## Fiscal Years 2019 - 2022

# TRANSIT ASSET MANAGEMENT GROUP-SPONSORED PLAN



NORTH CENTRAL TEXAS

COUNCIL OF GOVERNMENTS

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Cover Photo Courtesy of the North Central Texas Council of Governments. Image of delivered 2017 StarTrans Senator II Cutaway Bus purchased through NCTCOG's Cooperative Vehicle Procurement.

#### Introduction

Transit Asset Management (TAM) is a business model that prioritizes funding based on the condition of transit assets to achieve or maintain transit networks in a state of good repair. It supports a series of practices to achieve a transit state of good repair including, but not limited to:

- Regular maintenance
- Inspections
- Tracking asset condition over time
- Planning for maintenance and replacement costs
- Replacing each asset at the appropriate time

In 2012, this business model was integrated into the Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21), which required the U.S. Secretary of Transportation to develop rules to establish a system to monitor and manage public transportation assets to improve safety and increase reliability and performance, and to establish performance measures. This requirement was reaffirmed in subsequent legislation, Fixing America's Surface Transportation (FAST) Act.

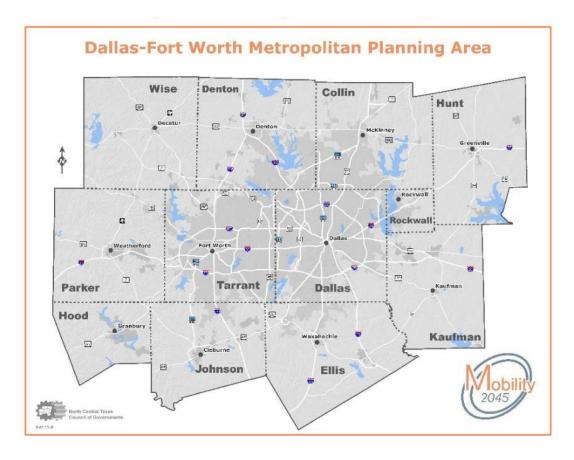
On July 26, 2016, the Federal Transit Administration (FTA) published the Transit Asset Management (TAM) final rule requiring all transit providers that are recipients or subrecipients receiving 49 U.S.C. Chapter 53 funds and own, operate, or manage transit capital assets used in the provision of public transportation to comply with additional state of good repair activities, including the development and implementation of a TAM Plan.

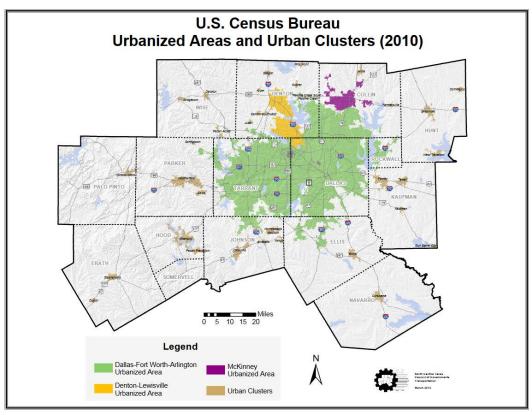
The TAM final rule also requires that designated or direct recipients of FTA's Urbanized Area Formula Program, Formula Grants for Rural Areas, and Enhanced Mobility for Seniors and Individuals with Disabilities Program funds sponsor and develop a Group TAM Plan for subrecipients that are Tier II providers of public transportation. The group plan sponsor is responsible for developing and writing the plan, as well as reporting on behalf of subrecipients. Participating subrecipients are responsible for collecting and submitting data to the sponsor and implementing the plan within their respective agencies. The plan will cover a period of four (4) years and must be updated at least every four (4) years.

This document will serve as the Fiscal Years (FY) 2019-2022 Group TAM Plan for subrecipients listed in the *Group Plan Participants* section.

#### **Group Sponsor Background**

The North Central Texas Council of Governments (NCTCOG) serves two roles in transit asset management. First, through NCTCOG's Regional Transportation Council (RTC), NCTCOG serves as the Metropolitan Planning Organization (MPO) for the Dallas-Fort Worth Metropolitan Planning Area. This comprises of 12 counties in North Central Texas region, including: Collin, Dallas, Denton, Ellis, Hood, Hunt, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties. The MPO is responsible for facilitating a continuous, cooperative, and comprehensive transportation planning process. This includes the development of the long-range plan, Mobility 2045, developing the Transportation Improvement Program and incorporating transit-related projects, and coordinating regional performance targets with all transit providers as they relate to TAM.





Second, NCTCOG is the designated recipient for federal transit funding in the Dallas-Fort Worth-Arlington (DFWA) and Denton-Lewisville (DL) Urbanized Areas (UZAs) for the Enhanced Mobility of Seniors and Individuals with Disabilities, New Freedom, Job Access Reverse Commute, and Urbanized Area Formula Programs not served by existing local transit authorities in Dallas, Fort Worth, and Denton, Texas. As the designated recipient, NCTCOG is responsible for coordinating and allocating federal funds to transit providers in the region, coordinating subrecipient transit providers' annual program of projects, conducting oversight and monitoring activities to ensure subrecipient compliance with federal requirements, and identifying strategic projects to implement based on the regional public transportation coordinated plan, Access North Texas. In this role, NCTCOG is also responsible for developing and sponsoring a group plan for its subrecipients.

#### Group Plan Notification and Participation

#### **Eligible Participants**

Pursuant to 49 C.F.R. 625 Subpart C, NCTCOG is required to develop a group TAM plan for its tier II provider subrecipients, except those subrecipients that are also direct recipients under the 49 U.S.C. 5307 Urbanized Area Formula Grant Program. Before soliciting participation, NCTCOG reviewed all subrecipients within active FTA grants, including the following FTA programs: Urbanized Area Formula Program (Section 5307), Enhanced Mobility of Seniors and Individuals with Disabilities (Section 5310), Job Access Reverse Commute (Section 5316), and New Freedom (Section 5317).

Of the twenty-seven (27) subrecipients identified, a total of seventeen (17) subrecipients were exempted from participation due to the following reasons:

- 1) Subrecipient was also a Tier I transit provider;
- 2) Subrecipient's project was no longer active, therefore the subrecipient relationship with NCTCOG had ended;
- 3) Subrecipient's project was capital project only (excluding vehicles);
- 4) Subrecipient's project was a closed-door (client-based);

To assist transit providers in the region and reduce the administrative costs associated with developing a plan, NCTCOG also allowed participation of tier II transit providers that are also direct recipients under the Section 5307 Program regardless of their subrecipient status with NCTCOG. A total of five (5) tier II direct recipients were provided with the option to participate in NCTCOG's Group TAM Plan, including the City of Arlington, City of Grand Prairie, City of Mesquite, City of McKinney, and Northeast Transportation Services (NETS).

A total of eleven (11) subrecipients and tier II providers were identified as eligible to participate in NCTCOG's Group TAM Plan.

#### Notification of Participation

In April 2018, NCTCOG met with all eligible subrecipients and tier II transit providers to address compliance with TAM requirements. Attendees were notified of their tier status, eligibility to participate in NCTCOG's Group TAM Plan or develop their own TAM Plan, federal deadlines, and requirements for notifying NCTCOG of participation in NCTCOG's Group TAM Plan.

Additionally, many of NCTCOG's eligible participants are subrecipients of other designated recipients, including the State of Texas' Department of Transportation (TxDOT) for FTA Formula Grants for Rural Area (Section 5311) or the Fort Worth Transportation Authority (FWTA) for Section 5307. Therefore, the following subrecipients were notified at the April 2018 meeting of their eligibility and additional option to participate in TxDOT's or FWTA's sponsored group TAM plan: City of Cleburne (dba City/County Transportation), Community Services, Inc (dba Community Transit Services), NETS, Public Transit Services (PTS), Span, Inc. (dba Span Transit), and STAR Transit.

Following the meeting, templates for notifying NCTCOG of participation were distributed via email. Eligible participants were instructed to notify NCTCOG of their participation or nonparticipation in NCTCOG's Group TAM Plan, participation or nonparticipation in other eligible group plans, and confirm that the TAM requirements would be met by the federal deadline.

#### Participating Transit Providers

Of the eligible subrecipients and tier II providers, six (6) provided notification to participate in NCTCOG's sponsored plan. Table 1 below lists the participating transit providers.

Table 1. Participating Agencies

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Transit Provider	Type of Participant	Funding Program(s)	Accountable Executive
Dallas/Fort Worth International Airport	Subrecipient	Section 5307 <sup>1</sup>	Michael Phemister
City of McKinney	Subrecipient / Tier II Direct Recipient	Section 5307 Section 5316	Anthony Cao
City of Grand Prairie	Tier II Direct Recipient	Section 5307 Section 5310	Anthony Flowers
City of Arlington	Tier II Direct Recipient	Section 5307	Bob Johnson
City of Mesquite	Tier II Direct Recipient	Section 5307 Section 5310	Valerie Bradley
Northeast Transportation Services (NETS)	Tier II Direct Recipient	Section 5307 Section 5310	Carla Forman

The Dallas/Fort Worth International Airport (DFW Airport) receives limited funding as a subrecipient of NCTCOG under the FTA Section 5307 Program to implement a shuttle between the Trinity Railway Express (TRE) Centreport Station and the Remote South Parking Lot at DFW Airport. This project was competitively awarded through three (3) of NCTCOG's Transit Call for Projects and is anticipated to expend all funding through NCTCOG in 2019. The DFW Airport maintains capital responsibility for all rolling stock, equipment, and facilities used in the provision of this public transportation service.

All remaining participants are tier II transit providers that have elected to participate in this plan due to limited resources and staff. Of these participants, the Cities of McKinney and Mesquite do

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<sup>&</sup>lt;sup>1</sup> For a Job Access/Reverse Commute (JARC) Project

not maintain capital responsibility of assets used to provide transportation services in their respective services. All public transportation services managed by the City of McKinney are operated through a partnership with the Denton County Transportation Authority (DCTA). McKinney maintains capital responsibility of a small number of assets, however DCTA maintains direct capital responsibility of the majority of assets used in service. DCTA will report asset conditions and performance in their respective TAM Plan. Similarly, all public transportation services managed by the City of Mesquite are operated by STAR Transit through contracts and interlocal agreements with STAR Transit and the Dallas Area Rapid Transit (DART). STAR Transit maintains capital responsibility for all assets used in the provision of transportation services in Mesquite. STAR Transit has opted to join TxDOT's TAM Group Sponsor Plan and will report all assets and asset conditions for their service and services provided on behalf of Mesquite to TxDOT, as well as apply these assets to their performance targets.

#### Performance Targets

Pursuant to 49 C.F.R. 613, NCTCOG, as the group TAM plan sponsor, is required to coordinate the development of the group plan's performance targets. Furthermore, NCTCOG is required by FTA to set annual performance targets for the region as the MPO. In development of the FY 2018 regional performance targets, NCTCOG coordinated with the region's public transportation providers, including the participants of this plan to ensure regional consistency. In order to align with the regional targets, NCTCOG adopted the region's FY 2018 performance targets as a starting point for the initial TAM Plan. Participants were notified during the April 2018 meeting of this decision. The performance targets for NCTCOG's Group TAM Plan is in Table 2 below.

Table 2. Asset Category Performance Measures and Targets

Asset Performance Measures	Asset Type	FY 2019 - FY 2022 Targets								
Rolling Stock (Revenue Vehicles)										
% of revenue vehicles that have met or	Cutaway Bus	_								
exceeded their FTA Useful Life Benchmark	Bus	0%								
(ULB)	Vans	U 70								
	Trolley Bus									
Equ	uipment									
% of non-revenue service vehicles or other equipment that have met or exceeded their FTA ULB	Service Vehicles	0%								
Fa	cilities									
% of facilities rated below "adequate" (3.0)	Maintenance									
on the FTA Transit Economic	Administrative									
Requirements Model (TERM) scale	Property Improvements	0%								
	Passenger Amenities									
	Parking Garage									

#### **Asset Inventory**

In June 2018, NCTCOG requested asset inventories from each participating agency related to the identified performance measures. As required by 49 C.F.R. 625.25(b)(1), assets directly owned by the participant and third-party contractors that are used in the provision of public

transportation services were combined and included into the group plan. Assets included rolling stock (revenue vehicles), equipment, and facilities.

#### Rolling Stock

Participants indicated capital responsibility for a total of forty-six (46) revenue vehicles. Of these vehicles, five (5) vehicles are large buses, one (1) is a trolley bus, three (3) are vans, and thirty-seven (37) are varying models of cutaway buses. Data collected for these assets includes:

- Year of Acquisition
- ❖ Vehicle Make / Model
- Vehicle Identification Number (VIN)
- ❖ Age of the Asset
- Mileage

#### Equipment

The asset inventory for equipment incorporates all services vehicles regardless of their initial purchase price, and all equipment exceeding \$50,000 in initial acquisition costs. Equipment not exceeding \$50,000 that are part of a facility (i.e., maintenance shop equipment) were excluded from this asset inventory. Participants indicated capital responsibility for a total of three (3) service (non-revenue) vehicles. Data collected for these assets are equivalent to the rolling stock inventory.

#### Facilities

The asset inventory for facilities is inclusive of facilities relating to the following functions: administrative, maintenance, passenger amenities, property improvements, and parking. Facilities that included incidental transit use (i.e., city halls) were excluded from the asset inventory.

A summary of all participants' assets are included in Table 3 below. Refer to Appendices A - C for the complete asset inventory listings.

Table 3. Asset Inventory Summary

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Asset Category / Type	Total Number	Average Age	Average Mileage
Rolling Stock	69	3.8	100,400
Cutaway Bus	60	3.3	79,000
Bus	5	7.6	402,700
Van	3	3.3	49,800
Trolley Bus	1	12	30,800
Equipment	3	0.6	8,400
Service Vehicles	3	0.6	8,400
Facilities	7	16.1	
Maintenance	3	21	
Administrative	1	4	
Passenger Amenities	1	12	
Property Improvements	1	4	
Parking Garage	1	30	

#### Condition Assessment

To ensure uniform assessments of condition for each asset type, NCTCOG coordinated with each participating agency to establish an accepted scale for assessing the physical condition of assets. Refer to Appendix D for a summary of the established rating scales for rolling stock and equipment, and facilities.

A summary of all condition data including revenue vehicles, equipment, and facilities is included in Table 4 and Table 5. Pursuant to 49 C.F.R. 625.25(b)(2), assets for which the participant does not maintain direct capital responsibility are included in the inventory but are not required to have condition assessments completed and have been excluded from evaluations. Refer to Appendices A – C for the complete asset inventory and condition assessments. Overall, 0% of revenue vehicles and equipment met or have exceed the FTA useful life benchmark, while 0% of facilities met or exceeded an "adequate" rating using FTA's TERM scale.

Table 4. Revenue and Equipment Asset Condition Summary

Asset Category / Type	Total Number	Average Age	Average Condition	FTA Useful Life Benchmark	% At or Past ULB
Rolling Stock	48	3.9	3		0%
Cutaway Bus	39	3.2	2	10	0%
Bus	5	7.6	3.6	14	0%
Van	3	3.3	1.7	8	0%
Trolley Bus	1	12	2.5	13	0%
Equipment	3	0.6	1	14	0%
Service Vehicles	3	0.6	1	14	0%

Table 5. Facility Asset Condition Summary

Asset Category / Type	Total Number	Average Age	Average Condition	FTA Useful Life Benchmark	% At or Past TERM	% At or Past ULB
Facilities	7	16.1	4		0%	12.5%
Maintenance	3	21	3.6	25	0%	0%
Administrative	1	4	4.7	25	0%	0%
Passenger Amenities	1	12	4.5	25	0%	0%
Property Improvements	1	4	5	15	0%	0%
Parking Garage	1	30	4	30	0%	100%

#### Investment Prioritization

During the data collection process, NCTCOG coordinated with plan participants to develop a tool that assists accountable executives in determining when investments in replacement assets are needed in order to maintain an overall state of good repair. The decision support tools for each asset category include various weighted categories based on common factors that affect the overall life of the asset. Pursuant to 49 C.F.R. 625.25(b)(3), a description of the analytical processes and decision support tools for each asset category are described in further detail below.

#### Rolling Stock and Equipment

While each participant in NCTCOG's Group TAM Plan operates in the urbanized area of North Central Texas, the operating environments, maintenance practices, and levels of service may differ greatly. The decision support tool for rolling stock and equipment included four (4) main categories and eight (8) subcategories that are commonly used to evaluate the viability of an asset for all participants. Primary categories include age, condition, performance and maintenance. Age is calculated by percentage of life expended in accordance with the NCTCOG-identified useful like benchmark. Condition is broken down by physical interior and physical exterior conditions using the rating scales identified in Appendix D. Vehicle and equipment performance is explained through sub categories of reliability and miles per gallon. Reliability can be determined through observing miles driven between failures (MDBF) and in-service rate, or frequency in which the vehicles is used in operation. Finally, maintenance is determined by examining the cost of operation of the asset, or the cost to maintain the asset.

Participants were required to provide input on the rating scale for each category and subcategory based on current practice. The final rating scale represents a range applicable to all participant's assets. A score of one (1) indicates an asset in excellent condition, while a score of five (5) indicates an asset in poor condition. Refer to Appendix E for a detailed breakdown of the decision support tool for rolling stock and equipment.

#### **Facilities**

The facility decision support tool is based upon the culmination of facility items including HVAC systems, roofing, plumbing and electrical. Utilizing the TERM scale, each of these item are provided a score to identify quality and effectiveness. The scores are then averaged to provide each facility an overall score. A score of one (1) indicates an asset in poor condition, while a score of five (5) indicates an asset in excellent condition. Refer to Appendix F for a detailed breakdown of the decision support tool for facilities.

#### Proposed Investments

In determining the prioritization of rolling stock, equipment, and facilities, NCTCOG evaluated each asset based on the following considerations:

- 1) Decision Support Tool Score
- 2) Remaining ULB before performance target is met

Rolling stock and equipment with high decision support tool scores indicate poor performance and physical condition, even when a significant number of years are remaining until the ULB is met. Low decision support tool scores might indicate excellent performance and condition, but might overlook assets that have met or exceeded their useful life. For facilities, the opposite scoring is true.

Pursuant to 49 C.F.R. 625.25(b)(4) and 49 CFR 625.33(b)-(f), Table 6 – 8 summarize the total number of assets requiring replacement to maintain a state of good repair and/or the established performance targets over the next four years. These tables also include the estimated replacement costs for these assets. Refer to Appendix G – I for the detailed ranking of projects for each asset category and Appendix J for a summary of how estimated asset costs were determined.

Table 6. Summary of Proposed Rolling Stock Replacements by Fiscal Year

Asset Category / Type	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023 & Onward
Cutaway Bus Replacement Quantity to Maintain TAM Target Estimated Replacement Costs	12	8	0	10	9
	\$913,800	\$626,900	\$0	\$829,700	\$778,600
Bus Replacement Quantity to Maintain TAM Target Estimated Replacement Costs	4	0	1	0	0
	\$1,500,000	\$0	\$386,900	\$0	\$0
Van Replacement Quantity to Maintain TAM Target Estimated Replacement Costs	0	0 \$0	1 \$44,900	0 \$0	2 \$96,500
Trolley Bus Replacement Quantity to Maintain TAM Target Estimated Replacement Costs	1	0	o	0	0
	\$72,100	\$0	\$0	\$0	\$0

Table 7. Summary of Proposed Equipment Replacements by Fiscal Year

Asset Category / Type	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023 &
					Onward
Service Vehicles	0	0	0	0	3
Replacement Quantity to Maintain TAM Target	\$0	\$0	\$0	\$0	\$86,700

Table 8. Summary of Proposed Facility Replacements by Fiscal Year

Asset Category / Type	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023 & Onward
Maintenance Replacement Quantity to	0	0	3	0	0
Maintain TAM Target Estimated Replacement	\$0	\$0	\$4,300,000	\$0	\$0
Costs Administrative	·	<u> </u>		<u> </u>	·
Replacement Quantity to Maintain TAM Target	0	0	0	0	1
Estimated Replacement Costs	\$0	\$0	\$0	\$0	\$72,700,000
Passenger Amenities					
Replacement Quantity to Maintain TAM Target	0	0	0	0	1
Estimated Replacement Costs	\$0	\$0	\$0	\$0	\$445,600
Property Improvements					
Replacement Quantity to Maintain TAM Target	0	0	0	0	1
Estimated Replacement Costs	\$0	\$0	\$0	\$0	\$934,400
Parking Garage					
Replacement Quantity to Maintain TAM Target	1	0	0	0	0
Estimated Replacement Costs	\$372,500	\$0	\$0	\$0	\$0

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## Appendix A: Asset Inventory and Condition for Rolling Stock

Provider	Vehicle Type	Year	Vehicle Make	Vehicle Model	VIN	Age	Mileage	Condition	FTA ULB	Remaining ULB
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL0D1190252	5	106,326	4.0	10	5
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL1D1189031	5	94,333	4.0	10	5
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL8D1190161	5	103,358	4.0	10	5
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL6D1189204	5	103,212	4.0	10	5
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL3D1189631	5	106,961	4.0	10	5
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL0D1189988	5	82,103	3.0	10	5
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL8B1188166	5	100,514	4.0	10	5
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL3D1189175	5	101,782	4.0	10	5
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL8D1188569	5	104,222	4.0	10	5
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL7G1293781	5	87,421	4.0	10	5
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL7G1293781	2	33,862	2.0	10	8
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL6G1295005	2	40,509	2.0	10	8
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL9G1290946	2	35,734	2.0	10	8
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL4G1291910	2	40,659	2.0	10	8
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL5G1291706	2	38,740	2.0	10	8
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL1G1294635	2	35,092	2.0	10	8
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL6G1290791	2	36,396	2.0	10	8
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL8G1291845	2	45,328	2.0	10	8

Provider	Vehicle Type	Year	Vehicle Make	Vehicle Model	VIN	Age	Mileage	Condition	FTA ULB	Remaining ULB
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL6G1293821	2	45,621	2.0	10	8
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL6G1292637	2	28,654	2.0	10	8
City of Arlington	CU	2017	Arboc	3500 Promaster	3C7WRVLG5GE136649	1	20,823	2.0	10	9
City of Grand Prairie	CU	2010	Ford	E-450	1FDFE4FP6ADA40161	8	166,596	1.5	10	2
City of Grand Prairie	CU	2012	Chevrolet	4500	1GB6G5CL3C1184037	6	110,203	3.0	10	5
City of Grand Prairie	CU	2013	Ford	E-450	1FDFE4FS1CDB24492	5	141,759	2.5	10	5
City of Grand Prairie	CU	2016	Ford	E-450	1FDFE4FS7GDC57053	2	51,387	1.0	10	8
City of Grand Prairie	CU	2016	Ford	E-450	1FDFE4FS9GDC57054	2	47,184	1.0	10	8
City of Grand Prairie	CU	2016	Ford	E-450	1FDFE4FS1GDC56982	2	50,036	1.0	10	8
City of Grand Prairie	CU	2016	Ford	E-450	1FDFE4FS2GDC57011	2	45,668	1.0	10	8
City of Grand Prairie	CU	2017	Ford	E-450	1FDFE4FS3HDC72067	1	9,230	1.0	10	9
City of Grand Prairie	CU	2017	Ford	E-450	1FDFE4FSSHDC72068	1	8,000	1.0	10	9
City of Grand Prairie	CU	2017	Ford	E-450	1FDFE4FS7HDC72069	1	8,117	1.0	10	9
City of Grand Prairie	CU	2017	Ford	E-450	1FDFE4FS8HDC74042	1	6,216	1.0	10	9
Northeast Transportation Services	CU	2014	Ford	E-350	1FDEE3FLXEDA23663	4	119,903	3.00	10	6
Northeast Transportation Services	CU	2014	Ford	E-350	1FDEE3FL6EDA23661	4	102,617	3.00	10	6
Northeast Transportation Services	CU	2014	Ford	E-350	1FDEE3FL8EDA23662	4	105,369	3.00	10	6
Northeast Transportation Services	CU	2015	Ford	E-350	1FDEE3FS5EDB00804	3	84,669	3.00	10	7
Northeast Transportation Services	CU	2015	Ford	E-350	1FDEE3FSXEDB00801	3	65,210	2.00	10	7

Provider	Vehicle Type	Year	Vehicle Make	Vehicle Model	VIN	Age	Mileage	Condition	FTA ULB	Remaining ULB
Star Transit (City of Mesquite)	CU	2010	Chevrolet	Arboc Mobility	1GB9G5AG4A1139916	8	84,368	N/A	10	2
Star Transit (City of Mesquite)	CU	2014	Ford	Glaval Universal Bus	1FDFE4FS8EDA91820	4	103,354	N/A	10	6
Star Transit (City of Mesquite)	CU	2014	Ford	Glaval Universal Bus	1FDFE4FS3EDA91823	4	124,359	N/A	10	6
Star Transit (City of Mesquite)	CU	2014	Ford	Glaval Universal Bus	1FDFE4FSXEDA91818	4	111,668	N/A	10	6
Star Transit (City of Mesquite)	CU	2014	Ford	Glaval Universal Bus	1FDFE4FS1EDA91819	4	151,177	N/A	10	6
Star Transit (City of Mesquite)	CU	2014	Ford	Glaval Universal Bus	1FDFE4FSXEDA91821	4	85,826	N/A	10	6
Star Transit (City of Mesquite)	CU	2014	Ford	Glaval Universal Bus	1FDFE4FS1EDA91822	4	108,394	N/A	10	6
Star Transit (City of Mesquite)	CU	2015	Ford	Glaval Entourage	1FDGF5GY5FEB40686	3	125,517	N/A	10	7
Star Transit (City of Mesquite)	CU	2015	Ford	Glaval Entourage	1FDGF5GY5FEB64499	3	107,961	N/A	10	7
Star Transit (City of Mesquite)	CU	2015	Ford	Glaval Entourage	1FDGF5GY2FEB64508	3	94,346	N/A	10	7
Star Transit (City of Mesquite)	CU	2016	Ford	Glaval Entourage	1FDGF5GY4GEA33310	2	83,126	N/A	10	8
Star Transit (City of Mesquite)	CU	2017	Ford	Ford Senator II	1FDFE4FS1HDC33705	1	25,620	N/A	10	9
Star Transit (City of Mesquite)	CU	2017	Ford	Ford Senator II	1FDFE4FS1HDC33722	1	40,580	N/A	10	9
Star Transit (City of Mesquite)	CU	2013	Ford	Eldorado National Aerotech 240	1FDFE4FS3DDA93053	5	167,448	N/A	10	5
Star Transit (City of Mesquite)	CU	2014	Ford	Eldorado National Aerotech 240	1FDFE4FS4DDB09678	4	140,393	N/A	10	6
Star Transit (City of Mesquite)	CU	2015	Ford	Glaval Entourage	1FDXE4FS6FDA03059	3	116,549	N/A	10	7
Star Transit (City of Mesquite)	CU	2015	Ford	Glaval Entourage	1FDXE4FS2FDA03060	3	129,761	N/A	10	7
Star Transit (City of Mesquite)	CU	2014	Ford	Eldorado National Aerotech 240	1FDFE4FSXDDB30759	4	124,594	N/A	10	6
City of McKinney	CU	2014	Ford	Glaval Titan II LF	1GB6G5BG9E1106496	4	70,500	2	10	6
City of McKinney	CU	2014	Ford	Glaval Titan II LF	1GB6G5BG9E1105879	4	46,000	2	10	6

Provider	Vehicle Type	Year	Vehicle Make	Vehicle Model	VIN	Age	Mileage	Condition	FTA ULB	Remaining ULB
Denton County Transportation Authority (City of McKinney)	CU	2015	Ford	E-450	1FDXE4FS8FDA03063	3	37,664	N/A	10	7
Denton County Transportation Authority (City of McKinney)	CU	2015	Ford	E-450	1FDXE4FS4FDA03058	3	98,671	N/A	10	7
Denton County Transportation Authority (City of McKinney)	CU	2015	Ford	E-450	1FDXE4FS6FDA03062	3	37,713	N/A	10	7

## Appendix B: Asset Inventory for Equipment

Provider	Asset Type	Year	Make	Model	Asset ID	Description	Age	Mileage	Condition	FTA ULB	Remaining ULB
Dallas/Fort Worth International Airport	Service Vehicle	2017	Ford	Taurus	9818.17	Bussing Ops Svc Vehicle	1	9,156	1.0	14	13
Dallas/Fort Worth International Airport	Service Vehicle	2017	Ford	Taurus	9819.17	Bussing Ops Svc Vehicle	1	8,890	1.0	14	13
Dallas/Fort Worth International Airport	Service Vehicle	2018	Ford	Focus	9062.18	Bus Maintenance Svc Vehicle	0	6,913	1.0	14	14

## Appendix C: Asset Inventory for Facilities

Provider	Asset Type	Asset ID	Description	Year	Age	TERM Condition	ULB	ULB Remaining
City of Grand Prairie	Improvement	NA	Building Renovation	2014	4	5.0	15	11
Dallas/Fort Worth International Airport	Administrative	13013.Building	DFW Consolidated HQ	2014	4	4.7	25	21
Dallas/Fort Worth International Airport	Parking Garage	13044.Building.8051	Shuttle Parking Garage	1988	30	4	30	0
Dallas/Fort Worth International Airport	Maintenance	24075.Building	Transportation Maint.	1997	21	3.2	25	4
Dallas/Fort Worth International Airport	Maintenance	24276.Area	Bus Fueling Area	1997	21	3.7	25	4
Dallas/Fort Worth International Airport	Maintenance	24176.Structure	Bus Wash Area	1997	21	4	25	4
Dallas/Fort Worth International Airport	Passenger	13044.Building	DFW Remote South Bus Stop	2006	12	4.5	25	13

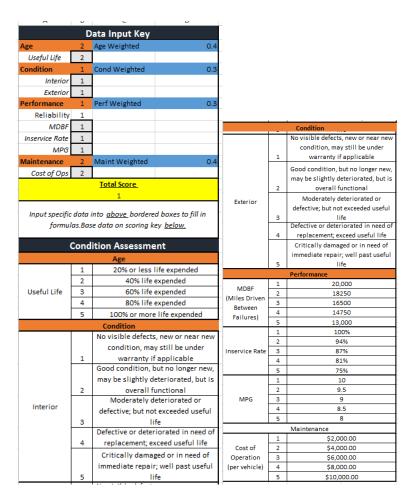
## Appendix D: Condition Assessment Rating Scales

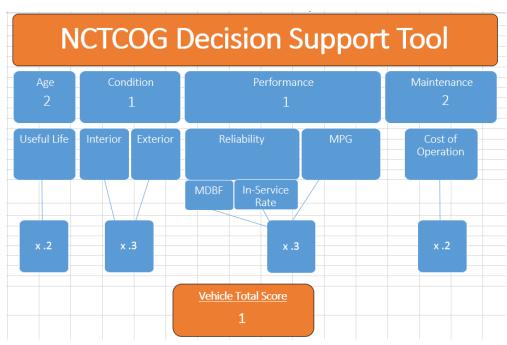
		Rolling Stock and Equipment Condition Rating Scale
Areas of Assessment	Rate	Description
Interior	1 – Excellent	No visible defects, new or near new condition, may still be under warranty if applicable.
Exterior	2 – Good	Good condition, but no longer new, may be slightly deteriorated, but is overall functional.
	3 – Adequate	Moderately deteriorated or defective; but not exceeded useful life.
	4 – Marginal	Defective or deteriorated in need of replacement; exceed useful life.
	5 – Poor	Critically damaged or in need of immediate repair; well past useful life.

		Facility Condition Rating Scale <sup>1</sup>
Areas of Assessment	Rate	Description
Substructure Shell	5 – Excellent	No visible defects, new or near new condition, may still be under warranty if applicable.
Interiors Conveyance	4 – Good	Good condition, but no longer new, may be slightly deteriorated, but is overall functional.
Plumbing HVAC	3 – Adequate	Moderately deteriorated or defective; but not exceeded useful life.
Fire Protection Electrical	2 – Marginal	Defective or deteriorated in need of replacement; exceed useful life.
Equipment Site Section	1 – Poor	Critically damaged or in need of immediate repair; well past useful life.

<sup>&</sup>lt;sup>1</sup> Based on FTA's TERM scale

### Appendix E: Rolling Stock and Equipment Decision Support Tool





## Appendix F: Facilities Decision Support Tool

, j		Unit of	Perce	nt of Asset (	Quantity by C	ondition	
Component	<b>Asset Quantity</b>	Measure	5- Excellent	4- Good	3-Adequate	2-Marginal	1- Poor
Roof	1	1		Х			
Shell	1	1	Х				
Interior	1	1	X				
Conveyance	0	0	NA				
Plumbing	1	1	X				
HVAC	1	1	Х				
Fire Protection	1	1	X				
Electrical	1	1	Х				
Equipment	1	1	X				
Site	1	1	Х				
				Ave	erage: 5		

## Appendix G: Proposed Investment Ranking for Rolling Stock

Provider	Туре	Year	Make	Model	VIN	Mileage	Initial Cost	FTA ULB	Remain. ULB	DST Score	FY Replace.	Estimated Replace. Costs
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL7G1293781	33,862	\$75,000	10	8	2.00	FY2022	\$82,964.68
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL6G1295005	40,509	\$75,000	10	8	2.00	FY2022	\$82,964.68
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL9G1290946	35,734	\$75,000	10	8	2.00	FY2022	\$82,964.68
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL4G1291910	40,659	\$75,000	10	8	2.00	FY2022	\$82,964.68
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL5G1291706	38,740	\$75,000	10	8	2.00	FY2022	\$82,964.68
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL1G1294635	35,092	\$75,000	10	8	2.00	FY2022	\$82,964.68
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL6G1290791	36,396	\$75,000	10	8	2.00	FY2022	\$82,964.68
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL8G1291845	45,328	\$75,000	10	8	2.00	FY2022	\$82,964.68
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL6G1293821	45,621	\$75,000	10	8	2.00	FY2022	\$82,964.68
City of Arlington	CU	2016	Goshen	Impulse	1GB6GUBL6G1292637	28,654	\$75,000	10	8	2.00	FY2022	\$82,964.68
City of Arlington	CU	2017	Arboc	3500 Promaster	3C7WRVLG5GE136649	20,823	\$92,660	10	9	2.00	FY2023	\$85,370.65
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL0D1190252	106,326	\$79,871	10	5	4.00	FY2019	\$76,146.00
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL1D1189031	94,333	\$79,871	10	5	4.00	FY2019	\$76,146.00
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL8D1190161	103,358	\$79,871	10	5	4.00	FY2019	\$76,146.00
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL6D1189204	103,212	\$79,871	10	5	4.00	FY2019	\$76,146.00
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL3D1189631	106,961	\$79,871	10	5	4.00	FY2019	\$76,146.00
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL0D1189988	82,103	\$79,871	10	5	4.00	FY2019	\$76,146.00
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL8B1188166	100,514	\$79,871	10	5	4.00	FY2019	\$76,146.00
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL3D1189175	101,782	\$79,871	10	5	4.00	FY2019	\$76,146.00
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL8D1188569	104,222	\$79,871	10	5	4.00	FY2019	\$76,146.00
City of Arlington	CU	2013	Eldorado Aerotech	G4500	1GB6G5BL7G1293781	87,421	\$79,871	10	5	4.00	FY2019	\$76,146.00
City of Grand Prairie	ТВ	2006	Freightliner	Freightliner	4UZAACBW56CW01931	30,759	\$70,000	13	1	3.00	FY2019	\$72,100.00

Provider	Туре	Year	Make	Model	VIN	Mileage	Initial Cost	FTA ULB	Remain. ULB	DST Score	FY Replace.	Estimated Replace. Costs
City of Grand Prairie	CU	2012	Chevrolet	4500	1GB6G5CL3C1184037	110,203	\$70,000	10	5	3.00	FY2019	\$76,146.00
City of Grand Prairie	CU	2016	Ford	E-450	1FDFE4FS7GDC57053	51,387	\$70,000	10	8	1.00	FY2023	\$85,370.65
City of Grand Prairie	CU	2016	Ford	E-450	1FDFE4FS9GDC57054	47,184	\$70,000	10	8	1.00	FY2023	\$85,370.65
City of Grand Prairie	CU	2016	Ford	E-450	1FDFE4FS1GDC56982	50,036	\$70,000	10	8	1.00	FY2023	\$85,370.65
City of Grand Prairie	CU	2016	Ford	E-450	1FDFE4FS2GDC57011	45,668	\$70,000	10	8	1.00	FY2023	\$85,370.65
City of Grand Prairie	VN	2016	Ford	Expedition	1FMJU1FTXGEF32266	10,159	\$60,000	8	6	1.00	FY2024	\$48,956.14
City of Grand Prairie	CU	2017	Ford	E-450	1FDFE4FS3HDC72067	9,230	\$70,000	10	9	1.00	FY2024	\$87,931.77
City of Grand Prairie	CU	2017	Ford	E-450	1FDFE4FSSHDC72068	8,000	\$70,000	10	9	1.00	FY2024	\$87,931.77
City of Grand Prairie	CU	2017	Ford	E-450	1FDFE4FS7HDC72069	8,117	\$70,000	10	9	1.00	FY2024	\$87,931.77
City of Grand Prairie	CU	2017	Ford	E-450	1FDFE4FS8HDC74042	6,216	\$70,000	10	9	1.00	FY2024	\$87,931.77
City of Grand Prairie	CU	2010	Ford	E-450	1FDFE4FP6ADA40161	166,596	\$70,000	10	2	2.00	FY2019	\$76,146.00
City of Grand Prairie	CU	2013	Ford	E-450	1FDFE4FS1CDB24492	141,759	\$70,000	10	5	2.00	FY2020	\$78,354.23
Dallas/Fort Worth International Airport	BU	2012	El Dorado National	EZ Rider II 35'	1N9MMALG2BC084229	299,320	\$363,94 3	14	8	3.00	FY 2021	\$386,825.36
Dallas/Fort Worth International Airport	BU	2010	El Dorado National	EZ Rider II 35'	1N9MMALG3AC084111	485,066	\$350,79 9	14	6	4.00	FY2019	\$364,620.00
Dallas/Fort Worth International Airport	BU	2010	El Dorado National	EZ Rider II 35'	1N9MMALG7AC084112	309,597	\$350,79 9	14	6	4.00	FY2019	\$364,620.00
Dallas/Fort Worth International Airport	BU	2010	El Dorado National	EZ Rider II 35'	1N9MMALG7AC084113	453,883	\$350,79 9	14	6	4.00	FY2019	\$364,620.00
Dallas/Fort Worth International Airport	BU	2010	El Dorado National	EZ Rider II 35'	1N9MMALG9AC084114	465,270	\$350,79 9	14	6	4.00	FY2019	\$364,620.00
Northeast Transportation Services	CU	2014	Ford	E-350	1FDEE3FLXEDA23663	119,903	\$62,500	10	6	4.00	FY2020	\$78,354.23

Provider	Туре	Year	Make	Model	VIN	Mileage	Initial Cost	FTA ULB	Remain. ULB	DST Score	FY Replace.	Estimated Replace. Costs
Northeast Transportation Services	CU	2014	Ford	E-350	1FDEE3FL6EDA23661	102,617	\$62,500	10	6	4.00	FY2020	\$78,354.23
Northeast Transportation Services	CU	2014	Ford	E-350	1FDEE3FL8EDA23662	105,369	\$62,500	10	6	4.00	FY2020	\$78,354.23
Northeast Transportation Services	CU	2015	Ford	E-350	1FDEE3FS5EDB00804	84,669	\$53,636	10	7	4.00	FY2020	\$78,354.23
Northeast Transportation Services	VN	2013	Toyota	Sienna	5TDZK3DCD8DS397869	73,015	\$25,000	8	3	2.00	FY2021	\$44,801.81
Northeast Transportation Services	VN	2015	Dodge	Caravan	2C7WDGBG6FR703525	65,539	\$37,137	8	5	2.00	FY2023	\$47,530.24
Northeast Transportation Services	CU	2015	Ford	E-350	1FDEE3FSXEDB00801	65,210	\$53,636	10	7	3.00	FY2020	\$78,354.23
City of McKinney	CU	2014	Ford	Glaval Titan II LF	1GB6G5BG9E1106496	70,500	N/A	10	6	3.00	FY2020	\$78,354.23
City of McKinney	CU	2014	Ford	Glaval Titan II LF	1GB6G5BG9E1105879	46,000	N/A	10	6	3.00	FY2020	\$78,354.23

## Appendix H: Proposed Investment Ranking for Equipment

Provider	Asset Type	Year	Make	Model	VIN	Mileage	Initial Cost	ULB	Remaining ULB	DST Score	FY Replacement	Estimated Replacement Costs
Dallas/Fort Worth International Airport	Service Vehicle	2017	Ford	Taurus	1FAHP2D83HG111452	9,156	\$19,862	14	13	1.00	FY 2032	\$28,599.96
Dallas/Fort Worth International Airport	Service Vehicle	2017	Ford	Taurus	1FAHP2D85HG111453	8,890	\$19,862	14	13	1.00	FY 2032	\$28,599.96
Dallas/Fort Worth International Airport	Service Vehicle	2018	Ford	Focus	1FADP3E2XJL212743	6,913	\$15,508	14	14	1.00	FY 2033	\$29,457.96

## Appendix I: Proposed Investment Ranking for Facilities

Provider	Asset Type	Year	Description	Asset ID	Initial Cost	ULB	Remaining ULB	DST Score	FY Replacement	F	Estimated Replacement Cost
City of Grand Prairie	Improvement	2014	Building Renovation	NA	\$640,000	15	11	5.00	FY 2030	\$	934,399.93
Dallas/Fort Worth International Airport	Parking Garage	1988	Shuttle Parking Garage	13044.Building.8051	\$361,281	30	0	4.00	FY 2019	\$	372,498.00
Dallas/Fort Worth International Airport	Maintenance	1997	Transportation Maintenance	24075.Building	\$3,024,583	25	4	3.00	FY 2021	\$	1,413,142.96
Dallas/Fort Worth International Airport	Maintenance	1997	Bus Fueling Area	24276.Area	\$116,108	25	4	3.00	FY 2021	\$	1,413,142.96
Dallas/Fort Worth International Airport	Maintenance	1997	Bus Wash Area	24176.Structure	\$748,365	25	4	4.00	FY 2022	\$	1,413,142.96
Dallas/Fort Worth International Airport	Passenger	2006	DFW Remote South Bus Stop	13044.Building	\$295,084	25	13	4.00	FY 2032	\$	445,557.34
Dallas/Fort Worth International Airport	Admin	2014	DFW Consolidated HQ	13013.Building	\$38,054,357	25	21	4.00	FY 2040	\$	72,649,841.22

## Appendix J: Estimated Replacement Costs by Asset Category

#### ROLLING STOCK REPLACEMENT COSTS

Asset Type	Average Initial Costs of Vehicles	Base Cost for Replacement Estimates	Assumed Market Rate	FY 2019 Costs		FY2020 Costs		FY2021 Costs		FY2022 Costs		FY2023 Costs	
Cutaway Bus	\$73,139	\$74,000.00	3%	\$	76,146.00	\$	78,354.23	\$	80,626.51	\$	82,964.68	\$	85,370.65
Trolley Bus	\$70,000	\$70,000.00	3%	\$	72,100.00	\$	74,263.00	\$	76,490.89	\$	78,785.62	\$	81,149.19
Van	\$40,712	\$41,000.00	3%	\$	42,230.00	\$	43,496.90	\$	44,801.81	\$	46,145.86	\$	47,530.24
Bus	\$353,428	\$354,000.00	3%	\$	364,620.00	\$	375,558.60	\$	386,825.36	\$	398,430.12	\$	410,383.02

#### **EQUIPMENT REPLACEMENT COSTS**

Asset Type	Average Initial Costs of Equipment	Base Cost for Replacement Estimates	Assumed Market Rate	FY	2019 Costs	FY	2020 Costs	FY	2021 Costs	FY	′2022 Costs	FY:	2023 Costs
Service Vehicles	\$18,411	\$19,000.00	3%	\$	19,551.00	\$	20,117.98	\$	20,701.40	\$	21,301.74	\$	21,919.49

#### **FACILITY REPLACEMENT COSTS**

Asset Type	Average Initial Costs of Facility	Base Cost for Replacement Estimates	Assumed Market Rate	FY 2019 Costs		FY2020 Costs		FY2021 Costs		FY2022 Costs		FY2023 Costs	
Admin	\$18,411	\$19,000.00	3%	\$	19,551.00	\$	20,117.98	\$	20,701.40	\$	21,301.74	\$	21,919.49
Maintenance	\$1,296,352	\$1,297,000.00	3%	\$	1,334,613.00	\$	1,373,316.78	\$	1,413,142.96	\$	1,454,124.11	\$	1,496,293.71
Parking Garage	\$361,281	\$362,000.00	3%	\$	372,498.00	\$	383,300.44	\$	394,416.15	\$	405,854.22	\$	417,624.00
Improvement	\$640,000	\$640,000.00	3%	\$	658,560.00	\$	677,658.24	\$	697,310.33	\$	717,532.33	\$	738,340.77
Passenger	\$295,084	\$296,000.00	3%	\$	304,584.00	\$	313,416.94	\$	322,506.03	\$	331,858.70	\$	341,482.60