

Transportation Asset Management Plan
For Terre Haute Transit Utility (THTU)

**Transit Asset Management Plan for the
Terre Haute Transit Utility (THTU)**

October 2018

Prepared for: Terre Haute Transit Utility (THTU)
901 S. 14th Street
Terre Haute, Indiana 47807

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1.0 Introduction

The Terre Haute Transit Utility, (THTU) is a recipient of Federal Funds through the U.S. Department of Transportation’s Federal Transit Administration (FTA). As part of its eligibility to receive this financial assistance, THTU is required to implement various actions as prescribed by the laws that govern the distribution of these funds.

As noted in the 2012 Federal legislation for funding highway and transit transportation, namely Moving Ahead for Progress in the 21st Century (MAP-21), Section 5326 will establish new requirements for transit asset management by FTA’s grantees, as well as new reporting requirements to promote accountability. The goal of improved transit asset management is to implement a strategic approach for assessing needs and prioritizing investments for bringing the nation’s public transit system into a SGR.

One of the new requirements is the development and maintenance of a Transit Asset Management System (TAMS).

1.1 Purpose of this Plan

To accomplish meeting the criteria above, this plan creates a baseline of THTU assets and their condition, current operations in use for keeping the assets in a SGR and a model of “best practices” for continued operation of this fleet while performing effective transit asset management.

The benefits of implementing this plan are set forth in the Federal Transit Administration’s Asset Management Guide.

1.2 Operational Overview of Terre Haute Transit Utility System

Terre Haute Transit Utility operates fixed-route bus service and demand-response complimentary ADA paratransit service Monday through Saturday within the City of Terre Haute. Service hours are 6:00 a.m. to 11:00 p.m. Buses do not operate on Sundays or the following Holidays: New Year's Day, Martin Luther King Day, President's Day, Memorial Day, 4th of July, Labor Day, Veteran's Day, Thanksgiving Day, day after Thanksgiving Day, Christmas Eve and Christmas Day. Terre Haute Transit Utility operates 8 day buses for fixed-route services and 3 night buses for fixed-routes service. Terre Haute Transit Utility has 2 day buses for their ADA route service and 1 night bus for their ADA route service. The business office for the Terre Haute Transit Utility is located at 750 Cherry Street, Terre Haute, Indiana.

The 2010 Census showed a total population in Terre Haute of 59,614. Persons over the age of 18 and under the age of 65 constitute the majority of the population. Terre Haute Transit Utility provides scheduled services over eight routes as well as supplemental ADA paratransit service addressing the transit needs of Terre Haute.

1.3 Requirements of the Transit Asset Management Plan

Terre Haute Transit Utility is required by FTA to develop and implement a *Transit Asset Management Plan* that addresses the criteria listed below:

- Establish a set of objective standards for measuring the condition of capital assets (including facilities, FFE, rolling stock, and infrastructure)
- Establish performance measures for SGR, as defined by the FTA, from which to set targets for achieving a SGR for the Terre Haute Transit system

Terre Haute Transit Asset Management Plan includes, at a minimum, the following information:

- Facilities, FFE Inventory, and Replacement Cost Estimates (Exhibit A)
- Rolling Stock Inventory and Replacement Cost Estimates (Exhibit B)
- 2016 Eligible Facility, FFE and Rolling Stock Inventory (Exhibit C)

Additionally, Terre Haute Transit will be required to annually evaluate and update, as necessary, its Plan to report:

- The current condition of its system (SGR)
- Any change in condition since the last report
- The targets set under the above performance measures
- The progress towards meeting these targets

2.2 Inventory Summary and Present Day Replacement Cost Estimates

Exhibits A and B are the tables that contain the results of Terre Haute Transit Utility’s current facility, FFE, and rolling stock inventory. The tables also list anticipated useful life time periods and cost estimates for the replacement of these items in the calendar year of this report. The estimates are based on the assumptions described previously.

The facility, FFE and rolling stock contained in the inventory have been combined from all locations where the various transit system functions are performed. The locations include the following:

- Administration – Terre Haute Transfer Center – 750 Cherry Street
- Operations – Terre Haute Transfer Center – 750 Cherry Street
- Rolling Stock Maintenance – 901 S. 14th Street
- Rolling Stock Storage Garage – 901 S. 14th Street

2.3 Facilities and FFE Functional Assessment Overview and Measurement Assumptions

An assessment of the current condition of facilities and FFE is included as part of the asset inventory table to assist in the development and analysis of agency needs. The functional condition rating stated within the inventory summarizes the current condition of the inspected unit in a single qualitative rating based on the following definitions:

Table 2
Functional Condition Ratings

Rating Description	Working Definition
Excellent	The asset exceeds the reasonable requirements based on its intended function
Good	The asset meets most reasonable requirements, but may have some less than optimum characteristics
Adequate	The asset has shortcomings in its ability to support its intended function but these do not significantly impact transit performance
Substandard	The asset has shortcomings in its ability to support its intended function that are deemed by the operator to be below industry standards. These deficiencies impact the efficiency and / or of the operation

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Provide safe, cost-effective and reliable service to current and future customers. The recommended practice then identifies that asset management addresses the following two concepts: Level of Service (LOS) and Lifecycle Management.

- Asset Management can affect Level of Service, most notably stating, (TAM)...provides accountability and communicates performance and asset condition to customers.
- Lifecycle Management—the core of Asset Management is understanding and minimizing the total cost of ownership of an asset while maximizing its performance. Transit asset management integrates activities across departments and offices in a transit agency to optimize resource allocation by providing quality information and well-defined business objectives to support decision making within and between classes of assets.

Furthermore, Terre Haute Transit recognizes that there is no one industry wide adopted definition of SGR but understands, as outlined in a published FTA review titled “Transit Asset Management Practices”, A National and International Review, 2010 SGR consists of one or more of the following concepts.

- Maintaining an agency’s rolling stock and infrastructure as needed to meet a certain level of service
- Performing maintenance, repair, rehabilitation and renewal according to agency policy
- Reducing or eliminating a agency’s backlog of unmet capital needs

The review continues by stating that the defining aspects of achieving SGR outlined above are consistent with the concepts of Transportation Asset Management. The review also cites that a majority of the early work in this field has been performed by state DOT’s and the American Association of State Highway and Transportation Officials (AASHTO). Additionally, and for comparison, AASHTO’s previously developed TAM guide defines asset management as a strategic and systematic process of operating, maintaining, upgrading and expanding physical assets effectively throughout their life cycle. Aligned in concept with APTA, it focuses on business and engineering practices for resource allocation and utilization, with the objective of better decision-making based on quality information and well-defined objectives. Lastly, the FTA review document concludes that this study is based on a working definition for SGR that recognizes the fundamental principles that underlie achieving a SGR and applying asset management concepts; that is, in this context, SGR may be defined as ‘ a state that results from the application of Transportation Asset Management concepts in which a transit agency maintains its physical assets according to policy that minimizes asset life-cycle costs while avoiding negative impacts to transit service’.

Although application of the APTA standards, practices or guidelines is voluntary, Terre Haute Transit recognizes and acknowledges the value of information gained through field study of the U.S. transit industry successes, as well as shortcomings found within existing asset management practices. Moreover, this research has positively reinforced past, current and ongoing

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The annual Terre Haute Transit goal is to continue the SGR of its fleet, facilities, and programs while staying within the fiscal constraints placed upon the organization through responsible budgeting of funding amounts and asset allocations. Terre Haute Transit will also monitor the replacement program versus the replacement schedule as it is also fiscally constrained. The overall trend with all of Terre Haute Transit operations is the focus placed on fiscal constraints. Terre Haute Transit currently deals with these constraints and will continue to deal with these constraints in the following manners ensuring yearly accountability of funding expenditures corresponding to keeping its fleet in a SGR. These items come directly from the requirements of a TAM plan found in Section 1.3 on pages 2 and 3 of this document:

Requirement: Establish a set of objective standards for measuring the condition of capital assets (including facilities, FFE, rolling stock and infrastructure)

Adherence: THTU will monitor and manage all facilities, FFE, rolling stock, and infrastructure through reporting

Requirement: Establish performance measures for SGR, as defined by the FTA, from which to set targets for achieving a SGR for THTU

Adherence: THTU performance measures are bases on the monthly reporting of scheduled maintenance, preventative maintenance, trip information, hours and mileage information, and other relevant information as reported each month.

Adherence: Hold monthly information sharing meetings with the managing personnel to review reports and track asset maintenance to maintain a SGR for THTU

Budgeting: THTU has adopted the following measures to help maintain fiscal budget control of major expenditures while operating within yearly constraints:

- ❖ THTU uses a competitive contracting bid process through the public sector to ensure price competition using procurement regulations as guidance
- ❖ Ensure replacement program cost against the replacement schedule to stay within fiscal constraints. This includes meeting yearly to monitor the following:
 - ❖ Ensure “Major Expenses” are dealt with first within the existing fiscal constraints
 - ❖ Ensuring the current replacement schedule is reviewed and all items that can be funded within the fiscal constraints are completed
 - ❖ Reorganizing the order in which tasks within the replacement schedule are performed to meet fiscal constraints and keep the fleet in a SGR

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Replacement schedules is determined on a risk/need basis and is brought to the attention of the Assistant Manager and appropriate disposition is determined and funding awarded for mitigation of the risk/need.

THTU current inventory meets the definition of an entity with assets in a SGR. Through the 2015 fiscal year, THTU personnel performed 100% of preventative maintenance on time on all Fixed Route Vehicles and Paratransit Vehicles. This attention to detail and timing has kept the THTU assets in a SGR.

Although FTA standards for useful life of rolling stock are typically more stringent, THTU has experienced success, in careful and informed extension of its rolling stock through (preventative) maintenance policies, procedures and evaluation.

3.4 Level of Service / Service Standards

In keeping with FTA Requirements, in

3.5 Lifestyle Management / Performance Standards

THTU Lifestyle Management and Performance Standards revolve around the necessity of reaching the community with a holistic approach. This is accomplished through public ads, brochures, and publicity through exciting opportunities for community outreach. THTU cites current rider and population statistics in their public materials to help ensure the total populous demographic is reached. THTU has a brochure to reach local riders on who, what, when, and where riders can find various transportation in Vigo County.

Attachment: Exhibit E –City of Terre Haute and Vigo County Transportation Services

3.6 Financial Plan / Funding Sources

Financial Plan / Funding Sources:

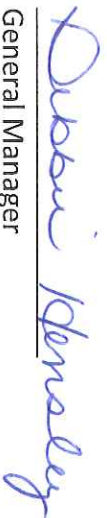
Overview of current funding sources:

- Operating revenue:
 - Fixed route fares
 - Contract with Indiana State University

3.8 Asset Management Process Enhancements

Asset Management Process Enhancements are brought before the THTU General Manager for consideration based upon the viability of the enhancement and the long term benefit from the proposed enhancement. Upon agreement, this is added to the appropriate meeting agenda for consideration and approval to move forward with the enhancement. Upon this approval by the appropriate parties, these enhancements are then assessed for available funding criteria through the MPO TIP or other funding programs as appropriate depending on the enhancement.

In the case of immediate enhancement needs, the risk of the proposed enhancement is evaluated and communicated to appropriate decision makers depending on the risk level identified. Funds distribution is completed depending on the current risk and the probability of elimination of the risk in an appropriate timeline.


General Manager

Adopted by Board of Public Works on: 10/22/18
Vice President 

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EXHIBIT A
Facilities, FFE Inventory

FIXED ROUTES

Grant #	Veh. #	Vehicle Year	Make/Model or Vehicle Description	Date In Service	Out of Service	Fed. Useful Life (Yr)	Actual Service (YR)	Remaining yrs	Remaining % bases on yrs.	Actual Mileage	Minimum Useful Life Mileage	Remaining % based on miles	Total Federal Share	Remaining Fed. Share based on yrs.	Remaining Fed. Share based on miles
IN-96-X005	32	2010	Senator	12/2/2010	2017	7	8.0	0	0%	312,476	150,000	0%	\$65,177.00	0.00	0.0
IN-96-X005	33	2010	Senator	12/2/2010	2017	7	8.0	0	0%	278,980	150,000	0%	\$71,452.00	0.00	0.0
IN-90-0563	34	2009	Senator	8/5/2009	2016	7	9.0	0	0%	253,999	150,000	0%	\$73,260.00	0.00	0.0
IN-96-X005	*35	2009	Work Horse	1/1/2015	2022	7	3.0	4.0	57%	71,900	150,000	52%	\$239,151.00	\$136,316	78,100.0
IN-96-X005	*38	2009	Work Horse	1/1/2015	2022	7	3.0	4.0	57%	92,869	150,000	38%	\$239,151.00	\$136,316	57,131.0
IN-96-X005	39	2010	Senator	12/9/2009	2017	7	9.0	0.0	0%	321,050	150,000	0%	\$65,177.00	0.00	0.0
IN-90-X661	54	2014	Goshen Coach	1/2/2015	2025	10	4.0	6.0	60%	120,733	200,000	40%	\$90,899.00	\$54,539.00	79,267.0
IN-90-X661	55	2014	Goshen Coach	1/2/2015	2025	10	4.0	6.0	60%	127,059	200,000	36%	\$90,899.00	\$54,539.00	72,941.0
IN-90-X661	56	2014	Goshen Coach	1/2/2015	2025	10	4.0	6.0	60%	115,657	200,000	42%	\$90,899.00	\$54,539.00	84,343.0
IN-90-X661	58	2014	Goshen Coach	1/2/2015	2025	10	4.0	6.0	60%	106,845	200,000	47%	\$90,899.00	\$54,539.00	93,155.0
IN-90-X661	59	2014	Goshen Coach	1/2/2015	2025	10	3.0	6.0	60%	120,719	200,000	40%	\$90,899.00	\$54,539.00	79,281.0
LOCAL FUND	*61	2007	Work Horse	5/11/2016	2023	7	2.0	5.0	71%	58,275	150,000	61%	\$0.00	\$0.00	0.0
IN-90-X661	62	2015	Goshen Coach	11/8/2016	2025	10	2.00	8.0	80%	51,351	200,000	74%	\$99,874.00	\$79,899.00	148,649.0

Note * Bus # 35, 38,61 were converted from Hybrid buses to regular gas buses and replaced into service.
When these buses were purchased they never ran because the hybrid were bad buses

Also bus # 61 was not purchased with FTA funds. \$34,050.80 local funds.

**Equipment Inventory List
Non-Revenue**

Grant #	Veh. #	Vehicle Year	Name	Make/Model or Vehicle Description	Date In Service	Out of Service	Fed. Useful Life (Yr)	Actual Service (YR)	Remaining yrs	Remaining % bases on yrs.	Actual Mileage	Minimum Useful Life Mileage	Remaining % based on miles	Total Federal Share	Remaining Fed. Share based on yrs.	Remaining Fed. Share based on miles
IN-90-0274	2253	2009	Van-50	Ford Econoline	2/16/2011	2016	5	9	0.00	0%	60,979	100,000	39%	\$23,935.81	\$0.00	39,168.0
IN-90-0274	2258	2009	Van-51	Ford Econoline	2/16/2011	2016	5	9	0.00	0%	80,877	100,000	19%	\$23,935.81	\$0.00	19,123.0
IN-90-0311	97462	1992	Truck	GMC	12/16/1991	2002	10	26	0.00	0%	85,558	200,000	57%	\$12,799.00	\$0.00	114,442.0
IN-90-0311	48427	2001	Truck	Dodge F16	4/19/2001	2011	10	17	0.00	0%	91,490	200,000	54%	\$19,274.50	\$0.00	108,510.0
IN-90-0463	66568	2005	Truck	Chevrolet	8/20/2004	2015	10	13	0.00	0%	122,242	200,000	0%	\$18,143.00	\$0.00	77,758.0
IN-90-X532	73496	2007	SUV	Ford Expedition	4/24/2007	2017	10	11	0.00	0%	249,496	200,000	0%	\$22,947.25	\$0.00	0.0

Terre Haute Transit Utility
Facilities

Inventory List

Inventory ID	Name	Year	Cost	Condition	Replacement Parts/Remodel	Cost	Condition	Current Value
901 S. 14th St.	Bus Garage & Maintenance Facility	1975	unknown	Fair	2009	\$249,000.00	Good	\$1,149,754.00
	Floor Lift	1975	unknown	Fair	2009	\$70,000.00	Good	\$63,700.00
	Heater	1975	unknown	Fair	2009	\$25,000.00	Good	\$22,750.00
	Overhead Doors	1975	unknown	Poor	2009	\$41,600.00	Good	\$37,856.00



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EXHIBIT B
Inventory Capital Assets
Age/ ULB

**Performance Measures and Targets
Fixed Route Buses**

	Bus	32	33	34	35	38	39	54	55	56	58	59	61	62	Exceed
	Age	8	8	9	3	3	9	4	4	4	4	3	2	2	ULB
	ULB	7	7	7	7	7	7	10	10	10	10	10	7	10	
Year 1		8	8	10	8	8	8	5	5	5	5	4	3	8	46%
Year 2		9	9	11	9	9	9	6	6	6	6	5	4	9	46%

Note: 46% of buses will exceed the 7 - year ULB

**Performance Measures and Targets
Paratransit (ADA)**

	Bus	45	48	60											Exceed
	Age	8	8	9											ULB
	ULB	7	7	7											
Year 1		8	6	3											33%
Year 2		9	7	4											67%

Note: 33% of buses will exceed the 7 - year ULB

**Inventory Capital Assets
Age/ULB**

Assess Condition (Fixed Routes)													
Bus	32	33	34	35	38	39	54	55	56	58	59	61	62
Age	8	8	9	3	3	9	4	4	4	4	3	2	2

4 out of 13 buses are below the useful life benchmark.

Assess Condition (Paratransit) ADA													
Bus	45	48	60										
Age	7	6	3										

1 out of 3 buses are below useful life benchmark.

**Equipment Inventory
Non-Revenue
Age/ ULB**

	Vehicle	Van - 50	Van - 51	GMC	Dodge F16	Chevrolet	Ford Exped	Exceed
	Age	9	9	26	17	13	11	ULB
	ULB	5	5	10	10	10	10	
Year 1		9	9	26	17	13	11	100%
Year 2		10	10	27	18	14	12	100%

Note: All vehicles will exceed their ULB requirements.

Exhibit C

Proposed Replacement

Inventory List

Inventory ID	Name	Model	Cost	Quantity in Stock	Year	Replacement Cost	Condition	Current Mileage	Discontinued ?
Fixed Routes									
82180	Bus #32	Senator	\$65,177.00	1	2010	\$100,000	Poor	283,443	2017
82925	Bus #33	Senator	\$71,452.00	1	2010	\$100,000	Fair	241,453	2017
80244	Bus #34	Senator	\$73,260.00	1	2009	\$100,000	Fair	209,168	2018
82576	Bus #35	Work Horse	\$239,151.00	1	2009	\$100,000	Good	22,734	2023
82575	Bus #38	Work Horse	\$239,151.00	1	2009	\$100,000	Good	53,194	2023
82407	Bus #39	Senator	\$65,177.00	1	2010	\$100,000	Fair	263,628	2018
28119	Bus #54	Goshen Coach	\$90,899.00	1	2014	\$100,000	Good	41,089	2022
28118	Bus #55	Goshen Coach	\$90,899.00	1	2014	\$100,000	Good	56,053	2022
28686	Bus #56	Goshen Coach	\$90,899.00	1	2014	\$100,000	Good	48,191	2022
28687	Bus #58	Goshen Coach	\$90,899.00	1	2014	\$100,000	Good	37,443	2022
28688	Bus #59	Goshen Coach	\$90,899.00	1	2014	\$100,000	Good	43,560	2022
34853	Bus #61	Work Horse	\$34,050.80	1	2007	\$100,000	Good	21,804	2023
342755	Bus #62	Goshen Coach	\$99,874.00	1	2015	\$100,000	Good	new	2023
ADA Paratransit									
934	Bus #45	Goshen Coach	\$65,345.00	1	2011	\$100,000	Good	191080	2019
12243	Bus #48	Goshen Coach	\$98,502.00	1	2012	\$100,000	Good	152871	2020
32764	Bus #60	Elkhart Coach	\$53,036.50	1	2016	\$100,000	Good	33126	2024

Terre Haute Transit Utility
Equipment Inventory

Inventory List

Inventory ID	Name	Model	Cost	Quantity in Stock	Year	Replacement Cost	Condition	Current Mileage	Discontinued?
2253	Van	Ford Econoline	\$23,935.81	1	2009	\$30,000	Good	60,979	2019
2258	Van	Ford Econoline	\$23,935.81	1	2009	\$30,000	Good	80,877	2019
97462	Truck	GMC	\$12,799.00	1	1992	\$20,000	Fair	85,558	2020
48427	Truck	Dodge F16	\$19,274.50	1	2001	\$20,000	Good	91,490	2021
66568	Truck	Chevrolet	\$18,143.00	1	2005	\$20,000	Fair	122,242	2025
73496	SUV	Ford Expedition	\$22,947.25	1	2007	\$25,000	Good	249,496	2027

Terre Haute Transit Utility
Facilities

Inventory List

Inventory ID	Name	Year	Cost	Condition	Replacement Parts/Remodel	Cost	Condition	Current Value
901 S. 14th St.	Bus Garage & Maintenance Facility	1975	unknown	Fair	2009	\$249,000.00	Good	\$1,149,754.00
	Floor Lift	1975	unknown	Fair	2009	\$70,000.00	Good	\$63,700.00
	Heater	1975	unknown	Fair	2009	\$25,000.00	Good	\$22,750.00
	Overhead Doors	1975	unknown	Poor	2009	\$41,600.00	Good	\$37,856.00