

FY 2022-2026 MTA Proposed Capital Investment Plan

June 24, 2021

The Nashville Metropolitan Transit Authority (Nashville MTA) Board of Directors recognizes the need to develop a broad funding policy for the annual Capital Budget to maintain assets in a state of good repair (SGR); to provide improvements to existing service for current riders; and to reflect and advance the initiatives adopted under the nMotion Strategic Service Plan to expand the use of mass transit in Davidson County.

This capital plan generally identifies sources and amounts of projected capital funding available to Nashville MTA as well as a framework for categorizing and prioritizing projects for funding decisions. It goes on to provide descriptions of proposed capital projects and to project available resources for those projects.

The capital plan provides planned projects for a five-year horizon – FY2022 through FY2026. Projects listed for FY2022 generally have been thoroughly scoped and have identified funding sources associated with them. Once approved in the Capital Plan, Nashville MTA board members can next expect to see them reported out in a project delivery phase, such as design or procurement.

Projects listed for FY2023 and beyond are more conceptual in nature, and most will likely require more detailed scoping and the identification of specific funding sources. In the case of State of Good Repair (SGR) projects, these are drawn from our existing fleet plan, as well as recent experience with respect to facility capital maintenance projects. Projects under business improvement and nMotion service expansion/service improvement are listed to facilitate discussion of Nashville MTA priorities among members. Once adopted into the FY2022 Capital Plan, staff will work with funding partners (Federal Transit Administration (FTA), Tennessee Department of Transportation (TDOT), Greater Nashville Regional Council (GNRC), and Metro Nashville) to identify the best matches for outside discretionary funding. Funds described in later sections of this document that might be applied include Congestion Mitigation and Air Quality (CMAQ) funds, federal Surface Transportation Block Grant Program (STBG) funds, State Improve Act funds, and funding from the Capital Spending Plan of the Metropolitan Government, as well as several smaller sources.

This plan is broadly broken down into the following sections:

- A. Nashville MTA Capital Funding Sources and Amounts:** Describes the typical funding sources for Nashville MTA capital projects.
- B. Capital Funding Strategy:** Broadly describes a ranking process that management uses in advancing capital projects for recommendation to the Board for inclusion. This process is consistent with FTA Asset Management Requirements.
- C. Funding Look Ahead:** A snapshot of where the Nashville MTA stands with respect to likely available funds compared to project needs.
- D. Project Plan Budget:** A listing of proposed projects, scheduled years, and budgets.
- E. Project Descriptions:** A brief description of each project in the project plan budget.

A. Nashville MTA Capital Funding Sources and Amounts

The Nashville MTA receives capital funding from federal, state, and local sources as identified below.

1. Federal 5307 – Urbanized Area Formula Grant

The 5307 federal formula funding is provided to the region based on reported and audited ridership data. Through annual agreements with regional partners at the MPO level, funding is split among Nashville MTA, Regional Transportation Authority of Middle Tennessee (RTA), and Franklin Transit. These funds can also be flexed over to the operational budget to be used for preventative maintenance to some extent, as allowed by FTA regulation. These are typically 80% funds, meaning that 80% of the funding shown is federal money while 10% of the money comes from the state and 10% comes from local sources.

At this time, Nashville MTA can reasonably predict that annually it will receive approximately \$20 million total for Capital needs in 5307 funds including state/local match annually. Nashville MTA typically transfers approximately

\$18 million to the operations budget for preventative maintenance and Americans with Disabilities Act (ADA) service costs, though the specific amount for this transfer is included as part of the annual operating budget process. For plan years FY2021-22 and FY2022-23, this need is mitigated by the availability of Federal Rescue Plan Act funding, described later in this document.

FTA provides 5307 funding to public transit systems in Urbanized Areas (UZA) for public transportation capital projects, planning, job access and reverse commute projects, and operating expenses in certain circumstances.

Eligible activities include:

- Planning, engineering, design and evaluation of transit projects and other technical transportation-related studies;
- Capital investments in bus and bus-related activities such as replacement of buses, overhaul of buses, rebuilding of buses, crime prevention and security equipment and construction of maintenance and passenger facilities; and
- Capital investments in new and existing fixed guideway systems including rolling stock, overhaul and rebuilding of vehicles, track, signals, communications, and computer hardware and software.
- All preventive maintenance and some ADA complementary paratransit service costs are considered capital costs.
- Population of an urbanized area is among the variables that factor into the calculation of these formula grant amounts. Population is based on the most recently completed census. Once the 2020 census numbers are certified and released, two specific possibilities may have a negative impact on funding available to Nashville MTA:
 - The Nashville-Davidson Urbanized Area could exceed one million for the first time. This will place Nashville MTA in a different funding tier, among the largest metropolitan areas of the nation, and could have a negative impact on funding; and
 - The City of Murfreesboro may be included in the Nashville-Davidson Urbanized area, adding their transit system –Murfreesboro Rover to the regional mix of transit operators – Nashville MTA, RTA, Rover, and Franklin Transit – sharing these funds.

This issue also impacts other federal formula funded programs.

2. Federal 5339 – Bus and Bus Facilities Grant

The 5339 federal formula funding is provided to the region based on reported and audited bus ridership data. Through annual agreements with regional partners, funding can be split among Nashville MTA, RTA, and Franklin Transit. As with 5307 funding, these are typically 80% funds, meaning that 80% of the funding shown is federal money while 10% of the money comes from the state and 10% comes from local sources.

At this time, the region can reasonably predict that annually it will receive approximately \$2 million for Capital needs in 5339 funds and state/local match annually. As Nashville MTA provides the greatest share of bus service in Middle Tennessee, the portion of these funds that would be fairly shared with RTA and Franklin Transit requires significant paperwork for limited revenue to those agencies. By mutual agreement, Nashville MTA receives the full allocation of regional 5339 funding.

FTA provides 5339 funding to states and transit agencies through a statutory formula for capital projects to replace, rehabilitate and purchase buses, vans, and related equipment, and to construct bus-related facilities, including technological changes or innovations to modify low or no emission vehicles or facilities.

3. Federal Congestion Mitigation and Air Quality (CMAQ)

These are federal funds that are allocated by TDOT through a competitive grant process. These funds typically are 80% federal and require a state or local match. Nashville MTA can apply to TDOT for capital funding for bus replacements, Park & Rides, and other projects that would result in a reduction of vehicle congestion and an associated improvement of local or regional air quality.

MTA does not have a current strategy for requesting these funds and cannot reasonably include this as an ongoing and stable funding source. However, MTA does review shovel ready projects in its capital budget to submit CMAQ applications each year as eligible. As the Board approves each subsequent capital plan, staff will work with TDOT and regional leadership at the MPO (GNRC) to evaluate the best candidate projects for CMAQ funding.

4. Federal Surface Transportation Program (STBG)

These are funds that are managed and allocated by the MPO. Nashville MTA can apply for these funds for use on capital projects, engineering, planning studies, and similar activities. These funds are also typically are 80% federal and require a state or local match.

Nashville MTA does not have a current strategy for requesting these funds and cannot reasonably include this as an ongoing and stable funding source. Like CMAQ, as the Board approves each subsequent capital plan, staff will work with TDOT and regional leadership at the MPO to evaluate the best candidate projects for STBG funding.

5. State IMPROVE Act Program

These are state funds that are allocated by TDOT through a competitive grant process. These funds require a local match. Nashville MTA can apply to TDOT for funding for a broad range of transit capital projects.

Nashville MTA does not have a current strategy for requesting these funds and cannot reasonably include this as an ongoing and stable funding source. However, Nashville MTA does review shovel ready projects in its capital budget to submit IMPROVE Act applications each year. Recent year awards include Nolensville Pike bus stop enhancements and the North Nashville Transit Center. TDOT's FY2021-22 budget significantly reduces the availability of this funding source, so it will be of limited applicability in the coming year. TDOT hopes to restore these funds in future years.

6. State Grant Match

Nashville MTA relies on state funding to provide matches to federal funds, typically in the amount of 10% of total project cost.

7. Local Capital Funding and Grant Match

Nashville MTA relies on local funding to provide matches to federal funds. Nashville MTA also makes annual requests of 100% capital funding for specific capital needs including finding the annual fleet replacement needs for bus and paratransit vans. Metro may also fund projects that are aligned with the needs of Metro and Nashville MTA including projects such as design and construction of Neighborhood Transit Centers.

Funding is based on local approval of annual budgets. In order for Nashville MTA to obligate funds to projects, funding for the project must be authorized through the Council-adopted Capital Spending Plan (CSP). Besides the grant match amounts, Metro's FY2022 CSP includes \$2 million for shelter improvements and neighborhood transit centers development. Prior to consideration in the CSP, projects must be identified in the Council-approved Capital Improvement Budget (CIB). The CIB is a planning document that communicates a wide variety of capital projects and indicates the extent to which these projects are consistent with the City's Comprehensive Plan. Funding of CIB project through the CSP is dependent on the level of capital funding in a particular year relative to planned projects.

Metro Council just approved a new CIB. Nashville MTA projects included in the CIB include matches to our Federal and State grants, WeGo Access replacement buses, fixed route transit replacement buses, stop and shelter improvements, and neighborhood transit centers projects. Nashville MTA also serves as a conduit for RTA capital budget requests. RTA projects in the CIB include federal and state grant matches, WeGo Star rail upgrades, and improvements at Donelson Station on the WeGo Star to support the pending transit-oriented development in that neighborhood. As part of the negotiation with Council for the FY2021-22 Metro Operating Budget, Mayor Cooper committed to include a total of \$26 million in funding for transit in the next Capital Spending Plan, which would result in a true obligation of funds to projects. This includes grant matches, full capital projects, and encompasses both MTA and RTA funding. As such, this figure has been incorporated into the plan.

8. Other

When projects deemed to be a Nashville MTA priority cannot be funded through traditional formula sources, a dialogue is initiated with potential outside funding partners (i.e.: TDOT, GNRC, etc.) to identify other potential sources of funds. Other sources include grants from other federal, state, or local entities. Nashville MTA continuously reviews opportunities to apply for grants to support capital projects. Occasionally, there may be truly unique circumstances that generate other funds. Examples of some of the types of funding in play now include Federal "HOPE" funding toward the North Nashville Transit Center, FTA COVID Research funds to a reliability improvement project, and partner funding from the Nashville Downtown Partnership for the proposed Downtown Traffic Study.

B. MTA Capital Funding Strategy

The Nashville MTA capital funding strategy prioritizes the agencies needs to maintain assets in a state of good repair; to provide improvements to existing service for current riders; and to reflect and advance the initiatives adopted under the nMotion Strategic Service Plan to expand the usage of mass transit. Projects are categorized in the following order of priority.

1. Safety / Regulatory Projects

Completing projects required for safety or by law/regulation is at the top of Nashville MTA's priority list.

Capital projects for FY2022 in this category include mandatory software upgrades to two-way communications devices required in for our maintenance functions to assure continued compliance with Federal Communications Commission (FCC) regulations and update requirements to systemwide demographic and socio-economic data as well as updating the Transit Asset Management Plan.

2. Transfer of Federal Capital Funds to Operational Preventative Maintenance and ADA

Nashville MTA transfers Federal 5307 capital dollars for operational preventative maintenance and ADA needs. The amount transferred annually is reviewed to balance the needs of system maintenance and system capital projects. With the approval and execution of a long-term ground lease for the North Nashville Transit Center site last year, this will be an additional line item funded in this category.

3. State of Good Repair (SGR)

Maintaining the existing transit system in a state of good repair is also one of Nashville MTA’s highest priorities. Having well maintained, reliable transit infrastructure will help ensure safe, dependable, efficient, and accessible services.

Capital SGR projects include routine vehicle repair and replacement; infrastructure rehabilitation, replacement, and repair; and routine replacement of information technology (IT) assets.

4. Business Improvements

In order to provide increase staff efficiency and improve business processes, Nashville MTA will review and upgrade or implement strategic process improvements to streamline business efforts and increase effectiveness of existing resources.

5. nMotion Service Improvements

In order to provide increasingly meaningful service to Davidson County and Middle Tennessee residents, Nashville MTA will improve its existing service making it easier to use, more convenient, comfortable, more efficient, and accessible. nMotion recommendations for service improvements include:

- Neighborhood transit centers;
- New and expanded passenger waiting shelters;
- Capital investments supporting bus service improvements (such as bus fleet expansion)
- Planning and project development support for emerging nMotion initiatives, such as high capacity transit corridors.

C. Nashville MTA Capital Funding Look Ahead

The chart below illustrates the reasonably predicted sources and amounts of funds available to the Nashville MTA for capital projects for FY2022 through FY2026. In addition to recurring sources, Nashville MTA has access to carryover funds from prior project years. These funds generally become available through reprogramming of project funds for projects that could not be completed, projects coming in under budget, etc. Nashville MTA will carry approximately \$23.1 million of total funding into FY2022 capital projects. This balance of prior year funds has decreased dramatically from previous years as WeGo Public Transit has invested in key projects for bus replacement for aging vehicles, State of Good Repair Projects at WeGo Central and Nestor facilities, expansion of the stop and shelter program, and significant progress on the Hillsboro and North Nashville Transit Center Projects.

Nashville MTA has approximately \$41.7 million in project capital needs for FY2022 and known funding committed in the amount of \$49.2 million with another \$23.1 million of prior year funding. As such, the “known year” of the plan is more than fully funded and, if the plan is approved by the Board, you can expect “next

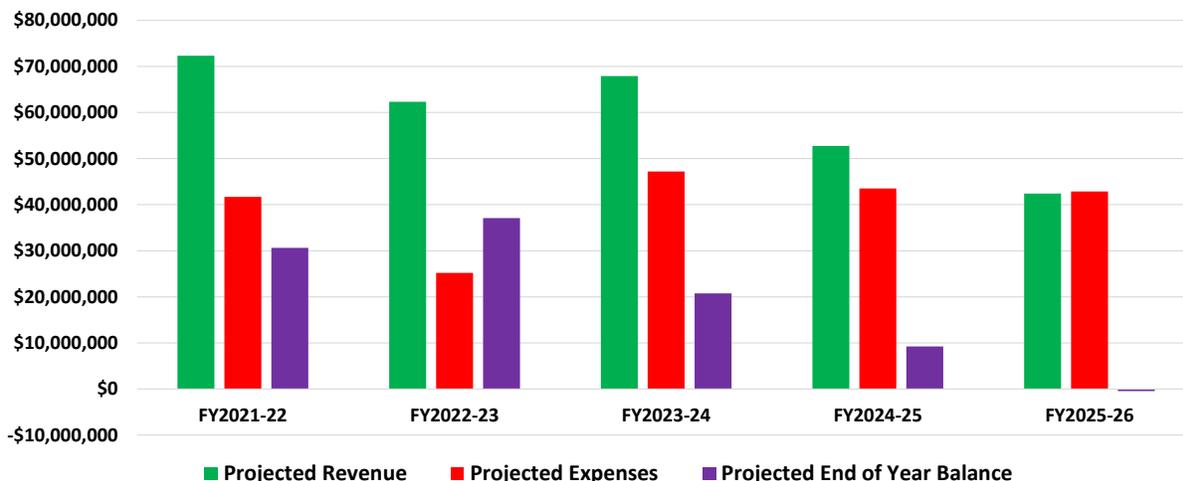
actions” to be actual project delivery. Over the longer-term, although this figure appears to be extremely high, you will note that the annual capital budget (while balanced) sees declining carryover balances through the years. Nashville MTA is assuming Metro matching funds against federal and state funding will be awarded. Until FY2019, Metro provided significant capital funding beyond the minimum required for grant matches. However, the City’s declining financial condition prevented this from FY2019 through FY2020. For FY2021, following passage of the Metro Transportation Plan, the City included a total of \$6.6 million in capital spending plan funds for WeGo Public Transit, including minimum grant matches, \$1.5 million for shelter expansion and \$500,000 to advance future transit center development. These certainly represent progress, but would be wholly insufficient on an ongoing basis to come close to carrying out the ambitions that the City’s Transportation Plan has for public transportation. During negotiations between the Mayor’s Office and Metro Council, Mayor Cooper committed to a total of \$26 million in capital funding to WeGo Public Transit in the City’s next Capital Spending Plan (\$4.2 million for MTA Grant Matches, \$0.8 million for RTA Grant Matches, and \$21 million for various other MTA projects). The Administration tentatively plans to issue another Capital Spending Plan in the Fall of 2021, but this is subject to its formal submission to (and approval by) the Metropolitan Council. Although the Mayor’s commitment and general support of the Council lead to optimism over these prospects, the funds are not committed until these steps are complete. The most significant risk to this source is the pending property tax referendum, now in the courts. If the ballot measure is successful in repealing last year’s property tax increase, it is highly unlikely that Metro will entertain a Capital Spending Plan in 2021.

Based on recent trends in formula funding and ongoing discussions with entities such as TDOT and GNRC, the following table projects funding we can reasonably expect to receive over the five years of this plan:

Funding Source	Prior Year Balance Remaining	Revenues FY2022	Revenues FY2023	Revenues FY2024	Revenues FY2025	Revenues FY2026	Total Available
Prior Year Carryover	\$ -	\$ 23,102,066	\$ 30,638,626	\$ 37,103,961	\$ 20,736,963	\$ 9,220,772	\$ -
Section 5307 - Urbanized Area Formula	\$ 14,768,765	\$ 19,088,601	\$ 19,661,259	\$ 20,251,097	\$ 20,858,630	\$ 21,484,389	\$ 116,112,740
Section 5339 - Bus and Bus Facilities	\$ 5,040,518	\$ 1,611,322	\$ 1,679,275	\$ 1,729,653	\$ 1,781,543	\$ 1,834,989	\$ 13,677,300
FTA HOPE & COVID Research & Development Grants	\$ -	\$ 720,000	\$ -	\$ -	\$ -	\$ -	\$ 720,000
Congestion Mitigation/Air Quality	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Surface Transportation Block Grant	\$ 4,034,942	\$ -	\$ 4,000,000	\$ 2,435,000	\$ 2,885,000	\$ 3,355,000	\$ 16,709,942
Improve Act	\$ 5,166,995	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,166,995
Metro Local Capital Spending Plan	\$ 11,795,670	\$ 21,000,000	\$ -	\$ -	\$ -	\$ -	\$ 32,795,670
State Formula Match	\$ 2,327,081	\$ 2,587,490	\$ 2,134,053	\$ 2,198,075	\$ 2,264,017	\$ 2,331,938	\$ 13,842,655
Metro Grant Match	\$ 5,207,227	\$ 4,200,000	\$ 4,200,000	\$ 4,200,000	\$ 4,200,000	\$ 4,200,000	\$ 26,207,227
Total	\$ 48,341,197	\$ 72,309,480	\$ 62,313,213	\$ 67,917,786	\$ 52,726,153	\$ 42,427,087	\$ 225,232,528
Less Funds Committed to Ongoing Projects	\$ 25,239,131	\$ 41,670,854	\$ 25,209,252	\$ 47,180,823	\$ 43,505,381	\$ 42,878,621	\$ 198,444,931
Funds Available for Ensuing Year	\$ 23,102,066	\$ 30,638,626	\$ 37,103,961	\$ 20,736,963	\$ 9,220,772	\$ (451,534)	

These projections are relatively conservative, insofar as they assume no funds under the IMPROVE Act, which is a competitive discretionary program; or 100% Metro Capital funds beyond the total of \$26 million committed by Mayor Cooper as part of the FY2021-22 Metro budget process. These figures do assume that Metro will continue to provide the minimum local match required to receive available state and federal funds. The most significant risk to the program beyond the availability of Metro funding is the potential impact of the 2020 census on our federal formula funding, as described above. The IMPROVE Act funds have been a significant source of project funding since their inception in 2018. However, the 2021-22 State Budget reduces funding to this program by about 70%, so they are unlikely to be a significant source for FY2021-22. You will note from the chart below that we project the overall five-year plan to have a funding gap of just over \$451,534 (<1% of the overall recommended program expenditure). This is not a material concern, as we can reasonably anticipate discretionary funding in excess of this amount over the five-year program. Larger risks reside in the impact of the 2020 census on ongoing federal revenue, and the ability of Metro Nashville to continue to provide matching funds for available state and federal dollars. In the event program funding does fall short, first-priority will need to go

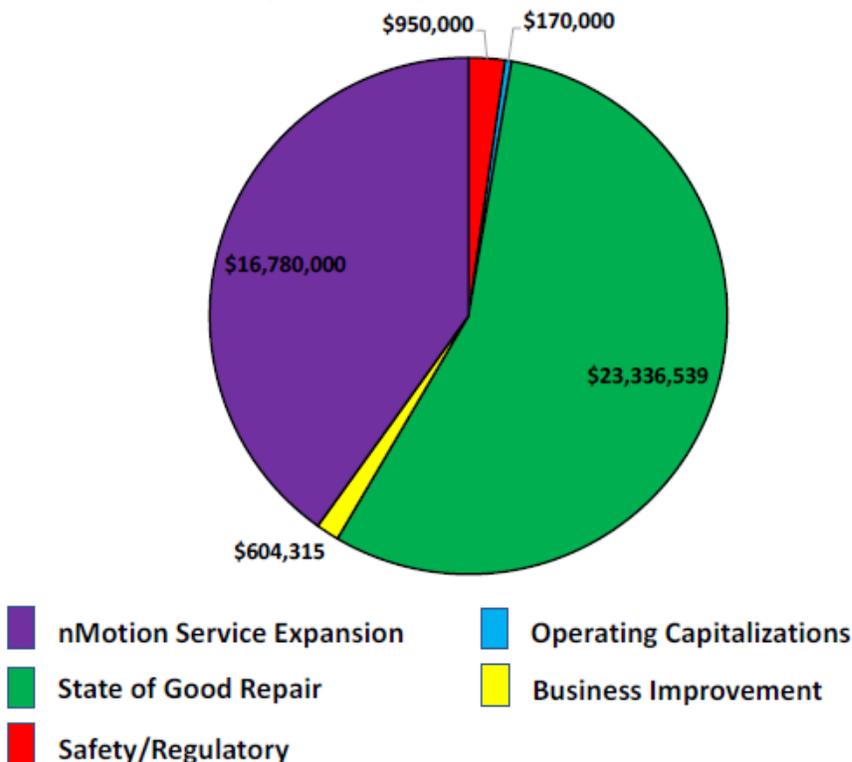
to safety and regulatory Projects and State of Good Repair Projects.



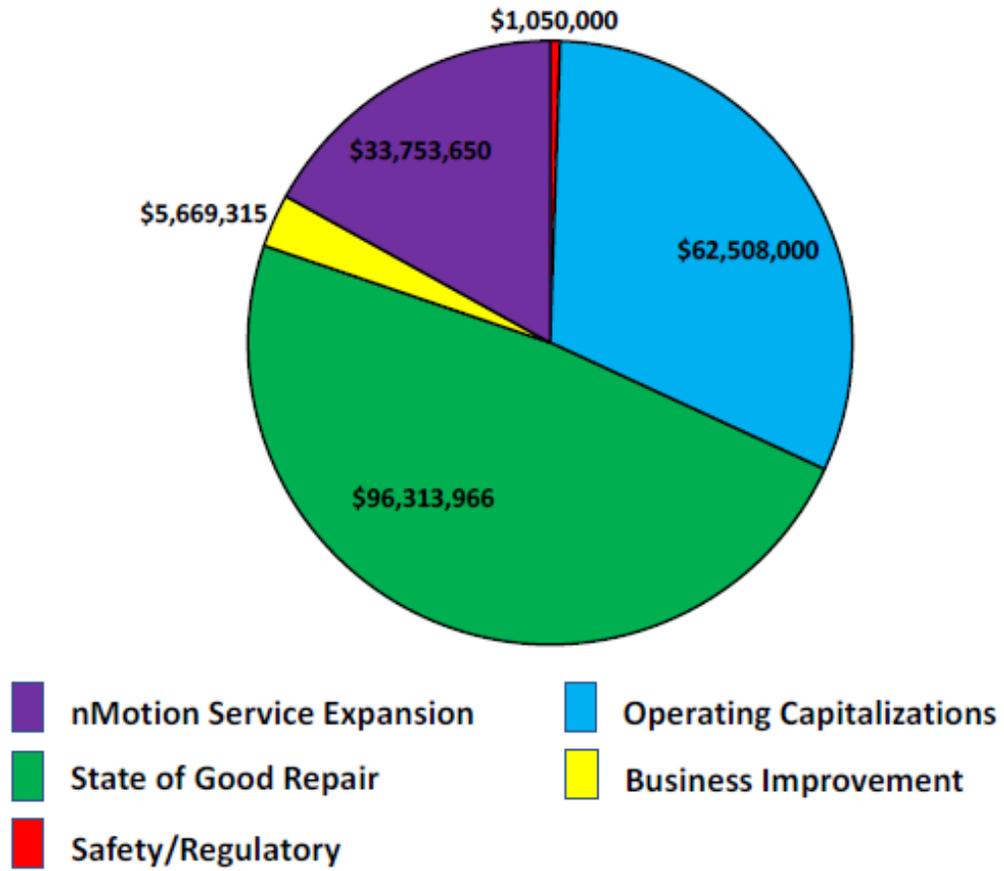
FY2022-2026 Annual Capital Funding Projections

The next two charts provide an overview of recommended project funding. The first chart illustrates the recommended distribution among major funding categories in FY2022, and the second illustrates the recommended distribution among major funding categories for the five-year span of the plan – FY2022 through FY2026.

FY2022 MTA Proposed Project List: \$41,670,854



FY2022-2026 MTA Proposed Project List: \$198,444,931



D. Project Plan Budget (1 of 2)

The recommended project plan detailed budget tables follow:

Project Expenses	FY2022	FY2023	FY2024	FY2025	FY2026	Total
1 - Safety and Regulatory Projects						
A. Upgrade Motorola P-25 800MHz Radio Communications	\$ 200,000	\$ 100,000	\$ -	\$ -	\$ -	\$ 300,000
B. Origin-Destination Survey Update	\$ 550,000	\$ -	\$ -	\$ -	\$ -	\$ 550,000
C. Transit Asset Management Plan Update	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ 200,000
Total Safety and Regulatory -	\$ 950,000	\$ 100,000	\$ -	\$ -	\$ -	\$ 1,050,000
2 - Operating Budget Capitalizations						
A. Annual Preventive Maintenance/ADA Complementary Paratransit	\$ -	\$ -	\$ 20,182,000	\$ 20,533,000	\$ 20,943,000	\$ 61,658,000
B. North Nashville Transit Center Ground Lease	\$ 170,000	\$ 170,000	\$ 170,000	\$ 170,000	\$ 170,000	\$ 850,000
Total	\$ 170,000	\$ 170,000	\$ 20,352,000	\$ 20,703,000	\$ 21,113,000	\$ 62,508,000
3 - State of Good Repair Projects						
<u>Rolling Stock (Revenue)</u>						
A. 12-Year Heavy Duty Bus Replacement - Fixed Route	\$ 12,419,913	\$ 9,000,000	\$ 9,225,000	\$ 14,420,000	\$ 13,800,000	\$ 58,864,913
B. 5-Year Body-on-Chassis Bus Replacement	\$ 3,718,000	\$ 3,093,376	\$ 3,217,111	\$ 3,178,506	\$ 3,305,646	\$ 16,512,639
Total Revenue Vehicle Replacement -	\$ 16,137,913	\$ 12,093,376	\$ 12,442,111	\$ 17,598,506	\$ 17,105,646	\$ 75,377,552
<u>Equipment</u>						
C. Non-Revenue Vehicle Replacement	\$ 600,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 1,000,000
D. Information Technology Routine Hardware, Software & Office Equipment Replacement	\$ 425,000	\$ 400,000	\$ 450,000	\$ 450,000	\$ 500,000	\$ 2,225,000
E. OnBoard & OnStreet IT Equipment Replacement	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 500,000
F. Wireless Projects	\$ 248,600	\$ -	\$ -	\$ -	\$ -	\$ 248,600
Total Equipment -	\$ 1,373,600	\$ 600,000	\$ 650,000	\$ 650,000	\$ 700,000	\$ 3,973,600
<u>Facilities</u>						
G. Myatt Building Shop Trench Fill	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000
H. Facility Maintenance & Capital Replacement	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 5,000,000
I. Nestor Facility Phased Maintenance Facility and Site Rehabilitation/Upgrade Projects	\$ 4,000,000	\$ 1,500,000	\$ 1,500,000	\$ 1,000,000	\$ 750,000	\$ 8,750,000
J. Bus Stop Amenities Replacement	\$ 625,026	\$ 612,876	\$ 271,062	\$ 723,875	\$ 379,975	\$ 2,612,814
K. Central External Bay Coverings	\$ 100,000	\$ 400,000	\$ -	\$ -	\$ -	\$ 500,000
Total Facilities -	\$ 5,825,026	\$ 3,512,876	\$ 2,771,062	\$ 2,723,875	\$ 2,129,975	\$ 16,962,814
Total State of Good Repair	\$ 23,336,539	\$ 16,206,252	\$ 15,863,173	\$ 20,972,381	\$ 19,935,621	\$ 96,313,966
4 - Business Improvement						
A. Touchless Procurement & Document Management System	\$ 54,315	\$ -	\$ -	\$ -	\$ -	\$ 54,315
B. nMotion Strategic Plan Update	\$ 350,000	\$ -	\$ -	\$ -	\$ -	\$ 350,000
C. Paratransit Dispatching/Scheduling Software Upgrade	\$ -	\$ -	\$ 3,000,000	\$ -	\$ -	\$ 3,000,000
D. Enterprise Asset Management (EAM) & Enterprise Resource Planning (ERP) System	\$ 100,000	\$ 2,000,000	\$ -	\$ -	\$ -	\$ 2,100,000
E. Training Center Expansion (Maintenance Focus)	\$ 100,000	\$ 65,000	\$ -	\$ -	\$ -	\$ 165,000
Total Business Improvement -	\$ 604,315	\$ 2,065,000	\$ 3,000,000	\$ -	\$ -	\$ 5,669,315

Project Expenses	FY2022	FY2023	FY2024	FY2025	FY2026	Total
5 - nMotion Service Expansion/Service Improvement						
A. Better Bus Fleet Expansion	\$ 10,180,000	\$ 4,838,000	\$ 6,135,650	\$ -	\$ -	\$ 21,153,650
B. Shelter Expansion/Upgrade Program	\$ 2,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 8,500,000
C. Downtown Traffic Study - in coordination with Metro, TDOT, and Downtown Partnership	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000
E. Development of Transit Centers	\$ 1,000,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 3,000,000
F. Service Reliability Improvements	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000
G. Murfreesboro Pike High Capacity Corridor Development	\$ 2,000,000	\$ -	\$ -	\$ -	\$ -	\$ -
Total Service Expansion/ Service Improvement -	\$ 16,780,000	\$ 6,838,000	\$ 8,135,650	\$ 2,000,000	\$ 2,000,000	\$ 33,753,650
Grand Total, All Projects -	\$ 41,670,854	\$ 25,209,252	\$ 47,180,823	\$ 43,505,381	\$ 42,878,621	\$ 198,444,931

E. Project Descriptions

The following are brief descriptions of each project contained in the Project Plan Budget.

Safety and Regulatory Projects

Safety and Regulatory Projects represent those projects viewed as important to protecting the safety and security of WeGo Public Transit customers, employees and assets. These projects also represent investments that are required to operate within the rules of various regulatory bodies that govern specific operations of WeGo Public Transit.

- 1. Upgrade Motorola P25 Radio Voice Communications:** This project relates to the agency's two-way radio communication system and is intended to enhance system resilience during emergencies through enhanced interagency communication. Project 25 is a public safety communications standard dedicated to ensuring interoperability in communications. It's designed to ensure fast & secure communications between local, state, and federal agencies when protecting the public's welfare. This project will reprogram frequencies on 300 mobile voice radios, 15 support vehicle radios, 5 desktop consoles, 8 transition devices and 60 hand-held radios. Additionally, 55 hand-held radios will be replaced.
- 2. Origin-Destination (O-D) Survey:** Conduct a systemwide Origin-Destination (O-D) on-board survey. O-D surveys involve statistically sampling the start and end points of the trips of riders in anonymous fashion to develop overall patterns of travel among our customer base. O-D surveys are important strategic planning tools for transit as they provide data insights into transit markets to understand the demographics and travel behavior of riders on a system as well as helping to fulfill Title VI reporting requirements. The FTA Title VI Circular requires the demographic ridership information to be collected at least every five years. The last O-D survey for MTA was conducted in the spring of 2017.
- 3. Transit Asset Management Plan Update:** The Transit Asset Management Plan (TAM) is a federal requirement and provides a strategic and systematic planning tool to manage transit capital assets and prioritize capital spending based on careful planning and improved decision-making. Transit asset conditions are used to manage capital assets and prioritize funding to improve or maintain the overall transit fleet and facilities to a target level of State of Good Repair. The plan needs to be updated by October 2022. This project would cover consulting costs for updating the agency's TAM plan.

Transfers to Operating Budget for Capitalized Items

These projects represent annual expenditures that flow through our operating budget, but are eligible for funding through various capital grant sources.

4. **Annual Operating Budget Preventive Maintenance/ADA Expenditures:** Annual transfer of capital funds to operational budget for preventive maintenance and Americans with Disabilities Act Complementary Paratransit expenses, as permitted under federal law. This is the maximum amount allowable as currently calculated by Finance and reflects annual increases in line with increasing expenses in these line items. Historically, Metro has requested that we minimize our requests for operating assistance while simultaneously expanding the system in exchange for more funding under their Capital Spending Plan to sustain a state of good repair. These transfers are a fairly common practice in the transit industry, particularly among smaller transit systems in regions that lack dedicated funding. During the period of FY2013 through FY2018, the average annual investment of Metro Capital Spending Plan funds in WeGo Public Transit projects was over \$24.6 million. However, from FY2019 through FY2021, the average dropped to just less than \$4.6 million annually (a reduction of 81%). This trend would be unsustainable if allowed to continue. For the first two years of the capital plan, staff is proposing to replace these annual transfers with funding provided through the American Rescue Plan Act – one of the two pandemic relief bills that provided the MTA with significant funding. The MTA received a total of \$46,243,245 through this program, and we are assigning all of this to operating assistance. This will have the effect of freeing up our normal Federal Section 5307 Urbanized Area Formula Grants for traditional capital projects.
5. **Annual Lease for North Nashville Transit Center:** This project represents the annual payments for the long-term ground lease approved by the MTA Board for the land on which we will be constructing the North Nashville Transit Center. This is an eligible capital expense under Section 5307 formula funding for transit activities and will be a recurring item with periodic adjustments as called out in the approved lease.

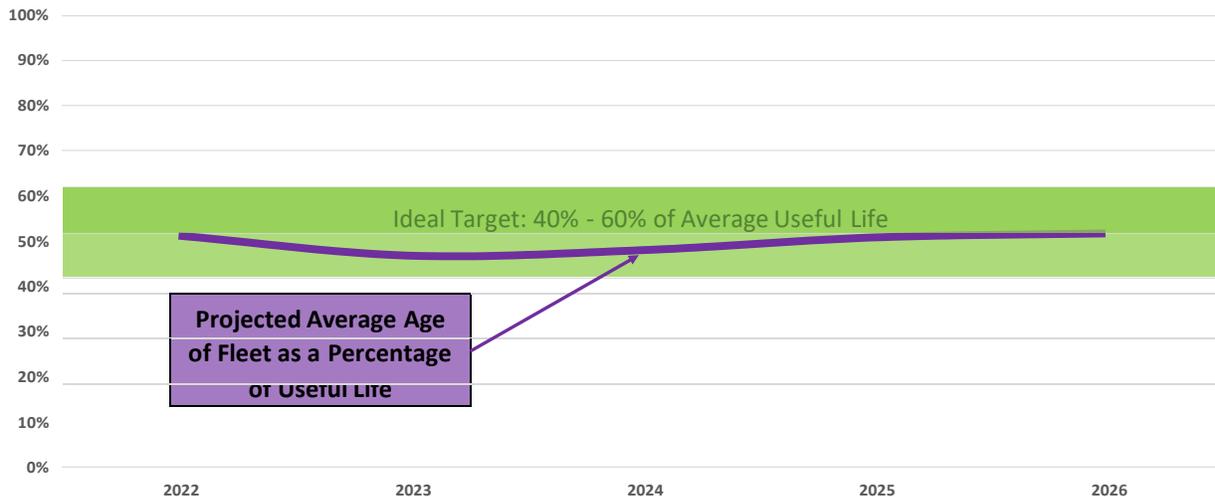
State of Good Repair (SGR) Projects

State of Good Repair Projects represent those investments in the rehabilitation and routine replacement of fixed assets based on the useful life of an asset, or some other precipitating condition such as engineering analysis or in-service failure. This category is the specific focus of the Authority's Transit Asset Management Plan (TAM), as required by the Federal Transit Administration. Beyond sound operating practice, the FTA will closely examine the condition of a transit agency's physical infrastructure and stability of its service levels prior to committing funding to expansion projects through funding sources such as New Starts or Small Starts.

6. **Twelve-Year Heavy-Duty Bus Replacement – Fixed Route:** Annual bus replacement to bring fleet into SGR according to the fleet management plan and in accordance with goals established in the NashvilleMTA TAM plan for existing service levels (as such, this category does not include buses required for service expansion). Twelve-year heavy-duty buses are deployed on WeGo Public Transit's higher ridership routes and include 40-foot standard low-floor buses for normal local routes, and 60-foot articulated low-floor buses for the highest ridership services. The plan assumes a normal replacement cycle of 12 years, utilizing Clean Diesel propulsion technology. Fleet replacement schedule is as follows:

	FY2022	FY2023	FY2024	FY2025	FY2026
40-Foot Clean Diesel Standard Low Floor	0	15	15	7	7
60-Foot Clean Diesel Articulated Low Floor	14	0	0	11	10
Total	14	15	15	18	17

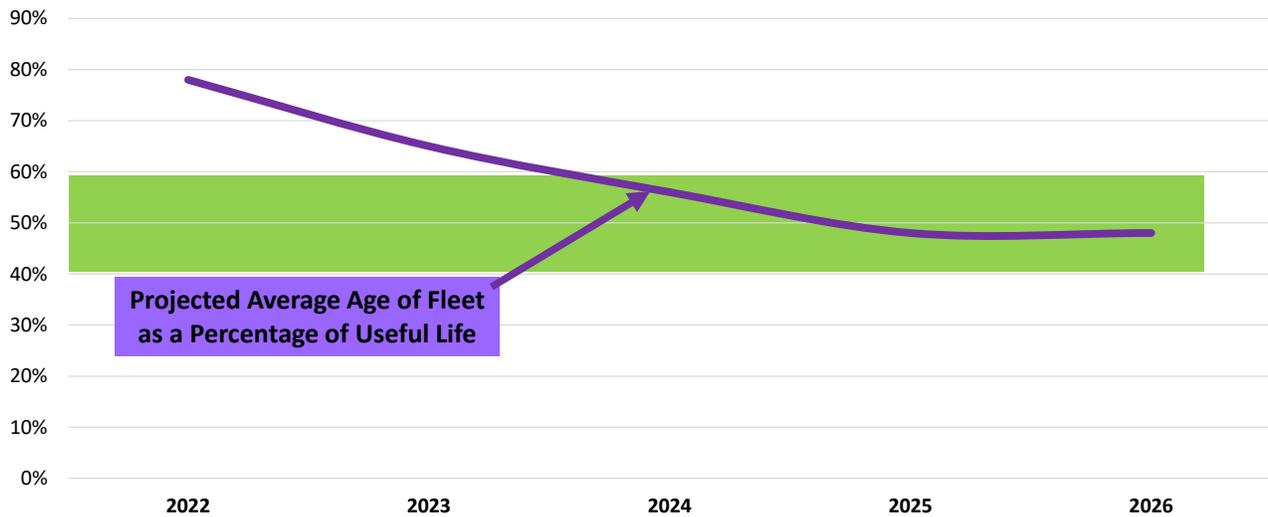
An effective fleet replacement program attempts to avoid significant “peaks and valleys” in replacements. This practice normalizes maintenance expense (ie: you’re maintaining about the same number of new buses, old buses and middle aged buses each year), smooths capital expenditures, and provides for more flexible service planning as fleet composition can be more quickly adapted to changing service and ridership patterns. Based on this schedule, the average age of fleet will be well within the target average age of 4.8 to 7.2 years. The chart below depicts the projected average age of the Authority’s heavy-duty bus fleet expressed as a percentage of useful life assuming we carry out the plan as presented. For example, a metric of 50% would mean that the average age of a bus is six years old:



7. Body-on-Chassis Vehicle Replacement: Annual small bus replacement to bring fleet into SGR according to the fleet management plan and in accordance with goals established in the Nashville MTA TAM plan for existing service levels (as such, this category does not include buses required for service expansion). Body-on-Chassis vehicles are the small buses in the WeGo Public Transit fleet, generally built on Ford commercial chassis’ and accommodating 12 – 20 passengers. These vehicles are used on low patronage fixed bus routes (with added equipment such as electronic destination signs, fare collection equipment, bicycle racks, stop annunciators, etc.) and in Access door-to-door service. The plan assumes a normal replacement cycle of 5 years, utilizing gasoline propulsion technology. Fleet replacement schedule is as follows:

	FY2022	FY2023	FY2024	FY2025	FY2026
Fixed Route	12	10	10	10	10
Access	13	10	10	10	10
Total	25	20	20	20	20

An effective fleet replacement program attempts to avoid significant “peaks and valleys” in replacements. This practice normalizes maintenance expense (ie: you’re maintaining about the same number of new buses, old buses and middle aged buses each year), smooths capital expenditures, and provides for more flexible service planning as fleet composition can be more quickly adapted to changing service and ridership patterns. Based on this schedule, the average age of fleet will reach the target average age of 2 - 3 years by the mid-point in the plan. The chart below depicts the projected average age of the Authority’s body-on-chassis bus fleet expressed as a percentage of useful life assuming we carry out the plan as presented. For example, a metric of 50% would mean that the average age of a bus is 2.5 years old:



8. **Non-Revenue Vehicle Replacement:** Annual non-revenue car/truck replacement to bring fleet into State of Good Repair according to the fleet management plan as needed based on age, mileage or condition of various vehicles. For FY2021-22, there has been an accumulated backlog of replacements, and 35 vehicles will have reached the end of their useful life. After FY2021-22, the programmed funding would provide for a more “normal” replacement cycle of 5 – 7 vehicles per year, depending on type purchased. Vehicles included in this classification include Operations supervisory vehicles, Maintenance support vehicles, pool cars, inventory distribution vehicles, stop/shelter maintenance vehicles, etc.
9. **Information Technology Routine Hardware Replacement:** Annual IT Budget for maintenance and replacement of current IT needs. This equipment generally includes the servers, workstations, switches and related equipment necessary to sustain the Authority’s enterprise and office management software.
10. **On Board & On Street IT Equipment Replacement:** Five to ten year replacement of on board vehicle and on street hardware and software including fare collection equipment, ticket vending machines, transit signal priority, 800Mhz voice, Ultra High Frequency data, on board routers, automated passenger counters, Computer-Aided Dispatch/Automatic Vehicle Locator, and Wi-Fi hardware. On street hardware includes customer facing equipment for bus bays at Central and on street single line signs. This may include firmware and software programming services.
11. **Wireless Communications:** This project identifies wireless communications deficiencies at WeGo’s three main facilities. These networks will impact all departments with improved communication access.
12. **Myatt Building Shop Trench Fill:** Filling in open area trench in the Myatt building garage left from the previous tenant. The large trench creates a division in the garage and prevents the use of this section of the space. Filling in the trench in the long term will allow for maintenance training area space for mechanics and apprentice mechanics to be trained.
13. **Operating Facility Building Capital Repair/Replacement.** This item is a planned recurring expenditure to support capital repairs and replacements on significant building systems (i.e.: HVAC, Elevator/ Escalator, Plumbing, Pavement, Roof and Structure) on an as needed basis. Larger individual items would be programmed separately from the more routine projects included in this line item.
14. **Nestor Maintenance Facility Upgrades:** The Nestor facility is the main maintenance, operations, and dispatching location for WeGo hosting most forms of operational departments. Although the Administrative

Offices at the Nestor facility underwent significant renovation in recent years, the much more complicated task of upgrading the Maintenance facility and improving site circulation has not moved forward. Given that more than 90% of WeGo Public Transit's bus fleet is dispatched and undergoes running repair here, the facility will need to begin design of major upgrades and renovations to remain viable. While the Myatt facility has more than enough space to accommodate significantly more fleet than it does currently, the location of the facility is problematic, as it would require excessive deadhead hours and miles. Recently, service development staff modeled operation of the entire fleet out of the Myatt Drive facility in the event Nestor became inoperable for some reason. They estimated that the Authority's operating budget would need to increase by more than \$6 million annually to operate the current level of service. This necessitates a programmed approach to upgrading the Nestor facility – a process that is complicated by its location within the Cumberland River floodplain, which may restrict the value and nature of renovations that can be done. On the Board's June agenda, is an item to authorize HDR to initiate an alternatives analysis for the long-term future of the Nestor property. However, there are a number of more immediate projects that will need to be completed in the short-term, regardless of the outcome of the study. These include:

- Sanitary Sewer Line Removal and Parking Area Stabilization
- Riverbank Stabilization
- Roof Replacement (May be partially reimbursed with FEMA funds due to storm damage)
- Exhaust Systems
- Shop Doors
- Pavement Repair and Rail Track Removal
- Security Structures
- HVAC Equipment Replacement

15. Existing Stop and Shelter Replacement: Annual budget for ongoing repair and replacement of old shelters. These projects will generally involve very little construction, with a routine "exchange" of an old shelter for new by WeGo Public Transit staff. In addition, given recent realignments of service and a move toward Better Bus Service improvements and system classification (i.e.: frequent service network, local routes, etc.), this project would begin the process of replacing old bus stop signs with more informative signage in the WeGo brand. The useful life of a shelter is approximately 10 years.

16. WeGo Central External Bay Coverings: This project involves the design, removal, and installation of new external bay coverings to improve passenger comfort at WeGo Central, specifically at Bays 7, 9 and 11 on the upper level that currently have very limited protection from the elements. Design is proposed for FY2022 and procurement and installation on FY2023.

Business Improvement

Business improvement projects are generally larger-scale planning, software or technology projects that provide a measurable enhancement to efficiency or customer service. These projects will also include routine, periodic updates to Authority planning efforts as required, such as the nMotion Strategic Service Plan which will be scheduled for an update during the term of this capital plan.

17. Touchless Procurement & Document Management System: The system will provide for a more efficient way to process purchase requests throughout the organization. Some of the overall goals for the touchless system include elimination of standalone business processing system, elimination of duplicate efforts and redundant data entry processes, improved workflow processes, centralized approach to process purchase requests and invoice approvals, an environment that allows for easy import/export, research, and retrieval of information, a centralized control environment for final supporting documents, and integration between multiple departments.

- 18. nMotion Strategic Service Plan Update:** The nMotion Strategic Service Plan was adopted in August 2016 by the Nashville MTA Board. Generally, Nashville MTA has updated the strategic service plan every five years. Funds are programmed in FY2022 to update baseline data and develop an updated strategic service plan. Although the update will include a public engagement element, we do not anticipate a level of effort remotely approaching that exercised during nMotion.
- 19. Paratransit Dispatching/Scheduling Software Upgrade:** The existing paratransit scheduling software has been used by MTA for well over a decade. Beyond normal obsolescence, this system does not accommodate current and emerging operating practices such as Access on Demand, WeGo Link, or real-time scheduling and dispatching of trips. This project entails the replacement of the existing system and will be consistent with recommendations from the Access Improvement Study that will provide specific functional specifications for a new system.
- 20. Enterprise Asset Management & Enterprise Resource Planning System:** Over the years WeGo has implemented a combination of data and financial management systems to address the needs of its business operations. These systems combined essentially function as stand-alone pieces for Procurement, Contracts Administration, Finance, Human Resources, Grants, Facilities, Maintenance and Operations. The current systems are outdated and ineffective in supporting the existing business processes. These general issues result in staff spending an extraordinary amount of time performing simple transactions as well as investigating the status of invoices in the purchase order/finance cycle. This project will fund the detailed exploration of options for implementing and integrating these systems into the agency's processes.
- 21. Training Center Expansion (Maintenance Focus):** Acquire modules, equipment, and tools to implement and maintain a Maintenance Apprenticeship Program as part of the Training Department.

nMotion Service Expansion/Service Improvement

- 22. Twelve-Year Heavy-Duty Bus Expansion, Fixed Route:** This item reflects service expansion scenarios developed as part of the Better Bus process and incorporated into the Metro Nashville Transportation Plan. The schedule presented here represents the phased implementation of Better Bus as outlined in the Metro Nashville Plan and incorporated into the recently adopted Metro Capital Improvement Budget. Specific acquisition authorizations will depend on projected increases in Metro operational funding to support service expansion.
- 23. Five-Year Body-on-Chassis Bus Expansion:** Similar to item 22 above, additional buses required on the fixed-route system would be developed in conjunction with adoption of Better Bus service expansion scenarios. However, Access also has projected an ideal fleet size based on pending demand. This calls for an expansion in the Access fleet of seven vehicles in FY2022. This expansion is delayed to 2022 to catch up the backlog of Access vehicle replacements and to assure that Operator levels are sufficient to staff the additional fleet.
- 24. Shelter Expansion/Upgrade Program:** The proposed plan allots \$2.5 million on FY2022 and \$1.5 million each subsequent year to upgrade and expand the Authority's passenger waiting shelter program. This effort includes 68 bus stops without shelters where at least 25 passengers board daily that should be candidates for shelters. In addition, 25 locations that already have waiting shelters warrant larger shelters based on routine crowding. These locations were adopted as part of the Metro Nashville Transportation Plan in December 2020. All new sites (and many of the sites in need of expanded shelters) will require extensive civil construction to accommodate the shelters, and many are also likely to require easements or other property acquisition strategies.

25. *Downtown Neighborhood Traffic Study*: This is a collaboration between WeGo Public Transit and Metro Nashville to complete a comprehensive study to address the management and prioritization of transportation activities in Downtown Nashville including traffic management, transit operations, curbside management, and vision zero to improve overall mobility. Project funding partners include WeGo, Metro Nashville, TDOT, and the Nashville Downtown Partnership. WeGo Public Transit is handling the procurement of consulting partners, and Metro Nashville will handle overall project management.

26. *Transit Center Projects*: This is a key element of the nMotion plan and included in the Metro Nashville Transportation Plan to improve transit options and facilitate connections outside of Downtown Nashville. Funds in the amount of \$1.5 million on FY2022 and \$500,000 every year after are proposed to support planning and development services for transit centers will support planning and development services such as real estate prospecting, conceptual design, legal work, and appraisal services for 'next generation' transit centers. These funds will be used as specific opportunities arise. The Hillsboro Transit Center is nearing completion and expected to open in the fall and the North Nashville Transit Center design is moving along. As previously reported to the Board, other neighborhood and regional transit centers are in varying stages of development. Staff had reported that WeGo Public Transit had been approached by developers about incorporating transit centers into the redevelopment of the Global Mall at the Crossings and the Madison Town Center. These projects are moving slowly at the time and staff will continue conversations with these parties as the projects develop. Similarly, WeGo Public Transit is pursuing a transit center at Tennessee State University, but the university has asked that we delay the project until they are able to update their Campus Master Plan. None of these projects are proposed for funding in this iteration of the Capital Plan (although staff would certainly approach the Board for an amendment if any of these situations changes).

27. *Service Reliability Improvements*: This is a new category to the capital plan and (over time) could include a wide variety of projects ranging from planning, to capital to information technology and communications infrastructure. Broadly speaking, these are projects targeted at improving the overall reliability of our services from a systems perspective with a focus on trip completion, on-time performance, bus spacing/gap protection, service disruption recovery, "connection protection," etc. Among the illustrative types of projects that could be contemplated in this category:

- ***Headway Management Systems*** – For bus service operating in high frequency corridors, on-time performance is usually less important to a customer than headway performance. For instance, in the Murfreesboro Pike Corridor where buses run every 10 minutes during peak periods, a passenger will generally be less concerned that the bus is 4 minutes ahead or behind the published time point, as long as all buses are operating consistently and all buses are 4 minutes ahead or behind the current time point, and buses are consistently running about 10 minutes apart. With all or part of 9 service corridors targeted for this kind of "frequent service network" status, headway management will become an increasingly important part of our operations system management. Recently, the City of Nashville was awarded a highly competitive "Advanced Transportation and Congestion Management Technologies Deployment" Grant by the Federal Highway Administration (FHWA) to deploy various intelligent transportation systems applications in the Charlotte Corridor. The exploration of headway management techniques in the corridor was a significant deciding factor for FHWA to award the project to Nashville.
- ***Yard Management Systems*** – For anyone who has ever had trouble finding their car in a parking garage, imagine a large parking lot with 240 cars that all look exactly like yours. In terms of transit service, a surprisingly high number of trips leave the Nestor (or Myatt) operating facilities late due to factors ranging from operators not being able to find their assigned bus, to buses with mechanical failures being improperly parked and classified in active areas, to lost paper vehicle condition reports leading to buses with mechanical conditions being improperly placed back in service. Currently, all of these are

paper-based systems. Automated yard management systems provide for a more automated approach to vehicle condition reporting and tracing (in concert with the Enterprise Asset Management System described above) to pinpoint location of vehicles on storage lots, to real-time notification of dispatchers of pending disruptions.

- **Traffic Management Center Integration** – As part of the Nashville Transportation Plan, the City will be pursuing development and construction of an advanced traffic management center where traffic operations will begin to become automated and centralized. In such a center, traffic signals are coordinated with video surveillance equipment and traffic sensors to dynamically alter flow patterns based on normal (ie: time of day) or unusual (ie: incident, special event) disruptions to “normal” traffic flow. As part of the design process, we will be working with the City to determine what role (if any) WeGo will play in this facility; from a full-time presence to manage bus service reliability in real-time, to deployment during special events.
- **Transit Priority Improvements** - These are projects that would provide priority for transit vehicles in various settings. Current examples include the queue jumps and transit signal priority along Murfreesboro Pike. Future projects could include expansions of these approaches, dedicated lanes, event-based transit priority measures (like contraflow lanes), etc.

28. Murfreesboro Pike High Capacity Corridor Planning: The nMotion Strategic Service Plan contemplated the ultimate development of several “high capacity transit corridors” in our highest ridership locations. Metro Nashville’s recently adopted Transportation Plan narrowed the development of high capacity transit to upgrades to the WeGo Star (an RTA project), Rapid Bus enhancement in the Clarksville Pike Corridor, and possible full Bus Rapid Transit in the Murfreesboro Pike Corridor. This project would conduct initial planning studies and environmental assessment to the point of determining project eligibility for Federal fixed guideway funding (most likely FTA Small Starts) in this corridor.