

# INSTITUTE OF OCEAN SCIENCES NEW GUARDHOUSE

SYMBOL LEGEND			
POWER		LIGHTING	
	DUPLEX RECEPTACLE (5-15R TYPE UNLESS INDICATED OTHERWISE)	\$	SINGLE POLE SWITCH
	DUPLEX RECEPTACLE (5-20R)		LOW VOLTAGE SWITCH - SINGLE
	ISOLATED GROUND DUPLEX RECEPTACLE		LINE VOLTAGE OCCUPANCY SENSOR SWITCH
	SPLIT RECEPTACLE		OCCUPANCY SENSOR - WALL AND CEILING D: INDICATES WITH DAYLIGHT SENSOR
	SINGLE RECEPTACLE		DOWNLIGHT FIXTURE
	DIRECT CONNECTION (OR CONNECTION TYPE AS INDICATED)		2X2 FIXTURE
	QUAD RECEPTACLE		2FT STRIP
	SPECIAL RECEPTACLE - TYPE AS INDICATED		4FT STRIP
	FLOOR RECEPTACLE (DUPLEX)		2FT WALL FIXTURE
	CEILING RECEPTACLE (DUPLEX)	COMMUNICATIONS	
	FLOOR RECEPTACLE (QUAD)		WALL STRUCTURED WIRING OUTLET - #: NUMBER OF DROPS
	CEILING RECEPTACLE (QUAD)		FLOOR STRUCTURED WIRING OUTLET - #: NUMBER OF DROPS
	ISOLATED GROUND FLOOR RECEPTACLE		CEILING STRUCTURED WIRING OUTLET - #: NUMBER OF DROPS
	ISOLATED GROUND CEILING RECEPTACLE		WALL TELEPHONE OUTLET - #: NUMBER OF DROPS
	JUNCTION BOX (WALL, CEILING, IN GROUND)		WALL COAXIAL OUTLET - #: NUMBER OF DROPS
	MOTOR		FLOOR COAXIAL OUTLET - #: NUMBER OF DROPS
	PANEL - TYPE AS INDICATED		CEILING COAXIAL OUTLET - #: NUMBER OF DROPS
	SURFACE MOUNTED PANEL - TYPE AS INDICATED		INTERCOM STATION
	GROUND/BOND BUS BAR		FIBRE OPTIC OUTLET - #: NUMBER OF DROPS, SM: SINGLE MODE, MM: MULTIMODE
	CONTROLLER CABINET	EQUIPMENT IDENTIFIERS	
	CONDUIT STUB		INDICATES DEVICE IS ABOVE COUNTER
	CONDUIT UP		EQUIPMENT IDENTIFIER
	CONDUIT DOWN		LUMINAIRE TYPE TAG
	GROUND ROD COMPLETE WITH INSPECTION WELL		DIRECTIONAL LUMINAIRE INDICATOR

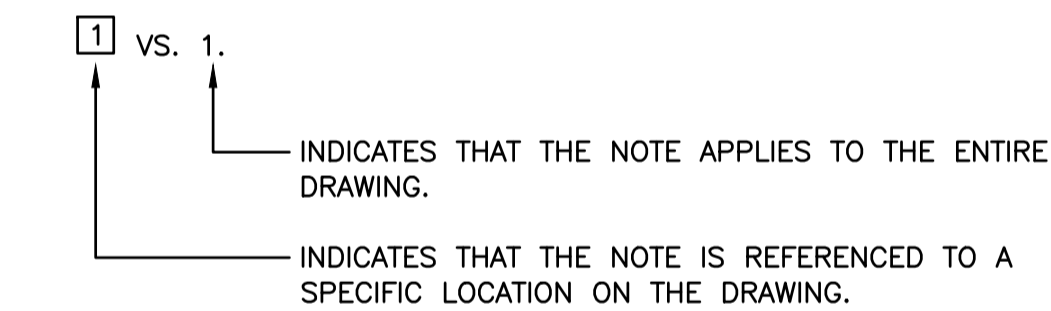
LINE TYPE LEGEND	
LINE	DESCRIPTION
	120/240V CONDUIT/CABLE
	347/600V CONDUIT/CABLE
	OVER 600V CONDUIT/CABLE
	COMMUNICATIONS CONDUIT/CABLE
	TECK CONDUIT/CABLE
	IN SLAB CONDUIT/CABLE

DRAWING INDEX		
NO.	TITLE	REVISION
E001	TITLE PAGE, SYMBOL LEGEND AND DRAWING INDEX	0
E002	SITE PLAN	0
E010	SINGLE LINE DIAGRAM (PROPOSED)	0
E100	GUARDHOUSE AREA PLAN	0
E110	GUARDHOUSE POWER & LOW TENSION (PROPOSED)	0
E111	GUARDHOUSE LIGHTING (PROPOSED)	0
E120	WORKSHOP UPPER LEVEL	0
E500	DETAILS AND ELEVATIONS	0
E501	DETAILS (1 OF 2)	0
E515	DETAILS (2 OF 2)	0
E600	SCHEDULES	0

### ABBREVIATIONS:

- FR - REFRIGERATOR
- COMM. - COMMUNICATIONS
- DDC - DIRECT DIGITAL CONTROL
- F/A - FIRE ALARM
- GFCI - GROUND-FAULT CIRCUIT INTERRUPTER
- MW - MICROWAVE
- SSC - SHARED SERVICES CANADA

### NOTES LEGEND:



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NOT FOR CONSTRUCTION**

	<b>FISHERIES AND OCEANS CANADA</b> REAL PROPERTY AND SAFETY AND SECURITY
<b>INSTITUTE OF OCEAN SCIENCES</b> <b>NEW GUARDHOUSE</b> 9860 WEST SAANICH ROAD SIDNEY, BC, V8L 5T5	SCALE AS NOTED START DATE
<b>TITLE PAGE, SYMBOL LEGEND AND DRAWING INDEX</b>	DRAWING NUMBER <b>E001</b> 1 OF 11
	REVISION 0

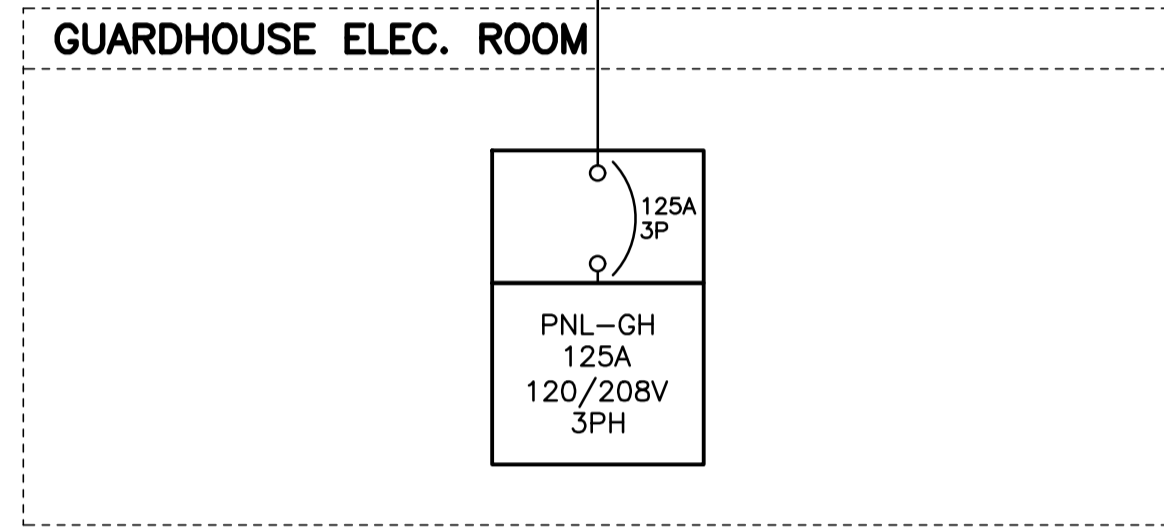
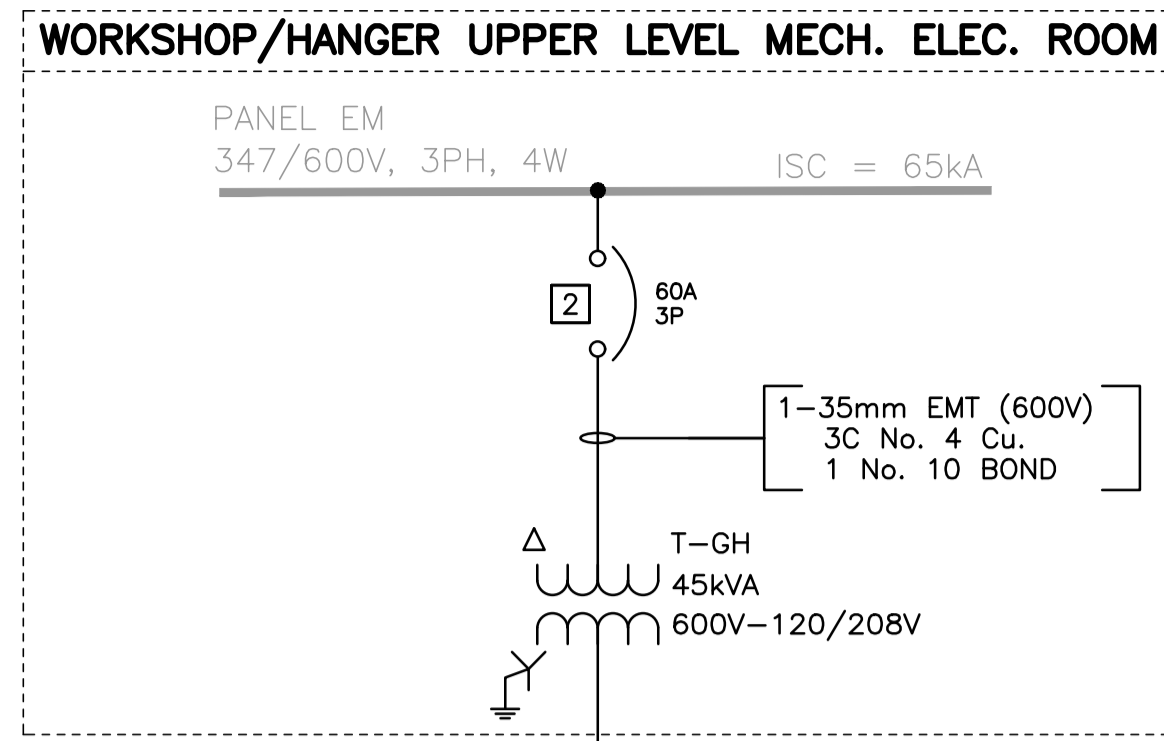
P:\18598\_05\_Guard\_House\01 - Design\Drawings\ACAD\E001\_01\_29/04/2020 2:11 AM - PETER KREMER

DWG. NO.	DRAWING REFERENCES	NOTES	NO.	DATE	REVISIONS								
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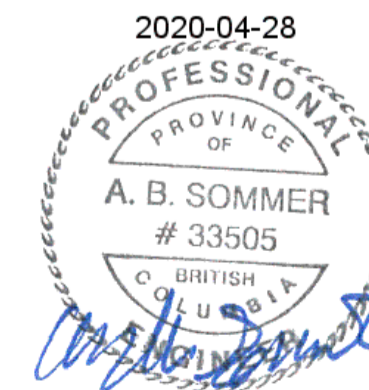


PARTIAL SINGLE LINE DIAGRAM

PANEL: GH									LOCATION: GUARD HOUSE ELECTRICAL ROOM			
NOTE	LOAD	TYPE	DESCRIPTION	BRKR	CCT	PHASE	CCT	BRKR	DESCRIPTION	TYPE	LOAD	NOTE
1		E	FIRE ALARM (FUTURE)	1P15A	1	A	2	1P20A	ACCESS CONTROL PANELS	E		
		R	SHARE SERVICES RECEPTACLES	1P15A	3	B	4	1P15A	LIGHTS	E		
		R	DATA ROOM RECEPTACLES	1P15A	5	C	6	1P15A	LIGHTS	L		
		R	MEETING ROOM RECEPTACLES	1P15A	7	A	8	1P30A	DATA RACK #2	R		
		R	MEETING ROOM RECEPTACLES	1P15A	9	B	10	1P30A	DATA RACK #3	R		
		R	W/C RECEPTACLE	1P15A	11	C	12	1P20A	DATA RACK #1	R		
		R	KITCHEN RECEPTACLE	1P20A	13	A	14	1P20A	DATA RACK #1	R		
		R	KITCHEN RECEPTACLES	1P20A	15	B	16	1P20A	DATA RACK #2	R		
		R	MICROWAVE	1P20A	17	C	18	1P20A	DATA RACK #2	R		
		R	FRIDGE	1P15A	19	A	20	1P20A	DATA RACK #3	R		
		M	EF-1 / EF-2	1P15A	21	B	22	1P20A	DATA RACK #3	R		
		M	HP-1	2P20A	23	C	24	1P15A	LONG RANGE CARD READER PS	E		3
		M	HP-1	2P20A	25	A	26	1P15A	ENTRY BARRIER ARM GATE	E		3
		R	WORKSTATION RECEPTACLES	1P20A	27	B	28	1P15A	EXIT BARRIER ARM GATE	E		3
		R	WORKSTATION RECEPTACLES	1P20A	29	C	30	1P15A	DEPOT SLIDING GATE	E		3
		R	WORKSTATION RECEPTACLES	1P20A	31	A	32	1P15A	SERVICE ROAD SLIDING GATE	E		3
		R	WORKSTATION RECEPTACLES	1P20A	33	B	34	1P20A	POWER DOOR OPERATOR	E		
		R	SECURITY COUNTER RECEPTACLES	1P20A	35	C	36	1P15A	MAG LOCK POWER SUPPLIES	E		3
		R	CEILING MONITOR RECEPTACLES	1P15A	37	A	38	1P15A	FC-1, FC-2, FC-3, FC-4	M		
		H	BB-1	1P15A	39	B	40	2P15A	FC-1, FC-2, FC-3, FC-4	M		
		M	DHWT-1	2P70A	41	C	42	1P15A	SPARE			
		M	DHWT-1	2P70A	43	A	44	1P15A	SPARE			
		M	SPARE	1P15A	45	B	46	1P15A	SPARE			
		M	SPARE	1P15A	47	C	48	1P15A	SPARE			
		M	SPARE	1P15A	49	A	50	1P15A	SPARE			
		M	SPACE		51	B	52		SPACE			
		M	SPACE		53	C	54		SPACE			
		M	SPACE		55	A	56		SPACE			
		M	SPACE		57	B	58		SPACE			
		M	SPACE		59	C	60		SPACE			
LOAD BREAKDOWN				CONNECTED		DERATED		PANEL DESCRIPTION				
L	LIGHTING:					100%	0	VOLTAGE : 208 V				
C	COOLING:					100%	0	PHASE : 3				
H	HEATING:					100%	0	AMPERAGE : - A				
M	MECHANICAL:					100%	0	PANEL AMPACITY : 125 A				
R	GENERAL RECEPTACLES:					100%	0	MAIN BREAKER : 125 A				
E	OWNER EQUIPMENT:					100%	0	# OF TUBS : 1				
TOTAL:				0		W 0						
NOTE DESCRIPTION												
1	PROVIDE TIE LOCK ON INDICATED BREAKERS.											
2	PROVIDE GFCI TYPE BREAKER WHERE INDICATED.											
3	EQUIPMENT PROVIDED BY OTHERS											
4												

NOTES:

- ITEMS SHOWN IN LIGHT LINETYPE ARE EXISTING TO REMAIN. ITEMS SHOWN IN BOLD ARE TO BE PROVIDED NEW UNLESS OTHERWISE NOTED.
- PROVIDE NEW 60A BREAKER IN EXISTING PANEL. EXISTING PANEL BOARD IS AN EATON PRL-4g.
- TIE INTO RPVC CONDUIT ON INSIDE OF SOUTH EXTERIOR WALL IN BOILER ROOM. RPVC CONDUIT BY OTHERS. ALL 600V AND 208V WIRING BY THIS CONTRACTOR.



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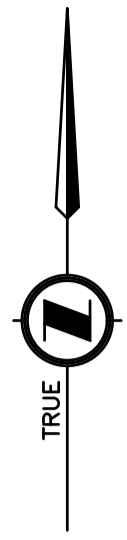
**INSTITUTE OF OCEAN SCIENCES**  
NEW GUARDHOUSE  
9860 WEST SAANICH ROAD  
SIDNEY, BC, V8L 5T5

**SINGLE LINE DIAGRAM (PROPOSED)**

SCALE: AS NOTED  
START DATE:  
DRAWING NUMBER: **E010**  
3 OF 11  
REVISION: 0







- 1-103mm RPVC (208V) GUARDHOUSE FEEDERS (SEE SINGLE LINE DIAGRAM)
- 1-103mm RPVC (COMM.)
- 1-12C FIBRE (GUARDHOUSE SECURITY) - BY OTHERS
- 1-24C FIBRE (SSC) - BY OTHERS
- 1-6PR CAT 3 (TELEPHONES) - BY OTHERS
- 1 No. 14 BOND
- 1-53mm RPVC (F/A) (EMPTY)
- 1-53mm RPVC (DDC) - BY OTHERS (EMPTY)

- 1-103mm RPVC (208V) - CONDUIT BY OTHERS GUARDHOUSE FEEDERS (SEE SINGLE LINE DIAGRAM)
- 1-103mm RPVC (COMM.) - CONDUIT BY OTHERS
- 1-12C FIBRE (GUARDHOUSE SECURITY) - BY OTHERS
- 1-24C FIBRE (SSC) - BY OTHERS
- 1-6PR CAT 3 (TELEPHONES) - BY OTHERS
- 1 No. 14 BOND
- 1-53mm RPVC (F/A) - CONDUIT BY OTHERS (EMPTY)
- 1-53mm RPVC (DDC) - CONDUIT BY OTHERS (EMPTY)

CONDUIT DRAIN **1** SEE TYP. DETAIL  
E500

CONNECT TO EXISTING CAPPED OFF CONDUIT

CONNECT NEW CONDUIT RUN TO EXISTING COMMUNICATIONS JUNCTION BOX

- BY OTHERS:**
- 1-35mm RPVC (120V) CONDUCTORS BY OTHERS
  - 1-35mm RPVC (COMM.) CONDUCTORS BY OTHERS

- 1-103mm RPVC (COMM.) CONDUCTORS BY OTHERS
- 1-103mm RPVC (COMM.) CONDUCTORS BY OTHERS
- 1-103mm RPVC (120V) CONDUCTORS BY OTHERS

- BY OTHERS:**
- 1-103mm RPVC (120V) CONDUCTORS BY OTHERS
  - 1-103mm RPVC (COMM.) CONDUCTORS BY OTHERS
  - 1-53mm RPVC (F/A) CONDUCTORS BY OTHERS

JB TYPE LEGEND	
LABEL	DESCRIPTION
C	COMMUNICATIONS (TYPE 10)
P2	120/208V POWER (TYPE 10)
FA	FIRE ALARM (TYPE 10)

SEE DETAIL **1** **1**  
110 111

AREA ENLARGEMENT **1** GUARD HOUSE  
1:50



**NOTES:**

1. ADDITIONAL CONDUIT AND JUNCTION BOXES REQUIRED AS PART OF THE SECURITY GATE UPGRADES PROJECT ARE NOT SHOWN AND WILL BE INSTALLED BY OTHERS. CONTRACTOR SHALL COORDINATE WITH SECURITY GATE UPGRADE REQUIREMENTS.
2. CONTRACTOR SHALL COORDINATE EXACT CONDUIT ROUTING WITH CIVIL DRAWINGS.
3. PROVIDE TYPE 10 JUNCTION BOXES AND CONNECT TO EXISTING CAPPED OFF CONDUITS.
4. ALL SHARED SERVICES DATA AND TELEPHONE WIRING BY OTHERS. CONTRACTOR SHALL PROVIDE ROUGH-IN ONLY INCLUDING EMPTY CONDUITS, BACK BOXES AND COVER PLATES.
5. PROVIDE H20 RATED JUNCTION BOXES IN ALL VEHICULAR AREAS.



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**INSTITUTE OF OCEAN  
SCIENCES  
NEW GUARDHOUSE  
9860 WEST SAANICH ROAD  
SIDNEY, BC, V8L 5T5**

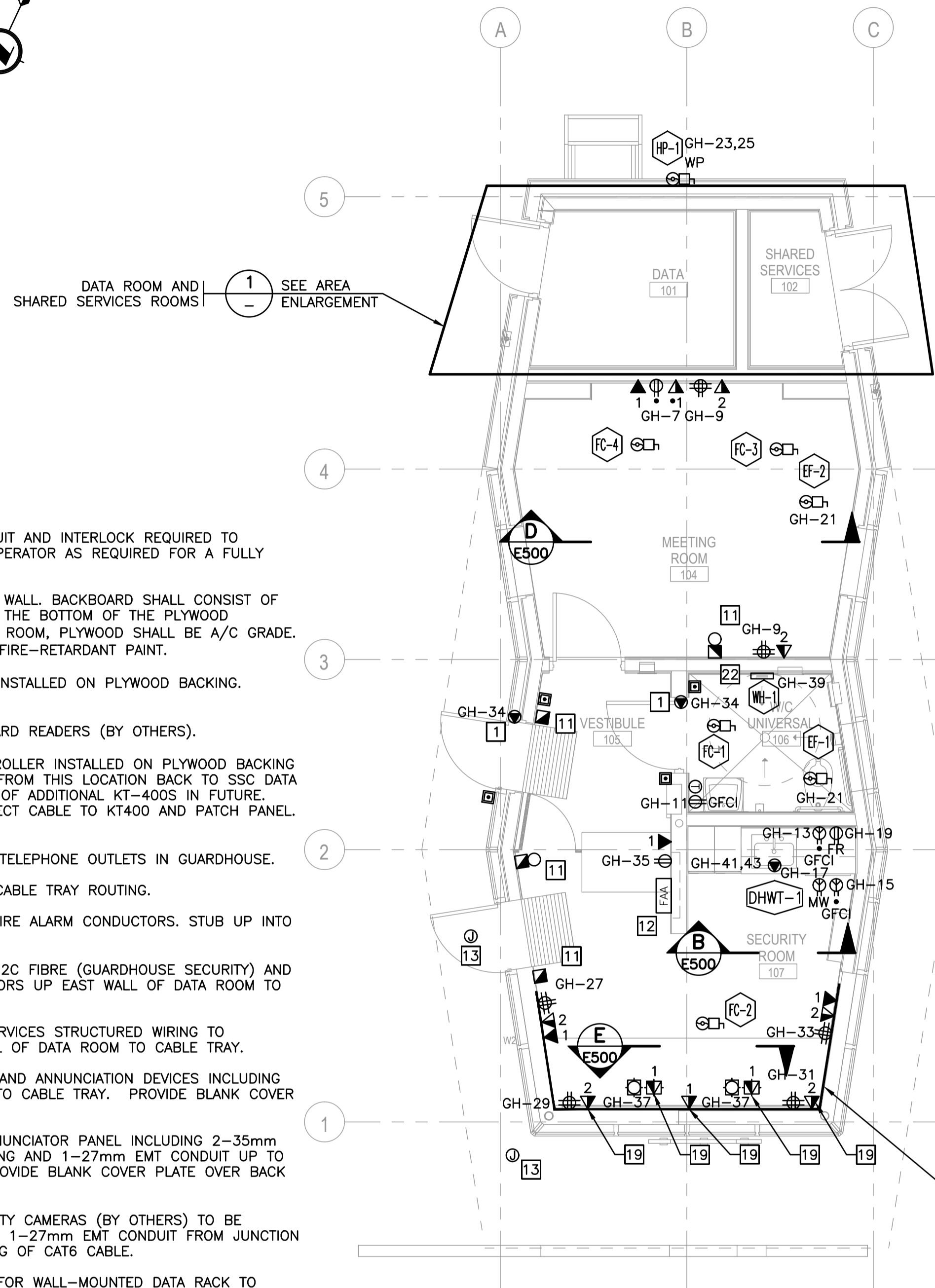
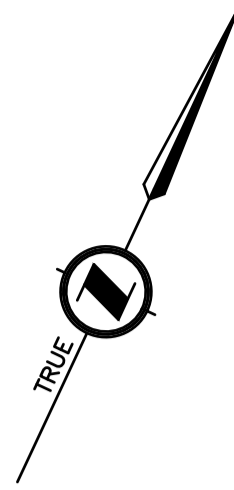
**GUARDHOUSE  
AREA PLAN**

SCALE	AS NOTED
START DATE	
DRAWING NUMBER	<b>E100</b>
	4 OF 11
REVISION	<b>0</b>

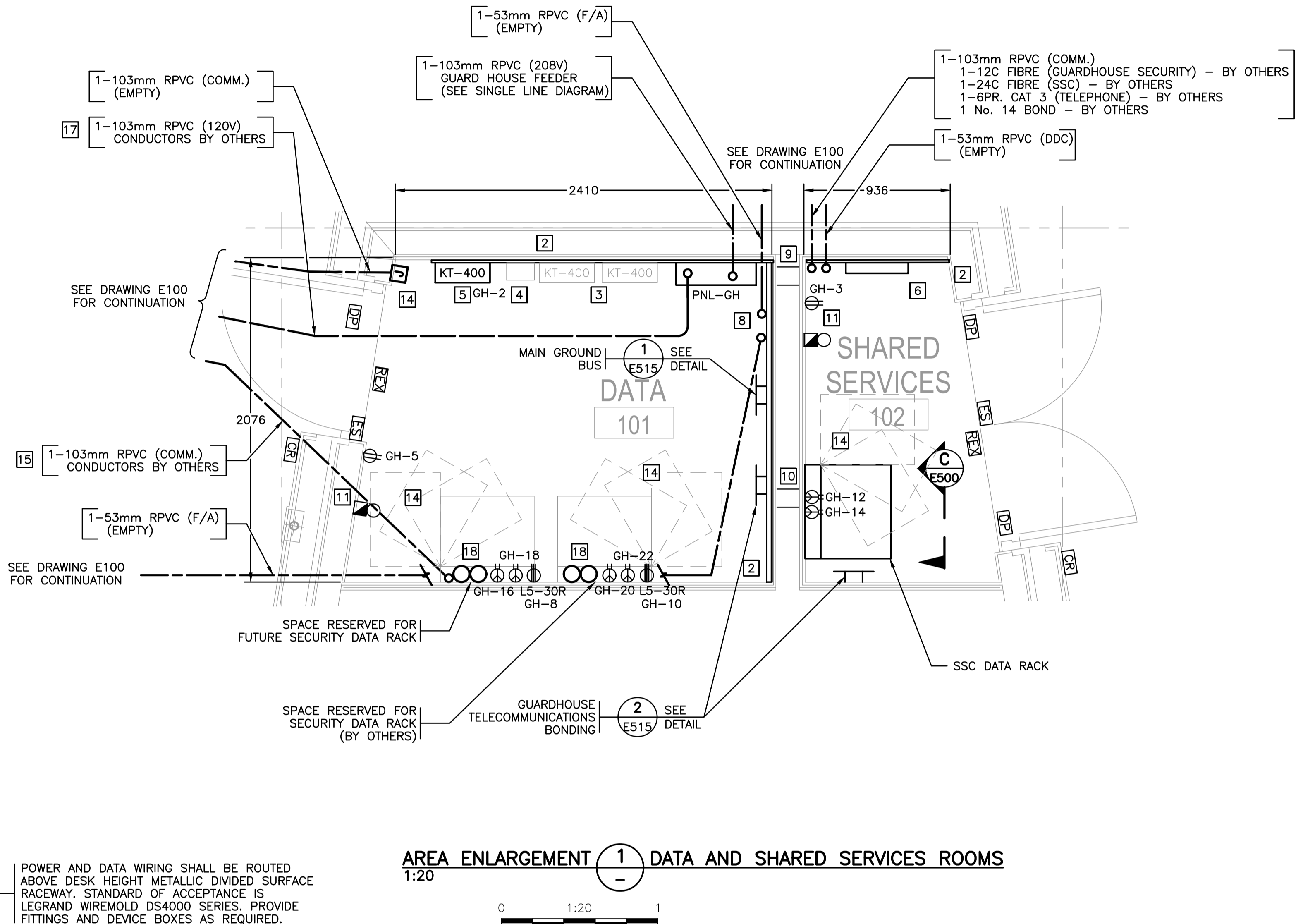


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0	2020-04-28	ISSUED FOR TENDER





**DETAIL 1 FLOOR PLAN**  
1:50



**AREA ENLARGEMENT 1 DATA AND SHARED SERVICES ROOMS**  
1:20

**NOTES:**

- 1 POWER DOOR OPERATOR. ALLOW FOR ALL CONDUIT AND INTERLOCK REQUIRED TO CONNECT DOOR OPENING BUTTONS WITH DOOR OPERATOR AS REQUIRED FOR A FULLY FUNCTIONAL SYSTEM
- 2 PROVIDE PLYWOOD BACKBOARD TO COVER ENTIRE WALL. BACKBOARD SHALL CONSIST OF 1.2m X 2.4m SHEETS MOUNTED VERTICALLY WITH THE BOTTOM OF THE PLYWOOD MOUNTED 150mm A.F.F. WITH BEST SIDE TOWARD ROOM, PLYWOOD SHALL BE A/C GRADE. FINISH PLYWOOD WITH TWO (2) COATS OF WHITE FIRE-RETARDANT PAINT.
- 3 TWO (2) KANTECH KT400 ACCESS CONTROLLERS INSTALLED ON PLYWOOD BACKING. CONTROLLERS PROVIDED BY OTHERS.
- 4 EXTERNAL POWER SUPPLIES FOR LONG-RANGE CARD READERS (BY OTHERS).
- 5 PROVIDE ONE (1) KANTECH KT400 ACCESS CONTROLLER INSTALLED ON PLYWOOD BACKING FOR GUARDHOUSE DOORS. PROVIDE CAT6 CABLE FROM THIS LOCATION BACK TO SSC DATA RACK. INCLUDE PROVISIONS FOR DAISY-CHAINING OF ADDITIONAL KT-400S IN FUTURE. PROVIDE TERMINATION ON BOTH ENDS AND CONNECT CABLE TO KT400 AND PATCH PANEL. COORDINATE CONNECTION WITH SSC.
- 6 PROVIDE BIX BLOCKS TO CONNECT TO FOUR (4) TELEPHONE OUTLETS IN GUARDHOUSE.
- 7 REFER TO DRAWING E111 FOR COMMUNICATIONS CABLE TRAY ROUTING.
- 8 INCOMING AND OUTGOING CONDUIT FOR FUTURE FIRE ALARM CONDUCTORS. STUB UP INTO DATA ROOM AND CAP OFF.
- 9 CONDUIT SLEEVE THROUGH WALL FOR INCOMING 12C FIBRE (GUARDHOUSE SECURITY) AND GUARDHOUSE TELEPHONE LINES. ROUTE CONDUCTORS UP EAST WALL OF DATA ROOM TO CABLE TRAY.
- 10 CONDUIT SLEEVE THROUGH WALL FOR SHARED SERVICES STRUCTURED WIRING TO GUARDHOUSE. ROUTE CONDUCTORS UP EAST WALL OF DATA ROOM TO CABLE TRAY.
- 11 PROVIDE ROUGH-IN FOR FUTURE PULL STATIONS AND ANNUNCIATOR DEVICES INCLUDING BACK BOXES AND 1-27mm EMT CONDUIT BACK TO CABLE TRAY. PROVIDE BLANK COVER PLATE OVER BACK BOX.
- 12 PROVIDE ROUGH-IN FOR FUTURE FIRE ALARM ANNUNCIATOR PANEL INCLUDING 2-35mm CONDUIT BACK TO CABLE TRAY FOR COMMS. WIRING AND 1-27mm EMT CONDUIT UP TO CEILING SPACE FOR FUTURE POWER CIRCUIT. PROVIDE BLANK COVER PLATE OVER BACK BOX.
- 13 PROVIDE ROUGH-IN FOR SOFFIT MOUNTED SECURITY CAMERAS (BY OTHERS) TO BE CONNECTED. CAMERAS SHALL BE POE. PROVIDE 1-27mm EMT CONDUIT FROM JUNCTION BOX LOCATION BACK TO CABLE TRAY FOR ROUTING OF CAT6 CABLE.
- 14 DASH LINES INDICATE THE CLEARANCE REQUIRED FOR WALL-MOUNTED DATA RACK TO SWING OUT FOR REAR ACCESS.
- 15 SPARE CONDUIT FOR FUTURE. STUB UP AND CAP OFF.
- 16 ALL DATA DROPS TO BE CONNECTED TO SHARED SERVICES CANADA (SSC) DATA RACK IN ROOM 102 UNLESS OTHERWISE NOTED.
- 17 CONDUIT FOR CABLES FROM SECURITY DATA RACK. CABLES AND DATA RACK BY OTHERS. STUB UP AND EXTEND UP THE WALL 300mm INTO JUNCTION BOX. SIZE JUNCTION BOX TO ACCOMMODATE
- 18 PROVIDE VERTICAL CABLE TRAY DOWN TO 1800 A.F.F. FOR ROUTING DATA CABLES DOWN TO RACK.
- 19 DATA DROPS TO BE CONNECTED TO SECURITY DATA RACK IN ROOM 201. PROVIDE DATA CABLING AND TERMINATE AT BOTH ENDS. DATA CABLING TO BE ENTERED INTO RACK BY OTHERS
- 20 ALL SHARED SERVICES DATA AND TELEPHONE WIRING BY OTHERS. CONTRACTOR SHALL PROVIDE ROUGH-IN ONLY INCLUDING EMPTY CONDUITS, BACK BOXES AND COVER PLATES.
- 21 ALLOW FOR COORDINATION WITH IOS SECURITY UPGRADES PROJECT TRADES AS REQUIRED.
- 22 PROVIDE RECESSED WALL FAN HEATER. STANDARD OF ACCEPTANCE IS STELPRO PULSAIR. REFER TO MECHANICAL SCHEDULE ON E600 FOR CONNECTION DETAILS.



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**FISHERIES AND OCEANS CANADA**  
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**INSTITUTE OF OCEAN SCIENCES**  
NEW GUARDHOUSE  
9860 WEST SAANICH ROAD  
SIDNEY, BC, V8L 5T5

**GUARDHOUSE POWER & LOW TENSION (PROPOSED)**

SCALE  
AS NOTED  
START DATE

DRAWING NUMBER  
**E110**  
5 OF 11

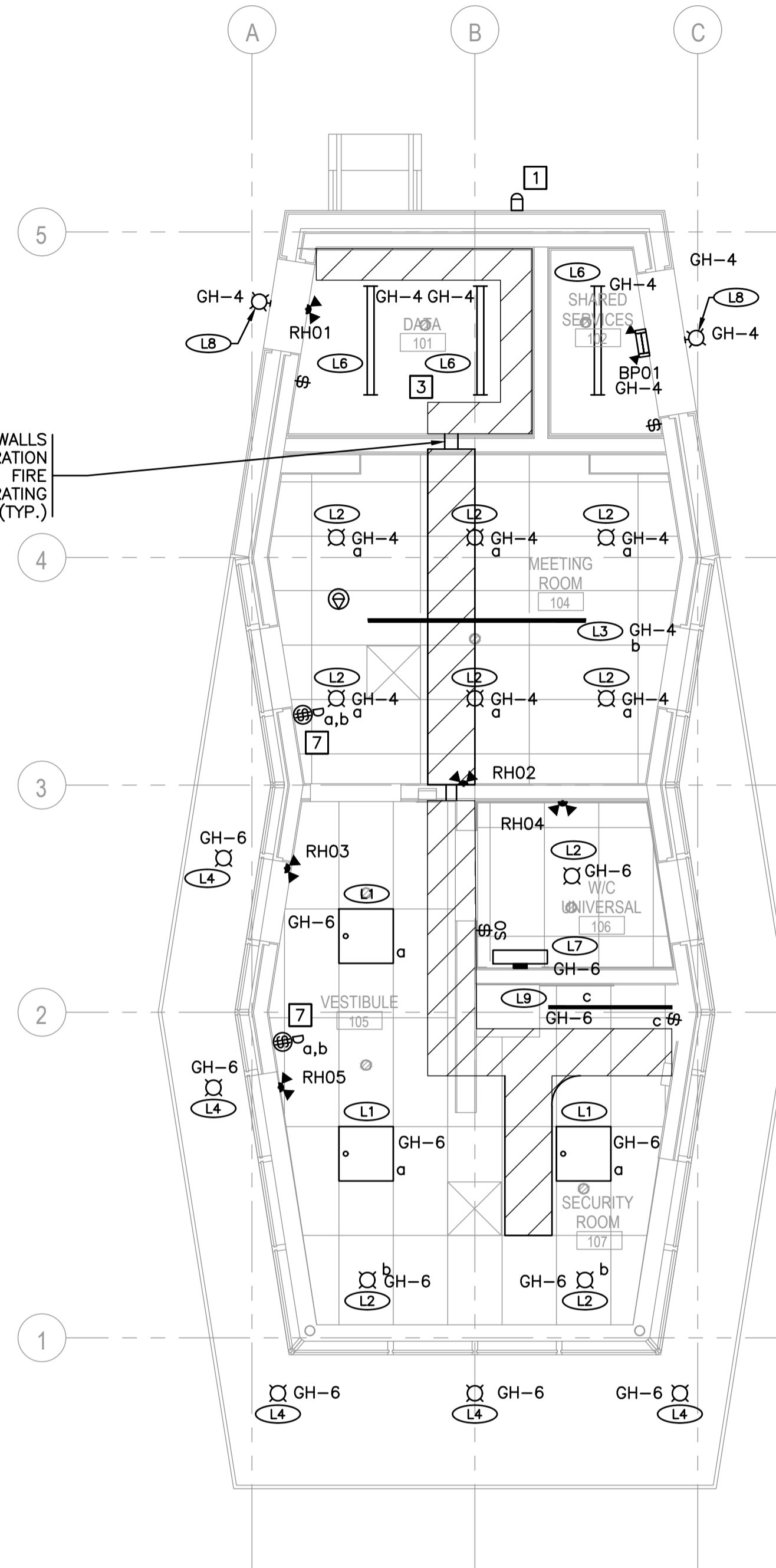
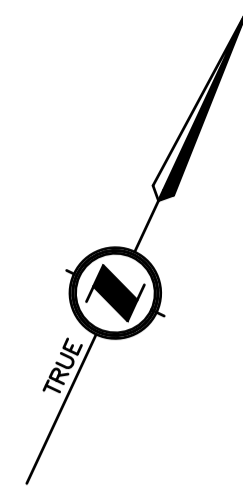
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PROVIDE CONDUIT SLEEVE THROUGH WALLS FOR COMMUNICATION CABLES. PENETRATION SHALL BE SEALED WITH A ULC APPROVED FIRE STOPPING SYSTEM TO MAINTAIN 2HR FIRE RATING (TYP.)

DETAIL 1 REFLECTED CEILING PLAN  
1:50



**NOTES:**

- 1 PROVIDE WALL MOUNTED LINE VOLTAGE PHOTOCELL FOR EXTERIOR LIGHTING. STANDARD OF ACCEPTANCE IS INTERMATIC EK4335S.
- 2 APPROXIMATE ROUTING OF CABLE TRAY SHOWN. COORDINATE ON SITE WITH MECHANICAL CONTRACTOR TO AVOID CONFLICTS WITH MECHANICAL UNITS AND DUCTING.
- 3 INSTALL DATA CABLING AND LEAVE COILED IN CABLE TRAY WITH 3m OF SLACK, FOR FUTURE CONNECTION TO PATCH PANEL IN SECURITY DATA RACK.
- 4 ALL SHARED SERVICES DATA AND TELEPHONE WIRING BY OTHERS. CONTRACTOR SHALL PROVIDE ROUGH-IN ONLY INCLUDING EMPTY CONDUITS, BACK BOXES AND COVER PLATES.
- 5 REFER TO DRAWING E600 FOR LUMINAIRE SCHEDULE, LIGHTING CONTROL SEQUENCE AND BATTERY PACK SCHEDULE.
- 6 REFER TO DRAWING E515 FOR LIGHTING CONTROLS WIRING DIAGRAMS.
- 7 LOW VOLTAGE DIMMING LIGHTING CONTROLS. STANDARD OF ACCEPTANCE IS DOUGLAS DIALOG WRC-4222. REFER TO DETAIL 4 ON SHEET E515 FOR WIRING DETAILS.



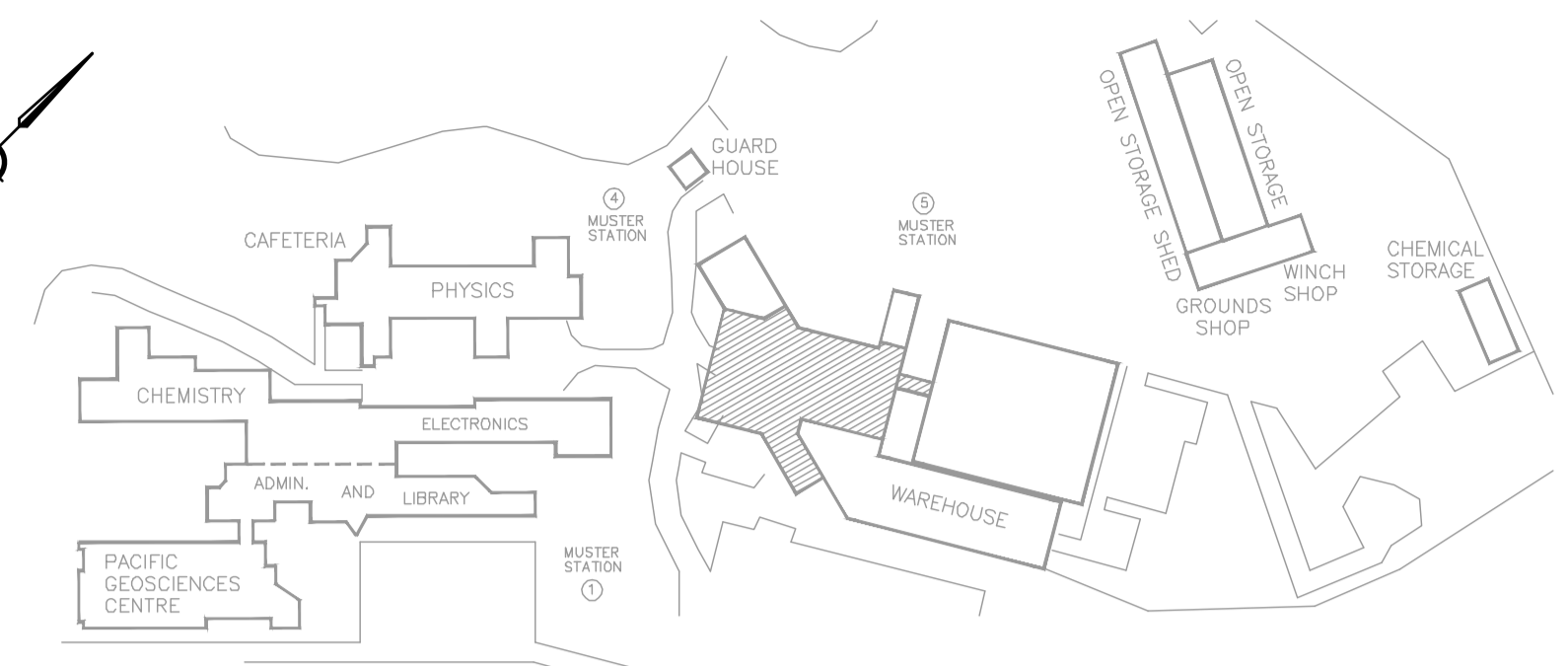
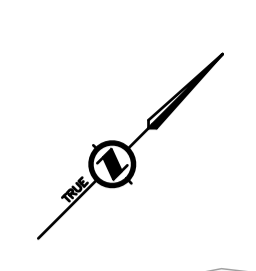
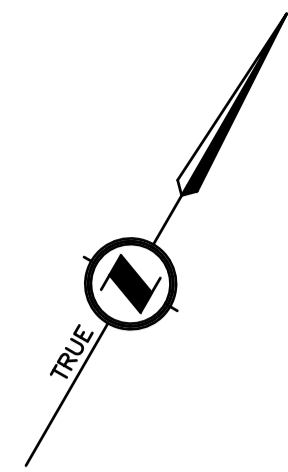
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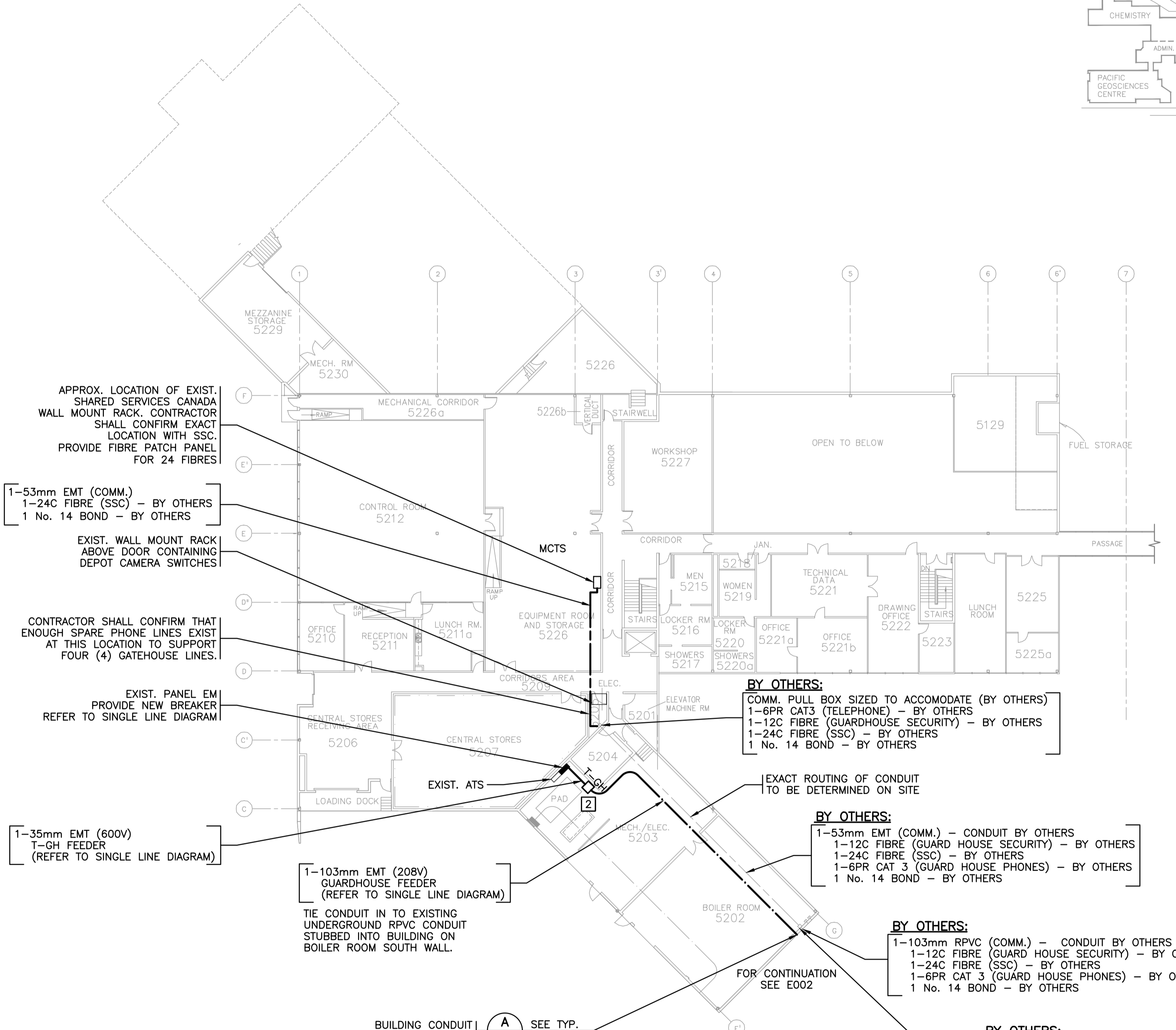
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<b>INSTITUTE OF OCEAN SCIENCE</b> <b>NEW GUARDHOUSE</b> 9860 WEST SAANICH ROAD SIDNEY, BC, V8L 5T5		DRAWING NUMBER <b>E111</b> 6 OF 11
<b>GUARDHOUSE LIGHTING (PROPOSED)</b>		REVISION 0



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**KEY PLAN**  
N.T.S.



APPROX. LOCATION OF EXIST. SHARED SERVICES CANADA WALL MOUNT RACK. CONTRACTOR SHALL CONFIRM EXACT LOCATION WITH SSC. PROVIDE FIBRE PATCH PANEL FOR 24 FIBRES

1-53mm EMT (COMM.)  
1-24C FIBRE (SSC) - BY OTHERS  
1 No. 14 BOND - BY OTHERS

EXIST. WALL MOUNT RACK ABOVE DOOR CONTAINING DEPOT CAMERA SWITCHES

CONTRACTOR SHALL CONFIRM THAT ENOUGH SPARE PHONE LINES EXIST AT THIS LOCATION TO SUPPORT FOUR (4) GATEHOUSE LINES.

EXIST. PANEL EM PROVIDE NEW BREAKER REFER TO SINGLE LINE DIAGRAM

1-35mm EMT (600V)  
T-GH FEEDER  
(REFER TO SINGLE LINE DIAGRAM)

1-103mm EMT (208V)  
GUARDHOUSE FEEDER  
(REFER TO SINGLE LINE DIAGRAM)

TIE CONDUIT IN TO EXISTING UNDERGROUND RPVC CONDUIT STUBBED INTO BUILDING ON BOILER ROOM SOUTH WALL.

**BY OTHERS:**  
COMM. PULL BOX SIZED TO ACCOMMODATE (BY OTHERS)  
1-6PR CAT3 (TELEPHONE) - BY OTHERS  
1-12C FIBRE (GUARDHOUSE SECURITY) - BY OTHERS  
1-24C FIBRE (SSC) - BY OTHERS  
1 No. 14 BOND - BY OTHERS

**BY OTHERS:**  
1-53mm EMT (COMM.) - CONDUIT BY OTHERS  
1-12C FIBRE (GUARD HOUSE SECURITY) - BY OTHERS  
1-24C FIBRE (SSC) - BY OTHERS  
1-6PR CAT 3 (GUARD HOUSE PHONES) - BY OTHERS  
1 No. 14 BOND - BY OTHERS

**BY OTHERS:**  
1-103mm RPVC (COMM.) - CONDUIT BY OTHERS  
1-12C FIBRE (GUARD HOUSE SECURITY) - BY OTHERS  
1-24C FIBRE (SSC) - BY OTHERS  
1-6PR CAT 3 (GUARD HOUSE PHONES) - BY OTHERS  
1 No. 14 BOND - BY OTHERS

**BY OTHERS:**  
COMM. PULL BOX ON BUILDING INTERIOR PRIOR TO EXITING BUILDING TO ACCOMMODATE ADDITIONAL FUTURE COMM. CABLES FROM OTHER LOCATIONS WITHIN THE BUILDING.  
MINIMUM SIZE: 400mm X 400mm X 300mm TO ACCOMMODATE 4-35mm CONDUITS

BUILDING CONDUIT EXIT E500 SEE TYP. ELEVATION

**DETAIL 1 WORKSHOP/HANGAR**  
N.T.S. E002 UPPER LEVEL

**NOTES:**

- ITEMS SHOWN IN LIGHT LINETYPE ARE EXISTING TO REMAIN. ITEMS SHOWN IN BOLD ARE TO BE PROVIDED NEW UNLESS OTHERWISE NOTED.
- COORDINATE EXACT TRANSFORMER LOCATION WITH OWNER.
- CONTRACTOR SHALL REVIEW FINAL PROPOSED CONDUIT ROUTING WITH OWNER AND OBTAIN APPROVAL PRIOR TO INSTALLATION



**ISSUED FOR TENDER**  
**NOT FOR CONSTRUCTION**

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**NEW GUARDHOUSE**  
9860 WEST SAANICH ROAD  
SIDNEY, BC, V8L 5T5

**WORKSHOP UPPER LEVEL**

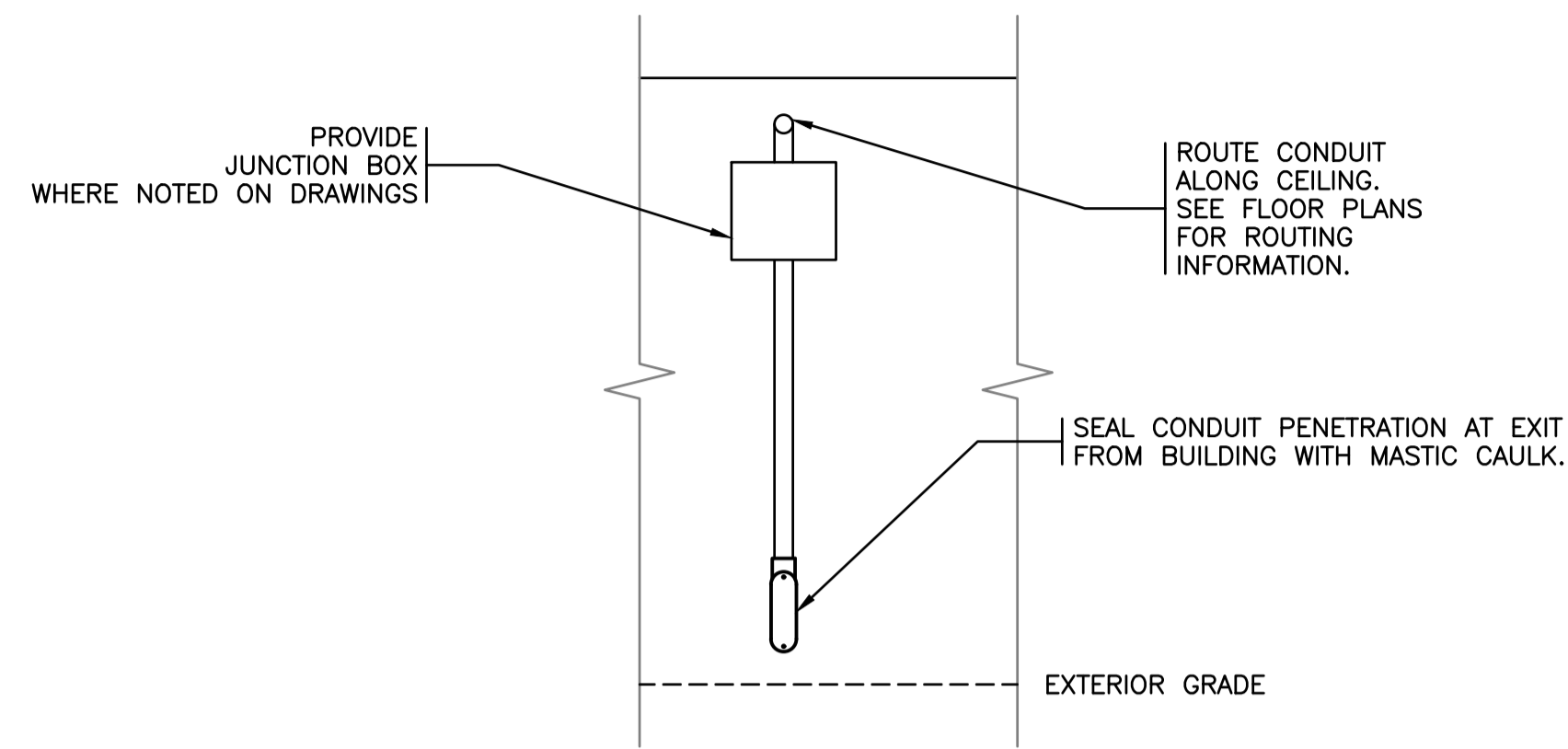
SCALE	AS NOTED
START DATE	
DRAWING NUMBER	<b>E120</b>
7 OF 11	
REVISION	0



NO.	DATE	REVISIONS
0	2020-04-28	ISSUED FOR TENDER

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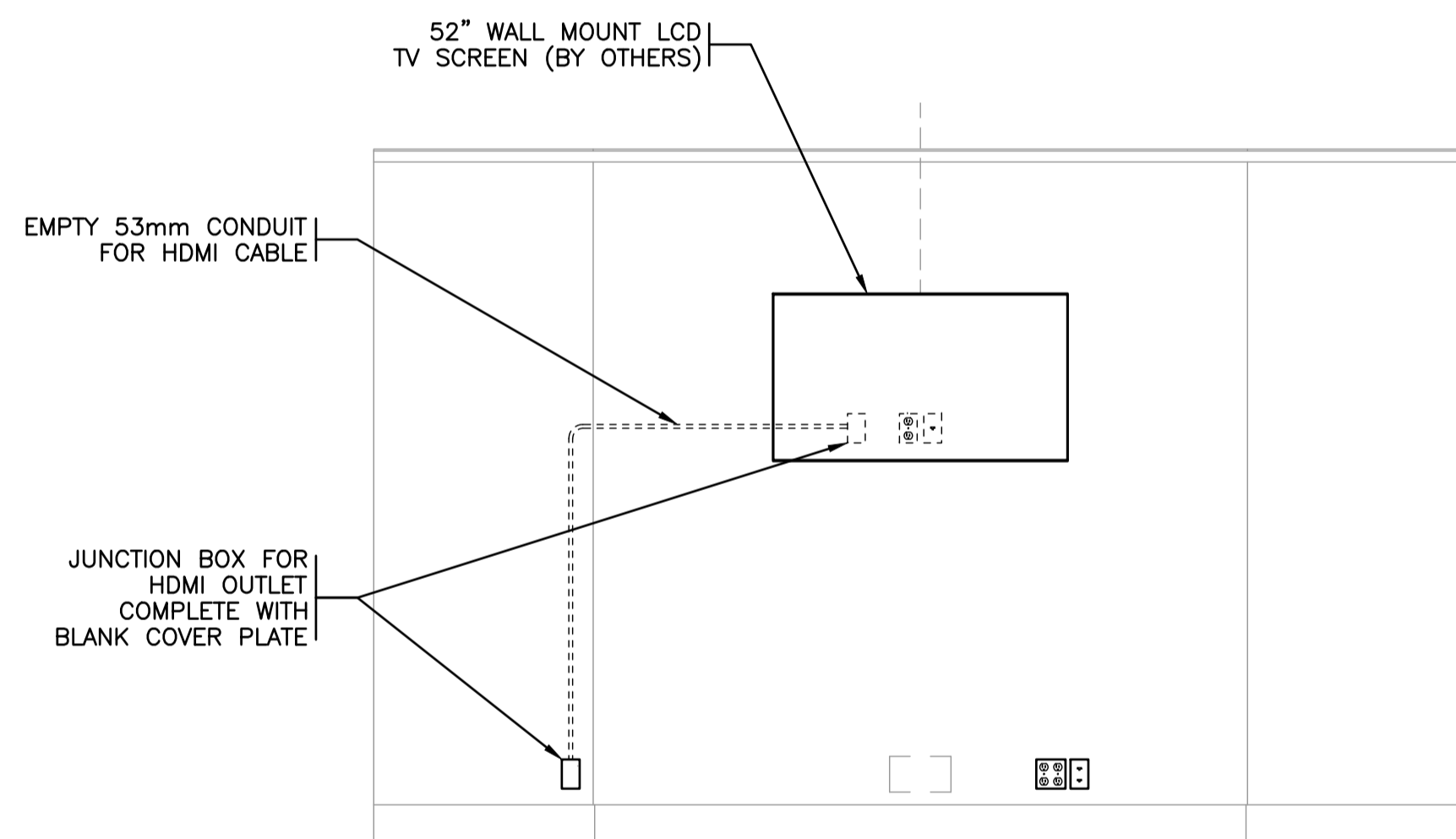




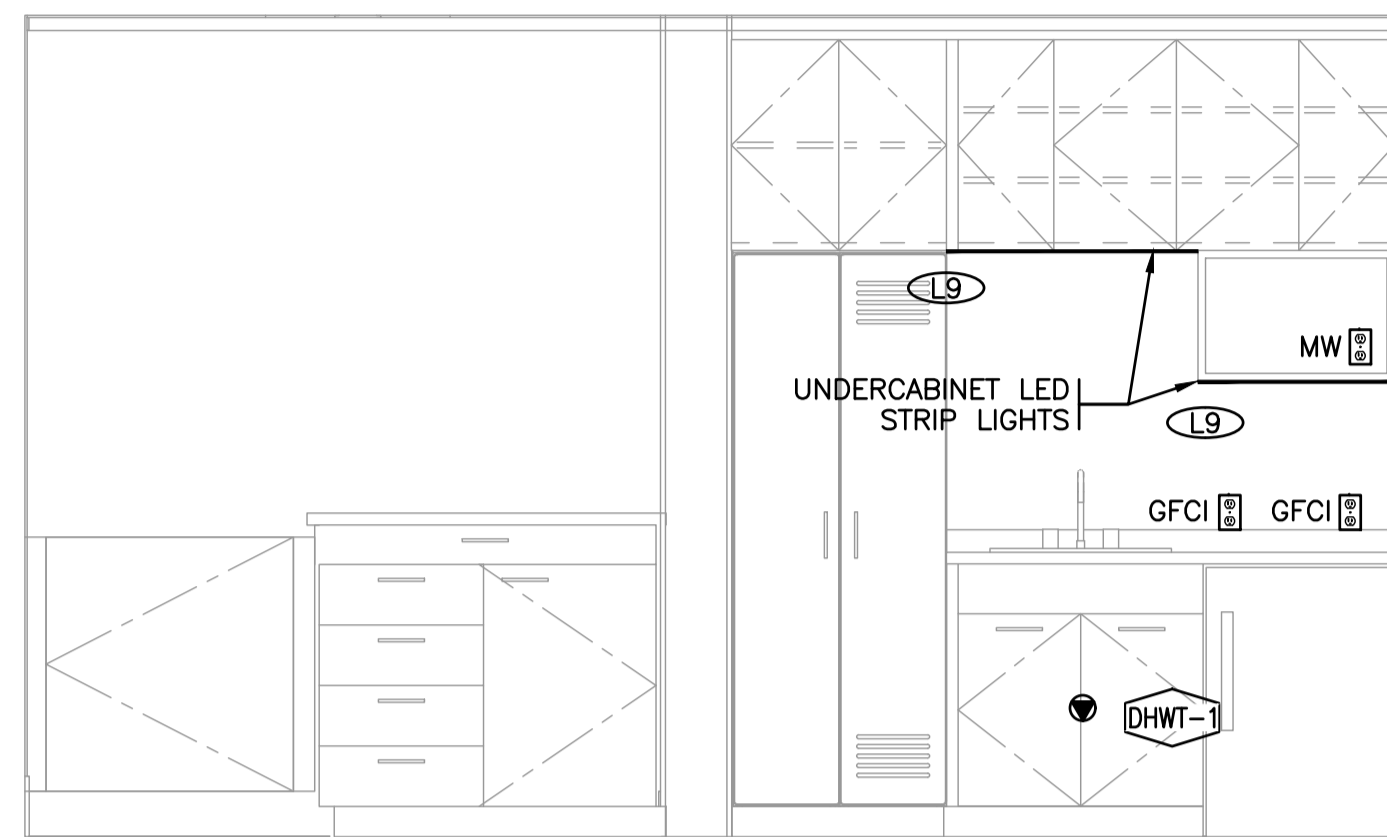
**NOTES:**

1. CONFIRM CONDUIT ROUTING WITH OWNER AND OBTAIN APPROVAL PRIOR TO INSTALLATION.
2. PAINT CONDUIT TO MATCH EXISTING WALL COLOUR.
3. PROVIDE CONDUIT QUANTITIES AND SIZES AS INDICATED ON SITE PLANS.

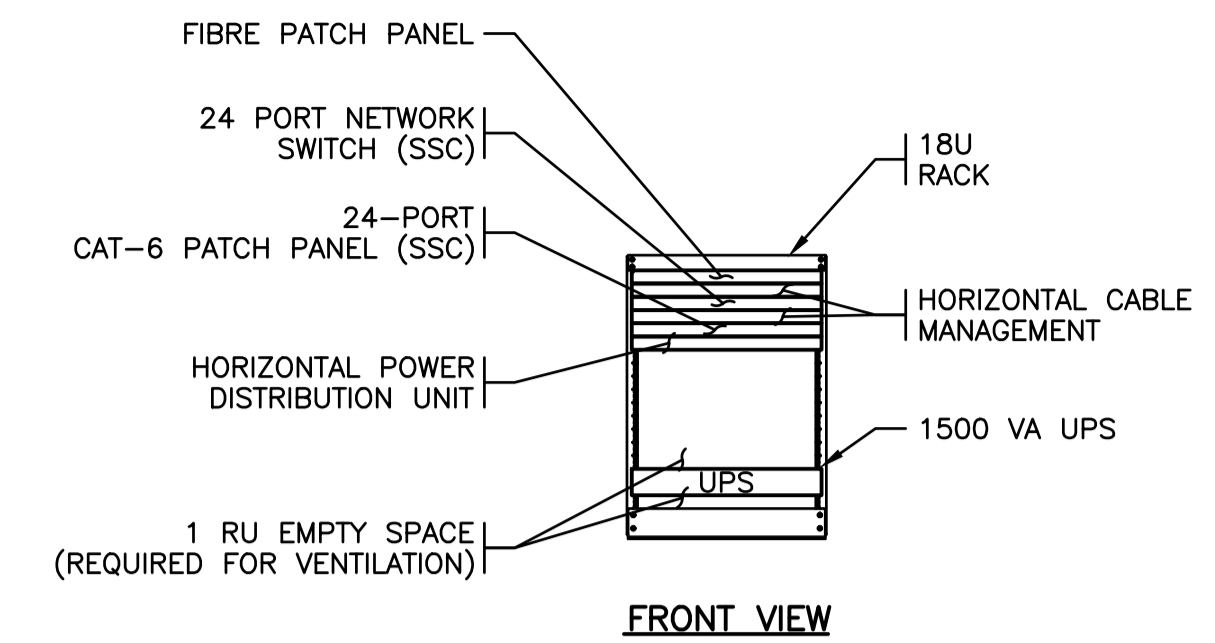
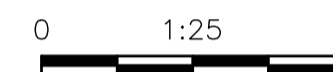
**ELEVATION A BUILDING CONDUIT EXIT**  
N.T.S. (E002) (E120) INTERIOR WALL



**ELEVATION D MEETING ROOM NORTH WALL**  
1:25 (E110)



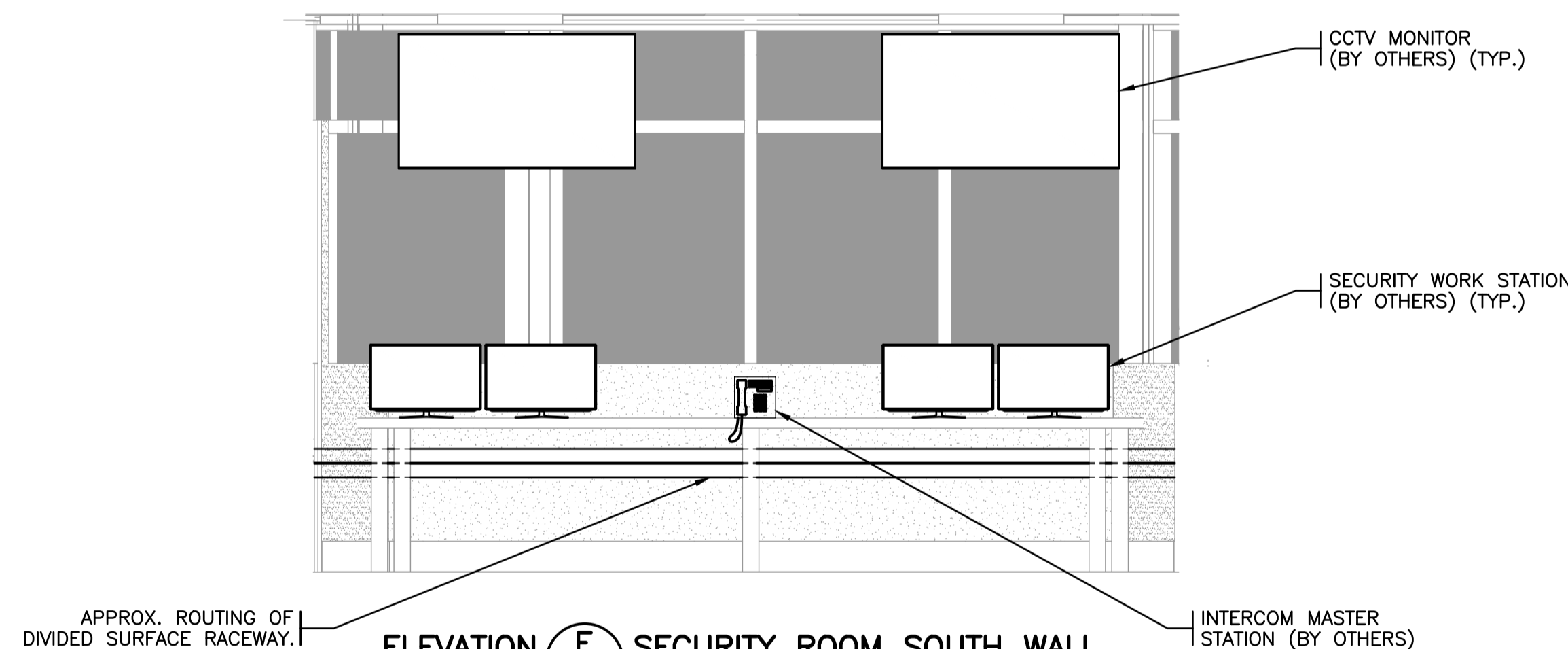
**ELEVATION B KITCHENETTE ELEVATION**  
1:25 (E110)



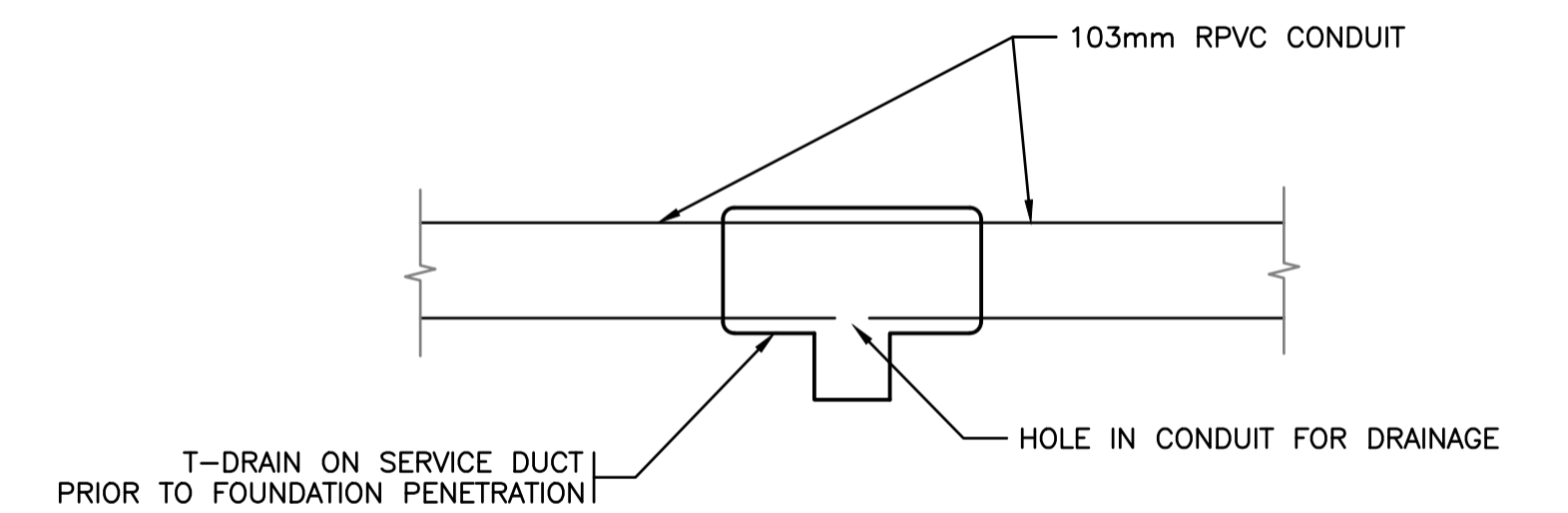
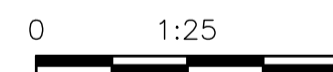
**NOTES:**

1. CONTRACTOR SHALL FOLLOW THE ABOVE RACK CONFIGURATION. PATCH PANEL, PATCH CABLES, PATCH PANEL CONNECTORS, AND NETWORK SWITCH ARE TO BE PROVIDED BY THE CONTRACTOR.
2. RACK SHALL BE HINGED WALL-MOUNT TYPE. STANDARD OF ACCEPTANCE: STARTECH.COM RK1820WALHM
3. UPS STANDARD OF ACCEPTANCE: APC SMART UPS 1500VA LCD RM 2U 120V C/W MANAGEMENT NETWORK CARD.
4. UPS AND ACTIVE NETWORK EQUIPMENT SHALL BE SUPPLIED AND INSTALLED BY SSC.
5. INSTALL RACK SO THAT THE TOP OF THE ENCLOSURE IS 1800mm A.F.F.

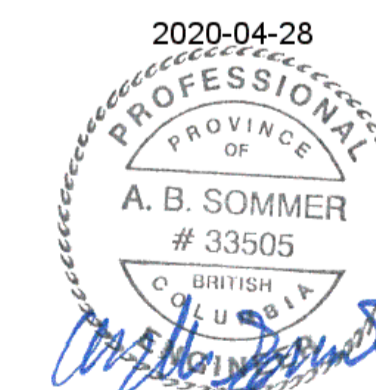
**ELEVATION C SSC DATA RACK**  
N.T.S. (E110) GATE HOUSE



**ELEVATION E SECURITY ROOM SOUTH WALL**  
1:25 (E110)



**TYP. DETAIL 1 CONDUIT DRAIN**  
N.T.S. (E100)



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**DETAILS AND ELEVATIONS**

SCALE: AS NOTED  
START DATE:  
DRAWING NUMBER: **E500**  
8 OF 11  
REVISION: 0

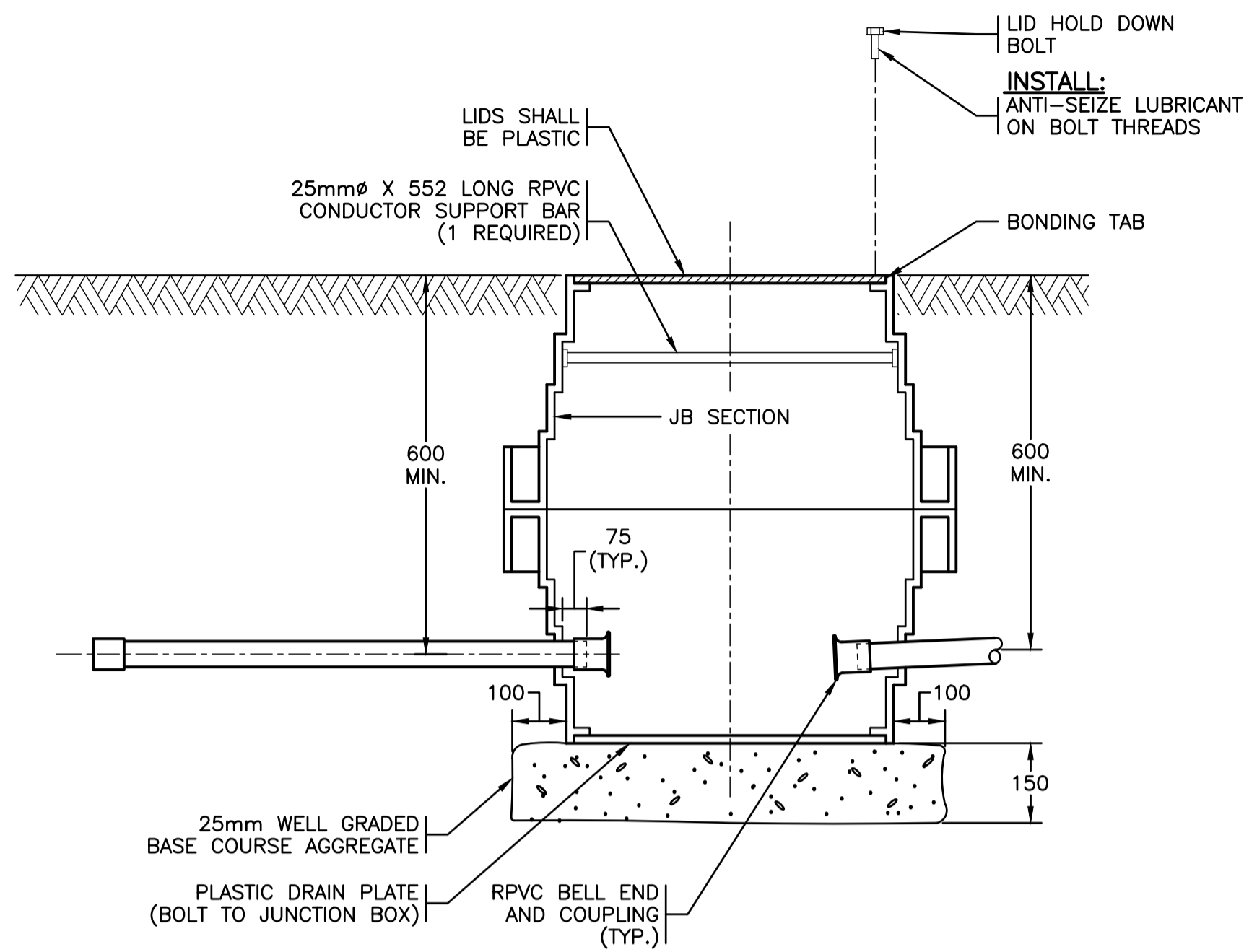


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0	2020-04-28	ISSUED FOR TENDER



**TYPE 10 JUNCTION BOX**

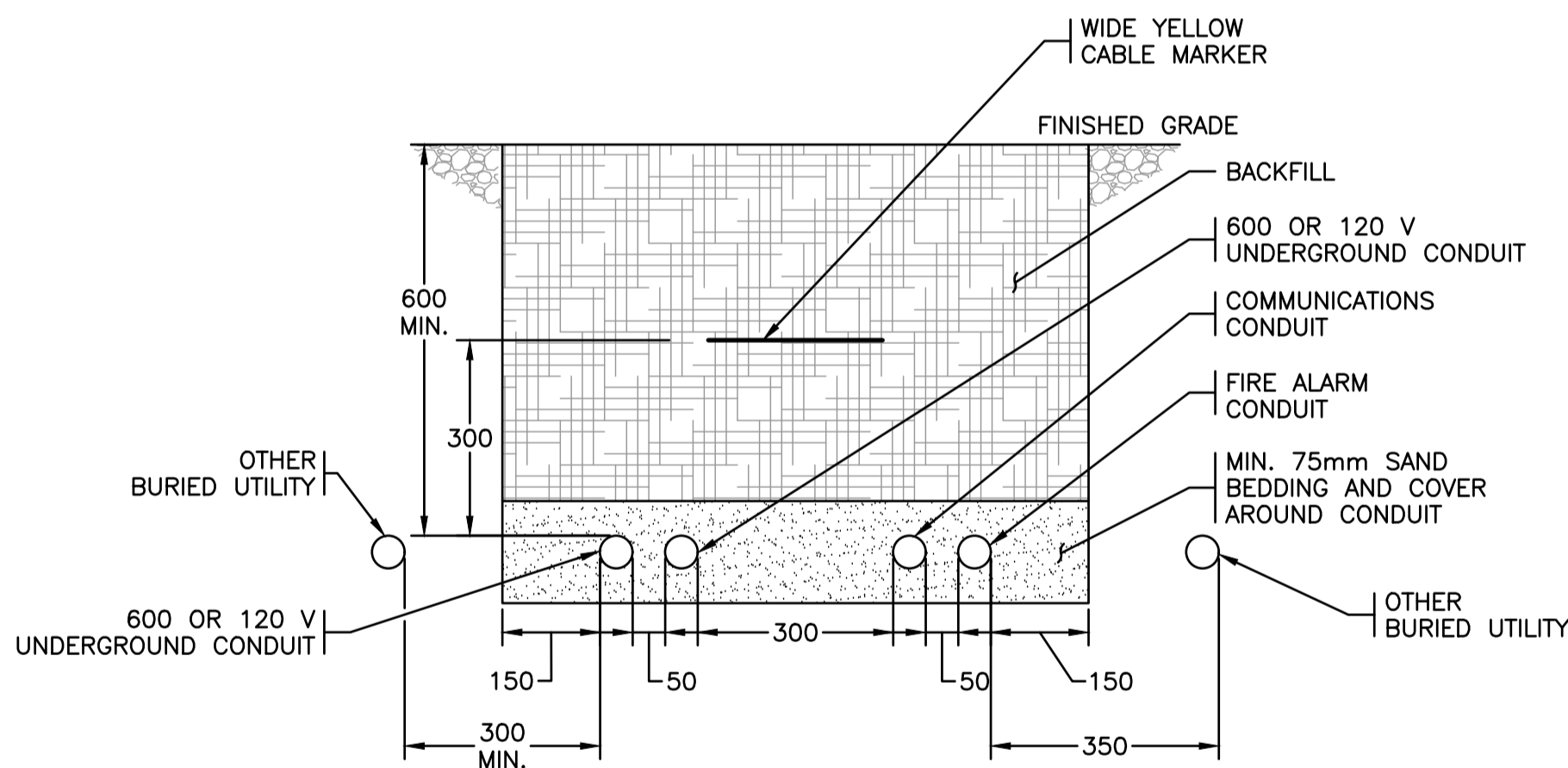
TWO J.B. SECTIONS (SN1847R)  
ONE PLASTIC LID (SN1850R)  
ONE DRAIN PLATE (SN1849)



**NOTES:**

- BOLT DOWN LID ON BOX BEFORE BACKFILLING, TAMPING, AND PAVING.
- SN PART NUMBERS INDICATE BC MoTI STOCK NUMBERS.
- PROVIDE H20 RATING FOR ALL JUNCTION BOXES IN VEHICULAR AREAS.

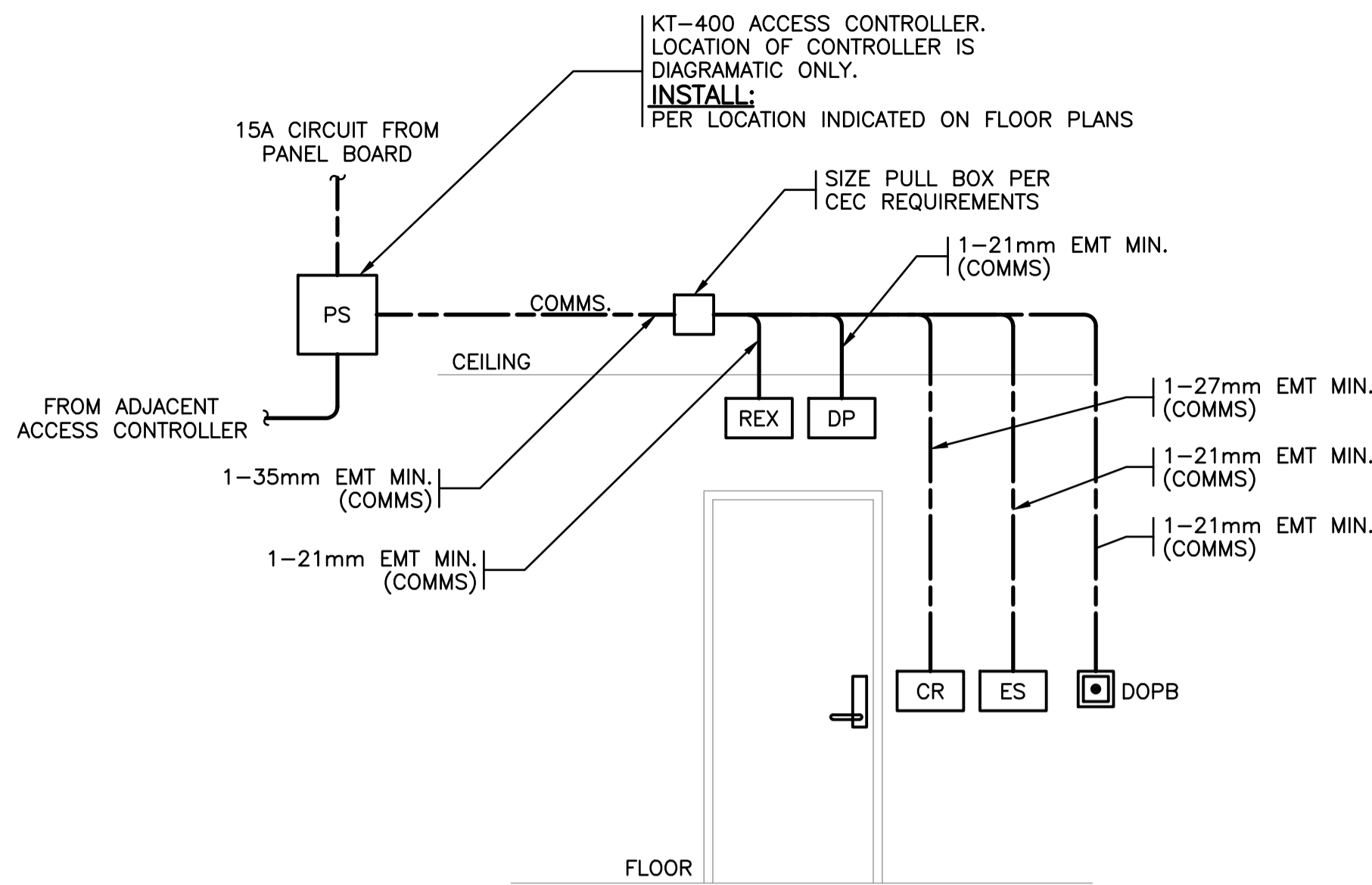
**DETAIL 1 TYPE 10 JUNCTION BOX INSTALLATION**  
N.T.S.



**NOTES:**

- COORDINATE WITH CIVIL REQUIREMENTS FOR BACKFILL AND CONDUIT ROUTING DETAILS. COORDINATE PROTECTION OF EXISTING CURBS WITH CIVIL DRAWINGS.

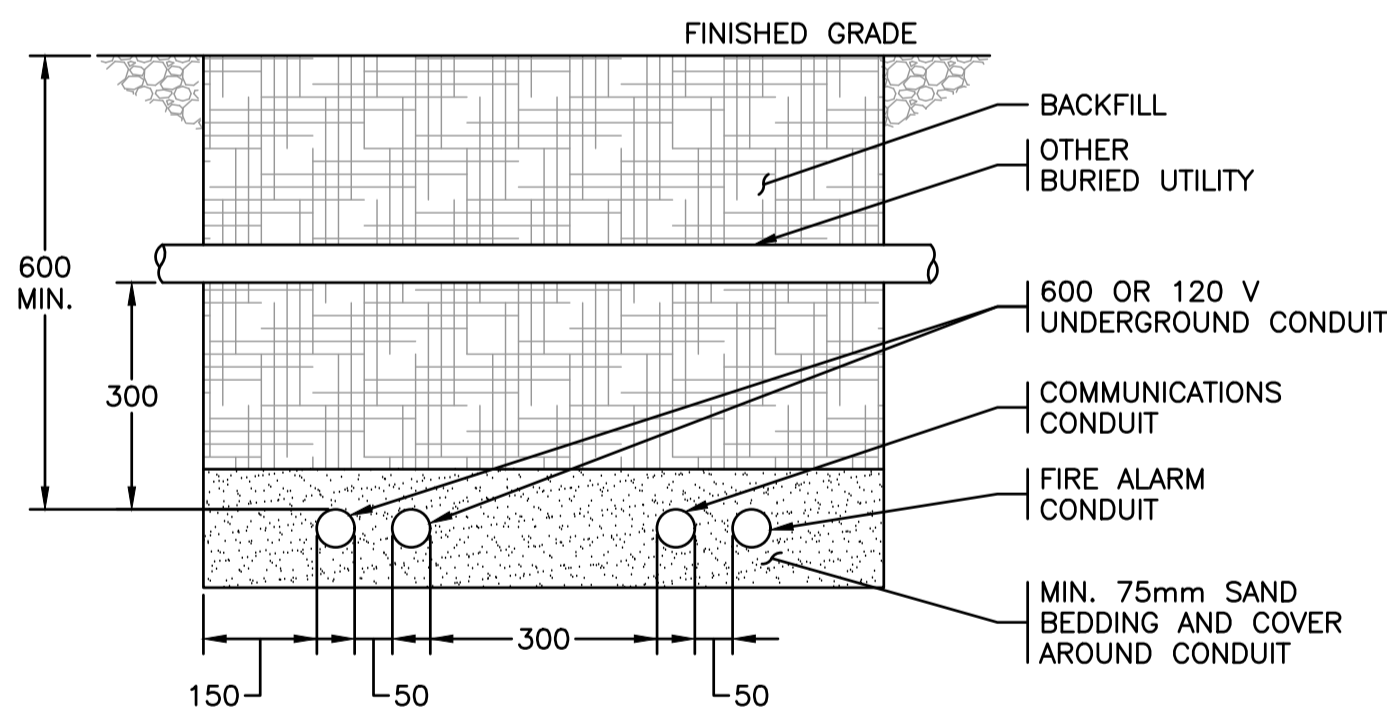
**DETAIL 1 TYPICAL DUCTBANK SECTION**  
N.T.S.



**NOTES:**

- CONTRACTOR TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM CONSISTING OF THE ABOVE INDICATED SYSTEMS.
- PROVIDE POWER FOR THE ACCESS CONTROL SYSTEMS AS REQUIRED.
- WHERE NOTED ON DRAWINGS, LOCATE JUNCTION BOXES IN ACCESSIBLE CEILING ON FLOOR BELOW.
- CONTRACTOR SHALL PROVIDE DOOR OPERATOR INTERFACE RELAY WHERE BOTH AUTOMATIC DOOR OPERATORS AND CARD READERS ARE INSTALLED ON THE SAME DOOR.

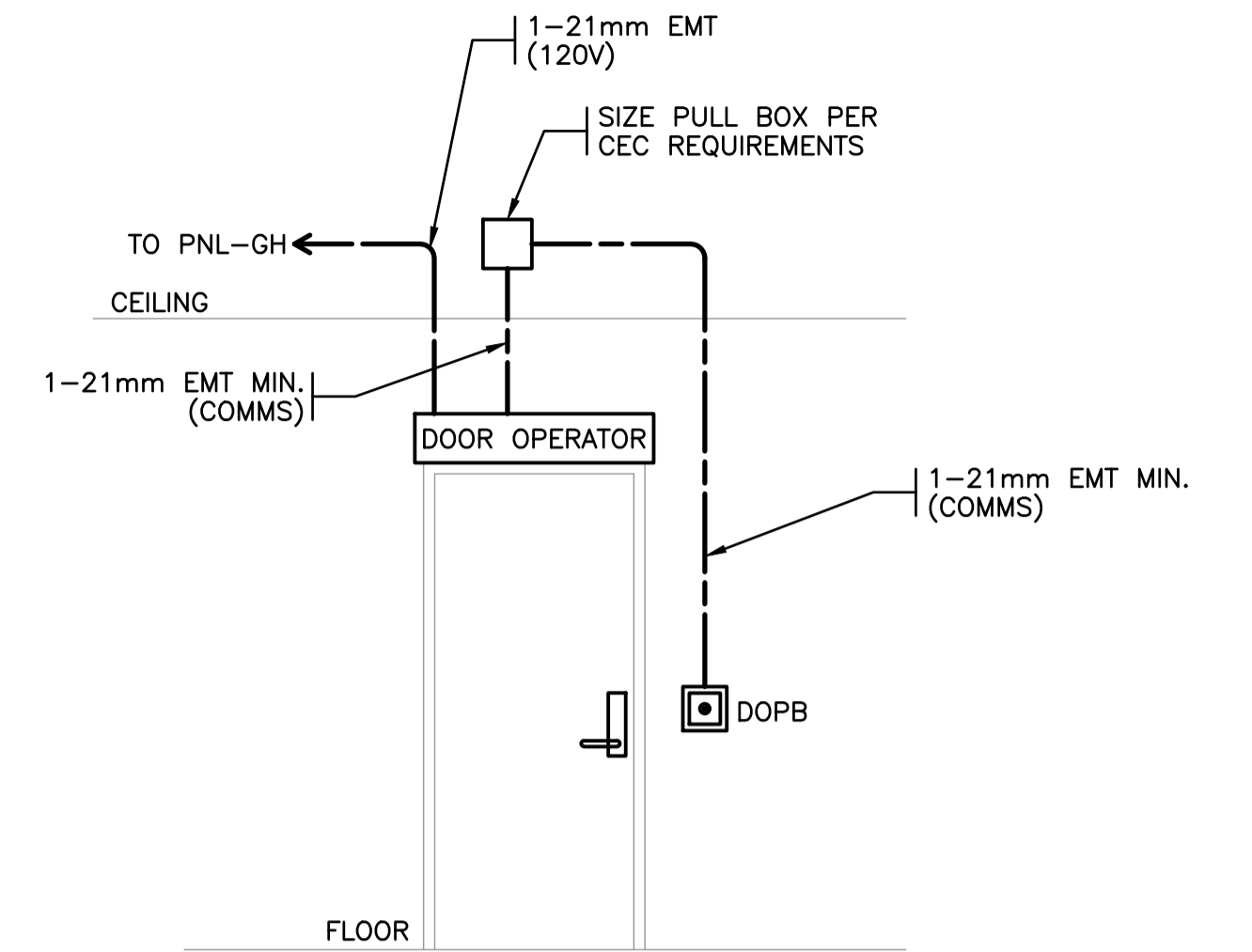
**DETAIL 2 TYPICAL SINGLE DOOR**  
N.T.S. W/ CARD ACCESS



**NOTES:**

- COORDINATE WITH CIVIL REQUIREMENTS FOR BACKFILL AND CONDUIT ROUTING DETAILS. COORDINATE PROTECTION OF EXISTING CURBS WITH CIVIL DRAWINGS.

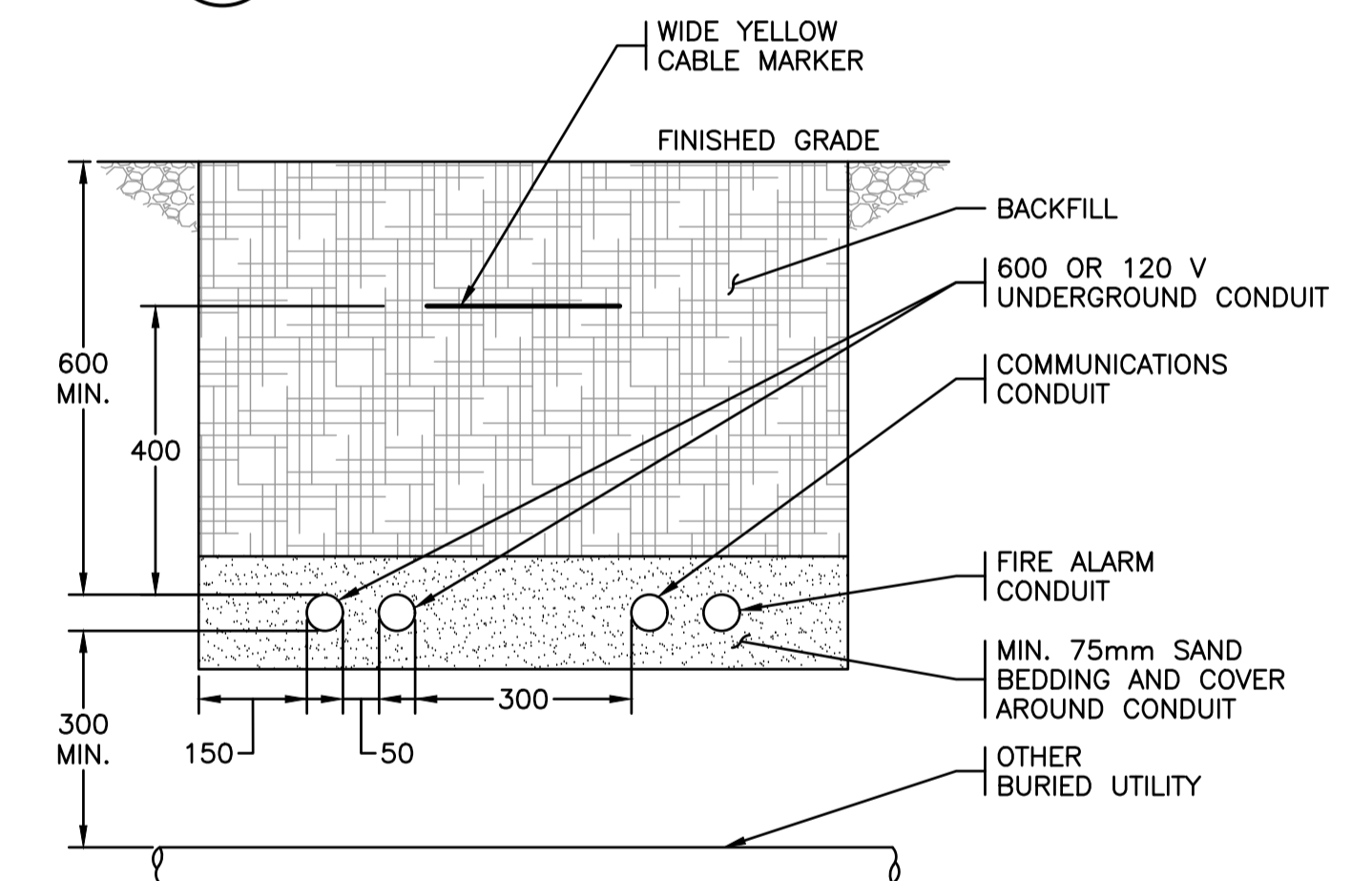
**DETAIL 2 TYPICAL DUCTBANK UTILITY CROSSING**  
N.T.S. OTHER UTILITY AT SHALLOWER DEPTH



**NOTES:**

- CONTRACTOR TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM CONSISTING OF THE ABOVE INDICATED SYSTEMS.
- WHERE NOTED ON DRAWINGS, LOCATE JUNCTION BOXES IN ACCESSIBLE CEILING ON FLOOR BELOW.
- MOUNT DOOR OPERATOR PUSHBUTTONS ON WALL MULLIONS.
- COORDINATE POWER REQUIREMENTS FOR DOOR HARDWARE WITH DOOR HARDWARE CONTRACTOR AND ARCHITECT.

**DETAIL 3 TYPICAL ACCESSIBLE SINGLE DOOR**  
N.T.S.



**NOTES:**

- COORDINATE WITH STRUCTURAL DETAILS FOR BACKFILL AND CONDUIT ROUTING DETAILS. COORDINATE PROTECTION OF EXISTING CURBS WITH STRUCTURAL DRAWINGS.

**DETAIL 3 TYPICAL DUCTBANK UTILITY CROSSING**  
N.T.S. ELECTRICAL CONDUIT AT SHALLOWER DEPTH



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9860 WEST SAANICH ROAD  
SIDNEY, BC, V8L 5T5

**SCALE**  
AS NOTED  
START DATE

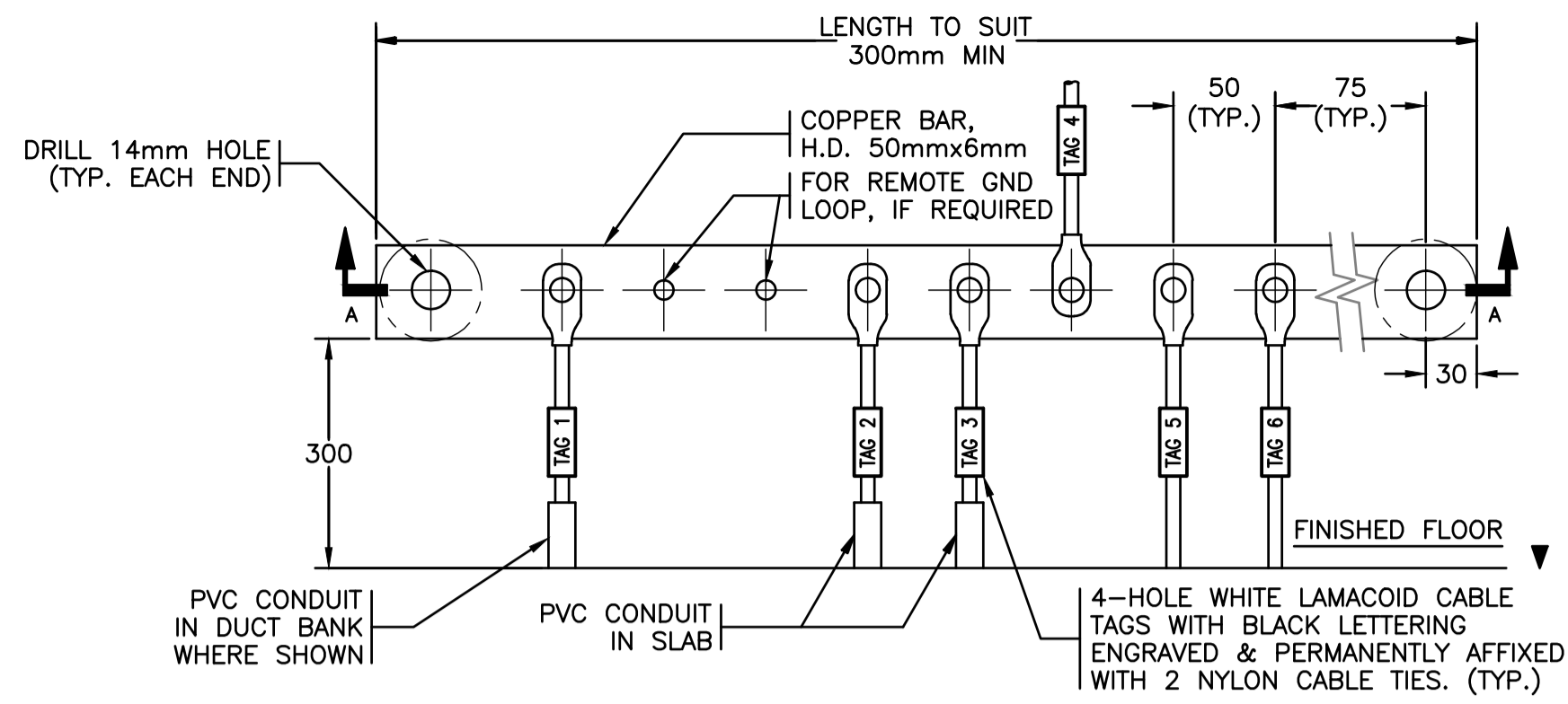
**DRAWING NUMBER**  
**E501**  
9 OF 11

**REVISION** 0

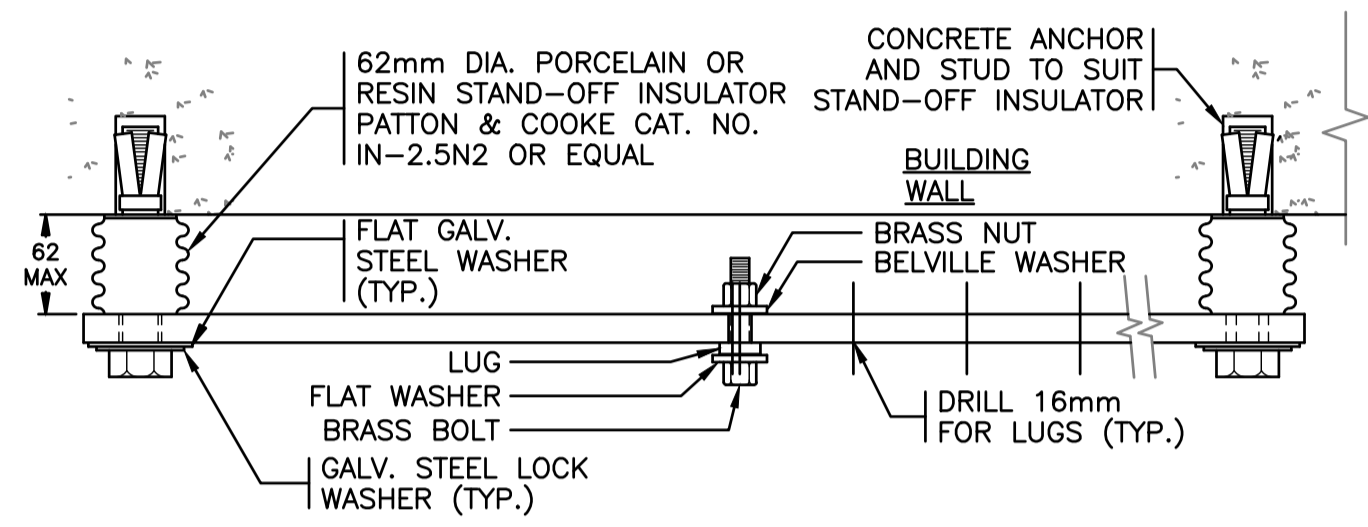


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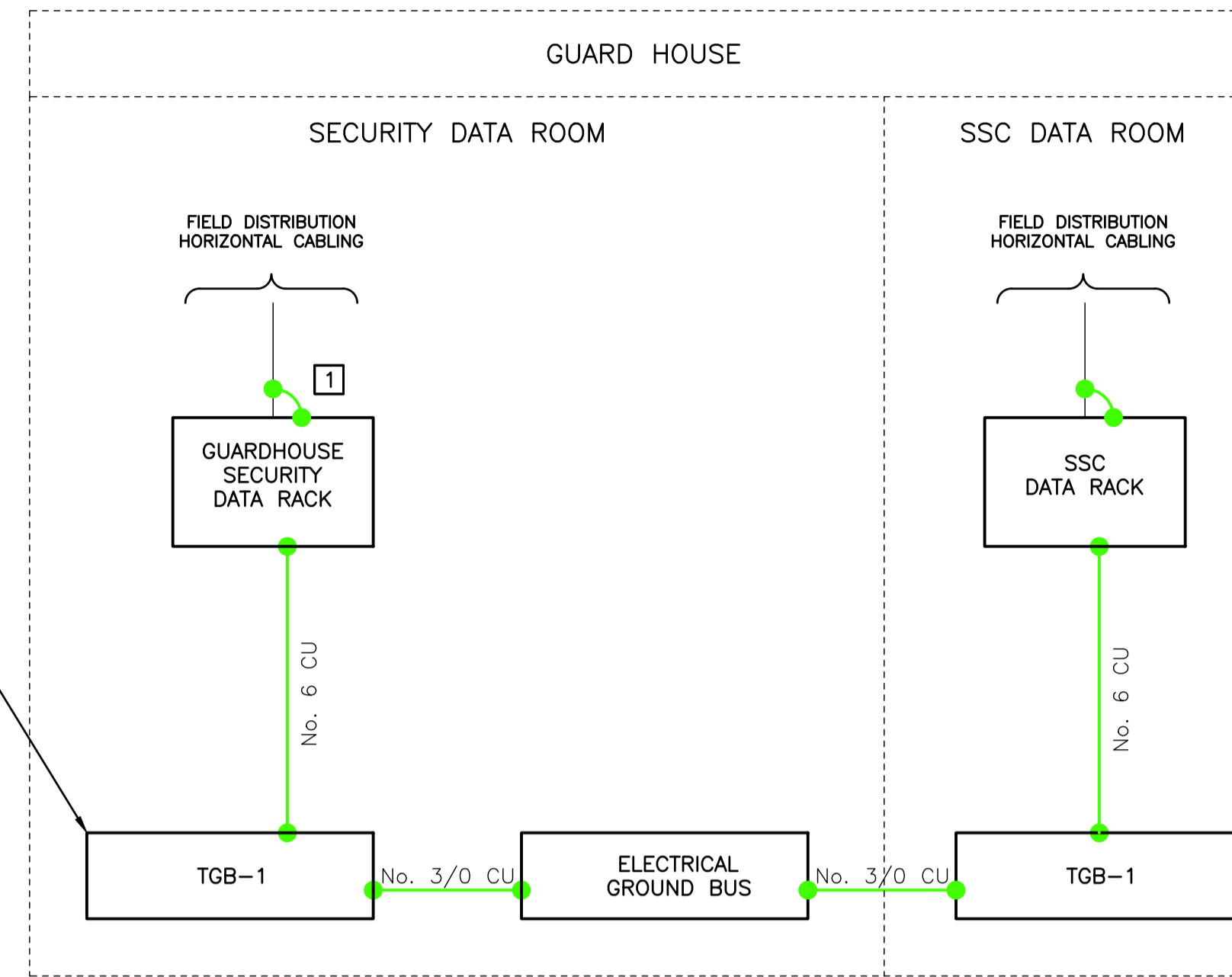
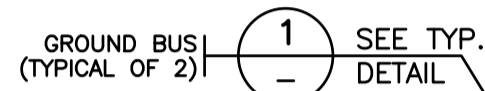


FRONT ELEVATION



SECTION A-A

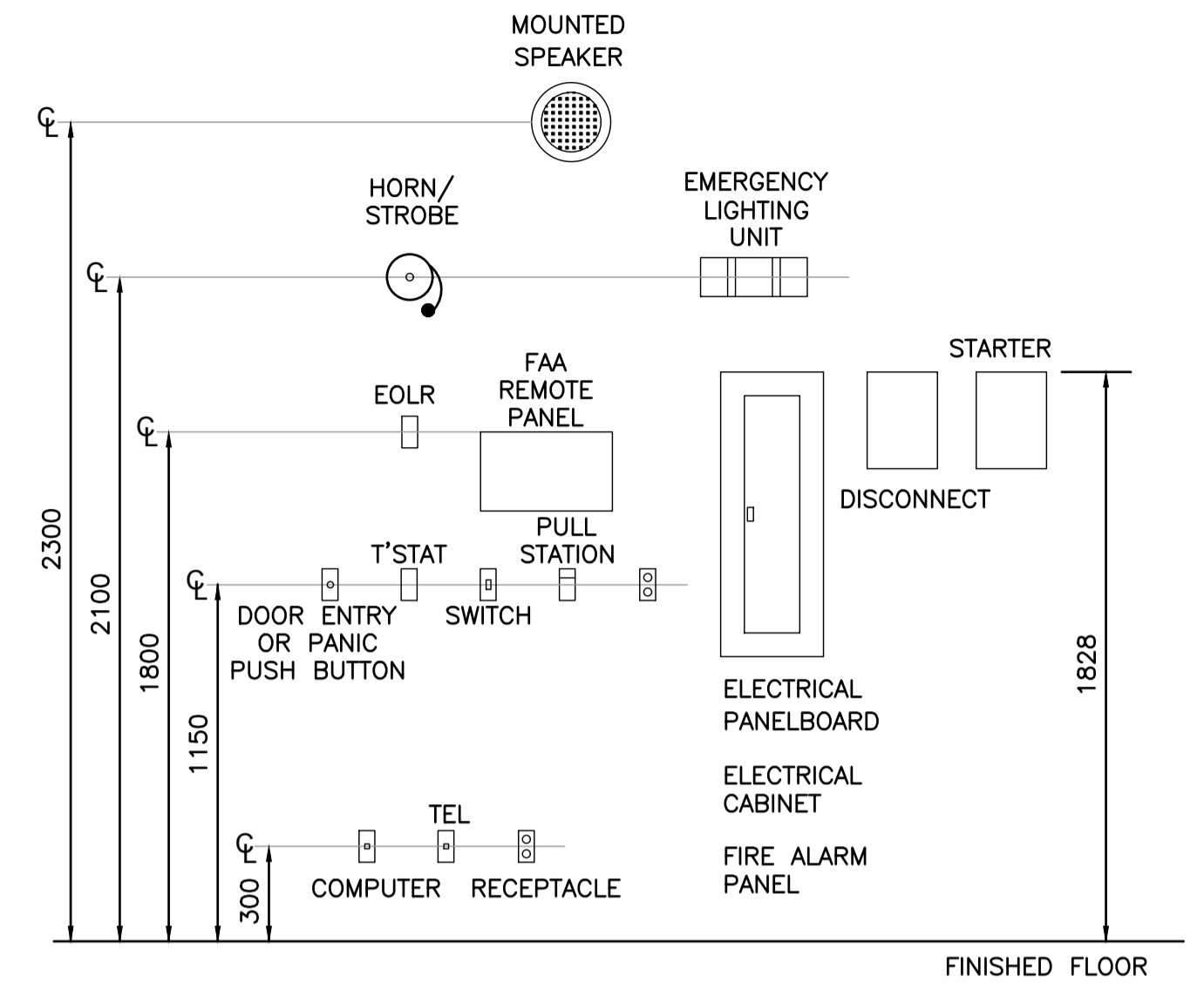
DETAIL 1 GROUNDING INSTALLATION DETAILS  
N.T.S. E110 COPPER GROUNDING BAR - TYP.



NOTES:

1 DENOTES BONDING JUMPER TO CONDUIT AND CABLE TRAY (TYP.)

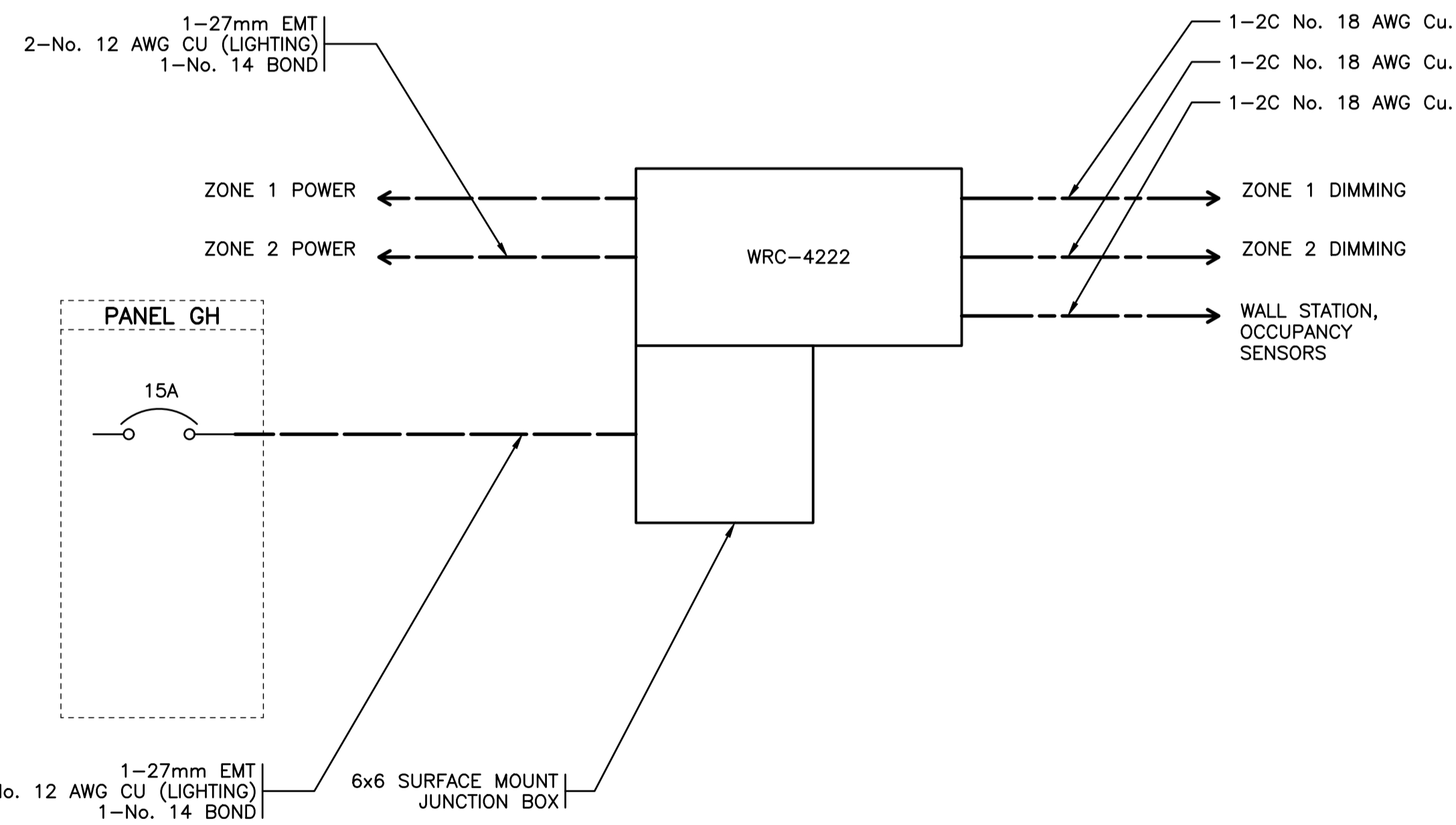
DETAIL 2 GUARDHOUSE TELECOMMUNICATIONS  
N.T.S. E110 BONDING



NOTES:

1. ALIGN ALL EQUIPMENT VERTICALLY AND HORIZONTALLY.

DETAIL 3 TYPICAL MOUNTING HEIGHTS  
N.T.S. E110



NOTES:

1. DETAIL APPLIES TO DOUGLAS DIALOG ROOM CONTROLLER MODEL WRC-4222. REFER TO DOUGLAS INSTALLATION MANUAL FOR FURTHER DETAILS.

DETAIL 4 LOW VOLTAGE LIGHTING CONTROLS  
N.T.S. E111 WIRING DIAGRAM

NOTES:

1. ALL EQUIPMENT TO BE PROVIDED NEW UNLESS NOTED OTHERWISE.
2. ALL GROUNDING AND BONDING CONDUCTORS SHALL BE GREEN-JACKETED UNLESS NOTED OTHERWISE.
3. FOR NEW CABLE TRAY WITHIN ROOMS HOUSING RACK EQUIPMENT, BOND No. 6 CONDUCTOR TWICE PER MECHANICAL SECTION.



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**DETAILS (2 OF 2)**

SCALE: AS NOTED  
START DATE:  
DRAWING NUMBER: **E515**  
10 OF 11  
REVISION: 0





**MECHANICAL SCHEDULE**

TAG	DESCRIPTION	LOCATION	SPECIFICATIONS								DISCONNECT			STARTER/CONTROL				CONTROL DEVICE				NOTES	PANEL	BREAKER	FEEDER
			HORSEPOWER (HP)	CONNECTED LOAD (KW)	FLA (A)	MCA / MOP (A)	VOLTAGE (V)	PHASE	FIRE ALARM CONN?	EMERGENCY?	SUPPLIED	INSTALLED	CONNECTED	SUPPLIED	INSTALLED	CONNECTED	TYPE	SUPPLIED	INSTALLED	CONNECTED	TYPE				
HWH-1	ON DEMAND HOT WATER HEATER	UNDER SINK IN SECURITY ROOM		13.50	65.00		208	1	N	N	-	-	-	M	M	M	INT	M	M	M	TSTAT		GH-1	2P-70A	2C-No. 4 Cu. + No. 10 Bond
CU-1	VAV HEAT PUMP	OUTDOORS - NORTH SIDE OF BUILDING				16.5	208	1	N	N	E	E	E	M	M	M	INT	M	M	M	PCS		GH-1	2P-20A	2C-No. 12 Cu. + No. 14 Bond
FC-1	MEETING ROOM 103 FAN COIL	CEILING ABOVE W/C				0.8	208	1	N	N	E	E	E	M	M	M	INT	M	M	M	PCS	1	GH-1	2P-15A	2C-No. 12 Cu. + No. 14 Bond
FC-2	SECURITY ROOM 106 VESTIBULE 104 FAN COIL	CEILING ABOVE SECURITY CONTROL ROOM 107				0.3	208	1	N	N	E	E	E	M	M	M	INT	M	M	M	PCS	1	GH-1		2C-No. 12 Cu. + No. 14 Bond
FC-3	DATA ROOM 101 FAN COIL	CEILING ABOVE MEETING ROOM				0.4	208	1	N	N	E	E	E	M	M	M	INT	M	M	M	PCS	1	GH-1		2C-No. 12 Cu. + No. 14 Bond
FC-4	SSC 102 FAN COIL	CEILING ABOVE MEETING ROOM				0.4	208	1	N	N	E	E	E	M	M	M	INT	M	M	M	PCS	1	GH-1		2C-No. 12 Cu. + No. 14 Bond
EF-1	SECURITY ROOM 106 VESTIBULE 104 EXHAUST FAN	CEILING ABOVE W/C	FRAC						N	N	E	E	E	M	M	M	INT	M	M	M	INT	2	GH-1	1P-15A	2C-No. 12 Cu. + No. 14 Bond
EF-2	MEETING ROOM EXHAUST FAN	CEILING ABOVE MEETING ROOM	FRAC						N	N	E	E	E	M	M	M	INT	M	M	M	INT	2	GH-1	1P-15A	2C-No. 12 Cu. + No. 14 Bond
WH-1	WALL FAN HEATER	WASHROOM		0.50			120	1	N	N	-	-	-	-	-	-	-	E	E	E	TSTAT		GH-1	1P-15A	2C-No. 12 Cu. + No. 14 Bond

**NOTES:**  
 1 FAN COILS FC-1, FC-2, FC-3 AND FC-4 TO BE CONNECTED TO SAME CIRCUIT IN PANEL GH-1  
 2 EXHAUST FANS EF-1 AND EF-2 SHALL BOTH BE CONNECTED TO THE SAME CIRCUIT IN PANEL GH-1

**STARTER ABBREVIATIONS:**  
 FVNR - COMBINATION MAGNETIC STARTER  
 INT - INTEGRAL TO UNIT  
 HOA - HAND-OFF-AUTO  
 MAG - MAGNETIC MOTOR STARTER  
 MMS - MANUAL MOTOR STARTER  
 MPS - MOTOR PROTECTION SWITCH  
 R - RELAY/CONTACTS  
 VFD - VARIABLE FREQUENCY DRIVE  
 BRK - BREAKER

**CONTROL DEVICES**  
 BAS - BUILDING AUTOMATION SYSTEM  
 DDC - DIRECT DIGITAL CONTROL  
 DS - DUCT STAT  
 FS - FLOAT SWITCH  
 H - HUMIDISTAT  
 PS - PRESSURE SWITCH  
 SW - MANUAL SWITCH  
 TC - TIME CLOCK  
 TSTAT - THERMOSTAT  
 ASTAT - AQUASTAT

**DIVISION**  
 M - MECHANICAL  
 E - ELECTRICAL  
 C - VARIES WITH SUPPLIER

**LUMINAIRE SCHEDULE**

TAG	DESCRIPTION	CRI	LUMENS (lm)	COLOUR TEMP. (K)	STANDARD OF ACCEPTANCE	VOLTAGE	MOUNTING	NOTES
L1	2' X 2' LED TROUGH	>80	3300	3500	LITHONIA BLC SERIES LED	120	T-BAR	
L2	6" LED DOWNLIGHT	>90	1000	3500	DMF LIGHTING DRD2 & ONEFRAME	120	RECESSED / T-BAR	1
L3	SUSPENDED DIRECT/INDIRECT LED LUMINAIRE	>90	900 DOWN / 800 UP	3500	CREE STYLUS LINEAR SERIES	120	SUSPENDED	
L4	ROUND ASYMMETRICAL LED DOWNLIGHT	>80	1110	3000	SYSTEMALUX LOGO LOGS-RTNC-E830AFL120-012D10	120	RECESSED / SOFFIT	2
L5	2' LED LINEAR STRIP NARROW	>80	1200	3500	CREE C-LITE C-STRIP-A-LIN SERIES	120	SURFACE	
L6	4' LED WRAPAROUND	>80	4000	3500	LITHONIA LBL4	120	SURFACE	
L7	LED VANITY LIGHT	>80	1200	3500	CREE C-LITE C-STRIP-A-LIN SERIES	120	WALL	
L8	EXTERIOR FULL CUTOFF LED WALL PACK	>80	1350	3000	CREE C-WP-A-ARFC-SM-1L SERIES	120	WALL	
L9	CHANNEL MOUNTED LED TAPE LIGHT	>80	250/FT	4000	UTECHNOLOGY UNITI SE SERIES	120	SURFACE	3

**NUMBERED NOTES:**  
 1 PROVIDE DOWNLIGHT COMPLETE WITH NEW CONSTRUCTION DEEP JUNCTION BOX AND ROUND TRIM.  
 2 ADJUST LIGHT OUTPUT TO SHINE AWAY FROM WINDOW. COORDINATE WITH OWNER.  
 3 PROVIDE LED TAPE LIGHT COMPLETE WITH PR-ST ALUMINUM CHANNEL AND 24W - ELA SERIES POWER SUPPLY.

**BATTERY PACK SCHEDULE**

REMOTE HEAD	BATTERY PACK	TYPE	AREA
-	BP01	BATTERY PACK C/W LED HEADS	SHARED SERVICES ROOM
RH01	BP01	REMOTE HEAD	DATA ROOM
RH02	BP01	REMOTE HEAD	MEETING ROOM
RH03	BP01	REMOTE HEAD	VESTIBULE
RH04	BP01	REMOTE HEAD	W/C
RH05	BP01	REMOTE HEAD	SECURITY ROOM

**NOTES:**  
 1. ALL REMOTE HEADS SHALL BE SURFACE MOUNTED, FINISHED COLOUR: WHITE, 24V, STANDARD OF ACCEPTANCE: BEGHELLI BTMR LED SERIES  
 2. ALL BATTERY PACKS C/W REMOTE HEADS SHALL BE SURFACE MOUNTED, FINISHED COLOUR: WHITE, 120V, STANDARD OF ACCEPTANCE: BEGHELLI NOVA SERIES

**LIGHTING CONTROL SEQUENCE**

SPACE TYPE	NO ZONES	SEQUENCE						OCCUPANCY SENSOR TYPE (A)	CONTROL METHOD (B)		NOTES
		MANUAL ON	MANUAL OFF	AUTO ON	AUTO OFF	DIMMING	SCENE SELECTION		ON CONTROL	OFF CONTROL	
SECURITY ROOM / VESTIBULE	3	X	X				X	DTU	SW	SW	
UNDERCABINET	1	X	X						SW	SW	
WASHROOM	1	X	X	X	X			DTU	SW	SW/OS	
MEETING ROOM	2	X	X		X	X		DTU	SW	SW/VS	
DATA ROOM	1	X	X						SW	SW	
ELECTRICAL ROOM	1	X	X						SW	SW	
EXTERIOR CANOPY AND WALLPACK	1			X	X			PC	PC	1	

(A) OCCUPANCY SENSOR TYPE: DTU = Dual Tech - PIR and Ultrasonic  
 (B) CONTROL METHOD: SW = Switch  
 OS = Occupancy Sensor  
 PC = Photocell  
 VS = Vacancy Sensor

**GENERAL NOTES**  
 1. PROVIDE HAND/AUTO MANUAL OVERRIDE SWITCH INSTALLED ADJACENT TO ELECTRICAL PANEL FOR MAINTENANCE

**NUMBERED NOTES:**  
 1. PROVIDE WALL MOUNTED PHOTOCELL TO CONTROL ALL EXTERIOR LIGHTS AS SHOWN ON DRAWINGS



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<p><b>SCHEDULES</b></p>		

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