday. It now operates from 6am to 7pm, Monday through Friday. There is a defined route operating every 60 minutes; however, commuters can call up to 15 minutes prior to the bus arriving at the closest bus stop and the bus will deviate up to two or three blocks from the route to pick up the commuter at their home. The bus will then return back to route.

Revenue and Cost Sharing

La Crescent pays for the service using the formula: (Total Operating Budget for entire system)/(Capital costs/hours of operation for Route 10). For 2013, La Crescent paid \$81.20/hr * 3,128 hrs= \$261,000 – revenue costs of \$248,000 for a total of \$13K. Revenue costs were calculated by dividing the total system revenue by the number of routes. This was done because they could not determine the origins of individual riders.

In 2000, MN provided La Crescent with 90% of the funds to purchase a heavy duty transit bus. La Crosse provided the remaining 10% and leases the bus from Crescent for \$1 a year. At the time, the bus served not only La Crescent but other routes in La Crosse due to the limited availability of Route 10. Since this bus was retired a few years ago, La Crosse has picked up 100% of the tab for a replacement bus.

Lessons Learned

When service started, the FTA required a joint powers agreement, Mr. Carlson provided a copy of the current joint powers agreement. La Crosse completes all paperwork for La Crescent to obtain Minnesota state funding. Mr. Carlson stated that this bus service has really helped mend fences between the two communities and has helped facilitate other major intergovernmental efforts. As a side note from Laurie – Wisconsin places strong emphasis on intergovernmental cooperation and requires this discussion in Comprehensive Plans. It is very common for adjacent communities to share equipment (plows, fire trucks, etc.).

Evansville-Henderson Cross River Service Summary of Peer Property Interviews

13. Louisville KY/Clarksville-New Albany IN (Ohio River) June 28, 2013

Overall

Michael Grovak interviewed Aida Copic, Director of Planning at the Transit Authority of River City (TARC). TARC is the transit operator in Louisville who also provides service to adjacent Indiana communities just north of Louisville. Service is provided by two routes between Louisville and Southern Indiana. Routes 71/ 72 operate 7 days/week; route 82 operates 6 days/week (no Sunday service). Per published route timetables, hours of service on Routes 71 and 72 are 6 am to 10 pm M-F, and 7 am to 9 pm Sat/Sun/Holidays. In addition, TARC operates Route 82, which operates only within Indiana. Its service operates 6 am to 8 pm M – F, and 7 am to 8 pm Sat.

Ridership Levels and Service; Equipment

Local regular service operates across the communities. The communities served are not bedroom communities. There are dispersed origins and destinations. Other than crossing Ohio River, service is strictly local stop patterns. There was some express service until about a year ago. The express services were discontinued then, and only local services are operated now. Route 71 and 72 operate with typical 40-foot transit coaches. Smaller (30 foot) coaches operate on the 82 route. All vehicles are garaged and serviced in Kentucky, and are owned/operated by TARC.

Service History

Service over the Ohio River to Indiana has been operated for quite some time. Ms. Copic has been in Louisville for 15 years, and the service has been provided for at least that long.

Revenue and Cost Sharing

Ms. Copic is unaware of any formal operating agreements for providing this service. The only cost-sharing or funding of which she is aware is the Public Mass Transit Fund (PMTF) provided by the State of Indiana. (Per the INDOT 2011 Public Transit Report, this amounts to \$1.219 million for TARC.)

Lessons Learned

None noted.

Appendix 2

Henderson Connection Study

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1 Introduction – Service Types Evaluated

One of the recommendations of the findings of the *Metropolitan Transportation Plan 2040*¹ was the establishment of a north-south transit route connecting the cities of Evansville and Henderson. This analysis examines the feasibility of this proposed route in detail and recommends a best approach to providing this service.

Three basic approaches to providing service were considered, which were outlined in the 2040 Plan. These included extending or deviating existing fixed routes (from Evansville and Henderson), providing “on call” service between the two downtown transfer terminals in Henderson and Evansville, and providing a regularly scheduled service connecting the two downtown transfer terminals.

The advantages and disadvantages of each are described here. Based upon data obtained during this Comprehensive Operations Analysis (COA) and interviews with staff at both METS and HART, the approach of a regularly-scheduled service connecting the two downtown transfer terminals is regarded as the most cost-feasible approach.

Appendix 1 accompanying this evaluation provides summaries of 12 interviews conducted with peer regions of the country. These peer regions have transit service provided across state lines separated by a major river crossing. Section 9 summarizes the conclusions drawn from these interviews. These conclusions emphasize:

- Hours and days of cross-river service, including ridership levels and trends
- Type of rolling stock used for service
- Operating costs, cost-sharing and revenue allocation
- “Lessons learned,” especially those which may be transferrable to the Evansville-Henderson region

This analysis recognizes that there are significant issues which must be finalized before a service can begin operation. These issues and next steps to implement this service are presented in Section 10.

1.1 Extending or Deviating Existing Fixed Routes

Under this approach, service would be extended from both Henderson and Evansville to an intermediate transfer point (such as Ellis Park). Buses would meet to exchange passengers. This would entail extending an existing route to the downtown transit centers in each city, or deviating an existing route to an intermediate transfer point.

Consultation with staff at METS and HART indicates that extending any existing route would require each operator to add a bus and operator to its schedule during times this service is provided. This is a net increase of two buses and two operators to their combined operations. As is described in Section

¹ Chapter 4, p. 94.

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1.2 of this report, a dedicated express route between both transfer locations would require one bus and operator to provide hourly service.

Deviating an existing route would require adding a bus and operator to that route's schedule. In addition, such a deviation would be in violation of the Service Planning Standards recommended as part of this study (see Appendix B, *METS Service Standards*). These provide that mid-route deviations greater than three minutes will not be permitted. Any deviations of less than three minutes must be justified by comparing the increase in travel time for existing through riders with the number of riders benefitted. A deviation to provide this service would be in the range of 20 minutes.

This scenario also would require in most cases a passenger to make at least one additional transfer to reach a destination. For example, a customer traveling from Henderson would have to make one transfer to a METS bus at a midway point. If that bus did not serve his/her final destination, at least one additional transfer would be imposed.

Compared with other options, this approach to providing service would be more costly (require one bus and operator more than the other two options considered) as well as require nearly all riders to use at least three buses to make their trips. Given these disadvantages, this approach was eliminated from consideration.

1.2 Regular Route Connecting Downtown Evansville and Henderson Transfer Centers

Under this approach, a service would be provided connecting the downtown Evansville and downtown Henderson transfer centers. An example of such a route is provided in Figure 1 below.

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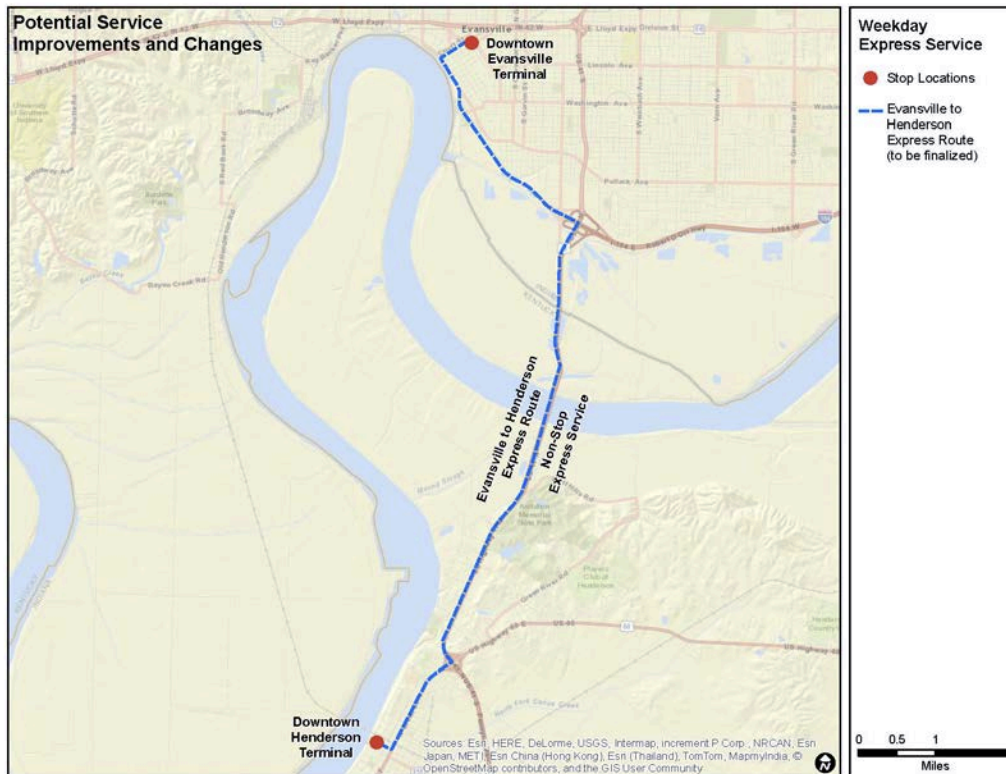


Figure 1 – Evansville-Henderson Express Service

Preliminary field checks indicate that a single vehicle and operator could operate non-stop between the METS and HART downtown transfer terminals and provide hourly service. All HART routes serve its downtown transfer terminal, and 12 of METS 17 daytime routes (all except routes 14, 15, 16, 19 and 23) serve its downtown transfer terminal. This approach would provide service on a “memory schedule” basis.² There would be a direct connection between all HART routes and the significant majority of METS routes.

1.3 On-Call Service Connecting Downtown Evansville and Henderson Transfer Centers

As a variation of service operating on a fixed schedule between the Evansville and Henderson transfer centers, the *Metropolitan Transportation Plan 2040* suggested an option by which is provided on an “on-call” basis connecting the two locations. In evaluating this option, the following characteristics of such a service were considered.

² “Memory schedule” refers to a route schedule where a bus is scheduled to arrive or depart at the same set time or time(s) during a given span of service. This service pattern makes it easy for riders to know when a bus is expected without consulting a printed or electronic schedule. For example, a route scheduled to arrive at a given stop at 6 minutes after each hour (e.g., 8:06, 9:06, 10:06, etc.) operates on a memory schedule.

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- The operating cost of such a service pattern would be similar to that for a connecting service operating on a fixed schedule. This option still would require a dedicated bus and operator during all hours of service. Savings in fuel and mileage-related costs would be minor.
- This service pattern would have lower productivity than a service operating on a fixed schedule. A fixed-service schedule would serve multiple individuals and groups on at least some trips. An on-call service has much lower potential for trip-sharing by unrelated parties.
- An on-call service would be less convenient for the riding public to use and understand than a fixed-schedule service. Customers would need to call to schedule service. The bus arrival time could be anticipated only within an approximate window, which would make scheduling any connections to or from other service difficult.

An on-call service offers no significant cost savings, but would be more difficult to use. Based upon these considerations, this service option was eliminated from consideration.

2 Evaluating Demand for Improved Service

Both METS and HART staff have indicated that ridership demand for this service will consist largely of Henderson residents who wish to access employment, school, medical services, shopping and recreational services in Evansville. This feedback indicated that the desire for travel to Henderson by Evansville residents will, by comparison, be relatively small. This feedback was based on METS and HART staff assessments that there is a greater variety of such destinations (especially school, medical and shopping) in Evansville than are available in Henderson.

This input is borne out by three data sources used in this study. These include:

- Only 1 of 179 (0.6%) website general comments received from the beginning of the project through May 21, 2014 cited the need for an Evansville-Henderson connection. These general website comments are described and summarized in Section 4.1 of the main Task 3 report.
- Only 3 of 291 (1.0%) responses to the web-based customer survey cited the need for an Evansville-Henderson connection. This web-based customer survey is described and summarized in Section 4.2 of the main Task 3 report.
- Only 5 of 1,914 (0.3%) responses to the on board rider survey documented in the Task 1 report cited the need for an Evansville-Henderson connection.

While the first two sources cited (the website general comments and web-based customer survey) were accessible to both Evansville and Henderson residents, they are more likely to be used by Evansville residents. In combination, these sources support the input that Henderson residents wishing to travel to Evansville will represent the core market for a transit connection between the two cities.

3 Identification of Service Provider

The capacity of both METS and HART to operate this service was evaluated, as well as the costs of providing the service. During interviews with both METS and HART staff early in this project, each indicated that METS is better positioned (in terms of being able to provide an added bus and operator(s)) to provide this service. As discussed in Section 2.1 of the main Task 3 report, as of January 1, 2015, the METS fixed-route fleet had 36 buses, which is 12 more than the 24 buses required for peak service. These statistics need to be tempered with consideration of the age and condition of the METS fleet identified in this same section of the main Task 3 report.

Recent National Transit Database (NTD) reports for METS and HART were analyzed to compare the operating costs for each operator to provide fixed route service. The most recent HART NTD report was for reporting year 2012; its statistics were compared to METS’ for the same reporting year. Table 1 compares these costs, and calculates total operating costs per vehicle hour of service operated.³ These computations were made both for fixed-route and demand-response services.

Table 1 - Cost Comparison - 2012 NTD Reports		
	METS	HART
Fixed Route		
Total Operating Costs	\$ 5,062,239	\$ 1,245,166
Total Riders	2,041,247	134,930
Total Vehicle Hours	95,467	10,268
Cost/Rider	\$ 2.48	\$ 9.23
Cost/Vehicle Hour	\$ 53	\$ 121
Demand Response		
Total Operating Costs	\$ 1,615,990	\$ 311,292
Total Riders	45,468	16,524
Total Vehicle Hours	24,977	9,966
Cost/Rider	\$ 35.54	\$ 18.84
Cost/Vehicle Hour	\$ 65	\$ 31
Sources: METS 2012 NTD Report (07-08-13); HART 2012 NTD Report (01-23-13)		

Somewhat unexpectedly, HART’s costs for providing fixed-route service (on a per vehicle-hour basis) are more than twice METS’ costs.

Based upon this cost comparison, as well as input from both METS and HART staff, our recommendations are that Evansville-Henderson service be operated by METS. A choice of operator, whether METS or HART, will require that the operating entity address the following issues:

- How will costs and revenues for a jointly-operated service be allocated? See Section 5 for further discussion.

³ 65 – 70% of operating costs (bus operator wages and fringes, other operating personnel (e.g., dispatchers) wages and fringes vary directly with vehicle hours of operation.

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- Will the Americans with Disabilities Act (ADA) require that accessible alternative service be provided? As is discussed in Section 6, the Federal Transit Administration recently issued Americans with Disabilities Act Circular C 4701.1 as a draft circular for public comment. Issuance of a final circular is pending as of this time. It may require that accessible alternative service be provided for an Evansville-Henderson connection. This has significant cost implications.
- Operations supervision for serving passengers using two different systems is discussed in Section 7.
- Are there any legal restrictions on the ability of the operator to provide service in another state? See Section 8 for further discussion.

Section 10 summarizes our findings and identifies steps required to implement this service. It will require significant coordination between

4 Forecasted Costs, Fare Revenues and Ridership

Costs presented below use the cost allocation model determined for METS earlier in the COA. This cost allocation model used a three-year average of costs⁴ which varies by bus vehicle hour and bus vehicle mile. These costs also assume that administrative and management costs are fixed, and will not change due to implementation of this service.

Passenger forecasts were based upon optimistic assumptions about what proportion of existing HART riders would use service to Evansville. Input from stakeholders has identified the following key market factors. Both of the local operators (METS in Evansville and HART in Henderson) foresee that most or nearly all of the riders would be Henderson residents. There are trip generators (major shopping, medical services) available in Evansville which are not found in Henderson. By contrast, there would be relatively few destinations in Henderson which would not already be available within Evansville. Henderson residents would want to come to Evansville for a variety of occasional trip purposes.

Input from METS and HART staff also indicates that work trips would not be a major trip purpose. This is based in part upon the hours of service for HART fixed-route service. In particular, the last bus on HART routes leaves the downtown Henderson Transfer Station at either 4:30 or 5:00 pm. A resident of Henderson who works in Evansville would have to leave work in Evansville no later than 3:30 to 4:00 pm, depending upon to which HART route he/she wished to connect. The hours of HART fixed-route service significantly restrict the ability for a Henderson resident to use a cross-river service for a work commute.

The most recent HART National Transit Database (NTD) report (2012) shows 135,000 annual riders on HART fixed route service, which is approximately 480 on a typical weekday. A best-case forecast would

⁴ Costs which vary by vehicle hour include operating salaries and fringe benefits. Costs which vary by vehicle mile include maintenance wages and fringes, contracted services, maintenance parts and supplies, fuel and tires. Costs are taken from METS NTD reports for 2011 – 2013.

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provide that up to 5% of these riders would make a two-way trip to Evansville and back. This provides for an estimated 50 daily riders on a Henderson-Evansville connecting route.

Over 75% of HART riders now ride for either a senior citizen or disabled fare, which is \$0.25⁵. For purposes of projecting fare revenues, it is assumed that half of riders on this cross-river service pay an adult fare, and half pay a discount fare. The full fare for this cross-river service is proposed at \$1.00, with a \$0.50 fare for senior citizen, disabled and student fare riders⁶. This results in an average fare revenue of \$0.75 per ride. To the extent larger number of disabled or senior citizen riders use the connection to Evansville, the fare revenues assumed here would be overstated.

Table 2 shows forecasted ridership, fare revenue, and operating cost for an Evansville-Henderson bus service. It is assumed to operate weekdays only for 10 hours per day.

Service	Daily						Annual		
	Hours	Miles	Op. Cost	Ridership	Revenue	PK Buses	Ridership	Revenue	Op. Cost
Evansville-Henderson Express	10	220	\$ 580	50	\$ 38	1	12,800	\$ 9,600	\$ 147,900

Forecasted revenues are a low proportion (6%) of out-of-pocket operating costs. As a comparison, the Task 1 report for this project (Table 2.1) shows that over a five-year period, METS fixed-route service overall had fare revenues equal to 22% of total operating costs. Note also that this five-year revenue-cost comparison includes all administrative and managerial costs, which are not included in the cost estimate for the Evansville-to-Henderson service.

5 Cost and Revenue Allocation

Under the proposed operating arrangement, METS would operate a service primarily for the benefit of residents of Henderson. As noted in the previous section, this service would require annual funding of about \$100,000 to defray out-of-pocket operating costs. Following is a summary of key issues which would have to be negotiated and reflected in a formal agreement between the cities of Evansville and Henderson.

- How will users of the system be identified as Evansville or Henderson residents?
- What factors, in addition to the home city of residents, will be used to allocate operating costs and fare revenues?
- How will operating costs be calculated? Will only direct operating costs be allocated, or will there be an allocation of managerial and administrative costs?

⁵ Data provided by HART showed the following percentages of riders by fare category for all of January and February, 2013. Adults 18%; Senior Citizens 16%; Disabled 61%; and Student 5%.

⁶ These are twice the HART fixed route fare of \$0.50 for adults and \$0.25 for senior citizens and the disabled.

TASK 3 REPORT – EVALUATION OF EVANSVILLE-HENDERSON SERVICE OPTIONS

- How will revenues be allocated between the two systems? This includes consideration of ridership reporting for purposes of FTA Section 5307 fund allocation, as well as calculation of METS’ allocation of the Indiana Public Mass Transportation Fund (PMTF).
- Will contributions by the City of Henderson be considered as “locally derived income” (LDI) for purposes of PMTF allocations to METS?
- If required (see Section 6) who would provide alternative service to satisfy requirements of the Americans with Disabilities Act (ADA)? How would the costs of such service be allocated?
- As described in Section 2.1 of the Task 3 report, METS has significant fixed route fleet age problems. Section 2.1 recommends an aggressive program to bring the METS fleet into a state of good repair. How will the vehicle required for this service be funded? This is an issue both with regard to allocation of FTA Section 5307 funding, as well as provision of local matching funds.

6 Americans with Disabilities Act (ADA)

The high percentage of HART fixed-route riders paying a disabled fare is a strong indication that demand for ADA alternative service could be considerable, if such service were offered. In one of the interviews of peer region properties (Lower Savannah Council of Governments), the interviewee advised that we consult FTA regulations regarding commuter service vs. regular fixed-route service. Commuter routes are not required to provide alternative point-to-point transportation under the ADA.

FTA issued a draft circular in February, 2014⁷ (Americans with Disabilities Act Circular C 4710.1) which represents a major revision to its guidance on transit system implementation of the ADA. Comments on this circular were due in February, 2015. A finalized circular has not yet been issued. Following is the text from this draft circular governing commuter operations.

8.2 Requirement for Complementary Paratransit Service – § 37.121

The ADA requires public entities (transit agencies) operating fixed route transit to provide paratransit service that “complements” their fixed route services, known as complementary paratransit service. Transit agencies may operate the service directly or they may use contractors. This requirement applies to all fixed route bus and rail transit service except for commuter bus, commuter rail, and intercity rail (Amtrak) services, which are specifically exempt (§ 37.121(c)). These exempt modes (commuter bus, commuter rail, and intercity rail) do not factor into development or modification of policies for fares, service area, or service hours.

Commuter bus has a specific definition in the regulations, as follows: Commuter bus service means fixed route bus service, characterized by service predominantly in one

⁷ Draft circular may be viewed at http://www.fta.dot.gov/documents/Proposed_ADA_Circular_Amendment_1.pdf.

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direction during peak periods, limited stops, use of multi-ride tickets, and routes of extended length, usually between the central business district and outlying suburbs. Commuter bus service may also include other service, characterized by a limited route structure, limited stops, and a coordinated relationship to another mode of transportation (§ 37.3).

At the request of FTA, during a complaint investigation or other oversight activity, transit agencies must be able to substantiate how a particular service meets the definition of commuter bus.

Our assessment is that the wording in the draft circular would place the Evansville-to-Henderson service in an uncertain status, regarding whether it is necessary to provide alternative point-to-point service.

- The typical example cited for commuter bus service has some of the characteristics of the recommended Evansville-to-Henderson bus service. These include service to a central business district and (possibly) a route of extended length.⁸ However, our assessment is that it is unlikely to serve peak-period commuter trips (as envisioned by the draft circular); ridership is more likely to be spread throughout the day.
- The alternative framework (service connected to another mode of transportation) is not applicable in this case.

A final determination of whether this service would be considered a commuter service requires coordination with FTA Region 7. It would involve consideration of requests for new trips which cannot be made via transit at present (e.g., Henderson residents going to Evansville for medical services). Also, it is unlikely that FTA would provide a firm opinion until the draft circular is finalized. Accordingly, we provide an assessment of the costs of ADA alternative service (if required), noting that a determination whether it is required entails further FTA coordination.

If complimentary ADA service is required, its costs (as a percentage of the fixed route service cost) will be significant. In the event that ADA service must be provided, one option may be for METS to provide the fixed-route service, and HART provide the ADA service.

As a placeholder cost estimate, the following assumptions were made to estimate the cost for METS to provide ADA alternative service.

- These trips would be significantly more expensive to serve than existing METS Mobility trips.
 - They generally would require deadheading (no passengers) for one leg of a round trip.
 - In addition, they would be much longer than the typical METS Mobility trip.

⁸ The proposed route would be longer than those presently operated by HART or METS. The longest METS routes (4 – Stringtown and 10 – Lynch) have one-way mileages of 7.5 to 8 miles. This proposed Evansville-to-Henderson route would have a one-way mileage of approximately 11 miles.

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- As noted in Section 5.3.3 of the Task 3 Report, METS Mobility cost/rider in 2014 was \$41.71.
- Due to the longer trip length and deadheading of vehicles, the cost for providing alternative Mobility service to Henderson is forecasted at \$80 to \$100 per rider.
- If only two round trips/day were provided Mobility service, the added cost for Mobility service would be \$320 to \$400 per day, or approximately \$82,000 to \$102,000 annually. This is in addition to the net cost/year of the service itself (approximately \$143,000 – see Table 2).

7 Operations Coordination

Operational coordination between METS and HART must be considered as part of any cross-river service. Key coordination items include:

- Joint dispatching efforts.
 - How will bus departure “holds” be managed to meet trips from two different bus systems?
 - How will service delay information be provided to both systems?
- Customer information.
 - How will fare, schedule and travel information be provided to customers in both Evansville and Henderson?
 - Will toll-free telephone access to customer information be provided to callers in both states?

8 Legal and Liability Issues

Both METS and HART presently are operated as departments of city government. Each city’s legal department will need to provide input regarding legal issues associated with operating within another state. These issues will include liability for out-of-state operations as well as the authority to provide service to residents of other jurisdictions. Guidance also will be needed regarding the kind of formal written agreements needed to implement service.

The peer interviews included within Appendix 1 describe a range of ways in which formal service coordination across state lines is accomplished. In some cases, a formal service contract provides for service into another community to be fully underwritten by that community. In some cases, there is no formal agreement associated with cross-state operations.

Section 5 of this report provides details of cost and revenue sharing issues which also will be key discussion points in any negotiations between METS and HART.

9 Peer Interviews

The interviews in Appendix 1 provide the following information for each peer region:

TASK 3 REPORT – EVALUATION OF EVANSVILLE-HENDERSON SERVICE OPTIONS

- Overall description of cross-river service
- Ridership and service levels; equipment used
- History of cross-river service
- Cost and revenue sharing
- Key “lessons learned”

In addition to items already noted in this report, the following key points from Appendix 1 are noted:

- Ease of understanding and use are key to successful service. This extends to an understandable fare structure and the “seamless” nature of service across properties.
- There are a wide range of cost- and revenue-sharing arrangements.
- It is important that multiple properties involved in such service arrangements go beyond basic communication to a high level of interagency cooperation.
- Service is provided by many vehicle types, ranging from smaller, cutaway-type vehicles to 40 foot transit coaches.
- In working with employers for work-based trips, seek to work with a few large, key employers.
- There is at least one example of a flex-type routing. However, nearly all services operate with fixed routes and schedules.

One final key point is perhaps the most important. In peer regions, the two urban areas/downtowns both are proximate to the river separating them. This minimizes the length of “unproductive” route segments⁹. In the case of an Evansville-to-Henderson connection the two downtowns are separated by a significant distance. In addition about one-third of the 11.1-mile distance assumed (3.6 miles) between the two downtowns consists of the Ohio River, floodplain and wetlands. The low farebox recovery (4% - see Table 2) forecasted for this service is due in large part to these local geographic circumstances, which are unlike those found in peer regions. Also, additional stops or route deviations are likely to increase the number of buses and operators needed for this service. These costs are based upon the ability for one bus and operator to make a round trip (serving both downtown transfer centers) in one hour.

10 Summary and Next Steps

In summary, the proposed Evansville-to-Henderson service would have the following key ridership, cost and revenue attributes. These forecasts are based upon operation for 10 hours daily, weekdays only.

- Ridership (Daily/Annual) – 50/12,800
- Fare Revenue (Daily/Annual) - \$38/\$9,600
- Daily/Annual Operating Cost - \$580/\$147,900

⁹ The “unproductive segment” of such routes included the actual river crossing, along with access to and from the bridge crossing the river. This is the area where the service deadheads, and does not serve passengers boarding or alighting. The unproductive segment of an Evansville-to-Henderson service would be much longer than those in peer regions.

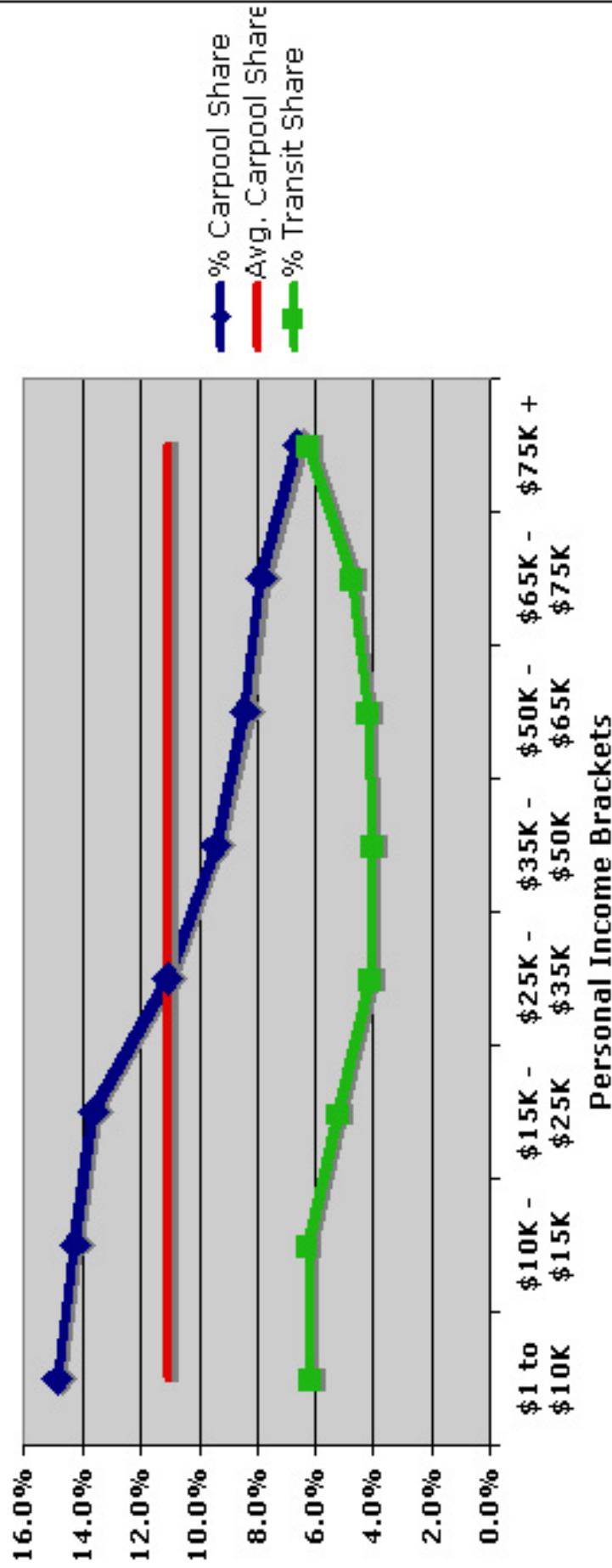
TASK 3 REPORT – EVALUATION OF EVANSVILLE-HENDERSON SERVICE OPTIONS

- Additional daily/Annual Cost for ADA Service (if required) - \$320 – \$400/\$82,000 – \$102,000

Implementing this service will require significant follow up consultations among the cities of Evansville and Henderson, as well as the Evansville MPO (EMPO). Key items to be addressed in these discussions have been enumerated above. In summary, these include:

- Designated operator for the service
- Fare structure
- Cost and revenue sharing
- Legal and liability issues for interstate operation
- Need to provide alternative ADA service

National Average Carpool Mode Share, and Carpool & Transit Mode Shares by Personal Income, 2007



Source: American Community Survey, 2005-2007

Appendix E

Ridership Forecasting Documentation

Memo

To: File

From: Michael Grovak

cc:

Date: June 11, 2015

Re: Ridership Forecasting – METS Service Plan

This memo documents the assumptions used to forecast ridership for service changes in the Five Year Service Plan options in the Evansville Transit Comprehensive Operations Analysis (COA).

The scope of work for the contract envisioned a regression-based model specific to the METS system (Task 3.1). This task envisioned a model which would predict ridership primarily as a function of demographic information. This information would include:

- Population (overall, as well as by age cohort)
- Number of households
- Employment (overall, as well as by employment type)
- Income levels
- Auto ownership levels

As the analysis proceeded, the Lochmueller Group study team learned of recent FTA research published by the Mineta Transportation Institute. The report, *Investigating the Determining Factors for Transit Travel Demand by Bus Mode in US Metropolitan Statistical Areas* (B. Alam, H. Nixon, Q. Zhang), Report 12-30, May 2015. It analyzed data from 273 of the 358 Metropolitan Statistical Areas (MSA) in the United States. Using Ordinary Least Squares (OLS) regression, it determined that nearly all external factors (such as those cited above) are not statistically significant predictors for transit ridership. It found the following for the specific indicators proposed for forecasting METS ridership.

Evaluation of Regression Coefficients, External Factors			
External Factor	Regression Coefficient		
	Expected	Actual	Significant
Median HH Income	Negative	Negative	No
% Carless HH	Positive	Negative	No
Population Density	Positive	Negative	No
Vehicles/HH	Negative	Negative	No

Source: Table 4, Alam, Nixon, Zhang. *Mineta Institute Technical Report 12-30*

Ridership Forecasting – METS Service Plan
June 11, 2015
Page 2 of 3

Two of the FTA findings are cited here. First, as cited on p. 35 of the report, “The study found that certain variables that many transit planners view as important determinants of transit demand did not have significant impacts on transit demand.” While some of these variables behaved as expected, (for example, transit ridership is negatively related to levels of median HH income) their predictive value is not statistically significant. Second, in some cases these external variables have an unexpected relationship to transit ridership. Citing again p. 35 of the report, “On the other hand, population density and the percentage of households without cars show insignificant impacts on transit demand in the opposite of the expected direction.”

This recent FTA research indicates that the approach anticipated for this study (a regression model using variables cited above) is not a reliable approach to forecasting the ridership effects of service and fare changes. There is a wide body of published transit planning literature which provides an alternative approach to forecasting ridership for transit service changes. For several decades, there have been a number of studies published documenting transit fare and service elasticities.

An elasticity is a measure of the percentage change in transit ridership, given a one percent change in a service attribute (or fare). For example, if an overall travel time elasticity is -0.4, this would indicate that for every 1% increase in total travel time, there would be a -0.4% decrease in transit ridership. A review of published transit planning literature service elasticities applicable to this study.¹

Appendix 1 of this report provides a table with a comprehensive summary of transit ridership elasticities taken from a number of studies. This study has determined detailed ridership profiles on the route and route segment basis, as well as information from the origin-destination survey regarding the unlinked components of linked trips. Having this detailed information available provides a firm basis to apply these elasticities, where appropriate, to forecast ridership changes for the broad range of service improvements evaluated. Other analytical procedures were used to forecast some of the ridership changes due to service improvements.

More Frequent Service

The onboard survey documented in the Task 1 report determined the following makeup for trips made on METS fixed-route service.

- 26% use only one bus
- 57% use two buses
- 17% use three or more buses

Given that about three-quarters of those traveling on fixed-route buses use two or more vehicles, applying a straightforward headway elasticity would be somewhat problematic. In addition, all of the available headway elasticities were quasi-experimental. By comparison, the elasticity summary cited in Appendix 1 has a robust sampling of vehicle-mile elasticities (17 total) for bus service at all hours. The average value of the vehicle mile elasticities for these 17 samples is +0.69, meaning that a 1% increase in vehicle miles of service on average leads to a 0.69% increase in ridership. This was applied to the ridership counted on each route during the 10 hours when more frequent service would be operated (7 am to 5 pm, weekdays).

Sunday Service

Ridership and cost forecasts for Sunday service assumed that service would be operated for 12 hours, between 7 am and 7 pm Sundays. Weekday ridership during this same time period was tabulated for each route proposed for Sunday service. Sunday ridership was forecasted to be 30% of weekday ridership during that same period of time.

¹ The use of fare elasticities to forecast changes in ridership and revenue for fare policy options is documented in Section 5.3.2 of the main report.

Evening Service Weekdays and Saturdays

Ridership and cost forecasts assumed that added evening service on weekdays and Saturdays would be provided until midnight, rather than end at 6 pm. Based upon the ride counts taken, the number of passengers per vehicle hour was determined for each route proposed for evening service. Evening service was forecasted to serve the 0.6 times the number of passengers per vehicle hour that were served on the route during the day. This rate was estimated by comparing the average number of passengers per hour served on the 4 – Stringtown and 7 – First Avenue routes (24.3 passengers per hour) with the number served on the evening-only 18 – First/Stringtown Route (17.0 passengers per hour). Route 18 operates during the evening in the same area served by routes 4 and 7 during the day. Route 18's passengers/hour actually is 0.70 of the daytime passengers/hour on Routes 4 and 7. The 0.6 factor is used as a conservative estimate to forecast evening ridership.

New Crosstown Service

Three of the proposed new crosstown routes (6 – Walnut, 10 – Lynch and 11 – Morgan) represent two way operation on these streets, replacing two routes (6 – Walnut and 10 – Lynch) which operate in large, one-way loops. The passengers served per hour on two of the new crosstown routes (6 – Walnut and 10 – Lynch) were forecasted as equal to the passengers/hour on the corresponding present route (20.4 and 27.0, respectively). Passengers served per hour on the 11 – Morgan Crosstown were forecasted at the average of the rates on existing routes 6 and 10 (23.7).

The other two proposed crosstown services (20 – Oak Hill/Weinbach and 21 – Green River Road) were forecasted to serve 15 passengers per hour. This is roughly two-thirds of the passengers/hour on the other three crosstown routes. It was specified as somewhat lower since these crosstown routes will not serve the downtown transfer center.

Route Consolidations

These service changes assumed that one-fifth (20%) of existing riders on Routes 12 – Howell and 15 – East Connection no longer use METS service. This is a conservative estimate, since the other nearby, parallel routes (5 – Mary/Tekoppel and 14 – Shoppers Shuttle, respectively) will continue to offer service.

Route Realignment

Reductions in ridership were forecasted as one-third of riders on portions of routes which no longer would be served. Increases in ridership were forecasted as one-sixth of "through" riders which no longer would be have to ride significant additional time on an indirect route.

Express Service

Express service between a proposed Newburgh/Lawndale Park and Ride and the Downtown Transfer Center (4 trips in the morning peak and 4 trips in the afternoon peak) was forecasted as serving 15 riders/trip. Express service to USI was specified as operating hourly between USI and the Downtown Transfer Center (12 trips total), serving 10 riders/trip. The fare on both of these services was specified at a premium fare of \$2 for a one-way trip, with a free transfer to another METS route.

Appendix 1

Summary Service and Fare Elasticities

Table 7-1 Summary of transit fare elasticities

Aggregate fare elasticities		
Estimation method:		
Quasi-experimental	-0.28 ± 0.16	(67 cases)
Time-series	-0.42 ± 0.24	(28 cases)
Cross-sectional	-0.53 ± 0.35	(28 cases)
Type of fare change:		
Fare increase	-0.34 ± 0.11	(14 cases)
Fare decrease	-0.37 ± 0.11	(9 cases)
Fare change to fare-free:		
Within CBD only	-0.52 ± 0.11	(4 cases)
Systemwide	-0.30 ± 0.17	(6 cases)
City size:		
Populations greater than 1 million	-0.24 ± 0.10	(19 cases)
Populations 500,000 to 1 million	-0.30 ± 0.12	(11 cases)
Populations less than 500,000	-0.35 ± 0.12	(14 cases)

Table 7-1 (continued)

Disaggregate fare elasticities		
Transit mode:		
Bus	-0.35 ± 0.14	(12 cases)
Rapid rail	-0.17 ± 0.05	(10 cases)
Commuter rail	-0.31	(1 case)
Trip length:		
London: bus		
Trips less than 1 mile	-0.55	(1 case)
Trips between 1 and 3 miles	-0.29	(1 case)
London: rapid rail		
Trips between 1 and 3 miles	-0.25	(1 case)
Trips greater than 3 miles	-0.60	(1 case)
Route type:		
Radial-arterial	-0.09 ± 0.02	(3 cases)
Intrasuburban	-0.31 ± 0.05	(3 cases)
Systemwide	-0.24 ± 0.08	(3 cases)
CBD-oriented	-0.40 ± 0.04	(3 cases)
Non-CBD-oriented	-0.62 ± 0.09	(3 cases)
Systemwide	-0.55 ± 0.08	(3 cases)
Intra-CBD	-0.52 ± 0.11	(4 cases)
Systemwide	-0.43 ± 0.08	(3 cases)
Time period:		
Peak	-0.17 ± 0.09	(5 cases)
Off-peak	-0.40 ± 0.26	(5 cases)
All hours	-0.29 ± 0.19	(5 cases)
Trip purpose:		
Work	-0.10 ± 0.04	(6 cases)
School	-0.19 to -0.44	(3 cases)
Shop	-0.23 ± 0.06	(5 cases)
Income group:		
Less than \$5,000	-0.19 ± 0.10	(2 cases)
\$5,000 to \$14,999	-0.25 ± 0.11	(4 cases)
More than \$15,000	-0.28 ± 0.13	(4 cases)
Age group:		
1-16 years	-0.32 ± 0.01	(2 cases)
17-24 years	-0.27 ± 0.03	(2 cases)
25-44 years	-0.18 ± 0.10	(2 cases)
45-64 years	-0.15 ± 0.03	(2 cases)
More than 65 years	-0.14 ± 0.02	(2 cases)

Source: (Mayworm, Lago, and McEnroe [1980].)

Table 7-2 Summary of transit service elasticities

Headway elasticities		
Bus (quasi-experimental):		
Peak	-0.37 ± 0.19	(3 cases)
Off-peak	-0.46 ± 0.26	(9 cases)
All hours	-0.47 ± 0.21	(7 cases)
Commuter rail (quasi-experimental):		
Peak	-0.38 ± 0.16	(5 cases)
Off-peak	-0.65 ± 0.19	(5 cases)
All hours	-0.47 ± 0.14	(5 cases)
Commuter rail (nonexperimental):		
All hours	-0.47 ± 0.11	(4 cases)
Vehicle-miles elasticities		
Bus (quasi-experimental):		
All hours	+0.63 ± 0.24	(3 cases)
Bus (nonexperimental):		
Peak	+0.33 ± 0.18	(3 cases)
Off-peak	+0.63 ± 0.11	(3 cases)
All hours	+0.69 ± 0.31	(17 cases)
Rapid rail (nonexperimental):		
Peak	+0.10	(1 case)
Off-peak	+0.25	(1 case)
All hours	+0.55	(1 case)
Total travel-time elasticities		
Bus (nonexperimental):		
Peak	-1.03 ± 0.13	(2 cases)
All hours	-0.92 ± 0.37	(2 cases)
Bus and rapid rail (nonexperimental):		
Off-peak	-0.59	(1 case)
In-vehicle-time elasticities		
Bus (quasi-experimental):		
Peak	-0.29 ± 0.13	(9 cases)
Off-peak	-0.83	(1 case)
Bus (nonexperimental):		
Peak	-0.68 ± 0.32	(7 cases)
Off-peak	-0.12	(1 case)
Rapid rail (nonexperimental):		
Peak	-0.70 ± 0.10	(2 cases)
Bus and rapid rail (nonexperimental):		
Peak	-0.30 ± 0.10	(2 cases)
All hours	-0.27	(1 case)
Commuter rail (nonexperimental):		
All hours	-0.59 ± 0.28	(9 cases)

Table 7-2 (continued)

Total out-of-vehicle-time elasticities		
Bus and rapid rail (nonexperimental):		
All hours	-0.59 ± 0.15	(3 cases)
Walk-time elasticities		
Bus (nonexperimental):		
Peak	-0.26	(1 case)
Off-peak	-0.14	(1 case)
Wait-time elasticities		
Bus and rapid rail (nonexperimental):		
Peak	-0.20 ± 0.07	(4 cases)
Off-peak	-0.21	(1 case)
All hours	-0.54	(1 case)
Transfer-time elasticities		
Bus and rapid rail (nonexperimental):		
Peak	-0.40 ± 0.18	(3 cases)
Number-of-transfers elasticities		
Bus (nonexperimental):		
Off-peak	-0.59	(1 case)

Source: (Mayworm, Lago, and McEnroe [1980].)

NETS

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Appendix F

Website Comments Monthly Summaries

METS Comprehensive Operations Analysis Website Comments Summary for August 2014

Increased Service

There were four commenters to the website in August. Several suggested adding Sunday service. Also, requests were made to add extra hours to the current service.

Route Improvements

One commenter recommended the Howell and Mary Howell go down Middle Mt. Vernon to Boehne Camp to Pearl to Schnucks outbound and Pearl to Boehne Camp to Middle Mt. Vernon to Broadway inbound to increase ridership. Another suggestion was to go through Westwood Apartments, as commenter said the apartment owner had agreed to remove speed bumps and add a bus stop shelter.

Safety

One commenter noted the age and high mileage of some buses, asserting they provided a rough ride, caused air pollution and were unsafe. Commenter noted that roads where there are bus routes should have better maintenance. Commenter stated that walking a half-mile with no sidewalk on a narrow road to the bus stop from Westwood Apartments is dangerous.

Other Considerations

One person complained that on his half-mile walk to the closest bus stop at 5210 Pearl Drive, he passed five bus stop benches and cited Evansville Code 12.05.530 (c) that a bus stop bench is to be at a bus stop designated by the Works Board. Person said the West Connection formerly was designed so a college student could work, eat and shop on Pearl Drive or University Drive and the bus stopped on demand. Now, they have one bus stop on Pearl, don't go down University and won't stop at the Red Bank Library.

METS Comprehensive Operations Analysis Website Comments Summary September 2014

Forty-one comments were submitted to the website in September by four commenters. Increasing service, route changes and additions, equipment issues and rider safety were topics of interest.

Increased Service, Route Improvements and Additions

Four commenters recommended adding bus service on Sundays, while one also asked for holiday bus service. Another requested adding service after midnight and extending service after 6 p.m. on Fulton Ave., Lynch Road, Walnut Ave., and North Main Street Trolley Connection. One rider requested more drivers during peak hours.

Detailed route suggestions included the following:

- Add a run Burdette Park, possibly an on-call West Connection.
- Add bus-stop signs where missing, including at Deaconess Home Services, 701 Garfield and Franklin and Harriet inbound and outbound.
- Drivers should announce street names.
- Need route brochures and system maps on-board fixed routes.
- Need system maps at bus shelters.
- Add information on the route and schedules at each bus stop.
- Add summer bus service to USI and service to the airport.
- Add a south connection to Henderson, Ky.
- Reroute the Fulton Ave. bus to go by Cedar Trace Apartments on 7th Ave, which is a fairly new development. (There is no one available to make route modifications when there is new development.)
- Add a bus should stop at the FSSA Office at 711 John St., with the state footing the bill because it moved the office from a location on a bus route.
- Make the FSSA a transfer point where they should wait for all the buses to arrive and that if you don't contact METS soon enough for a transfer, they don't wait or forget to call the bus to wait.
- Place bus stops more evenly on the Stringtown/First Ave. bus between Louisiana, Tennessee, Eichel and Maxwell.
- Have both a Downtown bus and a North Main trolley route. The Downtown trolley would pick up people walking downtown, while the North Main trolley should cover Garvin Park Industrial District and the apartments behind Garvin Park and the Towne Center Mall.
- Have a Stringtown A and B and a Howell A and B (i.e., provide 30 minute weekday service on each route).
- Place bus stops across the street from one another when a bus goes inbound and outbound on the same street.
- Split the Mary Howell and First Avenue-Stringtown into a Howell bus, Mary Tekoppel, First Avenue and Stringtown and run them like the day shift.
- Analyze routes for bus stop signs in locations that are no longer bus stops.
- Stepping Stones should be on-call.

- Designate a bus stop at every block from B Street to 2905 Broadway on the Howell Route outbound because there are numerous patrons who live across from Howell Park.
- Add bus service for workers at Ameriqua who start at 6:30 a.m.
- Reroute buses east from Red Bank down the lane by AT & T, Sonic and Pizza Hut for workers instead of going on the highway.

Rider Safety

There is a lack of safety at the downtown terminal and transfer points. Bicyclists “zoom” through downtown terminal. Two comments were made about no-smoking signs at the downtown terminal not being enforced. Wheelchair passengers must park in the road waiting for pick up at some bus stops. For safety reasons, one commenter suggested every crosswalk be a bus stop.

During a half-hour wait for the bus at the METS bus station, rider reported seeing a woman selling drugs and another selling a stolen bicycle. Commenter suggested full-time police security at the station.

Scheduling

Several comments were made about buses not arriving and leaving on time. One rider complimented METS for usually running on time. One commenter stated it would be more convenient if METS Mobility riders could request a pick up on the day a ride was needed. Another requested 24-hour notification on METS Mobility service.

One complained a rider was left behind when the bus arrived one minute early and another driver failed to call the bus. One rider complained the bus that picked him up was 10 minutes late and then 15 minutes late at the transfer station. One commenter noted that while riding new bus 14-20 that the driver was driving very hard, hitting a speed bump, and arriving 19 minutes early. Commenter said bus arrived 17 minutes late in the evening, that after 6 p.m. “anything goes” with “no supervision.”

One commenter suggested buses should leave transfer area on the hour and half hour instead of a quarter after and a quarter till.

Equipment Issues

One noted the Howell bus had been operating without a working radio, that bus 12-14 squeaks, the steering on bus 10-01 was pulling and the driver could not keep it in the lane. Bus shelter needed at Perry Township Trustee’s Office, Howell Park and Evansville Rescue Mission. One suggested drivers need training on operating hybrids, models which he says brake automatically when the gas pedal is released. Signs need to be erected in front of shelter at Buena Vista and Kratzville, Locust Hill Cemetery, trailer court at Kratzville and Allen’s, Fulton and Buena Vista and North Park Apartments. Need larger buses on routes such as Riverside B, Lincoln B, Covert B and First Avenue.

Move bus stop bench at 4701 Lincoln so telephone pole does not block view.

One rider noted bus #129 on the Howell Route would hardly run and the air conditioner was not working well. One of the emergency windows and its handle in bus 10-09 was loose.

Technology Needs

Need a mobile app for real-time bus tracking. Need automated voice information system on fixed routes to announcing upcoming stops. Need foreign language information vocalizer. Social media icons on METS city government website redirect to mayor's Facebook page, but there is no separate METS FB page. One suggested technology should be used to turn lights green when a bus is approaching. Customer service

One commenter requested the addition of day passes and improved customer service. One commenter suggested METS accept credit or debit cards for 30-day passes.

One commenter said to get choice riders, drivers should be advised to pick up people trying to catch the bus but not at a bus stop. One commenter said drivers should lower the bus for those who have trouble climbing on. One commenter witnessed a bus leaving a rider who had banged on the side of the bus to get it to stop. One expressed frustration at not being able to reach METS for on-call only routes on the east side of Evansville. Commenter said the Highway 41 bus doesn't seem to notice or get the message that riders are waiting.

Reaching an operator at the METS office by telephone is difficult. One commenter suggested working with a non-profit to provide METS-approved strollers that fold up to parents of young children. The building at the Downtown Bus Terminal should be open while the METS bus system is running because there is nowhere to use the restroom before 11 or after 5.

Other Considerations

One commenter said drivers are cordial, providing good service and driving performance is usually good. Fares are affordable. One commenter suggested monthly meetings between METS administration and staff to solve internal route and company issues. One rider questioned whether the Howell bus was surveyed during September's on-board counts and rider survey.

METS Comprehensive Operations Analysis Website Comments Summary October 2014

In October, 42 comments were added to the website by one commenter. Increasing service, route changes and additions, bus stops, scheduling, equipment issues, technology needs, management and rider safety were among the topics addressed.

Specific Routes

Many of the suggestions were directed at modifying specific routes, including the following:

- Buses should go east from Redbank down the lane by AT & T, Sonic and Pizza Hut for workers instead of going to the highway.
- Stepping Stones should be on-call.
- Specific recommendations on Mary Tekoppel outbound route with bus stops at the post office and Anchor Court Apartments and the Howell bus route.
- Add a bus to the jail and back downtown.
- Should be two buses on Stringtown and First Avenue.
- Fulton bus should travel to Riverside, past Casino Aztar.

Bus Stops

Other comments were offered concerning adding specific bus stops, including:

- West Side Mall at crosswalk
- Entrance to Vann Apartments at Vann and Pollack
- Crosswalk on Green River just north of Pollack Driveway to UE on Lincoln
- North Main
- Columbia at the Deaconess ER crosswalk on the Harriet inbound for the Main Deaconess Entrance
- Each entrance at the Deaconess complex
- 12th and Iowa, 12th and Virginia, and 12th and Delaware
- Franklin and Sixth inbound
- Bus stop at Ingle and Marion and Ingle and Claremont outbound
- The t-intersection at Schnucks on the West Side
- Fall festival boarding locations

Equipment Issues

In addition, many equipment problems were reported by the commenter, and these comments have been forwarded to METS management, including:

- Air conditioner out on bus 129
- Vibration on bus 10-03
- No heat on bus 10-01
- Hesitation on bus 106 and seat cannot be lowered, taking up three seats
- Broken destination sign on bus 112, 41, and 40
- Rough rides on buses 129 and 104 and small shuttle buses
- Incorrect time on two clocks at downtown transfer center
- Dirty buses need daily cleaning and downtown transfer center is filthy
- Loud noise from bus 10-01 at the rear axle
- Bus stop sign missing at Cumberland and Broadway outbound, and inbound sign needs rotating
- Destination signs incorrect or broken

Management Issues

Commenter offered suggestions for management improvements, including hiring better management team rather than a political appointee. Other points:

- METS is not dependable, an example of which is the Fall Festival did not show up at 11 p.m.
- Management should make sure regular drivers are running their routes correctly, and the fill-in drivers should run the route the way the regular drivers do. Otherwise, fill-in drivers arrive early and leave riders behind, etc.
- Difficulty reaching anyone at the METS office.
- Need notice for upcoming detours, such as Broadway from Oct. 29 through Nov. 4, for which there was no notification.

Driver Issue

Driver issues were submitted to the website. Rider said he witnessed a driver passing up people waiting at an intersection, but said the driver should have stopped and told them where the bus stop was. Another suggestion was for bus drivers to face Schnucks when waiting in order to enable them to see if someone is walking across the parking lot to the bus.

METS Comprehensive Operations Analysis Website Comments Summary for November 2014

In November, 20 comments were added to the METS Comprehensive Analysis Website by one commenter. They included specific route improvements, increased and better service and notification of upcoming detours, bus stops, rider safety and bus conditions.

Increased Service and Scheduling

Commenter suggested METS notify riders of route detours for times when streets are closed, such as when utility work was being done on the Fulton bus route or during bad weather. No notification currently available for detours or late running buses. No notification concerning detours for upcoming street closures for downtown hotel construction, especially for those going to Deaconess Clinic.

Rider suggested buses run 24/7 on Christmas Eve and New Year's Eve, and also run on New Year's Day. Another suggestion is to plan community events for days when METS provides bus service.

Specific Route Suggestions

Commenter suggested a bus or trolley should run back and forth on Franklin Street from Leroy's to Mary Street and possibly connect with Main Street. Also suggested, the Schnutte Apartments be served on the Fulton bus route outbound to allow Howell bus to cover further west. Inbound the Howell should continue down Franklin to past Fulton to Mary Street. The Fulton could continue down Fulton on Riverside to Main. A bus should run to the Lakewood West Apartments.

Bus Stops and Signs

Commenter said the Mary Tekoppel destination sign was spelled incorrectly. Commenter suggested bus stops be located at entrances to venues when possible rather than half a block away. Commenter said that each block downtown in the past had been designated as a bus stop but some bus drivers don't abide by this, and some are unaware.

Rider Safety

Rider urged buses run on time during cold weather and referenced two times during frigid weather he had to wait for a late bus.

Equipment and Bus Condition

Several comments focused on improperly operating buses, including the following: bus #118 is leaning severely; bus #10-02 heater broken; hole or weak spot in floor of bus #102; bus #10-06 wanders all over the road; bus #10-01 is making a loud clunk in right rear end.

Other Issues

Rider complained of a pass-up at Middle Mount Vernon and Hathaway.

METS Comprehensive Operations Analysis Website Comments Summary for December 2014 and January 2015

In December of 2014 and January of 2015, 20 comments were added to the METS COA Website by three commenters. A great majority of comments were posted by the same commenter. Most comments referred to specific route change requests. Two were about adding a bus stop and night-time service, and some were customer service complaints. Two commenters mentioned how important the bus service is to their employment, with one specifically requesting the Highway 41 route continue for that reason.

Suggestions for specific route changes included: Howell bus go to University Drive by request; Mary Howell bus go down Boehne Camp instead of Red Bank; take Schnutte Apartments off the Howell route and on Fulton; the Howell should go down MLK to Mary then west on Franklin, out Middle Mt. Vernon to Boehne Camp and through Westwood Apartments; run the Stringtown-First Avenue bus outbound North Main and inbound First Avenue to Uhlhorn to Fulton to Franklin to Mary to terminal; run the Fulton bus past Cedar Trace Apartments; the Stringtown outbound to Christ Road instead of Mill, right on Weaver, left on Senate, left on Petersburg, left on Campground, left on First right on Old Post, left by the front of Central, left by North Park Library to First Ave.

Also, discontinue the Covert after 6 and add Lynch Road bus to cover the northeast after 6; Mary Tekoppel outbound on Upper Mt. Vernon to Hogue; the North Main bus should outbound North Main to Louisiana to Baker to Morgan by Jacobsville Apartments, to Main through Garvin Park through apartments on the north side to Towne Center, back through the park and the apartments on the north side of the park to Morgan and back; the Mary Tekoppel and Mary Howell outbound on Mary to Virginia to Harriett since apartments on Franklin and Harriet are vacant; the Mary Tekoppel and Mary Howell should continue on down through Read to Tennessee to Mary.

One suggested adding a bus stop at Louisiana and Harriett inbound.

Another requested adding service after 6 p.m. to serve the area at Sigma Packing on Maxx Road, the jail and the old Whirlpool plant.

Five customer service complaints were received including: the back door should be kept shut when buses are sitting at transfer stations; a driver yelled at disabled person in a wheelchair and left the bus without helping rider disembark; rider was intentionally passed by; rider was required to throw coffee in cup with lid away; rider said he was harassed by undercover police, offering a ride for \$20 or drugs.

METS COA Website Comments Summary February of 2015

In February, METS received 17 website comments from commenters with the great majority of comments coming from one individual.

Three of those comments were directed towards the METS Mobility Service, specifically, complaining against rate increases for passengers outside the city limits.

Suggestions for service increases and route changes included the following:

- Sunday service
- Lynch until midnight
- Add bus stops on Vogel Road along Eastland Mall, on Morgan between Green River and Boeke, on Romains and Tornatta Tire, Red Bank and Pennington and 12th Avenue and Iowa.
- Mary Howell to Walmart all the time
- Add bus service back from Traveling City Hall at the Career and Tech Center.

Complaints included:

- Drivers ought to pick riders up and drop them off between bus stops
- No advance notice of detour due to Mardi Gras
- No way to know if a bus is detoured, running behind or shut down
- Evening buses need to stay on a schedule, not 10 or 15 minutes late
- Sidewalks left snow-covered with businesses not clearing them
- Fares not abiding by city codes
- Drivers leave front and back doors open while on break at downtown terminal

A rider also alerted METS that two new apartment complexes had been approved for construction, one at 5200 Lynch Road and the other at 600 Christ Road.

METS COA Website Comments Summary for March of 2015

Twenty-one website comments were received in March, all made by one commenter.

The following suggestions for additional bus stops were offered:

- Broadway and Irvington, inbound
- Claremont and Ingle
- Claremont and Bosse
- Marion and Ingle, inbound and outbound

Other suggestions included, removing bus stop signs on Tekoppel between Forest and Claremont because the bus doesn't travel there; use Twitter to announce detours, delays and weather closings; detour the Mary Howell so people are not stranded if a train is crossing Ingle; replace missing sign at Third Avenue and Columbia and on Court Street just off Riverside for the Howell and Mary Howell inbound; change route so Ivy Tech students do not cross First Street to board the bus; provide security at downtown terminal to stop drug sales and panhandling; fix and use air conditioning; and focus on rides for employees.

Also mentioned: a housing development was approved by the area plan commission for 4105 N. Green River Road.

METS COA Website Comments Summary for April of 2015

Eight comments were made to the website in April by the same commenter. One was a request for a bus shelter at St. Joseph and Franklin inbound and outbound. Another was a request for a bus stop at Parkway Pizza. Two included complaints about late-running buses. Another was a complaint about the no-smoking ordinance being ignored at the Downtown Terminal. One was a complaint about bus 10-15 being very rough riding. Another complained about lack of mowing at the downtown terminal. Also, there was an allegation that some bus drivers are buying stolen property.

METS COA Website Comments Summary for May 2015

Comments to the website for May were few, and submitted by just one commenter. Two were comments about poor bus condition, including: lack of air conditioning on several buses and the Mary Howell bus breaking down twice in two weeks and missing an entire run.

Another mentioned missing bus stop signs at Read and Louisiana outbound and Franklin and Mt. Vernon inbound for the Howell bus. Another was a complaint about a bus driver kicking trash out of the bus.

METS COA Website Comments Summary for June of 2015

In June, the METS COA website received 13 comments, all from the same individual. Several comments concerned poor bus maintenance, including lack of air conditioning, bad brakes and rough riding buses.

One complaint concerned a bus that would barely climb some hills on the Westside. Several comments highlighted removal of bus stop signs by METS staff. Also, there were a couple of comments about detours with no prior notification.

METS COA Website Comments for July of 2015

Altogether, the METS COA website received 28 comments during July. Twenty of those were included in the summary of comments for the draft five-year-service plan report gathered from July 7 through July 17. All comments received during the period between the July 2 release of the draft five-year service plans and July 17 (the end of the public input period) were treated as input on the five-year service plans.

All eight of the comments contained in this summary (which were provided before July 7 or after July 17) were provided by the same individual. Four of the comments focused on criticizing the proposal to combine the Howell and Mary Tekoppel routes. One comment suggested that encouraging disabled people to ride the fixed-route buses would slow down the bus system. He stated that until street repairs are completed and older buses retired, more frequent service (every 20 minutes, weekdays) on some routes should not be considered.

NETS

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Appendix G

Web- Based Customer Survey

Between Monday, January 26 and Saturday, February 21, 2015 a web-based customer survey was offered on the project web site (<http://metstransitstudy.info/>). A total of 291 survey responses were received.

This appendix includes an enumeration stating each question, along with a bullet-point summary of written responses to each. Following this enumeration is a series of charts and tables summarizing the multiple-choice responses to each question.

Question #1 of METS Web-Based Customer Survey

1. If limited Sunday service were added to the METS system, which route(s) would you prefer to see included and why would this (these) be the best for Sunday service?

- Almost all respondents, dozens, in fact, stated that people need Sunday service for transportation to and from work, including many for service to Ameriquel Foods. Others mentioned needing transportation to employment on Highway 41, on the Lynch and Fulton routes, the Eastland Mall area, and to fast food restaurants and hotels.
- Also, it was suggested that Sunday bus service would help employers hire needed workers.
- Several mentioned a need for Sunday service to shop and run other errands, using the Shoppers Shuttle, riding to the Eastland Mall, and Target/Fresh Market.
- Several mentioned the need for bus service to get to church services.
- Multiple requests were made for Sunday service for University of Evansville students.
- Another request was for transportation to St. Mary's for medical treatment.
- One respondent did not approve of Sunday service.
- Several offered social reasons for needing Sunday service, including visits to a relative at University Nursing and Rehab on Lincoln Avenue, while another wanted to eat Sunday dinner with family.
- Since the following routes are busy through the week, one person suggested having at least one bus from downtown to the Eastland Mall, one that travels from downtown to Lawndale, from Lawndale to Eastland Mall and one that travels from downtown to the Westside of town. Several said the busiest routes during the week should be the ones that have Sunday service.
- One mentioned a need for bus service to the library.
- One suggested running Sunday service where evening service runs now.
- Several suggested all routes run on Sunday.

- One suggested service to the jail, a combined First Avenue and Stringtown bus.
- One suggested a new route for Fulton and First Avenue for a northwest connection to cover St. Joseph north of Mesker Park for subdivisions, apartments and trailer parks.
- One suggested service to the zoo.

Question #2 of METS Web-Based Customer Survey

Which routes should operate more frequently on weekdays? Why would these routes be the best routes for increased frequency?

- Shorten arrival times for employees, who now must arrive up to 90 minutes early.
- More flexibility for work schedules.
- Several mentioned Ameriquel, which has staggered shifts, and difficulty in arriving on time.
- To help people be on time for children's school and doctor's appointments for Ameriquel employees.
- Wait times would be shorter, encouraging more riders, especially beneficial in extreme weather conditions. Buses on hourly schedules require passengers to wait 35 to 40 minutes out in the cold.
- Would make it practical to use the bus to go shopping, which would take "all day" for the trip and an hour or more to catch the bus now.
- Multiple requests to minimize overcrowding on the buses with less stand ups, with Riverside as an example.
- Takes two hours from Newburgh to doctor's office on Maxwell.
- Multiple requests for more frequent service at locations of largest employers: hospitals, Berry Plastics, downtown banks, retail stores, restaurants and government offices. Another suggested pinpointing the greatest concentration of jobs and fewest options for transportation and increase frequency on these routes.
- Multiple responses mentioned increasing frequency on Lincoln Route to alleviate crowding on the smaller buses.
- Routes on major roads in the city limits with easy access would allow more rider flexibility.
- EU students need more frequent bus service.
- First Ave. and Fulton need more frequent service because a new Walmart is being built and they serve Central High, Ivy Tech, Grandview Towers, Schnutte, North Park shopping, Academy of Innovative Studies and The Crossing apartments. This would alleviate overcrowding, according to multiple responses.
- To be able to make it to appointments on time.
- To shorten ride times: one rider complained it takes one hour to travel across Evansville by bus and 20 to 30 minutes by car.
- More frequent service during rush hour, predominately mornings, to Ivy Tech.
- More frequent service downtown, considering a new school is being constructed.

Question # 3A and #3B of METS Web-Based Customer Survey

Why would this/these be the best routes for earlier or later service?

- Literally dozens of responses related to employment and the need for earlier and later bus service. Many responses mentioned opportunity to work longer hours, i.e., Ameriquail, offering an economic boost to families.
- With some jobs starting at 6 a.m., earlier service is needed.
- Multiple responses mentioned a need for bus transportation for 2nd and 3rd shifts with Ameriquail's 2nd shift as an example.
- Multiple comments asking for evening service for students taking evening classes
- A couple of comments pertained to providing access to restaurants for evening meals. One referred to the proposed downtown hotel and a need for a trolley in the evening for that venue.
- Multiple comments on providing access to evening entertainment activities. One mentioned the Ford Center and riverfront.
- Some mentioned the need to do shopping and run errands in the evening.
- Downtown destinations were specifically mentioned as needing evening service.
- Evening service to bars was mentioned as a public safety feature.

Question #4 of METS Web-Based Customer Survey

4. What other improvements should be made at transfer terminals and bus stops? At which stops/terminals should they be made?

- Multiple suggestions for lighting at shelters
- Multiple suggestions for adding security cameras
- Multiple requests for trash cans at bus stops, especially those with benches
- Electrical outlets at bus stops
- Many suggestions for adding bus shelters at Ameriqua Foods
- Sidewalk at Ameriqua Foods
- Better signage, especially at Ameriqua Foods, to show pick-up times
- Multiple requests for signs with hours of operation and pick-up times posted at bus stops
- Multiple requests for more access to safe restrooms downtown around-the-clock
- Water fountain at downtown terminal
- More protected areas during inclement weather
- Multiple requests for more sidewalks with ramps, making bus more accessible, taking pressure off METS Mobility
- Platforms for waiting and access, mainly at commercial stops
- Fully enclosed shelters with no gap at the top, which allows rain and snow in.
- Better information on routes and connections
- Shelters and benches on 600 block of Lincoln to the Highway 41
- Bus stops and signs at all locations where there are benches
- Add advertisements at bus shelters to provide income for METS
- Cleaner, especially need trash removal at Lawndale transfer and graffiti removed from bus shelters
- Add actual bus stations at Lawndale and the West side
- Multiple requests for security guard or police to enforce rules and stop drug dealing at downtown transfer station
- Add bus shelter at the Covert/Jeanette stop heading downtown
- Multiple requests to enforce no-smoking regulations at downtown terminal
- Take out shelter at Burdette, which is not a stop anymore because it draws a lot of loiterers.
- Multiple requests for bigger, easier-to-read, signs
- Bilingual messages on signs
- More and better shelter needed at downtown terminal
- Warm shelters at Lincoln and Green River
- Emergency phones
- Transfer station on First Avenue has no bus stop sign, no bench, no shelter
- Multiple requests for adding shelters, benches and sidewalk on Covert Avenue

- Put bus stop sign for Stringtown bus on the correct side of the street
- Multiple suggestions for bus shelter and benches at Lynch and Highway 41 so people don't sit on the railroad tracks
- Add shelters in and around Walmart at Burkhardt
- Minute-by-minute route schedule display
- Need lighting at bus stop on Kentucky near Sunbeam Market so bus driver can see people wanting to ride
- Benches and shelters needed for Ivy Tech
- Remove all old bus stop signs and benches
- Interior waiting space at downtown terminal
- Add emergency blue lights and safety precautions at certain stops that are in less safe areas

Question #5 of the METS Web-Based Customer Survey

What other improvements would make riding the bus easier for you?

- Multiple requests for larger buses for more seats and less standing
- Multiple requests for better access for the handicapped on fixed route service
- Announce free-ride days
- Many requests for live tracking via smart phone apps. One mentioned Double Map system
- Multiple requests for posting arrival times and route map at Ameriquel for new riders
- Posted route and arrival times at every route for people who do not have internet access
- Toll-free customer service number
- Not needing exact fare amount
- Less transfers
- More bus shelters
- Buses out to Toyota and back at stop and start times
- Better safety and security
- Announcing next stop
- Multiple requests to simplify and improve the website.
- Multiple requests to add planning service feature in which rider can enter pickup and drop off locations to determine the best route. Add one comprehensive map and be able to click on the best route for details
- Add bus stops to website
- Make route obvious and simple. The downtown shuttle is incredibly inefficient.
- Add early mornings and Sundays
- Many suggestions for running buses on-time
- Clearer signs with prices for different types of tickets
- Set departure times
- More pickup areas on 41 North
- Multiple requests for route maps at every second or third stop and maps at bus shelters and terminals
- Improve bus driver training so they all follow rules
- Increase number of buses on First Avenue for students
- Fulton bus should be one of the larger buses so people don't need to stand
- Bus service outside city limits
- Make purchasing tokens for students easier and offer transit cards.
- Multiple requests that inbound and outbound routes should be the same
- Provide information for detours and adjustments for weather and holidays.
- Remove benches from locations without a bus stop
- Clean up downtown terminal.

- Keep people under the influence of drugs or alcohol and drug dealers out of terminal
- Several requests for courteous drivers, who do not use foul language. Anger management courses for drivers
- Make a rule that drivers can't leave riders if you are within so many feet of the bus
- Route maps on buses
- Use advertising rails more
- Temporary stops on reroutes
- Run buses on the half hour on weekends for grocery shopping, etc.
- Multiple requests for revamping METS Mobility, making drop-off times closer to appointment times
- Remove 24-hour-ahead scheduling for METS Mobility
- Increase bag space and luggage storage
- Softer seats
- Multiple requests for better cleaning of buses
- More benches
- Add a \$3 day pass
- Discount price of monthly bus pass for seniors, disabled and Medicare card holders
- A fast pass card
- Add a "how to ride the bus" tutorial on METS website.
- Use Twitter to post delays and detours
- All routes run until midnight and start at 5 a.m., seven days a week.
- Let passengers off and on at other than designated bus stops.
- Extend the Stringtown bus route down the entire store frontage road of the west side of the North Park Shopping Center
- Post holiday hours two weeks in advance
- Turn route lights on the bus so riders can see what bus is arriving, especially downtown terminal, where it is not obvious with unclear signage
- More bike racks
- More handicapped accessible buses
- 24-hour service with at least until 10 p.m. on weekends

Question #6 of METS Web-Based Customer Survey

Please provide any additional comments. Are there particular areas of the City that are lacking bus service?

- Run Fulton Ave. longer
- Multiple suggestions for Evansville to Henderson route
- Darmstadt, McCutchanville and the far Westside
- Toyota
- Morgan Avenue
- Downtown Shuttle should connect West Franklin, Main St. near the Ford Center, the Tropicana, and maybe Haynie's Corner in a loop.
- Newburgh
- Need a clear, obvious stop near University of Evansville
- Multiple suggestions for the Evansville Airport
- Peach Blossom
- Parochial schools
- Outside city limits
- A direct, north-south route for the Green River Road area
- Bellemeade
- Multiple requests for North side
- Better route to Deaconess Gateway Hospital from the Westside
- Outer St. Joseph Avenue
- Williamsburg Road
- Long-term road construction areas
- Trolley on the half hour and to town center
- Run every half hour on the Northside
- Goodwill and Save-a-Lot
- Social Security office and other venues north of Morgan Avenue on North Green River Road
- All Evansville schools
- East Connection all the way to the Warrick County line
- To the McDonald's out past Ameriqua
- From the mall up North Green River Road

Are there any other general improvements needed for the bus system?

- Drop off passengers closer to entrance during bad weather
- Several requests for Sunday service

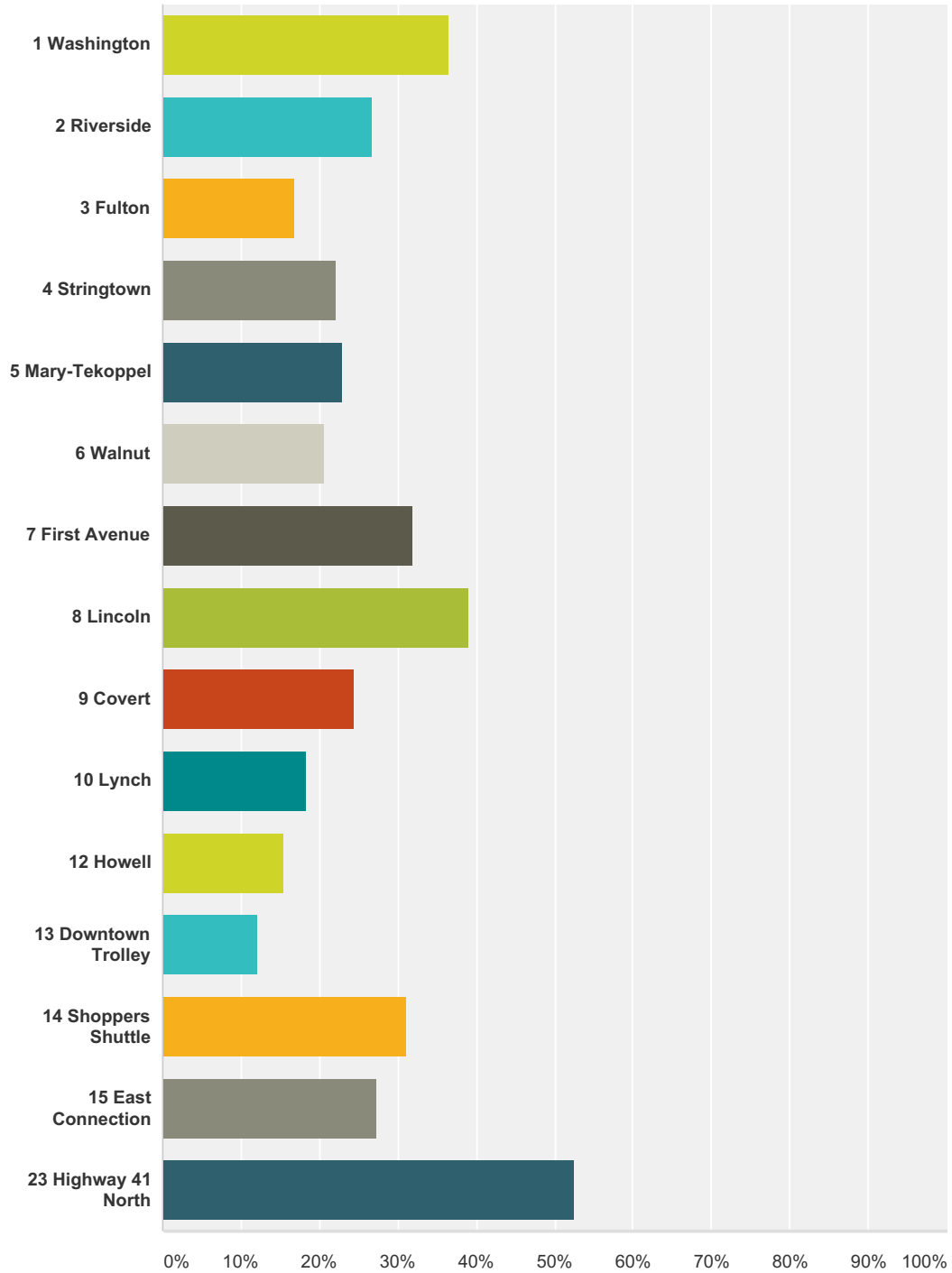
- Several requests for bus shelter at Ameriqua
- Multiple requests for extended hours to Ameriqua
- Sunday service to Ameriqua
- Security on buses
- Extended hours for employees working late shifts
- Student bus passes
- Consider using something like the Green Bay Metro naming system. Purple Line for UE and Blue Line for Riverside
- Fully enclosed downtown terminal
- Larger buses
- Public/private partnership for businesses to have bus stops with bus shelters and advertising. Busiest stops could use apps with interactive displays and ads
- Multiple requests to make bus system easier, more dependable and clearer for UE students and faculty
- Market METS extensively, everywhere
- Multiple suggestions for ensuring that real people answer the phone at the METS office for answers to scheduling and route questions. Need more staff to answer questions
- Multiple requests to simplify the route schedules and maps
- Sunday should be a day of rest with no buses running
- Have buses stop at the door areas of places such as Target and Walmart on the East side. Bring back the old route.
- Regional Transportation Authority
- Pick-ups at entrance of Eastland Place, Michaels/Best Buy Shopping Center on the Eastside, Wal-Mart, and Hobby Lobby/ Valu City Furniture shopping centers instead of walking to the street
- Run the Riverside bus to Pollack later in the evening
- Multiple suggestions to improve the image of METS, which now has a stigma attached to it. Start with the children. Let them know they can bring bikes, encourage people to ride for the health of the city.
- Design ad wraps with portholes so riders can see out better
- Multiple kudos to James, a bus driver
- Keep Mobility affordable
- Run West connection on Saturdays
- Posted and dependable arrival and departure times for choice riders; apps included.
- Space stops on Washington further apart than every block or so and stop picking up riders between stops
- Work with developers to create transit-oriented development, such as at downtown terminal and Lawndale transfer station
- Multiple requests to increase efficiency

- Purchase passes at grocery stores and no need for photo ID
- Increase hours that METS Mobility operates to late evening.
- Rate for monthly pass should be \$35 to \$40
- Transfers should be based on time frame and not transfer center
- Base policies on customer service, not as now
- Market to population as a whole and not just elderly, disabled and poor
- Work with employers such as Old National Bank, who could promote transit to employees
- Riders should be removed from bus for a time if they are abusive
- Renovate the downtown terminal to make it bright and appealing. Match the station with the rest of downtown, especially the Ford Center
- Don't give up METS. Continue making great changes for our city in need. Keep up the good work.
- Several compliments to METS service

Transit Information Survey

Q1 1. If limited Sunday service were to be added to the METS system, which route(s) would you prefer to see included?

Answered: 266 Skipped: 25



Answer Choices	Responses
1 Washington	36.47% 97

General Public

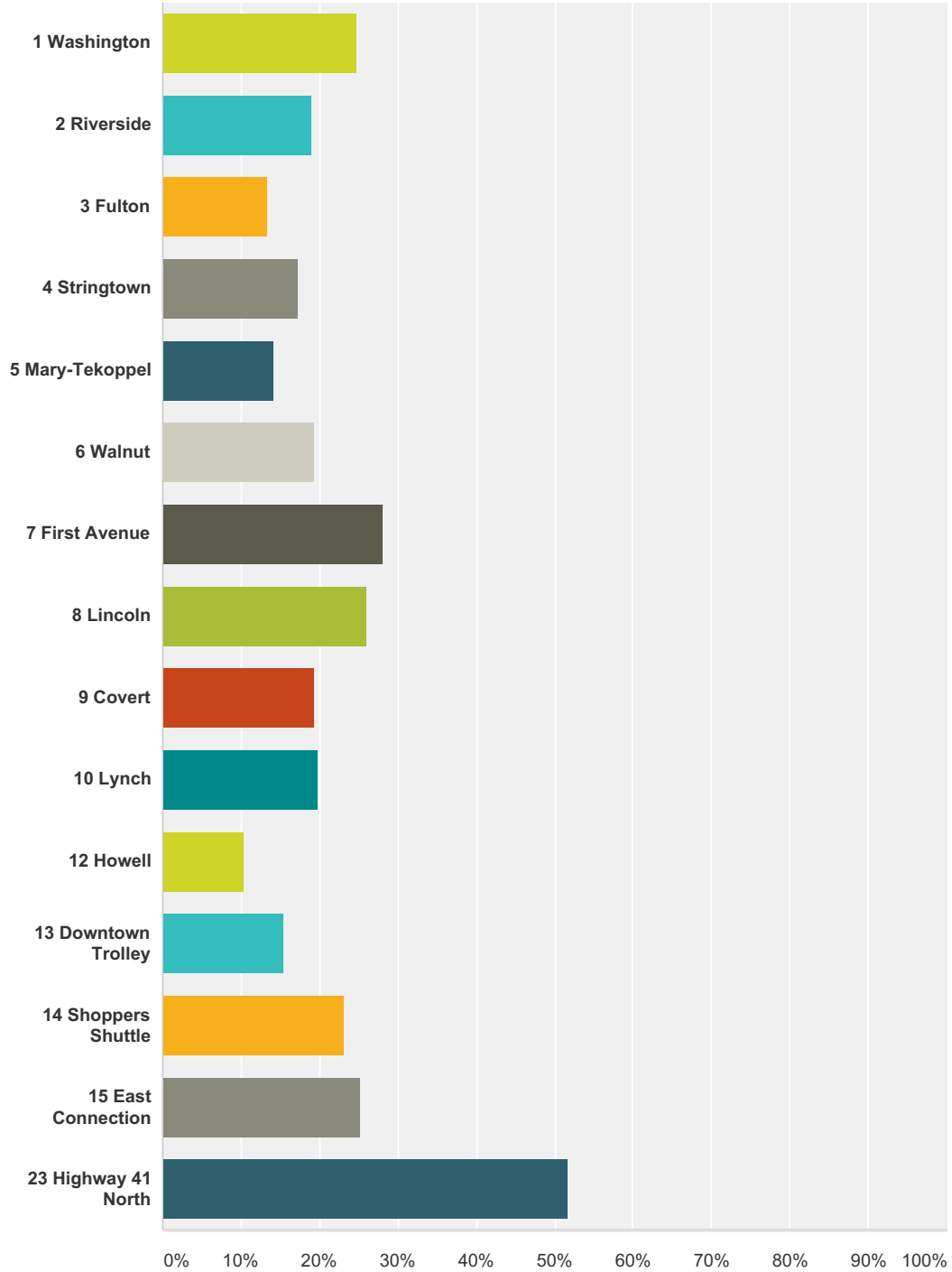
Transit Information Survey

2 Riverside	26.69%	71
3 Fulton	16.92%	45
4 Stringtown	22.18%	59
5 Mary-Tekoppel	22.93%	61
6 Walnut	20.68%	55
7 First Avenue	31.95%	85
8 Lincoln	39.10%	104
9 Covert	24.44%	65
10 Lynch	18.42%	49
12 Howell	15.41%	41
13 Downtown Trolley	12.03%	32
14 Shoppers Shuttle	31.20%	83
15 East Connection	27.44%	73
23 Highway 41 North	52.63%	140
Total Respondents: 266		

Transit Information Survey

Q2 2. Which routes should operate more frequently (less time between buses) on weekdays?

Answered: 238 Skipped: 53



Answer Choices	Responses
1 Washington	24.79%

General Public

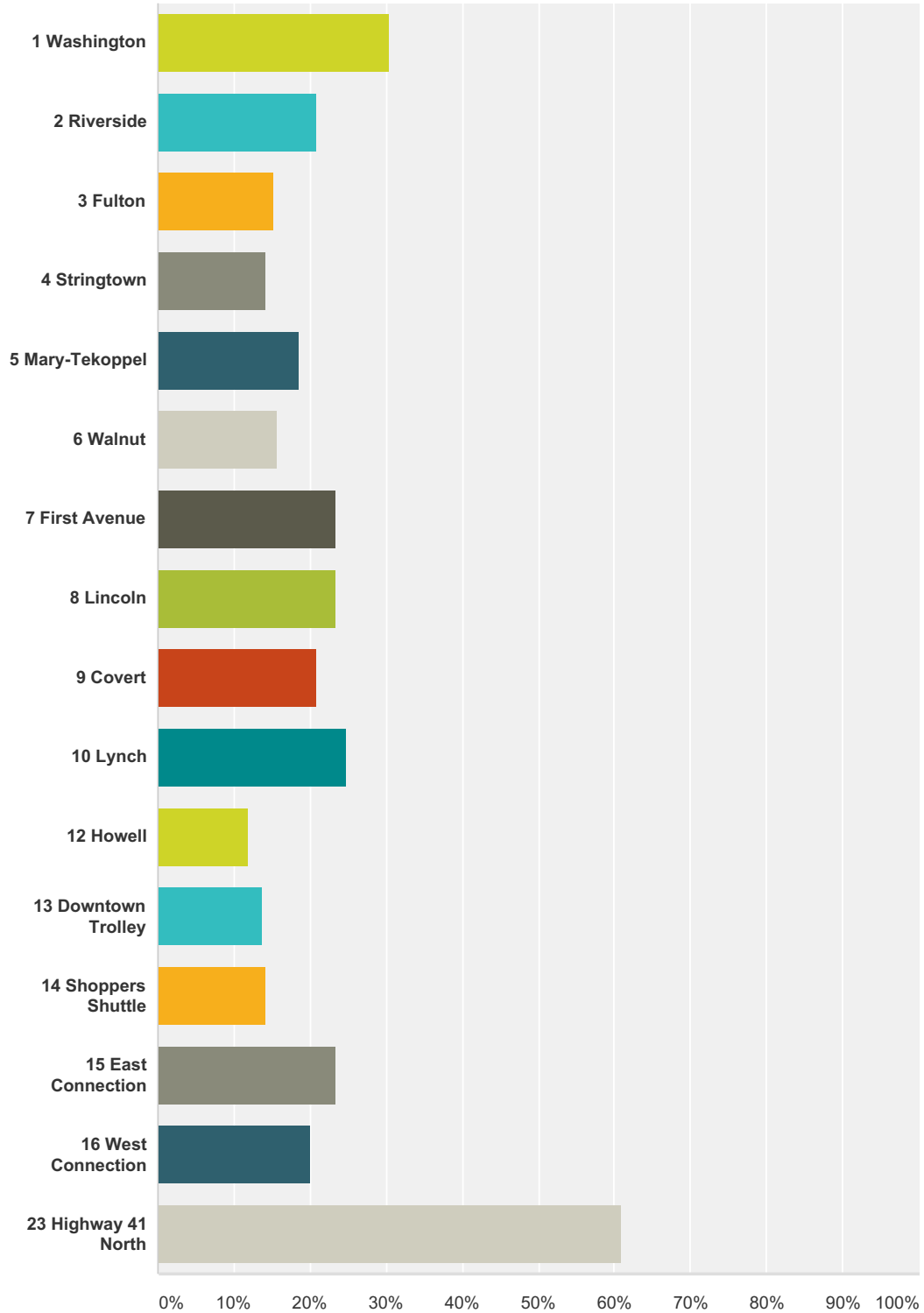
Transit Information Survey

2 Riverside	18.91%	45
3 Fulton	13.45%	32
4 Stringtown	17.23%	41
5 Mary-Tekoppel	14.29%	34
6 Walnut	19.33%	46
7 First Avenue	28.15%	67
8 Lincoln	26.05%	62
9 Covert	19.33%	46
10 Lynch	19.75%	47
12 Howell	10.50%	25
13 Downtown Trolley	15.55%	37
14 Shoppers Shuttle	23.11%	55
15 East Connection	25.21%	60
23 Highway 41 North	51.68%	123
Total Respondents: 238		

Transit Information Survey

Q3 3a. If some routes were to increase hours of operation, which routes would you like to see run earlier on weekdays (routes currently begin to operate at or shortly before 6 am)?

Answered: 210 Skipped: 81



General Public

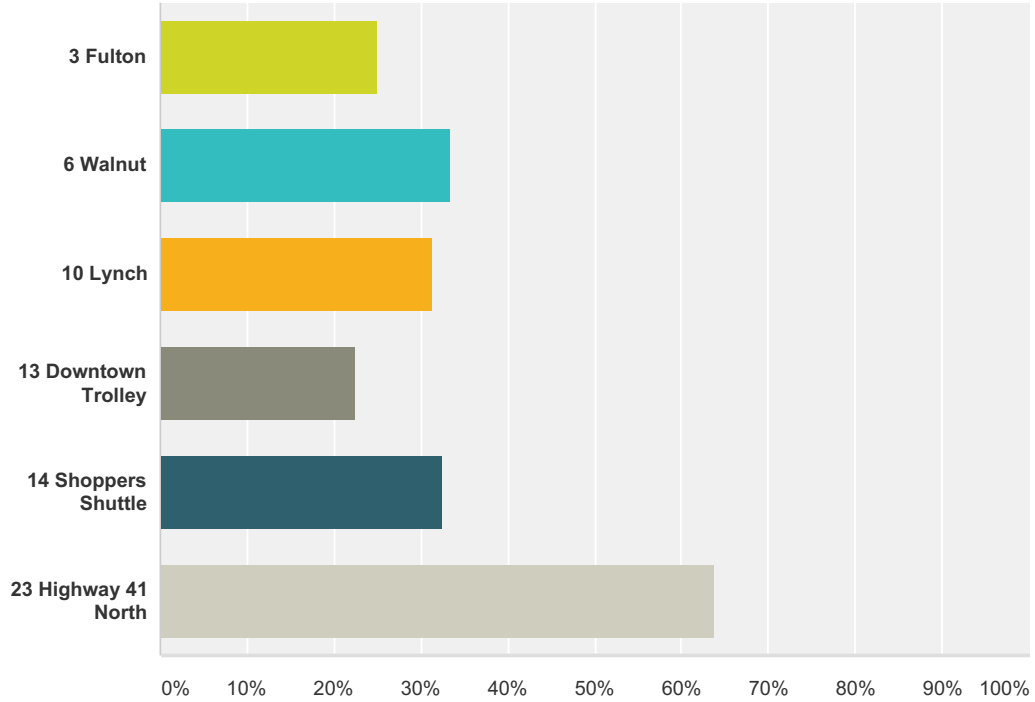
Transit Information Survey

Answer Choices	Responses	
1 Washington	30.48%	64
2 Riverside	20.95%	44
3 Fulton	15.24%	32
4 Stringtown	14.29%	30
5 Mary-Tekoppel	18.57%	39
6 Walnut	15.71%	33
7 First Avenue	23.33%	49
8 Lincoln	23.33%	49
9 Covert	20.95%	44
10 Lynch	24.76%	52
12 Howell	11.90%	25
13 Downtown Trolley	13.81%	29
14 Shoppers Shuttle	14.29%	30
15 East Connection	23.33%	49
16 West Connection	20.00%	42
23 Highway 41 North	60.95%	128
Total Respondents: 210		

Transit Information Survey

Q4 3b. Which routes would you like to see run later on weekdays (routes currently do not operate after 6 pm)?

Answered: 227 Skipped: 64

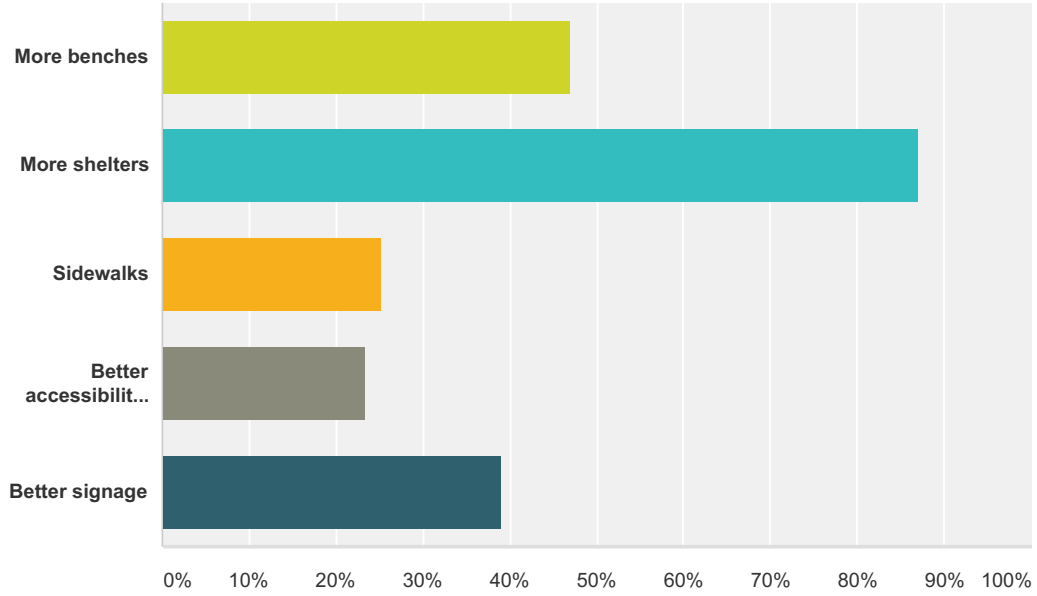


Answer Choices	Responses
3 Fulton	25.11% 57
6 Walnut	33.48% 76
10 Lynch	31.28% 71
13 Downtown Trolley	22.47% 51
14 Shoppers Shuttle	32.60% 74
23 Highway 41 North	63.88% 145
Total Respondents: 227	

Transit Information Survey

Q5 4. What improvements would be most beneficial at individual transfer terminals and bus stop locations?

Answered: 253 Skipped: 38

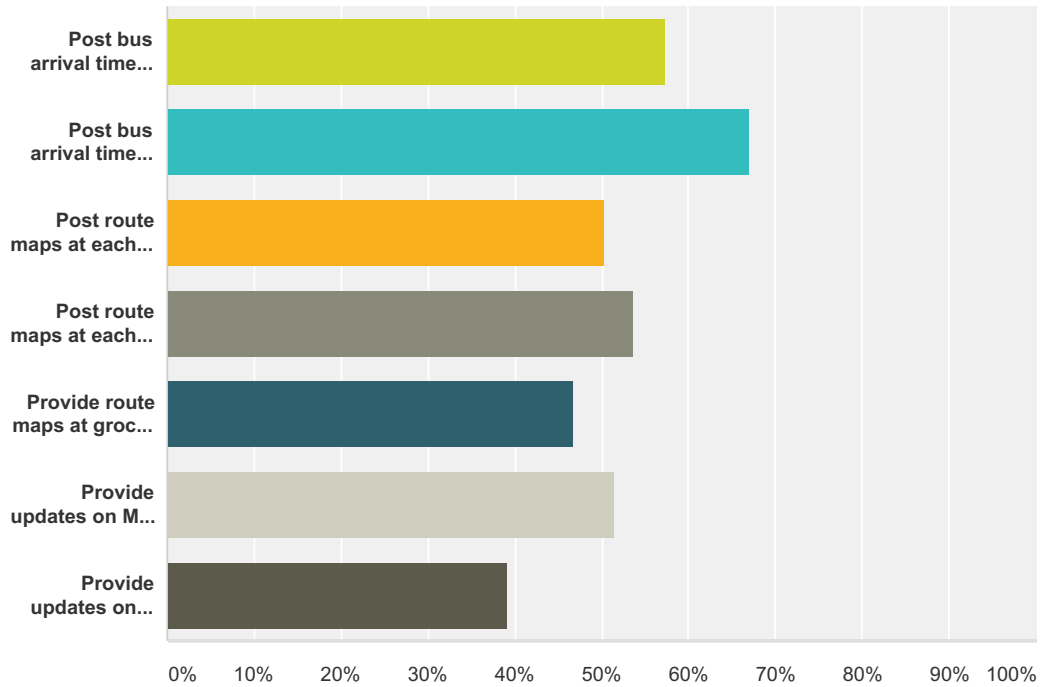


Answer Choices	Responses
More benches	47.04% 119
More shelters	86.96% 220
Sidewalks	25.30% 64
Better accessibility (i.e. ramps)	23.32% 59
Better signage	39.13% 99
Total Respondents: 253	

Transit Information Survey

Q6 5. What improvements would be most beneficial as you ride the bus? If you do not currently ride the bus, what would help you make riding the bus an option?

Answered: 242 Skipped: 49

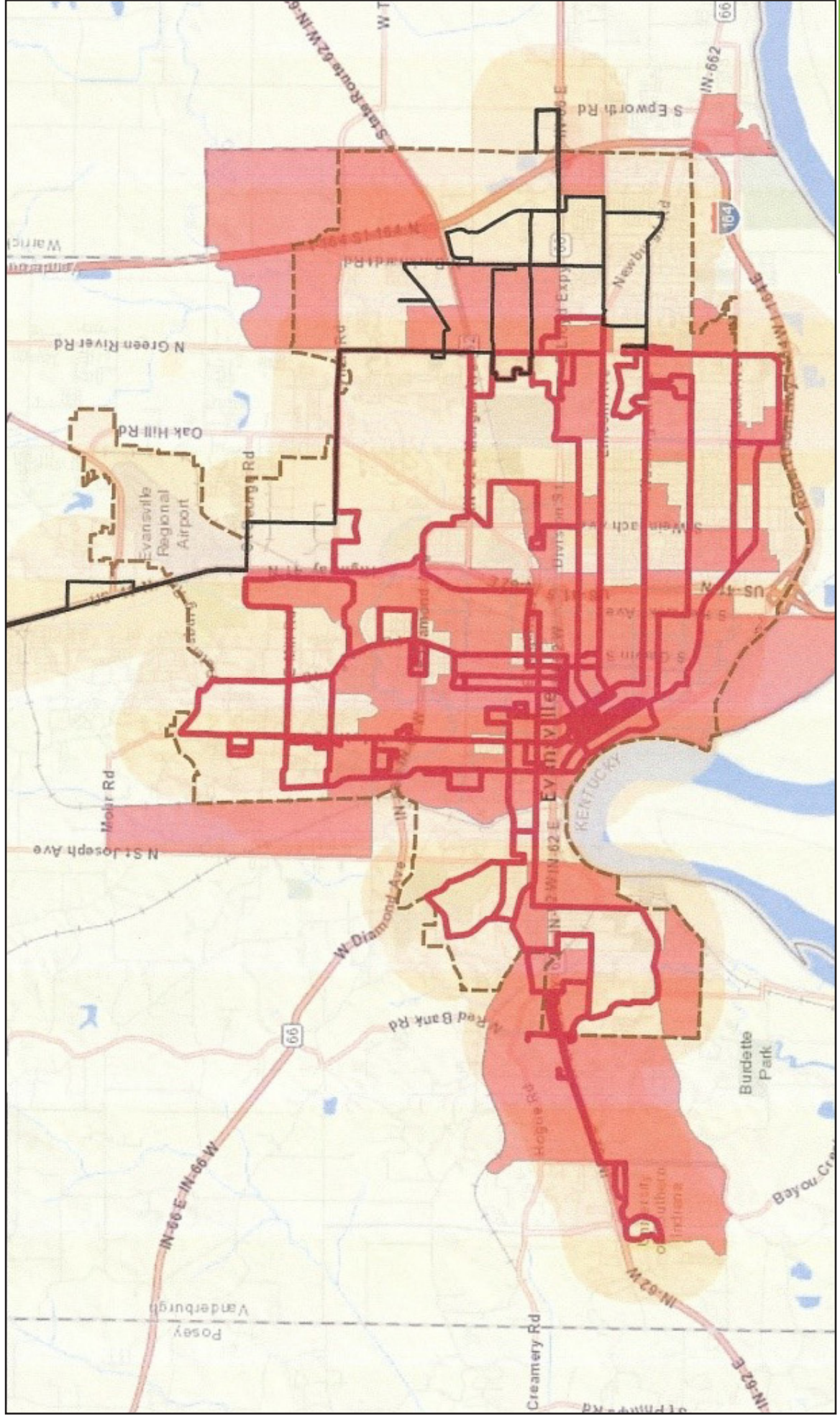


Answer Choices	Responses
Post bus arrival times at each terminal	57.44% 139
Post bus arrival times at each bus stop	66.94% 162
Post route maps at each terminal	50.41% 122
Post route maps at each bus stop	53.72% 130
Provide route maps at grocery stores and other retail businesses	46.69% 113
Provide updates on METS website	51.65% 125
Provide updates on Facebook or other social media	39.26% 95
Total Respondents: 242	

Transit Information Survey

**Q7 Additional Comments Please
provide any additional comments. Are
there particular areas of the City that are
lacking bus service? Are there any other
general improvements needed for the bus
system?**

Answered: 95 Skipped: 196



Appendix H

Scheduling Analysis

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This report provides scheduling-related guidance for the Metropolitan Evansville Transit System (METS). It is provided by Transportation Management and Design (TMD), a consulting firm with a national practice in transit schedule consulting. TMD was assisted by Lochmueller Group staff in preparation of these findings. These findings are organized in six sections, as follows.

- **Section I** summarizes standard transit industry schedule-writing practices.
- **Section II** contains METS-specific higher level scheduling recommendations.
- **Section III** identifies route-specific running time issues on METS routes.
- **Section IV** contains detailed run-cutting recommendations.
- **Section V** provides guidance for implementing Sunday service.
- **Section VI** summarizes Scheduled Transit Operations (STO)-based budgeted for bus operators.

These are provided for METS use, in particular once it hires a Manager of Service Planning, Scheduling and Marketing. Hiring such a manager (which is a new staff position) is a key recommendation of this Comprehensive Operations Analysis.

I. Standard Industry Schedule-Writing Practices

A. Blocking, Recovery Times, and Interlining

“Vehicle blocking” involves linking or hooking individual trips in a timetable into assignments which are operated by a single bus. A minimum amount of recovery time is provided between each trip to allow the schedule to recover from typical delays and variability in traffic and ridership. A significant amount of interactive, manual expertise is needed to achieve efficient blocking solutions.

- *Minimum recovery times* have a direct impact on building efficient blocks. There is no requirement in the METS bargaining agreement for minimum recovery times. Transit agencies generally use a minimum recovery time of 10 percent of running time. For example, a one-way trip of 25 minutes would have a minimum of three minutes recovery time at the end of that trip. Currently, METS schedules do not provide scheduled recovery times. Operating schedules should be modified to show scheduled arrival and departure times at every terminal. In addition, scheduled recovery time should be shown at both route terminals.
- *Interlining* is a means to improve blocking efficiency by designing blocks for buses to operate on two routes. This technique is used when blocks which operate on only one route have excess recovery times. Routes also should have complementary cycle times and share a common terminal. Typically, this allows each route to maintain a clock-face headway rather than an odd frequency (e.g., 28 minutes). It also avoids excessive schedule recovery time. Schedulers also consider operator quality of life issues by interlining routes to equalize recovery time between routes with tight recovery times and routes with generous recovery times. Since interlining requires additional supervision and operator training, many transit scheduling staff prefer that interlining be judiciously used.

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- A final, noteworthy practice under blocking and interlining relates to run-cutting and crew schedules often referred to as “*opportunistic interlining*” to optimize block lengths for improved run-cutting. Opportunistic interlining is an *ad hoc* opportunity that occurs once during a day rather than a systematic linking of two routes all day long. An example of opportunistic interlining is a bus which operates on a route only in peak periods also operating a single trip on an express route on the shoulders of a peak period.

B. Determining Running Times

Scheduled running times are the core structure supporting any set of schedules. They have a significant impact on operating reliability and an even bigger impact on operating costs.

- Currently METS staff reports that running times are not routinely checked due to staff unavailability. Running times are checked only in response to passenger or operator reports that buses are consistently late or ahead of schedule. When this happens, a staff member accompanies a bus and driver to investigate the complaint and determine the appropriate running time. If it is determined that there is inadequate time to operate the existing route, the route will be analyzed to determine if it can be shortened to provide adequate running time. It is not clear if running time studies are undertaken when route deviations are added. Anecdotally, as well as through our staff analysis of existing routes and schedules, it seems likely that route deviations have been added without consideration of the running time impacts.
- Many transit agencies without AVL (Automatic Vehicle Locator) systems try to manually collect running time data for all trips on a route at least 3 days to 5 days in each bid cycle. Data can be obtained by either ride checks or point checks. This should be repeated for at least 3 days a week to get a good sampling of running time for each trip. A spreadsheet analysis can analyze average running time by day and time. METS is in the process of making an AVL system fully functional. An AVL system can provide running time reports for every day on every route.

C. Run-cutting

Run-cutting is the process of developing operator (driver) assignments. Driver assignments ("runs") are assembled ("cut") from the vehicle assignments (blocks). Runs consist of one or more complete or partial blocks. Blocks are cut and assembled in such a way as to create either straight runs or split (multi-piece) runs. It is important to remember that a 'block' is a vehicle, and a 'run' is an operator.

RUN-CUTTING STRATEGIES

- Detailed attention must be paid to block lengths during the blocking stage of the scheduling process, prior to run-cutting. For example, trips from a ten-hour block may be reassigned to a six-hour block, resulting in two eight-hour blocks. This allows making two straight one-piece runs that are easier to manage in the field and that potentially require no overtime or guarantee.

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- METS may want to recut some of their blocks to allow for 10-hour runs (as part of allowing for a four-day work week). This is an issue which the operator's union has raised. Under this scenario, a block that has 18 hours of service is cut it into two blocks, one with 8 hours of service and another with 10 hours. This would entail a full time operator working a night run.

Initial Standard Run-cutting Processes

- First estimate the number of runs required. An estimate of the number of runs required enables the scheduler to assess during the run-cutting process if it is proceeding "on target." A common way to estimate the number of runs required is to divide the total platform time in the blocks by a target number of platform hours to be included in each run.
- Step 2 in the run-cutting process is usually the listing of all of blocks so that a scheduler can ensure that runs are being cut in conformance to existing work rules. One method involves listing all of the blocks in pull-out order- all A.M. blocks that pull-out prior to 11:59 a.m. in ascending (earliest to latest) pull- order, and all P.M. blocks that pull-out after 12:00 noon in ascending pull-in order. Listing the blocks in this order also helps facilitate the development of split runs that will conform to spread time limitations.

Optimization and the Run Guide

- In this stage of the run-cutting process, blocks are shown on a chronological block listing and arranged into runs. This form is called the Run Guide.
- The Run Guide records the work and pay components of the various runs. The run information is recorded to facilitate the scheduler's review of individual runs and the runs collectively. This review helps the scheduler to determine if the most efficient matching of blocks is occurring.
- Reviewing and adjusting of the run guide is called "optimization." During optimization, the scheduler strives to achieve the fewest number of runs necessary to provide the desired level of service, equalize platform time and pay hours among the runs, ensure that runs conform to labor agreements and agency policies, and facilitate the calculation of accurate pay hours. The greater the number of block pieces that exist, the greater the number of possibilities for creating and optimizing the runs.

D. Standard Scheduling/Run-cutting Related Reports

There are several standard scheduling and run-cutting related reports that are usually generated for every bid/pick by most public transit agencies. Attachment 'A' contains examples of reports from another transit agency. METS should begin to produce these reports in conjunction with semi-annual bids/picks. These include:

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- Driver paddle
 - Block mileage
 - Duty report times for operators
 - Vehicle schedule statistics
 - Block and trip details
 - Route schedule, showing time points and vehicles operating each trip
 - Operator roster report

An essential recommendation is that METS add intermediate time points on its routes. It also should provide each driver a “paddle” with the day’s work assignment. The paddle includes the report time, pull out/relief time, all trips operated (including scheduled time at major time points), and the pull in/ relief time and sign-off time. Paddles also show scheduled recovery time between trips. Providing drivers of fixed routes with a driver paddle is a standard practice among most public transit agencies and is an essential tool to assist the driver to stay ‘on schedule’ during the work day. Our staff has not encountered another public transit agency that does not provide drivers with individual paddles or driver timecards.

The ratio of scheduled operating time (the time when the bus is “moving” between the route terminals) to platform hours (the total scheduled time a bus spends from pull-out to pull-in at the garage) is a measure of blocking efficiency. Most transit agencies report this ratio. METS presently is not staffed to track these statistics. Further, the imprecise nature of existing operating schedules would not allow them to be calculated. Schedules would need to include scheduled arrival and departure times at each terminal in order to calculate these ratios.

The ratio of pay to platform hours is another key statistic. This shows the relationship between the hours of vehicle operation and operator pay hours. This statistic will be an important ‘tool’ to aid METS in getting the City Council to approve METS Scheduled Transit Operations budget approved on a platform hours basis rather than an operator head count basis. With sound schedule-making and run-cutting practices METS could minimize the number of pay hours associated with the platform hours. This requires that METS employ professional scheduling staff.

E. Absenteeism Tracking

The daily average percentage of operator absenteeism is a key statistic for managing the extra board. METS staff has indicated this is not tracked. Absenteeism tracking is be an important tool to justify adequate bus operator staffing. It is also important to track this when sizing the extra board.

A daily record of operator absenteeism by can be tracked daily in a simple table form which is compiled in a spreadsheet by weekdays and Saturdays on a monthly basis. A dispatcher should be responsible for filling in a daily absenteeism form such as in the example below. A separate record of part time driver absenteeism should also be tracked and compiled monthly. An example form is shown here.

DATE _____	Unplanned Absences		%	Planned Absences		%
Total Operators	Illness	5	6%	Vacation	4	5%
85	No Show	1	1%	FMLA	1	1%
	Sick child	0	0%	Jury Duty	0	0%
	Accident	2	2%	Personal Day	2	2%
				Birthday	1	1%
				Leave of Absence	3	4%
				Court Appearance	0	0%
	Daily total	8	9%		11	13%

F. Scheduling Staff Interaction with Other METS Departments

Scheduling staff should interact with other METS Departments such as the Operations and Personnel Departments. There should be at least bi-monthly meetings among these three areas.

Scheduling staff should also have a formal means of communication with the operators. This could entail a monthly meeting for operator feedback and suggestions on routes, running time, breaks etc. A Labor/Management committee could be assembled and with representation from all departments.

It is important to keep the lines of communication open between the departments and the operators.

II. METS-Specific Higher Level Scheduling Recommendations

A. Need for Professional Scheduling Staff

One of our key recommendations is that METS must hire a Manager of Service Planning, Scheduling and Marketing. This individual must be experienced in route planning, scheduling and run-cutting. It is our professional judgment that the service plan's recommendations cannot be successfully implemented without this staffing. Implementation of the service plan requires significant time and effort well beyond

the time and resources now available to METS staff. The Manager will oversee modifying and adjusting the service plan to conform to changing conditions. This is not a reflection on the proficiency of existing staffing. In our professional opinion, implementing the ambitious service plan without this added staffing is not feasible.

B. Need for Intermediate Time Points

All route schedules should be modified immediately to add intermediate time points, both inbound and outbound. We recommend adding at least two intermediate time points in each direction on every route (with the exception of Route 16 – West Connection and Route 19 – USI Shuttle. These should have one intermediate time point.). Mid-route time points will assist passengers in planning their trips and shorten the time they spend at a stop waiting for a bus. METS has been provided running time analyses from complete on-board ride counts which show actual running times for several segments of each route. Modifying the schedules to show intermediate time points will be a responsibility of the Manager of Service Planning, Scheduling and Marketing.

C. Use and Importance of Scheduled Recovery Time

Providing scheduled recovery time between all trips is an essential element for maintaining reliable schedules. Scheduled recovery time allows a scheduled trip to recover from typical delays such as variability in traffic and ridership.

Recovery time must not be considered an operator's "break time." For example, if an operator is scheduled to have a 7-minute recovery time between trips but arrives 3 minutes late, the operator still must leave on his scheduled time which results in having 4 minutes "actual" recovery time for that particular trip.

D. Need to Specify Recovery Time at Both Termini

It is 'best practice' to provide scheduled recovery time at both termini. For METS, we recommend that the majority of the recovery time be provided at the downtown terminal. For example, if a route has a 50 minute round trip running time, the scheduled recovery time could be allocated with 7 minutes at the Downtown terminal and 3 minutes at the outlying terminal. The METS Downtown terminal has designated bus bays and an operator's restroom. We previously recommended that operator paddles be provided which show scheduled 'arrival' and 'departure' times at each terminal. This is standard practice in the public transit industry.

III. Route-Specific Running Time Issues

The table below lists METS routes with identified running time issues. It is based upon end-to-end ride checks on each scheduled trip. Most METS routes have insufficient running time scheduled to allow for a 10 minute recovery time as part of a one-hour round trip. Routes which exceed average round-trip running times of 50 minutes are highlighted in yellow. The final service plan proposes realignments for

routes shown in red. These realignments will reduce these routes' running time and aid in maintaining schedules.

Route	Number of Trips Checked	Average Round Trip Running Time	Round Trips over 50 minutes	Percentage over 50 minutes
1-Washington	22	51	9	41%
2-Riverside A	9	52	8	89%
2-Riverside B	14	54	14	100%
3-Fulton	10	46	1	10%
4-Stringtown	12	50	11	92%
5-Mary-Tekoppel A	11	52	10	91%
5-Mary-Tekoppel B	9	55	9	100%
6-Walnut	12	49	4	33%
7-First Avenue	11	51	9	82%
9-Covert	26	55	26	100%
8-Lincoln A	6	51	4	67%
8-Lincoln B	15	47	3	20%
10-Lynch	10	47	3	30%
12-Howell	12	52	10	83%
13-Downtown Trolley	10	47	3	30%
14-Shopper Shuttle	9	48	5	56%
15-East Connection	13	55	12	92%
16-West Connection	26	27	21	81% trips over 25 minutes
17-Mary-Howell	5	52	5	100%
18-Stringtown-First	5	43	0	0%
23-Hwy 41 N	11	59	11	100%

IV Detailed Run-Cutting Recommendations

- In addition to adding intermediate time points to its routes, METS should change the format of its passenger public timetables. Timetables should list individual trips in an 'inbound/outbound' format showing of time points on each trip. They also should provide a route map. This is a standard practice for most public transit agencies. Making full use of an AVL system requires adding intermediate time points.

-
- Current METS scheduling and run-cutting is appropriate for its existing fixed route service pattern. Routes now operate with either a 12-hour or 18-hour service span five to six days a week. The intervals on the current routes are either 30 or 60 minutes during the day with 60 minute service on selected routes at night. There is no Sunday service provided on any route. This allows METS to schedule full-time operators in either straight runs that work eight hours or two four-hour pieces of work in a 'split' run (with night service provided in six-hour runs using part time operators). This service pattern is very simple to schedule and run cut efficiently.
 - Applications of the service planning guidelines are likely to require evening service to end at various times (such as 9 or 10 pm). Recommendations also include shorter hours of service on Sunday than on weekdays and Saturdays. Scheduling practices should not drive inefficiently providing later or earlier service than ridership justifies.
 - To implement the recommended service changes METS must add a Manager of Service Planning, Scheduling and Marketing. Staffing this position with an experienced and proficient transit scheduler/planner is an essential requirement to implement the recommended changes in routes and schedules.
 - Recommendations for Sunday service assume ending service between 8 and 9 pm. This will require added flexibility in designing service and determining operator work assignments.
 - After reviewing the METS bargaining unit contract, there is no requirement for work to be scheduled in four-hour pieces (as has been mentioned in staff interviews). METS has the flexibility to re-cutting blocks into different sized pieces.
 - Longer-term recommendations call for weekday express service which will have pieces of work 2 to 3 hours in length during the peak hours. METS may construct a full time split run that has a 3 hour piece of express service in the am peak and then possibly have a 5 hour piece of work in the pm. The only constraint is the rule that any split constructed has to be completed within a 12-hour spread or METS will have to pay the break time between the run's 2 pieces of work. This recommendation for peak hour express service is not 'short-term' and the METS scheduling staff will not be dealing with this in the 'short-run'.
 - Presently, all of METS night runs are cut into 6-hour pieces ending at 12am that are now assigned to part time operators. The only work available to part-time operators are these 6-hour night runs. METS should be mindful of this limited use of part time operators during upcoming contract negotiations. We recommend that it negotiate a change the use of part time operators to include their operating other work besides 6-hour night runs. For example, METS could use part-timer operators on peak-only express trips in the future.

-
- Also, part-timer operators could be used for charters, or possibly filling slots on the 'Extra Board' for a limited number of hours that would not exceed the maximum cap on part-time hours of 31 hours per week. Since the Extra Board will need to be augmented when METS begins operating more service in peak hours, part timers would be an excellent choice for staffing the Extra Board for a limited number of hours during the peak. This would have to be negotiated as part of the new contract.
 - METS should consider implementing some of the new night service to operate only until about 9pm. A full time driver could work a run that begins at 1pm and ends at 9pm. Alternatively a split run could be constructed that stays within a 12-hour spread time limit. These are just some possibilities for constructing a run that ends at 9pm or earlier.

V. Considerations in Implementing Sunday Service

- In order to add Sunday service, METS will need to renegotiate its bargaining unit contract to change the employee rate of pay for Sunday work. The current contract states that any Sunday work is paid at double time. It also provides that this provision will be reconsidered if METS begins to provide Sunday service. This paragraph must be changed (preferably eliminated) to implement Sunday service at a reasonable cost.
- Also, the number of consecutive days-off combinations will change depending on the number of Sunday runs that METS operates. There are no set number of consecutive days off required in the current METS bargaining unit contract. METS should strive to retain this flexibility during upcoming contract negotiations.

VI Discussion of STO-Based Budgeting

Currently METS must receive city approval for each individual bus operator hire. METS is required to budget for its bus operations service by operator 'head count' rather than the standard industry practice of STO (Scheduled Transit Operations) -based budgeting for operators. STO-based budgeting is a much more cost effective way to plan bus operator staffing. STO-based budgeting provides that METS' budget for bus operators be expressed as pay-hours rather than a head count. Presently, METS is incurring excessive overtime costs, and adding much more service would worsen this significantly. This approach to budgeting also will require added professional staffing with more transit technical scheduling skills.

Blocks Mileage

vehicle schedule: May11Wk Weekday Scenario: 1 May 2011 Wk working schedule draft 1

Block	From	Start	To	End	Distance	Duration
141	GAR1	440a	GAR1	1049p	245.300	18h09
142	GAR1	519a	GAR1	1023p	236.900	17h04
143	GAR1	554a	GAR1	1101p	237.000	17h07
144	GAR1	630a	GAR1	822a	39.500	1h52
145	GAR1	638a	GAR1	1136p	235.300	16h58
146	GAR1	229p	GAR1	407p	37.200	1h38
151	GAR1	445a	GAR1	924p	199.600	16h39
241	GAR1	554a	GAR1	1025p	210.400	16h31
242	GAR1	554a	GAR1	940p	197.000	15h46
301	GAR1	504a	GAR1	1036p	176.300	17h32
302	GAR1	534a	GAR1	1000p	164.300	16h26
303	GAR1	528a	GAR1	1006p	168.900	16h38
304	GAR1	604a	GAR1	1030p	164.300	16h26
305	GAR1	625a	GAR1	746a	22.200	1h21
306	GAR1	234p	GAR1	444p	35.400	2h10
321	GAR1	443a	GAR1	151p	153.100	9h08
322	GAR1	502a	GAR1	141p	140.300	8h39
323	GAR1	512a	GAR1	231p	155.000	9h19
324	GAR1	103p	GAR1	1011p	153.100	9h08
325	GAR1	132p	GAR1	1051p	155.000	9h19
326	GAR1	153p	GAR1	1101p	153.100	9h08
531	GAR1	437a	GAR1	100p	109.000	8h23
532	GAR1	1237p	GAR1	900p	109.000	8h23
701	GAR1	502a	GAR1	814p	206.400	15h12
702	GAR1	547a	GAR1	729a	32.700	1h42
703	GAR1	547a	GAR1	859p	206.400	15h12
704	GAR1	225p	GAR1	407p	32.700	1h42
801	GAR2	528a	GAR2	826p	168.600	14h58
802	GAR2	558a	GAR2	851p	155.100	14h53
901	GAR2	458a	GAR2	1013p	203.100	17h15
902	GAR2	533a	GAR2	938p	189.600	16h05
911	GAR2	458a	GAR2	126p	162.000	8h28
912	GAR2	451a	GAR2	1226p	147.900	7h35
913	GAR2	558a	GAR2	138p	151.800	7h40
914	GAR2	1258p	GAR2	926p	162.000	8h28
915	GAR2	1251p	GAR2	826p	147.900	7h35
916	GAR2	158p	GAR2	1026p	162.000	8h28
1011	GAR1	635a	GAR1	1105p	233.500	16h30
1012	GAR2	648a	GAR2	817a	24.700	1h29
1014	GAR2	650a	GAR2	1038p	212.200	15h48
1016	GAR2	242p	GAR2	321p	10.800	0h39
1110	GAR2	630a	GAR2	1018p	212.200	15h48
1111	GAR1	455a	GAR1	1127p	261.600	18h32

Duty Report Times

Effective: 05/01/2011

Booking: MAY11

Duty	Type	Sign-On Time	Sign-On Place	Start Time	Start Place	Block	Spread	Dut Work
15311	ST	423a	GAR1	437a	GAR1	531	8h39	8h39
11411	ST	426a	GAR1	440a	GAR1	141	8h38	8h38
				1242p	GAVC	TCAR06		
13211	ST	429a	GAR1	443a	GAR1	321	9h24	9h24
11511	ST	431a	GAR1	445a	GAR1	151	9h25	9h25
				125p	2BNP	TCAR05		
11111	ST10	441a	GAR1	455a	GAR1	1111	9h45	9h45
				209p	TCWH	TCAR07		
19121	ST	441a	GAR2	451a	GAR2	912	7h47	7h47
13221	ST	448a	GAR1	502a	GAR1	322	8h55	8h55
17011	ST	448a	GAR1	502a	GAR1	701	7h58	7h58
				1228p	HLWA	TCAR01		
19111	ST	448a	GAR2	458a	GAR2	911	8h40	8h40
19011	ST	448a	GAR2	458a	GAR2	901	9h17	9h17
13011	ST10	450a	GAR1	504a	GAR1	301	10h22	10h22
				255p	DPRA	TCAR06		
13231	ST10	458a	GAR1	512a	GAR1	323	9h35	9h35
11121	ST	500a	GAR2	510a	GAR2	1112	8h00	8h00
11131	ST10	501a	GAR1	515a	GAR1	1113	9h45	9h45
				229p	TCWH	TCAR03		
11421	ST	505a	GAR1	519a	GAR1	142	8h34	8h34
				117p	GAVC	TCAR01		
13031	ST	514a	GAR1	528a	GAR1	303	9h28	9h28
				225p	DPRA	TCAR02		
18011	ST	518a	GAR2	528a	GAR2	801	8h08	8h08
11141	ST	520a	GAR2	530a	GAR2	1114	8h00	8h00
13021	ST	520a	GAR1	534a	GAR1	302	8h22	8h22
				125p	DPRA	TCAR02		
11151	ST	521a	GAR1	535a	GAR1	1115	7h43	7h43
				1247p	TCWH	TCAR04		
19021	ST	523a	GAR2	533a	GAR2	902	8h07	8h07
17021	ST	533a	GAR1	547a	GAR1	703	7h58	7h58
				113p	HLWA	TCAR07		
17061	TRPA	533a	GAR1	547a	GAR1	706	1h58	1h58
12421	ST	540a	GAR1	554a	GAR1	242	8h32	8h32
				138p	TAFa	TCAR06		
11431	ST10	540a	GAR1	554a	GAR1	143	9h40	9h40
				258p	GAVC	TCAR05		
12411	ST	540a	GAR1	554a	GAR1	241	9h17	9h17
				223p	TAFa	TCAR01		
11161	ST	540a	GAR2	550a	GAR2	1116	8h00	8h00
11171	ST10	541a	GAR1	555a	GAR1	1117	9h45	9h45
				309p	TCWH	TCAR04		
19131	ST	548a	GAR2	558a	GAR2	913	7h52	7h52
18021	ST	548a	GAR2	558a	GAR2	802	7h05	7h05
13041	ST	550a	GAR1	604a	GAR1	304	8h22	8h22
				155p	DPRA	TCAR04		
11181	ST	600a	GAR2	610a	GAR2	1118	8h00	8h00
11191	ST	601a	GAR1	615a	GAR1	1119	7h43	7h43
				127p	TCWH	TCAR03		
13051	TRPA	611a	GAR1	625a	GAR1	305	1h37	1h37
11441	TRPA	616a	GAR1	630a	GAR1	144	2h08	2h08

	No	Total	%	Distance	Avg Speed				
In-service	427	368h49	80.44	5710.940	15.48				
Loading		1h00	0.22						
Layover		68h26	14.93						
Deadhead	2	0h30	0.11	7.900	15.80				
Pull-in/out	120	20h46	4.53	327.180	15.76				
Preparation		0h00							
Total	549	458h31	100.00	6046.020	15.50				
Blocks	60								
Vehicles	60								

Block & Trips Details - C

Effective: 01/02/2011

Vehicle schedule: May11Wk Weekday Scenario: 1 May 2011 Wk working schedule draft 1

Booking: MAY11

Garage	Block	From	Start	End	To	Duration	All Routes	Total Lay	Lay % in-serv	Distance
GAR1	141	GAR1	440a	1049p	GAR1	18h09	14	4h16	32.20%	245.300
Route	Type	From	Start	End	To	Dur	Lay	CumLay		
	Pull-out	GAR1	440a	454a	PLMP	0h14	0	0h00		
14		PLMP	454a	608a	PCBA	1h14	8	0h08		
14		PCBA	616a	714a	WSTP	0h58	26	0h34		
14		WSTP	740a	825a	PCBA	0h45	18	0h52		
14		PCBA	843a	941a	WSTP	0h58	19	1h11		
14		WSTP	1000a	1045a	PCBA	0h45	18	1h29		
14		PCBA	1103a	1201p	WSTP	0h58	19	1h48		
14		WSTP	1220p	105p	PCBA	0h45	18	2h06		
14		PCBA	123p	221p	WSTP	0h58	19	2h25		
14		WSTP	240p	325p	PCBA	0h45	18	2h43		
14		PCBA	343p	441p	WSTP	0h58	19	3h02		
14		WSTP	500p	545p	PCBA	0h45	18	3h20		
14		PCBA	603p	701p	WSTP	0h58	19	3h39		
14		WSTP	720p	805p	PCBA	0h45	18	3h57		
14		PCBA	823p	921p	WSTP	0h58	19	4h16		
14		WSTP	940p	1025p	PCBA	0h45	0	4h16		
	Pull-in	PCBA	1025p	1049p	GAR1	0h24		4h16		

Garage	Block	From	Start	End	To	Duration	All Routes	Total Lay	Lay % in-serv	Distance
GAR1	142	GAR1	519a	1023p	GAR1	17h04	14	3h53	31.07%	236.900
Route	Type	From	Start	End	To	Dur	Lay	CumLay		
	Pull-out	GAR1	519a	533a	PLMP	0h14	0	0h00		
14		PLMP	533a	647a	PCBA	1h14	11	0h11		
14		PCBA	658a	756a	WSTP	0h58	19	0h30		
14		WSTP	815a	900a	PCBA	0h45	18	0h48		
14		PCBA	918a	1016a	WSTP	0h58	19	1h07		
14		WSTP	1035a	1120a	PCBA	0h45	18	1h25		
14		PCBA	1138a	1236p	WSTP	0h58	19	1h44		
14		WSTP	1255p	140p	PCBA	0h45	18	2h02		
14		PCBA	158p	256p	WSTP	0h58	19	2h21		
14		WSTP	315p	400p	PCBA	0h45	18	2h39		
14		PCBA	418p	516p	WSTP	0h58	19	2h58		
14		WSTP	535p	620p	PCBA	0h45	18	3h16		
14		PCBA	638p	736p	WSTP	0h58	19	3h35		
14		WSTP	755p	840p	PCBA	0h45	18	3h53		
14		PCBA	858p	956p	WSTP	0h58	0	3h53		
	Pull-in	WSTP	956p	1023p	GAR1	0h27		3h53		

Route: 14 Palm & Paul/ Palm Cyn & Baristo
Garage:
Direction: North - South

Block	From	Note	PCBA	BAFA	GAVC	WSTP	PLMP	PLMP	WSTP	GAVC	BAFA	PCBA	Note	To
141	(440a)							454a	523a	545a	556a	608a		
142	(519a)							533a	602a	624a	635a	647a		
143	(554a)							608a	637a	659a	710a	722a		
145	(638a)								705a	727a	738a	750a		
144	(630a)							644a	713a	735a	746a	758a	S	(822a)
141			616a	629a	641a	714a			740a	802a	813a	825a		
142			658a	711a	723a	756a			815a	837a	848a	900a		
143			733a	746a	758a	831a			850a	912a	923a	935a		
145			808a	821a	833a	906a			925a	947a	958a	1010a		
141			843a	856a	908a	941a			1000a	1022a	1033a	1045a		
142			918a	931a	943a	1016a			1035a	1057a	1108a	1120a		
143			953a	1006a	1018a	1051a			1110a	1132a	1143a	1155a		
145			1028a	1041a	1053a	1126a			1145a	1207p	1218p	1230p		
141			1103a	1116a	1128a	1201p			1220p	1242p	1253p	105p		
142			1138a	1151a	1203p	1236p			1255p	117p	128p	140p		
143			1213p	1226p	1238p	111p			130p	152p	203p	215p		
145			1248p	101p	113p	146p			205p	227p	238p	250p		
141			123p	136p	148p	221p			240p	302p	313p	325p		
142			158p	211p	223p	256p			315p	337p	348p	400p		
143			233p	246p	258p	331p			350p	412p	423p	435p		
146	(229p)	S		255p	307p	340p								(407p)
145			308p	321p	333p	406p			425p	447p	458p	510p		
141			343p	356p	408p	441p			500p	522p	533p	545p		
142			418p	431p	443p	516p			535p	557p	608p	620p		
143			453p	506p	518p	551p			610p	632p	643p	655p		
145			528p	541p	553p	626p			645p	707p	718p	730p		
141			603p	616p	628p	701p			720p	742p	753p	805p		
142			638p	651p	703p	736p			755p	817p	828p	840p		
143			713p	726p	738p	811p			830p	852p	903p	915p		
145			748p	801p	813p	846p			905p	927p	938p	950p		
141			823p	836p	848p	921p			940p	1002p	1013p	1025p		(1049p)
142			858p	911p	923p	956p								(1023p)
143			933p	946p	958p	1031p	1046p							(1101p)
145			1008p	1021p	1033p	1106p	1121p							(1136p)

Notes: S - Operates school days only. PM school trips do not operate on minimum school days.

Roster Report

Effective: 05/01/2011
 Booking: MAY11

Roster: 1-5/8A Size: 22 Cycle: 1 GAR1: 5 DAYS AM runs

Pos	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Work	Guar	Paid
22	OFF	10YRD 415a 8h00	10YRD 415a 8h00	10YRD 415a 8h00	10YRD 415a 8h00	10YRD 415a 8h00	OFF	40h00	0h00	40h00
23	35311 523a 7h59	15311 423a 8h39	15311 423a 8h39	15311 423a 8h39	OFF	OFF	25311 523a 7h59	41h55	0h00	41h55
24	31411 505a 8h26	11411 426a 8h38	11411 426a 8h38	11411 426a 8h38	OFF	OFF	10YRD 415a 8h00	42h20	0h00	42h20
25	33211 611a 7h30	13211 429a 9h24	13211 429a 9h24	OFF	OFF	13231 458a 9h35	23211 611a 7h30	43h23	0h00	43h23
26	38011 456a 8h53	OFF	OFF	11511 431a 9h25	11511 431a 9h25	17011 448a 7h58	21511 557a 7h55	43h36	0h00	43h36
27	33011 536a 8h26	17011 448a 7h58	17011 448a 7h58	17011 448a 7h58	17011 448a 7h58	OFF	OFF	40h18	0h00	40h18
28	33221 646a 8h10	OFF	OFF	13221 448a 8h55	13221 448a 8h55	13221 448a 8h55	23221 646a 8h10	43h05	0h00	43h05
29	30111 620a 7h44	OFF	OFF	11131 501a 9h45	15311 423a 8h39	15311 423a 8h39	20111 620a 7h44	42h31	0h00	42h31
30	31421 550a 8h26	11421 505a 8h34	11421 505a 8h34	OFF	OFF	11451 624a 9h31	29111 440a 7h49	42h54	0h00	42h54
31	39111 440a 7h49	OFF	OFF	11421 505a 8h34	11421 505a 8h34	11421 505a 8h34	29121 523a 8h26	41h57	0h00	41h57
32	33021 554a 7h28	OFF	OFF	13031 514a 9h28	13031 514a 9h28	13031 514a 9h28	23021 554a 7h28	43h20	0h00	43h20
33	33031 616a 8h26	13021 520a 8h22	OFF	OFF	11411 426a 8h38	11411 426a 8h38	23031 616a 8h26	42h30	0h00	42h30
34	OFF	OFF	13021 520a 8h22	13021 520a 8h22	13021 520a 8h22	13021 520a 8h22	23011 536a 8h26	41h54	0h00	41h54
35	10YRD 415a 8h00	11151 521a 7h43	11151 521a 7h43	11111 441a 9h45	OFF	OFF	21131 500a 9h44	42h55	0h00	42h55

NETS

Evansville MPO



Henderson • Vanderburgh • Warrick



Appendix I

METS Perception Research

It takes the right match to ignite your brand.



METS PERCEPTIONS RESEARCH

Prepared especially for:



Prepared by:



Background/Purpose

Metropolitan Evansville Transit System (METS) would like to increase ridership by making METS more attractive to individuals who do not currently ride METS buses. To obtain opinions of METS in the community, a web survey was conducted among two audiences - the General Population (GP) and Key Opinions Leaders* (KOL).

Objectives

The primary objectives of the research are to determine the following:

- Are they aware of METS?
- Have they ever used METS services?
- What are the key drivers for using and not using METS?
- What attributes are important in a public transportation service?
- How does METS perform on those attributes?
- How likely would they be to use/recommend METS services in the future?
- What services, if any, are lacking in public transportation in Evansville?

Action Standards

Results from this study will be used to develop a positioning statement and marketing plans for METS services.

* Key Opinion Leaders are defined as individuals who, in their role with their company, might work or deal with individuals who have transportation challenges (social service agencies, government/policy makers, economic/urban development groups, neighborhood associations, etc. METS employees are also included in this group.



Overview

Surveys were conducted by web using a convenience sample. To target the General Population, Lochmueller's partner companies sent the survey link to their employees asking them to complete the survey. PAR also sent a survey request to their database of local residents. For the KOL cell Lochmueller obtained contact information for individuals associated with neighborhood associations, government/policy makers, social service agencies, environmental groups, economic development groups, key employers, and METS management and drivers. The survey was also available in Spanish.

Screening Criteria

All respondents are age 18 or over. Those in the General Population cell reside within city limits and are not employed in marketing research, advertising, public relations, or public transportation.

Sample Composition

A total of 406 interviews were completed – 272 among the General Population, four among METS employees,* and 130 with other Key Opinion Leaders.

**Responses from METS employees are lumped with KOLs for the questions that METS employees were asked; results that include METS employees are designated with an asterisk (*).*



Key Dates/Data Notes

Activity Dates

Materials Development: November 19, 2014 – January 30, 2015
Data Collection: February 4-22, 2015
Final Report: March 2, 2015

Statistical Parameters

Assuming measurement at the 95% confidence level, sampling error would be as follows: Total (n=406): $\pm 4.9\%$, General Population (n=272): $\pm 5.9\%$, Key Opinion Leaders (n=134): $\pm 8.5\%$.

Note: Concurrent with the launch of this survey, METS Mobility announced a rate increase from \$5 to \$15 for county riders, and County Commissioners voted to keep the rate at \$5. Please be aware that this could impact general opinions of METS and increase awareness of METS in these survey results.





KEY
FINDINGS



Key Findings

- **General awareness of METS is high, however, there appears to be opportunity to increase community awareness of specific information, such as route schedules and availability/coverage.**
 - Nearly all (97%) are aware of METS.
 - Among those aware of METS, less than four in ten know specifics about METS, such as the bus routes, hours/days of operation, coverage areas, phone number, website, and ads/communication.
 - Several open-end comments suggested the need to provide information regarding cost, route locations, and schedules.
- **Punctuality, and safety while riding the bus are primary strengths of METS, while providing convenient services is a key area for improvement.**
 - When measuring METS service on key attributes compared to importance of those attributes, punctuality/arriving on time and safety when riding the bus were rated high in importance and high in performance. Cost is considered a secondary strength (high in satisfaction but lower in importance).
 - Cost was cited as a reason for using METS among two in ten who have ever done so.
 - The following are considered areas of improvement for METS: providing service at times of day needed, providing service on days of week needed, and providing convenient routes, while providing adequate coverage area is a secondary consideration.
 - Among those who have never used METS, one in ten each (13%) said the route times and/or the bus stops or route locations are not convenient.
 - Some additional suggestions/areas in which respondents feel services are lacking include expanding the coverage area, providing service on Sunday, longer hours/2nd or 3rd shift coverage and more routes.*
 - Primary areas suggested for more coverage appear to be 41 North, Deaconess Gateway Campus, Newburgh, and USI.*
 - About two in ten who disliked the description of services indicated the lack of service on Sunday.

*Based on evaluation of open-end responses.



Key Findings

- **Current use of METS is fairly low; primarily due to a lack of need.**

- Four in ten have used METS service in the past, and less than one in ten currently ride the bus.
 - GPs are more likely to use METS than KOLs.
- Four in ten who have ever used METS did so because they had no other means of transportation, and nine in ten who don't use METS cited that they have their own transportation.

Use of METS (Base: 402)			
	Total	GP	KOL
Ever Used	42%	45%	36%
Used in Past Five Years	23%	24%	21%
Currently Use	8%	10%	4%

- **There appears to be an opportunity to improve satisfaction with METS services.**

- Eight in ten who have used METS said services met their expectations, however, the percentage who said the services did not meet their expectations is nearly triple the percentage saying services exceeded expectations.
- Six in ten are satisfied with METS services and one in ten are dissatisfied.
- METS' Net Promoter[®] Score (NPS) is 13%, with 42% being defined as "Promoters" of METS and 29% being "Detractors" (Please refer to the Appendix for a full description of the NPS.)

- **Safety appears to be less of an issue with individuals who have ridden the bus than those who have not.**

- 15% of respondents who have never used METS haven't done so because of safety concerns.
- Among those who have ridden the bus but not in the past five years, only 4% have safety concerns.
- Over a fourth (27%) of non-riders who wouldn't use the free service cited safety concerns.



Implications/Recommendations

Provided they are feasible for METS, this data suggest the following recommendations:

- Consider providing service on Sunday and expanding coverage times to accommodate first shift start times, as well as second and third shifts.
- Consider expanding beyond city limits, focusing on the areas where the need is greatest.
- Provide consumer education to alleviate concerns about riding the bus (cost, safety, etc.), perhaps including testimonials from frequent riders.
- Provide shelters for bus stops, keep the areas around bus stops clean, and keep the busses clean.
- Make sure route locations and schedules are easy to understand and readily available.
 - Provide detailed information on website.
 - Provide schedules/maps at key origination/destination points (USI, Gateway, key businesses, etc.).
 - This may imply some advertising/promotions to increase awareness of the METS website and/or any other information sources.

Note: Recommendations take into consideration survey results, open-end comments, and results of METS driver interviews conducted in 2014.





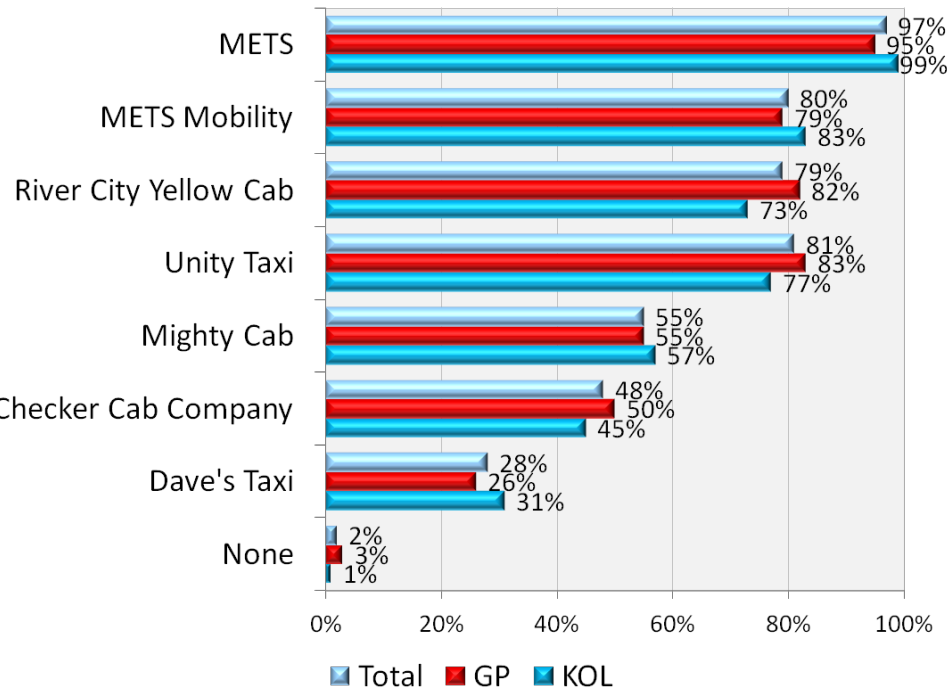
DETAILED FINDINGS



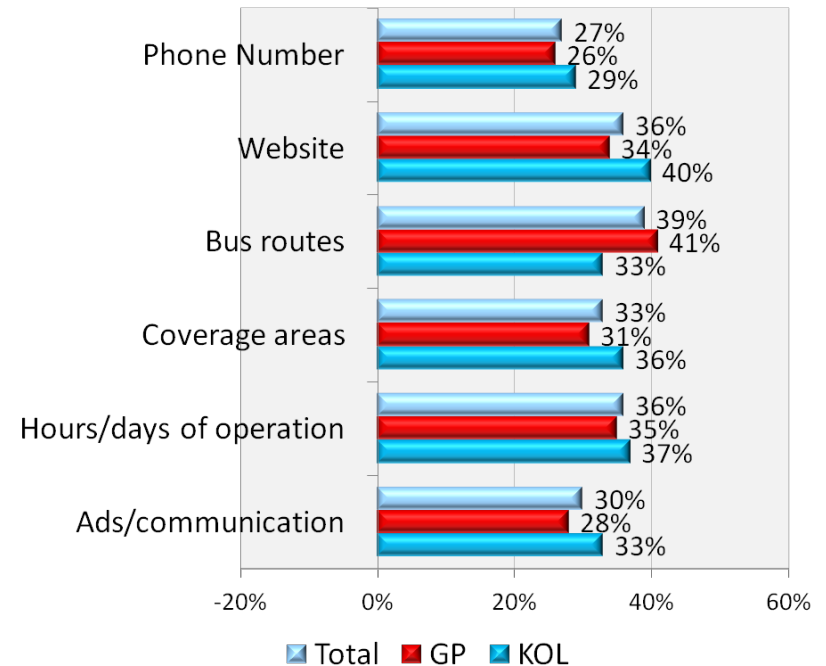
Nearly all are aware of METS

- Eight in ten are aware of METS Mobility, and awareness of local cab services are varied.
- Four in ten are aware of the METS bus routes, hours/days of operation, and website. Just over a fourth are aware of the phone number.
- About two-thirds of GPs (66%) know where the closest METS bus stop is to their home, and eight in ten (79%) KOLs know where the closest bus stop is to their business/association. (Data not shown)

Awareness of Local Transportation Services



Awareness of METS Key Information



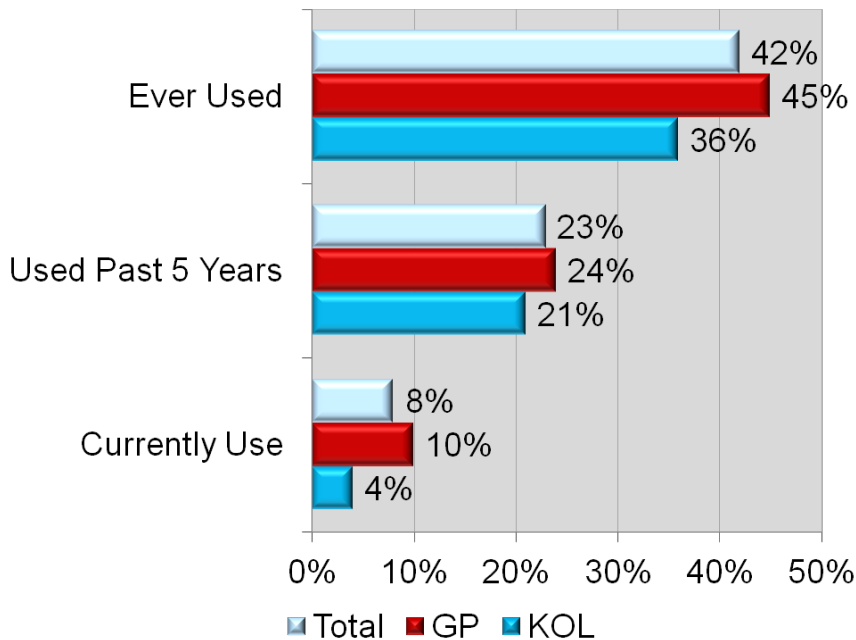
- Q.8 Which of the following local transportation services, if any, are you aware of? (Base: All- 402 Total, 272 GP, 130 KOL)
- Q.9 Which of the following, if any, regarding METS bus service are you aware of? (Base: Aware of METS – 388 Total, 259 GP, 129 KOL)
- Q.10 Do you know where the closest METS bus stop is to your home? (Base: Aware of METS – 388 Total, 259 GP, 129 KOL)
- Q.10b Do you know where the closest METS bus stop is to the (Q.1/2) with which you are affiliated? (Base: 129 KOL Aware of METS)



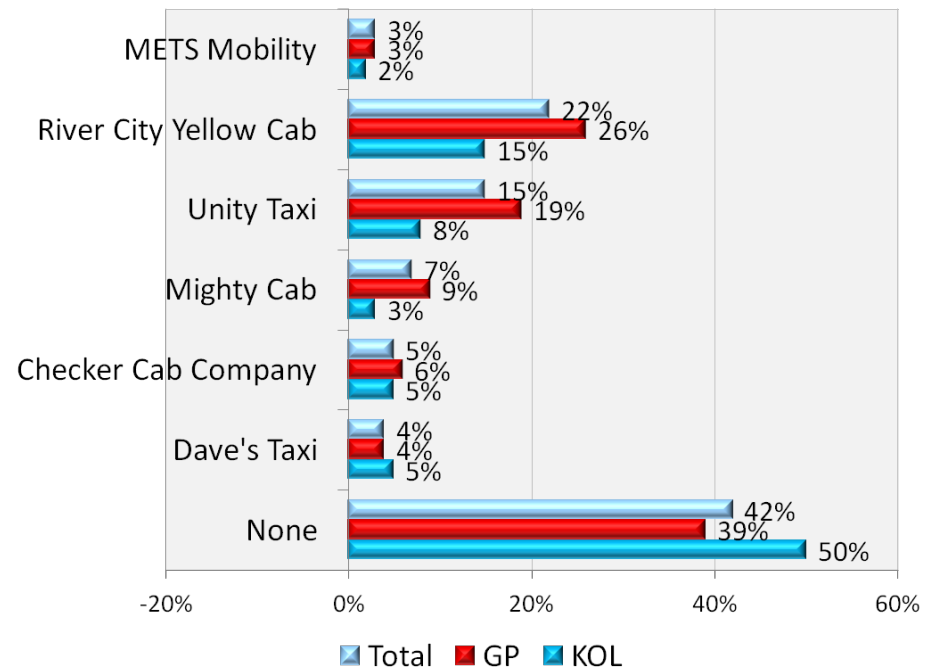
Six in ten have used local public transportation services

- Four in ten have used METS services in the past and about one in ten currently ride a METS bus at least once a month. This compares to about 27% who use public transportation in Chicago and about 9% who use public transportation in Cincinnati.*
- This is much higher among GPs (10%) than KOLs (4%).

Use of METS



Other Transportation Services Ever Used



Base: All- 402 Total, 272 GP, 130 KOL

- Q.11 Which of the following local transportation services if any, have you ever used?
- Q.12 Which of the following have you used in the past five years?
- Q.13 Which of the following services do you currently use at least once a month?

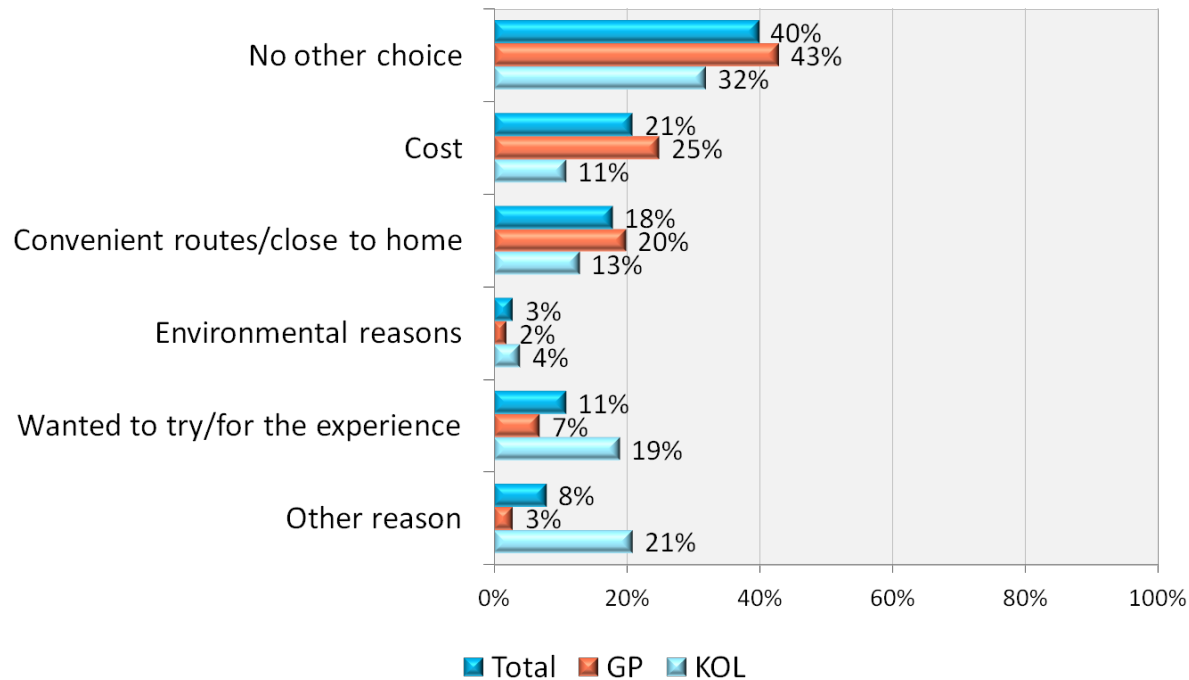
* Source: Wikipedia; See appendix for more information.



Transportation availability appears to be the key driver for METS use

- A much higher percentage of KOLs rode the bus for the experience than GPs, and cost drove a higher percentage of GPs than KOLs.
- Three-fourths said the weather or season of the year was not a factor in their use of METS. (Data not shown)

Reasons for Ever Using METS



Q.17 What is the primary reason you chose METS bus service over other transportation options? (Base: Ever Used METS - 169 Total, 122 GP, 47 KOL)

Q.23 Is/was your use of METS affected by season of year or weather? (Base: Ever Used METS - 169 Total, 122 GP, 47 KOL)



Transportation availability is also the primary reason for non-use of METS

- Nine in ten individuals who have never ridden the bus said they haven't done so because they have their own transportation/don't need to.
- Safety concerns, inconvenient bus stops/route locations, and route times are also key detriments.
 - Safety appears to be more of an issue among those who are not currently riding the bus.
- Cost does not appear to be a factor.

Reasons for Not Using METS			
	Have Never Used Mets	Haven't Used Mets in Past 5 Years	Would Not Use Free Service
Base:	219	76	146
Don't need/Have transportation	90%	95%	84%
Safety concerns	15%	4%	27%
Bus stops/route locations are not convenient	13%	9%	25%
Route times are not convenient	13%	9%	19%
Not aware of the location of the nearest bus stop	11%	11%	--
Cost is too high	3%	--	4%

Q.14 Why have you never used METS bus service?

Q.15 Why have you not used METS bus service in the past five years?

Q.35 Why would you not use this free METS bus service?



Most attributes rated are deemed important

- The ability to read or work while riding the bus is not important to about a fourth of the respondents.

Importance of Attributes of a Public Transportation System				
	GP		KOL	
	Important (4-5)	Not Important (1-2)	Important (4-5)	Not Important (1-2)
Reasonable cost	90%	1%	93%	0%
Punctuality/Arrives on time	93%	1%	96%	0%
Routes are convenient/Gets customers where they need to go	92%	1%	96%	0%
Bus stops are conveniently located	91%	1%	94%	0%
Coverage area is adequate	90%	1%	93%	0%
Provides service at times of day needed by riders	91%	1%	96%	1%
Provides service on days of week needed by riders	92%	1%	96%	0%
Wait times are appropriate	90%	1%	90%	0%
Bus stops are in a safe location/Personal safety while waiting at the bus stop	91%	1%	93%	1%
Personal safety while riding the bus	93%	1%	93%	0%
Ability to read or work while riding the bus	45%	25%	34%	25%

Base: All Respondents – 406 Total, 272 GP, 134 KOL*

Q.24 Please rate the importance of the following attributes of a public transportation service. (1 = "Not at all important;" 5 = "Very Important")



METS' primary strength appears to be reasonable cost

- Three-fourths agree that the cost is reasonable.
- About six in ten agree that riding the bus is safe.
- Slightly over six in ten GPs agree that METS busses are punctual.

Ratings of METS on Attributes of a Public Transportation System						
	GP			KOL		
	Agree (4-5)	Do Not Agree (1-2)	Don't Know	Agree (4-5)	Do Not Agree (1-2)	Don't Know
Cost is reasonable	77%	1%	15%	75%	4%	14%
Busses arrive on time	63%	7%	20%	55%	10%	20%
Routes are convenient	52%	11%	19%	45%	18%	18%
Bus stops are conveniently located	58%	6%	18%	55%	10%	16%
Coverage area is adequate	47%	16%	20%	39%	22%	18%
Provides service at times of day needed	52%	16%	20%	51%	20%	20%
Provides service on days of week needed	48%	18%	18%	51%	18%	25%
Wait times are appropriate	57%	7%	18%	51%	16%	20%
Bus stops are in a safe location	59%	8%	18%	47%	14%	20%
I feel safe/Personal safety while riding the bus	61%	5%	17%	59%	10%	12%
I am able to read or work while riding the bus	47%	10%	28%	39%	10%	35%

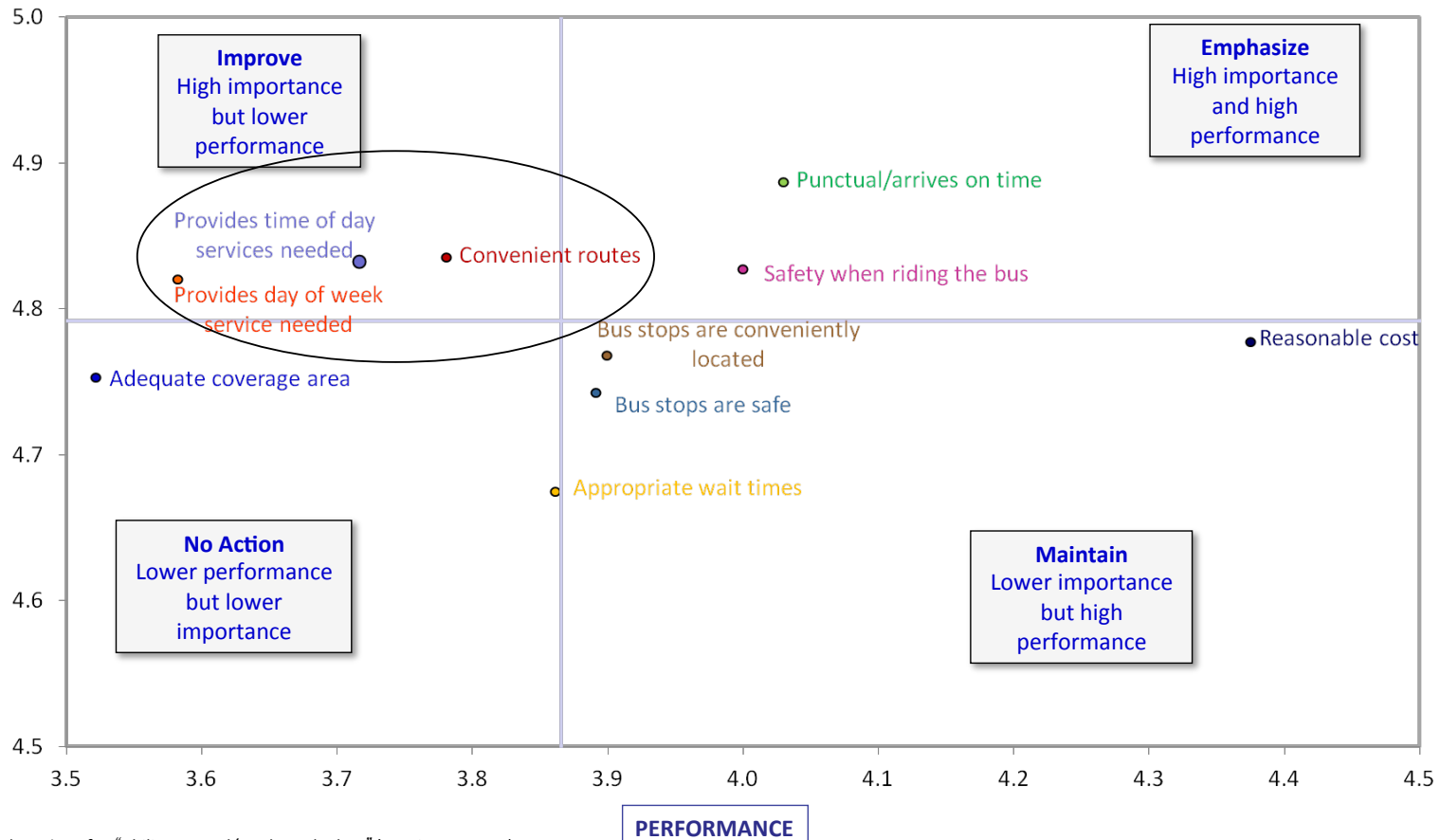
(Base: Ever Used METS + METS Employees - 173 Total, 122 GP, 51 KOL*)

Q.25 Please rate your level of agreement with the following statements regarding METS bus service. (1 = "Do not Agree at all;" 5 = "Completely Agree")
 (METS): Please indicate your perception of current METS bus riders' agreement with the following statements regarding METS bus service.



METS could improve convenience of services

- When considering importance with performance ratings, METS' primary strengths are punctuality and safety while riding, and a secondary strength is cost.
- Areas of improvement include providing service at time of day and day of week needed and convenient routes.



Base: Ever Used METS – 169 total; includes only importance ratings by those who have ever used METS

Q.24 Please rate the importance of the following attributes of a public transportation service. (1 = "Not at all important;" 5 = "Very Important")

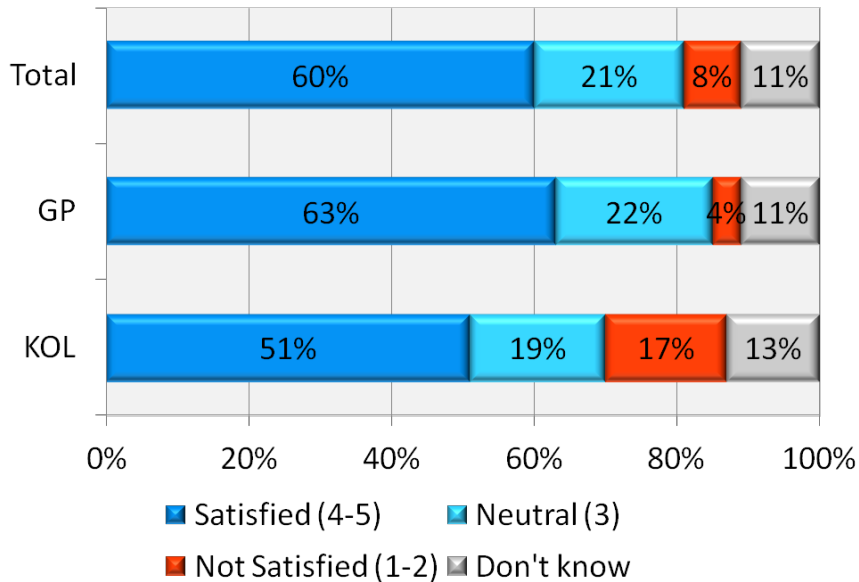
Q.25 Please rate your level of agreement with the following statements regarding METS bus service. (1 = "Do not Agree at all;" 5 = "Completely Agree")



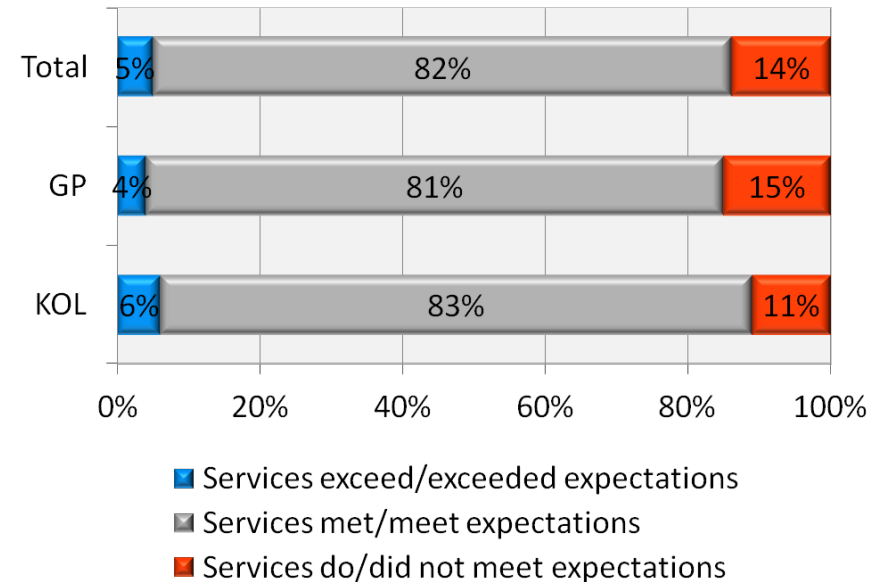
Most believe METS' services meet expectations

- Eight in ten respondents who have used METS said the services met their expectations.
- Five percent said services exceeded expectations, and one in ten said they did not meet expectations.
- Six in ten indicated satisfaction with METS overall, and one in ten are not satisfied.
 - GPs appear to be more satisfied than KOLs.

Overall Satisfaction with METS



METS Services vs. Expectations



Base: Ever Used METS– 169 Total, 122 GP, 47 KOL

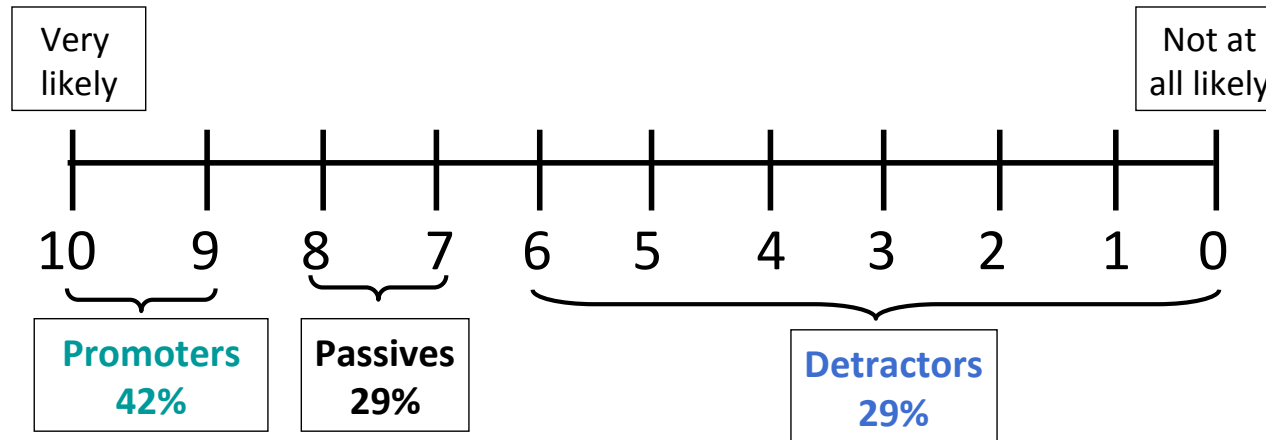
Q.18 Please rate your overall satisfaction with the services provided by METS. (1 = "Not at all satisfied," 5 = "Very satisfied")

Q.36 How does the service you've received from METS meet your expectations?



METS' Net Promoter® Score is 13%

- Four in ten respondents who have used METS' services are considered “Promoters” of METS, while three in ten are labeled as “Detractors.”
- The Net Promoter® Score (% of Promoters minus % of Detractors) is higher among GPs than KOLs (16% vs. 6%).



GPs:	44%	28%	28%
KOLs:	38%	30%	32%

Net Promoter is a registered trademark of Satmetrix Systems, Inc., Bain & Company and Fred Reichheld. Please refer to the Appendix for a description of NPS categories.

Q.20 Please rate your likelihood to recommend METS bus service to others if given the opportunity. (Base: Ever Used METS– 161 Total, 114 GP, 47 KOL; “Don’t know” not included)



KOLs are fairly likely to recommend METS to clients

- Six in ten (61%) would recommend METS to an individual who utilizes the services of their company/group, while nearly two in ten would not recommend METS to these individuals.
- Nearly half (46%) of KOLs would recommend METS to a colleague or employee of their company/group, and two in ten would not.

KOLs' Likelihood to Recommend METS Bus Transportation to:				
	Base	Likely (4-5)	Neutral (3)	Not Likely (1-2)
Colleague or employee of company, group, or association	125	46%	34%	20%
Individual who utilizes company, group, or association's services	61	61%	21%	18%

Q.40a Please indicate how likely you would be to recommend METS bus transportation to a colleague or employee of your company, group, or association. (Base: 125; any KOL except neighborhood association)

Q.40b Please indicate how likely you would be to recommend METS bus transportation to an individual who utilizes the services of your company, group, or association. (Base: 61; any KOL except government/policy maker or employer in Vanderburgh County)

(1 = "Not at all likely," 5 = "Very likely")

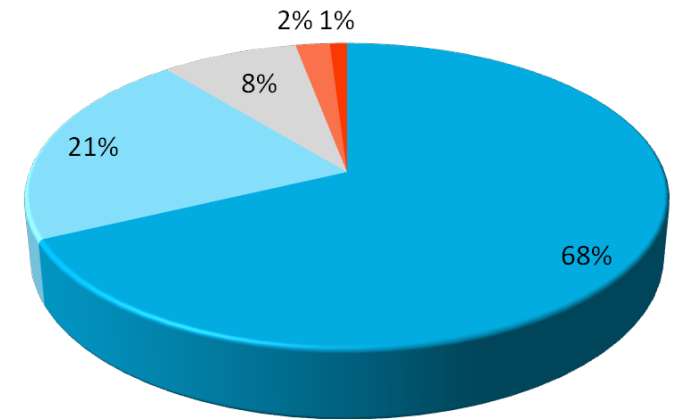


KOLs believe finding transportation is a concern

- Nearly three-fourths of those in a KOL position deal or work with individuals who rely on public transportation.
- About a third of all KOLs help people find transportation in their role.
- About nine in ten of those who help individuals find transportation indicated that finding transportation is a concern for these individuals.

	Yes	No	Not Sure
Work/deal with individuals who rely on public transportation	74%	15%	11%
Help those individuals find transportation – Base: work/deal with individuals who rely on public transportation	48%	52%	N/A
Help those individuals find transportation – Base: all KOLs	35%	65%	N/A

How much of a concern is finding transportation for these individuals?



■ A big concern (5) ■ 4 ■ 3 ■ 2 ■ Not a concern at all (1)

Q.37 Do you work or deal with individuals who rely on public transportation in your role with the (Pipe in answer to Q.1/2) with which you are affiliated/employed? (Base: KOL - 130)

Q.38 Are you involved with helping these individuals find transportation? (Base: Yes to Q.37 – 96 KOL)

Q.39 How much of a concern is finding transportation for these individuals? (Base: Yes to Q.37– 96 KOL)

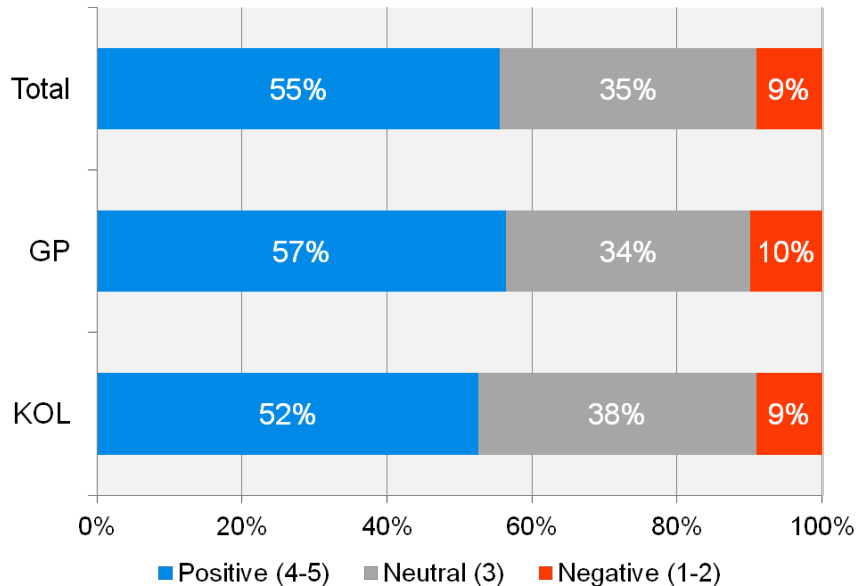


Most appear to be accepting of the statement of METS' services

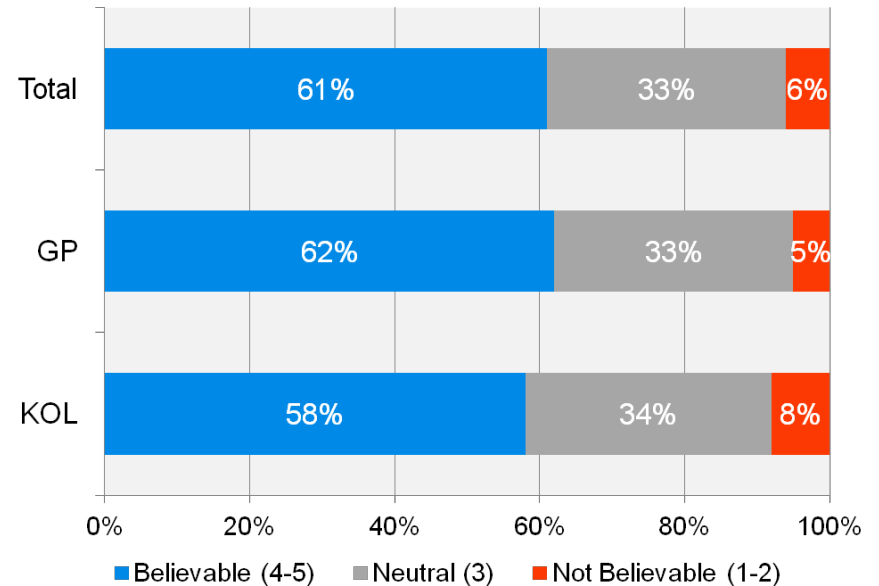
- Over half gave a positive rating to the statement and six in ten said the statement is believable.
- Among those who rated the believability low, (1-2 on a 5-point scale), seven don't believe all busses run until 12:15 am and five don't believe METS has served 45 million passengers (Base: 24).

The Metropolitan Evansville Transit System (METS) provides public bus transportation to individuals within Evansville city limits. METS offers 17 fixed routes within the city and operates Monday through Friday from 5:45 am through 12:15 am and Saturday from 6:15 am through 12:15 am. METS has transported more than 45 million passengers since 1971.

Overall Opinion



Believability



Base: All- 402 Total, 272 GP, 130 KOL

Q.26 Please rate your opinion of the description of METS services overall. (1 = "Poor," 5 = "Excellent")

Q.27 Please indicate how believable you believe this statement is. (1 = "Not at all believable," 5 = "Completely believable")



Available days/times are the key statement message

- The key message thought to be in this statement was primarily METS' availability/route times, and this was also what was liked most about the statement.
- Over half did not mention a dislike, and one in ten dislike that there is no service on Sunday.

The Metropolitan Evansville Transit System (METS) provides public bus transportation to individuals within Evansville city limits. METS offers 17 fixed routes within the city and operates Monday through Friday from 5:45 am through 12:15 am and Saturday from 6:15 am through 12:15 am. METS has transported more than 45 million passengers since 1971.

	Key Message	Likes	Dislikes
Availability/Route times	41%	32%	N/A
Available to Evansville city residents	10%	N/A	5%
Number of routes	6%	4%	N/A
Number of passengers transported/Irrelevant	2%	8%	5%
No Sunday service	N/A	N/A	10%
No route information	N/A	N/A	6%
Don't know/Nothing	23%	33%	54%

Note: percentages cited above are based on PAR's general analysis of open-end responses. Verbatim responses are being provided.

Base: All— 402 Total

Q.29 What do you believe is the key message in this statement?

Q.30 What, if anything, do you LIKE about this statement?

Q.31 What, if anything, do you DISLIKE about this statement?

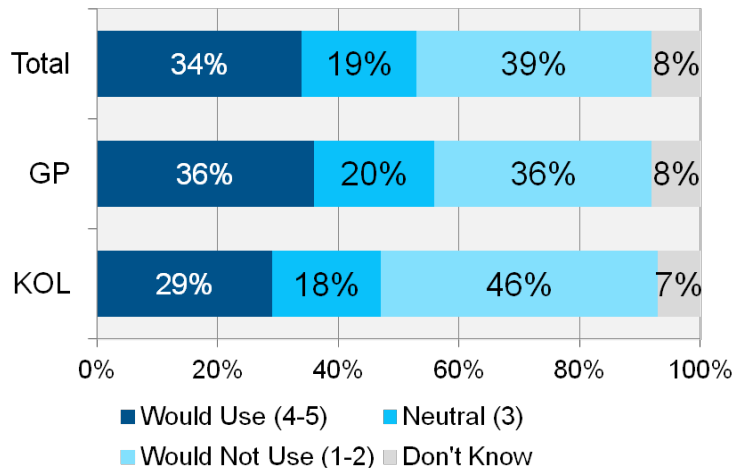


About three in ten would use a free service by METS

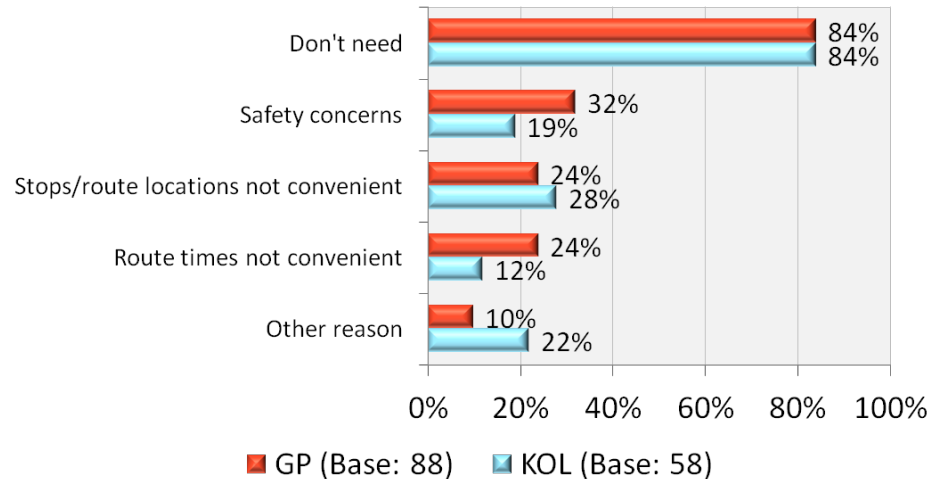
- Four in ten, however, indicated that they would not use this free service, primarily because they have their own transportation.
 - Safety concerns are much more prevalent among GPs than KOLs.
 - The primary “other” reason for not using the free service among KOLs is not living in the city.
- Most of those who would use the service said they’d use it 1-5 times, and three-fourths would be willing to complete a survey to share experiences. (Data not shown)

METS (Metropolitan Evansville Transit System) wants YOU to ride the bus! We all benefit with mass transit: fewer cars on the road, cleaner air, and you can save money and relax on your way to your destination! Show your valid drivers' license and ride free METS in March. Show your valid vehicle registration and ride free in April too! We want YOU to experience safe, reliable and efficient transportation the METS way. What's the catch? We want you to share your experience in a brief follow-up survey at the end of this promotion.

Likelihood to Use Free METS Service



Reasons Free Service Wouldn't be Used



- Q.32 How likely would you be to use this free METS bus services as a result of this statement?
 Q.33 About how many times do you think you would use this service?
 Q.34 How likely would you be to complete a survey sharing your experiences with the bus service?
 Q.35 Why would you not use this free METS bus service?

Base: Not currently using METS– 370 Total, 245 GP, 125 KOL





SAMPLE COMPOSITION

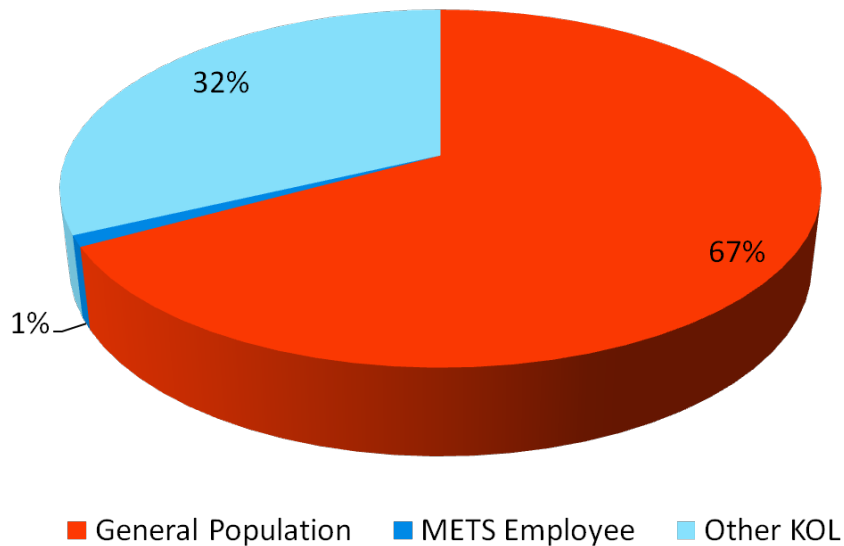
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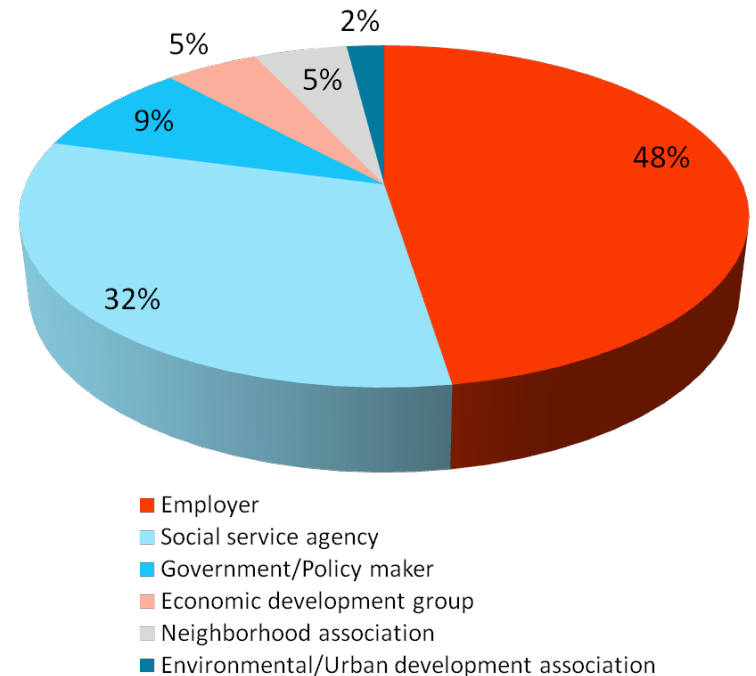
Sample Composition

- Three in ten respondents identified themselves as a Key Opinion Leader (in a leadership position) with their company/group, and two-thirds are considered General Population.
- Of the four responding METS employees, all are bus operators (one indicated he is a Mobility driver).
- Eight in ten KOLs consist of individuals who are in a leadership position with an employer in Vanderburgh County or a social service agency.

Cell (Base: 406 Total Respondents)



Primary Role - KOLs (Base: 130)



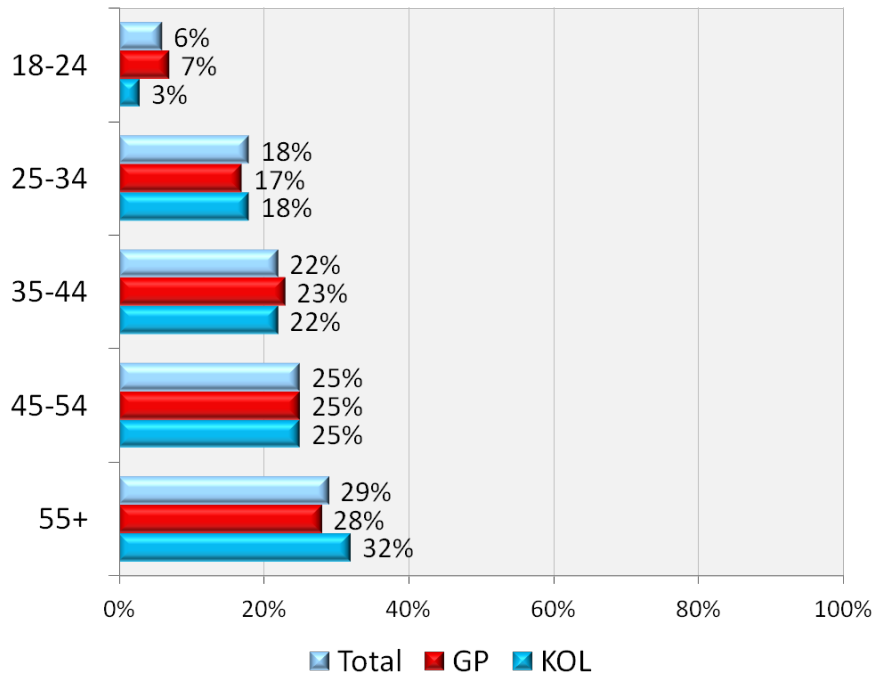
Q.1 Are you employed by or affiliated with any of the following types of associations in Vanderburgh County in a leadership position (Director, Supervisor, HR, etc.)?
 Q.2 Which do you consider your primary affiliation?



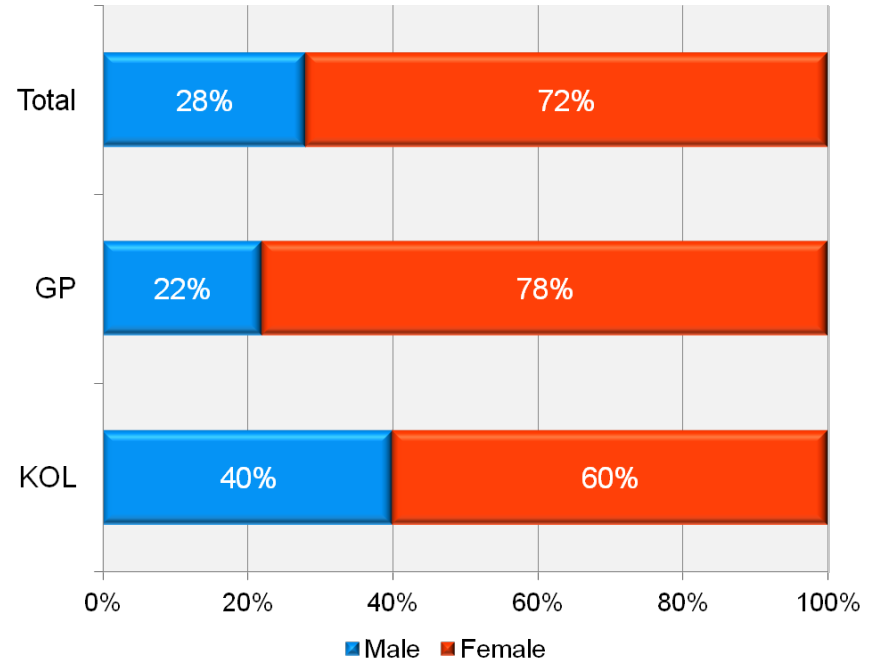
Age/Gender

- Age is widely dispersed, with over half being age 45 or older.
- Nearly three in ten are male.
 - A much higher percentage of KOLs are male compared to GPs.

Age



Gender



Base: Age: All- 402 Total, 272 GP, 130 KOL; Gender: 406 Total, 272 GP, 134 KOL*

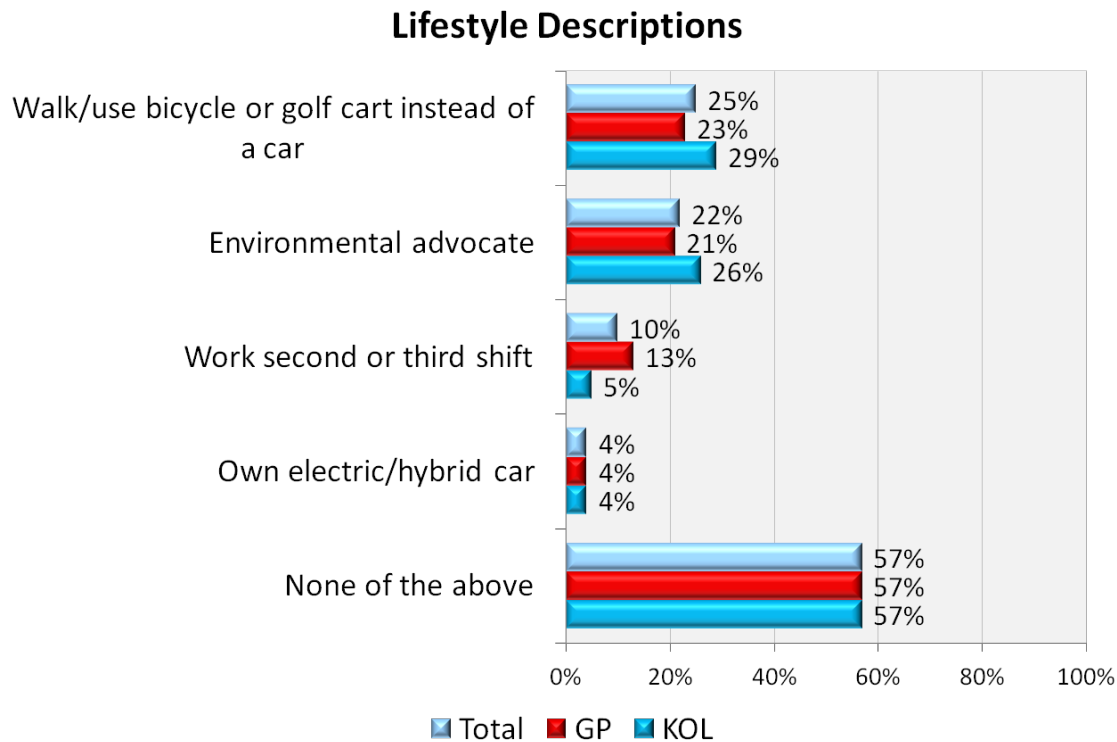
Q.7 Into which of the following categories does your age fall?

Q.44 Please indicate your gender.



Over half do not fit any of the descriptions below

- About a fourth said they walk or use a bicycle or golf cart instead of a car at least occasionally, and two in ten describe themselves as environmental advocates.
- Nine in ten (94%) GPs currently have a driver's license. (Data not shown)



Base: Age: All-406 Total, 272 GP, 134 KOL*

Q.42 Which of the following, if any, describe you or your lifestyle?

Q.43 Do you currently have a driver's license?





APPENDIX

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Mass Transit Use

The following is a partial list of U.S. cities of 100,000+ inhabitants showing the percentage who utilize public transit commuting to work, according to data from the 2010 American Community Survey. The survey measured the percentage of commuters who take public transit, as opposed to walking, driving, or riding in an automobile, bicycle, boat, or some other means.

Top Ten:

New York City, NY - 55.66%

Jersey City, NJ - 45.82%

Philadelphia, PA - 39.19%

San Francisco, CA - 34.05%

Boston, MA - 32.82%

Arlington, VA - 28.54%

Washington, D.C. - 26.61%

Cambridge, MA - 26.60%

Newark, NJ - 26.50%

Chicago, IL - 26.50%

Others to note:

Atlanta, GA - 11.43%

St. Louis, MO - 11.03%

Cleveland, OH - 9.84%

Cincinnati, OH - 8.29%

New Orleans, LA - 7.30%

Rochester, NY - 6.83%



Net Promoter® Classifications

Descriptions of the Net Promoter® Score (NPS) categories are as follows:

- **Promoters** - Loyal enthusiasts who keep buying from a company and urge their friends to do the same. This group accounts for more than 80% of referrals.
- **Passives** – Satisfied but less enthusiastic customers who can be easily wooed by the competition. This group's repurchase and referral rates are often lower than promoters by 50%+.
- **Detractors** – Unhappy customers trapped in a bad relationship by contract, lack of alternatives, inertia, the need to buy from the low bidder, or other reasons. Account for more than 80% of negative word-of-mouth comments. May appear profitable by an accounting standpoint, but their criticisms and attitudes diminish a company's reputation, discourage new customers, and demotivate employees.

For more information on the Net Promoter® Score, please refer to www.netpromoter.com



Net Promoter® Scores

The average firm has a Net Promoter® Score of 5-10%. Companies can even have a negative score.

For comparison, various companies' NPS are indicated below:

Harley-Davidson*	81%
HomeBanc*	81%
Amazon.com*	73%
Apple*	66%
Commerce Bank*	50%
Local Supermarket ⁺	33%
Local Banks ⁺	22% Average; Range of 9% to 29%

For the average firm, over two-thirds of customers are passives (bored) or detractors (angry).

* Based on Bain & Company or Satmetrix Systems, Inc. surveys, as noted in the book "The Ultimate Question" by Fred Reichheld (termed "NPS Stars").

+ Based on PAR Omnibus Study conducted in July 2007. Includes three local banks.

For more information on the Net Promoter® Score, please refer to www.netpromoter.com





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