

INVERCARGILL CENTRAL 33 ESK STREET

MECHANICAL SERVICES ZONE 1 UPDATED CONSENT ISSUE

DRAWING INDEX

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M-1204	PIPEWORK & CONTROLS LAYOUT LEVEL 1 PART 2	B	CONSENT ISSUE	11.10.19
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M-1401	MECHANICAL SCHEMATIC	C	UPDATED CONSENT ISSUE	24.10.19

- NOTES:
- SOME SYMBOLS ON THIS LEGEND MAY NOT BE APPLICABLE TO THIS PROJECT.
 - REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR SET-OUT OF ALL CEILING MOUNTED SERVICES.
 - REFER TO ARCHITECTURAL ELEVATIONS FOR SET-OUT OF ALL MECHANICAL SERVICES.
 - REFER TO THE ENGINEERS SPECIFICATION FOR FURTHER INFORMATION.

17 Dec 2019

HVAC SYMBOLS
Building Division

- 31 REFERENCE
- 50 AIRFLOW IN LITRES PER SECOND
- FLEXIBLE DUCT WORK
- DUCT UNINSULATED
- DUCT INTERNALLY INSULATED
- DUCT EXTERNALLY INSULATED
- DUCT SETS UP IN DIRECTION OF FLOW
- DUCT SETS DOWN IN DIRECTION OF FLOW
- DUCT CHANGE OF SIZE - RECTANGULAR
- DUCT CHANGE OF SIZE - CIRCULAR
- RECTANGULAR TO CIRCULAR TRANSITION
- RECTANGULAR DUCT WITH MITRED BEND & TURNING VANES
- RECTANGULAR DUCT WITH RADIUS BEND
- ROUND DUCT WITH RADIUS BEND
- MAIN RECTANGULAR DUCT WITH RECTANGULAR BRANCH & 45° ENTRY BOOT
- MAIN RECTANGULAR DUCT WITH CIRCULAR BRANCH & 45° ENTRY BOOT
- MAIN CIRCULAR DUCT WITH CIRCULAR BRANCH & 45° ENTRY BOOT
- RECTANGULAR DUCT TEE WITH TURNING VANES
- RECTANGULAR DUCT DOVETAIL
- RECTANGULAR DUCT WITH RADIUS BRANCH
- VARIABLE CONTROL DAMPER
- FIRE DAMPER
- SMOKE DAMPER
- MULTI-BLADE DAMPER OPPOSED BLADES
- MOTORISED DAMPER
- DUCT ACCESS PANEL (TOP)
- DUCT ACCESS PANEL (BOTTOM)
- DUCT ACCESS PANEL (SIDE)
- DUCT MOUNTED FAN
- VERTICAL DUCT WORK
- UNDER CUT DOOR
- AIR FLOW DIRECTION
- SUPPLY DIFFUSER
- EXTRACT DIFFUSER
- LINEAR DIFFUSER
- WALL MOUNTED GRILLE
- DOOR GRILLE
- FILTER
- SILENCER OR SOUND ATTENUATOR
- HEATER COIL
- COOLING COIL
- AIR QUALITY SENSOR
- WALL MOUNTED CONTROLLER
- CARPARK CARBON MONOXIDE SENSOR
- HUMIDITY SENSOR
- ROOM TEMPERATURE SENSOR
- THERMOSTAT
- CO₂ SENSOR
- PRESSURE SENSOR
- CEILING ACCESS PANEL (450x450 MIN) REMOVABLE CEILING TILE MAY ACT AS ACCESS PANEL (WHERE GRID CEILING IN PLACE)

HVAC ABBREVIATION

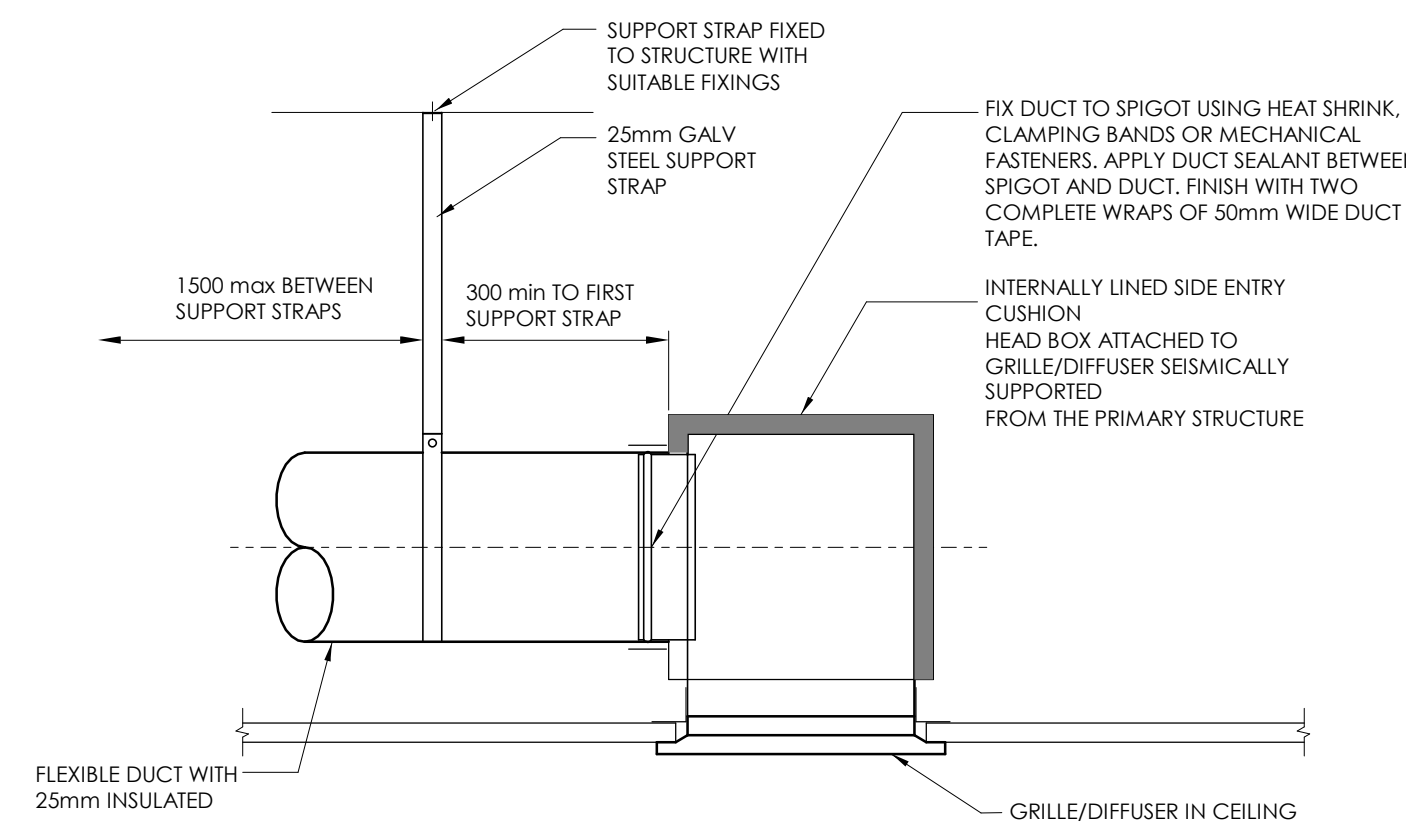
- | | |
|-------------|----------------------------------|
| E (PREFIX) | EXTRACT AIR |
| O (PREFIX) | OUTDOOR AIR |
| R (PREFIX) | RETURN AIR |
| S (PREFIX) | SUPPLY AIR |
| T (PREFIX) | TRANSFER AIR |
| /1 (SUFFIX) | UNINSULATED |
| /2 (SUFFIX) | 25mm INTERNAL LINING |
| /3 (SUFFIX) | 50mm INTERNAL LINING |
| /4 (SUFFIX) | 25mm EXTERNAL LINING |
| | |
| AFFL | ABOVE FINISHED FLOOR LEVEL |
| F.A. | FROM LEVEL ABOVE |
| F.B. | FROM LEVEL BELOW |
| H.L. | HIGH LEVEL |
| L.L. | LOW LEVEL |
| T.A. | TO LEVEL ABOVE |
| T.B. | TO LEVEL BELOW |
| | |
| RC | ROOF COWL |
| DG | DOOR GRILLE |
| L | LOUVRE |
| P | PUMP |
| AC-G.01 | EQUIPMENT REFERENCE |
| AC-#.#.# | REFERS TO EQUIPMENT ABBREVIATION |
| ##-G.## | REFERS TO LEVEL (GROUND FLOOR) |
| ##-#.01 | REFERS TO EQUIPMENT NUMBER |
| AC | AIR CONDITIONING UNIT |
| AHU | AIR HANDLING UNIT |
| HRV | HEAT RECOVERY VENTILATION |
| FCU | FAN COIL UNIT |
| SF | SUPPLY FAN |
| EF | EXTRACT FAN |
| HB | HEATER BATTERY |
| HC | HEATING COIL |
| CC | COOLING COIL |

PIPEWORK SYMBOLS

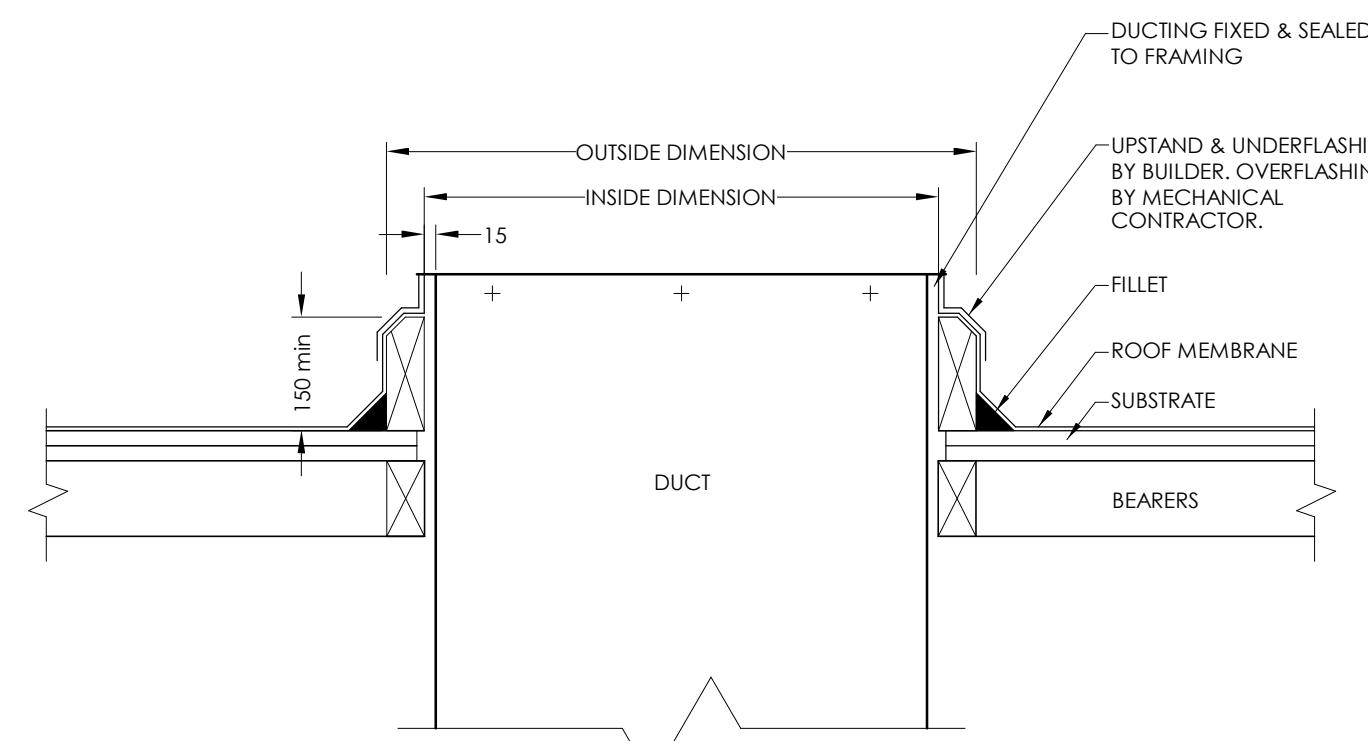
- | | |
|------|-------------------------------------|
| --- | EXISTING PIPEWORK |
| --- | PIPE RUNS BELOW FLOOR / GROUND |
| --- | PIPE RUNS IN CEILING SPACE |
| --- | PIPE RUNS NEAR FLOOR OR UNDER BENCH |
| --- | PIPE RUNS AT HIGH LEVEL |
| --- | DIRECTION OF FLOW |
| T.A. | PIPE TO LEVEL ABOVE |
| T.B. | PIPE TO LEVEL BELOW |
| F.A. | PIPE FROM LEVEL ABOVE |
| F.B. | PIPE FROM LEVEL BELOW |
| H.L. | PIPE RISES TO HIGH LEVEL |
| L.L. | PIPE DROPS TO LOW LEVEL |
| S.U. | PIPE SETS UP |
| S.D. | PIPE SETS DOWN |
| --- | PIPE TEES UP |
| --- | PIPE TEES DOWN |

PIPEWORK SYSTEM ABBEVIATIONS

- | | |
|-------|----------------------|
| CD | CONDENSATE |
| CHW-f | CHILLED WATER FLOW |
| CHW-r | CHILLED WATER RETURN |
| HTG-f | HEATING WATER FLOW |
| HTG-r | HEATING WATER RETURN |
| RFGT | REFRIGERANT |



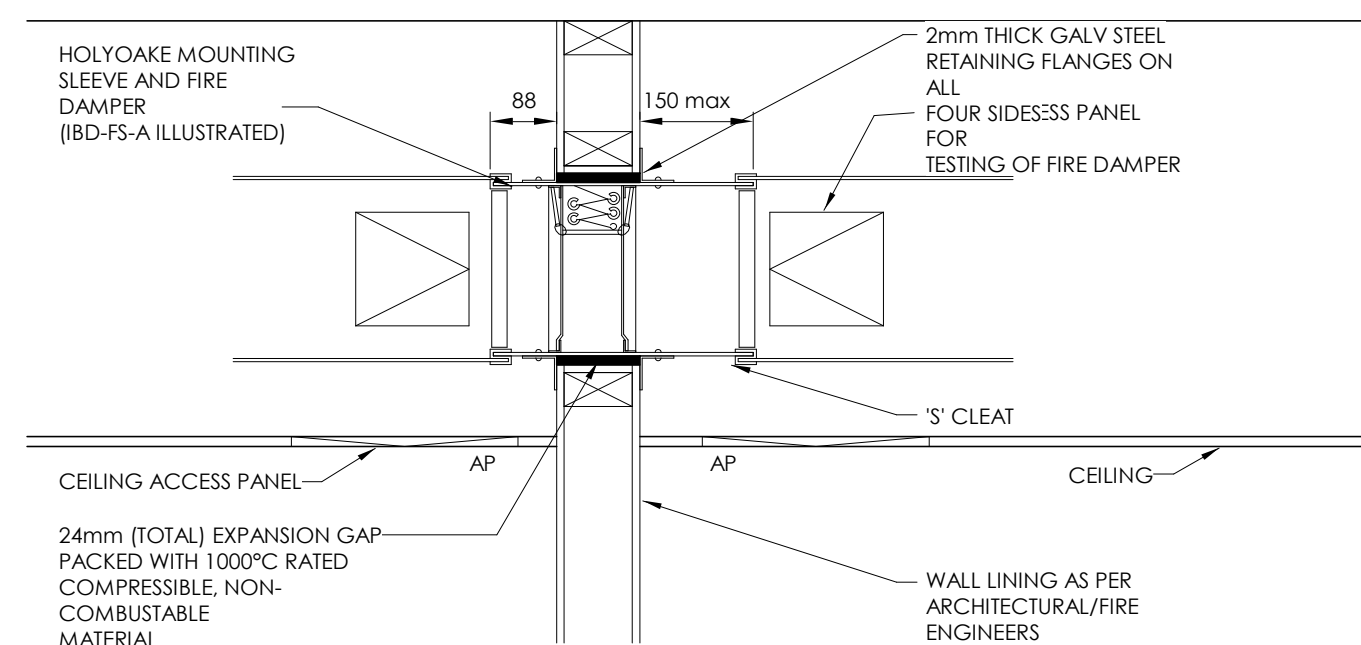
TYPICAL AIR CUSHION BOX DETAIL
SCALE: N.T.S.



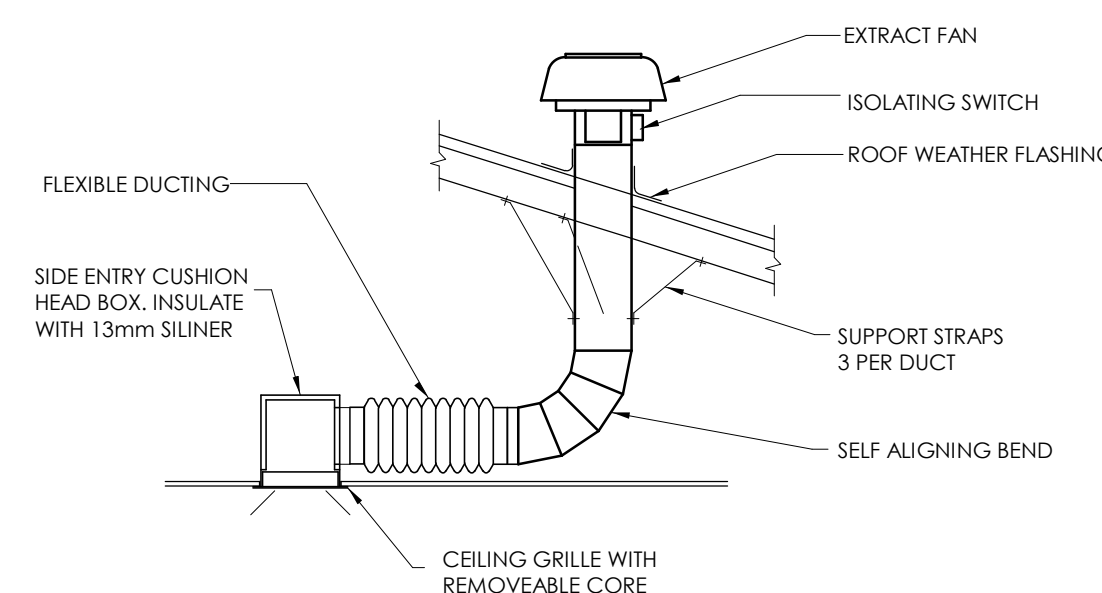
TYPICAL ROOF PENETRATION DETAIL
SCALE: N.T.S.

NOTE:

DAMPER INSTALLATION TO BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS; AS TESTED.



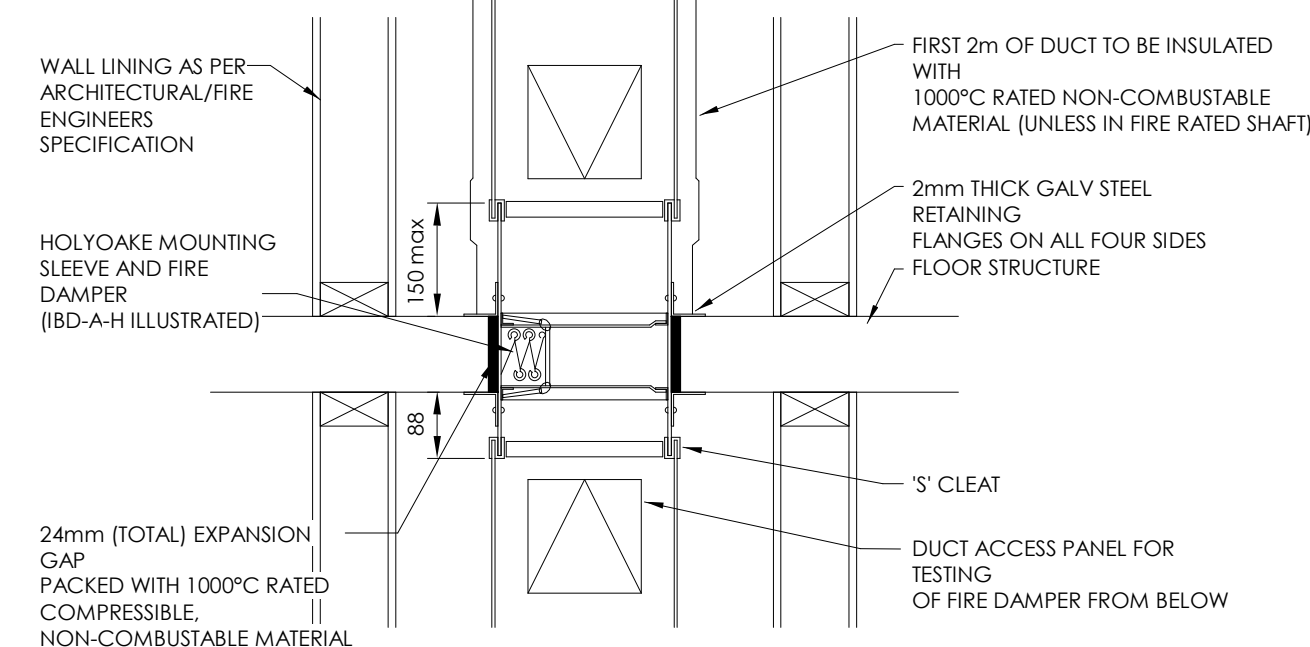
TYPICAL FIRE DAMPER DETAIL (PLASTERBOARD WALL)
SCALE: N.T.S.



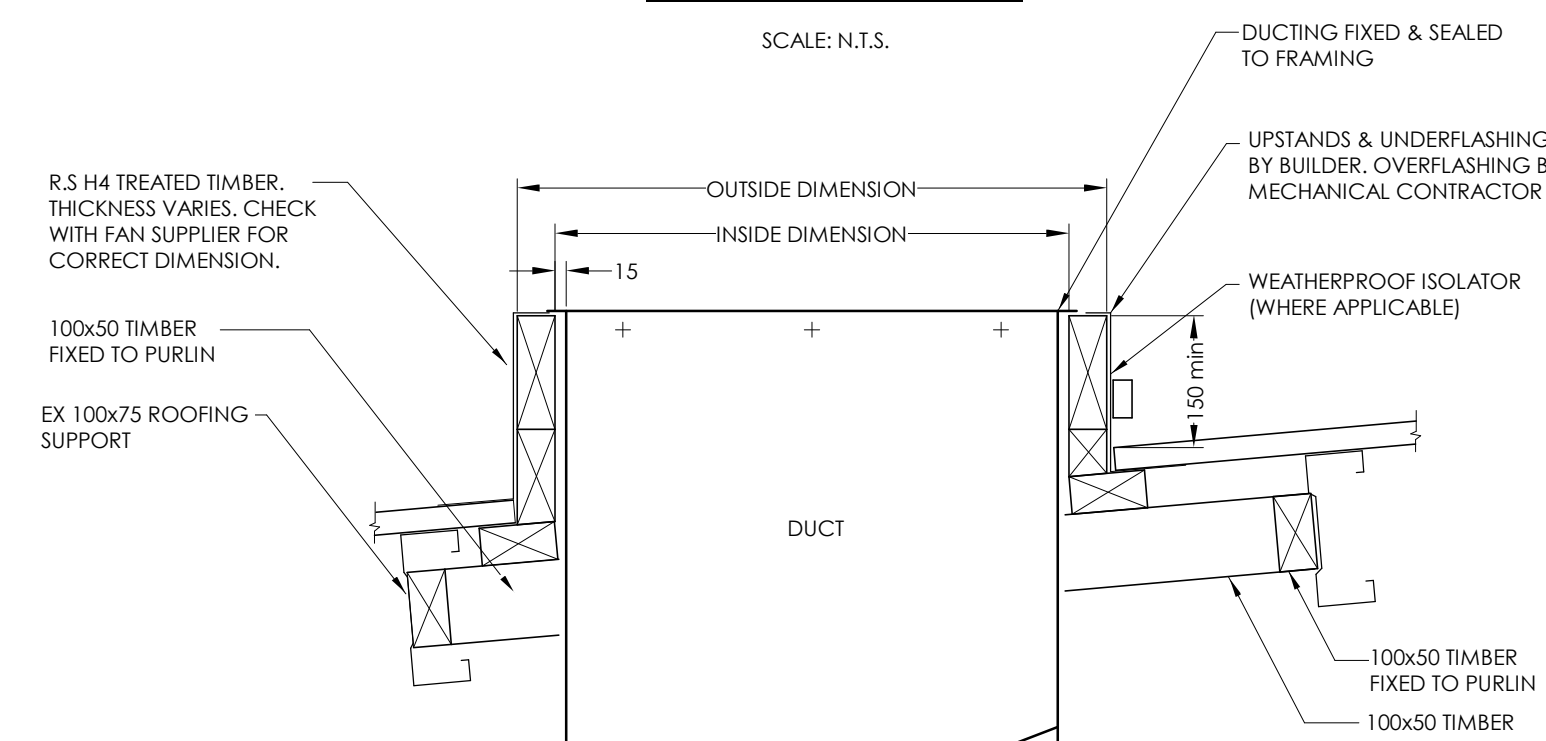
TYPICAL EXTRACT FAN DETAIL
SCALE: N.T.S.

NOTE:

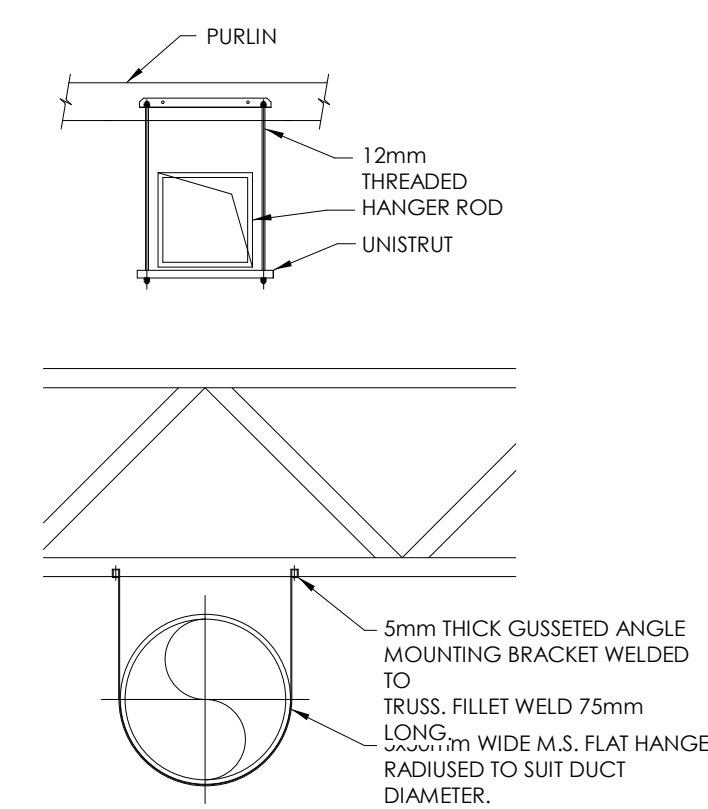
DAMPER INSTALLATION TO BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS; AS TESTED



TYPICAL FIRE DAMPER DETAIL FLOOR INSTALLATION
SCALE: N.T.S.



TYPICAL ROOF PENETRATION DETAIL
SCALE: N.T.S.



TYPICAL DUCT SUPPORT DETAIL
SCALE: N.T.S.

D	CONSENT ISSUE	11.10.19
C	COORDINATION ISSUE	27.09.19
B	50% DETAILED DESIGN	12.07.19
A	DEVELOPED DESIGN ISSUE	14.06.19
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS



PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
STANDARD SYMBOLS
LEGEND & DETAILS

CONSENT

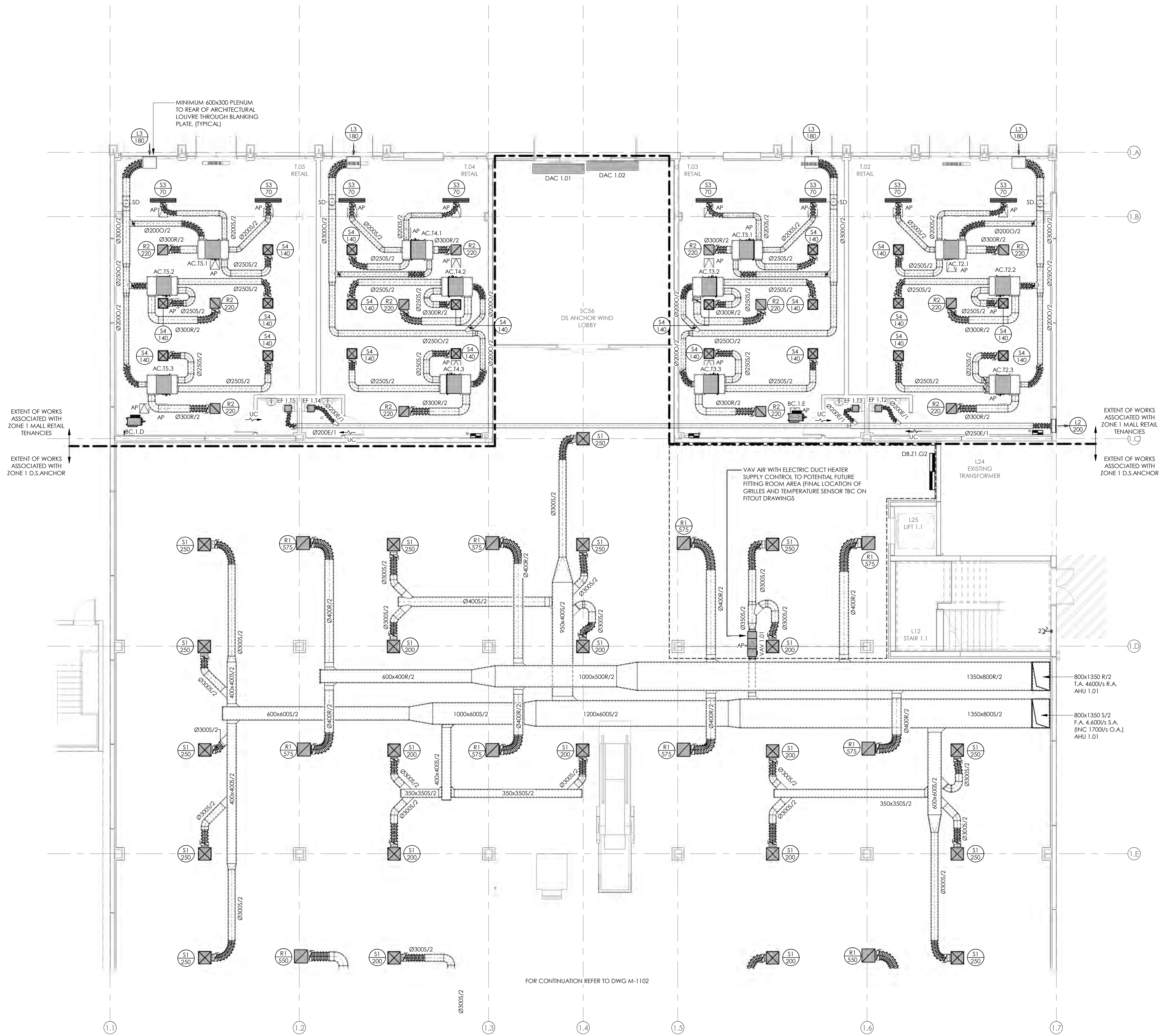
DESIGNED: SF	DATE: 11.10.19	ISSUE: D
DRAWN: RC	SCALE @ A1: 1 : 100	

PROJECT No: CS18007-1

SHEET No: M-0001

NOTES:

- REFER TO DRAWING M001 FOR STANDARD SYMBOLS LEGEND & DETAILS
- REFER TO SPECIFICATION FOR FURTHER INFORMATION.
- SUPPLY AIR DIFFUSERS ARE TO INCLUDE VOLUME CONTROL DAMPER AT CUSHION HEAD, ADJUSTABLE VIA GRILLE FACE AS STANDARD.



ISSUE	AMENDMENT	DATE
E	UPDATED CONSENT ISSUE	24.10.19
D	CONSENT ISSUE	11.10.19
C	COORDINATION ISSUE	27.09.19
B	50% DETAILED DESIGN	12.07.19
A	DEVELOPED DESIGN ISSUE	14.06.19

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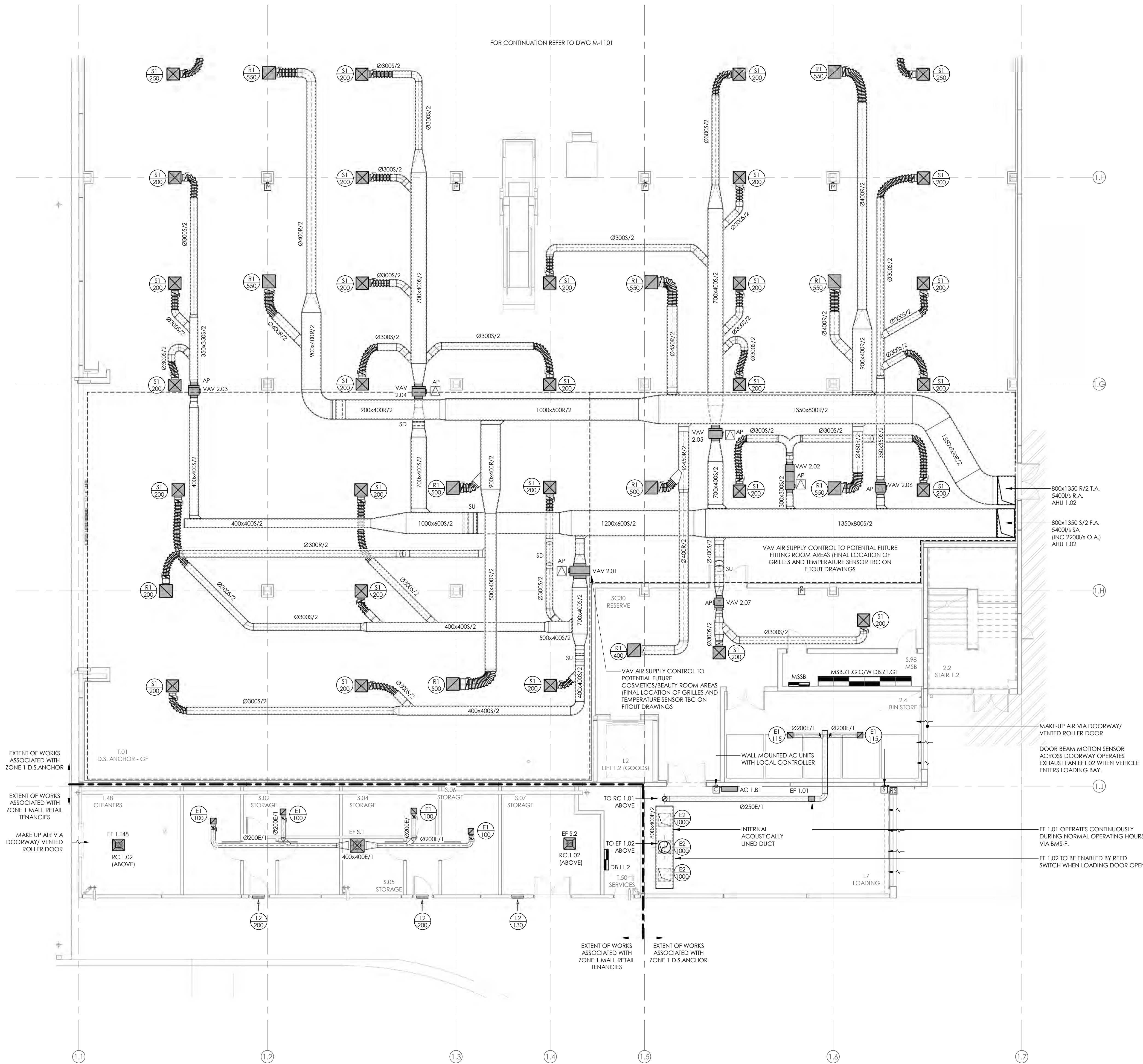
PROJECT
**INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1**

SHEET TITLE
**DUCTWORK LAYOUT
GROUND FLOOR PART 1**

UPDATED CONSENT		
DESIGNED: SF	DATE: 24.10.19	ISSUE: E
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: M-1101		

NOTES:

- REFER TO DRAWING M001 FOR STANDARD SYMBOLS LEGEND & DETAILS
- REFER TO SPECIFICATION FOR FURTHER INFORMATION.
- SUPPLY AIR DIFFUSERS ARE TO INCLUDE VOLUME CONTROL DAMPER AT CUSHION HEAD, ADJUSTABLE VIA GRILLE FACE AS STANDARD.
- EXHAUST FANS TO INCLUDE BACKDRAFT DAMPER AS STANDARD.



ISSUE	AMENDMENT	DATE
E	UPDATED CONSENT ISSUE	24.10.19
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A	DEVELOPED DESIGN ISSUE	14.06.19

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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
DUCTWORK LAYOUT
GROUND FLOOR PART 2

UPDATED CONSENT

DESIGNED: SF	DATE: 24.10.19	ISSUE: E
DRAWN: RC	SCALE @ A1: 1 : 100	

PROJECT No: CS18007-1

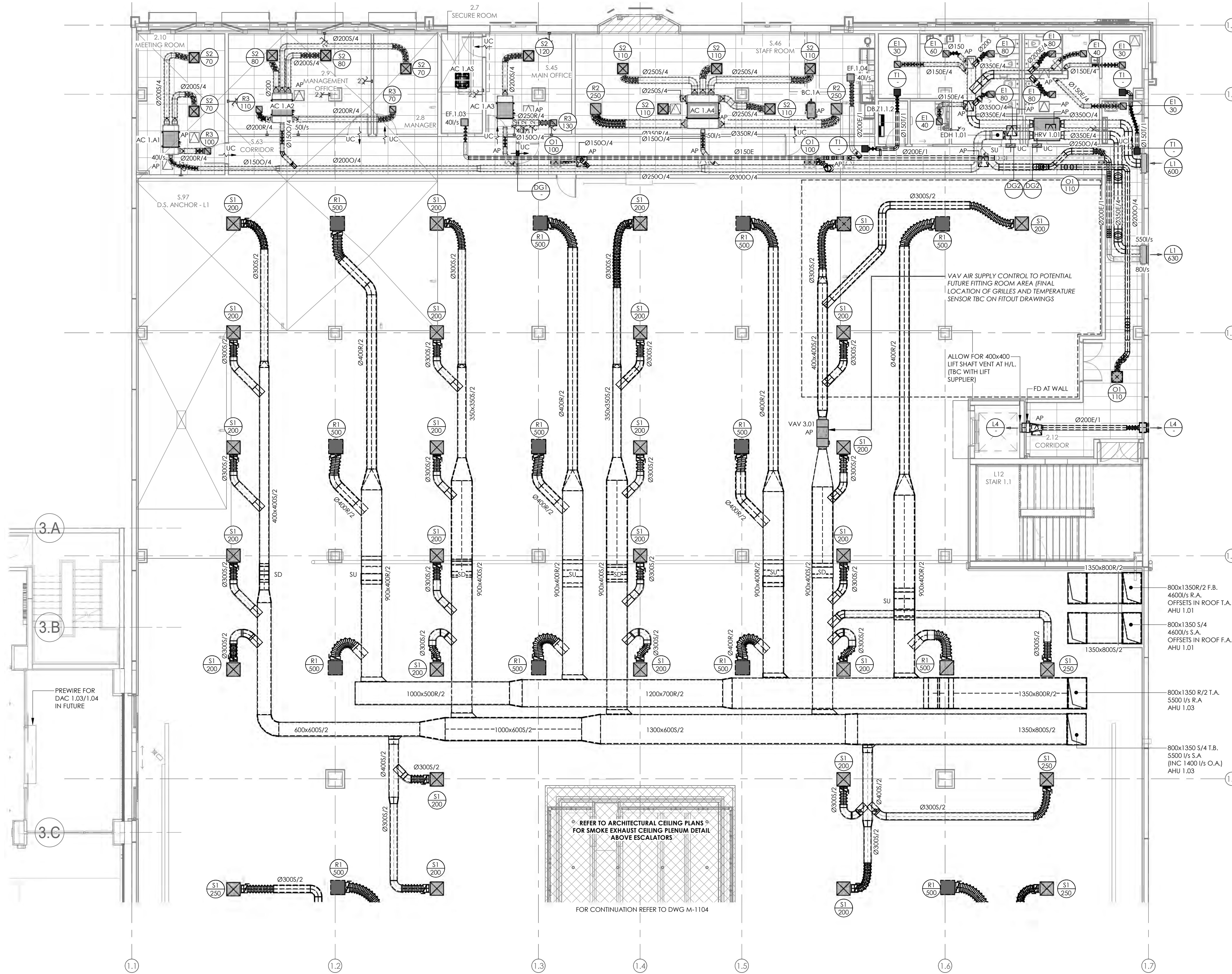
SHEET No: M-1102

NOTES:

REFER TO DRAWING M001 FOR STANDARD SYMBOLS LEGEND & DETAILS

REFER TO SPECIFICATION FOR FURTHER INFORMATION.

3. SUPPLY AIR DIFFUSERS ARE TO INCLUDE VOLUME CONTROL DAMPER AT CUSHION HEAD, ADJUSTABLE VIA GRILLE FACE AS STANDARD.



ISSUE	AMENDMENT	DATE
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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
DUCTWORK LAYOUT
LEVEL 1 PART 1

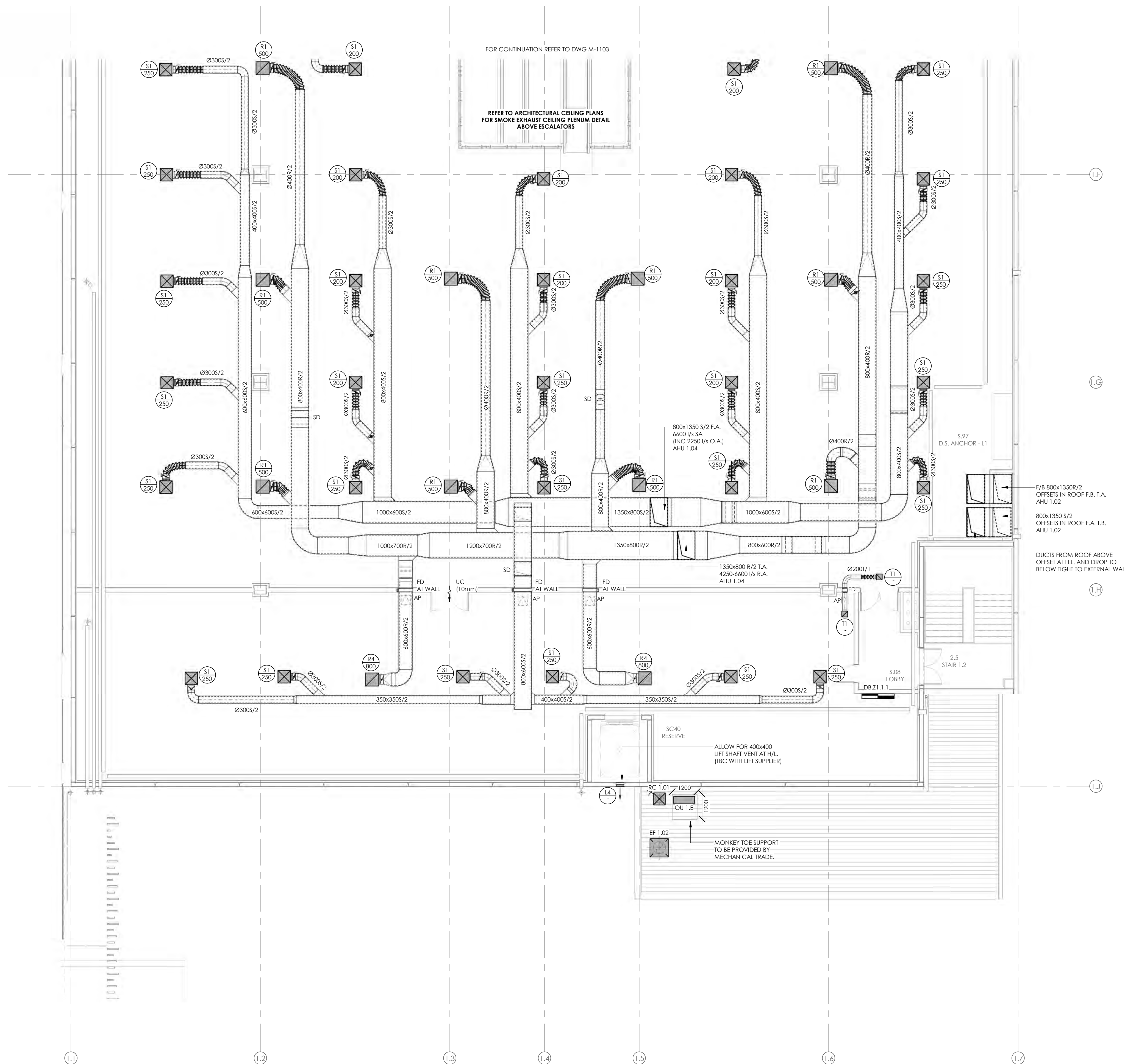
UPDATED CONSENT		
DESIGNED: SF	DATE: 24.10.19	ISSUE: E
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: M-1103		

NOTES:

REFER TO DRAWING M001 FOR STANDARD SYMBOLS LEGEND & DETAILS

REFER TO SPECIFICATION FOR FURTHER INFORMATION.

- SUPPLY AIR DIFFUSERS ARE TO INCLUDE VOLUME CONTROL DAMPER AT CUSHION HEAD, ADJUSTABLE VIA GRILLE FACE AS STANDARD.



ISSUE	AMENDMENT	DATE
E	UPDATED CONSENT ISSUE	24.10.19
D	CONSENT ISSUE	11.10.19
C	COORDINATION ISSUE	27.09.19
B	50% DETAILED DESIGN	12.07.19
A	DEVELOPED DESIGN ISSUE	14.06.19

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

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PROJECT
**INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1**

SHEET TITLE
**DUCTWORK LAYOUT
LEVEL 1 PART 2**

UPDATED CONSENT

DESIGNED: SF	DATE: 24.10.19	ISSUE: E
DRAWN: RC	SCALE @ A1: 1 : 100	

PROJECT No: **CS18007-1**

SHEET No: **M-1104**

17 Dec 2019

Building Division

Invercargill City
Council
Building Consent
Authority
Approved Site Copy

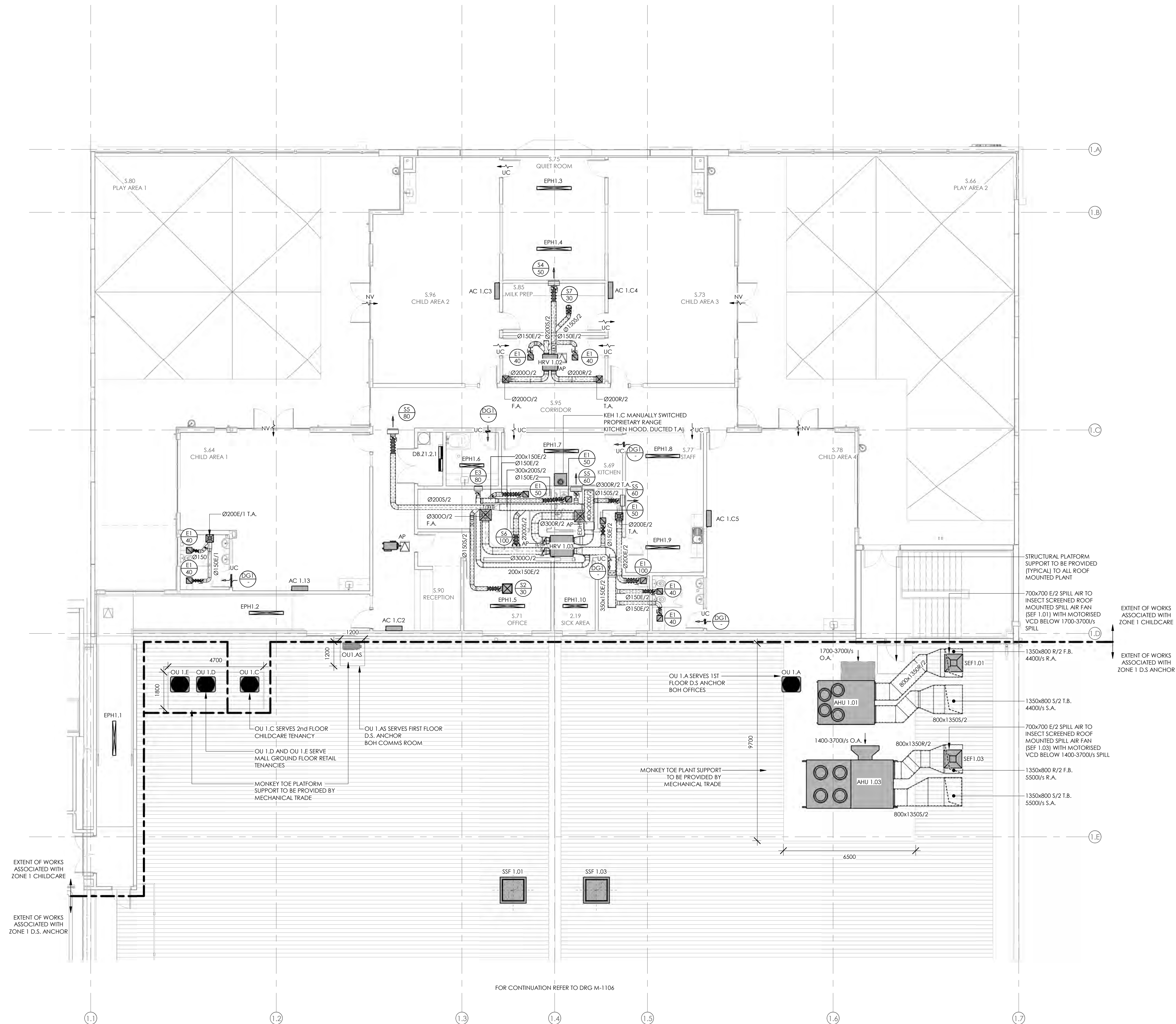
Approved For Issue
27/02/2020

BUILDING CONSENT NUMBER

2019/1381

NOTES:

- REFER TO DRAWING M001 FOR STANDARD SYMBOLS LEGEND & DETAILS
- REFER TO THE SPECIFICATION FOR FURTHER INFORMATION
- REFER TO THE FIRE ENGINEERS REPORT FOR EXTENT OF FIRE SEPARATIONS AND ALLOW TO SEAL ALL PENETRATIONS THROUGH FIRE RATE BUILDING ELEMENTS.
- DOOR UNDERCUTS (UC) SHALL TYPICALLY BE 20mm (MAX. 10mm ALLOWED TO FIRE DOORS).



ISSUE	AMENDMENT	DATE
D	CONSENT ISSUE	11.10.19
C	COORDINATION ISSUE	27.09.19
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A	DEVELOPED DESIGN ISSUE	14.06.19

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
DUCTWORK LAYOUT
LEVEL 2 & ROOF PART 1

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: D
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT NO: CS18007-1		
SHEET NO: M-1105		

FOR CONTINUATION REFER TO DRG M-1106

NOTES:

REFER TO DRAWING M001 FOR STANDARD
SYMBOLS LEGEND & DETAILS
REFER TO THE SPECIFICATION FOR FURTHER
INFORMATION



ISSUE	AMENDMENT	DATE
E	UPDATED CONSENT ISSUE	24.10.19
D	CONSENT ISSUE	11.10.19
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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

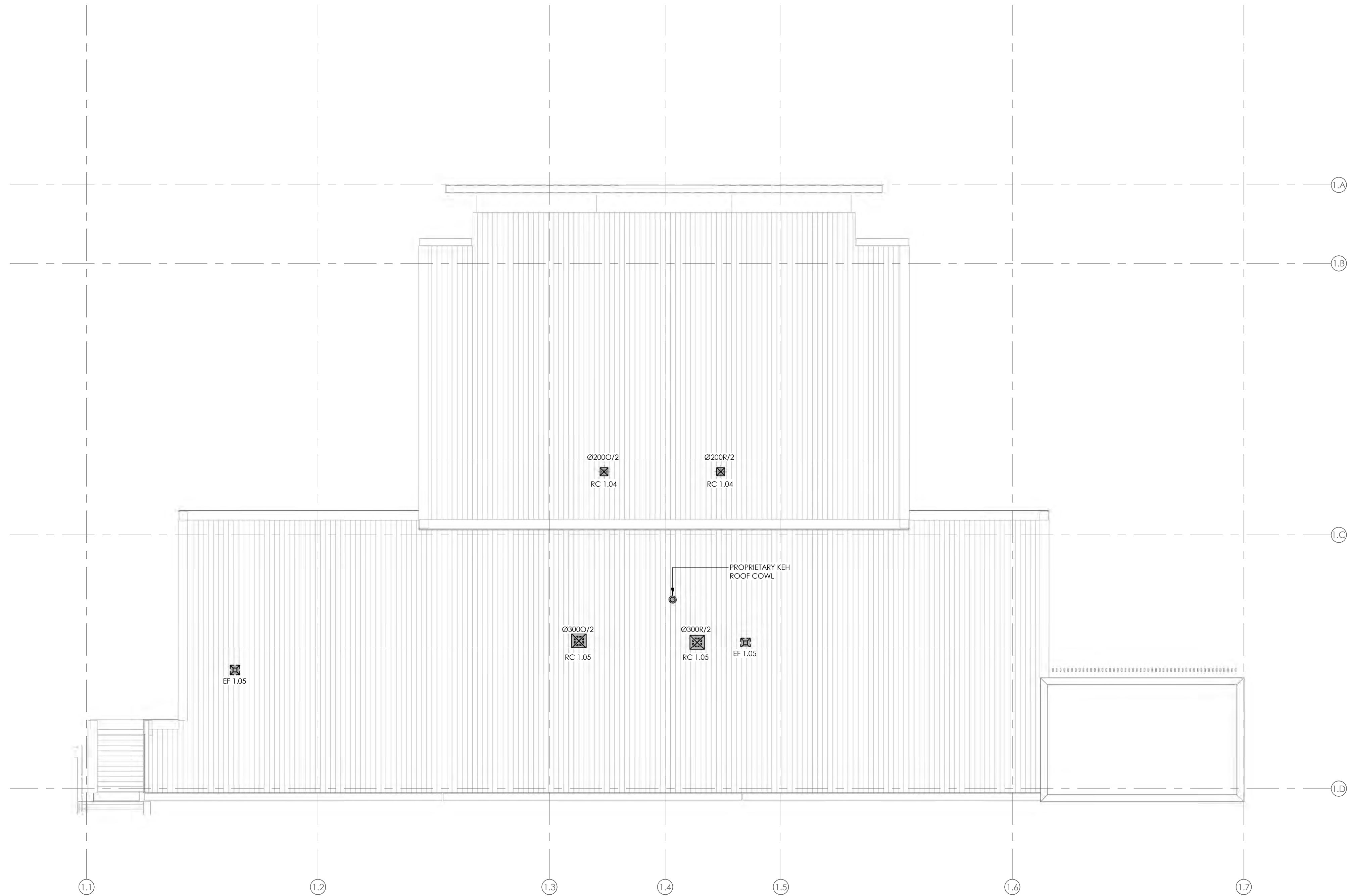
SHEET TITLE
DUCTWORK LAYOUT
ROOF PART 2

UPDATED CONSENT

DESIGNED: SF	DATE: 24.10.19	ISSUE: E
DRAWN: RC	SCALE @ A1: 1 : 100	

PROJECT No: CS18007-1

SHEET No: M-1106



B	CONSENT ISSUE	11.10.19
A	COORDINATION ISSUE	27.09.19
ISSUE	AMENDMENT	DATE

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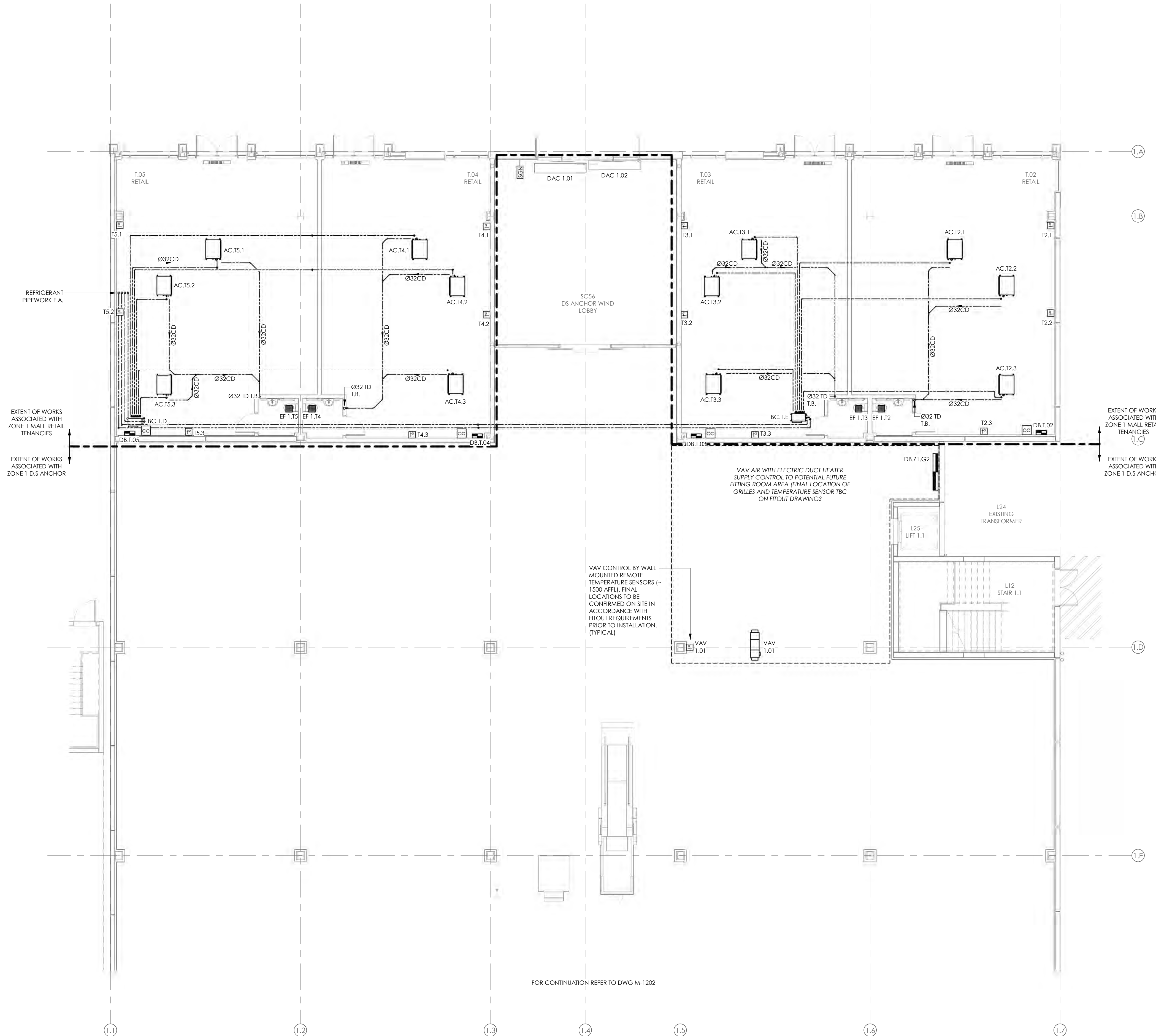
PROJECT
INVERCARGILL CENTRAL
33 ESK STREET

SHEET TITLE
DUCTWORK LAYOUT
CHILDCARE ROOF

CONSENT		
DESIGNED: RA	DATE: 11.10.19	ISSUE: B
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007		
SHEET No: M-1107		

NOTES:

- REFER TO DRAWING M001 FOR STANDARD SYMBOLS LEGEND & DETAILS
- REFER TO MECHANICAL SERVICES SPECIFICATION FOR FURTHER DETAILS.
- AC AND HEATING SYSTEMS CONTROLS AND REMOTE TEMPERATURE SENSORS TO TYPICALLY BE INSTALLED AT 1200AFFL TO BOTTOM EDGE OF DEVICE. FINAL LOCATIONS TO BE CONFIRMED ON SITE PRIOR TO INSTALLATION TO TAKE ACCOUNT OF FINAL FITOUT LAYOUTS.
- REFER TO FIRE ENGINEERS REPORT FOR EXTENT OF FIRE SEPARATIONS AND ALLOW TO SEAL ALL PENETRATIONS THROUGH FIRE RATED BUILDING ELEMENTS.
- ALL D.S ANCHOR ROOFTOP PLANT AND CONTROLS SHALL BE PROVIDED WITH SUITABLE BACNET INTERFACE CARDS FOR CONNECTION TO THE FARMERS BUILDING MANAGEMENT SYSTEM (BMS-F, LOCATED IN THE ZONE 1 GROUND LEVEL MAIN SWITCHBOARD ROOM) VIA D.S ANCHOR LOCAL BACNET ETHERNET NETWORK TO ALLOW FOR REMOTE MONITORING AND ADJUSTMENT.
- ALL PLANT AND CONTROLS SERVING INVERCARGILL CENTRAL MALL RETAIL TENANCIES SHALL BE PROVIDED WITH SUITABLE BACNET INTERFACE CARDS FOR CONNECTION TO THE INVERCARGILL CENTRAL MALL BUILDINGS MANAGEMENT SYSTEM (BMS-M, TO BE LOCATED IN ZONE 2, LEVEL 1 CENTRE MANAGEMENT OFFICES) VIA SEPERATE MALL BACNET ETHERNET NETWORK TO ALLOW FOR REMOTE MONITORING AND ADJUSTMENT.



REFRIGERANT PIPEWORK F.A.

EXTENT OF WORKS ASSOCIATED WITH ZONE 1 MALL RETAIL TENANCIES

EXTENT OF WORKS ASSOCIATED WITH ZONE 1 D.S ANCHOR

EXTENT OF WORKS ASSOCIATED WITH ZONE 1 MALL RETAIL TENANCIES

EXTENT OF WORKS ASSOCIATED WITH ZONE 1 D.S ANCHOR

VAV CONTROL BY WALL MOUNTED REMOTE TEMPERATURE SENSORS (~1500 AFFL). FINAL LOCATIONS TO BE CONFIRMED ON SITE IN ACCORDANCE WITH FITOUT REQUIREMENTS. PRIOR TO INSTALLATION. (TYPICAL)

VAV AIR WITH ELECTRIC DUCT HEATER SUPPLY CONTROL TO POTENTIAL FUTURE FITTING ROOM AREA (FINAL LOCATION OF GRILLES AND TEMPERATURE SENSOR TBC ON FITOUT DRAWINGS)

FOR CONTINUATION REFER TO DWG M-1202

B	CONSENT ISSUE	11.10.19
A	COORDINATION ISSUE	27.09.19
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

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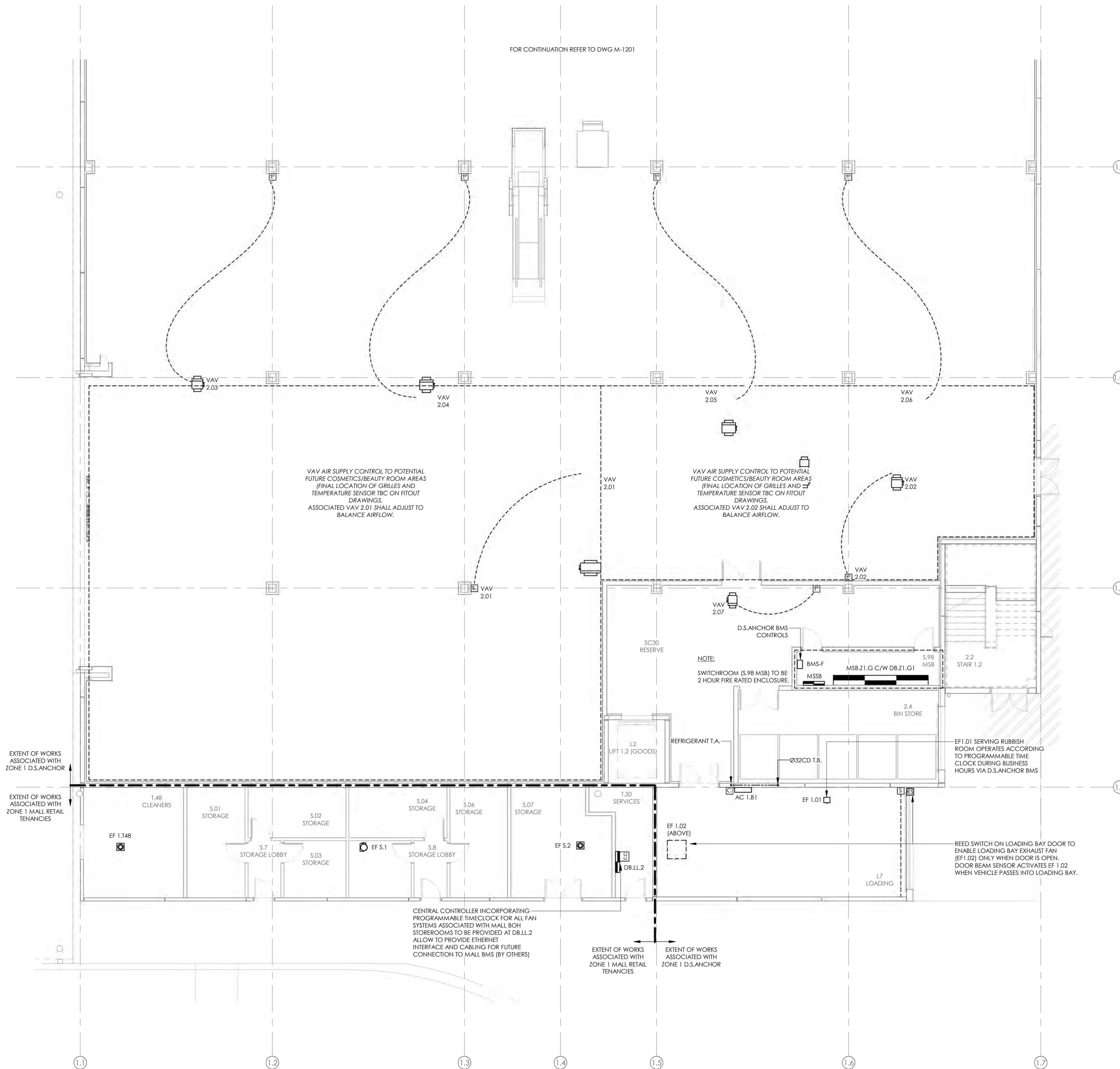
PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
PIPEWORK & CONTROLS
LAYOUT GROUND
FLOOR PART 1

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: B
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: M-1201		

NOTES:

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B	CONSENT ISSUE	11.10.19
A	COORDINATION ISSUE	27.09.19
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

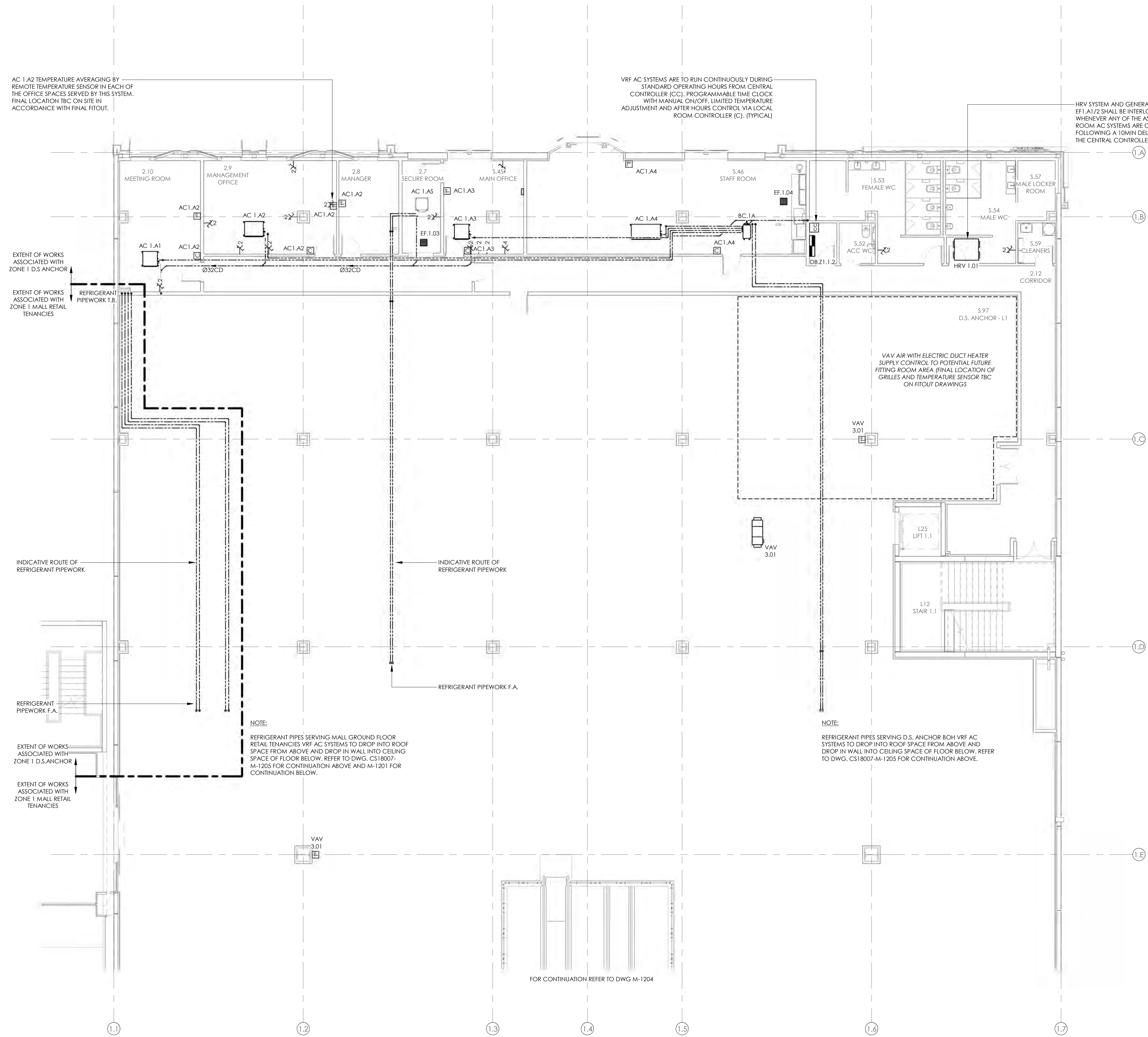


PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
PIPEWORK & CONTROLS
LAYOUT GROUND
FLOOR PART 2

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: B
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: M-1202		

- NOTES:
- REFER TO DRAWING M001 FOR STANDARD SYMBOLS LEGEND & DETAILS.
 - REFER TO MECHANICAL SERVICES SPECIFICATION FOR FURTHER DETAILS.
 - AC AND HEATING SYSTEMS CONTROLS AND REMOTE TEMPERATURE SENSORS TO TYPICALLY BE INSTALLED AT 1200APFL TO BOTTOM EDGE OF DEVICE. FINAL LOCATIONS TO BE CONFIRMED ON SITE PRIOR TO INSTALLATION TO TAKE ACCOUNT OF FINAL FITOUT LAYOUTS.
 - REFER TO FIRE ENGINEERS REPORT FOR EXTENT OF FIRE SEPERATIONS AND ALLOW TO SEAL ALL PENETRATIONS THROUGH FIRE RATED BUILDING ELEMENTS.
 - ALL D.S ANCHOR ROOFTOP PLANT AND CONTROLS SHALL BE PROVIDED WITH SUITABLE BACNET INTERFACE CARDS FOR CONNECTION TO THE D.S ANCHOR BUILDING MANAGEMENT SYSTEM (BMS). LOCATED IN THE ZONE 1 GROUND LEVEL MAIN SWITCHBOARD ROOM) VIA D.S ANCHOR LOCAL BACNET ETHERNET NETWORK TO ALLOW FOR REMOTE MONITORING AND ADJUSTMENT.



B	CONSENT ISSUE	11.10.19
A	COORDINATION ISSUE	27.09.19
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

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PROJECT
**INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1**

SHEET TITLE
**PIPEWORK & CONTROLS
LAYOUT LEVEL 1 PART 1**

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: B
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: M-1203		

17 Dec 2019

Building Division

Invercargill City
 Council
 Building Consent
 Authority
 Approved Site Copy

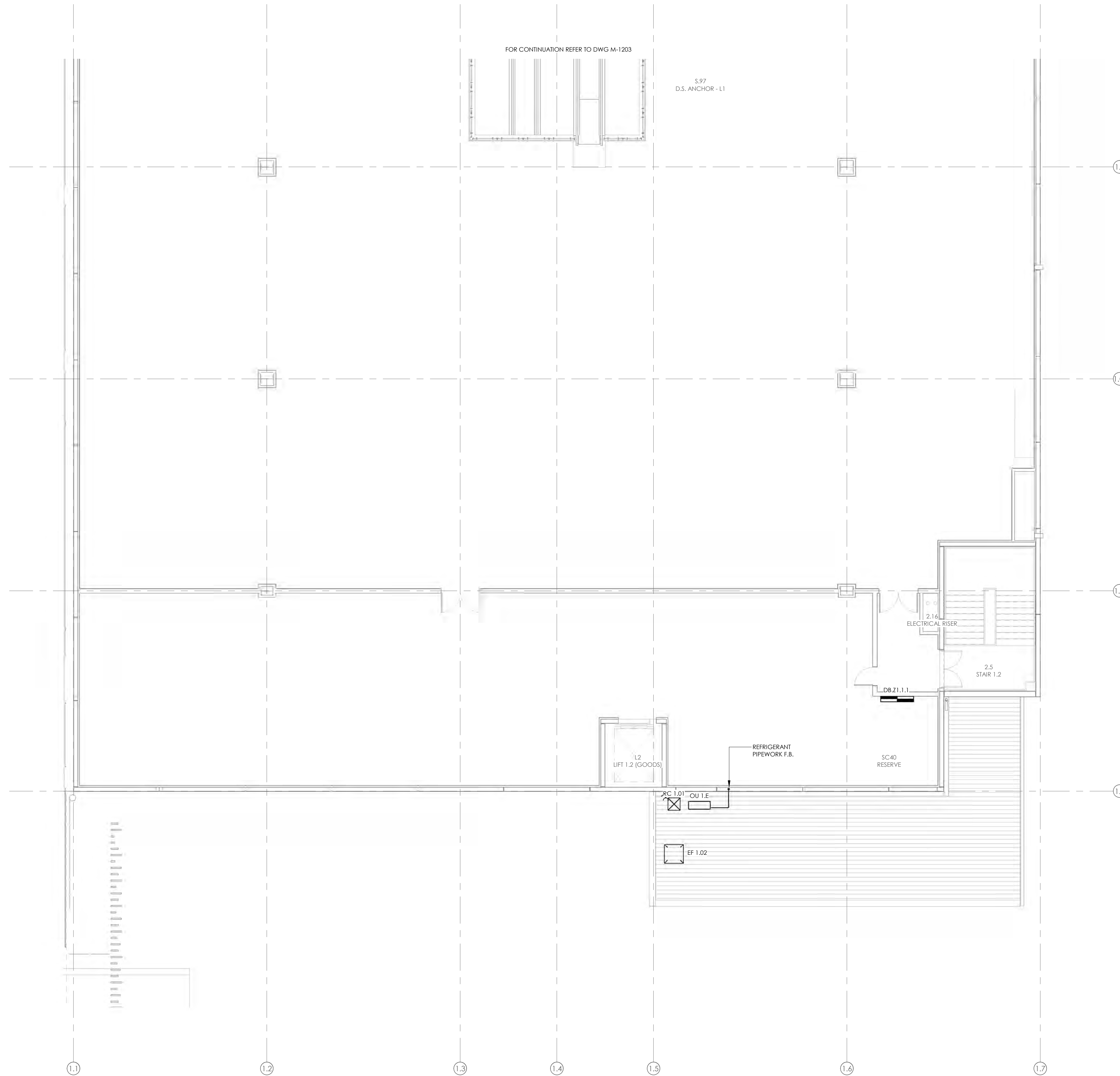
Approved For Issue
 27/02/2020

BUILDING CONSENT NUMBER

2019/1381

NOTES:

- REFER TO DRAWING M001 FOR STANDARD SYMBOLS LEGEND & DETAILS
- REFER TO MECHANICAL SERVICES SPECIFICATION FOR FURTHER DETAILS.
- REFER TO FIRE ENGINEERS REPORT FOR EXTENT OF FIRE SEPERATIONS AND ALLOW TO SEAL ALL PENETRATIONS THROUGH FIRE RATED BUILDING ELEMENTS.
- ALL D.S ANCHOR ROOFTOP PLANT AND CONTROLS SHALL BE PROVIDED WITH SUITABLE BACNET INTERFACE CARDS FOR CONNECTION TO THE D.S ANCHOR BUILDING MANAGEMENT SYSTEM (BMS.F. LOCATED IN THE ZONE 1 GROUND LEVEL MAIN SWITCHBOARD ROOM) VIA D.S ANCHOR LOCAL BACNET ETHERNET NETWORK TO ALLOW FOR REMOTE MONITORING AND ADJUSTMENT.



B	CONSENT ISSUE	11.10.19
A	COORDINATION ISSUE	27.09.19
ISSUE	AMENDMENT	DATE

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PROJECT
 INVERCARGILL CENTRAL
 33 ESK STREET
 ZONE 1

SHEET TITLE
 PIPEWORK & CONTROLS
 LAYOUT LEVEL 1 PART 2


CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: B
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: M-1204		

NOTES:

- REFER TO DRAWING M001 FOR STANDARD SYMBOLS LEGEND & DETAILS
- REFER TO MECHANICAL SERVICES SPECIFICATION FOR FURTHER DETAILS.
- AC AND HEATING SYSTEMS CONTROLS AND REMOTE TEMPERATURE SENSORS TO TYPICALLY BE INSTALLED AT 1200APFL TO BOTTOM EDGE OF DEVICE. FINAL LOCATIONS TO BE CONFIRMED ON SITE PRIOR TO INSTALLATION TO TAKE ACCOUNT OF FINAL FITOUT LAYOUTS.
- REFER TO FIRE ENGINEERS REPORT FOR EXTENT OF FIRE SEPARATIONS AND ALLOW TO SEAL ALL PENETRATIONS THROUGH FIRE RATED BUILDING ELEMENTS.
- ALL D.S ANCHOR ROOFTOP PLANT AND CONTROLS SHALL BE PROVIDED WITH SUITABLE BACNET INTERFACE CARDS FOR CONNECTION TO THE D.S ANCHOR BUILDING MANAGEMENT SYSTEM (BMS-F, LOCATED IN THE ZONE 1 GROUND LEVEL MAIN SWITCHBOARD ROOM) VIA D.S ANCHOR LOCAL BACNET ETHERNET NETWORK TO ALLOW FOR REMOTE MONITORING AND ADJUSTMENT.
- ALL CHILDCARE CENTRE PLANT AND CONTROLS SHALL BE PROVIDED WITH SUITABLE BACNET INTERFACE CARDS FOR CONNECTION TO THE INVERCARGILL CENTRAL MALL BUILDING MANAGEMENT SYSTEM (BMS-M, TO BE LOCATED IN ZONE 2, LEVEL 1 CENTRE MANAGEMENT OFFICES) VIA SEPARATE MALL BACNET ETHERNET NETWORK TO ALLOW FOR REMOTE MONITORING AND ADJUSTMENT.
- HRV SYSTEMS AND WC EXHAUST FANS ARE TO RUN CONTINUOUSLY DURING STANDARD OPERATING HOURS FROM CENTRAL CONTROLLER (CC) PROGRAMMABLE TIME CLOCK.
- ELECTRIC PANEL HEATERS AND AC SYSTEMS ARE TO RUN CONTINUOUSLY DURING STANDARD OPERATING HOURS FROM CENTRAL CONTROLLER (CC) PROGRAMMABLE TIME CLOCK WITH MANUAL ON/OFF, LIMITED TEMPERATURE ADJUSTMENT AND AFTER HOURS CONTROL VIA LOCAL ROOM CONTROLLER.
- LAUNDRY EXHAUST FAN SHALL BE INTERLOCKED TO RUN VIA CURRENT SWITCH AT DRYER POWER SUPPLY POINT WHENEVER DRYER IS OPERATING.

ISSUE	AMENDMENT	DATE
B	CONSENT ISSUE	11.10.19
A	COORDINATION ISSUE	27.09.19

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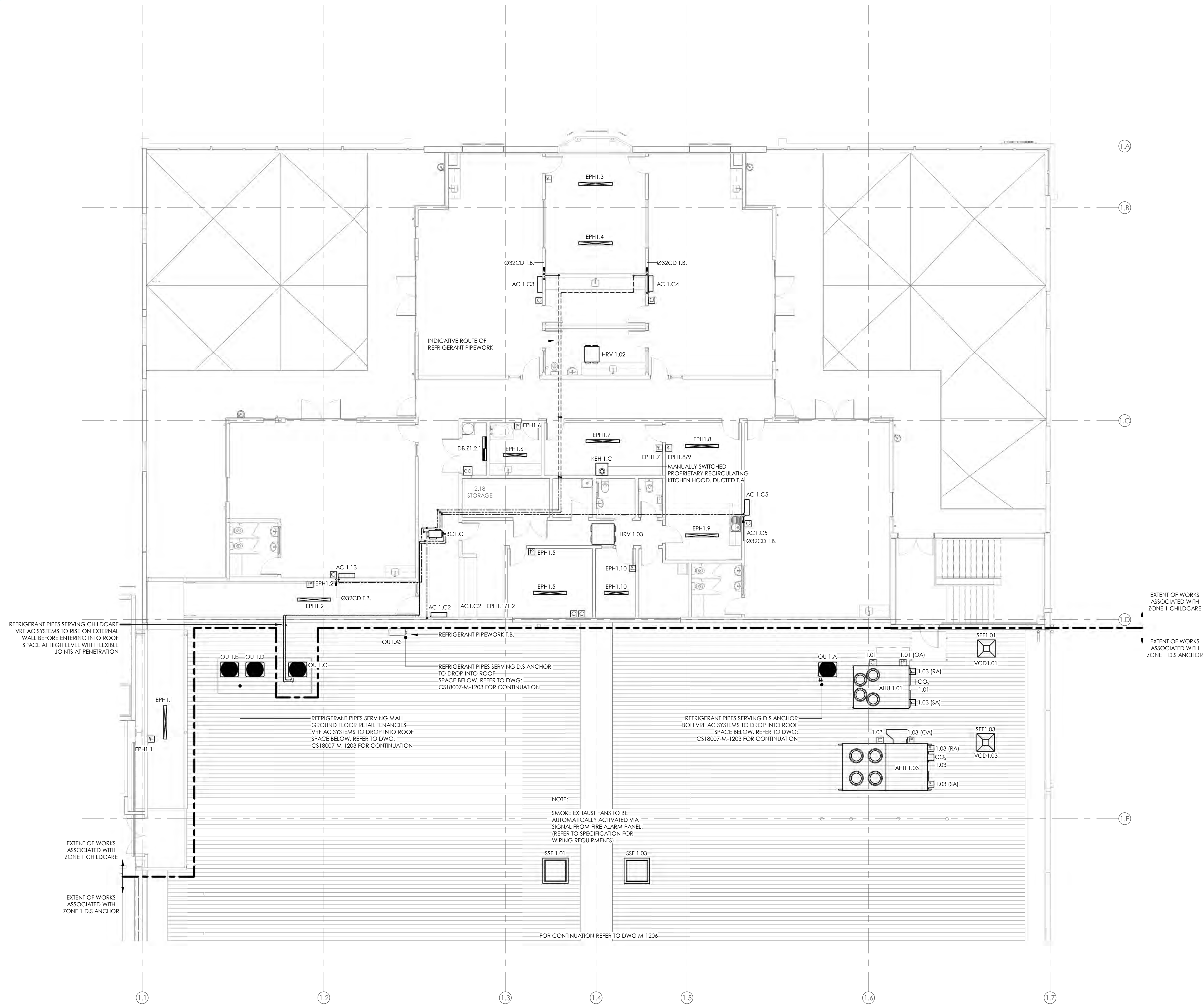
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PROJECT
**INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1**

SHEET TITLE
**PIPEWORK & CONTROLS
LAYOUT LEVEL 2 PART 1**

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: B
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: M-1205		



EXTENT OF WORKS ASSOCIATED WITH ZONE 1 CHILDCARE

EXTENT OF WORKS ASSOCIATED WITH ZONE 1 D.S ANCHOR

REFRIGERANT PIPES SERVING CHILDCARE VRF AC SYSTEMS TO RISE ON EXTERNAL WALL BEFORE ENTERING INTO ROOF SPACE AT HIGH LEVEL WITH FLEXIBLE JOINTS AT PENETRATION

REFRIGERANT PIPES SERVING MALL GROUND FLOOR RETAIL TENANCIES VRF AC SYSTEMS TO DROP INTO ROOF SPACE BELOW. REFER TO DWG: CS18007-M-1203 FOR CONTINUATION

REFRIGERANT PIPES SERVING D.S ANCHOR BOH VRF AC SYSTEMS TO DROP INTO ROOF SPACE BELOW. REFER TO DWG: CS18007-M-1203 FOR CONTINUATION

NOTE:
SMOKE EXHAUST FANS TO BE AUTOMATICALLY ACTIVATED VIA SIGNAL FROM FIRE ALARM PANEL. (REFER TO SPECIFICATION FOR WIRING REQUIREMENTS).

FOR CONTINUATION REFER TO DWG M-1206

17 Dec 2019

Building Division

Invercargill City
Council
Building Consent
Authority
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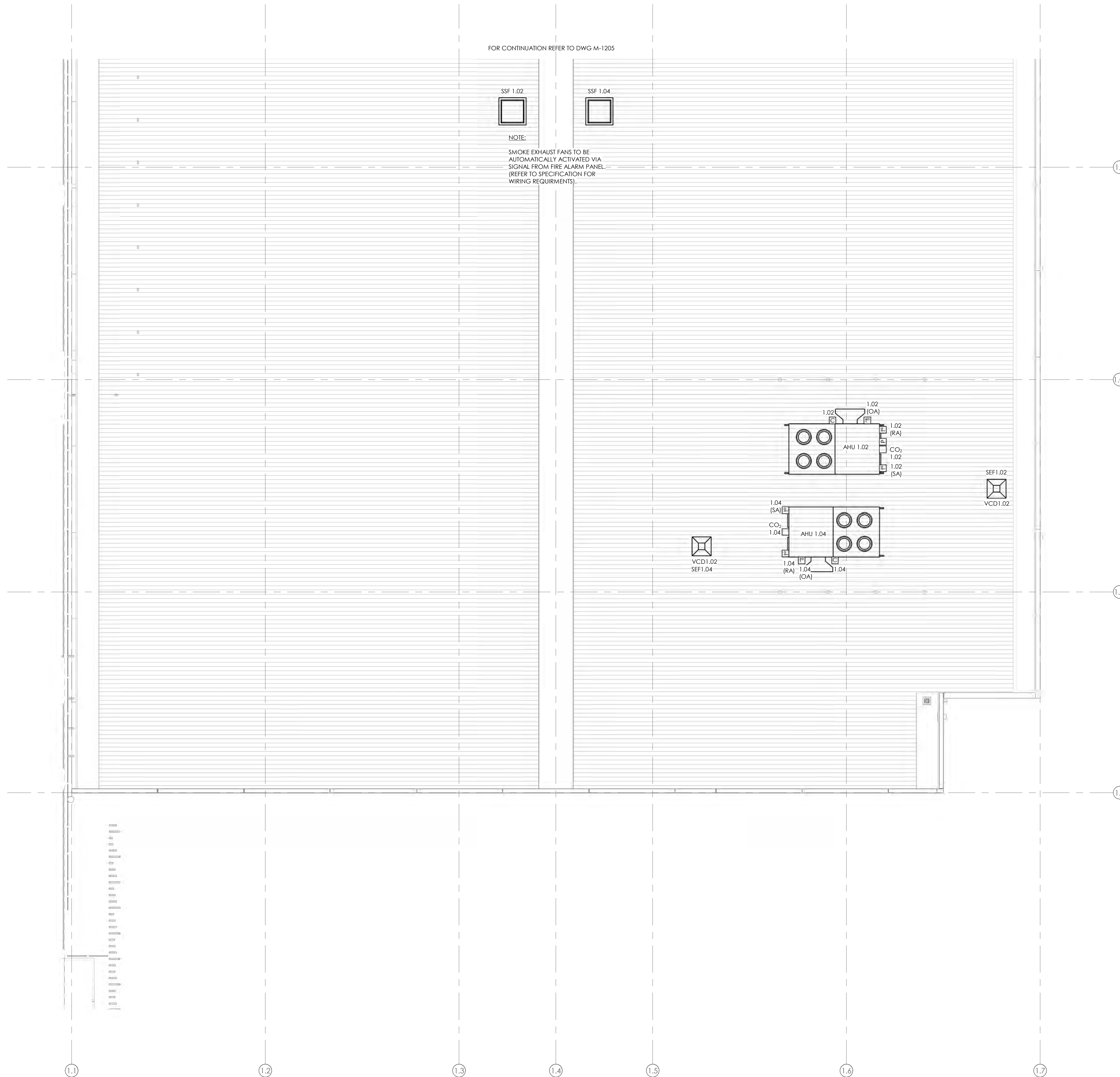
Approved For Issue
27/02/2020

BUILDING CONSENT NUMBER

2019/1381

NOTES:

- REFER TO DRAWING M001 FOR STANDARD SYMBOLS LEGEND & DETAILS
- REFER TO MECHANICAL SERVICES SPECIFICATION FOR FURTHER DETAILS.
- 3. AC AND HEATING SYSTEMS CONTROLS AND REMOTE TEMPERATURE SENSORS TO TYPICALLY BE INSTALLED AT 1200APFL TO BOTTOM EDGE OF DEVICE. FINAL LOCATIONS TO BE CONFIRMED ON SITE PRIOR TO INSTALLATION TO TAKE ACCOUNT OF FINAL FITOUT LAYOUTS.
- 4. REFER TO FIRE ENGINEERS REPORT FOR EXTENT OF FIRE SEPERATIONS AND ALLOW TO SEAL ALL PENETRATIONS THROUGH FIRE RATED BUILDING ELEMENTS.
- 5. ALL D.S. ANCHOR ROOFTOP PLANT AND CONTROLS SHALL BE PROVIDED WITH SUITABLE BACNET INTERFACE CARDS FOR CONNECTION TO THE D.S. ANCHOR BUILDING MANAGEMENT SYSTEM (BMS). LOCATED IN THE ZONE 1 GROUND LEVEL MAIN SWITCHBOARD ROOM) VIA FARMERS LOCAL BACNET ETHERNET NETWORK TO ALLOW FOR REMOTE MONITORING AND ADJUSTMENT.



B	CONSENT ISSUE	11.10.19
A	COORDINATION ISSUE	27.09.19
ISSUE	AMENDMENT	DATE

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS



PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
PIPEWORK & CONTROLS
LAYOUT LEVEL 2 PART 2

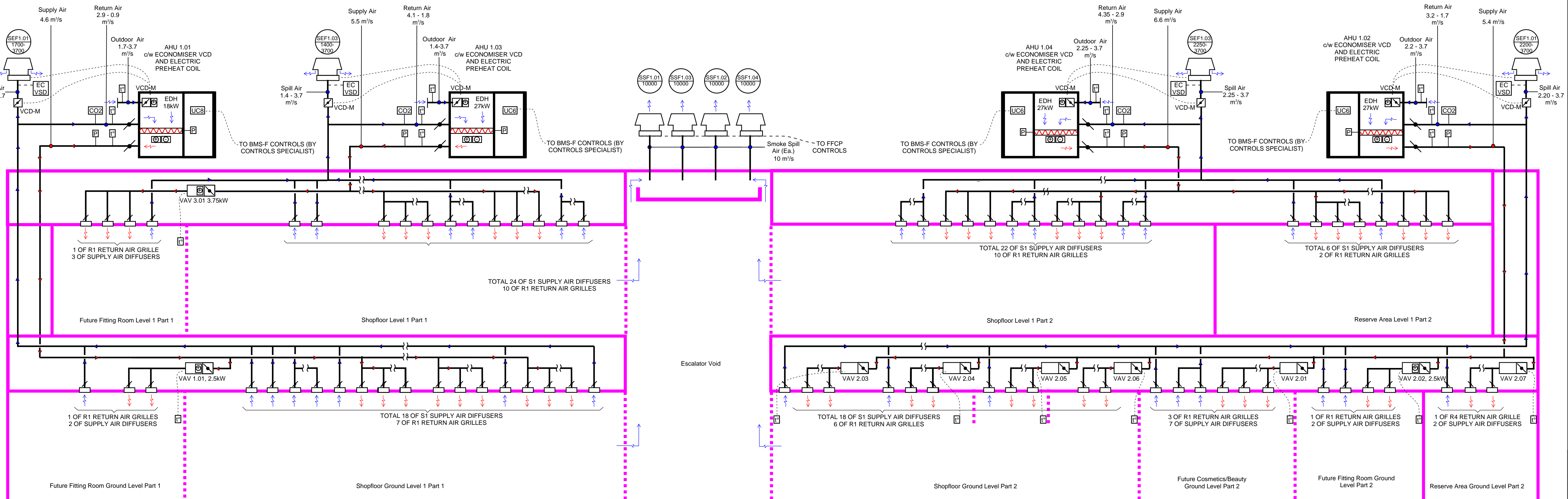
CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: B
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: M-1206		

NOTE: SOME GRILLES/DIFFUSERS OMITTED FOR CLARITY AND DUCT ROUTES IN CEILING VOIDS ARE DIAGRAMMATIC ONLY. REFER DRAWINGS FOR ACTUAL SETOUT(QTY.)

Department Store - Retail Shopfloor

Zone 1 North (Part 1)

Zone 1 South (Part 2)

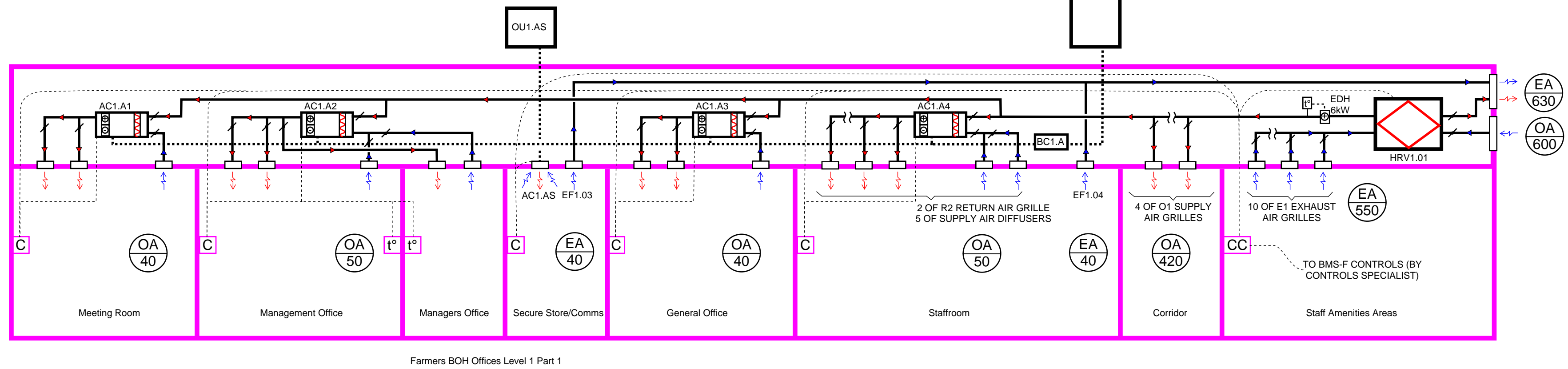


ISSUE	AMENDMENT	DATE
C	UPDATED CONSENT ISSUE	24.10.19
B	CONSENT ISSUE	11.10.19
A	COORDINATION ISSUE	27.09.19

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

Department Store - BOH Offices

Zone 1 North (Part 1)



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PROJECT
**INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1**

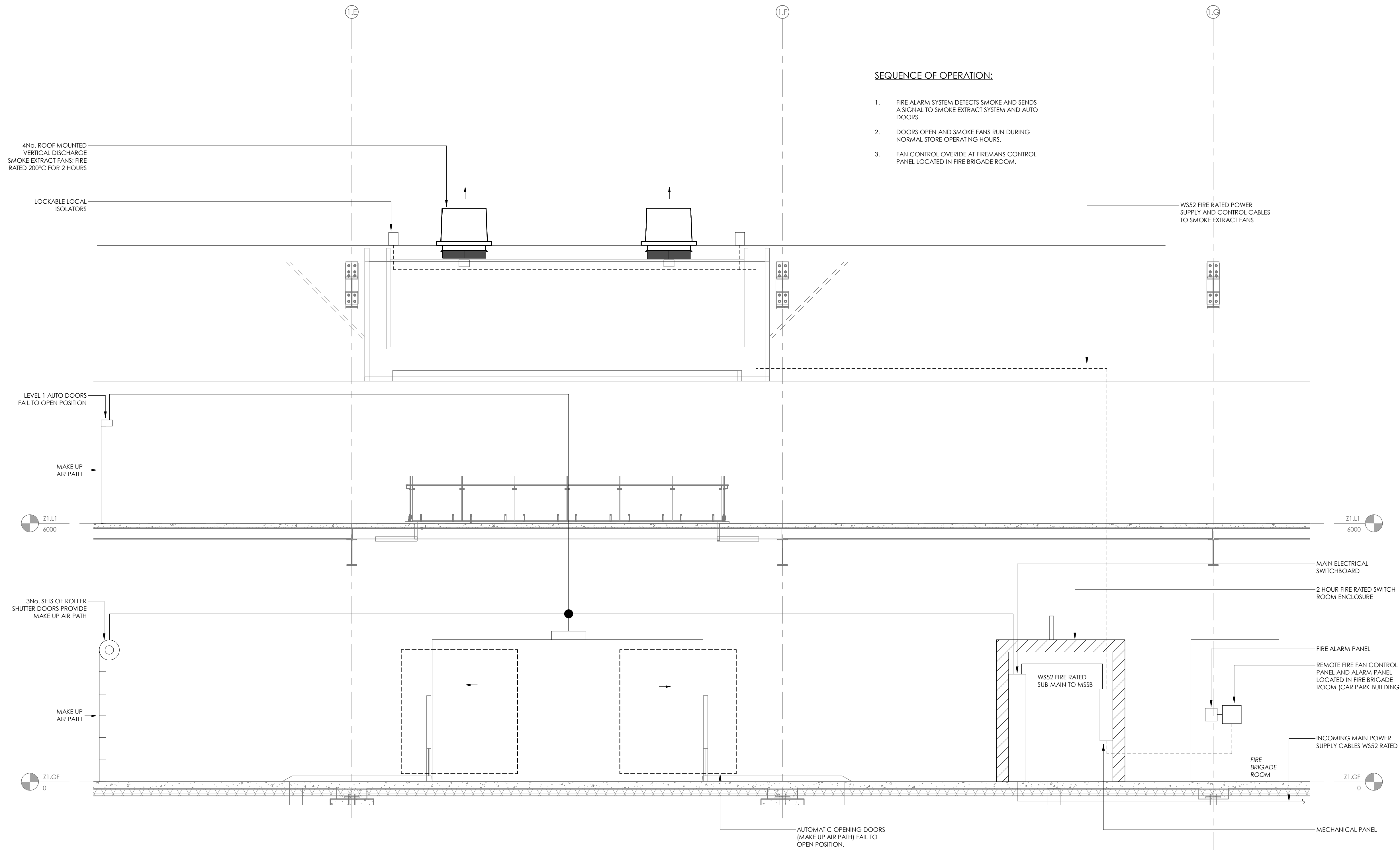
SHEET TITLE
**MECHANICAL
SCHEMATIC**

UPDATED CONSENT

DESIGNED: RA	DATE: 24.10.19	ISSUE: C
DRAWN: RA	SCALE @ A1:	
PROJECT No: CS18007-1		
SHEET No: M-1401		

NOTES:

1. SMOKE EXTRACT SYSTEM AND CONTROLS TO COMPLY WITH THE REQUIREMENTS OF AS 1668.1:2015.
2. SMOKE EXTRACT FANS SHALL BE ACTIVATED VIA A SIGNAL FROM THE FIRE ALARM SYSTEM TO THE FIRE FAN CONTROL PANEL.
3. SMOKE EXTRACT FAN CONTROLS SHALL BE LOCATED IN THE MECHANICAL PANEL IN THE FIRE RATED ELECTRICAL SWITCH ROOM.
4. REFER TO THE ENGINEERS FIRE STRATEGY REPORT FOR FURTHER INFORMATION.
5. MAIN HVAC PLANT TO SHUT DOWN ON FIRE ALARM SIGNAL.



SEQUENCE OF OPERATION:

1. FIRE ALARM SYSTEM DETECTS SMOKE AND SENDS A SIGNAL TO SMOKE EXTRACT SYSTEM AND AUTO DOORS.
2. DOORS OPEN AND SMOKE FANS RUN DURING NORMAL STORE OPERATING HOURS.
3. FAN CONTROL OVERRIDE AT FIREMANS CONTROL PANEL LOCATED IN FIRE BRIGADE ROOM.

FOR INFORMATION

ISSUE	AMENDMENT	DATE

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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
FIRE SERVICES SMOKE
EXTRACT AND CONTROL
SYSTEMS DIAGRAM

FOR INFORMATION

DESIGNED: SF	DATE:	ISSUE:
DRAWN: RC	SCALE @ A1: 1 : 50	

PROJECT No: CS18007-1

SHEET No: F-0001