

2018-2022 Transit Asset Management Plan

for
Metropolitan Evansville Transit System
and
Henderson Area Rapid Transit



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Evansville, IN 47713



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2018-2022
Transit Asset Management Plan
for
Metropolitan Evansville Transit System
and
Henderson Area Rapid Transit

This Transit Asset Management Plan is a Group TAM Plan covering the assets of the Metropolitan Evansville Transit System (METS) and Henderson Area Rapid Transit (HART). The Evansville MPO, the Metropolitan Planning Organization for the Evansville-Henderson Urbanized Area, developed the plan in coordination with and assistance from METS and HART.

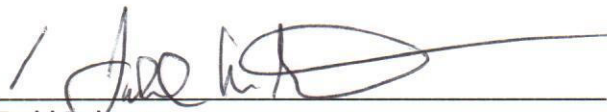
Transit Asset Management Plan Certification

The City of Evansville, Indiana (METS) and the City of Henderson, Kentucky (HART) certify the completion of this Transit Asset Management (TAM) Plan in accordance with the Federal Transit Administration's (FTA) Transit Asset Management Regulations (49 CFR § 625). The Accountable Executives for each agency will ensure their staff understand and are committed to the implementation of this TAM Plan. Each agency worked in cooperation with the Evansville Metropolitan Planning Organization (MPO) to provide the required information and assist in the development of this TAM Plan. METS and HART will provide the required TAM Targets annually to the National Transit Database (NTD) and to the Evansville MPO for inclusion in the TAM Plan appendix.

September 21, 2018

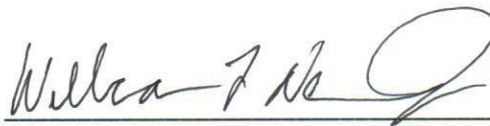
Date

**Metropolitan Evansville
Transit System
(METS)**

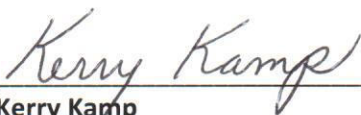


Todd Robertson
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**Henderson Area
Rapid Transit
(HART)**



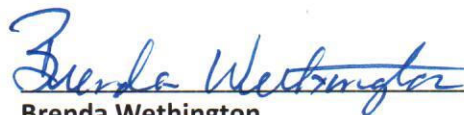
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Executive Summary

A Transit Asset Management (TAM) Plan identifies the condition of current assets and guides the prioritization of funding to replace assets beyond their useful life. Through this prioritization process, the transit agencies can efficiently replace assets with available funding and keep the transit systems in a State of Good Repair (SGR). The benefits of implementing a TAM Plan include:

- Improved transparency and accountability for safety, maintenance, asset use, and funding investments;
- Optimized capital investment and maintenance decisions;
- Data-driven maintenance decisions; and
- System safety and performance outcomes.

Failure to implement and follow a TAM Plan and keep the transit system in a State of Good Repair could lead to increased safety risks, decreased system reliability due to breakdowns, higher maintenance costs, and higher asset costs over time.

This Transit Asset Management Plan is a Group TAM Plan covering the assets of the Metropolitan Evansville Transit System (METS) and Henderson Area Rapid Transit (HART). The Evansville MPO, the Metropolitan Planning Organization for the Evansville-Henderson Urbanized Area, developed the plan in coordination with and assistance from METS and HART.

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Chapter 1: Introduction

METS and HART have always been committed to asset management to ensure that vehicles, equipment and facilities are in a State of Good Repair. The agencies strive to provide the best possible transit service to as many residents as possible. By tracking their assets, they are able to identify those assets that are approaching the end of their useful life and can prioritize their replacement based on available funding. Asset tracking has been completed by the individual agencies through their operations and maintenance supervisors using asset and maintenance software. Development of this TAM Plan will provide more detail to each agency’s asset management process and allow for the MPO, METS and HART to prioritize asset replacement at the regional level.

This TAM Plan outlines how METS and HART will assess, monitor, and report the condition of all rolling stock, non-revenue vehicles, and facilities in their ownership. In order to accomplish a State of Good Repair, METS and HART will continue to thoroughly monitor operations and maintenance activities and develop a prioritized timeline of maintenance, rehabilitation, and replacement of assets at an optimal cost.

Tier I & II Providers

Per FTA’s Transit Asset Management regulations (49 CFR § 625), transit operators are divided into one of two Tiers, which determines the information that is required to be included within the TAM Plan. The definitions provided in 49 CFR § 625.5 for Tier I and Tier II providers are as follows:

Tier I	Tier II
Operates > 100 vehicles in peak revenue service,	Operates ≤ 100 vehicles in peak revenue service,
or	and
Operate rail fixed-guideway public transportation systems	Do not operate rail fixed-guideway public transportation systems
	or
	Receive federal funds exclusively from §5310 or §5311 programs

Based on FTA’s Transit Asset Management regulations, METS and HART are Tier II providers.

Tier I Providers:

Tier I provider means a recipient that owns, operates, or manages either (1) one hundred and one (101) or more vehicles in revenue service during peak regular service across all fixed route modes or in any one non-fixed route mode, or (2) rail transit.

Tier II Providers:

Tier II provider means a recipient that owns, operates, or manages (1) one hundred (100) or fewer vehicles in revenue service during peak regular service across all non-rail fixed route modes or in any one non-fixed route mode, (2) a subrecipient under the 5311 Rural Area Formula Program, (3) or any American Indian tribe.

Based on these definitions, METS and HART both operate as Tier II transit operators.

TAM Plan Elements

The elements of a Transit Asset Management Plan are dependent on the size of the transit operator. Nine elements are required for all Tier I TAM Plans, but only the first four are required for Tier II TAM Plans. Because METS and HART are both Tier II operators, this TAM Plan covers the following required elements:

- 1. Inventory of Capital Assets:** All capital assets that the transit provider owns, operates or manages, including those acquired without FTA funds.
- 2. Condition Assessment:** A rating of inventoried assets, collected at the individual or asset class level.
- 3. Decision Support Tools:** The analytical process used to make investment prioritization.
- 4. Investment Prioritization:** The prioritized list of proposed investments by year of planned implementation.

This TAM Plan includes additional information beyond those requirements to provide additional context. Below is a list of the chapters covered in this TAM Plan.

- Executive Summary
- Chapter 1: Introduction
- Chapter 2: Inventory of Capital Assets
- Chapter 3: Condition Assessment
- Chapter 4: TAM Performance Measures and Targets
- Chapter 5: Decision Support Tools
- Chapter 6: Investment Prioritization
- Chapter 7: Record Keeping, NTD Reporting, and Adoption
- Appendix (Inventory and Condition Rating Tables)

Accountable Executives

Transit Asset Management regulations require each transit agency to designate an “Accountable Executive” who is responsible for approving and

Tier I & II

- 1. Inventory of Capital Assets:** All capital assets that a transit provider owns, operates or manages, including those acquired without FTA funds
- 2. Condition Assessment:** Rating of inventoried assets, collected at individual or asset class level
- 3. Decision Support Tools:** Analytical processes used to make investment prioritization
- 4. Investment Prioritization:** Ranked list of proposed projects and programs ordered by year of planned implementation

Tier I only

- 5. Transit Asset Management and State of Good Repair Policy:** Transit providers’ vision, defining objectives, roles and responsibilities
- 6. Implementation Strategy:** Operational level process for implementing TAM Plan
- 7. List of Key Annual Activities:** Actions needed to implement TAM Plan for each year of the Plan’s four-year horizon
- 8. Identification of Resources:** Staff time, funding, technology requirements, etc.
- 9. Evaluation Plan:** How TAM activities will be monitored, evaluated, and updated to ensure continuous improvement

As Tier II providers, the TAM Plan for METS and HART must include the first four required elements.

implementing the TAM Plan. The Director of METS and the Superintendent of HART are the Accountable Executives for each agency. They are also responsible for ensuring that all staff understand and are committed to implementation of this TAM Plan.

TAM Plan Development

This Transit Asset Management Plan was developed as a Group TAM Plan covering the assets of

both METS and HART. The Evansville MPO, the Metropolitan Planning Organization for the Evansville-Henderson Urbanized Area, took the lead in developing the plan in coordination with and assistance from both agencies. The Director, Maintenance Supervisor, and Superintendent of Operations at METS and the Superintendent at HART worked closely with MPO staff and provided the necessary data to complete this plan. All three agencies will continue to work together to maintain the TAM Plan and create annual TAM Targets.

Horizon Period

This TAM Plan has a “Horizon Period” of four years beginning on October 1, 2018 and ending on October 1, 2022. This Plan will be updated periodically to at least include updated annual TAM Targets and in the case of significant changes to asset inventory, condition assessments, or investment prioritization. A new TAM Plan will be developed and adopted in October 2022.

Overview of METS

The Metropolitan Evansville Transit System was created in 1971 to address Evansville’s growing need for public transportation. Since then, METS

buses and paratransit vans have transported more than 45 million passengers. METS provides both Fixed Route Service and Mobility Service within the City of Evansville and one-half mile beyond the city limits. In addition, Fixed Route Service is provided through contract to the University of Southern Indiana and Mobility Service through contract throughout Vanderburgh County. The following are highlights of METS’ current operations:

- 23 fixed routes running Monday-Friday, 5:45am-12:15am
- 16 fixed routes running Saturday, 6:15am-12:15am
- 5 fixed routes running Sunday, 6:15am-6:15pm
- Operation: within Evansville City limits, plus one-half mile buffer
- Annual Ridership: approximately 2 million
- Fares:
 - General: \$0.75
 - Students (K-12 & college): \$0.50
 - Seniors and individuals with a disability: \$0.35
 - Monthly unlimited pass: \$60
 - Mobility: \$1.50



Overview of HART

Henderson Area Rapid Transit (HART) began in 1957 and currently provides both Fixed Route and ADA Paratransit service within the city limits of Henderson. HART operates five fixed routes and ADA paratransit service weekdays and Saturday from 6:00am to 5:30pm. HART fixed route service is oriented around a transit transfer point at Third and Main Street in downtown. The following are highlights of HART's current operations:

- 5 fixed routes running Monday-Saturday, 6:00am-5:30pm
- Operation: within Henderson City limits
- Annual Ridership: approximately 150,000
- Fares:
 - General: \$0.50
 - Children (5 and under): Free
 - Students (age 6-18): \$0.25
 - Seniors and individuals with a disability: \$0.25



Transit Asset Management (TAM) Policy

It is the policy of METS and HART to:

1. assess the current condition of all capital assets;
2. determine the optimal condition of all assets;
3. identify any changes needed to continue to maintain each transit system in a State of Good Repair; and
4. decide how to best balance and prioritize anticipated funds from all sources to improve asset conditions and achieve the best possible level of performance within those means.

State of Good Repair (SGR) Policy

METS and HART identify an asset as being in a State of Good Repair when:

1. the asset is in a condition sufficient to operate as intended without risking the safety of riders, staff, or the general public;
2. the condition of the asset does not limit or deny accessibility for any riders; and
3. the annual cost of maintaining the asset does not exceed the cost of acquiring and maintaining a replacement asset.

TAM Vision, Goals & Objectives

It is the vision of both METS and HART to provide high quality transit systems within the Evansville-Henderson Urbanized Area that meet the needs of residents and provide a clean and efficient transportation option.

The following TAM goals and objectives will help guide METS and HART to achieve this vision.

- Goal: Provide the best possible service to residents within current budgetary constraints.
 - Objective: Continue the vehicle replacement schedule for buses and other equipment to

ensure the most efficient use of available funding.

- Objective: Continue to seek additional grant opportunities to increase available funding.
- Goal: Increase customer satisfaction by keeping the fleet in a State of Good Repair.
 - Objective: Ensure that buses are always clean and well maintained.
 - Objective: Replace buses that are beyond their useful life and susceptible to breakdowns.
- Goal: Increase safety and reduce accidents.
 - Objective: Continue to provide proper training opportunities for all drivers and staff to ensure the highest possible safety of all riders.
 - Objective: Ensure that all vehicles are well maintained and replace vehicles that are beyond their useful life and could become a safety risk.

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Chapter 2: Inventory of Capital Assets

The inventory of capital assets lists all items that METS and HART own, operate, or have a direct capital responsibility in the three asset classes: Rolling Stock, Equipment, and Facilities. METS and HART have maintained a database of their inventory to track maintenance and asset condition. Evansville MPO staff are utilizing the two agency’s individual data to develop a shared inventory for the development of this TAM Plan. The following sections provide information about each asset class, with a summary of the asset inventory at the end of this chapter. The full inventory of capital assets table can be found in the Appendix.

Rolling Stock

Rolling stock includes all buses in revenue service for both METS and HART, including both fixed route service and paratransit service. For fixed route service, METS uses a combination of 30- and 35-foot Gillig diesel buses as well as a variety of cutaways, including Ford E-450s and F-550s and Chevy 4500s. METS also uses these same cutaways for their paratransit service. HART uses a variety of Ford and Chevy cutaways for both fixed route and paratransit service.



Equipment : Non-Revenue Vehicles

Equipment for the purposes of this TAM Plan includes all non-revenue vehicles regardless of value and any equipment that is not part of a facility with a value of over \$50,000. The only equipment that either METS or HART have that fall into this category are non-revenue vehicles. Neither own equipment with a value over \$50,000.

METS has 15 non-revenue vehicles, including six minivans, four SUVs, four trucks, and one tow truck. Most vehicles are used for administrative purposes, maintenance, driver exchanges, and travel to meetings and conferences. The tow truck is used to remove stuck or broken down vehicles.

HART has three non-revenue vehicles, all pickup trucks. These vehicles are used for administrative purposes, maintenance, driver exchanges, and travel to meetings and conferences.

Facilities

Facilities are all buildings and structures used in providing public transportation. Both METS and HART use a combined administration and maintenance building. The METS administration/maintenance building is located at 601 John Street, just east of downtown Evansville. The HART administration/maintenance building is located at 401 N. Elm Street, just north of downtown Henderson. METS also has a downtown terminal building located along N.W. 6th Street between Sycamore Street and Vine Street.

HART and METS also have bus shelters used as transfer stations and along multiple routes. The HART downtown terminal is a large bus shelter located along 3rd Street, just west of N. Main Street. METS' Eastside transfer point is located at the Lawndale Shopping Center and includes three bus shelters. METS' Northside transfer point is located at the Northside Target, near the North Park Shopping Center. METS' Westside transfer point is located at the Westside Schnucks.

HART Non-Revenue Vehicle



METS Non-Revenue Vehicle



METS Non-Revenue Vehicle



METS Facilities: Administration and Maintenance Building



METS Facilities: Administration Interior



METS Facilities: Maintenance Garage



METS Facilities: Bus Wash



METS Facilities: Downtown Terminal



METS Facilities: Bus Stop Shelter



HART Facilities: Administration and Maintenance Building



HART Facilities: Administration Interior



HART Facilities: Maintenance Garage



HART Facilities: Bus Wash



HART Facilities: Downtown Terminal



HART Facilities: Bus Stop Shelter



Asset Inventory Summary (as of 1/1/2018)			
Asset Category		Total #	Total Value
Rolling Stock: Fixed Route	METS	33	\$11,764,000
	HART	5	\$520,000
Rolling Stock: Paratransit	METS	16	\$1,487,000
	HART	3	\$275,000
Equipment: Non-Revenue Vehicles	METS	15	\$539,000
	HART	3	\$100,000
Facilities	METS	2	\$4,000,000
	HART	1	\$1,000,000

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Chapter 3: Condition Assessment

An asset’s condition is measured in one of two ways, the age of the asset in relation to its useful life or the rating of the asset based on the Transit Economic Requirements Model (TERM) condition assessment scale. This TAM Plan uses both measurements based on the asset class measured. All vehicles, both revenue and non-revenue, are assessed based on their useful life. All other equipment and facilities are assessed based on the TERM scale.

The Useful Life Benchmark (ULB) of an asset is the expected lifecycle of an asset based on the transit agency’s operating environment, or the acceptable period of use in service for that transit agency’s operating environment. The ULB is defined locally by the transit operator. METS and HART have determined to use the following ULBs.

Vehicle Type	Useful Life Benchmark	
	Years	Miles
Heavy Duty Bus (35'+)	12	500,000
Heavy Duty Bus (30')	10	350,000
Medium Duty Cutaway (30')	7	200,000
Light Duty Cutaway (<30')	5	150,000
Service Vehicles	4	100,000

The Transit Economic Requirements Model (TERM) condition assessment scale is a rating scale for equipment and facilities. METS and HART have determined to use the TERM scale to rate their equipment and facilities. The table below describes the scale.

The following sections provide information about how the condition of each asset class is assessed, with a summary of the conditional assessments at the end of this chapter. The conditional assessment table of all capital assets can be found in the Appendix.

METS and HART have always maintained a current database of rolling stock, non-revenue vehicles, equipment, and facilities through asset management and tracking software. The software tracks assets and maintenance schedules. Each agency uses a different software. See Chapter 5: Decision Support Tools for more information.

TERM Condition Assessment Scale		
Condition	Rating	Description
Excellent	5.0 to 4.8	New asset; no visible defects.
Good	4.7 to 4.0	Asset showing minimal signs of wear; some (slightly) defective or deteriorated component(s).
Adequate	3.9 to 3.0	Asset has reached its mid-life (condition of 3.5); some moderately defective or deteriorated components
Marginal	2.9 to 2.0	Asset reaching or just past the end of its useful life; increasing number of defective or deteriorated component(s) and increasing maintenance needs.
Poor	1.9 to 1.0	Asset is past its useful life and is in need of immediate repair or replacement; may have critically damaged components.

Rolling Stock

The database in the asset management software includes the year, make, and model of all rolling stock, a locally established identification number, date of acquisition, date first placed in service, and current mileage updated throughout the year. The database compares the age and mileage of each vehicle to its useful life. When a vehicle has neared or reached the end of its useful life, the agencies include acquisition of a replacement in their next budget to be included in the next grant. When vehicles are near the same age and/or mileage, or a vehicle has had greater wear and tear than an older vehicle, the condition of the vehicle is also taken into consideration and moved higher on the replacement list.

Facilities

The facilities and related equipment within those facilities are also tracked within the software. The wear and tear on facilities and equipment is more important than the actual age, so a rating scale is used for tracking. Well-maintained equipment and facilities should last for several years. Normal maintenance and inspections help determine when equipment and facilities are in need of improvement or replacement.

Equipment: Non-Revenue Vehicles

For non-revenue vehicles, the software tracks the age and mileage of each vehicle and compares it to the useful life of that vehicle. Because the mileage and wear and tear on a non-revenue vehicle is much less than a rolling stock vehicle, they are less likely to be replaced immediately upon reaching the end of its useful life in age. More emphasis is placed on the mileage of the vehicle and vehicle condition.

Condition Assessment Summary (as of 1/1/2018)				
Asset Category		Total #	Average Age	Average TERM Rating
Rolling Stock: Fixed Route	METS	33	7.9	
	HART	5	4.2	
Rolling Stock: Paratransit	METS	16	4.6	
	HART	3	3.0	
Equipment: Non-Revenue Vehicles	METS	15	13.3	
	HART	3	7.0	
Facilities	METS	2		3.9
	HART	1		3.0

Chapter 4:

TAM Performance Measures and Targets

Transit Asset Management regulations require performance measures and targets to be reported annually. These performance measures and targets quantify the conditional assessment of assets and goals for the end of the year. The Evansville MPO began developing targets early in 2017 and again in 2018 covering METS, HART, and non-profits receiving Section 5310 funds. METS and HART reported targets to the NTD early in 2017 and 2018. Based on discussions between all agencies, an agreed upon set of Useful Life Benchmarks were established as part of this TAM Plan process. These ULBs (listed in the previous chapter) will be used for all TAM Targets moving forward. The table to the right shows the Performance Measures that are required for METS and HART per TAM regulations.

TAM Performance Measures		
Asset Class	Performance Measure	Definition
Rolling Stock All revenue vehicles	Age	% of revenue vehicles that have met or exceeded their Useful Life Benchmark (ULB)
Equipment Non-revenue vehicles	Age	% of non-revenue vehicles that have met or exceeded their Useful Life Benchmark (ULB)
Facilities All buildings or structures	Condition	% of facilities with a condition rating below 3.0 on FTA's Transit Economic Requirements Model (TERM) Scale

At the beginning of each calendar year, the MPO will work with METS and HART to determine the previous year's actual performance metrics and develop TAM Targets for the end of that year. The performance metrics are the actual calculations for the end of that year. TAM Targets are based on anticipated vehicle

deliveries and proposed facility improvements to develop realistic Targets for the end of that year. The table below shows the actual performance metrics for the end of 2017 and the end of 2018 Targets. New annual Targets will be added to the appendix of this TAM Plan each year.

TAM Targets				
Asset Class			2017 Performance Metrics (% exceeding ULB)	2018 Target (% exceeding ULB)
Rolling Stock All revenue vehicles	Bus	METS	32%	20%
		HART	0%	0%
		Combined	32%	20%
	Cutaway	METS	58%	42%
		HART	13%	13%
		Combined	47%	34%
Equipment Non-revenue vehicles	Service Vehicles	METS	93%	93%
		HART	67%	67%
		Combined	89%	89%
Facilities All buildings or structures	METS		0%	0%
	HART		0%	0%
	Combined		0%	0%

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Chapter 5: Decision Support Tools

METS and HART use a variety of policies, manuals, and software to manage and maintain assets from procurement through disposal. The following list provides a summary of each tool. More detail regarding the procurement process, maintenance schedule, rehabilitation/overhaul policies, and disposal procedures follow.

Decision Support Tools

METS and HART use the following tools and policies to track assets and determine maintenance schedules:

METS

- Fleetmate
 - METS uses Fleetmate software for all data records regarding their fleet and facilities maintenance.
- Fuelmaster
 - METS uses Fuelmaster software to monitor the fueling and mileage of all vehicles.
- METS Maintenance Plan
 - The METS Maintenance Plan details all policies and procedures related to the fleet and facilities.

HART

- ManagerPlus Equipment & Maintenance Software
 - HART utilizes ManagerPlus to track their assets and maintenance schedule. The asset management software helps HART keep the system in a state of good repair and decrease operating costs. It links the asset management, maintenance management, inventory, and procurement functions together

for quick and easy viewing and decision-making.

- Preventive Maintenance Policy
 - HART’s Preventive Maintenance Policy establishes the procedures for operating in the most efficient and economical manner possible and to provide safe and reliable transportation for Henderson residents. It helps reduce maintenance costs to avoid or lessen the consequences of vehicle or equipment failure and helps maintain and extend the useful life of assets.

Procurement

As city departments, both METS and HART follow the purchasing policy of the City of Evansville and the City of Henderson. Once an asset is beyond its useful life and in need of replacement, METS and HART work with their corresponding purchasing department. The policies for each city are listed below.

City of Evansville Purchasing Policy

Once it is decided a new item is needed METS follows all Federal Transit Administration (FTA), State, and Local guidelines on procurement. All items over \$300 require three price checks. Once the price checks are reviewed they are forwarded to the City Controller’s Office for approval. All purchases over \$50,000 require formal bids or quotes. Items between \$50,000 and \$150,000 may be purchased by inviting quotes from three persons that are given seven days to bid. Purchases greater than \$150,000 must go through the competitive bid process and include public notices with bids open publicly. These bids also require contractual terms, evaluation of criteria, and require financial proof.

City of Henderson Purchasing Policy

All items purchased by or for the city of Henderson are approved in the Finance Department. Written quotes from vendors are solicited for items that cost between \$750 and \$19,999. Items that cost over \$20,000 are open to public bid and awarded on either a lowest bid price or a lowest evaluated bid price basis. Certain purchases, such as those for professional services or those where the specifications cannot be made sufficiently specific to permit award on either a lowest bid price or lowest evaluated bid price, are made on either a competitive or noncompetitive basis in accordance with the Kentucky Model Procurement Code.

Maintenance

METS and HART each have detailed maintenance strategies as described in their maintenance policies. The following provides an overview of each agency's maintenance strategy.

METS

METS' first line of defense is the drivers. They play a vital role in the maintenance program. The driver is responsible for reporting all vehicle defects on a daily basis so that prompt attention can be given to the defects as soon as they are reported.

An Operator's Defect Card is completed by the driver at the end of their shift each day for the vehicle they operated that day. The purpose of the Defect Card is to allow drivers to let the maintenance department know of defects they have found while driving.

The Operator's Defect Card is reviewed by the Maintenance Department, making any necessary minor repairs. If the repair is such that it will take longer than four hours, the equipment is deadlined until the repair is completed. In addition, a posting is added to the equipment showing the equipment is not to be driven.

Mechanics making repairs complete the opposite side of the Operator Defect Card noting the repairs made,

the parts used, and date. The data is also entered into the Fleetmate system (the software utilized by METS to track repairs made to vehicles).

METS' second preventive tool is the daily fueling inspection. Each vehicle is fueled daily. While the fueling is being completed, the Mechanic and/or Utility checks the tires, oil levels, lights, wipers, brakes, and completes a brief interior visual inspection. If the vehicle checks out, it is sent through the bus wash and assigned for the next day of service.

METS' final maintenance tool is the scheduled Preventive Maintenance (PM) Service. All vehicles are serviced every 5,000 miles. Miles are tracked by the Fuelmaster system and visual inspection of the odometers. A PM Service Report is completed each service. Each PM includes inspection of the security cameras. Because the average monthly mileage per bus is 3,500 miles, each bus is subject to this service approximately every 45 days; depending on miles driven.

A daily check by the Maintenance Manager of the Daily Mileage Report showing PM intervals vs where each bus is on mileage is completed. The Manager then assigns the unit(s) that need to be completed within the 10 percent rule of FTA procedures. This process will ensure that METS will meet the 80 percent completion rate. METS' goal is 100 percent completion to aid the life and upkeep of the fleet.

On the 14th of each month the Maintenance Manager does a visual and physical inspection of the grounds. This includes checking the plumbing, ADA equipment, shop equipment, security equipment, and the HVAC system.

Facility and Mission Critical preventive maintenance for all of METS' real estate and equipment is conducted by the procedures and time period recommend by the manufacturer. Mission Critical items include Garage Doors, the METS Admin building, HVAC systems, Security Systems, Lifts, Electrical Systems, Grounds, and shop equipment. The building and equipment maintenance schedule runs from daily to annually. (i.e. daily, weekly, monthly, quarterly, semi-annual and annually).

HART

The pre-trip and post-trip inspections are vital to ensuring that vehicles are in safe, working order. The drivers perform the pre-trip inspections at the beginning of their shift. The maintenance technician performs the post-trip inspection at the end of a driver's shift. The inspections include a check of the PA system, radio, security camera, lights, steering, windshield wipers, mirrors, brakes, horn, gauges and indicator lights, doors, lifts, tires, and internal/external vehicle damage. If any malfunction or defect is detected, the vehicle is immediately removed from service and a repair order is issued.

A complete service check is conducted on vehicles on a weekly basis, including a more thorough check of all parts. This includes changing transmission fluid and the transmission filter. The interior and exterior of the buses are also cleaned weekly.

The oil is changed on vehicles every 5,000 miles. The oil filter is also checked and replaced if needed. Every 15,000 miles, the air filter is inspected and replaced if needed and the fuel filter is replaced. Every month, the vehicle wheelchair lifts are inspected, with more detailed lift inspections occurring quarterly. Every three months, the security camera hard drive is checked, the camera lens is cleaned, and the angle of the camera is checked. The exterior of buses are waxed annually.

All equipment and facilities are inspected at different intervals. Water is drained from the air compressor and the oil is checked weekly, with a full inspection quarterly. Every two weeks the bus shelters are cleaned. Monthly, all benches are checked for damage, the lifts are inspected, the pressure washer detergent inlet screen is cleaned, and the sand in the bottom of the wash bay drain is measured. On a quarterly basis, the fuel filter on the fuel pump is changed, the oil is changed on the pressure washer, and the security camera on the admin/maintenance facility is checked for recording, camera lens is cleaned, and the angle is checked. Twice a year the air filter on the exhaust system is replaced.

Rehabilitation and Overhaul

It is the policy of both METS and HART to repair damaged or non-functional assets and components on an as needed basis only. Neither agency overhauls or rehabilitates its assets unless additional specific funding is obtained and a replacement asset is available while the asset is being overhauled or rehabilitated.

Disposal

METS and HART have the following policies for disposing of vehicles and equipment:

METS

Once vehicles and equipment have met their useful life, METS goes before the City of Evansville Board of Public Works and seeks their approval for disposal. METS then offers the vehicles to other City departments for training purposes (Police and Fire use them for training, not transportation). If no other department wants the vehicle, they are sent to Public Auction. The vehicle is sold to the highest bidder. METS contacts the FTA if any vehicle sells for more than \$5,000. The vehicle or equipment is then removed from the inventory list.

HART

HART receives approval from the Henderson City Manager before disposing of vehicles and equipment. Once approval is received, the vehicle or equipment is placed on www.govdeals.com and sold to the highest bidder. If the vehicle or equipment sells for more than \$5,000, HART contacts the FTA to determine if any of the revenue made from the sell must be returned to the FTA. After the sale is final, the item is removed from the inventory list.

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Chapter 6: Investment Prioritization

Using the Rolling Stock, Equipment (Non-Revenue Vehicles), and Facilities Inventory & Condition Rating tables in the Appendix, an investment prioritization was developed, as shown in the Replacement Prioritization column of the tables. For Rolling Stock and Non-Revenue Vehicles, the number of years under or over the ULB was calculated for each vehicle, as shown in the ULB +/- column. The ULB MET by 2018 column states whether the particular vehicle has exceeded its useful life by January 1, 2018. The ULB MET by 2022 column states whether the particular vehicle will exceed its useful life by January 1, 2022, the last year of the Horizon Period for the TAM Plan.

All vehicles that will exceed their ULB by 2022 have a Replacement Prioritization listed. The vehicle that is over its useful life by the highest amount receives a Replacement Prioritization of 1, meaning it should be replaced first. When two or more vehicles are over their useful life by the same number of years, the vehicle with the highest mileage receives the lower Replacement Prioritization. The prioritization is separated between METS and HART with all of METS' prioritizations beginning with an M- and all of HART's prioritizations beginning with an H-. This is because METS and HART may have funding available for replacements at different times. All Rolling Stock are prioritized together and all Non-Revenue Vehicles are prioritized together.

Facility replacement prioritization is based on the TERM value of the facility. Because no facilities are expected to have a TERM value below 3, there is no Replacement Prioritization for facilities at this time.

The Inventory & Condition Rating tables also include an estimated year of replacement at the end. This estimate is dependent upon available funding and may change over the horizon period of this TAM Plan. The replacement year is listed as a calendar year for METS and fiscal year for HART for 2018-2022. If a replacement is estimated to be after 2022, it is listed as such and will be updated in the next TAM Plan.

See the Appendix for the Replacement Prioritizations and Replacement Year shown in the Inventory & Condition Rating tables.

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Chapter 7: Recordkeeping, NTD Reporting and Adoption

The Evansville MPO, METS and HART will continue to work together to maintain the Inventory & Condition Rating tables. Updated tables will be included in the 2022-2026 TAM Plan.

Annual TAM Targets will be developed at the beginning of each year through coordination between all three agencies and added to the Appendix of this TAM Plan. METS and HART are responsible for reporting TAM Targets annually to the NTD.

Upon completion of the TAM Plan, it is to be adopted by the Board of Public Works for METS and the Henderson City Council for HART. Annual TAM Targets should be approved by the Board of Public Works for METS and the Henderson City Council for HART at the beginning of each year.

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Appendix

**METS & HART Rolling Stock
Inventory & Condition Rating 2018**

ID #	Vehicle Use	Year	Make	Model	Asset Owner*	Acquisition Date	Age	Mileage**	Replacement Cost	ULB	ULB +/-	ULB Met by 2018	ULB Met by 2022	Replacement Prioritization	Replacement Year
Bus - Heavy Duty (35'+)															
1965	FR	2012	Gillig	35' Low Floor	METS	11/18/2017	6.0	240,642	\$432,000	12	6.0	No	No		2023+
Bus - Heavy Duty (30')															
102	FR	2001	Gillig	Phantom - 29'	METS	8/8/2001	16.4	422,289	\$432,000	10	-6.4	Yes	Yes	M-2	2018
108	FR	2001	Gillig	Phantom - 29'	METS	8/8/2001	16.4	583,746	\$432,000	10	-6.4	Yes	Yes	M-1	2018
114	FR	2001	Gillig	Phantom - 29'	METS	8/24/2001	16.4	395,145	\$432,000	10	-6.4	Yes	Yes	M-4	2018
116	FR	2001	Gillig	Phantom - 29'	METS	8/24/2001	16.4	439,876	\$432,000	10	-6.4	Yes	Yes	M-3	2018
105	FR	2006	Gillig	Low Floor - Hybrid - 29'	METS	6/22/2006	11.5	532,642	\$432,000	10	-1.5	Yes	Yes	M-18	2021
106	FR	2006	Gillig	Low Floor - Hybrid - 29'	METS	6/22/2006	11.5	447,588	\$432,000	10	-1.5	Yes	Yes	M-19	2021
112	FR	2006	Gillig	Low Floor - Hybrid - 29'	METS	6/23/2006	11.5	617,263	\$432,000	10	-1.5	Yes	Yes	M-20	2021
118	FR	2006	Gillig	Low Floor - Hybrid - 29'	METS	6/23/2006	11.5	537,524	\$432,000	10	-1.5	Yes	Yes	M-21	2021
140	FR	2007	Gillig	Low Floor - Hybrid - 29'	METS	2/8/2008	9.9	412,659	\$432,000	10	0.1	No	Yes	M-23	2022
1001	FR	2010	Gillig	Low Floor - Hybrid - 29'	METS	4/10/2010	7.7	342,494	\$432,000	10	2.3	No	Yes	M-32	2023+
1002	FR	2010	Gillig	Low Floor - Hybrid - 29'	METS	4/10/2010	7.7	392,062	\$432,000	10	2.3	No	Yes	M-28	2023+
1003	FR	2010	Gillig	Low Floor - Hybrid - 29'	METS	4/10/2010	7.7	398,828	\$432,000	10	2.3	No	Yes	M-27	2023+
1004	FR	2010	Gillig	Low Floor - Hybrid - 29'	METS	4/10/2010	7.7	370,731	\$432,000	10	2.3	No	Yes	M-31	2023+
1005	FR	2010	Gillig	Low Floor - Hybrid - 29'	METS	4/10/2010	7.7	379,570	\$432,000	10	2.3	No	Yes	M-30	2023+
1006	FR	2010	Gillig	Low Floor - Hybrid - 29'	METS	4/10/2010	7.7	388,995	\$432,000	10	2.3	No	Yes	M-29	2023+
1213	FR	2012	Gillig	Low Floor - Trolley - 29'	METS	5/2/2012	5.7	159,507	\$485,000	10	4.3	No	No		2023+
1214	FR	2012	Gillig	Low Floor - Hybrid - 29'	METS	5/2/2012	5.7	303,558	\$432,000	10	4.3	No	No		2023+
1215	FR	2012	Gillig	Low Floor - Hybrid - 29'	METS	5/2/2012	5.7	310,177	\$432,000	10	4.3	No	No		2023+
14-20	FR	2014	Gillig	Low Floor - 29'	METS	6/13/2014	3.6	167,478	\$432,000	10	6.4	No	No		2023+
14-21	FR	2014	Gillig	Low Floor - Trolley - 29'	METS	8/11/2014	3.4	28,271	\$485,000	10	6.6	No	No		2023+
16-26	FR	2016	Gillig	Low Floor - 29'	METS	9/2/2016	1.3	76,980	\$432,000	10	8.7	No	No		2023+
16-27	FR	2016	Gillig	Low Floor - 29'	METS	9/2/2016	1.3	71,924	\$432,000	10	8.7	No	No		2023+
17-32	FR	2017	Gillig	Low Floor - 29'	METS	5/4/2017	0.7	38,803	\$432,000	10	9.3	No	No		2023+
17-33	FR	2017	Gillig	Low Floor - 29'	METS	5/4/2017	0.7	37,587	\$432,000	10	9.3	No	No		2023+
Cutaway - Medium Duty (30')															
1217	FR	2012	Ford	F550	METS	6/14/2012	5.6	243,205	\$150,000	7	1.4	No	Yes	M-26	2022
1218	FR	2012	Ford	F550	METS	6/14/2012	5.6	269,789	\$150,000	7	1.4	No	Yes	M-25	2022
015-39	FR	2009	Chevy	Champion Defender DF310FL	HART	9/24/2009	8.3	246,740	\$87,511	7	-1.3	Yes	Yes	H-1	2018
015-41	FR	2012	Ford	StarTrans Senator	HART	8/1/2012	5.4	160,908	\$87,511	7	1.6	No	Yes	H-5	2018
015-42	FR	2012	Ford	StarTrans Senator	HART	8/1/2012	5.4	162,017	\$95,000	7	1.6	No	Yes	H-4	2019
015-353	FR	2016	Champion	LF260RP	HART	7/19/2016	1.5	61,110	\$125,000	7	5.5	No	No		2021
Cutaway - Light Duty (<30')															
41	FR	2009	Ford	Supreme E450	METS	5/29/2009	8.6	181,607	\$92,955	5	-3.6	Yes	Yes	M-7	2019
42	FR	2009	Ford	Supreme E450	METS	5/29/2009	8.6	270,648	\$92,955	5	-3.6	Yes	Yes	M-5	2018
50	FR	2009	Ford	Supreme E450	METS	7/27/2009	8.4	222,826	\$92,955	5	-3.4	Yes	Yes	M-9	2021
54	FR	2009	Ford	Supreme E450	METS	7/27/2009	8.4	292,711	\$92,955	5	-3.4	Yes	Yes	M-8	2018
1007	FR	2010	Ford	E450	METS	8/25/2010	7.4	239,439	\$92,955	5	-2.4	Yes	Yes	M-14	2018
1008	FR	2010	Ford	E450	METS	8/25/2010	7.4	302,704	\$92,955	5	-2.4	Yes	Yes	M-13	2018
015-354	FR	2017	Ford	StarTrans Sen II	HART	5/27/2017	0.6	31,636	\$125,000	5	4.4	No	No		2023+
51M	Para	2009	Ford	Supreme E450	METS	7/27/2009	8.4	139,518	\$92,955	5	-3.4	Yes	Yes	M-12	2019
52M	Para	2009	Ford	Supreme E450	METS	7/27/2009	8.4	189,450	\$92,955	5	-3.4	Yes	Yes	M-10	2018
53M	Para	2009	Ford	Supreme E450	METS	7/27/2009	8.4	159,924	\$92,955	5	-3.4	Yes	Yes	M-11	2019
1010M	Para	2010	Ford	E450	METS	8/25/2010	7.4	188,842	\$92,955	5	-2.4	Yes	Yes	M-17	2020
1011M	Para	2010	Ford	E450	METS	8/25/2010	7.4	194,307	\$92,955	5	-2.4	Yes	Yes	M-16	2020
1012M	Para	2010	Ford	E450	METS	8/25/2010	7.4	212,116	\$92,955	5	-2.4	Yes	Yes	M-15	2020
12-16M	Para	2012	Ford	E450	METS	5/2/2012	5.7	109,384	\$92,955	5	-0.7	Yes	Yes	M-22	2021
13-19M	Para	2013	Chevy	4500	METS	6/11/2013	4.6	131,731	\$92,955	5	0.4	No	Yes	M-24	2021
40	Para	2009	Ford	Supreme E450	METS	5/29/2009	8.6	270,403	\$92,955	5	-3.6	Yes	Yes	M-6	2019
16-24	Para	2016	GMC	Savana	METS	4/7/2016	1.7	60,666	\$92,955	5	3.3	No	Yes	M-33	2023+
16-25	Para	2016	GMC	Savana	METS	4/7/2016	1.7	55,939	\$92,955	5	3.3	No	Yes	M-34	2023+
16-28	Para	2016	Chevy	4500	METS	10/18/2016	1.2	41,360	\$92,955	5	3.8	No	Yes	M-35	2023+
16-29	Para	2016	Chevy	4500	METS	10/18/2016	1.2	38,788	\$92,955	5	3.8	No	Yes	M-36	2023+
17-30	Para	2016	Chevy	4500	METS	7/25/2017	0.4	15,508	\$92,955	5	4.6	No	No		2023+
17-31	Para	2016	Chevy	4500	METS	7/25/2017	0.4	17,400	\$92,955	5	4.6	No	No		2023+
17-34	Para	2016	Chevy	4500	METS	7/14/2017	0.5	19,459	\$92,955	5	4.5	No	No		2023+
015-43	Para	2013	Chevy	Starcraft	HART	4/5/2013	4.7	117,125	\$75,000	5	0.3	No	Yes	H-2	2019
015-44	Para	2014	Chevy	Goshen GC11	HART	12/4/2013	4.1	106,477	\$75,000	5	0.9	No	Yes	H-3	2020
015-350	Para	2017	Ford	StarTrans Sen II	HART	9/16/2017	0.3	12,723	\$125,000	5	4.7	No	No		2023+

* Actual asset owner for METS is the City of Evansville and for HART the City of Henderson.

** Mileage is as of 12/19/17 for METS vehicles and 3/21/18 for HART vehicles.

2018-2022 Transit Asset Management Plan

METS & HART Equipment (Non-Revenue Vehicles) Inventory & Condition Rating 2018

ID #	Vehicle Use	Year	Make	Model	Asset Owner*	Acquisition Date	Age	Mileage**	Replacement Cost	ULB	ULB +/-	ULB Met by 2018	ULB Met by 2022	Replacement Prioritization	Replacement Year
Service Vehicles															
150	Service	2001	Dodge	Minivan	METS	7/1/2001	16.5	116,161	\$26,500	4	-12.5	Yes	Yes	M-3	2019
151	Service	2001	Dodge	Minivan	METS	7/1/2001	16.5	51,131	\$26,500	4	-12.5	Yes	Yes	M-8	2021
152	Service	2001	Dodge	Minivan	METS	7/1/2001	16.5	75,342	\$26,500	4	-12.5	Yes	Yes	M-5	2019
153	Service	2001	Dodge	Minivan	METS	7/1/2001	16.5	60,001	\$26,500	4	-12.5	Yes	Yes	M-7	2019
154	Service	2001	Dodge	Minivan	METS	7/1/2001	16.5	69,501	\$26,500	4	-12.5	Yes	Yes	M-6	2021
155	Service	2001	Dodge	Minivan	METS	7/1/2001	16.5	85,046	\$26,500	4	-12.5	Yes	Yes	M-4	2019
169	Service	1999	Ford	Tow Truck	METS	1/1/1999	19.0	53,324	\$77,500	4	-15.0	Yes	Yes	M-1	2023+
170	Service	2003	Ford	Truck	METS	1/1/2003	15.0	41,236	\$52,895	4	-11.0	Yes	Yes	M-11	2023+
484	Service	1992	Chevy	Truck	METS	1/1/2011	7.0	233,416	\$28,300	4	-3.0	Yes	Yes	M-12	2020
77	Service	2000	Jeep	Truck	METS	1/1/2000	18.0	75,166	\$30,375	4	-14.0	Yes	Yes	M-2	2023+
78	Service	2003	Jeep	SUV	METS	1/1/2003	15.0	69,551	\$30,375	4	-11.0	Yes	Yes	M-10	2023+
76	Service	2003	Ford	SUV	METS	1/1/2003	15.0	102,293	\$54,705	4	-11.0	Yes	Yes	M-9	2023+
1	Service	2013	Ford	SUV	METS	7/1/2013	4.5	28,883	\$36,170	4	-0.5	Yes	Yes	M-14	2023+
2	Service	2013	Ford	SUV	METS	7/1/2013	4.5	535,531	\$36,170	4	-0.5	Yes	Yes	M-13	2023+
3	Service	2016	Ford	Truck	METS	2/1/2016	1.9	7,199	\$33,355	4	2.1	No	Yes	M-15	2023+
015-127	Service	2008	Ford	F 150	HART	1/1/2008	10.0	32,257	\$35,000	4	-6.0	Yes	Yes	H-1	
015-128	Service	2008	Ford	F 150	HART	1/1/2008	10.0	22,788	\$30,000	4	-6.0	Yes	Yes	H-2	
015-339	Service	2017	Dodge	Ram	HART	1/1/2017	1.0	4,411	\$35,000	4	3.0	No	Yes	H-3	

* Actual asset owner for METS is the City of Evansville and for HART the City of Henderson.

** Mileage is as of 12/19/17 for METS vehicles and 3/21/18 for HART vehicles.

**METS & HART Facilities
Inventory & Condition Rating 2018**

Name	Address	Asset Owner*	Year Built	Replacement Cost	TERM Rating	Below 3.0 TERM by 2018	Below 3.0 TERM by 2022	Replacement Prioritization	Replacement Year
Facilities									
Administration/Maintenance Building	601 John Street Evansville, IN 47713	METS	1988	\$3,000,000	3.9 Adequate	No	No	-	-
Transfer Terminal	101 NW 6th Street Evansville, IN 47708	METS	1990s Renovated 2006	\$1,000,000	3.9 Adequate	No	No	-	-
Administration/Maintenance Building	401 N Elm Street Henderson, KY 42420	HART	1982	\$1,000,000	3 Adequate	No	No	-	-

* Actual asset owner for METS is the City of Evansville and for HART the City of Henderson.

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2018-2022
Transit Asset Management Plan
for
Metropolitan Evansville Transit System
and
Henderson Area Rapid Transit