



# TRANSIT ASSET MANAGEMENT PLAN STATUS REPORT – 2023



*Produced by the Transit Asset Management Department:*  
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## EXECUTIVE SUMMARY

Annually in May, the Regional Transportation Authority (RTA) of Northeastern Illinois, approves and releases their Budget and Capital Program Call (the “Budget Call”) to the Service Boards; Pace Suburban Bus Service, Metra Commuter Rail, and the Chicago Transit Authority (CTA). The RTA FY2024 Budget Call Service Board Information Requirements, B. paragraph states:

*“The Service Boards must articulate their methodology for analyzing priorities and selecting projects to be funded in their 2024-2028 Five-Year Capital Program. This process should be reflective of each Service Board’s TAM (Transit Asset Management) Plan. Amendments and updates to TAM Plans should be provided to RTA as a part of the budget process and posted on each agency’s website in accordance with state legislation (Public Act 102-0573, Section 2705-203). RTA will use this to ensure compliance with Federal and State requirements, understand each Service Board’s approach to TAM, and to inform RTA’s Strategic Asset Management (SAM) activities that are ongoing in 2023 and 2024”.*

Whereas per the TAM Final Rule, 49 CFR §625.29 Transit Asset Management Plan: Horizon Period, Amendments, and Updates:

*(a) **Horizon period.** A TAM plan must cover a horizon period of at least four (4) years.*

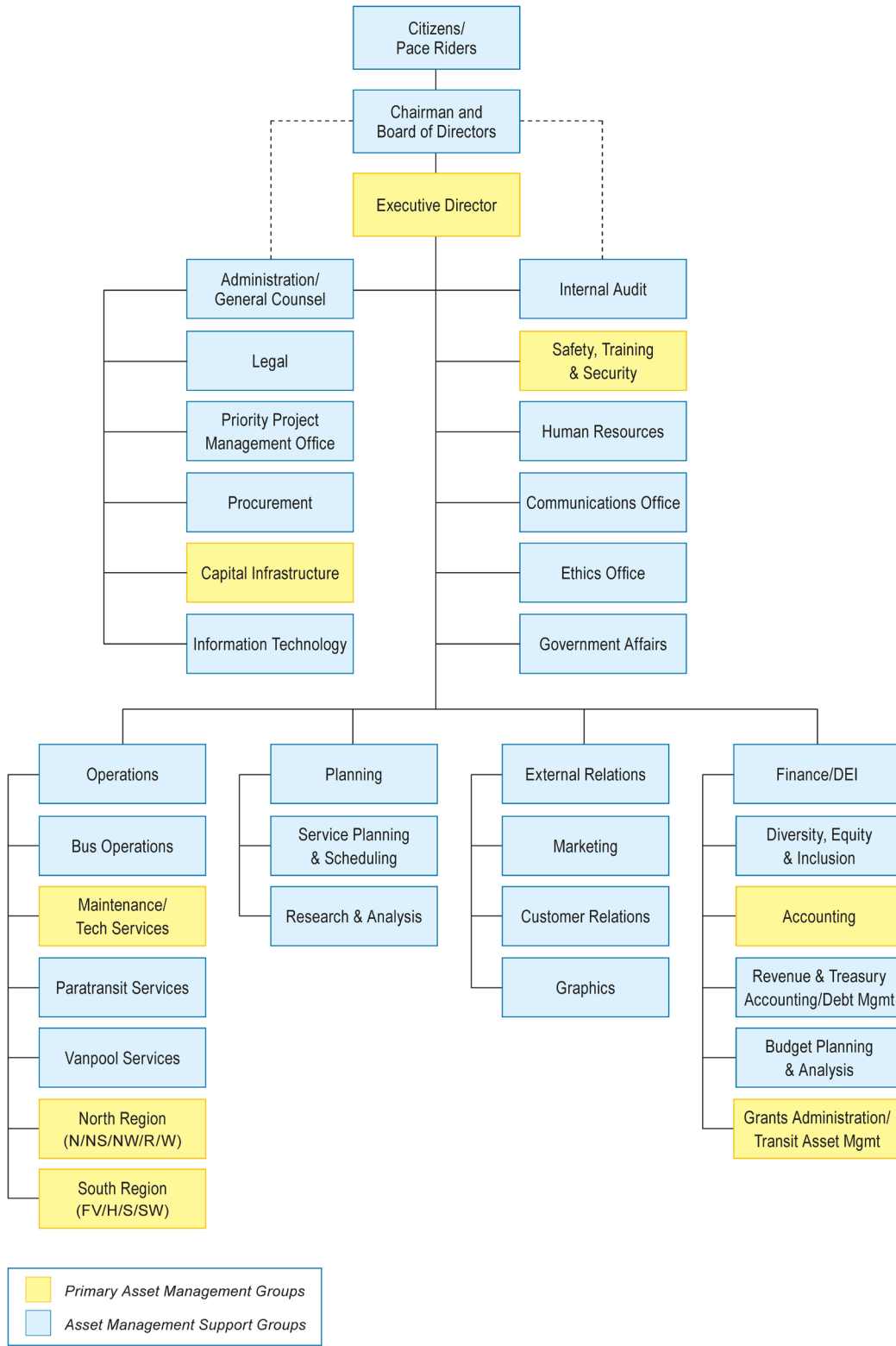
*(b) **Amendments.** A provider may update its TAM plan at any time during the TAM plan horizon period. A provider should amend its TAM plan whenever there is a significant change to the asset inventory, condition assessments, or investment prioritization that the provider did not reasonably anticipate during the development of the TAM plan.*

*(c) **Updates.** A provider must update its entire TAM plan at least once every four (4) years. A provider’s TAM plan update should coincide with the planning cycle for the relevant Transportation Improvement Program or Statewide Transportation Improvement Program.*

Annually, the TAM Department shall summarize those TAM Plan sections where changes are identified from the 2022 Horizon Plan to create an internal status report for **Melinda J. Metzger, Pace Executive Director, and Accountable Executive**. This report can be used upon ordinance or request, to inform external stakeholders, such as the RTA’s Annual Budget Call Submittal mentioned above.

It is our pleasure to report receiving the metric of “Not Deficient (ND)” for the FTA FY23 Triennial requirements for Transit Asset Management. At Pace, Transit Asset Management is an agency-wide effort as summarized in the top-down organization chart on the next page.

# PACE ASSET MANAGEMENT ORGANIZATION



# 1. INVESTMENT PRIORITIZATION

Pace's Investment Prioritization method, in the following pages, aligns with our Capital Project Scoring Criteria, and the process currently to be used to evaluate projects during the 2024-2028 annual budget cycle.

Within each asset category reside individual asset class projects which are scored by pre-determined criteria and scoring ranges assigned to achieve up to a total maximum of 30 points. Each of the evaluators' scores are averaged to produce an overall asset category score to assign a ranking within the Five-Year program. The Chief Financial Officer appoints a multi-department cross functional team, approved by the Executive Director, to complete the scoring. All team member scores are averaged to provide a singular score per project.

After the evaluation of projects, the Capital Grants and Transit Asset Management (TAM) Department prepares a draft recommended project list and submits it to Senior Staff for review and comment. Recommended projects are tied to available funding as established by the RTA projections (Marks) which are adopted no later than the September 15 statutory funding deadline. Note that years two through five are approached as an overarching strategic framework for the future direction of potential projects outside of the annual program.

The Investment Prioritization Framework is goal-orientated and objective-based in the out-years because it is dependent on the RTA receiving the fully apportioned regional funding estimates along with each Service Board receiving potential discretionary funding. Each program year needs to balance to the RTA Five-Year Capital Program Funding Marks.

## PROJECT CRITERIA AND SCORING RANGES

Below is an outline of our 13 criteria used during the scoring phase of the capital project prioritization process for a maximum total score of 30.

**1. SAFETY** - Max Score: 3

Security is also a factor in addition to safety improvements.

**2. STATE OF GOOD REPAIR** - Max Score: 3

< 1 year beyond useful life (1 point), > 1 year beyond useful life or poor condition (3 points).

**3. RELIABILITY** - Max Score: 3

Reliability of the capital item or service provided.

**4. MOBILITY** - Max Score: 3

Mobility Justice, ADA specific.

**5. REGULATORY** - Max Score: 2  
Compliance with regulations (0 or 2 score).

**6. EQUITY** - Max Score: 3  
Racial equity, factoring demographics of service area or location of project.

**7. CAPACITY** - Max Score: 2  
Expansion of service or seating or facility space.

**8. ACCESS TO KEY DESTINATIONS** - Max Score: 1  
Jobs, retail, healthcare, recreation, etc.

**9. ECONOMIC DEVELOPMENT** - Max Score: 1  
Positive economic impact to area/location of project.

**10. DELIVER VALUE ON INVESTMENTS** - Max Score: 1  
Operating impacts/ Recovery Ratio improvement and/or reduced O&M costs.

**11. STAY COMPETITIVE** - Max Score: 2  
Improvements to rider experience, technology improvements, and/or ridership increase.

**12. ENVIRONMENTAL IMPACT** - Max Score: 3  
Zero-Emission/Electrification (3 points), CNG (2 points), other (1-2 points).

**13. AGENCY COMMITMENT** - Max Score: 3  
Multi-year funding, Board/Executive priority request, and/or mission critical.

## **PRIORITIZATION OF CAPITAL INVESTMENTS**

Due to the timing of the annual budget process, the information provided in this section is considered preliminary until approved by both the Pace and RTA Boards of Directors in November and December 2023, respectively. The following tables summarize Pace's proposed five-year capital program:

- **2024-2028 Suburban Service Capital Business Plan (000s) - Constrained**
- **Ranked List of Capital Projects, 2024**
- **Ranked List of Capital Projects, 2025-2028**



## 2024-2028 Suburban Service Capital Business Plan (000s) - Constrained<sup>1</sup>

|  | 2024             | 2025            | 2026            | 2027            | 2028            | Total            |
|--|------------------|-----------------|-----------------|-----------------|-----------------|------------------|
| <b>Rolling Stock Quantities</b>              |                  |                 |                 |                 |                 |                  |
| Fixed Route Electric Buses                   | 0                | 0               | 9               | 15              | 36              | 60               |
| Paratransit Vehicles                         | 14               | 45              | 45              | 56              | 93              | 253              |
| <b>Rolling Stock</b>                         |                  |                 |                 |                 |                 |                  |
| Fixed Route Electric Buses                   | \$0              | \$0             | \$11,700        | \$19,500        | \$46,809        | \$78,009         |
| Paratransit Vehicles                         | 1,802            | 5,564           | 5,526           | 6,838           | 11,365          | 31,095           |
| <b>Subtotal</b>                              | <b>\$1,802</b>   | <b>\$5,564</b>  | <b>\$17,226</b> | <b>\$26,338</b> | <b>\$58,174</b> | <b>\$109,104</b> |
| <b>Electrical/Signal/Communications</b>      |                  |                 |                 |                 |                 |                  |
| Onboard Digital Screens                      | \$2,514          | \$2,000         | \$2,000         | \$2,000         | \$2,000         | \$10,514         |
| <b>Subtotal</b>                              | <b>\$2,514</b>   | <b>\$2,000</b>  | <b>\$2,000</b>  | <b>\$2,000</b>  | <b>\$2,000</b>  | <b>\$10,514</b>  |
| <b>Support Facilities &amp; Equipment</b>    |                  |                 |                 |                 |                 |                  |
| North Division Electrification/Expansion     | \$55,000         | \$7,600         | \$0             | \$0             | \$0             | \$62,600         |
| Southwest Division Electrification/Expansion | 0                | 41,000          | 37,500          | 25,900          | 0               | 104,400          |
| River Division Electrification/Expansion     | 0                | 17,621          | 18,238          | 17,869          | 13,100          | 66,828           |
| <b>Subtotal</b>                              | <b>\$55,000</b>  | <b>\$66,221</b> | <b>\$55,738</b> | <b>\$43,769</b> | <b>\$13,100</b> | <b>\$233,828</b> |
| <b>Stations &amp; Passenger Facilities</b>   |                  |                 |                 |                 |                 |                  |
| Pulse 95th Construction                      | \$19,567         | \$0             | \$0             | \$0             | \$0             | \$19,567         |
| Pulse Halsted A/E and Construction           | 39,574           | 0               | 0               | 0               | 0               | 39,574           |
| <b>Subtotal</b>                              | <b>\$59,141</b>  | <b>\$0</b>      | <b>\$0</b>      | <b>\$0</b>      | <b>\$0</b>      | <b>\$59,141</b>  |
| <b>Grand Total - Constrained</b>             | <b>\$118,457</b> | <b>\$73,785</b> | <b>\$74,963</b> | <b>\$72,107</b> | <b>\$73,275</b> | <b>\$412,587</b> |

## Ranked List of Capital Projects, 2024

| Project Rank | Project Name                                       | Asset Category                   | Amount Requested | Average Score |
|--------------|--|----------------------------------|------------------|---------------|
| 1            | North Division Electrification/Expansion (Phase 2) | Support Facilities & Equipment   | \$62,636,623     | 20.3          |
| 2            | Paratransit Vehicles (replacement)                 | Rolling Stock                    | \$3,636,984      | 18.9          |
| 3            | Pulse 95th Construction                            | Stations & Passenger Facilities  | \$3,913,500      | 18.1          |
| 4            | Pulse Halsted A/E & Construction                   | Stations & Passenger Facilities  | \$7,436,500      | 18.1          |
| 5            | Paratransit Vehicles (expansion)                   | Rolling Stock                    | \$6,365,000      | 16.8          |
| 6            | Onboard Digital Screens                            | Electrical/Signal/Communications | \$2,350,000      | 9.6           |

<sup>1</sup> Pace Suburban Service and Regional ADA Paratransit Budget: 2024 Operating and Capital Program; 2024-2026 Business Plan for Operations; 2024-2028 Capital Business Plan. Proposed Program, October 2023.

### Ranked List of Capital Projects, 2025-2028

| Project Rank | Project Name                                 | Asset Category                   | Amount Requested | Average Score |
|--------------|--|----------------------------------|------------------|---------------|
| 1            | Southwest Division Electrification/Expansion | Support Facilities & Equipment   | \$104,370,424    | 19.9          |
| 2            | River Division Electrification/Expansion     | Support Facilities & Equipment   | \$66,833,447     | 19.5          |
| 3            | Fixed Route Electric Buses                   | Rolling Stock                    | \$78,000,000     | 19.5          |
| 4            | Paratransit Vehicles (replacement)           | Rolling Stock                    | \$40,850,000     | 17.5          |
| 5            | Paratransit Vehicles (expansion)             | Rolling Stock                    | \$12,350,000     | 15.6          |
| 6            | Onboard Digital Screens                      | Electrical/Signal/Communications | \$9,200,250      | 9.3           |

### ESTIMATION OF AVAILABLE CAPITAL FUNDING

To pay for our capital investments over the next five years, Pace will rely on funding from the sources described in **Capital Program Expected Funds (000s), FY2024-2028**.

#### Capital Program Expected Funds (000s), FY2024-2028

| Funding Source    | Amount           |
|-------------------|------------------|
| Federal 5307/5339 | \$281,223        |
| State PAYGO       | 83,572           |
| Federal CMAQ/CRP  | 27,791           |
| Federal RAISE     | 20,000           |
| <b>Total</b>      | <b>\$412,587</b> |

## 2. TAM NTD AIM ANNUAL SUBMITTAL

Per the Federal Transit Administration's guidance<sup>2</sup>:

*“The National Transit Database (NTD) program’s Asset Inventory Module (AIM) is designed to collect basic information on assets and infrastructure used by U.S. transit agencies to deliver service. The purpose of assembling a nationwide inventory is to improve the Federal Transit Administration’s (FTA’s) ability to project capital costs for the future replacement (and necessary capital renewal activities) of existing transit assets.*

*This information supports the FTA biennial report to the U.S. Congress regarding cost estimates of transit capital. These estimates directly influence the FTA annual budget request submitted for the Federal fiscal year (FFY). The Transit Asset Management (TAM) rule (49 CFR part 625) is a set of federal regulations that set out minimum Asset Management practices for Transit Providers. Beginning in Report Year (RY) 2018, agencies that receive or benefit from Chapter 53 funds from the Federal Transit Administration are required to report asset inventory and condition and performance information to the National Transit Database.”*

Each Chapter 53 funding recipient developing a TAM Plan is required to report annually to the FTA NTD. Pace has two NTD ID reporting numbers:

- 50113 for the Suburban Bus Division
- 50182 for the Regional ADA Paratransit Services

Pace does not set Performance Measures for the NTD ID reporting number 50182 Regional ADA Paratransit Services, because capital responsibility for those assets belongs to the Contractor, not Pace. Annually, the TAM Department maintains a record copy of each NTD submitted form with the Narrative Report. The Pace NTD Annual TAM Asset Inventory Module (AIM) Inventory Submittal includes:

| Pace NTD Annual TAM AIM Data Report Forms |  |
|---|--|
| <b>A-90</b>                               | Transit Asset Management Performance Measures    |
| <b>A-15</b>                               | Transit Asset Management Facilities Inventory    |
| <b>A-30</b>                               | Revenue Vehicle Inventory:                       |
|   | MB DO - Motor Bus Directly Operated              |
|   | MB PT - Motor Bus Purchased Transportation       |
|   | VP DO - Vanpool Directly Operated                |
|   | DR DO - Demand Response Directly Operated        |
| <b>A-35</b>                               | DR PT - Demand Response Purchased Transportation |
| <b>A-35</b>                               | Service Vehicle Inventory                        |

<sup>2</sup> National Transit Database, Asset Inventory Module, FY 2015 Reporting Manual.

### 3. TAM PERFORMANCE MEASURE TARGETS

*"Beginning in Report Year 2019, agencies must upload a narrative report to the NTD that outlines Performance Measures and their progress toward those Measures. This narrative may include any changes in transit system conditions that may affect progress toward Measures. There is no prescribed format for the narrative report."*<sup>3</sup>

Annually, Transit agencies must report their fiscal year Performance Measure Targets to the NTD for assets for which they have capital responsibility for replacement. Our Narrative Report identifies Pace's progress toward achieving the 2022 Performance Measure Targets, comparing these projected for 2023.

The Useful Life Benchmarks (ULB) for Rolling Stock and Equipment categories are measured in years and based on Pace's experience with these assets. The Facility condition ratings are based on the FTA TERM condition scale of 1 (Poor) to 5 (Excellent).

It is critical that Pace has clear knowledge of the condition of our assets and their performance. This information enables justification of operating budgets, capital program funding requests and project prioritization across divisions and asset classes.

To better communicate needs and the risks of underinvestment, Pace must have a good understanding of our State of Good Repair (SOGR) needs informed by condition assessments. This condition data will be a key input of Pace's prioritization process to ensure efficient and effective use of public funding.

#### 1. ROLLING STOCK

Percent of revenue vehicles that have met or exceeded their Useful Life Benchmark (ULB)

| Performance Measure    | ULB | 2022 Target | 2022 Performance | 2022 Variance | 2023 Target |
|------------------------|-----|-------------|------------------|---------------|-------------|
| BR - Over-the-Road Bus | 12  | 0.00%       | 0.00%            | 0.00%         | 0.00%       |
| BU - Bus               | 12  | 13.35%      | 18.09%           | -4.74%        | 14.44%      |
| CU - Cutaway           | 4   | 64.16%      | 75.99%           | -11.83%       | 59.38%      |
| MV - Minivan           | 5   | 100.00%     | 100.00%          | 0.00%         | 100.00%     |
| VN - Van               | 5   | 45.00%      | 43.45%           | 1.55%         | 72.13%      |

#### 2. EQUIPMENT

Percent of service vehicles that have met or exceeded their Useful Life Benchmark (ULB)

| Performance Measure                   | ULB  | 2022 Target | 2022 Performance | 2022 Variance | 2023 Target |
|---------------------------------------|------|-------------|------------------|---------------|-------------|
| Automobiles                           | 5    | 100.00%     | 100.00%          | 0.00%         | 100.00%     |
| Trucks and Other Rubber Tire Vehicles | 5/10 | 44.78%      | 47.97%           | -3.19%        | 54.42%      |

#### 3. FACILITY

Percent of facilities rated below 3 on the FTA TERM condition scale

| Performance Measure                     | ULB | 2022 Target | 2022 Performance | 2022 Variance | 2023 Target |
|---|-----|-------------|------------------|---------------|-------------|
| Passenger / Parking Facilities          | N/A | 13.64%      | 13.64%           | 0.00%         | 13.64%      |
| Administrative / Maintenance Facilities | N/A | 7.69%       | 8.33%            | -0.64%        | 8.33%       |

<sup>3</sup> Ibid

## 4. TAM FACILITIES INVENTORY

Pace utilizes Bus Transfer Centers, Park-n-Ride lots, and Passenger or Parking Facilities, which are primarily Transportation Centers that combine a Bus Transfer Center with parking. Pace also owns Administrative and Maintenance Facilities and uses support facilities owned by others to provide service. Additionally, Pace provides service to and from several Metra and CTA stations, and from locations not owned by Pace throughout the RTA service area in Northeastern Illinois.

Pace must annually report to the NTD on the facilities for which it has capital responsibility, as well as all passenger stations used in the provision of public transit. Pace passenger facilities without an enclosed building for passenger amenities such as ticketing, information, restrooms, concessions, do not meet NTD reporting requirements. However, because Pace has capital responsibility these are included the Initial 2018 and 2022 TAM Plan inventory per the Final Rule.

### FTA ANNUAL FACILITIES CONDITION RATINGS

Facilities condition ratings are used for required NTD reporting to evaluate performance. With the introduction of TAM, Pace has been required since 2017 to develop performance measures for the assets for which it has capital replacement responsibility.

*“For Passenger/Parking Facilities, the performance target must reflect the “percentage of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) scale (1=Poor to 5=Excellent).”<sup>4</sup>*

#### FTA TERM Facilities Condition Rating Levels

| Condition     | Definition   |
|---------------|--|
| 5 - Excellent | No visible defects, new or near new condition, may still be under warranty if applicable.                                    |
| 4 - Good      | Good condition, but no longer new, may have some slightly defective or deteriorated component(s), but is overall functional. |
| 3 - Adequate  | Moderately deteriorated or defective components; but has not exceeded useful life.   |
| 2 - Marginal  | Defective or deteriorated component(s) in need of replacement; exceeded useful life.   |
| 1 - Poor      | Critically damaged component(s) or in need of immediate repair; well past useful life.                                       |

Pace facilities are scored using the **TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation**, issued by the FTA, as the primary source for inspection and grading methodology. The FTA Guidebook relies on visual inspection, and in cases of difficult to access areas, it relies on visual inspection from an access point. The FTA Guidebook requires condition scores be given to 10 building

<sup>4</sup> Federal Transit Administration, U.S. Department of Transportation, National Transit Database Asset Inventory Module 2017-2018 Reporting Guide

systems in each facility which are summed into a single score for each facility using a calculation method at the discretion of the agency. Those weightings are summarized below.

| ID            | Building System             | Weightings (%) |
|---------------|-----------------------------|----------------|
| A             | Substructure                | 5-15           |
| B             | Shell                       | 20-35          |
| C             | Interiors                   | 5-10           |
| D             | Conveyance                  | 1-5            |
| E             | Plumbing                    | 5-10           |
| F             | HVAC                        | 5-10           |
| G             | Fire Protection             | 1-5            |
| H             | Electrical                  | 1-5            |
| I             | Equipment / Fare Collection | 10-15          |
| J             | Site                        | 10-15          |
| <b>Total:</b> |                             | <b>100%</b>    |

Note that ranges are provided because certain facilities did not have all the building systems listed so weightings are redistributed accordingly in that case. Many sites have large areas of pavement and or landscaping which are scored under “Site” which proportionally reduces the weightings given to the other building systems.

## FACILITY CONDITION ASSESSEMENTS

Between 2018-2022, WSP, USA, Inc. was the TAM Plan consultant who also conducted the facility condition assessments for which Pace has capital responsibility. Pace has assessed approximately one-quarter of its facilities each year since 2018 in compliance with the FTA mandate to assess all facilities at least once every four years. In August 2023, Pace executed a five-year contract with Bureau Veritas to perform annual facilities condition assessments. We anticipate their final report to be issued in the 4th quarter, 2023.

| Current Condition Scores for Administrative/Maintenance Facilities |                  |                 |
|--|------------------|-----------------|
| Asset Name   | Condition Rating | Assessment Date |
| Administration Headquarters  | 4                | 9/28/2020       |
| Fox Valley Division  | 3                | 7/12/2019       |
| Heritage Division  | 5                | 10/24/2022      |
| McHenry Paratransit Garage   | 3                | 7/10/2019       |
| North Division   | 3                | 7/10/2019       |
| North Shore Division   | 4                | 7/9/2019        |
| Northwest Division   | 2                | 9/29/2020       |
| River Division   | 3                | 7/11/2019       |
| South Division   | 4                | 10/12/2021      |
| South Holland Acceptance Facility                                  | 4                | 10/13/2021      |
| Southwest Division   | 4                | 10/13/2021      |
| West Division  | 4                | 9/30/2020       |

### Current Condition Scores for Passenger/Parking Facilities

| Asset Name                                  | Condition Rating | Assessment Date |
|---|------------------|-----------------|
| Blue Island Park-n-Ride                     | 3                | 7/8/2019        |
| Bolingbrook - Canterbury Lane Park-n-Ride   | 3                | 4/28/2022       |
| Bolingbrook - Old Chicago Park-n-Ride       | 3                | 4/28/2022       |
| Bridgeview Transit Center                   | 5                | 10/7/2020       |
| Bridgeview Transit Center Park-n-Ride       | 5                | 10/7/2020       |
| Buffalo Grove Park-n-Ride                   | 3                | 4/27/2022       |
| Buffalo Grove Transportation Center         | 4                | 4/27/2022       |
| Burr Ridge Park-n-Ride                      | 2                | 4/28/2022       |
| Chicago Heights Transportation Center       | 3                | 10/12/2021      |
| Elgin Transportation Center                 | 4                | 10/6/2020       |
| Elk Grove Park-n-Ride                       | 2                | 4/27/2022       |
| Harvey Transportation Center                | 2                | 7/8/2019        |
| Harvey Transportation Center Park-n-Ride    | 2                | 7/8/2019        |
| Hillside Park-n-Ride                        | 3                | 9/29/2020       |
| Homewood Park-n-Ride                        | 3                | 7/8/2019        |
| I-90/Barrington Road                        | 5                | 10/6/2020       |
| I-90/Barrington Road Park-n-Ride            | 5                | 10/6/2020       |
| I-90/IL-25 Park-n-Ride                      | 5                | 4/29/2022       |
| I-90/Randall Road Park-n-Ride               | 5                | 4/29/2022       |
| Northwest Transportation Center             | 3                | 9/28/2020       |
| Northwest Transportation Center Park-n-Ride | 3                | 9/28/2020       |
| Plainfield Park-n-Ride Bus Transfer Center  | 5                | 10/7/2020       |
| Plainfield Park-n-Ride                      | 5                | 10/8/2020       |
| Prairie Stone Transportation Center         | 2                | 4/29/2022       |

### NTD RY2022 FACILITIES PERFORMANCE MEASURES

#### Performance Measures for Facilities

| Asset Type                 | 2022 Target | 2022 Performance | 2022 Variance | 2023 Target |
|----------------------------|-------------|------------------|---------------|-------------|
| Passenger/Parking          | 13.64%      | 13.64%           | 0.00%         | 13.64%      |
| Administrative/Maintenance | 7.69%       | 8.33%            | -0.64%        | 8.33%       |

**Passenger/Parking Facilities:** Pace maintained the 2022 Performance Measure Target of 13.64% because there is no change in the percent of our facilities rated below three on the FTA TERM condition scale. The 2023 Passenger/Parking Facilities Projected Performance Measure Target is set at 13.64%.

**Administrative/Maintenance Facilities:** Pace was slightly unfavorable to our 2022 Performance Measure Target from the 2022 Projected Performance Targets by 0.64%. This is because the total quantity was based on 13 locations and now reflects 12 locations

due to our Joliet location closure not being factored into our 2022 projections. On October 24, 2022, our new Heritage Division, Plainfield facility opened, with all bus service operating from Joliet transferred to Plainfield. The 2023 Projected Performance Measure Target is set at 8.33%.



*Photo: New Heritage Division in Plainfield, October 2022*



## 5. TAM ROLLING STOCK INVENTORY

All transit agencies reporting service data must provide information on Revenue Vehicles by Mode and Type of Service (TOS). Transit agencies must inventory all vehicles they use to provide public transportation that have not been sold or disposed of by the end of the fiscal year. Vehicles must be reported on the first fiscal year in which they are used in revenue service. Transit agencies report Revenue Vehicle Inventory data by groups or fleets.

| Over-the-Road Bus (BR) |        |      |            |           |
|------------------------|--------|------|------------|-----------|
| Manufacturer           | Length | Year | Age FY2022 | Quantity  |
| MCI                    | 40'    | 2013 | 9          | 13        |
| MCI                    | 40'    | 2015 | 7          | 9         |
| MCI                    | 40'    | 2017 | 5          | 6         |
| MCI                    | 40'    | 2021 | 1          | 7         |
|                        |        |      |            | <b>35</b> |

| Bus (BU)     |        |      |            |            |
|--------------|--------|------|------------|------------|
| Manufacturer | Length | Year | Age FY2022 | Quantity   |
| Eldorado     | 30'    | 2007 | 15         | 43         |
| Eldorado     | 30'    | 2008 | 14         | 29         |
| Eldorado     | 30'    | 2009 | 13         | 18         |
| Eldorado     | 30'    | 2010 | 12         | 29         |
| Orion Hybrid | 30'    | 2011 | 11         | 2          |
| Eldorado     | 30'    | 2011 | 11         | 4          |
| Eldorado     | 40'    | 2012 | 10         | 1          |
| Eldorado     | 40'    | 2013 | 9          | 63         |
| Eldorado     | 40'    | 2014 | 8          | 36         |
| Eldorado     | 40'    | 2015 | 7          | 45         |
| Eldorado CNG | 40'    | 2015 | 7          | 18         |
| Eldorado     | 40'    | 2016 | 6          | 81         |
| Eldorado     | 40'    | 2017 | 5          | 84         |
| Trolley      | 30'    | 2017 | 5          | 7          |
| Eldorado CNG | 40'    | 2017 | 5          | 67         |
| Eldorado CNG | 40'    | 2018 | 4          | 11         |
| Eldorado CNG | 40'    | 2020 | 2          | 6          |
| New Flyer    | 40'    | 2020 | 2          | 78         |
| Eldorado     | 30'    | 2020 | 2          | 21         |
| Eldorado     | 30'    | 2022 | 0          | 15         |
|              |        |      |            | <b>658</b> |

| Cutaway (CU)      |        |      |            |          |
|-------------------|--------|------|------------|----------|
| Manufacturer      | Length | Year | Age FY2022 | Quantity |
| Champion Crusader | 21'    | 2009 | 13         | 2        |
| Champion Crusader | 21'    | 2012 | 10         | 3        |

|                     |         |      |   |            |
|---------------------|---------|------|---|------------|
| Eldorado Aerotech   | 25'     | 2014 | 8 | 62         |
| Champion Challenger | 22'     | 2014 | 8 | 86         |
| Champion Crusader   | 23'     | 2015 | 7 | 15         |
| Eldorado Aerotech   | 25'     | 2016 | 6 | 49         |
| Eldorado Aerotech   | 25'     | 2017 | 5 | 119        |
| Champion Crusader   | 23'     | 2017 | 5 | 35         |
| Eldorado Aerotech   | 25'     | 2018 | 4 | 28         |
| Champion Crusader   | 21'-23' | 2018 | 4 | 3          |
| Champion Crusader   | 21'     | 2019 | 3 | 21         |
| Coach Phoenix       | 28'     | 2022 | 0 | 106        |
|                     |         |      |   | <b>529</b> |

| <b>Minivan (MV)</b> |               |             |                       |                 |
|---------------------|---------------|-------------|-----------------------|-----------------|
| <b>Manufacturer</b> | <b>Length</b> | <b>Year</b> | <b>Age<br/>FY2022</b> | <b>Quantity</b> |
| Dodge Caravan       | 17'           | 2012        | 10                    | 1               |
| Dodge Caravan       | 17'           | 2013        | 9                     | 20              |
| Dodge Caravan       | 17'           | 2016        | 6                     | 4               |
| Dodge Caravan       | 17'           | 2017        | 5                     | 168             |
|                     |               |             |                       | <b>193</b>      |

| <b>Van (VN)</b>     |               |             |                       |                 |
|---------------------|---------------|-------------|-----------------------|-----------------|
| <b>Manufacturer</b> | <b>Length</b> | <b>Year</b> | <b>Age<br/>FY2022</b> | <b>Quantity</b> |
| Ford E350           | 19'           | 2011        | 11                    | 3               |
| Ford E350           | 18'-20'       | 2013        | 9                     | 16              |
| Ford E350           | 22'           | 2014        | 8                     | 4               |
| Ford Transit        | 19'-20'       | 2016        | 6                     | 63              |
| Ford Transit        | 19'           | 2017        | 5                     | 50              |
| Ford Transit        | 19'           | 2018        | 4                     | 92              |
| Ford Transit        | 18'-19'       | 2020        | 2                     | 85              |
|                     |               |             |                       | <b>313</b>      |

Pace calculated the 2022 Revenue Vehicle Performance Measure Targets by dividing the Active Fleet that have met or exceeded their ULB by the Total Active Fleet. To conduct the 2023 Projected Vehicle Targets, one year is added to the vehicles age to re-baseline the fleet age. Pace then estimates the number of new vehicles it expects to receive during the year and adds them to the Projected Active Fleet.

Lastly, Pace estimates the number of Active Vehicles it expects to deactivate from service during the year and removes them from the Projected Active Fleet. Pace then calculates the 2023 Revenue Vehicle Projected Performance Measure Targets by dividing the Projected Active Fleet that will have met or exceeded their ULB by the Total Projected Active Fleet.

## CONDITION INFORMATION AND PERFORMANCE MEASURES

For Rolling Stock, the Performance Measure must reflect the “percent of Revenue Vehicles that are expected to meet or exceed their Useful Life Benchmark.” The values in the table represent the percentage of vehicles beyond their ULB.

| Performance Measures for Rolling Stock |             |             |                  |               |             |
|--|-------------|-------------|------------------|---------------|-------------|
| Asset Type                             | ULB (Years) | 2022 Target | 2022 Performance | 2022 Variance | 2023 Target |
| BR – Over-the-Road Bus                 | 12          | 0.00%       | 0.00%            | 0.00%         | 0.00%       |
| BU – Bus                               | 12          | 13.35%      | 18.09%           | -4.74%        | 14.44%      |
| CU – Cutaway                           | 4           | 64.16%      | 75.99%           | -11.83%       | 59.38%      |
| MV – Minivan                           | 5           | 100.00%     | 100.00%          | 0.00%         | 100.00%     |
| VN – Van                               | 5           | 45.00%      | 43.45%           | 1.55%         | 72.13%      |

**BR – Over-the-Road Bus:** Pace maintained the 2022 Performance Measure Target of 0.00% as none of our vehicles exceeded their ULB. The 2023 Projected Performance Measure Target is set at 0.00%.

**BU – Bus:** Pace was unfavorable to its 2022 Projected Performance Measure Target by 4.74%. The 2023 Projected Performance Measure Target is set at 14.44%, which would be an improvement of 3.65% from the 2022 actual performance.

**CU – Cutaway:** Pace was unfavorable to its 2022 Projected Performance Measure Target by 11.83%. The 2023 Projected Performance Measure Target is set at 59.38%, which would be an improvement of 16.61% from the 2022 actual performance.

**MV – Minivan:** Pace maintained the 2022 Performance Measure Target of 100.00% as all our vehicles exceeded their ULB. The 2023 Projected Performance Measure Target is set at 100.00%. No replacement vehicles were put into service in 2022, or will be in 2023, and all vehicles will continue to exceed their ULB in 2023. There has been lower participation due to COVID-19 and Pace is keeping vehicles longer because lower mileages are being accumulated.

**VN – Van:** Pace was favorable to its 2022 Projected Performance Measure Target by 1.55%. The 2023 Projected Performance Measure Target is set at 72.13% increasing 28.68% from 2022 actual performance. No replacement vehicles were put into service in 2022 or will be in 2023. There has been lower participation due to COVID-19 and Pace is keeping vehicles longer because lower mileages are being accumulated.

## 6. TAM SERVICE VEHICLE INVENTORY

Annually, transit agencies must report the number of Service Vehicles or vehicles which do not carry passengers in the total fleet at the end of their fiscal year, and for which they have capital replacement responsibility. Transit agencies are required to report Service Vehicle inventory data by groups or fleets.

| Automobiles           |      |               |           |
|-----------------------|------|---------------|-----------|
| Manufacturer          | Year | Age<br>FY2022 | Quantity  |
| Ford Focus            | 2009 | 13            | 2         |
| Chevy Impala          | 2010 | 12            | 6         |
| Ford Focus            | 2010 | 12            | 10        |
| Ford Focus - Electric | 2014 | 8             | 1         |
| Ford Taurus           | 2016 | 6             | 26        |
| Ford Taurus           | 2017 | 5             | 4         |
|                       |      |               | <b>49</b> |

| Trucks and Other Rubber Tire Vehicles |                |     |      |               |            |
|---------------------------------------|----------------|-----|------|---------------|------------|
| Manufacturer                          | Truck/<br>ORTV | ULB | Year | Age<br>FY2022 | Quantity   |
| Chevy C7H042                          | Truck          | 10  | 1994 | 28            | 1          |
| GMC C7H042                            | Truck          | 10  | 1994 | 28            | 1          |
| International 4170                    | Truck          | 10  | 1995 | 27            | 4          |
| International 4700                    | Truck          | 10  | 1995 | 27            | 2          |
| Ford F350                             | Truck          | 10  | 2000 | 22            | 1          |
| Ford F150                             | Truck          | 10  | 2005 | 17            | 1          |
| Dodge Caravan                         | ORTV           | 5   | 2009 | 13            | 3          |
| Ford F250                             | Truck          | 10  | 2009 | 13            | 2          |
| Ford E350                             | ORTV           | 5   | 2010 | 12            | 12         |
| Ford F150                             | Truck          | 10  | 2010 | 12            | 1          |
| Ford F350                             | Truck          | 10  | 2010 | 12            | 10         |
| Dodge Caravan                         | ORTV           | 5   | 2011 | 11            | 1          |
| Dodge Caravan                         | ORTV           | 5   | 2012 | 10            | 5          |
| Ford E350 Cube Van                    | Truck          | 10  | 2012 | 10            | 2          |
| Ford F250                             | Truck          | 10  | 2012 | 10            | 1          |
| Dodge Caravan                         | ORTV           | 5   | 2013 | 9             | 3          |
| Dodge Ram 1500                        | Truck          | 10  | 2013 | 9             | 3          |
| Ford Explorer                         | ORTV           | 5   | 2013 | 9             | 12         |
| Ford Transit Connect Mini             | ORTV           | 5   | 2013 | 9             | 4          |
| International 7400                    | Truck          | 10  | 2013 | 9             | 1          |
| Dodge Grand Caravan                   | ORTV           | 5   | 2016 | 6             | 3          |
| Ford F150                             | Truck          | 10  | 2016 | 6             | 1          |
| Ford F350                             | Truck          | 10  | 2016 | 6             | 1          |
| Ford Explorer                         | ORTV           | 5   | 2017 | 5             | 2          |
| Freightliner 35T                      | Truck          | 10  | 2018 | 4             | 1          |
| Ford Escape                           | ORTV           | 5   | 2018 | 4             | 8          |
| Ford F150                             | Truck          | 10  | 2018 | 4             | 5          |
| Ford F550                             | Truck          | 10  | 2018 | 4             | 1          |
| Ford Escape                           | ORTV           | 5   | 2019 | 3             | 50         |
| Ford F150                             | Truck          | 10  | 2020 | 2             | 4          |
| Ford F250                             | Truck          | 10  | 2020 | 2             | 1          |
| Freightliner 114SD                    | Truck          | 10  | 2021 | 1             | 1          |
|                                       |                |     |      |               | <b>148</b> |

## CONDITION INFORMATION AND PERFORMANCE MEASURES

Pace calculated the 2022 Service Vehicle Performance Measure Targets and the 2023 Service Vehicle Projected Performance Measure Targets using a similar methodology as for Revenue Vehicles. The only difference is that the Service Vehicle Inventory includes both Active *and* Inactive Vehicles owned by Pace in the fleet calculations.

For Service Vehicles, condition is measured based on the asset’s age relative to Pace’s Useful Life Benchmark (ULB). A ULB is the expected lifecycle of a capital asset for a Transit Provider's operating environment, or the acceptable period of use in service for a Transit Provider's operating environment, or as per FTA guidance. The values in the table below represent the percentage of Non-Revenue Vehicles beyond their ULB.

| Performance Measures for Equipment    |             |             |                  |               |             |
|---------------------------------------|-------------|-------------|------------------|---------------|-------------|
| Asset Type                            | ULB (Years) | 2022 Target | 2022 Performance | 2022 Variance | 2023 Target |
| Automobiles                           | 5           | 100.00%     | 100.00%          | 0.00%         | 100.00%     |
| Trucks and Other Rubber Tire Vehicles | 5/10        | 44.78%      | 47.97%           | -3.19%        | 54.42%      |

**Automobiles:** Pace maintained the 2022 Performance Measure Target of 100.00% as all our vehicles exceeded their ULB. The 2023 Projected Performance Measure Target is set at 100.00%. For Non-Revenue use, Pace has decided to go forward with only purchasing vehicles classified as Trucks and Other Rubber Tire Vehicles rather than Automobiles.

**Trucks and Other Rubber Tire Vehicles:** Pace was unfavorable to its 2022 Performance Measure Target by 3.19%. The 2023 Projected Performance Measure Target is set at 54.42%, an increase of 6.45% over 2022 actuals



*Photo: 2018 Freightliner 35-ton tow truck (“Cecil”) used for roadside service calls*

## 7. TAM ELECTRICAL/SIGNAL/COMMUNICATIONS

### ASSET DEFINITION

Electrical, Signal, and Communications is *not* yet a required annual NTD reporting asset category for transit agencies. However, it is included here based upon the RTA annual budget categories accounted for in Pace's Program of Projects, and because it is expected that all assets used in the provision of public transit will be included in the TAM Plan asset inventory.

### ASSET INVENTORY

Pace has different systems, and associated assets, which comprise our Electrical/Signal/Communications asset inventory including:

- Radio System
- Automated Vehicle Location (AVL) System
- Intelligent Bus System (IBS)
- Transit Signal Priority (TSP) System
- On-Bus Security System
- Bus Tracker Signage

The Radio System is for wireless two-way mobile communication between bus dispatch and bus drivers.

The Automated Vehicle Location System is a communication technology used for tracking our paratransit vehicles.

The Intelligent Bus System is a satellite-based communications technology, used to improve the tracking of fixed route buses, collection of data, and communication between Pace and our drivers and passengers for fixed route services.

In 2021, the Transit Signal Priority System was implemented along our Pulse Milwaukee Line. In late 2023 the Pulse Dempster Line is anticipated to support the Rapid Transit Program.

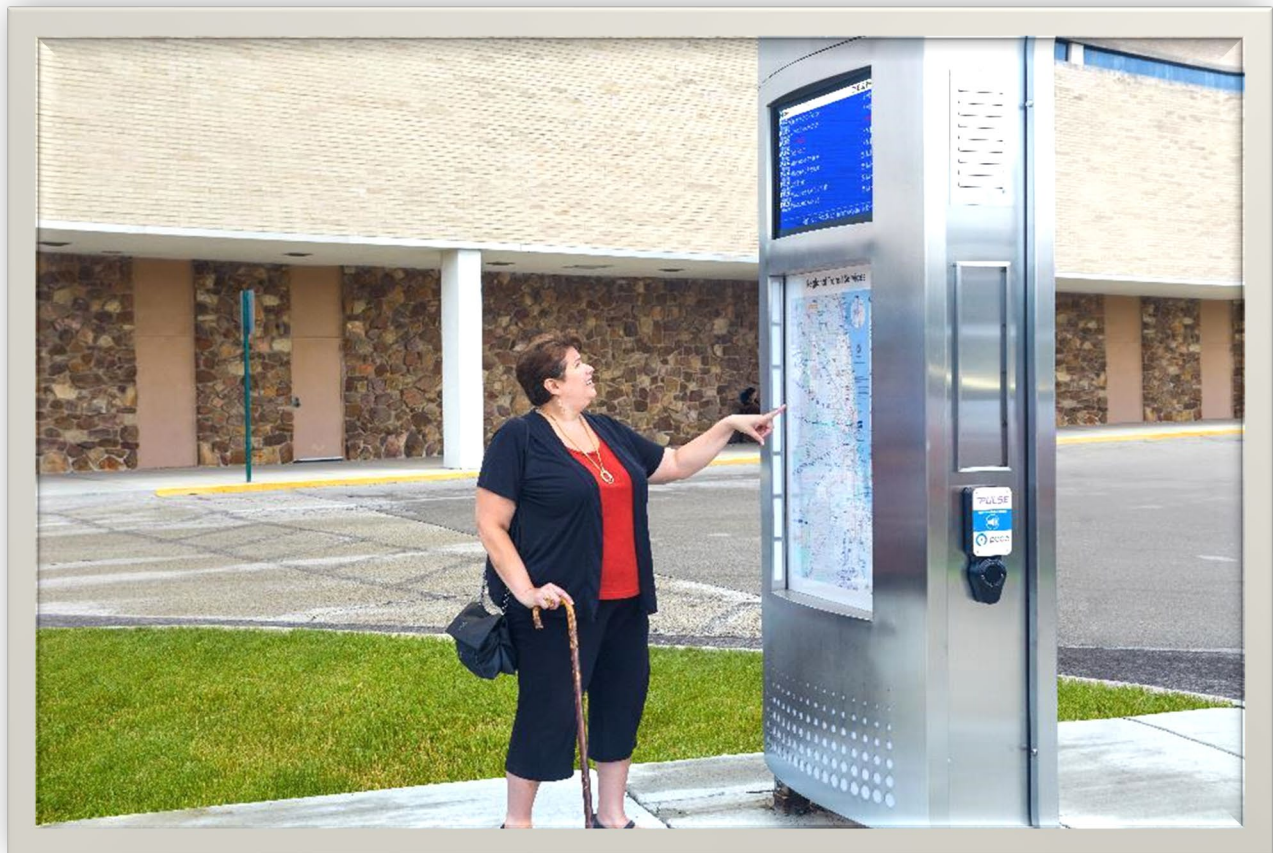
Pace developed a Regional Interoperable Transit Signal Priority System Platform in coordination with Illinois, Chicago and County DOT's and CTA. Pace also implemented signal timing optimization along 400 plus intersections connecting individual signal interconnects by signal timing offsets.

Pace also identified and designed Transit Signal Priority Signal Timing Plans for 300 intersections for Transit Signal Priority implementation along ten corridors within its service area. Pace plans to continue Transit Signal Priority deployment along other corridors and is also looking at centralized Transit Signal Priority options for future deployments.

All Pace buses are equipped with constant recording by internal security cameras and technology that enables external recording before and after incidents. These technologies promote safety of passengers and drivers and enable Pace to identify driver behavior that may pose a safety risk.

Pace has diverse types of Bus Tracker signage deployed primarily at its highest-ridership locations. These electronic signs offer real-time information about upcoming bus departures and provide for customer-facing messaging. The table below lists different signage types and typical locations where these are installed.

| Signage Type                           | Typical Installation     | Quantity |
|--|--------------------------|----------|
| <b>Nexus Alpha Bus Tracker</b>         | Shelters/Buildings       | 98       |
| <b>“e-ink” CHK Bus Tracker</b>         | Shelters (embedded)      | 30       |
| <b>Parsons Video-Style Bus Tracker</b> | Transit Centers          | 29       |
| <b>Parsons Video-Style Bus Tracker</b> | Pulse Milwaukee Shelters | 17       |
| <b>Parsons Video-Style Bus Tracker</b> | Pulse Dempster Shelters  | 29       |



*Photo: Pulse Station Bus Tracker Monument Signage*

## 8. TAM PLAN IMPLEMENTATION

WSP, Pace's TAM Plan consultant conducted a GAP Assessment to evaluate Pace's general Asset Management maturity and to assist with the development of the October 1, 2018, Pace Initial TAM Plan framework.

The WSP Gap Assessment produced a ***Pace TAM Improvement Objectives Handbook***, proposing 23 objectives on expanding asset management culture and implementation. Subsequently, these were divided into three categories:

- **8 Baseline Objectives** are well underway, with our commitment to continuing, expanding, or otherwise maintaining.
- **6 Implement Later Objectives** require preliminary work to be completed before these can start and be moved up to **Baseline**.
- **9 Further Investigate Objectives** need to be further explored to determine whether they should be programmed. If accepted, these may advance to **Implement Later**.

The table below highlights the status of Pace's implementation strategy for our Baseline objectives. Note objective implementation is not dependent on a sequential order by the TAM Department or the Agency.

| Baseline Improvement Objectives Update |   |
|--|---|
| 1                                      | <b>ASSET MANAGEMENT DOCUMENTS AND SYSTEMS</b><br>Pace has implemented a TAM SharePoint intranet site to access TAM Plans and annual Condition Assessment Reports, and centralize the NTD TAM AIM reporter source, working, and export files to eliminate silos of information. Development of the SharePoint is an iterative process.   |
| 2                                      | <b>CONDITION ASSESSMENT PROCESSES</b><br>The Pace TAM Department is in FTA compliance with annually assessing at least one-quarter of Pace's Facilities each year and will complete condition assessments of all Facilities in the FTA prescriptive four-year cycle. Pace will use consultants to produce asset condition assessments and accompany Pace staff in the field to produce an Annual Capital Asset Condition Assessment Report. |
| 3                                      | <b>NTD PERFORMANCE MEASURE TARGETS</b><br>The Pace TAM department has been in FTA compliance since 2017 to develop Performance Measure Targets for the assets for which Pace has capital responsibility. Subsequently, FTA required State of Good Repair (SGR) Performance Target Setting to be an annual component of the NTD Asset Inventory Module (AIM) reporting.  |
| 4                                      | <b>VEHICLE TRACKING UTILITY (VTU)</b><br>Pace has completed a baseline implementation of the VTU which provides additional fields for data in the Fixed Assets APEX system along with some baseline reports. Additional fields, reporting, and features are being determined to further develop with the Utility.   |



## Baseline Improvement Objectives Update

|    |  |
|----|--|
| 5  | <b>INVESTMENT PRIORITIZATION</b><br>Pace revisited our 1991 capital priority scoring criteria to apply it to the 2023 capital budget call process. The TAM Department with the Chief Financial Officer developed this new scoring guide. Updates include new RTA Act requirements for state-funded projects and alignment with the RTA strategic plan. Updates also include adding categories for racial equity, mobility justice, and environmental goals with an improved weighting system that better reflects evolving capital priorities of Pace and the region. The criteria include Safety, State of Good Repair, Reliability, Mobility, Regulatory, Equity, Capacity, Access to Key Destinations, Economic Development, Deliver Value on Investments, Stay Competitive, Agency Commitment. |
| 6  | <b>ASSET MANAGEMENT ORGANIZATIONAL DEVELOPMENT</b><br>Developed and distributed NTD TAM Asset Inventory Module (AIM) data entry protocols to Reporters. Conducted Reporter workshops to review agreed to data input methodology, monitor progress, and to inherently embed QA/QC oversight into Pace’s annual upload to the NTD database.  |
| 18 | <b>BUSINESS CONTINUITY PLAN – FORCE MAJEURE</b><br>During the world-wide pandemic, Pace prioritized the safety of our passengers and personnel by deep cleaning and sanitizing our vehicles and facilities daily, cleaning high-touch surfaces throughout the day, providing riders and personnel with hand sanitizer, providing personnel with PPE and thermometers for taking their temperature before reporting to work when not working remotely, separating operators from passengers using temporary and permanent barriers, and operating reduced service on some routes, reflecting reduced ridership while other routes experiencing an increase in demand have been reinstated.  |
| 22 | <b>DEVELOP ASSET MANAGEMENT CULTURE</b><br>The TAM Department circulated the TAM Objective Handbook and updates which outline the WSP developed implementation Objectives to Executive staff within the organization to assist in the development of Asset Management Culture. TAM Staff discussed with the IT department the ability to improve tracking of NTD information for Pace’s fleet of vehicles, see <b>Objective 4. Vehicle Tracking Utility (VTU)</b> . Additionally, the TAM Portal, see <b>Objective 1. Asset Management Documents and Systems</b> was improved to provide links to additional documentation to staff.   |

Pace recognizes the TAM Plan Improvement Objectives Handbook as a roadmap to guide the long-term asset management maturity journey of the Agency. For further detail on specific objectives, please see the TAM Objective Progress Report – 2023.

Pace looks forward to continuing to build on the progress made toward growing a mature Asset Management system that will enable it to improve the State of Good Repair and ensure the successful operations of regional services for many years to come.

**End of Report**