Consultation on Guidebook for Plans Submission and PTO Application of Fixed Installations

Building and Construction Authority

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Guidebook for Plans Submission and PTO Application of Fixed Installations

BuildSG

This document is a draft and is subject to changes.

BCA

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Objective of Presentation

- Consultation on **Guidebook for Plans Submission and PTO Application of Fixed Installations**
- Draft of Guidebook can be downloaded from the common link to the webinar materials: (https://www1.bca.gov.sg/regulatory-info/lifts-escalators/resources-from-past-events)
- Feedback on the draft guidebook and its contents can be sent to us via online feedback form for the webinar (https://go.gov.sg/lift-and-escalator-webinar-dec-2021-feedback-form)

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Contents of Draft Guidebook

- Overview of Fixed Installation Regulatory Regime
- Plans Submission Requirements
- Requirements for Application of New PTO/PTO after Major A/R works
- Lists of Material Changes to Submitted/Approved Design
- Lists of Immaterial Changes to Submitted/Approved Design
- Lists of Major A/R that require the submission and approval of Plans
- Lists of Major A/R that do not require the submission and approval of Plans

Please note that draft is subject to changes. A finalised version of the guidebook will be published at a later date.

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Regulatory Regimes for Different Project Types

- New Installations
- Major A/R works

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New Installations

- Such works will require plans submission (with QP certification on design) and approval prior to commencement of work, followed by T&C and application of new PTO (with QP certification on installation and T&C).
- PTO will be a prerequisite for the issuance of TOP for a new building.

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Regulatory Regime – New Installations

1. DESIGN

Owner/Developer

- Appoints contractor and QP

Contractor

- Works on the design for the FI
- Provides FI design plans and other design details/ information to QP for review

QP

- Reviews and **certifies on FI design plans** for whole FI.
- **Makes plans submission to BCA for design approval**

Manufacturing

2. INSTALLATION

Owner/Developer

Contractor

- Carries out installation works

3a. TESTING & COMMISSIONING

Owner/Developer

- **Applies for new PTO** with the QP certification for installation and T&C and final inspection report

Contractor

- Carries out T&C of FI under QP's supervision
- Provides documentations for PTO application
- Carries out inspection with BCA (if required)

QP

- Examines and inspects FI, to ensure compliance with design requirements in standards and that the installation works are carried out in accordance with approved plans
- Supervises T&C of FI carried out by contractor to ensure that the operations and functionalities comply with the standards and requirements
- **QP certifies the installation and T&C**
- Prepares final inspection report for PTO application

3b. APPLICATION FOR NEW PTO

4. COMMENCE OPERATION

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Two types of Major A/R works

A. Major A/R works that **require submission and approval of plans** before the work commence

B. Major A/R works that do not require submission and approval of plans before the work commence

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Major A/R works that require plans submission and approval

- Such works will <u>require plans submission (with QP certification on design) and approval prior to commencement of work</u>, followed by testing on the major A/R parts and application of PTO after major A/R works (with QP certification on major A/R works and testing).
- PTO will be a prerequisite for the issuance of TOP for a building (if the major A/R works are part of the A&A works of the building).

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Regulatory Regime – Major A/R (with plans submission)

Owner/Developer

- Appoints contractor and QP

Contractor

- Works on the design for the major A/R works
- Provides design plans and other design details/ information to QP for review

QP

- Reviews and **certifies on FI design on major A/R works**.
- **Makes plans submission to BCA for design approval**

→ 1. DESIGN

Manufacturing

Owner/Developer

Contractor

- Carries out major A/R works

→ 2. INSTALLATION

Owner/Developer

- **Applies for PTO after major A/R works** with the QP certification for major A/R works and testing and final inspection report

Contractor

- Carries out testing of major A/R works under QP's supervision
- Provides documentations for PTO application
- Carries out inspection with BCA (if required)

QP

- Examines and inspects major A/R works, to ensure compliance with design requirements in standards and that the major A/R works are carried out in accordance with approved plans
- Supervises testing of major A/R works carried out by contractor to ensure that the operations and functionalities comply with the standards and requirements
- **QP certifies the major A/R works and testing**
- Prepares final inspection report for PTO application

→ 3a. TESTING & RE-COMMISSIONING

→ 3b. APPLICATION FOR NEW PTO

→ 4. COMMENCE OPERATION

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Examples of major A/R works that require plan submission and approval (SS550 Lifts)

- Changing rated speed
- Changing rated load
- Changing mass of the car (≥ 5%) (including the finishing)
- Adding one or more landing entrances or car entrances
- Changing the type of drive system
- Changing the brake system
- Changing the number or size of the hoisting ropes
- Changing the controller model
- Changing any type tested safety components (e.g. ACOP, UCMP, governor, safety gear, safety circuits with PESSRAL)

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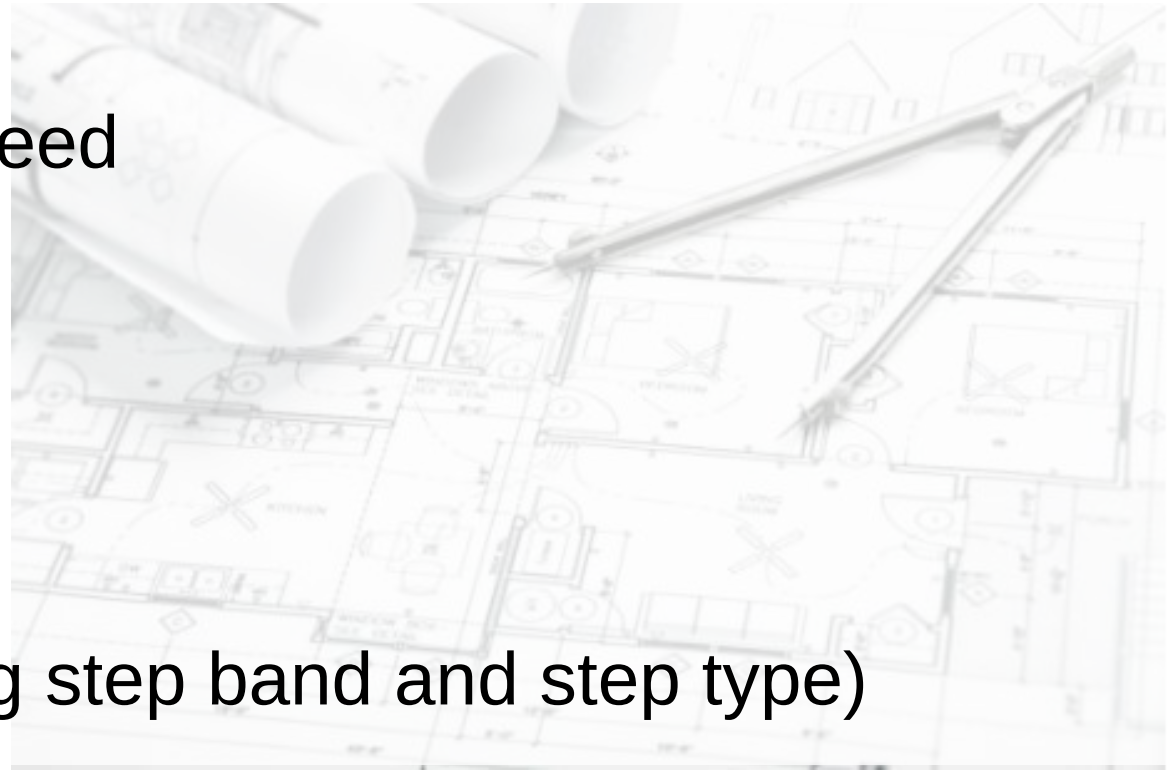
Examples of major A/R works that require plan submission and approval (Escalators)

- Increasing the maximum rated speed
- Changing the drive system
- Changing the auxiliary brakes
- Changing the brake system
- Changing the controller model
- Changing the step band (including step band and step type)



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Examples of major A/R works that require plan submission and approval (MCPS)

- Changing the rated load
- Changing the location of the entrance and exit of vehicle, user exit door and emergency door
- Changing the dimensions of the transfer area
- Changing the design of the anti-fall device
- Changing the positions and coverage of sensors in the transfer area
- Changing the position and coverage of door protective device (light curtain/photo sensor)
- Changing the control e.g. hold to start, automatic parking and retrieval process before and after the user enter and leave the transfer area
- Changing the control and logic programming (that affects the transfer area)

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Major A/R works that do not require plans submission and approval

- Such works <u>may commence without the need of plans submission and approval</u>, followed by testing on the major A/R parts and application of PTO after major A/R works (with QP certification on major A/R works and testing).
- PTO will be a prerequisite for the issuance of TOP for a building (if the major A/R works are part of the A&A works of the building).

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Regulatory Regime – Major A/R (w/o plans submission)

Owner/Developer

- Appoints contractor and QP

Contractor

- Works on the design for the major A/R works

→ **1. DESIGN**

Manufacturing

Owner/Developer

Contractor

- Carries out major A/R works

→ **2. INSTALLATION**

Owner/Developer

- **Applies for PTO after major A/R works** with the QP certification for major A/R works and testing and final inspection report

Contractor

- Carries out testing of major A/R works under QP's supervision
- Provides documentations for PTO application
- Carries out inspection with BCA (if required)

QP

- Examines and inspects major A/R works, to ensure compliance with design requirements in standards and that the major A/R works are carried out in accordance with approved plans
- Supervises testing of major A/R works carried out by contractor to ensure that the operations and functionalities comply with the standards and requirements
- **QP certifies the major A/R works and testing**
- Prepares final inspection report for PTO application

→ **3a. TESTING & RE-COMMISSIONING**

→ **3b. APPLICATION FOR NEW PTO**

→ **4. COMMENCE OPERATION**

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Examples of major A/R works that do not require plan submission and approval (SS550 Lifts)

- Changing the type of hoisting ropes
- Changing the software such that safety functionalities are affected
- Changing the type of car doors or landing doors
- Changing the pawl device
- Changing the hydraulic jack
- Changing the pressure relief valve
- Changing the compensation system

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Examples of major A/R works that do not require plan submission and approval (Escalators)

- Changing the truss
- Changing the balustrade
- Changing the overspeed and reversal protection means
- Changing the software such that safety functionalities are affected
- Changing safety circuit containing electronic components and/or programmable electronic system

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Plans submission requirements

- Types of info/documents to be submitted:
  - Equipment Data (e.g. rated speed, rated load, model number)
  - Plans and Drawings (e.g. hoistway drawings, machine room layouts)
  - Certificates and Reports (e.g. type testing certificates and reports)
- The lists of submission requirements will be published in the guidebook (SS550 traction and hydraulic lifts, VPLs, stairlifts, escalators, MCPS).
- For submission of plans for major A/R works, the QP may submit <u>only the information and documents within the submission requirement lists that are relevant to the major A/R works</u>.

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Deviations from Submitted/Approved Plans before getting PTO

- **Material Changes** – Any deviations from the submitted/approved design prior to obtaining the PTO that fall within the lists of material changes will require the submission and approval of **amendment plans** before the commencement or works.
- **Immaterial Changes** – Any deviations from the submitted/approved design prior to obtaining the PTO that fall within the lists of immaterial changes will require the submission of **as-built plans**. Works can proceed without the need to obtain design approval for the as-built plans. As-built plans can be submitted after the completion of the relevant works, just before the application for PTO.

The QP may submit <u>only the information and documents within the submission requirement lists that are relevant to the amended works</u>.

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Examples of material changes (SS550 lifts)

- Changing the rated speed
- Changing the rated load
- Changing the mass of the car (≥ 5%) (including the finishing)
- Changing the travel distance
- Adding one or more landing entrances or car entrances
- Changing the car bottom clearances and overhead clearances
- Providing new occupancy space below lift pit
- Changing any type tested safety components (e.g. ACOP, UCMP, governor, safety gear, safety circuits with PESSRAL)

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Examples of material changes (Escalators)

- Increasing the maximum rated speed
- Changing the drive system
- Changing the auxiliary brakes

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Examples of material changes (MCPS)

- Changing the rated load
- Changing the location of the entrance and exit of vehicle, user exit door and emergency door
- Changing the dimensions of the transfer area

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Requirements for Application of New PTO/PTO after Major A/R works

- Types of info/documents to be submitted
  - Equipment Data (mainly data that are usually not available during design e.g. ARD, UPS data)
  - Certificates and Reports (mill test certificates, final inspection reports etc)

- Final inspection report templates will be published in the finalised version of the guidebook (SS550 traction and hydraulic lifts, VPLs, stairlifts, escalators, MCPS).

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Thank you

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