

GRAND FORKS - EAST GRAND FORKS

Transit Development Plan

Appendix 6: Capital Plan and Financial Plan

September 2022





Introduction

Project Overview

The Grand Forks-East Grand Forks Transit Development Plan (TDP) is a 10-year plan that provides a vision for transit in the community. Grand Forks – East Grand Forks’ previous transit development plan was completed in 2017. The 2022 plan update will evaluate recent system improvements and has the following areas of focus:



Integration of University of North Dakota (UND) campus bus routes



New or improved fixed route, paratransit, and Senior Rider services



Maintenance and growth of CAT ridership



Fare, pass, or transfer policy changes to increase ridership or funding



Transit fleet and technology recommendations



Investments in capital improvements like buses, bus stop enhancements, and support equipment



Support for existing and future CAT operations at transit facilities such as Midtown Transit Center and Metro Transit Center

Capital Plan

The purpose of this report is to document the Grand Forks – East Grand Forks Public Transit’s existing capital assets as well as their replacement needs and future system capital needs. The capital plan will be used to identify the financial resources needed to purchase the capital assets necessary to keep the system in a state of good repair as well as those needed for system growth.

Existing Capital Assets

Vehicles

CAT has a fleet of 26 active vehicles, as shown in Table 1 and

Table 2. The fleet is comprised of 14 fixed route vehicles and 12 demand response vehicles. All vehicles are accessible and feature bicycle racks. These vehicles are stored at the City Bus Garage and Administrative Office.

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The fixed route fleet includes 11 heavy-duty buses, one light-duty bus, and two light-duty cutaway buses. The average age of the fleet is 5.8 years. This is slightly newer on average than the national average fleet age for buses, which is 7.4 years.¹ The conditions of the vehicles range between “Good” and “Excellent.” Fixed route vehicles have a remaining service life ranging between 19 percent and 100 percent of the built service life.

The demand response fleet includes 11 light-duty minivans and one light-duty van. The average age of the fleet is 2.9 years, which is similar to the national average of 2.7 years.² The conditions of the vehicles range between “Good” and “Excellent.” Demand response vehicles have a remaining service life ranging between 19 percent and 100 percent of the built service life.

Table 1: Fixed Route Fleet Inventory

Fleet ID	Vehicle Type	Make/Model	Vehicle Year	Current Mileage	Useful Life (Months)	Actual Service (Months)	Remaining Months	Useful Life (Mileage)	Remaining Life (Mileage)
105	Bus	New Flyer D35LFR	2010	376,053	168	144	24	500,000	25%
106	Bus	New Flyer D35LFR	2010	404,746	168	144	24	500,000	19%
103	Bus	New Flyer DE35LFR	2010	372,799	168	156	12	500,000	25%
104	Bus	New Flyer DE35LFR	2010	381,397	168	156	12	500,000	24%
192	Cutaway Bus	Dodge Promaster	2016	39,937	120	84	36	150,000	73%
191	Cutaway Bus	Dodge Promaster	2016	36,312	120	84	36	150,000	76%
183	Bus	New Flyer Xcelsior	2018	58,805	168	60	108	500,000	88%
185	Bus	Xcelsior	2018	43,503	168	60	108	500,000	91%
193	Bus	Alexander Dennis Enviro - 200	2019	23,797	168	48	120	500,000	95%
194	Bus	Alexander Dennis Enviro - 200	2019	19,713	168	48	120	500,000	96%
201	Bus	New Flyer XD35	2020	5,563	168	36	132	500,000	99%
202	Bus	New Flyer XD35	2020	5,261	168	36	132	500,000	99%
203	Bus	New Flyer XD35	2020	4,944	168	36	132	500,000	99%
215	Bus	Dodge Promaster	2021	79	168	108	60	150,000	100%
Average				126,636	161	86	75	425,000	72%

¹ National Transit Database. National Transit Summaries and Trends 2019. Available online: <https://www.transit.dot.gov/ntd>

² Ibid.



Table 2: Demand Response Fleet Inventory

Fleet ID	Vehicle Type	Make/Model	Vehicle Year	Current Mileage	Useful Life (Months)	Actual Service (Months)	Remaining Months	Useful Life (Mileage)	Remaining Life (Mileage)
172	Minivan	Dodge Grand Caravan	2017	76,622	96	96	0	100,000	23%
171	Minivan	Dodge Grand Caravan	2017	83,542	96	96	0	100,000	16%
196	Minivan	Braun Entervan	2019	12,290	96	60	36	100,000	88%
181	Minivan	Dodge Grand Caravan	2017	52,805	96	84	12	100,000	47%
182	Van	Ford Transit	2018	40,520	96	84	12	100,000	59%
198	Minivan	Braun Entervan	2019	19,845	96	60	36	100,000	80%
197	Minivan	Braun Entervan	2019	11,383	96	60	36	100,000	89%
195	Minivan	Braun Entervan	2019	14,087	96	60	36	100,000	86%
211	Minivan	Chrysler Voyager	2021	1,435	96	48	48	100,000	99%
212	Minivan	Chrysler Voyager	2021	2,890	96	48	48	100,000	97%
213	Minivan	Chrysler Voyager	2021	20	96	48	48	100,000	100%
214	Minivan	Chrysler Voyager	2021	14	96	48	48	100,000	100%
Average				26,288	96	66	30	100,000	74%

Facilities

CAT currently uses two facilities for its operations, further details can be found in Table 3. The Cities Area Transit Metro Transit Center Downtown facility serves as a bus transfer center, and the Grand Forks Cities Area Transit facility currently functions as a general-purpose maintenance facility/depot. Both facilities are owned by the City of Grand Forks. CAT has made several recent investments to improve facilities. In 2020, phase one of a two-part plan to improve the Cities Area Transit administrative, operations, and maintenance building was completed.

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Table 3: Facility Inventory

Organization	Facility Name	Facility Type	Facility Class	Year Built	Condition Rating	Remaining Useful Life (Years)	Total Cost	Federal Share	Local Share
City of Grand Forks	Cities Area Transit Metro Transit Center Downtown	Bus Transfer Center	Bus Transfer Center	2000	Good	18	N/A	80%	20%
City of Grand Forks	Grand Forks Cities Area Transit	General Purpose Maintenance Facility/Depot	Maintenance	1978	Excellent	37	\$5,180,441	80%	20%

Other Infrastructure

In addition to vehicles and facilities, CAT also several other capital assets, including heavy machinery, fare collection equipment, lighting, and cleaning tools necessary to maintain the CAT fleet in good condition and working order. Table 4 details the non-fleet assets. The condition of the equipment ranges from “Good” to “Excellent”, and the average cost of the assets is \$40,372.42. Federal grants, most notably Section 5339 funds, were used to purchase the equipment.

CAT has 49 bus shelters at stops, which provide a glass enclosed structure with benches that protects riders from the weather elements.

Table 4: Capital Equipment Inventory

DOT ID	Name	Equipment Type	Manufacturer	Production Year	Condition Rating	Funding Program	Total Cost	Federal Share	Local Share
101	2 - Man Scissors Lift	Shop Equipment	Skyjack	2019	Excellent	Section 5339 Urban	\$12,912	80%	20%
102	Brake Mate Lifting Machine	Shop Equipment	Vehicle Inspection Systems, Inc	2019	Excellent	Section 5339	\$13,459	80%	20%
103	Bus Wash	Bus Wash	Navigator	2017	N/A	Section 5339	\$115,559	80%	20%
104	Fare Collection Equipment	Fareboxes	Genfare	2017	Good	Section 5339 Urban	\$34,705	80%	20%
105	Fare Collection Project Costs	Fareboxes	RouteMatch	2016	Good	Section 5339 Urban	\$36,350	80%	20%
106	Fare Collection System	Fareboxes	RouteMatch	2016	N/A	Section 5339 Urban	\$86,840	80%	20%
107	Fare Collection System	Fareboxes	RouteMatch	2016	Good	Section 5339 Urban	\$50,491	80%	20%



DOT ID	Name	Equipment Type	Manufacturer	Production Year	Condition Rating	Funding Program	Total Cost	Federal Share	Local Share
108	LED Shop Lights	Shop Equipment	RAB Lighting	2016	Good	Section 5339 Urban	\$9,774	80%	20%
109	Tennant Floor Sweeper	Floor Sweeper	Tennant	2020	Excellent	Section 5339	\$34,644	80%	20%
1010	Vane Air Compressor	Shop Equipment	Chaigo Pnuematic	2020	Excellent	Section 5339 Urban	\$8,990	80%	20%
Average							\$40,372		

Existing Capital Asset Replacement Needs

As capital assets age, they will need to be replaced to keep the agency in a state of good repair and to keep CAT running smoothly. Capital assets are eligible for federal funding from the FTA that provides 80 percent of the cost, in association with 20 percent of the cost from a local source.

Vehicles

As shown in Tables 1 and 2, of the existing fleet two demand response vehicles are beyond their useful life age, and a few fixed route and demand response vehicles are nearing their useful life in both age and mileage. Replacement of these vehicles will be critical to keep assets in a state of good repair and keep CAT service running smoothly.

A vehicle replacement schedule and associated costs were developed for the CAT fleet that extends through the ten-year horizon of this plan. As shown in Table 5, 20 vehicles in CAT’s fleet of revenue vehicles, including fixed-route and demand-response vehicles, will reach their useful life benchmark (ULB) over the next 10 years. Of those 20 vehicles, six are 40’ heavy duty buses and the remainder consist of the entire cutaway, minivan, and van fleets. Replacement of these vehicles is essential to maintaining a state of good repair (SGR) and to ensure reliable and high-quality service.

Fleet replacement costs are shown by year in Table 6 Replacement costs for each vehicle type are based on updated vehicle costs provided by MnDOT, which take into account recent inflation. Those replacement costs were inflated to year of expenditure (YOE) costs using a 4% annual inflation rate. The replacement schedule, if followed, will result in total expenditure of \$5,308,946 over a ten-year timespan.

Table 5: Fleet Replacement Schedule by Year (Maintaining 40’ Bus Fleet)

Vehicle Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
40' Bus Fleet	0	0	4	0	0	0	0	0	0	0	2	6
20' Bus Fleet (Cut-Away)	0	0	0	0	2	0	0	0	0	0	0	2
Mini-Vans	0	0	0	3	0	4	0	4	0	0	0	11
Van	0	0	0	0	1	0	0	0	0	0	0	1
All Vehicles	0	0	4	3	3	4	0	4	0	0	2	20

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Table 6: Fleet Replacement Costs by Year (Maintaining 40' Bus Fleet)

Vehicle Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
40' Bus Fleet	\$0	\$0	\$2,457,395	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,681,558	\$4,138,953
20' Bus Fleet (Cut-Away)	\$0	\$0	\$0	\$0	\$439,867	\$0	\$0	\$0	\$0	\$0	\$0	\$439,867
Mini-Vans	\$0	\$0	\$0	\$161,980	\$0	\$233,597	\$0	\$252,659	\$0	\$0	\$0	\$648,237
Van	\$0	\$0	\$0	\$0	\$81,890	\$0	\$0	\$0	\$0	\$0	\$0	\$81,890
All Vehicles	\$0	\$0	\$2,457,395	\$161,980	\$521,757	\$233,597	\$0	\$252,659	\$0	\$0	\$1,681,558	\$5,308,946

Table 7 shows the replacement schedule if the 40' buses are replaced with cutaway buses once they reach their ULB. The difference in cost is reflected in Table 8. As shown in the tables, significant savings can be achieved as total fleet costs for replacement of the 40' bus fleet with cutaway vehicles equal \$2,539,929 million for replacement of the 40' bus fleet with cutaway vehicles and that equates to under half of the total costs of purchasing new 40' buses (i.e., \$5.3 million). While CAT staff has inquired about this potential transition of their fleet, further study of different service delivery models, including service, technology, and capital needs, will be required.

Table 7: Fleet Replacement Schedule by Year (Transitioning 40' Bus Fleet to 20' Bus Fleet)

Vehicle Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
40' Bus Fleet	0	0	0	0	0	0	0	0	0	0	0	0
20' Bus Fleet (Cut-Away)	0	0	4	0	2	0	0	0	0	0	2	8
Mini-Vans	0	0	0	3	0	4	0	4	0	0	0	11
Van	0	0	0	0	1	0	0	0	0	0	0	1
All Vehicles	0	0	4	3	3	4	0	4	0	0	2	20



Table 8: Fleet Replacement Costs by Year (Transitioning 40' Bus Fleet to 20' Bus Fleet)

Vehicle Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
40' Bus Fleet	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
20' Bus Fleet (Cut-Away)	\$0	\$0	\$813,363	\$0	\$439,867	\$0	\$0	\$0	\$0	\$0	\$556,572	\$1,809,802
Mini-Vans	\$0	\$0	\$0	\$161,980	\$0	\$233,597	\$0	\$252,659	\$0	\$0	\$0	\$648,237
Van	\$0	\$0	\$0	\$0	\$81,890	\$0	\$0	\$0	\$0	\$0	\$0	\$81,890
All Vehicles	\$0	\$0	\$813,363	\$161,980	\$521,757	\$233,597	\$0	\$252,659	\$0	\$0	\$556,572	\$2,539,929

Facilities

The Grand Forks Cities Area Transit facility was built in 1978 and remodeled in 2019-2020. This two-phase project has initially added on 11,520 square feet to the facility. It is now in excellent condition and will be able to be of service for another 37 years. CAT consistently maintains its facilities to ensure a state of good repair and includes this in its overall operating budgets. This will be important to continue.

The other facility, Cities Area Transit Metro Transit Center Downtown, is a bus transfer center that has a remaining useful life of 18 years. While this facility continues to meet the needs of CAT, future budgets should consider additional improvements to or future replacement of this facility, given its growing age (the Federal Transit Administration estimates the useful life of transit facilities at 40 to 50 years).

Other Infrastructure

Currently existing other infrastructure are active and in good or excellent condition. However, these assets will need to be replaced over time as they age and on longer meet the needs of CAT operations and service. A list of CAT capital equipment is shown in Table 9. All equipment is active and in good or excellent condition. However, these assets will need to be replaced over time as they age and may no longer meet CAT operations and service requirements. Useful life benchmarks for each asset in CAT's capital equipment list were identified using FTA Transit Economic Requirements Model (TERM) Lite ULB guidance. Using information in that database, it was possible to develop a capital replacement schedule for all equipment. Table 5 shows the purchase year, ULB, and recommended disposal year of all CAT capital equipment. Based on the identified ULBs, only the fare collection equipment purchased in 2017 is scheduled to reach its useful life over the next ten years. Replacement costs for the fare collection equipment are estimated to be \$55,564 in 2029 YOES\$.



Table 9: CAT Equipment Inventory – Useful Life Benchmarks (ULBs)

DOT ID	Purchase Year	Category	Equipment Name	Useful Life (Years)	Disposal Year
101	2019	Shop Equipment	2 - Man Scissors Lift	15	2034
102	2019	Shop Equipment	Brake Mate Lifting Machine	25	2044
103	2017	Bus Wash	Bus Wash	20	2037
104	2017	Fare Boxes	Fare Collection Equipment	12	2029
105	2016	Fare Boxes	Fare Collection Project Costs	20	2036
106	2016	Fare Boxes	Fare Collection System	20	2036
107	2016	Fare Boxes	Fare Collection System	20	2036
108	2016	Shop Equipment	LED Shop Lights	25	2041
109	2020	Floor Sweeper	Tennant Floor Sweeper	25	2045
1010	2020	Shop Equipment	Vane Air Compressor	25	2045

Future Capital Assets Needed to Accommodate Service Growth

Other Capital Needs – Service Recommendations

New Route 17

In the 2017 Grand Forks-East Grand Forks TDP, Route 12 was identified as the least effective route in CAT's system, having the lowest ridership and highest cost per passenger trip, \$39.07. In the short-term, discontinuing Route 12 in favor of an on-demand service that provides connection to Route 6 can provide a means for improving the overall effectiveness of the CAT system. In addition, CAT has proposed the addition of Route 17 to their fixed-route system which would serve the proposed Industrial Park Micro Transit Zone. CAT can implement this new route without purchasing a new expansion vehicle by reallocating Route 12 equipment (i.e., one bus) to operation of the new on-demand service.



Bus Stop Improvements and Safe and Accessible Paths

Providing increased space and accessible paths within roadway right-of-way for bus stops and passenger amenities enhances access to transit and improves customer satisfaction levels as CAT, Grand Forks MPO, and other agency partners undertake roadway improvement projects. CAT should collaborate with partners to develop and maintain a cohesive inventory of transit assets including, but not limited to, bus stop locations, route maps, accurate timetables, and amenities.

Furthermore, it is recommended that CAT identify non-compliant bus stop locations (i.e., Americans with Disabilities Act [ADA]) in the bus stop inventory and prioritize the construction of ADA-compliant bus boarding pads, passenger amenities such as benches and shelters, and accessible paths. Improvements specific to ADA accessibility will ensure equitable access for all CAT patrons. To transition to a fully compliant network of bus stops, ADA accessible bus stops can first be placed at high ridership locations or at bus stops frequented by persons with disabilities.

Based on public engagement with CAT patrons and other community stakeholders, providing a comfortable means of accessing bus stops is essential for patrons heavily reliant on non-motorized travel to access transit. Accessible paths can consist of sidewalk connections to existing pedestrian and bicycle facilities, or even the nearest driveway, at a minimum. Street crossings can further benefit from signalization and street markings that facilitate safe pedestrian movements and that designate roadway space for pedestrian and bicycle travel. CAT plans to work further with the Grand Forks-East Grand Forks MPO and other community partners to prioritize improvements in the bicycle and pedestrian network to enhance connections to existing transit lines.

Bus Stop Construction Costs

Table 10 provides a range of cost estimates, low and high-cost estimates, for the design and construction of bus shelters along with a range of pricing for various stop amenities. The design and engineering costs are based on peer-reviewed information from other small and large transit agencies. Stop amenity costs reflect 2022 pricing obtained for Buy America compliant bus stop infrastructure collected from multiple transit shelter vendors.

Table 10: Cost Estimates for Bus Shelter Design/Construction and Amenities

Cost Component	Design/Construction		Stop Amenities	
	Low	High	Low	High
Design/Engineering*	\$8,700	\$15,400		
Construction	\$7,300	\$19,700		
Installation			\$0	\$3,500
Shelter			\$3600 (8' x 3')	\$9300 (12' x 5')
Lighting Package (Interior)			\$900	\$1,700
Solar Powered Light Post				\$1,100
Map/Schedule Frame				\$100
Bench			\$300	\$1,000
Trash Receptacle			\$500	\$700
Bike Rack	\$300	\$300	\$300	\$400
Total	\$16,000	\$38,600	\$6,700	\$14,300

Source: *Design/Engineering: High – PalmTran (Palm Beach County, FL). Low – SunTran (Ocala, FL)



Zero Emission Buses and Solar Additions to Facilities

CAT is currently looking towards transitioning to a zero-emission vehicle fleet and aims to explore feasibility through a Zero Emission Fleet Transition Plan. The Zero Emission Transition Plan is essential for CAT and other transit agencies to be able to apply for various Federal Transit Administration (FTA) grants that support the transition to zero or low-emission fleets and other related infrastructure and facilities. The Bipartisan Infrastructure Law, as enacted in the Infrastructure Investment and Jobs Act (IIJA), reauthorized surface transportation programs for FY 2022-2026. The law authorizes up to \$108 billion to support federal public transportation programs, including \$91 billion in guaranteed funding. Table 11 shows the grant programs. Transit agencies transitioning towards low and zero-emission vehicles and facilities can apply for such as the Grants for Buses and Bus Facilities Formula Program – 5339(a), Grants for Buses and Bus Facilities Competitive Program - (49 U.S.C. 5339(b)), and the Low and No-Emission Vehicle Program – 5339(c).

Table 11: FTA Grants Available to Support Zero and Low-Emission Vehicle and Infrastructure

Program Name	Funding Type	Federal Match	Eligible Activities
Grants for Buses and Bus Facilities Formula Program - 5339(a)	Formula	N/A	Capital projects to replace, rehabilitate, and purchase fleet inventory or other transit-related equipment and construct transit-related facilities including innovations that modify low or no-emission vehicles or facilities
Grants for Buses and Bus Facilities Competitive Program - (49 U.S.C. 5339(b))	Competitive	Up to 85% if purchasing or leasing low or no-emission transit buses, up to 90% if acquiring or leasing low- or no-emission bus-related equipment and facilities, and up to 80% for all other activities	Capital projects to replace, rehabilitate, and purchase fleet inventory or other transit-related equipment and construct transit-related facilities including innovations that modify low or no-emission vehicles or facilities
Low and No-Emission Vehicle Program - 5339(c)	Competitive	Up to 85% if purchasing or leasing low or no-emission transit buses, up to 90% if acquiring or leasing low- or no-emission bus-related equipment and facilities	Purchase or lease of low or no-emission buses, acquisition of low or no-emission buses with a leased power source, construction or lease of facilities and related equipment (including intelligent technology and software) for low or no-emission buses, or rehabilitation or enhancement of existing public transportation facilities to accommodate low or no-emission buses. 0.5% of a request may be for workforce training and an additional 0.5% for trainings at the National Transit Institute (NTI)

Source: (<https://www.transit.dot.gov/funding/grants/busprogram>, <https://www.transit.dot.gov/bus-program>, <https://www.transit.dot.gov/lowno>)



The Grants for Buses and Bus Facilities Formula Program – 5339(a) provides funding through a statutory formula to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities. These funds can be used for eligible activities such as fleet and equipment replacement. This includes any transit agency efforts that transition fleets and facilities towards low or zero-emission infrastructure.

In addition to the Formula Grant Program, transit agencies transitioning towards low and zero-emission vehicles and facilities can apply to two additional competitive grant programs. The Grants for Buses and Bus Facilities Competitive Program (49 U.S.C. 5339(b)) provides federal resources for transit agencies to replace and rehabilitate bus fleets and related equipment, including technological changes that that modify low or no emission vehicles and facilities. The Low and No-Emission Vehicle Program – 5339(c) also provides funding for the purchase or lease of buses, facilities, technology, and rehabilitation or enhancement of public transportation facilities relating to low or no-emission buses. Agencies can request an additional 0.5% of funding for workforce training and another additional 0.5% for workforce trainings at the National Transit Institute (NTI).

Importantly, a key eligibility requirement for the FTA 5339(c) program is the preparation of a “Zero-Emission Fleet Transition Plan.” Requirements for Fleet Transition Plans are detailed by the Federal Transit Administration (FTA). Transition Plan development costs are ineligible to be covered under the Buses and Bus Facilities or Low-No Programs but are eligible through planning programs (49 U.S.C. § 5305), along with the urbanized area formula (49 U.S.C. § 5307) and rural area formula (49 U.S.C. § 5311) programs. It is recommended that CAT develop a Zero-Emission Fleet Transition Plan to be eligible for FTA grants related to low or zero-emission fleets and infrastructure.

Transit Hub Improvements

CAT operates transit hub facilities at Columbia Mall, Grand Forks Mall and at Metro Transit Center (MTC). While the MTC serves as the central transit hub for CAT’s system, Columbia Mall and Grand Forks Mall serve as essential hubs for many of the system’s routes. Currently, proposed enhancements to all three centers are intended to improve overall operations and accessibility. A summary of enhancements for the Columbia Mall and Grand Forks Mall transit center locations includes the following:

- **Columbia Mall:** Parking space directly east of JCPenney’s entrance is proposed to be repurposed as a more robust transit hub including shelters, shaded areas, enhanced ADA accessibility, and crosswalk connections.

Preliminary cost estimate: \$236,200

- **Grand Forks Mall:** Similar plans to enhance shading, ADA accessibility, pedestrian connections are proposed. Preliminary cost estimates for enhancements

Preliminary cost estimate: \$102,900



Financial Plan

The financial plan is a critical component of the Transit Development Plan that examines the system’s current finances, identifies any ongoing funding challenges, and lays out a plan to fund the system over the next 10 years.

CURRENT REVENUES AND EXPENSES

Revenue Profile

Funding for the CAT system is currently made up of a variety of federal, state, and local sources. An evaluation of local, state, and federal funding was completed based on the Transportation Improvement Programs (TIPs) for the Grand Forks – East Grand Forks Metropolitan Planning Organization (GF-EGF MPO). The first year in each TIP was evaluated for the years 2017 to 2021 and used to provide an annual average based on the five years of inputs for both operational and capital funding.

Funding has been split out for the Grand Forks and East Grand Forks systems separately. This provides for the ability to understand the unique funding mixes for each system.

Table 1.1 – System Revenue Profile CAT System - (By Source)

East Grand Forks			
	Revenue	% City	% of System
Local	\$119,000	15%	3%
State	\$502,000	62%	12%
Federal	\$191,000	24%	4%
Subtotal	\$812,000		19%
Grand Forks			
	Revenue	% City	% of System
Local	\$1,426,000	41%	33%
State	\$249,000	7%	6%
Federal	\$1,770,000	51%	42%
Subtotal	\$3,445,000		81%
Total	\$4,257,000		100%

Note: State funding for East Grand Forks includes MN State Transit Formula Funds.

Current Expenses

An evaluation of Grand Forks Budget Performance Reports was conducted based on the years 2018-2021. This evaluation provides a baseline expense profile for each component of Cities Area Transit (CAT) Transit System. Expenses were isolated into three primary categories: Labor, Operations & Maintenance (O&M) and Capital.



Table 1.2 – Expense Profiles – CAT System (by city)

Fixed Route			
Account*	Cost Center	Total	
400, 401, 402,	Labor	\$1,785,326	
410, 415, 420-460	O & M	\$728,056	
		\$2,513,382	Subtotal - Operations
700	Capital	\$1,053,650	Subtotal Capital
		\$3,567,032	Total - Fixed Route
Demand Response			
Account*	Item	Total	
400-402	Labor	\$1,126,000	
410, 415, 430-460	O & M	\$169,326	
		\$1,295,326	Subtotal - Operations
700	Capital	\$179,683	Subtotal - Capital
		\$1,475,683	Total – Demand Response
		\$5,042,041	Total

* Grand Forks Budget Performance Reports (2018-2021)

FUTURE FUNDING FORECASTS

Financial forecasts are needed to support the update of the Grand Forks Transit Development (TDP). Historical data for the year 2017 to 2025 was used to assist with understanding revenue trends supporting transit operations for Cities Area Transit (CAT). Additionally, changes in urbanized area funding are imminent based on the Bipartisan Infrastructure Law (BIL). Specifically, the impacts of BIL on the Federal Transit Administration (FTA) Urbanized Area Formula Program, Section 5307, need to be accounted for with the TDP update. The results of the 10-year revenue forecast are shown in Table 1.3.

Federal

Section 5307 – Urbanized Area Funds

These funds are apportioned to designated recipients by the Federal Transit Administration (FTA). In the case of the Grand Forks - East Grand Forks MPO area, funds are apportioned to both Grand Forks and East Grand Forks. Section 5307 funds providing ongoing operations funding for the system, and also may be used to implement small scale programmatic and marketing efforts to aid implementation of the TDP.

Section 5307 apportionments under BIL are projected to grow by about 5%. However, a more conservative estimate of 2% is proposed. This rate is lowered also so it can be applied across the life of the 10-year projection, whereas the BIL only goes through 2026. However, several newer operations and capital programs come into play with BIL, for which estimating the impact on the CAT are not yet possible, so this 2% forecast could in fact be low when the full impact of BIL is more fully understood especially on capital programs such as Section 5339, etc. Therefore a 2% growth seems appropriate. For comparison, under the FAST Act (FY 2015-2019) the rate of growth in the 5307 programs would have been about 2%.

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The 2% forecasts should apply equally to both the Grand Forks and East Grand Forks system revenues for Federal funds.

State

State funding for public transit is different between both Minnesota and North Dakota. Looking at historic trends and current budget outlooks for both state two separate growth are proposed for State revenue to the CAT System.

East Grand Forks

A 3% growth is proposed based on both historic trends and likelihood that MnDOT will enhance funding for transit operators based on the impacts of the BIL and state revenue projections over the next several years. This rate is slightly higher than roughly 2% growth in state transit funding provided through MnDOT to East Grand Forks over the past five years.

Grand Forks

State aid for public transit in North Dakota has grown slowly in recent years and has been a small part of the overall funding for Grand Forks share of CAT. Therefore, we are proposing only a 1.5% growth rate in North Dakota State Aid for public transit. This rate roughly follows historic trends about 1.4%.

Local

Local funding for transit will be set at 2% growth rate for both Grand Forks and East Grand Forks. This should be seen as the bare minimum needed to match anticipated increases in Federal funds under BIL. In fact, later stages of the TDP may identify the need to recommend greater increases in local funding assumptions to meet gaps in either local match or publicly desired services levels.

Stimulus Funding

Recent one-time awards from the CARES Act and ARPA were excluded from the financial analysis. East Grand Forks currently has approximately \$110,000 in unused ARPA funds and no remaining CARES funds. Grand Forks currently has \$600,000 in ARPA and \$750,000 in remaining CARES funds. Assumptions regarding expenditures of these funds will be coordinated into the development of TDP financial forecasts.

Table 1.3 – 10 Year Revenue Forecast by System and Source

East Grand Forks				YoY Inflation rate	East Grand Forks								
Revenue	% City	% of System			10 Year Revenue Forecast								
2022					2023	2024	2025	2026	2027	2028	2029	2030	2031
Local	\$119,000	15%	3%	2%	\$121,380	\$123,808	\$126,284	\$128,809	\$131,386	\$134,013	\$136,694	\$139,427	\$142,216
State	\$502,000	62%	12%	3%	\$517,060	\$532,572	\$548,549	\$565,005	\$581,956	\$599,414	\$617,397	\$635,919	\$654,996
Federal	\$191,000	24%	4%	2%	\$194,820	\$198,716	\$202,691	\$206,745	\$210,879	\$215,097	\$219,399	\$223,787	\$228,263
Subtotal	\$812,000	100%	19%		\$833,260	\$855,096	\$877,523	\$900,559	\$924,221	\$948,525	\$973,489	\$999,133	\$1,025,475
Grand Forks				YoY Inflation rate	Grand Forks								
Revenue	% City	% of System			10 Year Revenue Forecast								
2022					2023	2024	2025	2026	2027	2028	2029	2030	2031
Local	\$1,426,000	41%	33%	2%	\$1,454,520	\$1,483,610	\$1,513,283	\$1,543,548	\$1,574,419	\$1,605,908	\$1,638,026	\$1,670,786	\$1,704,202
State	\$249,000	7%	6%	1.50%	\$252,735	\$256,526	\$260,374	\$264,280	\$268,244	\$272,267	\$276,351	\$280,497	\$284,704
Federal	\$1,770,000	51%	42%	2%	\$1,805,400	\$1,841,508	\$1,878,338	\$1,915,905	\$1,954,223	\$1,993,307	\$2,033,174	\$2,073,837	\$2,115,314
Subtotal	\$3,445,000	100%	81%		\$3,512,655	\$3,581,644	\$3,651,995	\$3,723,733	\$3,796,886	\$3,871,482	\$3,947,551	\$4,025,120	\$4,104,220
System Total	\$4,257,000		100%		\$4,345,915	\$4,436,740	\$4,529,518	\$4,624,292	\$4,721,107	\$4,820,007	\$4,921,040	\$5,024,253	\$5,129,695



FUTURE EXPENSE FORECASTS

Based on recent inflation trends, as well as historic data, expenses are forecast to increase an average Results from applying the recommended inflation rates to *Expense* totals by mode (CAT System profile Table 1.2 - *Fixed Route and Demand Response*) are shown in Tables 1.4 and 1.5.

Operating Expenses (Costs) per Vehicle Revenue Hour (VRH)

Using National Transit Database (NTD) CAT System profile data, the forecasted *Operations (Subtotal) Expenses* for each year (*Operating Costs, excluding Capital Expenses) were divided by an average *Annual Vehicle Revenue Hours (AVRH)* for *Fixed Route* (27,325 AVRH) and *Demand Response* (22,518 AVRH). The averaged AVRH provided the baseline to generate *Operating Expenses (Costs) per Vehicle Revenue Hour (VRH)* for the years 2013 to 2020. Overall, *Operating Expenses (Costs)* for *Fixed Route* are higher than *Demand Response* by a range of approximately \$35 to \$50 per *Vehicle Revenue Hour (VRH)*, over the years 2013 to 2020. Note that *Cost per VRH* increases in-line with the calculated 4% YoY inflation rate for all expense categories.

Fixed Route Cost per VRH

Based on 2022 **Operating Costs* and the *Fixed Route* baseline average of 27,325 AVRH per year, current 2022 *Fixed Route Expense (Cost) per VRH* is \$91.98. At the midpoint forecast in 2026, *Cost per VRH* increases to \$107.60, and to \$130.92 in 2031. Over the ten-year forecast period, the *Fixed Route Cost per VRH* increases approximately \$39.00. Refer to Table 1.4.

Table 1.4 - Forecasted Expenses: Fixed Route

Fixed Route Expenses (10 yr. Forecast): Assumes inflation factor of 4% YoY											
Year		2022 (*Baseline)	2023	2024	2025	2026	2027	2028	2029	2030	2031
Account	Cost Center	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
All Accounts	Labor	\$1,785,326	\$1,856,739	\$1,931,009	\$2,008,249	\$2,088,579	\$2,172,122	\$2,259,007	\$2,349,367	\$2,443,342	\$2,492,209
All Accounts	O & M	\$728,056	\$757,178	\$787,465	\$818,964	\$851,723	\$885,791	\$921,223	\$958,072	\$996,395	\$1,036,251
	Operations (Subtotal)	\$2,513,382	\$2,613,917	\$2,718,474	\$2,827,213	\$2,940,301	\$3,057,914	\$3,180,230	\$3,307,439	\$3,439,737	\$3,577,326
All Accounts	Capital (Subtotal)	\$1,053,650	\$1,095,796	\$1,139,628	\$1,185,213	\$1,232,621	\$1,281,926	\$1,333,203	\$1,386,532	\$1,441,993	\$1,499,672
Total - Fixed Route		\$3,567,032	\$3,709,713	\$3,858,102	\$4,012,426	\$4,172,923	\$4,339,840	\$4,513,433	\$4,693,971	\$4,881,730	\$5,076,999
Fixed Route: Forecasted Operating Expenses (Cost) per Vehicle Revenue Hours		\$91.98	\$95.66	\$99.49	\$103.47	\$107.60	\$111.91	\$116.39	\$121.04	\$125.88	\$130.92
Fixed Route: Averaged Annual Vehicle Revenue Hours (AVRH)		27,325									

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Demand Response Cost per VRH

Based on 2022 *Operating Costs and the Demand Response baseline average of 22,518 AVRH per year, current 2022 Demand Response Expense (Cost) per VRH is \$57.52. At the midpoint forecast in 2026, Cost per VRH increases to \$67.29, and to \$81.87 in 2031. Over the ten-year forecast period, the Demand Response Cost per VRH increases approximately \$24.00. Refer to Table 1.5.

Table 1.5 – Forecasted Expenses: Demand Response

Demand Response Expenses (10 yr. Forecast): Assumes inflation factor of 4% YoY											
Year		2022 (*Baseline)	2023	2024	2025	2026	2027	2028	2029	2030	2031
Account	Cost Center	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
All Accounts	Labor	\$1,126,000	\$1,171,040	\$1,217,882	\$1,266,597	\$1,317,261	\$1,369,951	\$1,424,749	\$1,481,739	\$1,541,009	\$1,602,649
All Accounts	O & M	\$169,326	\$176,099	\$183,143	\$190,469	\$198,087	\$206,011	\$214,251	\$222,821	\$231,734	\$241,004
	Operations (Subtotal)	\$1,295,326	\$1,347,139	\$1,401,025	\$1,457,066	\$1,515,348	\$1,575,962	\$1,639,001	\$1,704,561	\$1,772,743	\$1,843,653
All Accounts	Capital (Subtotal)	\$179,683	\$186,871	\$194,345	\$202,119	\$210,204	\$218,612	\$227,357	\$236,451	\$245,909	\$255,745
Total - Demand Response		\$1,475,009	\$1,534,010	\$1,595,370	\$1,659,185	\$1,725,552	\$1,794,574	\$1,866,357	\$1,941,012	\$2,018,652	\$2,099,398
Demand Response: Operating Expenses (Cost) per Vehicle Revenue Hour		\$57.52	\$59.82	\$62.22	\$64.71	\$67.29	\$69.99	\$72.79	\$75.70	\$78.73	\$81.87
Demand Response: Averaged Annual Vehicle Revenue Hours (AVRH)		22,518									

Combined System Expenses

Based on 2022 *Operating Costs and the Combined System baseline average of 49,842 AVRH per year, current 2022 Combined System Expense (Cost) per VRH is \$76.42. At the midpoint forecast in 2026, Cost per VRH increases to \$89.40, and to \$108.76 in 2031. Over the ten-year forecast period, the Combined System Cost per VRH increases approximately \$33.00.

Additionally, Total System Wide Expenses (excluding capital costs), increase \$1.6 million over the 10-year forecast period from \$3.8 million in 2022, to 4.5 million at the midpoint in 2026, to \$5.4 million in 2031. Refer to Table 1.6.

Table 1.6 – Forecasted Total System Expenses

Combined System Expenses: Excluding Capital - (10 yr. Forecast): Assumes inflation factor of 4% YoY											
Year	2022 (*Baseline)	2023	2024	2025	2026	2027	2028	2029	2030	2031	
Total Expenses	\$3,808,708	\$3,961,056	\$4,119,499	\$4,284,279	\$4,455,650	\$4,633,876	\$4,819,231	\$5,012,000	\$5,212,480	\$5,420,979	
Total Operating Expenses (Cost) per Vehicle Revenue Hour	\$76.42	\$79.47	\$82.65	\$85.96	\$89.40	\$92.97	\$96.69	\$100.56	\$104.58	\$108.76	
Total Averaged Annual Vehicle Revenue Hours (AVRH)	49,842										



Summary

Over the 10-year financial plan period, operating expenses are increasing faster than system revenues. This is forecasted to result in an operating shortfall by the year 2029 if not corrected. Additional sources of local funding may be necessary to shore up system finances if expenses continue to increase at the forecasted rates.

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Total Revenues	\$4,257,000	\$4,345,915	\$4,436,740	\$4,529,518	\$4,624,292	\$4,721,106	\$4,820,007	\$4,921,040	\$5,024,253	\$5,129,694
Total Expenses	\$3,808,708	\$3,961,056	\$4,119,498	\$4,284,278	\$4,455,649	\$4,633,875	\$4,819,230	\$5,011,999	\$5,212,479	\$5,420,979
Surplus/Shortfall	\$448,292	\$384,858	\$317,241	\$245,239	\$168,642	\$87,230	\$776	\$(90,959)	\$(188,226)	\$(291,284)