KLJ

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Performance Management Plan

M.P.O. M.P.O. M.P.O.
Grand Forks - East Grand Forks Metropolitan Planning Organization

A Place of Excellence
City of Grand Forks

C.A.T. Cities Area Transit

PERFORMANCE MANAGEMENT

To meet the guidance established by Fixing America's Surface Transportation Act's (FAST Act), the Transit Development Plan was developed with a performance management component.

Development of the performance management element of the Transit Development Plan was driven in large part through close consultation with the 2016 Minnesota Department of Transportation (MnDOT) Greater Minnesota Transit Investment Plan. While the 2012 North Dakota Department of Transportations (NDDOT) TransAction III Long Range Transportation Plan was consulted, however TransAction III has yet to be updated to reflect the FAST Act.

Because the FAST Act requires performance based planning, the MnDOT Transit Investment Plan provided a very reasonable framework for identification of performance measures and targets for use by Cities Area Transit.

The FAST Act establishes a set of national goals to guide the development of surface transportation investments. The FAST Act focuses on performance-based approach to transportation planning and has developed seven national performance goals.

- Safety
- Infrastructure condition
- Congestion reduction
- System reliability
- Freight movement and economic vitality
- Environmental sustainability
- Reduced project delivery delays

Goals from the FAST Act were incorporated in the 2040 Long Range Transportation Plan (LRTP) completed by the Grand Forks-East Grand Forks MPO. The approved LRTP for the Grand Forks-East Grand Forks MPO area provides the background architecture for the development of goals for the development of the Transit Development Plan. To ensure consistency with the LRTP the Transit Development Plan has integrated with overall goals from the LRTP.

The 10 overall goals from the LRTP integrated into the Transit Development are summarized as follows:

- Economic vitality – economic vitality, competitiveness, access to jobs, education and markets
- Security – increase security for motorized and non-motorized users
- Accessibility and mobility – provide more transportation choices
- Environmental/energy/quality of life – protect the environment, promote conservation, value unique qualities
- Integration and connectivity – across and between modes for people and freight
- Efficient system management – collaboration among stakeholders to target investments, improve accountability
- System preservation – target funds towards existing infrastructure, promote urban landscapes, protect rural landscapes
- Safety – increase safety for motorized and non-motorized users
- Resiliency – resiliency and reliability of the system and reduce impacts of surface transportation
- Tourism – enhance travel and tourism

Issues Identification & Goal Development

Development of the Transit Development Plan identified seven primary issues within the Cities Area Transit system. These issues related to the overall public transit system and primarily identified opportunity areas for improvement of the system. To assist in developing a more responsive set of goals and future Performance Management Plan for Cities Area Transit the Transit System Issues were compared with overall LRTP Goals. The system issues and their corresponding goals matrix is shown in Table 1.

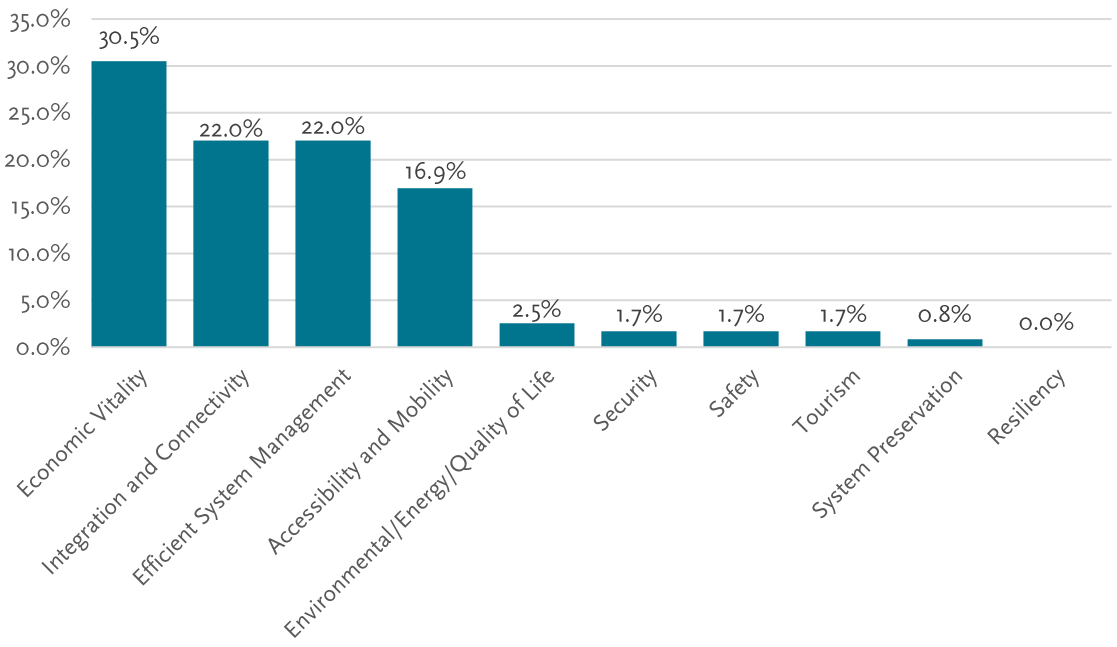
Table 1: Cities Area Transit Issues and TDP Goals Matrix

	TDP Identified Issues							
TDP Goals		Effectiveness	System Interface	Performance & Operations	UND Coordination	Capital Needs	Balance System Needs	Community Support
	Economic Vitality				◆		◆	◆
	Integration/Connectivity	◆	◆		◆		◆	◆
	Efficient System Management		◆		◆			◆
	Accessibility/Mobility				◆		◆	
	Environmental/Energy/Quality of Life		◆	◆				
	Tourism				◆			◆
	Safety					◆		
	Security					◆		
	System Preservation					◆		◆
	Resiliency							◆

Transit Development Plan Goal Prioritization

Through the development of the Transit Development Plan update, the existing LRTP goals were prioritized to ensure a more consistent and streamlined integration into the plan. Because the Transit Development Plan addresses primarily the public transit infrastructure, attention was given to ensure a more unique performance management program tailored to primarily the Cities Area Transit system. The prioritization process was guided by the overall Steering Committee and was reflective of the Existing Conditions and Issues Identification. As the Transit Development Plan was further refined, additional public and stakeholder was gathered to confirm the prioritized list of goals.

Figure 1: Prioritized Goals for Transit Development Plan



Based on this prioritization process, shown in Figure 1, the most significant priority was given to the following overall surface transportation goals:

- Accessibility/Mobility
- Integration/Connectivity
- Efficient System Management
- Economic Vitality

These four prioritized goals also align closely with the prioritized list of Transit System Issues which provided an overall framework for developing the operational analysis. While the Goal of System Preservation scored poorly, it none the less must be a critical consideration in future investment and programming decision making for CAT.

Defining Performance Management

The following terminology will be used to guide the development of the Performance Management Plan.

- **Goal** - Overall guiding result or outcome related to the surface transportation system. These are derived directly from the current LRTP which have been developed in consultation with the FAST Act.
- **Objective** - Desired action or initiative that is perceived as meeting the intent of the overall goal. Further, the objective is also designed to assist in achieving the defined performance level.
- **Performance Measure** - Measure used to evaluate system performance.
- **Performance Level** - Measurement of system performance.
- **Consistency Monitoring** - Effort used to monitor, evaluate and track performance levels.

Linking System Operational Alternatives to Performance Targets

The Performance Levels for certain operation variables were developed using system growth projections based on 2015 NTD data and the Cost + Alternative Scenario developed as part of the Transit Development Plan Update. Growth projections and assumptions are shown in Table 3.

Table 2 assumes implementation of the Cost + Operational Scenario such that it would be 50% implemented by Year 3 and fully implemented by Year 5. The resulting year 5 system performance levels were tagged as the operational performance levels for relevant elements of this element of the TDP.

Table 2 shows the corresponding goals and performance measures.

Table 2: Goals and Performance Measures Matrix

TDP Goals	Fixed Route Performance Measures	Demand Response Performance Measures
Economic Vitality	3	2
Integration/Connectivity	4, 7, 8, 9, 13	3, 6, 7, 14
Efficient System Management	5, 6, 10, 11, 12, 18, 19, 20	4, 5, 8, 9, 10, 11, 12, 13, 19, 20, 21
Accessibility/Mobility	1, 2, 21, 22	1, 22
Environmental/Energy/Quality of Life	X	X
Security	X	x
Safety	15	16
Tourism	x	X
System Preservation	14, 16, 17	15, 17, 18
Resiliency	x	x

Table 3: Performance Level Growth Projections

Ridership	Base*	Year 1	Year 2	Year 3	Year 4	Year 5	Change	% Change	Notes
Fixed Route	336,665	353,498	371,173	389,732	409,218	429,679	93,014	27.6%	5% annual growth in FR ridership
Dial-a-Ride	54,750	53,838	52,925	52,013	50,644	49,275	-5,475	-10.0%	5% reduction in DAR ridreship to Year 3 (Y3); 10% by Y5.
Population	**Base**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Change**	**%**	**Notes**
Service Area (2010)	56,534	58,361	58,653	58,946	59,241	59,537	3,003	0.05	Use NTD defined service area pop. (2010) with .4% growth per year to base; and then same % to Y5.
Revenue Hours	**Base**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Change**	**%**	**Notes**
Fixed Route	24,547	25,393	26,239	28,915	28,354	33,282	8,735	35.6%	To achieve Cost +, 50% implementation by Y3; the balance by Y5.
Dial-a-Ride	19,183	18,991	18,801	18,613	18,427	18,243	-940	-4.9%	1% annual decrease in DAR revenue hours
Budget	**Base**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Change**	**%**	**Notes**
Fixed Route	$2,060,372	$2,101,579	$2,143,611	$2,561,483	$2,612,713	$3,039,967	$979,595	47.5%	Growth in base cost 2% annually (per TIP). FR adds 50% of Cost + Scenario in Y3; other 50% in Y5.
Dial-a-Ride	$1,234,626	$1,259,319	$1,284,505	$1,310,195	$1,336,399	$1,363,127	$128,501	10.4%	Growth in base cost 2% annually (per TIP)
Cost/Ride	**Base**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Change**	**%**	**Notes**
Fixed Route	$6.12	$5.95	$5.78	$6.57	$6.38	$7.07	$0.96	15.6%	Function of other variables.
Dial-a-Ride	$22.55	$23.39	$24.27	$25.19	$26.39	$27.66	$5.11	22.7%	
Revenue Hours/Capita	**Base**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Change**	**%**	**Notes**
FR (NTD pop.)	0.43	0.44	0.45	0.49	0.48	0.56	0.12	28.7%	Function of other variables.
DAR (NTD pop.)	0.34	0.33	0.32	0.32	0.31	0.31	-0.03	-9.7%	
Cost/Revenue Hour	**Base**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Change**	**%**	**Notes**
Fixed Route	$83.94	$82.76	$81.70	$88.59	$92.15	$91.34	$7.40	8.8%	Function of other variables.
Dial-a-Ride	$64.36	$66.31	$68.32	$70.39	$72.52	$74.72	$10.36	16.1%	
Rides/Revenue Hour	**Base**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Change**	**%**	**Notes**
Fixed Route	13.72	13.92	14.15	13.48	14.43	12.91	-0.80	-5.87%	Function of other variables.
Dial-a-Ride	2.85	2.83	2.81	2.79	2.75	2.70	-0.15	-5.36%	

Table 4: Cities Area Transit Performance Standards for Fixed Route System

Performance Measures	Performance Level
1) Span of Service	18 hours a day for six days a week.
2) Service Frequency	30 minute headways AM/PM peak hour on at least 4 of 9 CAT Routes (Equal to Cost + Service Scenario).
3) Service Availability	75% of the service area population within ¼ mile of transit route.
4) Service Hours per Capita	0.56 (Equal to Cost + Service Scenario)
5) Information Availability	Standard requirements: Title VI, Riders Guide, Service Schedules, trip reservation process.
6) Planning Requirements	Identified and analyzed as part of Transit Development Plan. Service expansions must be determined through alternatives analysis.
7) Number of Shelters Installed	Shelters at stops with at least 20 boardings per day, major transfer points and facilities serving disabled and or senior populations.
8) Bicycle Parking at Transit Stops	Bike parking at stops with at least 20 boardings per day or more.
9) Continuous Walking Route and Crossings	Pedestrian facilities within ¼ mile of stops with at least 20 boardings per day.
10) Public Transportation and Human Services Coordination	Update Coordinated Plan once every five years; establish outreach targets in coordination with the Coordinated Plan. Assess annually.
11) Passengers per Service Hour	12.91
12) On-Time Performance	90% of schedule stops on-time (within 5 minutes).
13) Passenger Complaints	Six complaints per 100,000 boardings.
14) Road Calls	New data collection system implemented in 2017. Measure for one year and set target in cooperation with MPO.
15) Accidents	One accident per 100,000 revenue miles.
16) Fleet Maintenance	At least 75% of all regular fleet available for operations.
17) Spare Ratio	Spare vehicles to peak requirement less than 20%
18) Cost per Revenue Hour	$91.34
19) Cost per Ride	$7.07
20) Farebox Recovery	15%
21) Ridership	Increase ridership 5% per year.
22) Transit Auto Travel Time	Transit travel time should be no more than 3 times auto travel time.

Table 5: Cities Area Transit Performance Standards for Demand Response System

Performance Measures	Performance Level
1) Span of Service	18 hours a day for six days a week.
2) Service Availability	75% of population covered by service area.
3) Service Hours per Capita	0.31
4) Information Availability	Standard requirements: Title VI, Riders Guide, Service Schedules, trip reservation process.
5) Planning Requirements	Identified and analyzed as part of Transit Development Plan. Service expansions must be determined through alternatives analysis.
6) Number of Shelters Installed	Shelters at stops with at least 20 boardings per day or major transfer points.
7) Public Transportation and Human Services Coordination	Update Coordinated Plan once every five years; establish outreach targets in coordination with the Coordinated Plan. Assess annually.
8) Passengers per Service Hour	2.7
9) On-Time Performance	90% on-time within published pickup window.
10) Advance Reservation Time	Minimum two hours in advance.
11) Reservation Negotiation Window	Maximum: Up to one hour before/after requested time.
12) Trip Denials	Must follow ADA trip denial definitions and process.
13) Trip Cancellations	Bus or vanpool trips should only be canceled from lack of riders or weather.
14) Passenger Complaints	Six complaints per 100,000 boardings.
15) Road Calls	New data collection system implemented in 2017. Measure for one year and set target in cooperation with MPO
16) Accidents	Once accident per 100,000 revenue miles.
17) Fleet Maintenance	At least 75% of all regular fleet available for operations.
18) Spare Ratio	Spare vehicles to regular fleet vehicles less than 25%.
19) Cost per Revenue Hour	$74.75
20) Cost per Ride	$27.66
21) Farebox Recovery	15%
22) Ridership	Ridership growth commensurate with eligible rider growth.

GOALS

Goal: Economic Vitality

Support the economic vitality through enhancing the economic competitiveness of the metropolitan area by giving people access to jobs, and education services as well as giving business access to markets.

- Objective 1: Provide transit service within 1/4 mile of residential areas and to major activity and employment centers.
- Objective 2: Integrate economic development plans, programs and initiatives into the development of the transit planning process.
- Objective 3: Improve the understanding of CAT among key economic development, community development and community building groups and organizations through periodic outreach and marketing.

Table 6: Economic Vitality Performance Measures and Targets

Performance Measure	System	Performance Level	CAT System Performance	CAT – EGF Performance
Service Availability	Fixed Route	75% of the service area population within ¼ mile of transit route.	89.0%	83.5%
	Demand Response	75% of population covered by service area.	100%	

Goal: Integration and Connectivity

Enhance the integration and connectivity of the transportation system, across and between modes for people and freight, and housing, particularly affordable housing located close to transit.

- Objective 1: Expand transit service hours to better serve existing and future potential riders.
- Objective 2: Improve infrastructure to include shelters, bicycle parking and pedestrian amenities where warranted.
- Objective 3: Engage in coordinated outreach with key agencies and consortiums to better coordinate demand response services with social and human service providers.
- Objective 4: Train employees on customer service to minimize passenger complaints.

Table 7: Integration and Connectivity Performance Measures and Targets

Performance Measure	System	Performance Level	CAT System Performance	CAT – EGF Performance
Service Hours per Capita	Fixed Route	0.56	0.43	0.43
	Demand Response	0.31	0.34	
Number of Shelters Installed	Fixed Route	Shelters at stops with at least 20 boardings per day, major transfer points and facilities serving disabled and or senior populations.	45% (based on stop locations only)	0%
Bicycle Parking at Transit Stops	Fixed Route	Bike parking at stops with at least 20 boardings per day or more	<0% Bike Parking at MTC and racks within ¼ mile of many stops.	
Continuous Walking Route and Crossings	Fixed Route	Pedestrian facilities within ¼ mile of stops with at least 20 boarding's per day.	100% However, not all pedestrian facilities ADA compliant.	
Public Transportation and Human Services Coordination	Demand Response	Update Coordinated Plan once every five years; establish outreach targets in coordination with the Coordinated Plan. Assess annually.	Updated Plan recommends program of outreach and mobility coordination.	
Passenger Complaints	Fixed Route	Six complaints per 100,000 boarding's.	No data	
	Demand Response		No data	

Goal: Efficient System Management

Promote efficient system management and operation by increasing collaboration among federal, state, and local government to better target investments and improve accountability.

- Objective 1: Annually review Title VI, Riders Guide, Service Schedules and related processes to ensure consistency with all requirements.
- Objective 2: Review and track public participation to improve information availability and decision making.
- Objective 3: Establish twice annual working meetings and roundtables with key human and social service agencies and other organizations who utilize CAT service are provide ancillary service in the MPO area.
- Objective 4: Improve efforts to attract and retain riders through marketing, information and quality of service.
- Objective 5: Annually evaluate demand response processes to ensure ADA compliance and cost-effective management.
- Objective 6: Develop process to incorporate new service to transit supportive developments. This process should include service and assessment options.
- Objective 7: Collaborate across city and state boundaries to create a seamless transportation networks including service and performance management.
- Objective 8: Track performance measures annually to determine progress.

Table 8: Efficient System Management Performance Measures and Targets

Performance Measure	System	Performance Level	CAT System Performance	CAT – EGF Performance
Information Availability	Fixed Route	Standard requirements: Title VI, Riders Guide, Service Schedules, Trip Reservation Process	Meets Criteria	
	Demand Response		Meets Criteria	
Planning Requirements	Fixed Route	Identified and analyzed as part of Transit Development Plan. Service expansions determined through alternatives analysis.	2012 (Currently Being Updated)	
	Demand Response		2012 (Currently Being Updated)	
Public Transportation and Human Services Coordination	Fixed Route	Update Coordinated Plan once every five years; establish outreach targets in coordination with the Coordinated Plan. Assess annually.	2012 (Currently Being Updated)	
Passengers per Service Hour	Fixed Route	12.91	13.7	9.5
	Demand Response	2.70	2.85	
On-Time Performance	Fixed Route	90% of schedule stops on time (within 5 minutes).	82.73% *(September 2016 sample)*	
	Demand Response	90% on-time within published pickup window.	>95%	
Advance Reservation Time	Demand Response	Minimum two hours in advance.	5:30 pm the day before reservation (not same day)	
Reservation Negotiation Window	Demand Response	Maximum: Up to one hour before/after requested time.	Meets Criteria	
Trip Denials	Demand Response	Must follow ADA trip denial definitions and process.	Meets Criteria	
Trip Cancellations	Demand Response	Bus or vanpool trips should only be canceled from lack of riders or weather.	No data provided	
Cost per Revenue Hour	Fixed Route	$91.34	$83.94	$91.99
	Demand Response	$74.72	$64.36	
Cost per Ride	Fixed Route	$7.07	$6.12	$9.71
	Demand Response	$27.66	$22.55	
Farebox Recovery	Fixed Route	15%	12.0%	6.6%
	Demand Response	15%	13.1%	

Goal: Accessibility and Mobility

Increase the accessibility and mobility options for people and freight by providing more transportation choices.

- Objective 1: Increase ridership on the fixed route system through improved information availability and service quality.
- Objective 2: Manage system demand between fixed route and dial-a-ride system through eligibility screening and better coordination with hand demand users.
- Objective 3: Operate 40% of fixed routes at 30 minute headways.
- Objective 4: Encourage transit travel time to be competitive with auto, no more than one-hour travel time.

Table 9: Accessibility and Mobility Performance Measures and Targets

Performance Measure	System	Performance Level	CAT System Performance	CAT – EGF Performance
Span of Service	Fixed Route	18 hours a day for six days a week.	15.5 Hours	11.5 Hours
	Demand Response	18 hours a day for six days a week.	15.67 Hours	
Service Frequency	Fixed Route	30 minute headways on 40% of routes.	55 Minutes	60 Minutes
Ridership	Fixed Route	Increase ridership 8% per year.	336,655	31,585
	Demand Response	5% reduction in three years; 10% in 5 years.	54,750	
Transit-Auto Travel Time Difference	Fixed Route	Transit travel time should be no more than one hour.	18 Minutes	

Goal: Environmental/Energy/QOL

Protect and enhance the environment, promote energy conservation, and improve quality of life by valuing the unique qualities of all communities – whether urban, suburban or rural.

- Objective 1: Avoid, minimize and/or mitigate adverse social, environmental, and economic impacts resulting from existing or new transportation facilities by incorporating elements of the Environmental Justice, Title VI and Limited English Proficiency plans.
- Objective 2: Integrate CAT into development of quality of life initiatives such as updates to Downtown Vibrancy Report or other community livability efforts.
- Objective 3: Integrate CAT as a consideration into future updates to the UND Climate Action Plan.

Goal: Security

Increase security of the transportation system for motorized and non-motorized uses.

- Objective 1: Identify and incorporate state and regional emergency, evacuation and security plans into transportation plans and TIP project selection.
- Objective 2: Ensure all applicable employees undergo incident response training.

Goal: Safety

Increase safety of the transportation system for motorized and non-motorized uses.

- Objective 1: Reduce the number, severity and rate of crashes compared to previous years.
- Objective 2: Develop an agency safety plan and certify the plan meets FTA requirements.
- Objective 3: Identify high-incident crash locations and seek opportunities to mitigate safety issues.

Table 10: Safety Performance Measures and Targets

Performance Measure	System	Performance Level	CAT System Performance	CAT – EGF Performance
Accidents	Fixed Route	1.0 Accidents per 100,000 Revenue Miles	1.12 Accidents per 100,000 Revenue Miles	
	Demand Response		1.30 Accidents per 100,000 Revenue Miles	

Goal: System Preservation

Emphasize the preservation of the existing transportation system by first targeting federal funds towards existing infrastructure to spur revitalization, promote urban landscapes and protect rural landscapes.

- Objective 1: Achieve "State of Good Repair" performance levels agreed to between MnDOT, NDDOT and the NDDOT.
- Objective 2: Ensure daily transit operations without interruption for fleet maintenance or repair.
- Objective 3: Implement and periodically update transit asset management plan.

Table 11: System Preservation Performance Measures and Targets

Performance Measure	System	Performance Level	CAT System Performance	CAT – EGF Performance
Road Calls	Fixed Route	New data collection system implemented in 2017. Measure for one year and set target in cooperation with MPO	(N/A) Data Collection Started in 2017	
	Demand Response			
Fleet Maintenance	Fixed Route	At least 75% of all regular fleet available for operations.	100% Available	
	Demand Response			
Spare Ratio	Fixed Route	Spare vehicles to peak requirement less than 20% (fixed)	37.5% (Fixed) (assumes HC Tripper)	
	Demand Response			

Goal: Tourism

Enhance travel and tourism.

- Objective 1: Ensure a minimum of 60 minute headways between major regional destinations.
- Objective 2: Ensure CAT services are included in regional travel and tourism marketing materials.

Goal: Resiliency

Improve resiliency and reliability of the transportation system and reduce or mitigate storm water impacts of surface transportation.

- Objective 1: Consider reduction of surface parking and other related impervious services through the better utilized of CAT as a demand management tool through the land development process.

CONSISTENCY MONITORING

FTA Section 5340 Small Transit Intensive Cities (STIC) Apportionments

FTA Section 5340 STIC funding provides additional operating funds apportioned to transit systems which meet or exceed system averages based on all UZA providers with a population between 200,000 – 999,999. Most recently CAT has been able to attain target levels in Vehicle Revenues per Capita. Based on FY 2016 funding, this amounted to an additional $189,000 in FTA operating funds.

The most recent targets for the FTA Section 5340 program and the performance for CAT (2016) are shown in Table 12 below. Performance tracking on FTA Section 5340 program can be reviewed annually with each submittal of the NTD reporting process.

Table 12: FY 2016 Small Transit Intensive Cities Performance Data and Apportionments

Urbanized Area	Passenger Miles/ Revenue Mile	Passenger Miles/ Revenue Hour	Revenue Mile/ Capita	Revenue Hour/ Capita	Passenger Miles/ Capita	Passenger Trips/ Capita	Number of Performance Factors Met or Exceeded	STIC Funding
Grand Forks, ND-MN	2.6	31.4	8.8	0.7	23.2	6.5	1	$189,432
Average	6.3	106.0	11.1	0.7	84.2	12.9	-	-

Performance Tracking

The MPO should integrate an annual summary report of CAT performance related measures and performance levels included in the TDP. Data used for the development of this element of the TDP is sourced to either annual data developed by CAT or NTD datasets.

Reporting could be done through a simple and easy to follow dashboard format which shows historic and existing performance levels. Similar charts and tables were used in the Existing Conditions element of the TDP.