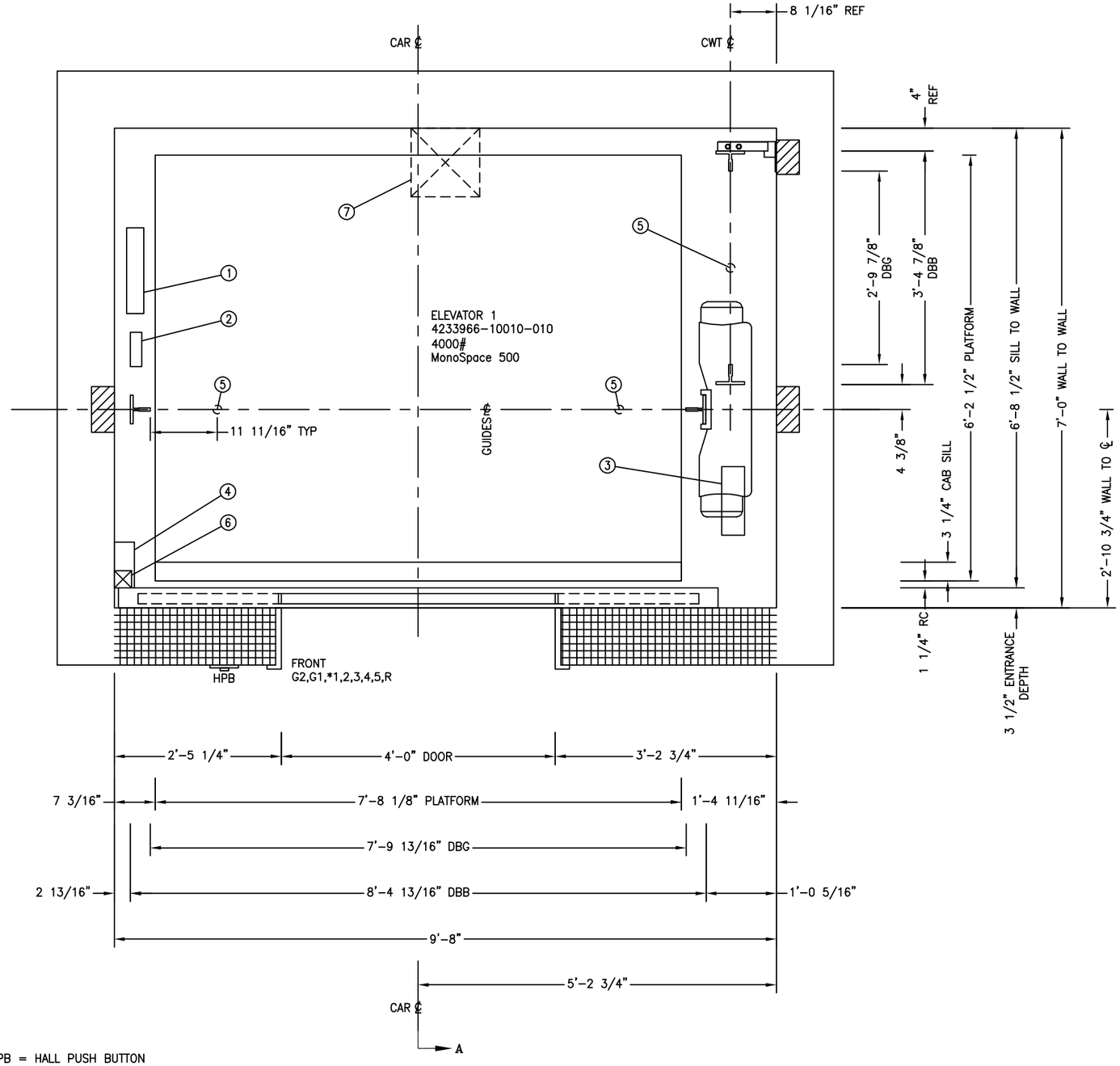

NOTE: HPB = HALL PUSH BUTTON

① TRAVELING CABLE
② DEAD-END HITCH
③ CAR GOVERNOR / TENSION WT ASSEMBLY (SEE NOTE B)
④ PIT LADDER (KONE SUPPLIED/INSTALLED)
MIN. CLEARANCE FROM FRONT WALL:
SS/CO 8.25"[210mm], 2S 10.25"[260mm]
⑤ TYP BUFFER LOCATION / SEE DATA SHEET FOR REACTIONS
⑥ WIRE DUCT (SEE NOTE C)
⑦ RECOMMENDED DRAIN/SUMP PUMP LOCATION (IF REQUIRED)
SEE "WORK BY OTHERS" SHEET, NOTE 38.

FOR APPROVAL – NOT FOR CONSTRUCTION

NOTES:
A. IF POSSIBLE, ENTIRE ENTRANCE WALLS TO BE LEFT FULLY OPEN AT EACH LANDING. MINIMUM REQUIRED ROUGH OPENINGS FOR ALL LANDINGS DETAILED ON ENTRANCE DRAWINGS.

B. GOVERNOR TO BE POSITIONED WITH ELECTRICAL BOXES TOWARDS CAR SIDE AND ENCODER TOWARDS FRONT SIDE.

C. TERMINATE WIRE DUCT 48" [1220] ABOVE LOWEST LANDING. PIT LADDER TO BE POSITIONED DIRECTLY BELOW DUCT.

D. REFER TO THE DATA SHEET FOR FURTHER DETAILS CONCERNING ALLOWABLE CLEAR HOISTWAY TOLERANCES.

E. MINIMUM CLEAR HOISTWAY WIDTH SHOWN. CONTACT KONE FOR MAXIMUM ALLOWABLE CLEAR HOISTWAY.

F. ALL CAR AND CWT RAIL BRACKETS ATTACH TO SIDE HOISTWAY WALLS.

G. FILLER BIT HEIGHTS ARE BASED ON A COMPLETE CAB INSTALLATION.

INSTALLATION NOTES:

1) DBG TELESCOPE POLE SETTINGS = 8'-10"

2) BALANCE WEIGHTS: 0LBS QTY: 0
TRACTION WEIGHTS: 0LBS QTY: 0

NOTE: ALL TRACTION WEIGHTS MUST BE INSTALLED FOR TRACTION PURPOSES.

SPLIT FILLER BIT HT (STEEL): 11"
FULL FILLER BIT HT (STEEL)THIN: 2 3/4"
FULL FILLER BIT HT (STEEL)THK: 3'-7 3/8"

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NOT FOR CONSTRUCTION

APPROVAL SPACE

PROJECT:
ALTOS ONE
LOCATION:
MONOSPACE 500 19.2-1
ENG/ARCH:
SDG ARCHITECTURE
CONTRACTOR:
CLARUM CORPORATION

UNIT INFO

ITEM NO.	NETWORK NO.	EQUIPMENT NO.

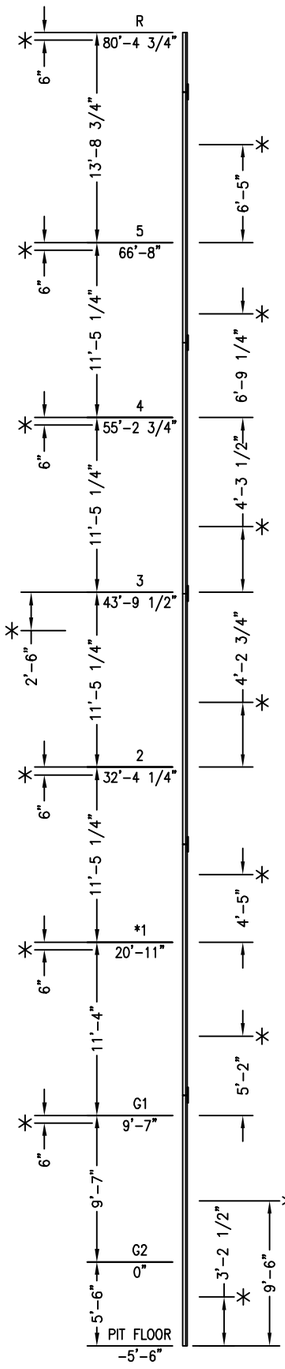
REVISIONS

DATE	NO	BY	CK	DESCRIPTION
2021-05-06	-	MAT		PRELIMINARY

KONE

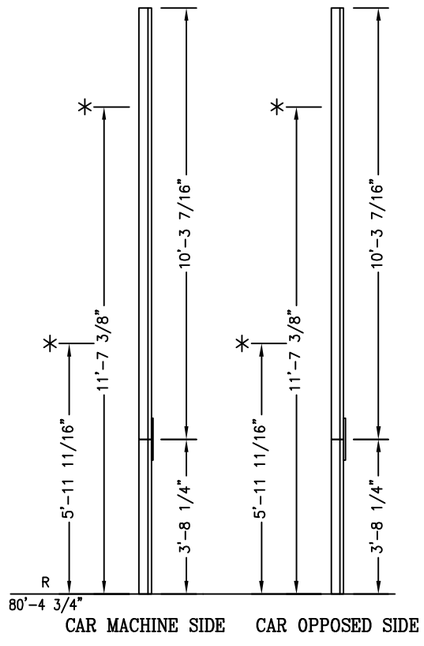
GENERATED ON: 05/06/21	BY: MMA	REV
UNITS: IMPERIAL	1-20.2	-
DRAWING	DESCRIPTION	SHEET
M-4233966-10010-010	HOISTWAY	1 of 17

FLOOR NUM	FRONT	REAR	DISTANCE
1	G2		9'-7"
2	G1		11'-4"
3	*1		11'-5 1/4"
4	2		11'-5 1/4"
5	3		11'-5 1/4"
6	4		11'-5 1/4"
7	5		13'-8 3/4"
8	R		

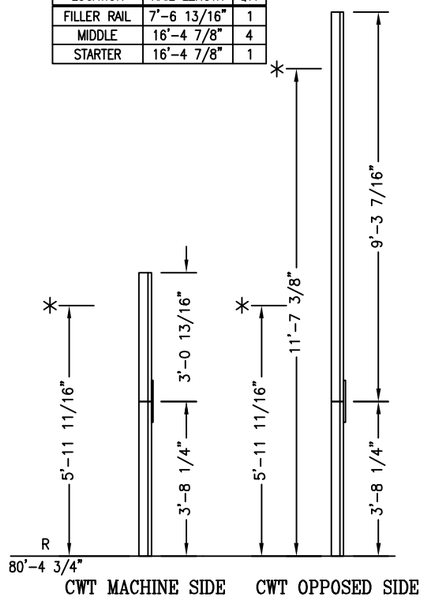


RAILSTACK

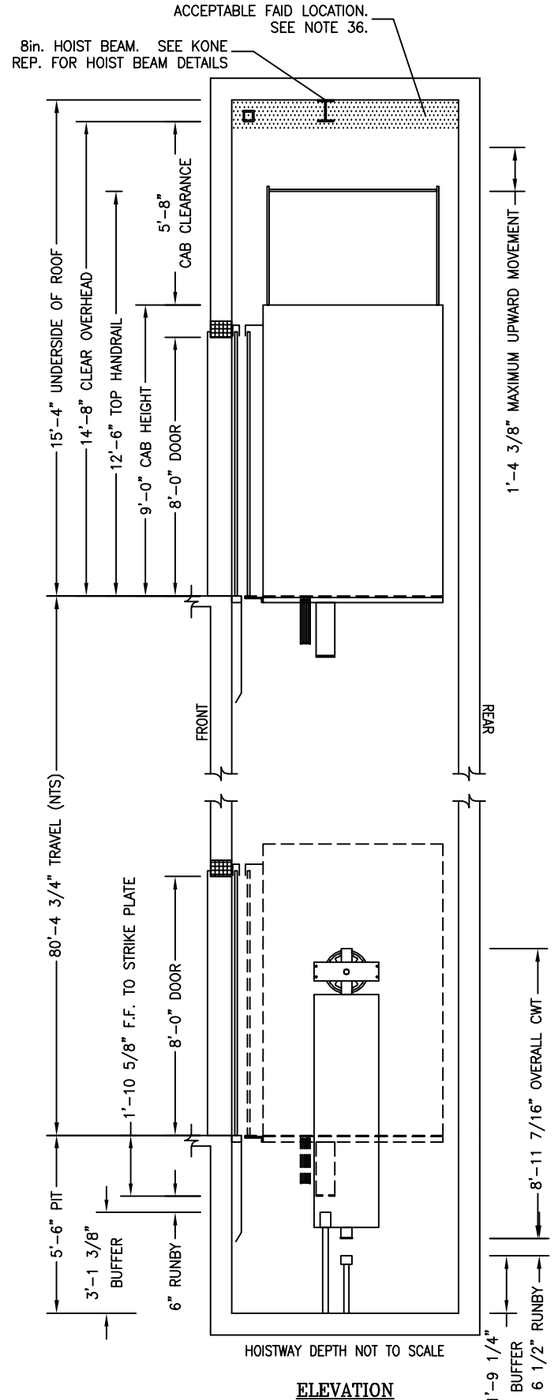
MAXIMUM BRACKET SPACING – 98"



RAIL SCHEDULE		
LOCATION	RAIL LENGTH	QTY
FILLER RAIL	7'-6 13/16"	1
MIDDLE	16'-4 7/8"	4
STARTER	16'-4 7/8"	1



"*" DENOTES CENTER LINE OF BRACKETS.
BRACKET SUPPORTS ARE REQUIRED AT THESE POINTS.



ELEVATION

CAPACITY: 4000#

COUNTERWEIGHT SAFETIES HAVE NOT BEEN PROVIDED.
KONE IS NOT AWARE OF ANY ACCESSIBLE SPACE BELOW THE PIT.

ELEVATIONS OR FLOOR MARKINGS OF THE FOLLOWING MUST BE NOTED WHEN APPLICABLE.

DESIGNATION	FLOOR MARKING
MAIN ELEVATION LOBBY	*1
FIRE SERVICE RETURN	*1
ALTERNATE FIRE SERVICE RETURN	G1
EMERGENCY POWER RETURN	N/A

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APPROVAL SPACE

PROJECT:
ALTOS ONE
LOCATION:
MONOSPACE 500 19.2-1
ENG/ARCH:
SDG ARCHITECTURE
CONTRACTOR:
CLARUM CORPORATION

UNIT INFO

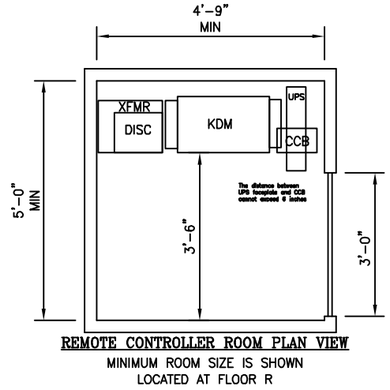
ITEM NO.	NETWORK NO.	EQUIPMENT NO.

REVISIONS

DATE	NO	BY	CK	DESCRIPTION
2021-05-06	–	MAT		PRELIMINARY

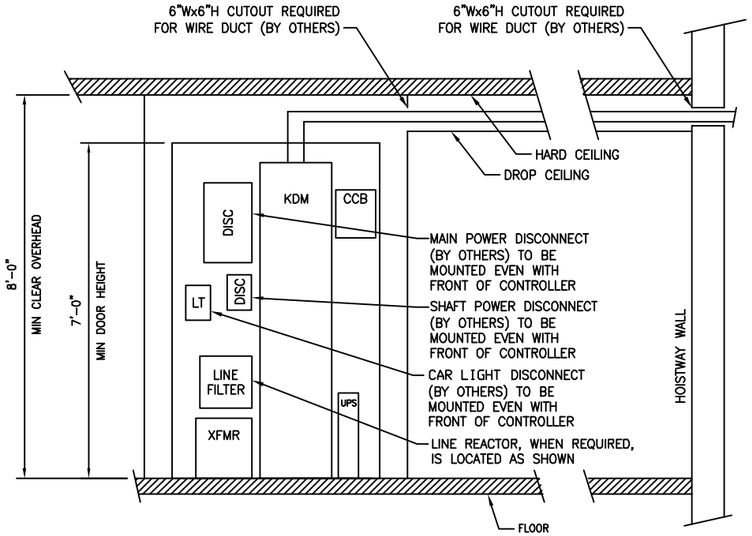
KONE

GENERATED ON: 05/06/21	BY: MMA	REV
UNITS: IMPERIAL	1-20.2	–
DRAWING	DESCRIPTION	SHEET
M-4233966-10010	RAILSTACK	2 of 17

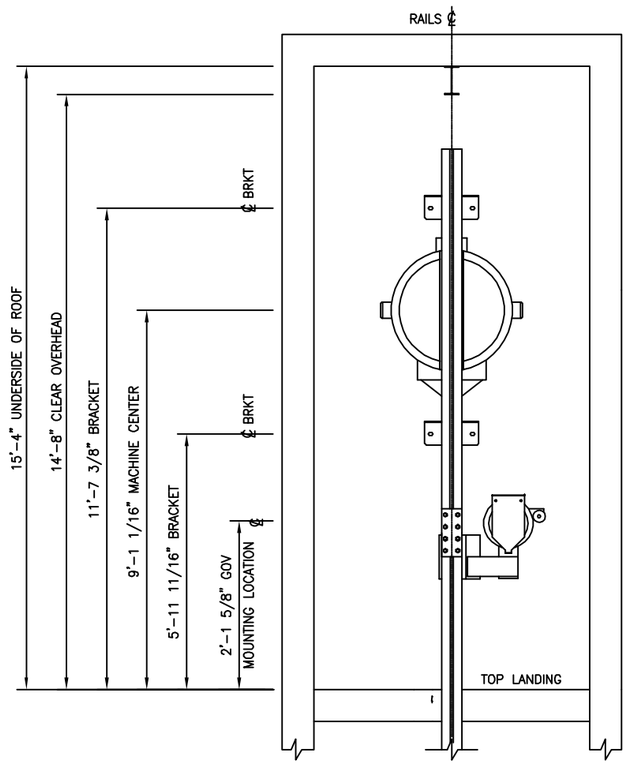


REMOTE CONTROLLER ROOM PLAN VIEW

MINIMUM ROOM SIZE IS SHOWN
LOCATED AT FLOOR R



ELEVATION AT CONTROLLER



ELEVATION VIEW
SECTION A-A

NOTES:
A. THE TEMPERATURE IN THE CONTROL SPACE MUST MAINTAIN BETWEEN 41° F [5° C] and 104° F [40° C].

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APPROVAL SPACE

PROJECT:
ALTOS ONE
LOCATION:
MONOSPACE 500 19.2-1
ENG/ARCH:
SDG ARCHITECTURE
CONTRACTOR:
CLARUM CORPORATION

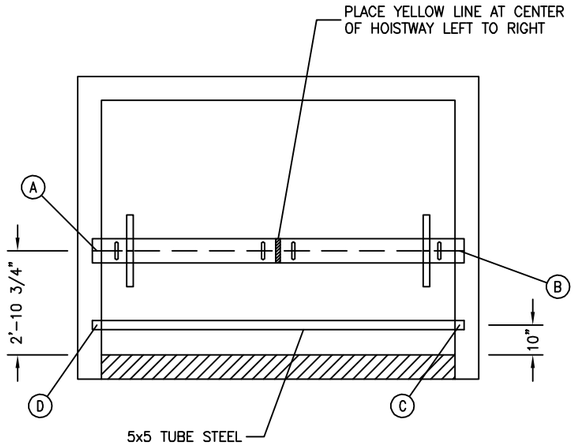
UNIT INFO			
ITEM NO.	NETWORK NO.		EQUIPMENT NO.

REVISIONS				
2021-05-06	-	MAT		PRELIMINARY
DATE	NO	BY	CK	DESCRIPTION

KONE

GENERATED ON: 05/06/21	BY: MMA	REV
UNITS: IMPERIAL	1-20.2	-
DRAWING	DESCRIPTION	SHEET
M-4233966-10010	CONTROLLER	3 of 17

4233966-10010-010
ELEVATOR 1
4000#



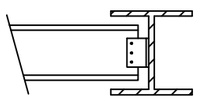
BUILDING LOADS FOR HOISTING BEAM & TUBE STEEL SUPPORT

FOR ADJACENT HOISTWAYS COMBINED LOADS ON A COMMON STRUCTURAL SUPPORT SHOULD BE TAKEN INTO CONSIDERATION. REACTIONS SHOWN BELOW ARE FOR THIS ELEVATOR ONLY. THE REACTION LOADS BELOW ARE ASD LEVEL & UNFACTORED.

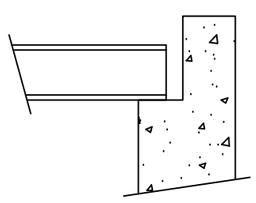
PLANVIEW IS AT TOP OF OVERHEAD LOOKING DOWN ON THE BEAMS
ALL U-BOLTS HANG DOWN TOWARDS THE PIT FLOOR
SEE BRACKET SHEET FOR THE ELEVATION OF SUPPORTS

VERTICAL FORCES* (lbf)				
REACTION LOCATION	A	B	C	D
Z DIRECTION	5610	4840	5000	5000

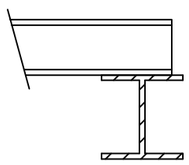
*REACTIONS A AND B ARE SIZED TO SUPPORT THE MAXIMUM WORKING LOAD OF THE INSTALLATION HOIST. REACTIONS D AND C SUPPORT FALL ARREST LIFELINES PER OSHA MINIMUM SUPPORT LOADS. REACTIONS A & B MAY BE CONSIDERED TO OCCUR SEPARATELY FROM C & D.



BEAM CLIP

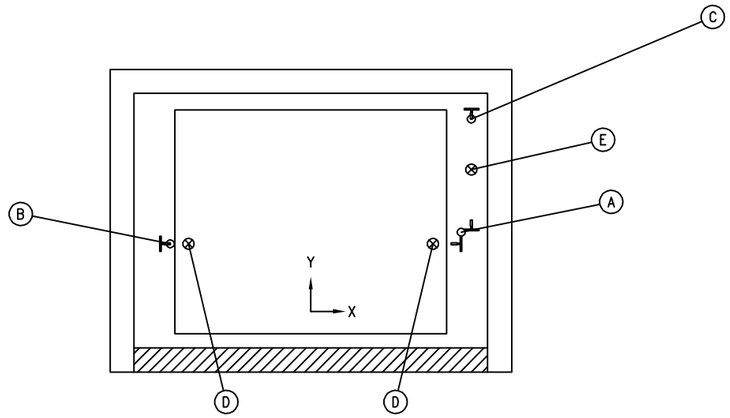


BEAM POCKET



BEAM REST

ATTACHMENT DETAILS



GUIDE RAIL REACTIONS*

FOR ADJACENT HOISTWAYS COMBINED LOADS ON A COMMON STRUCTURAL SUPPORT SHOULD BE TAKEN INTO CONSIDERATION. REACTIONS SHOWN BELOW ARE FOR THIS ELEVATOR ONLY. THE REACTION LOADS BELOW ARE ASD LEVEL & UNFACTORED.

NON-SEISMIC REACTIONS

BRKTS ABOVE TOPMOST LANDING - IMPACT LOADING REACTIONS (lbf)			
REACTION LOCATION	A	B	C
X DIRECTION	1510	340	50
Y DIRECTION	580	1740	100
MAX STRESS NOT TO EXCEED 27,500psi DUE TO APPLIED LOADS			

BRKTS BELOW TOPMOST LANDING - RUNNING REACTIONS (lbf)			
REACTION LOCATION	A	B	C
X DIRECTION	390	340	50
Y DIRECTION	240	140	100
MAX DEFLECTION NOT TO EXCEED 0.125" DUE TO APPLIED LOADS			

*Governor system related loads are included in the rail reactions.

SEISMIC REACTIONS

ALL BRKT LOCATIONS - SEISMIC LOADING (lbf)			
REACTION LOCATION	A	B	C
X DIRECTION	2500	2200	1200
Y DIRECTION	2300	1600	2300
MAX DEFLECTION NOT TO EXCEED 0.25" DUE TO APPLIED LOADS			

*ORTHOGONAL SEISMIC REACTIONS DO NOT OCCUR SIMULTANEOUSLY.
*Governor system related loads are included in the rail reactions.

PIT FLOOR REACTIONS**

VERTICAL FORCES ONTO PIT FLOOR (lbf)					
REACTION LOCATION	A	B	C	D	E
Z DIRECTION	20400	10000	6300	17300	25800

**VERTICAL REACTIONS A B & C OCCUR SIMULTANEOUSLY. VERTICAL REACTIONS D & E OCCUR INDIVIDUALLY AND SEPARATELY FROM A B & C.

SEISMIC DESIGN CRITERIA

BUILDING CODE: IBC
SEISMIC DESIGN REQUIRED: YES
DESIGN CATEGORY: D
COMPONENT IMPORTANCE FACTOR: 1.000
SDS: 1.240
IP*SDS EQUIVALENT: 1.240

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APPROVAL SPACE

PROJECT:
ALTOS ONE
LOCATION:
MONOSPACE 500 19.2-1
ENG/ARCH:
SDG ARCHITECTURE
CONTRACTOR:
CLARUM CORPORATION

UNIT INFO				
ITEM NO.	NETWORK NO.			EQUIPMENT NO.

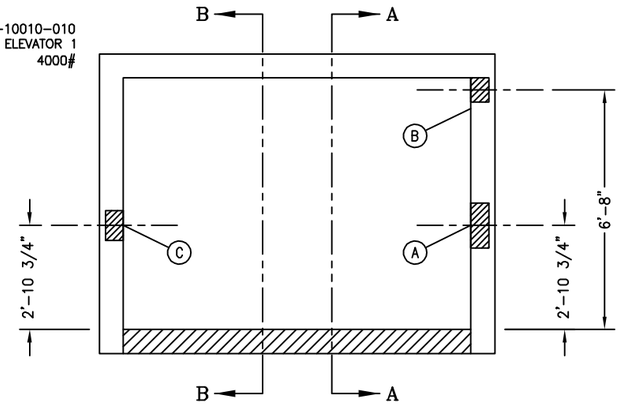
REVISIONS				
2021-05-06	-	MAT		PRELIMINARY
DATE	NO	BY	CK	DESCRIPTION

KONE

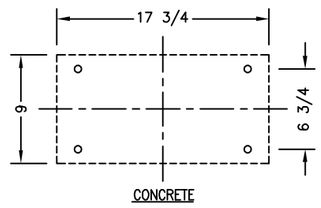
GENERATED ON: 05/06/21	BY: MMA	REV
UNITS: IMPERIAL	1-20.2	-

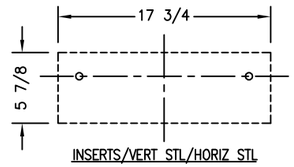
DRAWING	DESCRIPTION	SHEET
M-4233966-10010-010	REACTION	4 of 17

4233966-10010-010
ELEVATOR 1
4000#

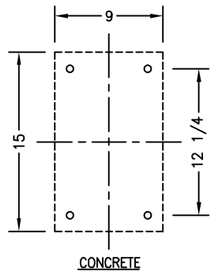


BRACKET ATTACHMENT LOCATIONS

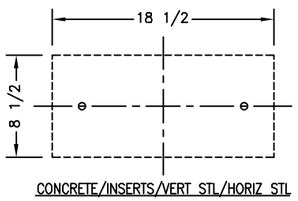




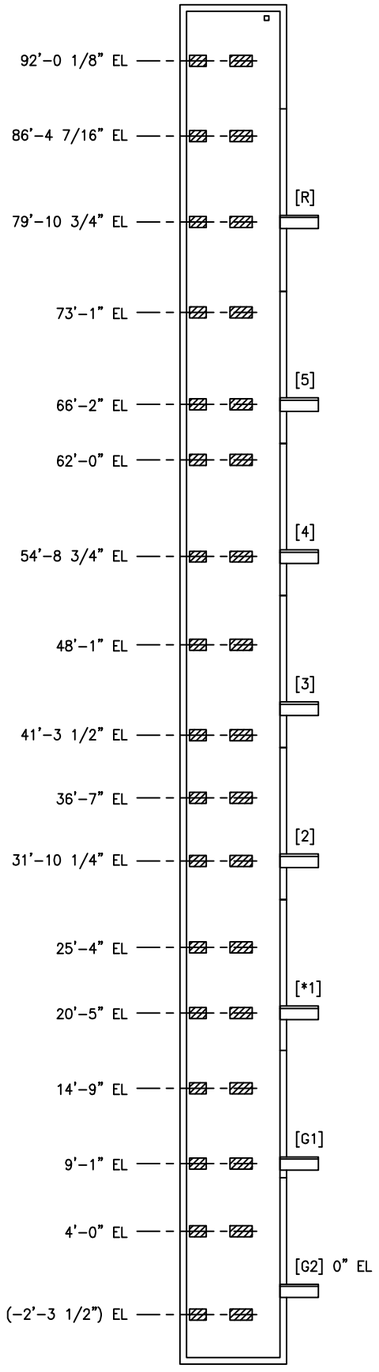
KONE SUPPLIED BRACKET FOOTPRINT AT POINT A (COMBO BRACKETS)



KONE SUPPLIED BRACKET FOOTPRINT AT POINT B (CWT BRACKETS)

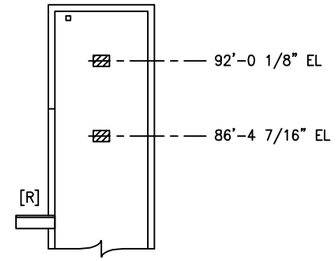


KONE SUPPLIED BRACKET FOOTPRINT AT POINT C (CAR BRACKETS)



SECTION A-A

BRACKET ELEVATIONS ARE AT THE CENTERLINE OF BEARING AREA OF WALL FASTENERS



SECTION B-B

BRACKET ELEVATIONS ARE AT THE CENTERLINE OF BEARING AREA OF WALL FASTENERS

ELEVATIONS BELOW TOP LANDING ARE THE SAME AS SECTION A-A

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APPROVAL SPACE

PROJECT:
ALTOS ONE
LOCATION:
MONOSPACE 500 19.2-1
ENG/ARCH:
SDG ARCHITECTURE
CONTRACTOR:
CLARUM CORPORATION

UNIT INFO

ITEM NO.	NETWORK NO.	EQUIPMENT NO.

REVISIONS

DATE	NO	BY	CK	DESCRIPTION
2021-05-06	-	MAT		PRELIMINARY

KONE

GENERATED ON: 05/06/21	BY: MMA	REV -
UNITS: IMPERIAL	1-20.2	
DRAWING M-4233966-10010-010	DESCRIPTION BRACKET	SHEET 5 of 17

ELEVATOR: 1

RATED CAPACITY:	4000LB(1814KG)
RATED SPEED:	350FPM(1.75MPS)
ELEVATOR RANGE OF USE:	PASSENGER
CLASS OF LOADING:	CLASS A
CODE:	A17.1 2004
NO OF LANDINGS:	8
NO OF OPENINGS:	8
OPERATION:	SIMPLEX
MECH. POWER REQUIRED:	18.1KW(24.2HP)
CONTROLLER/DRIVE TYPE:	KCM831 W/KDM-40A
MACHINE/MOTOR TYPE:	MX20/G07:V005-8 W/FAN
EST WT MACHINE W/MOTOR:	1654 LBS
RATED MOTOR OUTPUT:	25.7KW(33.6HP) - 113RPM
RATED CONTROLLER OUTPUT:	18.5KW(25.0HP)
SLING:	ISCS16
EST. CAR WT.:	3913 LBS
CWT GUIDE TYPE:	SLG20
CAR GUIDE TYPE:	RG150
CAR SAFETY:	SGB02-TYPE B
CWT GOVERNOR TYPE:	NONE
CAR GOVERNOR TYPE:	OL35
EST WT INCL. 50% OV'BAL.:	5913
CWT SAFETY:	NONE
CWT FRAME TYPE:	FCWT04
MIDDLE WEIGHT WIDTH:	11"
FRONT DOORS:	SINGLE SPEED - CENTER
REAR DOORS:	N/A
INTERLOCKS:	AMD
HOIST ROPES:	(7)10mm
ROPING TYPE	2:1
CAR GOVERNOR ROPE:	6.0mm
COMPENSATION:	NONE
CWT GOVERNOR ROPE:	NONE
CAR BUFFER TYPE:	OIL (RED. STRK. BUFFER)
CAR BUFFER QTY:	2
CAR BUFFER STROKE	6.81
CWT BUFFER TYPE:	OIL (RED. STRK. BUFFER)
CWT BUFFER STROKE:	6.81
CWT BUFFER QTY:	1
CAR GUIDE RAILS:	15 LB/FT (T127-2/B)
CWT GUIDE RAILS:	15 LB/FT (T127-2/B)
EMERGENCY PWR PROVISION:	NO
EMERGENCY BATTERY DRIVE:	NO

ELECTRICAL

MAXIMUM ALLOWABLE VOLTAGE VARIATION IS +/- 10%
KONE CALC THE FOLLOWING FOR THIS ELEVATOR DUTY

NAMEPLATE AMPS:	70
MAX ACCEL AMPS:	126

PROTECTION DEVICE REQUIRED PRIOR TO INSTALLATION
MAX MOTOR BRANCH SHORT-CIRCUIT PROTECTION IS

UL CLASS RK1 FUSE (AMP):	90
TRANS RATED VOLTAGE:	208, 3 PH, 60 HZ
SUPPLIED VOLTAGE:	208

HEAT OUTPUTS ARE

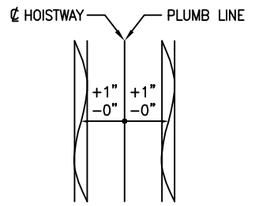
CONTROL/TRANS:	3.4KBTU/HR(1.0KW)
MACHINE/MOTOR:	3.5KBTU/HR(1.02KW)

THE TEMPERATURE IN THE CONTROL SPACE MUST MAINTAIN BETWEEN 41° F [5° C] and 104° F [40° C].

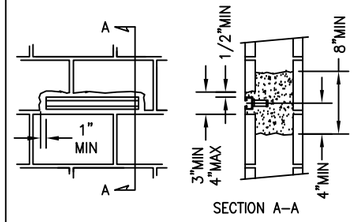
FLOOR, CAB & DOOR WEIGHTS

IF THE ACTUAL CAB & FLOOR WEIGHT
DEVIATES, THE EQUIPMENT MAY NEED TO BE REVISED

EST CAB WEIGHT:	3703.0 LBS
EST FINISH FLOOR WEIGHT:	5.0 LBS/FT^2
EST FLOOR TOTAL WEIGHT:	210.0 LBS
CAB & FLOOR WEIGHT:	3913 LBS
MOVING MASS OF DOORS:	296 LBS



HOISTWAY TOLERANCES



SECTION A-A

Inserts: Min. 24" [611mm] width

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APPROVAL SPACE

PROJECT:
ALTOS ONE
LOCATION:
MONOSPACE 500 19.2-1
ENG/ARCH:
SDG ARCHITECTURE
CONTRACTOR:
CLARUM CORPORATION

UNIT INFO

ITEM NO.	NETWORK NO.	EQUIPMENT NO.

REVISIONS

DATE	NO	BY	CK	DESCRIPTION
2021-05-06	-	MAT		PRELIMINARY

KONE

GENERATED ON: 05/06/21	BY: MMA	REV
UNITS: IMPERIAL	1-20.2	-
DRAWING	DESCRIPTION	SHEET
M-4233966-10010	DATA	6 of 17

Site Safety Requirements / Work by Others
KONE EcoSpace / KONE MonoSpace 500 Bid Attachment "B"

Purchaser to provide the following in accordance with code requirements. NOTE: All site preparation required to be in place prior to KONE's start must be ready two (2) weeks prior to the start of installation.

General

1. Provide sufficient on-site refuse containers for the disposal of the elevator packing material. Should sufficient containers not be provided, the removal of the elevator packing material shall become the responsibility of others.
2. Provide forklift for KONE's exclusive use during the unloading of the elevator at time of delivery.
3. Provide any cutouts to accommodate the elevator equipment (see notes below).
4. Provide and install finished elevator cab flooring prior to balancing cabs (coordinate with KONE). Cab flooring/weight allowance shall be in accordance with KONE's approved layouts. Owner must provide certification (to the elevator inspector at time of inspection) that flooring meets flame spread and smoke density requirements. (ASME A17.1/CSA B44 sec 2.14.2.1).
5. Provide permanent elevator lobby lighting, ceiling and flooring prior to inspection date.
6. Owner must provide certification (to the elevator inspector at time of inspection) that owner-supplied elevator interior finishes meet flame spread and smoke density requirements (ASME A17.1/CSA B44 sec. 2.14.2.1). In the case of using glass, transparent or translucent plastic panels for car interiors, they shall meet the requirements of ASME A17.1/CSAB44 sec. 2.14.1.8, ANSI Z97.1/ CGSB 12.1 in Canada.
7. Provide cutting/ coring of all openings and penetrations required to install hall push buttons, signal fixtures, wiring duct and piping, and sleeves. Sleeves will be required in the hoistway wall for EACH elevator.
8. Provide any repairs such as grouting, patching and painting made necessary by such cutting/coring. Provide fire caulking around all fixtures and as needed to satisfy NFPA 70 article 300.21, or any applicable local code.
9. Please note that none of the elevator components are weatherproof and that the elevator entrances do not seal the hoistway from inclement weather. The entire elevator, hoistway, and controls must remain protected from inclement weather prior to and throughout the installation.

Safety

10. Provide adequate, roll-able access (clear path without obstructions, walls, etc.) into the building for delivery of the elevator material. Clean, safe, secure and dry storage is required adjacent to the hoistway at grade level with minimum space of 20' x 20' [6m x 6m] per elevator.
11. Provide free-standing, removable, OSHA-compliant barricades capable of withstanding 200lb (890N) of force in all directions around all hoistway openings per OSHA 29 CFR 1926.502, and/or any applicable local code.
12. Provide and install full-covering entry protection as per local requirements and manufacturer's requirements. Protection to be made of nylon mesh or reinforced plastic,at all hoistway openings to prevent materials or tooling from falling into the elevator shaft during installation per Federal OSHA requirements listed in 29 CFR 1926.502(j). In Canada, where required by Provincial regulation, enclose the front of the hoistway with removable hoarding or screening to prevent material from entering the hoistway. Design and install entrance protection in such a way as to allow quick accessibility in and out of the hoistway.
13. Provide two (2) lifeline attachments at the top, front of the hoistway. Each must be capable of withstanding a 5000 lb [2250 Kg] load per OSHA 29 CFR 1926.502, or any applicable local code. For machine-room-less applications, provide attachments as described above, or install KONE-provided 5" x 5" x 3/8" (127mm x 127mm x 9.6mm) tube steel lifeline beam in the elevator hoistway overhead 10 inches (254 mm) from front of hoistway to center line, with bottom of lifeline beam at same elevation as bottom of hoisting I-beam. Lifeline tube steel supplied by KONE by request at no additional cost. Engineering details, attachment details and/or modifications, or any beam(s) alterations in the field for installation is by others.
14. Provide proper lighting in all work areas and stairways, including access to all floors and machine rooms per OSHA 29.CFR1926.1052 or any applicable local code.
15. Provide and maintain 6-foot (1800 mm) clear work area in front of all entrance openings per OSHA 29.CFR1926.502 or any applicable local code.

Hoistway

16. Provide a clear and plumb hoistway of size shown on approved KONE final layout drawings. Any variations from the detailed dimensions may not exceed 2" [50 mm] greater and may not be less than the clear dimensions detailed. (Tolerance: -0" + 2" [-0 mm +50 mm]).
17. Provide hoistway ventilation per local building code requirements as applicable. For proper equipment operation, the machine space in machine room or at the top of the hoistway must maintain a temperature between 41˚ F [5˚ C] and 104˚ F [40˚ C]. Maximum allowed humidity is 95% non-condensing.
18. Provide any partitions between common hoistways if applicable.
19. Provide for installation of hoisting I-beam in the elevator hoistway overhead per the KONE final layout drawings. Beam supplied by KONE unless otherwise noted on the layout drawings. Engineering details, attachment details and/or modifications, or any beam(s) alterations in the field for installation is by others.
20. In cases where multiple elevators are in a common hoistway, and the counterweights are located between elevators, the entire length of counterweight runway must be guarded. The guard shall extend at least 6 inches (150mm) horizontally beyond each counterweight rail. The guard shall be made from wire-mesh material equal to or stronger than .048-inch diameter wire with openings not exceeding 1/2 inch (13 mm), securely fastened to keep the guard taut and plumb. (A17.1 – 2019 / B44 – 19 : General Requirements.)
21. On applications where working platforms are required, working platforms provided shall comply with the requirements of the current ASME A17.1 / CSA-B44 code edition in effect at the time of installation and /or any applicable local code.
22. Provide adequate support for guide rail brackets from pit floor to the top of the hoistway. Locate rail backing per KONE final approved layout drawings. When maximum bracket span is exceeded, additional support shall be provided at purchaser's expense. Any bracket mounting surface that is not in line with the clear hoistway dimension detailed on the approved KONE final layout drawings may need to be corrected to meet the proper dimension at purchaser's expense.
23. If guide rail brackets are to attach to steel, ensure all brackets are installed prior to applying fireproofing to the steel. Otherwise, removal and reapplication of fireproofing will be at purchaser's expense.
24. All offsets, ledges or projections within the hoistway shall be addressed in accordance with applicable local code. All offsets, ledges or projections within the hoistway greater than 4 inches (100mm) must be tapered to not less than 75 degrees (ASME A17.1/CSA B44 sec 2.1.6.2). Maximum ledge or projection is 2 inches (50mm) in California and District of Columbia.
25. If concrete block wall construction, refer to the approved KONE final approved layout drawings for proper installation of rail bracket attachments. Inserts provided by KONE unless otherwise noted on the approved KONE final approved layout drawings. Insert type must be approved by KONE. Concrete masonry units, mortar and grout, shall conform to IBC 2000 or any applicable local code. Concrete masonry units shall have a minimum compressive strength of 1500 PSI (10.5 MPa). Mortar and grout shall have a minimum compressive strength of 2000 PSI (13.8 MPa).
26. KONE entrance jambs are non-ferrous and material may not be attached to them (i.e. fire doors/curtains).
27. Arrange for entrance walls to be constructed at the time doorframes and sills are installed to facilitate timely installation of hall fixture faceplates. Entire front wall must be left open at top and bottom landings until elevator equipment is installed. Intermediate landings must have rough openings of the size and location shown on KONE final approved layout drawings to allow installation of entrances. All entrance openings must be aligned vertically. Adequate support for entrance attachment points shall be provided at all landings. Any marble, stone or similar wall material must be prepared after the entrance frames are installed. Provide corridor lines for any marble or special finish walls. NOTE: If concrete block wall construction to prevent overloading entrance frames, top of entrances should not receive more than one row of block. A lintel must be installed to support additional rows of block.
28. Provide elevator landings suitably prepared to accept entrance sill installation per KONE final layout drawings. Grouting to be done by purchaser after sills are installed. NOTE: Traditional angle or concrete sill support is not required.
29. Provide finished-floor height marks visible from hoistway openings at all landings minimum one week prior to beginning entrance installation. Placing floor height mark on hoistway wall is desirable. Complete "Contractor Verification Form of Sill to Sill Heights and Remote Machine Piping, CONSTR-07-0675.
30. Provide suitable, permanent lighting for control space with light switch located within 18" [457 mm] of strike jamb side of control space door where practical.
31. Electric lighting shall have a minimum lighting intensity of 200 lx (19 fc) at the floor level. When permitted by state and local code the light switch should also control the machine space lighting if control space is adjacent to the hoistway at the top landing.
32. If the control space is located remote from the elevator hoistway top landing the following may apply:
    a. If applicable, provide machine space access door of the size and in the location shown on the KONE final layout drawings. The access door shall be secured against unauthorized access. It shall be self-closing, self-locking and operable from the inside without a key.
    b. Provide suitable lighting in or above the machine space access with light switch located within 18" [457 mm] of strike jamb side of access space door where practical.
    c. When permitted by state and local code the light switch should also control the machine space lighting.
    d. In cases where a battery lowering device is provided, control closet may not be adequate. Please consult KONE representative.
33. Provide and install GFCI-type receptacle located at machine in the top of the hoistway or in machine room as applicable (NFPA 70 article 620.85 or CEC article 38.85 whichever is applicable).
34. Provide and install light switch located at manual brake release location: may also be required in control space per local jurisdiction.
35. Where a single elevator is installed in a hoistway and a portion of the travel extends higher that 11m (36 ft.) between entrances (single blind hoistway), emergency door(s) must be provided. Emergency doors and their electrical contacts shall comply with the current ASME A17.1/CSA-B44 code edition in effect at the time of installation and/or any applicable local code. ASME A17.1-2019/B44-19 requirement Section 2.11.1.2 covers Emergency Doors in Blind Hoistways and Section 2.26.2 covers Electrical Protective Devices. Each emergency door must be provided with an electrical contact with minimum UL/CSA NEMA A300 rating suitable for use in a 3 amp 230VAC circuit. Consult KONE representative if there are any questions concerning the code requirements.
36. In jurisdictions enforcing the NBCC and in jurisdictions enforcing NFPA 72, the means for testing and maintenance of fire alarm initiating devices without having to enter the hoistway shall be permitted. When this means is provided it must comply with A17.1-2019/B44-19 requirement 2.8.2.4 and the location of equipment inside the elevator hoistway must be coordinated with KONE sales and/or operations representative.

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APPROVAL SPACE

PROJECT:
ALTOS ONE
LOCATION:
MONOSPACE 500 19.2-1
ENG/ARCH:
SDG ARCHITECTURE
CONTRACTOR:
CLARUM CORPORATION

UNIT INFO

ITEM NO.	NETWORK NO.	EQUIPMENT NO.

REVISIONS

DATE	NO	BY	CK	DESCRIPTION
2021-05-06	-	MAT		PRELIMINARY

KONE

GENERATED ON: 05/06/21	BY: MMA	REV
UNITS: IMPERIAL	1-20.2	-
DRAWING	DESCRIPTION	SHEET
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Pit

37. Provide a legal, dry and clean pit with level pit floor, built per KONE final layout drawings. Pit shall be reinforced to sustain vertical forces detailed on KONE final layout drawings (vertical forces detailed are two times the static loads.)
38. Sumps and/or sump pumps (where permitted) located within the pit may not interfere with the elevator equipment. Sumps to be covered with flush mounted, non-combustible cover capable of withstanding 150 lbs. per square foot (7 kPa). The sump pump/drain must, at minimum, remove 3,000 gal/h (11.4 m3/h):
    a. A17.1-2016/B44-16 and earlier, per elevator.
    b. A17.1-2019/B44-19 and later, per single hoistway or multiple car hoistway.
39. Provide a pit light fixture with switch and guards with an illumination level equal to or greater than that required by ASME A17.1/CSA B44 2000, or applicable version. Recommended to provide minimum 4-foot double tube fluorescent fixture, with suitable guard and mounted to rear wall of pit per KONE installation representative's direction.
40. Provide a dedicated pit circuit with GFCI-protected 15 or 20 amp 120VAC duplex outlet. Location to be coordinated with the KONE project team using the KONE final approve layout drawings (NFPA 70 article 620.85; CEC article 38.85 whichever is applicable).
41. Provide non-GFCI-protected single receptacle for sump pumps (NFPA 70 article 620.85, NFPA 70 article 620.85 or CEC article 38.85 whichever is applicable).
42. Pit ladder to be constructed of non-combustible material extending from pit floor to 48" [1200 mm] above the sill of the access landing. Pit ladder is supplied by KONE; provided by purchaser on other KONE products unless otherwise noted on the layout drawing. Locate per KONE final layout drawings. Coordinate ladder sizing and location with KONE representative to assure proper fit in hoistway.

Electrical

43. US Applications – Purchaser provides in accordance with National Electrical Code, NFPA 70 (NEC) Article 620 or any applicable local code.
44. Canadian Applications – Purchaser provides in accordance with Canadian Electrical Code, C22.1 Section 38 or any applicable local code.
45. Provide dedicated GFCI-protected 20 amp 120VAC duplex (15 amp in Canada) outlet next to each ICS panel control cabinet located as shown on layouts
46. Provide for all electrical branch circuits/disconnects to be labeled (NFPA 70 article 620.54 / 620.53 / 620.51d, CEC articles 38.54/ 38.53/ 36.51d).
47. Provide 480/208VAC (USA) or 575/208VAC (Canada) three-phase permanent power, including piping, wiring and fused disconnect, to controller location to facilitate elevator installation prior to start of project.
48. Provide 220VAC single-phase temp. power and 115VAC single-phase temp. power, of permanent characteristics at each elevator landing for lighting and installation method tools. Locate connection points at elevator hoistway. Consult your KONE representative for confirmation of location and type of temporary power.
49. When generator is used to provide 3-phase 480/208VAC (USA) or 575/208VAC (Canada) power for installation, purchaser to accept change notice for additional costs, estimated locally by installing office, to cover inefficiencies and any damages resulting from installing without permanent power present.
    NOTE: Our elevator controllers require Wye configuration transformers. It is also the responsibility of the purchaser to provide consistent three-phase voltages balanced within +/- 10% when measured phase-to-phase and +/-10% when measured phase-to-ground.
50. Provide a dedicated 20 amp 115VAC circuit in the fire command room piped and wired to the lobby panel where applicable.
51. Provide a dedicated 15-amp,115VAC fused service with ground (supplied through automatic emergency lighting supply if available in building) connected to each elevator signal control cabinet for car lighting. Must include the means to disconnect this service and lock-off in the "open" position (NFPA 70 article 620.22 and 620.53 or CEC article 38.22 and 38.53).
52. Provide a separate15-amp, 115 VAC fused service with ground (powered by building emergency power system, when available) for KONE 24/7 Emergency Communications, when specified. Must include the means to disconnect each service and lock-off in the "open" position (NFPA 70 article 620.22 and 620.53 or CEC article 38.22 and 38.53).

Control Space/ Integrated Controls Solution (ICS)

53. Provide a legal control space/ machine room with access as indicated on the KONE final layout drawings. To include a temporary or permanent door that can be locked from outside. Permanent door must be self-closing, self-locking, and require a key to open from outside. Must have adequate temporary or permanent lighting for installation purposes. For proper equipment operation, the temperature in the control space must maintain between 41° F [5° C] and 104° F [40° C]. Maximum allowed humidity is 95% non-condensing.
54. Provide safe and convenient access to control space/machine room including provisions for necessary lighting for access path (ASME A17.1/CSA B44 sec 2.8.1, ASME A17.1 / CSA B44 sec 2.7.3).
55. Provide a clean and dry elevator control room.
56. Provide suitable lighting for control space with light switch located within 18" [457 mm] of strike jamb side of control space door where practical. When permitted by state and local code the light switch should also control the machine space lighting if control space is adjacent to the hoistway at the top landing.
57. Provide dedicated GFCI-protected 120VAC 20-amp duplex (15 amp in Canada) outlet next to each signal control cabinet.
58. Provide a single means of disconnecting all ungrounded main power conductors for each elevator by an enclosed, externally operable, fused motor circuit switch with UL/CSA Class RK1 fuses. Must be lockable in the open position. This disconnecting means shall disconnect the normal power service as well as emergency power service, when provided.
    Note 1: If a battery-powered rescue device is required, the above-mentioned disconnect must have an auxiliary contact monitored by elevator controller that is positively opened mechanically and is normally closed (NC) when the main power is in the ON position, and is normally open (NO) when power is in the OFF position.
    Note 2: If a battery-powered rescue device is required and a separate shunt trip breaker which is subject to either the hoistway or control space sprinkler system is provided, the shunt trip breaker must have an auxiliary contact that is positively opened mechanically and is NC when the main power is in the ON position.
    Note 3: Shunt trip not allowed for Fire Service Access / Occupation Evacuation elevators or in Canada and some US jurisdictions.

Site Safety Requirements / Work by Others (Bid Attachment "B")
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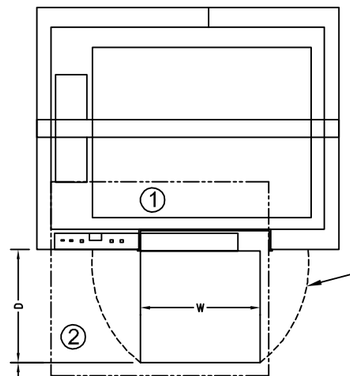
59. Provide a Direct-in-dial (DID) analog phone line, activated at least one week prior to inspection, terminated at the appropriate phone jacks in the elevator control room. GC/ Owner may elect to have a separate analog line installed (one per elevator), or GC/ Owner may elect to provide DID lines from an Analog Station Card in the building's PBX system. If GC/Owner provides a Direct-in-Dial analog phone line or lines off an existing PBX phone system, a backup power source must also be provided. All phone and associated equipment provided by GC/ Owner shall be in compliance with the requirements of ASME A17.1/ CSA B44, local codes and applicable law, as amended.
60. Provide all fire alarm initiating signals as required by all national, state and local codes for termination at the primary elevator signal control cabinet in each group.
61. With emergency power service provide emergency power transfer switch and power change pending signals as required; 2 normally open dry contacts from transfer switch to controller (2 pairs plus ground wire). One contact closes to signal emergency power is present, the other contact closes to give 30 second pre-signal prior to transfer switch change. Termination of these wires is at the primary elevator signal control cabinet in each group (2 pairs plus ground wire).
62. Furnish and install smoke detectors and fire operation per ASME A17.1/CSA B44 sec 2.27.3.2, NFPA 72; one for lobby detector, machine room detector, hoistway detector (hoistway detector requirement determined by local code), and one for all grouped non-lobby detectors are required. Provide normally-closed dry contacts, with wiring, to controller for each group listed above.
63. Provide and install smoke detector in hoistway as required per local codes, and in all elevator lobbies, machine room and controller space.
64. Provide heat detectors and "shunt-trip operation" when sprinklers are required in machine room or hoistway, (ASME A17.1 sec 2.8.2.1.2, NFPA 13 sec 4-13.5, ASME A17.1 sec 2.8.2.3.1, ASME A17.1 sec 2.8.2.3.2, NFPA 72).
65. If Fire Status Panel or Security panels are required, all remote conduit runs from elevator equipment room/machine space to these panels shall be by others.
66. Non-elevator related piping and equipment is prohibited in machine room or hoistway (ASME A17.1/CSA B44 sec 2.8.1, ASME A17.1/CSA B44 sec 2.8.2).
67. Provide and mount at minimum a 10-pound, ABC-type fire extinguisher in control space (ASME A17.1 sec 8.6.1.6.5). (Not required in Canada).

Applicable for Integrated Control Solution (ICS)

68. Provide a completely open front wall at top landing with access as indicated on the KONE Final Approved Layout Drawings. Must have adequate temporary or permanent lighting for installation purposes. NOTE: The lobby side of the ICS control cabinet must be faced with 2 layers of dry wall to comply with UL certification, regardless of front type. See KONE Final Approved Layout Drawings for details and wall type and minimum dimensions.
69. Provide environment for proper equipment operation during installation and after acceptance, the temperature at the top floor elevator lobby must maintain between 41° F [5° C] and 104° F [40° C]. Maximum allowed humidity is 95% non-condensing.
70. Provide safe and convenient roll-able access to top floor elevator lobby area. (ASME A17.1/CSA B44 sec 2.8.1, ASME A17.1/CSA B44 sec 2.7.3).
71. Provide 480/208VAC (USA) or 575/208VAC (Canada), three-phase permanent power, including piping, and wiring from fused disconnect, to junction box located in hoistway at top landing to facilitate elevator installation.
72. FIRE ALARM INITIATING DEVICE (FAID). FAID is a requirement of A17.1/B44, rules 2.27.3.2.1 (b) and 2.27.3.2.2 (b).



2	USA	CANADA	COMMENT
W	30"	1m	NEC2014. CE2015
D	36"	1m	NEC2014. CE2015
C	Min 36"	Min 914mm	Minimum recommended. Consult ADA requiements for exact building clearance.

1) Since ICS control enclosure is vented into the hoistway, a fire alarm initiating device (FAID) is required in this portion of the control space.
2) A fire alarm initiation device (FAID) is required in the lobby area to protect the control space when ICS is open.

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APPROVAL SPACE

PROJECT:
ALTOS ONE
LOCATION:
MONOSPACE 500 19.2-1
ENG/ARCH:
SDG ARCHITECTURE
CONTRACTOR:
CLARUM CORPORATION

UNIT INFO

ITEM NO.	NETWORK NO.	EQUIPMENT NO.

REVISIONS

DATE	NO	BY	CK	DESCRIPTION
2021-05-06	-	MAT		PRELIMINARY

KONE

GENERATED ON: 05/06/21	BY: MMA	REV -
UNITS: IMPERIAL	1-20.2	
DRAWING M-4233966-10010	DESCRIPTION CONTRACT	SHEET 8 of 17

Fire Service Access and Occupant evacuation Operation IBC 2018

73. Fire service access elevators per code requirements (IBC 403.6) shall be provided with hoistway lighting per code requirements (IBC 3007). The hoistway lighting shall illuminate the entire height of the hoistway and shall be located such that it does not interfere with the operation of the elevator or reduce any clearances below applicable code requirements (applicable only in jurisdictions enforcing the IBC, International Building Code). Consult KONE representative to assure required clearances are provided.
74. Conductors and cables located outside of the elevator hoistway, machine space and control space, that provide normal or standby power, car lighting power, car ventilation power, car heating power, car air conditioning power, control signals, communication with the car and fire/heat-detecting systems control signals to Fire Service Access Elevators, shall be protected by construction having a fire-resistance rating of not less than 2 hours (applicable only in jurisdictions enforcing the IBC, International Building Code, or any applicable local codes).
75. Fire Service Access elevators shall be provided with hoistway lighting.
76. Prevent water from the operation of an automatic sprinkler system outside the enclosed lobby from infiltrating the hoistway enclosure in accordance with an approved method per rule 3008.
77. Means for elevator shutdown in accordance with Section 3005 shall not be installed on elevator systems used for Fire Service Access and/or Occupant Evacuation Elevators per rule 3008.
78. Occupant Evacuation elevators shall be continuously monitored at the fire command center or a central control point approved by the fire department and arranged to display all of the following information per rule 3008.
    a. Floor location of each elevator car.
    b. Direction of travel of each elevator car.
    c. Status of each elevator car with respect to whether it is Occupied.
    d. Status of normal power to the elevator equipment, elevator machinery and electrical apparatus cooling equipment where provided, elevator machine room, control room and control space ventilation and cooling equipment.
    e. Status of standby or emergency power system that provides backup power to the elevator equipment, elevator machinery and electrical cooling equipment where provided, elevator machine room, control room and control space ventilation and cooling equipment.
    f. Activation of any fire alarm initiating device in any elevator lobby, elevator machine room, machine space containing a motor controller or electric driving machine, control space, control room or elevator hoistway.
79. Each Fire Service and /or Occupant Evacuation elevator shall be supplied by both normal power and Type 60/Class 2/Level 1 standby power per rule 3008.
    a. Elevator equipment.
    b. Ventilation and cooling equipment for elevator machine rooms, control rooms, machinery spaces and control spaces.
    c. Elevator car lighting.
80. Standby power loads shall be based on the determination of the number of occupant evacuation elevators in Sections 3008.1.1 and 3008.8.1.
81. Wires or cables that are located outside of the elevator hoistway, machine room, control room and control space and that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, ventilation and fire-detecting systems to occupant evacuation elevators shall be protected using one of the following methods 3008.
    a. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a fire-resistance rating of not less than 2 hours.
    b. Two electrical circuit protective systems shall have a fire-resistance rating of not less than 2 hours. Electrical circuit protective systems shall be installed in accordance with their listing requirements.
    c. Construction having a fire-resistance rating of not less than 2 hours.
    Exception: Wiring and cables to control signals are not required to be protected provided that wiring and cables do not serve Phase II emergency in-car operation.

Site Safety Requirements / Work by Others (Bid Attachment "B")
CONSTR-007-0664 (2020-02-04) KONE EcoSpace / KONE MonoSpace 500

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APPROVAL SPACE

PROJECT:
ALTOS ONE
LOCATION:
MONOSPACE 500 19.2-1
ENG/ARCH:
SDG ARCHITECTURE
CONTRACTOR:
CLARUM CORPORATION

UNIT INFO

ITEM NO.	NETWORK NO.	EQUIPMENT NO.

REVISIONS

DATE	NO	BY	CK	DESCRIPTION
2021-05-06	-	MAT		PRELIMINARY

KONE

GENERATED ON: 05/06/21	BY: MMA	REV
UNITS: IMPERIAL	1-20.2	-

DRAWING	DESCRIPTION	SHEET
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Bid Attachment "B" People Flow Intelligence (PFI) Work by Others

Purchaser to provide the following in accordance with code requirements.
NOTE: All Work by Others is requited to be completed two (2) weeks prior to the start of PFI installation.

KONE Access Control (if provided)

1. Provide two (2) dedicated 15 amp 120VAC fused service with ground in the control space connected to designated ACS cabinet(s) per the ACS wiring diagrams. Must include the means to disconnect this service and lock–off in the "open" position (NFPA 70 article 620.22 and 620.53or CEC article 38.22 and 38.53).
2. If Mobile Device feature is provided, the customer provides the site–specific configuration cards and two valid mobile credentials for testing to KONE during installation.
3. Provide IP addresses per KONE LAN schedule. IP addresses are required, but not limited to, KONE Group controllers (KGC), KONE Interface Controllers (KIC), LAN Destination Operating Panels (DOP), LAN Destination Guidance Displays (DGD) and LAN InfoScreen.

Turnstile Integration for KONE Destination (If provided)

4. Provide one (1) dedicated GFCI protected 120VAC 20–amp (15 am in Canada) duplex outlet for PeopleFlow Servers per the wiring diagrams.
5. KONE recommends a minimum 100 Mbit/s Ethernet for each of the following application(s): Security Integrated Touchscreen/Keypad Destination Operating Panels, Monitoring System, Multi–Media Equipment, and Card Readers.
6. Provide IP addresses per KONE LAN schedule. IP addresses are required, but not limited to, KONE Group controllers (KGC), KONE Interface Controllers (KIC), LAN Destination Operating Panels (DOP), LAN Destination Guidance Displays (DGD) and LAN InfoScreen.
7. Provide and install the required number and size conduit runs from elevator hoistways to turnstile banks. See turnstile integration specifications for site specific requirements.

3rd Party Access Integration/Security (If provided)

8. Our proposal includes KONE logic and provisions for the specified Touchscreen(s), Keypad Destination Operating Panel(s), Monitoring System(s) and Multi–Media Equipment.
9. Card Readers and/or any additional required hardware & software for proper functionality of access control/security system(s) shall be furnished and installed by others.
10. A designated 115V 15A circuit is required at each of the remote monitoring stations.
11. Any required interface software to ensure proper communication between KONE control system(s) and building system(s) shall be the responsibility of others.
12. KONE recommends a minimum 100 Mbit/s Ethernet foreach of the following application(s): Security Integrated Touchscreen/Keypad Destination Operating Panels, Monitoring System, Multi–Media Equipment, and Card Readers.

KONE Destination Dispatching (If provided)

13. When KONE Destination (Destination Dispatch) is used, provide one (1) dedicated 15 amp 120V AC fused service with ground (supplied through automatic emergency lighting supply if available in building) connected to each elevator signal control cabinet for shaft power. Must include the means to disconnect this service and lock–off in the "open" position (NFPA 70 article 620.22 and 620.53 or CEC article 38.22 and 38.53).
14. When KONE Destination (Destination Dispatch) is used, provide 2 (two) separate 115 VAC 15 amp branch circuit for KGCs (KONE Group Controls), one for each KGC, powered by building emergency power system, when applicable.
15. Provide IP addresses per KONE LAN schedule. IP addresses are required, but not limited to, KONE Group Controllers (KGC), KONE Interface Controllers (KIC), LAN Destination Operating Panels (DOP), LAN Destination Guidance Displays (DGD) and LAN InfoScreen.

E–Link (If provided)

16. A designated 115V 15A circuit is required at each of the remote monitoring stations.
17. KONE recommends a minimum 100 Mbit/s Ethernet for each of the following application(s): Security Integrated Touchscreen/Keypad Destination Operating Panels, Monitoring System, Multi–Media Equipment, and Card Readers.
18. Provide IP addresses per KONE LAN schedule. IP addresses are required, but not limited to, KONE Group Controllers (KGC), KONE Interface Controllers (KIC), LAN Destination Operating Panels (DOP), LAN Destination Guidance Displays (DGD) and LAN InfoScreen.
19. BACnet Additional requirements (if provided)
    a. All E–Link features required
    b. Provide BACnet Device IDs for Devices
    c. Provide BACnet Revision Level requested for the site (PR–18 supported or not)

KONE RemoteCall (If provided)

20. Provide one (1) dedicated CFCI protected 120VAC 20– amp duplex (15 am in Canada) outlet per the Remote Call wiring diagrams.
21. KONE recommends a minimum 100 Mbit/s Ethernet for each of the following application(s): Security Integrated Touchscreen/Keypad Destination Operating Panels, Monitoring System, Multi–Media Equipment, and Card Readers.
22. Provide one (1) public IP v4 address that can be accessed via the Internet.
23. Provide IP addresses per KONE LAN schedule. IP addresses are required, but not limited to, KONE Group Controllers (KGC), KONE Interface Controllers (KIC), LAN Destination Operating Panels (DOP), LAN.

InfoScreen (If provided)

24. If InfoScreen is Offline, none of the below is applicable.
25. Provide one RJ45 CAT6 jack and network switch in each elevator machine room/control space that has an InfoScreen server. This jack is wired to a building LAN network with internet access. In the machine room/control space, pipe and wire CAT6 cable from the switch to the InfoScreen Server Box.
26. Provide one IP address for each InfoScreen server.
27. Provide another RJ45 CAT6 jack and VLAN configuration to the next elevator machine room/control space that has elevators with InfoScreens. This is to connect two Group Connection Boxes from two elevator machine rooms/ control space.
28. Provide a dedicated 115VAC, 15 Amp fused disconnect with ground PE per machine room/control space piped and wired to the first InfoScreen Group Connection Box.
29. If InfoScreen TV Streaming Video is to be used, the equipment and converters will be located in a building IT room as shown in the wiring diagram. Provide another RJ45 CAT6 jack and VLAN configuration in InfoScreen IP network range for video Encoder Board in the machine room/control space that has the last Group Connection Box. Provide a Cable TV Box as needed, or other device that will stream composite video output.

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NOT FOR CONSTRUCTION

APPROVAL SPACE

PROJECT:
ALTOS ONE
LOCATION:
MONOSPACE 500 19.2–1
ENG/ARCH:
SDG ARCHITECTURE
CONTRACTOR:
CLARUM CORPORATION

UNIT INFO

ITEM NO.	NETWORK NO.	EQUIPMENT NO.

REVISIONS

DATE	NO	BY	CK	DESCRIPTION
2021–05–06	–	MAT		PRELIMINARY

KONE

GENERATED ON: 05/06/21	BY: MMA	REV
UNITS: IMPERIAL	1–20.2	–
DRAWING	DESCRIPTION	SHEET
M–4233966–10010	CONTRACT	10 of 17

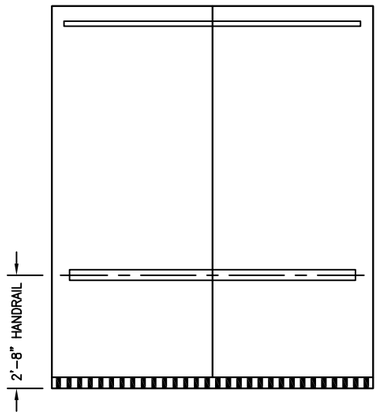
NOTE:

A. EMERGENCY CAR LIGHTING IS PROVIDED

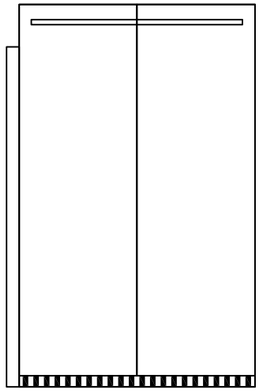
B. CAB INTERIOR COMPLIES WITH THE LATEST EDITION ASME A17.1/CSA B44 INCLUDING SMOKE AND FLAME RATING CLASS B.

C. CAB RELATED DIMENSIONS OTHER THAN DOOR OPENING WIDTH AND DOOR OPENING HEIGHT ARE NOMINAL DIMENSIONS. THEY DO NOT ACCOUNT FOR MANUFACTURING TOLERANCES NOR FOR FINISHED FLOOR THICKNESS.

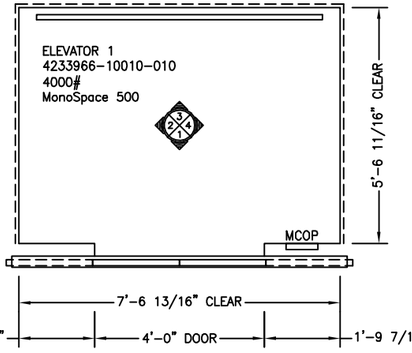
ITEM	TYPE	DESCRIPTION
SUSPENDED CEILING	CL88	DIRECT LGHTG, ROUND LED SPOTS
CEILING PANEL FINISH	–	BRUSHED STAINLESS
FRONT DOOR FINISH	4SS	#4 STAINLESS
FRONT DOOR MATL. THICKNESS	–	16 GA
CAB FRONT WALL MATERIAL	4SS	#4 STAINLESS
CAB SIDE WALL MATERIAL	L417	AMBER CHERRY
CAB REAR WALL MATERIAL	L417	AMBER CHERRY
SKIRTING MATERIAL	4SS	BRUSHED STAINLESS STEEL
CAR SILL MATERIAL	AL	ALUMINUM
REAR CAR HANDRAIL	HR61	ROUND: D38 – 4SS
REAR HANDRAIL ENDS	–	STRAIGHT ENDS
PLASTIC LAMINATE FIRE RATING	BS	CLASS B RATING (STD COLOR)
CAR FAN TYPE	1	FAN REQUIRED
EMERGENCY EXIT SWITCH	–	REQUIRED
FINISH FLOOR THICKNESS		1/2"
FLOOR WEIGHT		5.0 LBS/SQ FT
CAB & FLOOR WEIGHT		3913 LBS
PROTECTION PADS	–	PADS REQUIRED



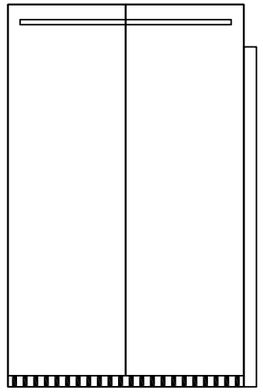
ELEVATION 3



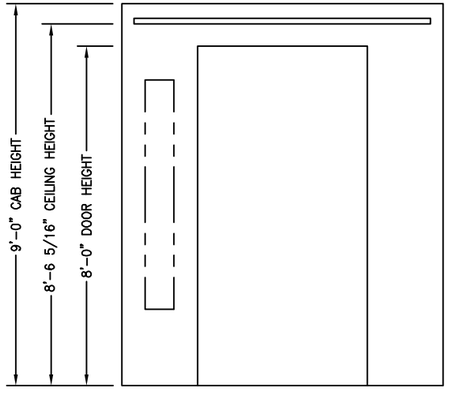
ELEVATION 2



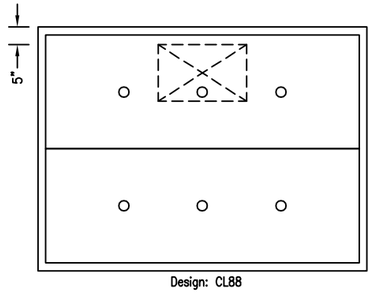
PLAN VIEW



ELEVATION 4



ELEVATION 1



Design: CL88

REFLECTED CEILING
EMERGENCY EXIT 25"x16"

NOTE:
MCOP = MAIN CAR OPERATION PANEL

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MONOSPACE 500 19.2-1
ENG/ARCH:
SDG ARCHITECTURE
CONTRACTOR:
CLARUM CORPORATION

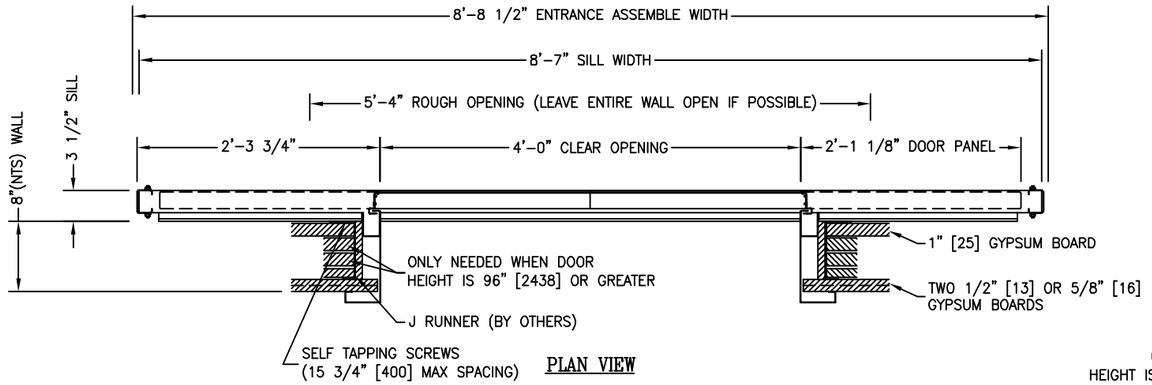
UNIT INFO	ITEM NO.	NETWORK NO.	EQUIPMENT NO.

REVISIONS	DATE	NO	BY	CK	DESCRIPTION
	2021-05-06	–	MAT		PRELIMINARY

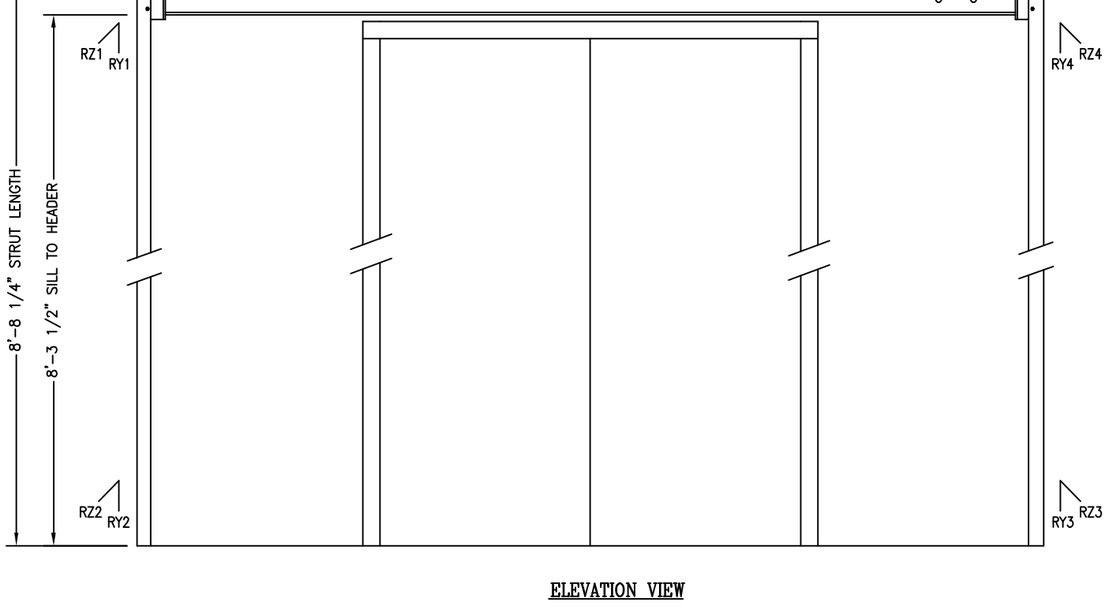
KONE

GENERATED ON: 05/06/21	BY: MMA	REV
UNITS: IMPERIAL	1-20.2	–
DRAWING	DESCRIPTION	SHEET
C-4233966-10010-010	CAB	11 of 17

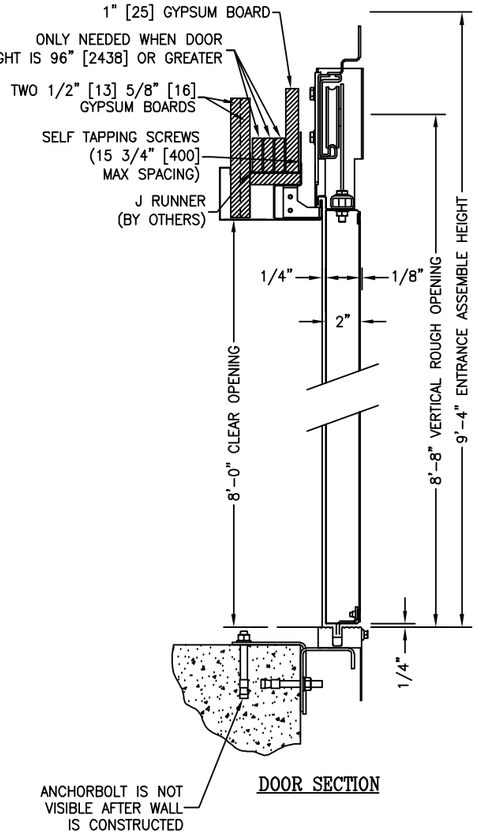
ITEM	TYPE	DESCRIPTION
ELEVATOR I.D.		ELEVATOR 1
ENTRANCE LANDINGS	–	G2, G1, *1, 2, 3, 4, 5, R
ENTRANCE DESIGN NUM	1	AMDY / SINGLE SPEED / CENTER OPENING
FIXTURES	KSS570	–
KEYWAY CUTOUT	–	NONE
ACCESS SWITCH	–	NONE
FIRE RECALL	–	NONE
STAR OF LIFE	–	NONE
FRAME	16 GA	#4 STAINLESS STEEL
FRAME CONSTRUCTION	–	KNOCK–DOWN STYLE BOLTED
SOUND DEADENING	–	NONE
DOOR PANEL	16 GA	#4 STAINLESS STEEL
SILL	NARROW	EXTRUDED ALUMINUM
FASCIA / TOE–GUARD	16 GA	GALVANIZED STEEL 48" WIDE
JAMB BRAILLE	CJ6S	SURFACE MOUNTED, WHITE ON BLACK
LABELS	–	2 HOUR U.L. – CLASS B



PLAN VIEW



ELEVATION VIEW



DOOR SECTION

NOTES:

A. DO NOT CONSTRUCT WALLS UNTIL DOOR FRAMES ARE SET.

REACT. PT.	RZ (LBF)	RY (LBF)
1	305	55
2	260	55
3	260	55
4	305	55

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ALTOS ONE
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MONOSPACE 500 19.2–1
ENG/ARCH:
SDG ARCHITECTURE
CONTRACTOR:
CLARUM CORPORATION

UNIT INFO

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REVISIONS

DATE	NO	BY	CK	DESCRIPTION
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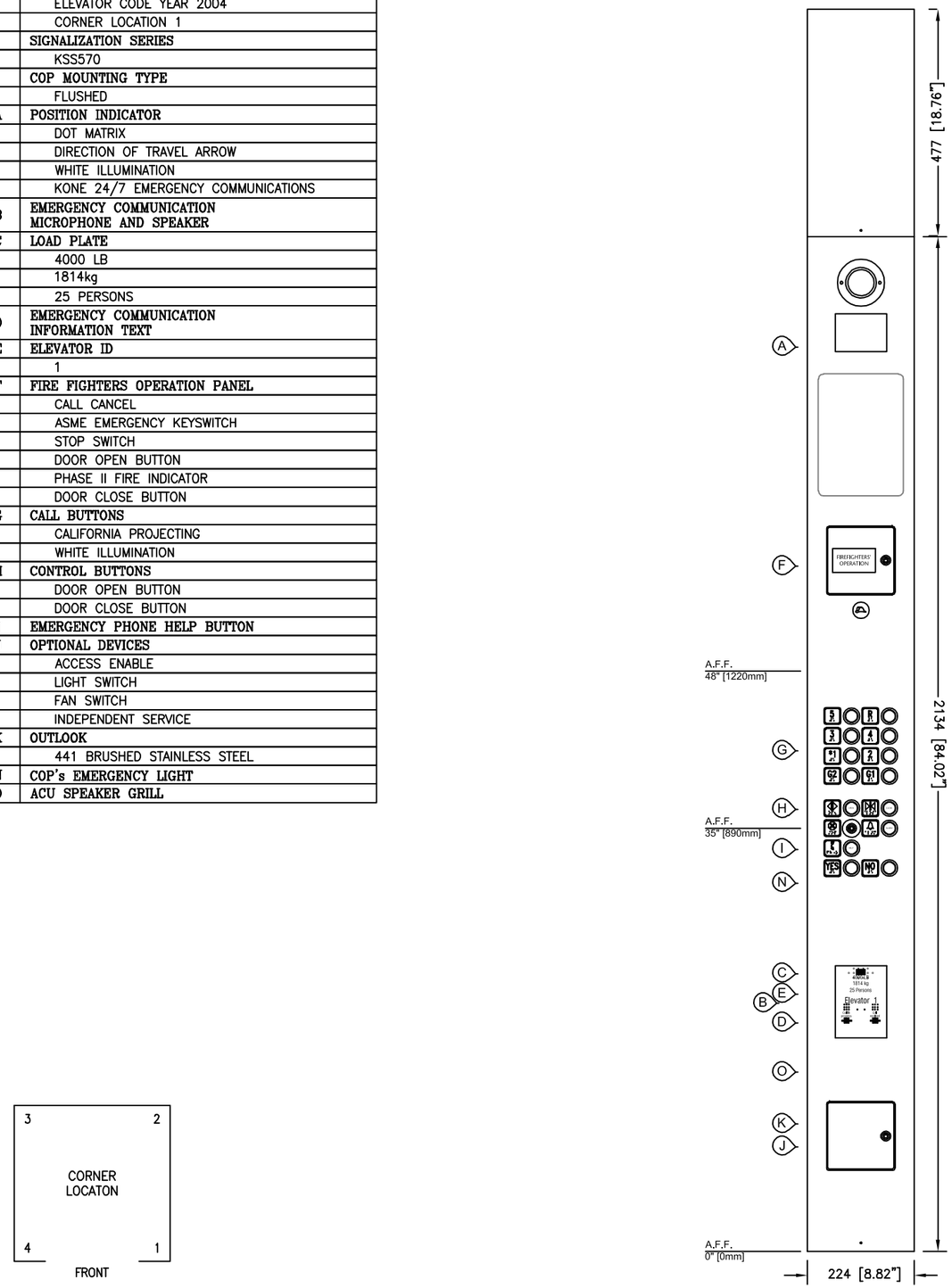
KONE

GENERATED ON: 05/06/21	BY: MMA	REV
UNITS: IMPERIAL	1–20.2	–
DRAWING	DESCRIPTION	SHEET
E–4233966–10010–010	ENTRANCE	12 of 17

	GENERAL INFORMATION
	ELEVATOR CODE YEAR 2004
	CORNER LOCATION 1
	SIGNALIZATION SERIES
	KSS570
	COP MOUNTING TYPE
	FLUSHED
A	**POSITION INDICATOR**
	DOT MATRIX
	DIRECTION OF TRAVEL ARROW
	WHITE ILLUMINATION
	KONE 24/7 EMERGENCY COMMUNICATIONS
B	**EMERGENCY COMMUNICATION MICROPHONE AND SPEAKER**
C	**LOAD PLATE**
	4000 LB
	1814kg
	25 PERSONS
D	**EMERGENCY COMMUNICATION INFORMATION TEXT**
E	**ELEVATOR ID**
	1
F	**FIRE FIGHTERS OPERATION PANEL**
	CALL CANCEL
	ASME EMERGENCY KEYSWITCH
	STOP SWITCH
	DOOR OPEN BUTTON
	PHASE II FIRE INDICATOR
	DOOR CLOSE BUTTON
G	**CALL BUTTONS**
	CALIFORNIA PROJECTING
	WHITE ILLUMINATION
H	**CONTROL BUTTONS**
	DOOR OPEN BUTTON
	DOOR CLOSE BUTTON
I	**EMERGENCY PHONE HELP BUTTON**
J	**OPTIONAL DEVICES**
	ACCESS ENABLE
	LIGHT SWITCH
	FAN SWITCH
	INDEPENDENT SERVICE
K	**OUTLOOK**
	441 BRUSHED STAINLESS STEEL
N	**COP's EMERGENCY LIGHT**
O	**ACU SPEAKER GRILL**



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ALTOS ONE
LOCATION:
MONOSPACE 500 19.2-1
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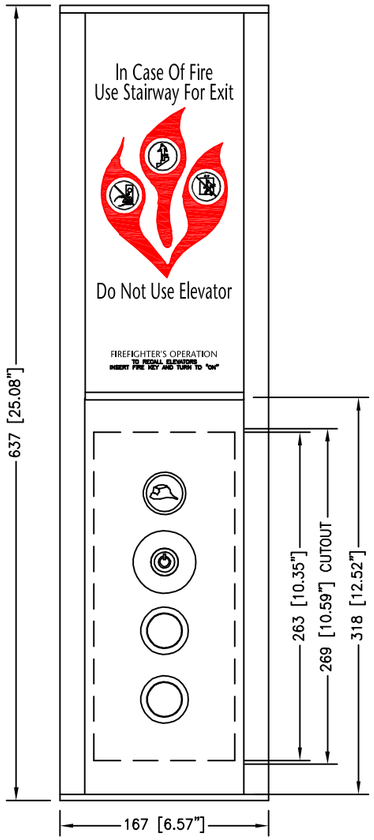
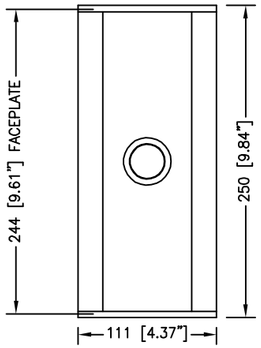
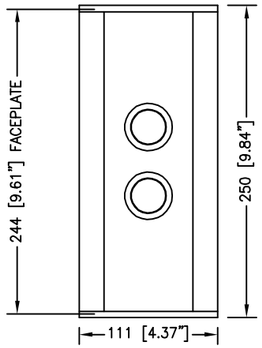
KONE

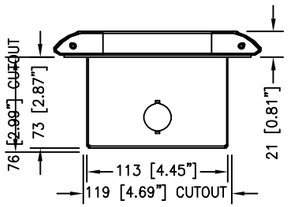
GENERATED ON: 05/06/21	BY: MMA	REV
UNITS: IMPERIAL	1-20.2	-

DRAWING	DESCRIPTION	SHEET
F-4233966-10010-010	COP	13 of 17









QUANTITY: 1
LOCATIONS
*1
OUTLOOK
WHITE ILLUMINATION
BRUSHED STAINLESS STEEL FACEPLATE
SIGNAGE
PHASE 1 ASME A17.1
CA TITLE 8
DEVICES
PILOT LIGHT
FRD KEY SWITCH
UP CALL BUTTON
DOWN CALL BUTTON
PHASE I FIRE RECALL KEY
ASME EMERGENCY KEYSWITCH
SIGNALISATION SERIES: KSS570

QUANTITY: 1
LOCATIONS
R
OUTLOOK
WHITE ILLUMINATION
BRUSHED STAINLESS STEEL FACEPLATE
DEVICES
DOWN CALL BUTTON
SIGNALISATION SERIES: KSS570

QUANTITY: 5
LOCATIONS
G1, 2, 3, 4, 5
OUTLOOK
WHITE ILLUMINATION
BRUSHED STAINLESS STEEL FACEPLATE
DEVICES
UP CALL BUTTON
DOWN CALL BUTTON
SIGNALISATION SERIES: KSS570

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MONOSPACE 500 19.2-1
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SDG ARCHITECTURE
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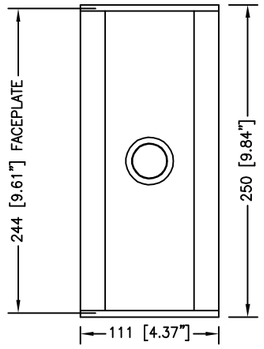
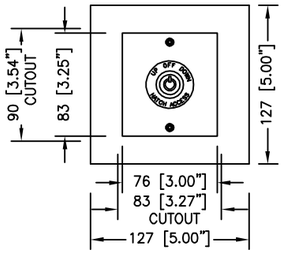
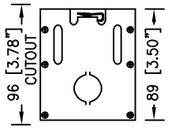
2021-05-06	-	MAT		PRELIMINARY

KONE

GENERATED ON: 05/06/21	BY: MMA	REV -
UNITS: IMPERIAL	1-20.2	
DRAWING F-4233966-10010	DESCRIPTION HPB	SHEET 14 of 17







QUANTITY: 1
LOCATIONS
G2
OUTLOOK
WHITE ILLUMINATION
BRUSHED STAINLESS STEEL FACEPLATE
DEVICES
UP CALL BUTTON
SIGNALISATION SERIES: KSS570

QUANTITY: 2
LOCATIONS
G2, R
HAC STATION TYPE
SEPARATE HAC STATION
OUTLOOK
BRUSHED STAINLESS STEEL FACEPLATE
SIGNALISATION SERIES: KSS570

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SDG ARCHITECTURE
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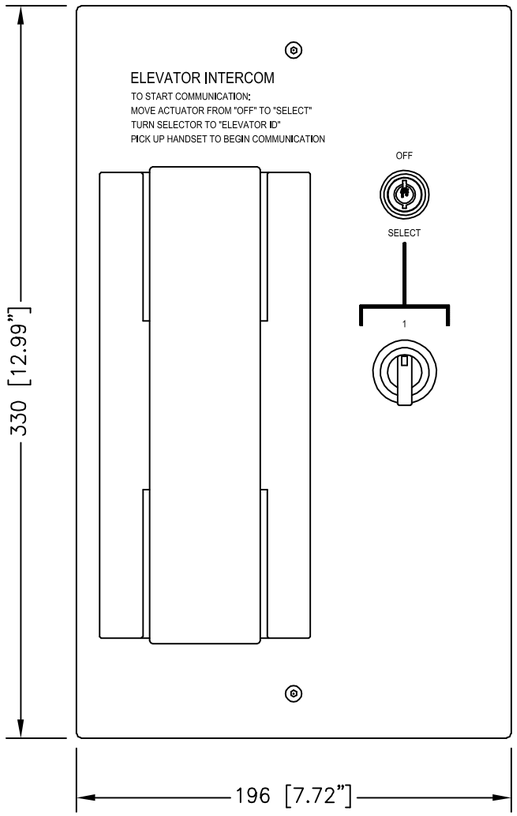
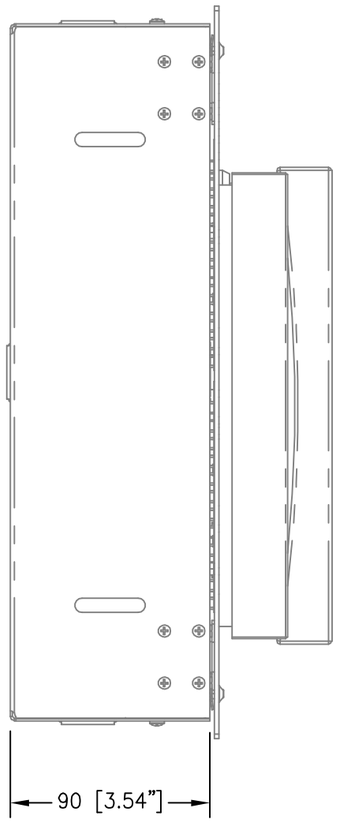
UNITS: IMPERIAL	1-20.2	–

DRAWING	DESCRIPTION	SHEET
F-4233966-10010	HPB	15 of 17





HALL MONITOR STATION
QUANTITY: 1
LOCATION
WITHIN ELEVATOR VIEW
OUTLOOK
441 BRUSHED STAINLESS STEEL

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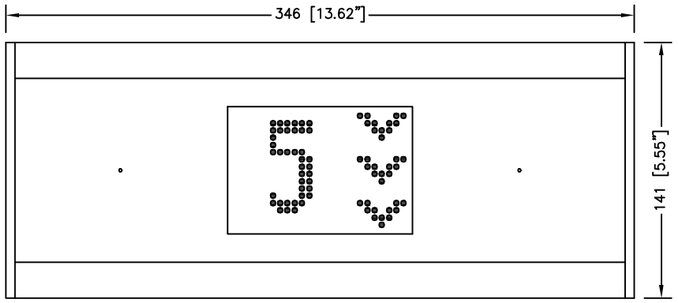
GENERATED ON: 05/06/21	BY: MMA	REV
UNITS: IMPERIAL	1-20.2	-

DRAWING	DESCRIPTION	SHEET
F-4233966-10010	HPB	16 of 17

QUANTITY: 8
ELEVATOR ID: 1
LOCATIONS
G2, G1, *1, 2, 3, 4, 5, R
OUTLOOK
POSITION INDICATOR
WHITE ILLUMINATION
DOT MATRIX
BRUSHED STAINLESS STEEL FACEPLATE
HORIZONTAL ORIENTATION
SIGNALISATION SERIES: KSS570



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UNITS: IMPERIAL	1-20.2	-
DRAWING	DESCRIPTION	SHEET
F-4233966-10010-010	HL	17 of 17

The following items must be performed or provided at no cost to Otis Elevator Company ("OTIS") by the Owner or General Contractor or their agents in accordance with governing codes. The price and installation schedule of Otis is based on these job-site conditions existing at the beginning and during the installation of the elevator equipment. Failure to provide the items specified in this list will result in additional work performed by Otis Elevator beyond the scope of our contract causing installation delays. A change order will be submitted by Otis for materials and/or labor expended. All work must be performed per the applicable national and or local codes.

General Prep/Work

1. Provide on-site storage area for elevator equipment as follows: dry and enclosed, provides roll-able access to the elevator hoistway at the ground level, located within 100 feet (30480mm) of the hoistway and is larger than 25 x 20 feet (7620mm x 6096mm) per elevator. Any warranties provided by Otis for elevator equipment are null and void if equipment is stored in a manner other than a dry enclosed building structure.

2. Provide sufficient on-site refuse containers for the proper disposal of elevator packaging material. Should sufficient refuse containers not be provided, disposal of packaging material shall become the responsibility of the owner.

3. Provide any cutouts to accommodate elevator equipment (troughing, venting, and hall fixtures), along with the patching/painting of walls, floors, or partitions together with finish painting of entrance doors and frames, if required.

Hoistway & Pit Prep/Work

4. Provide and install a steel, I-beam shaped safety beam with a maximum flange width of 8 11/16" (220mm), from side wall to side wall at the top of the hoistway, capable of withstanding a minimum net live load of 7500 lb (3402kg) per elevator. Reference Otis Layout for location. A 4" minimum clearance is required from top of beam to top of hoistway.

5. Provide a clear plumb hoistway with variations from the size shown on the Otis layout not to exceed -0"/+1"(25mm) and not less than the clear dimensions shown on the Otis layout

6. Provide adequate rail bracket supports, bracket spacing as required by governing code, from pit floor to top of hoistway to comply with the rail reaction forces detailed on the Otis Contract Layout. Provide adequate support for the top rail brackets at locations above the top landing as specified on the Otis Layout. Provide separator beams where required. Unless approved by Otis, rail-bracket attachment supports must be exposed and flush with the clear hoistway line.
   If the floor-to-floor height exceeds the maximum bracket spacing allowed by the elevator code, Otis requires some form of steel support to properly attach our guide rail brackets. The maximum allowed bracket spacing is indicated in the rail force and bracket detail table on the Otis layout. Any rail bracket mounting surfaces that are not in line with the finished hoistway dimension (i.e. the clear hoistway line) may need to be extended to meet the required distance. Otis agrees to provide guidance on this matter at the appropriate time.

   If rail bracket embedded plates or inserts are provided by Otis they shall be installed by others in accordance with Otis documentation and instructions.

   If vertical tube steel is utilized as rail support, see the Otis layout for any specific requirements.

7. Provide adequate support at all fastening points of each entrance. Provide plumb vertical surfaces for entrances and entrances and building sill line. For MRL installations, a horizontal support member is to be provided 20" (508mm) above the clear opening at the controller landing to support the entrance and controller components. If any other floor height exceeds 12'-0" (3657mm), a horizontal support member is to be provided 12" (305mm) above the clear opening. For MRL installations, if entrance finish protection is installed, a section of such protection must be removable to allow safe and convenient access to the Inspection & Test panel of the elevator.

8. Prior to the start of installation, provide a dry, properly framed, enclosed and vented hoistway in accordance with all applicable codes.

9. A.) Protection from Falls:
   As required by the Occupational Safety and Health Administration (OSHA) 1926.502 B) (1-3) a freestanding removable barricade at each hoistway opening at each floor. Barricades shall be 42" (1067mm) high, with mid-rail and kick board, and withstand 200 lbs. (90.7kg) of vertical and horizontal pressure.

   B.) Protection from Falling Objects:
   As required by the Occupational Safety and Health Administration (OSHA) 1926.502(j) hoistway protection from falling debris and other trades materials by either:
   1.)Full entrance screening/mesh in front of all elevator entrances

   2.)Secured/controlled access to all elevator lobbies (lock and key) with posted Notice "only elevator personnel beyond this protection."
   Notes:
   Items A.) and B.) can be integrated systems.
   Hoistway barricades and screening shall be constructed, maintained and removed by others.

10. Provide a pit floor designed to sustain vertical forces (based on safety impact) on car and counterweight rails and impact loads on car and counterweight buffers as shown on the Otis layout. The pit must be dry and clean. The elevator pit must have a floor drain or sump pump to prevent the accumulation of water. Location to be coordinated with Otis to avoid all elevator components and access areas. In areas requiring fire fighters emergency operation (FEO) a sump pump/drain shall be provided that shall have the capacity to remove a minimum of 11.4m3/h (3,000 gal/h) per elevator (ASME A17.1/CSA B44 latest applicable code year section 2.2.2.5). Otis recommends that the owner verify the drain or sump pump system is in compliance with all applicable codes and laws.

11. TOP and BOTTOM landings (and the MAIN landing where applicable), are not to be constructed until after all elevator equipment is installed in the hoistway.
    The entire front wall must be open for installation with the following rough opening dimensions (to be shown on layouts):
    -Rough Opening Width = CLEAR HOISTWAY WIDTH
    -Rough Opening Height = 2642mm (8'-8") for a 2134mm (7') entrance height
    2947mm (9'-8") for a 2438mm (8') entrance height
    If the controller is located on the REAR entrance, the wall at this rear entrance should also have these rough opening dimensions. Remaining front entrance walls are not to be constructed until after door frames and sills are in place.

    The rough openings, per sizes shown on the Otis layout, are required. Prior to the completion and turnover of the elevator(s), all entrance walls must be installed and rough openings filled in complete to maintain fire rated hoistway requirements.

12. Provide and install a fixed vertical iron ladder in each pit as required by governing code and located per Otis layout or as coordinated with Otis personnel. Ladder width and pit wall pocket requirements are shown in the pit plan view on the Otis layout. For entrance heights of up to 7' (2134mm) the top rung of the ladder must be even with the bottom landing. For entrance heights greater than 7' (2134mm) the top rung must be 12' (305mm) above the bottom landing. Hand grips must be provided to a height of 4' (1219mm) above the bottom landing. Hand grips must have 4-1/2" (114mm) radial clearance, from their centerline, to any obstruction in the hoistway. (Refer to the detail views for typical ladder arrangement)

13. Install permanent light fixture in each elevator pit with illumination of not less than 100 lx (10 fc) as measured at the pit floor. The light bulb(s) shall be externally guarded to prevent contact and accidental breakage. The light switch shall be so located as to be accessible from the pit ladder.

14. Glass used in hoistway construction must block 98% or more of incident full-spectrum ultraviolet radiation for the full height of the hoistway.

15. Provide and install guarding of counterweight in a multiple-elevator hoistway as required, when a counterweight is located between elevators, the counterweight runway shall be guarded on the side next to the adjacent elevator. The guarding must meet or exceed the requirements of ASME A17.1/CSA B44 latest applicable code year, section 2.3.2.3.
    If an emergency door in a blind hoistway is required, provide an outward swinging single section type door with door closer and a self closing barrier per ASME A17.1/CSA B44 latest applicable code year, section 2.11.1.2. Contact your local Otis personnel for a detailed drawing (AAA26900D_FMI) showing Otis specific requirements.

MRL Machine Space Prep/Work

16. Maintain the temperature at the top of the hoistway (machine space) between 32º F (0º C) and 104º F (40º C). This space also includes the the car controller which is mounted at the top landing. Relative humidity shall not to exceed 95% non-condensing. Provide ventilation to suit Otis heat release amounts as shown in Otis Confirmation of Power Supply form. Local codes may require tighter temperature ranges and higher ventilation levels. Please check with your local code authority for the exact requirements in your area. If your machinery space temperature exceeds this requirement, contact your local Otis sales representative for assistance.

17. Install a permanent light fixture at the top of the hoistway (machine space) of not less than 200-lux (19 fc) as measured at the level of the standing surface on the car when the elevator is at the top landing. Light switch is to be located in the hoistway per the Otis layout.

18. Install a permanent light fixture at the top landing entrance (control space), in the hall, of not less than 200-lux (19 fc) as measured at the floor level. Light switch is to be located close to the elevator entrance.

Control Room/Space and Machine Space Prep/Work

19. Provide a suitable control room/space(s) with access and ventilation in accordance with all applicable codes and regulations. The control room/space(s) shall be maintained at a temperature between 32F (0C) and 104F (40C) to be measured 6 feet (1830 mm) above the floor and 1 foot (305 mm) out from the front center of the car controller(s). Relative humidity is not to exceed 95% non-condensing. Provide ventilation to suit Otis heat release amounts as shown on the Otis Confirmation of Power Supply form. Local codes may require tighter temperature ranges and higher ventilation levels, please check with your local code authority for the exact requirements in your area. If your control room/space(s) temperatures exceed these requirements, contact your local Otis sales area. If your control room/space(s) temperatures exceed these requirements, contact your local Otis sales representative for assistance.

20. Provide illumination of control room/space(s) of not less than 200 LUX (19 FC) as measured at floor level. Light switch is to be located within 18" (157 mm) to the lock-jamb side of the access door to the control room/space(s).

21. Provide control room/space(s) with self-closing and self-locking doors with a group 2 locking device. In addition, ensure that all air gaps around the doors are sealed (i.e. threshold, weather stripping, etc.).

22. Maintain the temperature at the top of the hoistway (machine space) between 32º F (0º C) and 104º F (45º C). Relative humidity shall not to exceed 95% non-condensing. Provide ventilation to suit Otis heat release amounts as shown in Otis Confirmation of Power Supply form. If your machinery space temperature exceeds this requirement, contact your local Otis sales representative for assistance.

23. Install a permanent light fixture at the top of the hoistway (machine space) of not less than 200-lux (19 fc) as measured at the level of the standing surface on the car when the elevator is at the top landing. Light switch is to be located in the hoistway per the Otis layout.

Fire Prevention Prep/Work

24. Provide hoistway walls designed and constructed in accordance with the required fire rating (including those places where elevator fixture boxes, rail bracket fastenings, and any other penetration into the hoistway walls).

25. In the United States provide smoke detectors, located as required, with wiring from the sensing devices to the controller(s) designated by Otis.
    A. For each group of elevators, provide a normally closed contact representing the smoke detector at the designated return landing.

    B. For each group of elevators, provide a normally closed contact representing all smoke detectors located in lobbies, hoistways, or control rooms/spaces but <u>not</u> the smoke detector at the designated return landing (see above) or the smoke detectors as described below:
    1) If a smoke detector is located in the hoistway at or below the lower of the two recall landings, it shall be wired to activate the same normally closed contact as the smoke detector located in the lobby at the lower of the two recall landings.

    2) If the control room/space(s) are located at the designated return landing, the smoke detectors located therein shall be wired to activate the same normally closed contact as the smoke detector at the designated landing.

    C. Requirements for intermittently illuminating the fire hat visual signal in the car operating panel, either 1) or 2) must be selected.
    1) For a single unit, or group of elevators having control room/space(s) and one common hoistway, provide one additional normally closed contact representing the control room/space(s) and hoistway smoke detectors.

    2) If the group contains more than one hoistway, and hoistway smoke detectors are installed, provide one normally closed contact for <u>each elevator</u>. The contact is to represent the smoke detectors in the control room/space(s) or hoistway containing that particular elevator.

26. In Canada provide smoke detectors, located as required, with wiring from the sensing devices to the controller(s)
    A. For each group of elevators, provide a normally closed contact representing the smoke detector at the designated return landing and if provided, from the sensing device in the pit.

    B. For each group of elevators, provide a normally closed contact representing all smoke detectors located in elevator lobbies, but <u>not</u> the smoke detector at the designated return landing (see above), and if provided, from the sensing device in the top of the hoistway.

    C. For each group of elevators, provide a normally closed contact representing the smoke detector in the elevator machine space.

    D. If the control space is located at the designated return landing, the smoke detectors located therein shall be wired to activate the same normally closed contact as the smoke detector at the designated landing. For each group of elevators, provide in addition to the above, a normally closed contact representing the sensing devices in the pit or at the top of the hoistway (For the Fire Hat in the Elevator).

OTIS

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SEISMIC 2

DWG. NO.:	PWBO 1 OF 2
BUILDING	
LOCATION	
CONT. WITH	
OWNER	
ARCHT.	
CONTRACT NO.	

NOTE - DO NOT SCALE THIS DRAWING

EXPRESS DRAW: AA

Fire Prevention Prep/Work (cont)

27. In the United States, if sprinklers are installed in the hoistway(s), or machine space(s), a means to automatically disconnect the main line power supply of the affected elevator and any other power supply used to move the elevator upon or prior to the application of water is required (unless prohibited by local code). Smoke detectors shall not be used to activate sprinklers in hoistway(s), or machinery spaces or to disconnect the mainline power supply.

    In addition, when the Automatic Recovery Operation (ARO) is specified, the means provided to automatically disconnect power to the elevator shall be equipped with an additional auxiliary contact that is positively opened when power is removed from the elevator system. This automatically controlled mainline disconnect must be provided with all associated wiring and conduit to the controller.

28. Provide an "ABC" fire extinguisher, minimum 10 lbs for machine space, and located convenient to the top landing elevator entrance.

29. Provide control room/space(s) and door to code compliant fire-resistive construction.

Electrical Requirements

30. 3 Phase Power MRL - Provide a permanent three (3) phase electrical-feeder system with a separate equipment-grounding conductor terminating in the elevator controller located at the top landing or transformer located at the top of the hoistway. Permanent three (3) phase electrical-feeder to be terminated at the elevator controller or transformer at the start of installation of the top landing elevator entrance and the timing of connection to Otis controller shall be coordinated with the elevator installer. Feeder conductors and grounding conductor sized according to elevator current characteristics as shown on the Otis Confirmation of Power Supply form. Feeder conductors and grounding conductor must be copper. Provide a fused disconnect switch or circuit breaker capable of being locked in the open position, for each elevator per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1) with feeder or branch wiring to elevator controller [NEC 620-51, 620-61(D), and 620-62] or [CEC Rule 38-013 (2) (a)] located at the point of power distribution in the building. The disconnecting means required by the National Electrical Code or Canadian Electrical Code CEC [Rule 38-051] shall be provided with all associated wiring and conduit to the elevator controller. Size of main contacts to suit elevator power characteristics. Fuses, if provided, are to be current limiting class J or equivalent. Circuit breakers, if provided, are to have current limiting characteristics equivalent to class J fuses. Fuses or circuit breakers are to be time delay to cover the full load up accelerating current. Accelerating current typically is the peak as indicated on the Otis Confirmation of Power Supply Form, and lasts for duration not to exceed 7 seconds. Feeder conductors and associated wiring to the controller to be sized to limit wiring voltage drop to 5% maximum when delivering elevator full load up accelerating current. The building power system used to operate the elevator(s) shall be capable of supplying non linear loads and be capable of absorbing the regenerated power listed on the Otis Confirmation of Power Supply form.

    Single Phase Power MRL - Provide a permanent single phase electrical-feeder system with a separate equipment-grounding conductor terminating to the transformer located at the top of the hoistway. Permanent single phase electrical-feeder to be terminated at the transformer at the start of installation of the top landing elevator entrance and the timing of connection to Otis controller shall be coordinated with the elevator installer. Feeder conductors and grounding conductor sized according to elevator current characteristics shown on the Otis Confirmation of Power Supply form. Feeder conductors and grounding conductor must be copper. Provide a fused disconnect switch or circuit breaker capable of being locked in the open position, for each elevator per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1) with feeder or branch wiring to elevator controller [NEC 620-51, 620-61(D), and 620-62] or [CEC Rule 38-013 (2) (a)] located at the point of power distribution in the building. The disconnecting means required by the National Electrical Code or Canadian Electrical Code CEC [Rule 38-051] shall be provided with all associated wiring and conduit to the elevator controller. Size of main contacts to suit elevator power characteristics. Fuses, if provided, are to be current limiting class J or equivalent. Circuit breakers, if provided, are to have current limiting characteristics equivalent to class J Fuses, if provided, are to be current limiting class J or equivalent. Circuit breakers, if provided, are to have current limiting characteristics equivalent to class J fuses. Fuses or circuit breakers are to be time delay to cover the full load up accelerating current. Accelerating current typically is the peak as indicated on the Otis Confirmation of Power Supply Form, and lasts for duration not to exceed 7 seconds. Feeder conductors and associated wiring to the controller to be sized to limit wiring voltage drop to 5% maximum when delivering elevator full load up accelerating current. The building power system used to operate the elevator(s) shall be capable of supplying non linear loads and be capable of absorbing the regenerated power listed on the Otis Confirmation of Power Supply form.

    MRL Configuration (controller located in hoistway entrance) with Transformer - If a transformer is required and the controller is to be located in the hoistway entrance, the transformer must be located in an electrical room. The transformer must be mounted and wired as per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1). Provide conduit and wiring to the transformer as well as between the transformer and the controller located in the hoistway entrance in accordance with the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1). Contact your local Otis representative for details.

31. 3 Phase Power Control Room/Space - Provide a permanent three (3) phase electrical-feeder system with a separate equipment-grounding conductor terminating in the control room/space(s), located per Otis layout. Feeder conductors and grounding conductor sized according to elevator current characteristics as shown on the Otis Confirmation of Power Supply form. Feeder conductors and grounding conductor must be copper. A fused disconnect switch or circuit breaker capable of being locked in the open position, for each elevator per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1) with feeder or branch wiring to controller [NEC 620-51, 620-61(D), and 620-62] or [CEC Rule 38-013(2)(a)]. The disconnecting means required by the National Electrical Code or Canadian Electrical Code CEC [Rule 38-051] shall be provided with all associated wiring and conduit to the controller. Size of main contacts to suit elevator power characteristics. Fuses are to be current limiting class RK1 or equivalent. Circuit breakers are to have current limiting characteristics equivalent to class RK1 fuses. Fuses or circuit breakers are to be time delay to cover the full load up accelerating current. Accelerating current typically is the peak as indicated on the Otis Confirmation of Power Supply Form, and lasts for duration not to exceed 7 seconds. Feeder conductors and associated wiring to the controller to be sized to limit wiring voltage drop to 5% maximum when delivering elevator full load up accelerating current. The building power system used to operate the elevator(s) shall be capable of supplying non linear loads and be capable of absorbing the regenerated power listed on the Otis Confirmation of Power Supply form.

    Single Phase Power Control Room/Space - Provide a permanent single phase electrical-feeder system with a separate equipment-grounding conductor terminating in the control room/space(s), located per Otis layout. Feeder conductors and grounding conductor sized according to elevator current characteristics as shown on the Otis Confirmation of Power Supply form. Feeder conductors and grounding conductor must be copper. A fused disconnect switch or circuit breaker capable of being locked in the open position, for each elevator per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1) with feeder or branch wiring to controller [NEC 620-51, 620-61(D), and 620-62] or [CEC Rule 38-013(2)(a)]. The disconnecting means required by the National Electrical Code or Canadian Electrical Code CEC [Rule 38-051] shall be provided with all associated wiring and conduit to the controller. Size of main contacts to suit elevator power characteristics. Fuses are to be current limiting class RK1 or equivalent. Circuit breakers are to have current limiting characteristics equivalent to class RK1 fuses. Fuses or circuit breakers are to be time delay to cover the full load up accelerating current. Accelerating current typically is the peak as indicated on the Otis Confirmation of Power Supply Form, and lasts for duration not to exceed 7 seconds. Feeder conductors and associated wiring to the controller to be sized to limit wiring voltage drop to 5% maximum when delivering elevator full load up accelerating current. The building power system used to operate the elevator(s) shall be capable of supplying non linear loads and be capable of absorbing the regenerated power listed on the Otis Confirmation of Power Supply form.

32. Provide a dedicated 125 volt, 15 ampere single-phase branch circuit with a fused disconnect switch or circuit breaker located at the point of power distribution in the building. The fused disconnect or circuit breaker shall be capable of being locked in the open position. This branch circuit supplies the car lights, car top receptacle, auxiliary lighting power source and ventilation on each car in compliance with the National Electrical Code [NEC620-53] or Canadian Electrical Code [CEC Rule 38-053]. Termination of this branch circuit shall be in the elevator controller located at the top landing and shall be connected at the same time as the permanent three (3) phase power referenced in the previous paragraph.

33. All 125 volt, 15 or 20 ampere single-phase receptacles installed in pits, machine spaces, control rooms/space(s) shall be of the ground-fault circuit-interrupter type (GFCI). A dedicated single-phase receptacle supplying a permanently installed pit sump pump shall not require GFCI protection.

34. Provide electric power for lights, tools, welding, hoisting, etc. during installation with sufficient power for starting, testing and adjusting the elevator. Provide a 220 volt, 30 ampere single-phase 4 wire electrical supply for platform operation during construction, available at the start of elevator installation.

35. Provide one (1) dedicated outside telephone line, per elevator, and terminated at the controller designated by the Otis construction superintendent. Reference the A17.1 code and the Otis power of confirmation letter for specific requirements.

36. In areas under the jurisdiction of AMSE A17.1-2004/CSA B44 or later where the elevator travel is greater than or equal to 60 feet /18 meters, provide two-way voice communications means that shall enable emergency personnel within the building to establish communications to each car individually without intervention by a person within the car. The communication means shall override communications to the outside of the building and once established shall only be terminated by emergency personnel outside the car. Refer to ASME A17.1/CSA B44 latest applicable code year, section 2.27.1.1.4 for exact requirements.

37. [Optional] For elevators having an intra building intercom, provide a separate 120 volt, 15 ampere, single phase power supply with fused SPST disconnect switch or circuit breaker, located as required for inter-communicating system power supply. Circuit to be arranged for feeding from the building emergency lighting supply if provided. Conduit and wiring for remotely located inter-communicating stations.

38. [Optional] For installations having emergency (standby) power, provide the standby power unit and means for starting it. The emergency (standby) power unit shall deliver to the elevator via disconnect switches in the building power distribution location or disconnect switches in the control room/space(s), sufficient power to operate one or more elevators at a time at full rated speed, and rated load.

    An automatic power transfer switch for each power feeder to monitor both normal and emergency (standby) power conditions and to perform the transfer from one to the other. Switch to have two sets of normally closed dry contacts, one to be open when the switch is in the emergency (standby) power position; the other to open upon initiation of power transfer and to close when transfer is complete. Switch to have an inhibit function which will delay transfer to normal and/or emergency (standby) power by an adjustable period of 0 - 300 seconds. Switch shall have a phase monitor feature, which prohibits the transfer of power between "live" sources unless the sources are in phase with each other. If a shunt trip device is provided, an additional normally closed contact, with all associated wiring and conduit to the controller, is required from the emergency (standby) power source. The emergency (standby) power system provided shall comply with ANSI/NFPA 70 requirements 620.91. The table in section "ELEVATOR REGENERATIVE POWER REQUIREMENTS", on the Otis Confirmation of Power Supply form, contains the elevator system power regenerated under an overhauling load. The information contained in the form is to be used to determine regenerative power absorption capability for the emergency (standby) power distribution system.

    Note: The building Emergency (Standby Power) Generator system used to operate the elevator(s) shall be capable of supplying non-linear loads.

39. [Optional] Compass Dispatching System - a dedicated 125 volt 20 ampere single-phase power supply with SPST fused disconnect switch or circuit breaker. The fused disconnect or circuit breaker shall be capable of being locked in the open position and located upstream of the elevator equipment. This disconnect or circuit breaker must be in sight of the Compass Dispatching System equipment.

    MRL Configuration (controller located in hoistway entrance) with Compass - If Compass is required and the controller is to be located in the hoistway entrance, an electrical room must be provided for the Compass Dispatching System equipment within sight of the entrance controller. Contact your local Otis representative for details.

    [Optional] Elevator Management System (EMS) - a dedicated 125 volt 20 ampere single-phase power supply with SPST disconnect switch or circuit breaker with duplex outlets per Otis layout, and at any location where a Security Station and/or Fire Station is furnished. Circuits to be arranged for feeding from the building standby or emergency lighting supply if provided.

[OPTIONAL] FIRE SERVICE ACCESS ELEVATORS (FSAE)

FSAE Hoistway & Pit Prep/Work

40. Provide all hoistways to meet structural code requirements for Fire Service Access Elevators as per IBC and NFPA

FSAE Machine Room Prep/Work

41. Provide climate control and ventilation with monitoring equipment

FSAE Fire Protection Prep/Work

42. Comply with NFPA requirements relative to hoistway pressurization and sprinkler prohibition.

FSAE Electrical Requirements

43. Provide hoistway lighting (1 Foot-candle, 11 lux, measured on top of car) for entire length of hoistway.

44. Emergency (standby) power must deliver power to elevator machine room, control room or space ventilation, cooling equipment, and the hoistway lighting.

You agree to indemnify and save Otis harmless against any and all liability and costs arising out of your failure to carry out any of the foregoing requirements.

OTIS

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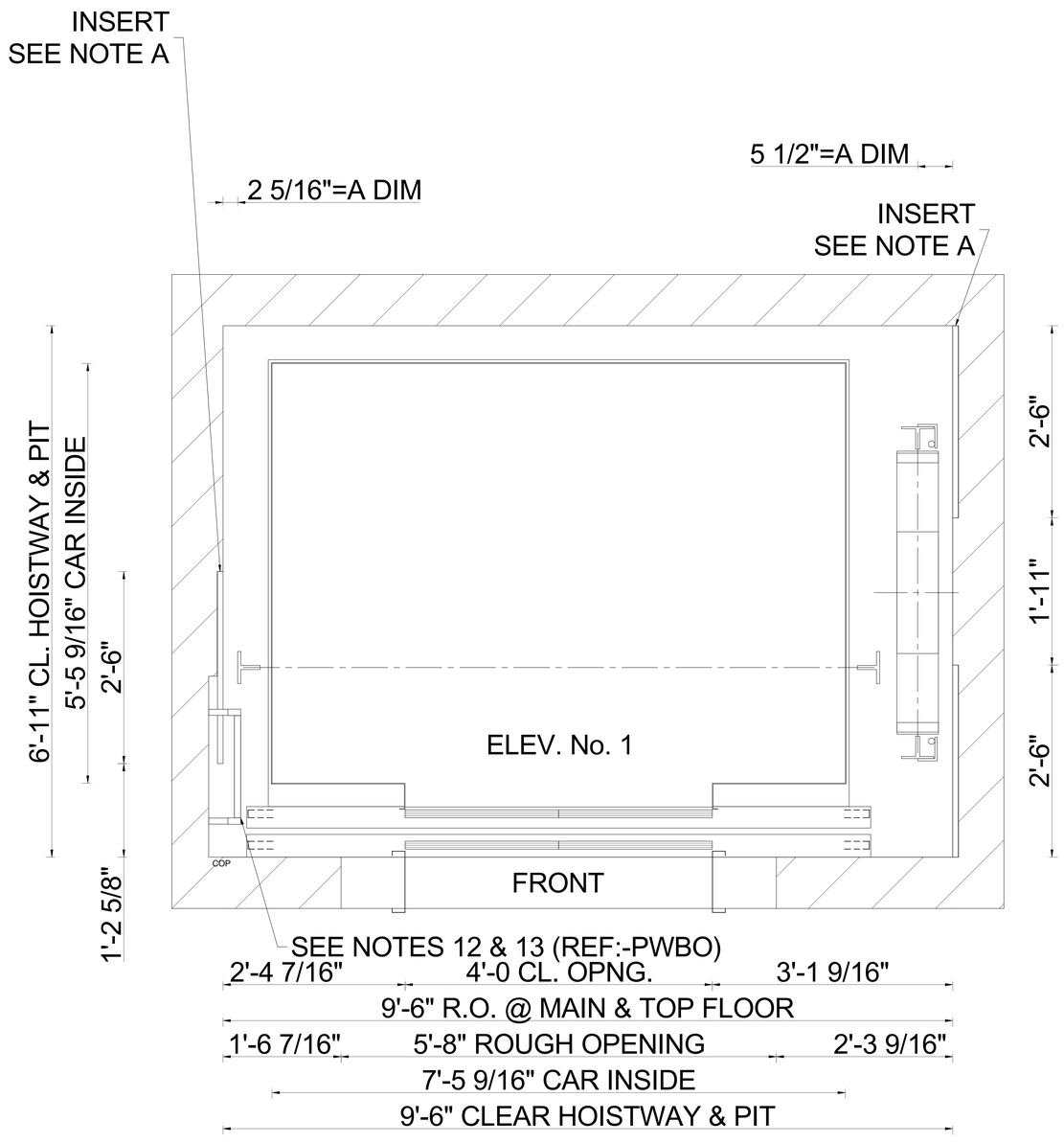
SEISMIC 2

DWG. NO.:	PWBO 2 OF 2
BUILDING	
LOCATION	
CONT. WITH	
OWNER	
ARCHT.	
CONTRACT NO.	



PLAN VIEW

SEE NOTE 5, PWBO SHEET

DIRECTIONAL ARROW
INDICATES NORTH

ELEV. No.	DUTY	SPEED	SERVICE TYPE
1	4000#	150 F.P.M.	PASSENGER

NOTE A
THESE DIMENSIONS ARE BASED ON HOISTWAY SIZES SHOWN & 30" INSERTS. IF EITHER OF THESE VARY, CONSULT THE SALES REPRESENTATIVE.

APPROVAL
THIS ARRANGEMENT AND
SUPPLEMENTARY NOTES APPROVED

SIGNED: _____ DATE: _____

OTIS

Gen2®

SEISMIC 2

DWG. NO.: PLAN VIEW

BUILDING

LOCATION

CONT. WITH

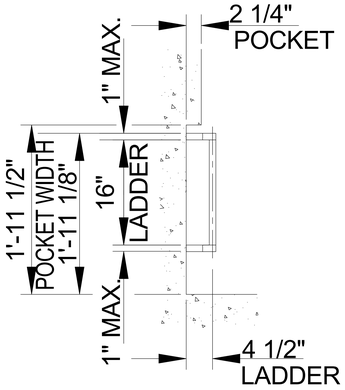
OWNER

ARCHT.

CONTRACT NO.

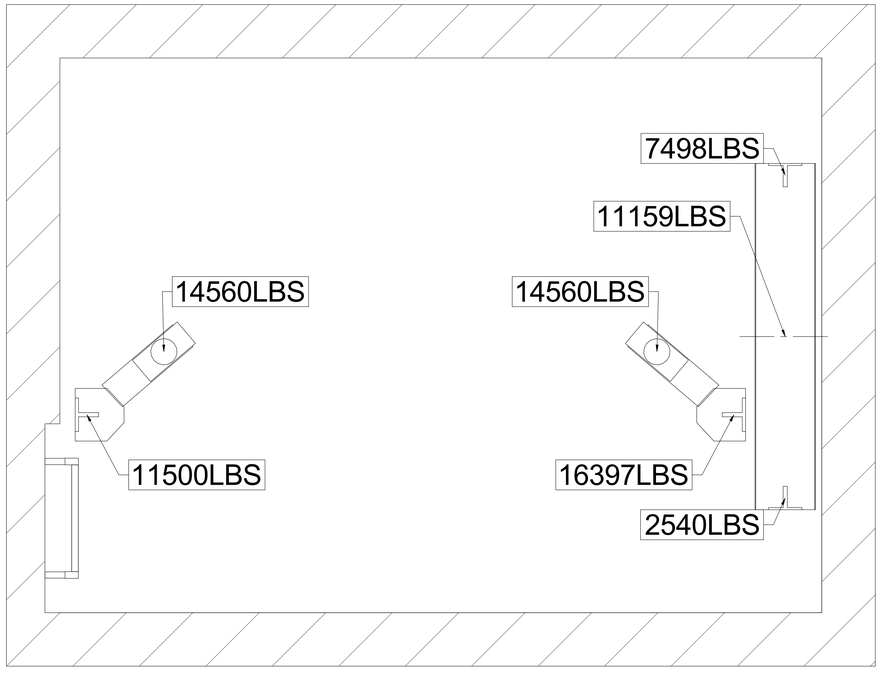
NOTE - DO NOT SCALE THIS DRAWING

EXPRESS DRAW: AA



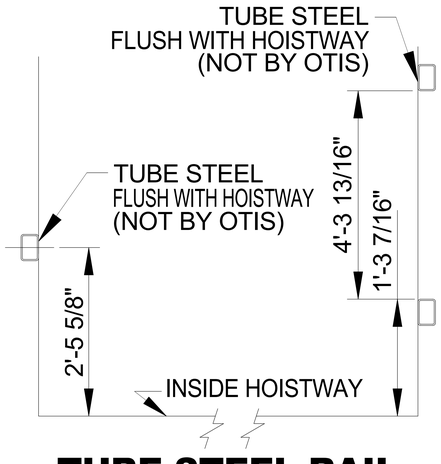
LADDER AND POCKET DETAIL

ELEV. No. 1



PIT PLAN VIEW

FORCE SHOWN INCLUDES DOUBLING FOR IMPACT



TUBE STEEL RAIL BRACKET SUPPORT

ELEV. No. 1

ELEV. No.	DUTY	SPEED	SERVICE TYPE
1	4000#	150 F.P.M.	PASSENGER

APPROVAL
THIS ARRANGEMENT AND SUPPLEMENTARY NOTES APPROVED

SIGNED: _____ DATE: _____

OTIS

Gen2®

SEISMIC 2

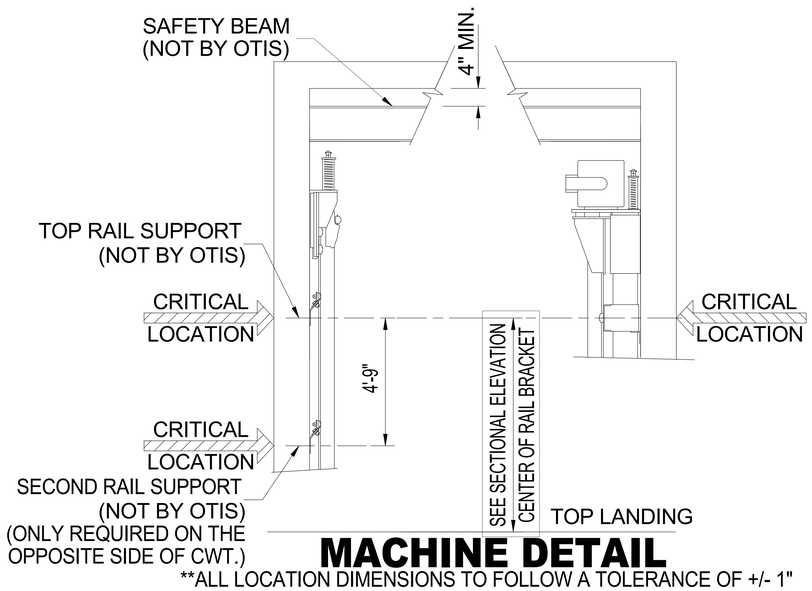
DWG. NO.:	PIT VIEW
BUILDING	
LOCATION	
CONT. WITH	
OWNER	
ARCHT.	
CONTRACT NO.	

DIRECTIONAL ARROW INDICATES NORTH

NOTE - DO NOT SCALE THIS DRAWING

EXPRESS DRAW: AA

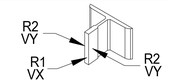
TABLE 1 CAR RAIL BRACKET INSERT TABLE	ELEV. No. 1
4'-9"	9th BRACKET LOC. FROM 8th BRKT.
6'-2"	8th BRACKET LOC. FROM 7th BRKT.
10'-0"	7th BRACKET LOC. FROM 6th BRKT.
10'-0"	6th BRACKET LOC. FROM 5th BRKT.
10'-0"	5th BRACKET LOC. FROM 4th BRKT.
10'-0"	4th BRACKET LOC. FROM 3rd BRKT.
10'-0"	3rd BRACKET LOC. FROM 2nd BRKT.
11'-0"	2nd BRACKET LOC. FROM 1st BRKT. (REQ'D)
3'-0"	1st BRACKET LOC. FROM PIT FLOOR



MACHINE DETAIL

**ALL LOCATION DIMENSIONS TO FOLLOW A TOLERANCE OF +/- 1"

RAIL FORCE & BRACKET SPACING DETAIL



SEE NOTES 6 & 7

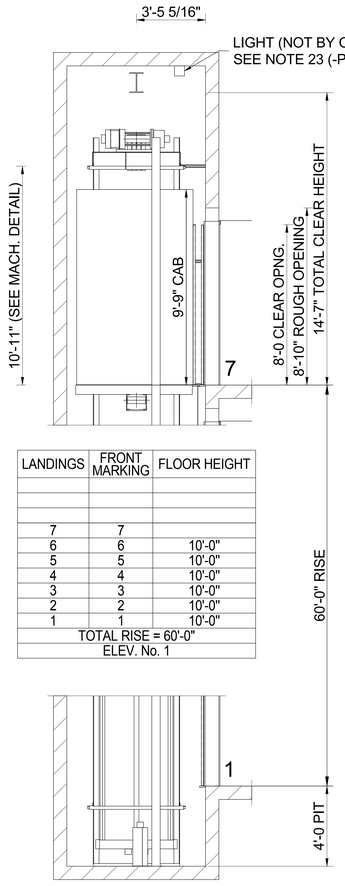
CAR	R1	567 lbs
	R2	86 lbs
	VX	1078 lbs
	VY	539 lbs
	MAXIMUM BRACKET SPACING	11'-0"
	RAIL SIZE	1
CWT	R1	314 lbs
	R2	23 lbs
	VX	1132 lbs
	VY	566 lbs
	MAXIMUM BRACKET SPACING	11'-0"
	RAIL SIZE	1-1/2
DEH (DEAD END HITCH)	R1	840 lbs
	R2	2630 lbs

IN MULTICAR GROUPS THE VALUES ABOVE ARE THE LARGEST VALUES FOR THE ENTIRE GROUP

FIRST INTERMEDIATE RAIL SUPPORT LOCATION TO BE LOCATED 14' 0" FROM PIT FLOOR. ALL OTHER INTERMEDIATE SUPPORTS CANNOT EXCEED THE MAXIMUM BRACKET SPACING IN THE RAIL FORCE & BRACKET SPACING DETAIL

CAR R1 = SAFETY APPLICATION
CWT R1 = LOADING OR RUNNING
R2 = LOADING OR RUNNING

REQUIREMENTS FOR RAIL BRACKET SUPPORT (NOT BY OTIS):
DEFLECTION NOT TO EXCEED 1/8"
BASED ON HORIZONTAL RAIL FORCES.

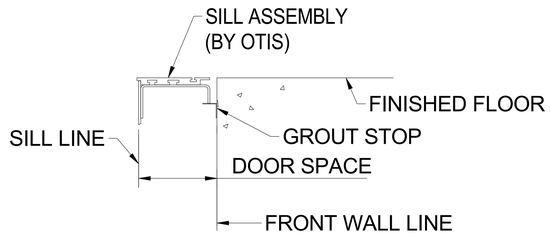


LANDINGS	FRONT MARKING	FLOOR HEIGHT
7	7	
6	6	10'-0"
5	5	10'-0"
4	4	10'-0"
3	3	10'-0"
2	2	10'-0"
1	1	10'-0"
TOTAL RISE = 60'-0"		
ELEV. No. 1		

FRONT

HOISTWAY SECTION

FOR MAX. SPACING BETWEEN INSERTS SEE RAIL FORCE DETAIL
ELEV. No. 1



DETAIL "A" SILL SUPPORT

ADEQUATE SUPPORT AT ALL FASTENING POINTS OF ENTRANCE ASSEMBLY REQUIRED. MUST WITHSTAND A HORIZONTAL PULL-OUT FORCE OF 140 LBS. @ EA. FASTENING POINT (8 @ EA. ENTRANCE) INCLUDING SUPPORT FOR CENTER SILL SUPPORT BRACKET (NOT BY OTIS).

ELEV. No.	DUTY	SPEED	SERVICE TYPE
1	4000#	150 F.P.M.	PASSENGER

APPROVAL
THIS ARRANGEMENT AND SUPPLEMENTARY NOTES APPROVED

SIGNED: _____ DATE: _____

OTIS

Gen2®

SEISMIC 2

DWG. NO.: ELEVATION 1

BUILDING

LOCATION

CONT. WITH

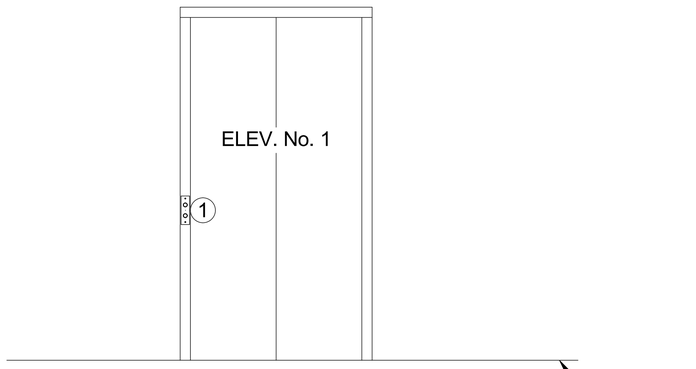
OWNER

ARCHT.

CONTRACT NO.

NOTE - DO NOT SCALE THIS DRAWING

EXPRESS DRAW: AA



HALL FIXTURE DETAIL

1 HALL BUTTONS @ ALL FLOORS

APPROVAL
THIS ARRANGEMENT AND
SUPPLEMENTARY NOTES APPROVED

SIGNED: _____ DATE: _____

OTIS

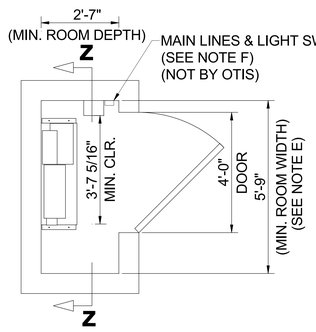
Gen2®

SEISMIC 2

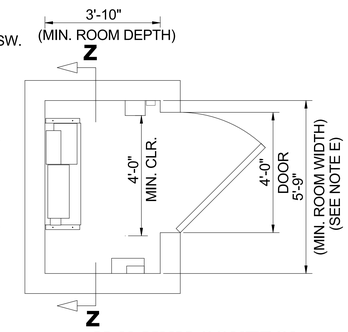
DWG. NO.:	HALL FIXTURES
BUILDING	
LOCATION	
CONT. WITH	
OWNER	
ARCHT.	
CONTRACT NO.	

NOTE - DO NOT SCALE THIS DRAWING

EXPRESS DRAW: AA



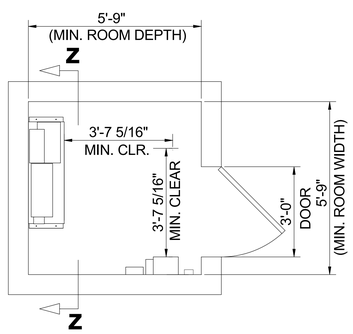
MINIMUM CONTROL SPACE REQUIREMENTS ONE CAR WITHOUT AUTOMATIC RECOVERY OPERATION



MINIMUM CONTROL SPACE REQUIREMENTS ONE CAR WITH AUTOMATIC RECOVERY OPERATION

NOTE E

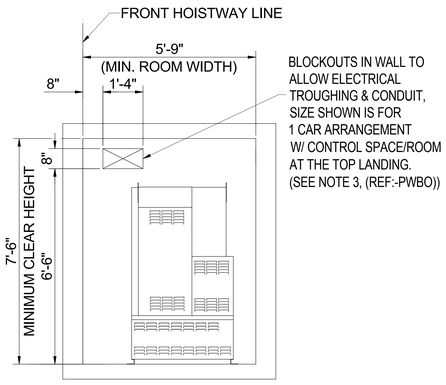
CHECK LOCAL BUILDING CODES FOR HALLWAY CLEARANCES WHEN CONTROL DOORS ARE OPENED FOR SERVICE OF THE ELEVATOR.



MINIMUM CONTROL ROOM REQUIREMENTS ONE CAR

NOTE F

THE FRONT SURFACE OF THE MAINLINE DISCONNECT MUST PROJECT INTO CLEAR OPENING OF CONTROL SPACE. IF THE SIZE OF THE CONTROL SPACE IS INCREASED, A MEANS OF LOCATING THE MAINLINE DISCONNECT INTO THE CLEAR OPENING MUST BE PROVIDED.



SECTION Z - Z

NOTES:
WEIGHT OF CONTROLLER = 350 lbs.

NOTE 23A

TWO (2) 6"X6" (152mmX152mm) CUTOUTS ARE REQUIRED (NOT BY OTIS). THE ACTUAL LOCATION OF THE CUTOUTS FOR THE TO AND FROM OIL PIPE AND ELECTRICAL TROUGH WILL VARY DEPENDENT UPON MACHINE ROOM LOCATION AND CONFIGURATION,

APPROVAL
THIS ARRANGEMENT AND SUPPLEMENTARY NOTES APPROVED

SIGNED: _____ DATE: _____

OTIS

Gen2®

SEISMIC 2

DWG. NO.: CONTROL ROOM

BUILDING

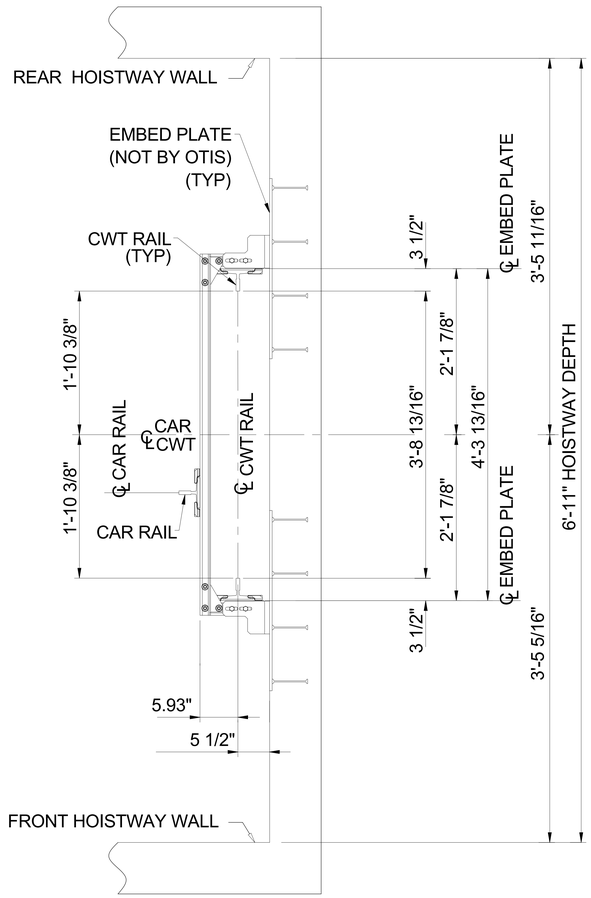
LOCATION

CONT. WITH

OWNER

ARCHT.

CONTRACT NO.



EMBED LOCATION DETAIL
COUNTERWEIGHT BRACKET SUPPORTS

(NOT TO SCALE)

ELEV. No. 1

NOTE A
THESE DIMENSIONS ARE BASED ON HOISTWAY SIZES SHOWN & 30" INSERTS. IF EITHER OF THESE VARY, CONSULT THE SALES REPRESENTATIVE.

APPROVAL
THIS ARRANGEMENT AND SUPPLEMENTARY NOTES APPROVED

SIGNED: _____ DATE: _____

OTIS

Gen2®

SEISMIC 2

DWG. NO.: EMBED DETAIL

BUILDING

LOCATION

CONT. WITH

OWNER

ARCHT.

CONTRACT NO.

LOAD TABLES

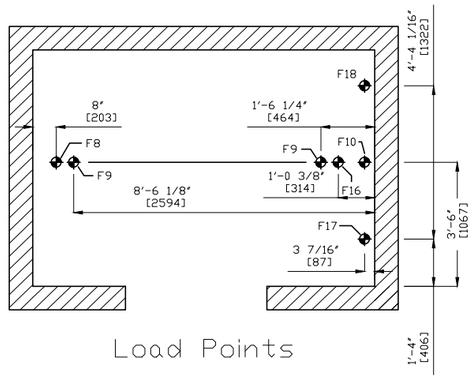
IMPACT LOADS					
VERTICAL LOADS AT PIT (BUFFER IMPACT)		VERTICAL LOADS AT PIT UNDER GUIDE RAILS (INCLUDING IMPACT LOAD DUE TO SAFETIES APPLICATION, GOVERNOR LOAD AND EQUIPMENT ON RAILS)			
F9	F10	F8	F16	F17	F18
18210 LBF	12331 LBF	10860 LBF	14561 LBF	3422 LBF	3422 LBF
[81.0 KN]	[127.0 KN]	[48.3 KN]	[64.8 KN]	[15.2 KN]	[15.2 KN]

CAR RAIL LOADS			
NON-SEISMIC		SEISMIC	
F	P	F	P
270 LBF	119 LBF	639 LBF	320 LBF
[1200 N]	[528 N]	[2842 N]	[1421 N]

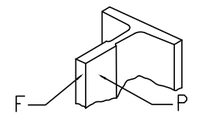
CWT-RAIL LOADS			
NON-SEISMIC		SEISMIC	
F	P	F	P
30 LBF	6 LBF	691 LBF	346 LBF
[134 N]	[28 N]	[3073 N]	[1536 N]

STATIC RAIL LOADS FROM EQUIPMENT SUPPORTED			
F8	F16	F17	F18
4172 LBF	7406 LBF	2132 LBF	2132 LBF
[18.6 KN]	[32.9 KN]	[9.5 KN]	[9.5 KN]

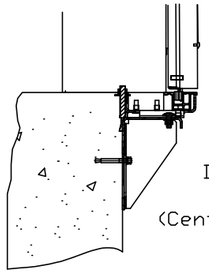
NOTE: F9 & F10 Do not occur simultaneously with F8 & F16



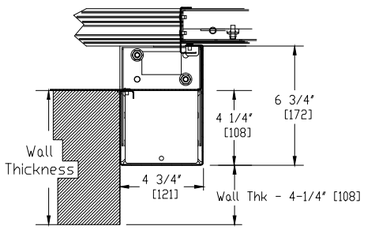
Load Points



Rail Load Diagram



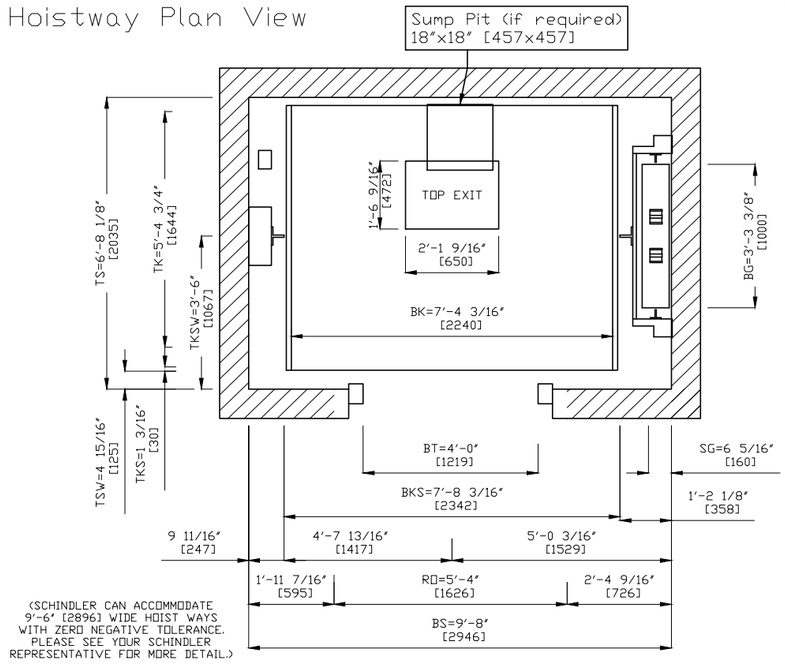
Door Sill Detail (Center Opening)



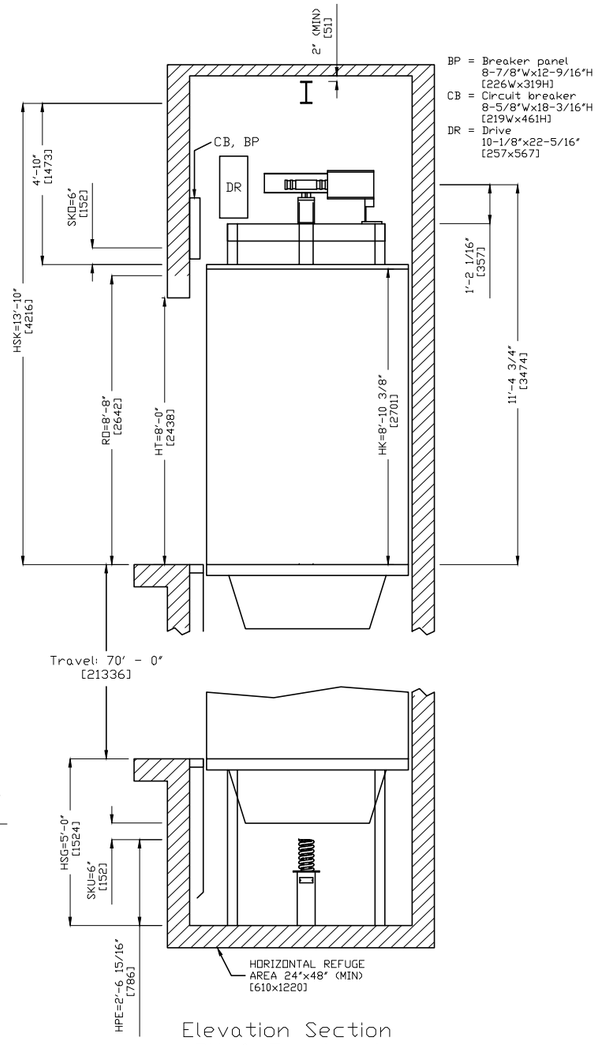
Entrance Jamb Detail (Center Opening)

ACRONYM	DEFINITION	ACRONYM	DEFINITION
BGS	DISTANCE BETWEEN CWT GUIDE RAILS	RO	ROUGH OPENING
BK	CAR WIDTH (INSIDE)	SG	C/L CWT RAIL
BKS	DISTANCE BETWEEN CAR GUIDE RAILS	SKO	TOP RUNBY
BS	HOISTWAY WIDTH	SKU	BOTTOM RUNBY
BT	ENTRANCE OPENING WIDTH (HOISTWAY)	TCRR	TOP OF CAR RAIL
DCL	DOOR C/L	TCWR	TOP OF CWT RAIL
HK	CAB HGT TO UNDERSIDE OF CANOPY	TK	CAR DEPTH (INSIDE)
HSG	PIT DEPTH	TKS	RUNNING CLEARANCE
HSK	OVERHEAD HEIGHT	TKSW	FRONT H/W WALL TO C/L RAILS
HT	ENTRANCE OPENING HEIGHT	TS	HOISTWAY DEPTH
RHD	RAIL HEAD DEPTH	TSW	ENTRANCE SILL DEPTH

Hoistway Plan View



(SCHINDLER CAN ACCOMMODATE 9'-6" [2896] WIDE HOIST WAYS WITH ZERO NEGATIVE TOLERANCE. PLEASE SEE YOUR SCHINDLER REPRESENTATIVE FOR MORE DETAIL.)



Elevation Section Pit & Overhead

PURCHASER NOTES: THE FOLLOWING NOTES SHOULD BE CONSIDERED BY THE PURCHASER BEFORE APPROVING THIS DRAWING
WHEN THE APPLICABLE LOCAL CODES INCLUDE OTHER REQUIREMENTS OR CONFLICT WITH THE REFERENCED CODES BELOW, THE LOCAL CODES SHALL PREVAIL.

1. Clear, plumb, hoistway with variations not to exceed +25mm (+1"). Hoistway enclosure to be fire rated per national code requirements and applicable building codes (rule 2.1.1).
2. Power for construction adjacent to hoistways and machine/control rooms (110/220 volt, single phase, for welders and hoists) and sufficient 3-phase power to run elevator(s) at the same time.
3. 75° bevel guards on all projections, recesses or setbacks over 100mm (4").
4. Provide venting of the hoistway per national code requirements and applicable building codes (rule 2.1.4).
5. Clear, flat, vertical or horizontal surfaces for mounting rail brackets at each floor, in overhead, and intermediate levels (if required).
6. For masonry block hoistway construction, Schindler will provide rail bracket inserts for installation by others.
7. For non-masonry hoistway construction with floor heights exceeding 4.5m (15ft), structural support at 2.4m (8ft) to 4.5m (15ft) above finished floor level for entrance strut angle attachment.
8. Grouting around entrance frames and finished floor and grout to sill line after installation of entrance.
9. Construction barricades (per OSHA requirements) either outside of elevator hoistway(s) or between elevators inside of hoistway(s) as required.
10. Dry pit reinforced to sustain vertical forces from rails and impact loads on buffers (rule 2.2.2). Car buffer impact loads as calculated (rule 8.2.3).
11. Adequate sealing and waterproofing of pit. Effective prevention of pit exposure to storm water or ground water.
12. Sump pit, if required, to be located in rear center of pit floor.
13. GFCI convenience outlet and light fixture with guard in pit (National Electrical Code).
14. Pit ladder for each elevator in compliance with rule 2.2.4.2.
15. GFCI convenience outlet and telephone outlet located in machine/control room.
16. Provide, preferably at the top landing, a lockable, fused disconnect switch or circuit breaker suitable for 3-phase power for the elevator control and a separate lockable, fused disconnect switch for car lighting circuit for each elevator.
17. Building corridors shall be lighted so that the illumination level at the landing sills, when an elevator is in service, shall not be less than 100 LUX (10 FC). (RuleE 2.11.10.2)
18. For areas in seismic zone 2 or greater, provide additional 2" (50 mm) TO hoistway width.
19. Hoist beam(s) required. Contact local Schindler office for sizing and location.
20. Provide suitable feeder and branch wiring circuits from the building service to the controller, including main line switch, for signal systems, power operated doors, car lighting and convenience outlets.
21. A temporary work platform is required for installation of the elevator.
22. If applicable, smoke and/or heat detectors with signals to elevator controller(s).
23. For jurisdictions following ASME A17.1 code prior to 2009, please add 1 additional inch of overhead at 150 FPM.

3300 TRACTION ELEVATOR
PLANS AND DETAILS

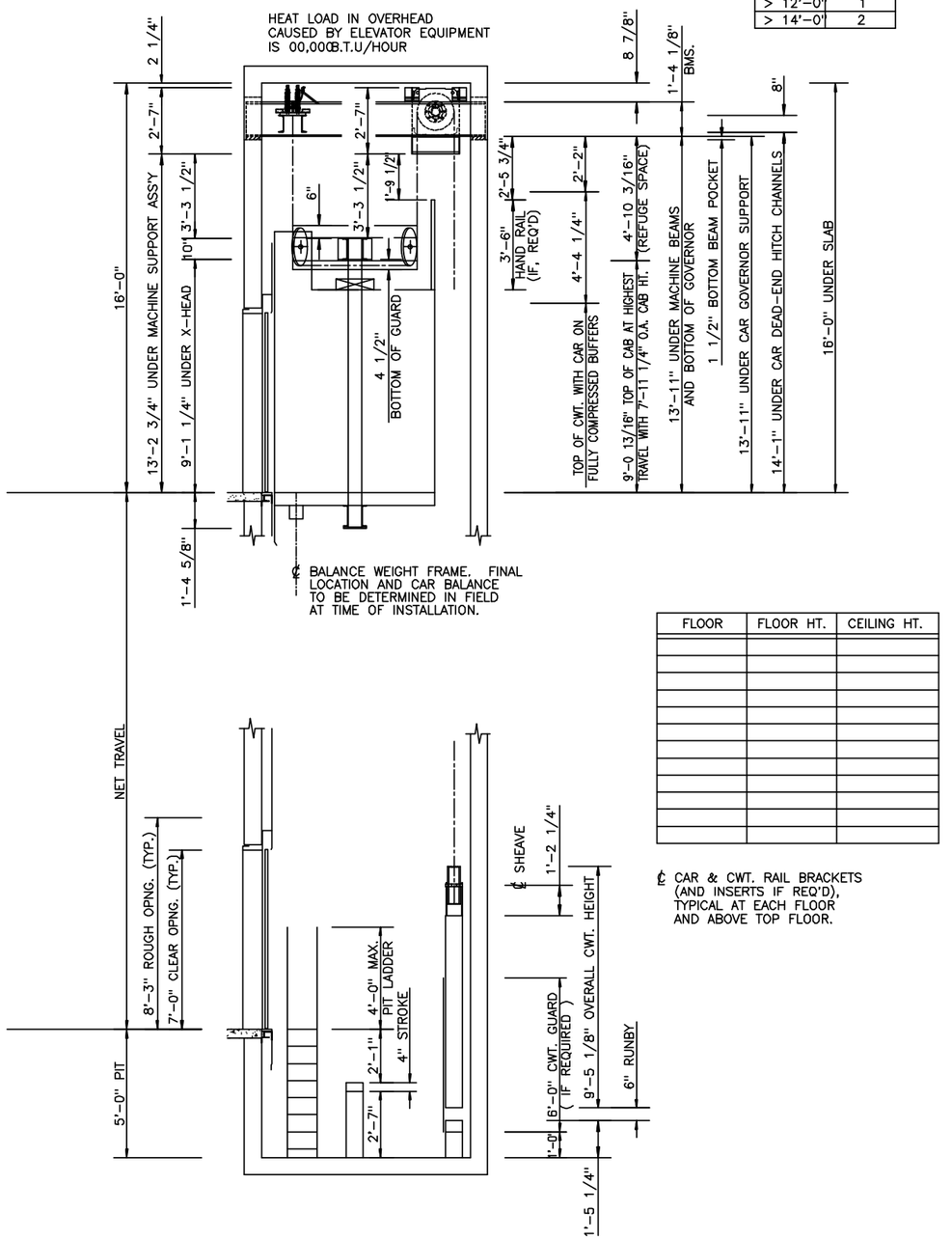
Schindler

SPECIFICATIONS	
CAPACITY: 4000 lbs [1815 kg]	
RATED SPEED: 150 fpm [0.75 mps]	
TRAVEL: 70' - 0" [21.336 m]	
BUILDING:	
LOCATION:	
OWNER:	
ARCHITECT:	ENGINEER:
DRAWN BY: SchindlerDraw 2	DATE: Jun 23, 2021
DRAWING NO:	

HALL FIXTURE	ELEVATOR	FLOORS	POCKET SIZE W	H	D	CL. ABOVE FIN. FLOOR

MAX. BRACKET SPACING CAR	CWT.	CWT. RAIL SIZE
16'–0"	16'–0"	8
	12'–8"	C7

CWT. INTERMEDIATE TIE BRACKET SPACING	QTY.
> 12'–0"	1
> 14'–0"	2



FLOOR	FLOOR HT.	CEILING HT.

℄ CAR & CWT. RAIL BRACKETS (AND INSERTS IF REQ'D), TYPICAL AT EACH FLOOR AND ABOVE TOP FLOOR.

NOTE: CONTINUOUS PIT CHANNELS WITH 1" GROUT

SECTION A–A

* NOTE: COUNTERWEIGHT SPRING BUFFER STANDS SHALL BE REQUIRED WITH CHAIN COMPENSATION.

* AS REQUIRED

TRACTION ELEVATOR CONTRACT DATA

ELEVATOR NUMBER	
TYPE	PASSENGER
CLASS	DESIGNED FOR CLASS "A" FREIGHT LOADING
CAPACITY	3,500 LBS.
MAXIMUM UNIT LOAD	875 LBS.
MAXIMUM AXLE LOAD	875 LBS.
MAXIMUM SUSTAINING LOAD	3,500 LBS.
SPEED	200 F.P.M.
OPERATION	TAC50–04
STOPS	
HOISTWAY ENTRANCES	CENTER OPENING (PWD.)
CAR DOOR	CENTER OPENING (PWD.)
STILE	F6.5 x 6.05
CROSSHEAD	F10 x 13.2
SAFETY PLANK	F10 x 9.45
CAR GUIDE TYPE	ROLLER
BALANCE WEIGHTS	150 LBS.
CAR SAFETY	FLEX CLAMP
GOVERNOR	CAR
MACHINE	TORIN W/ BRAKE
DRIVE SHEAVE DIAMETER	17.32 INCH
ISOLATION	SPECIAL
FULL LOAD MASS	16,050 LBS.
CONTROL	VVVF
POWER SUPPLY	___ V. 3 PH. 60 CYC.
HOIST ROPE (PREFORMED)	(7) 10 mm – DRAKO 250–T 8 x 19 WARRINGTON – IWRC
GOVERNOR ROPE (PREFORMED)	(1) 3/8 IN. 8 x 19 IRON
COMPENSATION CHAIN (WHISPER–FLEX)	(2) WF20 (2 LBS./FT.) PER CHAIN
CAR BUFFER TYPE	(4) SPRING
CAR BUFFER STROKE	4 INCH
CWT. BUFFER TYPE	(2) SPRING
CWT. BUFFER STROKE	5 1/2 INCH
CWT. STILE LENGTH	7'–6"
CWT. GUIDE TYPE	ROLLER
CWT. FILLER TYPE	(53) NO. 121458
TOTAL FILLER WEIGHT	5,270 LBS.
TOTAL CWT. WEIGHT	(50 %) 5,845 LBS.
TOTAL CAR WEIGHT	4,005 LBS.
EST. CAB WEIGHT WITH DOOR OPERATOR CAB TYPE – (TKS)	1,575 LBS.
MACHINE WEIGHT	1,630 LBS.
CAR GUIDE RAILS	15 LBS./FT.
CWT. GUIDE RAILS	□ 8 LBS./FT. □ C12 (Ω)

THE FOLLOWING CONDITIONS MUST BE MET BEFORE INSTALLATION IS COMPLETED, AND ARE NOT INCLUDED IN THE ELEVATOR CONTRACT:

1. A PLUMB, PROPERLY–VENTILATED HOISTWAY (ACCORDING TO CODE AND SIZES SHOWN).
2. ADEQUATE SUPPORT FOR MACHINE BEAMS, GUIDE RAIL BRACKETS, AND BUFFERS (FOR REACTIONS SHOWN).
3. HOISTWAY BARRICADES (ALL CUTTING AND PATCHING TO INSTALL HOISTWAY ENTRANCES, SILLS, AND HALL FIXTURES).
4. PIT LIGHTS AND SWITCH, CONVENIENCE OUTLETS OF THE GFCI TYPE PER NEC, PIT LADDER PER CAR (ACCORDING TO CODE). NOTE: MUST BE CLEAR OF ALL ELEVATOR EQUIPMENT.
5. SEPARATE 120 VOLT, 15 AMP. BRANCH CIRCUITS, ALONG WITH TELEPHONE CIRCUIT WHEN REQUIRED, TO TERMINALS OF EACH REQUIRED CONTROLLER (AS LOCATED ON PLAN VIEW) FOR THE FOLLOWING:
   – CAR LIGHT AND ALARM CIRCUIT WITH RECEPTACLES OF THE GFCI TYPE PER NEC
   – GROUP CONTROL WHEN REQUIRED
   NOTE: IF STANDBY POWER IS SUPPLIED TO THE ELEVATOR, GROUP CONTROL CIRCUIT MUST BE STANDBY POWER BACKED.
6. BRANCH CIRCUIT CONDUCTOR SIZING, MATERIALS, AND INSULATION (INCLUDING BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE) TO COMPLY WITH ALL LOCAL ELECTRICAL CODES (SEE "ELECTRICAL POWER REQUIREMENTS").
   NOTE: ALSO, A FOURTH WIRE OF SAME SIZE AS THREE PHASE WIRES IS REQUIRED FOR GROUNDING PURPOSES TO MINIMIZE ELECTRICAL NOISE INTERFERENCE. THE GROUNDING WIRE MUST BE CONNECTED TO THE BUILDINGS ELECTRICAL SYSTEMS GROUND.
   NOTE: IF STANDBY POWER IS REQUIRED, SEE "ELEVATOR STANDBY POWER OPERATION".
7. AN ENCLOSED CONTROLLER ROOM AREA (ACCORDING TO CODE), WITH ADEQUATE LIGHT, HEAT, VENTILATION (MIN. 32° F., MAX. 104° F. WITH NON–CONDENSING HUMIDITY OF 10–90%), AND SEALED CONCRETE FLOOR SLAB SURFACE.
   NOTE: MUST PROVIDE ADEQUATE DOOR SIZE TO ALLOW INSTALLATION OF EQUIPMENT – OR LEAVE WALL OUT UNTIL EQUIPMENT IS IN PLACE.
   NOTE: MACHINE BEAM DESIGN (PER ASME A17.1).
8. A PROPERLY VENTED HOISTWAY AND MAINTAINED BET. 32° F. AND 122° F.
9. ENTRANCE WALLS WITH LINTELS, NOTE: MUST BE PROVIDED AFTER ENTRANCE FRAMES ARE SET – OR LEAVE A ROUGH OPENING 1'–3" WIDER AND 1'–3" HIGHER THAN THE FRAME OPENING; FOLLOW INSTALLATION PROCEDURES FOR FRAME TO WALL INTERFACE TO MAINTAIN LABELED CONSTRUCTION. FILL IN AROUND FRAMES AFTER THE FRAMES ARE SET.
10. POCKETS IN CORRIDOR WALL (PER FIXTURE DRAWINGS) FOR HALL FIXTURES.
    NOTE: MUST BE LOCATED AS DIRECTED BY ELEVATOR CONTRACTOR.
11. SMOKE SENSORS (AS REQUIRED).
12. CONDUIT AND WIRING FROM HOISTWAY TO ELEVATOR MONITORING PANELS (FOR SECURITY, LIFE SAFETY, OR FIRE REQUIREMENTS).

RAIL FORCES		F_1	F_2
F1 / F2	LOADING OR UNLOADING	450 LBS.	435 LBS.

MAXIMUM VERTICAL FORCE ON EACH GUIDE RAIL DUE TO SAFETY APPLICATION.	CAR
	8,910 LBS.

NOTE A: ALL REACTIONS INCLUDE ALLOWANCE FOR IMPACT.

NOTE B: THYSSENKRUPP ELEVATOR TO BE NOTIFIED OF ANY CHANGE TO ELEVATOR HOISTWAY OR MACHINE ROOM DESIGN PRIOR TO FABRICATION OF ELEVATOR EQUIPMENT.

NOTE C: ELEVATOR DESIGN AND FABRICATION BASED ON ESTIMATED CAB WEIGHT SHOWN. LAYOUT APPROVAL WILL BE CONSTRUED AS FINAL CAB WEIGHT, UNLESS OTHERWISE NOTIFIED.

DATE	SYM.	REVISION	BY	CHKD.

DO NOT SCALE THIS DRAWING

ELEVATOR CONTRACTOR	CONTRACT NUMBER

FOR:

ADDRESS:

CITY:

ARCHITECT:

GENERAL CONTRACTOR:

SYNERGY NON–SEISMIC – 3500/200 C/O | SN015

ThyssenKrupp Elevator Americas

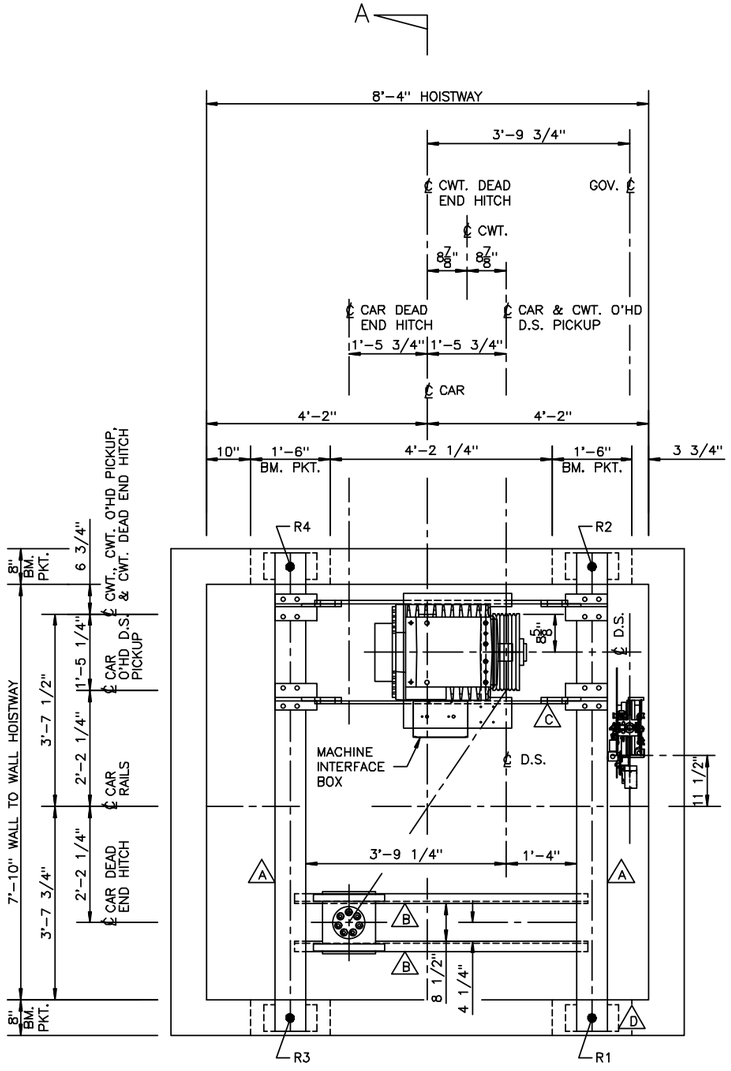
ThyssenKrupp

9/9/2011
GEMANTOWN, TN.

DRAWN	DATE	CHKD.	JOB NUMBER	REV.	SHEET NO.
					OF

HEAT LOAD IN CONTROLLER CLOSET
CAUSED BY ELEVATOR EQUIPMENT IS
IN B.T.U./HOUR UNITS PER CHART BELOW

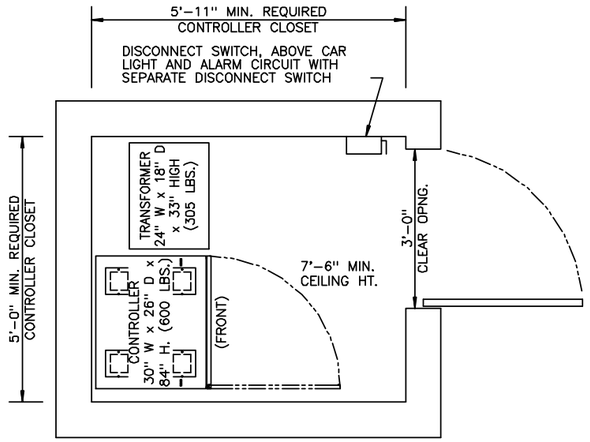
CAR SPEED	WITHOUT TRANSFORMER	WITH TRANSFORMER	REGENERATIVE DRIVE
200	1650	2210	NO
350	2070	3045	NO
200	560	1115	YES
350	980	1955	YES



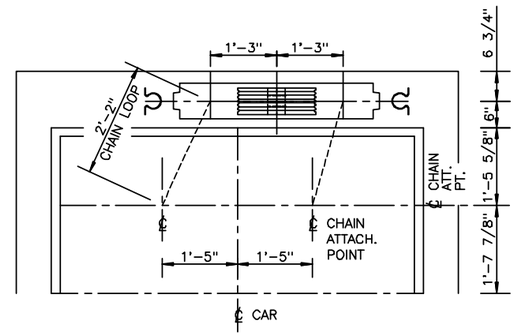
NOTE: STANDARD BEAM POCKET ARRANGEMENT SHOWN FOR THE INSTALLATION OF THE OVERHEAD BEAMS. ANY DEVIATION FROM BEAM POCKET TYPE OF SUPPORT WILL REQUIRE APPROVAL FROM THE FACTORY.

A

PLAN OF OVERHEAD



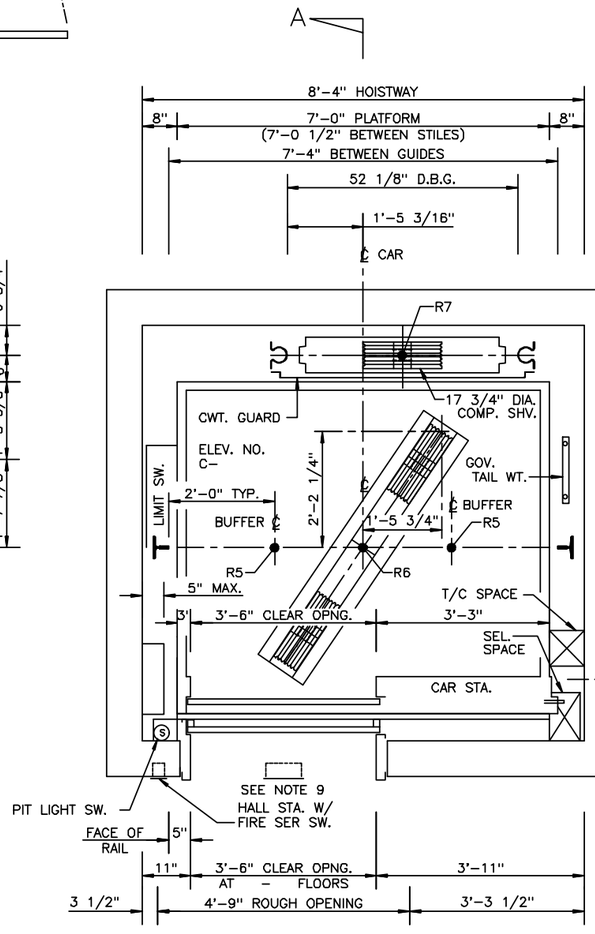
PLAN OF CONTROLLER CLOSET



CHAIN COMPENSATION
ATTACHMENT POINTS

OVERHEAD REACTIONS (LBS.)	
R1	4,600
R2	14,000
R3	6,700
R4	8,000

OVERHEAD BEAMS, SUPPORT PLATES, AND BEARING PLATES		
QTY.	MARK	DESCRIPTION
2	A	W16 x 45 x 9'-0" LONG
2	B	C8 x 11.5 x 5'-6 1/4" LONG
1	C	MACHINE SUPPORT ASSEMBLY
4	D	6" x 1'-0" x 3/4" STEEL PLATE



A

PLAN OF HOISTWAY

BUFFER REACTIONS (LBS.)		
	200 F. P. M.	350 F. P. M.
R5	13,600	-----
R6	-----	32,500
R7	18,600	25,350

DATE	SYM.	REVISION	BY	CHKD.

FOR:

DO NOT SCALE THIS DRAWING

SYNERGY NON-SEISMIC – 3500/200-350 LH SN018

ThyssenKrupp Elevator Americas

ThyssenKrupp

9/9/2011
GERMANTOWN, TN.

DRAWN	DATE	CHKD.	JOB NUMBER	REV.	SHEET NO.
					OF