



Planning, Development and Real Estate Committee

Board Action Item VIII-C

November 20, 2008

Adoption of 7000 Series Rail Car Design

Washington Metropolitan Area Transit Authority
Board Action/Information Summary

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|---|------------------------|--|
| <input checked="" type="radio"/> Action <input type="radio"/> Information | MEAD Number: 100204 | Resolution: <input type="radio"/> Yes <input checked="" type="radio"/> No |
|---|------------------------|--|

TITLE:

7000 Series Railcar Program - Design & Function

PURPOSE:

The adoption of the 7000 Series design for railcar procurements for FY 2009-2020.

DESCRIPTION:

The timing of needs for renewal, rehabilitation and growth of the Metro railcar fleet within a five-year window has provided the opportunity to standardize a major portion of the fleet to a new design that will result in lower acquisition, operating and maintenance costs.

The reassessment of design was necessary because, after 32 years of fleet operation and maintenance, we know:

- how long an aluminum railcar lasts and are not confident that it will be 40 years;
- that every new railcar must operate under heavier loading for far longer operating periods than any railcar we have ever purchased;
- that facilities and structures are stressed;
- that operating and maintenance costs continue to increase; and
- that there will be increased competition for scarce funds.

The 7000 Series railcar design incorporates proven technology with three decades of lessons learned. The program has insured that for its critical junctures: the start of development; design and specification production; contract award; that all critical technologies are mature, that the design has been adequately reviewed and that program requirements have been well defined. This includes validating designs and cost estimates, evaluating manufacturing processes and refining requirements. The expected result is improved cost control and quality control during acquisition and manufacture and long-term reductions in operating and maintenance costs.

FUNDING IMPACT:

The financial commitment for the initial 64 vehicles will be provided by MWAA in support of the Dulles Rail Project. The remainder of the Metro Railcar Program is subject to Board approval, availability of funds and review in the capital prioritization process.

RECOMMENDATION:

Adoption of the 7000 Series design for railcar procurements for FY 2009-2020.



7000 Series Railcar Program

-Design, Performance, Capacity –

Presented to the Board of Directors:

Planning, Development and Real Estate Committee

November 20, 2008





Purpose

Planning Our Transportation Future.....

.....next equipment lifecycle going beyond 2050

Adoption of the 7000 Series design platform for future railcar procurements



7000 Series vs. 6000 Series Major Changes to the Exterior



- Stainless steel carbody
- More exterior destination signage
- Improved interior Public Address System
- Rubber inter-car barriers



7000 Series Customer Advantages

- Ergonomic stainless steel seat construction
- Resilient flooring
- Overhead and seat grab handles
- More vertical grab poles
- We listened – 27 RAC design changes



- Active route maps
- CCTV security cameras
- Capacity increases by elimination of cabs
- Equipment seat wells eliminated
- LCD displays provide Metro Channel real-time content

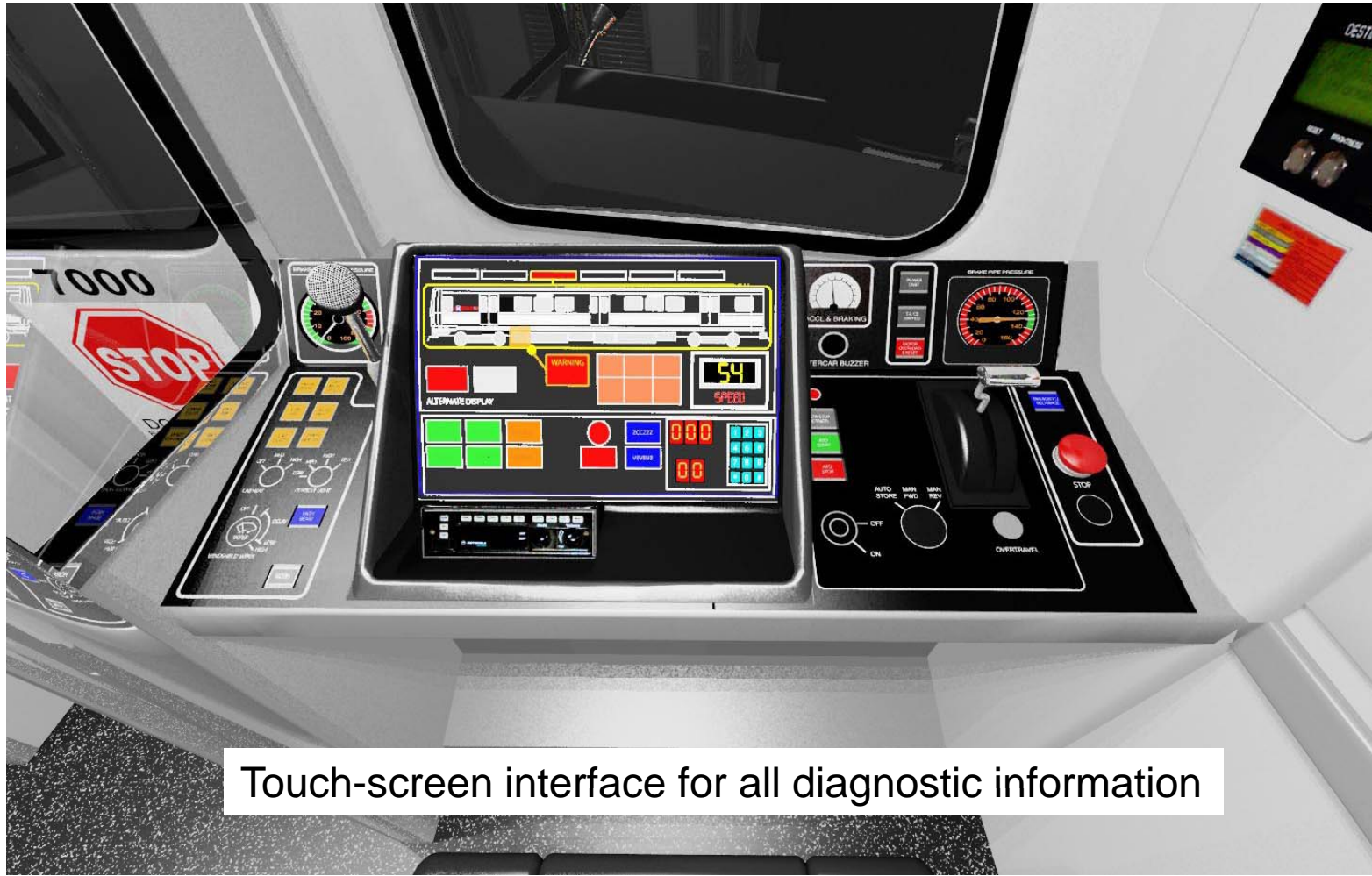


7000 Series Operations Advantages

- Reduced energy costs from lighter railcar
- Improved train operator displays and controls
- On-board diagnostics permit operator to deal with minor problems and reduce out-of-service trains
- Train network backbone for communications
- Improved interior Public Address System
- New security capability utilizing CCTV



Cab Console Concept



Touch-screen interface for all diagnostic information



7000 Series Maintenance Advantages

- Longer useful life under heavier sustained loading
- Standardization of fleet
 - Eliminate for inventory streams
 - Reduce parts obsolescence
 - Simplified maintenance training
- Elimination of two major overhaul events
- Eliminates acid wash and environmental mitigation
- Easier interior cleaning and maintenance
- Improved maintenance diagnostics capability



7000 Series Seating Plan and Side Elevation



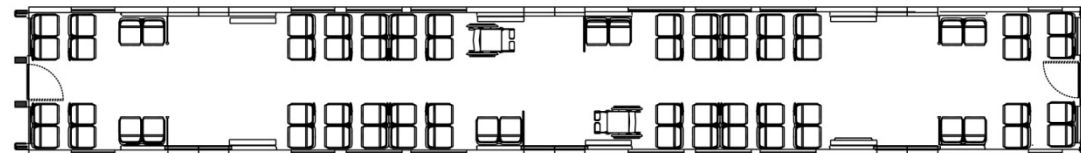
7000 EXTERIOR ILLUSTRATION A-CAR



7000 INTERIOR FLOOR PLAN A-CAR



7000 EXTERIOR ILLUSTRATION B-CAR



7000 INTERIOR FLOOR PLAN B-CAR



Recommendation

- Adopt the 7000 Series railcar design for the FY2009 – FY2020 railcar procurements



7000 Series Railcar Next Steps

- December 4, 2008 Finance, Administration and Oversight Committee – request recommendation to add options for procurement of up to 684 additional railcars in the RFP for the 64 Dulles program vehicles previously approved. All options subject to prioritization and availability of funds.

