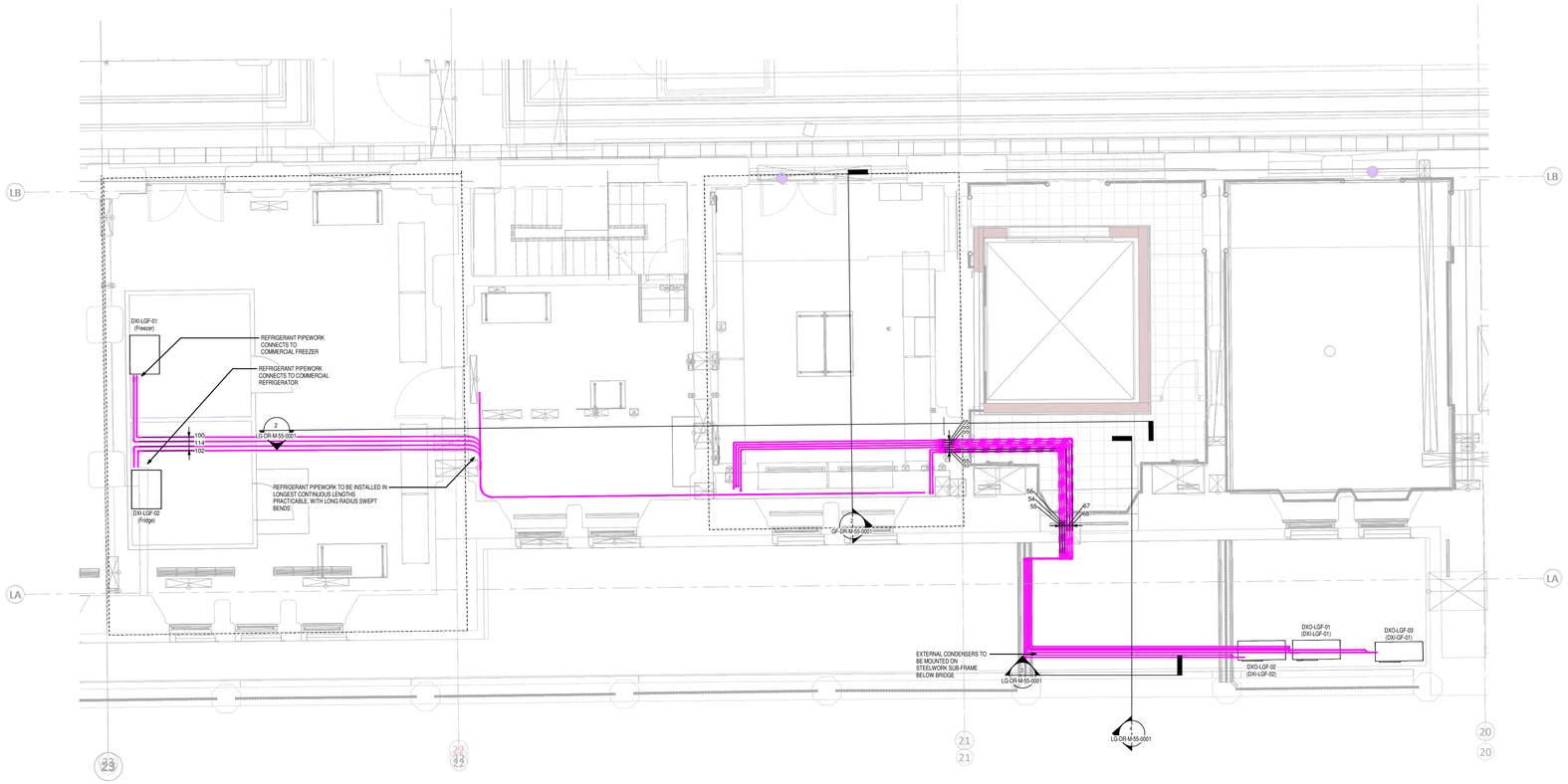
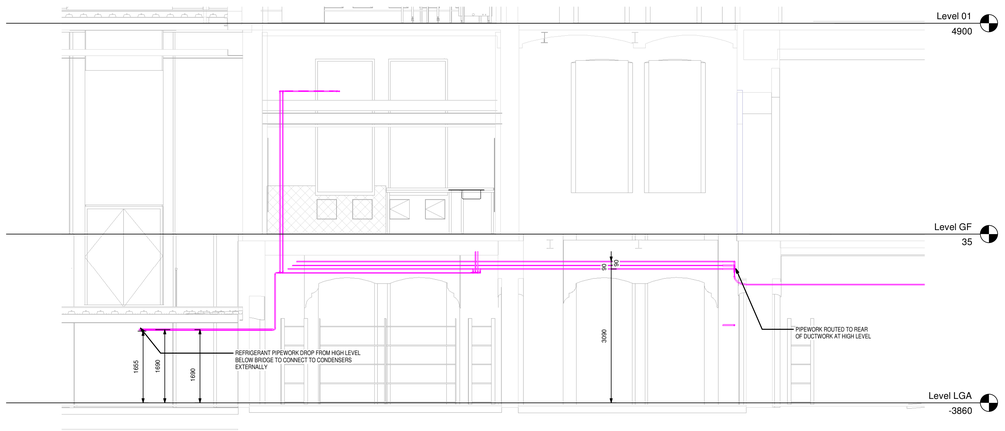
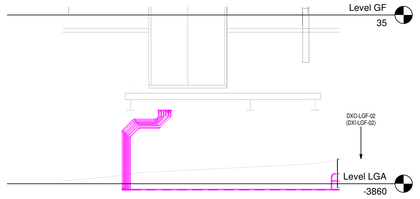


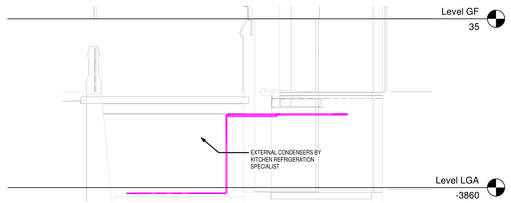
1 Lower Ground Floor Refrigerant Routes
1 : 50



2 (55) Internal Section
1 : 50



3 External Catering Condensers
1 : 50



4 External Catering Condensers
1 : 50

HK-N-50-General Notes

1 THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT PROJECT DRAWINGS AND INFORMATION FROM THE WHOLE PROJECT TEAM AS AVAILABLE ON ACONEX. THIS IS INCLUSIVE OF, BUT NOT LIMITED TO, ALL AVAILABLE 3D REVIT MODEL INFORMATION FROM HULLEY & KIRKWOOD, TAYLOR DESIGN, PURCELL, RAMBOLL AND ARUP.
2 ALL ELECTRICAL INSTALLATION WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH BS 7671 INCORPORATING AMENDMENTS.
3 THE CONTRACTOR SHALL ALLOW FOR DISJOINTED WORKS INVOLVED WITH THE PROJECT IN REGARD TO COORDINATION WITH ALL OTHER TRADES.
4 ALL MECHANICAL INSTALLATIONS TO BE UNDERTAKEN IN ACCORDANCE WITH THE PRINCIPAL CONTRACTORS PROGRAMME OF WORKS.
5 FINAL POSITIONS OF ALL EQUIPMENT SHALL BE AS PER THE SETTING OUT IN ACCORDANCE WITH THE ARCHITECTURAL INFORMATION.
6 ALL BMS CONTROLS, MECHANICAL CONTROL PANELS AND TESTING AND COMMISSIONING OF THE AUTOMATIC CONTROLS BY OTHERS. THE CONTRACTOR SHALL ALLOW FOR ALL REQUIRED LIAISON/COORDINATION WITH THE AUTOMATIC CONTROLS SPECIALIST AS PART OF THEIR WORKS TO ACCOMMODATE THE SETTING TO WORK OF ALL RESPECTIVE EQUIPMENT AND PLANT. FINAL INSTALLATIONS TO BE IN ACCORDANCE WITH THE ARUP PROJECT SPECIFICATION(S).
7 THE CONTRACTOR SHALL UNDERTAKE ALL WORKS IN ACCORDANCE WITH THE ARUP PROJECT SPECIFICATION(S). IF NOT PROVIDED AT THE TIME OF TENDER, THE CONTRACTOR SHALL REQUEST SAID DOCUMENT(S) AND ENSURE THEIR TENDER COMPLIES FULLY WITH THE OUTLINED REQUIREMENTS.
8 ALL INSTALLATIONS SHALL BE IN FULL ACCORDANCE WITH THE PROJECT ACOUSTIC REPORT.
9 ALL INSTALLATIONS SHALL BE IN FULL ACCORDANCE WITH THE PROJECT FIRE ENGINEERING REPORT.
10 THIS DRAWING IS DIAGRAMATIC ONLY AND SHOWS DESIGN INTENT. THE MECHANICAL SERVICES CONTRACTOR SHALL PROVIDE WORKING DRAWINGS FOR FINAL APPROVAL BY THE ARCHITECT PRIOR TO INSTALLATION, ALLOWING SUFFICIENT TIME FOR REVIEW AND COMMENT, AS NECESSARY, SUCH THAT IT DOES NOT IMPACT UPON THE PRINCIPAL CONTRACTORS PROGRAMME OF WORKS.
11 THE CONTRACTOR SHALL CONFIRM THEIR BUILDERSWORK REQUIREMENTS TO THE PRINCIPAL CONTRACTOR, ALLOWING SUFFICIENT TIME FOR THE WORKS TO BE UNDERTAKEN SUCH THAT IT DOES NOT IMPACT UPON THE PRINCIPAL CONTRACTORS PROGRAMME OF WORKS.

HK-N-55-Refrigerant and Chilled Water Notes

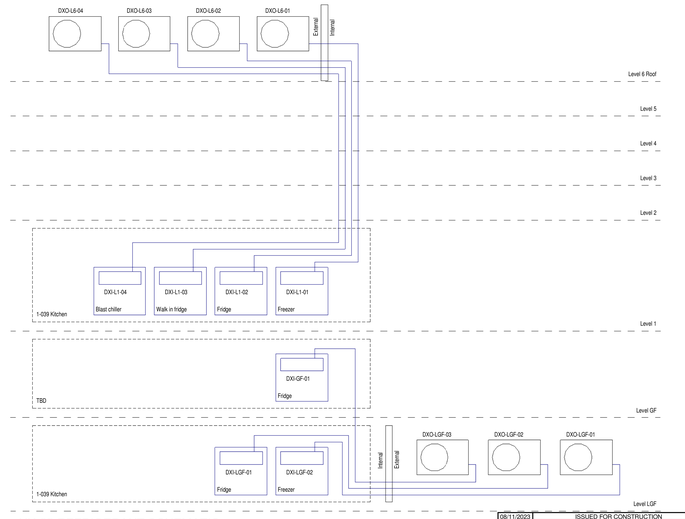
1 THE CONTRACTOR SHALL ALLOW FOR FINAL CONNECTION OF THE KITCHEN SUPPLY AIR HANDLING UNIT COOLING COIL TO THE BASE BUILD CHILLED WATER INSTALLATIONS.
2 SECONDARY DISTRIBUTION PIPEWORK FOR CHILLED WATER SERVING THE KITCHEN SUPPLY AIR HANDLING UNIT COOLING COIL BY OTHERS. TO BE TERMINATED WITHIN 500MM OF UNIT CONNECTION POSITIONS.
3 CHILLED WATER PIPEWORK MATERIAL AND INSTALLATION TO BE IN FULL ACCORDANCE WITH THE ARUP PROJECT SPECIFICATION(S).
4 AUTOMATIC CONTROLS AND VALVE ARRANGEMENTS FOR THE KITCHEN SUPPLY AIR HANDLING UNIT COOLING COIL BY OTHERS.
5 AIR BOTTLES/AUTOMATIC AIR VENTS TO BE INSTALLED AT ALL HIGH POINTS IN THE SYSTEM.
6 DRAIN COCKS TO BE INSTALLED AT ALL LOW POINTS IN THE SYSTEM.
7 WALK-IN-FRIDGE, WALK-IN-FREEZER AND BLAST CHILLER INSTALLATIONS TO BE UNDERTAKEN BY A SPECIALIST CATERING REFRIGERATION CONTRACTOR. THE APPOINTED MECHANICAL SERVICES CONTRACTOR SHALL ALLOW FOR COORDINATION WITH SAID CONTRACTOR AND INSTALLATION OF SUPPLEMENTARY REFRIGERANT CONTAINMENT, INTERCONNECTING REFRIGERANT PIPEWORK AND ASSOCIATED SUPPORT BRACKETS AND SECONDARY STEELWORK.
8 ALL REFRIGERANT PIPEWORK SHALL BE INSULATED IN ACCORDANCE WITH BS 5422.
9 EACH SYSTEM SHALL BE FULLY COMMISSIONED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND CIBSE COMMISSIONING CODE 'R' REFRIGERATION SYSTEMS.
10 ALL WALK-IN-FRIDGE, WALK-IN-FREEZER AND BLAST CHILLER INSTALLATION CONTROLS TO BE PROVIDED BY SPECIALIST CATERING REFRIGERATION SPECIALIST. C/W OUTPUT TO BASE BUILD AUTOMATIC CONTROLS/BMS INSTALLATIONS.
11 THE CONTRACTOR SHALL ALLOW FOR ALL NECESSARY WIRING BETWEEN CONTROLLERS AND THE INDOOR REFRIGERATION UNITS.
12 CONNECTION OF ALL WALK-IN-FRIDGE, WALK-IN-FREEZER AND BLAST CHILLER CONTROL INSTALLATIONS TO THE BASE BUILD AUTOMATIC CONTROLS/BMS BY OTHERS. THE CONTRACTOR SHALL ALLOW FOR COORDINATION WITH, AND ACCOMMODATION OF, WORKS BY THE BASE BUILD AUTOMATIC CONTROLS SPECIALIST.
13 ROOM SENSORS/CONTROLLER POSITIONS SHALL BE CONFIRMED WITH THE ARCHITECT. THE INSTALLER SHALL SEEK CONFIRMATION FROM THE ENGINEER PRIOR TO INSTALLATION.
14 ALL SERVICES SHOWN ON THIS DRAWING INCLUDING PIPEWORK SUPPORT BRACKETS AND SECONDARY STEELWORK SHALL BE PROVIDED BY THE MECHANICAL SERVICES CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE. INSTALLATIONS TO BE IN FULL ACCORDANCE WITH THE ARUP PROJECT SPECIFICATION(S).
15 FINAL REFRIGERANT PIPEWORK SIZES TO BE ADVISED BY SPECIALIST CATERING REFRIGERATION CONTRACTOR.
16 FINAL CONDENSER SPECIFICATIONS TO BE CONFIRMED BY SPECIALIST CATERING REFRIGERATION CONTRACTOR

LEGEND

LOW TEMPERATURE HOT WATER FLOW

LOW TEMPERATURE HOT WATER RETURN

DTLL	DROP TO LOW LEVEL
IV	ISOLATION VALVE
PICV	PRESSURE INDEPENDANT CONTROL VALVE
DC	DRAIN COCK
OP	ORIFICE PLATE



HK-55-REFRIGERANT SCHEMATIC
1 : 50

Date	Revision Description	Rev.	By
08/11/2023	ISSUED FOR CONSTRUCTION	C01	S Mish
02/08/2021	UPDATED IN LINE WITH CLASH REPORTS & COMMENTS	P06	J Staley
18/05/2021	UPDATED IN LINE WITH COMMENTS	P05	J Staley
23/04/2021	ISSUED FOR TENDER	P04	J Staley
05/11/2020	ISSUED FOR WORK STAGE 5	P03	D Pierce
30/08/2019	ISSUE FOR TENDER	P02	S Lu
23/08/2019	ISSUE FOR COMMENT	P01	S Lu

Revision Description

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Project:
Manchester Town Hall Catering Works

Drawing Title:
REFRIGERATION LAYOUT LEVEL LG

Drawing Number:
OTH-HAK-TH-LG-DWG-V-5501

Revision: C01 **Rev Date:** 08/11/2023
Scale: 1 : 50
Drawn By: S Lu **Checked By:** R Beagan
Approved By: R Beagan
Arch Rev: -
Struct Rev: -
Issue Status: CONSTRUCTION
A0