

Annexure 16

Maha Metro



Tender Documents

UGC-02: DESIGN AND CONSTRUCTION OF UNDERGROUND STATIONS AT
BUDHWAR PETH, MANDAI AND SWARGATE AND ASSOCIATED TUNNELS

PART II – EMPLOYER’S REQUIREMENT

Section VI – Employers Requirement
Appendix 2B – Contract Key Dates & Completion Dates

August 2018

CONTRACT KEY DATES

Key Date for Employer/Engineer Site Office's:

Contractor shall establish a site office for Employer/Engineer at designated location within 45 days of from contract commencement date.

In case Contractor failed to do so a penalty of 0.0005 % of fixed lump sum quoted in Price center B per day of delay for the work will be incurred from Contractor.

Key Dates: Budhwar Peth Station

Key Dates	Description	Number of days from Commencement	Delay Damages for non-achieving the Key Dates
KD-1	Design Submission Programme and site investigations submission	120	0.025% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date
KD-2	Preliminary Design Submission	150	0.025% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date
KD-3A	Definitive Design Submission for Permanent Structures for base slab	240	0.005% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date
KD-3B	Definitive Design Submission for Permanent Structures for complete station	360	0.005% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date
KD-4	Achieve completion of Excavation for station cut & cover box	442	0.025% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date
KD-5A	Base slab construction for the station cut & cover box including installation of waterproofing membrane, toe in of slab (if any) and installation of tension piles (if any)	532	0.025% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date
KD-5B	NATM Tunnel construction including excavation, installation of waterproofing, primary linings and secondary lining in all respect.	625	0.025% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date
KD-6	Achieve completion of the following station rooms/areas: ➤ Group 1 station rooms (Excluding rooms located on and above the platform) finished to Degree 1 completion and providing	900	0.025% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date

Key Dates	Description	Number of days from Commencement	Delay Damages for non-achieving the Key Dates
	access to all Interfacing contractors. ➤ All tunnel ventilation shafts (Excluding Shafts located on and above the platform)		
KD-7	Achieve completion of station public Concourse/Mezzanine (Excluding rooms located on and above the platform) Level areas including all entrances finished to Degree 2 completion and provide access to all Interfacing Contractors	960	0.01% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date
KD-8	Achieve completion of the following station rooms / areas and provide access to all Interfacing Contractors: Group 1 station rooms in the ancillary buildings on Street Level, finished to Degree 3 completion	1000	0.01% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date
KD-9	Achieve completion of station Track areas finished to Degree 1 completion and provide access to interfacing contractors	1100	0.01% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date
KD-10	Achieve completion of the following station rooms and public Concourse/ Mezzanine (wherever applicable) Level areas and provide access to AFC Contractor: Groups 2a and 2b station rooms and areas on Concourse/Mezzanine (wherever applicable) Level finished to Degree 3 completion	1080	0.01% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date
KD-11	Achieve completion of station structures on Platform, concourse and mezzanine	1100	0.01% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date

Key Dates	Description	Number of days from Commencement	Delay Damages for non-achieving the Key Dates
	Level rooms/areas (Excluding rooms located on and above the platform) finished to Degree 3 completion and provide access to all Interfacing contractors		
KD-12	Achieve completion of the following station rooms after retrieval of TBM from working shaft (wherever provided in station areas) and provide access to all Interfacing Contractors: Group 1 station rooms on Concourse/Mezzanine (wherever applicable) Level finished to Degree 3 completion	1160	0.01% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date
KD-13	Achieve completion of station structures on Platform, concourse and mezzanine Levels finished to Degree 2 completion and provide access to Platform screen door and Lift and Escalator Contractor.	1160	0.01% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date
KD-14	Achieve completion of all E&M works (including DG set & UPS) to permit permanent power on to all stations and Complete all architectural finishing and signage works in all respects	1183	0.01% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date
KD-15	Achieve issuance of Taking Over Certificate (all completed to degree 4 completion)	1270	0.05% of the fixed lump sum quoted in Price Centre "B" per day of delay for the Key date

Key Dates: Mandai Station

Key Dates	Description	Number of days from Commencement	Delay Damages for non-achieving the Key Dates
KD-1	Design Submission Programme and site investigations submission	140	0.025% of the fixed lump sum quoted in Price Centre "C" per day of delay for the Key date
KD-2	Preliminary Design Submission	170	0.025% of the fixed lump sum quoted in Price Centre "C" per day of delay for the Key date
KD-3A	Definitive Design Submission for Permanent Structures for base slab	200	0.005% of the fixed lump sum quoted in Price Centre "C" per day of delay for the Key date
KD-3B	Definitive Design Submission for Permanent Structures for base slab	240	0.005% of the fixed lump sum quoted in Price Centre "C" per day of delay for the Key date
KD-4	Achieve completion Excavation for station cut & cover boxes at both ends	380	0.025% of the fixed lump sum quoted in Price Centre "C" per day of delay for the Key date
KD-5A	NATM Tunnel construction including excavation, installation of waterproofing, primary linings and secondary lining in all respect.	484	0.025% of the fixed lump sum quoted in Price Centre "C" per day of delay for the Key date
KD-5B	Base slab construction for the station cut & cover boxes at both ends including installation of waterproofing membrane, toe in of slab (if any) and installation of tension piles (if any)	586	0.025% of the fixed lump sum quoted in Price Centre "C" per day of delay for the Key date
KD-6	Achieve completion of the following: ➤ Group 1 station rooms finished to Degree 1 completion and providing access to all Interfacing contractors. ➤ All tunnel ventilation shafts	900	0.025% of the fixed lump sum quoted in Price Centre "C" per day of delay for the Key date
KD-7	Achieve completion of station public Concourse/Mezzanine (wherever applicable) Level	960	0.01% of the fixed lump sum quoted in Price Centre "C" per day of delay for the Key date

Key Dates	Description	Number of days from Commencement	Delay Damages for non-achieving the Key Dates
	areas including and all entrances finished to Degree 2 completion and provide access to all Interfacing Contractors		
KD-8	Achieve completion of the following station rooms / areas and provide access to all Interfacing Contractors Group 1 station rooms in the ancillary buildings on Street Level to finished Degree 3 completion.	1000	0.01% of the fixed lump sum quoted in Price Centre “C” per day of delay for the Key date
KD-9	Achieve completion of station Track areas finished to Degree 1 completion and provide access to interfacing contractors	1050	0.01% of the fixed lump sum quoted in Price Centre “C” per day of delay for the Key date
KD-10	Achieve completion of station Platform, concourse and mezzanine Levels finished to Degree 3 completion and provide access to all Interfacing contractors	1100	0.01% of the fixed lump sum quoted in Price Centre “C” per day of delay for the Key date
KD-11	Achieve completion of the following station rooms and public Concourse/Mezzanine (wherever applicable) Level areas and provide access to AFC Contractor Groups 2a and 2b station rooms and areas on Concourse/Mezzanine (wherever applicable) Level finished to Degree 3 completion	1100	0.01% of the fixed lump sum quoted in Price Centre “C” per day of delay for the Key date
KD-12	Completion of station structures on Platform, concourse and mezzanine Levels finished to Degree 2 completion and provide access to Platform Screen Door and	1150	0.01% of the fixed lump sum quoted in Price Centre “C” per day of delay for the Key date

Key Dates	Description	Number of days from Commencement	Delay Damages for non-achieving the Key Dates
	Lift & Escalator Contractors.		
KD-13	Achieve completion of all E&M works (including DG set & UPS) to permit permanent power on to all stations and Complete all architectural finishing and signage works in all respects	1183	0.01% of the fixed lump sum quoted in Price Centre "C" per day of delay for the Key date
KD-14	Achieve issuance of Taking Over Certificate (all completed to degree 4 completion)	1270	0.05% of the fixed lump sum quoted in Price Centre "C" per day of delay for the Key date

Key Dates : Swargate Station

Key Dates	Description	Number of days from Commencement	Delay Damages for non-achieving the Key Dates
KD-1	Design Submission Programme and site investigations submission	100	0.025% of the fixed lump sum quoted in Price Centre "D" per day of delay for the Key date
KD-2	Preliminary Design Submission for Permanent Structures for station box	120	0.025% of the fixed lump sum quoted in Price Centre "D" per day of delay for the Key date
KD-3	Definitive Design Submission for Permanent Structures for complete station	180	0.005% of the fixed lump sum quoted in Price Centre "D" per day of delay for the Key date
KD-4	Completion of Base slab construction for the station including installation of waterproofing membrane, toe in of slab (if any) and installation of tension piles (if any)	330	0.025% of the fixed lump sum quoted in Price Centre "D" per day of delay for the Key date
KD-5	Achieve completion of <ul style="list-style-type: none"> ➤ Group 1 station rooms finished to Degree 1 completion and providing access to all Interfacing contractors. ➤ All tunnel ventilation shafts 	870	0.01% of the fixed lump sum quoted in Price Centre "D" per day of delay for the Key date
KD-6	Achieve completion of the following station rooms / areas and provide access to all Interfacing Contractors Group 1 station rooms in the ancillary buildings on Street Level finished to Degree 3 completion	920	0.01% of the fixed lump sum quoted in Price Centre "D" per day of delay for the Key date
KD-7	Achieve completion of station public Concourse/ Mezzanine Level areas including entrances finished to Degree 2 completion and provide access to all Interfacing Contractors	940	0.01% of the fixed lump sum quoted in Price Centre "D" per day of delay for the Key date
KD-8	Achieve completion of the following station rooms and provide access to all Interfacing Contractors Group 1 station rooms on Concourse/ Mezzanine (wherever applicable) Level finished to Degree 3 completion	970	0.01% of the fixed lump sum quoted in Price Centre "D" per day of delay for the Key date

Key Dates	Description	Number of days from Commencement	Delay Damages for non-achieving the Key Dates
KD-9	Achieve completion of the following station rooms after removal of TBM from working shaft (wherever provided in station areas) and provide access to all Interfacing Contractors Group 1 station rooms on Concourse/Mezzanine (wherever applicable) Level finished to Degree 3 completion	1000	0.01% of the fixed lump sum quoted in Price Centre “D” per day of delay for the Key date
KD-10	Achieve completion of station Platform Level areas finished to Degree 2 completion and provide access to all Interfacing contractors	1000	0.01% of the fixed lump sum quoted in Price Centre “D” per day of delay for the Key date
KD-11	Achieve completion of station track areas finished to Degree 1 completion and provide access to Track and other interfacing contractors	1050	0.01% of the fixed lump sum quoted in Price Centre “D” per day of delay for the Key date
KD-12	Achieve completion of the following station rooms and public Concourse/Mezzanine (wherever applicable) Level areas and provide access to AFC Contractor Groups 2a and 2b station rooms and areas on Concourse/Mezzanine (wherever applicable) Level finished to Degree 3 completion	1050	0.01% of the fixed lump sum quoted in Price Centre “D” per day of delay for the Key date
KD-13	Achieve completion of station structures on Platform Level finished to Degree 2 completion and provide access to Lift & Escalator and Platform Scree Door Contractors.	1080	0.01% of the fixed lump sum quoted in Price Centre “D” per day of delay for the Key date
KD-14	Achieve completion of all E&M works (including DG set & UPS) to permit permanent power on to all stations and Complete all architectural finishing and signage works in all respects	1183	0.05% of the fixed lump sum quoted in Price Centre “D” per day of delay for the Key date

Key Dates	Description	Number of days from Commencement	Delay Damages for non-achieving the Key Dates
KD-15	Achieve issuance of Taking Over Certificate (all completed to degree 4 completion)	1270	0.05% of the fixed lump sum quoted in Price Centre “D” per day of delay for the Key date

Tunnel Key Dates

Key Dates	Description	Number of days from Commencement	Delay Damages for non-achieving the Key Dates
KD-1	Preliminary Design Submission and Finalization of TBM design and proceed for manufacturing	90	0.025% of the fixed lump sum quoted in Price Centre “E,F & G” per day of delay for the Key date
KD-2A	Completion of Soil Investigation and submission of reports.	90	0.01% of the fixed lump sum quoted in Price Centre “E,F & G” per day of delay for the Key date
KD-2B	Completion of Building Condition Survey and submission of Report.	140	0.015% of the fixed lump sum quoted in Price Centre “E,F & G” per day of delay for the Key date
KD-3	Submission of Definitive Design	180	0.025% of the fixed lump sum quoted in Price Centre “E,F & G” per day of delay for the Key date
KD-4	Completion of Casting Yard Establishment and casting of first segment	224	0.025% of the fixed lump sum quoted in Price Centre “B,C,D,E,F & G” per day of delay for the Key date
KD-5	Assembling and Start of Initial drive for TBM-1	360	0.025% of the fixed lump sum quoted in Price Centre “E” per day of delay for the Key date
KD-6	Assembling and Start of Initial drive for TBM-2	390	0.025 % of the fixed lump sum quoted in Price Centre “E” per day of delay for the Key date
KD-7A	TBM 1 Arrival at Mandai Station (Drive Swargate to Mandai)	600	0.005 % of the fixed lump sum quoted in Price Centre “E” per day of delay for the Key date
KD-7B	TBM 2 Arrival at Mandai Station (Drive Swargate to Mandai)	630	0.005 % of the fixed lump sum quoted in Price Centre “E” per day of delay for the Key date
KD-8A	TBM 1 Arrival at Budhwar Peth Station (Drive Mandai to Budhwar Peth)	760	0.05 % of the fixed lump sum quoted in Price Centre “D & E”

Key Dates	Description	Number of days from Commencement	Delay Damages for non-achieving the Key Dates
			per day of delay for the Key date
KD-8B	TBM 2 Arrival at Budhwar Peth Station (Drive Mandai to Budhwar Peth)	820	0.05 % of the fixed lump sum quoted in Price Centre “E” per day of delay for the Key date
KD-9	Achieve completion of all tunnels (including cross passages and stabling lines at the back of Swargate station) finished to Degree 1 completion, from Swargate to Budhwar Peth Station (excluding Budhwar Peth Station), and provide access to Track work and other Interfacing Contractors.	1050	0.02% of the fixed lump sum quoted in Price Centre “E” per day of delay for the Key date
KD-10	Achieve completion of all E&M works (including DG set & UPS) to permit permanent power on to all tunnels and complete all works in all respects	1183	0.05 % of the fixed lump sum quoted in Price Centre “E, F & G” per day of delay for the Key date
KD-11	Achieve issuance of taking over certificate(all completed to degree 4 completion)	1270	0.05 % of the fixed lump sum quoted in Price Centre “E, F & G” per day of delay for the Key date

Notes to Key Dates:

1. The achievement of Key Date shall be subject to the issuing of a notice of no objection from the Engineer.
2. The achievement of a Degree of Completion shall require the completion of works for that particular Degree of Completion and all preceding ones.
3. The Degree of Completion shall be read in conjunction with the Interface Specifications (interface related Contract requirements and Stipulations) to establish access requirements for Interfacing Contractors.
4. The access and order for completion of the work specified within each Key Date and within each Degree of Completion shall be coordinated among the Interfacing Contractors in the development of the Coordinated Installation Programme (CIP) and Track Related Installation Programme (TRIP).

Degree of Completion for Station Rooms (Including those on Platform, tunnel (s) and cross-passages in NATM Stations)

Degree 1	Degree 2	Degree 3	Degree 4
<ul style="list-style-type: none"> • Structure complete, clean, dry and all works area to be watertight and weatherproof • Cast-in and concealed components complete • Movement and expansion joints installed • Partition walls complete with penetrations and plant delivery openings formed • Plant plinths complete and survey accepted • Complete floor screed • Complete permanent framing for doors, hatches, and other openings • Complete wall plastering and all finishing works for wall prior to painting • Drainage system and discharge connection complete • Complete sealant for ceiling and floor • Complete air and services ducts 	<ul style="list-style-type: none"> • Complete fixing brackets for pedestal for raised floor • Earthing and bonding complete • Contractor's Equipment removed • Temporary power and lighting available • Suitable work and storage areas available for Interfacing Contractors • Lifting facilities installed and certified • Clear route available for plant access and equipment delivery • Survey reference lines available • Complete TVS shafts 	<ul style="list-style-type: none"> • Complete wall painting • Complete all cable containment leading to, and inside the equipment rooms • Complete all cable riser / shafts • Complete all E & M services except final fittings • Complete wall, raised floor and false flooring in SER/CER and SCR / floor finishes, and ceiling / false ceiling, except for locations where these works have to be completed after completion of works by the Interfacing Contractors • Complete all internal glazing • Temporary doors with locks installed • Temporary air-conditioning / ventilation available • Openings and service penetrations temporarily blanked off 	<ul style="list-style-type: none"> • Complete all electrical and light fittings • Complete all fire protection and detectors • Louvres and grilles installed • All finishes including signage complete • Permanent LV including UPS supply available • Permanent doors and ironmongery installed • Complete all works including testing and commissioning

<i>Group 1</i>	
Signal Equipment Room (SER)	Signaling Control Panel Room
Communication Equipment Rooms (CER)	Telecommunication Closet
33kV MV Switchgear Room	33/0.415kV Transformer Room (ASS)
Any Power Supply or Traction related rooms/facilities	
Platform Screen Door related rooms (if required)	Station Control Room (SCR)
Tunnel Ventilation Machine Rooms	Ventilation and Air Conditioning Mechanical Rooms
Chiller Plant Room	
<i>Group 2a</i>	
Ticket Office (TO)	
Excess Fare Office	Other Rooms

Note: Interfacing Contractors installation and access requirements shall be agreed during interface coordination meetings and in accordance with Appendix 19 of this Section VI, Part 2.

Degree of Completion for Tunnels (Other than Tunnel (s) in NATM Stations)

Degree 1	Degree 2	Degree 3	Degree 4
<ul style="list-style-type: none"> • Tunnel structure complete, clean, dry and watertight • Trackbed concrete (including shear connectors), walkway, cable trough / duct complete and surveyed. As-built records on track centre line level and alignment available • Complete all trackside cable containment, cable supports, and all mounting facilities for Interfacing Contractors • Earthing and bonding connections complete • Drainage system and discharge connection complete with temporary pumps • Temporary tunnel ventilation, background lighting, power, and water, available for Interfacing Contractors • Clear routes available for plant access • Lifting facilities installed and certified • Permanent cross-passage and door installed • Contractor's Equipment removed • All provisions stipulated in the Interface Specification (interface related Contract requirements and Stipulations) required for access by Trackworks Contractor available 	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • Permanent cross- passage doors ironmongery installed • All graphics and signage complete • Permanent Power system including Uninterruptible Power Supply (UPS) system complete • Permanent Tunnel Lighting system complete • Permanent E&M system complete • Energisation of main LV switchboards complete and permanent LV supply available • Permanent pumps installed and commissioned 	<ul style="list-style-type: none"> • Complete all works including testing and commissioning

Degree of Completion for Station Track Area

Degree 1	Degree 2	Degree 3	Degree 4
<ul style="list-style-type: none"> • Complete station structures for the track, including all ductings, ventilation shafts, plenums, nozzles, and other fixtures above, under and adjacent to the track • Complete waterproofing for the station track structure • Joint sealants complete • Track bed, walkway, derailment curb complete and survey accepted • Complete all trackside cable containments and mounting facilities for Interfacing Contractors • Earthing and bonding connections complete and test results accepted • Advertising panel brackets installed • Drainage system and discharge connection complete and operational with temporary pumps • Temporary ventilation, background lighting, power, and water, available for Interfacing Contractors • Clear routes available for plant access, equipment and track concrete delivery 	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • All cabling and wiring complete • Graphics, advertising panels and signages installed • Permanent Lighting systems commissioned • Permanent E & M systems complete • Permanent pumps commissioned • Complete all permanent fixtures • All openings and service penetrations sealed 	<ul style="list-style-type: none"> • All works including testing and commissioning complete

Degree of Completion for Platform Screen Door Work Zone (area within 3m from platform edge)

Degree 1	Degree 2	Degree 3	Degree 4
<ul style="list-style-type: none"> • Structure complete, clean, dry and all works area to be weatherproof • Cast-in and concealed components complete • Movement and expansion joints installed • Partition walls complete with penetrations and plant delivery openings formed 	<ul style="list-style-type: none"> • Earthing and bonding complete and tested accepted • Contractor's Equipment removed • Temporary power and lighting available • Suitable work and storage areas available for Interfacing Contractors • Header I-beam and works on threshold complete with survey accepted • Clear plant access and delivery routes available 	<ul style="list-style-type: none"> • Complete installation and testing of insulation membrane 	<ul style="list-style-type: none"> • Complete all wall, ceiling / false ceiling and floor finishes • Complete all E & M services • Complete all fire protection and detectors • Louvres and grilles installed • All finishes including signage complete • Permanent LV supply available • All openings and service penetrations sealed • Complete all works including testing and commissioning

Degree of Completion for Station Concourse/Mezzanine (wherever applicable) and Platform Areas, including Entrances (excluding PSD Work Zones)

Degree 1	Degree 2	Degree 3	Degree 4
<ul style="list-style-type: none"> Structure complete, clean, dry and all works area to be watertight and weatherproof Cast-in and concealed components complete Movement and expansion joints installed Partition walls complete with penetrations and plant delivery openings formed Complete floor screed Drainage system and discharge connection complete Complete permanent framing for doors, hatches, and other openings 	<ul style="list-style-type: none"> Complete all cable containment in concourse and platform area for Interfacing Contractors including connection to trackside Earthing and bonding complete Contractor's Equipment removed Temporary power and lighting available Suitable work and storage areas available for Interfacing Contractors Clear route available for plant access and delivery Survey reference lines available Complete mounting bracket, primary ceiling support frame, power and data points for Interfacing Contractors 	<ul style="list-style-type: none"> Complete all wall, ceiling / false ceiling and floor finishes, except for locations where the works have to be carried out after the completion of works by Interfacing Contractors Joinery/framing/ counter for supporting AFC Contractor's equipment available 	<ul style="list-style-type: none"> Complete all electrical and light fittings Complete all fire protection and detectors Louvres and grilles installed All finishes including signage complete Permanent LV supply including UPS available All openings and service penetrations sealed Complete all works including testing and commissioning

Group 2b	
Ticket Hall (paid and unpaid areas)	

Degree of Completion for Lifts & Escalators

(a) Lift Shafts

Degree 1	Degree 2	Degree 3	Degree 4
<ul style="list-style-type: none"> • Structure complete, clean, dry and all works area to be watertight and weatherproof • Cast-in and concealed components complete • Openings to lift machine room and lift shaft available • Partition walls complete with penetrations and plant delivery openings formed • Plant plinths complete and survey accepted • Drainage system and discharge connection complete • Complete floor screeding 	<ul style="list-style-type: none"> • Earthing and bonding complete • Contractor's Equipment removed • Temporary power and lighting available • Suitable work and storage areas available for Interfacing Contractors • Lifting facilities installed and certified • Clear routes available for plant access and delivery • Survey reference lines available • Shaft alignment, location of penetrations and openings surveyed and accepted • Complete builder's works provisions for buffers area • Complete structural frames and associated fixtures for lift shafts • Provide temporary safety barrier at landing, lift shaft and other openings 	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • Complete all wall, ceiling and floor finishes including signages • Complete all electrical and light fittings • Complete all fire protection and detectors • All finishes including signage complete • All openings and service penetrations sealed • Complete all works including testing and commissioning

Escalator Zones

Degree 1	Degree 2	Degree 3	Degree 4
<ul style="list-style-type: none"> Escalator pits complete, clean, dry and watertight Cast-in and concealed components complete Plant plinths complete and survey accepted Drainage system and discharge connection complete Complete permanent framings for doors, hatches and other openings 	<ul style="list-style-type: none"> Earthing and bonding complete Contractor's Equipment removed Temporary power and lighting available Suitable work and storage areas available for Interfacing Contractors Lifting facilities for escalator installed and certified Clear routes available for plant access and delivery Survey reference lines available Alignment (vertical and horizontal) and recess supports, including intermediate supports surveyed and accepted Provide temporary safety barrier at landing and other openings 	<ul style="list-style-type: none"> Complete cable containment and fire protection within the escalator structure Complete installation of isolators / distribution boards 	<ul style="list-style-type: none"> Complete all wall, ceiling and floor finishes Complete all electrical and light fittings Complete all fire protection and detectors Louvres and grilles installed All finishes including signage complete Permanent LV supply available All openings and service penetrations sealed Complete floor finishes at landings Complete balustrade and barrier around the escalator voids Complete all works including testing and commissioning

Group – Lifts and Escalators

Escalator Zone

Lift Shaft