NGEC Technical Subcommittee and Specification Development

TRB Annual Meeting
January 14, 2020

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National Railroad Passenger Corporation (Amtrak)
P20-20731
PRIIA 305

Passenger Rail Investment and Improvement Act of 2008 (PRIIA)

• The Passenger Rail Investment and Improvement Act of 2008 (PRIIA) reauthorizes the National Railroad Passenger Corporation, better known as Amtrak, and strengthens the US passenger rail network by tasking Amtrak, the U.S. Department of Transportation (US DOT), Federal Railroad Administration (FRA), states, and other stakeholders in improving service, operations, and facilities. PRIIA focuses on intercity passenger rail, including Amtrak’s long-distance routes and the Northeast Corridor (NEC), state-sponsored corridors throughout the Nation, and the development of high-speed rail corridors.
Next Generation Corridor Equipment Pool Committee

- Amtrak was required to establish the Next Generation Corridor Equipment Pool Committee, comprised of representatives of Amtrak, the Federal Railroad Administration, host freight railroad companies, passenger railroad equipment manufacturers, interested States, and other passenger railroad operators. The Committee was formed to design, develop specifications for, and procure standardized next-generation corridor equipment.

PRIIA 305 Technical Subcommittee

- Main purpose is to develop specifications as requested by the Executive Board.
- Comprised of representatives from Amtrak, FRA, States, and rail equipment manufacturers and suppliers.
- Currently we have 13 states involved; California, Connecticut, Illinois, Iowa, Maine, Michigan, Missouri, New York, North Carolina, Oklahoma, Oregon, Washington and Wisconsin.
- Presently over 225 volunteer members. Open to anyone from companies/consultants involved in rail.
- Each Specification has a Leader to coordinate the creation process.
- Majority of spec writing done by members of the 6 permanent working groups on a volunteer basis with support from a technical writer.
Specification Creation Process

- Executive Board
  - Determines need for specification
  - Requests and approves Requirements document

- Technical Sub-Committee
  - Specification Leader works with EB on Requirements Document
  - Approves timelines

- Technical Working Groups (TWG)
  - Permanent Technical Working Groups create initial draft specification. 3-4 months

- Draft Public Comment
  - Specs. Posted
  - Industry comments to TWG
  - Comments posted

- Technical Sub-Committee
  - Face to Face Meeting to
    - Discuss comments received
    - Incorporate accepted comments
    - Vote to accept specs. as revised

- Review Panel
  - Reviews specifications to assure compliance with requirements document
  - Recommends Executive Board Approval

- Executive Board
  - Approves Specification

- Specifications Posted
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Specification Creation

All of the chapters for the car specifications have the same titles and where possible the actual chapters are the same.

1. Specification Summary
2. References and Glossary
3. Project Management
4. Carbody
5. Trucks
6. Couplers and Draft Gear
7. Brakes
8. Door Systems
9. Interior
10. HVAC System
11. Lighting System
12. Communications System
13. Electrical System
14. Food Service
15. Water and Waste System
16. Cab and Train Controls
17. Emergency Equipment
18. Materials and Workmanship
19. Test Requirements
20. Tools, Consumables and Spare Parts
21. Shipping Preparations
22. Training and Documentation
23. Customer Variables

Items in Bold are similar between equipment types.
The Locomotive chapters are the same as the cars where they can be. Again some of the chapters are the same, for example; References and Glossary.

<table>
<thead>
<tr>
<th>Specification Creation</th>
<th>Items in Bold are similar between car and locomotives.</th>
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<tbody>
<tr>
<td>2. References and Glossary</td>
<td>15. Sanding System</td>
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<tr>
<td>3. Project Management</td>
<td>16. Engineers Cab Controls</td>
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<tr>
<td>4. Locomotive Carbody</td>
<td>17. Fuel System</td>
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<td>5. Running Gear</td>
<td>18. Materials and Workmanship</td>
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<td>7. Brakes</td>
<td>20. Tools, Consumables and Spare Parts</td>
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<td>8. Engineers Cab</td>
<td>21. Shipping Preparations</td>
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<td>10. AC Power Dist., Comm and MU</td>
<td>23. Customer Variables</td>
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<tr>
<td>12. Locomotive to Train Communication</td>
<td>25. Environmental Characteristics</td>
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<td>13. Head End Power System</td>
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The following 6 Equipment Specifications have been created since January 2010

- Bi-Level: C.4 – 8/2/16
- Locomotive: A.1 – 12/9/17
- Single Level: A – 11/13/12
- Trainset: A – 12/10/13
- DMU: IR – 9/4/12
- Dual Mode Loco: IR – 2/2/16
Revising Specifications

After the specifications are completed and issued as version IR (initial release) the process of updating and revising the specification becomes an issue. This has led us to develop a complete and thorough process for managing change control.

**Document Change Request Form (DCR)**

- This is the basis for all changes.
- Changes can be proposed by anyone using a DCR.
- Evaluated by the TWG responsible for the section affected.
- Approved by the TWG.
- Approved by the Technical Subcommittee during the regular phone conference and sent to Executive Board for approval.
Revising Specifications

• Review panel reviews change to verify compliance with requirements document.
• Executive Board approves.

This process can take months because typically the DCRs are processed and a specification is revised after several DCRs have been received.

There is an Urgent DCR process to address issues that may come up during a procurement. This pushes a DCR through the system in less than two weeks.
Current Status of Revisions

• The Bi-level specification is currently on revision D and the TWGs processed a total of 295 DCRs to date.
• The Single level and Trainset specifications were both updated in 2019 and incorporated 180 and 102 changes, respectively.
• The Locomotive specification is on revision B and so far the TWGs have processed 70 DCRs.
• Starting this month, the TSC will begin the undertaking of updating the DMU specification. This will include evaluating every change made to every PRIIA specification to determine if it applies to the DMU. A DCR will be created for every proposed change.
Comments or Questions?