

# Inspection and Testing of Signalling – Standard Forms

ESC-21-04

## Applicability

ARTC Network Wide
SMS

## Publication Requirement

Internal / External
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## Primary Source

SCP 11 v1.0
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## Document Status

Version #	Date Reviewed	Prepared by	Reviewed by	Endorsed	Approved
1.3	17 Oct 22	Standards	Stakeholders	Manager Signalling Standards	A/General Manager Technical Standards 19/11/2022

## Amendment Record

Amendment Version #	Date Reviewed	Clause	Description of Amendment
1.0	28 Apr 09		First issue. Supersedes NSW Standard SCP 11 v1.0
1.1	07 Oct 09		Disclaimer updated as per Risk & Safety Committee 14/09/2009
1.2	13 Aug 10		Issued as final.
1.3	17 Oct 22		Included the Compliance Test Certificate for TPWS and rebranded.

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## 1 Introduction

### 1.1 General

This Standard sets out the typical requirements for inspection and testing documentation to be used to provide objective evidence of the process of certifying new and altered signalling works.

### 1.2 Scope

This standard covers the inspection and testing standard forms for inspection and testing of the various signalling equipment.

### 1.3 Document Owner

The Head of Engineering Standards is the Document Owner. Queries should be directed to [standards@artc.com.au](mailto:standards@artc.com.au) in the first instance.

### 1.4 Reference Documents

This Standard shall be read in conjunction with the ARTC Standards, Procedures and Work Instructions.

This Standard shall be read in conjunction with companion ARTC Engineering (Signalling) Standards:

- ESC-21-01 Inspection and Testing of Signalling - Roles, Responsibilities and Authorities
- ESC-21-02 Inspection and Testing of Signalling - Plans, Programs, Documentation and Packages
- ESC-21-03 Inspection and Testing of Signalling - Inspection and Testing Principles

This Standard shall be read in conjunction with Signal Engineering Instructions and Guidelines:

- As issued from time to time and published on the ARTC Extranet.

### 1.5 Definitions

The following terms and acronyms are used within this document:

Term or acronym	Description
ARTC	Australian Rail Track Corporation Ltd.

## **2 Inspection and Testing Standard Forms Index**

### **2.1 ESC2104F-01 Inspection and Testing Plan**

- Part 1: Inspection and Testing Strategy

Inspection and Testing Strategy Details

Quality Assurance Strategy

Inspection and Testing Strategy Check List

- Part 2: Inspection and Testing Outline Plan
- Part 3: Inspection and Testing Detailed Plan

### **2.2 ESC2104F-02 Minor Signalling Work Package**

- Authorisation
- Inspection and Testing Plan – Minor Works
- Installation, Inspection, Testing and Commissioning Detailed Plan and Signalling Safeworking Requirements – Minor Works
- Installation, Inspection and Testing Quality Assurance Strategy – Minor Works
- Installation, Inspection, Testing and Commissioning Log – Minor Works

### **2.3 ESC2104F-03 Installation Work Package**

- Authorisation of Installation Work Package
- Register of Working Documents

Register of Construction Copies of Working Drawings

Register of Signal Sighting Forms

Register of Detailed Site Survey Plans

Register of Site Installation Drawings

Register of Equipment and Operating Manuals

Register of Test Copies of Working Drawings

- Register of Quality Assurance Documentation

Register of Quality Assurance Documents

Register of Installation Work Package Documents for Version Control

- Type Approvals
- Accreditation / Competency Certificate
- Pre-Installation Test Certificates

Register of Pre-Installation Test Certificates

- Installation Inspection and Testing

Installation Inspection and Testing Log

Installation Inspection and Testing Report

- Installation Work Instructions

Register of Installation Work Instructions

Installation Work Instruction

Issued Work Instructions

Completed Work Instructions

- Installation Inspection and Testing Status Certificate
- Transmittals

## **2.4 ESC2104F-04 Commissioning Work Package**

### **Section 1: Preparation**

- Authorisation of Commissioning Work Package
- Safeworking Forms & Permits
- Network Alteration Notice and Circulars
- Scope of Works
- Commissioning Program
- Commissioning Notices

Certification of Signalling – ARTC

Certification of Signalling – V/Line

Commissioning Notice

- Prepared Pre-Commissioning Work Instructions

Pre-Commissioning Work Instruction

- Prepared Commissioning Work Instructions

Commissioning Work Instruction

- Prepared Post-Commissioning Work Instructions

Post-Commissioning Work Instruction

- Minutes of Pre-Commissioning Meeting

### **Section 2: Implementation**

- Register of Work Instructions

Register of Pre-Commissioning Work Instructions

Register of Commissioning Work Instructions

Register of Post-Commissioning Work Instructions

- Completed Pre-Commissioning Work Instructions

- Completed Commissioning Work Instructions
- Completed Post-Commissioning Work Instructions

**Section 3: Evaluation**

- Commissioning Certificate

Commissioning Certificate – Part 1

Commissioning Certificate – Part 2

- Commissioning Log
- Attendance Book
- Report on Post-Commissioning Meeting
- Transmittals

Memorandum of Document Exchange

**2.5 ESC2104F-05 Handover Documentation Package**

- Updated Asset Register
- Interim Maintenance Copies of Design Documents
- Spare Equipment
- Equipment Manuals
- Certificate of Practical Completion
- Commissioning Work Package
- Copies of Inspection and Test Records
- Maintenance Issue of Design Documents
- Certificate of Acceptance
- Test and Certify (TC) Forms and Inspection and Testing Forms (ITF's)

TC 1(a) – Colour Light Signal Test Certificate

TC 1(b) – Double Light Signal (LED) Test Certificate

TC 1(c) – Single Light Signal (LED) Test Certificate

C/TC 1(d) – Train Protection Warning System (TPWS)

TC 2(a) – Cable Insulation Test Certificate

TC 2(b) – Cable Insulation Test Certificate

TC 2(c) – Cable Insulation Test Certificate

C/TC 3 – Compliance/Test Certificate – Cables

C/TC 4 – Compliance/Test Certificate – Cable Variance

TC 5 – Pre-Site Test Certificate

TC 6 – Point Operating Test Certificate

- TC 7 – Location Power Supply Test Certificate
- TC 8 – Motor Generator Test Certificate
- TC 9 – Circuit Breaker Test Certificate
- TC 10 – Level Crossing Test Certificate
- TC 11 – Ready for Test Certificate
- ITF 12 – Irregularities Found in Testing
  - Certification Inspection and Testing Checklists
- ITF 13/0 – Certification Inspection and Test Summary Checklist
- ITF 13/1(a) – Checklist for Colour Light Signal
- ITF 13/1(b) – Checklist for LED Colour Light Signal
- ITF 13/2 – Checklist for Points
- ITF 13/3 – Checklist for Ground Frames/Electric Releasing Switches
- ITF 13/5 – Checklist for Track Circuits
- ITF 13/6 – Checklist for Level Crossing
- ITF 13/7 – Checklist for Power Supplies
- ITF 13/10 – Checklist for Timer Relays/Units
- ITF 13/11 – Checklist for Cables
- ITF 13/15 – Checklist for Telemetry/Panel Processor
- ITF 13/16 – Checklist for Control Console/Indicator Diagram
- ITF 13/17 – Checklist for Location
- ITF 13/18 – Checklist for Computer Based Interlockings
- ITF 13/20 – Checklist for Aspect Sequence
- ITF 14 – Measuring Instrument/Tool Calibration/Test Record
  - Interface Coordination Plan
  - Typical Signal Sighting Forms
- Signal Sighting Form – Double Light
- Signal Sighting Form – Dwarf Signal
- Signal Sighting Form – Guards Indicator
  - Level Crossing Sighting Forms
- Level Crossing Site Inspection Form
- Stakeholder Site Inspection and Authority to Commission
- Gated Pedestrian Crossing Assessment Sheet
- Level Crossing Location Maintenance Visit Sheet