

GDH Plot4# Project 云港城项目 4#地块

Elevator Tender Specification 垂直梯招标技术文件（T3、T4、T5、商业）

1

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ELECTRIC TRACTION LIFTS 曳引式垂直梯

PART 1 - GENERAL 总体说明

1.1 SUMMARY 概述

A. General: Provide Fifty-eight (22) Gearless Traction Lifts as follows

总则：提供二十二（22）台无齿轮曳引式垂直梯

1. Provide Five (5) Gearless Traction Lifts in Office Tower T3, including Four(4) passenger lifts and One(1) fire service lifts:
在办公塔楼 T3 中，提供五（5）台无齿轮曳引式垂直梯，其中包含四（4）台客梯和一（1）台消防服务梯：
 - Office Passenger Lifts DT01~DT04
办公客梯 DT01~DT04
 - Fire Service Passenger Lifts DTX01
消防服务梯 DTX01
2. Provide Seven (7) Gearless Traction Lifts in Office Tower T4, including Five(5) passenger lifts and Two(2) fire service lifts:
在办公塔楼 T4 中，提供七（7）台无齿轮曳引式垂直梯，其中包含五（5）台客梯和二（2）台消防服务梯：
 - Office Passenger Lifts DT01~DT05
办公客梯 DT01~DT05
 - Fire Service Passenger Lifts DTX01 ~ DTX02
消防服务梯 DTX01~ DTX02
3. Provide Six (6) Gearless Traction Lifts in Office Tower T5, including Five(5) passenger lifts and One(1) fire service lifts:
在办公塔楼 T5 中，提供六（6）台无齿轮曳引式垂直梯，其中包含五（5）台客梯和一（1）台消防服务梯：
 - Office Passenger Lifts DT01~DT05
办公客梯 DT01~DT05
 - Fire Service Passenger Lifts DTX01
消防服务梯 DTX01
4. Provide Four (4) Gearless Traction Lifts in Commercial podium, including Two(2) passenger lifts and Two(2) fire service lifts:
在商业裙房中，提供四（4）台无齿轮曳引式垂直梯，其中包含二（2）台客梯和二（2）台消防服务梯：
 - Passenger Lifts C-DT01~ C-DT02
客梯 C-DT01~ C-DT02
 - Fire Service Passenger Lifts C-DTX01 ,C1-DTX01
消防服务梯 C-DTX01 ,C1-DTX01

B. Products Installed But Not Furnished:

需安装但无需提供的产品包含：

1. CCTV camera provisions inside Car
轿厢内的闭路电视监控摄像头
2. Passenger Lifts' car interior finishes(Car Wall, Car Flooring, Ceiling, Handrail)
乘客电梯的轿厢内部装潢(轿壁, 地板, 吊顶, 扶手)

1.2 DEFINITIONS 定义

- A. Terms used are defined in the latest edition of the Code for Elevators GB/T 7588.1-2020.
使用的术语定义参见最新版的《电梯制造与安装安全规范》GB/T 7588.1-2020。

1.3 PERFORMANCE REQUIREMENTS 性能要求

- A. Regulatory Requirements: Comply with GB/T 7588.1-2020.
监管要求: 符合 GB/T 7588.1-2020。
- B. Accessibility Requirements: Comply with GB50763-2012
无障碍要求: 符合《无障碍设计规范》GB50763-2012

1.4 SUBMITTALS 交付件

- A. Product Data: Include capacities, sizes, performances, operations, safety features, finishes, and similar information. Include product data for car enclosures, hoistway entrances, and operation, control, and signal systems. Include product data for signal fixtures, lights, graphics, Braille plates, and details of mounting provisions.
产品资料: 包括载重、尺寸、性能、运行、安全特性、饰面和类似信息。包括轿厢壁、井道入口以及运行、控制和信号系统的产品资料。包括信号装置、灯具、图形、盲文牌的产品资料以及安装预留的细节。
- B. Shop Drawings: 施工图
1. Include plans, elevations, sections, and large-scale details indicating openings at each landing, machine room equipment space layout, coordination with building structure, relationships with other construction, and locations of equipment.
包括平面图、立面图、剖面图和局部放大图, 说明各层开口, 机房设备的空间布局, 建筑结构协调, 与其他构筑物的关系以及设备位置。
 2. Include large-scale layout of car operating panel
包括轿厢操作面板的放大比例布局图。
 3. Indicate maximum dynamic and static loads imposed on building structure at points of support and maximum and average power demands.
说明建筑结构在支撑点的最大动荷载和静荷载以及最大功率需量和平均功率需量。
 4. Power Confirmation Information: Include motor output power, starting current, full-load running current, and demand factor. Provide maximum and average power consumption.
功率确认信息: 包括电源输出功率、启动电流、满载运行电流以及供电因数。提供最大耗电量及平均耗电量。
- C. Samples for Initial Selection: For finishes involving surface treatment, paint or color selection.
初始选择样品: 用于表面处理饰面、油漆或颜色的选择。
- D. Samples for Verification: For exposed car, hoistway door and frame, and signal equipment finishes:
封样样品: 用于外露轿厢、井道门及门框、轿架以及信号设备饰面。

E. Operation and Maintenance Data:

运行和维护资料:

1. For elevators to include in emergency, operation, and maintenance manuals.
电梯应包括应急、运行和维护手册。
2. Diagnostic and repair information available to manufacturer's and Installer's maintenance personnel.
可供制造商和安装单位维护人员使用的诊断检查和维修信息。

F. Inspection and Acceptance Certificates and Operating Permits: As required by authorities having jurisdiction for normal, unrestricted elevator use.

检查和验收认证以及运行许可: 对于电梯的正常的无限制的使用, 必须得到权威机构的认证。

G. Continuing Maintenance Proposal: Submit a continuing maintenance proposal from Elevator Contractor to Owner, in the form of a standard two-year maintenance agreement, starting on date initial maintenance service is concluded. State services, obligations, conditions, and terms for agreement period and for future renewal options.

持续维保方案: 电梯供应商以标准二年的维保方案, 向业主提交持续维保方案, 持续维护始于初期维护服务结束之日。说明合约期内及日后续订期内的服务、义务、条件和条款。

1.5 QUALITY ASSURANCE 质量保证

A. Compliance with Regulatory Agencies: Comply with most stringent applicable provisions of following codes, laws, and/or authorities, including revisions and changes in effect:

符合监管机构要求: 符合下列规范、法律和/或政府要求的最严格的适用规定, 包括生效的修订和变更版本

1. GB/T 7588.1-2020 电梯制造与安装规范
2. GB/T 8903-2018 电梯用钢丝绳
3. GB/T 10058-2009 电梯技术条件
4. GB/T 10059-2009 电梯试验方法
5. GB/T 10060-2011 电梯安装验收规范
6. GB/T 12974-2012 交流电梯电动机通用技术条件
7. GB 50763-2012 无障碍设施规范
8. GB 50016-2014 建筑设计防火规范
9. GB 51348-2019 民用建筑电气设计标准
10. GB 50116-2013 火灾自动报警系统设计规范
11. GB 50303-2015 建筑电气安装工程施工质量验收规范
12. GB 50054-2011 低压配电设计规范
13. GB/T 7025.1-2008 电梯主参数及轿厢、井道、机房的型式与尺寸
14. GB/T 24477-2009 适用于残障人员的电梯附加要求
15. GB/T 24478-2009 电梯曳引机
16. GB/T 24479-2009 火灾情况下的电梯特性
17. GB 24803.1-2009 电梯安全要求 第一部分:电梯基本安全要求
18. GB/T 27903-2011 电梯层门耐火试验方法
19. GB 50011-2010 建筑抗震设计规范
20. GB 50310-2002 电梯工程施工质量验收规范
21. GB 55036-2022 消防设施通用规范
22. GB 55037-2022 建筑防火通用规范

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING 产品交付、储存和处理

- A. Deliver material in Contractor's original unopened protective packaging.
采用承包商原有的未开封的保护性包装交付材料。
- B. Store material in original protective packaging. Prevent soiling, physical damage, or moisture damage.
用原有的保护性包装储存材料。防止污渍、物理损坏或受潮。
- C. Protect equipment and exposed finishes from damage and stains during transportation and construction
在运输和施工期间要防止设备和外露饰面损坏或沾染污渍。

1.7 WARRANTY 质保

- A. Manufacturer's Warranty: Manufacturer agrees to repair, restore, or replace elevator work that fails in materials or workmanship within specified warranty period.
厂商保修：厂商同意在规定的保修期内维修、修复或更换材料或工艺有问题的电梯设备。
- B. Failures include, but are not limited to: operation or control system failure, including excessive malfunctions; performances below specified ratings; excessive wear; unusual deterioration or aging of materials or finishes; unsafe conditions; need for excessive maintenance; abnormal noise or vibration; and similar unusual, unexpected, and unsatisfactory conditions.
制造商的问题如下（但不仅仅局限于）：操作系统或控制系统的故障，其中包括过多的失灵；不满足规定水平的运行表现；过度磨损；材料或装饰不正常的退化老化；不安全的情况；需过多维保的情况；不正常的噪音或震动；以及类似以上的不正常的，意外的，不令人满意的情况。
- C. Warranty Period: Two years.
保修期：两年。

1.8 MAINTENANCE 维保

- A. Initial Maintenance Service: Beginning at Substantial Completion, maintenance service shall provide twenty-four months full maintenance by skilled employees of elevator Installer. Include monthly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper elevator operation at rated speed and capacity. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.
初期维保服务：始于实质性竣工之时，维保服务应包括由电梯安装单位的熟练工提供的二十四个月的完整维护。其中包括每月的针对磨损的或有缺陷的部件的预防性保养、修理和替换，加润滑油，清洁以及调节，以保证电梯按照规定的速度及额定的载重来正常运行。其中涉及到的零部件和物资都应该是制造商所认可的部件的备件和物资。
 - 1. Perform maintenance during normal working hours.
在正常工作时间内进行维保。
 - 2. If Client requires maintenance out of working hours, coordinate fee
如果业主要求在非正常工作时间内的维保，另协商费用。
 - 3. Perform emergency callback service during normal working hours. Include 24-hour-per-day, 7-day-per-week emergency callback service with response time of thirty minutes or less.
在正常工作时间内提供应急响应服务。包括一周七天，一天 24 小时的应急响应服务，回复时间不超过三十分鐘。
 - 4. Construction contract will include initial maintenance service beginning at Substantial Completion. Owner/General Contractor cannot deduct.
施工合同将包含从实质性竣工时开始的初次维护服务。业主/总承包商不得扣除该次维护。

PART 2 - PRODUCTS 产品

2.1 ELEVATORS 垂直电梯

- A. Elevator System, General: Manufacturer's standard elevator systems. Unless otherwise indicated, manufacturer's standard components shall be used, as included in standard elevator systems and as required for complete system.

电梯系统，概述：制造商标准电梯系统。除非另有说明，应根据标准电梯系统及整套系统，使用制造商标准部件。

- B. Summary 综述

Office Tower T3 includes 5 lifts in below 办公塔楼 T3 包含 5 台电梯，如下：

- Office Passenger Lifts DT01~DT04 办公客梯 DT01~DT04
 1. Elevator Identification: DT01~DT04
电梯编号：DT01~DT04
 2. Capacity: 1000kg.
载重：1000 公斤
 3. Travel Height: 63.4m
提升高度：63.4 米
 4. Contract Speed: 1.75 m/s
合同速度：1.75 m/s
 5. Roping: 2:1
绕绳比：2:1
 6. Machine: Gearless PMSM Machine with 32 bit or more Microcomputer VVVF system from original lift vendor or from domestic/overseas famous lift component vendor
曳引主机：无齿轮永磁同步电机，32 位以上微机控制交流变频变压驱动系统，需为原厂电梯品牌或国内外著名电梯专业配件品牌
 7. Machine Location: Overhead machine room
曳引机位置：上部机房内
 8. Operational Control: Duplex automatic
运行控制：并联自动控制
 9. Controller and Invertor: Electromagnetic compatibility meet GB/T 24807 and GB/T 24808
控制柜和变频器：电磁兼容性应符合 GB/T 24807 和 GB/T 24808 的要求，原厂电梯品牌或国内外著名电梯专业配件品牌
 10. Stops:14(B3~ L1, L3~L12)
停层：14 个(地下 3 层~1 层，2 层~12 层)
 11. Openings: 14 Front (B3~ L1, L3~L12)
开门：14 前开门(地下 3 层~1 层，2 层~12 层)
 12. Minimum Clear Inside Car: 1600mm Wide X 1500mm Deep(after cabin decoration)
最小轿厢净尺寸：1600 毫米 宽 X 1500 毫米 深（轿厢精装修后）
 13. Entrance Size: 1200mm Wide X 2700mm High
入口尺寸：1200 毫米 宽 X 2700 毫米 高
 14. Entrance Type: Single, center – opening
入口类型：单速，中分开门
 15. Door Operation: Gearless PMSM motor with VVVF system, Minimum opening speed: 0.6m/s
电梯门机：永磁同步门机，门机驱动采用交流变频变压控制系统，最低开门速度：0.6m/s，原厂电梯品牌或国内外著名电梯专业配件品牌
 16. Door Protection: MBS 2D + SAFETY EDGES
电梯门防护装置：2D 光幕 + 安全触板

17. **Safety: Progressive, car**
安全钳：渐进式，配置轿厢侧安全钳
18. **Guide Rails: Planed steel tees**
导轨：T型钢
19. **Buffers: Oil**
缓冲器：油压式
20. **Compensation: Per Lift Contractor**
补偿装置：根据供应商要求
21. **Car Enclosure:**
轿厢壁：
 - a. As tender drawing specified,
按照招标图说明
 - b. Steel shell as specified car interior finishes. Max 500 kg weight allowance for interior finishes (Air-conditioner is NOT included).
按照指定的装饰要求配置轿厢壁；最大 500kg 的轿厢内部装饰重量 (不含空调重量)
 - c. Clear height under canopy 3000mm
轿顶下净高 3000 毫米
 - d. Car interior air conditioning
轿厢内部的空调。
22. **Signal Fixtures: LED illumination. See architectural details for custom fixture designs or coordinate with Client.**
信号装置：采用：LED 照明。设计参见建筑详图或者与业主协商。
 - a. **Hall and Car Pushbutton Stations**
电梯门厅和轿厢按钮站：
 - 1) Single hall pushbutton riser
一套门厅按钮
 - 2) Two car operating panels.
单个轿厢操作面板
 - b. **Car Position Indicators:**
轿厢位置指示灯：
 - 1) Digital light in car station with car direction arrows.
在轿厢操作盘内设置数字指示灯，并设有轿厢运行方向箭头
 - c. **Hall Lantern: Not required or per Interior Design**
到站灯：按供应商配置提供给甲方确认
23. **Communication System:**
通信系统：
 - a. Intercom with distress signal.
遇险信号对讲机
 - b. Self-dialing, vandal-resistant, push-to-call, two-way communication system with recall, tracking, and voiceless communication.
具有自动拨号、防破坏、按钮式呼叫功能的双向通信系统，含回拨、记录及无声通信设置
24. **Additional Features:**
其它特征：
 - a. Hoistway access switches, top and bottom floors.
在顶层和底层设置井道检修开关
 - b. Hoistway door unlocking device at all floors
在所有楼层设置井道门开锁装置
 - c. CCTV provisions.
闭路电视系统
 - d. Digital video display provisions(LCD Screen inside car operation panel)
电梯数字图像显示装置(轿厢操作盘上有 LCD 屏幕)
 - e. Monitoring system.
监控系统
 - f. Provide pit access ladder.

设置电梯底坑扶梯

● Fire Service Lifts DTX01

消防服务梯 DTX01, DTX02

1. Elevator Identification: DTX01
电梯编号: DTX01
2. Capacity: 1000kg.
载重: 1000 公斤
3. Travel Height: 63.4m
提升高度: 63.4 米
4. Contract Speed: 1.75 m/s
合同速度: 1.75m/s
5. Roping: 2:1
绕绳比: 2:1
6. Machine: Gearless PMSM Machine with 32 bit or more Microcomputer VVVF system from original lift vendor or from domestic/overseas famous lift component vendor
曳引主机: 无齿轮永磁同步电机, 32 位以上微机控制交流变频变压驱动系统, 需为原厂电梯品牌或国内外著名电梯专业配件品牌
7. Machine Location: Overhead machine room
曳引机位置: 上部机房内
8. Operational Control: Simplex automatic
运行控制: 单一自动控制
9. Controller and Inverter: Electromagnetic compatibility meet GB/T 24807 and GB/T 24808
控制柜和变频器: 电磁兼容性应符合 GB/T 24807 和 GB/T 24808 的要求, 原厂电梯品牌或国内外著名电梯专业配件品牌
10. Stops: 14 (B3~ L1,L3~L12)
停层: 14 个(地下 3 层~ 1 层, 3~12 层)
11. Openings: 14 Front (B3~ L1,L3~L12)
开门: 14 前开门(地下 3 层~ 1 层, 3~12 层)
12. Minimum Clear Inside Car: 1600mm Wide X 1500mm Deep
最小轿厢净尺寸: 1600 毫米 宽 X 1500 毫米 深
13. Entrance Size: 1200mm Wide X 2400mm High
入口尺寸: 1200 毫米 宽 X 2400 毫米 高
14. Entrance Type: Single, center – opening
入口类型: 单速, 中分开门
15. Door Operation: Gearless PMSM motor with VVVF system. Minimum opening speed: 0.6 m/s
电梯门机: 永磁同步门机, 门机驱动采用交流变频变压控制系统, 最低开门速度: 0.6m/s, 原厂电梯品牌或国内外著名电梯专业配件品牌
16. Door Protection: MBS 2D + SAFETY EDGES
电梯门防护装置: 2D 光幕 + 安全触板
17. Safety: Progressive, car
安全钳: 渐进式, 配置轿厢侧安全钳
18. Guide Rails: Planed steel tees
导轨: T 型钢
19. Buffers: Oil
缓冲器: 油压式
20. Compensation: Wire rope with pit guide sheave and tie-down device
补偿装置: 采用补偿钢丝绳与底坑导向轮及防跳装置连接
21. Car Enclosure:
轿厢壁:

- a. As tender drawing specified,
按照招标图说明
 - b. Recommend Simple interior finishes.
建议轿厢内部装饰为简装
 - c. Clear height under canopy 3000mm
轿顶下净高 3000 毫米
 - d. Car interior air conditioning
轿厢内部的空调。
22. Signal Fixtures: LED illumination. See architectural details for custom fixture designs or coordinate with Client.
信号装置：采用：LED 照明。设计参见建筑详图或者与业主协商。
- a. Hall and Car Pushbutton Stations
电梯门厅和轿厢按钮站：
 - 1) Single hall pushbutton riser
单个门厅按钮
 - 2) One car operating panel.
单个轿厢操作面板
 - b. Car Position Indicators:
轿厢位置指示灯：
 - 1) Digital light in car station with car direction arrows.
在轿厢操作盘内设置数字指示灯，并设有轿厢运行方向箭头
 - c. Hall Lantern: Not required or per Interior Design
到站灯：按供应商配置提供给甲方确认
23. Communication System:
通信系统：
- a. Intercom with distress signal.
遇险信号对讲机
 - b. Self-dialing, vandal-resistant, push-to-call, two-way communication system with recall, tracking, and voiceless communication.
具有自动拨号、防破坏、按钮式呼叫功能的双向通信系统，含回拨、记录及无声通信设置
24. Additional Features:
其它特征：
- a. Hoistway access switches, top and bottom floors.
在顶层和底层设置井道检修开关
 - b. Hoistway door unlocking device at all floors
在所有楼层设置井道门开锁装置
 - c. CCTV provisions.
闭路电视系统
 - d. Monitoring system.
监控系统
 - e. Provide pit access ladder.
设置电梯底坑扶梯

Office Tower T4 includes 7 lifts in below 办公塔楼 T4 包含 7 台电梯，如下：

- Office Passenger Lifts DT01~DT04 办公客梯 DT01~DT04
 1. Elevator Identification: DT01~DT04
电梯编号：DT01~DT04
 2. Capacity: 1000kg.
载重：1000 公斤
 3. Travel Height: 63.4m
提升高度：63.4 米

4. Contract Speed: 1.75 m/s
合同速度: 1.75 m/s
5. Roping: 2:1
绕绳比: 2:1
6. Machine: Gearless PMSM Machine with 32 bit or more Microcomputer VVVF system from original lift vendor or from domestic/overseas famous lift component vendor
曳引主机: 无齿轮永磁同步电机, 32 位以上微机控制交流变频变压驱动系统, 需为原厂电梯品牌或国内外著名电梯专业配件品牌
7. Machine Location: Overhead machine room
曳引机位置: 上部机房内
8. Operational Control: Duplex automatic
运行控制: 并联自动控制
9. Controller and Inverter: Electromagnetic compatibility meet GB/T 24807 and GB/T 24808
控制柜和变频器: 电磁兼容性应符合 GB/T 24807 和 GB/T 24808 的要求, 原厂电梯品牌或国内外著名电梯专业配件品牌
10. Stops: 14(B3~ L1, L3~L12)
停层: 14 个(地下 3 层~1 层, 2 层~12 层)
11. Openings: 14 Front (B3~ L1, L3~L12)
开门: 14 前开门(地下 3 层~1 层, 2 层~12 层)
12. Minimum Clear Inside Car: 1600mm Wide X 1500mm Deep(after cabin decoration)
最小轿厢净尺寸: 1600 毫米 宽 X 1500 毫米 深 (轿厢精装修后)
13. Entrance Size: 1200mm Wide X 2700mm High
入口尺寸: 1200 毫米 宽 X 2700 毫米 高
14. Entrance Type: Single, center – opening
入口类型: 单速, 中分开门
15. Door Operation: Gearless PMSM motor with VVVF system, Minimum opening speed: 0.6m/s
电梯门机: 永磁同步门机, 门机驱动采用交流变频变压控制系统, 最低开门速度: 0.6m/s, 原厂电梯品牌或国内外著名电梯专业配件品牌
16. Door Protection: MBS 2D + SAFETY EDGES
电梯门防护装置: 2D 光幕 + 安全触板
17. Safety: Progressive, car
安全钳: 渐进式, 配置轿厢侧安全钳
18. Guide Rails: Planed steel tees
导轨: T 型钢
19. Buffers: Oil
缓冲器: 油压式
20. Compensation: Per Lift Contractor
补偿装置: 根据供应商要求
21. Car Enclosure:
轿厢壁:
 - e. As tender drawing specified,
按照招标图说明
 - f. Steel shell as specified car interior finishes. Max 500 kg weight allowance for interior finishes.
按照指定的装饰要求配置轿厢壁; 最大 500kg 的轿厢内部装饰重量 (不含空调重量)
 - g. Clear height under canopy 3000mm
轿顶下净高 3000 毫米
 - h. Car interior air conditioning
轿厢内部的空调。
22. Signal Fixtures: LED illumination. See architectural details for custom fixture designs or coordinate with Client.
信号装置: 采用: LED 照明。设计参见建筑详图或者与业主协商。

- d. Hall and Car Pushbutton Stations
电梯门厅和轿厢按钮站:
 - 3) Single hall pushbutton riser
一套门厅按钮
 - 4) Two car operating panels.
单个轿厢操作面板
 - e. Car Position Indicators:
轿厢位置指示灯:
 - 2) Digital light in car station with car direction arrows.
在轿厢操作盘内设置数字指示灯，并设有轿厢运行方向箭头
 - f. Hall Lantern: Not required or per Interior Design
到站灯：按供应商配置提供给甲方确认
23. Communication System:
通信系统:
- c. Intercom with distress signal.
遇险信号对讲机
 - d. Self-dialing, vandal-resistant, push-to-call, two-way communication system with recall, tracking, and voiceless communication.
具有自动拨号、防破坏、按钮式呼叫功能的双向通信系统，含回拨、记录及无声通信设置
24. Additional Features:
其它特征:
- g. Hoistway access switches, top and bottom floors.
在顶层和底层设置井道检修开关
 - h. Hoistway door unlocking device at all floors
在所有楼层设置井道门开锁装置
 - i. CCTV provisions.
闭路电视系统
 - j. Digital video display provisions(LCD Screen inside car operation panel)
电梯数字图像显示装置(轿厢操作盘上有 LCD 屏幕)
 - k. Monitoring system.
监控系统
 - l. Provide pit access ladder.
设置电梯底坑扶梯
- Commercial Passenger Lifts DT05 商业客梯 DT5
 - 1. Elevator Identification: DT05
电梯编号：DT05
 - 2. Capacity: 1600kg.
载重：1600 公斤
 - 3. Travel Height:10.9m
提升高度：10.9 米
 - 4. Contract Speed: 1 m/s
合同速度：1 m/s
 - 5. Roping: 2:1
绕绳比：2:1
 - 6. Machine: Gearless PMSM Machine with 32 bit or more Microcomputer VVVF system from original lift vendor or from domestic/overseas famous lift component vendor
曳引主机：无齿轮永磁同步电机，32 位以上微机控制交流变频变压驱动系统，需为原厂电梯品牌或国内外著名电梯专业配件品牌
 - 7. Machine Location: Overhead machine room less
曳引机位置：（无机房）顶层上部
 - 8. Operational Control: Duplex automatic
运行控制：并联自动控制
 - 9. Controller and Invertor: Electromagnetic compatibility meet GB/T 24807 and GB/T 24808

控制柜和变频器：电磁兼容性应符合 GB/T 24807 和 GB/T 24808 的要求，原厂电梯品牌或国内外著名电梯专业配件品牌

10. Stops:3(B1~L2)
停层：3 个(地下 1 层~2 层)
11. Openings: 3Front (B1~L2)
开门：3 个前开门(地下 1 层~2 层)
12. Minimum Clear Inside Car: 2100mm Wide X 1600mm Deep(after cabin decoration)
最小轿厢净尺寸：2100 毫米 宽 X 1600 毫米 深（轿厢精装修后）
13. Entrance Size: 1200mm Wide X 2400mm High
入口尺寸：1200 毫米 宽 X 2400 毫米 高
14. Entrance Type: Single, center – opening
入口类型：单速，中分开门
15. Door Operation: Gearless PMSM motor with VVVF system, Minimum opening speed: 0.6m/s
电梯门机：永磁同步门机，门机驱动采用交流变频变压控制系统，最低开门速度：0.6m/s，原厂电梯品牌或国内外著名电梯专业配件品牌
16. Door Protection: MBS 2D + SAFETY EDGES
电梯门防护装置：2D 光幕 + 安全触板
17. Safety: Progressive, car
安全钳：渐进式，配置轿厢侧安全钳
18. Guide Rails: Planed steel tees
导轨：T 型钢
19. Buffers: Oil
缓冲器：油压式
20. Compensation: Per Lift Contractor
补偿装置：根据供应商要求
21. Car Enclosure:
轿厢壁：
 - i. As tender drawing specified,
按照招标图说明
 - j. Steel shell as specified car interior finishes. Max 500 kg weight allowance for interior finishes.
按照指定的装饰要求配置轿厢壁；最大 500kg 的轿厢内部装饰重量（不含空调重量）
 - k. Clear height under canopy 3000mm
轿顶下净高 3000 毫米
 - l. Car interior air conditioning
轿厢内部的空调。
22. Signal Fixtures: LED illumination. See architectural details for custom fixture designs or coordinate with Client.
信号装置：采用：LED 照明。设计参见建筑详图或者与业主协商。
 - g. Hall and Car Pushbutton Stations
电梯门厅和轿厢按钮站：
 - 5) Single hall pushbutton riser
一套门厅按钮
 - 6) Two car operating panels.
单个轿厢操作面板
 - h. Car Position Indicators:
轿厢位置指示灯：
 - 3) Digital light in car station with car direction arrows.
在轿厢操作盘内设置数字指示灯，并设有轿厢运行方向箭头
 - i. Hall Lantern: Not required or per Interior Design
到站灯：按招标参数表
23. Communication System:
通信系统：

- e. Intercom with distress signal.
遇险信号对讲机
 - f. Self-dialing, vandal-resistant, push-to-call, two-way communication system with recall, tracking, and voiceless communication.
具有自动拨号、防破坏、按钮式呼叫功能的双向通信系统，含回拨、记录及无声通信设置
24. Additional Features:
其它特征:
- m. Hoistway access switches, top and bottom floors.
在顶层和底层设置井道检修开关
 - n. Hoistway door unlocking device at all floors
在所有楼层设置井道门开锁装置
 - o. CCTV provisions.
闭路电视系统
 - p. Digital video display provisions(LCD Screen inside car operation panel)
电梯数字图像显示装置(轿厢操作盘上有 LCD 屏幕)
 - q. Monitoring system.
监控系统
 - r. Provide pit access ladder.
设置电梯底坑扶梯

● Fire Service Lifts DTX01

消防服务梯 DTX01

1. Elevator Identification: DTX01
电梯编号: DTX01
2. Capacity: 1000kg.
载重: 1000 公斤
3. Travel Height: 63.4m
提升高度: 63.4 米
4. Contract Speed: 1.75 m/s
合同速度: 1.75m/s
5. Roping: 2:1
绕绳比: 2:1
6. Machine: Gearless PMSM Machine with 32 bit or more Microcomputer VVVF system from original lift vendor or from domestic/overseas famous lift component vendor
曳引主机: 无齿轮永磁同步电机, 32 位以上微机控制交流变频变压驱动系统, 需为原厂电梯品牌或国内外著名电梯专业配件品牌
7. Machine Location: Overhead machine room
曳引机位置: 上部机房内
8. Operational Control: Simplex automatic
运行控制: 单一自动控制
9. Controller and Invertor: Electromagnetic compatibility meet GB/T 24807 and GB/T 24808
控制柜和变频器: 电磁兼容性应符合 GB/T 24807 和 GB/T 24808 的要求, 原厂电梯品牌或国内外著名电梯专业配件品牌
10. Stops: 14 (B3~ L1,L3~L12)
停层: 14 个(地下 3 层~ 1 层, 3~12 层)
11. Openings: 14 Front (B3~ L1,L3~L12)
开门: 14 前开门(地下 3 层~ 1 层, 3~12 层)
12. Minimum Clear Inside Car: 1600mm Wide X 1500mm Deep(after cabin decoration)
最小轿厢净尺寸: 1600 毫米 宽 X 1500 毫米 深 (轿厢精装修后)
13. Entrance Size: 1200mm Wide X 2400mm High
入口尺寸: 1200 毫米 宽 X 2400 毫米 高

14. Entrance Type: Single, center – opening
入口类型：单速，中分开门
15. Door Operation: Gearless PMSM motor with VVVF system. Minimum opening speed: 0.8m/s
电梯门机：永磁同步门机，门机驱动采用交流变频变压控制系统，最低开门速度：0.6m/s，原厂电梯品牌或国内外著名电梯专业配件品牌
16. Door Protection: MBS 2D + SAFETY EDGES
电梯门防护装置：2D 光幕 + 安全触板
17. Safety: Progressive, car
安全钳：渐进式，配置轿厢侧安全钳
18. Guide Rails: Planed steel tees
导轨：T 型钢
19. Buffers: Oil
缓冲器：油压式
20. Compensation: Wire rope with pit guide sheave and tie-down device
补偿装置：采用补偿钢丝绳与底坑导向轮及防跳装置连接
21. Car Enclosure:
轿厢壁：
 - e. As tender drawing specified,
按照招标图说明
 - f. Recommend Simple interior finishes.
建议轿厢内部装饰为简装
 - g. Clear height under canopy 3000mm
轿顶下净高 3000 毫米
 - h. Car interior air conditioning
轿厢内部的空调。
22. Signal Fixtures: LED illumination. See architectural details for custom fixture designs or coordinate with Client.
信号装置：采用：LED 照明。设计参见建筑详图或者与业主协商。
 - d. Hall and Car Pushbutton Stations
电梯门厅和轿厢按钮站：
 - 3) Single hall pushbutton riser
单个门厅按钮
 - 4) One car operating panel.
单个轿厢操作面板
 - e. Car Position Indicators:
轿厢位置指示灯：
 - 2) Digital light in car station with car direction arrows.
在轿厢操作盘内设置数字指示灯，并设有轿厢运行方向箭头
 - f. Hall Lantern: Not required or per Interior Design
到站灯：按招标参数表
23. Communication System:
通信系统：
 - c. Intercom with distress signal.
遇险信号对讲机
 - d. Self-dialing, vandal-resistant, push-to-call, two-way communication system with recall, tracking, and voiceless communication.
具有自动拨号、防破坏、按钮式呼叫功能的双向通信系统，含回拨、记录及无声通信设置
24. Additional Features:
其它特征：
 - f. Hoistway access switches, top and bottom floors.
在顶层和底层设置井道检修开关
 - g. Hoistway door unlocking device at all floors
在所有楼层设置井道门开锁装置
 - h. CCTV provisions.

- 闭路电视系统
- i. Monitoring system.
监控系统
- j. Provide pit access ladder.
设置电梯底坑扶梯

● Fire Service Lifts DTX02

消防服务梯 DTX02

1. Elevator Identification: DTX02
电梯编号: DTX02
2. Capacity: 1600kg.
载重: 1600 公斤
3. Travel Height: 17.9m
提升高度: 17.9 米
4. Contract Speed: 1.75 m/s
合同速度: 1.75m/s
5. Roping: 2:1
绕绳比: 2:1
6. Machine: Gearless PMSM Machine with 32 bit or more Microcomputer VVVF system from original lift vendor or from domestic/overseas famous lift component vendor
曳引主机: 无齿轮永磁同步电机, 32 位以上微机控制交流变频变压驱动系统, 需为原厂电梯品牌或国内外著名电梯专业配件品牌
7. Machine Location: Overhead machine room less
曳引机位置: (无机房) 顶层上部
8. Operational Control: Simplex automatic
运行控制: 单一自动控制
9. Controller and Inverter: Electromagnetic compatibility meet GB/T 24807 and GB/T 24808
控制柜和变频器: 电磁兼容性应符合 GB/T 24807 和 GB/T 24808 的要求, 原厂电梯品牌或国内外著名电梯专业配件品牌
10. Stops: 5 (B3~ L2)
停层: 5 个(地下 3 层~2 层)
11. Openings: 5 Front (B3~ L2)
开门: 5 前开门(地下 3 层~ 2 层)
12. Minimum Clear Inside Car: 2100mm Wide X 1600mm Deep(after cabin decoration)
最小轿厢净尺寸: 2100 毫米 宽 X 1600 毫米 深 (轿厢精装修后)
13. Entrance Size: 1300mm Wide X 2400mm High
入口尺寸: 1300 毫米 宽 X 2400 毫米 高
14. Entrance Type: Single, center – opening
入口类型: 单速, 中分开门
15. Door Operation: Gearless PMSM motor with VVVF system. Minimum opening speed: 0.8m/s
电梯门机: 永磁同步门机, 门机驱动采用交流变频变压控制系统, 最低开门速度: 0.6m/s, 原厂电梯品牌或国内外著名电梯专业配件品牌
16. Door Protection: MBS 2D + SAFETY EDGES
电梯门防护装置: 2D 光幕 + 安全触板
17. Safety: Progressive, car
安全钳: 渐进式, 配置轿厢侧安全钳及对重侧安全钳
18. Guide Rails: Planed steel tees
导轨: T 型钢
19. Buffers: Oil
缓冲器: 油压式
20. Compensation: Wire rope with pit guide sheave and tie-down device
补偿装置: 采用补偿钢丝绳与底坑导向轮及防跳装置连接

21. Car Enclosure:
轿厢壁:
- i. As tender drawing specified,
按照招标图说明
 - j. Recommend Simple interior finishes.
建议轿厢内部装饰为简装
 - k. Clear height under canopy 3000mm
轿顶下净高 3000 毫米
 - l. Car interior air conditioning
轿厢内部的空调.
22. Signal Fixtures: LED illumination. See architectural details for custom fixture designs or coordinate with Client.
信号装置: 采用: LED 照明。设计参见建筑详图或者与业主协商。
- g. Hall and Car Pushbutton Stations
电梯门厅和轿厢按钮站:
 - 5) Single hall pushbutton riser
单个门厅按钮
 - 6) One car operating panel.
单个轿厢操作面板
 - h. Car Position Indicators:
轿厢位置指示灯:
 - 3) Digital light in car station with car direction arrows.
在轿厢操作盘内设置数字指示灯, 并设有轿厢运行方向箭头
 - i. Hall Lantern: Not required or per Interior Design
到站灯: 按招标参数表
23. Communication System:
通信系统:
- e. Intercom with distress signal.
遇险信号对讲机
 - f. Self-dialing, vandal-resistant, push-to-call, two-way communication system with recall, tracking, and voiceless communication.
具有自动拨号、防破坏、按钮式呼叫功能的双向通信系统, 含回拨、记录及无声通信设置
24. Additional Features:
其它特征:
- k. Hoistway access switches, top and bottom floors.
在顶层和底层设置井道检修开关
 - l. Hoistway door unlocking device at all floors
在所有楼层设置井道门开锁装置
 - m. CCTV provisions.
闭路电视系统
 - n. Monitoring system.
监控系统
 - o. Provide pit access ladder.
设置电梯底坑扶梯

Office Tower T5 includes 6 lifts in below 办公塔楼 T5 包含 6 台电梯, 如下:

- Office Passenger Lifts DT01~DT04 办公客梯 DT01~DT04
 - 1. Elevator Identification: DT01~DT04
电梯编号: DT01~DT04
 - 2. Capacity: 1000kg.
载重: 1000 公斤

3. Travel Height: 63.4m
提升高度: 63.4 米
4. Contract Speed: 1.75 m/s
合同速度: 1.75 m/s
5. Roping: 2:1
绕绳比: 2:1
6. Machine: Gearless PMSM Machine with 32 bit or more Microcomputer VVVF system from original lift vendor or from domestic/overseas famous lift component vendor
曳引主机: 无齿轮永磁同步电机, 32 位以上微机控制交流变频变压驱动系统, 需为原厂电梯品牌或国内外著名电梯专业配件品牌
7. Machine Location: Overhead machine room
曳引机位置: 上部机房内
8. Operational Control: Duplex automatic
运行控制: 并联自动控制
9. Controller and Inverter: Electromagnetic compatibility meet GB/T 24807 and GB/T 24808
控制柜和变频器: 电磁兼容性应符合 GB/T 24807 和 GB/T 24808 的要求, 原厂电梯品牌或国内外著名电梯专业配件品牌
10. Stops: 14(B3~ L1, L3~L12)
停层: 14 个(地下 3 层~1 层, 2 层~12 层)
11. Openings: 14 Front (B3~ L1, L3~L12)
开门: 14 前开门(地下 3 层~1 层, 2 层~12 层)
12. Minimum Clear Inside Car: 1600mm Wide X 1500mm Deep(after cabin decoration)
最小轿厢净尺寸: 1600 毫米 宽 X 1500 毫米 深 (轿厢精装修后)
13. Entrance Size: 1200mm Wide X 2700mm High
入口尺寸: 1200 毫米 宽 X 2700 毫米 高
14. Entrance Type: Single, center – opening
入口类型: 单速, 中分开门
15. Door Operation: Gearless PMSM motor with VVVF system, Minimum opening speed: 0.6m/s
电梯门机: 永磁同步门机, 门机驱动采用交流变频变压控制系统, 最低开门速度: 0.6m/s, 原厂电梯品牌或国内外著名电梯专业配件品牌
16. Door Protection: MBS 2D + SAFETY EDGES
电梯门防护装置: 2D 光幕 + 安全触板
17. Safety: Progressive, car
安全钳: 渐进式, 配置轿厢侧安全钳
18. Guide Rails: Planed steel tees
导轨: T 型钢
19. Buffers: Oil
缓冲器: 油压式
20. Compensation: Per Lift Contractor
补偿装置: 根据供应商要求
21. Car Enclosure:
轿厢壁:
 - m. As tender drawing specified,
按照招标图说明
 - n. Steel shell as specified car interior finishes. Max 500 kg weight allowance for interior finishes.
按照指定的装饰要求配置轿厢壁; 最大 500kg 的轿厢内部装饰重量(不含空调重量)
 - o. Clear height under canopy 3000mm
轿顶下净高 3000 毫米
 - p. Car interior air conditioning
轿厢内部的空调.

22. Signal Fixtures: LED illumination. See architectural details for custom fixture designs or coordinate with Client.
信号装置：采用：LED 照明。设计参见建筑详图或者与业主协商。
- j. Hall and Car Pushbutton Stations
电梯门厅和轿厢按钮站：
 - 7) Single hall pushbutton riser
一套门厅按钮
 - 8) Two car operating panels.
单个轿厢操作面板
 - k. Car Position Indicators:
轿厢位置指示灯：
 - 4) Digital light in car station with car direction arrows.
在轿厢操作盘内设置数字指示灯，并设有轿厢运行方向箭头
 - l. Hall Lantern: Not required or per Interior Design
到站灯：按招标参数表
23. Communication System:
通信系统：
- g. Intercom with distress signal.
遇险信号对讲机
 - h. Self-dialing, vandal-resistant, push-to-call, two-way communication system with recall, tracking, and voiceless communication.
具有自动拨号、防破坏、按钮式呼叫功能的双向通信系统，含回拨、记录及无声通信设置
24. Additional Features:
其它特征：
- s. Hoistway access switches, top and bottom floors.
在顶层和底层设置井道检修开关
 - t. Hoistway door unlocking device at all floors
在所有楼层设置井道门开锁装置
 - u. CCTV provisions.
闭路电视系统
 - v. Digital video display provisions(LCD Screen inside car operation panel)
电梯数字图像显示装置(轿厢操作盘上有 LCD 屏幕)
 - w. Monitoring system.
监控系统
 - x. Provide pit access ladder.
设置电梯底坑扶梯
- Commercial Passenger Lifts DT05 商业客梯 DT5
 - 1. Elevator Identification: DT05
电梯编号：DT05
 - 2. Capacity: 1600kg.
载重：1600 公斤
 - 3. Travel Height:10.9m
提升高度：10.9 米
 - 4. Contract Speed: 1 m/s
合同速度：1 m/s
 - 5. Roping: 2:1
绕绳比：2:1
 - 6. Machine: Gearless PMSM Machine with 32 bit or more Microcomputer VVVF system from original lift vendor or from domestic/overseas famous lift component vendor
曳引主机：无齿轮永磁同步电机，32 位以上微机控制交流变频变压驱动系统，需为原厂电梯品牌或国内外著名电梯专业配件品牌
 - 7. Machine Location: Overhead machine room less
曳引机位置：（无机房）顶层上部

8. Operational Control: Duplex automatic
运行控制：并联自动控制
9. Controller and Inverter: Electromagnetic compatibility meet GB/T 24807 and GB/T 24808
控制柜和变频器：电磁兼容性应符合 GB/T 24807 和 GB/T 24808 的要求，原厂电梯品牌或国内外著名电梯专业配件品牌
10. Stops:3(B1~L2)
停层：3 个(地下 1 层~2 层)
11. Openings: 3Front (B1~L2)
开门：3 个前开门(地下 1 层~2 层)
12. Minimum Clear Inside Car: 2100mm Wide X 1600mm Deep(after cabin decoration)
最小轿厢净尺寸：2100 毫米 宽 X 1600 毫米 深（轿厢精装修后）
13. Entrance Size: 1200mm Wide X 2400mm High
入口尺寸：1200 毫米 宽 X 2400 毫米 高
14. Entrance Type: Single, center – opening
入口类型：单速，中分开门
15. Door Operation: Gearless PMSM motor with VVVF system, Minimum opening speed: 0.6m/s
电梯门机：永磁同步门机，门机驱动采用交流变频变压控制系统，最低开门速度：0.6m/s，原厂电梯品牌或国内外著名电梯专业配件品牌
16. Door Protection: MBS 2D + SAFETY EDGES
电梯门防护装置：2D 光幕 + 安全触板
17. Safety: Progressive, car
安全钳：渐进式，配置轿厢侧安全钳
18. Guide Rails: Planed steel tees
导轨：T 型钢
19. Buffers: Oil
缓冲器：油压式
20. Compensation: Per Lift Contractor
补偿装置：根据供应商要求
21. Car Enclosure:
轿厢壁：
 - q. As tender drawing specified,
按照招标图说明
 - r. Steel shell as specified car interior finishes. Max 500 kg weight allowance for interior finishes.
按照指定的装饰要求配置轿厢壁；最大 500kg 的轿厢内部装饰重量(不含空调)
 - s. Clear height under canopy 3000mm
轿顶下净高 3000 毫米
 - t. Car interior air conditioning
轿厢内部的空调。
22. Signal Fixtures: LED illumination. See architectural details for custom fixture designs or coordinate with Client.
信号装置：采用：LED 照明。设计参见建筑详图或者与业主协商。
 - m. Hall and Car Pushbutton Stations
电梯门厅和轿厢按钮站：
 - 9) Single hall pushbutton riser
一套门厅按钮
 - 10) Two car operating panels.
单个轿厢操作面板
 - n. Car Position Indicators:
轿厢位置指示灯：
 - 5) Digital light in car station with car direction arrows.
在轿厢操作盘内设置数字指示灯，并设有轿厢运行方向箭头

- o. Hall Lantern: Not required or per Interior Design
到站灯：按招标参数表
- 23. Communication System:
通信系统：
 - i. Intercom with distress signal.
遇险信号对讲机
 - j. Self-dialing, vandal-resistant, push-to-call, two-way communication system with recall, tracking, and voiceless communication.
具有自动拨号、防破坏、按钮式呼叫功能的双向通信系统，含回拨、记录及无声通信设置
- 24. Additional Features:
其它特征：
 - y. Hoistway access switches, top and bottom floors.
在顶层和底层设置井道检修开关
 - z. Hoistway door unlocking device at all floors
在所有楼层设置井道门开锁装置
 - aa. CCTV provisions.
闭路电视系统
 - bb. Digital video display provisions(LCD Screen inside car operation panel)
电梯数字图像显示装置(轿厢操作盘上有 LCD 屏幕)
 - cc. Monitoring system.
监控系统
 - dd. Provide pit access ladder.
设置电梯底坑扶梯
- Fire Service Lifts DTX01
消防服务梯 DTX01
 - 1. Elevator Identification: DTX01
电梯编号：DTX01
 - 2. Capacity: 1000kg.
载重：1000 公斤
 - 3. Travel Height: 63.4m
提升高度：63.4 米
 - 4. Contract Speed: 1.75 m/s
合同速度：1.75m/s
 - 5. Roping: 2:1
绕绳比：2:1
 - 6. Machine: Gearless PMSM Machine with 32 bit or more Microcomputer VVVF system from original lift vendor or from domestic/overseas famous lift component vendor
曳引主机：无齿轮永磁同步电机，32 位以上微机控制交流变频变压驱动系统，需为原厂电梯品牌或国内外著名电梯专业配件品牌
 - 7. Machine Location: Overhead machine room
曳引机位置：上部机房内
 - 8. Operational Control: Simplex automatic
运行控制：单一自动控制
 - 9. Controller and Inverter: Electromagnetic compatibility meet GB/T 24807 and GB/T 24808
控制柜和变频器：电磁兼容性应符合 GB/T 24807 和 GB/T 24808 的要求，原厂电梯品牌或国内外著名电梯专业配件品牌
 - 10. Stops: 14 (B3~ L1,L3~L12)
停层：14 个(地下 3 层~ 1 层，3~12 层)
 - 11. Openings: 14 Front (B3~ L1,L3~L12)
开门：14 前开门(地下 3 层~ 1 层，3~12 层)
 - 12. Minimum Clear Inside Car: 1600mm Wide X 1500mm Deep(after cabin decoration)

最小轿厢净尺寸：1600 毫米 宽 X 1500 毫米 深

13. Entrance Size: 1200mm Wide X 2400mm High
入口尺寸：1200 毫米 宽 X 2400 毫米 高
14. Entrance Type: Single, center – opening
入口类型：单速，中分开门
15. Door Operation: Gearless PMSM motor with VVVF system. Minimum opening speed: 0.6m/s
电梯门机：永磁同步门机，门机驱动采用交流变频变压控制系统最低开门速度：0.6m/s，原厂电
梯品牌或国内外著名电梯专业配件品牌
16. Door Protection: MBS 2D + SAFETY EDGES
电梯门防护装置：2D 光幕 + 安全触板
17. Safety: Progressive, car
安全钳：渐进式，配置轿厢侧安全钳
18. Guide Rails: Planed steel tees
导轨：T 型钢
19. Buffers: Oil
缓冲器：油压式
20. Compensation: Wire rope with pit guide sheave and tie-down device
补偿装置：采用补偿钢丝绳与底坑导向轮及防跳装置连接
21. Car Enclosure:
轿厢壁：
 - m. As tender drawing specified,
按照招标图说明
 - n. Recommend Simple interior finishes.
建议轿厢内部装饰为简装
 - o. Clear height under canopy 3000mm
轿顶下净高 3000 毫米
 - p. Car interior air conditioning
轿厢内部的空调。
22. Signal Fixtures: LED illumination. See architectural details for custom fixture designs or
coordinate with Client.
信号装置：采用：LED 照明。设计参见建筑详图或者与业主协商。
 - j. Hall and Car Pushbutton Stations
电梯门厅和轿厢按钮站：
 - 7) Single hall pushbutton riser
单个门厅按钮
 - 8) One car operating panel.
单个轿厢操作面板
 - k. Car Position Indicators:
轿厢位置指示灯：
 - 4) Digital light in car station with car direction arrows.
在轿厢操作盘内设置数字指示灯，并设有轿厢运行方向箭头
 - l. Hall Lantern: Not required or per Interior Design
到站灯：按招标参数表
23. Communication System:
通信系统：
 - g. Intercom with distress signal.
遇险信号对讲机
 - h. Self-dialing, vandal-resistant, push-to-call, two-way communication system with recall,
tracking, and voiceless communication.
具有自动拨号、防破坏、按钮式呼叫功能的双向通信系统，含回拨、记录及无声通信设置
24. Additional Features:
其它特征：
 - p. Hoistway access switches, top and bottom floors.

- 在顶层和底层设置井道检修开关
- q. Hoistway door unlocking device at all floors
在所有楼层设置井道门开锁装置
 - r. CCTV provisions.
闭路电视系统
 - s. Monitoring system.
监控系统
 - t. Provide pit access ladder.
设置电梯底坑扶梯

Podium includes 4 lifts in below 商业裙房包含 4 台电梯，如下：

- Podium Service Lifts C-DT01~C-DT02 裙房服务梯 C-DT01~ C-DT02
 - 1. Elevator Identification: C-DT01~C-DT02
电梯编号：C-DT01~C-DT02
 - 2. Capacity: 1600kg.
载重：1600 公斤
 - 3. Travel Height: 17.9m
提升高度：17.9 米
 - 4. Contract Speed: 1.75 m/s
合同速度：1.75m/s
 - 5. Roping: 2:1
绕绳比：2:1
 - 6. Machine: Gearless PMSM Machine with 32 bit or more Microcomputer VVVF system from original lift vendor or from domestic/overseas famous lift component vendor
曳引主机：无齿轮永磁同步电机，32 位以上微机控制交流变频变压驱动系统，需为原厂电梯品牌或国内外著名电梯专业配件品牌
 - 7. Machine Location: Overhead machine room less
曳引机位置：（无机房）顶层上部
 - 8. Operational Control: Group automatic
运行控制：群组控制
 - 9. Controller and Inverter: Electromagnetic compatibility meet GB/T 24807 and GB/T 24808
控制柜和变频器：电磁兼容性应符合 GB/T 24807 和 GB/T 24808 的要求，原厂电梯品牌或国内外著名电梯专业配件品牌
 - 10. Stops: 5 (B3~ L2)
停层：5 个(地下 3 层~ 2 层)
 - 11. Openings: 5 Front (B2~ L2)
开门：5 前开门(地下 3 层~ 2 层)
 - 12. Minimum Clear Inside Car: 2100mm Wide X 1600mm Deep(after cabin decoration)
最小轿厢净尺寸：2100 毫米 宽 X 1600 毫米 深（轿厢精装修后）
 - 13. Entrance Size: 1000mm Wide X 2400mm High
入口尺寸：1000 毫米 宽 X 2400 毫米 高
 - 14. Entrance Type: Single, center – opening
入口类型：单速，中分开门
 - 15. Door Operation: Gearless PMSM motor with VVVF system, Minimum opening speed: 0.6m/s
电梯门机：永磁同步门机，门机驱动采用交流变频变压控制系统，最低开门速度：0.6m/s，原厂电梯品牌或国内外著名电梯专业配件品牌
 - 16. Door Protection: MBS 2D + SAFETY EDGES
电梯门防护装置：2D 光幕 + 安全触板
 - 17. Safety: Progressive, car
安全钳：渐进式，配置轿厢侧安全钳

18. Guide Rails: Planed steel tees
导轨：T 型钢
19. Buffers: Oil
缓冲器：油压式
20. Compensation: Per Lift Contractor
补偿装置：根据供应商要求
21. Car Enclosure:
轿厢壁：
 - a. As tender drawing specified,
按照招标图说明
 - b. Steel shell as specified car interior finishes. Max 500 kg weight allowance for interior finishes.
按照指定的装饰要求配置轿厢壁；最大 500kg 的轿厢内部装饰重量(不含空调)
 - c. Clear height under canopy 3000mm
轿顶下净高 3000 毫米
 - d. Car interior air conditioning
轿厢内部的空调。
22. Signal Fixtures: LED illumination. See architectural details for custom fixture designs or coordinate with Client.
信号装置：采用：LED 照明。设计参见建筑详图或者与业主协商。
 - a. Hall and Car Pushbutton Stations
电梯门厅和轿厢按钮站：
 - 1) Two hall pushbutton risers
单套门厅按钮
 - 1) One car operating panel
单个轿厢操作面板
 - b. Car Position Indicators:
轿厢位置指示灯：
 - 1) Digital light in car station with car direction arrows.
在轿厢操作盘内设置数字指示灯，并设有轿厢运行方向箭头
 - c. Hall Lantern: Not required or per Interior Design
到站灯：按招标参数表要求
23. Communication System:
通信系统：
 - a. Intercom with distress signal.
遇险信号对讲机
 - b. Self-dialing, vandal-resistant, push-to-call, two-way communication system with recall, tracking, and voiceless communication.
具有自动拨号、防破坏、按钮式呼叫功能的双向通信系统，含回拨、记录及无声通信设置
24. Additional Features:
其它特征：
 - a. Hoistway access switches, top and bottom floors.
在顶层和底层设置井道检修开关
 - b. Hoistway door unlocking device at all floors
在所有楼层设置井道门开锁装置
 - c. CCTV provisions.
闭路电视系统
 - d. Monitoring system.
监控系统
 - e. Provide pit access ladder.
设置电梯底坑扶梯

- Podium Fire Service Lift C-DTX01 商业裙房消防服务梯 C-DTX01

1. Elevator Identification: C-DTX01
电梯编号: C-DTX01
2. Capacity: 1600kg.
载重: 1600 公斤
3. Travel Height: 17.9m
提升高度: 17.9 米
4. Contract Speed: 1.75 m/s
合同速度: 1.75m/s
5. Roping: 2:1
绕绳比: 2:1
6. Machine: Gearless PMSM Machine with 32 bit or more Microcomputer VVVF system from original lift vendor or from domestic/overseas famous lift component vendor
曳引主机: 无齿轮永磁同步电机, 32 位以上微机控制交流变频变压驱动系统, 需为原厂电梯品牌或国内外著名电梯专业配件品牌
7. Machine Location: Overhead machine room
曳引机位置: (无机房) 顶层上部
8. Operational Control: Simplex automatic
运行控制: 单一自动控制
9. Controller and Inverter: Electromagnetic compatibility meet GB/T 24807 and GB/T 24808
控制柜和变频器: 电磁兼容性应符合 GB/T 24807 和 GB/T 24808 的要求, 原厂电梯品牌或国内外著名电梯专业配件品牌
10. Stops: 5 (B3~ L2)
停层: 5 个(地下 3 层~ 2 层)
11. Openings: 5Front (B3~ L2)
开门: 5 前开门(地下 2 层~地下 1 层, 1~21 层)
12. Minimum Clear Inside Car: 2100mm Wide X 1600mm Deep(after cabin decoration)
最小轿厢净尺寸: 2100 毫米 宽 X 1600 毫米 深
13. Entrance Size: 1200mm Wide X 2400mm High
入口尺寸: 1200 毫米 宽 X 2400 毫米 高
14. Entrance Type: Single, center – opening
入口类型: 单速, 中分开门
15. Door Operation: Gearless PMSM motor with VVVF system, Minimum opening speed: 0.6m/s
电梯门机: 永磁同步门机, 门机驱动采用交流变频变压控制系统, 最低开门速度: 0.6m/s, 原厂电梯品牌或国内外著名电梯专业配件品牌
16. Door Protection: MBS 2D + SAFETY EDGES
电梯门防护装置: 2D 光幕 + 安全触板
17. Safety: Progressive, car
安全钳: 渐进式, 配置轿厢侧安全钳
18. Guide Rails: Planed steel tees
导轨: T 型钢
19. Buffers: Oil
缓冲器: 油压式
20. Compensation: Per Lift Contractor
补偿装置: 根据供应商要求
21. Car Enclosure:
轿厢壁:
 - a. As tender drawing specified,
按照招标图说明
 - b. Recommend Simple interior finishes.
建议轿厢内部装饰为简装
 - c. Clear height under canopy 3000mm
轿顶下净高 3000 毫米

- d. Car interior air conditioning
轿厢内部的空调。
 - 22. Signal Fixtures: LED illumination. See architectural details for custom fixture designs or coordinate with Client.
信号装置：采用：LED 照明。设计参见建筑详图或者与业主协商。
 - a. Hall and Car Pushbutton Stations
电梯门厅和轿厢按钮站：
 - 1) Single hall pushbutton riser
一套门厅按钮
 - 2) One car operating panel.
单个轿厢操作面板
 - b. Car Position Indicators:
轿厢位置指示灯：
 - 1) Digital light in car station with car direction arrows.
在轿厢操作盘内设置数字指示灯，并设有轿厢运行方向箭头
 - c. Hall Lantern: Not required or per Interior Design
到站灯：按招标参数表
 - 23. Communication System:
通信系统：
 - a. Intercom with distress signal.
遇险信号对讲机
 - b. Self-dialing, vandal-resistant, push-to-call, two-way communication system with recall, tracking, and voiceless communication.
具有自动拨号、防破坏、按钮式呼叫功能的双向通信系统，含回拨、记录及无声通信设置
 - 24. Additional Features:
其它特征：
 - a. Hoistway access switches, top and bottom floors.
在顶层和底层设置井道检修开关
 - b. Hoistway door unlocking device at all floors
在所有楼层设置井道门开锁装置
 - c. CCTV provisions.
闭路电视系统
 - d. Monitoring system.
监控系统
 - e. Provide pit access ladder.
设置电梯底坑扶梯
- Podium Fire Service Lift C-DTX01 商业裙房消防服务梯 C1-DTX01
 - 1. Elevator Identification: C-DTX01
电梯编号：C-DTX01
 - 2. Capacity: 1000kg.
载重：1000 公斤
 - 3. Travel Height: 22.9m
提升高度：22.9 米
 - 4. Contract Speed: 1.75 m/s
合同速度：1.75m/s
 - 5. Roping: 2:1
绕绳比：2:1
 - 6. Machine: Gearless PMSM Machine with 32 bit or more Microcomputer VVVF system from original lift vendor or from domestic/overseas famous lift component vendor
曳引主机：无齿轮永磁同步电机，32 位以上微机控制交流变频变压驱动系统，需为原厂电梯品牌或国内外著名电梯专业配件品牌

7. Machine Location: Overhead machine room
曳引机位置：（无机房）顶层上部
8. Operational Control: Simplex automatic
运行控制：单一自动控制
9. Controller and Inverter: Electromagnetic compatibility meet GB/T 24807 and GB/T 24808
控制柜和变频器：电磁兼容性应符合 GB/T 24807 和 GB/T 24808 的要求，原厂电梯品牌或国内外著名电梯专业配件品牌
10. Stops: 6 (B3~ L3)
停层：6 个(地下 3 层~ 3 层)
11. Openings: 6Front (B3~ L3)
开门：6 前开门(地下 3 层~ 3 层)
12. Minimum Clear Inside Car: 1600mm Wide X 1500mm Deep(after cabin decoration)
最小轿厢净尺寸：1600 毫米 宽 X 1500 毫米 深
13. Entrance Size: 1200mm Wide X 2400mm High
入口尺寸：1200 毫米 宽 X 2400 毫米 高
14. Entrance Type: Single, center – opening
入口类型：单速，中分开门
15. Door Operation: Gearless PMSM motor with VVVF system, Minimum opening speed: 0.6m/s
电梯门机：永磁同步门机，门机驱动采用交流变频变压控制系统，最低开门速度：0.6m/s，原厂电梯品牌或国内外著名电梯专业配件品牌
16. Door Protection: MBS 2D + SAFETY EDGES
电梯门防护装置：2D 光幕 + 安全触板
17. Safety: Progressive, car
安全钳：渐进式，配置轿厢侧安全钳
18. Guide Rails: Planed steel tees
导轨：T 型钢
19. Buffers: Oil
缓冲器：油压式
20. Compensation: Per Lift Contractor
补偿装置：根据供应商要求
21. Car Enclosure:
轿厢壁：
 - e. As tender drawing specified,
按照招标图说明
 - f. Recommend Simple interior finishes.
建议轿厢内部装饰为简装
 - g. Clear height under canopy 3000mm
轿顶下净高 3000 毫米
 - h. Car interior air conditioning
轿厢内部的空调.
22. Signal Fixtures: LED illumination. See architectural details for custom fixture designs or coordinate with Client.
信号装置：采用：LED 照明。设计参见建筑详图或者与业主协商。
 - d. Hall and Car Pushbutton Stations
电梯门厅和轿厢按钮站：
 - 3) Single hall pushbutton riser
一套门厅按钮
 - 4) One car operating panel.
单个轿厢操作面板
 - e. Car Position Indicators:
轿厢位置指示灯：
 - 2) Digital light in car station with car direction arrows.
在轿厢操作盘内设置数字指示灯，并设有轿厢运行方向箭头

- f. Hall Lantern: Not required or per Interior Design
到站灯：按招标参数表
- 23. Communication System:
通信系统：
 - c. Intercom with distress signal.
遇险信号对讲机
 - d. Self-dialing, vandal-resistant, push-to-call, two-way communication system with recall, tracking, and voiceless communication.
具有自动拨号、防破坏、按钮式呼叫功能的双向通信系统，含回拨、记录及无声通信设置
- 24. Additional Features:
其它特征：
 - f. Hoistway access switches, top and bottom floors.
在顶层和底层设置井道检修开关
 - g. Hoistway door unlocking device at all floors
在所有楼层设置井道门开锁装置
 - h. CCTV provisions.
闭路电视系统
 - i. Monitoring system.
监控系统
 - j. Provide pit access ladder.
设置电梯底坑扶梯

2.2 MATERIALS 材料

A. Steel 钢:

1. Sheet Steel (Furniture Steel for Exposed Work): Stretcher-leveled, cold-rolled, commercial quality carbon steel, complying with ASTM A366 or equivalent, matte finish.
钢板(用于暴露在外的装饰钢板): 拉伸至水平, 冷轧, 商业等级碳素钢, 符合 ASTM A366 或同等材料标准, 喷砂面。
2. Sheet Steel (for Unexposed Work): Hot-rolled, commercial quality carbon steel, pickled and oiled, complying with ASTM A568/A568M-03 or equivalent.
钢板(用于不暴露在外的部分): 热轧, 商业等级碳素钢, 经酸洗和涂油, 符合 ASTM A568 / A568M-03 或同等材料标准。与试验学会 (ASTM) A568/A568M-03 的要求。
3. Structural Steel Shapes and Plates: ASTM A36 or equivalent.
结构钢类型和板材: 符合 ASTM A36 或同等等级标准。

B. Stainless Steel: Type 304 complying with ASTM A240 or equivalent, with standard tempers and hardness required for fabrication, strength and durability. Apply mechanical finish on fabricated work in the locations shown or specified, with texture and reflectivity required to match Architect's sample. Protect with adhesive paper covering. Average 1.2mm mean depth for its steel raw material.

不锈钢: 304 型号, 符合 ASTM A240 或同等材料标准, 具备制造、强度和耐久性所需的标准淬火和硬度。显示或指定位置焊接工艺上应用机械表面处理, 根据需要纹理和反射率符合建筑师的样品要求。用胶粘纸覆盖保护。其钢材原材料的平均的板材厚度需为 1.2mm。

1. Brushed: Directional polish finish. Graining directions as shown or, if not shown, in vertical dimension.
拉丝不锈钢: 表面直接抛光处理。粒化方向如所示, 如果没有表面粒化方向, 则方向为垂直的尺寸
2. Mirror: Reflective polish finish with no visible graining.
镜面不锈钢: 反射抛光面, 无可见粒化纹理。

- 3. Black: The “Black” surface should be made by chemical treatment instead of painting
黑色不锈钢：黑色的表面是由化学处理产生的黑色，而不是涂装的黑色。
- 4. Corrugated steel plates with lath and lentilform: Vandal-resistant Steel, anti-skidding and anti-friction
花纹钢板：防破坏的钢，防滑并耐磨
- C. Aluminum: Extrusions per ASTM B221 or equivalent; sheet and plate per ASTM B209 or equivalent.
铝材：挤压制品按 ASTM B221 或同等材料要求；板材和金属板按 ASTM B209 或同等材料要求。
- D. Paint: Clean exposed metal parts and assemblies of oil, grease, scale, and other foreign matter and factory paint one shop coat of standard rust-resistant primer. Galvanized metal need not be painted. After installation provide one finish coat of industrial enamel paint.
油漆：清除外露金属部件及装配的油渍、油污、毛刺及其他异物，在工厂涂刷一层标准防锈底漆。制作完成之后，涂刷一层工业搪瓷漆作为饰面。镀锌金属表面无需涂漆。
- E. Prime Finish: Clean all metal surfaces receiving a baked enamel paint finish of oil, grease, and scale. Apply one coat of rust-resistant primer followed by a filler coat over uneven surfaces. Sand smooth and apply final coat of primer.
底漆面层：清洁所有需涂刷烤漆的金属表面的油渍、油污及毛刺。涂一层防锈底漆，之后在不平整单位表面涂刷一层填充层。将表面打磨光滑，涂刷最后一层底漆。
- F. Baked Enamel Finish: Prime finish per above. Unless specified “prime finish” only, apply and bake three additional coats of enamel in the selected solid color.
烤漆饰面：按照以上步骤涂刷底漆。除非另有规定仅“涂刷底漆”，还需另外涂刷三层选定的纯色烤漆。

2.3 CAR AND GROUP PERFORMANCE 轿厢和轿厢组性能

- A. Car Speed: ± 3% of contract speed under any loading condition.
轿厢速度：在任何荷载情况下，允许误差为约定速度的± 3%。
- B. Car Capacity: Safely lower, stop and hold 125% of rated load.
轿厢载重：安全下降、停止，能够承受额定载重的 125%
- C. Car Stopping Zone: 5 mm under any loading condition.
轿厢停靠区：在任何荷载情况下，允许误差为 5 mm
- D. Door Times: Seconds from start to fully open or fully closed:
开门/关门时间：自开启至完全打开：
 - 1. The door opening times shall meet the indicated times and the door closing times shall approximate the following:
开门时间应当符合指定的时间,关门时间应当接近下表中所列数值:

DOORS 电梯门		TYPE 型号	LIFTS 电梯类型	DOOR OPENING TIME (SECONDS) 开门时间 (秒)	DOOR CLOSING TIME (SECONDS) 关门时间 (秒)
Width 开门宽度	Height 开门高度				
1200	2700	Center 中分开门	Passenger 乘客电梯	1.8	2.9

1200	2400	Center 中分开门	Passenger 乘客电梯	1.8	2.4
1300	2400	Side 侧开门	Service 服务电梯	2.5	3.0

E. Car Ride Quality: 轿厢乘坐质量

1. Acceleration and Deceleration: Smooth constant and not less than $0.8\text{m}/\text{second}^2$ with an initial ramp between 0.5 and 0.75 second.
加速度和减速度：平稳均匀，不低于 $0.8\text{米}/\text{秒}^2$ ，初始斜度为 0.5 至 0.75 秒。
2. Sustained Jerk: Not more than $1.4\text{m}/\text{second}^3$.
持续的加加速度：不超过 $1.4\text{米}/\text{秒}^3$ 。
3. Horizontal and vertical acceleration within car during all riding and door operating conditions. Not more than $0.2\text{m}/\text{second}^2$ peak to peak (adjacent peaks) in the 1-10 Hz range.
在乘坐期间及轿门动作时，轿厢内竖向和横向加速度；峰间值（最大峰峰值）不超过 $0.2\text{米}/\text{秒}^2$ ，1 – 10 赫兹
4. Measurement Standards: Measure and evaluate ride quality consistent with GB/T24474-2009, using low pass cutoff frequency of 10 Hz and A95 peak-to-peak average calculations.
衡量标准：按照 GB/T24474-2009 的要求衡量和分析乘坐质量，采用 10 赫兹低通截止频率，A95 峰间平均计算值。

F. Noise and Vibration Control: 噪音和震动控制

1. Airborne Noise: Measured noise level of elevator equipment and its operation shall not exceed 60 dBA inside car under any condition including door operation and car ventilation exhaust blower on its highest speed. Limit noise level in the machine room relating to elevator equipment and its operation to no more than 75 dBA. All dBA readings to be taken 3'-0" off the floor and 1 meter from the equipment using the "A" weighted scale.
空气噪声：测得的轿厢内电梯设备和操作噪声水平在任何情况下不得超过 60 分贝，包括在轿厢门操作和轿厢排风扇最高速运转时也是如此。机房内电梯设备及其运行相关的噪声水平不得超过 75 分贝。所有的分贝读数在距离地板和设备 1 米处采用加权平均值测量。
2. Vibration Control: All elevator equipment shall be mechanically isolated from the building structure and other components to minimize the possibility of objectionable noise and vibrations being transmitted to occupied areas of the building.
震动控制：合同项下所有的电梯设备应同建筑结构及其他部件分开，尽量避免令人不悦的噪音和震动传送到建筑物中有人员的区域。

2.4 OPERATION 操作系统

- A. Single Automatic Microprocessor-Based, Cars DTX01 in T3; Cars DT-05, DTX01, DTX02 in T4; Cars DT05, DTX01 in T5; Cars C-DTX01, C1-DTX01 in Podium :
- 基于微处理器的单个自动控制系统，T3 塔的电梯 DTX01；T4 塔的电梯 DT-05, DTX01, DTX02；T5 塔的电梯 DT05, DTX01，；商业裙房的 C-DTX01, C1-DTX01:
1. Operate car without attendant from pushbuttons in car and at each landing. When car is idle, automatically start car, and dispatch it to appropriate floor when call is registered by pressing car or hall pushbutton.
轿厢采用按钮操作，无需操作员，在各楼层停靠。轿厢闲置时，自动启动轿厢，并发送到登记了轿厢或门厅呼梯的楼层。

2. Illuminate, "in use" lights in each hall pushbutton station when car is responding to registered car or hall call. Prevent registration of another call until trip is complete including time for passenger transfer and registration of car call if car is responding to a hall call. Extinguish "in use" light to indicate system is available to respond to next call.

在轿厢响应轿厢或门厅呼梯时，各个按钮站的“使用中”指示灯应发光。电梯行程结束之前避免登记新的呼梯，如轿厢正在响应门厅呼梯，还应在乘客换乘和登记轿厢呼梯完成之前避免登记新的呼梯。轿厢可回应下一次呼梯时，熄灭“使用中”指示灯。

- B. Group Automatic, Cars DT01~DT04 in T3; Cars DT01~DT04 in T4 ;Cars DT01~DT04 in T5; Cars C-DT01~C-DT02 in Podium :

自动群组控制，T3 塔的电梯 DT01~DT04；T4 塔的电梯 DT01~DT04；T5 塔的电梯 DT01~DT04；裙房的电梯 C-DT01~C-DT02:

1. Artificial Intelligence Systems: Control system shall include one or more of the following "artificial" intelligence approaches to maximize the interfloor traffic performance and reduce the number of "long wait calls" for a given group of elevators:

人工智能系统：控制系统应包括以下“人工”智能方法中的一个或多个，以最大化楼层间交通性能，并减少电梯组的“长时间等待呼梯”的数量：

- a. A long term learning function with a histogram or genetic algorithms that records traffic patterns in the building on a hard disk over at least a week of operation.It shall make use of this information by positioning cars at floors at certain times of the day when heavy traffic is anticipated, by minimizing stops by inferring likely traffic patterns and arrival/departure rates at different floors during different times of the day.The system shall reduce the probability of long wait calls during heavy periods of traffic, etc.

含在硬盘上记录建筑内交通模式（至少一周的运行）的柱状图或遗传算法的长期学习功能。在预计交通量较大时，通过在一天内的某一时间段内指定轿厢停靠某些楼层，或通过推测可能的交通模式及一天内不同时段不同楼层的到达/离开率来最小化停靠楼层，来利用这一信息。在交通量大的时间段内等，系统应减少长时间等待呼梯的概率。

- b. Incorporates neural network, fuzzy logic type rule sets in an expert system rule base.Provide a short term learning function and a knowledge base of predicted traffic patterns and car movements.

将神经网络、模糊逻辑型规则整合在专家系统规则库中。提供预计交通模式及轿厢运动的短期学习功能及知识库。

- c. A destination hall call registration system that anticipates traffic demands before they occur.

采用在交通需求出现前能够预测的目的层厅呼梯登记系统。

- d. Contractor shall supply full details of his preferred approach to these requirements with his bid response.

承包商应与其投标响应一起提供自身对这些要求首选方法的全部细节。

2. Include, as a minimum, the following features:

最少应包括以下特点:

- a. Operate cars as a group capable of balancing service and providing continuity of group operation with one or more cars removed from the system.

以轿厢组的形式运行轿厢，在移除系统一部或多部轿厢的情况下轿厢组应能够平衡服务并确保轿厢群连续运行。

- b. Register service calls from pushbuttons located at each floor and in each car. Slow cars and stop automatically at floors corresponding to registered calls. Make stops at successive floors for each direction of travel irrespective of order in which calls are registered except when bypassing hall calls to balance and improve overall service; stop only one car in response to a particular hall call. Assign hall calls to specific cars and continually review and modify those assignments to improve service. Simultaneous to initiation of slowdown of a car for a hall call, cancel that call. Render hall pushbutton ineffective until car doors begin to close after passenger transfer. Cancel car calls in the same manner. Give priority to coincidental car and hall calls in car assignment.
通过每层及每部轿厢内部的按钮登记服务呼梯。交响减速并自动停靠登记呼梯的对应楼层。不管呼梯登记顺序如何，确保每个运行方向的轿厢停靠连续楼层（除轿厢为平衡及提高整体服务而避开门厅呼梯的情况）；仅停靠一部电梯响应每个门厅呼梯、将门厅呼梯分配给具体轿厢，并不断审查、修改这些分配，以提高服务效率。在轿厢减速响应某一门厅呼梯的同时，取消该呼梯。门厅按钮在下客后轿厢门关闭前应失去作用。以同种方式取消轿厢呼梯。在进行轿厢分配时，优先处理同时发生的轿厢及门厅呼梯。
- c. Operate system to meet changing traffic conditions on a service demand basis. Include provisions for handling traffic that may be heavier in either direction, intermittent or very light. As traffic demands change, automatically and continually modify group and individual car assignment to provide the most-effective means to handle current traffic conditions. Hall lantern shall sound again and illumination shall pulse just prior to car arrival. Give priority to coincidental car and hall calls in hall call assignment. Accomplish car direction reversal without closing and reopening doors.
操作系统须满足一定服务需求基础上的交通流量变更情形。包括双向大人流，间歇性的或者是人员很少时的运送。当交通需求变化的时候，可以自动持续地修改群组 and 单部轿厢分配以便提供最有效的运送方式。在轿厢到达之前门厅指示灯应再次发出声音，照明将脉冲。优先考虑同时发生的轿厢和电梯间呼叫。完成轿厢运行方向改变而无需关闭和重开电梯门。
- d. Use programmable system software. Design basic algorithm to optimize service based on equalizing system response to registered hall calls and equalizing passenger trip time at shortest possible time.
使用可以轻易再编程的系统软件。对基本算法进行设计，以优化服务，但前提是对登记电梯间呼叫进行平等的系统响应，并最简化乘客行程时间。
- e. Serve floors below main floor in a manner that logically minimizes delay in passing or stopping at main floor in both directions of travel. Provide manual means to force a stop at the main floor when passing to or from lower levels.
主楼层下的楼层服务方式为，逻辑上最小化主楼双向通过和停靠延时。须提供手动方式以强制停靠主楼层（当经过下面楼层或者来自下面楼层时）
- f. Required Features:
提供以下特性：
- 1) Dispatch Protection: Backup dispatching shall function in the same manner as the primary dispatching.
分配保护：备用分配方式须与主分配一样。
 - 2) Delayed Car Removal: Automatically remove delayed car from group operation.
受延误轿厢之取消：将受延误的轿厢从群组中取消。
 - 3) Position Sensing: Update car position when passing or stopping at each landing
位置感应：当通过或者停靠每个着陆层时，更新轿厢位置。
 - 4) Hall Pushbutton Failure: Provide multiple power sources and separate fusing for pushbutton risers.
电梯间按钮失效：为按钮立管提供多电源和单独保险。
 - 5) Communication Link: Provide serial or duplicate communication link for all group and individual car computers.
通信联系：为群组和单个轿厢电脑提供系列或者双通信联系。

C. Other Items: 其它项

1. **Load Weighing:** Provide means for weighing car passenger load. Control system to provide dispatching at main floor in advance of normal intervals when car fills to capacity. Provide hall call by-pass when the car is filled to preset percentage of rated capacity and traveling in down direction. Field adjustment range: 10% to 100%.
荷载称重：采取措施衡量客梯轿厢荷载。若轿厢满载，控制系统将在正常间隔时间之前在主要楼层调配。若轿厢满足预设百分比的额定容量并为下行状态，将设置门厅呼梯通过。现场调整范围：10%至 100%。
 2. **Anti-Nuisance Feature:** If car loading relative to weight in car is not commensurate with number of registered car calls, or activation of door protection device is not commensurate with number of registered car calls, cancel car calls.
防干扰特征：若与轿厢内重量相关的轿厢荷载与登记的轿厢呼梯数量不匹配，则取消轿厢呼梯请求；或门保护装置激活与登记的轿厢呼梯数量不匹配，则取消轿厢呼梯请求。
 3. **Independent Service:** Provide controls for operation of each car from its pushbuttons only. Close doors by constant pressure on desired destination floor button or door close button. Open doors automatically upon arrival at selected floor.
独立服务：仅在按钮上进行各个轿厢的操作控制。在指定目的地楼层按钮或门关闭按钮上设置恒压来关闭轿厢门。在到达目的楼层后，自动开启轿厢门。
- D. **Car-to-Lobby Feature:** Provide the means for automatic return to the lobby floor. Return car nonstop after answering pre-registered car calls, and park with doors open for an adjustable time period of 60-90 seconds. Upon expiration of time period, car shall automatically revert to normal operation and close doors until assigned as next car or until the car is placed on independent service.
轿厢停靠大厅层特征：提供自动返回大厅楼层的方法。在响应预登记呼梯请求后，轿厢将返回不停靠，且门开启时间可调整，为 60 – 90 秒。在时间截止后，轿厢应自动返回至正常运行状态并关闭轿厢门，直至将任务分配至下一个轿厢，或轿厢被设定提供独立服务。
- E. **Firefighters' Service:** Provide equipment and operation in accordance with code requirements.
消防员服务电梯：根据规范要求设置设备及操作装置。
- F. **Automatic Car Stopping Zone:** Stop car no more than 5mm above or below the landing sill. Maintain stopping accuracy regardless of load in car, direction of travel, distance between landings, hoist rope slippage or stretch.
自动轿厢停止区：在地坎上或下部 5 毫米以内停止轿厢。无论轿厢内荷载、行进方向、平台间距离、卷扬绳滑移、或延伸，保持停止区域位置。
- G. **Remote Monitoring and Information:** Each controller and the group dispatch logic controller shall provide the following output information, including data logging, fault logs operational events, performance information including car speed, floor to floor times, and door times. The system shall be real time, capable of driving remote color LCD monitors that continually display the status of each car and call. Provide each group with a complete, interactive elevator monitoring system.
远程监控及信息：应为各个控制柜及电梯组配置调配逻辑控制柜设置以下输出信息，包含数据记录、故障查找诊断及性能信息（包含轿厢速度、层间运行时间及开门次数）。系统应实时运行，能够驱动远程彩色 LCD 监视器，以持续显示各个轿厢及呼梯状态。为各个电梯组设置完整的交互电梯监控系统。
1. The system shall concurrently display all units in a group and separate units on one screen in a graphical format and record the following information for each monitored unit:
系统应在同一屏幕中同时以图片格式显示一个电梯组的所有装置或各独立装置，并为各个监控装置记录以下信息：

- a. Group status:
电梯组状态:
 - 1) Group operational mode
电梯组运行模式。
 - 2) In/out of service
服务启动/停止。
 - 3) Standby power
备用电源。
 - 4) Supervisory failure
监管故障。
 - 5) Location and direction of hall calls
所有门厅呼梯的位置及方向。
 - 6) Phase I operation
阶段一运行。
- b. Individual car status – expandable menus:
独立轿厢状态-可扩展菜单:
 - 1) Direction of travel
运行方向。
 - 2) Independent service
独立服务。
 - 3) Hall button failure
门厅按钮故障。
 - 4) Inspection service
检查服务。
 - 5) Firefighters' service
消防员服务。
 - 6) Position of elevator
电梯位置。
 - 7) Door status (open, opening, closing, closed)
门状态（开启、关闭）。
 - 8) Door dwell time
门停留时间。
 - 9) Load by-pass
负荷支路。
 - 10) Standby power operation/sequence
备用电源操作/序列。
 - 11) Power on/off
电源开/闭。
 - 12) Door detector
门探测器。
 - 13) Safety circuit
安全线路。
 - 14) Door zone
门分区。
 - 15) Stop switch
停止开关。
 - 16) Alarm button
警报按钮。
 - 17) Registered car calls
登记的轿厢呼梯请求。
 - 18) Out of level
非水平状态。
 - 19) Stop counter (number of starts)
停止次数（启动次数）。

- 20) Car speed
轿厢速度。
 - 21) Door open times
开门次数。
 - 22) Door close time
关门次数。
 - 23) Start to stop motion time
启动到停止的运行时间。
 - 24) Emergency two-way communication device
紧急双向通信装置。
 - 25) Air conditioner
空调
 - 26) Floor lockouts (car or hall)
楼层封锁（轿厢或门厅）。
 - 27) Lobby recall
门厅重新呼梯。
 - 28) VIP service
VIP 服务。
 - 29) Firefighters' service
消防员服务。
 - 30) Up/down peak
上/下行高峰。
 - c. Service Driven Outages:
服务驱动中断：
 - 1) Independent service
独立服务。
 - 2) Car out of service
轿厢停止服务。
 - 3) Lobby return, cleaning
返回电梯厅；清理。
 - d. Maintenance Activity "Indicators":
维护活动“指标”：
 - 1) Top of car inspection
轿厢顶部检查。
 - 2) Hoistway access
井道检修。
 - 3) Phase I and II
阶段一和阶段二
 - 4) Independent service
独立服务。
 - 5) Out of service
停止服务。
2. Faults monitored with visual and audible alarm, triggered by combinations of any of the above status points:
采用音视频警报监控故障，触发下列状态点的一种将发出警报：
- a. Safety circuit
安全线路。
 - b. Alarm bell
警铃。
 - c. Stop switch
停止开关。
 - d. Emergency two-way communication device
紧急双向通信装置。

- e. Door reversal device
门反向开启装置。
 - f. At least six user defined faults or events, i.e. water in pit, high machine room/cab temperature
至少由六个用户界定的故障或事件；如基坑内有水，过高的机房/轿厢温度。
 - g. Transmit email when any monitored faults occur.
在监控故障发生时，通过邮件传输。
- H. Interface to Third Party Building Management Systems(Coordinate with Client and Property Management):
The elevator monitoring system shall be capable of interfacing and exchanging data with a variety of third party building management systems. Information shall be exchanged by Modbus protocol, open protocol or other suitable methods as required.
与第三方楼宇管理系统相连(与业主和物业方具体协商)：电梯监控系统应能够与各类第三方楼宇管理系统的
数据相连或互换。应通过 Modbus 协议、开放协议或其它所需恰当方法进行信息互换。
- I. Motion Control: Microprocessor-based AC variable-voltage, variable frequency with digitally encoded closed-loop velocity feedback suitable for operation specified and capable of providing smooth, comfortable car acceleration, retardation, and dynamic braking. Limit the difference in car speed between full load and no load to not more than $\pm 3\%$ of the contract speed.
运动控制：基于微处理器的交流电、可变电电压、变频，带数位编码闭环回路速度反馈，与指定操作相匹配并能够提供平滑、舒服的轿厢加速、减速及动态制动。将轿厢速度限制在满载与空载之间，差异不大于合同速度的 $\pm 3\%$ 。
- J. Attendant Operation: Include provision for attendant control of door closing, car direction, and calls answered.
司机员操作：提供供司机员进行控制关门、轿厢运行方向和呼梯应答的设备。
- K. Passenger Elevator Door Operation: Automatically open doors when car arrives at main floor. At expiration of normal dwell time, close doors.
客梯门机操作：在轿厢到达主要楼层后，门自动开启。在正常停留时间后，门将关闭。
- L. Service Elevator Door Operation: Open door and gate automatically when car arrives at a floor. Control door and gate closing by using constant-pressure buttons on car or at each floor. After an adjustable time period between, 30 to 300 seconds, provide audible and visible warning signal and automatically close door and gate.
服务电梯门机操作：在轿厢到达指定楼层后门将自动开启。通过轿厢及各个楼层的常压按钮控制门。在 30-300 秒时间（可调节）后，发出声光警报并自动关闭门。
- M. Standby Power Operation: Upon loss of normal power, adequate standby power will be supplied via building electrical feeders to start and run one car in each group and single car simultaneously at contract car speed and capacity.
备用电源运行：如果出现正常电力中断，将通过建筑电气进线提供充足的备用电源，以同时启动并以额定轿厢速度及载重运行电梯组的一台电梯及所有单独的电梯。
- 1. Automatically return car(s), nonstop to designated floor, open doors for approximately 3.0 seconds, close doors, and park car. During return operation, car and hall call pushbuttons shall be inoperative. As car(s) park, system shall immediately select the next car until all cars have returned to the designated floor. If a car fails to start or return within 30 seconds, system shall automatically select the next car in the group to return.

使轿厢自动返回至指定楼层（中间不停靠任何楼层），开启轿厢门约 3 秒钟，关闭轿厢门，轿厢暂停。在轿厢返回期间，轿厢及门厅呼梯按钮应失去作用。在轿厢停靠后，系统应立即选择下一部轿厢，直到电梯组内的所有轿厢回到指定楼层。如果轿厢在 30 秒内无法启动或返回，系统应自动选择电梯组内的下一步轿厢，自动返回指定楼层。

2. When all operable car(s) have returned to the designated floor, one car in each group shall be designated for automatic operation. When demand exists for 30 seconds and designated car fails to start, next available car in the group shall be automatically selected for operation.

当一个电梯组内的所有可操作轿厢全部回到指定楼层后，每个电梯组内应由一部电梯被选定进行自动运行。如果服务需求存在 30 秒而指定电梯无法启动，应自动选择该电梯组内的另一部电梯运行。

3. Provide separate group selection switches in firefighters' control panel and separate lobby panel in firefighters control panel and independent lobby panel to provide independent elevator group selection switches.

a. Switches shall be labeled "STANDBY POWER OVERRIDE" with positions marked "AUTO" and appropriate car numbers controlled by each respective switch. Key shall be keyed differently from the key utilized for firefighters' Phase I and II key switch. Key shall be removable in "AUTO" position only.

开关应贴有“备用电源覆盖”的标签，并标有“自动”及由每个开关控制的适当轿厢数量。按键应与消防员 I 阶段和 II 阶段开关采用不同键控。按键仅在“自动”位置时可以拔出。

b. Switch shall override automatic return and automatic selection functions, and cause the manually selected car to operate. Manual selection shall cause car to start and proceed to designated floor and open and close its doors before standby power is manually transferred to next selected car.

开关应超越自动返回及自动选择功能，使人工选择的轿厢开始运行。在将备用电源手动转换至下一部选定轿厢前，人工选择应能够启动轿厢，使之运行至指定楼层，开启并关闭轿厢门。

c. Provide "STANDBY POWER" indicator lights, one per car, in firefighters' and security control panel. Indicator light illuminates when corresponding car is selected, automatically or manually, to operate on standby power.

在消防员控制面板及安全控制面板上为每个轿厢设置一个“备用电源”指示灯。当自动或手动选定相应轿厢以备用电源运行后，指示灯开始照明。

4. Successive Starting: When normal power is restored or there has been a power interruption, individual cars in each bank shall restart at five-second intervals.

连续启动：当恢复正常供电或出现电源中断时，独立轿厢应以 5 秒的间隔重新启动。

- N. Provide provisions at Destination Input Terminals incorporating proximity type card readers. Destination Dispatch System to accept destination calls via card input. Coordinate Vertical Transportation Equipment and card readers in order to integrate, install and test the readers. Provide card readers compatible with the building security system.

目的层输入终端提供感应型读卡器。目的层调度系统通过卡片输入登记的目的地呼梯。协调垂直交通设备及读卡器，以安装及测试读卡器。提供与建筑安全系统兼容的读卡器。

2.5 MACHINE ROOM EQUIPMENT 机房设备

- A. Arrange equipment in spaces shown on drawings.

将设备布置在图纸所示的空间中。

- B. Gearless Traction Hoist Machine:

无齿轮曳引机：

1. P.M.S.M. ACV³F gearless traction type motor with brakes, drive sheave, and deflector sheave(if necessary) mounted in proper alignment on a common, isolated bedplate.
交流变频无齿轮曳引马达，配有制动器、曳引轮和导向轮(若需要)对齐安装于单独的同一个曳引主机机座上。
 2. Provide hoist machine mounted direct drive, digital, closed-loop velocity encoder.
设置安装在升降机上的直驱数字闭路速度编码器。
 3. Provide ladders and platforms with handrails and toeboards for overhead sheave access within the bounds of the machine room.
在机房界内，对于在高处的曳引主机驱动轮，提供具有扶手和护围的梯子，以方便进入。
- C. Solid State Power Conversion and Regulation Unit: Provide solid-state, alternating current, variable voltage, variable frequency (ACV³F), IGBT converter/inverter Power Factor1 drive.
固态电源转换和控制单元：设置固态、交流电，变压，变频(ACV³F)，绝缘栅双极型晶体管转换器/变频器驱动
1. Design unit to limit current, suppress noise, and prevent transient voltage feedback into building power supply. Provide internal heat sink cooling fans for the power drive portion of the converter panels.
单元须可以限制电流，噪音并防止瞬时电压回流到大楼电源。设置内部散热器风扇供变压器面板电源驱动使用。
 2. Mechanically isolate unit to minimize noise and vibration transmission. Incorporate isolation design shown in documents.
对单元装置进行隔离，以进行隔音和防振。包括设计文件中所示的隔离设计。
 3. Suppress solid-state converter noises, radio frequency interference, and eliminate regenerative transients induced into the mainline feeders or the building standby power generator.
抑制固态变压器噪音，电波频率干扰，并消除主馈线或建筑备用发电机的再生性瞬时引致电压。
 4. Supplemental direct-current power for the operation of hoist machine brake, door operator, dispatch processor, signal fixtures, etc., from separate static power supply.
须从单独静电电源引出升降机制动运行、门操作器，分配处理器，信号灯等的补充直流电。
 5. ACV³F Drives shall be regenerative and utilize IGBT converter/inverter and dynamic braking during overhauling condition.
无齿轮电梯的交流变频驱动必须为再生型，并在大修期间利用绝缘栅双极型晶体管变压器/变频器和动力制动。
- D. Encoder: Direct drive, solid-state, digital type. Update car position at each floor and automatically restore after power loss.
编码器：直接驱动，固态，数字型编码器。可以更新每层楼的轿厢位置并在断电时自动恢复。
- E. Controller:
控制柜：
1. Compartment: Securely mount all assemblies, power supplies, chassis switches, relays, etc., on a substantial, self-supporting steel frame. Completely enclose equipment with covers. Provide means to prevent overheating.
柜体：将所有组件、电源、架式交换器、继电器等安装在坚固的自带支架的钢框架上。设备具备完整的外壳。设置防过热的措施。

2. Relay Design: Magnet operated with contacts of design and material to insure maximum conductivity, long life, and reliable operation without overheating or excessive wear. Provide wiping action and means to prevent sticking due to fusion. Contacts carrying high inductive currents shall be provided with arc deflectors or suppressors.
继电器设计：磁继电器，触点设计和材料可以确保最大导电性，长期寿命，可靠运行，而无过热或过度磨损。提供消磁动作和方式以防止融化后粘住。承受大感应电流的触点须设有电弧偏转器或者镇流器。
 3. Microprocessor Hardware:
微处理器相关硬件：
 - a. Provide built-in noise suppression devices that provide a high level of noise immunity on all solid-state hardware and devices.
提供嵌入式噪音抑制装置，减少所有固体硬件及装置的噪音。
 - b. Provide power supplies with noise suppression devices.
提供含噪音抑制装置的电源。
 - c. Isolate inputs from external devices (such as pushbuttons) with opto-isolation modules.
采用光隔离模块隔离外部装置的输入电路，如安全开关。
 - d. Design control circuits with one leg of power supply grounded.
设计控制电路，保证一路电源接地。
 - e. Safety circuits shall not be affected by accidental grounding of any part of the system.
安全电路不得受到该系统任何部件意外接地的影响。
 - f. System shall automatically restart when power is restored.
恢复电力后，系统应自动重启。
 - g. System memory shall be retained in the event of power failure or disturbance.
电源故障或有干扰的情况下，应保留系统内存。
 - h. Equipment shall be provided with Electro Magnetic Interference (EMI) shielding within 3C guidelines.
所有设备都应按照 3C 认证配置电磁干扰保护装置。
 4. Wiring: China standard copper for factory wiring. Neatly route all wiring interconnections and securely attach wiring connections to studs or terminals.
布线：出厂布线采用标有中国标准设计的铜线。整齐布置所有线路连接，线路接头应牢牢固定在双头螺栓或接线端子上。
 5. Permanently mark components (relays, fuses, PC boards, etc.) with symbols shown on wiring diagrams.
布线图中永久性标志部件（继电器、保险丝及印刷电路板等）符号。
- F. Sleeves and Guards: Provide steel angle guards around cable or duct slots through floor slabs or grating. Provide rope and smoke guards for sheaves, cables, and cable slots in machine room. Paint them if necessary.
套管和护罩：整个楼板和/墙内在电缆和管槽周围设置角钢护罩。在机房空间为滑轮，电缆和电缆槽设置缆绳和烟雾保护装置。必要时进行涂漆。
- G. Machine and Equipment Support Beams:
机械和设备支撑梁：
 1. Provide structural steel beams required for direct support of and attachment to building structure of hoist machine, deflector sheaves, overhead sheaves, governor, and hoist rope dead-end hitch assemblies.
须供钢结构横梁，以便直接支撑和固定在升降机、导向轮、头顶轮、调节器和牵引绳死结套的建筑物结构上。

2. Provide bearing plates, anchors, shelf angles, blocking, embedment, etc., for support and fastening of machine beams or equipment to the building structure.
设置支撑板、锚、座角钢、堵头、埋件等以将牵引机支撑横梁或者设备支撑固定到主体结构上。
3. Isolate machine and overhead sheave beams to prevent noise and vibration transmission to building structure.
将牵引机和/或机器支撑框架进行隔离以隔音隔振，影响主体结构。
4. Provide ladders and platforms with handrails and toeboards for overhead sheave access within the confines of the machine room.
在机房范围内，提供带扶手和脚板的爬梯和平台，以便进入上部的机器空间。

- H. Governor: Centrifugal-type, car and counterweight driven machine room mounted with pull-through jaws and bi-directional shutdown switches. Provide required bracketing and supports for attachment to building structure.
限速器：离心式的轿厢侧限速器和对重侧限速器，带可推式钳口和双向关闭开关。设置所需的托架和支撑，以固定到建筑结构上。
- I. Emergency Brake: Provide means to prevent ascending car over-speed and unintended car movement.
紧急制动：提供根据规范要求的上行超速保护及轿厢意外移动保护的办。

2.6 HOISTWAY EQUIPMENT 井道设备

- A. Guide Rails: Planed steel T-sections for car and counterweight of suitable size and weight for the application, including brackets for attachment to building structure. No additional structural points of attachment other than those shown on the Contract Documents will be provided.
导轨：尺寸和重量合适的，用于轿厢和对重的 T 型钢导轨，包括用于固定到建筑主体结构上的导轨支架。除了合同文件上显示的，不会额外提供用于导轨固定的结构固定点。
- B. Buffers: Oil or Spring type or Polyurethane.
缓冲器：油压式或弹簧式或聚氨酯材料
- C. Equipment Access: Provide buffer access ladder(s) and platform(s). Stencil car number on buffer. Provide safety access ladder(s) and platform(s).
设备检修：提供缓冲器检修梯和平台。在缓冲器上喷刷轿厢编号。提供安全检修梯和平台。
- D. Sheaves: Machined grooves and sealed bearings. Provide mounting to machine beams, machine bedplate, car and counterweight structural members, or building structure.
滑轮：要有机加工的槽和密封轴承。提供与机器横梁、主机底板、轿厢和对重结构部件或建筑结构的安装方法。
- E. Counterweight: Steel frame with metal filler weights. Cars DT01~DT18 in T1, Cars DT01~DT26 in T2,
对重：金属材料的钢架。对于 T1 塔的电梯 DT01~DT18, T2 塔的电梯 DT01~DT26 提供对重安全钳。
- F. Counterweight Guard: Metal guard in pit. Where counterweight is located between adjacent elevators, provide runway guard next to the adjacent elevator.
对重防护板：设置于基坑内的金属制防护板。如果对重位于相邻电梯之间，须在临近电梯边上设置防护板。

- G. Governor Rope and Encoder Tape Tensioning Sheaves: Mount sheaves and support frame on pit floor or guide rail. Provide frame with guides or pivot point to enable free vertical movement and proper tension of rope and tape.
限速器钢丝绳和带编码器的涨紧轮：在底坑楼板或者导轨上安装滑轮和支撑框架。框架须设置导轨或者支点以确保可以竖向随意移动以及缆绳和张紧带的适当绷紧。
- H. Hoisting and Governor Ropes:
曳引钢丝绳和限速器钢丝绳：
1. 8 x 19 or 8 x 25 Seale construction or per lift contractor's specification, traction steel type. Fasten with staggered length, adjustable, spring isolated wedge type shackles. If contractor's rope is different, they need to submit detail and it needs to be approved by elevator consultant.
8 x 19 或 8 x 25 的带芯股的牵引钢丝绳或者电梯承包商的规格。使用不同长度且可以调节的弹簧固定，弹簧把楔型的钩链隔离开。如果承包商的钢丝绳是不同的，他们需要提交细节并且经过电梯顾问的批准同意。
 2. Governor rope to suit Contractor's specification.
限速器绳应符合承包商的规范。
- I. Hoisting Belt:
曳引钢带：
1. At least 3mm thickness, and at least 30mm width
厚度至少 3mm，宽度至少 30mm
 2. Application of Hoisting Belt is NOT permitted when elevator rated speed is over 2.5m/s
电梯额定速度超过 2.5m/s 时，不同意使用曳引钢带
 3. Appropriate inspection technology is required in order to inspect the internal broken hoisting rope in time and apply maintenance accordingly.
必须提供合适的钢带检测技术，以确保及时检测出钢带内部的断丝情况，从而及时对钢带进行维修保养。
- J. Compensation: Wire rope with pit-mounted guide sheave assembly including tie-down device. (greater than contract car speed of 3.5m/s) Pit mounted guide assembly shall provide quiet, effective restraint without excessive wear of components. Inhibit rubbing or chafing against hoistway or equipment within hoistway or pit. Application must meet performance/noise level requirement of specification.
补偿装置：钢丝绳安装在导向滑轮组件上，其中包括防跳装置（当超过合同额定速度 3.5 米/秒的时候）。安装于底坑的导轨组件应能够提供安静有效的约束，同时不至造成部件过度磨损。避免摩擦或碰触井道和井道/基坑内的设备。符合说明书中的性能/噪音要求。
- K. Terminal Stopping: Provide normal and final devices. Provide emergency terminal speed limiting devices if necessary for high-speed cars
限位开关：提供正常的限位开关和终点限位开关。如有需要，对高速电梯提供紧急终端限速装置。
- L. Electrical Wiring and Wiring Connections: 电气布线和接头

1. **Conductors and Connections:** Copper throughout with individual wires coded and connections on identified studs or terminal blocks. Use no splices or similar connections in wiring except at terminal blocks, control compartments, or junction boxes. Provide 10% spare conductors throughout. Run spare wires from car connection points to individual elevator controllers in the machine room.
导线和接头：铜线，须单独编号，并接到有标签的螺栓或接线盒上。布线的时候不得使用搭接或者类似的接法，除非是接在接线板，控制盒或者分线盒上。要预留 10%备用导线。从轿厢接头点到机房内各个电梯控制装置要布备用电线。
2. **Conduit:** Galvanized steel conduit, EMT, or duct. Flexible conduit length not to exceed 1m. Flexible heavy-duty service cord may be used between fixed car wiring and car door switches for door protective devices.
导管：采用喷漆或者镀锌钢管，EMT 或管子。柔性导管的长度不超过 1m。可在轿厢电线和轿厢门开关之间采用柔性重型电线，用于门保护装置。
3. **Traveling Cables:** Flame and moisture-resistant outer cover. Prevent traveling cable from rubbing or chafing against hoistway or equipment within hoistway. Travelling Cables should meet these requirement: CARD READER, Monitor Center, Cellphone Signal in the lift Car, LCD Screen in the Car Operation Panels, and the QTY of cables should be given enough. Please refer to the detailed ICT requirement in Appendix A.
随行电缆：抗火抗水性外罩。防止随行电缆摩擦或磨损井道或井道内的其它设备。要求电缆满足：读卡器、监控中心、手机信号覆盖、轿内操作盘的显示屏，并且电缆数量做足够的预留。请参照《附录 A-智能化要求》中的详细要求。
4. **Auxiliary Wiring:** Connect fire alarm initiating devices, emergency two-way communication system, firefighters' phone jack, paging speaker, CCTV, card reader, intercom, and announcement speaker and/or background music in each car controller in machine room.
辅助线缆：连接火警启动装置、紧急双线对讲系统、消防员耳机插座、传呼扬声器、闭路电视、读卡器、对讲机以及机房内每个轿厢控制器的音响和背景音乐。

M. Entrance Equipment 入口设备

1. **Door Hangers:** Two-point hanger roller with neoprene roller surface and suspension with eccentric upthrust roller adjustment.
电梯门吊架：两点式吊架滚轮，滚轮表面为橡胶面漆，悬吊可以进行离心上冲滚轮调节。
2. **Door Tracks:** Bar or formed, cold-drawn removable steel tracks with smooth roller contact surface.
门轨：条式，或者可拆卸式冷延钢轨，与滚筒接触面为平滑表面。
3. **Door Interlocks:** Operable without retiring cam.
门联动装置：无活动门刀即可操作。
4. **Door Closers:** Spring, aspirator, or jamb/strut mounted counterweight type. Design and adjust to insure smooth, quiet mechanical close of doors.
闭门器：弹簧，吸出器或者在侧壁/支柱安装的对重型号。设计完好，可进行调节，以确保门可以顺滑，安静的关闭。

2.7 HOISTWAY ENTRANCES 井道入口

- A. Complete entrances bearing fire labels approved by the government inspection organization.
政府批准的消防标签贴在完整的厅门处。

- B. Door Panels: Stainless steel, sandwich construction without binder angles. Provide leading edges of center-opening doors with rubber astragals. Provide a minimum of two (2) gibs per panel, one at leading and one at trailing edge with gibs in the sill groove entire length of door travel. Construct door panels with interlocking, stiffening ribs. Sight Guards: same material and finish as hoistway entrance door panels. Construct without sharp edges. Elevator Supplier who attends tender needs to provide options for door decoration for the client to choose.
All the landing doors of all elevators are required to meet 1 hour fire proof requirement(integrity is a MUST)
门板: 不锈钢, 没有压角的夹层结构。提供中分式门的前缘的橡胶圈线。为每个面板提供两个最小的夹条。一个在主要边缘另一个在后缘处, 其位于沿整个门的地坎凹槽中。带有连锁和加劲肋的门板结构。可见保护: 与井道入口门板相同的材料和表面处理。没有锐利边缘的结构。参加投标的电梯供应商需要提供电梯门装潢的可选方案供业主选择。
所有电梯的所有层门均要求满足相应消防规范对电梯层门的要求
- C. Sills: Extruded aluminum.
层门地坎: 挤压铝材
- D. Sill Supports: Structural or formed steel designed to support door sill based upon car loading classification. Mount to eliminate need for grout under the sill.
地坎支撑: 采用结构钢或者钢型材用足地坎支撑, 要与轿厢荷载分类一致。确保无需在地坎下浇泥浆。
- E. Fascia, Toe Guards and Hanger Covers: furniture steel with Contractor's standard finish.
门顶板, 护脚板和门吊盘盖板: 装饰钢材, 承包商标准饰面。
- F. Struts and Headers: Provide all support of entrances and related material to building structure. Provide door open bumpers on entrances equipped with vertical struts.
支柱和门头: 在厅门处提供垂直方向支撑。对于装有垂直支撑的厅门提供开门缓冲器。
- G. Elevator Identification Signage: Provide English alphabetic -numerical car label at designated floor. Provide metal plate, finish to match designated fixture finish.
电梯标识: 在指定楼层提供轿厢的英文字母-数字标签。提供金属铭牌, 饰面匹配指定的设备饰面。
- H. Finish of Frames and Doors: Provide final painting requirements to General Contractor where factory prime finish is specified.
门和框装饰: 如果出厂底漆已经指定, 须向总包提供最终喷漆要求。
- I. Typical Jambs(left side, right side, upper side) for landing entrance: Stainless Steel Type 304, of which the height is by lift contractor
层站入口侧的标准小门套(左侧、右侧、上侧): 304 不锈钢材料, 其高度尺寸由电梯供应商提供。
- J. See Architectural/Interior Design Drawing Details for Entrance Finishes.
对于电梯厅门处完成面的处理要求, 请参照建筑详图及室内设计图。
- K. Emergency Hoistway Access: provide Emergency Access panels and locations to comply with GB/T 7588.1-2020.
紧急井道安全门: 提供紧急通道面板和位置, 遵从 GB/T 7588.1-2020。
- L. Hoistway Access: 井道入口:

1. Hoistway Door Unlocking Device: Provide unlocking device in door panel at all floors, with finish to match adjacent surface.
厅门解锁装置：在所有楼层的门面板提供开锁装置，饰面应与周围表面相匹配。
2. Hoistway Access Switches: Mount in entrance frame side jamb at top and bottom floors.
井道检修开关：安装在顶部及底部楼层的墙体入口框架侧柱

2.8 CAR EQUIPMENT 轿厢设备

- A. Frame: Welded or bolted, rolled or formed steel channel construction to meet load classification specified.
框架：焊接或螺栓连接、轧制或型钢槽钢结构，以满足指定负载等级要求。
- B. Safety Device: Progressive Safety Gear
安全装置：渐进式安全钳
- C. Platform: Isolated type, constructed of steel, or steel and wood that is fireproofed on underside. Design and construct to accommodate load classification requirements.
轿底：隔离型，钢材或钢和木材制成，底部耐火。设计及构造应满足荷载分类要求。
- D. Finish Floor Covering: Per Client detailed requirement. Coordinate with Client
地板完成面：根据业主的具体要求，与业主协商。
- E. Sills: One piece extrusion with extruded extension between car entrance columns to face of car front return. Extruded extension to match finish of sill.
地坎：整体式挤压材质，轿厢入口立柱之间设有挤压延伸，延伸至轿厢前壁表面。挤压外延材质与地坎饰面相匹配。
 1. Cars: Extruded aluminum(Passenger Lifts) ; Stainless steel (Service Lifts)
所有轿厢：挤压铝材（客梯）；不锈钢（服务电梯）
- F. Door Panels: steel, sandwich construction without binder angles. Provide a minimum of two gibs per panel, one at leading and one at trailing edge with gibs in the sill groove entire length of door travel. Construct door panels with interlocking, stiffening ribs.
门板：钢，夹层结构，无粘合角。至少为每个门板设置两个楔块-一个位于前端一个位于后缘，设于地坎凹槽内的整个门运行距离内。为门板设置互锁及加筋肋。
- G. Door Hangers: Two-point suspension. Hanger roller with non-metallic surface and eccentric roller adjustment.
门吊架：两点吊门滚轮，带橡胶滚轮表面，根据偏心向上滚轮调整。
- H. Door Track: Bar or formed, cold-drawn removable steel track with smooth roller contact surface.
门轨：条状或成形、冷拉可移动钢支架，带平滑滚动接触表面。
- I. Door Header: Construct of steel, shape to provide stiffening flanges.
门头：由钢材制成，形状满足固化法兰设置要求。
- J. Door Electrical Contact: Prohibit car operation unless car door is closed.
门的电气触点：除非轿厢门被关闭，否则禁止轿厢运行。

- K. Door Clutch: Heavy-duty clutch, linkage arms, vane assembly and pickup rollers or cams to provide positive, smooth, quiet door operation. Design clutch so car doors can be closed, with hoistway doors open.
门刀：设置重型门刀、连接杠杆、带动销及轴承轮或凸轮，以获得积极、平滑及安静的门运行。门刀设计应确保在井道门开启的时候可以关闭轿厢门。
- L. Restricted Opening Device: Provide mechanical car-door restrictor to prevent opening of doors when outside unlocking zone.
限位开启装置：设置轿厢-门连锁，防止门在未锁定区域外部开启。
- M. Door Operator: door operator capable of opening doors. Accomplish reversal movement. Provide solid-state door control with closed loop circuitry to constantly monitor and automatically adjust door operation based upon velocity, position, and motor current. Provide a minimum of four controller-based motion profiles, per floor, per door, to maintain consistent, smooth, and quiet door operation at all floors, regardless of door weight or varying air pressure.
门机：门机能够开门。门可以完成反向打开。为静态门控制设置闭路电路，从而根据当前速度、位置及电机持续监控并自动调节门运行。无论门重如或风压大小，在所有楼层保持门的持续、平滑及安静运行。可采用的闭合回路门启闭装置包含：
- N. Door Reversing Device:
门反向开启装置：
1. Infrared Reopening Device:
红外线重新开启装置：
 - a. Black fully enclosed device with full screen infrared matrix or multiple beams extending vertically along leading edge of each door panel to minimum height of 2.1mm above finished floor. Device shall prevent doors from closing and reverse doors at normal opening speed if beams are obstructed while doors are closing, except during nudging operation. In event of device failure, provide for automatic shutdown of car at floor level with doors open.
红外线重新开启装置：黑色，完全设于外壳中，带全屏红外线矩阵或多波束，竖直方向沿各个门板边缘延伸至完成楼面以上 2.1 米高度处。在门关闭时，如光束受到阻碍（除非强制关闭操作），装置应防止门关闭并以正常开启速度反开门。如装置发生故障，在门开启时，于楼层设置自动关闭电梯。
 2. Nudging Operation: After beams of door control device are obstructed for a predetermined time interval (minimum 20.0-25.0 seconds), warning signal shall sound and doors shall attempt to close with a maximum of 150N kinetic energy. Activation of the door open button shall override nudging operation and reopen doors.
强迫关门操作：在门控制装置光束受到预设时长的阻挡后（最低为 20.0 - 25.0 秒）警报信号将发出声响，门将使用最大 150 牛的运动力关闭。门开启按钮的激活应超出强制关门及重新开启操作的限制。
 3. Interrupted Beam Time: When beams are interrupted during initial door opening, hold door open a minimum of 3.0 seconds. When beams are interrupted after the initial 3.0 second hold open time, reduce time doors remain open to an adjustable time of approximately 1.0-1.5 seconds after beams are reestablished.
束流中断时间：若光束在门初次开启时中断，门开启时间应至少为 3.0 秒。若光束在 3.0 秒门初次开启时间后被中断，则在光束重新建立后，将门保持开启的时间降低至可调时间（约为 1.0 - 1.5 秒）。

4. Differential Door Time: Provide separately adjustable timers to vary time that doors remain open after stopping in response to calls.

不同的门时间：设置单独可调节计时器，在对呼梯请求进行响应而门停止后，设置不同的开启保持时间。

- a. Car Call: Hold open time adjustable between 3.0 and 5.0 seconds.

轿厢呼梯：门开启时间可调，为 3.0~5.0 秒。

- b. Hall Call: Hold open time adjustable between 5.0 and 8.0 seconds. Use hall call time when car responds to coincidental calls.

层站呼梯：门开启时间可调，为 5.0~8.0 秒。在轿厢响应同一时间发出的呼梯请求时，以层站时间为准。

O. Car Operating Panel:

轿厢操作面板：

1. Passenger Elevator, Cars DT19~DT20 in T1; Cars DT18~DT28 in T2; Cars DT01~DT03 in T6:

T1 塔的客梯 DT19~DT20, T2 塔的客梯 DT18~DT28, T6 塔的客梯 DT01~DT03:

- a. Cars DT21~DT26 in T2; Cars DT01~DT03 in T6: One car operating panel without faceplate, consisting of a metal box containing the operating fixtures, mounted behind the car front return panels.

Cars DT19~DT20 in T1; Cars DT18~DT20, DT27~DT28 in T2: Two car operating panels without faceplate, consisting of a metal box containing the operating fixtures, mounted behind the car front return panels.

T2 塔的客梯 DT21~DT26, T6 塔的客梯 DT01~DT03: 一个轿壁一体式操作面板，其中金属箱（含操作装置）安装在轿厢回转前壁板后面。

T1 塔的客梯 DT19~DT20, T2 塔的客梯 DT18~DT20, DT27~DT28: 两个轿壁一体式操作面板，其中金属箱（含操作装置）安装在轿厢回转前壁板后面。

- b. Provide "door open" button to stop and reopen doors or hold doors in open position.

设置“开门”按钮，用于关门、重新开门，保持开启状态。

- c. Provide "door close" button to activate door close cycle. Cycle shall not begin until normal door dwell time for a car or hall call has expired, except firefighters' operation.

设置“关门”按钮，激活门闭合线路。除非消防员操作，在轿厢或门厅呼梯截止后，门经过正常停留时间线路即可开启。

2. For Cars DT01~DT18 in T1; Cars DT01~DT17 in T2, Provide concealed Firefighters' car operating panel that opens automatically upon activation of Firefighter's operation. Call registered lights located within or behind buttons to illuminate the floor number corresponding to the call registered.

对于 T1 塔的电梯 DT01~DT18, T2 塔的电梯 DT01~DT17, 须装隐藏式消防电梯轿厢操作面板。一旦启动消防操作，该面板自动打开。在按钮内或后方设置的呼梯登记照明装置按照登记的呼梯信号照亮相应地楼梯编号。

- a. Conventional car buttons for the selection of destination floors are not required for destination control systems. Each car shall be provided with two car operating panels comprising of:

在目的楼层控制系统中，无需设置用于目的楼层选择的常规轿厢按钮。每个轿厢应配备有两个轿厢操作面板，包括：

- 1) Main Car Operating Panel:

主轿厢控制面板：

- Car position indicator
轿厢位置指示灯
- Alarm button
报警按钮

- Door open button
开门按钮
 - Door close button
关门按钮
 - Phase II fire access switch and hidden floor buttons, call cancel button, door open, door close, switch, stop switch, light jewel, for fire officer use and use of car on independent service only
仅供火险部门及独立管道上设置的轿厢使用的二期消防通道开关及隐藏的楼层按钮，呼叫取消按钮、开门按钮、关门按钮、开关、停止开关、灯盒。
- 2) Auxiliary Car Operating Panel:
辅助轿厢操作面板:
- Car position indicator
轿厢位置指示灯
 - Alarm button
报警按钮
 - Door open button
开门按钮
 - Door close button
关门按钮
 - Auxiliary switches within locked service panel
设置在锁定的检修面板内的辅助开关
- b. The floor buttons for the fire officer are operative only under Fire Phase II and independent service and shall be automatically exposed by placing the car on Phase II operation or independent service and be activated by a magnetic spring and switch. As an additional safeguard, it shall be possible to manually open the door by using the Phase II key.
用于火险公司使用的楼层按钮仅在消防服务阶段二及独立服务情况下使用，并通过在阶段二操作或独立服务设施上设置轿厢进行自动控制，及通过电磁弹簧及开关激活。作为附加保护设施，可通过阶段二按键手动开启轿厢们。
- P. Car Top Control Station: Mount to provide safe access and utilization while standing on car top.
轿厢顶部控制站：安装该设备确保当站在轿厢顶部时，可安全到达和使用。
- Q. Work Light and Duplex Plug Receptacle: GFCI protected outlet at top and bottom of car. Include on/off switch and lamp guard. Provide additional GFCI protected outlet on car top for installation of car CCTV.
工作灯及双工插座：在轿厢顶部和底部设置接地故障保护插座。须设置开/关切换开关及灯具防护装置。在轿顶提供额外的漏电保护插座用以安装轿厢内闭路电视。
- R. Communication System: 通讯系统
1. Two-way communication instrument in car with automatic dialing, tracking, and recall features, with shielded wiring to car controller in machine room. Provide dialer with automatic rollover capability with minimum two numbers.
在轿厢内设置双向通讯设备，含自动拨号、跟踪及撤销功能，并设有连接至机房内的轿厢控制柜的屏蔽线。拨号装置须设有至少两个数字的自动转存功能。
 - a. Actuate two-way communication via "Help" button.
通过“帮助”按钮激活双向通讯系统。
 - b. Button or adjacent light jewel shall illuminate and flash when call is acknowledged.
在确定呼梯时，按钮或相邻的灯盒将被点亮并闪烁。
 - c. Button shall match car operating panel pushbutton design.
按钮应与轿厢操作面板上的按钮设计相匹配。

- d. Provide "Help" button tactile symbol, engraved signage, and Braille adjacent to button mounted integral with car front return panel.
须靠近安装在轿厢前壁板中的按钮设置“帮助”按钮触摸标志、镌刻的标识及盲文。
2. Provide five-way communication.
提供五方通话通讯系统。
3. Provide centralized call system, coordinate the detailed requirement with Property Management
提供集中式通话主机，与物业管理方协商具体要求
4. Provide specific fire system intercommunication telephone for Fire Elevators
消防电梯配置专用的消防对讲电话

2.9 CAR ENCLOSURE 轿厢壁板

- A. Passenger Elevator (Car Structural Enclosure): Provide complete as specified herein
客梯（轿厢结构壁板）：提供此处指定说明的完整产品。

1. Car Wall Shell: Reinforced steel formed panels. Apply sound-deadening material or measures if necessary. Provide concealed ventilation cutouts.
轿厢壁外壳：强化型钢板。在必要时采取隔音材料或隔音措施。有隐藏的通风口。
2. Car Door Panels: Please refer to interior finish as selected.
轿厢门板：请参照内饰装修的要求。
3. Canopy: Reinforced steel formed panels with lockable, contacted, hinged emergency exit.
轿顶：强化型钢板，含可锁定的铰接的轿顶紧急出口。
4. Car Operation Panels and Integral Entrance Columns: Reinforced steel. Swing entire unit on substantial pivot points (minimum three) for service access to car operating panel(s). Locate pivot points to provide full swing of front return panel without interference with side wall finish or handrail. Secure in closed position with concealed three-point latch. Provide firefighters' and service compartments with recessed flush cover and cutouts for operating switches, etc.
一体式前壁的轿厢操作面板：强化型钢板。可以固定的轴心点（最少 3 点）旋转整个部件，以开启轿厢操作盘。定位轴心点，保证整体旋转轿厢回转前壁时与轿厢侧壁与扶手不冲突。内藏三点式门闩，保证关闭位置的安全性。提供具有隐藏式掩蔽门和保险开关的维修间，以进行开关操作等。
5. LCD Screen imbedded in the car operating panel: minimum 1920*1080 resolution, ability to change the display content easily
轿厢操纵盘的嵌入式液晶显示屏：最小 1920*1080 分辨率，可以容易的更换其显示的内容
6. Transom: Reinforced steel
出入口上板：强化型钢板。
7. Base: Stainless steel.
轿底：不锈钢。
8. Ventilation: mounted to car canopy on isolated rubber grommets. Exhaust blower shall meet noise and vibration criteria.
通风设备：排风机安装到轿顶内。排风机应满足噪音及振动的标准要求。
9. Cab Air Conditioner Unit: Provide self-contained cab air conditioner/heater on car top with concealed ducts, thermostat control, and evaporator. Isolate from car top to comply with noise and vibration requirements.
轿厢制冷装置：须在轿厢顶部设置独立的轿厢制冷装置，并设有暗装通风管道、调温器及蒸发装置。按照噪音及震动防止要求，将其与轿厢顶部隔开。

B. Passenger Elevator (Part to be decorated inside Car): Provide complete as specified herein and detailed on architectural and interior design drawings.

客梯（轿厢内需精装修的部分）：提供此处指定的及建筑设计及室内设计图纸上详细说明了完整产品。

1. Interior Wall Finish of Car Wall: Finished by Others except the COP in the front wall provided by lift contractor. (Car Front Wall is the Integral Car Operation Panel, which is finished by Lift Contractor instead of Others). Note that the design of Lift DT27~DT28 in Tower T2 with Front&Rear opening is different, its rear wall is also provided by lift contractor (Car Front Wall is the Integral Car Operation Panel, which is finished by Lift Contractor instead of Others.).

轿壁的饰面：除了前壁的轿厢操作面板由电梯承包商提供以外，其他均由第三方实施。（轿厢前壁是一体式的轿厢操作面板，此需由电梯承包商提供，非第三方实施）。请注意 T2 塔内的贯通门电梯 DT27~DT28 设计有所不同，后壁也由电梯承包商提供。

2. Car Ceiling: Finished by Others. Please refer to interior finish as selected.
轿厢吊顶：由第三方实施。请参照内饰装修的要求。
3. Car Flooring: Finished by Others. Please refer to interior finish as selected.
轿厢地板：由第三方实施。请参照内饰装修的要求。
4. Lighting: LED Inside the Car Canopy . Illumination intensity is at least 50 lx
照明装置：发光二级管，内嵌在轿厢吊顶内。照明度要求至少 50 勒克斯。
5. Handrails: Please refer to interior finish as selected
扶手：请参照内饰装修的要求。

C. Service Elevator: Provide complete as specified herein.

服务电梯按照本条所述，设置完整的系统。

1. Shell: Reinforced stainless steel. Apply sound-deadening material or measures if necessary.
外壳：采用具有特定纹理的或缎面不锈钢加固板。在必要时采取隔音材料或隔音措施。
2. Canopy: Reinforced steel formed panels with lockable, contacted, hinged emergency exit.
轿顶：强化型钢板，含可锁定的铰接轿顶紧急出口。
3. Front Return Panels: Reinforced steel
回转前壁：强化型钢板
4. Transom: Reinforced steel
出入口上板：强化型钢板。
5. Car Flooring: Corrugated steel plates with lath and lentilform
轿厢地板：花纹钢板
6. Car Door Panels: Reinforced steel. Same construction as hoistway door panels.
轿厢门板：强化型钢板。厅门面板采用相同结构。
7. Ventilation: mounted to car canopy on isolated rubber grommets. Exhaust blower shall meet noise and vibration criteria.
通风设备：排风机安装到轿顶内。排风机应满足噪音及振动的标准要求。
8. Lighting: LED or Fluorescent fixture flush mounted in canopy with expanded metal protective diffuser and steel guard over fixtures on car top. Provide protective tube covers.
照明装置：须在吊顶中装荧光灯或 LED 灯。在轿厢顶部需设置防护风口和钢质防护装置。须设置防护外壳。

2.10 HALL CONTROL STATIONS 门厅控制站

- A. Pushbuttons (For Cars DT19~DT20, DTX01, DTX02 in T1; Cars DT18~DT28, DTX01, DTX02 in T2; Cars DT01~DT04, DTX01, DTX02 in T6):
Provide risers with flush mounted faceplates. Include pushbuttons for each direction of travel that illuminate to indicate call registration. Include approved engraved message and pictorial representation prohibiting use of elevator during fire or other emergency. Pushbutton design shall match car operating panel pushbuttons.
呼梯按钮(对 T1 塔的电梯 DT19~DT20, DTX01, DTX02; T2 塔的电梯 DT18~DT28, DTX01, DTX02; T6 塔的电梯 DT01~DT04, DTX01, DTX02): 须设置呼梯按钮, 含固定面板。须设置各个行进方向按钮。在有呼梯登记时, 该按钮被点亮。在面板上或独立镌刻的面板上设置文字和图形, 禁止在发生火灾或其他紧急事件时使用电梯。按钮设计应与轿厢操作面板按钮相匹配。
- B. Phase I Fire Service fixture, including keyswitch, engraved operating instructions and illuminating jewel.
(Only for fire lifts)
一阶段消防服务讯号装置, 包括按键开关、镌刻的操作说明及照明装置外壳。(仅针对消防电梯)
- C. DCS Hall Registration Stations (For Cars DT01~DT18 in T1; Cars DT01~DT17 in T2):
Provide a minimum of two stations per group at the Main Lobby(implanted at lobby wall) and two stations at the typical lobbies(implanted at lobby wall) . Provide manufacturer's standard registration station design touch screens with custom designed backgrounds and LCD car assignment display. DCS Hall Registrations Stations shall interface with building security system. Include necessary provisions for disabled access.
All DCS Hall Registration Stations should be provided with Car-Reader.
目的楼层呼梯终端(对 T1 塔的电梯 DT01~DT18; T2 塔的电梯 DT01~DT17):
须在主大厅(嵌入在电梯厅墙上)为每个电梯组至少设置两个目的楼层呼梯终端, 并在标准大厅层设置两个目的楼层呼梯终端(嵌入在电梯厅墙上)。需提供制造商标准登记站设计的触摸屏(含定制设计的背景及 LCD 轿厢分配显示装置)。目的楼层呼梯终端应与建筑安全系统相连接。包括无障碍通道设施。
所有目的楼层呼梯终端应含有读卡器。
- D. Service Operation Pushbutton Riser (For Cars DTX01, DTX02 in T1; Cars DTX01, DTX02 in T2; Cars DTX01, DTX02): Include flush mounted faceplates and pushbuttons for each direction of travel that illuminate to indicate call registration. Pushbutton design shall match car operating panel pushbuttons. Provide vandal resistant pushbutton and light assemblies.
服务电梯呼梯按钮(对 T1 塔的电梯 DTX01, DTX02; T2 塔的电梯 DTX01, DTX02; T6 塔的电梯 DTX01, DTX02): 须明装面板及各个行进方向按钮。在有呼梯登记时, 该按钮被点亮。按钮设计须与轿厢操作面板按钮相匹配。须设置防破坏按钮和照明装置。

2.11 SIGNALS 信号装置

- A. Hall Lantern, For all Cars:
到站指示灯(对所有电梯):
1. Provide at each entrance to indicate travel direction of arriving car(except destination dispatch system is not required). Locate as detailed on architectural drawings.
须在每个层站入口设置以显示到达轿厢的行进方向(除了目的楼层派梯系统无需此要求以外)。按照建筑图纸上的详细说明进行设置。
 2. Illuminate up or down LED lights prior to car arrival at floor. Illuminate light until the car doors start to close
在轿厢到达服务楼层前, 点亮上行或下行 LED 灯。一直点亮 LED 灯直至轿厢门开始关闭。

3. Sound level shall be adjustable from 20-80 dBA measured at 1.5m in front of hall control station and 1.0m off floor.
在门厅按钮前方 1.5 米处及距离停靠层楼迷 1.0 米处所测的声级应可调整，确保在 20~80 分贝范围内。
- B. Elevator Identifier, Cars DT01~DT18 in T1; Cars DT01~DT17 in T2:
Custom projecting fixture per Marking Design at all entrances. Provided and installed as directed by Marking Design.
电梯标识装置（对 T1 塔的电梯 DT01~DT18, T2 塔的电梯 DT01~DT17）：
由标识设计单位设计。由标识设计单位提供并施工。
- C. Car Destination Indicator, Cars DT01~DT18 in T1; Cars DT01~DT17 in T2:
Provide digital display screens flush mounted in the side of car operating panel to indicate floor destinations served. Provide minimum 6 inches indications. Two indicators shall be provided to show the floors at which the car will stop. As the doors open, passengers on the landing will receive confirmation their destination has been transferred to the car by a corresponding light or numeral flashing. Once the doors close, the destinations shall remain illuminated until the car approaches the next destination floor, whereupon the floor numeral or light will flash and the audible signal will sound to denote the next stopping floor. When the doors open, Destination Indicator shall display the next floor(s) to be served.
轿厢目的层显示器（对 T1 塔的电梯 DT01~DT18, T2 塔的电梯 DT01~DT17）：
在轿厢操作面板的内侧安装数字显示屏以显示服务的目的楼层。须设置大小至少为 6 英寸的指示装置。须在每个轿厢内设置 2 个指示灯以注明轿厢将停靠的楼层。当轿厢门打开时，平台上的乘客将接收到确认其目的楼层已通过相应的灯具或数字闪光装置转换至轿厢的信息。一旦轿厢门关闭，目的楼层编号应保持点亮状态直至轿厢下一个楼层。届时，楼层数字或灯具将照亮，同时可听信号装置将发声以注明下一个停靠楼层。当轿厢门打开时，目的层显示器应显示服务的楼层。
- D. Car Position Indicator: Alpha-numeric digital indicator containing floor designations and direction arrows to indicate floor served and direction of car travel. When a car leaves or passes a floor, illuminate indication representing position of car in hoistway. Illuminate proper direction arrow to indicate direction of travel.
轿厢位置指示灯：注明楼层名及方向箭头的阿拉伯数字指示灯或 LCD 屏以显示服务的楼层及轿厢行进方向。当轿厢离开或路过某一楼层时，点亮指示灯，显示井道内的轿厢位置。点亮适当的方向箭头以显示行进方向。
- E. Faceplate Material and Finish: (Refer to the requirements in section 2.1)
面板材质和饰面：（请参照 2.1 章节的要求）
 1. Passenger Lifts: Stainless Steel
客梯：不锈钢
 2. Service Lifts: Vandal-resistant Steel
服务梯：防破坏的钢。
- F. Floor Passing Tone, Cars DT01~DT18 in T1; Cars DT01~DT17 in T2:
Provide an audible tone of no less than 20 decibels and frequency of no higher than 1500 Hz, to sound as the car passes or stops at a floor served.
楼层经过音（对 T1 塔的电梯 DT01~DT18, T2 塔的电梯 DT01~DT17）：
设置声级不低于 20 分贝，频率不高于 1500 赫兹的可听音。在经过某一服务楼层或停靠在某一服务层时响起。

- G. Voice Synthesizer: Provide electronic device with easily reprogrammable message and female voice to announce car direction, floor, emergency exiting instructions, etc.

声音合成器：设置含易可重复编程的信息及女性声音的电子设施以告知轿厢行进方向、到达楼层、紧急出口说明等。

2.12 GROUP CONTROL AND FIREFIGHTERS' CONTROL PANEL 群控及消防员控制面板

- A. Elevator Control System: Provide a CPU and LCD screen color monitor with the capability to activate, display, monitor, or control the following functions:

电梯控制系统:提供有激活、显示、监控及控制以下功能的 CPU 及纯平彩色监控器 LCD:

1. On/off means to place car in or out of service. When placed in "off" position, return car(s) nonstop to designated floor and park with door(s) open for adjustable period of 1 to 3 minutes. At expiration of time, restore car to service.
开启/关闭意味着使电梯轿厢投入运行或停止服务。当开关在“关闭”位置时，轿厢直接回到指定楼层且中途不停靠任何楼层，轿厢门开启 1-3 分钟，以进行调节。设定时间一到，轿厢恢复服务
2. Car operating on normal/standby power.
正常电源/备用电源下的轿厢操作
3. Car position and direction of travel.
轿厢位置及运行方向。
4. Car calls
轿厢呼梯
5. Hall calls.
门厅呼梯
6. Operating mode.
运行模式
7. Door status.
轿厢门状态
8. Delayed car.
延时轿厢
9. Load weighing and by-pass.
载重及直行
10. Car to lobby feature.
轿厢停靠大厅层特征
11. Car in/out of service.
轿厢正在运行/停止服务
12. Fixtures and monitor shall be located as directed by Architect. Where applicable, identify all indicators and manual switches with appropriate engraving. Provide conduit and wiring to control panel. Coordinate size and location with Architect.
固定装置及监视器应安装在建筑设计单位指定的位置。在适用的情况下，采用合适的雕刻确定所有指示器及手动开关。提供控制面板的导管及布线。与建筑设计单位协调尺寸及位置。

- B. Firefighters' Control Panel: Locate in building fire control room. Fixture faceplate, stainless steel, satin finish, including the following features:

消防员控制面板：位于建筑内消防控制室。采用固定面板、不锈钢缎面，应包括以下特征：

1. Car position and direction indicator, digital-readout or LCD flat screen color monitor. Identify each position indicator with car number.
轿厢位置及方向指示器、数字读取式或 LCD 纯平彩色监视器。用轿厢编号确认每个位置指示器。

2. Indicator showing operating status of car.
显示轿厢运行状态的指示灯。
 3. Manual car standby power selection switches and power status indicators.
手动开启轿厢备用电源的开关并设有电源状态的指示器
 4. Two-position firefighters' emergency return switches and indicators with engraved instructions filled red.
两个位置的消防员紧急返回的按键，并配置镌刻的红色的使用说明
 5. Fixtures and monitor shall be located as directed by Architect. Where applicable, identify all indicators and manual switches with appropriate engraving. Provide conduit and wiring to control panel. Coordinate size and location with Architect.
讯号装置及监视器应安装在建筑设计单位指定的位置。在适用的情况下，采用合适的雕刻确定所有指示器及手动开关。提供控制面板的导管及布线。与建筑设计单位协调尺寸及位置。
- C. Monitoring and Display System with Battery Backup: Provide groups of elevators with a monitoring system in the machine room or Property Management Center with color monitor. System shall be a Windows based operating system capable of outputting to external media. As a minimum, system shall display the following functions:
含备用电池的监控及显示系统：在机房或者物业管理中心内为电梯组提供监控系统。该监控系统应为基于 Windows 的操作系统，能够向外媒输出数据。该系统最低应显示以下功能：
1. Operational Displays
运行显示：
 - a. Car operating in normal/standby power.
正常电源/备用电源下的轿厢操作
 - b. Car position and direction of travel.
轿厢位置及运行方向。
 - c. Car and hall calls.
轿厢及门厅呼梯
 - d. Operating mode.
运行模式
 - e. Door status.
轿厢门状态
 - f. Delayed car.
延时轿厢
 - g. Load weighing and by-pass.
载重及直行
 - h. Car to lobby feature.
轿厢停靠大厅层特征
 - i. Car in/out of service.
轿厢正在运行/停止服务
 2. System Performance Monitoring
系统性能监控：
 - a. Hall call registration information: Provide memory capacity for at least the preceding five, 24-hour periods, in blocks of 5- or 15-minute segments, running hour to hour (i.e., 2:00 p.m. to 3:00 p.m.)
门厅呼梯登记信息：提供至少提供之前 5 天 24 小时的存储器容量，每个记录片段为 5 或 15 分钟，连续运行一小时（如下午两点-下午三点）。
 - Visual and printed summary of hall call registration events by floor, direction, and duration, totaled in 5- or 15-minute segments during any 60-minute block using an internal clock.

通过楼层、方向及持续时间直观总结并打印记录门厅呼梯录入信息，利用内时钟记录每 60 分钟内 5 或 15 分钟的片段。

- Visual and printed summary of hall call registration duration averaged for 5- or 15-minute and hourly periods.

直观总结并打印记录门厅呼梯持续时间，平均每段记录时间为 5 分钟、15 分钟或 1 小时。

- Visual and printed summary of percentage of hall calls answered within 30 and 60 seconds in each 5- or 15-minute and hourly periods.

以每 5 分钟、15 分钟或 1 小时为单位，直观总结并打印记录 30 及 60 秒内得到响应的门厅呼梯百分比。

- Visual and printed summary of time periods during which individual cars are not in group operation (operating separately or out of service).

直观总结并打印记录独立轿厢未在电梯组内运行（独立运行或暂停服务）的时间。

- b. Accumulate system fault data including nature of fault, time, and day. Store and retrieval capabilities for minimum 30-day period.

连续记录系统故障信息包括故障性质、时间及日期。最低提供存储及检索 30 天内信息的能力。

3. Provide printer to produce a hard copy of stored data. Provide directions and software to accomplish information retrieval.

须设置打印机打印所存储数据。提供说明及软件，以进行信息检索。

4. Locate the Monitoring and Display System inside the Fire Control Room of this project

将监控及显示系统放置在项目的消防控制室中

PART 3 - EXECUTION 实施

3.1 EXAMINATION 检查

- A. Prior to beginning installation of equipment examine hoistway and machine room areas. Verify no irregularities exist that affect execution of work specified.
在开始安装设备前，检查井道和机房区域。确保无影响指定工程实施的违规现象。
- B. Do not proceed with installation until work in place conforms to project requirements.
在完成的工作符合项目要求前，请勿进行安装。

3.2 INSTALLATION 安装

- A. Install all equipment in accordance with Contractor's instructions, referenced codes, specification, and approved submittals.
按照承包商的说明、参考规范、技术说明书及批准交付件的要求，安装所有设备。
- B. Install machine room equipment with clearances in accordance with referenced codes and specification.
根据参考规范及技术说明书确定机房空间内的设备安装的间隙。
- C. Install all equipment so it may be easily removed for maintenance and repair.
安装所有设备，确保可方便移除进行维护和修理。
- D. Provide any required hoisting/safety beams. Remove if beams are encroaching on code clearances prior to final acceptance.
设置所需井道/安全横梁。在最终验收前，如横梁接近规范要求的容差则移除横梁。
- E. Install all equipment to afford maximum accessibility, safety, and continuity of operation.
安装所有设备，确保最大可达性、安全性及操作的连续性。
- F. Remove oil, grease, scale, and other foreign matter from all equipment and apply one coat of field-applied machinery enamel for all equipment and metal work installed that does not have a factory applied paint or architectural finish. Neatly touch up damaged factory-painted surfaces with original paint color to protect factory finished surfaces against corrosion.
对于所有未在工厂涂漆或建筑饰面的设备及金属工程，去除油污、油脂、剥落物及其他异物，并现场涂覆一层机械用漆。使用原始颜色涂料仔细为损坏的工厂涂漆表面润色，防止腐蚀。
- G. Clean all architectural finishes and replace or restore any surfaces damaged during construction to like new condition.
在施工中，清理所有建筑饰面并更换或存储所有受损表面，确保状态如新。

3.3 FIELD QUALITY CONTROL 现场质量控制

- A. Work at the jobsite will be checked during the course of installation. Any corrective work the Consultant requires shall be accomplished prior to performing further installation dependent upon or related to the required correction.
安装期间需检查工地现场的作业。在进行下一步安装之前，必须有专业的顾问按照相关要求做校正工作。
- B. Have Code Authority acceptance inspection performed. Verification that such tests have been completed, all corrective work accomplished and installation approved for issuance of a taking Over Certificate shall be required before acceptance of any unit.
必须由质检局进行验收检验。任何装置进行验收前，应确保已完成所有测试、所有专业的校正工作，安装已经过核准并颁发证书。

3.4 ADJUSTING 调整

- A. Align guide rails vertically within a tolerance of 1.6 mm in 30 m. Secure joints without gaps and file any irregularities to a smooth surface.
调整导轨，使其垂直，使其在 30 m 内只有 1.6 mm 的公差。确保所有连接处无缝隙，调整所有不齐处，使其表面光滑平整。
- B. Static balance car to equalize pressure of guide shoes on guide rails. Dynamically balance car and counterweight.
静态平衡轿厢，补偿导轨上导靴的压力。动态平衡轿厢及对重装置。
- C. Lubricate all equipment in accordance with Contractor's instructions.
根据承包商的指示对所有设备进行润滑。
- D. Adjust motors, power conversion units, brakes, controllers, leveling switches, limit switches, stopping switches, door operators, interlocks, and safety devices to achieve specified performance levels.
调节电机、功率转换装置、制动器、控制器、校平开关、限位开关、停止开关、门启闭装置、联动装置及安全装置，以达到所需性能水平。

3.5 CLEANING 清洁

- A. Keep work areas orderly and free from debris during progress of project. Remove packaging materials on a daily basis.
在项目施工过程中保持工作区整洁无杂物。每日清除包装材料。
- B. Remove all loose materials and filings resulting from work.
清除所有施工产生的松散材料和残屑。
- C. Clean machine room equipment and floor.
清扫机房空间的设备和地板
- D. Clean hoistways, car, car enclosure, entrances, operating and signal fixtures.
清扫井道、轿厢、轿厢围护结构、入口、运行及信号装置。
- E. Clean pit equipment and floor.
清扫底坑

3.6 TEST RESULTS: 测试结果:

- A. Under any load obtain specified contract speed, performance times, stopping accuracy without re-leveling, and ride quality to satisfaction of Consultant. Tests may be conducted under no load, balanced load, and full load conditions.
在任何负载下应获得规定的约定速度、运行时间、无需二次平衡的精准停止、行车品质，直至顾问满意。应分别在空载、平衡负载及满载的情况下进行测试。
- B. Consultant may test temperature rise in motor windings limited to 50° Celsius above ambient. A full-capacity one hour running test, stopping at each floor for ten seconds in up and down directions, may be required.
顾问可测试电机绕组升温不超过环境温度 50° 摄氏度。可能要求在上行及下行方向各进行一个小时的满载运行测试，且电梯在每层楼停靠 10 秒。

- C. Engage a factory-authorized service representative to train Owner's maintenance personnel to operate, adjust, and maintain elevators.
聘请工厂授权的服务代表培训业主的维护人员操作、调节及维护电梯。
- D. Check operation of each elevator with Owner's personnel present before date of Substantial Completion and again not more than one month before end of warranty period. Determine that operation systems and devices are functioning properly.
在实质性竣工之前及保修期到期前一个月内，在业主人员在场的情况下检查每部电梯的运行。确保运行系统及装置运转良好。

3.7 PROTECTION 保护措施

- A. Temporary Use: Comply with the following requirements for each elevator used for construction purposes:
临时使用：用于施工目的的每部电梯符合以下要求：
 - 1. Provide car with temporary enclosure, either within finished car or in place of finished car, to protect finishes from damage.
在完成的轿厢内部或完成轿厢位置设置临时围护结构，保护饰面免受损害。
 - 2. Provide strippable protective film on entrance and car doors and frames.
入口、轿厢门及框架需设置可剥离的保护薄膜。
 - 3. Provide padded wood bumpers on entrance door frames covering jambs and frame faces.
入口门框架需设置有垫层的木质缓冲，包覆侧柱及门框表面。
 - 4. Provide other protective coverings, barriers, devices, signs, and procedures as needed to protect elevator and elevator equipment.
按照需要，提供其他防护涂层、格栅、装置、标志及流程，保护电梯及电梯设备。
 - 5. Do not load elevators beyond their rated weight capacity.
电梯不得超载
 - 6. Engage elevator Installer to provide full maintenance service. Include preventive maintenance, repair, or replacement of worn or defective components, lubrication, cleanup, and adjustment as necessary for proper elevator operation at rated speed and capacity. Provide parts and supplies same as those used in the manufacture and installation of original equipment.
聘请电梯安装公司提供全面维护服务。包括确保电梯以额定速度及载重运行必需的预防性维护，维修或磨损、损坏部件的替换、润滑、清洁及调节。提供与原设备生产及安装一致的部件及零件。
 - 7. Engage Elevator Installer to restore damaged work, if any, so no evidence remains of correction. Return items which cannot be refinished in the field to the shop, make required repairs, and refinish entire unit, or provide new units as required.
聘请电梯安装公司修复受损部分(如有)，确保无修复痕迹。将现场无法整修光滑的部件返回工厂，做出必要维修，重新抛光整个装置，或按照要求提供新的装置。

3.8 USE OF TEMPORARY CONSTRUCTION ELEVATOR 临时施工电梯的使用

- A. Elevator contractor need to comply with the following requirements in order to meet Client/Main Contractor's use of temporary construction elevator:
为了满足业主/总包的现在临时施工电梯的需求，电梯承包商应满足以下要求：

1. Apply installation work for those temporary construction elevator according to Client's requirement in order to improve the progress of the construction period
对后期需要作为临时施工用电梯的部分电梯进行先行安装工作，确保配合业主加快项目工期进度
2. Assign dedicated elevator attendant who is in charge of the temporary construction elevator. Temporary construction elevator is NOT allowed to run automatically
必须有专职司机，实行专人管理，不得使得临时施工电梯自动运行
3. For all the workers and goods entering or exiting the temporary construction elevator, they have to obey to the elevator attendant's order and they are NOT allowed to operate the elevator by themselves. Otherwise, the elevator attendant has the right to deny their entering
对进出临时施工电梯的人员和货物，必须听从电梯司机的安排和指挥，不得自行操作电梯运行；否则司机有权拒载
4. For transporting the corrosive materials such as cement and/or mortar, it is required to pack up and then they are allowed to enter the elevator car
装在水泥、砂浆等腐蚀性材料时，必须装袋后进入轿厢
5. Overload is prohibited
严禁超载
6. Elevator contractor should assign a dedicated worker to be in charge of the technical maintenance and emergency rescue of the temporary construction elevators who also supervises the running status. If any operation does not obey the regulation, he has the right to stop the use of the temporary construction elevators
电梯承包商应在现场配置一名专职人员负责临时施工电梯的技术维护、应急救援的工作，同时监管电梯的运行情况，发现违规操作的有权利停止电梯的使用
7. Before the formal handover after these elevators are used as temporary construction elevators onsite, elevator contractor should check the current condition of these elevators and replace the worn or broken parts. Such as (but not limited to):
在这些电梯作为现场的临时施工电梯以后并在正式移交之前，电梯承包商应该检查这些电梯的目前状况并更换破损的或损坏的零部件，例如（但不限于以下部件）：
 - a. Car Wall 轿厢壁
 - b. Car Ceiling 轿厢轿顶
 - c. Car Operating Panel 轿厢操作面板
 - d. Landing Button 楼层召唤按钮
 - e. Landing Door Panel 层门面板
 - f. Landing Door Jamb 层门门套
 - g. Car Door Sill/Landing Door Sills 轿门门坎/层门门坎

APPENDIX A - ICT REQUIREMENT 附录 A 智能化要求

一、 垂直电梯随行电缆光纤预留

每台电梯随行电缆需预留 2 组 2 芯皮线光缆，与主随行电缆为一整体，用于视频监控及相关智能化设备联网。

二、 电梯功能需求

- 1、 每部电梯除了预留 2 组 2 芯皮线光缆外，还需预留 1 组 RVVP4*0.75 和 1 组 RVVP2*0.75 线缆，1 组屏蔽超五类线，与主随行电缆为一整体。
- 2、 配置电梯楼层控制功能，实现轿厢内刷卡/二维码/人脸后自动点亮对应楼层，并运送客户抵达所要到达的楼层(多楼层权限客户需手动选择楼层按键)。注意：①刷卡/二维码/人脸设备由智能化专业提供；②电梯机房和电梯轿厢所需的相关控制设备，随行电缆内所需通讯电缆，需由电梯公司配套完成；③电梯轿厢顶部需预留 AC220V 电源插座。
- 3、 每台电梯需于电梯机房预留 RS485 通讯接口装置，并免费开放接口协议，与可视对讲/门禁系统的相关通讯模块进行数据对接和交换。提供包括但不限于以下信号：电梯启停状态、上下行状态、故障状态、故障类型和所处楼层信息等信号。
- 4、 实现可视对讲/门禁与电梯楼层控制系统联动：
 - 1) 业主呼梯联动：业主刷脸/二维码/IC 卡进单元门，同时呼叫电梯至当前门口机所在楼层，并开放业主所住楼层梯控权限；
 - 2) 访客呼梯联动：访客呼叫，住户开锁，会自动呼梯至访客所在楼层，同时开放室内机所在楼层梯控权限；

三、 要求中标后 15 日历天内提供包括但不限于以下深化系统图，以便于智能化单位敷设电梯机房至消防控制中心的相关联网线路：

1. 目的楼层联网系统图；
2. 电梯多方通话联网系统图；
3. 电梯运行监控联网系统图；
4. 电梯空调联网系统图；
5. 其他需要从电梯机房至消防控制中心敷设线路的联网系统图。

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