

Annual PTC  
Progress  
Report

2015

Denton County Transportation Authority

FRA-2010-0074

The Annual Positive Train Control (PTC) Progress Report is due by March 31"of each year until full PTC system implementation is complete. The Annual PTC Progress Report must cover the railroad's implementation efforts and progress from the directly previous calendar year, and must be submitted electronically to the Federal Railroad Administration (FRA) via the FRA Secure Information Repository at <https://sir.fra.dot.gov>.

**Name of Railroad or Entity Subject to 49 U.S.C §20157(a):** Denton County Transportation Authority

**Railroad Code:** DCTA

**Annual PTC Implementation Progress Report for:** 2015

**PTCIP Version Number on File with FRA (basis for goals stated):** Rev 5

**Submission Date:** March 31, 2016

## Contents

1	Summary .....	3
2	Update on Spectrum Acquisition .....	4
3	Quantity Update on Hardware Installation .....	5
3.1	Locomotive Status.....	5
3.2	Infrastructure / Back Office Status.....	6
3.3	Installation / Track Segment Status .....	7
4	Quantity Update on Employees Trained.....	8
5	Progress on Implementation Schedule / Milestones.....	9
6	Summary of Update of Challenges / Risks .....	10
7	Progress on Revenue Service Demonstration (RSD) or Implementation .....	10
8	Update for Intercity or Commuter Rail Passenger Transportation (if applicable).....	11
9	Update on Interoperability Progress and Other Formal Agreements .....	11
10	Estimated PTC Safety Plan (PTCSP) Submission Date (if not already submitted) .....	12
11	Testing and Integration Efforts (if applicable, laboratory, integration, and revenue service demonstration) .....	12
12	Updated Information That FRA Can Use to Maintain Its Geographic Information System (GIS) Database – Segments Complete and Operable .....	12

## 1 Summary

In February 2016 DCTA submitted updated PTCIP (Rev 5) with accompanying RFA to propose change of the implemented system from the originally proposed V-ETMS by Wabtec, to Alstom's E-ATC system. DCTA will utilize the Type Approval of Enhanced Automatic Train Control (E-ATC), FRA Type Approval (FRA-TA-2013-01) for the Enhanced Automatic Train Control (E-ATC) PTC System (Docket FRA-2010-0073). The proposed E-ATC system provides a significantly less complex and lower cost solution to PTC than the originally planned V-ETMS system while maintaining compliance with all requirements for certification under 46 CFR § 236 subpart I.

Having discussed this change with the FRA previously, DCTA engaged Alstom to begin procurement of the E-ATC system in late 2015. Under the schedule presented in DCTA's PTCIP, the installation of the PTC system is scheduled to begin in the 3rd quarter of 2016 and complete in the 2nd quarter of 2017. The successful implementation of E-ATC on DCTA's territory may be dependent upon a number of associated risks. Although the potential for risks may exist, none are anticipated at this time that would create difficulty in deploying the E-ATC system by the December 31, 2017 completion date as proposed by DCTA.

Category	Quantity installed during CY 2015	PTCIP Year End Goal (if Applicable)	Cumulative qty installed at end of CY2015	Total Required for PTC Implementation
Locomotives Fully Equipped	0	0	0	11
Installation/Track Segments completed	0	0	0	2
Radio towers fully installed and equipped	0	0	0	0 See Note 1
Employees trained	0	0	0	56
Back office locations completely installed and fully operable	0	0	0	2 See Note 2
Dispatching locations completely installed and fully operable	0	0	2	2 See note 5
Route miles in testing	0	0	0	TBD See Note 3
Route miles in RSD	0	0	0	TBD See Note 4
Route miles in full PTC operation	0	0	0	21

### Notes:

1. DCTA will implement the E-ATC system to complement the existing CTC, Data, and Voice communications infrastructure. Implementation of the E-ATC system does not require installation of any new radio towers.
2. The Back Office Servers to support TSR functions will be installed as a part of this program. A TSR Terminal and associated communication equipment will be installed at the DCTA Control Offices. Redundant Back Office Server equipment will be installed at the DCTA Rail O&M and Bus O&M.
3. Detailed test plans are under development at this time.
4. RSD plan is under development at this time.
5. Dispatch locations were in-service prior to initiation of the PTC project.

## 2 Update on Spectrum Acquisition

Spectrum Area or Location	Spectrum Acquired and available for use (owned/leased) during CY 2015	Cumulative amount of spectrum acquired and available for use (owned/leased) at end of CY 2015	PTCIP Year-end goal for spectrum acquired and available for use	Total spectrum required for PTC implementation, as reported in PTCIP
N/A	N/A	N/A	N/A	N/A

Additional narrative:

DCTA will implement the Alstom Enhanced Automatic Train Control (E-ATC) system to complement the existing CTC, Data, and Voice communications infrastructure. Implementation of the E-ATC system does not require acquisition of any additional spectrum licenses.

### 3 Quantity Update on Hardware Installation

#### 3.1 Locomotive Status

Category/Installation Feature	Quantity installed during CY 2015	PTCIP year-end goal	Cumulative qty installed at end of CY 2015	Total required for PTC implementation as reported in PTCIP
Locomotive (Apparatus)				
Onboard computer (e.g., TMC)	0	0	0	11
Software for Train Management & other applications	0	0	0	0
PTC User Displays	0	0	0	11
Event Recorders	0	0	0	11 <small>See Note 1</small>
Onboard Antennas	0	0	0	22 (2 per) <small>See Note 2</small>
Transponder readers as applicable	N/A	N/A	N/A	N/A <small>See Note 3</small>
GPS receivers	N/A	N/A	N/A	N/A <small>See Note 3</small>
Locomotive radios – Primary communications (e.g. 220 MHz radios)	N/A	N/A	N/A	N/A <small>See Note 3</small>
Secondary communications – cellular	N/A	N/A	N/A	N/A <small>See Note 3</small>
Secondary Communications - WiFi	N/A	N/A	N/A	N/A <small>See Note 3</small>

Notes:

1. DCTA will utilize existing event recorders to satisfy the PTC requirement. No new event recorders will be installed.
2. Onboard antennas referenced here are the received coils to pick up cab codes from the rails
3. Implementation of the E-ATC system does not require installation of transponders, GPS receivers, or onboard radio communication.

Additional narrative:

Installation and test of onboard computers on the DCTA DMUs is scheduled to begin in the fourth quarter of 2016 and complete in the first quarter of 2017.

### 3.2 Infrastructure / Back Office Status

Category/Installation Feature	Quantity installed during CY 2015	PTCIP year-end goal	Cumulative qty installed at end of CY 2015	Total required for PTC implementation as reported in PTCIP
Infrastructure (Back Office)				
Dispatching Locations (installation complete)	0	0	0	0
Back Office Locations (installation complete)	0	0	0	2 See Note 1

Notes:

1. The Back Office Servers to support TSR functions will be installed as a part of this program. A TSR Terminal and associated communication equipment will be installed at the DCTA Control Offices. Redundant Back Office Servers equipment will be installed at the DCTA Rail O&M and Bus O&M.

Additional narrative:

Installation and testing of TSR terminals and servers is scheduled to complete in the fourth quarter of 2016.

### 3.3 Installation / Track Segment Status

Category/Installation Feature	Quantity installed during CY 2015	PTCIP year-end goal	Cumulative qty installed at end of CY 2015	Total required for PTC implementation as reported in PTCIP
Infrastructure – Wayside (By installation/Track Segment per the PTCIP)				
Installation/ Track Segment Identification: Segment 1				
Wayside Interface Units	0	0	0	18 <sup>See Note 3</sup>
Communications towers or poles	0	0	0	0
Switch Position Monitors	0	0	0	11 <sup>See Note 2</sup>
Fiber or ground wiring (per mile)	0	0	0	TBD <sup>See Note 1</sup>
Wayside Radios	0	0	0	0
Base Station Radios	0	0	0	0

Installation/ Track Segment Identification: Segment 2				
Wayside Interface Units	0	0	0	12 <sup>See Note 3</sup>
Communications towers or poles	0	0	0	0
Switch Position Monitors	0	0	0	5 <sup>See Note 2</sup>
Fiber or ground wiring (per mile)	0	0	0	TBD <sup>See Note 1</sup>
Wayside Radios	0	0	0	0
Base Station Radios	0	0	0	0

Notes:

1. Majority of fiber is pre-existing. Quantity required for new cut sections under review at this time.
2. DCTA will utilize existing switch machines to satisfy the PTC requirement. No new switch position monitors will be installed.
3. With the exception of new cut sections, existing vital signaling equipment will be updated to accommodate the new cab signal generators.

Additional narrative:

The installation of the PTC system is scheduled to begin in the 3rd quarter of 2016 and to be completed in the 2nd quarter of 2017.

## 4 Quantity Update on Employees Trained

Employee Category	Number employees trained during CY 2015	PTCIP Year-end goal	Cumulative number of employees trained at end of CY 2015	Total as reported in PTCIP
T&E Crew (Operations ) Employees	0	0	0	20
Mechanical Employees	0	0	0	12
MOW/Engineering/Roadway Worker Employees	0	0	0	10
Management Employees	0	0	0	10
Other Employees	0	0	0	4

Additional narrative:

DCTA employee and contractor training will be completed in 2017.



## 5 Progress on Implementation Schedule / Milestones

Revised PTCIP submitted to FRA in February of 2016. System modification, configuration, documentation and material procurement are in active progress. Under the schedule presented in DCTA's PTCIP, the installation of the PTC system is scheduled to begin in the 3rd quarter of 2016 and complete in the 2nd quarter of 2017. The successful implementation of E-ATC on DCTA's territory may be dependent upon a number of associated risks. Although the potential for risks may exist, none are anticipated at this time that would create difficulty in deploying the E-ATC system by the December 31, 2017 completion date as proposed by DCTA.

Anticipated schedule of deliverables to the FRA are as follows:

#	Deliverable	Anticipated Date
1.	PTC Implementation Plan (PTCIP) including an MTEA excluding DCTA trackage from MP721.6 to MP742.8	February 2016
2.	Documented Variance from FRA Type Approval (FRA-TA-2013-01) for the Enhanced Automatic Train Control (E-ATC) PTC System (Docket FRA-2010-0073)	May 2016
3.	A complete description of field test procedures for the E-ATC system	July 2016
4.	Pre-Revenue Service Demonstration Application	March 2017
5.	PTC Safety Plan (PTCSP) for E-ATC on Denton County Transit Authority territory per 49CFR236.1015	June 2017

## 6 Summary of Update of Challenges / Risks

Although the potential for risks may exist, none are anticipated at this time that would create difficulty in deploying the ATC system by the December 31, 2017 completion date as proposed by DCTA.

## 7 Progress on Revenue Service Demonstration (RSD) or Implementation

Segment Identification	Number of Route Miles in segment	Status at end of CY 2015	Estimated Start date for RSD if not yet begun
Segment 1	12.69	<input checked="" type="checkbox"/> Not Started <input type="checkbox"/> Installing <input type="checkbox"/> Testing <input type="checkbox"/> Operational/ Complete	March 2017
Segment 2	8	<input checked="" type="checkbox"/> Not Started <input type="checkbox"/> Installing <input type="checkbox"/> Testing <input type="checkbox"/> Operational/ Complete	March 2017

## 8 Update for Intercity or Commuter Rail Passenger Transportation (if applicable)

DCTA has allocated at least 3 internal resources and has acquired the services of an independent consulting for the implementation of PTC.

DCTA has acquired the services of Alstom as the prime contractor for procurement, installation, and test of the PTC system.

Alstom has acquired the services of Rail Safety Consulting for development of the deliverables to facilitate certification of the PTC system in accordance with 49 CFR 236 subpart I.

## 9 Update on Interoperability Progress and Other Formal Agreements

Passenger service and freight service are temporally separated and are not permitted to operate simultaneously in the corridor.

As passenger and freight operations are temporally separated and DGNO does not meet the criteria for PTC, DGNO will not be required to equip their locomotives with the E-ATC equipment being installed by DCTA.

## 10 Estimated PTC Safety Plan (PTCSP) Submission Date (if not already submitted)

PTCSP Submission Date
-----------------------

June 2017
-----------

Additional narrative:

Date listed above is consistent with that reported in the revised PTCIP submitted February 2016.

## 11 Testing and Integration Efforts (if applicable, laboratory, integration, and revenue service demonstration)

Lab testing of the onboard subsystem is on target to begin January 2017 and to be completed February 2017. Lab testing of wayside components will begin in April 2016 and to be completed in November 2016. Field integration testing is scheduled to begin July 2016 and complete in November 2016. RSD is anticipated to begin in March 2017 and complete June 2017.

## 12 Updated Information That FRA Can Use to Maintain Its Geographic Information System (GIS) Database – Segments Complete and Operable

GIS data is not available at this time.