UNIVERSITY OF TORONTO | Facilities & Services

Door hardware standard

Last updated: November 28, 2023

Revision 02

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08 71 00 Door hardware

General

In the planning stage of a project, a determination shall be made regarding the need for or desirability of including a security access system in the building. If security access is to be integrated into the building, the designed system shall adhere to the schematic diagrams in Appendix A. The security system shall be reviewed with University of Toronto.

All low-voltage wiring shall be stranded and shielded copper conductors installed in conduit or plenum rated in hollow metal door frame where accessible.

To ensure barrier-free access across the campus, any renovation work shall incorporate the use of lever handles that turn in towards the door on all doors except in the case of:

a) Existing buildings required by Authorities Having Jurisdiction to maintain hardware for historical or heritage reasons.
b) Utility rooms where accessible hardware cannot be installed.
c) All stairwell exits.

All barrier-free access doors incorporating the use of a power door operator shall follow the University's Facility Accessibility Design Standard.

All hardware shall have a manufacturer warranty of minimum one year.

1. Keying

All cylinders for locksets shall be supplied and installed by the University of Toronto Lock Shop.

Key switch approved manufacturers:

a) Rutherford
b) Controls
c) Camden
d) IEI

2. Closers

Closers shall be surface mounted overhead type. All closers shall be field serviceable.

Approved manufacturers:

a) LCN (4041 for exterior and stairwell doors and 1461 for other doors)
b) Sargent
c) Norton

3. Door operators

Operators shall be Horton 4000 series or Rhinotek 4000 for all doors. The only exception is a single stall barrier-free washroom which shall be a Horton 7000 series. Refer to Appendix A, drawing ADO-1, ADO-2, and ADO-3 for typical wiring schematics for automatic door operator.

Approved manufacturers:

a) Horton
b) Rhinotek

4. Locksets

All locksets shall be constructed to ANSI standard mortise lockset.

Approved manufacturers:

Mortise locksets:

a) Schlage
b) Sargent
c) Corbin

Mortise locksets electric:

a) Schlage
b) Sargent

5. Exit devices

All exit devices shall be a flat bar regular style device. If the exit devices on the exterior door is not a part of the university's security systems, then cylinder dogging shall be used on the exit device.

Approved manufacturers:

Exit devices

a) Von Duprin
b) Sargent
c) Corbin

Panic devices, electric latch retraction

a) Sargent
b) Von Duprin QEL

6. Hinges

All hinges on oversized doors shall be a continuous hinge.
All hinges for interior doors shall be a full mortise hinge.

All electric transfers through any door shall be concealed wire contact transfer hinge.
Note: pivot hinges are not acceptable.

Approved manufacturers:

Hinges, continuous

a) Markar
b) McKinney
c) Gallery

Hinges, full mortise

a) McKinney
b) Hager

7. Electric locking devices

All doors using a card access system and/or barrier-free access shall use electric latch retraction panic device or an electric mortise lockset with request to exit feature.

Electric locking devices shall be powered by 24 volts dc with the exception of standalone battery-operated locksets.

Electric strikes shall only be used in the following locations:
• Barrier-free washrooms. Refer to Appendix A, drawing WR-01, 02, 03 and 04.

Approved manufacturers:

a) Hess
b) Von Duprin
c) Folger Adams

8. Door pulls and kick plates

Door pulls with through bolt fixing shall be at or near the same height as push plates so that the pull bolts will be hidden. Hardware shall not require polishing or maintenance. All edges shall be rounded. Kick plates on doors shall be stainless steel for full width of door.

Approved manufacturers:

Flush bolts

a) Ives
b) Rixson

Surface bolts

a) Glynn Johnson

b) Ives

9. Door seals

Approved manufacturers:

a) K.N. Crowder

b) Rixson

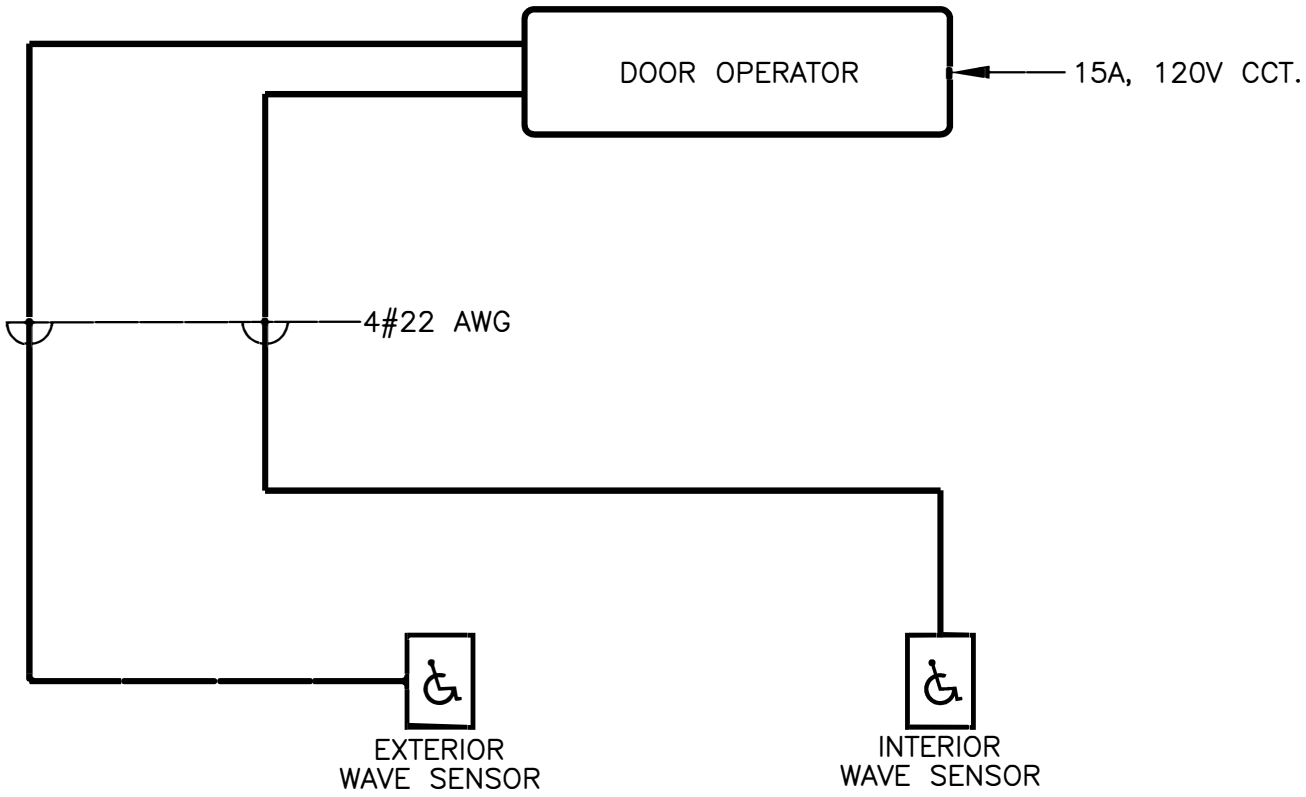
10. Standard measurements

The following hardware shall be installed at the recommended heights and identified on the shop drawings:

- Door pulls 900 mm to 1000 mm
- Door bar 900 mm to centre line
- Door lever 1000 mm to centre line
- Exit device bolt 950 mm to centre line

Appendix A

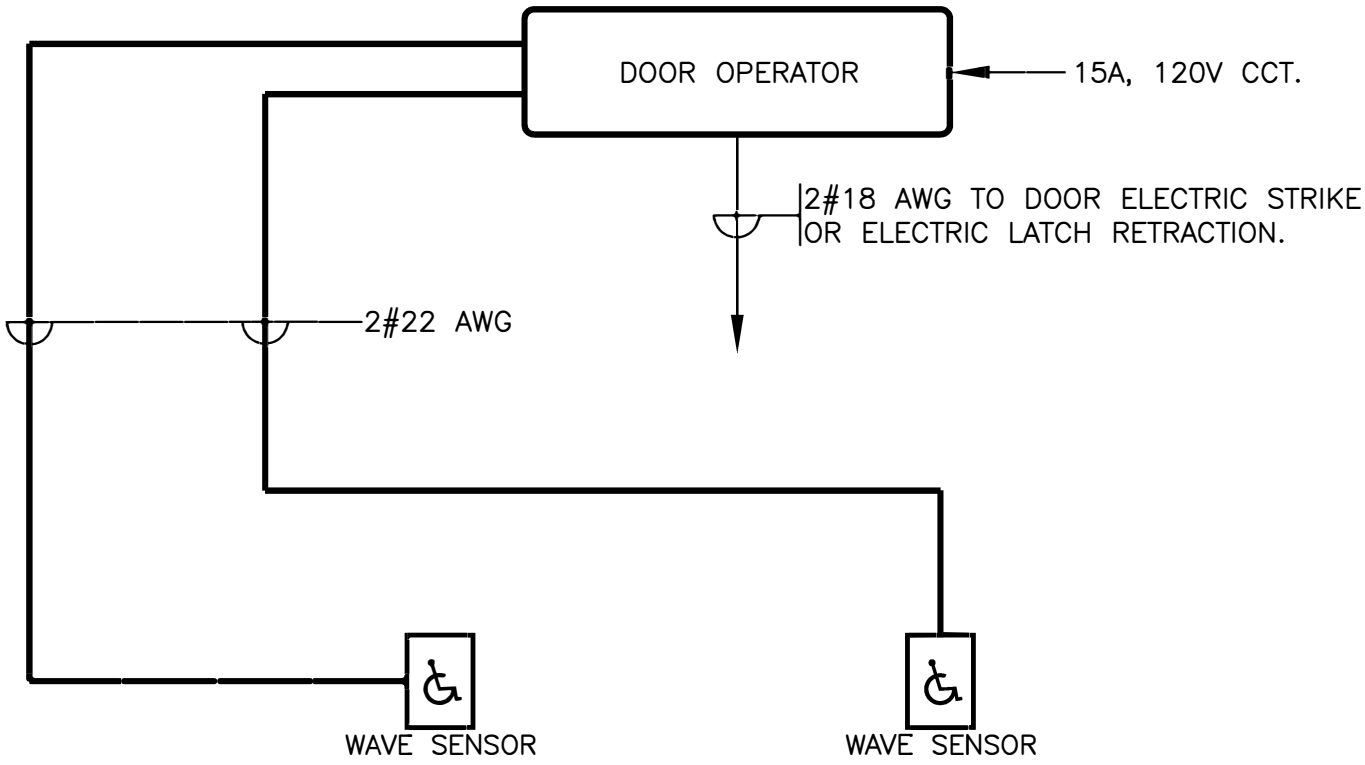
(Drawings commence in the following page)



NOTES:

1. DOOR OPERATOR SHALL BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR AND WIRED BY ELECTRICAL CONTRACTOR. 120VAC RECEPTACLE TO BE ADDED INSIDE OPERATOR BOX.
2. FINAL LOW VOLTAGE WIRING CONNECTIONS AND COMMISSIONING SHALL BE COMPLETED BY THE MANUFACTURER.
3. USE BX (AC90) FOR POWER WIRING TO THE DOOR OPERATOR ONLY THROUGH HOLLOW METAL DOOR FRAME WHERE ACCESSIBLE.

University Of Toronto REAL ESTATE OPERATIONS DESIGN & ENGINEERING	Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS	Drawn by: GDP	Drawing No.
	Ti tle: TYPICAL WIRING SCHEMATIC FOR AUTOMATIC DOOR OPERATOR WITH NON-LATCHABLE DOOR	Scale: N.T.S. Date: JUNE 2023	ADO-1



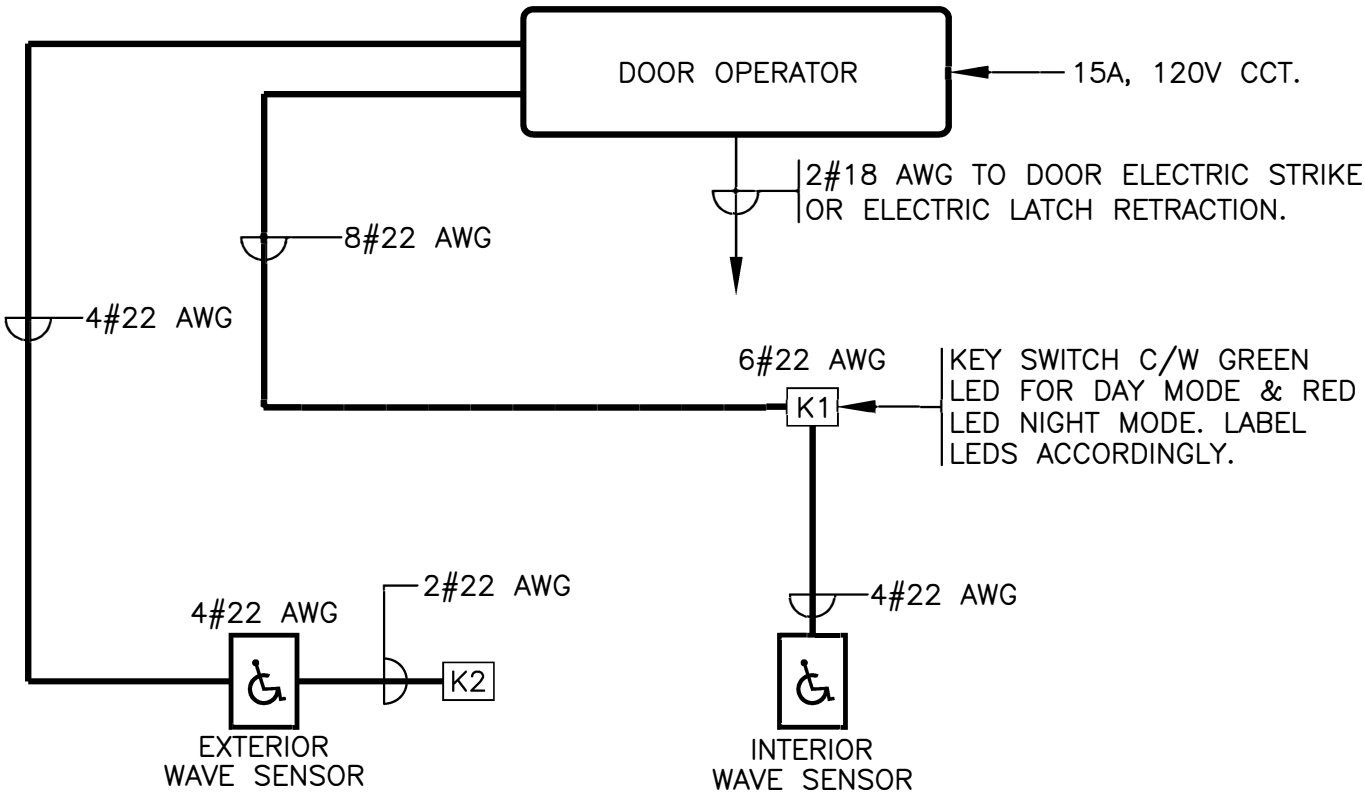
NOTES:

1. DOOR OPERATOR SHALL BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR, AND WIRED BY ELECTRICAL CONTRACTOR. 120VAC RECEPTACLE TO BE ADDED INSIDE OPERATOR BOX. ELECTRIC STRIKE SHALL BE SUPPLIED BY GENERAL CONTRACTOR, AND INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR.

2. FINAL LOW VOLTAGE WIRING CONNECTIONS AND COMMISSIONING SHALL BE COMPLETED BY THE MANUFACTURER.

3. USE BX (AC90) FOR POWER WIRING TO THE DOOR OPERATOR ONLY THROUGH HOLLOW METAL DOOR FRAME WHERE ACCESSIBLE.

University Of Toronto REAL ESTATE OPERATIONS DESIGN & ENGINEERING	Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS	Drawn by: GDP	Drawing No.
	Title: TYPICAL WIRING SCHEMATIC FOR AUTOMATIC DOOR OPERATOR WITH LATCHABLE DOOR	Scale: N.T.S. Date: JUNE 2023	ADO-2



OPERATION:

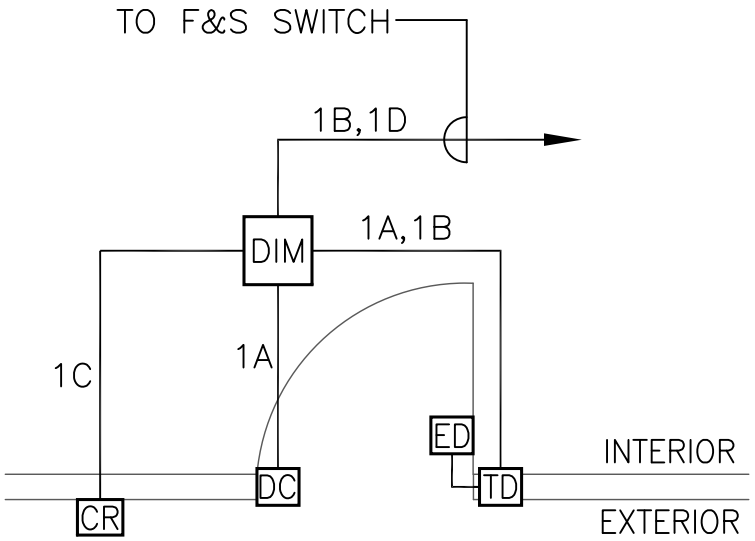
K1 INSIDE KEY SWITCH RESTRICTS DOOR OPERATOR FROM EXTERIOR AFTER HOURS. INTERIOR WAVE SENSOR OPENS DOOR IN DAY OR NIGHT MODE. KEY SWITCH SHALL BE COMPLETE WITH MAINTAINED CONTACTS LED. OUTLET BOX TO ALLOW THE KEY FACE PLATE TO BE MATCHED TO THE BOX MOUNTING HOLES AND TAMPER PROOF SCREWS FOR MOUNTING THE KEY FACE PLATE. KEY SWITCH TO MATCH MASTER BUILDING KEY.

K2 EXTERIOR KEY SWITCH OPENS THE DOOR AFTER HOURS. EXTERIOR WAVE SENSOR OPENS DOOR IN DAY MODE ONLY. KEY SWITCH SHALL BE COMPLETE WITH MOMENTARY CONTACT. OUTLET BOX TO ALLOW THE KEY FACE PLATE TO BE MATCHED TO THE BOX MOUNTING HOLES AND TAMPER PROOF SCREWS FOR MOUNTING THE KEY FACE PLATE. KEY SWITCH TO MATCH BUILDING MASTER KEY.

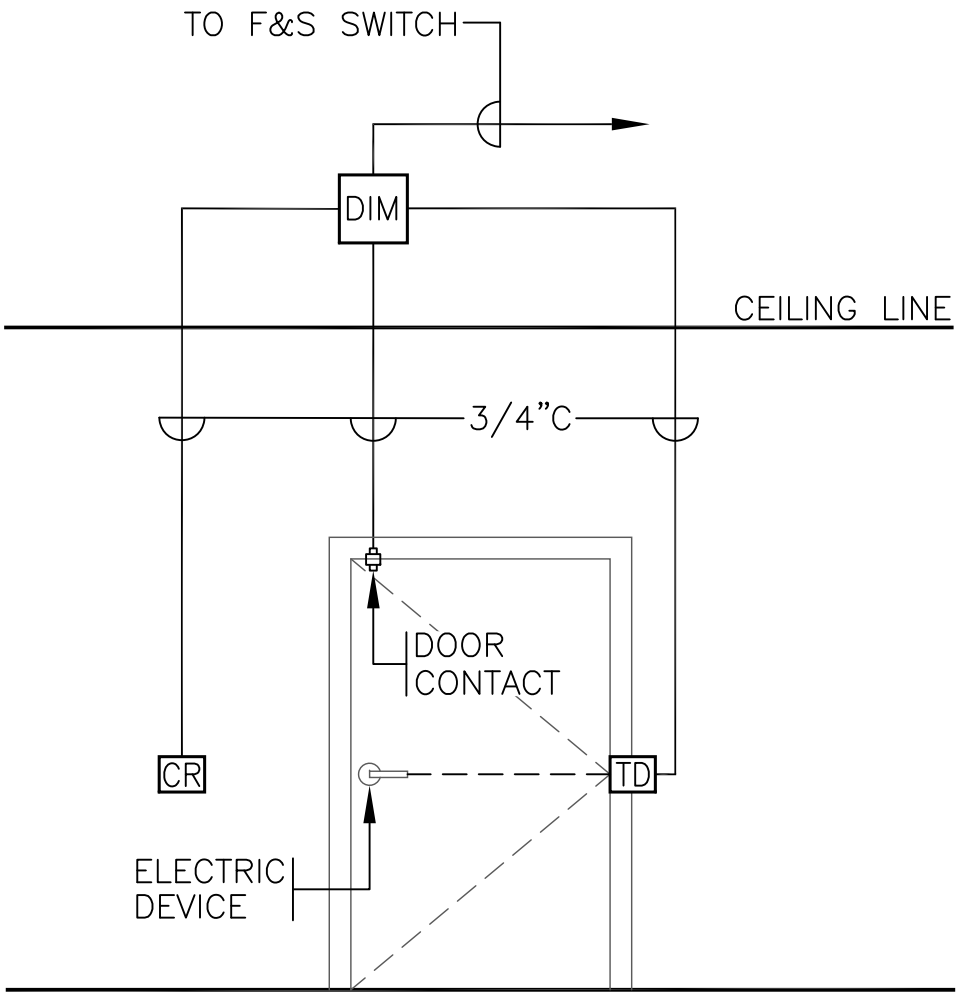
NOTES:

1. DOOR OPERATOR SHALL BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR, AND WIRED BY ELECTRICAL CONTRACTOR. 120VAC RECEPTACLE TO BE ADDED INSIDE OPERATOR BOX. KEY CYLINDERS BY U. of T. LOCKSHOP AND ELECTRIC STRIKE BY GENERAL TRADE. ELECTRIC STRIKE INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR.
2. FINAL LOW VOLTAGE WIRING CONNECTIONS AND COMMISSIONING SHALL BE COMPLETED BY THE MANUFACTURER.
3. USE BX (AC90) FOR POWER WIRING TO THE DOOR OPERATOR ONLY THROUGH HOLLOW METAL DOOR FRAME WHERE ACCESSIBLE.

University Of Toronto REAL ESTATE OPERATIONS DESIGN & ENGINEERING	Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS Title: TYPICAL WIRING SCHEMATIC FOR AUTOMATIC DOOR OPERATOR WITH LOCKABLE DOOR	Drawn by: GDP Scale: N.T.S. Date: JUNE 2023	Drawing No. ADO-3



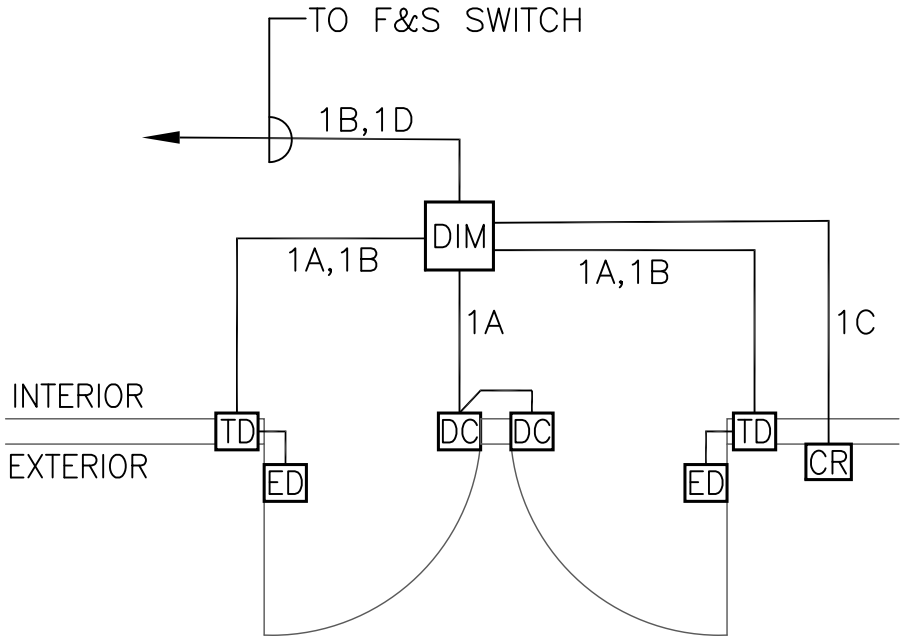
PLAN VIEW



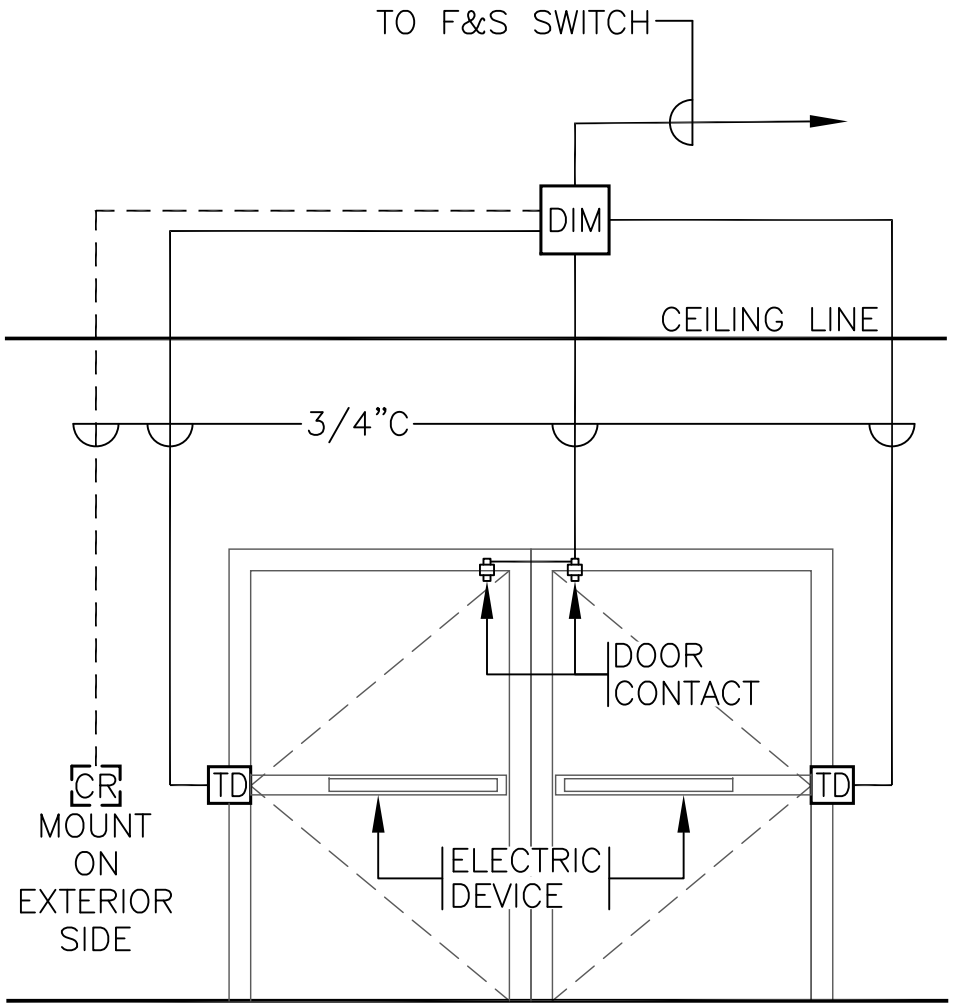
ELEVATION

(EXTERIOR)

University of Toronto UPDC DESIGN & ENGINEERING	Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS	Drawn by: GDP	Project No.
	Title: ENTERPRISE BUILDINGS INTEGRATOR FAULT TOLERANT SERIES INTERIOR DOOR WIRING SCHEMATIC FOR SINGLE DOOR WITH CARD READER	Scale: N.T.S. Date: JUNE 2023	Drawing No. FT-INT-01



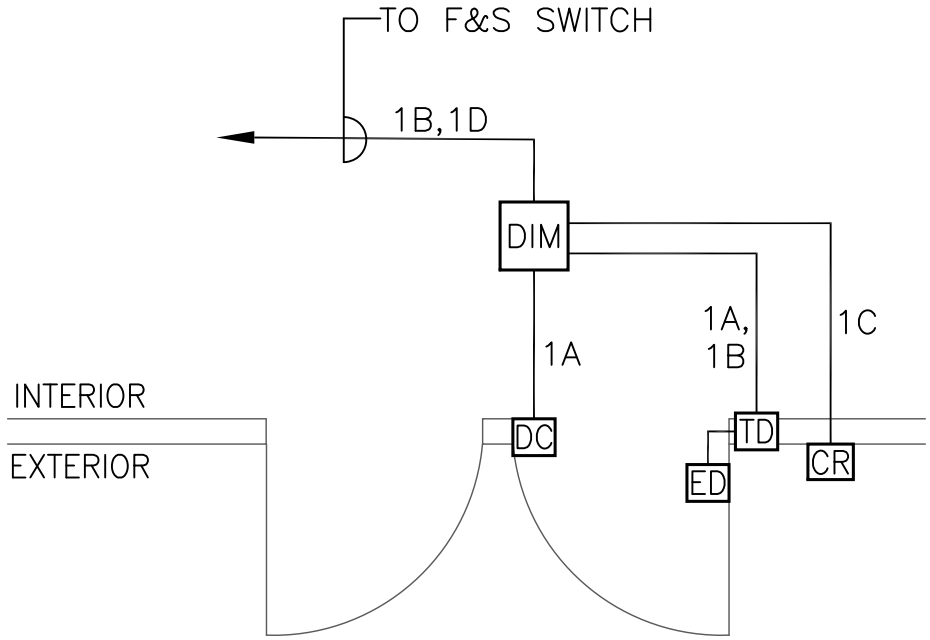
PLAN VIEW



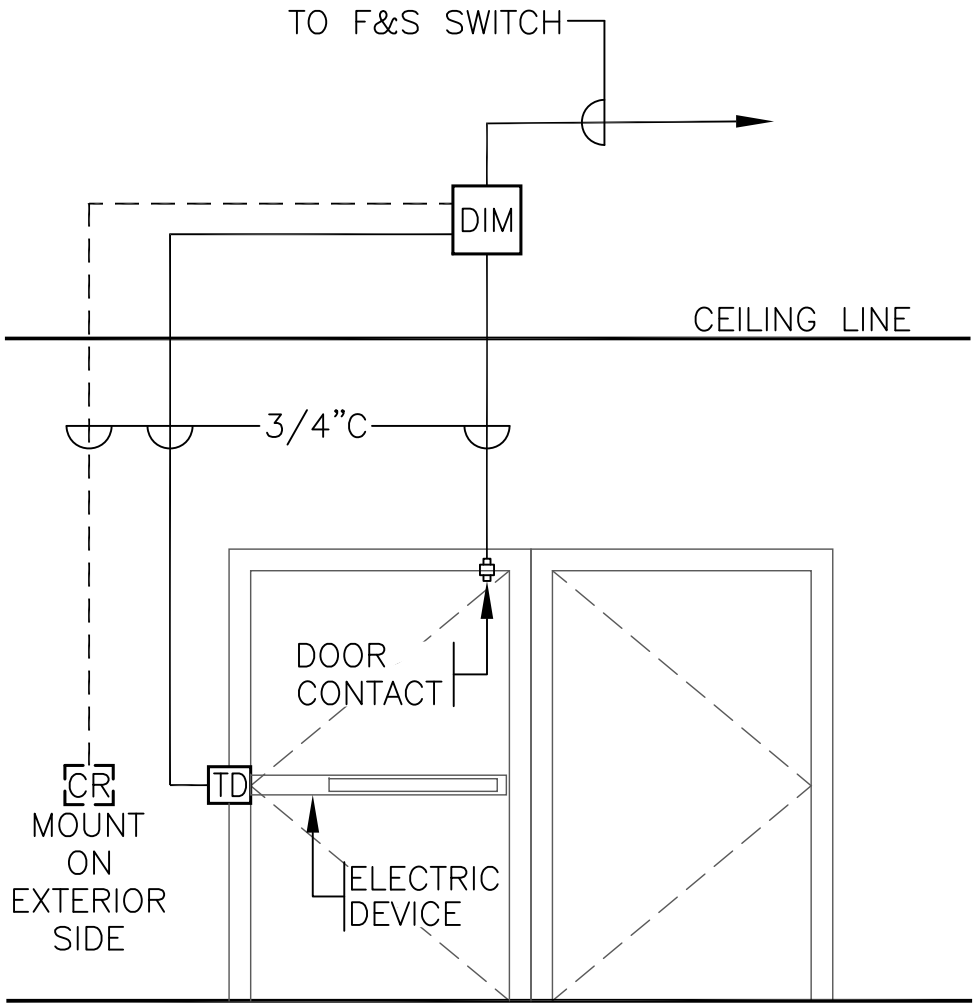
ELEVATION

(INTERIOR)

University of Toronto UPDC DESIGN & ENGINEERING	Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS	Drawn by: GDP	Project No.
	Title: ENTERPRISE BUILDINGS INTEGRATOR FAULT TOLERANT SERIES INTERIOR DOOR WIRING SCHEMATIC FOR DOUBLE DOOR WITH CARD READER	Scale: N.T.S. Date: JUNE 2023	Drawing No. FT-INT-02



PLAN VIEW



ELEVATION

(INTERIOR)

University of Toronto
UPDC
DESIGN & ENGINEERING

Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS

Title: ENTERPRISE BUILDINGS INTEGRATOR
FAULT TOLERANT SERIES INTERIOR DOOR WIRING SCHEMATIC
FOR DOUBLE DOOR WITH CARD READER & SINGLE ACTIVE LEAF

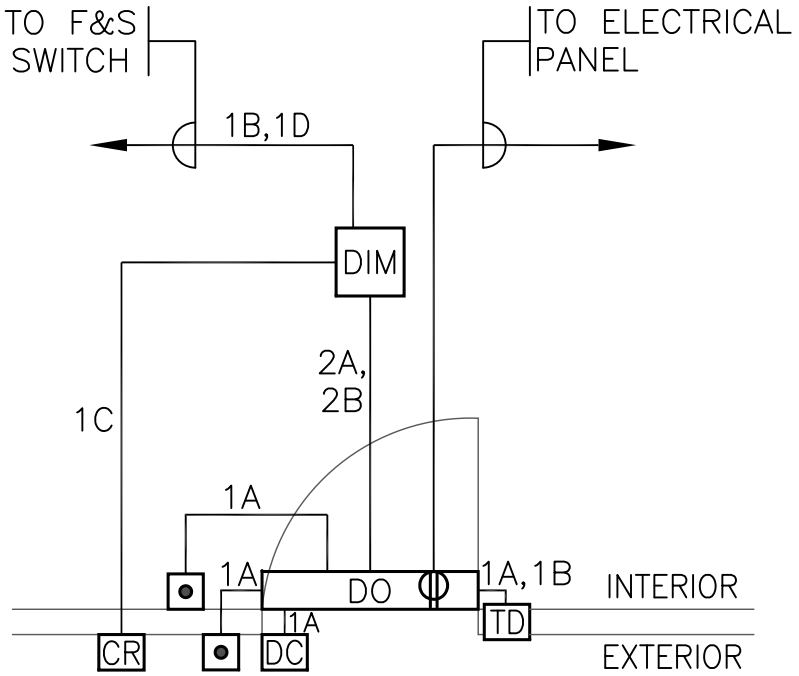
Drawn by: GDP

Scale: N.T.S.

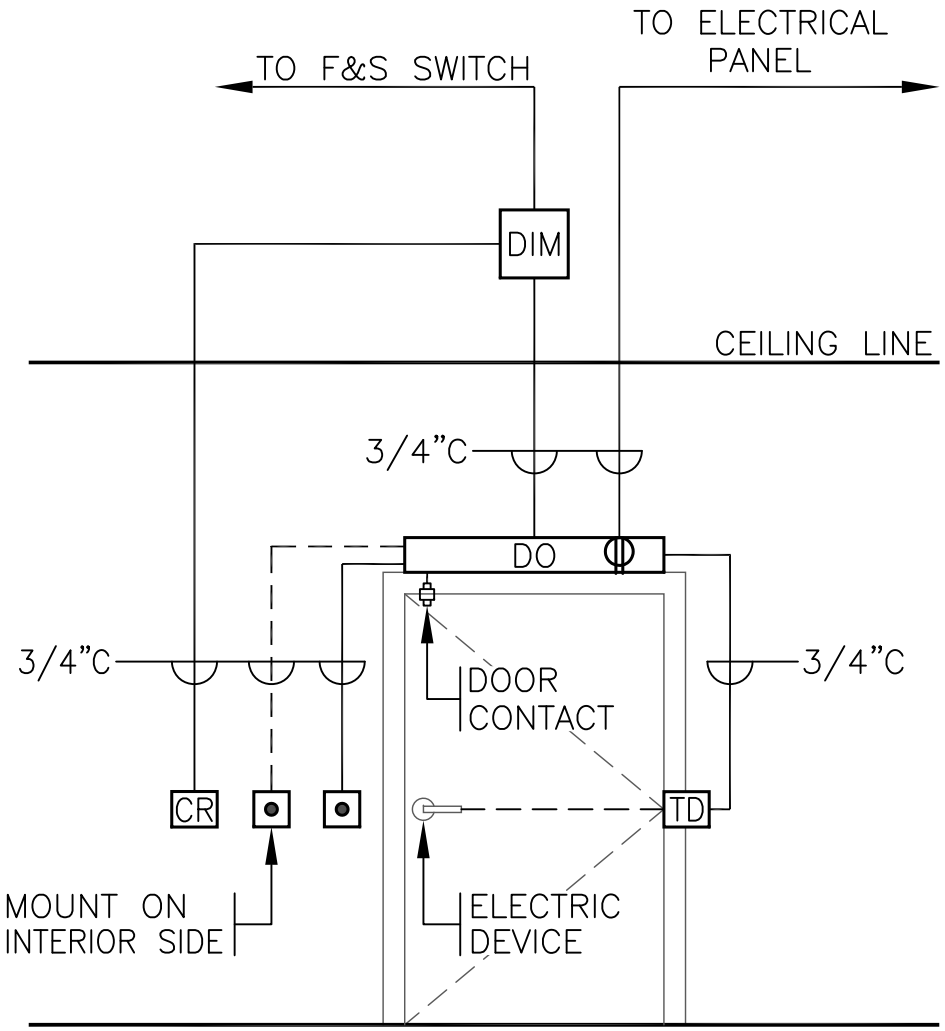
Date: JUNE 2023

Project No.

Drawing No. FT-INT-03



PLAN VIEW

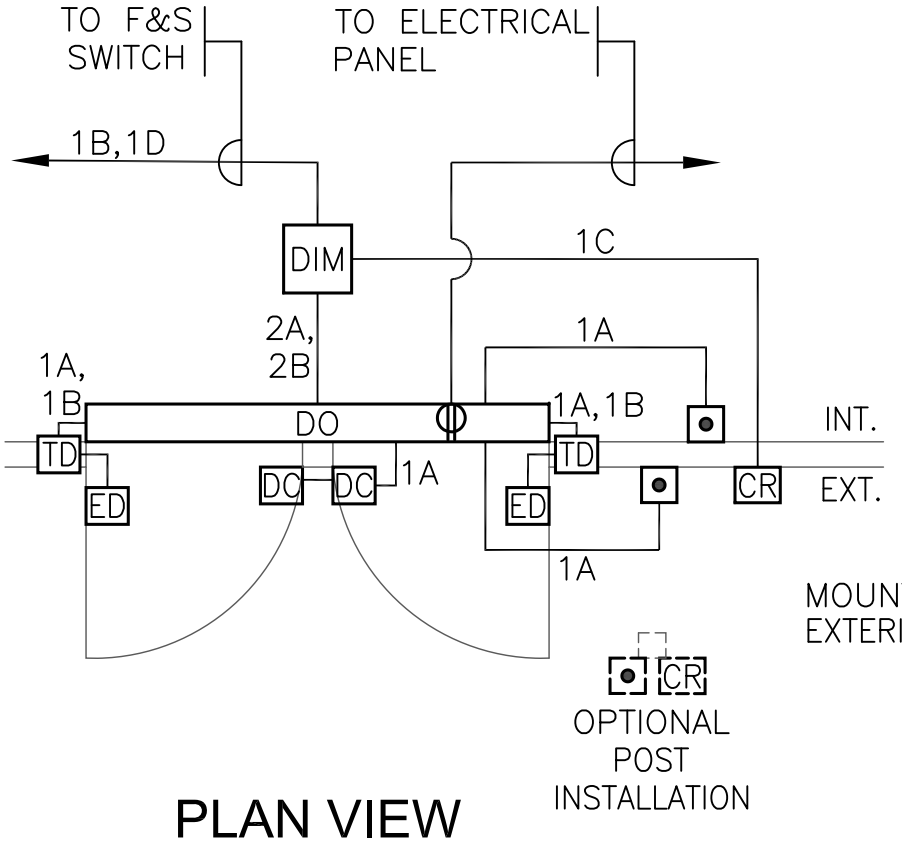


ELEVATION

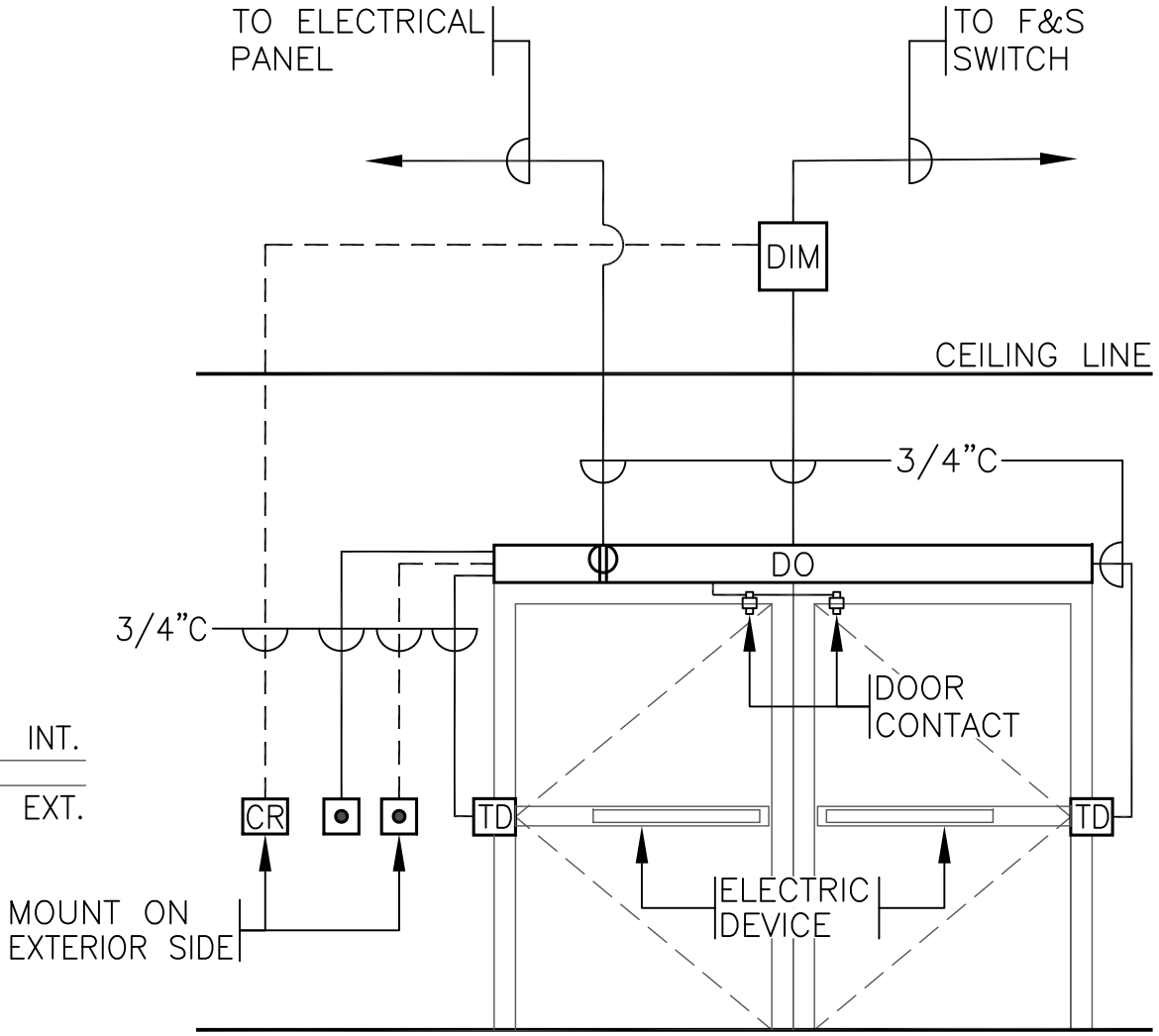
(EXTERIOR)

University of Toronto
UPDC
DESIGN & ENGINEERING

Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS		Drawn by: GDP	Project No.
Title: ENTERPRISE BUILDINGS INTEGRATOR FAULT TOLERANT SERIES INTERIOR DOOR WIRING SCHEMATIC FOR SINGLE DOOR WITH CARD READER & DOOR OPERATOR		Scale: N.T.S. Date: JUNE 2023	Drawing No. FT-INT-04



PLAN VIEW



ELEVATION

(INTERIOR)

University of Toronto
UPDC
DESIGN & ENGINEERING

Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS

Title: ENTERPRISE BUILDINGS INTEGRATOR
FAULT TOLERANT SERIES INTERIOR DOOR WIRING SCHEMATIC
FOR DOUBLE DOOR WITH CARD READER & DOOR OPERATOR

Drawn by: GDP

Scale: N.T.S.

Date: JUNE 2023

Project No.

Drawing No. FT-INT-05

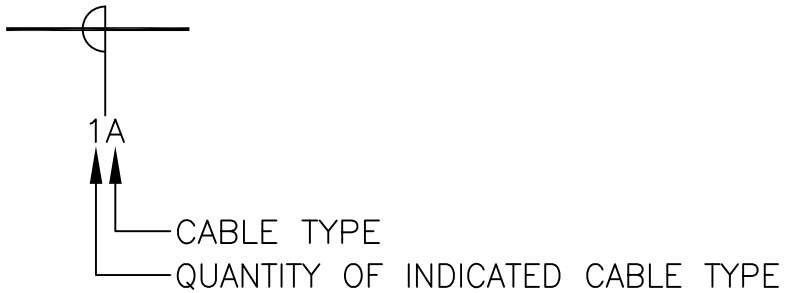
WIRE & CABLE LEGEND

CABLE	DESCRIPTION	BELDEN #	APPLICATION
A	2PR, 22AWG, STRANDED, SHEILDED, TWISTED PR.	8723	DOOR CONTACT/REX/LOCK STATUS
B	1PR, 18AWG, STRANDED, SHIELDED, TWISTED PR.	9740	ELECTRIC LOCK/AUDIBLE ALARM
C	3PR, 22AWG, STRANDED, SHEILDED, TWISTED PR.	8777	CARD READER
D	CAT. 6 CABLE		

FIELD DEVICE LEGEND

SYMBOL	DESCRIPTION
CR	CARD READER
DC	DOOR CONTACT
ED	ELECTRIC DEVICE
TD	ELECTRIC TRANSFER DEVICE
DO	DOOR OPERATOR
DIM	DOOR INTERFACE MODULE
⊙	DOOR ACTIVATION DEVICE

WIRE TAGGING



University of Toronto
UPDC
DESIGN & ENGINEERING

Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS

Title: ENTERPRISE BUILDINGS INTEGRATOR
FAULT TOLERANT SERIES INTERIOR DOOR WIRING
LEGENDS & WIRE TAGGING DIAGRAM

Drawn by: GDP

Scale: N.T.S.

Date: JUNE 2023

Project No.

Drawing No. FT-INT-05A

NOTES: (INTERIOR DOOR)

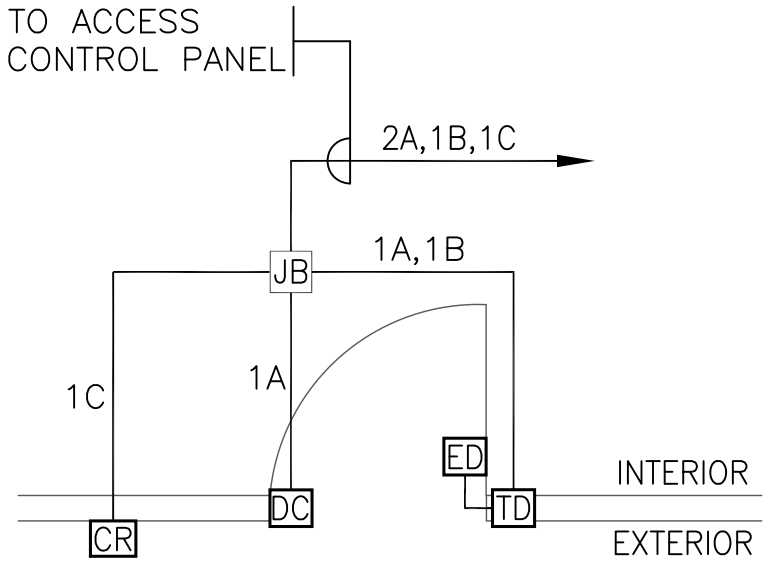
1. FOR EXACT HEIGHTS, REFER TO AODA SPECIFICATIONS.
2. LOW VOLTAGE WIRING SHALL BE COPPER CONDUCTORS.
3. MINIMUM CONDUIT SIZE TO BE 3/4".

SEQUENCE OF OPERATION (INTERIOR DOOR WITH CARD READER):

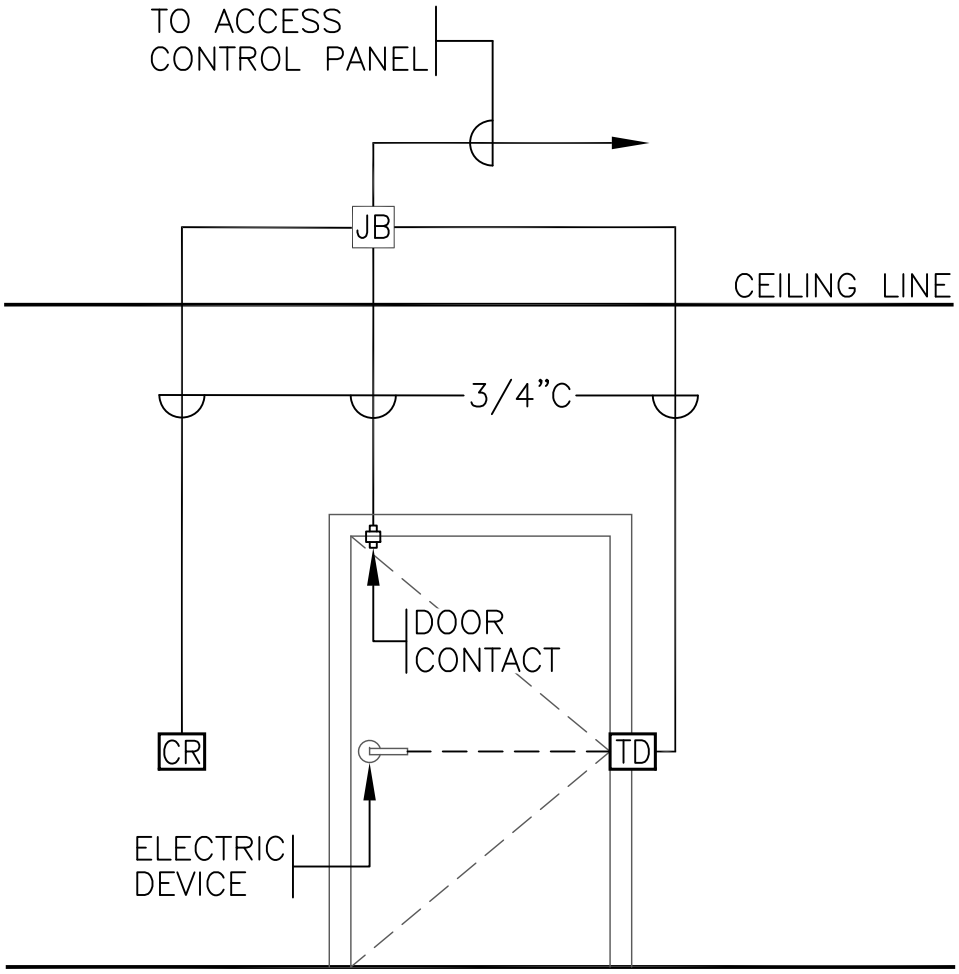
FOR LOCKED DOORS:

- CARD READER UNLOCKS DOOR.
- ONCE CLOSED, DOOR LOCKS.
- IF DOOR IS LEFT AJAR, BUZZER WILL SOUND.

University of Toronto UPDC DESIGN & ENGINEERING	Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS	Drawn by: GDP	Project No.
	Title: ENTERPRISE BUILDINGS INTEGRATOR FAULT TOLERANT SERIES INTERIOR DOOR WIRING NOTES & SEQUENCE OF OPERATION	Scale: N.T.S. Date: JUNE 2023	Drawing No. FT-INT-05B



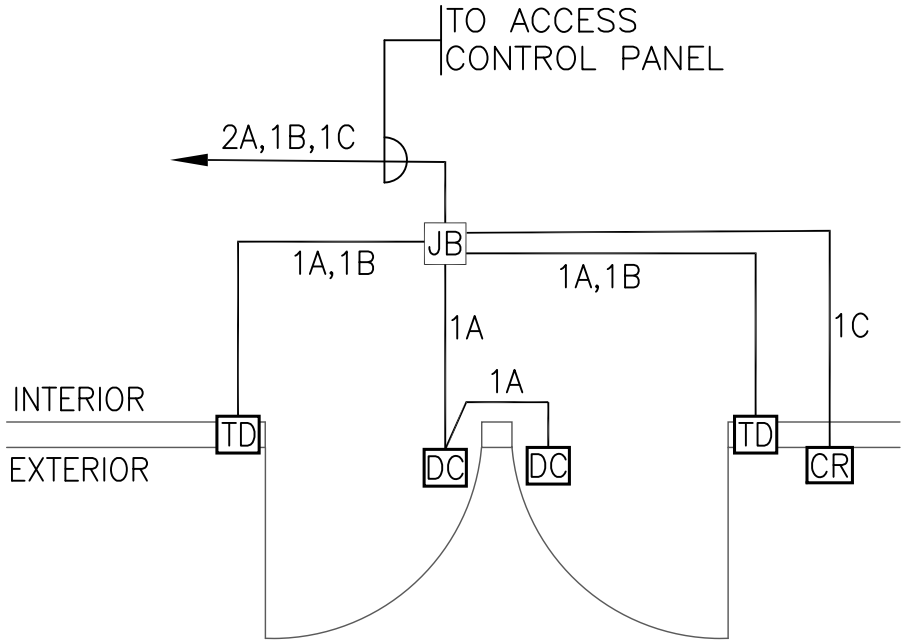
PLAN VIEW



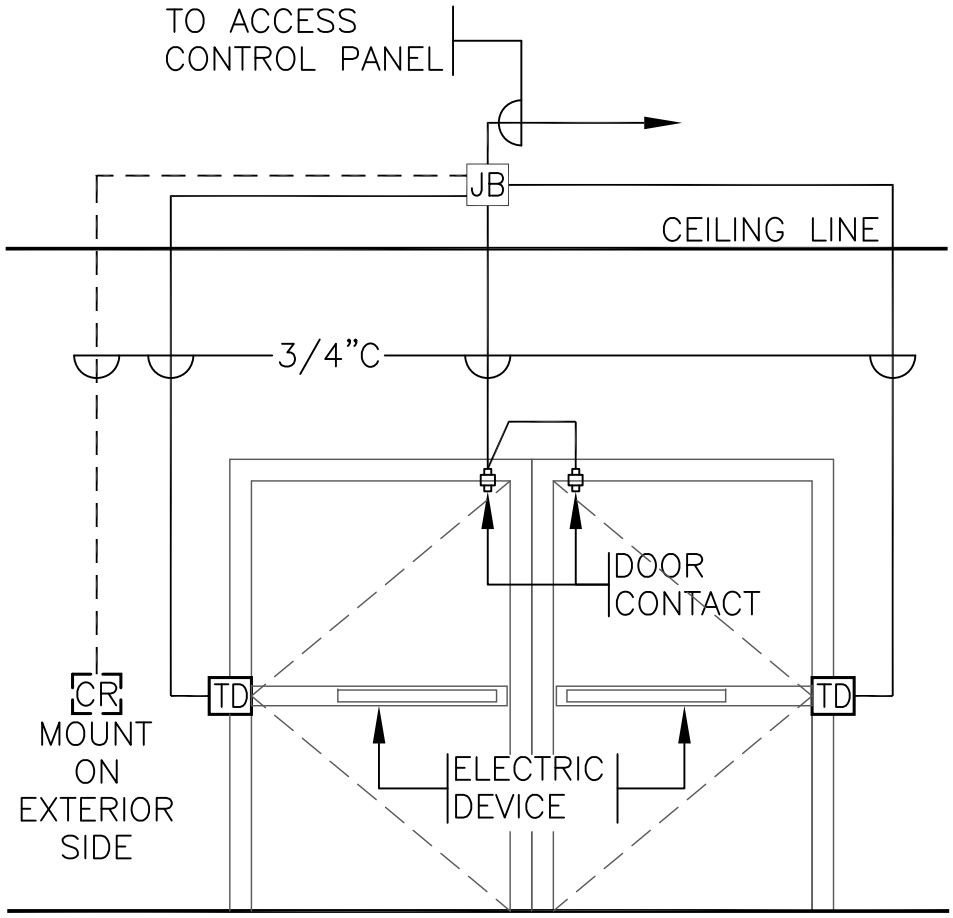
ELEVATION

(EXTERIOR)

University of Toronto UPDC DESIGN & ENGINEERING	Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS	Drawn by: GDP	Project No.
	Title: ENTERPRISE BUILDINGS INTEGRATOR IQ SERIES (NON-FAULT) INTERIOR DOOR WIRING SCHEMATIC FOR SINGLE DOOR WITH CARD READER	Scale: N.T.S. Date: JUNE 2023	Drawing No. IQ-INT-01



PLAN VIEW



ELEVATION
(INTERIOR)

University of Toronto UPDC DESIGN & ENGINEERING	Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS	Drawn by: GDP	Project No.
	Title: ENTERPRISE BUILDINGS INTEGRATOR IQ SERIES (NON-FAULT) INTERIOR DOOR WIRING SCHEMATIC FOR DOUBLE DOOR WITH CARD READER	Scale: N.T.S. Date: JUNE 2023	Drawing No. IQ-INT-02

WIRE & CABLE LEGEND

CABLE	DESCRIPTION	BELDEN #	APPLICATION
A	2PR, 22AWG, STRANDED, SHEILDED, TWISTED PR.	8723	DOOR CONTACT/REX/LOCK STATUS
B	1PR, 18AWG, STRANDED, TWISTED PR.	9740	ELECTRIC LOCK/AUDIBLE ALARM
C	3PR, 22AWG, STRANDED, SHEILDED, TWISTED PR.	8777	CARD READER, RS485 COMMUNICATIONS
D	CAT. 6		

FIELD DEVICE LEGEND

SYM.	DESCRIPTION	SYM.	DESCRIPTION
CR	CARD READER	RX	REQUEST TO EXIT
DC	DOOR CONTACT	TD	ELECTRIC TRANSFER DEVICE
EL	ELECTRIC LOCK	JB	JUNCTION BOX (ACCESSIBLE FOR MAINTENANCE)

NOTES: (INTERIOR DOOR)

1. FOR EXACT HEIGHTS, REFER TO AODA SPECIFICATIONS.
2. LOW VOLTAGE WIRING SHALL BE COPPER CONDUCTORS.
3. MINIMUM CONDUIT SIZE TO BE 3/4".

SEQUENCE OF OPERATION (INTERIOR DOOR WITH CARD READER):

FOR LOCKED DOORS:

- CARD READER UNLOCKS DOOR.
- ONCE CLOSED, DOOR LOCKS.
- IF DOOR IS LEFT AJAR, BUZZER WILL SOUND.

University of Toronto
UPDC
DESIGN & ENGINEERING

Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS

Title: ENTERPRISE BUILDINGS INTEGRATOR
IQ SERIES (NON-FAULT) INTERIOR DOOR WIRING
LEGENDS, NOTES & SEQUENCE OF OPERATION

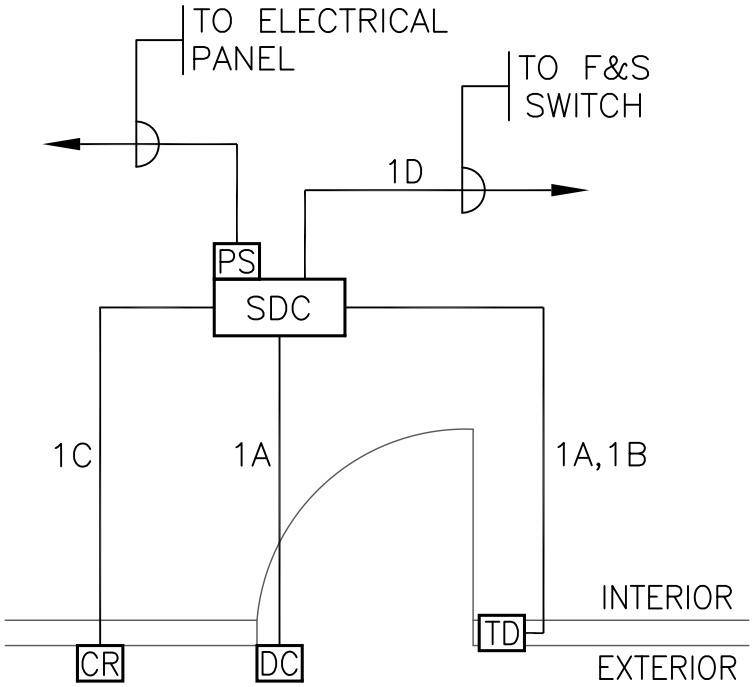
Drawn by: GDP

Scale: N.T.S.

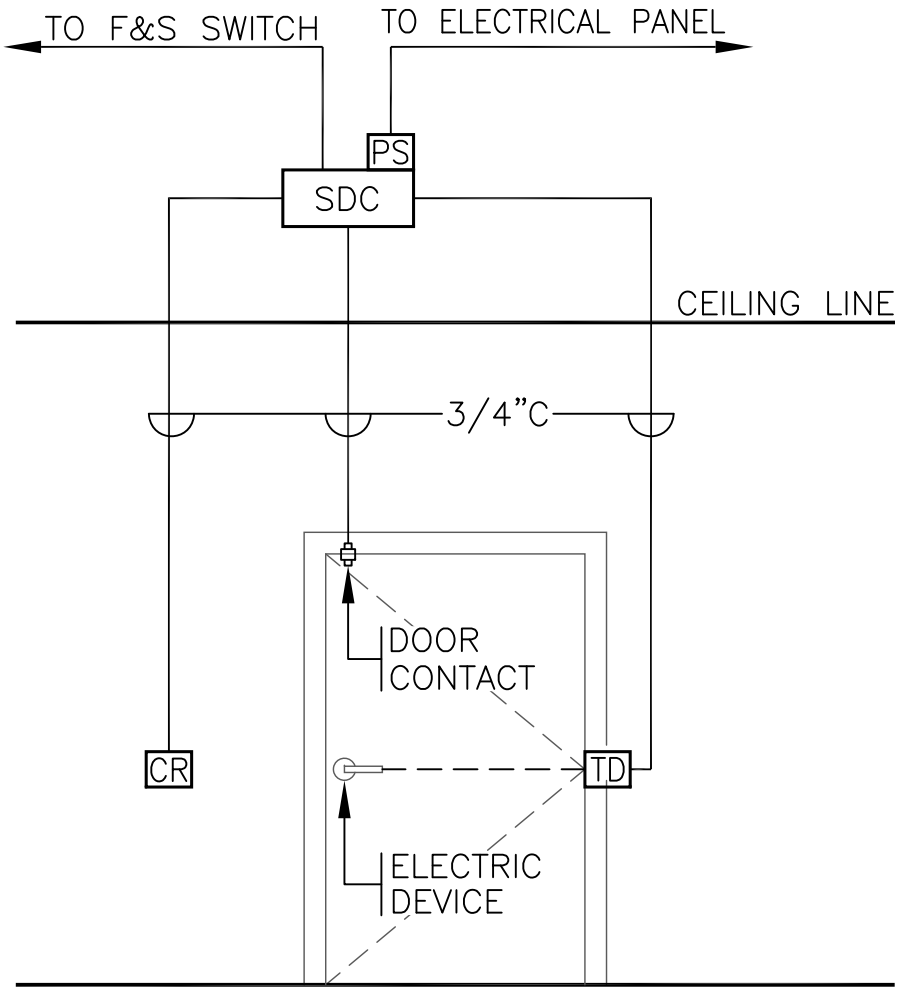
Date: JUNE 2023

Project No.

Drawing No. IQ-INT-03



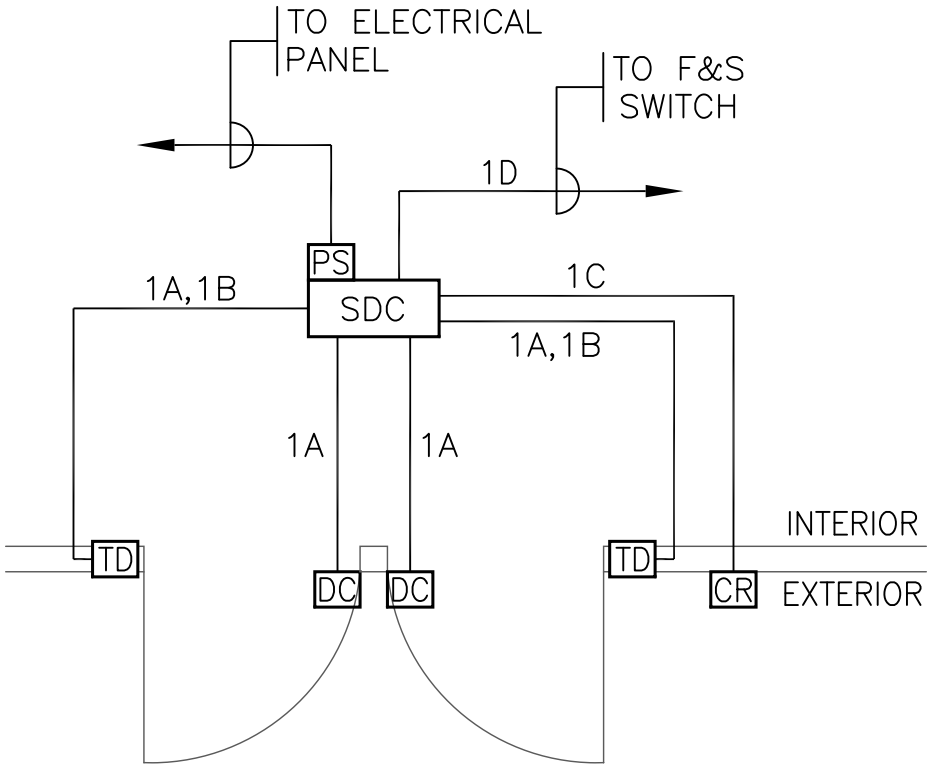
PLAN VIEW



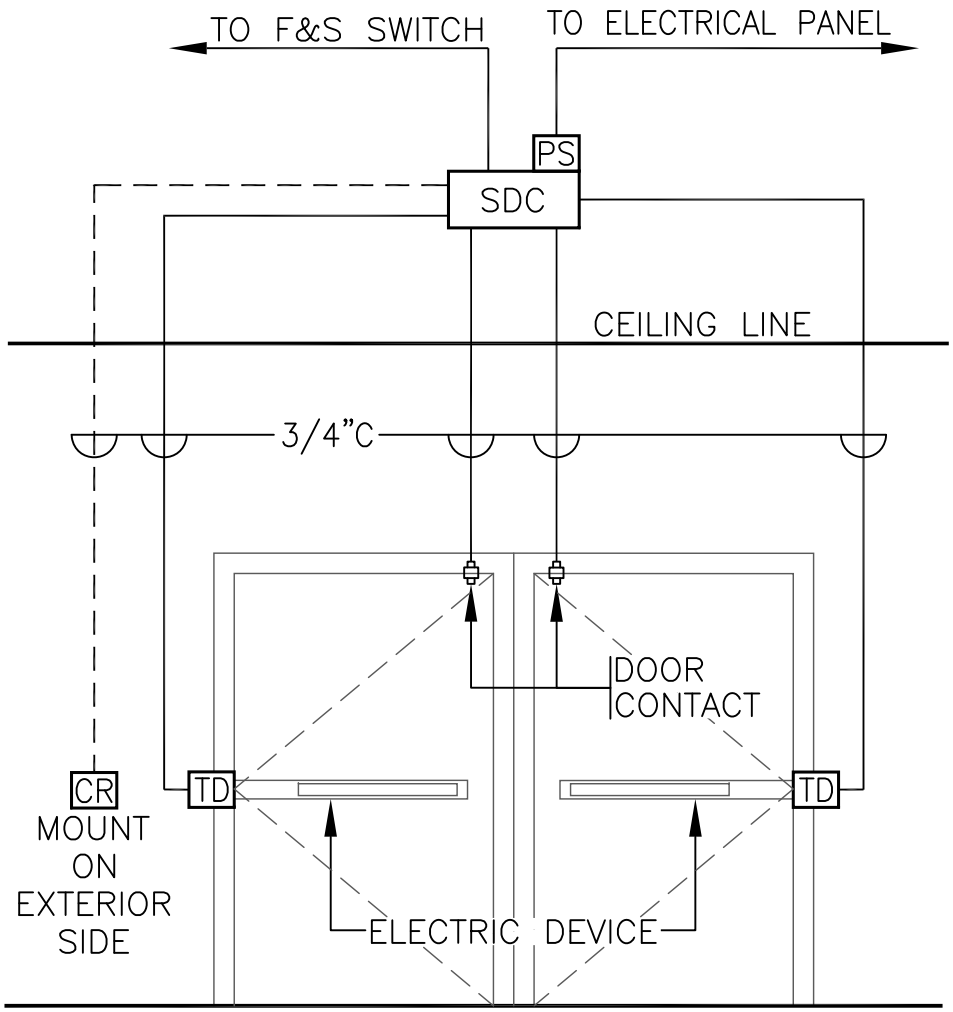
ELEVATION

(EXTERIOR)

University of Toronto UPDC DESIGN & ENGINEERING	Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS Title: TYPICAL SALTO WIRING SCHEMATIC FOR SINGLE DOOR W/ CARD READER & EXIT DEVICE	Drawn by: GDP Scale: N.T.S. Date: JUNE 2023	Project No. Drawing No. S-INT-01



PLAN VIEW



ELEVATION

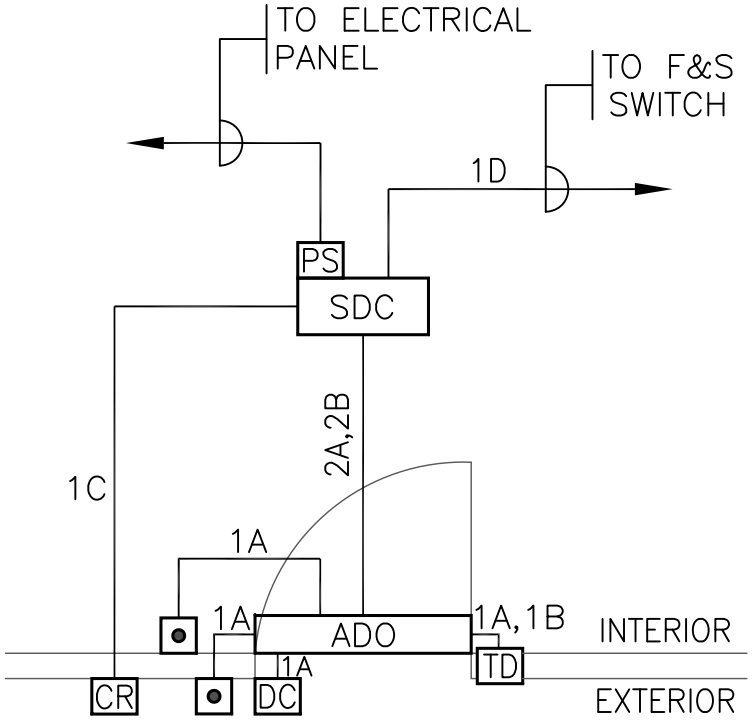
(INTERIOR)

University of Toronto
UPDC
DESIGN & ENGINEERING

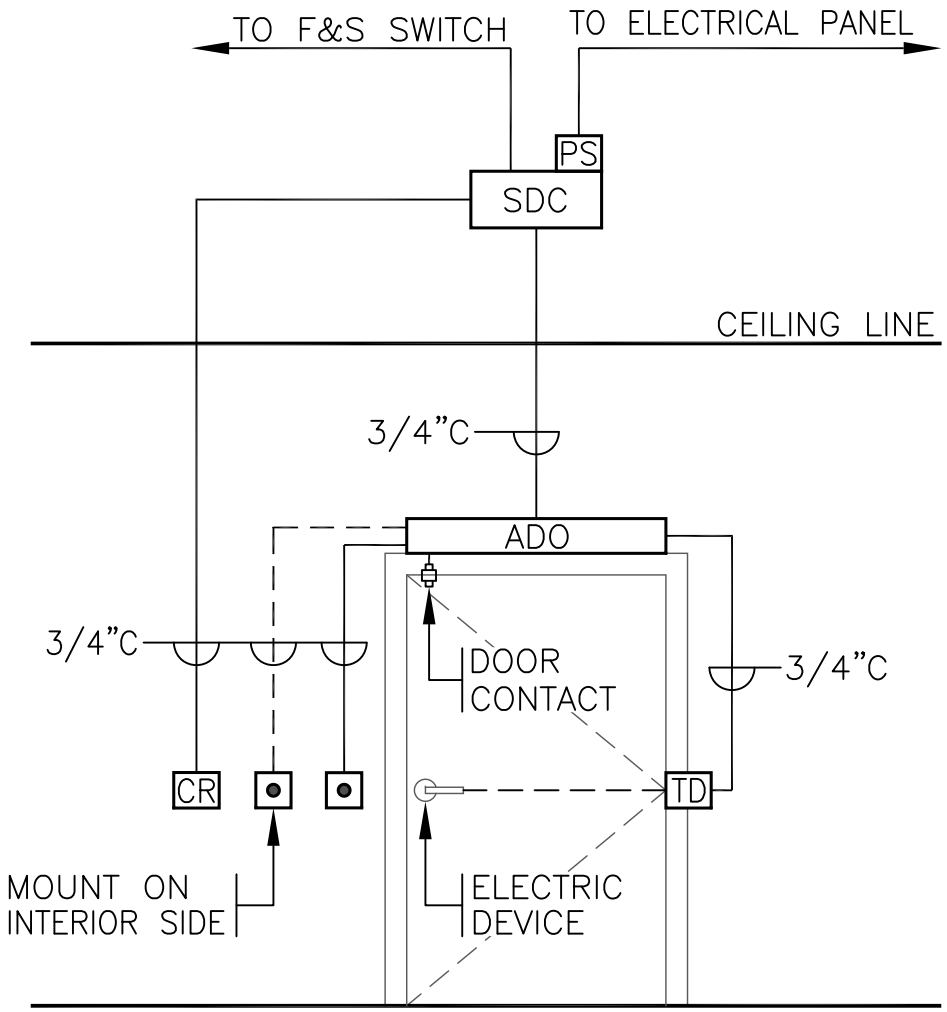
Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS

Title: TYPICAL SALTO WIRING SCHEMATIC FOR DOUBLE DOOR W/ CARD READER & EXIT DEVICE

Drawn by: GDP	Project No.
Scale: N.T.S.	
Date: JUNE 2023	Drawing No. S-INT-02



PLAN VIEW



ELEVATION

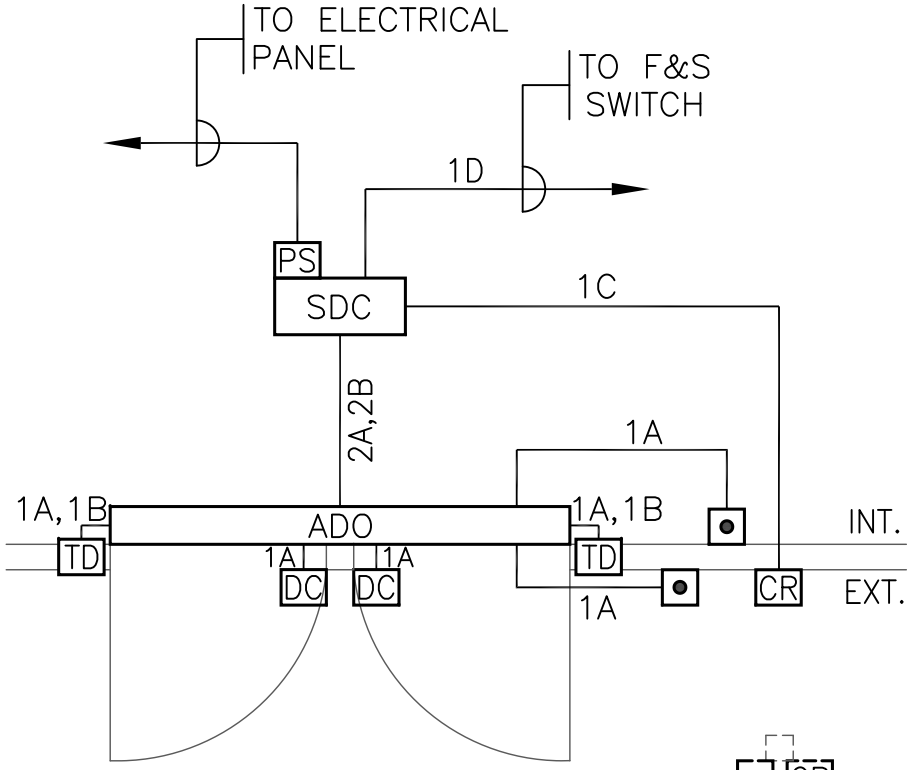
(EXTERIOR)

University of Toronto
UPDC
DESIGN & ENGINEERING

Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS

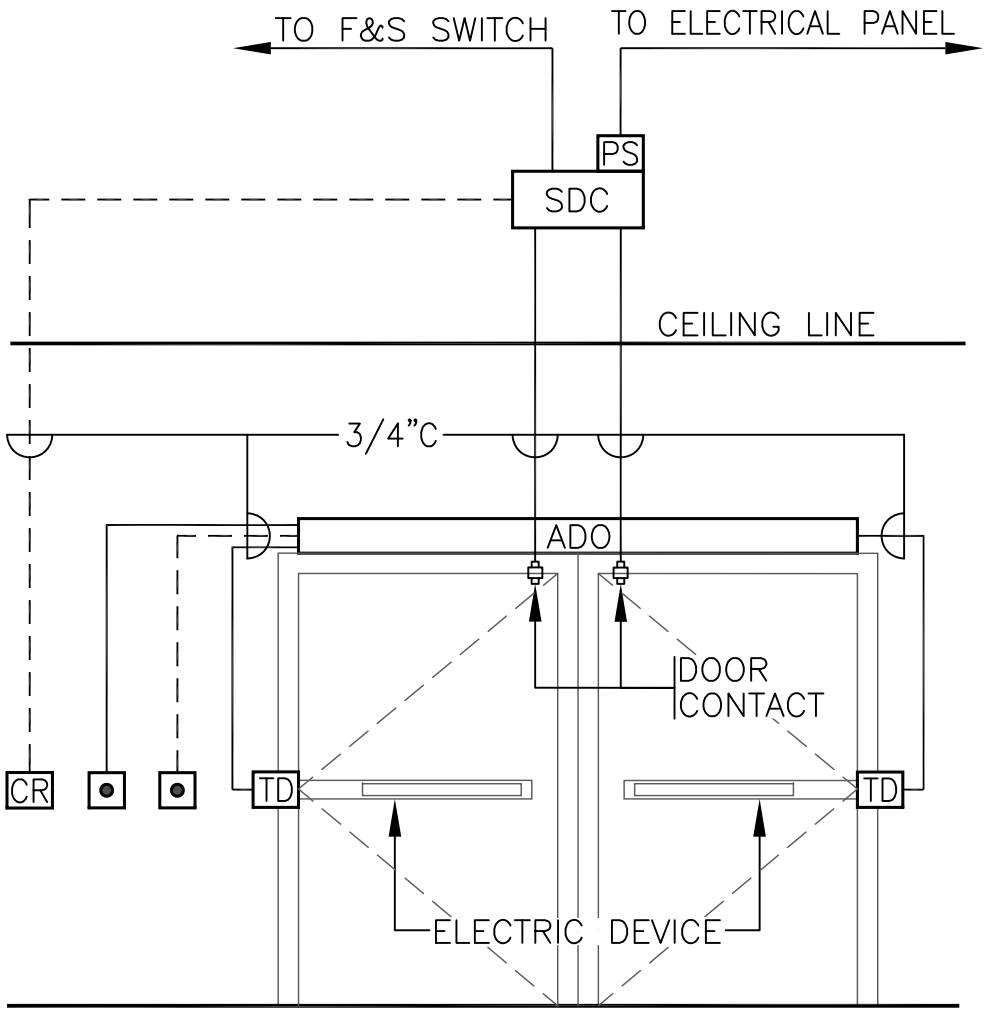
Title: TYPICAL SALTO WIRING SCHEMATIC FOR SINGLE DOOR W/ CARD READER, EXIT DEVICE & DOOR OPERATOR

Drawn by: GDP	Project No.
Scale: N.T.S.	
Date: JUNE 2023	Drawing No. S-INT-03



PLAN VIEW

OPTIONAL POST INSTALLATION



ELEVATION
(INTERIOR)

University of Toronto
UPDC
DESIGN & ENGINEERING

Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS

Title: TYPICAL SALTO WIRING SCHEMATIC FOR DOUBLE DOOR W/ CARD READER, EXIT DEVICE & DOOR OPERATOR

Drawn by: GDP	Project No.
Scale: N.T.S.	
Date: JUNE 2023	Drawing No. S-INT-04

WIRE & CABLE LEGEND

CABLE	DESCRIPTION	BELDEN #	APPLICATION
A	2PR, 22AWG, STRANDED, SHEILDED, TWISTED PR.	8723	DOOR CONTACT/REX/LOCK STATUS
B	1PR, 18AWG, STRANDED, TWISTED PR.	9740	ELECTRIC LOCK/AUDIBLE ALARM
C	3PR, 22AWG, STRANDED, SHEILDED, TWISTED PR.	8777	CARD READER
D	CAT. 6 CABLE		

FIELD DEVICE LEGEND

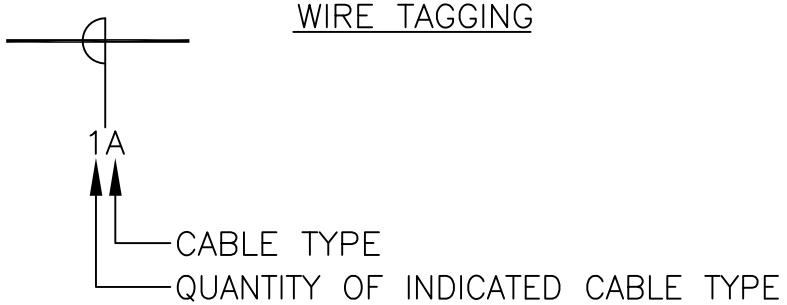
SYMBOL	DESCRIPTION
CR	CARD READER
DC	DOOR CONTACT
TD	ELECTRIC TRANSFER DEVICE
⊙	DOOR ACTIVATION DEVICE
ADO	DOOR OPERATOR
SDC	SALTO DOOR CONTROLLER
PS	POWER SUPPLY

SEQUENCE OF OPERATION (INTERIOR DOOR WITH CARD READER):

FOR LOCKED DOORS:

- CARD READER UNLOCKS DOOR.
- ONCE CLOSED, DOOR LOCKS.
- IF DOOR IS LEFT AJAR, BUZZER WILL SOUND.

WIRE TAGGING



University of Toronto
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DESIGN & ENGINEERING

Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS

Title: TYPICAL SALTO WIRING SCHEMATIC LEGENDS, SEQUENCE OF OPERATION & WIRE TAGGING DIAGRAM

Drawn by: GDP

Scale: N.T.S.

Date: JUNE 2023

Project No.

Drawing No. S-INT-05

NOTES:

1. DOOR HARDWARE SUPPLIED AND INSTALLED BY PROJECT.

2. SECURITY ACCESS CONTROL COMPONENTS, CARD READERS, DOOR CONTACTS, AND GLASS BREAK TO BE PROVIDED BY PROJECT, AS PER THIS STANDARD.

3. ALL FIELD DEVICES MOUNTED AND TERMINATED BY ELECTRICAL CONTRACTOR.

4. PRIOR TO INSTALLATION, COORDINATE LOCATION OF FIELD DEVICES AND SECURITY ACCESS CONTROLLER WITH THE UNIVERSITY.

5. PROVIDE NEW SECURITY SYSTEM AS SHOWN ON THIS DRAWING. ALL THE SECURITY SYSTEM DEVICES SUCH AS CARD READERS, GLASS BREAK AND DOOR CONTACTS SHALL BE INSTALLED AND ROUGH–IN BY ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR WILL PROVIDE ALL THE NECESSARY CONDUITS AND WIRING AS REQUIRED TO MAKE THE SECURITY SYSTEM FULLY FUNCTIONAL. THE SECURITY SYSTEM SHALL BE COMMISSIONED BY F&S. COORDINATE WITH F&S ON SITE.

WORK RESPONSIBILITY

BY ELECTRICAL CONTRACTOR:

1. PROVIDE ALL WIRING, CONDUIT & JUNCTION BOXES.

2. PROVIDE ALL WIRING AS NOTED ON THIS SCHEMATIC. WIRING SHALL BE SOLID COPPER CONDUCTORS, RISER RATED & INSTALLED IN CONDUIT.

BY UofT CONTRACTOR:

1. PROVIDE ALL CARD READERS, DOOR CONTROLLERS, DOOR CONTACTS, RX/LX DEVICES.

2. FINAL CONNECTIONS, PROGRAMMING & COMMISSIONING OF DOOR CONTROL SYSTEM.

BY GENERAL CONTRACTOR:

1. PROVIDE TRANSFER HINGE. REFER TO ARCHITECTURAL DRAWINGS & SPECIFICATION FOR REQUIREMENTS.

University of Toronto
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DESIGN & ENGINEERING

Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS

Title: TYPICAL SALTO WIRING SCHEMATIC
WORK RESPONSIBILITY

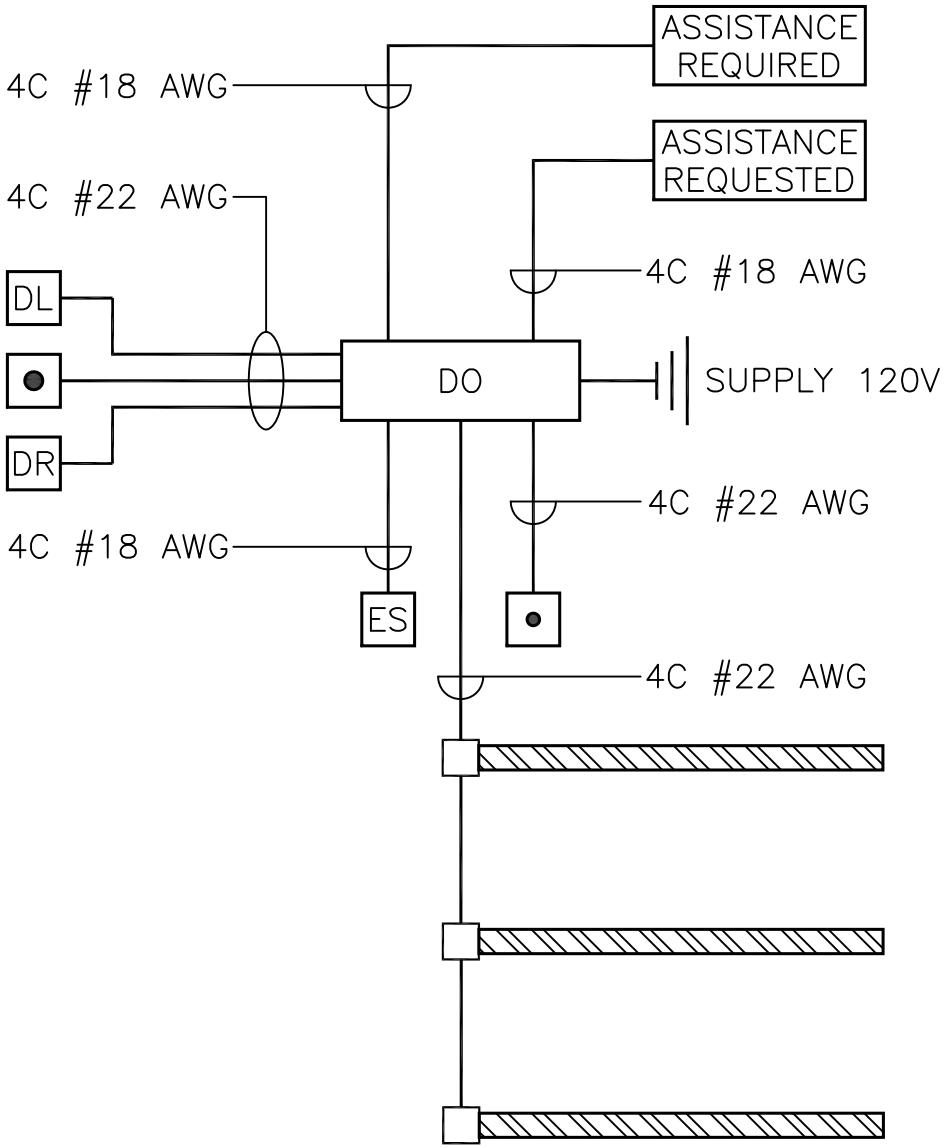
Drawn by: GDP

Scale: N.T.S.

Date: JUNE 2023

Project No.

Drawing No. S-INT-07



University of Toronto
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DESIGN & ENGINEERING

Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS

Title: TYPICAL DOOR WIRING SCHEMATIC FOR LOCKABLE & ALARMED WASHROOM DOOR

Drawn by: GDP

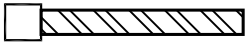
Scale: N/A

Date: JUNE 2023

Project No.

Drawing No. WR-01

FIELD DEVICE LEGEND

SYMBOL	DESCRIPTION
DO	DOOR OPENER
	DOOR ACTIVATION DEVICE
DL	DOOR LOCK DEVICE (PUSH TO LOCK PLATE SWITCH)
DR	DOOR RESET BUTTON. PROVIDE LAMACOID PLATE, 1/8" HIGH BLACK LETTERS ON WHITE BACKGROUND TO READ "PRESS TO RESET".
ES	ELECTRIC STRIKE
ASSISTANCE REQUESTED	"ASSISTANCE REQUESTED" SIGN
ASSISTANCE REQUIRED	"ASSISTANCE REQUIRED" SIGN
	EMERGENCY CALL STRIP. "EMERGENCY ALARM – PRESS FOR ASSISTANCE". BLACK LETTERING ON YELLOW BACKGROUND. PROVIDE LAMACOID PLATE, 1/4" HIGH RED LETTERS ON WHITE BACKGROUND TO READ, "EMERGENCY PUSH STRIP – USE ONLY IN AN EMERGENCY." MOUNT LABEL ABOVE EACH PUSH STRIP.

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DESIGN & ENGINEERING

Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS

Title: TYPICAL FIELD DEVICE LEGEND FOR LOCKABLE & ALARMED WASHROOM DOOR

Drawn by: GDP

Scale: N/A

Date: JUNE 2023

Project No.

Drawing No. WR-02

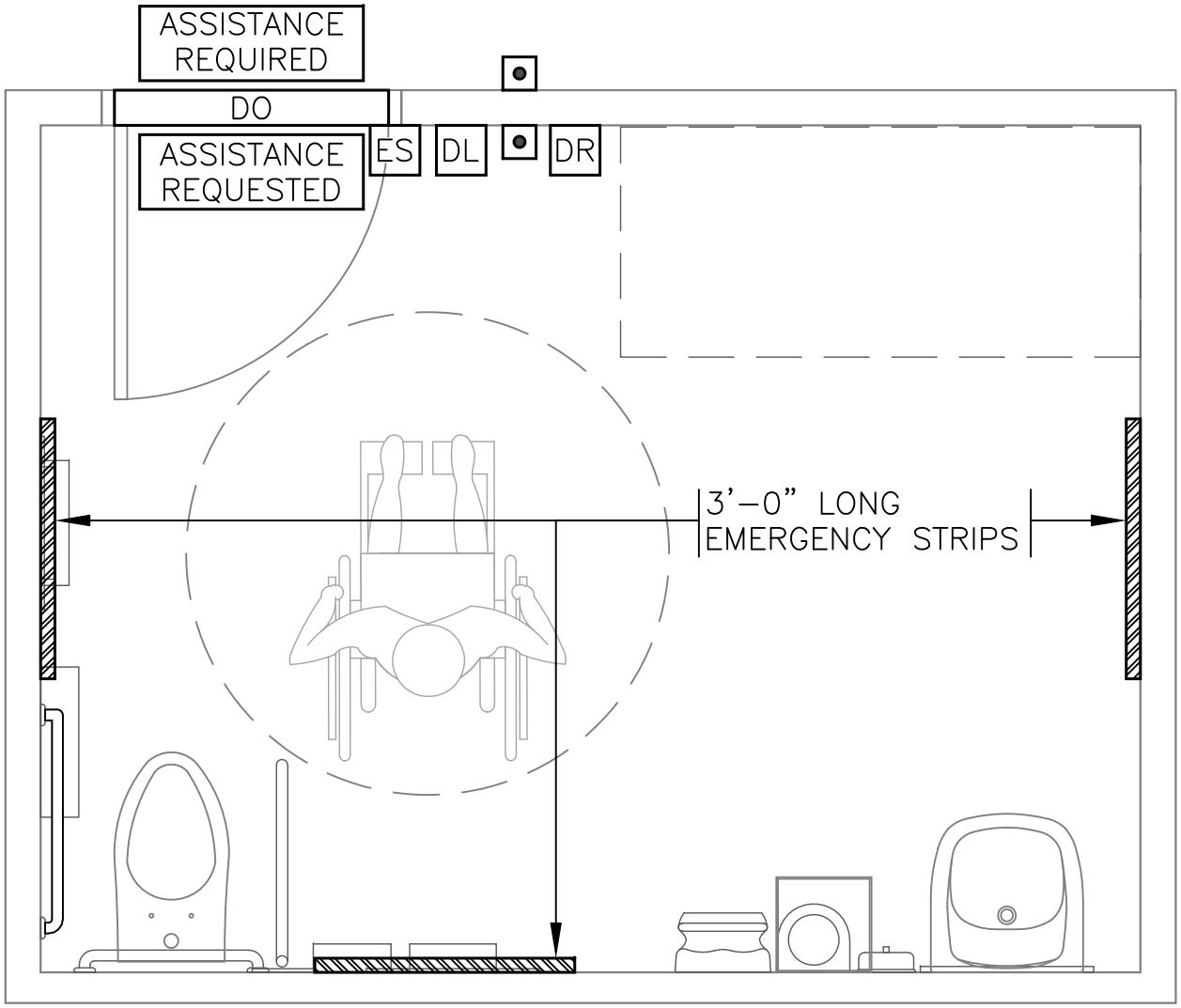
SEQUENCE OF OPERATION: ACCESSIBLE WASHROOM

- DOOR ACTIVATION DEVICE OPENS DOOR.
- DOOR LOCK DEVICE DEACTIVATES EXTERIOR DOOR ACTIVATION DEVICE, LOCKS THE DOOR & ACTIVATES THE IN USE SIGN.
- INTERIOR DOOR ACTIVATION DEVICE UNLOCKS AND OPENS THE DOOR & DEACTIVATES THE IN USE SIGN.
- EMERGENCY CALL STRIPS ACTIVATE THE ASSISTANCE REQUIRED SIGN, THE AUDIBLE BUZZER & UNLOCKS THE DOOR.
- DOOR RESET BUTTON RETURNS THE SYSTEM TO NORMAL MODE.

NOTES: (ACCESSIBLE WASHROOM)

1. FOR EXACT HEIGHTS, REFER TO ARCHITECTURAL DRAWINGS.
2. LOW VOLTAGE WIRING SHALL BE COPPER CONDUCTORS.
3. ALL LOW VOLTAGE WIRING SHALL BE STRANDED & SHIELDED INSTALLED IN CONDUIT OR PLENUM RATED IN HOLLOW METAL DOOR FRAME WHERE ACCESSIBLE.
4. RUN WIRES IN TO HEADER OF AUTOMATIC DOOR OPERATOR OPPOSITE HINGE SIDE ABOVE DOOR JAMB TO ALLOW FOR ORGANIZED LOW VOLTAGE WIRING DUE TO LOCATION OF RELAY.
5. MINIMUM CONDUIT SIZE TO BE 3/4".

University of Toronto UPDC DESIGN & ENGINEERING	Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS	Drawn by: GDP	Project No.
	Title: TYPICAL SEQUENCE OF OPERATION & NOTES FOR LOCKABLE & ALARMED WASHROOM DOOR	Scale: N/A	
		Date: JUNE 2023	Drawing No. WR-03



University of Toronto
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DESIGN & ENGINEERING

Project: UNIVERSITY of TORONTO SECURITY DOOR DETAILS

Title: TYPICAL WASHROOM ELECTRICAL LAYOUT FOR LOCKABLE & ALARMED WASHROOM DOOR

Drawn by:	GDP
Scale:	N/A
Date:	JUNE 2023

Project No.

Drawing No. WR-04