COMcheck Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: Levittown_ FSU #4937
Project Type: New Construction

Construction Site:
3859 Hempstead Turnpike
Levittown, NY 11714

Owner/Agent:
Chick-fil-a
5200 Buffington Road
Atlanta, GA 30349

Designer/Contractor:
Armen Khachaturian, PE
KEA Engineers
186 Wood Ave South
First Floor
Iselin, NJ 08830

Additional Efficiency Package(s)

Credits: 1.0 Required 0.0 Proposed

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-Common Space Types:Electrical/Mechanical	123	0.43	53
2-Common Space Types:Sales Area	878	1.59	1396
3-Common Space Types:Food Preparation	1954	1.06	2071
4-Common Space Types:Dining Area - Family Restaurant	988	0.71	701
5-Common Space Types:Storage <50 sq.ft.	69	0.46	32
6-Common Space Types:Office - Enclosed	246	0.93	229
7-Common Space Types:Corridor/Transition <8 ft wide	68	0.66	45
8-Common Space Types:Restrooms	381	0.85	324
		Total Allowed Watts =	4851

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-Common Space Types:Electrical/Mechanical				
LED: LED Panel 40W:	1	2	39	78
LED: LED Linear 33W:	1	1	44	44
2-Common Space Types:Sales Area				
LED: LED MR 10W:	1	19	21	399
LED: LED Panel 40W:	1	2	39	78
3-Common Space Types:Food Preparation				
LED: LED Panel 40W:	1	36	39	1404
LED: LED Linear 33W:	1	4	32	128
4-Common Space Types:Dining Area - Family Restaurant				
LED: LED MR 10W:	1	32	21	672
LED: LED A Lamp 25W:	1	2	22	44
5-Common Space Types:Storage <50 sq.ft.				

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
LED: LED Linear 33W:	1	2	44	88
6-Common Space Types:Office - Enclosed				
LED: LED Panel 40W:	1	1	39	39
LED: LED MR 10W:	1	6	21	126
7-Common Space Types:Corridor/Transition <8 ft wide				
LED: LED MR 10W:	1	2	21	42
8-Common Space Types:Restrooms				
LED: LED MR 10W:	1	8	21	168
LED: LED A Lamp 11W:	1	2	11	22
			Total Proposed Watts =	3332

Interior Lighting PASSES: Design 31% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb 4.0.12 to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Armen Khachaturian, PE - President — Signature — 09/30/2022
Name - Title — Date

COMcheck Software Version COMcheckWeb

Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: Levittown_ FSU #4937
Project Type: New Construction
Exterior Lighting Zone: 2 (Neighborhood business district (LZ2))

Construction Site:
3859 Hempstead Turnpike
Levittown, NY 11714

Owner/Agent:
Chick-fil-a
5200 Buffington Road
Atlanta, GA 30349

Designer/Contractor:
Armen Khachaturian, PE
KEA Engineers
186 Wood Ave South
First Floor
Iselin, NJ 08830

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
Free standing/attached sales canopy	2380 ft2	0.4	Yes	952
Walkway < 10 feet wide	711 ft of	0.5	Yes	356
Entry canopy	244 ft2	0.25	Yes	61
Free standing/attached sales canopy	1417 ft2	0.4	Yes	567
			Total Tradable Watts (a) =	1935
			Total Allowed Watts =	1935
			Total Allowed Supplemental Watts (b) =	400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Free standing/attached sales canopy (2380 ft2): Tradable Wattage				
LED: LED Other Fixture Unit 80W:	1	10	72	720
Walkway < 10 feet wide (711 ft of walkway length): Tradable Wattage				
LED: LED A Lamp 13W:	1	13	24	312
Entry canopy (244 ft2): Tradable Wattage				
LED: LED Other Fixture Unit 13W:	1	7	13	91
Free standing/attached sales canopy (1417 ft2): Tradable Wattage				
LED: LED Other Fixture Unit 80W:	1	6	72	432
			Total Tradable Proposed Watts =	1555

Exterior Lighting PASSES: Design 33% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb 4.0.12 to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Armen Khachaturian, PE - President — Signature — 09/30/2022
Name - Title — Date

COMcheck Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2018 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C103.2 [PR8][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2.2 [EL22][1]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.1, C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.2 [EL19][1]	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.3 [EL20][1]	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2.1, C405.2.2.2 [EL21][1]	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3, C405.2.3.1, C405.2.3.2 [EL23][1]	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL26][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL27][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.5 [EL28][mnl]	Manual controls required by the energy code are in a location with ready access to occupants and located where the controlled lights are visible, or identify the area served and their status.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.6 [EL30][mnl]	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.3 [EL6][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.6 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.7 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.8.2, C405.8.2.1 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.9 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][1]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.4.1 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
C405.5.1 [FI19][1]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.5.1 [FI16][1]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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00-LSR-04937-EN-101-ELECTRICAL ENERGY COMPLIANCE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

KEA ENGINEERS
Engineering Excellence since 1984
KEA ENGINEERS
186 WOOD AVE. SOUTH, 1ST FLOOR
ISELIN, NJ 08830
TEL: (732) 635 0044 • FAX: (732) 635 1777
NY STATE CERTIFICATE OF AUTHORIZATION #0019115

ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR
RELEASE: 22.08
PRINTED FOR
ISSUED FOR BID 10/04/2022

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY MN

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SHEET
ELECTRICAL ENERGY COMPLIANCE

SHEET NUMBER
EN-101

COMcheck Software Version 4.1.5.5

Mechanical Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	Levittown_ FSU #4937
Location:	Levittown, New York
Climate Zone:	4a
Project Type:	New Construction

Construction Site:
3859 Hempstead Turnpike
Levittown, NY 11714

Owner/Agent:
Chick-fil-a
5200 Buffington Road
Atlanta, GA 30349

Designer/Contractor:
Armen Khachaturian, PE
KEA Engineers
186 Wood Ave South
First Floor
Iselin, NJ 08830

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Reduced Air Infiltration, 1.0 credit

Mechanical Systems List

Quantity — System Type & Description

1 AC#1 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 250 kBtu/h
Proposed Efficiency = 81.00% Et, Required Efficiency: 80.00 % Et
Cooling: 1 each - Single Package DX Unit, Capacity = 279 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 9.80 EER, Required Efficiency: 9.80 EER + 11.4 IEER
Fan System: None

1 AC#2 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 250 kBtu/h
Proposed Efficiency = 81.00% Et, Required Efficiency: 80.00 % Et
Cooling: 1 each - Single Package DX Unit, Capacity = 188 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 10.80 EER, Required Efficiency: 10.80 EER + 12.2 IEER
Fan System: None

1 AC#3 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 320 kBtu/h
Proposed Efficiency = 81.00% Et, Required Efficiency: 80.00 % Et
Cooling: 1 each - Single Package DX Unit, Capacity = 188 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 10.80 EER, Required Efficiency: 10.80 EER + 12.2 IEER
Fan System: None

1 AC#4 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 130 kBtu/h
Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE
Cooling: 1 each - Single Package DX Unit, Capacity = 60 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 17.20 SEER, Required Efficiency: 14.00 SEER
Fan System: None

6 GH (Single Zone):
Heating: 1 each - Radiant Heater, Gas, Capacity = 50 kBtu/h
No minimum efficiency requirement applies
Fan System: None

1 EH#1 (Single Zone):
Heating: 1 each - Unit Heater, Electric, Capacity = 20 kBtu/h
No minimum efficiency requirement applies

Quantity — System Type & Description

Fan System: None

2 Air Door (Heated) (Single Zone):
Heating: 1 each - Other, Electric, Capacity = 34 kBtu/h
No minimum efficiency requirement applies
Fan System: None

1 Water Heater:
Gas Storage Water Heater, Capacity: 60 gallons, Input Rating: 75 kBtu/h w/ Circulation Pump
No minimum efficiency requirement applies

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this code application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and will comply with any applicable mandatory requirements listed in the Inspection Checklist.

Armen Khachaturian, PE - President
Name - Title

Signature

9/30/2022
Date

COMcheck Software Version 4.1.5.5

Inspection Checklist

Energy Code: 2018 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR2][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C103.2 [PR3][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C403.12.2 [FO9][1] C403.12.3 [FO9][1]	Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature and outdoor temperature. future connection to controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6][1]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.5, C404.5.1, C404.5.2 [PL6][1]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.5, C404.5.1, C404.5.2 [PL6][1]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.5, C404.5.1, C404.5.2 [PL6][1]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.5, C404.5.1, C404.5.2 [PL6][1]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.5, C404.5.1, C404.5.2 [PL6][1]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.5, C404.5.1, C404.5.2 [PL6][1]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.6.1, C404.6.2 [PL3][1]	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.6.3 [PL7][1]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.6.3 [PL7][1]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.6.3 [PL7][1]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.6.3 [PL7][1]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.6.3 [PL7][1]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.6.3 [PL7][1]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.6.3 [PL7][1]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.7 [PL8][1]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.7 [PL8][1]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.7 [PL8][1]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.7 [PL8][1]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.7 [PL8][1]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.7 [PL8][1]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C404.7 [PL8][1]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41][1]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.11.3 [ME61][2]	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.11.3 [ME61][2]	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.8.1 [ME65][3]	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
C403.8.1 [ME65][3]	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
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C403.8.1 [ME65][3]	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
C403.8.3 [ME117][2]	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.8.3 [ME117][2]	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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30-LSR-04937-EN-102-MECHANICAL ENERGY COMPLIANCE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

KEA ENGINEERS
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KEA ENGINEERS
186 WOOD AVE. SOUTH, 1ST FLOOR
ISELIN, NJ 08830
TEL: (732) 635 0044 • FAX: (732) 635 1777
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ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR ALL
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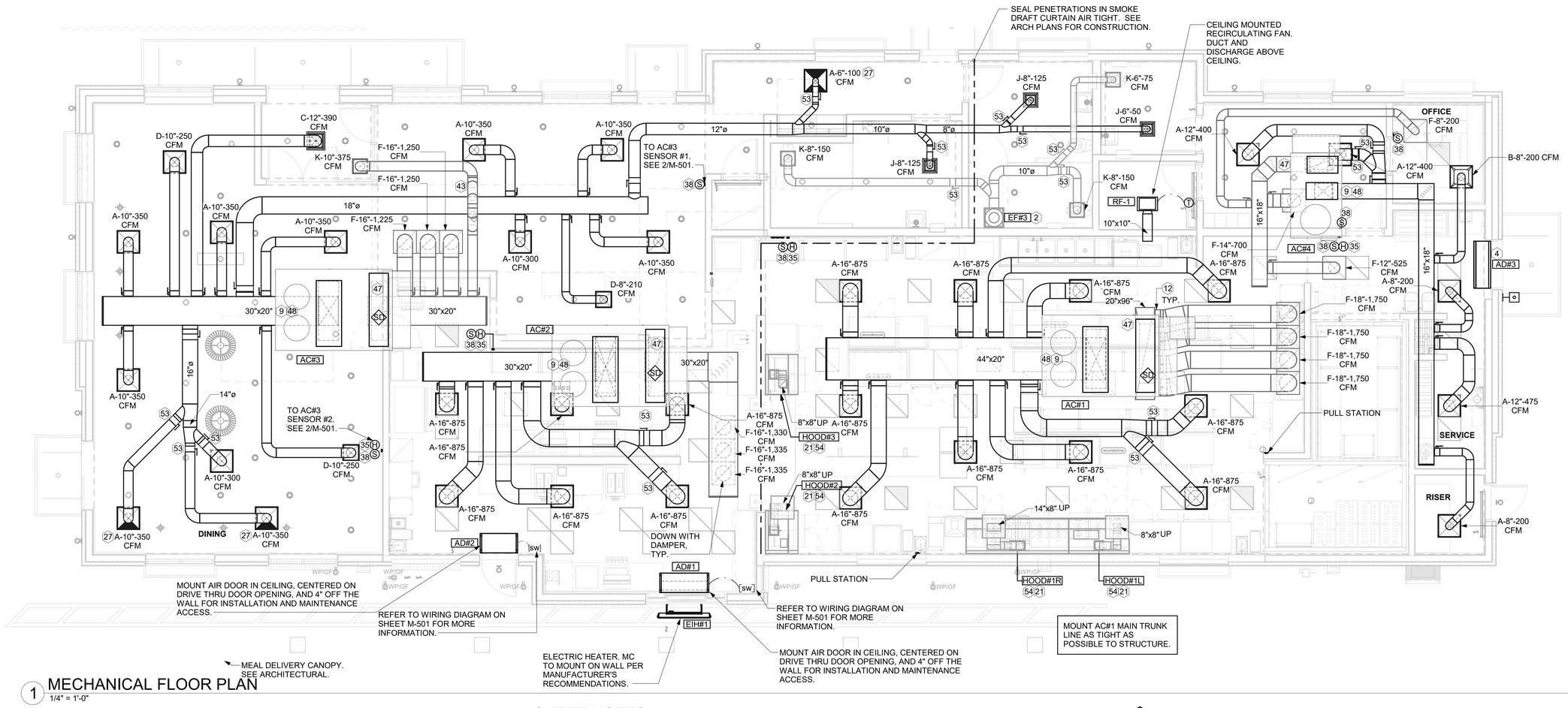
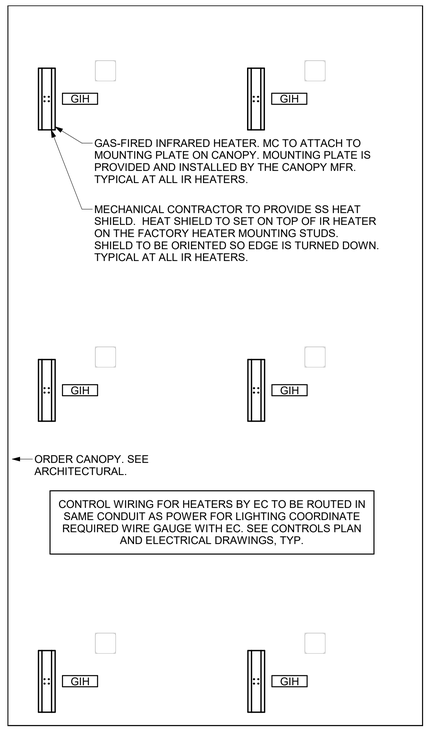
SHEET
MECHANICAL ENERGY COMPLIANCE

SHEET NUMBER
EN-102



1 MECHANICAL FLOOR PLAN
1/4" = 1'-0"



2 MECHANICAL FLOOR PLAN - ORDER CANOPY
1/4" = 1'-0"

SHEET NOTES

1. DUCT SIZES SERVING DIFFUSERS AND GRILLES ARE SAME SIZE AS DIFFUSER OR GRILLE NECK UNLESS NOTED OTHERWISE.
2. FLEXIBLE DUCT NOT SHOWN FOR CLARITY. ALL TAKE-OFFS SHALL INCLUDE FLEXIBLE DUCT. SEE DETAIL 1/M-401 FOR FLEXIBLE DUCT INSTALLATION REQUIREMENTS.
3. FOR SUPPLY AND RETURN OPENINGS, CUT OPENING AROUND DUCT DROPS 4" TO 8" MINIMUM (EXCEPT WHERE STRUCTURE PREVENTS THIS). SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
4. AT EACH PIECE OF ROOF EQUIPMENT, PROVIDE A PLASTIC ENGRAVED LABEL WITH 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. THE LABEL IS TO HAVE A SELF ADHESIVE BACKING.
5. UNLESS NOTED OTHERWISE, MC TO ADJUST ALL DIFFUSER AIR PATTERN DEFLECTORS TO THROW HORIZONTALLY ALONG THE CEILING.
6. SUPPORT ALL DUCT DROPS AT BASE OF DROP FROM STRUCTURE.

CANOPY GENERAL NOTES

1. COORDINATE NEW WORK WITH EXISTING CONDUIT, STRUCTURE, AND PIPING. FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.
2. COORDINATE LOCATION AND RESPONSIBILITIES FOR UNDERGROUND PIPING AND ASSOCIATED TRENCHING WITH GENERAL CONTRACTOR PRIOR TO START OF WORK.
3. EXPOSED GAS PIPING SHALL BE PAINTED BY GENERAL CONTRACTOR.
4. ACTUAL NUMBER OF GAS INFRARED HEATERS WILL BE DETERMINED BY SITE-SPECIFIC CANOPY LAYOUT AND EQUIPMENT LOCATIONS, AS INDICATED ON ARCHITECTURAL PLANS.
5. CONTROL WIRING FOR HEATERS BY EC. COORDINATE REQUIRED WIRE GAUGE WITH EC. SEE CONTROLS PLAN AND ELECTRICAL DRAWINGS, TYP.

KEY NOTES

2	10X10 UP THRU ROOF.
4	AIR CURTAIN MOUNTED OVER DOOR HEADER AT 7'-2" AFF TO BOTTOM OF UNIT. PROVIDE BLOCKING IN WALL BEHIND AIR CURTAIN. USE FACTORY PRE-PUNCHED MOUNTING HOLES ON BACK SIDE OF AIR CURTAIN ONLY. ATTACH AIR CURTAIN TO WALL USING 3/8" LAG BOLTS, LENGTH AS REQUIRED TO FULLY PENETRATE BLOCKING. LOCATE MAGNETIC CONTACT TYPE MICROSWITCH IN DOOR FRAME ON STRIKE SIDE.
9	BRANCH TAKE-OFFS ARE NOT TO BE LOCATED CLOSER THAN 3'-0" FROM ANY OFFSET OR ELBOW INCLUDING THE SUPPLY AIR DROP FROM CURB.
12	DAMPER HANDLES SHOULD BE INSTALLED SUCH THAT THE DAMPERS ROTATION AXIS IS PERPENDICULAR TO THE FLOOR WITH THE HANDLE FULLY ACCESSIBLE UNDERNEATH THE DUCT IT CONTROLS. (TYPICAL OF ALL DAMPERS AT THE SAME PLENUM.)
21	HALTON KBD DAMPER AT HOOD COLLAR BY MECHANICAL CONTRACTOR. SEE HOOD ELEVATIONS ON M-301 FOR LOCATION.
27	MECHANICAL CONTRACTOR TO CLOSE THE AIR PATTERN DEFLECTORS ON SHADED SIDE.
35	MOUNT HUMIDITY SENSOR ON WALL ABOVE SPACE TEMP SENSOR AND ROUTE WIRING TO UNIT ON ROOF.
38	MOUNT REMOTE SENSOR ON WALL AT 5-0" AFF U.N.O. AND ROUTE WIRING BACK TO SUNCOAST TEMP CONTROL PANEL. FOR SENSOR SERVING AC#1, COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT.
43	ROUTE DUCT WITHIN STRUCTURE.
47	TRANSITION IN VERTICAL DROP FROM FULL SIZE OF CURB OPENING TO SIZE SHOWN. SEE DETAIL 6/M-401 FOR REQUIRED TRANSITION GEOMETRY. TRANSITION WITHIN CURB WHERE REQUIRED TO AVOID STRUCTURE. WHERE THE DUCT IS SHOWN OFFSET HORIZONTALLY, PROVIDE ELBOW WITHOUT TURNING VANES. FOR DROPS WITH NO HORIZONTAL OFFSET, EXTEND DROP BELOW STRUCTURE TO ACCOMMODATE START COLLARS. TERMINATE DROP A MINIMUM 0'-10" ABOVE CEILING (0'-4" ABOVE CEILING IF REQUIRED TO ACCOMMODATE TAKE-OFF AND DROP IS NOT LOCATED DIRECTLY ABOVE A LIGHT).
48	TRANSITION IN VERTICAL DROP FROM FULL SIZE OF CURB OPENING TO SIZE SHOWN. TRANSITION WITHIN CURB WHERE REQUIRED TO AVOID STRUCTURE. WHERE THE DUCT IS SHOWN OFFSET HORIZONTALLY, PROVIDE ELBOW WITH TURNING VANES. FOR DROPS WITH NO HORIZONTAL OFFSET, EXTEND DROP BELOW STRUCTURE TO ACCOMMODATE START COLLARS. TERMINATE DROP A MINIMUM 0'-10" ABOVE CEILING (0'-4" ABOVE CEILING IF REQUIRED TO ACCOMMODATE TAKE-OFF AND DROP IS NOT LOCATED DIRECTLY ABOVE A LIGHT).
53	RUSKIN MDRS25 MVD W/LOCKING QUADRANT HANDLE.
54	SEE ELEVATIONS ON M-301 FOR CJ FAN DUCTING REQUIREMENT.

LEGEND

A-12-400	TYPE - NECK SIZE - CFM	EF#1	EXHAUST FAN #1 (TYP.)
	SPIN-IN FITTING WITH MANUAL BALANCING DAMPER, WITHOUT SCOOP	AC#1	AIR CONDITIONING UNIT #1 (TYP.)
	SPIN-IN HARD FLEXIBLE DIFFUSER		RETURN/EXHAUST (TYP.)
S	REMOTE TEMPERATURE SENSOR		SUPPLY DIFFUSER, SQ FACE (TYP.)
H	HUMIDITY SENSOR	1	PLAN NOTE REFERENCE
SD	SMOKE DETECTOR		MANUAL VOLUME DAMPER
12x18	DUCT SIZE (reverse for elevation views) 1ST NUMBER - HORIZONTAL DIMENSION 2ND NUMBER - VERTICAL DIMENSION		DIRECTION OF THROW ON DIFFUSER
			CLOSED AIR PATTERN DEFLECTOR
SW	AIR DOOR SWITCH	GIH	GAS INFRARED HEATER (TYP.)
EC	ELECTRICAL CONTRACTOR	B/G	BELOW GRADE
MC	MECHANICAL CONTRACTOR	T	THERMOSTAT
EIH	ELECTRIC INFRARED HEATER		

AIR BALANCE SCHEDULE

Mark	SUPPLY AIR	RETURN AIR	OUTSIDE AIR	EXHAUST AIR	BUILDING POSITIVE PRESSURE
AC#1	8,750 CFM	7,000 CFM	1,750 CFM	0 CFM	0 CFM
AC#2	5,250 CFM	4,000 CFM	1,250 CFM	0 CFM	0 CFM
AC#3	5,250 CFM	4,100 CFM	1,150 CFM	0 CFM	0 CFM
AC#4	1,875 CFM	1,375 CFM	500 CFM	0 CFM	0 CFM
EF#1	0 CFM	0 CFM	0 CFM	1,913 CFM	
EF#2	0 CFM	0 CFM	0 CFM	1,402 CFM	
EF#3	0 CFM	0 CFM	0 CFM	375 CFM	
	21,125 CFM	16,475 CFM	4,650 CFM	3,690 CFM	-3,690 CFM

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Levittown
3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

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SHEET
MECHANICAL FLOOR PLAN

SHEET NUMBER
M-201

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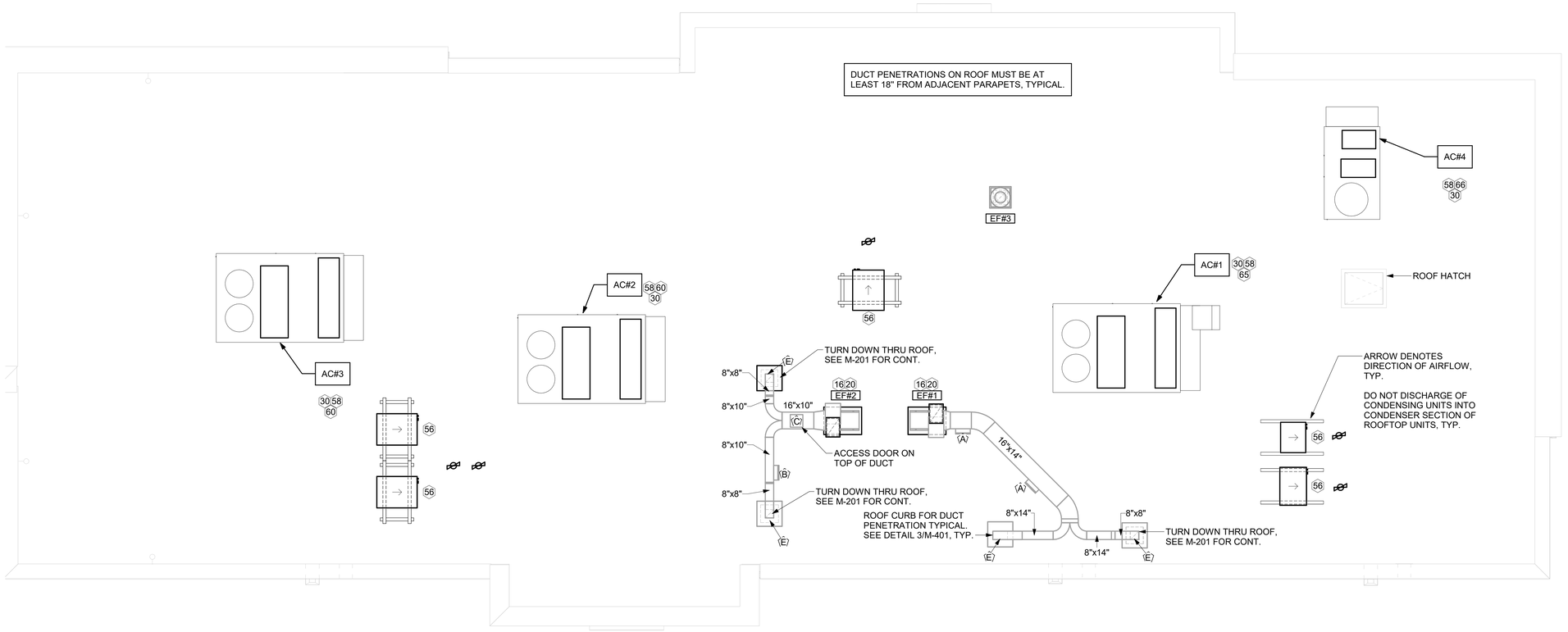

1 ALTERNATE DESIGN PLAN - TRANE
1/4" = 1'-0"

KEY NOTES

16 FABRICATE DISCHARGE AIR NOZZLE. VERIFY EXHAUST TERMINATION IS A MINIMUM 10'-0" FROM PARAPETS AND OUTSIDE AIR INTAKES. SEE DETAIL 3/M-401.

20 GREASE EXHAUST DUCT LOCATED ON ROOF SHALL SLOPE ¼"PER FOOT TOWARDS THE HOOD, THE FAN, OR A COMBINATION OF THE TWO SUCH THAT NO PORTION OF THE RADIUS ELBOW AT THE CURB IS BELOW THE CURB CAP AND SUCH THAT THE FAN BASE SETS DIRECTLY ON THE CURB RAILS. THE BOTTOM OF THE RADIUS ELBOW MAY BE EVEN OR FLUSH WITH THE CURB CAP, BUT NOT BELOW THE CAP. THE DUCT AT THE FAN MUST BE CENTERED ON THE FAN INLET. THE MC MAY ADD A VERTICAL RISER AT THE RADIUSED ELBOW LOCATED AT THE DUCT CURB AS NEEDED IN ORDER TO CENTER THE DUCT ON THE FAN INLET.

30 MECHANICAL CONTRACTOR TO SEE ARCHITECTURAL ROOF PLAN FOR NOTES REGARDING LEVELING FRAMES FOR RTUS. COORDINATE WITH GENERAL CONTRACTOR EXACT LOCATIONS AND SIZE NEEDED.

56 GC SHALL PROVIDE EQUIPMENT STANDS AS MANUFACTURERED BY AVCOA OR EQUAL. STANDS SHALL BE INSTALLED PRIOR TO ROOF INSULATION SO THAT THE INSULATION IS CONTINUOUS UP TO THE PIPE POSTS. POSTS SHALL BE FLASHED IN ACCORDANCE WITH ROOFING MANUFACTURER'S INSTALLATION INSTRUCTIONS. COORDINATE BLOCKING BELOW THE ROOF DECK AS REQUIRED.

58 SUPPLY AND RETURN AIR DUCTWORK OPENING DROPS FROM THE UNIT SHALL BE FULL SIZE OF UNIT.

60 TRANSITION SUPPLY AIR DUCT TO 30"x20" AND RETURN AIR DUCT TO 30"X20". REFER TO SHEET M-201 FOR CONTINUATION. TRANSITIONS SHALL BE MADE ACCORDING TO SMACNA. CONTRACTOR TO PROVIDE ALL NECESSARY ELBOWS TO CONNECT TO MAIN DUCT ABOVE CEILING.

65 TRANSITION SUPPLY AIR DUCT TO 44"x20" AND RETURN AIR DUCT TO 20"X96" PLENUM. REFER TO SHEET M-201 FOR CONTINUATION. TRANSITIONS SHALL BE MADE ACCORDING TO SMACNA. CONTRACTOR TO PROVIDE ALL NECESSARY ELBOWS TO CONNECT TO MAIN DUCT ABOVE CEILING.

66 TRANSITION SUPPLY AIR DUCT TO 16"x18" AND RETURN AIR DUCT TO 16"X18". REFER TO SHEET M-201 FOR CONTINUATION. TRANSITIONS SHALL BE MADE ACCORDING TO SMACNA. CONTRACTOR TO PROVIDE ALL NECESSARY ELBOWS TO CONNECT TO MAIN DUCT ABOVE CEILING.

GAS FIRED ROOFTOP UNIT SCHEDULE

MARK	TOTAL COOLING MBH	SENSIBLE COOLING MBH	HEATING INPUT MBH	HEATING OUTPUT MBH	SUPPLY	OA	HP	ESP	EER	IEER/SEER	VOLTAGE	PHASE	MCA	MOCP	MANUFACTURER	MODEL	REMARKS
AC#1	279.4	180.8	250	202.5	8,750 CFM	1,750 CFM	3.1 hp	0.8 in-wg	9.8	13	208 V	3	125 A	150 A	TRANE	YSJ300A3S	1,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17
AC#2	188	120.9	250	202.5	5,250 CFM	1,250 CFM	3.1 hp	0.8 in-wg	10.8	14	208 V	3	78 A	100 A	TRANE	YSJ180A3S	2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17
AC#3	188	120.9	320	259.2	5,250 CFM	1,150 CFM	3.1 hp	0.8 in-wg	10.8	14	208 V	3	78 A	100 A	TRANE	YSJ180A3S	2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17
AC#4	60.1	39.2	130	104	1,875 CFM	500 CFM	1 hp	0.8 in-wg	13	17.2	208 V	3	33 A	45 A	TRANE	YHC067E3R	2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17

NOTES
- CHICK-FIL-A MAINTAINS A NATIONAL ACCOUNT FOR EQUIPMENT WITH TRANE CORPORATION. CONTACT TRANE TECH SUPPORT AT 866-986-4822 FOR PRICING, ORDERING AND AVAILABILITY OR BY EMAIL CFA@TRANE.COM.
- MECHANICAL CONTRACTOR TO VERIFY TRANE SUBMITTAL WITH CONSTRUCTION DOCUMENTS.

REMARKS
1. PROVIDE DIFFERENTIAL ENTHALPY ECONOMIZER WITH POWER EXHAUST.
2. PROVIDE DIFFERENTIAL ENTHALPY ECONOMIZER WITH BAROMETRIC EXHAUST.
3. PROVIDE 14" HIGH ROOF CURB.
4. SEE DETAIL 2/M-501 FOR SETTING OF CONTROL PARAMETERS BY MC.
5. PROVIDE FACTORY INSTALLED 115V GFI SERVICE OUTLET. SEPERATE 115V CIRCUIT PROVIDED BY ELECTRICAL CONTRACTOR.
6. PROVIDE FACTORY INSTALLED RETURN AIR SMOKE DETECTOR.
7. PROVIDE FACTORY INSTALLED NON-FUSED DISCONNECT.
8. PROVIDE 2" MERV 8 THROW AWAY FILTERS.
9. PROVIDE HINGED PANELS FOR ACCESS TO FILTER(S), FAN BLOWER & MOTOR, COMPRESSOR(S) ACCESS AND CONTROLS.
10. PROVIDE FACTORY COIL HAIL GUARD, FIELD INSTALLED.
11. PROVIDE FRESH AIR TEMPERING KIT.
12. PROVIDE HAS GAS DEHUMIDIFICATION OPTION WITH WALL MOUNTED HUMIDITY SENSOR.
13. PROVIDE FACTORY INSTALLED BELT TENSIONER.
14. PROVIDE FACTORY CONFIGURED PHASE LOSS PROTECTION.
15. PROVIDE FACTORY INSTALLED CONDENSATE PAN DRAIN OVERFLOW SWITCH.
16. PROVIDE FACTORY STAINLESS STEEL HEAT EXHANGER.
17. PROVIDE WITH 100K SCCR RATING.

Chick-fil-A
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FSR#04937

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SHEET
ROOF PLAN

SHEET NUMBER
M-250

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30-LSR-04937-M-250-ROOF PLAN

GREASE EXHAUST DUCT CLEARANCE NOTE:
CLEARANCES ABOVE CEILING ARE TIGHT. MECHANICAL CONTRACTOR TO FIELD VERIFY EXACT ROUTING AND CLEARANCES PRIOR TO FABRICATING GREASE EXHAUST DUCT.

CLEANOUT DOOR NOTE:
DUCT WRAP SHALL BE APPLIED TO THE CLEANOUT DOOR PER THE WRAP MFR'S INSTALLATION INSTRUCTIONS, NO EXCEPTIONS. ALSO, THE CLEANOUT DOOR MUST BE REMOVABLE WITHOUT TOOLS AND MUST BE CLEARLY AND PERMANENTLY LABELED.

HOOD SCHEDULE

MARK	EXHAUST CFM	SP @ TAB PORT	CAPTURE JET CFM & S.P.	TYPE	COLLAR SIZE	WIDTH	DEPTH	HEIGHT	MANUFACTURER	MODEL	REMARKS
HOOD#1L	709 CFM	0.13"	47 @ 0.30"	BACKSHELF	8"X8"	63"	37"	38"	HALTON	KVL-2 IC	1, 2, 3, 5, 7 ,8, 9, 12, 20, 21, 22
HOOD#1R	1,204 CFM	0.13"	80 @ 0.30"	BACKSHELF	14"X8"	107"	37"	38"	HALTON	KVL-2 IC	1 ,2, 3, 4, 5, 7, 8, 9, 12, 16, 21 ,23
HOOD#2	701 CFM	.30"	30 @ 0.29"	BACKSHELF	8"X8"	42"	34"	38"	HALTON	KVL-C	1, 2, 3, 6, 7, 8, 9,12,13,15,16,18, 21
HOOD#3	701 CFM	.30"	30 @ 0.29"	BACKSHELF	8"x8"	42"	34"	38"	HALTON	KVL-C	1, 2, 3, 4, 6, 7, 8, 10, 12, 14, 17, 21
NOTES	DIMENSIONS OF HOODS INCLUDE BACK AND SIDE SPACERS (HEIGHT DOES NOT INCLUDE CLOSURE PANELS).										

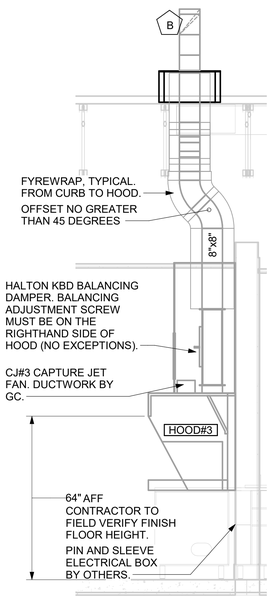
REMARKS

1. STAINLESS STEEL CONSTRUCTION.
2. PROVIDE FULL HEIGHT SS CLOSURE PANEL WITH ACCESS PANEL IN FRONT LARGE ENOUGH TO REMOVE CAPTURE JET FAN, FIRE SUPPRESSION COMPONENTS, AND/OR TO ACCESS KBD EQUALIZER JACK SCREW.
3. PROVIDE PRE-PIPED FIRE SUPPRESSION SYSTEM.
4. FIRE SUPPRESSION CABINET AND COMPONENTS ABOVE HOOD ON RIGHT SIDE.
5. PROVIDE 3" ZERO CLEARANCE TO COMBUSTIBLE BACK SPACER.
6. PROVIDE 3" ZERO CLEARANCE TO COMBUSTIBLE CUSTOM BACK SPACER TO ACCOMMODATE PIN AND SLEEVE ELECTRICAL BOX.
7. PROVIDE EQUIPMENT I.D. LABELS LOCATED ON FRONT LEADING EDGE OF HOOD.
8. PROVIDE FACTORY WALL MOUNTING ANGLE AT TOP OF HOOD.
9. PROVIDE TOP PLENUM CAPTURE JET FAN, SPEED CONTROLLER AND COLLAR.
10. PROVIDE COUNTER MOUNTED SIDE CAPTURE JET PLENUM ASSEMBLY AND FAN ON LEFT SIDE OF HOOD.
11. PROVIDE FACTORY INSTALLED CAPTURE JET FAN IN PLENUM.
12. PROVIDE CAPTURE JET AIR INLET AND COLLAR AT FRONT OF CLOSURE PANEL.
13. PROVIDE PIN AND SLEEVE ELECTRICAL BOX (DOUBLE CONNECTION). SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
14. PROVIDE PIN AND SLEEVE ELECTRICAL BOX (SINGLE CONNECTION). SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
15. PROVIDE 3" ZERO CLEARANCE TO COMBUSTIBLE LEFT SIDE SPACER.
16. PROVIDE NOTCHED RIGHT END SIDE PANEL.
17. PROVIDE NOTCHED LEFT END SIDE PANEL.
18. PROVIDE 3"X3" HORIZONTAL AND VERTICAL TRIM ANGLE FOR LEFT SIDE OF HOOD TO FINISH OFF GAP AT WALL.
19. PROVIDE FULL RIGHT END SIDE PANEL.
20. PROVIDE FULL LEFT END SIDE PANEL.
21. PROVIDE HALTON KBD EQUALIZER.
22. CONTINUOUS CAPTURE INTERNAL RIGHT END CUTOUT.
23. CONTINUOUS CAPTURE INTERNAL LEFT END CUTOUT.

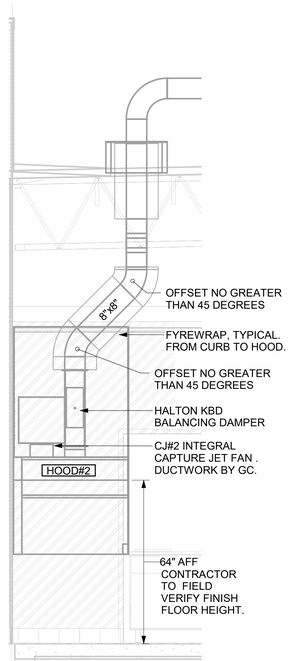
KITCHEN HOOD SYSTEMS NOTES

1. CHICK-FIL-A MAINTAINS A NATIONAL ACCOUNT WITH HALTON CO. FOR THE HOODS. CHICK-FIL-A WILL PURCHASE AND PROVIDE THE HOODS FOR INSTALLATION BY THE MECHANICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RECEIVING THE HOODS. CONTACT HALTON CO. AT 270-237-5600 FOR MORE INFO.
2. THE FIRE SUPPRESSION SYSTEM SHALL CONSIST OF A COMPLETE WET CHEMICAL SYSTEM FURNISHED BY HALTON. THE HOOD SHALL BE FURNISHED PRE-PIPED BY HALTON.
3. THE FIRE SUPPRESSION SYSTEM EXTERNAL TO THE HOODS SHALL BE INSTALLED IN ACCORDANCE WITH HOOD MANUFACTURER'S SHOP DRAWINGS BY AN AUTHORIZED INSTALLER SELECTED AND HIRED BY HALTON. COST FOR INSTALLATION INCLUDED IN PRICE OF HOODS TO CFA.
4. HOOD EXHAUST DUCTWORK SHALL BE 16 GA. BLACK STEEL WITH CONTINUOUS LIQUID TIGHT WELD OF JOINTS & SEAMS.
5. TURNS IN GREASE EXHAUST DUCTWORK SHALL BE LONG RADIUS TYPE, WITH A CENTERLINE RADIUS R=3W/2, UNLESS OTHERWISE NOTED. NO MITERED FITTINGS ALLOWED.
6. ALL STAINLESS STEEL CLOSURE PANELS SHALL BE SUPPLIED BY HOOD MANUFACTURER AND INSTALLED BY THE MECHANICAL CONTRACTOR ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
7. SLOPE ALL GREASE EXHAUST DUCT BACK TO HOOD AT 1/4" PER FOOT OF RUN.
8. WRAP NEW GREASE DUCT WITH UNIFRAX FYREWRAP. INSULATION ON ACCESS DOORS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION RECOMMENDATIONS. UNIFRAX FYREWRAP PRODUCT USED SHALL MEET LOCAL CODE REQUIREMENTS.
9. SUPPORT ALL HOODS WITH THREADED ROD AT EACH FACTORY SUPPORT POINT. EACH SUPPORT POINT MUST SUPPORT THE HOOD WEIGHT EQUALLY. ATTACH TO STRUCTURE AS DETAILED ON STRUCTURAL DRAWINGS. ATTACH HOOD TO WALL AT 16" INTERVALS ALONG FULL LENGTH OF HOOD ON TOP AND BOTTOM. ATTACHMENT TO WALL REQUIRES FIELD DRILLING OF SUPPORT ANGLE AT BACK OF HOODS. EACH WALL ATTACHMENT POINT MUST OCCUR AT A WALL STUD. ATTACHMENT HARDWARE TO BE #12-24 HEX HEAD SHEET METAL SCREW EQUAL TO TEXTRON SDS EDT265, LENGTH AS REQUIRED TO FULLY PENETRATE THE STUD.

SET LEFT SIDE OF HOOD#3 FLUSH WITH FINISHED EDGE OF PASS THRU OPENING.

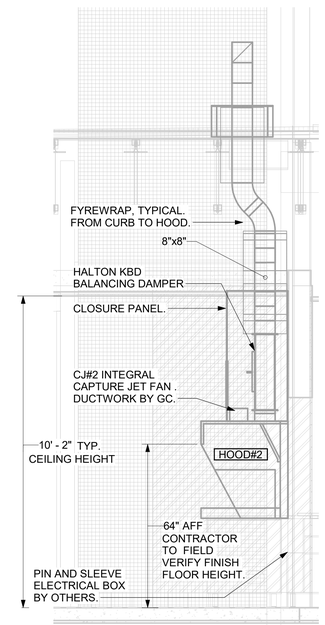


7 HOOD ELEVATION - HOOD#3
NOT TO SCALE

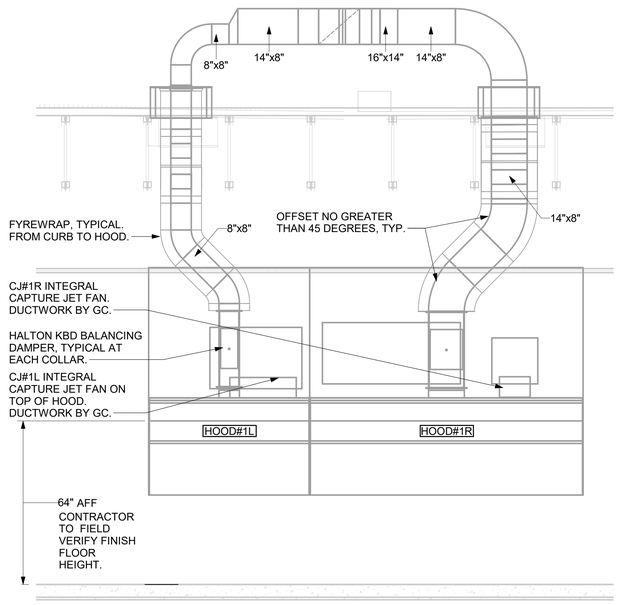


6 HOOD ELEVATION - HOOD#2 - FRONT
NOT TO SCALE

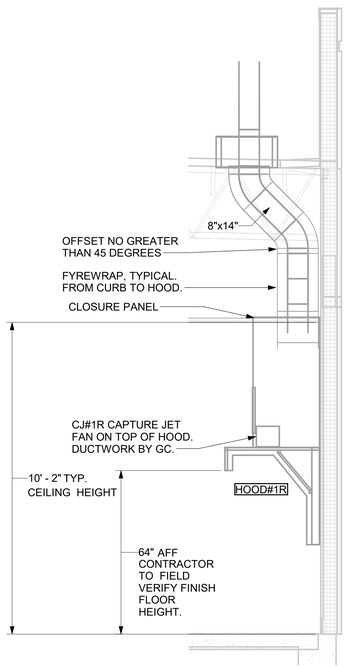
SET RIGHT SIDE OF HOOD#2 FLUSH WITH FINISHED EDGE OF PASS THRU OPENING.



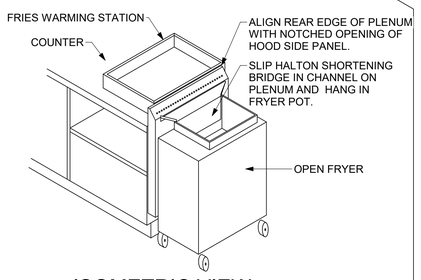
5 HOOD ELEVATION - HOOD#2 - SIDE
NOT TO SCALE



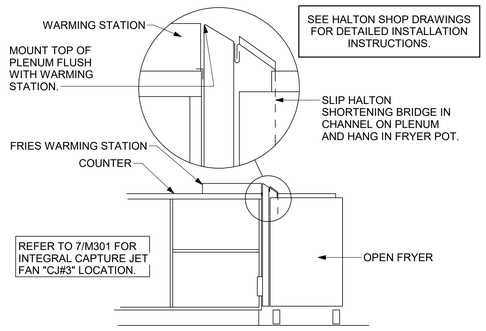
4 HOOD ELEVATION - HOOD#1 - FRONT
NONE



3 HOOD ELEVATION - HOOD#1 - SIDE
NOT TO SCALE



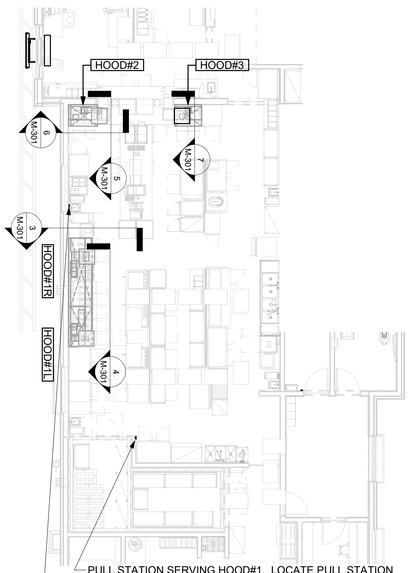
ISOMETRIC VIEW



FRONT VIEW

2 HALTON SIDE CAPTURE JET PLENUM
NOT TO SCALE

NOTE:
SEE ARCHITECTURAL PLANS FOR HOOD LOCATIONS.



1 HOOD LAYOUT
1/8" = 1'-0"

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

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186 WOOD AVE. SOUTH, 1ST FLOOR
ISELIN, NJ 08830
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ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR LRG
RELEASE: 22.08
PRINTED FOR
ISSUED FOR BID 10/04/2022

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY MM

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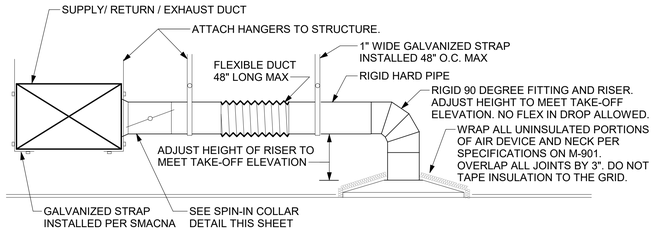
SHEET
HOOD DETAILS AND SCHEDULES

SHEET NUMBER
M-301

9/27/2022 9:48:27 AM Autodesk Docs://NY_04937_Levittown_2021.4_FSR/04937_Levittown_MEC.rvt
30-LSR-04937-M-301-HOOD DETAILS AND SCHEDULES

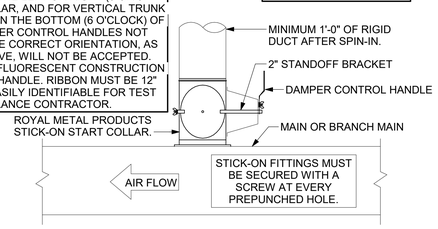


1 SAG/RAG/GRILLE TAKE-OFF
NOT TO SCALE

CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE ROYAL METAL PRODUCTS START COLLARS FOR BOTH WITH AND WITHOUT A MANUAL BALANCING DAMPER. THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE ROYAL METAL PRODUCTS START COLLARS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. ROYAL METAL PRODUCTS START COLLARS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

DAMPER CONTROL HANDLE MUST BE EXPOSED, AND DAMPER SHAFT MUST ALWAYS BE PARALLEL TO AIRFLOW IN DUCT MAIN. AS AN EXAMPLE, FOR HORIZONTAL TRUNK DUCT, HANDLE MUST BE LOCATED ON THE LEFT OR RIGHT (9 OR 3 O'CLOCK) OF COLLAR, AND FOR VERTICAL TRUNK DUCT, LOCATED ON THE BOTTOM (6 O'CLOCK) OF COLLAR. DAMPER CONTROL HANDLES NOT INSTALLED IN THE CORRECT ORIENTATION, AS SPECIFIED ABOVE, WILL NOT BE ACCEPTED. ATTACH YELLOW FLUORESCENT CONSTRUCTION RIBBON TO THE HANDLE. RIBBON MUST BE 12" LONG AND BE EASILY IDENTIFIABLE FOR TEST AND BALANCE CONTRACTOR.

DO NOT APPLY START COLLAR OVER DUCT WRAP

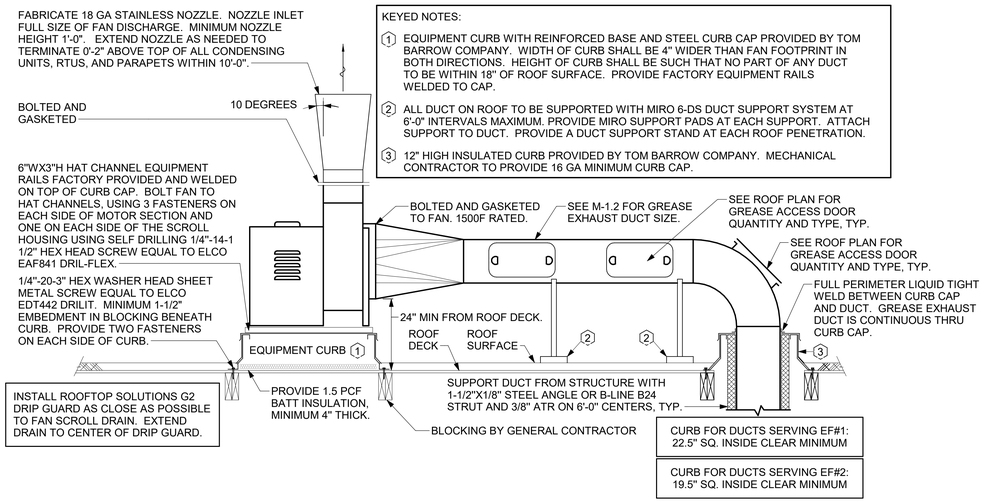


2 START COLLAR
NOT TO SCALE

ALL DUCTWORK AND UNFINISHED METAL ON ROOF EXCEPT STAINLESS SHALL BE PREPARED WITH TWO COATS OF SHERWIN WILLIAMS B66-200 SERIES DTM WHITE ACRYLIC SEMI-GLOSS INDUSTRIAL MAINTENANCE COATING. DEGREASE AND PRIME BARE METAL SURFACE WITH ONE COAT OF SHERWIN WILLIAMS DTM ACRYLIC PRIMER PRIOR TO PAINTING.

KEYED NOTES:

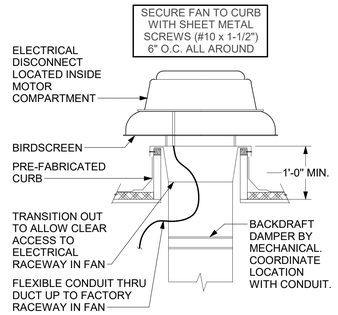
1. EQUIPMENT CURB WITH REINFORCED BASE AND STEEL CURB CAP PROVIDED BY TOM BARROW COMPANY. WIDTH OF CURB SHALL BE 4" WIDER THAN FAN FOOTPRINT IN BOTH DIRECTIONS. HEIGHT OF CURB SHALL BE SUCH THAT NO PART OF ANY DUCT TO BE WITHIN 18" OF ROOF SURFACE. PROVIDE FACTORY EQUIPMENT RAILS WELDED TO CAP.
2. ALL DUCT ON ROOF TO BE SUPPORTED WITH MIRO 6-DS DUCT SUPPORT SYSTEM AT 6'-0" INTERVALS MAXIMUM. PROVIDE MIRO SUPPORT PADS AT EACH SUPPORT. ATTACH SUPPORT TO DUCT. PROVIDE A DUCT SUPPORT STAND AT EACH ROOF PENETRATION.
3. 12" HIGH INSULATED CURB PROVIDED BY TOM BARROW COMPANY. MECHANICAL CONTRACTOR TO PROVIDE 16 GA MINIMUM CURB CAP.



CURB FOR DUCTS SERVING EF#1: 22.5" SQ. INSIDE CLEAR MINIMUM

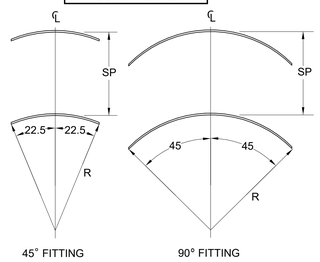
CURB FOR DUCTS SERVING EF#2: 19.5" SQ. INSIDE CLEAR MINIMUM

3 KITCHEN HOOD EXHAUST FANS
NOT TO SCALE

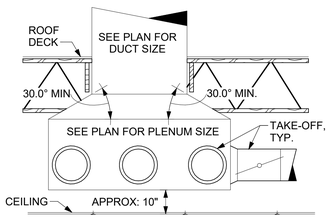


4 RESTROOM EXHAUST FAN
NOT TO SCALE

TURNING VANE SCHEDULE		
R	SP	GA
2"	1.5"	24
1. NO TRAILING EDGE. 2. SINGLE THICKNESS CONSTRUCTION.		



5 TURNING VANES
NOT TO SCALE



6 RETURN DROP GEOMETRY
NOT TO SCALE

EXHAUST FAN SCHEDULE NEW

MARK	FAN CFM	ESP	RPM	TIP SPEED	HP	AREA SERVED	VOLTAGE	PHASE	MOCP	MODEL	MANUFACTURER	REMARKS
EF#1	1,913 CFM	0.75 in-wg	1,331 RPM	5,226 FPM	0.75 hp	HOOD#1	120 V	1	25 A	150 CPS	LOREN COOK	1,2,3,4,5,6,7,8,9,10,11,17
EF#2	1,402 CFM	0.95 in-wg	1,199 RPM	4,708 FPM	0.75 hp	HOOD#2 & HOOD#3	120 V	1	25 A	150 CPS	LOREN COOK	1,2,3,4,5,6,7,8,9,10,11,17
EF#3	375 CFM	0.375 in-wg	1,550 RPM	3,658 FPM	0.125 hp	RESTROOMS	120 V	1	20 A	ACED-90C15DH	LOREN COOK	3,11,12,13,14,15,16

NOTES
- GREASE EXHAUST FAN RPM BASED ON 80 DEGREE F AIR AT 1000 FEET ABOVE SEA LEVEL.
- GREASE EXHAUST FANS TO BE U.L. 762 LISTED.
- CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE FAN/CURB PACKAGE. THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE FAN/CURB PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS AND CURBS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

REMARKS
1. UPBLAST, ARRANGEMENT 10, CCW ROTATION. SEE PLANS TO CONFIRM CONFIGURATION.
2. PROVIDE FACTORY ALUMINUM FAN WHEEL.
3. PROVIDE FACTORY INSTALLED PREWIRED NON-FUSED DISCONNECT.
4. PROVIDE FACTORY STEEL INLET FLANGE AND INLET COMPANION FLANGE.
5. PROVIDE AND INSTALL ROOFTOP SOLUTIONS G2 DRIP GUARD. MECHANICAL CONTRACTOR TO CONTACT ROOFTOP SOLUTIONS AT 800-913-7034.
6. PROVIDE FACTORY WEATHER HOUSING W/ HINGED ACCESS DOOR.
7. PROVIDE FACTORY DRAIN CONNECTION.
8. PROVIDE FACTORY BOLTED ACCESS DOOR ON SCROLL.
9. PROVIDE FACTORY INSTALLED BELT DRIVE WITH ADJUSTABLE MOTOR SHEAVE AND SPARE BELT..
10. PROVIDE FACTORY STEEL OUTLET COMPANION FLANGE.
11. INTEGRAL THERMAL OVERLOAD WITH AUTOMATIC RESET.
12. PROVIDE BIRDSCREEN.
13. BACKDRAFT DAMPER IN DUCT BY MECHANICAL CONTRACTOR AS SHOWN ON 4/M401.
14. STARTER BY ELECTRICAL CONTRACTOR. INTERLOCK WITH LIGHTS BY ELECTRICAL CONTRACTOR.
15. PROVIDE 12" HIGH CURB.
16. PROVIDE FACTORY INSTALLED AND WIRED SPEED CONTROLLER.
17. UTILITY SET FAN CURB AND ASSOCIATED EXHAUST DUCT CURB PROVIDED BY TOM BARROW COMPANY.

AIR DOOR SCHEDULE

MARK	CFM	VELOCITY	HEATING CAP	HP	AREA SERVED	MODEL	MANUFACTURER	REMARKS
AD#1	1,765 CFM	2,670 FPM	10 kW	3/4 HP	DRIVE THRU	CHA-1-48E	Powered Aire	1,2,3,5
AD#2	1,197 CFM	2,443 FPM	10kW	3/4 HP	DRIVE-THRU	CHA-1-36E	Powered Aire	1,2,3
AD#3	3,867 CFM	4,218 FPM	N/A	3/4 HP	REAR DOOR	RBT-1-48	Powered Aire	4

NOTES
- CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE AIR DOORS. THE MECHANICAL CONTRACTOR SHALL PURCHASE THE AIR DOORS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010, FOR PRICING AND AVAILABILITY. AIR DOORS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

REMARKS
1. FACTORY PROVIDED, WIRED, AND UNIT MOUNTED SPEED CONTROLLER LOCATED ABOVE CEILING.
2. FACTORY WIRED DISCONNECT.
3. FACTORY PROVIDED, FIELD INSTALLED BY MC, REMOTE WALL SWITCHES FOR EHATNG ON/OFF AND FAN ON/AUTO SWITCH. SEE DETAIL, AIR CURTAIN WIRING DIAGRAM.
4. FACTORY PROVIDED MAGNETIC DOOR CONTACT WITH FACTORY INSTALLED LOW VOLTAGE CONTROLS LOCATED IN AIR DOOR CABINET.
5. PROVIDE WITH A DIVERTER BOX. PROVIDE WITH MOUNTING BRACKETS PER MANUFACTURER'S RECOMMENDATIONS. INSTALL 4" FROM THE WALL.

AIR DEVICE SCHEDULE

MARK	DESCRIPTION	LOCATION	NECK SIZE	FACE SIZE	FRAME TYPE	REMARKS
A	PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS.	DINING/ KITCHEN	VARIES	24"x24"	LAY-IN	1,7
B	VARITHERM PLAQUE DIFFUSER	OFFICE	8"	24"x24"	LAY-IN	1,7,8
C	PRICE MODEL SMCD STEEL SUPPLY AIR DIFFUSER FIELD ADJUSTABLE AIR PATTERN CONTROLLERS.	ENTRY	14"x14"	19"x19"	BEVELLED	1,3,5,6
D	PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS.	DINING/ KITCHEN	VARIES	16"x16"	SURFACE	1,3,5,6
F	PRICE MODEL 80 EGGCRATE RETURN AIR GRILLE WITH REMOVABLE WHITE CORE, FACTORY FLAT BLACK BACKPAN AND ROUND NECK.	DINING/ OFFICE/ KITCHEN	VARIES	24"x24"	LAY-IN	1,7
J	PRICE MODEL SMCD STEEL SUPPLY AIR DIFFUSER FIELD ADJUSTABLE AIR PATTERN CONTROLLERS.	RESTROOMS	10"x10"	15"x15"	BEVELLED	1,2,3,5,6
K	PRICE MODEL APDDR ALUMINUM PERFORATED FACE RETURN AIR GRILLE.	RESTROOMS/ ENTRY	14"x14"	16"x16"	SURFACE	1,4,5,6

NOTES
- CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE AIR DEVICES. THE MECHANICAL CONTRACTOR SHALL PURCHASE THE AIR DEVICES DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010, FOR PRICING AND AVAILABILITY. AIR DEVICES NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

REMARKS
1. STANDARD OFF WHITE FINISH.
2. PROVIDE MODEL VCS3 NECK DAMPER.
3. SEE DRAWING M-201 FOR THROW.
4. PROVIDE MODEL VCR7 NECK DAMPER ON GRILLES IN RESTROOMS SERVING EXHAUST FAN.
5. PROVIDE BACKPAN. MC TO SEAL JOINTS WITH MASTIC AND INSULATE EXTERNALLY.
6. FIELD INSULATE BACKPAN AS SHOWN ON DETAIL 1/M-401.
7. FACTORY INSULATED R-6 BACKPAN.
8. PROVIDE RELIEF COLLAR ACCESSORY FOR VAV DIFFUSER.

RECIRCULATING FAN SCHEDULE

Mark	Fan CFM	Fan ESP	Fan RPM	Fan HP	Area Served	Model	Manufacturer	Fan Remarks
RF-1	450 CFM	0.3 in-wg	1144	58 W	TECH CLOSET	GCVF-700	LOREN COOK	1,2,3

NOTES
- CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE FANS PACKAGE. THE MECHANICAL CONTRACTOR SHALL PURCHASE THE FANS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010, FOR PRICING AND AVAILABILITY. FANS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

REMARKS
1. PROVIDE NEMA 1 PREWIRED DISCONNECT.
2. INTEGRAL POTENTIOMETER ON FAN MOTOR. SET TO FULL SPEED.
3. PROVIDE THERMOSTAT / TEMPERATURE CONTROLLER. SET TO 76°F.

GAS FIRED INFRARED HEATER SCHEDULE

MARK	INPUT (MBH)	FRAME LENGTH	FRAME WIDTH	FRAME DEPTH	MOUNTING TYPE	MODEL	MANUFACTURER
GIH	50	48-1/4"	13"	10"	Bracket	2352-NG	Schwank

NOTES
- CONFIRM HEATER QUANTITY WITH CANOPY SHOP DRAWINGS.
- CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE GAS FIRED INFRARED HEATERS. THE MECHANICAL CONTRACTOR SHALL PURCHASE THE HEATER PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010, FOR PRICING AND AVAILABILITY. HEATERS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

REMARKS
1. STEEL BURNER WITH CERAMIC BURNER TILES.
2. STAINLESS STEEL LENS WITH BLACK EMISSIVE COATING.
3. PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. MOUNT TO CANOPY DECK, FACING FORWARD, 12" LATERALLY FROM THE LONG SIDE OF THE HEATER.
4. STAINLESS STEEL HEAT SHIELDS PROVIDED BY TOM BARROW COMPANY.

ELECTRIC HEATER SCHEDULE

MARK	KW	FRAME LENGTH	FRAME WIDTH	FRAME DEPTH	MOUNTING TYPE	MODEL	MANUFACTURER
EIH#1	6.0	56"	8.5"	3.5"	BRACKET	BH0420035	Bromic

NOTES
- CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH BROMIC HEATING USA FOR THE ELECTRIC HEATER PACKAGE. THE MECHANICAL CONTRACTOR SHALL PURCHASE HEATERS DIRECTLY FROM BROMIC HEATING USA. CONTACT MR. BLAKE RUSSIE AT 858-381-4850 FOR PRICING AND AVAILABILITY. BROMIC HEATERS NOT PURCHASED THRU BROMIC HEATING USA WILL NOT BE ACCEPTED.

REMARKS
1. STAINLESS STEEL LENS WITH BLACK EMISSIVE COATING.
2. PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND.
3. PROVIDE BLACK HEATER WITH HIGH TEMPERATURE COATING, AND MANUFACTURER MOUNTING BRACKETS.

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

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3859 Hempstead Turnpike
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NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY MM

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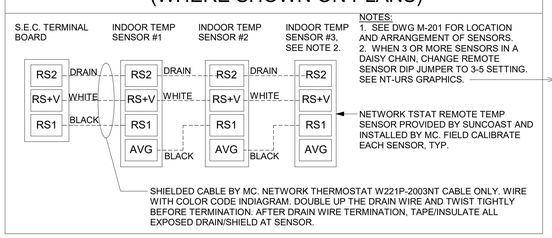
SHEET
HVAC DETAILS AND SCHEDULES

SHEET NUMBER
M-401

9/27/2022 9:48:29 AM Autodesk Docs://NY_04937_Levittown_2021.4_FSR/04937_Levittown_MEC.rvt
30-LSR-04937-M-401-HVAC DETAILS AND SCHEDULES

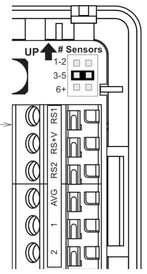
AC#3 AVERAGING SENSORS (WHERE SHOWN ON PLANS)



NOTES:
1. SEE DWG M-201 FOR LOCATION AND ARRANGEMENT OF SENSORS.
2. WHEN 3 OR MORE SENSORS IN A DAISY CHAIN, CHANGE REMOTE SENSOR DIP JUMPER TO 3-5 SETTING. SEE NT-URS GRAPHICS.

NETWORK TSTAT REMOTE TEMP SENSOR PROVIDED BY SUNCOAST AND INSTALLED BY MC. FIELD CALIBRATE EACH SENSOR, TYP.

SHIELDED CABLE BY MC. NETWORK THERMOSTAT W221P-2003NT CABLE ONLY. WIRE WITH COLOR CODE INDIAGRAM. DOUBLE UP THE DRAIN WIRE AND TWIST TIGHTLY BEFORE TERMINATION. AFTER DRAIN WIRE TERMINATION, TAPE/INSULATE ALL EXPOSED DRAIN/SHIELD AT SENSOR.



NT-URS GRAPHICS

NOTES:

1. MECHANICAL CONTRACTOR SHALL MAKE PLASTIC LAMINATE OF THIS DETAIL AND INSTALL PERMANENTLY ON INSIDE DOOR OF ROOFTOP UNIT CONTROL COMPARTMENT.
2. SEE DETAILS THIS SHEET FOR SMOKE DETECTOR AND ANNUNCIATOR WIRING.
3. SET ALL THERMOSTATS FOR AUTO CHANGEOVER.
4. PROVIDE PLAIC ENGRAVLABEL AT ALL NEW SENSORS WITH 1/4" HIGH WHITE LETTERING ON BLACK BACKGROUND, I.E. "AC#2 HUNIDITY SENSOR" OR "AC#2 TEMP SENSOR". PLACE LABELS ON WALL ADJACENT TO DEVICE, DO NOT APPLY DIRECTLY TO DEVICE.

PROVIDE A PROFESSIONAL LAMINATED COPY OF THESE DETAILS TO BE INSTALLED INSIDE THE ROOFTOP UNIT CONTROL CABINET. USE A SETON CHART FRAME STYLE #68624, TELEPHONE NUMBER 800-243-6624. FOR MOUNTING THE DETAIL. ATTACHED THE FRAME TO THE INTERIOR OF THE UNIT IN PLAIN AND EASY VIEW OF THE CONTROLS SECTION. CONTACT ENGINEER OF RECORD FOR A REPRODUCIBLE COPY OF THE DETAIL.

KEYED NOTES:

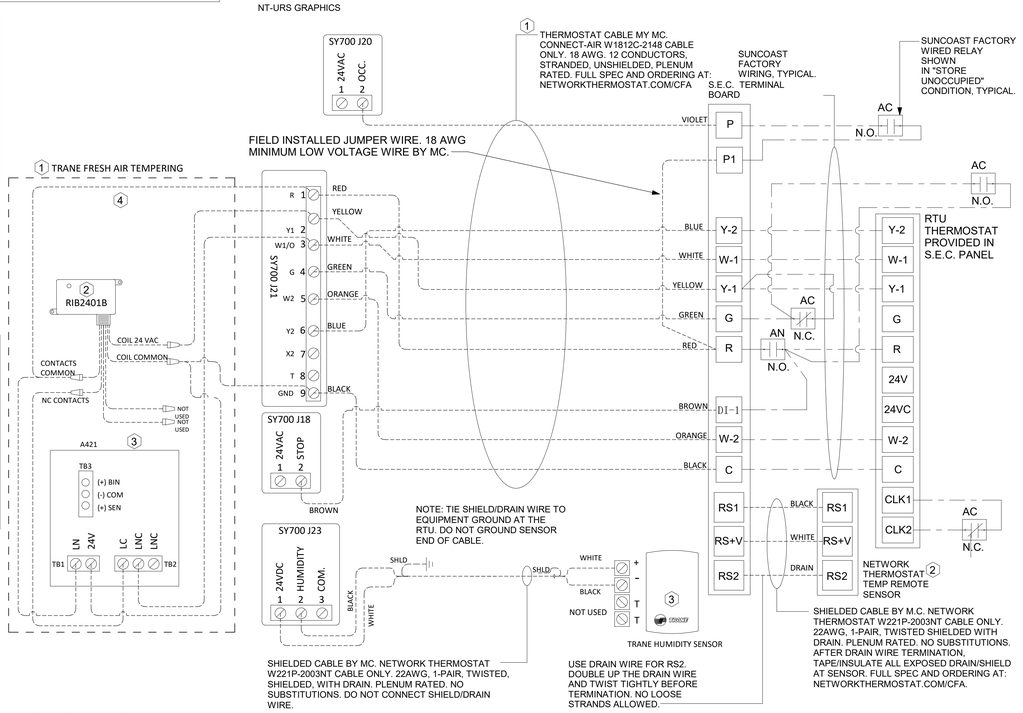
1. LOW VOLTAGE WIRING TO RTU TO BE ROUTED TO UNIT THRU FACTORY WIREWAY. LEAVE 4FT SERVICE LOOP AT RTU FOR TERMINATION AND FUTURE CONTROLS. DO NOT CUT OFF EXTRA CONDUCTORS.
2. NETWORK TSTAT REMOTE TEMP SENSOR PROVIDED BY SUNCOAST AND INSTALLED BY MC. SENSOR IS INTENDED TO BE SURFACE MOUNTED AND DOES NOT REQUIRE A SINGLE GANG BOX OR CONDUIT. FIELD CALIBRATE EACH SENSOR. SEAL CABLE PENETRATION AT ALL WALL LOCATIONS.
3. THE RH SETPOINT IS ESTABLISHED BY ADJUSTING THE R41 POTENTIOMETER (LABELED "DEHUMID SP") ON THE RTOM MODULE. SET TO 60%.

LEGEND

S.E.C.	SUNCOAST ENVIRONMENTAL CONTROLS (SUPPLIER OF TEMP/FAN CONTROL PANEL) LOCATED IN THE KITCHEN
(1)	KEY NOTE REFERENCE
MC	MECHANICAL CONTRACTOR
(AC)	SUNCOAST RELAY FACTORY INSTALLED AND WIRED IN CFA-500 PANEL, ENERGIZED BY PUTTING STORE SWITCH IN "STORE OCCUPIED" POSITION
(AN)	SUNCOAST RELAY FACTORY INSTALLED AND WIRED N CFA -500 PANEL, DENERGIZED WHEN ANSUL FIRE SUPPRESSION SYSTEM IS ACTIVATED, AS NOTED.
----------	ALL LOW VOLTAGE CABLING BY MC. ONLY USE CABLE SPECIFIED. NO SUBSTITUTIONS.
— — — —	LOW VOLTAGE WIRING BY S.E.C.
————	LINE VOLTAGE BY ELECTRICIAN OR S.E.C.

FRESH AIR TEMPERING KEYED NOTES:

1. INSTALL FRESH AIR TEMPERING KIT AS RECOMMENDED BY TRANE.
2. RIB2401B SPDT RELAY PROVIDED BY TRANE AND INSTALLED BY CONTRACTOR IN CONTROL CABINET OF TRANE UNIT.
3. JCI A421 TEMPERATURE CONTROLLER PROVIDED BY TRANE AND INSTALLED BY CONTRACTOR. DIN-MOUNTED IN THE RTU CONTROL CABINET. SET TO 58F. LOCATE TRANE PROVIDED A99 SENSOR IN THE SUPPLY DUCT DOWNSTREAM OF FIRST ELBOW. SECURE WIRING TO DUCT WITH TE6001-1 SENSOR DUCT MOUNTING PLATE PROVIDED BY TRANE; DO NOT RUN WIRING INSIDE DUCTWORK.
4. 18 AWG MIN. LOW VOLTAGE WIRING BY MC.



1 ROOFTOP UNIT CONTROL WIRING - TRANE
NOT TO SCALE

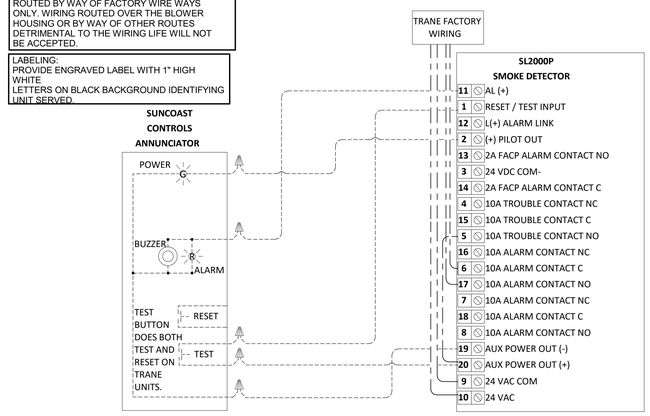
LEGEND

- 18 AWG MIN WIRING BY MECH CONTRACTOR
- FACTORY ANNUNCIATOR DETECTOR WIRING
- FACTORY TRANE WIRING

SUPPLY SIDE DETECTORS:
IF SUPPLY SIDE SMOKE DETECTORS ARE SHOWN ON DWG M-201, AND CALLED FOR ON RTU SCHEDULE, THE CONTRACTOR IS TO RELOCATE FACTORY INSTALLED SUPPLY SMOKE DETECTOR FROM BLOWER SECTION TO DUCTWORK. SEE NOTES ON DWG M-201.

FIELD INSTALLED WIRING:
WITHIN THE ROOFTOP UNITS, WIRING SHALL BE ROUTED BY WAY OF FACTORY WIRE WAYS ONLY. WIRING ROUTED OVER THE BLOWER HOUSING OR BY WAY OF OTHER ROUTES DETRIMENTAL TO THE WIRING LIFE WILL NOT BE ACCEPTED.

LABELING:
PROVIDE ENGRAVED LABEL WITH 1" HIGH WHITE LETTERS ON BLACK BACKGROUND IDENTIFYING UNIT SERVED.



2 SMOKE DETECTOR AND ANNUNCIATOR WIRING DIAGRAM - LARGE
NOT TO SCALE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

KEA ENGINEERS
Engineering Excellence since 1984
KEA ENGINEERS
186 WOOD AVE. SOUTH, 1ST FLOOR
ISELIN, NJ 08830
TEL: (732) 635 0044 • FAX: (732) 635 1777
NY STATE CERTIFICATE OF AUTHORIZATION #0019115

ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

CHICK-FIL-A
Levittown
3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR LRG
RELEASE: 22.08
PRINTED FOR
ISSUED FOR BID 10/04/2022

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY MM

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SHEET
HVAC CONTROLS

SHEET NUMBER
M-501

9/27/2022 9:48:30 AM Autodesk Docs://NY_04937_Levittown_2021.4_FSR04937_Levittown_MEC.rvt
30-LSR-04937-M-501-HVAC CONTROLS

1. SECTION C15000 - MECHANICAL SPECIFICATIONS

PART I - GENERAL

1.01 SCOPE

A. IT IS THE RESPONSIBILITY OF CONTRACTOR TO READ ALL SPECIFICATIONS AND CONSULT ALL DRAWINGS WHICH MAY AFFECT THE INSTALLATION AND COORDINATION OF HIS WORK WITH OTHER TRADES. CONTRACTOR SHALL COORDINATE AND MAKE MINOR ADJUSTMENTS IN LOCATION OF EQUIPMENT AND MATERIALS AS NECESSARY TO SECURE COORDINATION.

B. COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES, INCLUDING BUT NOT LIMITED TO THE LATEST APPROVED EDITIONS OF NFPA-96, NFPA-90A, NFPA-54, SMACNA, ASHRAE 90.1 AND ASHRAE 62.

C. SYSTEM LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY STRUCTURAL CONDITIONS, COORDINATION WITH OTHER TRADES, COORDINATION WITH FINISHES AND OTHER CONDITIONS. STRUCTURAL SUPPORTS SHALL NOT BE CUT OR ALTERED TO ASSURE FIT OF HVAC SYSTEM. TEN FOOT CLEARANCE SHALL BE MAINTAINED BETWEEN OUTSIDE AIR INTAKES AND EXHAUST FANS AND PLUMBING VENT TERMINALS.

D. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER FINAL PAYMENT IS APPROVED. CONTRACTOR SHALL HONOR FACTORY WARRANTIES ON ALL EQUIPMENT PROVIDED AS PART OF THIS SYSTEM.

E. UPON COMPLETION OF PROJECT, ALL SYSTEM EQUIPMENT AND MATERIALS SHALL BE IN NEW, CLEAN CONDITION WITH ALL DAMAGE RESTORED TO CONDITION ACCEPTABLE TO THE OWNERS REPRESENTATIVE. ALL EQUIPMENT, COMPONENTS, DUCTWORK AND AIR DEVICES SHALL BE INSPECTED AND THOROUGHLY CLEANED, CLEARED OF DEBRIS, AND READY FOR USE. AT COMPLETION OF JOB, ALL MISCELLANEOUS TOOLS, SCAFFOLDING, SURPLUS MATERIALS, RUBBISH AND DEBRIS SHALL BE REMOVED BY CONTRACTOR.

F. CONTRACTOR SHALL PROVIDE TWO SETS OF 2" MERV 8 OR HIGHER THROW AWAY TYPE FILTERS. A CLEAN SET SHALL BE PROVIDED PRIOR TO TEST AND BALANCE AND AGAIN PRIOR TO OPENING.

PART II - PRODUCTS

2.01 HEATING AND COOLING EQUIPMENT (C15730)

A. FURNISH AND INSTALL R-410A ROOFTOP SINGLE PACKAGE COMBINATION ELECTRIC COOLING AND NATURAL GAS FIRED HEATING UNITS BY LENNOX AS SHOWN ON DRAWINGS. EQUIPMENT SHALL BE ARI CERTIFIED AND A.G.A. AND U.L. LISTED.

B. ACCESSORIES SHALL INCLUDE LOW AND HIGH PRESSURE SAFETIES, CRANK CASE HEATER, OVERCURRENT AND OVERTEMPERATURE SAFETY, COMPRESSOR VIBRATION ISOLATORS, FILTER DRIERS, REFRIGERANT SERVICE VALVES, COIL HAIL GUARDS WHERE SCHEDULED, CONVENIENCE OUTLETS FACTORY INSTALLED ON SCHEDULED UNITS, UNIT MOUNTED NON-FUSED DISCONNECTS, LOW AMBIENT OPERATION DOWN TO 30 DEGREES F AND EVAPORATOR FREEZE STAT.

C. COMPRESSORS SHALL BE FULLY HERMETIC SCROLL TYPE WITH INTERNAL VIBRATION ISOLATORS. COMPRESSORS SHALL BE PROVIDED WITH A MINIMUM FIVE (5) YEAR FULL WARRANTY.

D. THE UNIT HEAT EXCHANGERS SHALL BE STEEL WITH ALUMINIZED STEEL COATING. HEATING CONTROLS SHALL CONSIST OF REDUNDANT GAS VALVES, INTERMITTENT PILOT WITH ELECTRONIC SPARK OR HOT PLATE IGNITION SYSTEM, COMBUSTION/EXHAUST FAN PROTECTED BY CENTRIFUGAL SWITCHES, HEAT LIMIT SWITCHES, TIME-DELAY RELAY, FLAME, AND PILOT SENSORS. ALL UNITS SHALL BE CAPABLE OF TWO STAGES OF HEAT. HEAT EXCHANGES SHALL HAVE A TEN (10) YEAR WARRANTY. BURNERS SHALL BE ALUMINIZED IN-SHOT TYPE. THE DRAFT MOTOR SHALL BE MONITORED BY THE CONTROL SYSTEM.

E. CHICK-FIL-A MAINTAINS A NATIONAL ACCOUNT FOR EQUIPMENT WITH LENNOX CORPORATION. PRICING FOR THE EQUIPMENT HAS BEEN ESTABLISHED IN ADVANCE. CONTACT LENNOX NATIONAL ACCOUNTS AT 972-497-6260 (OR BY FAX AT 972-497-5112) FOR PRICING, ORDERING AND AVAILABILITY.

NATIONAL ACCOUNTS

1. LENNOX EQUIPMENT - CONTACT LENNOX NATIONAL ACCOUNTS AT 972-497-6260 (OR BY FAX AT 972-497-5112) FOR PRICING, ORDERING AND AVAILABILITY. LENNOX EQUIPMENT NOT PURCHASED THRU LENNOX NATIONAL ACCOUNTS WILL NOT BE ACCEPTED.
2. LOREN COOK FAN AND CURB PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE FAN/CURB PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS AND CURBS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
3. PRICE AIR DEVICES - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE AIR DEVICES DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. AIR DEVICES NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
4. AIR DOORS - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE AIR DOORS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. AIR DOORS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
5. SUNCOAST ENVIRONMENTAL CONTROLS - THE CFA 500 PANEL AND THE TEST/RESET STATIONS WILL BE PURCHASED AND PROVIDED BY THE ELECTRICAL CONTRACTOR AS A PART OF A NATIONAL ACCOUNT PACKAGE. SEE PART II PARAGRAPH 3A, 3D, AND 3E OF THE MECHANICAL SPECIFICATIONS FOR MORE INFORMATION.
6. HALTON HOODS - CHICK-FIL-A WILL PURCHASE AND PROVIDE THE HOODS FOR INSTALLATION BY THE MECHANICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RECEIVING THE HOODS. CONTACT HALTON CO. AT 270-237-5600 FOR MORE INFO.
7. ROYAL METAL PRODUCTS START COLLARS - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE START COLLARS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. START COLLARS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
8. SCHWANK INFRARED HEATER PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE HEATER PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. HEATERS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
9. BROMIC ELECTRIC HEATER - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE HEATER DIRECTLY FROM BROMIC HEATING USA. CONTACT MR. BLAKE RUSSIE AT 858-381-4850 FOR PRICING AND AVAILABILITY. HEATERS NOT PURCHASED THRU BROMIC HEATING USA WILL NOT BE ACCEPTED.
10. TRANE EQUIPMENT - CONTACT MR. SCOTT ROWLEY AT 630-200-7155 FOR PRICING, ORDERING AND AVAILABILITY. TRANE EQUIPMENT NOT PURCHASED THRU TRANE NATIONAL ACCOUNTS WILL NOT BE ACCEPTED.

2.02 DUCTWORK (C15735) (SEE DWG M-301 FOR ADDITIONAL GREASE DUCT SYSTEM REQ.)

A. ACCEPTABLE MANUFACTURERS OF INSULATION ARE MANVILLE, OWENS CORNING OR KNAUF.

B. ALL DUCTWORK SHALL BE SHEET METAL, UNLESS NOTED OTHERWISE (U.N.O.).

C. DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS, U.N.O.

D. CONSTRUCTION OF DUCTWORK SHALL MEET SMACNA 1" W.C. PRESSURE CLASS STANDARD AND RECOMMENDATIONS. SMACNA SHALL BE FOLLOWED WITH RESPECT TO GAGE THICKNESS, JOINTS, REINFORCING, CONSTRUCTION, INSTALLATION AND SUPPORT FOR PRESSURE CLASS STATED. ALL TRANSVERSE JOINTS IN RECTANGULAR AND ROUND DUCT INCLUDING DUCT CONNECTION TO AIR DEVICE COLLAR SHALL BE SEALED PER SMACNA SEAL CLASS C WITH U.L. DUCT MASTIC SEALANT APPROVED FOR INTENDED USE. DUCT TAPE IS NOT AN ACCEPTABLE SUBSTITUTE FOR MASTIC UNLESS EQUAL TO HARDCAST FOIL-GRIP 1402 BUTYL RUBBER ADHESIVE TAPE.

E. DUCT SHALL BE SUPPORTED AT BASE OF DUCT DROPS. CURB DUCT RAILS ARE NOT INTENDED TO AND SHALL NOT SUPPORT THE WEIGHT OF THE DUCT.

F. ALL DUCT INSULATION SHALL MEET MINIMUM R-VALUE REQUIRED BY ASHRAE 90.1 LATEST EDITION. ALL DUCT WRAP SHALL BE MINIMUM 2" THICK, 3/4 PCF AND 6 R-VALUE INSTALLED WITH EITHER A VAPOR BARRIER WITH MAXIMUM PERMEANCE 0.05 OR A MINIMUM 2 MIL ALUMINUM REINFORCED FOIL/KRAFT FACING.

G. ALL DUCT DROPS FROM THE ROOFTOP UNITS SHALL BE EXTERNALLY INSULATED.

H. SUPPLY AND RETURN AIR DUCTWORK SERVING ALL AREAS SHALL BE EXTERNALLY INSULATED.

I. ALL AIR CONVEYANCE COMPONENTS SUCH AS, BUT NOT LIMITED TO DUCT, DUCT PLENUMS, GRILLES/DIFFUSERS, BACK PANS, AND BOOTS SHALL BE INSULATED. INSULATION TYPE IS COVERED ELSEWHERE IN THIS SPECIFICATION.

J. RESTROOM RECTANGULAR EXHAUST AIR DUCTWORK SHALL BE LINED WITH 1" THICK, 1-1/2 PCF INSULATION. RESTROOM ROUND EXHAUST DUCT SHALL BE EXTERNALLY INSULATED PER SECTION 2.02F.

K. TRUNK DUCTS SHALL BE ISOLATED FROM UNIT VIBRATION WITH THE USE OF NFPA AND U.L. APPROVED FLEXIBLE CONNECTORS INSTALLED AT THE TOP OF BOTH SUPPLY AND RETURN DROPS.

L. INSULATED FLEXIBLE DUCT MAY BE UTILIZED FOR RUNOUTS TO GRILLES AND DIFFUSERS ONLY IN THE HORIZONTAL POSITION AND IN MAXIMUM LENGTHS OF 4'-0", NO EXCEPTIONS. SEE TAKE-OFF DETAIL ON DRAWING M-401.

M. CONSTRUCTION OF FLEXIBLE DUCTWORK SHALL INCLUDE SPIRAL METAL HELIX BONDED TO A POLYESTER CORE, FIBERGLASS INSULATION WITH POLYETHYLENE OR MYLAR VAPOR BARRIER. ALL COMPONENTS SHALL HAVE APPROPRIATE U.L. APPROVAL AND SHALL BE EQUIVALENT TO THERMAFLEX MKE.

N. FLEXIBLE DUCT SHALL BE INSTALLED PER THE "ADC FLEXIBLE DUCT PERFORMANCE AND INSTALLATION STANDARDS, 4TH ED" USING FOIL TAPE AND DRAWBAND ON THE INNER CORE AND TAPE OR DRAWBAND ON THE OUTER JACKET.

O. DUCT TAPE SHALL BE EQUAL TO FASSON 181-B FX, 2-1/2" WIDE.

P. SINGLE THICKNESS TURNING VANES SHALL BE INSTALLED AT 90 DEGREE TURNS IN SUPPLY DUCTWORK WHERE ANY ONE DIMENSION IS GREATER THAN 12".

Q. RADIUSED ELBOWS MAY BE SUBSTITUTED FOR 90 DEGREE ELBOWS AT THE DISCRETION OF THE CONTRACTOR. CENTERLINE RADIUS EQUAL TO; R=W PER FIGURE NO. 4-2 IN SMACNA HVAC DUCT CONSTRUCTION STANDARDS.

R. EXTERNAL INSULATION ON BOTTOM OF DUCTS 24" OR WIDER SHALL BE SUPPORTED WITH STICK PINS ON 18" CENTERS. STICK PIN WASHERS SHALL BE COVERED WITH DUCT TAPE OR MASTIC.

2.03 CONTROLS (C15735)

A. SYSTEMS SHALL BE COMPLETE WITH CONNECTIONS TO CFA-500 TEMPERATURE CONTROL PANEL AS MANUFACTURED BY SUNCOAST ENVIRONMENTAL CONTROLS (S.E.C.) (PH: 877-544-6679). THE PANEL IS PROVIDED AND MOUNTED BY THE ELECTRICAL CONTRACTOR. CONTROL WIRING TERMINATIONS ARE BY THE MECHANICAL CONTRACTOR.

B. THE SMOKE DETECTORS SHALL BE FACTORY INSTALLED AND WIRED BY THE ROOFTOP UNIT MANUFACTURER.

C. A FACTORY INSTALLED SMOKE DETECTOR IN THE RETURN AIR SECTION OF EACH AIR CONDITIONING UNIT SHALL STOP THE INDOOR FAN AND CLOSE THE OUTSIDE AIR DAMPER IN THE EVENT OF EXCESSIVE TEMPERATURE OR SMOKE. SMOKE DETECTOR SHALL BE LOCATED PRIOR TO ANY EXHAUST FROM THE BUILDING OR MIXING WITH FRESH AIR MAKE-UP. UPON DETECTION, THE SYSTEM SHALL NOT RESTART UNTIL THE DEVICE IS MANUALLY RESET. DEVICES SHALL BE LOCATED WHERE THEY CAN BE EASILY ACCESSED AND WHERE CLEAR OF FILTERS.

D. CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH SUNCOAST ENVIRONMENTAL CONTROLS FOR THE SMOKE DETECTOR TEST/RESET ANNUNCIATOR STATIONS. THE TEST/RESET STATIONS WILL BE PURCHASED BY THE ELECTRICAL CONTRACTOR AS A PART OF A NATIONAL ACCOUNT PACKAGE AND TURNED OVER TO THE MECHANICAL CONTRACTOR FOR INSTALLATION.

E. THE REMOTE TEST/RESET ANNUNCIATORS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. INSTALLATION BY MECHANICAL SHALL INCLUDE MOUNTING OF THE ANNUNCIATORS AND ALL WIRING FROM EACH DEVICE TO THE RTU. ELECTRICAL WILL PROVIDE A JUNCTION BOX IN THE WALL WITH 1/2" CONDUIT STUBBED UP ABOVE THE CEILING FOR EACH REMOTE TEST STATION AS SHOWN ON THE ELECTRICAL PLANS. ANNUCIATOR SHALL BE SUNCOAST CONTROLS REMOTE TEST/RESET STATION WITH POWER LED, TROUBLE LED, ALARM LED, 90DB HORN AND TEST/RESET BUTTON.

F. THE RESTROOM FAN SHALL BE INTERLOCKED TO THE LIGHTS SERVING THE MEN AND WOMEN'S RESTROOMS. THE HOOD FANS SHALL BE CONTROLLED VIA THE SUNCOAST CFA-500 CONTROL PANEL. WIRING, RELAYS AND SWITCHES FOR CONTROL OF ALL FANS ARE BY ELECTRICAL CONTRACTOR.

G. LENNOX UNITS - THERMOSTATS ARE PROVIDED AND INTEGRATED INTO THE TEMPERATURE CONTROL PANEL BY SUNCOAST ENVIRONMENT CONTROLS. SUNCOAST WILL PROVIDE A NETWORK THERMOSTAT US32-CFA THERMOSTAT PRE-WIRED IN THE TEMPERATURE CONTROL PANEL. A REMOTE TEMPERATURE SENSOR FOR EACH THERMOSTAT IS ALSO PROVIDED. MECHANICAL CONTRACTOR SHALL INSTALL ALL WIRING BETWEEN THE THERMOSTAT, THE REMOTE SENSOR AND THE ROOFTOP UNIT.

H. MECHANICAL CONTRACTOR SHALL INSTALL CONTROL WIRING IN 1/2" CONDUIT WHERE REQUIRED BY CODE. WHERE NOT REQUIRED TO BE IN CONDUIT, ALL WIRING SHALL BE RUN PARALLEL TO STRUCTURAL MEMBERS OR PERPENDICULAR WITH NO DIAGONAL ROUTING. ALL WIRING SHALL BE SECURED TO THE FRAMING TO PREVENT SAGGING IN RUNS. WIRING TO ROOFTOP UNITS SHALL BE ROUTED THROUGH THE FACTORY THRU-BASE FITTING IN THE UNIT BASE. NO SPLICING OF WIRING WILL BE ACCEPTED. ALL WIRING ABOVE THE ROOF SHALL BE INSTALLED IN EXTERIOR GRADE FLEXIBLE CONDUIT. ALL CONTROL WIRING AND CONTROL WIRING CONDUIT SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. WIRING SHALL BE INSTALLED IN ACCORDANCE WITH LATEST EDITION OF NEC. ALL LOW VOLTAGE CONTROL WIRING SHALL BE NO LESS THAN 18 AWG MIN. CONTROL WIRING CONDUCTORS SHALL BE SIZED TO ACCOUNT FOR LOAD AND LENGTH OF RUN TO ALLOW SUFFICIENT VOLTAGE AVAILABLE AT CONTROLLED DEVICE TO OPERATE THE SYSTEM RELIABLY.

PART III - EXECUTION

3.01 SCOPE

A. FURNISH AND INSTALL SYSTEM IN ACCORDANCE WITH REFERENCED STANDARDS, APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS AND AS INDICATED ON DRAWINGS.

B. CONTRACTOR SHALL INSTRUCT THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT THROUGH DEMONSTRATION AND EXPLANATION OF OPERATING & MAINTENANCE MANUALS.

C. CONTRACTOR SHALL PROVIDE A "SAMPLE MAINTENANCE PROPOSAL" TO THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT.

D. CONTRACTOR SHALL COMPLETE A/C EQUIPMENT STARTUP DOCUMENTATION PROVIDED BY OWNER AND/OR MANUFACTURER. THIS SHALL INCLUDE RE-TORQUE OF ALL FIELD AND FACTORY HIGH VOLTAGE CONNECTIONS.

3.02 LEED PROJECTS

A. CONTRACTOR SHALL COMPLETE RECEIPT INSPECTION CHECKLISTS PROVIDED IN THE COMMISSIONING PLAN WITHIN 5 DAYS OF RECEIVING EQUIPMENT ON SITE.

B. CONTRACTOR SHALL COMPLETE PRE-FUNCTIONAL CHECKLISTS PROVIDED IN THE COMMISSIONING PLAN. CHECKLISTS SHALL BE RETURNED AT LEAST 5 DAYS PRIOR TO SCHEDULING FUNCTIONAL PERFORMANCE TESTING.

C. CONTRACTOR SHALL PROVIDE A TECHNICIAN TO ASSIST THE THIRD PARTY COMMISSIONING AUTHORITY WITH FUNCTIONAL TESTING. FUNCTIONAL TESTING SHALL OCCUR AFTER ALL CONTROLS HAVE BEEN INSTALLED AND VERIFIED AND AFTER TEST AND BALANCE IS COMPLETE. THE FUNCTIONAL PERFORMANCE TEST PROCEDURES CAN BE FOUND IN THE COMMISSIONING PLAN.

D. IF THE TOTAL TIME REQUIRED TO CORRECT PROBLEMS DURING TESTING IS GREATER THAT FORTY-FIVE (45) MINUTES (UNLESS EXTENUATING CIRCUMSTANCES EXIST), THE TEST SHALL BE CONSIDERED FAILED AND MUST BE REPEATED IN ITS ENTIRETY.

E. RE-TESTING: DURING THE COURSE OF THE RETEST, IF AT ANY POINT A MAJOR DEFICIENCY IS DISCOVERED, THE TEST WILL BE STOPPED. REPEAT TESTS UNTIL ACCEPTABLE RESULTS ARE ACHIEVED. IF MORE THAN TWO FUNCTIONAL PERFORMANCE TESTS (ONE INITIAL TEST AND ONE RETEST) FOR ANY TYPE OF EQUIPMENT DUE TO ISSUES THAT THE CONTRACTOR HAD DIRECT OR INDIRECT CONTROL OVER ARE REQUIRED, THE COSTS FOR THE CXA TO WITNESS RETESTING OF SIMILAR TYPES OF EQUIPMENT UNTIL SATISFACTORY RESULTS ARE OBTAINED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

3.03 TEST & BALANCE

A. OWNER SHALL TEST AND BALANCE MECHANICAL SYSTEM IN ACCORDANCE WITH NEBB, NBC OR AABC STANDARDS TO ASSURE CONFORMANCE WITH DESIGN. G.C. WILL MAKE MECHANICAL CONTRACTOR AVAILABLE DURING TEST AND BALANCE TO ASSIST TESTING AGENCY AND TO MAKE CORRECTIONS IMMEDIATELY NECESSARY. CONTRACTOR SHALL CORRECT ITEMS ON WRITTEN TEST AND BALANCE REPORT.

B. ALL EQUIPMENT TO BE BALANCED MUST HAVE GONE THRU SUCCESSFUL START-UP PROCEDURE BY THE MECHANICAL CONTRACTOR (MC) PRIOR TO TAB VISIT.

C. THE FLOOR OF THE RESTAURANT SHALL BE CLEARED OF DEBRIS, STAGED CONSTRUCTION MATERIALS, EQUIPMENT, ETC. WHICH MAY, IN THE OPINION OF THE TAB TECHNICIAN, OBSTRUCT ACCESS TO AIR DISTRIBUTION COMPONENTS IN AND ABOVE THE CEILING.

D. EQUIPMENT ACCESS PANELS, DUCT AIR DEVICES SUCH AS BALANCING DAMPERS AND ACTUATORS SHALL BE ACCESSIBLE AND CLEAR OF PIPING, CONDUIT, FRAMING, SUPPORTS ETC...

E. PROVIDE AN 8 FT PORTABLE A-FRAME STYLE LADDER DEDICATED FOR THE TAB TECHNICIAN'S USE DURING THE ENTIRE TAB EFFORT DURATION.

F. THE MC SHALL BE AVAILABLE DURING THE ENTIRE DURATION OF THE TAB EFFORT AND HAVE ON-SITE THE RESOURCES AND TOOLS TO MAKE CORRECTIONS AS NEEDED UNDER THE DIRECTION OF THE TAB TECHNICIAN.

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

KEA ENGINEERS
Engineering Excellence since 1984
KEA ENGINEERS
186 WOOD AVE. SOUTH, 1ST FLOOR
ISELIN, NJ 08830
TEL: (732) 635 0044 • FAX: (732) 635 1777
NY STATE CERTIFICATE OF AUTHORIZATION #0019115

ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR LRG
RELEASE: 22.08
PRINTED FOR
ISSUED FOR BID 10/04/2022

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY MM

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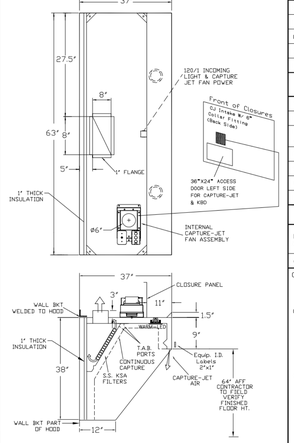
SHEET
MECHANICAL SPECIFICATIONS

SHEET NUMBER
M-901

9/27/2022 9:48:30 AM Autodesk Docs://NY_04937_Levittown_2021.4_FSR/04937_Levittown_MEC.rvt
30-LSR-04937-M-901-MECHANICAL SPECIFICATIONS

MODEL: KVL-2-IC

FACTORY MUST BE ADVISED OF ANY SPECIAL ✱ REQUIREMENTS OF THE "AUTHORITY HAVING JURISDICTION" AT TIME OF QUOTE



STANDARD FEATURES	
S.S. FILTERS (KSA)	3
1/2 S.S. FILTERS (KSA)	-
CAPTURE-JET	✱
STAND-OFF	✱
L.E.D. LIGHTS	2
OPTIONS	
REMOTE SWITCH PANEL	
FIRE PROTECTION	✱
ETL LISTED W/D EXHAUST DAMPER	✱
CEILING CLOSURE	2
STD. BACKSPLASH	
INSULATED BACKSPLASH	
KBD DAMPER	✱
MATERIAL	
EXPOSED SURFACES 18 GA. S.S.	✱
ALL 18 GA. S.S.	

COMMENTS:
CLOSURE HEIGHT = 51" (TWO SIDES)
CEILING HEIGHT = 122"
CEILING CLOSURE RECESSED 11" FROM FRONT TO CREATE SHELF

36"x24" ACCESS DOOR LEFT SIDE FOR ACCESS TO CAPTURE-JET W/ FRONT CJ INTAKE & KBD

CONTINUOUS CAPTURE INTERNAL RIGHT END CUTOUT

3" REAR STAND-OFF TO HAVE 1" THICK INSULATION

EQUIPMENT COVERED (3)PRESSURE FRYERS

HOOD WEIGHT = 394 LBS

DATE	DWG. NO.	ITEM NO.	EXHAUST AIR INFORMATION		
			CFM	T.A.B.	SP
08.09.22	U22-606-01	H-1L	709	.13"	.23"
PROJECT: CHICK-FIL-A P14 - REVERSE LSR BUILDING			CAPTURE AIR INFORMATION		
LOCATION: --			CFM		SP
SUBMITTED BY: HALTON CO.			47		.30"

4123

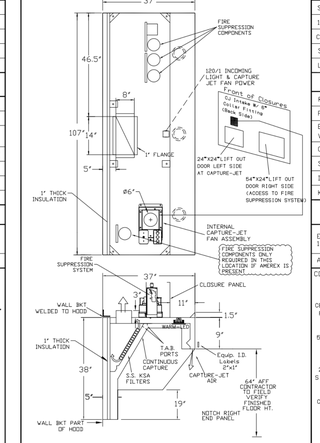
K FACTOR EQUATION: CFM = K FACTOR ✱ $\sqrt{\Delta P}$

K FACTOR = 1959

Halton

MODEL: KVL-2-IC

FACTORY MUST BE ADVISED OF ANY SPECIAL ✱ REQUIREMENTS OF THE "AUTHORITY HAVING JURISDICTION" AT TIME OF QUOTE



STANDARD FEATURES	
S.S. FILTERS (KSA)	5
1/2 S.S. FILTERS (KSA)	-
CAPTURE-JET	✱
STAND-OFF	✱
L.E.D. LIGHTS	3
OPTIONS	
REMOTE SWITCH PANEL	
FIRE PROTECTION	✱
ETL LISTED W/D EXHAUST DAMPER	✱
CEILING CLOSURE	2
STD. BACKSPLASH	
INSULATED BACKSPLASH	
KBD DAMPER	✱
MATERIAL	
EXPOSED SURFACES 18 GA. S.S.	✱
ALL 18 GA. S.S.	

COMMENTS:
CLOSURE HEIGHT = 51" (TWO SIDES)
CEILING HEIGHT = 122"
CEILING CLOSURE RECESSED 11" FROM FRONT TO CREATE SHELF

FRONT CLOSURE PANEL WITH 54"X24" LIFT OUT DOOR RIGHT SIDE (ACCESS TO FIRE SUPPRESSION)

24"X24" LIFT OUT DOOR LEFT SIDE AT CAPTURE-JET W/ FRONT CJ INTAKE

CONTINUOUS CAPTURE INTERNAL LEFT END CUTOUT

3" REAR STAND-OFF TO HAVE 1" THICK INSULATION

NOTCHED RIGHT END PANEL

EQUIPMENT COVERED (4)PRESSURE FRYERS (2)GRILLS

FIRE SUPPRESSION WEIGHT = ANSUL 63 LBS / AMEREX 264LBS
HOOD WEIGHT= 669 LBS

DATE	DWG. NO.	ITEM NO.	EXHAUST AIR INFORMATION		
			CFM	T.A.B.	SP
08.09.22	U22-606-01	H-1R	1204	.13"	.22"
PROJECT: CHICK-FIL-A P14 - REVERSE LSR BUILDING			CAPTURE AIR INFORMATION		
LOCATION: --			CFM		SP
SUBMITTED BY: HALTON CO.			80		.30"

4123

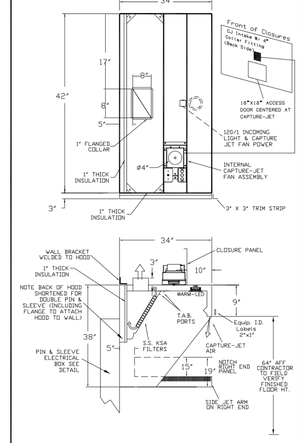
K FACTOR EQUATION: CFM = K FACTOR ✱ $\sqrt{\Delta P}$

K FACTOR = 3365

Halton

MODEL: KVL-C-IC

FACTORY MUST BE ADVISED OF ANY SPECIAL ✱ REQUIREMENTS OF THE "AUTHORITY HAVING JURISDICTION" AT TIME OF QUOTE



STANDARD FEATURES	
S.S. FILTERS (KSA)	2
CAPTURE-JET	✱
STAND-OFF	✱
L.E.D. LIGHTS	1
OPTIONS	
REMOTE SWITCH PANEL	
FIRE PROTECTION	✱
ETL LISTED W/D EXHAUST DAMPER	✱
CEILING CLOSURE	2
STD. BACKSPLASH	
INSULATED BACKSPLASH	
KBD DAMPER	✱
MATERIAL	
EXPOSED SURFACES 18 GA. S.S.	✱
ALL 18 GA. S.S.	

COMMENTS:
CLOSURE HEIGHT = 51" (TWO SIDES)
CEILING HEIGHT = 122"
CEILING CLOSURE RECESSED 10" FROM FRONT TO CREATE SHELF

18"x18" ACCESS DOOR CENTERED AT CAPTURE-JET W/ FRONT CJ INTAKE

NOTCH RIGHT END PANEL

DOUBLE RECEPTACLE PIN & SLEEVE

3" X 3" TRIM STRIP FOR STANDOFF ON LEFT END

3" SIDE & REAR STAND-OFF TO HAVE 1" THICK INSULATION

EQUIPMENT COVERED (2)FRYERS

HOOD WEIGHT= 262 LBS

DATE	DWG. NO.	ITEM NO.	EXHAUST AIR INFORMATION		
			CFM	T.A.B.	SP
08.09.22	U22-606-01	H-2	701	.30"	.39"
PROJECT: CHICK-FIL-A P14 - REVERSE LSR BUILDING			CAPTURE AIR INFORMATION		
LOCATION: --			CFM		SP
SUBMITTED BY: HALTON CO.			30		.29"

4123

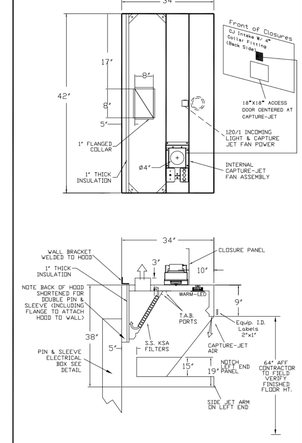
K FACTOR EQUATION: CFM = K FACTOR ✱ $\sqrt{\Delta P}$

K FACTOR = 1291

Halton

MODEL: KVL-C-IC

FACTORY MUST BE ADVISED OF ANY SPECIAL ✱ REQUIREMENTS OF THE "AUTHORITY HAVING JURISDICTION" AT TIME OF QUOTE



STANDARD FEATURES	
S.S. FILTERS (KSA)	2
CAPTURE-JET	✱
STAND-OFF	✱
L.E.D. LIGHTS	1
OPTIONS	
REMOTE SWITCH PANEL	
FIRE PROTECTION	✱
ETL LISTED W/D EXHAUST DAMPER	✱
CEILING CLOSURE	3
STD. BACKSPLASH	
INSULATED BACKSPLASH	
KBD DAMPER	✱
MATERIAL	
EXPOSED SURFACES 18 GA. S.S.	✱
ALL 18 GA. S.S.	

COMMENTS:
CLOSURE HEIGHT = 51" (THREE SIDES)
CEILING HEIGHT = 122"
CEILING CLOSURE RECESSED 10" FROM FRONT TO CREATE SHELF

18"x18" ACCESS DOOR CENTERED AT CAPTURE-JET W/ FRONT CJ INTAKE

NOTCH LEFT END PANEL

DOUBLE RECEPTACLE PIN & SLEEVE

3" REAR SIDE STAND-OFF TO HAVE 1" THICK INSULATION

EQUIPMENT COVERED (2)FRYERS

HOOD WEIGHT= 245 LBS

DATE	DWG. NO.	ITEM NO.	EXHAUST AIR INFORMATION		
			CFM	T.A.B.	SP
08.09.22	U22-606-01	H-3	701	.30"	.39"
PROJECT: CHICK-FIL-A P14 - REVERSE LSR BUILDING			CAPTURE AIR INFORMATION		
LOCATION: --			CFM		SP
SUBMITTED BY: HALTON CO.			30		.29"

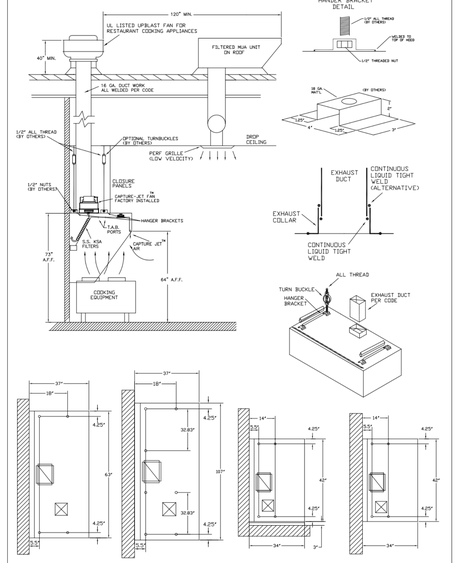
4123

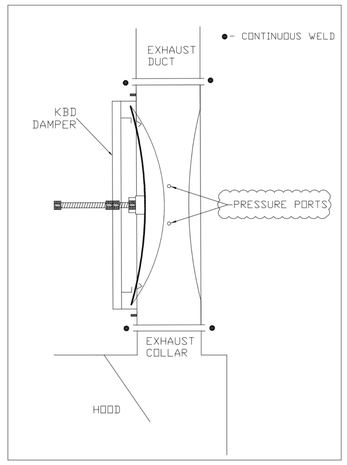
K FACTOR EQUATION: CFM = K FACTOR ✱ $\sqrt{\Delta P}$

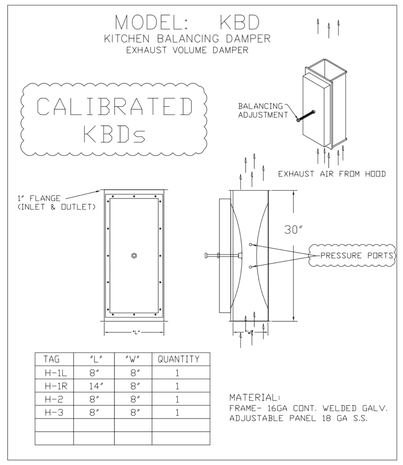
K FACTOR = 1291

Halton

HANGER BRACKET DETAIL

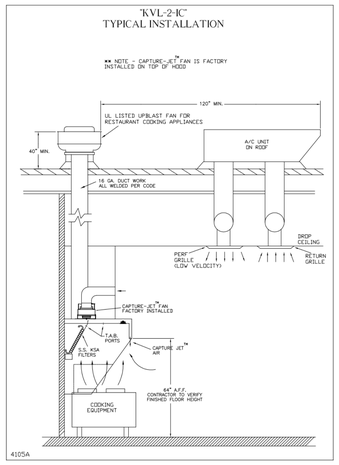


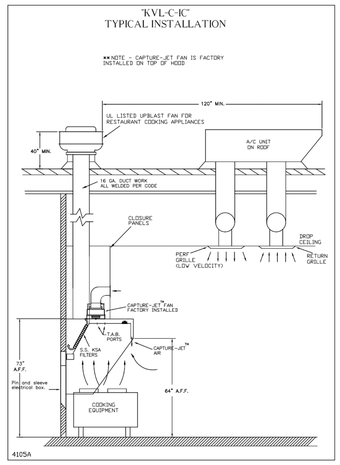


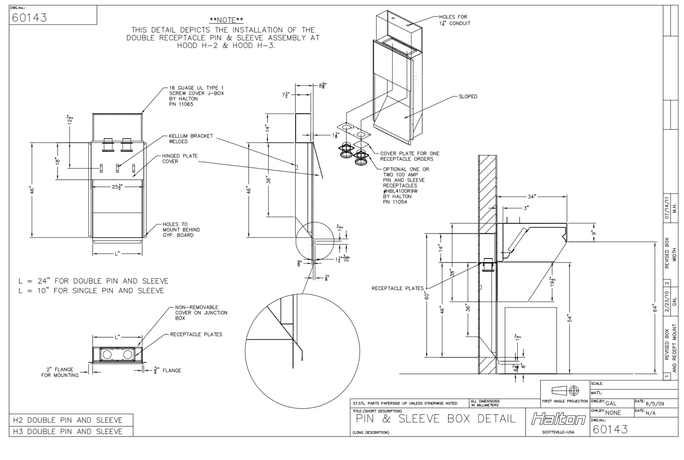


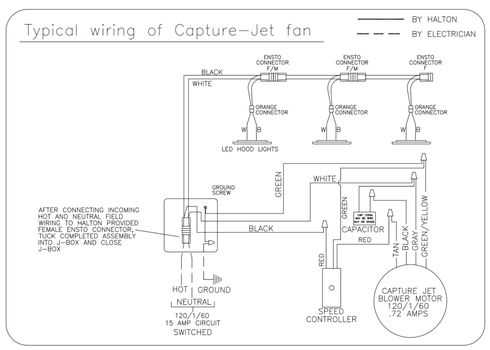
TAG	"L"	"W"	QUANTITY
H-1L	8"	8"	1
H-1R	14"	8"	1
H-2	8"	8"	1
H-3	8"	8"	1

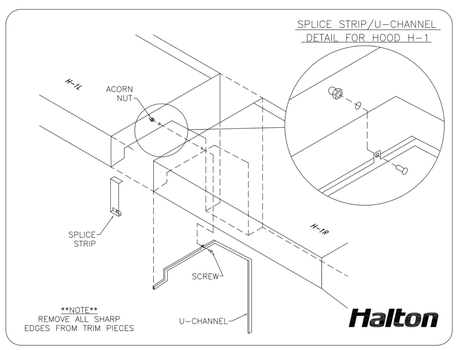
MATERIAL:
FRAME- 16GA CONT. WELDED GALV.
ADJUSTABLE PANEL 18 GA S.S.

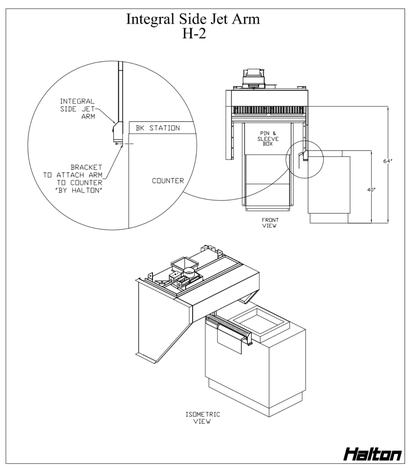


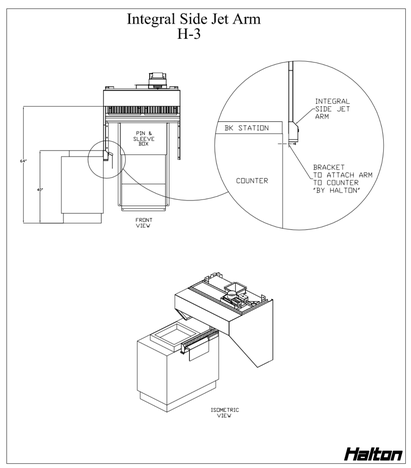


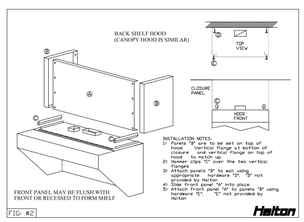


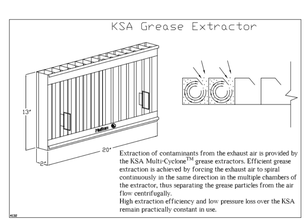












HALTON HOODS
- ETL LISTED PER LATEST 710 STANDARD
- BUILT PER NFPA 96
- NSF LISTED

CONFORMS TO UL STD UL STD 710 CERTIFIED TO ULC STD 5646
INTERTEK 3012025
HALTON COMPANY, 101 INDUSTRIAL DR., SCOTTSVILLE, KY 42164
MODEL NO. KVL-C-IC | SERIAL NO. | ITEM NO.

GENERAL REQUIREMENTS

FILTER TYPE EXHAUST HOOD FOR COMMERCIAL AND INSTITUTIONAL KITCHENS
THE FAN CIRCUIT IS RATED FOR 120V, 15A, 60HZ.
THE LIGHTING CIRCUIT IS RATED FOR 120V, 15A, 60HZ.
THE HOOD HAS BEEN CERTIFIED BY ETL FOR 0 INCH CLEARANCE TO COMBUSTIBLE MATERIALS (TOP, SIDES, FRONT AND REAR) IN COMPLIANCE WITH UL710 WITH CONSIDERATIONS TO NFPA 96.
THE HOOD IS PROVIDED WITH REPLACEABLE KSA FILTERS AND LIGHTING FIXTURES
REPLACE FILTERS ONLY WITH UL CLASSIFIED FILTER TYPE OF THE SAME MODEL AND MANUFACTURER.
SUITABLE FOR USE TO MEDIUM DUTY COOKING APPLIANCES.

DUTY LEVEL	MINIMUM OVERHANG		DISTANCE BETWEEN FRONT EDGE OF HOOD AND COOKING SURFACE IN		MIN. EXHAUST FLOW RATE OF HOOD LINEAR
	FRONT, IN	SIDE, IN	MIN	MAX	
MEDIUM	6	0	21	31	138

JET SUPPLY AIR FLOW SHALL ONLY BE SET AT 0.30 IN H2O

CONFORMS TO UL STD UL STD 710 CERTIFIED TO ULC STD 5646
INTERTEK 3012025
HALTON COMPANY, 101 INDUSTRIAL DR., SCOTTSVILLE, KY 42164
MODEL NO. KVL-2-IC | SERIAL NO. | ITEM NO.

GENERAL REQUIREMENTS

FILTER TYPE EXHAUST HOOD FOR COMMERCIAL AND INSTITUTIONAL KITCHENS
THE FAN CIRCUIT IS RATED FOR 120V, 15A, 60HZ.
THE LIGHTING CIRCUIT IS RATED FOR 120V, 15A, 60HZ.
THE HOOD HAS BEEN CERTIFIED BY ETL FOR 0 INCH CLEARANCE TO COMBUSTIBLE MATERIALS (TOP, SIDES, FRONT AND REAR) IN COMPLIANCE WITH UL710 WITH CONSIDERATIONS TO NFPA 96.
THE HOOD IS PROVIDED WITH REPLACEABLE KSA FILTERS AND LIGHTING FIXTURES
REPLACE FILTERS ONLY WITH UL CLASSIFIED FILTER TYPE OF THE SAME MODEL AND MANUFACTURER.
SUITABLE FOR USE TO HEAVY DUTY COOKING APPLIANCES.

DUTY LEVEL	MINIMUM OVERHANG		DISTANCE BETWEEN FRONT EDGE OF HOOD AND COOKING SURFACE IN		MIN. EXHAUST FLOW RATE OF HOOD LINEAR
	FRONT, IN	SIDE, IN	MIN	MAX	
MEDIUM	6 +/-	0	25	30	121
MEDIUM	6	0	25	32	106
MEDIUM	6	0	25	34	133
HEAVY	0	2	29	175	176
HEAVY	0	2	25	30	256
+ - SETBACK/UNDERWING DISTANCE					

JET SUPPLY AIR FLOW SHALL ONLY BE SET AT 0.26 IN H2O

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:

HALTON CO. (CANADA)
1021 BREVIK PLACE
MISSISSAUGA, ON L4W 3R7
1-905-624-0301

HALTON CO. (USA)
101 INDUSTRIAL DRIVE
SCOTTSVILLE, KY 42164
1-270-237-5600

WEBSITE: WWW.HALTON.COM

THIS DRAWING MUST BE CHECKED, SIGNED AND RETURNED TO THE APPROPRIATE FACTORY. PLEASE VERIFYING THE FOLLOWING:
1. ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS AND CLEARANCES.
2. THE LOCATION AND TYPE OF COOKING EQUIPMENT.

NOTE TO APPROVER
ANY CHANGES IN COOKING EQUIPMENT SUCH AS INCREASED ENERGY INPUTS OR EQUIPMENT BEING ADDED OR REMOVED FROM UNDER THE HOOD MAY REQUIRE ONE OR ALL OF THESE CHANGES OCCUR, A RECALCULATION EXHAUST AIRFLOW MAY BE REQUIRED.

☐ REVISE AND RESUBMIT
APPROVED FOR FABRICATION ☐ WITH CHANGES AS NOTED
☐ WITH NO CHANGES

APPROVED BY: DATE:

REV.	BY	DATE
1	-	-
2		
3		
4		
5		
6		
7		

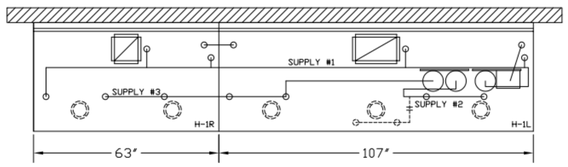
PROJECT: CHICK-FIL-A P14 - REVERSE LSR BUILDING
LOCATION: --
DRAWN BY: CG
SCALE: NTS
DATE: 08.09.22
Halton Dwg: U22-606-01

Halton
CARE FOR INDOOR AIR

Sheet
MH-1.1

NOTE:

FIRE SYSTEM TYPE TO BE DETERMINED AT TIME OF ORDER RELEASE.

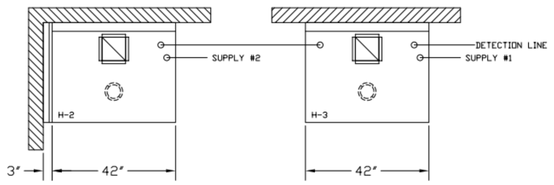


(1) OEM REGULATED RELEASE
(2) EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN OEM REG. REL.)
(3) 3 GALLON TANKS

ANSUL R-102 FIRE SYSTEM

A) 9 GALLON SYSTEM (3 TANKS) (MOUNTED ON HOOD H-1L) (FOR HOODS H-1L & H-1R)

B) 3/8" BLACK IRON PIPING W/ 3/8" S.S. APPLIANCE DROPS



(1) ELEC REGULATED RELEASE
(2) EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN REG. REL.)
(1) SINGLE TANK ENCLOSURE
(2) 3 GALLON TANK

ANSUL R-102 FIRE SYSTEM

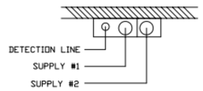
A) 6 GALLON SYSTEM (2 TANKS) (REMOTE MOUNTED) (FOR HOOD H-2 & H-3)

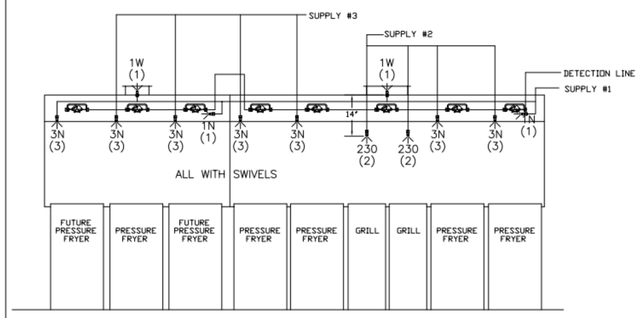
B) 3/8" BLACK IRON PIPING W/ 3/8" S.S. APPLIANCE DROPS

PROTECTS HOODS H-2 & H-3

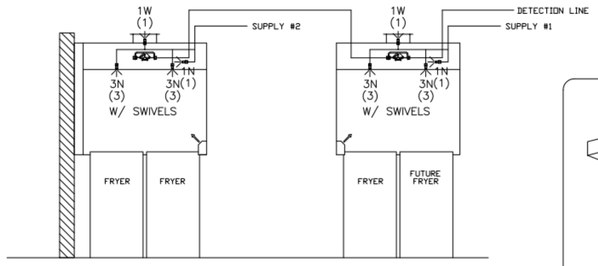
REMOTE MOUNTED:

(1) REGULATED RELEASE (WITH ONE TANK)
(1) SINGLE TANK ENCLOSURE (WITH ONE TANK)



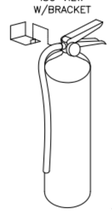


ANSUL R-102 FIRE SYSTEM LAYOUT



ANSUL R-102 FIRE SYSTEM LAYOUT

FIRE EXTINGUISHER



5 LBS. ABC
MODEL B402 QTY:_____

10 LBS. ABC
MODEL B456 QTY:_____

6 LTR CLASS K
MODEL C-260 QTY:_____

SUPPLIED BY HALTON

FUSIBLE LINK RATINGS

ITEM	TEMP
OPEN FRYERS	450°
2 BURNER / FLAT TOP	450°
PRESSURE FRYERS	450°
GRILL	450°
EXHAUST COLLARS	450°

ANSUL R-102 FIRE SYSTEM NOTES
THREE TANK SYSTEM MOUNTED ON TOP OF (H-1R)
MAXIMUM FLOW POINTS = 33

ANSUL R-102 FIRE SYSTEM NOTES
TWO TANK SYSTEM REMOTE MOUNTED ON WALL
MAXIMUM FLOW POINTS = 22

ITEM #	QTY	DESCRIPTION	FLOW PTS (TOTAL)
1W	4	DUCT NOZZLES	4
1N	4	PLENUM NOZZLES	4
230	2	APPLIANCE NOZZLES	4
3N	11	APPLIANCE NOZZLES	33

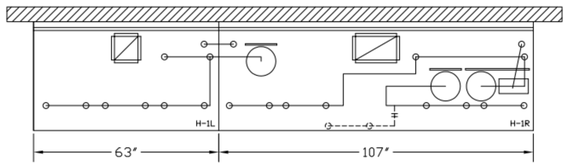
TOTAL FLOW POINTS - 45

ITEM #	QTY	DESCRIPTION
#200	8	SERIES DETECTORS W/ FUSIBLE LINKS
#201	2	TERMINAL DETECTOR W/ FUSIBLE LINKS
#202	1	ELEC OEM REGULATED RELEASE W/ DOUBLE POLE MICRO SWITCH
#202	1	ELEC REGULATED RELEASE W/ DOUBLE POLE MICRO SWITCH
#203	5	3 GALLON TANKS
#204	1	SINGLE TANK ENCLOSURE
#205	2	REMOTE PULL STATION

ANSUL R-102 FIRE SYSTEM
UL LISTED PER STD LATEST STD 300

1. FINAL INSTALLATION IS TO BE MADE IN ACCORDANCE WITH ALL APPLICAPBLE CODES
2. ALL ELECTRICAL COMPONENTS FOR EQUIPMENT SHUT DOWN TO BE PROVIDED BY THE ELECTRICIAN.
   MICRO-SWITCH INSTALLED IN REGULATED RELEASE BY ANSUL INSTALLER
3. REMOTE PULL STATION LOCATED PER MECHANICAL DRAWINGS

1/2" BLACK IRON SUPPLY LINE REQ'D FROM TANK TO FIRST BRANCH LINE FOR 475 TANKS ONLY!

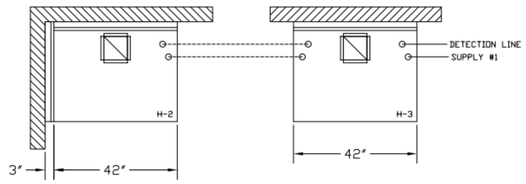


(1) MECHANICAL RELEASE MODULE
(2) EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN MECHANICAL REL. MODULE)
(1) 3.75 GALLON TANK
(2) 4.75 GALLON TANKS

AMEREX FIRE SYSTEM

A) (1) KP375 TANK - 11 FLOW POINTS
(2) KP475 TANKS - 14 FLOW POINTS (MOUNTED ON HOOD H-1L) (FOR HOODS H-1L & H-1R)

B) 1/2" & 3/8" BLACK IRON PIPING W/ 3/8" S.S. APPLIANCE DROPS



(1) SYSTEM ENCLOSURE
(1) WALL MOUNTING BRACKET
(1) MECHANICAL RELEASE MODULE
(2) EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN MECHANICAL REL. MODULE)
(1) KP475 AGENT CYLINDERS (4.75 GALLON TANK)

AMEREX FIRE SYSTEM

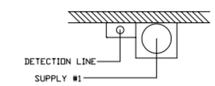
A) (1) KP475 TANKS - 14 FLOW POINTS (REMOTE MOUNTED) (FOR HOOD H-2 & H-3)

B) 1/2" & 3/8" BLACK IRON PIPING W/ 3/8" S.S. APPLIANCE DROPS

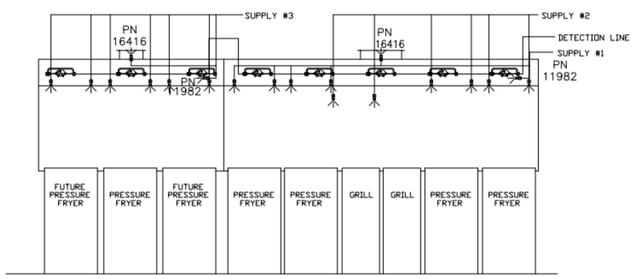
PROTECTS HOODS H-2 & H-3

REMOTE MOUNTED:

(1) SYSTEM ENCLOSURE
(1) WALL MOUNTING BRACKET
(1) MECHANICAL RELEASE MODULE
(1) KP475 AGENT CYLINDER (4.75 GALLON TANK)

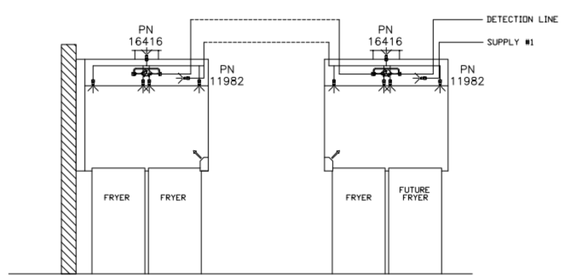


ALL APPLIANCE NOZZLES FOR PRESSURE FRYERS ARE PN 13729 NOZZLES W/ SWIVELS. ALL GRILL NOZZLES ARE 14178 NOZZLES W/ SWIVELS.



AMEREX FIRE SYSTEM LAYOUT

ALL APPLIANCE NOZZLES FOR H-2 & H-3 ARE PN 11982 NOZZLES W/ SWIVELS.



AMEREX FIRE SYSTEM LAYOUT

FUSIBLE LINK RATINGS

ITEM	TEMP
OPEN FRYERS	450°
2 BURNER / FLAT TOP	450°
PRESSURE FRYERS	450°
GRILL	450°
EXHAUST COLLARS	450°

AMEREX FIRE SYSTEM NOTES
(1) KP375 & (2) KP475 TANK SYSTEM MOUNTED ON TOP OF (H-1L)
MAXIMUM FLOW POINTS = 39

AMEREX FIRE SYSTEM NOTES
KP475 TANK SYSTEM REMOTE MOUNTED
(1) TANK
MAXIMUM FLOW POINTS = 14

ITEM #	QTY	DESCRIPTION	FLOW PTS (TOTAL)
16416	4	DUCT NOZZLES	4
11982	4	PLENUM NOZZLES	4
11982	8	APPLIANCE NOZZLES	8
14178	2	APPLIANCE NOZZLES	4
13729	14	APPLIANCE NOZZLES	28

TOTAL FLOW POINTS - 48

ITEM #	QTY	DESCRIPTION
12508-P001	10	DETECTOR BRACKET ASSEMBLY
13334	1	KP375 AGENT CYLINDER
17379	3	KP475 AGENT CYLINDER
18001	1	MECHANICAL RELEASE MODULE W/ DOUBLE POLE MICRO SWITCH
25851	1	SYSTEM ENCLOSURE W/ DOUBLE POLE MICRO SWITCH
16290	1	WALL MOUNTING BRACKET
21481	3	REMOTE MANUAL PULL STATION

AMEREX FIRE SYSTEM
TESTED & LISTED BY UNDERWRITERS LABORATORIES, INC. TO UL STANDARD 300.

1. FINAL INSTALLATION IS TO BE MADE IN ACCORDANCE WITH ALL APPLICAPABLE CODES
2. ALL ELECTRICAL COMPONENTS FOR EQUIPMENT SHUT DOWN TO BE PROVIDED BY THE ELECTRICIAN.
   MICRO-SWITCH INSTALLED IN REGULATED RELEASE BY AMEREX INSTALLER
3. REMOTE PULL STATION LOCATED PER MECHANICAL DRAWINGS

ANSUL

AMEREX

THIS DRAWING MUST BE CHECKED, SIGNED AND RETURNED TO THE APPROPRIATE FACTORY. PLEASE VERIFYING THE FOLLOWING:
1. ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS AND CLEARANCES.
2. THE LOCATION AND TYPE OF COOKING EQUIPMENT.

NOTE TO APPROVER
ANY CHANGES IN COOKING EQUIPMENT SUCH AS INCREASED ENERGY INPUTS OR EQUIPMENT POSITIONING MAY AFFECT EXHAUST FLOW RATES. ADDITIONAL HOODS MAY BE REQUIRED. IF ANY OF THESE CHANGES OCCUR, A RECALCULATION EXHAUST AIRFLOW MAY BE REQUIRED.

☐ REVISE AND RESUBMIT
APPROVED FOR FABRICATION
☐ WITH NO CHANGES ☐ WITH CHANGES AS NOTED

APPROVED BY _____ DATE _____

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:

HALTON CO. (CANADA)
1021 BREVIK PLACE
MISSISSAUGA, ON L4W 3R7
1-905-624-0301 ☐

REV.	REVISION DESCRIPTION	BY	DATE
1	-	-	-
2			
3			
4			
5			
6			
7			

WEBSITE: WWW.HALTON.COM

HALTON CO. (USA)
101 INDUSTRIAL DRIVE
SCOTTSVILLE, KY 42164
1-270-237-5600 ☒

PROJECT:
CHICK-FIL-A P14 - REVERSE
LSR BUILDING

LOCATION: --
DRAWN BY: CG
DATE: 08.09.22
SCALE: NTS
Halton Dwg: U22-606-02FS

Halton
CARE FOR INDOOR AIR

Sheet
MH-1.2

PROTECTION CRITERIA BASED ON NFPA 13

OCCUPANCY CLASSIFICATION	DESIGN AREA	HOSE ALLOWANCE	MAXIMUM SPACING (SQ FT)	OCCUPANCY CLASSIFICATION
KITCHEN & STORAGE (MISCELLANEOUS STORAGE)	0.20/1,500 SQ FT	250	130	CLASS I-IV TO 5'-0", MAX 10'-0"; 13: TABLE 13.2.1 & FIGURE 13.2.1
COOLERS/FREEZERS (MISCELLANEOUS STORAGE)	MINIMUM 0.20/1,500 OR ENTIRE AREA	250	130	CLASS I-III TO 12'-0" ON SINGLE ROW RACK; 13: TABLE 13.2.1
DINING/OFFICE/TEAM MEMBER ROOM/RESTROOMS	0.10/1,500	100	225	LIGHT HAZARD; 13:11.2.3.1.1 AND TABLE 11.2.3.1.2

SPRINKLER SYMBOL LEGEND

SYMBOL	SIZE	MFR	MAKE	S.I.N.	FINISH	STYLE	TEMP	K-FACTOR	QTY
●	1/2"	TYCO	TY-FRB	TY323	WHITE	PENDENT RECESS	155 °F	5.6	25
◢●	1/2"	TYCO	TY-FRB	TY323	WHITE	PENDENT RECESS	286 °F	5.6	5
◢●	1"	TYCO	DS-C	TY3555	WHITE	PENDENT DRY CONC	200 °F	5.6	2
◎	1/2"	TYCO	RFII	TY3531	WHITE	PENDENT CONCEAL	155 °F	5.6	25

SYMBOL	DESCRIPTION (SYMBOLS USED IF APPLICABLE)
	SPRINKLER SYSTEM RISER
	DRY SPRINKLER SYSTEM RISER
	RISE/DROP FITTINGS
	END CAP OR PLUG
	AUXILIARY DRAIN
	INSPECTOR'S TEST/AUXILIARY DRAIN
	SMALL HOSE VALVE
	FIRE DEPARTMENT CONNECTION (FDC)
	HYDRANT
WP	FIRE ALARM WATERFLOW NOTIFICATION - EXTERIOR
	PIPE HANGER OR TRAPEZE HANGER
	SEISMIC BRACE
101	HYDRAULIC REFERENCE NODE POINT

PROVIDE SPARE SPRINKLERS AND WRENCHES FOR ALL TYPES OF SPRINKLERS PRESENT, QUANTITY PER SPECIFICATIONS, TO BE LOCATED IN SPRINKLER CABINETS IN SPRINKLER CABINETS IN SPRINKLER ROOM

CONTRACTOR MAY SUBSTITUTE SPRINKLERS OF SAME SIZE, RESPONSE TIME, K-FACTOR, AND TEMPERATURE CLASSIFICATION UNLESS PROHIBITED BY THE SPECIFICATIONS.

FIRE SPRINKLER NOTES:
- MECHANICAL/ELECTRICAL/PLUMBING TAKES PRECEDENCE IN LOCATION AND INSTALLATION. FIRE SPRINKLER CONTRACTOR SHALL COORDINATE PIPING AND SPRINKLER LOCATIONS WITH DUCTWORK AND OTHER TRADES BEFORE INSTALLATION.
- SEE SHEET FP-211 FOR ADDITIONAL SPRINKLER INSTALLATION DETAILS.

APPLICABLE CODES

NFPA STANDARDS — EDITION
NFPA 13 — XXXX

OTHER STANDARDS (IF APPLICABLE)
N/A
(REFER TO SHEET G-000 FOR APPLICABLE BUILDING CODES)

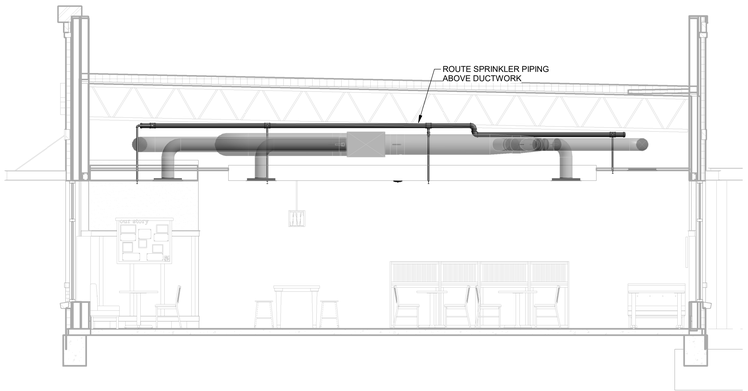
CONTACT INFORMATION

DOCUMENTS INCLUDE JURISDICTIONAL REQUIREMENTS AS PROVIDED BY THE FOLLOWING CONTACT:

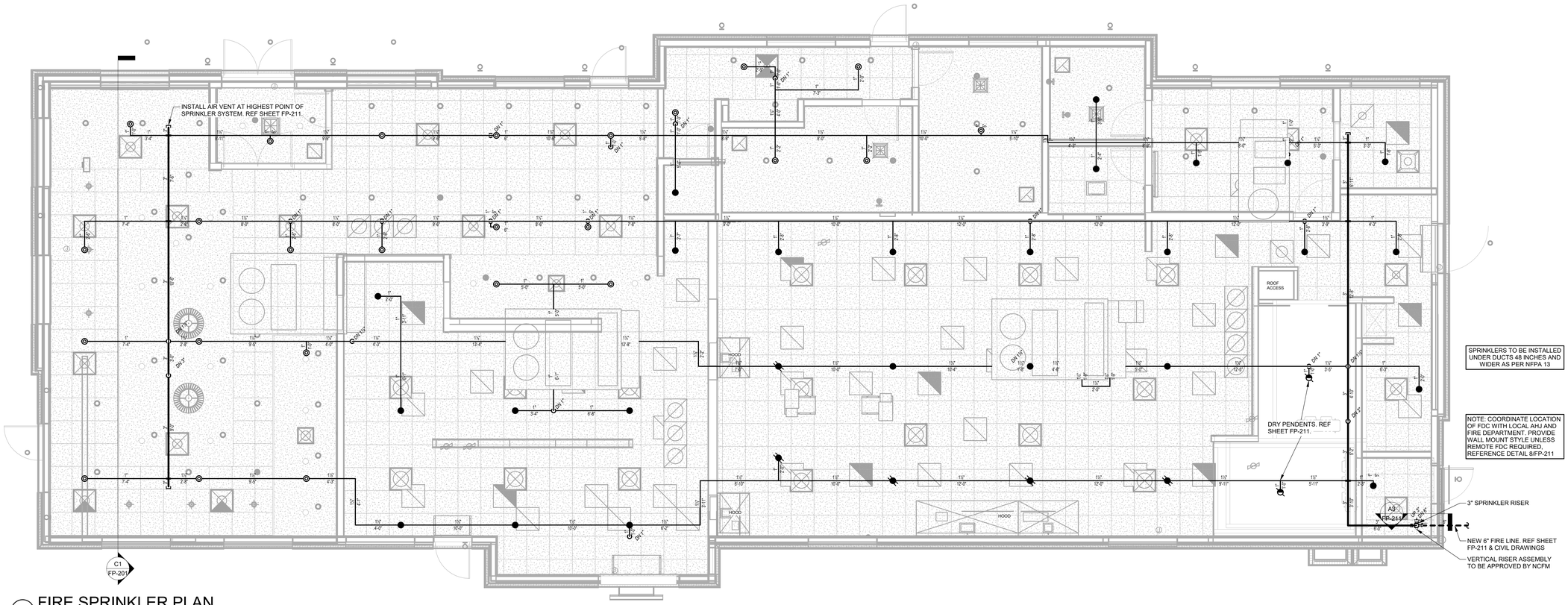
FIRE SPRINKLER REVIEWING AUTHORITY
CONTACT - TITLE
PHONE

GENERAL NOTES

1. THE DESIGN SHOWN ON THESE CONTRACT DOCUMENTS HAVE BEEN PREPARED TO PROVIDE GUIDANCE FOR BIDDING ONLY. THE CONTRACTOR SHALL SUBMIT FIRE SPRINKLER SHOP DRAWINGS FOR APPROVAL BY THE AUTHORITY HAVING JURISDICTION (AHJ) AND AS REQUIRED BY SPECIFICATION SECTION 01330. CONTRACTOR SHALL BASE SHOP DRAWING DESIGN ON THE FIRE PROTECTION DRAWINGS AND SPECIFICATIONS. SPRINKLER SYSTEM SHOP DRAWINGS SHALL INCLUDE ALL NECESSARY ELEVATIONS, HANGER LOCATIONS, PIPE LENGTHS, DIMENSIONS, FABRICATION METHODS, NOTES, MATERIAL DATA, AND ANY OTHER INFORMATION REQUIRED DESCRIBING THE INTENT OF THE INSTALLATION. CONTRACTOR SHALL PROVIDE PIPE SIZES, SPRINKLER SPACING, AND ALL SYSTEM CONFIGURATIONS AS SHOWN. ANY ALTERNATES TO THE DESIGN OF THE SYSTEM OR IN MATERIALS AND EQUIPMENT USED MUST BE APPROVED IN WRITING VIA THE REQUEST FOR INFORMATION PROCESS BY THE FIRE PROTECTON ENGINEER OF RECORD PRIOR TO ANY BIDDING, FABRICATION, OR INSTALLATION.
2. CONTRACTOR SHALL COORDINATE LOCATIONS OF FIRE PROTECTION COMPONENTS INCLUDING PIPING, ALARMS, DRAINS, TEST POINTS, ETC. WITH ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL COMPONENTS. OBSTRUCTIONS TO SPRINKLERS DISCHARGE MUST BE CONSIDERED DURING SHOP DRAWING PRODUCTION AND INSTALLATION. EXTRA SPRINKLERS MAY BE REQUIRED AT NO ADDITIONAL COST TO THE OWNER. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. SUBMIT A REQUEST FOR INFORMATION (RFI) FOR ALL QUESTIONS RELATED TO THE FIRE PROTECTION DOCUMENTS.
4. ROUTE ALL SPRINKLER MAINS ABOVE THE BOTTOM CHORD OF THE BAR JOISTS.
5. NEUTRALIZATION/DEMISING WALLS, IF APPLICABLE, ARE SHOWN ON ARCHITECTURAL DRAWINGS. REFER TO MECHANICAL DRAWINGS FOR NEUTRALIZATION WALL PENETRATIONS.
6. SPRINKLER SYSTEMS WILL BE MONITORED BY AN OFF-SITE CENTRAL STATION, INCLUDING TAMPER SWITCHES ON ALL CONTROL VALVES AND FLOW SWITCHES.
7. PENETRATIONS OF RATED WALLS OR ASSEMBLIES SHALL BE FIRE CAULKED WITH APPROVED CAULKING PER METHODS REQUIRED BY THE AHJ AND PROJECT SPECIFICATIONS.
8. THE FIRE PROTECTION ENGINEER OF RECORD WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NOR SHALL THEY BE REQUIRED TO SUPERVISE THE CONDUCT OF THE WORK. THE CONSTRUCTION PROCEDURES AS SET FORTH BY THE GENERAL CONTRACTOR, SUBCONTRACTORS, THEIR RESPECTIVE EMPLOYEES OR ANY OTHER PERSON AT THE JOBSITE OTHER THAN THE ENGINEERING FIRM'S OWN EMPLOYEES.
9. SPRINKLER PROTECTION IS REQUIRED ABOVE THE ELECTRICAL ROOMS. NO MAIN PIPING SHALL PENETRATE THE ELECTRICAL ROOMS.
10. THE CONTRACTOR MUST REVIEW ALL CONSTRUCTION DOCUMENTS PRIOR TO BID. SHOULD MODIFICATION TO THESE PLANS BECOME NECESSARY TO PROPERLY COORDINATE THE SYSTEM WITH OTHER TRADES, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL OF THESE CHANGES BY THE AHJ AND THE FIRE PROTECTION ENGINEER OF RECORD. IN ADDITION TO OBTAINING THE NECESSARY APPROVALS THE CONTRACTOR MUST MAKE NOTE OF ALL FIELD OR COORDINATION CHANGES ON THE INSTALLATION DRAWINGS, ONCE COMPLETE, THE CONTRACTOR SHALL SUPPLY ONE COPY OF THE AS-BUILT DRAWINGS TO THE FIRE PROTECTION ENGINEER OF RECORD FOR THEIR USE.
11. THE CONTRACTOR SHALL DIVERT ALL DRAIN AND INSPECTOR TEST CONNECTION DISCHARGE AWAY FROM FINISHED SURFACES AND PIPE TO APPROVED DRAIN LOCATIONS. THE CONTRACTOR WILL BE BACK CHARGED FOR ANY REPAIR, REPLACEMENT, OR CLEANING OF RUST STAINS ON PAVEMENT, CONCRETE DUE TO WATER DISCHARGE FOR SPRINKLER SYSTEM DRAIN DOWNS.
12. WHEN SYSTEM PRESSURES EXCEED 100 PSI, REFER TO NFPA FOR MAXIMUM ARM OVER LENGTHS AND HANGING INSTRUCTIONS.
13. PROVIDE A MINIMUM OF 5 PSI SAFETY FACTOR FOR HYDRAULIC CALCULATIONS OF SPRINKLER SYSTEMS. USE HIGHER SAFETY FACTOR WHEN REQUIRED BY THE AHJ.



C1 BUILDING SECTION
1/4" = 1'-0"



A1 FIRE SPRINKLER PLAN
1/4" = 1'-0"

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

KEA ENGINEERS
Engineering Excellence since 1984
KEA ENGINEERS
186 WOOD AVE. SOUTH, 1ST FLOOR
ISELIN, NJ 08830
TEL: (732) 635 0044 • FAX: (732) 635 1777
NY STATE CERTIFICATE OF AUTHORIZATION #0019115

SEALS

ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR
RELEASE: 22.08
PRINTED FOR
ISSUED FOR BID 10/04/2022

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

- Not For Construction -

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY CN

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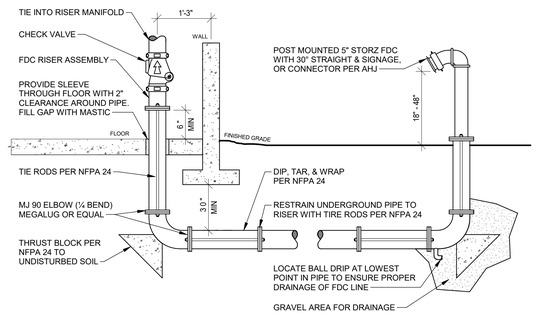
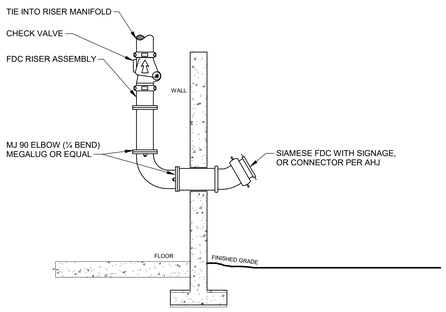
SHEET
FIRE PROTECTION PLAN AND GENERAL NOTES

SHEET NUMBER
FP-201

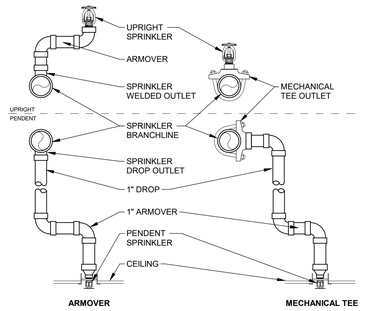
10/4/2022 3:52:07 PM Autodesk Docs://NY_04937_Levittown_2021.4_FSR/04937_Levittown_FP.rvt
80-LSR-04937-FP-201-FIRE PROTECTION PLAN AND GENERAL NOTES



D5 REMOTE REMOTE FDC (AS APPLICABLE)
NTS



D4 FIRE DEPARTMENT CONNECTION
NTS



D3 ARMOVER/MECH. TEE
NTS

PIPE TABLES

DRY AND WET EXTERIOR

PRODUCT	NOMINAL PIPE SIZE	INSIDE DIAMETER
SCHEDULE 10 GALVANIZED	2"	2.157
	2½"	2.635
	3"	3.260
	4"	4.260
	6"	6.357
SCHEDULE 40 GALVANIZED	1"	1.049
	1¼"	1.380
	1½"	1.610
	2"	2.067

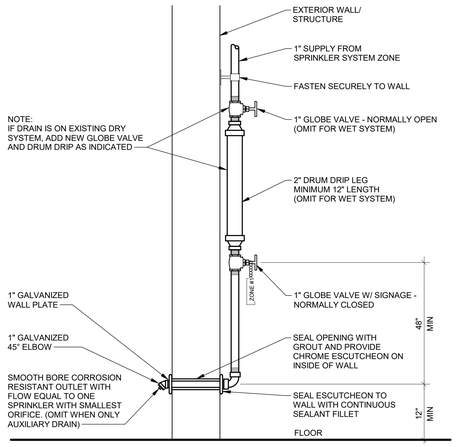
NOTE: PIPE SIZES SHOWN ARE FOR HYDRAULIC CALCULATIONS PURPOSES ONLY. REFER TO SPECIFICATIONS FOR ALLOWABLE SUBSTITUTIONS.

UNDERGROUND

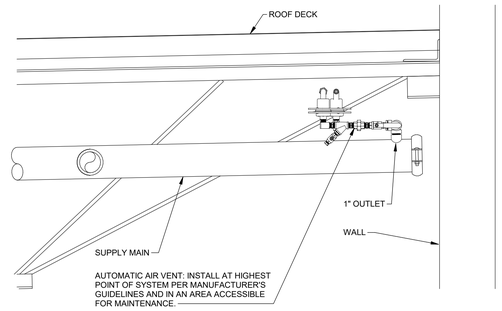
PRODUCT	NOMINAL PIPE SIZE	INSIDE DIAMETER
DUCTILE IRON	6"	6.28
	8"	8.39
	10"	10.40
	12"	12.46
	16"	16.53
	18"	18.61
	20"	20.69
	24"	24.85
PVC	6"	6.09
	8"	7.98
	10"	9.79
	12"	11.65
	16"	15.53
	18"	17.20
	20"	19.06
	24"	22.76

WET

PRODUCT	NOMINAL PIPE SIZE	INSIDE DIAMETER
DYNA-FLOW	2"	2.203
	2½"	2.703
	3"	3.314
	4"	4.310
DYNA-THREAD	1"	1.080
	1¼"	1.408
	1½"	1.639
	2"	2.104
SCHEDULE 10	2"	2.157
	2½"	2.635
	3"	3.260
	4"	4.260
	6"	6.357
	8"	8.249
SCHEDULE 40	1"	1.049
	1¼"	1.380
	1½"	1.610
	2"	2.067



C4 AUX. DRAIN/INSPECTOR'S TEST
NTS



SLOPED ROOF

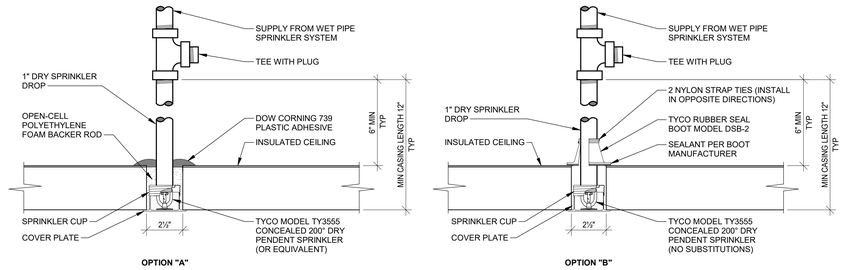
C3 AIR VENT INSTALLATION
NTS

OPTION "A" INSTALLATION PROCEDURE

1. CORE DRILL 2½" DIAMETER HOLE IN THE INSULATED CEILING PANEL. LOCATE HOLE AND REQUIRED SPRINKLER PROTECTION IN ACCORDANCE WITH NFPA 13 OBSTRUCTION CRITERIA (SSP TYPE SPRINKLERS). MAINTAIN 6" CLEARANCE FROM COOLER SEAMS.
2. INSTALL DRY PENDENT SPRINKLER PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
3. COMPLETELY FILL ANNULAR CEILING OPENING BETWEEN THE ESCUTCHEON AND TOP OF CEILING PANEL WITH OPEN-CELL POLYETHYLENE FOAM BACKER ROD. EXPANDED FOAM IS NOT PERMITTED.
4. INJECT DOW CORNING 739 PLASTIC ADHESIVE SEALANT INTO AND AROUND THE TOP OF THE CEILING CORE OPENING IN ACCORDANCE WITH SEALANT MANUFACTURER'S INSTRUCTIONS.

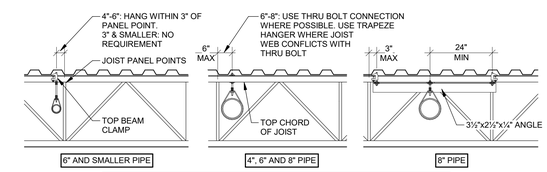
OPTION "B" INSTALLATION PROCEDURE

1. CORE DRILL 2½" DIAMETER HOLE IN THE INSULATED CEILING PANEL FROM BELOW. LOCATE HOLE AND REQUIRED SPRINKLER PROTECTION IN ACCORDANCE WITH NFPA 13 OBSTRUCTION CRITERIA (SSP TYPE SPRINKLERS). MAINTAIN 6" CLEARANCE FROM COOLER SEAMS
2. INSTALL TYCO DRY PENDENT SPRINKLER PER MANUFACTURER'S INSTALLATION REQUIREMENTS. INSERT BOOT PRIOR TO MAKE-UP WITH PIPING.
3. COMPLETELY SEAL INTERFACE BETWEEN BOOT FLANGE AND TOP OF CEILING PANEL WITH ADHESIVE PROVIDED WITH BOOT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. APPLY STRAP TIES ON BOOT ARROUND DRY SPRINKLER BARREL PER MANUFACTURER'S INSTRUCTIONS.



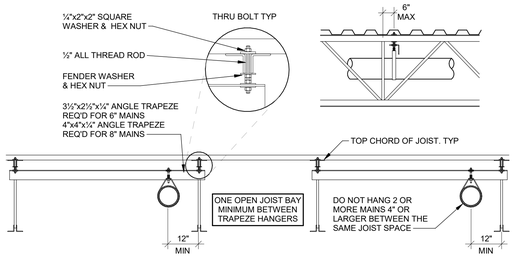
NOTE: CONTRACTOR TO SEAL DRY PENDENT SPRINKLERS AT COOLER/FREEZER USING ONE OF THE OPTIONS ABOVE. NO OTHER SEALANTS ARE PERMITTED

B2 COOLER/FREEZER DRY PENDENT SPRINKLER
NTS



MAXIMUM HANGER SPACING FOR PIPING PERPENDICULAR TO JOISTS		
BEAM CLAMP NOT TRAPEZED	THRU-BOLT NOT TRAPEZED	BEAM CLAMP TRAPEZED
4" PIPE EVERY 12'-0" EVERY OTHER JOIST 6" PIPE EVERY 6'-0" EVERY JOIST 8" PIPE NOT ALLOWED	4" PIPE EVERY 12'-0" EVERY OTHER JOIST 6" PIPE EVERY 12'-0" EVERY OTHER JOIST 8" PIPE EVERY 6'-0" EVERY JOIST	4" PIPE NOT NECESSARY 6" PIPE NOT NECESSARY 8" PIPE EVERY 6'-0" EVERY JOIST

----------PIPE RUNNING PERPENDICULAR TO JOISTS----------

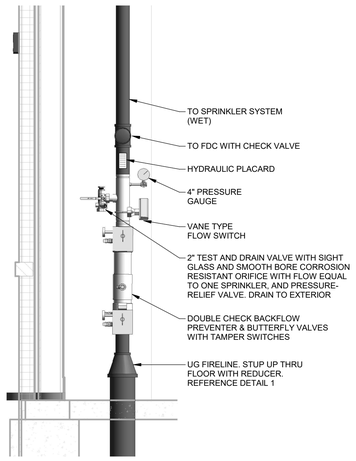


MAXIMUM HANGER SPACING FOR PIPES PARALLEL TO JOISTS		
4" PIPE EVERY 12'-0" NOT TRAPEZED BEAM CLAMP	6" PIPE EVERY 12'-0" TRAPEZED THRU BOLT	8" PIPE EVERY 12'-0" TRAPEZED THRU BOLT

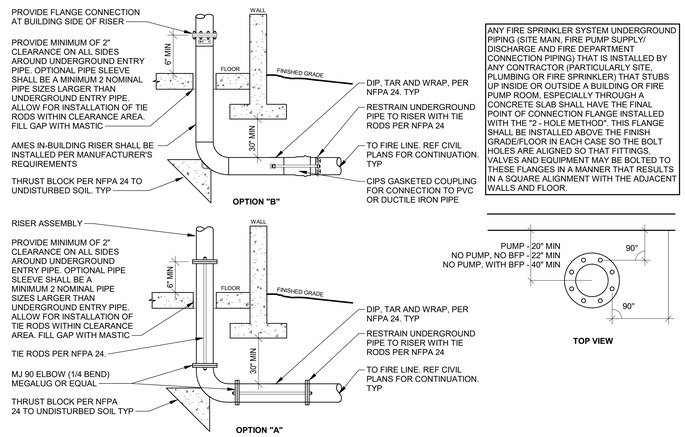
----------PIPE RUNNING PARALLEL TO JOIST----------

GENERAL PIPE SUPPORT NOTES:
- DO NOT SUPPORT SPRINKLER PIPING FROM BOTTOM CHORD OF BAR JOISTS
- MAINTAIN VISIBLE CLEARANCE BETWEEN PIPE AND JOIST MEMBERS
- CONTRACTOR MAY SUBSTITUTE ANGLE IRON TRAPEZE MEMBER WITH PIPE MEMBER. SIZE PIPE MEMBER IN ACCORDANCE WITH NFPA 13 AND MAINTAIN 12" MAXIMUM DEFLECTOR DISTANCE
- UTILIZE THESE HANGING METHODS FOR ALL SPRINKLER PIPING. SPACE TRAPEZE HANGERS IN ACCORDANCE WITH SCHEDULE. LOCATE HANGERS WITHIN 3" OF JOIST PANEL POINTS U.N.O.

A4 PIPING SUPPORT
NTS



A3 FIRE SPRINKLER RISER
3/4" = 1'-0"



ANY FIRE SPRINKLER SYSTEM UNDERGROUND PIPING (SITE MAIN, FIRE PUMP SUPPLY/ DISCHARGE AND FIRE DEPARTMENT CONNECTION PIPING) THAT IS INSTALLED BY ANY CONTRACTOR (PARTICULARLY SITE, PLUMBING OR FIRE SPRINKLER) THAT STUBS UP INSIDE OR OUTSIDE A BUILDING OR FIRE PUMP ROOM, ESPECIALLY THROUGH A CONCRETE SLAB SHALL HAVE THE FINAL POINT OF CONNECTION FLANGE INSTALLED WITH THE "2 - HOLE METHOD". THIS FLANGE SHALL BE INSTALLED ABOVE THE FINISH GRADE/FLOOR IN EACH CASE SO THE BOLT HOLES ARE ALIGNED SO THAT FITTINGS, VALVES AND EQUIPMENT MAY BE BOLTED TO THESE FLANGES IN A MANNER THAT RESULTS IN A SQUARE ALIGNMENT WITH THE ADJACENT WALLS AND FLOOR.

TOP VIEW

A2 UNDERGROUND FIRE LEAD-IN
NTS

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

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KEA ENGINEERS
186 WOOD AVE. SOUTH, 1ST FLOOR
ISELIN, NJ 08830
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NY STATE CERTIFICATE OF AUTHORIZATION #0019115

SEALS

ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

- Not For Construction -

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR
RELEASE: 22.08
PRINTED FOR

ISSUED FOR BID 10/04/2022

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY CN

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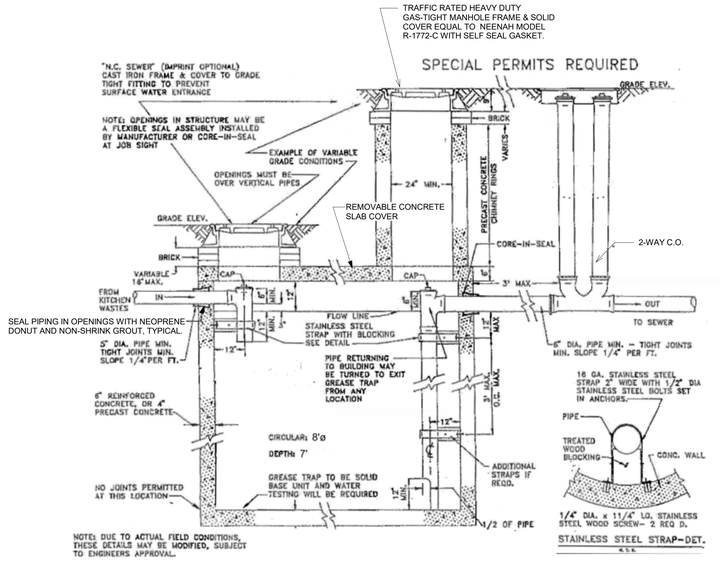
SHEET
FIRE PROTECTION DETAILS

SHEET NUMBER
FP-211

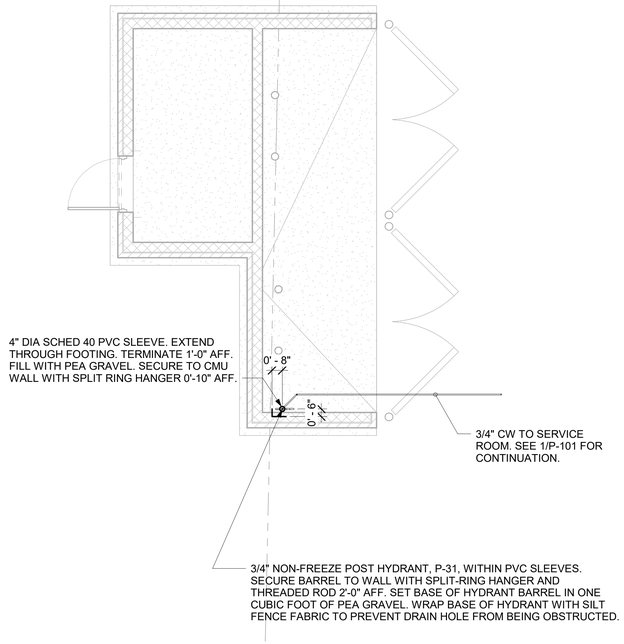
10/4/2022 3:52:36 PM Autodesk Docs://NY_04937_Levittown_2021_4_FSR/04937_Levittown_FP.rvt
80-LSR-04937-FP-211-FIRE PROTECTION DETAILS



NOTES:
1. SET ON 0'-4" OF STRUCTURAL BACKFILL
2. TRAP CAPACITY SUBJECT TO APPROVAL BY STATE OR LOCAL AUTHORITY. CONSTRUCTION MUST BE MONOLITHIC. TRAP MUST MEET H-20 TRAFFIC LOADING REQUIREMENTS WHEN LOCATED IN A TRAFFIC AREA. SEE CIVIL PLANS FOR TRAP LOCATION.

(2) GREASE INTERCEPTOR NASSAU COUNTY
NOT TO SCALE

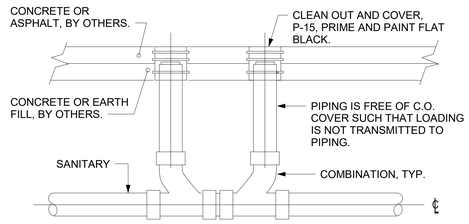
METHOD OF DRAINAGE AT REFUSE PAD -
REFER TO ARCHITECTURAL DRAWINGS FOR DESIGN OPTION SHOWING DRAINAGE THROUGH BACK OF DUMPSTER ENCLOSURE.



(3) REFUSE PAD PLUMBING PLAN
1/4" = 1'-0"

5. SHEET NOTES

1. COORDINATE INSTALLATION OF SANITARY PIPING WITH FOOTINGS IN THE FIELD. SLEEVE PENETRATIONS IN FOOTINGS WITH PVC.
2. COMBINATION WASTE AND VENT SYSTEM SHOWN HERE. WHERE REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION, PROVIDE SAFE-WASTE SYSTEM OR DEDICATED VENT SYSTEM AS OUTLINED IN STATE AND LOCAL CODE AMENDMENTS.
3. ALL WATER PIPING INSTALLED WITHIN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF THE INSULATION.
4. ALL VENT PIPING TO BE 2" DIAMETER MIN U.N.O. SEE 1/P-301 FOR VENT LAYOUT.



(4) SAN. C.O. OUTSIDE BUILDING
NOT TO SCALE

KEY NOTES

16 4" DOUBLE CO, P-15. SEE DETAIL 4/P-101.
30 GREASE TRAP - REFER TO DETAIL 2/P-101, REFER TO SITE UTILITY PLAN SHEET FOR EXACT LOCATION.
31 INSTALL FLOOR DRAIN P-35 AT MOP SINK DEPRESSION WITH TOP OF STRAINER 0'-7" BFF.
39 PROVIDE TRAP SEAL PROTECTOR P-26A.

(XXX) KITCHEN EQUIPMENT NO. SEE KITCHEN EQUIPMENT SCHEDULE ON DWG P-303 FOR EQUIPMENT DESCRIPTIONS.

(1) BELOW SLAB PLUMBING PLAN
1/4" = 1'-0"

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SEALS

ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR LRG
RELEASE: 22.08
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SHEET
BELOW SLAB PLUMBING PLAN

SHEET NUMBER
P-101

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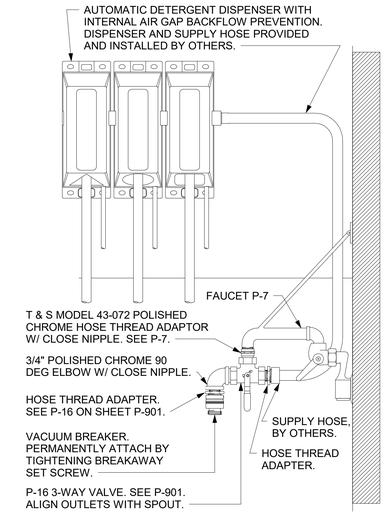
40-LSR-04937-P-101-BELOW SLAB PLUMBING PLAN



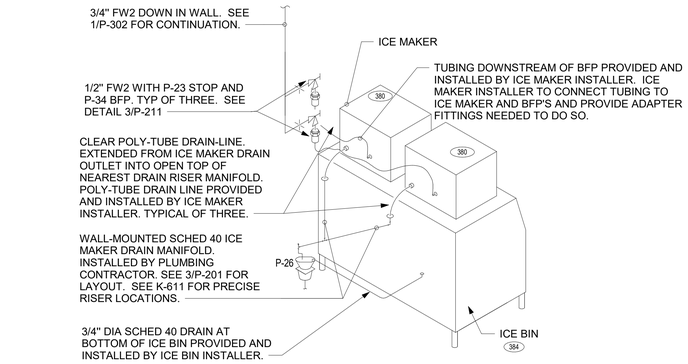
4 3-WAY VALVE AT MOP SINK
NOT TO SCALE

NOTE TO WATER HEATER INSTALLER:

POSITION VALVES AND TRIM IN WATER HEATER CLOSET SUCH THAT VISIBLE OBSERVATION OF VALVES AND TRIM IS UNOBSTRUCTED AND SUCH THAT ACCESS FOR OPERATION OR REPAIR IS POSSIBLE WITHOUT USE OF STEP LADDERS OR ANY NEED TO DISASSEMBLE ANY COMPONENTS.

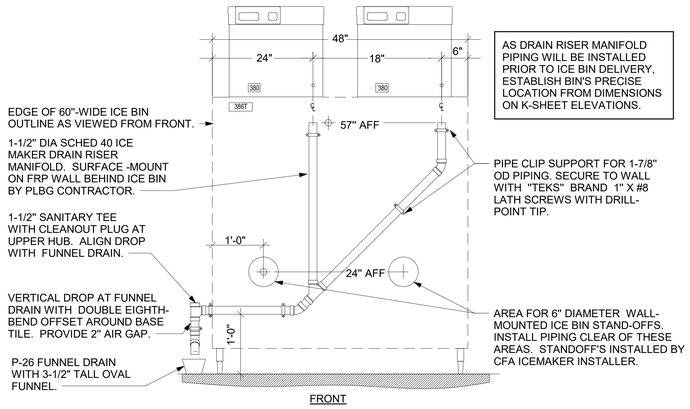
WALK-IN CONDENSATE PIPING NOTES:

INSTALL PIPING TIGHT TO WALL SO AS NOT TO INTERFERE WITH COOLER AND FREEZER SHELVES. PROVIDE UNION FITTINGS IMMEDIATELY DOWNSTREAM OF CONNECTION TO EVAPORATORS.



2 ICE MACHINE PIPING
NOT TO SCALE

DRAIN RISER LOCATIONS MEASURED FROM EDGE OF ICE BIN. VERIFY ICE BIN WIDTH AND PRECISE LOCATION FROM DIMENSIONS ON K-SHEET ELEVATIONS.



3 ICE MAKER DRAIN ON WALL
NOT TO SCALE

KEY NOTES

1 1" DIAMETER PVC DRAIN FROM BACKFLOW PREVENTER PANEL. CONNECT 1" PVC TO FACTORY PROVIDED COUPLING MOUNTED ON BACK PANEL. ROUTE DRAIN TO P-26 FUNNEL DRAIN AT END OF BAG-N-BOX. MOUNT PIPING TIGHT TO WALL WITH STRUT AND CLAMP.

2 1" GAS DOWN FROM ROOF FOR P-19. SEE 6/P-303 FOR CONTINUATION. OFFSET DROP WITHIN WALL ABOVE MECH ROOM CEILING.

5 1/2" HW AND CW DROPS TO MOP SINK FAUCET SET P-7. PROVIDE BALL VALVE FOR EACH ABOVE CEILING WITH P-22 BALL CHECK VALVE IN EACH DROP. SEE RISER DIAGRAM 1/P-302.

6 1/2" HW AND CW DROPS TO P-16 WALL FAUCET WITH VACUUM BREAKER FOR DEDICATED CONNECTION TO ECOLAB DETERGENT DISPENSER. MOUNT AS SHOWN ON K-SHEETS. PROVIDE BALL VALVES IN SUPPLY ABOVE CEILING.

8 1/2" FW TO P-24 & P-34 AT TWO TEA BREWERS AND ONE COFFEE MAKER. SEE 4/P-211 AND 1/P-302.

10 2" CW ON WALL. SEE 4/P-303 FOR EXACT ROUTING LOCATIONS OF CW PIPING IN THIS AREA.

13 3/4" FW DROP TO TWO-HANDLE FAUCET, P-30. MOUNT FAUCET ON WALL. SEE K-SHEETS FOR EXACT LOCATION. PIPE 1/2" FW TO EACH FAUCET INLET WITH 6" SPREAD. PROVIDE BALL VALVE ABOVE CEILING. SEE RISER DIAGRAM 1/P-302.

17 APPLY RAYCHEM XL-TRACE, MODEL 5XL-1, SELF REGULATING HEATING CABLE. USE END SEAL KIT FROM MFR. PROVIDE P-TRAP IN CONDENSATE DRAIN ON COOLER SIDE OF COOLER-FREEZER PANEL WALL WITH OPEN-TOPPED TEE AT TRAP OUTLET. PROVIDE 6" OF FALL IN FREEZER DRAIN LINE PRIOR TO PENETRATING PANEL WALL. EXTEND HEAT TRACE TO P-TRAP OUTLET IN COOLER.

26 FW AND FW2 FROM WATER FILTERS. SEE DETAIL 5/P-303.

33 OWNER PROVIDED, PLUMBER INSTALLED STOP/BFP PANEL. SEE K-SHEET ELEVATIONS FOR EXACT LOCATION. PROVIDE EXPOSED 3/4" BALL VALVE AT CONNECTION TO PANEL. ROUTE 1" PVC DRAIN FROM FACTORY PANEL DRAIN CONNECTION TO P-26 FUNNEL DRAIN AT END OF BEVERAGE RACK AND TERMINATE WITH ELBOW AND AIR GAP.

34 OWNER PROVIDED, PLUMBER INSTALLED WATER FILTERS. SEE DETAIL 5/P-303.

35 P-11 WALL HYDRANT 24" AFF WITH BALL VALVE IN DROP 48" AFF. ORDER HYDRANT WITH 12" WOODFORD WALL THICKNESS. SEE WATER RISER 1/P-302. SECURE TO WALL WITH STRUT AND CLAMP.

38 PROVIDE SCHEDULE 40 (BLACK OR GALVANIZED) STEEL PIPING BACK TO FUTURE DARPRO OIL TANK. PIPING TO BE ROUTED TO ALLOW AS MUCH FALL AS POSSIBLE TO THE TANK.

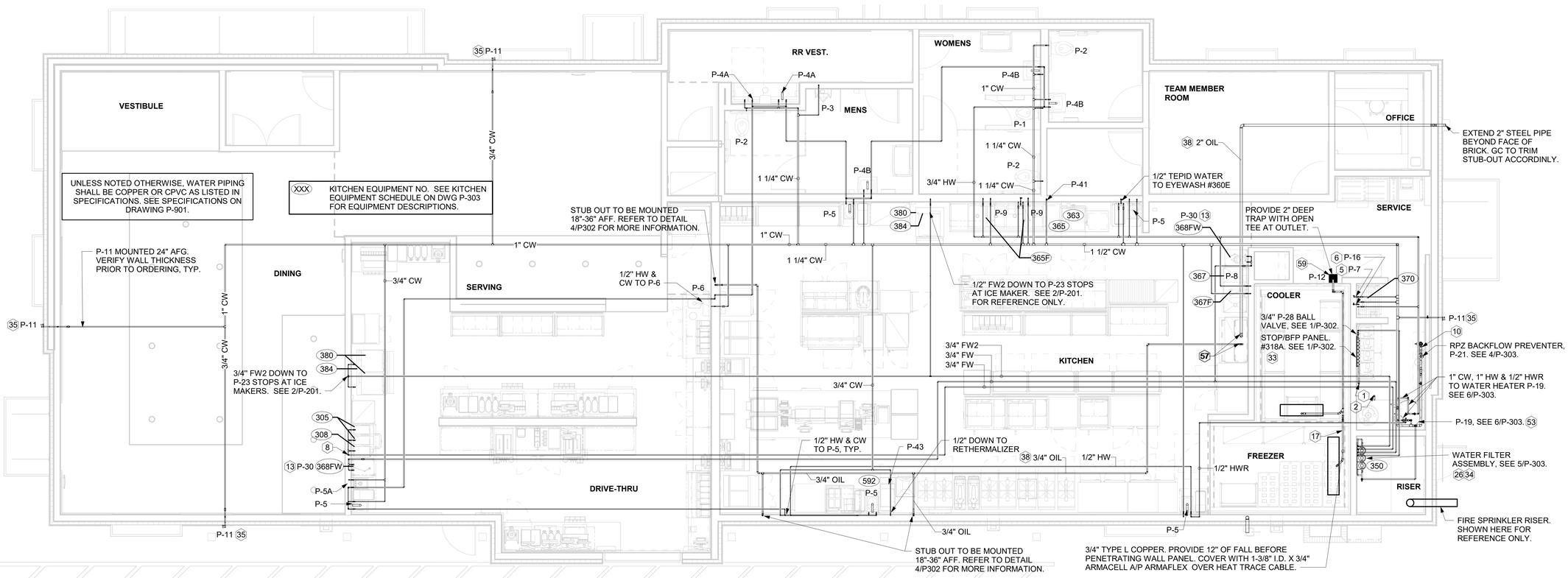
53 SEE 6/P-303 FOR P-19 WATER HEATER, AND P-38 HOT WATER CIRCULATING PUMP. COORDINATE WATER AND DWV PIPING IN THIS AREA WITH HVAC DUCT. SEE M-201 FOR DUCT LAYOUT.

57 TURN 3/4" AND 2" SCHEDULE 40 STEEL PIPE DOWN THROUGH CEILING FOR FUTURE DARPRO OIL TANK AND CAP ACCORDINGLY. PROVIDE CHROMED ESCUTCHEONS AT CEILING PENETRATIONS. 3/4" OIL LINE TO BE CAPPED 2" BELOW CEILING.

59 TURN 3/4" CONDENSATE PIPING OUT OF COOLER AND EXTEND OUTLET TO P-12 FUNNEL DRAIN, SECURE PIPING TO COOLER/FREEZER WALL WITH RUBBER INSULATED PIPE CLAMPS TO PREVENT GALVANIC CORROSION. SEAL ALL PENETRATIONS IN WALLS WITH PERMAGUM CORD. TERMINATE ABOVE FUNNEL WITH ELBOW AND AIR GAP. PROVIDE P-TRAP IN CONDENSATE DRAIN OUTSIDE COOLER WITH OPEN-TOPPED TEE AT TRAP OUTLET.

3. SHEET NOTES

1. COORDINATE VENT TERMINAL LOCATIONS WITH FRESH AIR HOODS ON ROOFTOP EQUIPMENT SO AS TO MAINTAIN MINIMUM 15'-0" CLEARANCE.
2. HOLD ALL PIPING ABOVE THE CEILING TIGHT TO STRUCTURE. DUCT LOCATIONS TAKE PRIORITY. SEE DRAWING M-201 FOR DUCT LAYOUT. COORDINATE CONFLICTS WITH GC.
3. SEE K-SHEET ELEVATIONS FOR KITCHEN EQUIPMENT WATER PIPING ROUGH-IN LOCATIONS.
4. SEE SHEET P-211 FOR BEVERAGE CONDUIT PIPING.
5. SEE RISER DIAGRAM 1/P-301 FOR VENT PIPING. SEE ROOF PLAN 1/P-250 FOR VENT THRU ROOF (VTR) LOCATION.
6. VERIFY WALL TYPE AND WALL THICKNESS AT EXTERIOR HOSE BIBBS PRIOR TO ORDERING EQUIPMENT.
7. WATER HEATER PIPING IS SHOWN FOR STATE/A.O. SMITH MODELS WITH SIDE INLET/OUTLET CONNECTIONS. ADJUST PIPING AS NEEDED TO ACCOMODATE OTHER CONNECTION POINTS WHEN ALTERNATE MODELS ARE PROVIDED.
8. COORDINATE ABOVE-CEILING PIPING LOCATIONS AND ROUTING WITH HVAC CONTRACTOR AND M-SHEETS PRIOR TO INSTALLATION. ALL MAIN DUCT TRUNK LOCATIONS SHALL TAKE PRIORITY. PIPING MAY REQUIRE REMOVAL AND REINSTALLATION AT PLUMBING CONTRACTOR'S EXPENSE IF PIPING OBSTRUCTS THE M-SHEET DUCT LAYOUT AS SHOWN OR PREVENTS ACCESS TO GREASE DUCT CLEANOUT OPENINGS.



1 WATER AND OIL PIPING PLAN PLUMBING
1/4" = 1'-0"

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SEALS

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NY LICENSE #062261-1

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

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SHEET
WATER AND OIL PIPING PLAN

SHEET NUMBER
P-201

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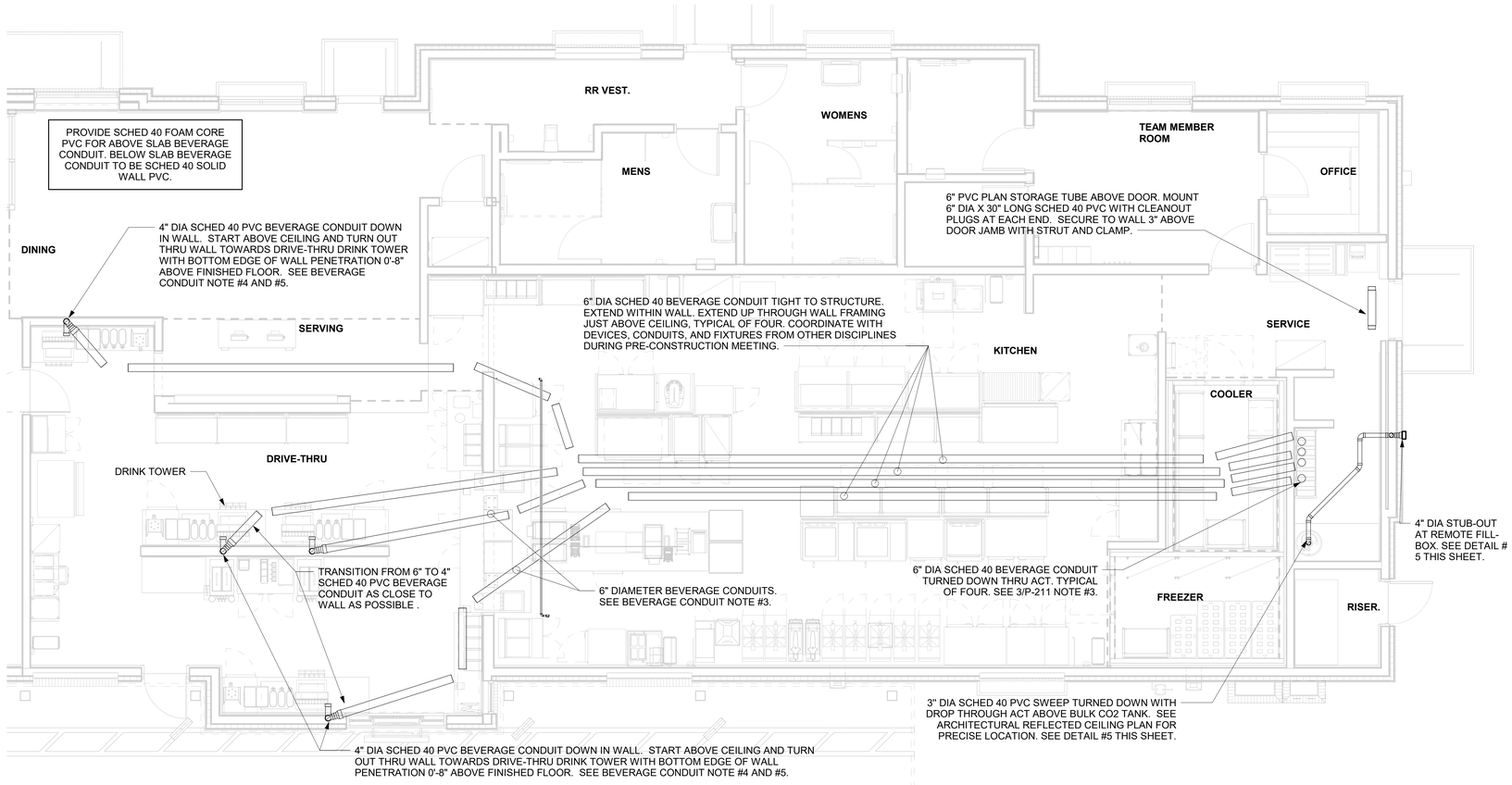
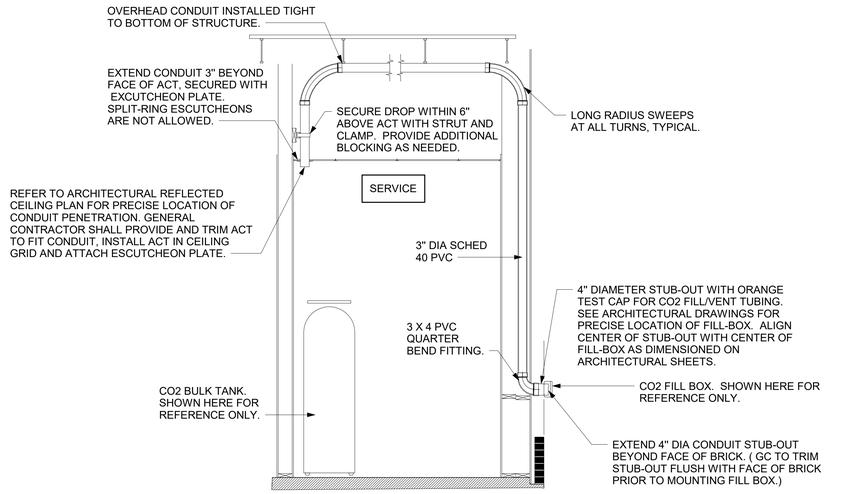
40-LSR-04937-P-201-WATER AND OIL PIPING PLAN

2. BEVERAGE CONDUIT NOTES

1. ROUTE BEVERAGE SYSTEM PIPING OVERHEAD FROM THE BEVERAGE RACK TO DRINK TOWERS IN FOUR (4)-6" DIA SCH 40 PVC DWV CONDUITS. ALL CONDUIT SHALL BE HELD TIGHT TO STRUCTURE AND SUPPORTED WITH THREADED ROD AND CLEVIS HANGERS AT INTERVALS SHOWN IN SPECIFICATIONS FOR HORIZONTAL OVERHEAD PIPING. COORDINATE ROUTING WITH THE GENERAL CONTRACTOR TO AVOID MECHANICAL AND ELECTRICAL SYSTEMS. SEE 1/P-101 AND 1/P-221 FOR BELOW-SLAB BEVERAGE CONDUIT.
2. COORDINATE ROUTING OF ALL CONDUITS WITH HVAC DUCT IN KITCHEN. SEE SHEET M-201 FOR LOCATION OF AC UNITS AND DUCT ROUTING.
3. TURN THE 6" DIA CONDUIT DOWN THROUGH THE CEILING AT THE BEVERAGE RACK AND PROVIDE CHROMED ESCUTCHEONS AT CEILING PENETRATIONS. TERMINATE OPPOSITE END ABOVE CEILING WHERE SHOWN ON PLANS.
4. AT 4" DIA CONDUIT DROP IN WALL, PROVIDE 1/8TH BEND FITTING WITH SHORT PIPE STUB AT BASE OF DROP. CUT STUB AND FITTING FLUSH WITH FINISHED WALL.
5. FOR BEVERAGE CONDUIT DROPS AT WALLS WITH SHEATHING EXTENDED ABOVE THE CEILING, PROVIDE APPROPRIATE FITTING AT UPPER END OF CONDUIT DROP TO EXTEND CONDUIT THROUGH SHEATHING.
6. INSTALL CONTINUOUS CONDUIT FROM CO2 FILL-BOX LOCATION TO BULK CO2 TANK AS SHOWN ON PLANS AND DETAILS. COORDINATE 4" CONDUIT WALL STUB INSTALLATION CLOSELY WITH GENERAL CONTRACTOR AND BRICK MASON. PRIOR TO COVERING UP OF CONDUIT, VERIFY WITH GENERAL CONTRACTOR THE FULL LENGTH OF FILL/VENT TUBING MAY BE INSTALLED AND SUBSEQUENTLY REMOVED FROM CONDUIT. SEE PLAN AND DETAIL #5 THIS SHEET.

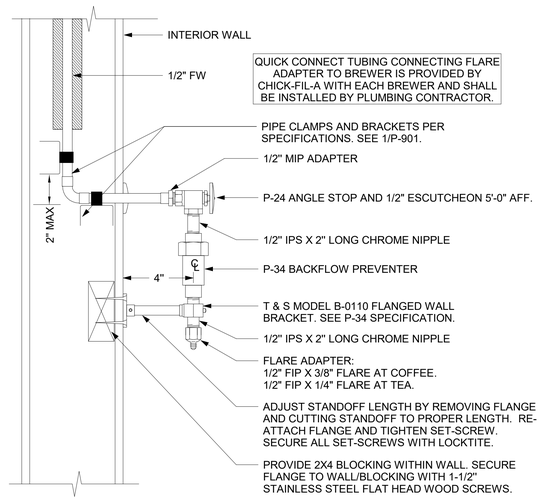


1 BEVERAGE CONDUIT PIPING PLAN
1/4" = 1'-0"

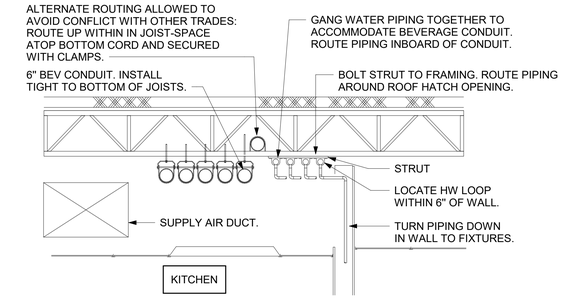


CO2 FILL BOX, FILL TUBING, AND VENT LINE SET PROVIDED BY CAF AND INSTALLED BY GC. GC TO COORDINATE REQUIRED LENGTH OF TUBING AND LINE SET FROM FILL BOX TO TANK LOCATION WITH TMS; LENGTH NOT TO EXCEED 100 FT. FINAL CONNECTION BY CO2 VENDOR.

5 CO2 FILL/VENT CONDUIT AND FILL-BOX INSTALLATION
NOT TO SCALE



4 COFFEE & TEA BREWER STOP & BFP
1/4" = 1'-0"



3 SECTION AT WET WALL
NOT TO SCALE

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SHEET
BEVERAGE CONDUIT PLAN

SHEET NUMBER
P-211

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40-LSR-04937-P-211-BEVERAGE CONDUIT PLAN

NOTE OF SPECIAL IMPORTANCE:

BELOW-SLAB BEVERAGE CONDUIT SHALL BE 6" DIAMETER SCHED 40 DWV SOLID WALL, NO FOAM CORE ALLOWED. USE LONG RADIUS ELBOWS (A.K.A. SWEEPS) ON ALL BEVERAGE CONDUIT. PLEASE NOTE BEVERAGE CONDUIT ROUGH-IN LOCATIONS ARE MEASURED TO THE FRACTION OF AN INCH. CARE MUST BE TAKEN WHEN INSTALLING 6" DIAMETER CONDUIT LOCATED WITHIN A 2X8 WALL. THE MARGIN FOR ERROR IS ONLY 1/16TH INCH.

COORDINATE LEGEND

TYPE	EXAMPLE	PIPE COORDINATES
#1	CW X=43'8" Y=14'7"	APPLIES TO WATER PIPING ROUGH-IN PENETRATION ONLY. SEE P-101 FOR CONTINUATION.
#2	VENT X=43'8" Y=14'7"	APPLIES TO DWV PENETRATION ONLY.
#3	6" BEV COND X=43'8" Y=27'3"	APPLIES TO 6" BEVERAGE CONDUIT PENETRATION ONLY.

IMPORTANT NOTE TO INSTALLER

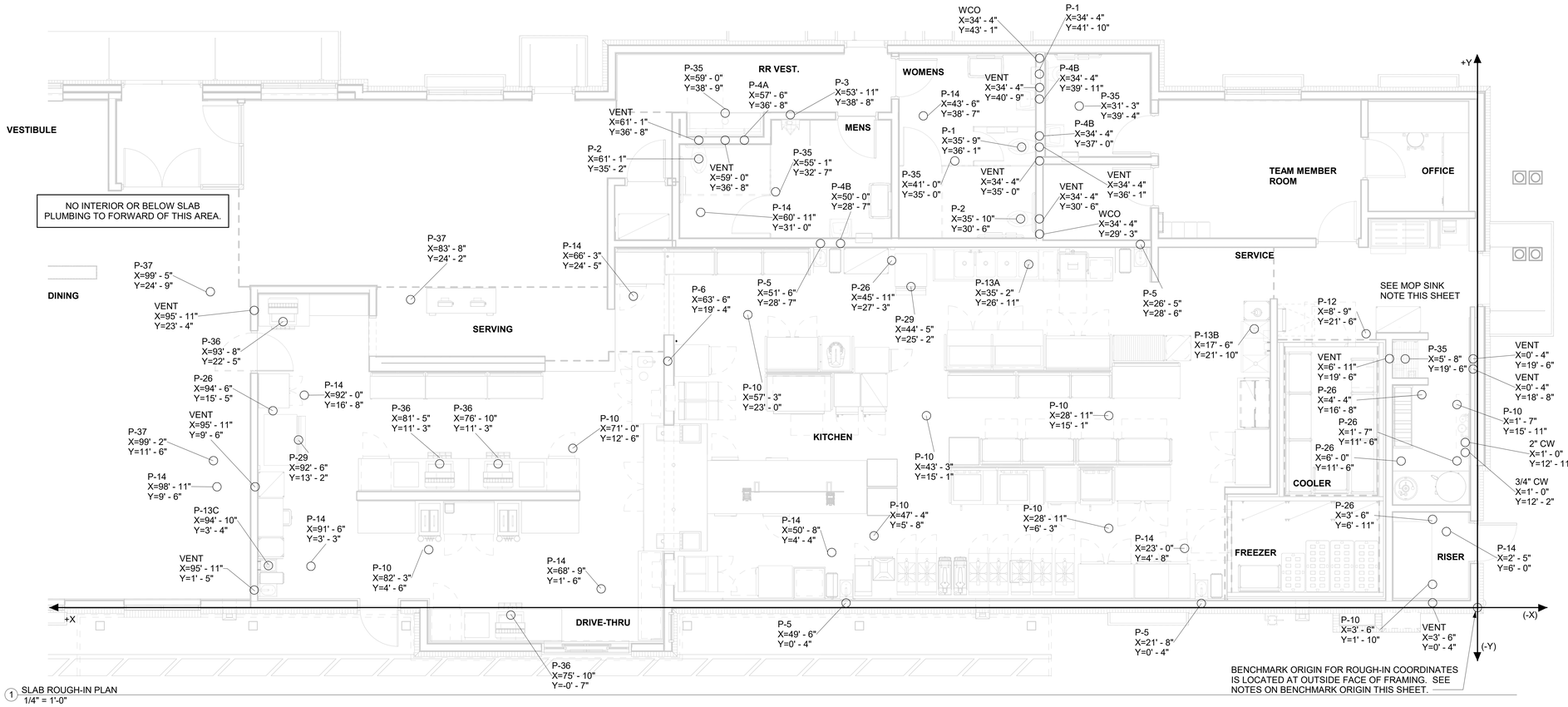
EXERCISE CAUTION WHEN LOCATING ROUGH-INS AT:
-DRIVE THRU AREA
-CUSTOMER WAIT AREA
DO NOT PULL TAPE FROM THE SLAB EDGE AT THESE AREAS WITHOUT COMPENSATING FOR DIFFERENCE IN OFFSETS. NOTE OFFSET AT BACK CORNER OF BUILDING.

MOP SINK NOTE

IMPORTANT: INSTALL FLOOR DRAIN WITH TOP OF DRAIN 0'-7" BFF. COORDINATE WITH GENERAL CONTRACTOR. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS.

NOTES ABOUT (0,0) BENCHMARK ORIGIN

1. THE (X=0, Y=0) BENCHMARK ORIGIN IS LOCATED AT THE OUTSIDE FACE OF FRAMING FOR THE EXTERIOR WALL AT THE CORNER WHERE SHOWN ON THE ADJACENT PLAN.
2. IT IS EXTREMELY IMPORTANT FOR THE PLUMBING INSTALLER TO BECOME COMPLETELY FAMILIAR WITH THE FACE-OF-FRAMING POSITION AND ITS RELATION TO THE FLOOR SLAB CONSTRUCTION PRIOR TO BEGINNING THE UNDERSLAB PLUMBING ROUGH-IN..
3. PLUMBING CONTRACTOR SHALL REVIEW STRUCTURAL DETAIL "TYPICAL SECTION @ EXTERIOR WALL" FOR PRECISE LOCATION OF FACE-OF-FRAMING WITH RESPECT TO THE SLAB INSTALLATION PRIOR TO LOCATING SLAB ROUGH-INS.



1 SLAB ROUGH-IN PLAN
1/4" = 1'-0"

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SHEET
SLAB ROUGH-IN PLAN

SHEET NUMBER
P-221

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40-LSR-04937-P-221-SLAB ROUGH-IN PLAN

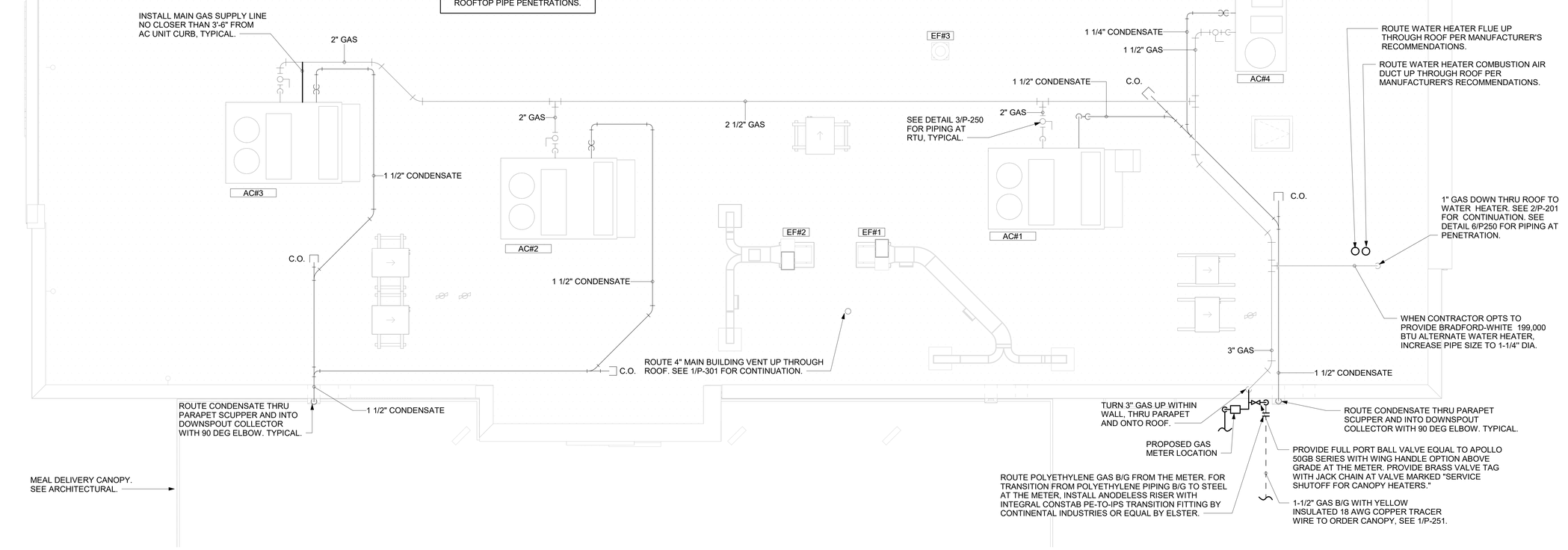
PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL CONDUIT FOR ICE MAKER, AND WALK-IN FREEZER AND COOLER REFRIGERANT TUBING THROUGH ROOF. SEE ARCHITECTURAL DRAWINGS FOR ROOFTOP REFRIGERANT CONDUIT INSTALLATIONS AND LOCATION OF ICE MAKER, FREEZER AND COOLER CONDENSING UNITS.

CONDENSATE PIPING ON ROOF SHALL BE SCHEDULE 40 PVC. SEE SPECIFICATIONS ON DRAWING P-901.

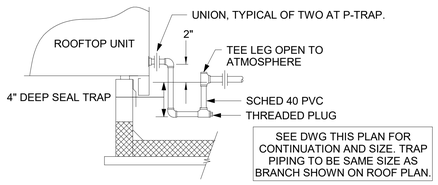
PIPING ON ROOF SHALL NOT BE INSTALLED NEARER THAN 1'-0' FROM INSIDE EDGE OF PARAPET. U.N.O.

SEE ARCHITECTURAL DETAILS FOR ROOFTOP PIPE PENETRATIONS.

INSTALL AND MOUNT ROOFTOP UNITS "ALT-AC" PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE EXACT LOCATION IN FIELD WITH OTHER TRADES AND MAINTAIN MANUFACTURER'S RECOMMENDED SERVICE CLEARANCES. CONFIRM THAT THE ROOFTOP UNITS OUTSIDE AIR INTAKE IS AT LEAST 10 FT AWAY FROM ANY FLUE VENT. SIZE CONDENSATE AND GAS PIPING BASED ON TRANE UNIT CAPACITY. REFER TO ROOF PIPING PLAN 1/P250 FOR FINAL CONNCETIONS TO MAIN LINES. TYPICAL OF THREE.

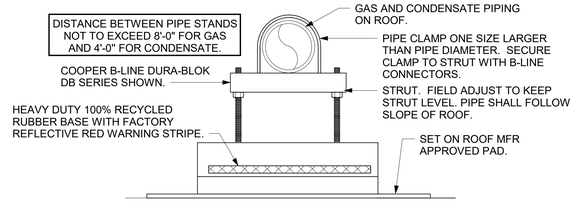


1 ALTERNATE ROOF PIPING PLAN - TRANE
1/4" = 1'-0"



3 CONDENSATE DRAIN PIPING
NOT TO SCALE

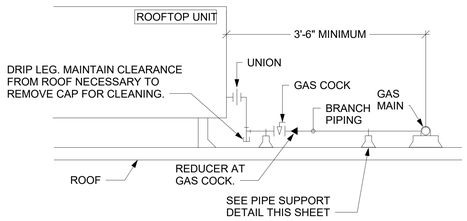
NOTES:
1. NON ADJUSTABLE MODEL DB610 PIPE STAND TO BE USED FOR NON-ELEVATED PIPING INSTALLED FLAT ON ROOF DECK.
2. PROVIDE MODEL DBE 10-8 OR DBE 10-12 OR DBE 10-16 AS NEEDED FOR ELEVATING CONDENSATE PIPING TO MAINTAIN PROPER SLOPE AND FOR GAS PIPING CROSSING OVER CONDENSATE PIPING.
3. ENSURE GAS AND CONDENSATE PIPING DO NOT OBSTRUCT ROOFTOP EQUIPMENT ACCESS OPENINGS. RE-PIPING OF SYSTEMS DUE TO CONFLICTS WITH EQUIPMENT ACCESS OPENINGS SHALL BE DONE AT PLUMBING CONTRACTOR'S EXPENSE.



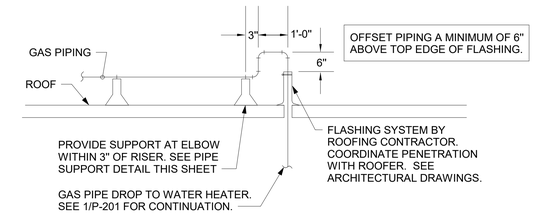
5 PIPING SUPPORT ON ROOF
NOT TO SCALE

5. GAS CONNECTION SCHEDULE	
EQUIPMENT	GAS LOAD
AC#1	250,000 BTUS
AC#2	250,000 BTUS
AC#3	320,000 BTUS
AC#4	130,000 BTUS
GIH (6 @ 50,000 BTU EA.)	300,000 BTUS
WATER HEATER	125,000 BTUS
TOTAL CONNECTED LOAD	1,375,000 BTUS
REMARKS:	1) EQUIVALENT TO 1,375.0 CFH 2) 7" W.C. DELIVERY PRESSURE 3) DEVELOPED LENGTH: 175 FT (METER TO AC#3)

NOTES:
1. INSTALL GAS PIPING SUCH THAT HVAC EQUIPMENT ACCESS PANELS AND/OR DOORS ARE IN NO WAY OBSTRUCTED BY PIPING, VALVES, OR SUPPORTS.
2. TO AVOID CONFLICT WITH AC UNIT ACCESS DORRS, INSTALL GAS PIPING NO CLOSER THAN 3'-6" FROM AC UNIT. (EXCEPT FOR BRANCH LINE CONNECTED TO AC UNIT.)
3. ROUTE BRANCH TAKE-OFF DIRECTLY FROM MAIN TO ROOFTOP UNIT AS SHOWN ON PLAN AND DETAILS WITHOUT LATERAL OFFSETS WHICH MAY OBSTRUCT UNIT ACCESS DOORS.



4 GAS PIPING AT RTU
NOT TO SCALE



6 GAS PIPE DROP TO WATER HEATER
NOT TO SCALE

LEGEND			
GIH#1	GAS INFRARED HEATER #1 (TYP.)	B/G	BELOW GRADE
———	NEW GAS PIPING ABOVE GRADE	EC	ELECTRICAL CONTRACTOR
– – –	NEW GAS PIPING BELOW GRADE	MC	MECHANICAL CONTRACTOR

CANOPY GENERAL NOTES

1. COORDINATE NEW WORK WITH EXISTING CONDUIT, STRUCTURE, AND PIPING. FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.
2. COORDINATE LOCATION AND RESPONSIBILITIES FOR UNDERGROUND PIPING AND ASSOCIATED TRENCHING WITH GENERAL CONTRACTOR PRIOR TO START OF WORK.
3. EXPOSED GAS PIPING SHALL BE PAINTED BY GENERAL CONTRACTOR.
4. ACTUAL NUMBER OF GAS INFRARED HEATERS WILL BE DETERMINED BY SITE-SPECIFIC CANOPY LAYOUT AND EQUIPMENT LOCATIONS, AS INDICATED ON ARCHITECTURAL PLANS.

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SEALS

ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

CHICK-FIL-A
Levittown
3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR LRG
RELEASE: 22.08
PRINTED FOR
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REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # KEA2552
DATE 10/04/2022
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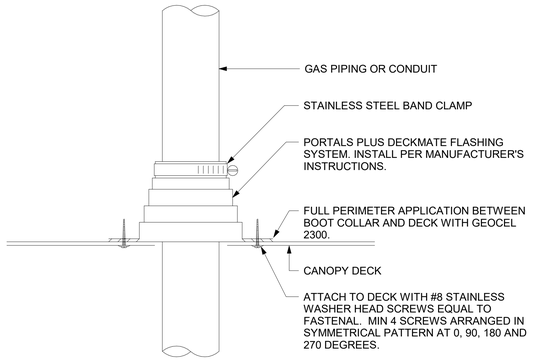
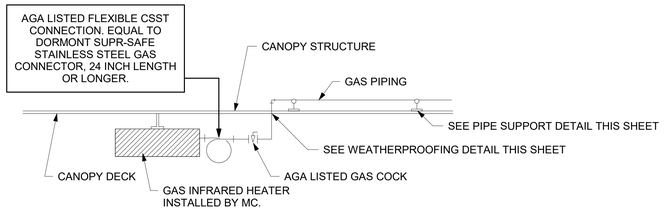
SHEET
ALTERNATE ROOF PLAN - TRANE

SHEET NUMBER
P-250a

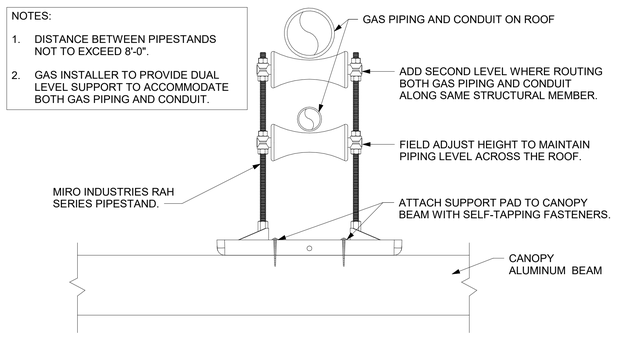
10/4/2022 10:47:47 AM Autodesk Docs://NY_04937_Levittown_2021.4_FSR/04937_Levittown_PLB.rvt
40-LSR-04937-P-250a-ALTERNATE ROOF PLAN - TRANE



2 WEATHERPROOFING AT CANOPY PENETRATION
NOT TO SCALE



3 GAS CONNECTION AT APPLIANCE
NOT TO SCALE

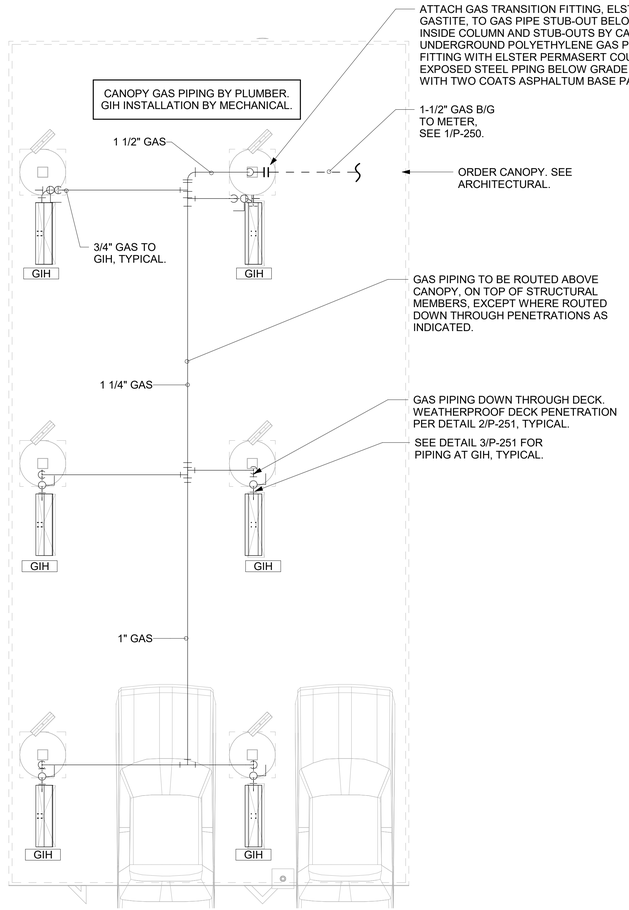


4 PIPING SUPPORT ON CANOPY
NOT TO SCALE

LEGEND			
GIH#1	GAS INFRARED HEATER #1 (TYP.)	B/G	BELOW GRADE
———	NEW GAS PIPING ABOVE GRADE	EC	ELECTRICAL CONTRACTOR
- - -	NEW GAS PIPING BELOW GRADE	MC	MECHANICAL CONTRACTOR

CANOPY GENERAL NOTES

1. COORDINATE NEW WORK WITH EXISTING CONDUIT, STRUCTURE, AND PIPING. FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.
2. COORDINATE LOCATION AND RESPONSIBILITIES FOR UNDERGROUND PIPING AND ASSOCIATED TRENCHING WITH GENERAL CONTRACTOR PRIOR TO START OF WORK.
3. EXPOSED GAS PIPING SHALL BE PAINTED BY GENERAL CONTRACTOR.
4. ACTUAL NUMBER OF GAS INFRARED HEATERS WILL BE DETERMINED BY SITE-SPECIFIC CANOPY LAYOUT AND EQUIPMENT LOCATIONS, AS INDICATED ON ARCHITECTURAL PLANS.



1 ORDER CANOPY PIPING PLAN
1/4" = 1'-0"

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SEALS

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CHICK-FIL-A
Levittown

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Levittown, NY 11714

FSR#04937

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DATE 10/04/2022
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SHEET
CANOPY PLAN AND DETAIL

SHEET NUMBER
P-251

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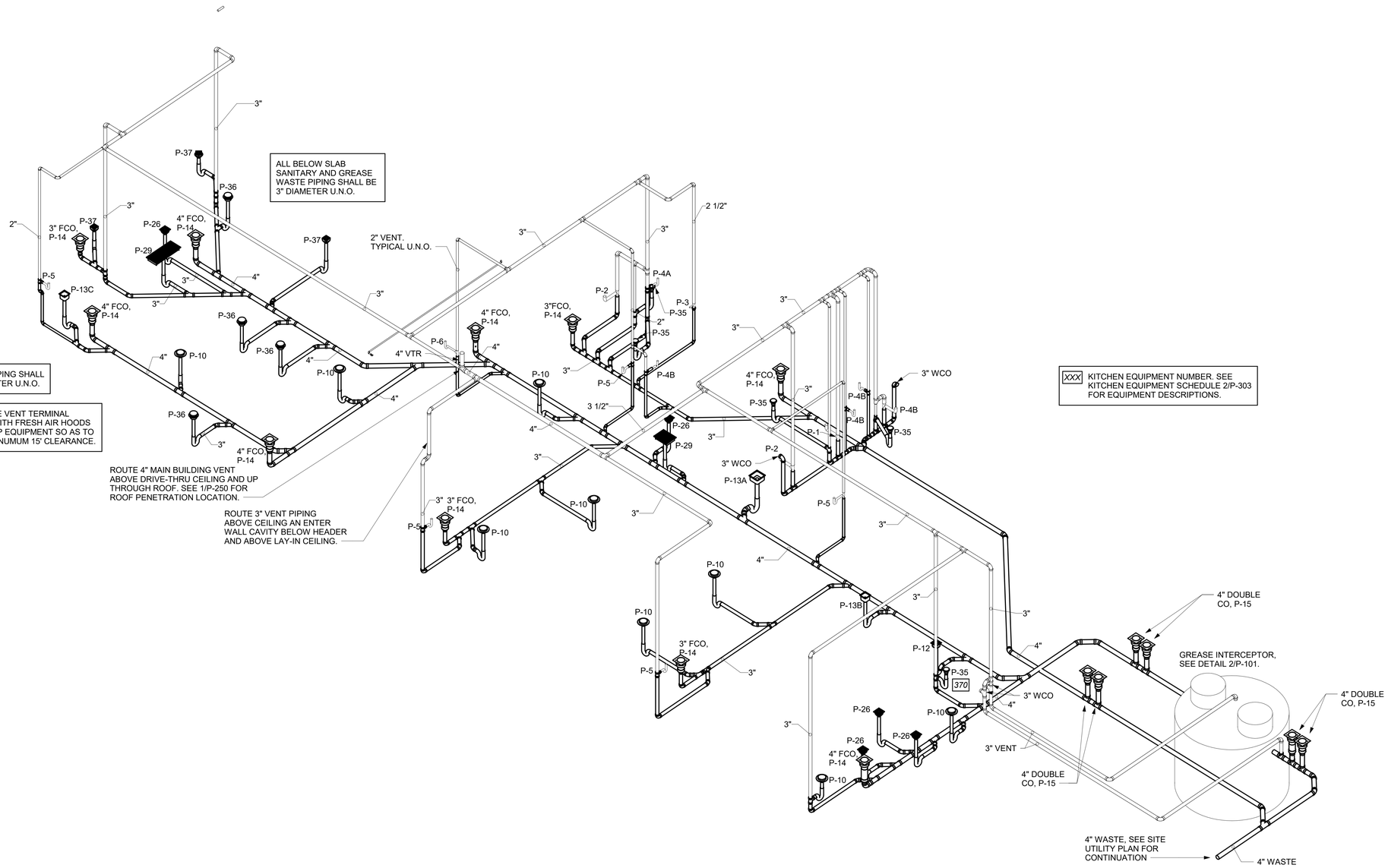
40-LSR-04937-P-251-CANOPY PLAN AND DETAIL



1 WASTE RISER DIAGRAM

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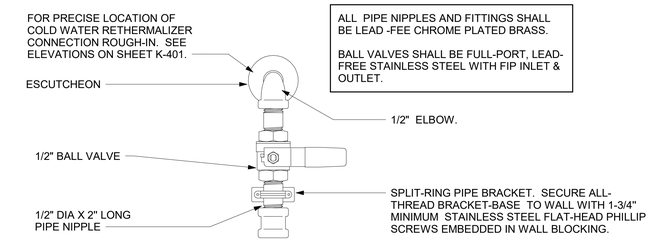
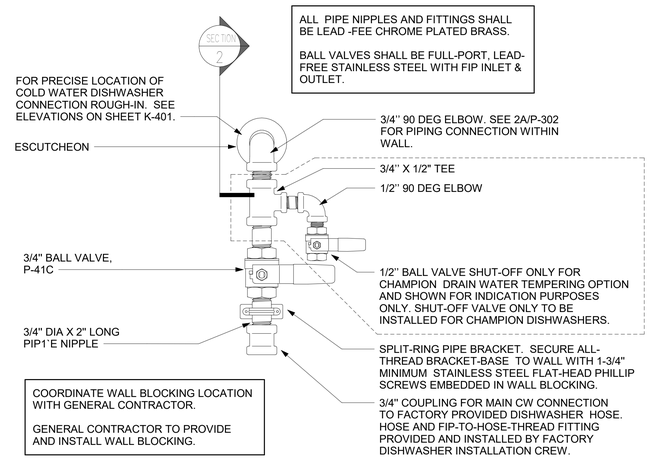
SHEET
DWV RISER DIAGRAM

SHEET NUMBER
P-301

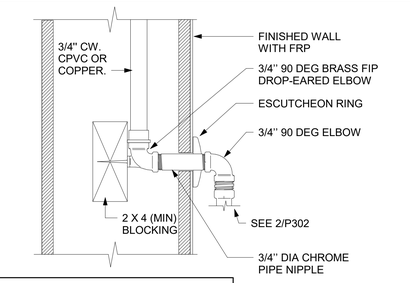
10/4/2022 10:31:46 AM Autodesk Docs://NY_04937_Levittown_2021.4_FSR/04937_Levittown_PLB.rvt
40-LSR-04937-P-301-DWV RISER DIAGRAM



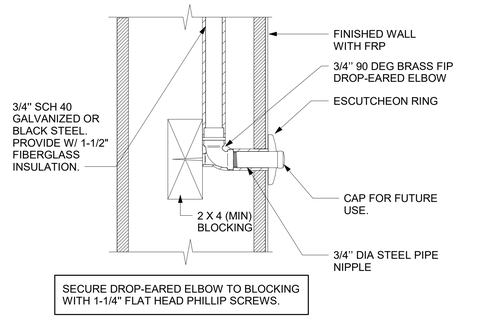
3 RETHERMALIZER SUPPLY VALVE
NOT TO SCALE



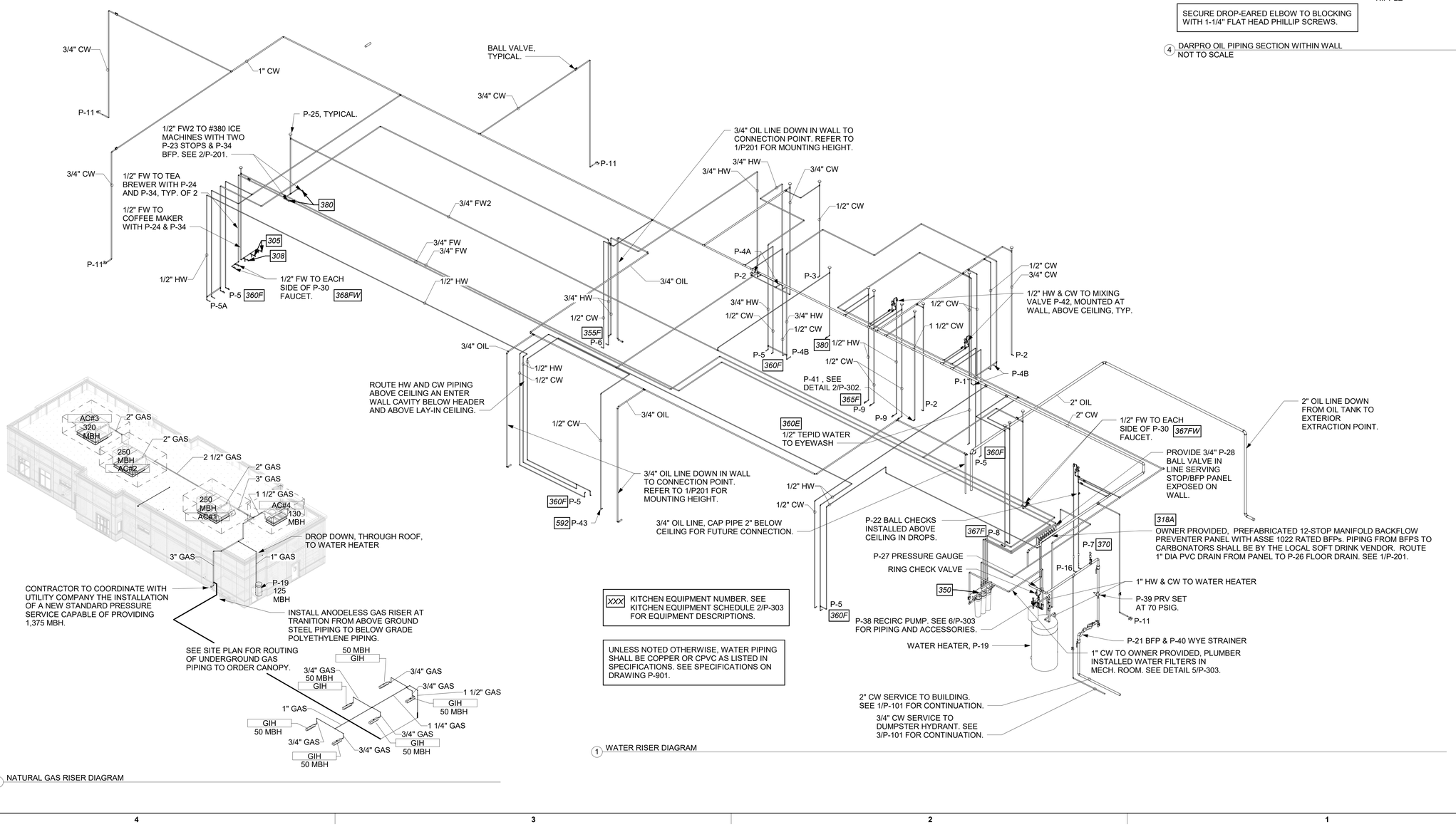
2 DISHWASHER SUPPLY VALVE ASSEMBLY
NOT TO SCALE



2A SECTION AT PIPNG WITHIN WALL
NOT TO SCALE



4 DARPRO OIL PIPING SECTION WITHIN WALL
NOT TO SCALE



1 WATER RISER DIAGRAM

5 NATURAL GAS RISER DIAGRAM

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Levittown

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SHEET
WATER RISER DIAGRAM

SHEET NUMBER
P-302

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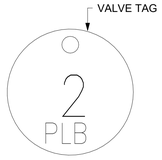
40-LSR-04937-P-302-WATER RISER DIAGRAM

VALVE TAG LEGEND	
VALVE	VALVE POSITION
① MAIN WATER SHUT-OFF	NORMALLY OPEN
② MAIN DRAIN	NORMALLY CLOSED
③ ACCESSORY SHUT-OFF	NORMALLY OPEN
④ WATER FILTER INLET	NORMALLY OPEN
⑤ RECIRC PUMP ISOLATION VALVE	NORMALLY OPEN
⑥ WATER HEATER INLET	NORMALLY OPEN
⑦ RESTROOM & KITCHEN COLD WATER	NORMALLY OPEN
⑧ POST HYDRANT COLD WATER	NORMALLY OPEN
⑨ GAS TO WATER HEATER	NORMALLY OPEN
⑩ WATER HEATER OUTLET	NORMALLY OPEN
NOTE: HANDLE IN-LINE WITH PIPING = VALVE OPEN	

LAMINATE VALVE TAG LEGEND AND MOUNT PERMANENTLY WHERE SHOWN ON WATER HEATER DETAIL IN AN ALUMINUM FRAME EQUAL TO SETON #68624.



② VALVE TAG SYMBOL AS SHOWN ON DETAIL 6/P-303. PROVIDE 1-1/2" ROUND BRASS VALVE TAG WITH 1/2" HIGH BLACK FILLED LETTERING. EACH TAG SHALL INDICATE VALVE NUMBER AND WILL ALSO HAVE "PLBG" STAMPED ON THE TAG IN 1/4" HIGH BLACK FILLED LETTERING EQUAL TO SETON #M4506. HANG WITH BRASS JACK CHAIN ON VALVE HANDLE.

③ VALVE TAGS AND LEGEND
NOT TO SCALE

2. KITCHEN EQUIPMENT SCHEDULE

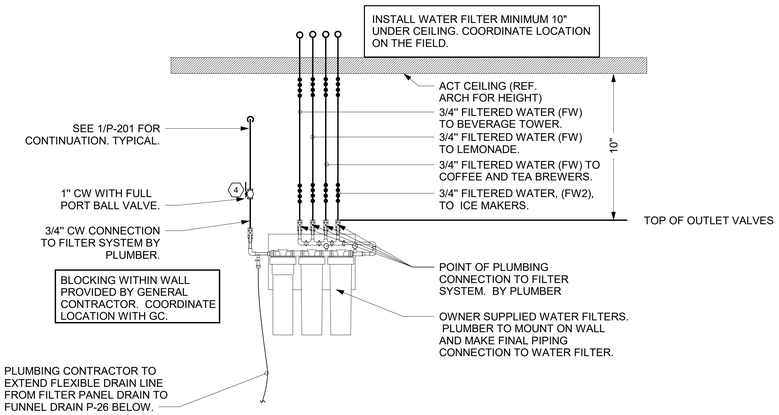
TAG	DESCRIPTION	FW	FW2	CW	HW	WASTE	ROUGH-IN
305	TEA BREWER	1/2"	X	X	X	X	P-24, SEE K-611 & 6/P-211
308	COFFEE MAKER	1/2"	X	X	X	X	P-24, SEE K-611 & 6/P-211
318A	CARBONATOR BFP PANEL	3/4"	X	X	X	X	P-28, SEE K-611
350	WATER FILTER PANEL	(3) 3/4"	3/4"	3/4"	X	X	SEE DET 5/P-303
360E	EMERGENCY EYEWASH STATION	X	X	1/2"*	1/2"*	X	*1/2" TEPID WATER FROM P-42, SEE K-611 & 1/P-201
363	DISHWASHER	X	X	3/4"	X	INDIRECT TO P-13A	P-41, SEE K-611 & 1/P-201
365	POT SINK	X	X	(2) 1/2"	(2) 1/2"	INDIRECT	TWO #365F FAUCETS, P-9 SEE K-611
367	VEGETABLE PREP SINK	X	X	1/2"	1/2"	INDIRECT	#367F FAUCET, P-8 SEE K-611
367FW	FILTERED WATER FAUCET	(2) 1/2"	X	X	X	X	P-30 48" AFF.
368FW	FILTERED WATER FAUCET	(2) 1/2"	X	X	X	X	P-30 48" AFF.
370	MOP SINK	X	X	1/2"	1/2"	3" P-35	P-7 SEE K-611
380	ICE MAKER	X	(3) 1/2"	X	X	INDIRECT	P-23 SEE K-611 & 3/P-201
381	ICE BIN (1 HEAD)	X	X	X	X	INDIRECT	SEE DET 3/P-201
384	ICE BIN (2 HEAD)	X	X	X	X	INDIRECT	SEE DET 3/P-201
592	RETHERMALIZER	X	X	1/2"	X	INDIRECT	P-43 SEE DET 3/P-302

1. FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	FW	FW2	CW	HW	WASTE
P-1	WATER CLOSET - FLOOR MOUNT (1.28 GPF)	X	X	1"	X	3"
P-2	WATER CLOSET - ADA FLOOR MOUNT (1.28 GPF)	X	X	1"	X	3"
P-3	URINAL - ADA WALL HUNG (0.125 GPF)	X	X	3/4"	X	2"
P-4A	LAVATORY - ADA COUNTERTOP (0.50 GPM)	X	X	1/2"	1/2"	1-1/4"
P-4B	LAVATORY - ADA WALL-MOUNTED (0.50 GPM)	X	X	1/2"	1/2"	1-1/4"
P-5	KITCHEN HAND SINK - WALL HUNG (0.5 GPM)	X	X	1/2"	1/2"	1-1/2"
P-5A	KITCHEN DUMP SINK - WALL HUNG (1.0 GPM)	X	X	1/2"	1/2"	1-1/2"
P-6	SINGLE COMP SINK - COUNTERTOP (1.0 GPM)	X	X	1/2"	1/2"	1-1/2"
P-7	MOP SINK	X	X	1/2"	1/2"	3"
P-8	VEGETABLE PREP SINK (1.0 GPM SPRAYER)	X	X	1/2"	1/2"	(2) 1-1/2"
P-9	POT SINK (1.0 GPM SPRAYER)	X	X	(2) 1/2"	(2) 1/2"	(4) 1-1/2"
P-10	FLOOR DRAIN (ROUND TOP)	X	X	X	X	3"
P-11	WALL HYDRANT (NON FREEZE)	X	X	3/4"	X	X
P-12	FUNNEL DRAIN (3")	X	X	X	X	3"
P-13A	FLOOR SINK (4") 12" TOP	X	X	X	X	4"
P-13B	FLOOR SINK (3") 8" TOP	X	X	X	X	3"
P-13C	FLOOR SINK (3") 8" TOP	X	X	X	X	3"
P-14	CLEANOUT INSIDE BUILDING	X	X	X	X	SEE PLAN
P-15	CLEANOUT OUTSIDE BUILDING	X	X	X	X	SEE PLAN
P-16	3-WAY VALVE/ VACUUM BREAKER	X	X	3/4"	3/4"	X
P-17	VACUUM RELIEF VALVE	X	X	3/4"	X	X
P-18	EXPANSION TANK	X	X	3/4"	X	X
P-19	WATER HEATER	X	X	1"	1"	X
P-20	THERMOMETER	X	X	X	1/2"	X
P-21	BACKFLOW PREVENTER	X	X	1-1/2"	X	X
P-22	MOP SINK CHECK VALVES	X	X	1/2"	1/2"	X
P-23	UTILITY CONNECTION (ICE MAKER)	X	1/2"	X	X	X
P-24	UTILITY CONNECTION (COFFEE & TEA)	1/2"	X	X	X	X
P-25	SHOCK ABSORBER	1/2"	1/2" & 3/4"	1/2"	1/2"	X
P-26	FUNNEL DRAIN	X	X	X	X	3"
P-26A	TRAP SEAL PROTECTOR	X	X	X	X	3"
P-27	WATER PRESSURE GAUGE	X	X	1/4"	X	X
P-28	BALL VALVE-CARBONATOR STOP/BFP PANEL	3/4"	X	X	X	X
P-29	ICE MACHINE TRENCH DRAIN	X	X	X	X	3"
P-30	FILTERED WATER FAUCET	(2) 1/2"	X	X	X	X
P-31	DUMPSTER POST HYDRANT	X	X	3/4"	X	X
P-32	DUMPSTER DRAIN	X	X	X	X	3"
P-33	TRAP PRIMER (MECHANICAL TYPE)	X	X	1/2"	X	X
P-34	DISPENSER BACKFLOW PREVENTER	1/2"	X	X	X	X
P-35	FLOOR DRAIN	X	X	X	X	3"
P-36	BEVERAGE TOWER INDIRECT RECEIVER	X	X	X	X	3"
P-37	FLOOR DRAIN (SQUARE TOP)	X	X	X	X	3"
P-38	HOT WATER CIRCULATING PUMP	X	X	X	1/2"	X
P-39	PRESSURE REDUCING VALVE	X	X	2"	X	X
P-40	WYE STRAINER	X	X	2"	X	X
P-41	DISHWASHER SUPPLY VALVES	X	X	3/4"	X	X
P-42	EMERGENCY EYEWASH MIXING VALVE	X	X	1/2"	1/2"	X
P-43	RETHERMALIZER SUPPLY VALVE	X	X	3/4"	X	X

NOTES: ① REFER TO FOOD SERVICE DRAWINGS FOR KITCHEN EQUIPMENT INSTALLATION AND HOOK-UP RESPONSIBILITIES.

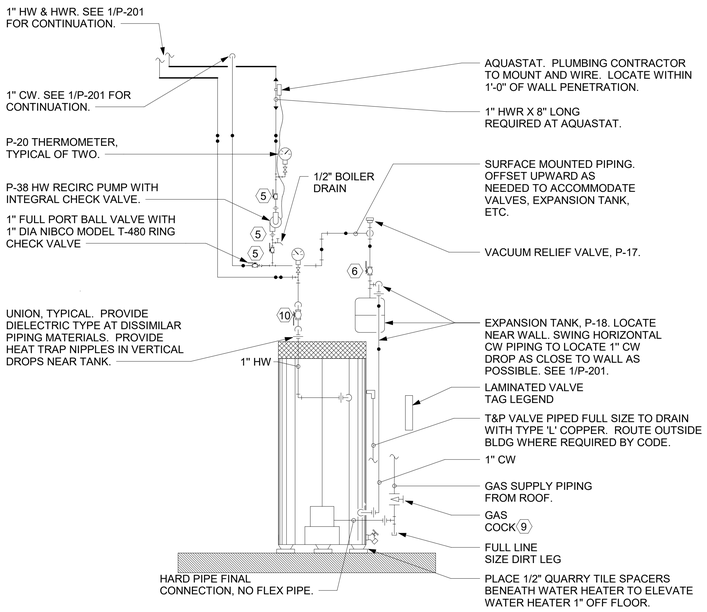
② DO NOT MANIFOLD POT OR PREP SINK DRAINS TOGETHER UNLESS ALLOWED BY LOCAL AUTHORITY.



⑤ PIPING AT WATER FILTER
NOT TO SCALE

NOTES TO WATER HEATER INSTALLER:

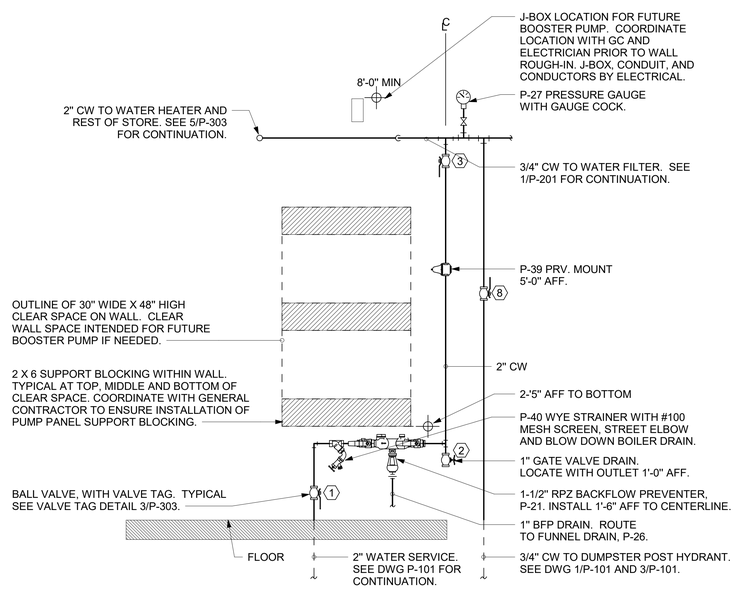
1. POSITION VALVES AND TRIM SUCH THAT VALVES AND TRIM ARE UNOBSTRUCTED TO VIEW AND SO THAT ACCESS FOR OPERATION OR REPAIR IS POSSIBLE WITHOUT USE OF STEP LADDERS OR NEED TO DISASSEMBLE ANY COMPONENTS.
2. VENT HEATER UP THRU ROOF AND PROVIDE FRESH AIR PIPING PER MANUFACTURER'S RECOMMENDATIONS.



⑥ PIPING AT WATER HEATER
NOT TO SCALE

NOTE OF SPECIAL IMPORTANCE

1. LOCATIONS OF 2" CW RISER AND CLEAR SPACE ARE DIMENSIONED BECAUSE THEY ARE CRITICAL FOR THE FUTURE PUMP PANEL INSTALLATION.
2. GENERAL CONTRACTOR SHALL ENSURE OTHER TRADES SHALL NOT INSTALL ANY OTHER BUILDING COMPONENT WITHIN CLEAR SPACE OR WITHIN 10" OF EDGES.



④ PIPING AT WATER SERVICE ENTRANCE IN MECHANICAL ROOM
NOT TO SCALE

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SHEET
DETAILS AND SCHEDULES

SHEET NUMBER
P-303

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40-LSR-04937-P-303-DETAILS AND SCHEDULES

1. SECTION C15100 - PLUMBING SPECIFICATIONS

PART I - PRODUCTS (C15100)

1.01 GENERAL REQUIREMENTS

A. THE FOLLOWING SPECIFICATIONS ARE THE MINIMUM REQUIREMENT. WHERE FEDERAL, STATE OR LOCAL REQUIREMENTS DIFFER FROM THIS SPECIFICATION, THE MORE STRINGENT OF THE TWO SHALL BE FOLLOWED.

1.02 SCOPE

A. HOT AND COLD POTABLE WATER PIPING ABOVE SLAB SHALL BE TYPE 'L' HARD DRAWN COPPER OR FLOWGUARD GOLD CPVC AS MANUFACTURED BY NIBCO OR CHARLOTTE PIPE & FOUNDRY AND MEETING ASTM D-2846. FILTERED WATER PIPING SHALL BE FLOWGUARD GOLD CPVC. HOT AND COLD PIPING WITHIN WALLS BEHIND KITCHEN HOODS SHALL BE COPPER.

B. POTABLE WATER PIPING BELOW SLAB AND OUTSIDE BELOW GRADE SHALL BE TYPE "K" SOFT ANNEALED SEAMLESS. NO JOINTS SHALL BE ALLOWED BELOW SLAB. POTABLE WATER PIPING BELOW GRADE SHALL BE SLEEVED FOR ITS ENTIRE LENGTH WITH POLY SLEEVE AS MADE BY IPS WATER-TITE. ALL SLAB PENETRATIONS SHALL BE SLEEVED WITH POLY SLEEVE TO PROTECT PIPING FROM CORROSION BY CONCRETE.

C. COPPER PIPE FITTINGS SHALL BE WROUGHT COPPER SWEEP PATTERN FITTINGS SOLDERED USING 95-5 LEAD-FREE SOLDER MEETING ASTM B-32 OR BRAZED WITH SIL-FOS. SOLDER FLUXES SHALL MEET ASTM B-813 AND SHALL BE LEAD FREE. BRAZING FLUXES SHALL MEET AWS FB3-A OR FB3-C.

D. WATER PIPING DOWNSTREAM OF SOFT DRINK CARBONATORS SHALL BE PROVIDED AND INSTALLED BY LOCAL SOFT DRINK VENDOR.

E. CPVC FITTINGS FOR PIPING SHALL BE SOLVENT WELD TYPE MEETING ASTM D-2846 WITH CEMENTS MEETING ASTM F-493 AND PRIMER MEETING ASTM F-656. CURE TIME MUST COMPLY WITH MANUFACTURER'S RECOMMENDATIONS. FOR CPVC PIPING INSTALLATION, WALL STUBS AT FIXTURES AND EQUIPMENT SHALL BE COPPER AND SHALL BE SERIES 630-C. CPVC-TO-COPPER STUB OUT ELBOWS BY SIOUX CHIEF.

F. NIPPLES, ELBOWS, AND OTHER ACCESSORY FITTINGS REQUIRED TO COMPLETE ANY WATER PIPING CONNECTION SHALL BE BRASS OR OF SIMILAR TYPE METAL AS THE FITTING TO WHICH IT IS CONNECTED. GALVANIZED FITTINGS ARE PROHIBITED. (EXCEPTION: GALVANIZED HEAT TRAP WATER HEATER NIPPLES IF INTERNALLY PROTECTED WITH TEFLON OR POLYMER CORROSION-RESISTANT COATING.)

G. ALL HVAC CONDENSATE PIPING SHALL BE SCHEDULE 40 PVC DWV AS MANUFACTURED BY CHARLOTTE PIPE AND MEETING ASTM D-1784, D-1785 AND D-2665.

H. U.N.O., ALL SANITARY WASTE, VENT, STORM DRAINAGE PIPING AND FITTINGS INSIDE THE BUILDING, ABOVE AND BELOW GRADE, AND FOR ROOFTOP CONDENSATE, SHALL BE SOLID WALL SCHEDULE 40 PVC DWV AS MANUFACTURED BY CHARLOTTE PIPE AND MEETING ASTM D-2665 AND D-2949. FOAM CORE AND/OR CELLULAR CORE PVC PIPING SHALL NOT BE ALLOWED. PVC PIPING OUTSIDE THE BUILDING, BELOW GRADE, SHALL BE TYPE SDR-35 MEETING ASTM D-3034, U.N.O.

I. DWV PIPE AND FITTINGS WITHIN WALLS BEHIND KITCHEN HOODS SHALL BE SERVICE WEIGHT HUBLESS CAST IRON WITH SLEEVE, SHIELD, AND DRAWBAND JOINTS MEETING ASTM A-888 AND ASTM C-564.

J. PVC-DWV FITTINGS FOR PIPING SHALL BE SOLVENT WELD TYPE INSIDE AND UNDERSLAB MEETING ASTM D-2665, D-3311 AND F-186. CEMENTS SHALL MEET ASTM D-2564 AND PRIMER MEETING ASTM F-656. CURE TIME MUST COMPLY WITH MANUFACTURER'S RECOMMENDATIONS. EXTERIOR PIPING JOINTS SHALL BE NEOPRENE PUSH-ON TYPE.

K. PROVIDE 1" THICK PIPE INSULATION FOR ALL ABOVE SLAB HOT AND TEMPERED WATER PIPING. PROVIDE 1/2" THICK INSULATION FOR ALL ABOVE SLAB COLD WATER, FILTERED WATER, CONDENSATE PIPING, AND HORIZONTAL RAIN WATER CONDUCTORS INSIDE THE BUILDING. PIPING INSULATION SHALL BE KNAUF 1000F 25/50 FIBERGLASS PIPE COVERING, WHITE KRAFT PAPER VAPOR BARRIER (.02 PERMS) BONDED TO ALUMINUM FOIL AND REINFORCED WITH GLASS FIBERS. MAXIMUM THERMAL CONDUCTIVITY OF 0.23 AT 75F. LONGITUDINAL LAP SHALL BE SELF SEALING. INSULATION FOR WALK-IN COOLER/FREEZER CONDENSATE PIPING SHALL BE ARMACELL A/P ARMAFLEX WITH MINIMUM 3/4" WALL THICKNESS.

L. PIPE INSULATION AND COVERINGS SHALL HAVE A RATING OF NOT GREATER THAN 25 FLAME SPREAD, NO HIGHER THAN 50 SMOKE DEVELOPED, AND NO MORE THAN 50 FUEL CONTRIBUTED. THE ONLY EXCEPTION SHALL BE ARMAFLEX AP, WHEN SPECIFIED, WHICH SHALL NOT EXCEED 100 SMOKE DEVELOPED.

M. A PVC 25/50 PRE-FORMED COVER SHALL BE PROVIDED AT ALL INSULATED PIPING FITTINGS EQUAL TO PROTO PVC CORP LOSMOKE, 800-875-7768.

N. ALL ABOVE GRADE NATURAL GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL MEETING ASTM A53 WITH SCREWED OR WELDED FITTINGS AND GASKET TYPE UNIONS AND FLANGES. FOR SCREWED PIPING, PIPING SHALL BE JOINED WITH BLACK 150 POUND MALLEABLE IRON SCREWED FITTINGS AS ALLOWED BY LOCAL AUTHORITY. CONTRACTOR SHALL VERIFY THE NEED FOR WELDED PIPING AS REQUIRED BY THE LOCAL GAS CODE AND/OR APPLICABLE LOCAL ORDINANCES AND AMENDMENTS.

O. ALL BELOW GRADE NATURAL GAS PIPING SHALL BE MEDIUM DENSITY POLYETHYLENE (PE) MEETING ASTM D2513 AS MANUFACTURED BY GASTITE WITH JOINING SYSTEM AS MANUFACTURED BY CON-STAB. TRANSITIONS FROM ABOVE GRADE RIDGID PIPING TO PE BELOW GRADE PIPING SHALL BE MADE WITH ANODE-LESS RISER ASSEMBLY AS MANUFACTURED BY CON-STAB.

P. EXPOSED SUPPORTS AND ATTACHMENTS SHALL BE STAINLESS STEEL, CHROME OR CHROME PLATED. GALVANIZED ATTACHMENTS WILL NOT BE ACCEPTED.

Q. USE MATERIALS SPECIFIED ON THESE PLANS. SUBSTITUTIONS ARE ALLOWED ONLY IF SPECIFIED MATERIALS ARE UNAVAILABLE. PRODUCT SUBSTITUTIONS WILL NOT BE ACCEPTED WITHOUT PRIOR APPROVAL. ALL WATER PIPING, FITTINGS, FIXTURES AND ACCESSORIES SHALL BE CERTIFIED LEAD FREE AS DEFINED IN, AND PER THE INTENT OF, THE "REDUCTION IN LEAD IN DRINKING WATER ACT".

PART II - EXECUTION (C15100)

2.01 TRENCHING (C15100)

A. EXCAVATION, BACKFILLING, AND TRENCH WORK SHALL BE DONE IN ACCORDANCE WITH LATEST O.S.H.A. AND APPLICABLE SAFETY STANDARDS.

B. PROVIDE NECESSARY SHORING AND CLEANING TO KEEP TRENCHES IN GOOD WORKING CONDITION, INCLUDING PUMPING OUT WATER.

C. IN MOSTLY ROCK MATERIAL, TRENCHES SHALL BE EXCAVATED TO 6" BELOW THE ELEVATION OF THE BOTTOM OF THE PIPES. AFTER EXCAVATION, TRENCH SHALL THEN BE FILLED TO THE PROPER ELEVATION WITH CRUSHED LIMESTONE. GRAVEL SHALL BE REMOVED FROM UNDER PIPE BELLS SO THE PIPE RESTS FIRMLY ON THE TRENCH BOTTOM.

D. IN MOSTLY EARTH OR SAND MATERIAL, TRENCHES SHALL BE EXCAVATED TO 6" BELOW THE ELEVATION OF THE BOTTOM OF THE PIPES. AFTER EXCAVATION, TRENCH SHALL THEN BE FILLED TO THE PROPER ELEVATION WITH FINE SAND OR GRAVEL. TRENCH BOTTOM SHALL BE REMOVED AT PIPE BELLS SO THE PIPE RESTS FIRMLY ON THE TRENCH BOTTOM.

E. BACKFILLING AND TAMPING SHALL BE CAREFULLY DONE BY HAND SIMULTANEOUSLY ALONG BOTH SIDES OF THE PIPE USING ROCK FREE EARTH, CRUSHED STONE OR SAND UNTIL THE PIPE IS COVERED TO A DEPTH OF AT LEAST 12". BACKFILL SHALL BE ACCOMPLISHED IN SUCCESSIVE 6" LAYERS. THE REST OF THE FILL-UP TO THE TOPSOIL LAYER MAY BE GRAVEL OR ROCK FREE EARTH.

F. ACCEPTABLE SOIL MATERIALS FOR BACKFILL AND FILL SHALL BE FREE OF CLAY, ROCK OR GRAVEL LARGER THAN 2" IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS AND OTHER DELETERIOUS MATTER HAVING A PLASTICITY INDEX LESS THAN 30. BACKFILL SHALL BE ACCOMPLISHED IN LAYERS OF NOT MORE THAN 6" AND EACH LAYER SHALL BE COMPACTED. THE LAST 12" OF BACKFILL SHALL BE ROCK FREE TOPSOIL.

G. SURFACE SHALL BE RESTORED TO ITS ORIGINAL CONDITION.

2.02 INSTALLATION (C15100)

A. WATER PIPING IN EXTERIOR WALL SHALL BE INSTALLED ON THE HEATED SIDE OF WALL INSULATION.

B. EXPOSED HOT AND COLD WATER TRIM FITTINGS AND ACCESSORIES IN FINISHED AREAS SHALL BE CHROME FINISHED.

C. ACCEPTABLE METHODS OF PIPE SUPPORT WITHIN WALLS SHALL BE THE SUMNER SYSTEM, POSIFIX, STAKFIX, PIPEFIX, HOLDRITE OR CHANNEL.

D. PROVIDE J.R. SMITH OR APPROVED EQUAL SHOCK ABSORBERS #5005 THRU 5050 SIZE AS RECOMMENDED BY MANUFACTURER INSTALLED ON HOT AND COLD WATER BRANCH LINES CONTAINING SINGLE LEVER FAUCETS, FLUSH VALVES OR EQUIPMENT WITH QUICK CLOSING VALVES BETWEEN THE LAST TWO FIXTURES AS SHOWN ON THE CONTRACT DRAWINGS. SHOCK ABSORBERS SERVICING FIXTURES WITH FLUSH VALVES SHALL BE SECURELY ANCHORED IN THEIR VERTICAL POSITION.

E. SANITARY WASTE LINES SHALL BE UNIFORMLY GRADED TO ELEVATIONS SHOWN. IF NO ELEVATIONS ARE GIVEN, SEWERS SHALL BE PITCHED NOT LESS THAN 1/4" PER FOOT FOR ALL PIPING 2-1/2" IN DIAMETER AND SMALLER AND 1/8" PER FOOT FOR ALL PIPING 3" IN DIAMETER AND LARGER.

F. STORM PIPING SHALL BE SLOPED AT 1/4" PER FT (2%) UNLESS NOTED OTHERWISE ON PLANS.

G. SUPPORT HORIZONTAL PIPING ACCORDING TO LOCAL PLUMBING CODE. HANGER RODS SHALL BE SIZED AS FOLLOWS:

NOMINAL PIPE SIZE (IN)	MINIMUM HANGER DIAMETER (IN)
1/2	3/8
3/4 TO 1-1/2	3/8
2 TO 2-1/2	3/8
3 TO 6	1/2

H. HANGERS FOR PIPING GREATER THAN 1" SHALL PASS OVER THE INSULATION. PROVIDE SADDLES FOR INSULATED PIPING.

I. INSULATION SHALL BE APPLIED WITH JOINTS TIGHTLY BUTTED. OPEN CRACKS, VOIDS AND DEPRESSIONS SHALL BE FILLED WITH HYDRAULIC SETTING CEMENT. LAPPING MATCHING THE FINISH SHALL BE PASTED NEATLY OVER JOINTS. FITTINGS AND VALVES SHALL BE INSULATED WITH THE SAME TYPE.

J. PROVIDE AND INSTALL A CUT-OFF VALVE, UNION AND FULL SIZE DIRT LEG AT CONNECTION TO EACH GAS-FIRED PIECE OF EQUIPMENT. INSTALL PIPING AT AND AROUND EQUIPMENT SO AS TO NO WAY OBSTRUCT EQUIPMENT ACCESS PANELS AND/OR ACCESS DOORS.

K. COORDINATE ABOVE-CEILING PIPING LOCATIONS AND ROUTING WITH HVAC CONTRACTOR AND M-SHEETS PRIOR TO INSTALLATION. ALL MAIN DUCT TRUNK LOCATIONS SHALL TAKE PRIORITY. PIPING MAY REQUIRE REMOVAL AND REINSTALLATION AT PLUMBING CONTRACTOR'S EXPENSE IF PIPING OBSTRUCTS THE M-SHEET DUCT LAYOUT AS SHOWN OR PREVENTS ACCESS TO GREASE DUCT CLEANOUT OPENINGS.

L. ALL GAS PIPING ABOVE ROOF SHALL BE CLEANED FREE OF RUST AND PAINTED WITH COAT OF ZINC RUST PRIMER AND ONE COAT OF ALUMINUM BASE PAINT. METER AND GAS RISER SHALL BE PRIMED AND PAINTED TO MATCH BUILDING.

2.03 TESTING (C15100)

A. POTABLE WATER PIPING SHALL BE PRESSURE TESTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND MANUFACTURERS RECOMMENDATIONS.

B. THE POTABLE WATER SYSTEM SHALL BE FLUSHED OUT PROGRESSIVELY BY OPENING OUTLETS AND FLOWING WATER UNTIL IT RUNS CLEAR. AFTER PIPE CLEANING IS COMPLETED, THE STRAINERS SHALL BE REMOVED, CLEANED, AND REPLACED. THEN THE ENTIRE POTABLE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION.

C. THE SANITARY WASTE SYSTEM SHALL BE FLUSHED OUT PROGRESSIVELY WITH FLOWING WATER UNTIL IT RUNS CLEAR.

D. THE ENTIRE SANITARY WASTE SYSTEM AND STORM DRAINAGE SYSTEM SHALL BE PRESSURE TESTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND MANUFACTURERS RECOMMENDATIONS.

E. NATURAL GAS PIPING SHALL BE LEAK TESTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND MANUFACTURERS RECOMMENDATIONS.

PART III - MANUFACTURERS

3.01 PRODUCTS - PIPING SYSTEMS, ETC (C15100)

A. HYDRANTS, CARRIERS, DRAINS, AND SHOCK ABSORBERS: ZURN. ACCEPTABLE ALTERNATES: JAY R. SMITH, JONES STEPHENS CORP, WATTS, OR JOSAM.

B. ALTERNATES TO ZURN (ZRN) FIXTURES: ONLY AS SHOWN ON PLANS. APPROVED JAY R. SMITH (JRS), WATTS (WTS), MODEL NUMBERS LISTED ON FIXTURE SCHEDULE, THIS SHEET.

3.02 PRODUCTS - RESTROOM FIXTURES PORCELAIN & VALVES (C15405)

A. PREFERRED FIXTURES: TOTO. NO EXCEPTION.

B. ALTERNATE FIXTURES: ONLY AS SHOWN ON PLANS.

C. FITTINGS: AS SPECIFIED ON THE PLANS. NO SUBSTITUTIONS ALLOWED.

D. FLUSH VALVES AND LAVATORY FAUCETS: TOTO MANUFACTURING. NO SUBSTITUTIONS ALLOWED.

E. PREFERRED TOILET SEATS: TOTO. ALTERNATE TOILET SEATS: CHURCH, BEMIS, AND BENEKE.

F. FLOOR SINKS: ZURN WITH ALUMINUM SEDIMENT BUCKETS. NO SUBSTITUTIONS ALLOWED.

NATIONAL ACCOUNTS

1. TOTO VALVES AND FIXTURES (NO SUBSTITUTIONS). HAINES, JONES & CADBURY LLC. (HJC DISTRIBUTORS). PLEASE CONTACT HJC-CFA CUSTOMER SERVICE REPRESENTATIVE AT (800) 459-7099 OR VIA E-MAIL AT: **CF@HJCINC.COM** FOR NATIONAL ACCOUNT PRICING AND DELIVERY FOR ALL ITEMS ON PLUMBING FIXTURE SCHEDULE.

2. PLUMBING FIXTURES

RESTROOM FIXTURES (C15405) AND PLUMBING (15100)

P-1 WATER CLOSET: TOTO MODEL CT705UN#01 BOWL WITH 1.28 GPF TET1LA32#CP ECO-POWER FLUSH VALVE AND SC534 SEAT (ALL PROVIDED BY HJC). NO SUBSTITUTIONS. WHITE, FLOOR MOUNTED, FLUSH VALVE TYPE, VITREOUS CHINA, 1-1/2" TOP SPUD, ELONGATED BOWL, ELECTRONIC SENSOR OPERATED HANDS-FREE FLUSH VALVE, WHITE OPEN FRONT SEAT WITH CHECK HINGE. CHICK-FIL-A HAS NATIONAL ACCOUNTS WITH TOTO. PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO FIXTURES.

P-2 WATER CLOSET (ADA): TOTO MODEL CT705ULN#01 BOWL WITH 1.28 GPF TET1LA32#CP ECO-POWER FLUSH VALVE AND SC534 SEAT (ALL PROVIDED BY HJC). NO SUBSTITUTIONS. H.C. ACCESSIBLE, WHITE, FLOOR MOUNTED, 17-1/2" HIGH, FLUSH VALVE TYPE, VITREOUS CHINA, 1-1/2" TOP SPUD, ELONGATED BOWL, ELECTRONIC SENSOR OPERATED HANDS-FREE FLUSH VALVE, WHITE OPEN FRONT SEAT WITH CHECK HINGE, AND NO OFFSET TOILET FLANGES. CHICK-FIL-A HAS NATIONAL ACCOUNTS WITH TOTO. PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO FIXTURES.

P-3 URINAL: TOTO MODEL UT445U#01 URINAL WITH TEU1UA12#CP 0.125 GPF SELF SUSTAINED HYDROPOWER SELF-GENERATING ELECTRONIC SENSOR-OPERATED FLUSH VALVE (BOTH PROVIDED BY HJC). NO SUBSTITUTIONS. VITREOUS CHINA, 3/4" TOP SPUD, SENSOR OPERATED WITH MANUAL OVERRIDE BUTTON, INTERNAL VALVE FILTER PROTECTION, PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO PRODUCTS.

P-4A LAVATORY FAUCET: (BUILT-IN COUNTERTOP LAVATORY PROVIDED BY OWNER) TOTO MODEL TEL 155-D10ET#CP ECO-POWER SENSOR HOT/COLD FAUCET WITH THERMOSTATICALLY CONTROLLED ASSE 1070 MIXING VALVE FAUCET, 0.5 GPM. NO SUBSTITUTIONS. PROVIDE MCGUIRE LF175 SUPPLY WITH STOP, MCGUIRE 155-WC GRID DRAIN WITH OFFSET TAILPIECE. MCGUIRE 8872C POLISHED CHROME P-TRAP. P-TRAP SHALL BE PARALLEL WITH BACK WALL. TRUEBRO INC., HANDI LAV-GUARD INSULATION KITS MODELS 101EZ AND 105EZ. (ALL PROVIDED BY HJC). CHICK-FIL-A HAS NATIONAL ACCOUNTS WITH TOTO. PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO FIXTURES.

P-4B LAVATORY: TOTO MODEL LT307 LAVATORY FAUCET: ECO-POWER SENSOR HOT/COLD FAUCET MODEL TEL105-D10ET#CP WITH THERMOSTATICALLY CONTROLLED ASSE 1070 MIXING VALVE FAUCET, 0.09 GALLONS PER CYCLE. PRO-SET FLOOR MOUNTED SUPPORT WITH CONCEALED ARMS. NO SUBSTITUTIONS. MCGUIRE LF175 SUPPLY WITH STOP, MCGUIRE 155-WC GRID DRAIN WITH OFFSET TAILPIECE. MCGUIRE 8872C POLISHED CHROME P-TRAP. P-TRAP SHALL BE PARALLEL WITH BACK WALL. TRUEBRO INC., HANDI LAV-GUARD INSULATION KITS MODELS 101EZ AND 105EZ. (ALL PROVIDED BY HJC). CHICK-FIL-A HAS NATIONAL ACCOUNTS WITH TOTO. PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO FIXTURES.

P-5 KITCHEN HAND SINK ROUGH IN: SINK BY TMS; FAUCET: TOTO MODEL #TEL165-C20E#CP - PROVIDED BY HJC WITH THP3094 NOZZLE. CONTRACTOR SHALL INSTALL WALL HUNG, STAINLESS STEEL SINK AND FAUCET SET AND MAKE FINAL CONNECTIONS. MCGUIRE LF175 SUPPLIES WITP-STOPS AND A MCGUIRE 8912C POLISHED CHROME P-TRAP (PROVIDED BY HJC). ADJUST FAUCET OUTLET TEMPERATURE TO 110 DEGREES F (OR HIGHER AS REQUIRED BY LOCAL JURISDICTION).

P-5A KITCHEN DUMP SINK ROUGH IN: (SINK BY TMS; FAUCET: T&S MODEL #B-1146-CFA-VF05 - PROVIDED BY HJC WITH THP3094 NOZZLE) CONTRACTOR SHALL INSTALL WALL HUNG, STAINLESS STEEL SINK AND FAUCET SET AND MAKE FINAL CONNECTIONS. MCGUIRE LF175 SUPPLIES WITH STOPS (PROVIDED BY HJC).

P-6 SERVING COUNTER DROP IN SINK ROUGH IN: (SINK PROVIDED BY CLAYTON FIXTURE; FAUCET-T&S EC-3100-7XF1THG WITH 1.0 GPM AERATOR PROVIDED BY HJC) CONTRACTOR SHALL INSTALL SINK AND FAUCET SET AND MAKE FINAL CONNECTIONS. MCGUIRE 8912C POLISHED CHROME P-TRAP AND MCGUIRE LF175R20 STOPS WITH 20" CHROME PLATED 3/8" COPPER RISERS (PROVIDED BY HJC). ADJUST FAUCET OUTLET TEMPERATURE TO 110 DEGREES F (OR HIGHER AS REQUIRED BY LOCAL JURISDICTION).

P-7 MOP SINK FAUCET: (MOP SINK BASIN BUILT BY GENERAL CONTRACTOR) PROVIDE T&S BRASS MODEL B-2345 FAUCET WITH CERAMA SPRING CHECK VALVE CARTRIDGES, HOSE THREAD SPOUT OUTLET, TOP BRACE, ADJUSTABLE INLET SPREAD FROM 3" TOP 8". INCLUDE T&S BRASS MODEL 43-072 HOSE THREAD X 3/4" FEMALE NPT CHROME ADAPTOR (ALL PROVIDED BY HJC). NO SUBSTITUTIONS. SEE ALSO P-16.

P-8 VEGETABLE PREP SINK ROUGH-IN: (SINK PROVIDED BY TMS; FAUCET T&S B-0152-14-CRBCT WITH 0.65 GPM SPRAY HEAD BY HJC) CONTRACTOR SHALL INSTALL SINK AND MAKE FINAL CONNECTIONS. MCGUIRE LFST08 STOPS AND BRASSCRAFT 36" CHROME PLATED 1/2" OD COPPER RISERS MODEL 3-36AC (PROVIDED BY HJC), ASSEMBLE AND MOUNT TWO HANDLE FAUCET WITH PRE-RINSE SPRAY ARM. INSTALL ADD-ON FAUCET WITH SPOUT AT BASE OF PRE-RINSE RISER. SEE K-SHEET ELEVATIONS. PROVIDE 1-1/2" SCHED 80 PVC (PIPE AND FITTINGS) INDIRECT WASTE LINES FROM SINK BASINS TO FLOOR SINK P-13B, NO P-TRAPS REQUIRED. HJC TO PROVIDE FISHER #22209 DRAINS WITH FLAT STRAINERS.

P-9 FOUR COMPARTMENT POT SINK ROUGH-IN: (SINK PROVIDED BY TMS; FAUCETS: T&S B-0152-14CRBCT & B2299-CR WITH 0.65 GPM SPRAY HEAD PROVIDED BY HJC) CONTRACTOR SHALL INSTALL SINK, ASSEMBLE & MOUNT TWO FAUCETS, AND MAKE FINAL CONNECTIONS. MCGUIRE LFST08 STOPS AND BRASSCRAFT 36" CHROME PLATED 1/2" OD COPPER RISERS MODEL 3-36AC (PROVIDED BY HJC). ASSEMBLE AND MOUNT ONE TWO-HANDLE FAUCET WITH PRE-RINSE SPRAY. INSTALL ADD-ON FAUCET WITH SPOUT AT BASE OF PRE-RINSE RISER. ASSEMBLE AND MOUNT ONE TWO-HANDLE FAUCET WITH DOUBLE JOINT SPOUT ON OPPOSITE SIDE. SEE K-SHEET ELEVATIONS FOR FAUCET LOCATIONS. PROVIDE 1-1/2" SCHED 80 PVC (PIPE AND FITTINGS) INDIRECT WASTE LINES FROM EACH SINK BASIN TO FLOOR SINK P-13A, NO P-TRAPS REQUIRED. HJC TO PROVIDE FISHER #22209 DRAINS WITH FLAT STRAINERS.

P-10 FLOOR DRAIN (3" WASTE CONNECTION): ZURN EZ1-PV3-R8 PVC BODY, BRONZE SPUD WITH 8" DIAMETER NICKEL BRONZE STRAINER (PROVIDED BY HJC). ALT: JONES STEPHENS CORP D53-144.

P-11 WALL HYDRANT (NON-FREEZE): WOODFORD MODEL 67C AUTOMATIC DRAINING WALL HYDRANT WITH DUAL CHECK BFP, ASSE 1052 APPROVED, WALL CLAMP, POLISHED BRASS FINISH (PROVIDED BY HJC). "C" STYLE INLET, SEE WALL HYDRANT NOTES ON 1/P-201 FOR WALL THICKNESS AT WALL HYDRANTS. ALT: (WTS) HY-42.

P-12 FUNNEL DRAIN (3"): ZURN MODEL ZN415E-SC-NL FLOOR DRAIN W/FUNNEL. INDIRECT WASTE RECEIVER WITH NICKEL BRONZE STRAINER AND FUNNEL. PROVIDE 6" SQUARE STRAINER WITH 4" ROUND FUNNEL AT ICE MACHINE & WALK-IN COOLER (PROVIDED BY HJC). 4" ROUND FUNNEL (ZURN) ZN328-4.

P-13A FLOOR SINK (POT SINK): ZURN MODEL Z1901-4NL-1-23-KC CAST IRON INDIRECT WASTE RECEIVER WITH 12" SQUARE BODY, FLASHING CLAMP, 8" DEEP, ALUMINUM SEDIMENT BUCKET, AND NO GRATE. NO SUBSTITUTIONS (PROVIDED BY HJC).

P-13B FLOOR SINK (VEGETABLE SINK): ZURN MODEL Z1910-KC-3NL-1-23 CAST IRON INDIRECT WASTE RECEIVER WITH FLASHING CLAMP, 8" SQ. BODY, ALUMINUM SEDIMENT BUCKET, AND NO GRATE (PROVIDED BY HJC). NO SUBSTITUTIONS.

P-13C FLOOR SINK (DUMP SINK): ZURN MODEL Z1910-NL-KC-2-23 CAST IRON BODY WITH INDIRECT WASTE RECEIVER, NEO-LOC OUTLET, ANCHOR FLANGE WITH SEEPAGE HOLES AND CLAMP COLLAR, WITH HALF GRATE, AND ALUMINUM BUCKET. (PROVIDE BY HJC) NO SUBSTITUTIONS.

P-14 CLEANOUTS INSIDE BUILDING: (SEE PLAN FOR CONNECTION SIZE) ZURN ZN1400-XNL-T-BP CLEANOUT WITH 6" SQUARE NICKEL BRONZE TOP AND TAPER THREAD BRONZE PLUG. SEE PLAN FOR SIZE. (X=PIPE DIA) (PROVIDED BY HJC).

P-15 CLEANOUTS OUTSIDE BUILDING: (SEE PLAN FOR CONNECTION SIZE) ZURN Z1474-NX EXTRA HEAVY DUTY CAST IRON CLEANOUT, "C.O." CAST IN COVER, ABS PLUG, NEO-LOOCK OUTLET. (X=PIPE DIA) (PROVIDED BY HJC). ALT: (ZURN) Z1474-X-N.

P-16 3-WAY DIVERTER VALVE ASSEMBLY: WATTS MODEL LFB 6780 ROUGH BRASS LEAD-FREE DIVERTER BALL VALVE WITH 3/4" FIP INLET AND OUTLETS AND QUARTER TURN LEVER HANDLE. PROVIDE WITH TWO (2) FORGED BRASS 3/4" MIP X 3/4" MALE GARDEN HOSE THREAD ADAPTERS (PLUMBEST MODEL G20-103 OR EQUAL). PROVIDE WITH ONE ASSE 1011 APPROVED CHROME PLATED VACUUM BREAKER (WOODFORD MODEL 34H-CH OR EQUAL) (ALL PROVIDED BY HJC). FOR INSTALLATION AT MOP SINK. SEE 4/P-201. PROVIDE ALSO TWO 3/4" CLOSE CHROME PLATED BRASS NIPPLE AND 3/4" POLISHED CHROME 90 DEGREE ELBOW.

P-17 VACUUM RELIEF VALVE: WATTS MODEL #LFN36M1, 3/4" CW CONNECTION. (PROVIDED BY HJC.)

P-18 EXPANSION TANK: AO SMITH MODEL TW12-5, ACCEPTANCE 2.19 GALLONS (PROVIDED BY HJC) AT 40 PSI PRECHARGE, 3/4" CONNECTION. ALTERNATE MODELS SIZED PER WATER HEATER MANUFACTURER RECOMMENDATIONS ARE ACCEPTABLE.

P-19 WATER HEATER: BRADFORD-WHITE EF-60T-125E-3N STORAGE TYPE GAS FIRED 60 GALLON WATER HEATER, 125MBH INPUT, 145 GPH RECOVERY AT 100F RISE, DIRECT VENT, BLOWER POWERED, CONDENSING TYPE WITH THREE-YEAR WARRANTY (PROVIDED BY HJC). CONTRACTOR TO PROVIDE DIELECTRIC HEAT TRAP NIPPLES. STATE INDUSTRIES SUF-100-199-NE, RHEEM GHE80-130, AND BRADFORD-WHITE EF-60T-199-3N MODELS ARE ACCEPTABLE SUBSTITUTES. (ANY SUBSTITUTIONS PROVIDED ON REQUEST FROM HJC.)

P-20 THERMOMETER: PROVIDE TRERICE MODEL B83404 - 04 3" DIAL TYPE THERMOMETER WITH BOTTOM 1/2" N.P.T. CONNECTION, 4" STEM AND 0 DEG F TO 200 DEG F RANGE. LEAD FREE. (PROVIDED BY HJC.)

P-21 BACKFLOW PREVENTERS: COORDINATE LOCATION WITH CIVIL SITE UTILITY PLAN. BACKFLOW PREVENTER TYPE AND MODEL IS DETERMINED BY CIVIL ENGINEER IF LOCATED OUTSIDE THE BUILDING.

DOUBLE CHECK TYPE:
WATTS NO. LFU007M1QT 1-1/2" DUAL CHECK MODULAR TYPE BACKFLOW PREVENTER MEETING ASSE 1015 AND AWWA C510-92. WHERE REQUIRED BY LOCAL AUTHORITY, USE THE RPZ TYPE BFP SHOWN BELOW. ALT: (ZRN) 112-350XL.

REDUCED PRESSURE ZONE (RPZ) TYPE:
WATTS NO. LFU009M2 1-1/2" MODULAR TYPE WITH TEST PORTS AND INTERMEDIATE RELIEF VALVE MEETING ASSE 1013 AND AWWA C511-89. PROVIDE WATTS NO. 909-AG-C AIR GAP DEVICE. ALT: (ZRN) 112-975XLT2U.
(ANY AND ALL PROVIDED BY HJC.)

P-22 MOP SINK CHECK VALVES: T&S BRASS 1/2" MODEL B-CVV1-2 BALL CHECK. (PROVIDED BY HJC)

P-23 UTILITY CONNECTION (ICEMAKER): PROVIDE A MCGUIRE MODEL LFHST06SB LEAD-FREE CHROME WHEEL ANGLE STOP, 1/2" FIP INLET AND OUTLET (PROVIDED BY HJC). PROVIDE CHROME WALL ESCUTCHEON. INSTALL WITH BFP P-34. SEE DETAIL 3/P-201 FOR PIPING AT ICE MAKERS.

P-24 UTILITY CONNECTION (COFFEE & TEA BREWERS): PROVIDE A MCGUIRE MODEL LFHST06SB LEAD-FREE CHROME WHEEL ANGLE STOP, 1/2" FIP INLET AND OUTLET (PROVIDED BY HJC). PROVIDE CHROME WALL ESCUTCHEON. INSTALL WITH BFP P-34.

P-25 SHOCK ABSORBER: ZURN Z1700-100 THRU Z1700-300 AS NEEDED, SIZE AS RECOMMENDED BY MANUFACTURER (PROVIDED BY HJC). ALT: (WTS) SSA + SSB; (JRS 5005 THROUGH 5050)

P-26 FUNNEL DRAIN (3"): ZURN ZN415-3NL-8S-OF FLOOR DRAIN W/FUNNEL. INDIRECT WASTE RECEIVER WITH NICKEL BRONZE STRAINER AND FUNNEL. PROVIDE 8"X8" SQUARE STRAINER WITH 3.25"X 8.25" OBLONG FUNNEL (DRAIN AND STRAINER PROVIDED BY HJC). ALT: (JRS) 3510L03-F22NB.

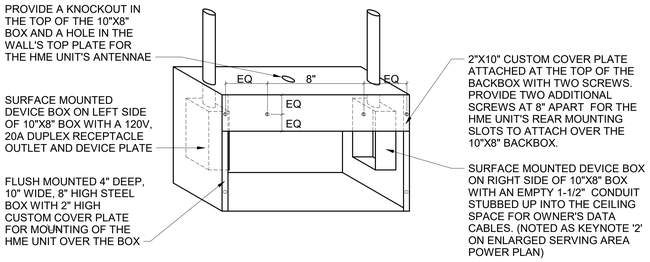
P-26A TRAP SEAL PROTECTOR: PROVENT TRAP GUARD MODEL TG3H 3" TRAP SEAL INSERT FOR INTERIOR INSTALLATION AND REPLACEMENT ACCESS THROUGH STRAINER (PROVIDED BY HJC). PROVIDE AT P-35 FLOOR DRAINS IN RESTROOMS, P-37 FLOOR DRAINS DINING ROOM, P-26 FUNNEL, AND P-10 DRAINS IN MECH ROOM. PROVIDE PROSET MODEL TG33-ZURN WHEN USING ZURN FLOOR FIXTURES (PROVIDED BY HJC).

P-27 WATER PRESSURE GAUGE: TRERICE MODEL 800B, 2-1/2" ROUND, BOTTOM OUTLET WITH 1/4" N.P.T. CONNECTION AND 0 TO 100 PSI RANGE. (PROVIDED BY HJC.)

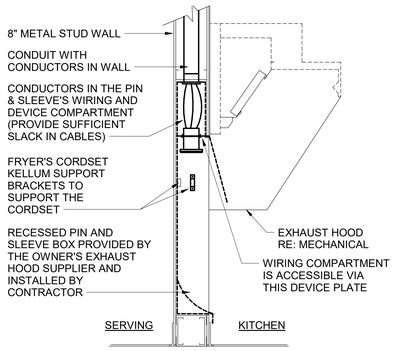
P-28 ISOLATION BALL VALVE (8-STOP WATER MANIFOLD PANEL): NIBCO MODEL 4660-T, 3/4", WITH IPS INLET AND OUTLET. (PROVIDED BY HJC.)

P-29 ICE MACHINE TRENCH DRAIN: ZURN/STAINLESS DRAINS TR12-CFA-XX STAINLESS STEEL TRENCH DRAIN, 14.5" X XX", STAINLESS STEEL SEDIMENT CUP AND STAINLESS STEEL SERRATED LADDER GRATE (XX=DRAIN WIDTH, 18"/36"/48") (PROVIDED BY HJC). NO SUBSTITUTIONS.

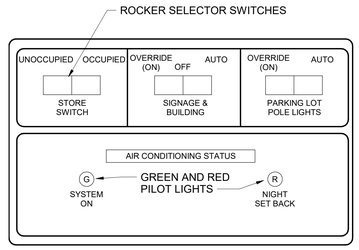
P-30 FILTERED WATER FAUCET: (FAUCETS: T&S B-02326-CR-063X PRO



E3 HME UNIT POWER & DATA BOX DETAIL
NO SCALE

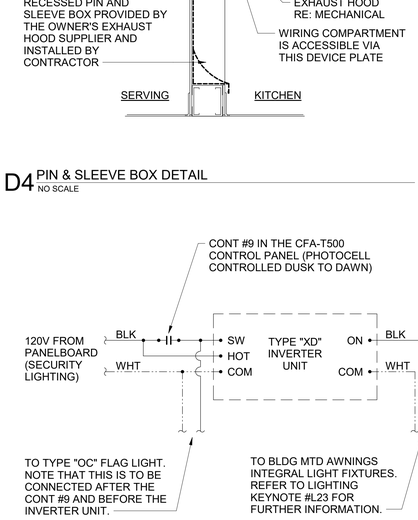


D4 PIN & SLEEVE BOX DETAIL
NO SCALE

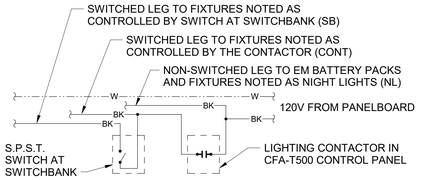


NOTE:
THIS UNIT IS MOUNTED IN THE DOOR OF THE CFA-T500 CONTROL CABINET AND IS INCLUDED WITH THE GEAR ORDER FROM SUNCOAST ENVIRONMENTAL INC.

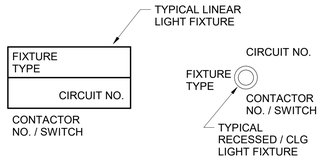
D3 OPEN-CLOSED CONTROL SWITCH
NO SCALE



C4 INVERTER XD WIRING DIAGRAM
NO SCALE



B4 LIGHTING CONTROL DIAGRAM
NO SCALE



A4 LIGHT FIXTURE NOMECLATURE
NO SCALE

CIR C-1	CONTACTOR-1 30A 4-POLE 120 VOLT COIL (STORE SWITCH ON AND OFF)	KITCHEN LTG
CIR C-3		KITCHEN LTG
CIR C-5		RESTROOM LTG / EF-3
CIR C-11		DINING LTG
CIR C-7	CONTACTOR-2 30A 4-POLE 120 VOLT COIL (STORE SWITCH ON AND OFF)	DINING LTG
CIR C-9		SERV AREA LTG
CIR C-15		WATER RECIRC PUMP
SPARE		SPARE
CIR C-43	CONTACTOR-3 30A 4-POLE 120 VOLT COIL (P'CELL ON AND SWITCH OFF)	BLDG. SIGNAGE
CIR C-45		BLDG. SIGNAGE
CIR C-47		BLDG. SIGNAGE
CIR C-49		BLDG. SIGNAGE
CIR C-19	CONTACTOR-4 30A 4-POLE 120 VOLT COIL (P'CELL ON AND SWITCH OFF)	DIRECTIONAL SIGNS
CIR C-37		MAIN ID SIGN
CIR C-39		MAIN ID SIGN
CIR C-41		MAIN ID SIGN
SPARE	CONTACTOR-5 30A 4-POLE 120 VOLT COIL (P'CELL ON AND SWITCH OFF)	SPARE
CIR C-31		BLDG LIGHTING
SPARE		SPARE
SPARE		SPARE
SPARE	CONTACTOR-6 30A 4-POLE 120 VOLT COIL (P'CELL ON AND SWITCH OFF)	SPARE
SPARE		SPARE
SPARE		SPARE
SPARE		SPARE
CIR C-21	CONTACTOR-7 30A 4-POLE 120 VOLT COIL (P'CELL ON AND SWITCH OFF)	PARKING LOT LTG
CIR C-23		PARKING LOT LTG
CIR C-25		SPARE/PARKING LOT LTG
CIR C-27		SPARE/PARKING LOT LTG
SPARE	CONTACTOR-8 30A 4-POLE 120 VOLT COIL (STORE SWITCH ON AND OFF)	SPARE
SPARE		SPARE
SPARE		SPARE
SPARE		SPARE
CIR C-29	CONTACTOR-9 30A 4-POLE 120 VOLT COIL (PHOTOCELL ON AND OFF)	SECURITY/FLAG LTG
SPARE		SPARE
SPARE		SPARE
SPARE		SPARE
CIR C-48	CONTACTOR-10 30A 4-POLE 120 VOLT COIL (SWITCH ON & OFF, FS ON)	EXHAUST FAN EF-1
CIR C-50		EXHAUST FAN EF-2
SPARE		SPARE
SPARE		SPARE
CIR C-54	CONTACTOR-11 30A 4-POLE 120 VOLT COIL (SWITCH ON & OFF, FS ON)	HOOD CJ FAN/LIGHTS
SPARE		SPARE
SPARE		SPARE
SPARE		SPARE

NOTE: LOCATIONS WITH TWO MAIN ID SIGNS WILL USE THIS CONTACTOR FOR THE SECOND SIGN.

NOTES:
1) VERIFY WITH SUNCOAST ENVIRONMENTAL CONTROLS' SHOP DRAWINGS.
2) ONLY THE 'HOT' CONDUCTOR OF EACH CIRCUIT SHALL BE RUN THRU THE CONTACTOR.
3) ANY TAPS OR WIRING CONNECTIONS OTHER THAN TO THE TERMINALS SHALL BE DONE IN A JUNCTION BOX OUTSIDE OF THIS CABINET.
4) VERIFY WITH THE LOCAL CODE IF CONTACTORS #10 AND #11 WILL BE ON OR OFF WHEN THE FS SYSTEM IS INITIATED.
5) CIRCUITS C-49, C-25, AND C-27 WILL BE SPARES IF NOT NEEDED.

C2 CFA-T500 CONTROL PANEL DIAGRAM
NO SCALE

C1 ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	MTG HT AFF TO CL
	LIGHTING FIXTURES	
	SURFACE MOUNTED LIGHTING FIXTURE	
	RECESSED LED TROFFER LIGHTING FIXTURE	
	SURFACE MOUNTED LED LIGHTING FIXTURE	
	RECESSED LED LIGHTING FIXTURE	
	WALL MOUNTED LIGHTING FIXTURE, SEE LIGHTING FIXTURE SCHEDULE	AS NOTED
	WALL MOUNTED EXIT SIGN, SHADE INDICATES FACES, PROVIDE CHEVRON DIRECTIONALS WHEN NEEDED	6" FROM CEILING TO TOP
	CEILING MTD EXIT SIGN, SHADING INDICATES FACES. PROVIDE W/ CHEVRON DIRECTIONALS WHEN NEEDED	
	COMBO EXIT WITH TWO LAMPHEADS	
	WALL MTD EMERGENCY BATTERY PACK LIGHTING FIXTURE	AS NOTED
	CEILING MTD EMERGENCY BATTERY PACK LIGHTING FIXTURE	
	FLUORESCENT STRIP LIGHTING FIXTURE	
	WALLWASHER TYPE RECESSED DOWNLIGHT, AIM LIGHT TOWARD WALL	
	RECESSED LIGHTING FIXTURE W/ EMERGENCY BATTERY PACK	
	PENDANT LIGHTING FIXTURE	AS NOTED
	LIGHTING TRACK WITH TRACK HEADS	
	WIRING DEVICES	
	120 VOLT DUPLEX RECEPTACLE, 20 AMPS U.O.N.	14" UON
	120 VOLT QUADRAPLEX RECEPTACLE, 20 AMPS U.O.N.	14" UON
	120 VOLT SIMPLEX RECEPTACLE, 20 AMPS U.O.N.	14" UON
	SINGLE SPECIAL PURPOSE RECEPT W/ VOLTS, AMPS, & PHASE AS NOTED, NEMA CONFIGURATION AS REQUIRED BY EQUIP.	14" UON
	RECEPTACLE MOUNTED ON DROP CORD, 120 VOLT, 20 AMP, UON, OUTLET BOX FLUSH WITH CEILING	
$	SINGLE POLE TOGGLE SWITCH	48"
$2	DOUBLE POLE TOGGLE SWITCH	48"
$3	THREE WAY TOGGLE SWITCH	48"
$T	SWITCH WITH TIMER	48"
$M	MANUAL MOTOR STARTER SWITCH (WP=NEMA 3R)	48"
$P	SWITCH WITH PILOT LIGHT (ON WHEN SWITCH IS ON)	48"
$K	KEY OPERATED SWITCH	48"

NOTE: RECEPTACLES ON A DEDICATED CIRCUIT (THAT IS, NO OTHER LOAD CONNECTED TO THE BRANCH CIRCUIT) SHALL HAVE AMPACITY RATING NOT LESS THAN THE AMPERAGE OF THE CIRCUIT BREAKER SERVING THE DEVICE.

	CONDUIT/RACEWAYS
	CONDUIT CONCEALED ABOVE CEILNG OR IN WALL
	CIRCUIT HOMERUN TO PANELBOARD W/ MIN 2#12, 1#12G, 3/4"C
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	CONDUIT CONCEALED IN OR BELOW SLAB (OR UNDERGROUND)
	FLEXIBLE LIGHT FIXTURE WHIP; SIX FOOT MAXIMUM LENGTH
-MC-	METAL CLAD CABLE ASSEMBLY - ONLY WHERE INDICATED ON DWGS OR SPECS

	DISTRIBUTION EQUIPMENT	
	NON-FUSIBLE SAFETY SWITCH, SIZE AND TYPE AS NOTED ON PLANS (AMP/POLES/ENCLOSURE) OR ON SCHEDULE. NEMA 1 ENCLOSURE UNLESS NOTED WP FOR NEMA 3R ENCLOSURE.	6'-6" *
	FUSIBLE SAFETY SWITCH, SIZE & TYPE AS NOTED ON PLANS (AMP/POLES/FUSE AMPS/ENCLOSURE) OR ON SCHEDULE. NEMA 1 ENCLOSURE UNLESS NOTED WP FOR NEMA 3R.	6'-6" *
	FLUSH MOUNTED LIGHTING PANELBOARD	6'-6" *
	SURFACE MOUNTED LIGHTING PANELBOARD	6'-6" *

* 6'-6" DISTANCE IS TO TOP-MOST DISCONNECTING DEVICE OR HIGHEST POSITION OF OPERATING HANDLE OF DISCONNECTING DEVICE

SYMBOL	DESCRIPTION	MTG HT AFF TO CL
	MISCELLANEOUS SYMBOLS	
	GROUND	
M	MOTOR	
EF	EXHAUST FAN MOTOR	
J	JUNCTION BOX	
1	CONDUIT AND WIRE 'MARK' NUMBER, REFER TO CONDUCTORS AND CONDUIT SCHEDULE FOR SIZE	
101	KITCHEN EQUIPMENT 'MARK' NUMBER, REFER TO KITCHEN EQUIPMENT SCHEDULE FOR REQUIREMENTS	
1	NOTE NUMBER	
A	HOOD EXTINGUISHING FIRE SUPPRESSION PULL STATION	
D	SMOKE DETECTORS REMOTE STATUS INDICATOR W/ 1/2"C STUB-UP	
	PUSHBUTTON	
B	BELL, TYPE AS NOTED ON PLANS	
PE	PHOTO-ELECTRIC CELL	
T	TRANSFORMER / DRIVER	
S	LOCKABLE SINGLE POLE SWITCH	
	ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR	
AFG	ABOVE FINISHED GRADE	
AHU	AIR HANDLING UNIT	
C	CONDUIT	
CL	CENTER-LINE	
CT	CONTACTOR	
EF	EXHAUST FAN	
FLA	FULL LOAD AMPS	
FS	FIRE SUPPRESSION	
GF/GFI	GROUND FAULT CIRCUIT INTERRUPTER	
GND/GRD	GROUND	
HT	HEIGHT	
IG	ISOLATED GRD, PROVIDE ORANGE DEVICE WHEN ADJACENT TO WIRING DEVICE	
MOCP	MAXIMUM OVER-CURRENT PROTECTION	
MUA	MAKE UP AIR UNIT	
NEC	LOCALLY ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70)	
NL	NIGHT LIGHT (ON 24 HOURS)	
OC	ON CENTER	
POS	POINT OF SALE EQUIPMENT	
RTU	ROOF TOP UNIT	
TB	TERMINAL BLOCK	
TL	TWIST-LOCK TYPE DEVICE	
TR	TAMPER-RESISTANT	
UON	UNLESS OTHERWISE NOTED	
WP	WEATHERPROOF (NEMA 3R)	
	TELEPHONE	
	TELEPHONE OUTLET	18" UON
	TELEPHONE OUTLET AT SPECIAL MOUNTING HEIGHT	60" UON

NOTE: EACH TELEPHONE OUTLET (FLOOR OR WALL MOUNTED SHALL BE PROVIDED WITH A 3/4" EMPTY CONDUIT, WITH PULL WIRE, TO ACCESSIBLE CEILING SPACE.

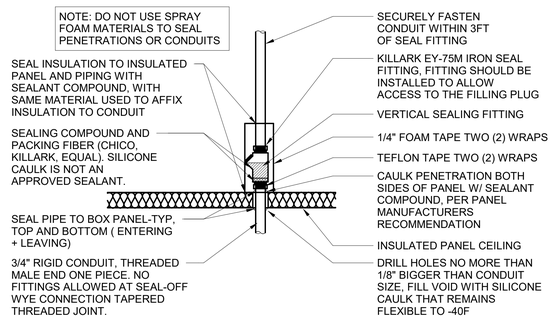
	CCTV / SECURITY SYSTEM
K	SECURITY ALARM KEYPAD
S1	SECURITY SYSTEM KEY NOTE

ELECTRICAL UTILITY COMPANY COORDINATION NOTES:

ELECTRICAL CONTRACTOR SHALL SUBMIT A NEW ELECTRIC SERVICE REQUEST DIRECTLY FROM THE UTILITY COMPANY. EC IS RESPONSIBLE FOR FILLING OUT AND SUBMITTING ALL UTILITY COMPANY LOAD FORMS WITH OWNER INFORMATION AND THE CONNECTED ELECTRIC LOADS PROVIDED IN THE LOAD SUMMARY OF PANELBOARD SCHEDULE MDP. EC SHALL OBTAIN AVAILABLE FAULT CURRENT AND SUBMIT TO EOR FOR FINAL SIZING OF INTERRUPTING RATINGS.

SIGNAGE NOTE

THE ELECTRICAL SUBCONTRACTOR SHALL INCLUDE THE ELECTRICAL ROUGH-IN AND FINAL CONNECTIONS OF ALL SIGNAGE (BUILDING MOUNTED AND GROUND MOUNTED ON THE SITE) IN HIS SCOPE OF WORK AND UNDER HIS LOCAL CODE PERMITTING PROCESS. PROVIDE A COPY OF THE PERMIT (WHICH SPECIFICALLY INCLUDES THE SIGNAGE) TO THE SIGN VENDOR IN ORDER TO EXPEDITE THE SIGN VENDOR'S PERMIT PROCESS.



A2 WIC/WIF SEAL-OFF DETAIL
NO SCALE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

KEA ENGINEERS
Engineering Excellence since 1984
KEA ENGINEERS
186 WOOD AVE. SOUTH, 1ST FLOOR
ISELIN, NJ 08830
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NY STATE CERTIFICATE OF AUTHORIZATION #0019115

ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

CHICK-FIL-A
Levittown
3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR ALL
RELEASE: 22.08
PRINTED FOR
ISSUED FOR BID **10/04/2022**

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY MN

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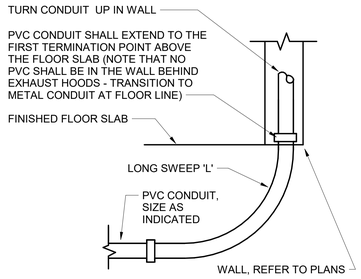
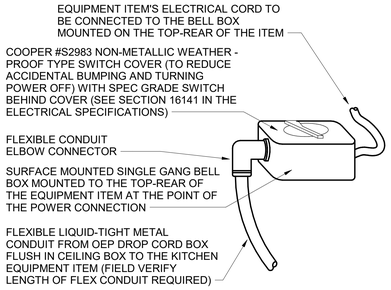
SHEET
ELECTRICAL SCHEDULES AND DETAILS

SHEET NUMBER
E-001

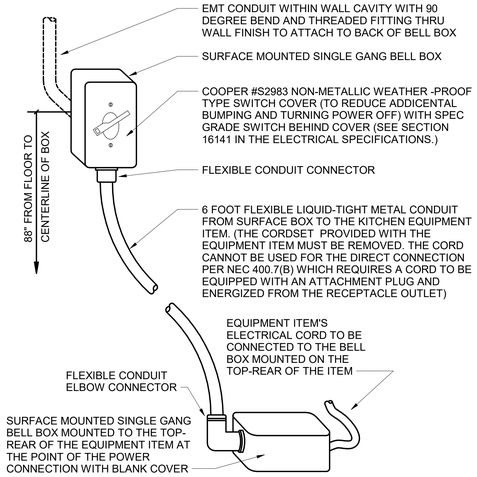
9/29/2022 3:48:09 PM Autodesk Docs://NY_04937_Levittown_2021.4_FSR/04937_Levittown_ELE.rvt
50-LSR-04937-E-001-ELECTRICAL SCHEDULES AND DETAILS



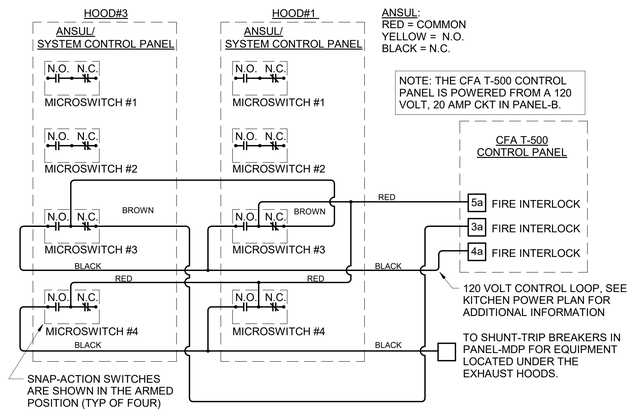
D4 INTERIOR PVC CONDUIT DETAIL
NO SCALE



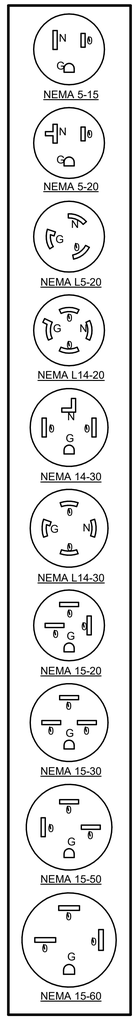
C4 DIRECT CONNECTION - ISLAND LOCATION
NO SCALE



B4 DIRECT CONNECTION -WALL LOCATION
NO SCALE



A4 FIRE SUPPRESSION SYSTEM PANEL WIRING DIAGRAM
NO SCALE



KITCHEN EQUIPMENT SCHEDULE NOTES

1. ALL SO CORD LENGTHS SHALL BE MEASURED FROM THE REAR OF THE EQUIPMENT TO THE END OF THE CORD.
2. CONTRACTOR SHALL PROVIDE GROUND-FAULT PROTECTION FOR ALL 120 VOLT 15 AMP AND 20 AMP RECEPTACLES IN THE KITCHEN / FOOD PREPARATION AREAS. GROUND-FAULT PROTECTION SHALL BE PROVIDED AT THE RECEPTACLE AS A GFCI TYPE RECEPTACLE UNLESS NOTED OTHERWISE ON THE PLANS WHERE A GFCI TYPE BREAKER IS INDICATED.
3. PROVIDE GFCI TYPE BRANCH BREAKER FOR KITCHEN / FOOD PREPARATION AREA RECEPTACLES THAT ARE TWIST-LOCK, CLOCK STYLE, OR IG (ISOLATED GROUND) TYPE.

KITCHEN EQUIPMENT SCHEDULE - CHICK-FIL-A P14 EDITION

ITEM NO.	DESCRIPTION OF EQUIPMENT	VOLTS	PH	KW	AMPS	NEMA-RATING	COMMENTS AND REMARKS
180	ORDER REGISTER	120	1		0.70	5-20P	
182	RECEIPT PRINTER	other	1		1.80	5-20P	PROVIDED WITH 120V/24V POWER SUPPLY ADAPTER FOR USE WITH 120V IG OUTLET
182L	LABEL PRINTER	other	1		1.7	5-20P	PROVIDED WITH 120V/24V POWER SUPPLY ADAPTER FOR USE WITH 120V IG OUTLET
183	ORDER MONITOR	120	1		0.125	5-20P	PROVIDED BY CFA IT
184	IPAD	120	1	0.120	1.00	5-20P	PROVIDED BY CONNECTION
184T	ITIMER	120	1	0.120	1.00	5-20P	PROVIDED BY CLARK
190	DRIVE-THRU VIDEO MONITOR	120	1		0.8	5-20P	
211B	FLY SYSTEM	120	1	0.017		5-15P	CLOCK STYLE RECEPTACLE REQUIRED
211C	FLY SYSTEM	120	1	.03	.25	5-15P	RE: ARCHITECTURAL SHEETS FOR MOUNTING DETAILS
269	FIRE SUPPRESSION SYSTEM	120	1		VERIFY	DIRECT CONNECTION	REMOTE CABINET - REFER TO SHOP DRAWINGS - FED FROM CFA-T500 PANEL
270	FIRE SUPPRESSION SYSTEM	120	1		VERIFY	DIRECT CONNECTION	LOCATED ABOVE HOOD - BEHIND CLOSURE PANEL - REFER TO SHOP DRAWINGS - FED FROM CFA-T500 PANEL
300a	MILKSHAKE BASE DISPENSER	120	1		4.00	5-20P	
300X	DOUBLE BARREL ICE CREAM MACHINE	208	3		19.00/15.00	15-30P/15-20P	PROVIDED WITH HUBBELL HBL8432C & HBL8421C ANGLE PLUGS
305	TEA BREWER	120	1	1.650	13.80		PROVIDE QUICK DISCONNECT HOSES
308	SINGLE COFFEE MAKER	208	1	4.000	19.20	L14-30P	QUICK DISCONNECT HOSES PROVIDED BY CFA WAREHOUSE
310	DOUBLE LEMONADE BUBBLER	120	1		8.50	5-15P	ORDER (1) #3CRA016 BOWL KIT AND (1) #3CRA018 BASE PER BUBBLER AND ORDER TOTAL OF (1) #3CRA021 SET OF (2) 2.4 GAL BOWLS
315W	10-HEAD BEVERAGE DISPENSER WITH ICE BIN	115	1		10.00	5-15P/5-15P	PROVIDED WITH (2) CORDS AND PLUGS PER TOWER
320	TURBO CARBONATOR	115	1		6.2	5-20P	ORDER (6) #44231, (2) #44233, (6) DR. PEPPER PUMPS, & (2) #C77004
363H	HIGH-TEMP UPRIGHT DISHWASHER	208	3		53.68	DIRECT CONNECTION	INCLUDES 6 FT BRAIDED HOSE AND INTEGRATED DRAIN WATER TEMPERING SYSTEM - ORDER WITH ASR-LEFT-AM16 ACCESSORY
380	ICE MACHINE	115	1	0.600	5.00	5-15P	INSTALLED ON TOP OF ICE BIN - PROVIDED WITH 6 FT CORD AND 35 FT LINE SETS
380a	ICE BIN SANITATION SYSTEM	120	1	0.0096		5-15P	INSTALLED ON WALL ABOVE ICE BIN - SHARES DUPLEX WITH (1) ICE MACHINE
380C	ICE MACHINE REMOTE CONDENSING UNIT	208	3	3.100	14.20	DIRECT CONNECTION	AIR COOLED UNIT - GC SHALL PLACE AND INSTALL CONDENSER ON ROOF - NOT SHOWN ON DRAWINGS
380CD	ICE MACHINE REMOTE CONDENSING UNIT	208	3	3.600	15.70	DIRECT CONNECTION	AIR COOLED UNIT - GC SHALL PLACE AND INSTALL CONDENSER ON ROOF - NOT SHOWN ON DRAWINGS
380D	ICE MACHINE	115	1	0.368	5.00	5-15P	INSTALLED ON TOP OF ICE BIN - PROVIDED WITH 6 FT CORD AND 35 FT LINE SETS
400	SINGLE UPRIGHT FREEZER (30" WIDE)	115	1	1.100	9.40	5-15P	HINGE RIGHT - PROVIDE FINISHED BACK - ORDER ON 4 5/8 IN CASTERS
410	WALK-IN FREEZER	120	1		3.3	DIRECT CONNECTION	ORDER WITHOUT FLOOR - REFER TO LIGHTING PLAN
410a	WALK-IN FREEZER CONDENSER	208	3		16.30	DIRECT CONNECTION	GC SHALL INSTALL CONDENSER ON ROOF - NOT SHOWN ON DRAWINGS
410b	WALK-IN FREEZER EVAPORATOR	208	1		1.50	DIRECT CONNECTION	POWER FED FROM CONDENSER
420	SINGLE UNDERCOUNTER REFRIGERATOR	115	1	0.564	4.70	5-20P	HINGE RIGHT - ORDER ON 4" CASTERS
420L	SINGLE UNDERCOUNTER REFRIGERATOR	115	1	0.564	4.70	5-20P	HINGE LEFT - ORDER ON 4 IN CASTERS
420LA	SINGLE UNDERCOUNTER REFRIGERATOR	115	1	0.564	4.70	5-20P	HINGE LEFT - ORDER ON 2 IN CASTERS
421	DOUBLE UNDERCOUNTER REFRIGERATOR	115	1	0.756	6.30	5-15P	ORDER ON 4 IN CASTERS
422T	REFRIGERATED EQUIPMENT STAND (48")	115	1	0.80	6.70	L5-15P	EC TO CHANGE PLUG TO TWIST LOCK - PROVIDED W/9' CORD - ORDER ON 4" CASTERS
431T	DOUBLE REFRIGERATED WORK TABLE	115	1	0.756	6.30	L5-15P (BY EC)	EC TO CHANGE PLUG TO TWIST LOCK - ORDER ON 6 IN CASTERS WITH BACKSPLASH TOP
432T	DOUBLE REFRIGERATED WORK TABLE	115	1	0.756	6.30	L5-20P (BY EC)	EC TO CHANGE PLUG TO TWIST LOCK - ORDER ON 6 IN CASTERS WITH BACKSPLASH TOP
439	40" COLD RAIL	115	1	0.800	7.10	5-15P	COMPRESSOR ON RIGHT - SUPPLIED WITH 9 FT CORD AND PLUG
440CT	ICE BATH BREADING TABLE	120	1		1.00	L5-15P (BY EC)	EC TO CHANGE PLUG TO TWIST LOCK - 10 FT CORD AND PLUG - LEAF INCLUDED WITH TABLE - INSTALL IF SHOWN ON PLANS
441	SALAD PREP TABLE	115	1		9.0	L5-15P	PROVIDE WITH TWIST LOCK PLUG; ORDER ON 4" CASTERS WITH PAN PKG.; SESC TO PROVIDE PAN PKG.
442WCT	SINGLE UPRIGHT REFRIGERATOR (30" WIDE)	115	1		7	L5-15P (BY EC)	HINGE RIGHT - PROVIDE FINISHED BACK - ORDER ON 6 IN CASTERS - EC TO CHANGE PLUG TO TWIST LOCK
443GT	SINGLE UPRIGHT REFRIGERATOR (24" WIDE)	115	1		8.00	L5-15P (BY EC)	HINGE RIGHT - HALF HEIGHT GLASS DOORS - PROVIDE FINISHED BACK - ORDER ON 6 IN CASTERS - EC TO CHANGE PLUG TO TWIST LOCK
444D	DOUBLE THAWING CABINET (52" WIDE)	115	1		16.00	DIRECT CONNECTION	HINGE STANDARD - GC TO INSTALL LIQUID TIGHT FLEX CONDUIT - ORDER ON 6 IN CASTERS
444SL	SINGLE THAWING CABINET (32" WIDE)	115	1		16.00	DIRECT CONNECTION	HINGE LEFT - GC TO INSTALL LIQUID TIGHT FLEX CONDUIT - ORDER ON 6 IN CASTERS
449	WALK-IN COOLER	120	1		2.4	DIRECT CONNECTION	ORDER WITHOUT FLOOR - REFER TO LIGHTING PLAN
449a	WALK-IN COOLER CONDENSER	208	3		9.50	DIRECT CONNECTION	GC SHALL INSTALL CONDENSER ON ROOF - NOT SHOWN ON DRAWINGS
449b	WALK-IN COOLER EVAPORATOR	208	1	0.110	1.00	DIRECT CONNECTION	POWER FED FROM CONDENSER
500A	VERTICAL CONTACT TOASTER	120	1	1.80	15.00	5-15P	
500B	RADIANT TOASTER	208	1	5.50	24.00	L6-30P	PROVIDED WITH TWIST LOCK PLUG
503T	EGG STATION	208	1	2.5	12.5	L6-20P	PROVIDED W/TWIST LOCK PLUG
505VT	VECTOR OVEN	208	3	7.90	22.00	L15-30P (BY EC)	HINGE RIGHT - EC TO CHANGE PLUG TO TWIST LOCK
522	SINGLE OPEN FRYER	208	3	22.000	62.00	PIN & SLEEVE	PIN & SLEEVE PROVIDED WITH EQUIPMENT AND RECEPTACLE BOX PROVIDED WITH HALTON ITEMS - (1) POWER CONNECTION PER WELL
522A	DOUBLE OPEN FRYER	208	3	22/22	62/62	PIN & SLEEVE	PIN & SLEEVE PROVIDED WITH EQUIPMENT AND RECEPTACLE BOX PROVIDED WITH HALTON ITEMS - (1) POWER CONNECTION PER WELL
523	PRESSURE FRYER	208	3	13.500	38.00	15-50P	PROVIDED WITH 6 FT CORD AND PLUG
524	DUAL SIDE CLAMSHELL GRILL	208	3	9	24.1/28.2/23.1	15-50P	PROVIDED WITH 5' CORD & PLUG
560	FRY HOLDING STATION	120	1	1.90	15.4	5-20P	
562A	HIGH DENSITY HOT HOLDING TOWER	120	1	1.80	16.00	5-20P	PROVIDED WITH 8 FT CORD AND PLUG
563DL	DOUBLE TIER SANDWICH SLIDE	120	1	1.09	9.13	5-15P	CORD EXITS LEFT - 6' CORD AND PLUG
563S	SINGLE TIER SANDWICH SLIDE	120	1	0.548	4.56	5-15P	CORD EXITS RIGHT - 6' CORD AND PLUG
564BD	VISUAL HOT HOLDING CABINET (2x2 LANDSCAPE)	120	1	0.660	5.50	5-15P	DUAL-SIDED DISPLAY - ORDER WITH LIDS/TRAY SEALS, AMBER PANS, AND FALSE BOTTOMS
565C	FOOD COOKER/WARMER	115	1	1.200	12.50	5-15P	ORDER WITH (1) 3VOL042, (2) 3VOL043, (8) 3VOL051, AND (8) 3VOL061
580H	VISUAL HOT HOLDING CABINET (5x2)	120	1	1.920	16.00	5-20P	ORDER WITH LIDS/TRAY SEALS
592	RETHERMALIZER	208	3	8.000	22.00	15-30P	PROVIDED WITH 6' CORD AND ANGLE PLUG - WATER SUPPLY TO BE S/S BRAIDED HOSE WITH MALE QUICK CONNECT ADAPTER
600T	MIXER	120	1		8.00	L5-20P (BY EC)	EC TO CHANGE PLUG TO TWIST LOCK - ORDER WITH (1) 3HOB405, (1) 3HOB061, (1) 3HOB318, (2) 3HOB319, AND (1) 3HOB058
607	COUNTERTOP LEMON JUICER	115	1			5-15P	
669	OFFICE SAFE	120	1				INSTALL SAFE PER MANUFACTURE'S WRITTEN INSTRUCTIONS
672	DIGITAL MENU BOARD	120	1			5-15P	PROVIDED BY COATES

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NY LICENSE #062261-1

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR ALL
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SHEET
ELECTRICAL SCHEDULES AND DETAILS

SHEET NUMBER
E-002

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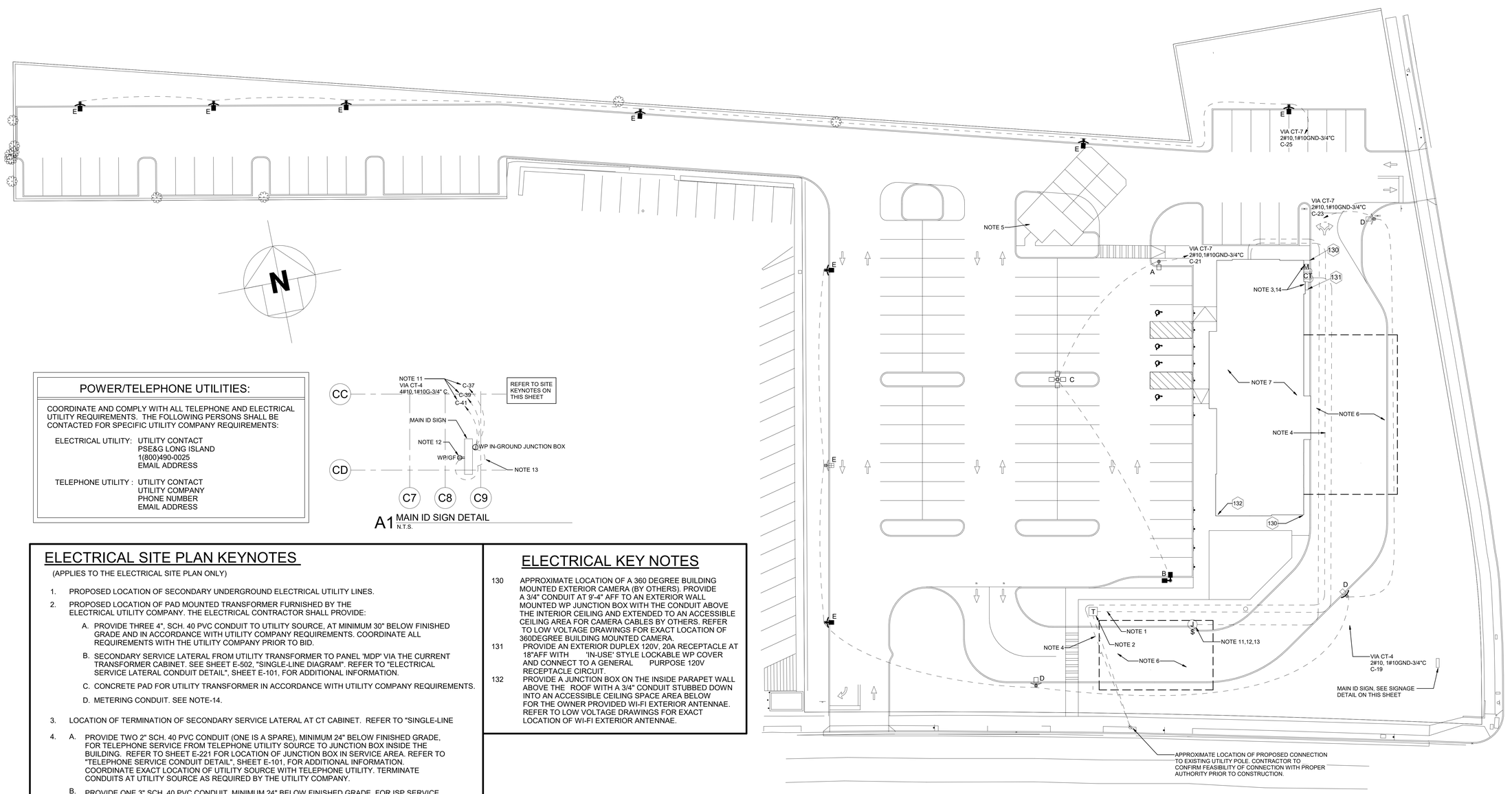

C1 ELECTRICAL SITE PLAN
1" = 20'-0"

POWER/TELEPHONE UTILITIES:

COORDINATE AND COMPLY WITH ALL TELEPHONE AND ELECTRICAL UTILITY REQUIREMENTS. THE FOLLOWING PERSONS SHALL BE CONTACTED FOR SPECIFIC UTILITY COMPANY REQUIREMENTS:

ELECTRICAL UTILITY: UTILITY CONTACT
PSE&G LONG ISLAND
1(800)490-0025
EMAIL ADDRESS

TELEPHONE UTILITY : UTILITY CONTACT
UTILITY COMPANY
PHONE NUMBER
EMAIL ADDRESS

A1 MAIN ID SIGN DETAIL
N.T.S.

ELECTRICAL SITE PLAN KEYNOTES

(APPLIES TO THE ELECTRICAL SITE PLAN ONLY)

1. PROPOSED LOCATION OF SECONDARY UNDERGROUND ELECTRICAL UTILITY LINES.
2. PROPOSED LOCATION OF PAD MOUNTED TRANSFORMER FURNISHED BY THE ELECTRICAL UTILITY COMPANY. THE ELECTRICAL CONTRACTOR SHALL PROVIDE:
   A. PROVIDE THREE 4", SCH. 40 PVC CONDUIT TO UTILITY SOURCE, AT MINIMUM 30" BELOW FINISHED GRADE AND IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS. COORDINATE ALL REQUIREMENTS WITH THE UTILITY COMPANY PRIOR TO BID.
   B. SECONDARY SERVICE LATERAL FROM UTILITY TRANSFORMER TO PANEL 'MDP' VIA THE CURRENT TRANSFORMER CABINET. SEE SHEET E-502, "SINGLE-LINE DIAGRAM". REFER TO "ELECTRICAL SERVICE LATERAL CONDUIT DETAIL", SHEET E-101, FOR ADDITIONAL INFORMATION.
   C. CONCRETE PAD FOR UTILITY TRANSFORMER IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.
   D. METERING CONDUIT. SEE NOTE-14.
3. LOCATION OF TERMINATION OF SECONDARY SERVICE LATERAL AT CT CABINET. REFER TO "SINGLE-LINE
4. A. PROVIDE TWO 2" SCH. 40 PVC CONDUIT (ONE IS A SPARE), MINIMUM 24" BELOW FINISHED GRADE, FOR TELEPHONE SERVICE FROM TELEPHONE UTILITY SOURCE TO JUNCTION BOX INSIDE THE BUILDING. REFER TO SHEET E-221 FOR LOCATION OF JUNCTION BOX IN SERVICE AREA. REFER TO "TELEPHONE SERVICE CONDUIT DETAIL", SHEET E-101, FOR ADDITIONAL INFORMATION. COORDINATE EXACT LOCATION OF UTILITY SOURCE WITH TELEPHONE UTILITY. TERMINATE CONDUITS AT UTILITY SOURCE AS REQUIRED BY THE UTILITY COMPANY.
   B. PROVIDE ONE 3" SCH. 40 PVC CONDUIT, MINIMUM 24" BELOW FINISHED GRADE, FOR ISP SERVICE FROM UTILITY SOURCE TO JUNCTION BOX INSIDE THE BUILDING. REFER TO SHEET E-221 FOR LOCATION OF JUNCTION BOX IN BUILDING. REFER TO "TELEPHONE SERVICE CONDUIT DETAIL", SHEET E-101, FOR ADDITIONAL INFORMATION. COORDINATE EXACT LOCATION OF UTILITY SOURCE WITH SERVICE SUPPLY COMPANY. TERMINATE CONDUITS AT AS REQUIRED BY THE UTILITY COMPANY.
5. LOCATION OF DUMPSTER. REFER TO "REFUSE ENCLOSURE PLAN - ELECTRICAL", SHEET E-303 FOR ELECTRICAL REQUIREMENTS IN THIS AREA.
6. REFER TO SHEET E-303 FOR ELECTRICAL REQUIREMENTS AT MENU BOARD, DRIVE-THRU CANOPY, AND PRESELL MENU BOARD.
7. REFER TO SHEETS E-901, & E-902 FOR ELECTRICAL SPECIFICATIONS PERTAINING TO ELECTRICAL WORK DESCRIBED ON THIS SHEET.
8. REFER TO SHEET E-211 FOR LIGHTING FIXTURE SCHEDULE.
9. PROVIDE UNDERGROUND CONDUIT TO JUNCTION BOX IN OFFICE FOR POLE MOUNTED SECURITY CAMERA. REFER TO SHEET E-302 FOR LOCATION OF JUNCTION BOX IN OFFICE AND REQUIRED SIZE OF CONDUIT. COORDINATE EXACT CAMERA LOCATION WITH CHICK-FIL-A SECURITY SYSTEM REPRESENTATIVE PRIOR TO ROUGH-IN.
10. CONNECT SITE LIGHTING CIRCUITS TO TERMINAL BLOCKS LOCATED IN THE "CFA-T500" CONTROL PANEL (TYPICAL). SEE PANEL SCHEDULES ON SHEET E-501.
11. CONNECT SITE SIGNAGE CIRCUITS TO TERMINAL BLOCKS LOCATED IN THE "CFA-T500" CONTROL PANEL (TYPICAL). SEE PANEL SCHEDULES ON SHEET E-501. COORDINATE LOCATIONS OF ALL SIGNS WITH CHICK-FIL-A REPRESENTATIVE PRIOR TO BID AND PRIOR TO CONDUIT INSTALLATION.
12. PROVIDE GFCI TYPE WEATHERPROOF RECEPTACLE MOUNTED ON MAIN SIGN SUPPORT +14" AFG. THIS RECEPTACLE SHALL NOT BE SWITCHED. (BYPASS THE CONTACTOR AND SIGN'S DISCONNECT SWITCH.)
13. PROVIDE WEATHERPROOF 20A SPST TOGGLE SWITCH 18" AFG AND CONNECTION TO MAINTENANCE DISCONNECT SWITCH FOR MAIN I.D. SIGN.
14. PROPOSED LOCATION OF BUILDING MOUNTED ELECTRICAL UTILITY METER. METER BASE WILL BE FURNISHED BY THE UTILITY COMPANY AND INSTALLED BY THE CONTRACTOR. THE CURRENT TRANSFORMER CABINET SHALL BE FURNISHED AND INSTALLED ON THE BUILDING BY THE CONTRACTOR. THE CONTRACTOR SHALL ALSO FURNISH AND INSTALL A 1-1/4" RIGID GALVANIZED CONDUIT BETWEEN METER BASE AND CURRENT TRANSFORMER CABINET. COORDINATE LOCATIONS AND REQUIREMENTS WITH ELECTRIC UTILITY COMPANY PRIOR TO BID.
15. PROVIDE A 12' POLE FOR MOUNTING OF SECURITY CAMERA. POLE TO MATCH SITE LIGHTING POLES IN STYLE AND COLOR.

ELECTRICAL KEY NOTES

130 APPROXIMATE LOCATION OF A 360 DEGREE BUILDING MOUNTED EXTERIOR CAMERA (BY OTHERS). PROVIDE A 3/4" CONDUIT AT 9'-4" AFF TO AN EXTERIOR WALL MOUNTED WP JUNCTION BOX WITH THE CONDUIT ABOVE THE INTERIOR CEILING AND EXTENDED TO AN ACCESSIBLE CEILING AREA FOR CAMERA CABLES BY OTHERS. REFER TO LOW VOLTAGE DRAWINGS FOR EXACT LOCATION OF 360DEGREE BUILDING MOUNTED CAMERA.

131 PROVIDE AN EXTERIOR DUPLEX 120V, 20A RECEPTACLE AT 18"AFF WITH 'IN-USE' STYLE LOCKABLE WP COVER AND CONNECT TO A GENERAL PURPOSE 120V RECEPTACLE CIRCUIT.

132 PROVIDE A JUNCTION BOX ON THE INSIDE PARAPET WALL ABOVE THE ROOF WITH A 3/4" CONDUIT STUBBED DOWN INTO AN ACCESSIBLE CEILING SPACE AREA BELOW FOR THE OWNER PROVIDED WI-FI EXTERIOR ANTENNAE. REFER TO LOW VOLTAGE DRAWINGS FOR EXACT LOCATION OF WI-FI EXTERIOR ANTENNAE.

ELECTRICAL SITE PLAN SYMBOLS

SYMBOL	DESCRIPTION (UNLESS OTHERWISE NOTED ON PLANS)
T	UTILITY COMPANY TRANSFORMER, (208 VOLT, 3 PHASE, 4 WIRE SECONDARY)
$	S.P.S.T. LIGHT SWITCH (600V AC QUIET TYPE)
GF	GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE
	CONDUIT HOMERUN TO PANEL
J	JUNCTION BOX (SINGLE GANG STEEL WHERE WALL MOUNTED, 4" SQ. STEEL WHERE CEILING MOUNTED, UNLESS NOTED OTHERWISE)
	CONDUIT BURIED BELOW GRADE
	POLE MOUNTED SITE LIGHTING FIXTURE.

GENERAL ELECTRICAL SITE PLAN NOTES

(APPLIES TO THE ELECTRICAL SITE PLAN ONLY)

1. VERIFY WITH LOCAL AUTHORITIES AND UTILITIES THAT OWNER'S SIGNS, POLES, AND THEIR APPURTENANCES ARE NOT LOCATED ON OR OVER ANY EASEMENT OR MUNICIPAL RIGHT OF WAY.
2. SITE WORK, UTILITY, AND ROADWAY INFORMATION ARE TAKEN FROM BOUNDARY AND TOPO SURVEY SITE PLANS. REFER TO C-DRAWINGS.
3. MINIMUM CONDUIT SIZE SHALL BE 3/4"C. MINIMUM CONDUCTOR SIZE SHALL BE #10AWG COPPER UNLESS OTHERWISE NOTED.
4. REFER TO BUILDING ELECTRICAL DRAWINGS FOR EXTERIOR LIGHTING CONTROL.
5. FOR WORK UNDER THIS DIVISION, ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ONLY NEW AND U.L. LABELED ELECTRICAL EQUIPMENT, UNLESS INDICATED OTHERWISE BY THE CONTRACT DOCUMENTS.
6. FOR WORK UNDER THIS DIVISION, ELECTRICAL CONTRACTOR SHALL CONTACT ALL UTILITIES FOR VERIFICATION AND IDENTIFICATION OF ALL UNDERGROUND RUNS, PRIOR TO SITE TRENCHING ("CALL BEFORE YOU DIG").
7. FOR WORK UNDER THIS DIVISION, ELECTRICAL CONTRACTOR SHALL PERFORM ALL WORK IN STRICT ACCORDANCE WITH THE CURRENT EDITION OF THE NATIONAL ELECTRIC CODE (NFPA 70), AND THE LIFE SAFETY CODE (NFPA 101), AS ADOPTED AND/ OR AMENDED BY STATE AND LOCAL AUTHORITIES HAVING JURISDICTION.
8. FOR WORK UNDER THIS DIVISION, ELECTRICAL CONTRACTOR SHALL COORDINATE AND FIELD VERIFY LOCATIONS OF ALL UTILITY SERVICE RUNS, ORIGINATIONS, TERMINATIONS AND ANY INSTALLATION REQUIREMENTS (i.e. ELECTRICAL, TELEPHONE, WATER, GAS, SEWAGE, ETC.), AS RELATED TO THIS JOB, OR THEREBY EFFECTED.

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ISELIN, NJ 08830
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ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR ALL
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SHEET
ELECTRICAL SITE PLAN

SHEET NUMBER
E-100

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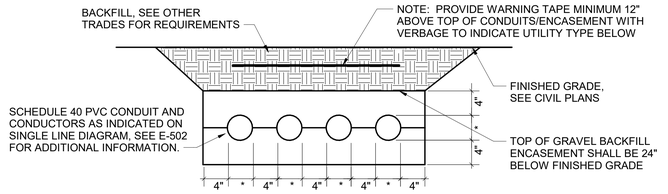
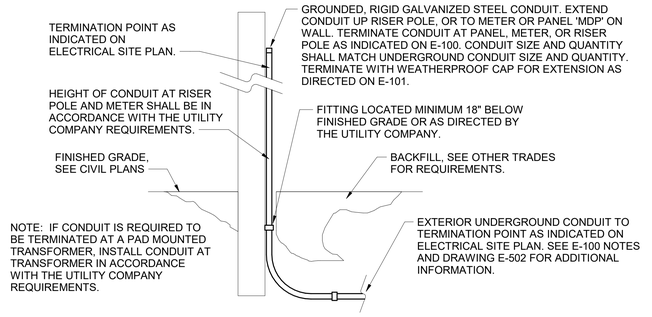


NOTE:
WHERE THE SECONDARY CONDUITS FROM THE UTILITY TRANSFORMER TO THE CURRENT TRANSFORMER CABINET (OR MAIN PANELBOARD) ARE FURNISHED BY THE UTILITY COMPANY (FOR INSTALLATION BY THE CONTRACTOR) OR ARE FURNISHED AND INSTALLED BY THE UTILITY COMPANY, THE CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS WITH THE UTILITY COMPANY PRIOR TO BID. REFER TO THE ELECTRICAL SITE PLAN FOR ADDITIONAL INFORMATION.

E1 ELECTRICAL SERVICE LATERAL CONDUIT DETAIL
N.T.S.



C1 EXTERIOR CONDUIT TURN UP DETAIL
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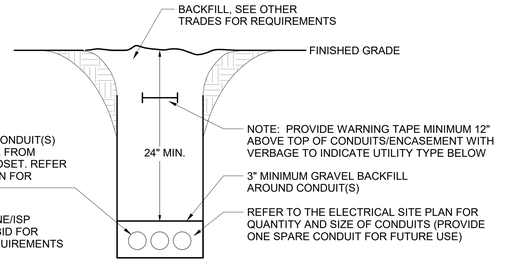
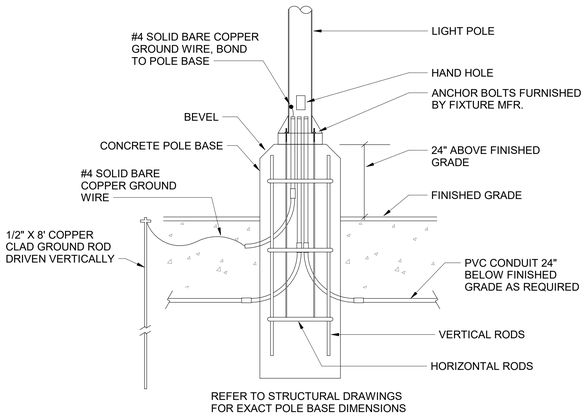
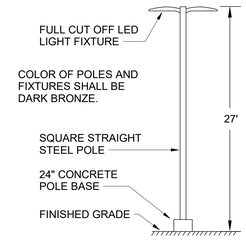


B1 TELEPHONE SERVICE CONDUIT DETAIL
N.T.S.





A3 SITE LIGHTING POLE DETAIL
N.T.S.

A1 TYPICAL LIGHT POLE BASE DETAIL
N.T.S.

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SHEET
ELECTRICAL SITE DETAILS

SHEET NUMBER
E-101

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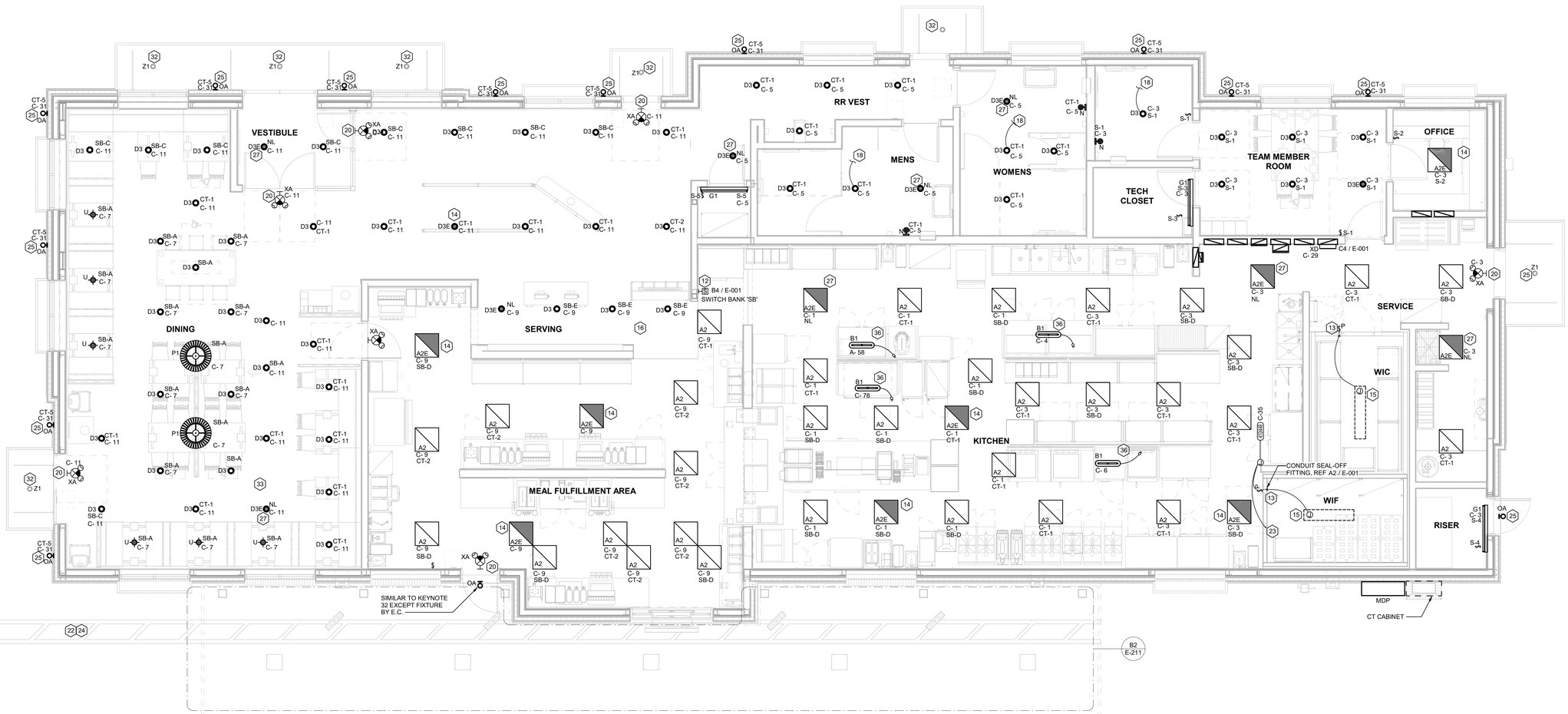


C1 LIGHTING PLAN
1/4" = 1'-0"

ELECTRICAL KEYNOTES (PART-1)

12 FOR SIGNAGE BY OTHERS; CONNECT AS REQUIRED. GROUND ALL LOCATIONS IN ACCORDANCE WITH NEC AND MANUFACTURER'S REQUIREMENTS. SIGN IS FURNISHED WITH AN INTEGRAL PRE-WIRED DISCONNECTING MEANS.

13 FOR CONTROL OF LIGHTING FIXTURE IN WALK-IN COOLER AND FREEZER. SWITCH FURNISHED WITH EQUIPMENT, INSTALLED BY ELECTRICAL CONTRACTOR.

14 CONNECT FIXTURE SO THAT BATTERY PACK IS NOT SWITCHED WITH LIGHTS, BUT ALL LAMPS ARE SWITCHED.

15 FOR CONNECTION TO LIGHTING FIXTURE IN THE WALK-IN COOLER AND FREEZER WHICH IS FURNISHED WITH EQUIPMENT. CONTRACTOR SHALL ROUGH-IN AND CONNECT ALL FIXTURES AS REQUIRED BY THE EQUIPMENT MANUFACTURER.

16 THE LIGHT FIXTURES IN THE MEAL FULFILLMENT AREA ARE PROVIDED WITH LAMP SHIELDING VIA A LENS.

18 TO THE TOILET EXHAUST FAN ON ROOF. SEE SHEET E-250, ROOF ELECTRICAL PLAN.

20 THIS FIXTURE SHALL NOT BE SWITCHED. CONNECT TO CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS.

22 SEE THE ROOF ELECTRICAL PLAN FOR LOCATION OF TYPE 'OC' ROOF MOUNTED FLAG POLE LIGHT. FIXTURE TO BE CONNECTED TO CIRCUIT C-29 THRU THE CFA-T500 CONTROL PANEL CONTACTOR #9 (AHEAD OF THE INVERTER, NOT THRU THE INVERTER.)

23 TO WALK-IN FREEZER DOOR FRAME HEATER AND AIR RELIEF ASSEMBLY (PRESSURE REDUCTION VALVE - PRV), THRU SEAL-OFF FITTING. VERIFY ROUGH-IN AND FINAL CONNECTION WITH EQUIPMENT.

24 SEE THE SITE ELECTRICAL PLAN FOR LOCATION OF TYPE 'OC' GROUND MOUNTED FLAG POLE LIGHT. FIXTURE TO BE CONNECTED TO CIRCUIT C-29 THRU THE CFA-T500 CONTROL PANEL CONTACTOR #9 (AHEAD OF THE INVERTER, NOT THRU THE INVERTER.)

25 ROUTE THROUGH CONTROL PANEL CFA-T500 AND CONTROLLED BY OCCUPIED SWITCH AND PHOTOCELL.

27 CONNECT LIGHTING FIXTURE SO THAT LAMP BALLAST OR DRIVER AND EMERGENCY BATTERY PACK ARE NOT SWITCHED. 'NL' ADJACENT TO FIXTURE INDICATES THAT FIXTURE SHALL BE ON 24 HOURS.

32 CANOPY LIGHTS PROVIDED BY THE CANOPY SUPPLIER INTEGRAL WITH THE CANOPY. ELECTRICAL CONTRACTOR SHALL PROVIDE ROUGH-IN CONDUIT CHASE AT CL OF AWNING AND AT 10'-0" AFF (VERIFY) AND CONNECT THE 120V CIRCUIT TO THE 'XD' INVERTER UNIT. COORDINATE LOCATIONS OF LIGHTS AND ROUGH-IN REQUIREMENTS WITH THE CANOPY SUPPLIER. LIGHTS WILL COME ON AT DUSK, TURN OFF AT DAWN, AND BE ENERGIZED WHENEVER THERE IS A POWER OUTAGE.

33 REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR LOCATIONS OF PENDANTS, DOWNLIGHTS, ACCENTS LIGHTS, AND OTHER CEILING MOUNTED LIGHT FIXTURES.

36 PROVIDE A TYPE B1 SHELF MOUNTED TASK LIGHT FIXTURE. MOUNT LIGHT TO THE UNDERSIDE OF THE WIRE SHELVING. PROVIDE A CORD FROM THE FIXTURE(S) TO A SWITCH IN AN FS BOX MOUNTED TO THE SHELF. FROM FS BOX PROVIDE AN SO CORD WITH PLUG AND CONNECT TO THE GEN RECEPTACLE (WALL OR DROP CORD). SEE ENLARGED POWER PLAN FOR FURTHER INFORMATION.

ELECTRICAL KEYNOTES (PART-2)

112 CEILING LIGHT FIXTURE PROVIDED BY THE CANOPY SUPPLIER AND INSTALLED BY ELECTRICAL CONTRACTOR.

113 AIR CIRCULATING FAN (WITH INTEGRAL ON-OFF SWITCH) PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR. PROVIDE A DUPLEX RECEPTACLE OUTLET (WITH IN-USE WP COVER PLATE) AT THE TOP OF THE COLUMN FLUSH MOUNTED IN THE CUT-OUT FOR THE FAN'S PLUG AND CORD CONNECTION.

114 INFRARED GAS HEATER WITH INTEGRAL ON-OFF SWITCH PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.

115 PROVIDE ONE DUPLEX GFCI (WITH IN-USE WP COVER PLATE) AND TWO 120V SINGLE-POLE SWITCHES (EACH WITH HUBBELL #RW51550 WP COVER PLATE) AND ONE DUPLEX SINGLE-POLE SWITCH (WITH HUBBELL #RW51470 WP COVER PLATE) MOUNTED IN THE COLUMN IN FLUSH MOUNTED METAL SINGLE-GANG BOXES FOR LOCAL ON-OFF CONTROL OF THE FANS, HEATERS, AND CANOPY LIGHTS. SEE WIRING SCHEMATIC FOR FURTHER INFORMATION. ALL SURFACE (OR VISIBLE) ITEMS AND COVERPLATES TO BE FIELD PAINTED MATTE BLACK.

116 ALL CONDUIT AND BOXES SHALL BE CONCEALED FROM NORMAL VIEW; IN WALLS OR ABOVE THE CANOPY (ON THE ROOF). MC CABLE (GALVANIZED STEEL WITH PVC JACKET) MAY BE USED INSIDE THE WALL FOR THE DEVICES, BUT MUST CONVERT TO IMC ABOVE THE CANOPY ROOF. (PROVIDE A NEMA 3R JUNCTION BOX ON THE ROOF SIDE OF THE CANOPY TO TRANSITION FROM MC CABLES IN WALL TO IMC CONDUIT ON THE ROOF.) ALL EXPOSED BOXES AND FITTINGS TO BE CAST-METAL NEMA 3R. REFER TO THE MECHANICAL SHEETS FOR CONDUIT MOUNTING DETAILS ON THE ROOF.

POWER PLAN GENERAL NOTES

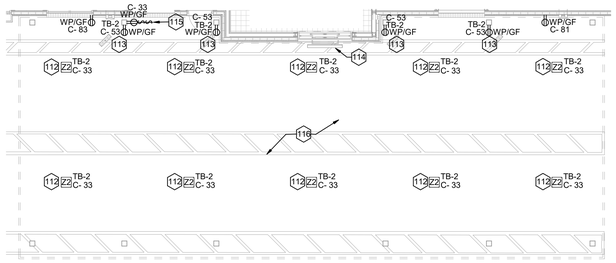
A. ALL SECURITY, POS, MUSIC, COMMUNICATIONS, AND POWER ROUGH-IN SHALL BE INSTALLED DURING THE FRAMING/ROUGH-IN PHASE OF CONSTRUCTION.

B. REFER TO KITCHEN EQUIPMENT SHEETS FOR EQUIPMENT ELECTRICAL ROUGH-IN ELEVATIONS ABOVE FINISHED FLOOR.

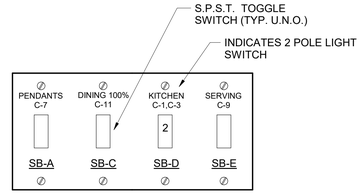
C. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRING.

D. PROVIDE INSULATED BUSHING AT TERMINATION POINTS OF ALL CONDUITS FOR LOW VOLTAGE WIRING.

E. THE ELECTRICAL INSTALLER SHALL COORDINATE THE ROUTING OF ALL CONDUIT IN THE BUILDING WITH OTHER TRADES (SPECIFICALLY THE DUCTWORK INSTALLATION) TO AVOID CONFLICTS OF SPACE REQUIREMENTS IN WALLS AND CEILING SPACES.



B2 CANOPY PLAN
1/8" = 1'-0"



NOTE: LOCATE JUNCTION BOXES IN CEILING SPACE ABOVE THE LOCATION OF THE SWITCHBANK FOR SPLICING OF LINE, LOAD, AND SWITCHED CONDUCTORS. PROVIDE GANGED BACKBOX FOR SWITCHES AS REQUIRED AND LABEL ALL CONDUCTORS SO AS TO INDICATE THEIR USE (LINE, LOAD, SWITCH), THE LOAD SERVED, AND THE CIRCUIT NUMBER.

B1 SWITCH BANK "SB" DETAIL
NO SCALE

LIGHTING FIXTURE (LUMINAIRE) SCHEDULE - CHICK-FIL-A P14 EDITION

NOTE: NOT ALL FIXTURE TYPES ARE USED IN ALL OF THE P13 BUILDINGS. CONFIRM WITH THE LIGHTING VENDOR FOR ANY UPDATES TO THE CURRENT LIGHTING MANUFACTURER AND CATALOG NUMBER.

MARK	MANUFACTURER	CATALOG NUMBER	NO. LAMPS/TYPE	WATTS	VOLTS	MOUNTING	REMARKS
A2	COOPER/METALUX	22FP4240C		39 VA	120 V	RECESSED	2X2 LED FLAT PANEL
A2E	COOPER/METALUX	22FP4240C		39 VA	120 V	RECESSED	2X2 EMERGENCY LED FLAT PANEL
B1	COOPER/METALUX	2VT3-LD5-4-G-120V-L840-CD1-SSL-U	INTEGRAL WITH FIXTURE	32 VA	120 V	SURFACE	MOUNT LIGHT TO BTM OF OVERHEAD WIRE SHELVING WITH CORD & PLUG
D3	COOPER/HALO	HC620D010-HM612830-61NDC	INTEGRAL WITH FIXTURE	21 VA	120 V	RECESSED	LED DOWNLIGHT WITH CLEAR REFLECTOR & TRIM RATED 2000 LUMENS, 3000K COLOR TEMP
D3E	COOPER/HALO	HC620D010IEM14-HM612830-61NDCIEM	INTEGRAL WITH FIXTURE	21 VA	120 V	RECESSED	SAME AS 'D3' EXCEPT WITH EMERGENCY BATTERY PACK/INTEGRAL TEST SWITCH
G1	COOPER/METALUX	4SLSTP4040DD-UNV	INTEGRAL WITH FIXTURE	44 VA	120 V	SURFACE	4760 LUMEN 4 FOOT LENSED LED STRIPLIGHT, MTD ABOVE DOOR FRAME
N	MINKA	4531-267B	1-LED11A19/827/D	11 VA	120 V	WALL	LAVATORY WALL SCONCE-SHADE POINTED DOWN W/ LED LAMP & CL ON LAVATORY
OA	PROGRESS LIGHTING	P5675-31 WITH P8799 TOP COVER LENS	2-(GE)LED12P30RW830255/ECO	24 VA	120 V	WALL	5" DIAMETER, 14" HEIGHT, WET LOCATION, UP/DOWN CYLINDER W/ 12 WATT PAR30 3K NFL LED LAMPS
OC	HUBBELL	FLL-42L-9S-4K7-N-U-K-DB (SEE NOTE 4)	INTEGRAL WITH FIXTURE	97 VA	120 V	PIPE	FLOODLIGHT MTD ON ROOF ON 2" PIPE SUPPORT (BY OTHERS) AND AIMED AT FLAG AFTER DARK
OD1	COOPER/LUMARK	LUMINAIRE: PRV-A60D-UNV-**-SA-BZ (DISTRIBUTION TYPES TO BE DETERMINED BY THE REGIONAL TEAM SPECIFIC TO THE SITE.) POLE: SSP25-4.0-7-BRZ-DM10-BC (SINGLE LUMINAIRE)	INTEGRAL WITH FIXTURE	153 VA	120 V	POLE W/CONCRETE BASE	COORDINATE WITH THE SPECIFIC SITE CONDITIONS FOR THE TYPE OF POLES REQUIRED, THE HEIGHT, AND THE CONFIGURATION. CONTACT VENDOR IF HIGHER THAN 100 MPH WIND LOADING REQUIRED.
OD2	COOPER/LUMARK	LUMINAIRE: PRV-A60D-UNV-**-SA-BZ (DISTRIBUTION TYPES TO BE DETERMINED BY THE REGIONAL TEAM SPECIFIC TO THE SITE.) POLE: SSP25-4.0-7-BRZ-DM10-BC (SINGLE LUMINAIRE)	INTEGRAL WITH FIXTURE	153 VA	120 V	POLE W/CONCRETE BASE	COORDINATE WITH THE SPECIFIC SITE CONDITIONS FOR THE TYPE OF POLES REQUIRED, THE HEIGHT, AND THE CONFIGURATION. CONTACT VENDOR IF HIGHER THAN 100 MPH WIND LOADING REQUIRED.
OD3	COOPER/LUMARK	LUMINAIRE: PRV-A60D-UNV-**-SA-BZ (DISTRIBUTION TYPES TO BE DETERMINED BY THE REGIONAL TEAM SPECIFIC TO THE SITE.) POLE: SSP25-4.0-7-BRZ-DM2180-BC (TWO LUMINAIRES AT 180 DEGRESS)	INTEGRAL WITH FIXTURE	306 VA	120 V	POLE W/CONCRETE BASE	COORDINATE WITH THE SPECIFIC SITE CONDITIONS FOR THE TYPE OF POLES REQUIRED, THE HEIGHT, AND THE CONFIGURATION. CONTACT VENDOR IF HIGHER THAN 100 MPH WIND LOADING REQUIRED.
OK	HUBBELL	LNC-5LU-3K-3-1	INTEGRAL WITH FIXTURE	13 VA	120 V	WALL	LED WALLPACK W/ CENTERLINE OF FIXTURE AT 8'0" ABV 0'0" (FINISH FLOOR LINE)
P1	MEYDA	142776		22 VA	120 V	PENDANT	31" DIA PEACH BASKET PENDANT WITH BTM AT 6'-8" AFF ABV TABLE, 8'-0" OTHERWISE
U	BESA LIGHTING	BES00298-060	FURNISHED	8 VA	120 V	PENDANT	RED FRIT GLASS, BRONZE CABLE & CANOPY, 6'-8" AFF
XA	COOPER/SURE-LITES	APCH7R	INTEGRAL WITH FIXTURE	4 VA	120 V	WALL	EXIT SIGN WITH BATTERY PACK AND TWO INTEGRAL ADJUSTABLE LAMPHEADS
XD	MULE LIGHTING	SPS-220/250-120/277	NONE	250 VA	120 V	WALL	INVERTER UNIT FOR EXTERIOR EGRESS LTG; ON AT DUSK, OFF AT DAWN, ON DURING PWR OUTAGE
Z1	COOPER/HALO	SLD405930WH	INTEGRAL WITH FIXTURE	13 VA	120 V	SURFACE	LED DOWNLIGHT PROVIDED BY CANOPY SUPPLIER INSTALLED BY CANOPY SUPPLIER, CONNECTION BY ELECTRICAL CONTRACTOR
Z2	LSI	CRUS-SC-LED-LW30-UE-WHT	INTEGRAL WITH FIXTURE	74 VA	120 V	RECESSED	CANOPY LIGHT PROVIDED BY CANOPY SUPPLIER AND INSTALLED BY ELECTRICAL CONTRACTOR

NOTES:
1. LUMINAIRES UTILIZING DOUBLE-ENDED LAMPS AND CONTAIN BALLASTS THAT CAN BE SERVICED IN PLACE SHALL HAVE A DISCONNECTING MEANS EITHER INTERNAL OF EXTERNAL TO EACH LUMINAIRE PER NEC 410.130(G).
2. THE LIGHTING FIXTURE PACKAGE IS AVAILABLE THROUGH A NATIONAL ACCOUNT PROGRAM. REFER TO THE ELECTRICAL SPECIFICATIONS SHEET, SECTION C16500 FOR VENDOR INFORMATION.
3. THE ASTERISK (*) BESIDE THE FIXTURE MARK IN THE ABOVE SCHEDULE INDICATES THE FIXTURE IS A NON-PROTOTYPICAL LIGHT FIXTURE PER THE CFA NATIONAL P12 PROTOTYPE.
4. IF TYPE OC IS GROUND MOUNTED IN LIEU OF ROOF MOUNTED, PROVIDE EITHER THE FLL-VISOR-DB (VISOR) OR THE FLL-LOUVER-BL (LOUVER) FOR GLARE CONTROL.

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

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ISELIN, NJ 08830
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NY LICENSE #062261-1

CHICK-FIL-A Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR LRG
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ISSUED FOR BID 10/04/2022

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SHEET
LIGHTING PLAN

SHEET NUMBER
E-211

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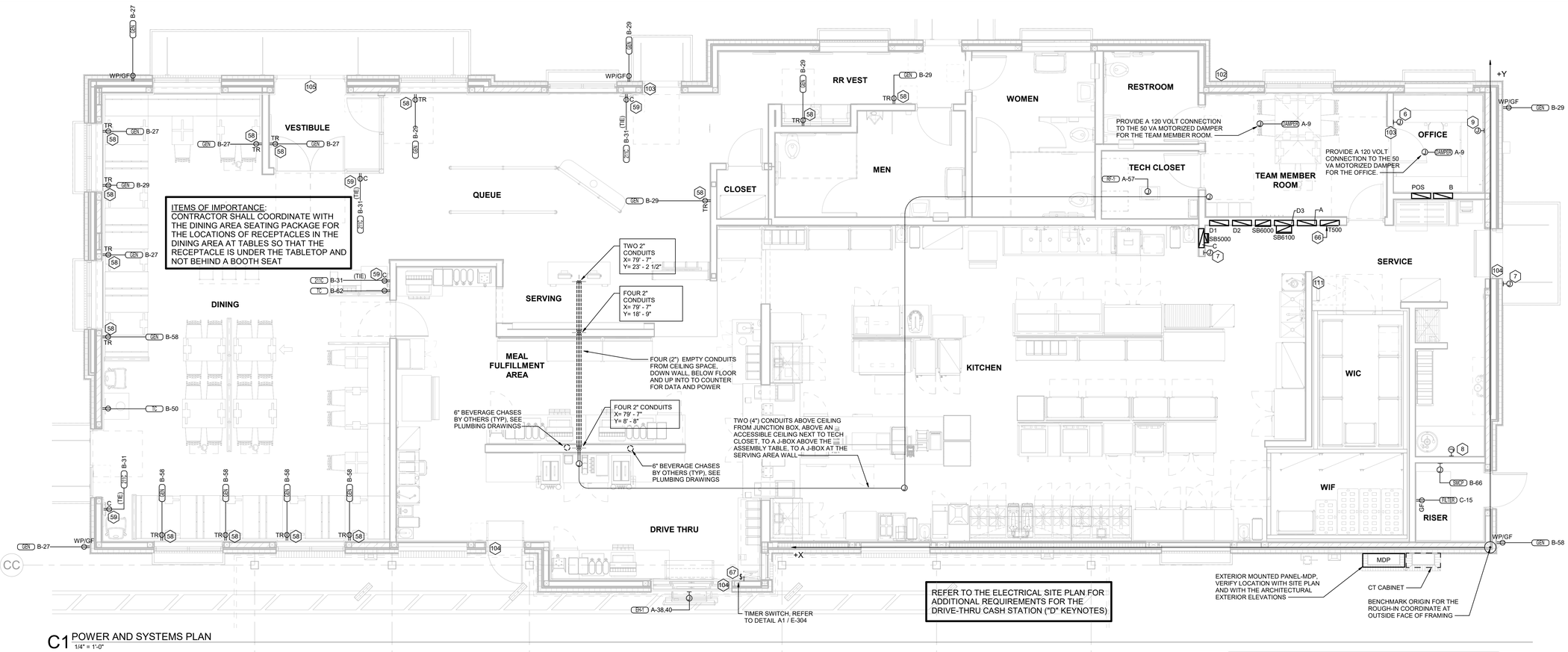
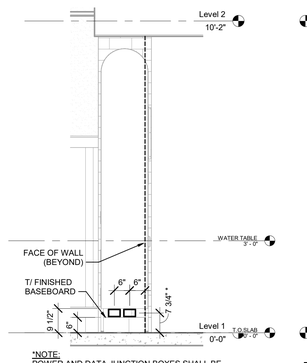
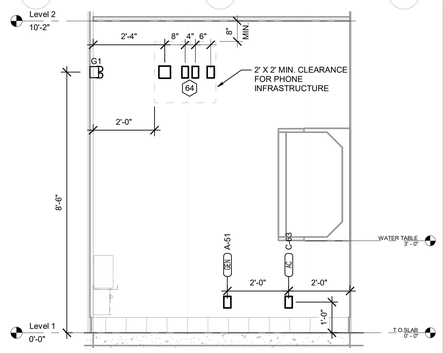


C1 POWER AND SYSTEMS PLAN
1/4" = 1'-0"

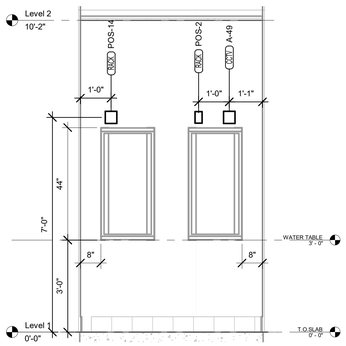


*NOTE:
POWER AND DATA JUNCTION BOXES SHALL BE LOCATED ABOVE THE FINISHED TILE BASEBOARD AND LOWEST SHELF OF THE PICK-UP SHELF UNIT. COORDINATE REQUIREMENTS WITH PICK-UP SHELF FINAL LOCATION.

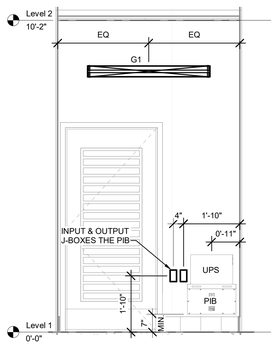
B4 PICK-UP SHELF ELEV
N.T.S.



B2 TECH ELEV CENTER
N.T.S.



B3 TECH ELEV LEFT
N.T.S.



B1 TECH ELEV RIGHT
N.T.S.

ELECTRICAL KEYNOTES (PART-1)

6	CO2 CENTRAL CONTROL UNIT - PROVIDE SINGLE-GANG BACKBOX AT 60" AFF WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE
7	CO2 ANNUNCIATOR UNIT - PROVIDE SINGLE-GANG BACKBOX AT 60" AFF WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE
8	CO2 SENSOR UNIT - PROVIDE SINGLE-GANG BACKBOX AT 12" AFF WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE
9	CO2 POWER SUPPLY - PROVIDE SINGLE-GANG BACKBOX AT 18" BELOW CEILING WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE. PROVIDE DUPLEX OUTLET, AND CONNECT TO A LOCAL GENERAL OUTLET CIRCUIT. FIELD VERIFY EXACT LOCATION WITH STRONG SYSTEMS 800-500-5566
58	TAMPER RESISTANT (TR) DUPLEX RECEPTACLE (IN DINING AREAS) WITH USB CHARGER SHALL BE COOPER/ARROW HART #TR7756-B (BROWN) WITH MATCHING COLOR 'DECOR' STYLE PLATE. VERIFY COLOR WITH OWNER.
59	PROVIDE DUPLEX RECEPTACLE (SEE ELEVATIONS FOR MTG HT) IN AN ARLINGTON #DVFR2W DOUBLE-GANG RECESSED BOX FOR THE FLY SYSTEM ITEMS. DO NOT CUT THE CORDSET FURNISHED WITH THE UNIT, BUT COIL THE CORD ON THE BACK OF THE UNIT AND TUCK INTO THE BACKBOX.
64	PROVIDE TWO 6"H X 6"W X 4"D J-BOXES (ONE FOR TELEPHONE AND ONE FOR ISP) AT 6" AFF AND EXTEND A 2" CONDUIT WITH A PULL STRING IN THE WALL FROM EACH J-BOX INTO THE ACCESSIBLE CEILING SPACE. PROVIDE A 36" X 36" X 3/4" PLYWOOD BACKBOARD ON THE WALL ABOVE THE J-BOXES (AT THE CEILING) FOR USE BY THE ISP. PROVIDE A COPPER GROUND BAR (EQUAL TO ERICO TGBA24L14P) AT THE BOTTOM OF THE BACKBOARD WITH A #6 AWG INSULATED CU GROUNDING CONDUCTOR IN A 3/4"C FROM THE GROUND BAR TO THE INTER SYSTEM BONDING TERMINATION NEXT TO THE SERVICE ENTRANCE. THE GROUND BAR SHALL HAVE TAPS FOR USE BY THE TELEPHONE AND ISP UTILITY COMPANIES AND FOR THE #6 COMMUNICATIONS GROUNDING CONDUCTOR TO THE GES. PROVIDE A 15 AMP ISOLATED GROUND (IG) ORANGE-FACED DUPLEX RECEPTACLE IN THE WALL BESIDE THE BACKBOARD AND LABEL THE RECEPTACLE "FOR FIBER TO CABLE MODEM USE ONLY". BOND NETWORK RACKS TO GROUND BAR.
66	THE STORE OPEN-CLOSE UNIT SWITCH IS FURNISHED WITH THE CFA-T500 CONTROL PANEL AND FACTORY INSTALLED IN THE DOOR OF THE CFA-T500 CABINET.
67	TIMER SWITCH FOR OUTSIDE ELECTRIC HEATER. REFER TO E304 FOR DETAILS AND WIRING SCHEMATIC.

ELECTRICAL KEYNOTES (PART-2)

102	PROVIDE A 1/2" CONDUIT THRU THE EXTERIOR WALL AND STUBBED INTO THE ACCESSIBLE CEILING SPACE FOR THE EXTERIOR WALL MOUNTED AUDIO-VISUAL ALARM NOTIFICATION DEVICE. VERIFY LOCATION WITH THE EXTERIOR ELEVATIONS AND WITH THE SECURITY INSTALLER - TYPICALLY TO BE LOCATED NEAR THE FIRE PROTECTION SYSTEM'S EXTERIOR ALARM UNIT AND VISIBLE FROM THE STREET.
103	EXTEND 1/2" RIGID CONDUIT FROM TOP OF STRIKE-SIDE DOOR FRAME CHANNEL TO ABOVE ACCESSIBLE CEILING.
104	EXTEND 3/4" RIGID CONDUIT FROM TOP OF STRIKE-SIDE DOOR FRAME CHANNEL TO ABOVE ACCESSIBLE CEILING.
105	EXTEND 1/2" CONDUIT FROM A POINT 3" WITHIN EITHER HINGE-SIDE DOOR VERTICAL FRAME MULLION TO ABOVE ACCESSIBLE CEILING.
111	PROVIDE JUNCTION BOX ON THE LATCH SIDE OF THE ROOF ACCESS HATCH WITH 1/2" CONDUIT ABOVE THE CEILING TO AN ACCESSIBLE CEILING SPACE FOR A DOOR CONTACT.

POWER PLAN GENERAL NOTES

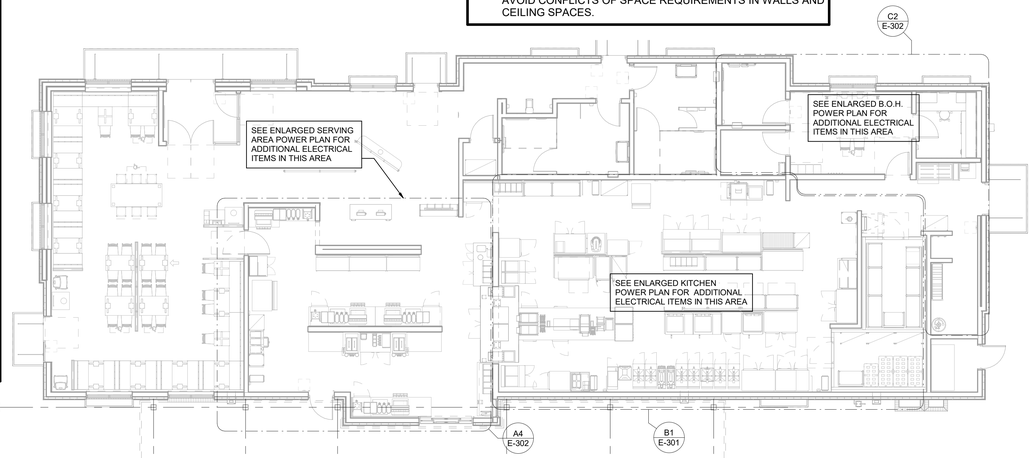
A. ALL SECURITY, POS, MUSIC, COMMUNICATIONS, AND POWER ROUGH-IN SHALL BE INSTALLED DURING THE FRAMING/ROUGH-IN PHASE OF CONSTRUCTION.

B. REFER TO KITCHEN EQUIPMENT SHEETS FOR EQUIPMENT ELECTRICAL ROUGH-IN ELEVATIONS ABOVE FINISHED FLOOR.

C. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRING.

D. PROVIDE INSULATED BUSHING AT TERMINATION POINTS OF ALL CONDUITS FOR LOW VOLTAGE WIRING.

E. THE ELECTRICAL INSTALLER SHALL COORDINATE THE ROUTING OF ALL CONDUIT IN THE BUILDING WITH OTHER TRADES (SPECIFICALLY THE DUCTWORK INSTALLATION) TO AVOID CONFLICTS OF SPACE REQUIREMENTS IN WALLS AND CEILING SPACES.



A1 ELECTRICAL KEY PLAN
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Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

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SHEET
POWER AND SYSTEMS PLAN

SHEET NUMBER
E-221

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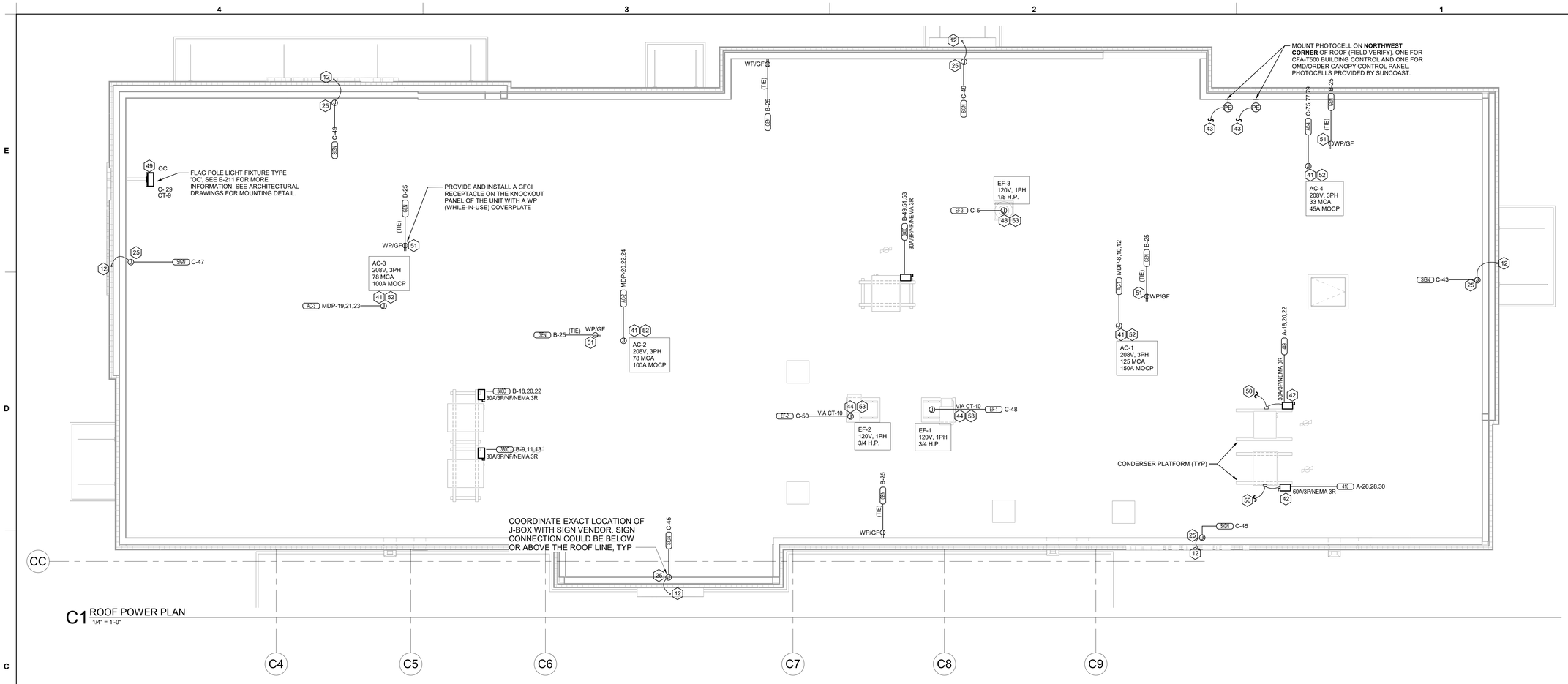

C1 ROOF POWER PLAN
1/4" = 1'-0"

POWER PLAN GENERAL NOTES

A. ALL SECURITY, POS, MUSIC, COMMUNICATIONS, AND POWER ROUGH-IN SHALL BE INSTALLED DURING THE FRAMING/ROUGH-IN PHASE OF CONSTRUCTION.

B. REFER TO KITCHEN EQUIPMENT SHEETS FOR EQUIPMENT ELECTRICAL ROUGH-IN ELEVATIONS ABOVE FINISHED FLOOR.

C. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRING.

D. PROVIDE INSULATED BUSHING AT TERMINATION POINTS OF ALL CONDUITS FOR LOW VOLTAGE WIRING.

E. THE ELECTRICAL INSTALLER SHALL COORDINATE THE ROUTING OF ALL CONDUIT IN THE BUILDING WITH OTHER TRADES (SPECIFICALLY THE DUCTWORK INSTALLATION) TO AVOID CONFLICTS OF SPACE REQUIREMENTS IN WALLS AND CEILING SPACES.

ELECTRICAL KEYNOTES (PART-1)

12 FOR SIGNAGE BY OTHERS; CONNECT AS REQUIRED. GROUND ALL LOCATIONS IN ACCORDANCE WITH NEC AND MANUFACTURER'S REQUIREMENTS. SIGN IS FURNISHED WITH AN INTEGRAL PRE-WIRED DISCONNECTING MEANS.

25 ROUTE THROUGH CONTROL PANEL CFA-T500 AND CONTROLLED BY OCCUPIED SWITCH AND PHOTOCELL.

41 ROUTE ELECTRICAL CONDUITS TO UNIT CONNECTIONS THROUGH WEATHERPROOF RACEWAY FURNISHED WITH UNIT. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATIONS.

42 MOUNT WEATHER-PROOF FUSED DISCONNECT SWITCHES FOR WIC AND WIF CONDENSERS ON UNISTRUT WITH CONDUIT DOWN INTO CEILING SPACE BELOW THRU ROOF PENETRATION DEVICE (NOT THRU ROOF), SEE THE ARCHITECTURAL ROOF PENETRATION DETAIL(S) FOR FURTHER INFORMATION. PROVIDE FUSE SIZE PER MANUFACTURER REQUIREMENTS.

43 CONNECT ONE PHOTOCELL ON ROOF TO THE CFA-T500 CONTROL PANEL TERMINALS AND ONE PHOTOCELL ON ROOF TO THE ORDER/OMD CANOPY CONTROL PANEL AS DIRECTED BY SUNCOAST ENVIRONMENTAL INC WIRING DIAGRAMS. PHOTOCELLS ON THE ROOF FURNISHED WITH CONTROL PANELS ORDER (SUNCOAST) AND INSTALLED BY CONTRACTOR.

44 COORDINATE EXACT LOCATION OF CONDUIT AND DISCONNECT AT EXHAUST FAN. CONDUIT SHALL BE INSTALLED THROUGH ROOF ON OUTSIDE OF FAN CURB. CONDUIT SHALL BE LOCATED AT FAN HINGE SUCH THAT THE FAN HOOD CAN BE FULLY HINGED OPEN AND NOT TOUCH THE CONDUIT. PROVIDE 14" DIAMETER LOOP IN THE FLEXIBLE CONDUIT BETWEEN THE ROOF AND THE FAN ELECTRICAL CONNECTION.

48 COORDINATE EXACT LOCATION OF CONDUIT AND DISCONNECT AT EXHAUST FAN. CONDUIT SHALL BE ROUTED WITH DUCTWORK WITHIN FAN ROOF CURB AND TO THE FAN WIREWAY. PROVIDE SEALTIGHT FITTINGS AS THE CONDUIT ENTERS AND LEAVES THE DUCTWORK. INTERLOCK WITH LIGHTING CIRCUIT IN RESTROOM. REFER TO THE LIGHTING PLAN FOR CONTINUATION.

49 MOUNT TYPE 'OC' LIGHTING FIXTURE, WITH INTEGRAL SLIPFITTER, ON PIPE. PIPE WILL BE PROVIDED BY OTHER TRADES. AIM LIGHTING FIXTURE AT NIGHT FOR BEST ILLUMINATION OF FLAG.

50 CONNECT POWER FROM EACH CONDENSING UNIT'S COMPRESSOR CONTACTOR TO THE EVAPORATOR COIL UNIT'S JUNCTION BOX BELOW. REFER TO ENLARGED KITCHEN POWER PLAN FOR LOCATION.

51 CONTRACTOR SHALL PROVIDE A 120V GFCI TYPE 20 AMP CONVENIENCE RECEPTACLE WITH WP (WHILE-IN-USE) COVERPLATE MOUNTED TO THE KNOCKOUT PANEL OF THE UNIT AC UNIT.

52 A/C UNIT DISCONNECT IS FURNISHED WITH A/C UNIT AND SHALL BE CONNECTED BY THE CONTRACTOR.

53 EXHAUST FAN IS FURNISHED WITH A PREWIRED DISCONNECT.

NOTE: REFER TO MECHANICAL DRAWINGS FOR ROOFTOP PACKAGED AC UNIT SCHEDULE. ALL UNITS ARE FURNISHED WITH FACTORY INSTALLED DISCONNECT SWITCH. REFER TO SAME SCHEDULE FOR INDICATION OF UNITS FURNISHED WITH FACTORY RECEPTACLE FOR COMPLIANCE WITH NEC 210-63.

ELECTRICAL ROOFTOP UNIT EQUIPMENT SCHEDULE - ALTERNATES

DESIGNATION	VOLTAGE	PHASE	MCA	MOCP	LOAD (VA)	MARK NO.*
AC-1	208 V	3	125 A	150 A	45,033	34
AC-2	208 V	3	78 A	100 A	29,902	22
AC-3	208 V	3	78 A	100 A	29,902	22
AC-4	208 V	3	33 A	45 A	11,889	12

*REFER TO TABLE B1 - CONDUIT AND CONDUCTORS SCHEDULE LOCATED ON SHEET E-502 FOR CONDUCTOR AND CONDUIT SIZE.

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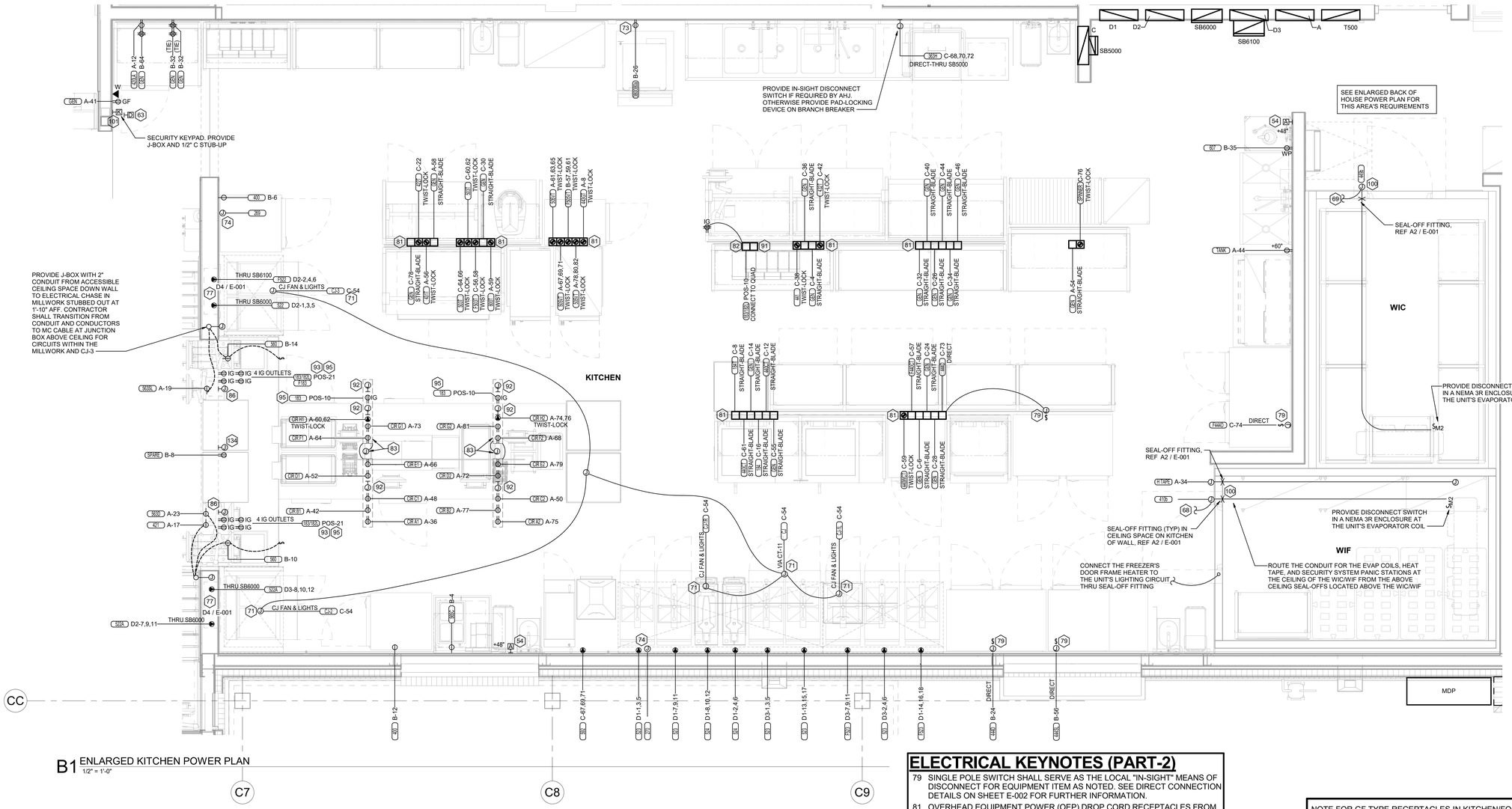
SHEET
ROOF POWER PLAN

SHEET NUMBER
E-250

9/29/2022 3:48:29 PM Autodesk Docs://NY_04937_Levittown_2021.4_FSR/04937_Levittown_ELE.rvt
50-LSR-04937-E-250-ROOF POWER PLAN



B1 ENLARGED KITCHEN POWER PLAN
1/2" = 1'-0"

POWER PLAN GENERAL NOTES

A. ALL SECURITY, POS, MUSIC, COMMUNICATIONS, AND POWER ROUGH-IN SHALL BE INSTALLED DURING THE FRAMING/ROUGH-IN PHASE OF CONSTRUCTION.

B. REFER TO KITCHEN EQUIPMENT SHEETS FOR EQUIPMENT ELECTRICAL ROUGH-IN ELEVATIONS ABOVE FINISHED FLOOR.

C. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRING.

D. PROVIDE INSULATED BUSHING AT TERMINATION POINTS OF ALL CONDUITS FOR LOW VOLTAGE WIRING.

E. THE ELECTRICAL INSTALLER SHALL COORDINATE THE ROUTING OF ALL CONDUIT IN THE BUILDING WITH OTHER TRADES (SPECIFICALLY THE DUCTWORK INSTALLATION) TO AVOID CONFLICTS OF SPACE REQUIREMENTS IN WALLS AND CEILING SPACES.

ELECTRICAL KEYNOTES (PART-1)

54 PROVIDE TWO-GANG DEEP BOX (2" MIN.) FOR FS PULL STATION. EXTEND 1/2" CONDUIT FROM BOX, STUBBED ABOVE CEILING.

63 PROVIDE 2 GANG DEEP BOX (2" MIN.) FOR EACH DUCT SMOKE DETECTOR INDICATED ON THE MECHANICAL DRAWINGS FOR INSTALLATION OF DUCT DETECTOR REMOTE ANNUNCIATORS BY MECHANICAL. THE DUCT SMOKE REMOTE ANNUNCIATORS ARE PROVIDED TO THE ELECTRICIAN WITH THE SUNCOAST ELECTRONICS PACKAGE OF GEAR AND CONTROLS. EXTEND 1/2" CONDUIT FROM EACH BOX AND STUB ABOVE CEILING.

68 CONNECT EVAPORATOR UNIT IN FREEZER TO FREEZER CONDENSING UNIT CONTROLS LOCATED ON ROOF. SEE THE ROOF ELECTRICAL PLAN.

69 CONNECT EVAPORATOR UNIT IN COOLER TO COOLER CONDENSING UNIT CONTROLS LOCATED ON ROOF. SEE THE ROOF ELECTRICAL PLAN.

71 CONNECT AS REQUIRED TO CJ FAN VIA THE HOOD SUPPLIED SPEED CONTROLLER. CONNECT HOMERUN VIA A RELAY IN THE CFA-T500 CONTROL SECTION.

73 SEE THE ROOF ELECTRICAL PLAN FOR THE LOCATION OF THE ICE MAKER CONDENSERS AND ANY ADDITIONAL REQUIREMENTS.

74 PROVIDE 3#12 IN 1/2" CONDUIT BETWEEN THE CFA-T500 CONTROL PANEL AND THE FS SYSTEM PANEL(S). SEE FS SYSTEM WIRING DIAGRAM DETAIL ON SHEET E-002 FOR ADDITIONAL INFORMATION.

77 THE RECESSED PIN AND SLEEVE BOX WITH THE 'SLEEVE' RECEPTACLE FOR THE OPEN FRYERS (ITEMS #522 AND 522A) ARE FURNISHED BY THE EXHAUST HOOD SUPPLIER AND INSTALLED BY THE CONTRACTOR. THE OPEN FRYER SUPPLIER PROVIDES PREWIRED CORDSET WITH A PIN DEVICE INTERGRAL WITH THE OPEN FRYER TO PLUG INTO THE SLEEVE RECEPTACLE.

ELECTRICAL KEYNOTES (PART-2)

79 SINGLE POLE SWITCH SHALL SERVE AS THE LOCAL "IN-SIGHT" MEANS OF DISCONNECT FOR EQUIPMENT ITEM AS NOTED. SEE DIRECT CONNECTION DETAILS ON SHEET E-002 FOR FURTHER INFORMATION.

81 OVERHEAD EQUIPMENT POWER (OEP) DROP CORD RECEPTACLES FROM A FLUSH MOUNTED CEILING OEP BOX (MAXIMUM OF SIX PER ASSEMBLY.) PROVIDE A-C-S OEP ASSEMBLY #12360-1000. ASSEMBLY WILL CONSIST OF A FLUSH CEILING OUTLET BOX, TWIST-LOCK PENDANT RECEPTACLES, STRAIGHT BLADE PENDANT RECEPTACLES, CORDS, STRAIN RELIEF, AND TWISTLOCK PLUGS AS NOTED ON PLAN. CONTACT BRIDGID DEFRAMCESHI EMAIL: BRIDGID1985@GMAIL.COM (800-639-7584) TO PURCHASE OEP BOX AND DROP CORD/RECEPTACLES. PROVIDE LIQUID-TIGHT CONDUIT WITH CONDUCTORS FOR DIRECT CONNECTED EQUIPMENT. CONDUIT SHALL NOT TOUCH THE FLOOR WHEN EQUIPMENT IS IN PLACE. USE SUPPORT GRIPS W/ SUPPORT HOOK ATTACHED TO SHELVING ABOVE AS NEEDED. PASS & SEYMOUR MODEL #FS075-U-GH5 OR EQUIVALENT.

82 PROVIDE A DOUBLE-GANG BOX FLUSH MOUNTED IN THE CEILING WITH A BLANK PLATE WITH HOLE FOR A DROP CORD. PROVIDE THE #12 DROP CORD (WITH STRAIN RELIEF AT THE BOX AND AT THE OUTLET BACKBOX) AND CONNECT THE CORD TO AN OUTLET BOX CONTAINING TWO 15 AMP IG (ORANGE) DUPLEX OUTLETS. OUTLET BOX TO BE MOUNTED TO THE OVERHEAD SHELVING AT THE PRINTER AND MONITOR MOUNTING BRACKET.

83 COORDINATE WITH THE EQUIPMENT SUPPLIER FOR THE CHASE LOCATIONS. ROUTE ONE SET OF CIRCUIT 'A' THRU 'H' AND POS CIRCUIT TO EACH JUNCTION BOX PROVIDED ABOVE CEILING. CONNECT TO PREWIRED LABELED CIRCUITS. ENSURE CIRCUITS ARE LABELED CORRECTLY FOR EACH PREWIRED OUTLET PROVIDED IN EACH CHASE.

86 PROVIDE SINGLE-GANG JUNCTION BOX WITH A 1" CONDUIT EXTENDING UP INTO THE CEILING SPACE FOR POS MONITOR(S). COVER PLATE PROVIDED BY OWNER'S POS SYSTEM VENDOR.

91 PROVIDE A SINGLE GANG BOX FLUSH MOUNTED IN THE CEILING FOR THE POS DATA PLATE (BY OTHERS) FOR THE SALAD PREP AREA POS MONITOR AND PRINTER.

92 3/4" FLEX PROVIDED FOR DATA CABLES IN CHASE.

93 PROVIDE ORANGE ISOLATED GROUND (IG) DUPLEX RECEPTACLE.

95 USE TYPE MC CABLE FOR THE ISOLATED GROUND CIRCUIT: #12 HOT, NEUTRAL, GREEN GROUND, STRIPED ISOLATED GROUND. EACH 15 AMP HOMERUN SHALL BE DEDICATED TO A CIRCUIT BREAKER V/A DEDICATED CONDUCTORS WITHIN A CABLE ASSEMBLY. ALL MC CABLES SHALL BE RUN OVERHEAD ABOVE THE CEILING AND RACKED TOGETHER ON J-HOOKS. NO SPLICES IN ANY HOMERUN CABLES FROM FIRST RECEPTACLE TO BREAKER.

100 PROVIDE TWO GANG WEATHERPROOF JUNCTION BOX AND STAINLESS STEEL PLATE WITH 7/8" HOLE IN CENTER FOR PANIC BUTTON. LOCATE AT 48" AFF AND EXTEND 1/2" CONDUIT UP TO ABOVE ACCESSIBLE CEILING WITH CONDUIT SEAL FITTING. SEAL CONDUIT PENETRATION AT WIC/WIF CEILING.

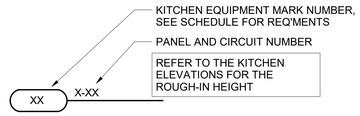
101 PROVIDE SINGLE GANG BOX WITHOUT COVER PLATE. EXTEND 1/2" CONDUIT UP IN WALL TO ABOVE ACCESSIBLE CEILING.

134 PROVIDE A JUNCTION BOX WITH A 1" CONDUIT FOR DATA AND/OR SYSTEMS STUBBED UP INTO CEILING SPACE FOR APPROVED OPERATOR OPTIONAL EQUIPMENT.

NOTE FOR GF TYPE RECEPTACLES IN KITCHEN/FOOD PREP AREAS:
THE CONTRACTOR SHALL PROVIDE GROUND FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL FOR ALL 125V - 250V RECEPTACLES SUPPLIED BY 120V SINGLE-PHASE BRANCH CIRCUITS 50 AMPS OR LESS, 208V SINGLE-PHASE BRANCH CIRCUITS 50 AMPS OR LESS, AND 208V THREE-PHASE BRANCH CIRCUITS 100 AMPS OR LESS. SEE FLOOR PLANS FOR ADDITIONAL INFORMATION.

NOTE FOR POS GF IN KITCHEN:
THE CONTRACTOR SHALL PROVIDE GROUND FAULT PROTECTION FOR ALL 120 VOLT, 15 AND 20 AMP ISOLATED GROUND RECEPTACLE OUTLET BRANCH CIRCUITS IN THE KITCHEN/FOOD PREPARATION AREAS. GROUND FAULT PROTECTION SHALL BE PROVIDED AT THE BREAKER VIA A GROUND FAULT TYPE BRANCH BREAKER. (GFCI TYPE ISOLATED GROUND RECEPTACLES ARE NOT AVAILABLE.)

NOTE:
RECEPTACLES FOR THE POS EQUIPMENT SHALL BE THE ONLY ITEMS THAT CONNECT TO PANEL-POS. THERE SHALL BE NO OTHER LOADS CONNECTED TO THIS ISOLATED GROUND PANEL AND, IF SO, SHALL BE REMOVED AND RECONNECTED TO ANOTHER PANELBOARD AT THE EXPENSE OF THE CONTRACTOR.



A1 KITCHEN EQUIP NOMENCLATURE
NO SCALE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

KEA ENGINEERS
Engineering Excellence since 1984
KEA ENGINEERS
186 WOOD AVE. SOUTH, 1ST FLOOR
ISELIN, NJ 08830
TEL: (732) 635 0044 • FAX: (732) 635 1777
NY STATE CERTIFICATE OF AUTHORIZATION #0019115

ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR ALL
RELEASE: 22.08
PRINTED FOR
ISSUED FOR BID 10/04/2022

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY MN

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SHEET
ENLARGED KITCHEN POWER PLAN

SHEET NUMBER
E-301

9/29/2022 3:48:34 PM Autodesk Docs://NY_04937_Levittown_2021-4_FSR/04937_Levittown_ELE.rvt
50-LSR-04937-E-301-ENLARGED KITCHEN POWER PLAN

POWER PLAN GENERAL NOTES

A. ALL SECURITY, POS, MUSIC, COMMUNICATIONS, AND POWER ROUGH-IN SHALL BE INSTALLED DURING THE FRAMING/ROUGH-IN PHASE OF CONSTRUCTION.

B. REFER TO KITCHEN EQUIPMENT SHEETS FOR EQUIPMENT ELECTRICAL ROUGH-IN ELEVATIONS ABOVE FINISHED FLOOR.

C. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRING.

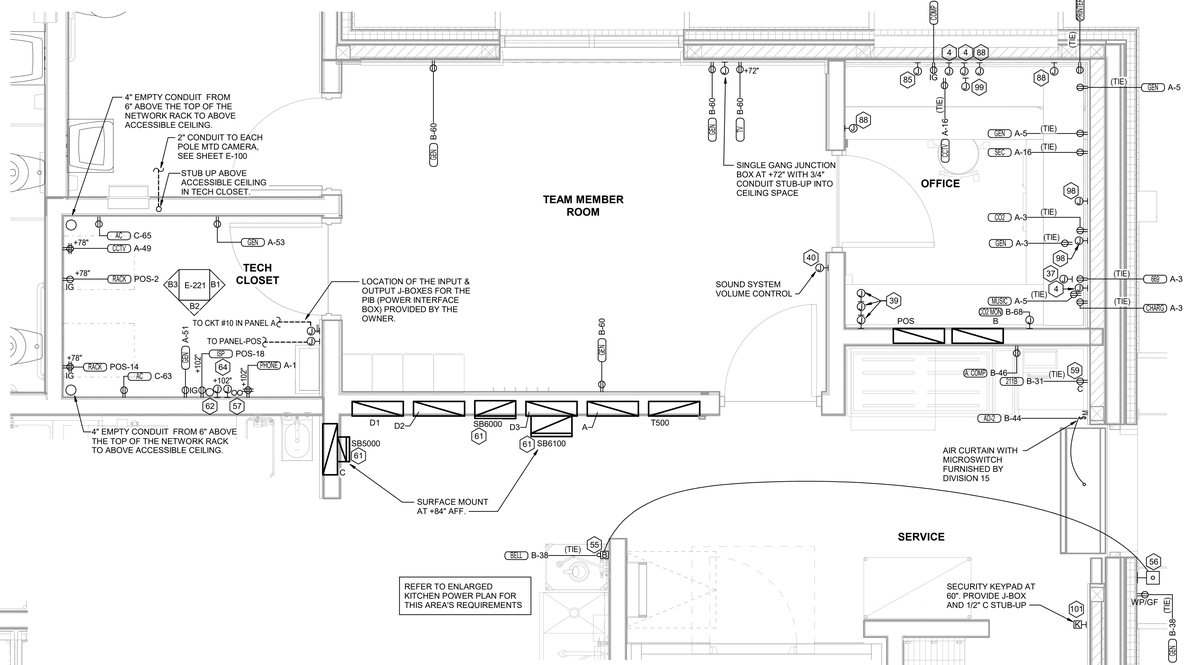
D. PROVIDE INSULATED BUSHING AT TERMINATION POINTS OF ALL CONDUITS FOR LOW VOLTAGE WIRING.

E. THE ELECTRICAL INSTALLER SHALL COORDINATE THE ROUTING OF ALL CONDUIT IN THE BUILDING WITH OTHER TRADES (SPECIFICALLY THE DUCTWORK INSTALLATION) TO AVOID CONFLICTS OF SPACE REQUIREMENTS IN WALLS AND CEILING SPACES.

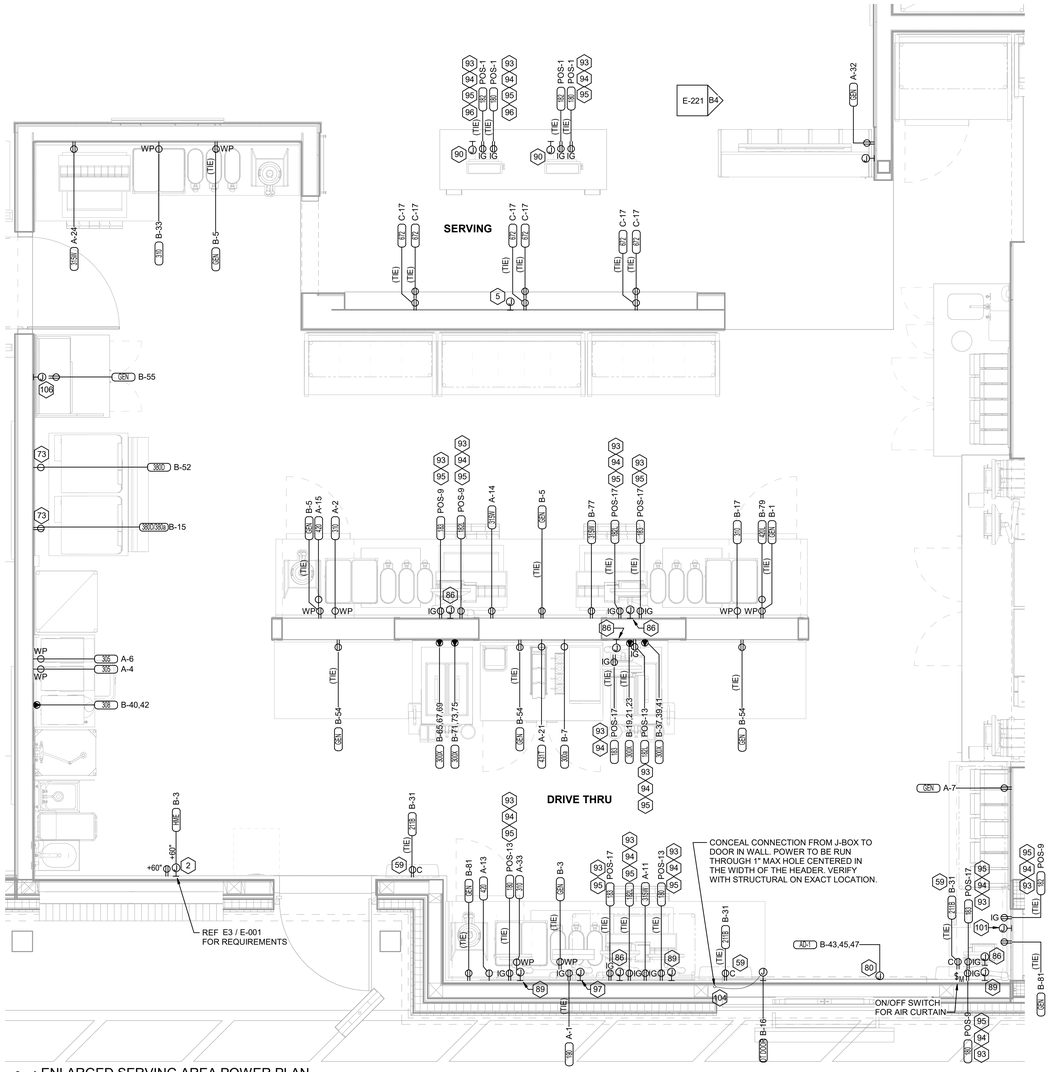
NOTE FOR GF TYPE RECEPTACLES IN KITCHEN/FOOD PREP AREAS:
THE CONTRACTOR SHALL PROVIDE GROUND FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL FOR ALL 125V - 250V RECEPTACLES SUPPLIED BY 120V SINGLE-PHASE BRANCH CIRCUITS 50 AMPS OR LESS, 208V SINGLE-PHASE BRANCH CIRCUITS 50 AMPS OR LESS, AND 208V THREE-PHASE BRANCH CIRCUITS 100 AMPS OR LESS. SEE FLOOR PLANS FOR ADDITIONAL INFORMATION.

NOTE:
RECEPTACLES FOR THE POS EQUIPMENT SHALL BE THE ONLY ITEMS THAT CONNECT TO PANEL-POS. THERE SHALL BE NO OTHER LOADS CONNECTED TO THIS ISOLATED GROUND PANEL AND, IF SO, SHALL BE REMOVED AND RECONNECTED TO ANOTHER PANELBOARD AT THE EXPENSE OF THE CONTRACTOR.

NOTE FOR POS GF IN KITCHEN:
THE CONTRACTOR SHALL PROVIDE GROUND FAULT PROTECTION FOR ALL 120 VOLT, 15 AND 20 AMP ISOLATED GROUND RECEPTACLE OUTLET BRANCH CIRCUITS IN THE KITCHEN/FOOD PREPARATION AREAS. GROUND FAULT PROTECTION SHALL BE PROVIDED AT THE BREAKER VIA A GROUND FAULT TYPE BRANCH BREAKER. (GFCI TYPE ISOLATED GROUND RECEPTACLES ARE NOT AVAILABLE.)



C2 ENLARGED BOH POWER PLAN
1/2" = 1'-0"



A4 ENLARGED SERVING AREA POWER PLAN
1/2" = 1'-0"

ELECTRICAL KEYNOTES (PART-1)

2 PROVIDE JUNCTION BOX, LESS COVER PLATE, AND EXTEND 1-1/2" CONDUIT UP IN WALL TO ABOVE CEILING FOR INSTALLATION OF WIRELESS COMMUNICATION CONTROL UNIT.

4 PROVIDE SINGLE-GANG JUNCTION BOX WITH A 1" EMPTY CONDUIT STUBBED UP INTO THE ACCESSIBLE CEILING SPACE FOR OWNER'S VOIP PHONE JACK AND CABLES.

5 PROVIDE SINGLE-GANG JUNCTION BOX WITH A 3/4" EMPTY CONDUIT STUBBED UP INTO THE ACCESSIBLE CEILING SPACE FOR FUTURE MENU BOARD CABLES.

37 PROVIDE JUNCTION BOX WITH STAINLESS STEEL COVER PLATE AND 3/4" HOLE IN PLATE WITH GROMMET ON HOLE IN PLATE. EXTEND 3/4" CONDUIT UP IN WALL TO ABOVE CEILING FOR MUSIC SYSTEM.

39 THREE SINGLE GANG EXTRA DEEP J-BOXES STACKED WITH A 1/2" CONDUIT FROM EACH TO THE TOP J-BOX BOX AND A 1" CONDUIT STUBBED INTO THE CEILING SPACE FOR MUSIC SYSTEM VOLUME CONTROLS PROVIDED BY OWNER'S VENDOR.

40 PROVIDE A SINGLE GANG EXTRA DEEP JUNCTION BOX AT 74" AFF WITH 1/2" CONDUIT STUBBED INTO THE CEILING SPACE FOR MUSIC SYSTEM VOLUME CONTROLS.

55 PROVIDE EDWARDS #340-4N5 VIBRATING 4" DIAMETER BELL. THE BELL SHALL BE RATED AT 120 VOLTS.

56 PROVIDE A 120 VOLT WEATHERPROOF DOORBELL PUSHBUTTON AT DOOR. PUSHBUTTON SHALL BE FLUSH MOUNTED. PROVIDE DORTRONICS SYSTEMS #W5286-P25 CLEAR ANODIZED ALUMINUM PUSHBUTTON WITH SINGLE GANG SWITCHPLATE.

57 TWO 2" TELEPHONE SERVICE ENTRANCE CONDUIT(S). EXTEND WITH PULL STRING FROM TELEPHONE SERVICE J-BOX TO THE UTILITY SOURCE. REFER TO THE ELECTRICAL SITE PLAN FOR ADDITIONAL INFORMATION.

59 PROVIDE DUPLEX RECEPTACLE (SEE ELEVATIONS FOR MTG HT) IN AN ARLINGTON #DVR2GW DOUBLE-GANG RECESSED BOX FOR THE FLY SYSTEM ITEMS. DO NOT CUT THE CORDSET FURNISHED WITH THE UNIT, BUT COIL THE CORD ON THE BACK OF THE UNIT AND TUCK INTO THE BACKBOX.

61 SB6000 PANEL ENCLOSURE WITH 3 LITTLEFUSE SHOCKBLOCK GFCI PROTECTION DEVICES, SB6100 SHOCK BLOCK GFCI PROTECTION DEVICE, AND SB5000 SHOCK BLOCK GFCI PROTECTION DEVICE. ENSURE CONDUITS ARE INSTALLED FOR LINE AND LOAD WIRES TO BE INSTALLED WITH PROPER WIRE BENDING SPACE. LABEL EACH SHOCK BLOCK WITH PANEL AND CIRCUIT NUMBER IT CONTROLS.

62 ONE 3" ISP SERVICE CONDUIT. EXTEND WITH PULL STRING FROM J-BOX TO SUPPLIER'S SOURCE, REFER TO ELECTRICAL SITE PLAN FOR ADDITIONAL INFORMATION.

64 PROVIDE TWO 6"H X 6"W X 4"D J-BOXES (ONE FOR TELEPHONE AND ONE FOR ISP) AT 6'-6" AFF AND EXTEND A 2" CONDUIT WITH PULL STRING IN THE WALL FROM EACH J-BOX INTO THE ACCESSIBLE CEILING SPACE. PROVIDE A 36" X 36" X 3/4" PLYWOOD BACKBOARD ON THE WALL ABOVE THE J-BOXES (AT THE CEILING) FOR USE BY THE ISP. PROVIDE A COPPER GROUND BAR (EQUAL TO ERICO TGBA24L 14P) AT THE BOTTOM OF THE BACKBOARD WITH A #6 AWG INSULATED CU GROUNDING CONDUCTOR IN A 3/4"C FROM THE GROUND BAR TO THE INTER SYSTEM BONDING TERMINATION NEXT TO THE SERVICE ENTRANCE. THE GROUND BAR SHALL HAVE TAPS FOR USE BY THE TELEPHONE AND ISP UTILITY COMPANIES AND FOR THE #6 COMMUNICATIONS GROUNDING CONDUCTOR TO THE GES. PROVIDE A 15 AMP ISOLATED GROUND (IG) ORANGE-FACED DUPLEX RECEPTACLE IN THE WALL BESIDE THE BACKBOARD AND LABEL THE RECEPTACLE "FOR FIBER TO CABLE MODEM USE ONLY". BOND NETWORK RACKS TO GROUND BAR.

73 SEE THE ROOF ELECTRICAL PLAN FOR THE LOCATION OF THE ICE MAKER CONDENSERS AND ANY ADDITIONAL REQUIREMENTS.

ELECTRICAL KEYNOTES (PART-2)

80 JUNCTION BOX ABOVE CEILING FOR AIR CURTAIN.

85 PROVIDE A "RETROFIT" SINGLE GANG RING (CARLON #SC100RR) FOR OWNER'S DEVICE PLATE WITH A 1" EMPTY CONDUIT AT THE OPENING STUBBED UP INTO THE CEILING SPACE FOR OWNER'S DATA CABLES.

86 PROVIDE SINGLE-GANG JUNCTION BOX WITH A 1" CONDUIT EXTENDING UP INTO THE CEILING SPACE FOR POS MONITOR(S). COVER PLATE PROVIDED BY OWNER'S POS SYSTEM VENDOR.

88 PROVIDE A "RETROFIT" SINGLE GANG RING (CARLON #SC100RR) FOR OWNER'S DEVICE PLATE WITH A 1" EMPTY CONDUIT AT THE OPENING STUBBED UP INTO THE CEILING SPACE FOR OWNER'S DATA CABLES.

89 PROVIDE SINGLE-GANG JUNCTION BOX WITH A 1" CONDUIT EXTENDING UP INTO THE CEILING SPACE FOR POS TERMINAL. POS SYSTEM SUPPLIER WILL PROVIDE COVER PLATE ON BOX.

90 PROVIDE SINGLE-GANG EXTRA DEEP JUNCTION BOX MOUNTED ON THE MOUNTING PLATE WITHIN THE FRONT SERVING COUNTER CASEWORK. MOUNT BOX ADJACENT TO THE RECEPTACLE FOR EQUIPMENT 180. DO NOT MOUNT BOX BETWEEN EQUIPMENT 180 AND EQUIPMENT 182 RECEPTACLES.

93 PROVIDE ORANGE ISOLATED GROUND (IG) DUPLEX RECEPTACLE.

94 PROVIDE GROUND FAULT PROTECTION FOR THESE DEVICES VIA A GROUND FAULT CIRCUIT BREAKER IF LOCAL CODE DEFINES THIS A FOOD PREPARATION AREA.

95 USE TYPE MC CABLE FOR THE ISOLATED GROUND CIRCUIT: #12 HOT, NEUTRAL, GREEN GROUND, STRIPED ISOLATED GROUND. EACH 15 AMP HOMERUN SHALL BE DEDICATED TO A CIRCUIT BREAKER VIA DEDICATED CONDUCTORS WITHIN A CABLE ASSEMBLY. ALL MC CABLES SHALL BE RUN OVERHEAD ABOVE THE CEILING AND RACKED TOGETHER ON J-HOOKS. NO SPLICES IN ANY HOMERUN CABLES FROM FIRST RECEPTACLE TO BREAKER.

96 THE RECEPTACLE BACKBOX AND SYSTEM CABLE JUNCTION BOX FOR ITEMS 180 AND 182 SHALL BE TURNED HORIZONTAL. REFER TO THE KITCHEN EQUIPMENT ROUGH-IN ELEVATIONS FOR ADDITIONAL INFORMATION.

97 PROVIDE SINGLE GANG JUNCTION BOX AND STAINLESS STEEL COVER PLATE WITH 7/8" HOLE IN CENTER. EXTEND 1" CONDUIT UP IN WALL TO ABOVE ACCESSIBLE CEILING.

98 PROVIDE 4"W X 4"H X 3"D FLUSH JUNCTION BOX WITHOUT A COVERPLATE. EXTEND 2" CONDUIT UP TO ABOVE ACCESSIBLE OFFICE CEILING AREA AND PROVIDE BUSHING ON CONDUIT.

99 PROVIDE 4"W X 4"H X 3" D JUNCTION BOX WITHOUT COVERPLATE AND EXTEND A 2" CONDUIT DOWN THROUGH SLAB AND BELOW GRADE TO EACH OF THE SITE'S POLE MOUNTED CAMERA LOCATIONS (SEE ELECTRICAL SITE PLAN FOR CONTINUATION) AND A 2" CONDUIT UP INTO THE ACCESSIBLE CEILING SPACE WITH A BUSHING ON THE CONDUIT END. PROVIDE A SINGLE-GANG JUNCTION BOX ADJACENT TO THE DOUBLE-GANG BOX WITH A 1.5" CONDUIT DOWN TO A SECOND SINGLE-GANG JUNCTION BOX AT THE CCTV MONITOR LOCATION.

101 PROVIDE SINGLE GANG BOX WITHOUT COVER PLATE. EXTEND 1/2" CONDUIT UP IN WALL TO ABOVE ACCESSIBLE CEILING.

104 EXTEND 3/4" RIGID CONDUIT FROM TOP OF STRIKE-SIDE DOOR FRAME CHANNEL TO ABOVE ACCESSIBLE CEILING.

106 PROVIDE SINGLE GANG JUNCTION BOX WITHOUT COVERPLATE. EXTEND 1/2" CONDUIT UP IN WALL TO ABOVE ACCESSIBLE CEILING.

107 PROVIDE SINGLE GANG JUNCTION BOX WITH STAINLESS STEEL COVER PLATE MOUNTED ABOVE THE CEILING SPACE AND ABOVE ON THE INTERIOR SIDE OF THE REAR DOOR. ROUTE 1" CONDUIT FROM THE BOX TO THE "109" BOX NOTED BELOW.

109 PROVIDE SINGLE GANG, WEATHER-PROOF JUNCTION BOX WITH STAINLESS STEEL COVER PLATE MOUNTED ABOVE THE REAR DOOR ON THE EXTERIOR WALL. ROUTE 1" CONDUIT FROM THE BOX AND INTO THE BUILDING AND TERMINATE CONDUIT IN THE BOX NOTED IN "S10" ABOVE.

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

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186 WOOD AVE. SOUTH, 1ST FLOOR
ISELIN, NJ 08830
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NY STATE CERTIFICATE OF AUTHORIZATION #0019115

ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR ALL
RELEASE: 22.08
PRINTED FOR
ISSUED FOR BID 10/04/2022

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY MN

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SHEET
ENLARGED SERVING AND BOH POWER PLAN

SHEET NUMBER
E-302

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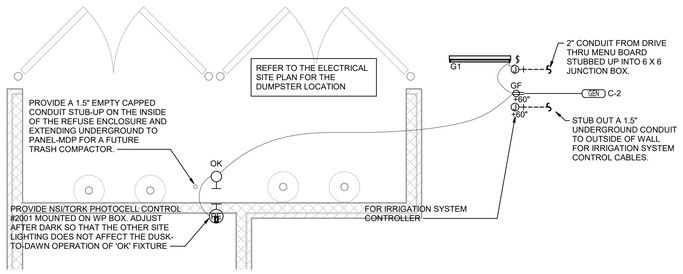
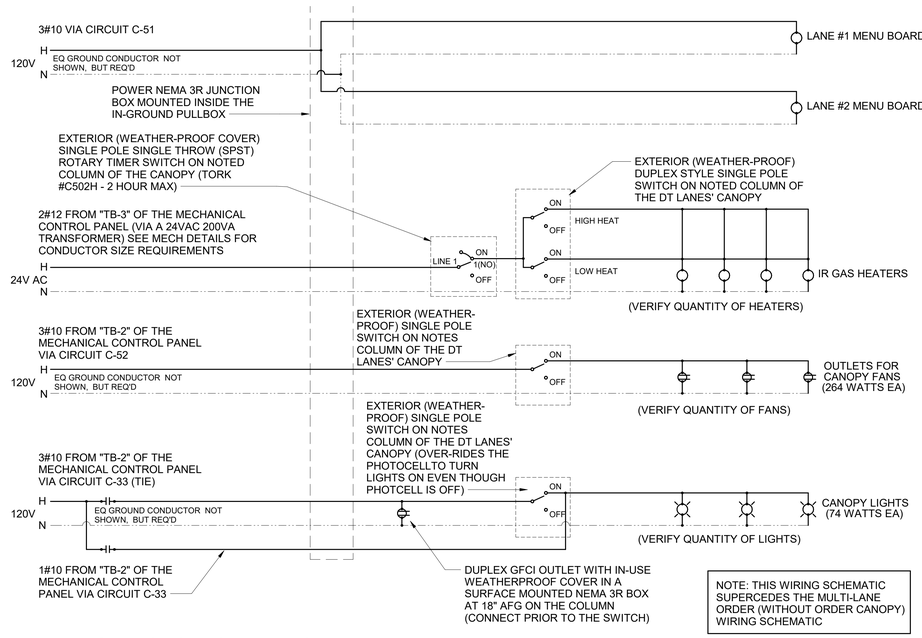
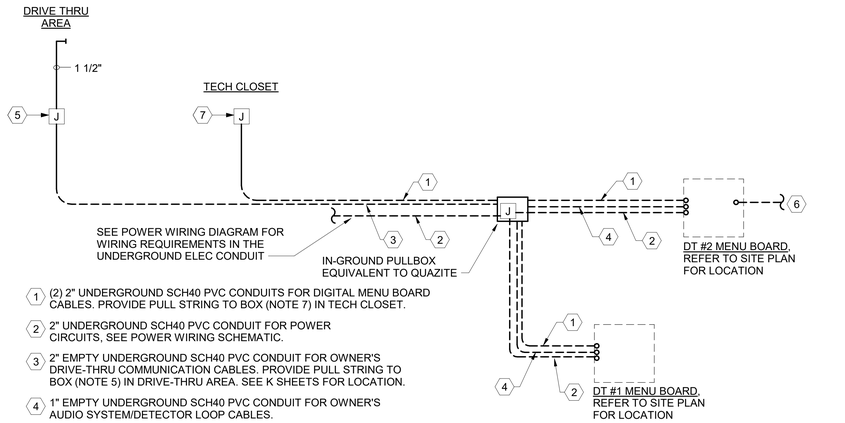
50-LSR-04937-E-302-ENLARGED SERVING AND BOH POWER PLAN



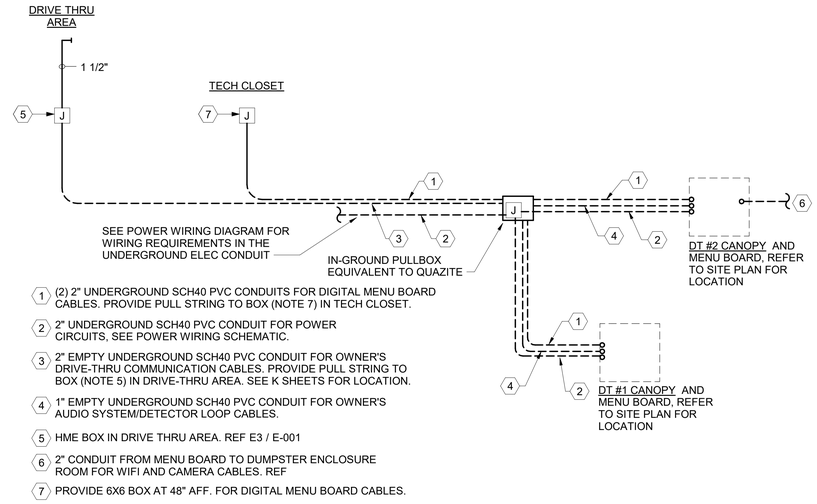
D1 REFUSE ENCLOSURE ELECTRICAL PLAN
1/4" = 1'-0"



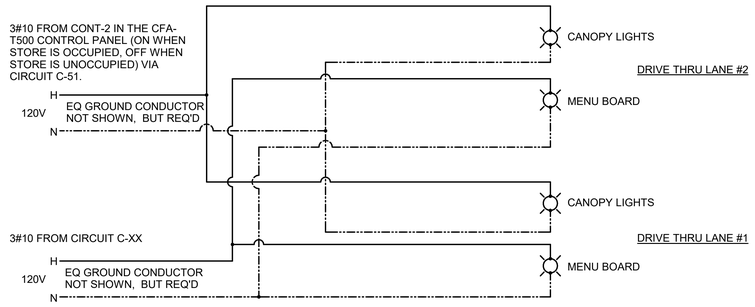
B3 MULTI-LANE ORDER CANOPY POWER WIRING SCHEMATIC
N.T.S.



A3 MLOP DT REQUIREMENTS - WITH ORDER AREA F2F CANOPY
NO SCALE



MULTI-LANE DRIVE-THRU ORDER AREA CONDUIT REQUIREMENTS



MULTI-LANE DRIVE-THRU ORDER AREA POWER WIRING SCHEMATIC

A1 MLOP DT REQUIREMENTS - NO ORDER AREA F2F CANOPY
NO SCALE

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CHICK-FIL-A Levittown

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FSR#04937

BUILDING TYPE / SIZE: P14 LSR ALL
RELEASE: 22.08
PRINTED FOR
ISSUED FOR BID **10/04/2022**

REVISION SCHEDULE

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CONSULTANT PROJECT # 2552
DATE 10/04/2022
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SHEET
DT ORDERING AREA DETAILS & REFUSE ENCLOSURE PLAN
SHEET NUMBER
E-303

9/29/2022 3:48:40 PM Autodesk Docs://NY_04937_Levittown_2021 4_FSR/04937_Levittown_ELE.rvt
50-LSR-04937-E-303-DT ORDERING AREA DETAILS & REFUSE ENCLOSURE PLAN

ELECTRICAL KEYNOTES (PART-2)

112 CEILING LIGHT FIXTURE PROVIDED BY THE CANOPY SUPPLIER AND INSTALLED BY ELECTRICAL CONTRACTOR.

118 CEILING LIGHT PROVIDED BY CANOPY SUPPLIER AND INSTALLED BY E.C.

119 AIR CIRCULATING FAN (WITH INTEGRAL ON-OFF SWITCH) PROVIDED BY OTHERS. PROVIDE A DUPLEX OUTLET (WITH IN-USE COVER PLATE) FLUSH MOUNTED IN CUT-OUT AT TOP OF COLUMN FOR FAN'S PLUG AND CORD. OUTLET TO BE ON DOWNSTREAM SIDE OF COLUMN AND AWAY FROM ONCOMING VEHICLES' VIEW.

120 INFRARED GAS HEATER WITH INTEGRAL ON-OFF SWITCH PROVIDED BY OTHERS.

121 MENUBOARD PROVIDED BY OTHERS.

122 PROVIDE IN-GROUND QUAZITE PULLBOX FOR MLOP DATA CABLES WITH POWER NEMA 3R JUNCTION BOX MOUNTED INSIDE THE PULLBOX.

123 2" UNDERGROUND SCH40 PVC CONDUIT WITH POWER CIRCUITS, SEE WIRING SCHEMATIC.

124 2" EMPTY UNDERGROUND SCH40 PVC CONDUIT FOR OWNER'S DETECTOR LOOP CABLES. EXTEND CONDUITS UP INTO ACCESSIBLE CEILING SPACE ABOVE THE HME BOX IN THE DRIVE THRU AREA.

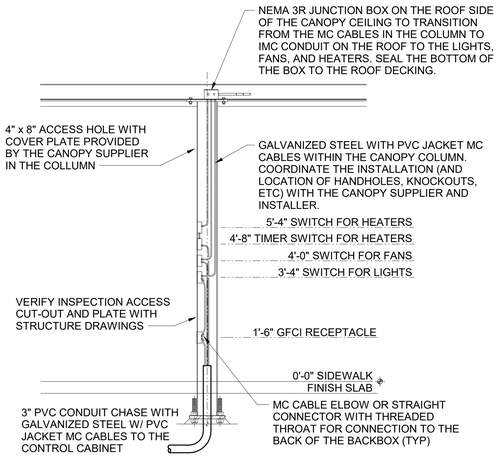
125 1" EMPTY UNDERGROUND SCH40 PVC CONDUIT FOR OWNER'S AUDIO SYSTEM/DETECTOR LOOP CABLES.

126 INSTALL UNDERGROUND 3" SCH40 PVC CONDUIT UP INTO THE CANOPY COLUMN WITH TYPE MC CABLE (GALVANIZED STEEL WITH PVC JACKET) RUN WITHIN FOR THE 120V POWER FOR LIGHTS, 120 VOLT POWER FOR FANS, AND 24 VOLT POWER FOR THE INFRARED GAS HEATERS.

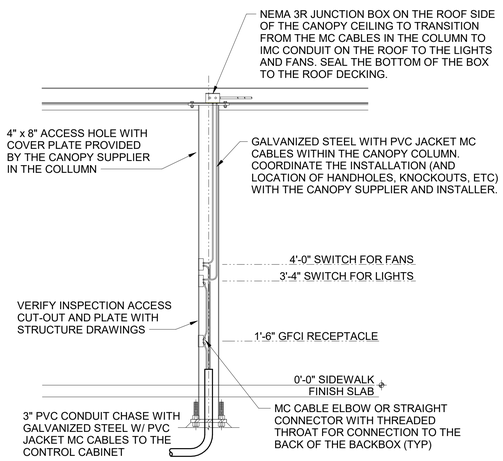
127 2" CONDUIT FROM DRIVE-THRU MENU BOARD TO DUMPSTER ENCLOSURE ROOM FOR WIFI AND CAMERA CABLES.

128 PROVIDE ONE DUPLEX GFCI (WITH IN-USE WP COVER PLATE), TWO 120V SINGLE-POLE SWITCHES (EACH WITH HUBBELL #RW51550 WP COVER PLATE), AND ONE DUPLEX SINGLE-POLE SWITCH (WITH HUBBELL #RW51470 WP COVER PLATE) MOUNTED ON THE COLUMN IN B12 PLATES TO BE FIELD PAINTED MATTE BLACK.

129 ALL CONDUIT AND BOXES SHALL BE CONCEALED FROM NORMAL VIEW; UNDERGROUND, IN COLUMNS, OR ABOVE THE CANOPY (ON THE ROOF). MC CABLE (GALVANIZED STEEL WITH PVC JACKET) TO BE USED INSIDE THE COLUMNS, BUT MUST CONVERT BACK TO IMC ABOVE THE ROOF. REFER TO THE MECHANICAL DRAWINGS FOR LOCATIONS OF GAS PIPING ABOVE THE ROOF AND INSTALL CONDUIT ALONG THE SAME LOCATIONS USING THE SAME PIPE STAND FOR PIPING AND CONDUIT. ALL EXPOSED ELECTRICAL BOXES TO BE NEMA 3R CAST-METAL.

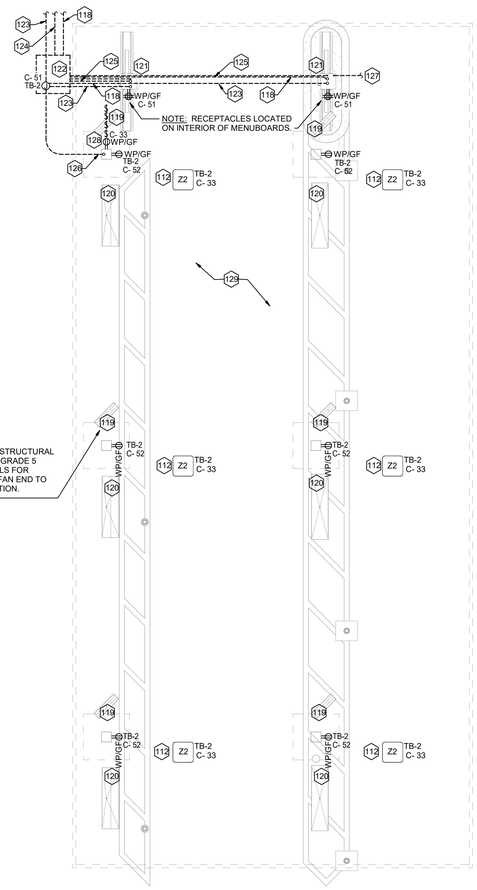


D2 MLOP ORDER CANOPY COLUMN SECTION
N.T.S.

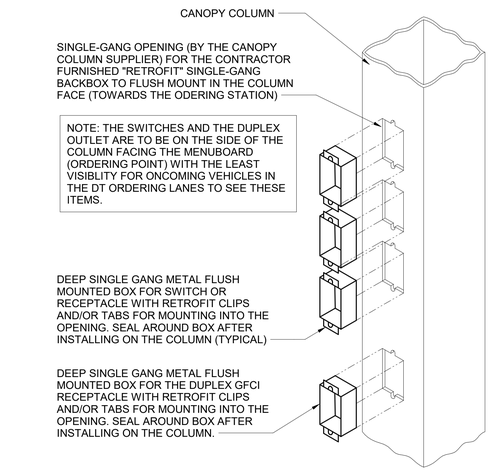


D1 MEAL DELIVERY CANOPY COLUMN SECTION
N.T.S.

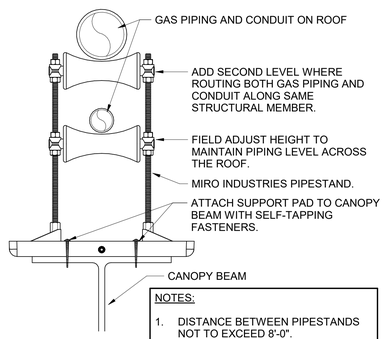
ORDER CANOPY PLAN FOR REFERENCE ONLY. VERIFY WITH THE ARCHITECTURAL MODEL FOR THE CORRECT ORDER CANOPY CONFIGURATION.



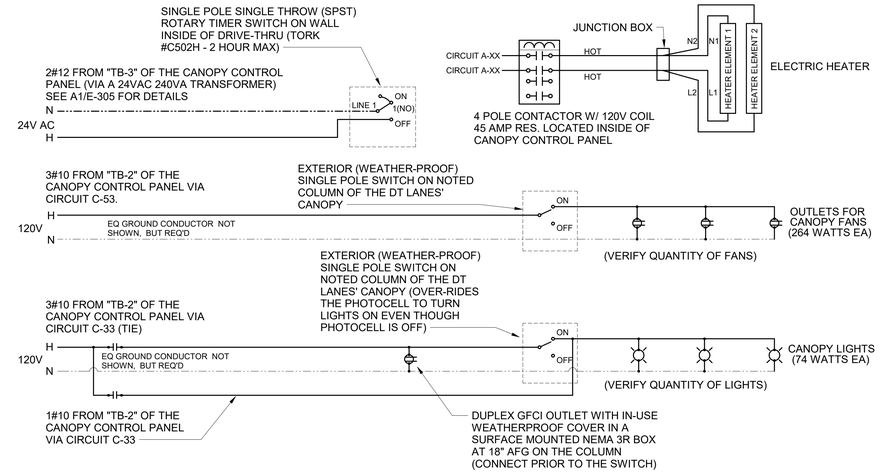
B4 MLOP ORDER CANOPY POWER PLAN
1/4" = 1'-0"



C3 CANOPY COLUMN ISOMETRIC
N.T.S.



C1 PIPING SUPPORT ON CANOPY
1/4" = 1'-0"



A1 MEAL DELIVERY CANOPY POWER WIRING SCHEMATIC
N.T.S.

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

KEA ENGINEERS
Engineering Excellence since 1984
KEA ENGINEERS
186 WOOD AVE. SOUTH, 1ST FLOOR
ISELIN, NJ 08830
TEL: (732) 635 0044 • FAX: (732) 635 1777
NY STATE CERTIFICATE OF AUTHORIZATION #0019115

ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR ALL
RELEASE: 22.08
PRINTED FOR
ISSUED FOR BID 10/04/2022

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY MN

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SHEET
ORDER CANOPY PLAN AND DETAILS

SHEET NUMBER
E-304

9/29/2022 3:48:41 PM Autodesk Docs://NY_04937_Levittown_2021.4_FSR/04937_Levittown_ELE.rvt
50-LSR-04937-E-304-ORDER CANOPY PLAN AND DETAILS

SEQUENCE OF OPERATION

STORE SWITCH IN "STORE OPEN" POSITION

A. INFRARED HEATERS ARE ENABLED.
B. COOLING FANS ARE ENABLED.
C. LIGHTS ARE ENABLED.
D. MASTER AUTO/OFF SWITCH FOR IR HEATERS AND COOLING FANS. PROVIDE SINGLE POINT ON/OFF CONTROL.

STORE SWITCH IN "STORE CLOSED" POSITION

A. INFRARED HEATERS ARE DISABLED.
B. COOLING FANS ARE DISABLED.
C. LIGHTS ARE DISABLED.

NOTES

1. CONTRACTOR SHALL PURCHASE CONTROL PANEL DIRECT FROM SUNCOAST ENVIRONMENTAL CONTROLS (727-544-6679).
2. COORDINATE WITH GC TO ESTABLISH LOCATION TO MOUNT PANEL IN A CONDITIONED SPACE INSIDE THE BUILDING. SUGGESTED LOCATION IS SURFACE MOUNTED DIRECTLY ABOVE THE LOCATION OF THE CFA-T500 CONTROL PANEL.
3. THE SUNCOAST ENVIRONMENTAL CONTROLS (SEC) IS TO BE SURFACE MOUNTED, UNLESS OTHERWISE REQUESTED TO SUNCOAST.
4. PROVIDE LAMINATED LEGEND SHOWING NAMED LOCATIONS OF FANS AND IR HEATERS. MOUNT LEGEND AT PANEL.

LEGEND

SEC SUNCOAST ENVIRONMENTAL CONTROLS (SUPPLIER OF CONTROL PANELS)
LOW VOLTAGE BY CONTRACTOR
LOW VOLTAGE WIRING BY SUNCOAST
120 VOLT BY CONTRACTOR
120 VOLT BY SUNCOAST

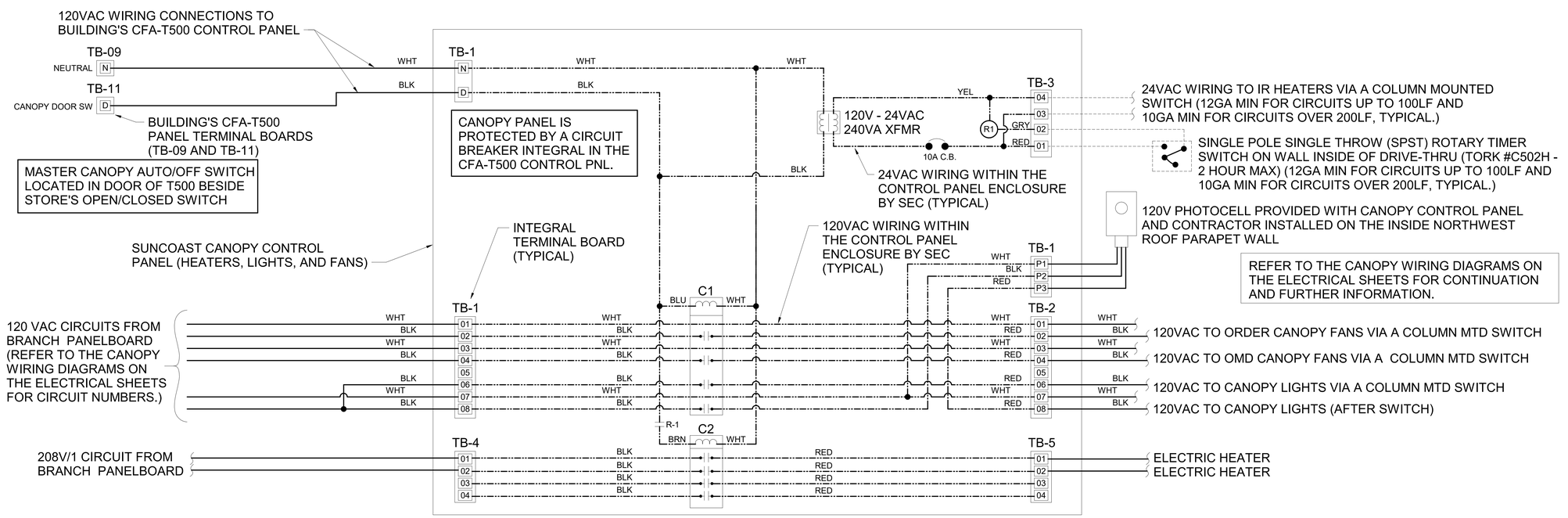
SUNCOAST RELAYS CONTACTORS SHOWN IN DE-ENERGIZED "STORE UNOCCUPIED" CONDITION. RELAYS AND CONTACTORS FACTORY INSTALLED BY SEC IN CONTROL PANEL. RELAYS AND CONTACTORS ENERGIZED VIA "STORE OPEN/CLOSED" SWITCH.

CIRCULATING FAN SCHEDULE

MARK	CFM	RPM	HP	MODEL	MANUFACTURER
CF	5,750	1,625	1/8	U18TE-HD	TPI

REMARKS
1. ALUMINUM PADDLE WITH STEEL HUB/SPIDER PROPELLER.
2. 360° ROTATING HEAD HORIZONTALLY AND VERTICALLY.
3. OSHA COMPLIANT DOUBLE LOCKING, COATED STEEL WIRE GUARD.
4. 3-SPEED, TOTALLY ENCLOSED, PERMANENTLY LUBRICATED BALL BEARING MOTOR.
5. FACTORY PRE-WIRED POWER CORD.
6. PROVIDE FACTORY WALL MOUNTING BRACKET, SEE FAN MOUNTING DETAIL ON CANOPY SHOP DRAWINGS FOR TYPICAL INSTALLATION INSTRUCTIONS.
7. PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. MOUNT TO UNDERSIDE OF CANOPY OR EXISTING OVERHANG, FACING DOWNWARD, 12" LATERALLY FROM THE FAN LOCATION.
8. REMOVE PULL CHAIN EXTENSION AT ON/OFF SWITCH IN THE FIELD.
9. FACTORY CERTIFIED FOR OUTDOOR INSTALLATION.

TPI FAN PACKAGE - THE CONTRACTOR IS REQUIRED TO PURCHASE THE FAN PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.



A1 SUNCOAST CANOPY CONTROL PANEL WIRING DIAGRAM
NO SCALE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

KEA ENGINEERS
Engineering Excellence since 1984
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186 WOOD AVE. SOUTH, 1ST FLOOR
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3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR ALL
RELEASE: 22.08
PRINTED FOR
ISSUED FOR BID **10/04/2022**

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY MN

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SHEET
CANOPY CONTROL PANEL WIRING DIAGRAM

SHEET NUMBER
E-305

9/29/2022 3:48:42 PM Autodesk Docs://NY_04937_Levittown_2021.4_FSR04937_Levittown_ELE.rvt
50-LSR-04937-E-305-CANOPY CONTROL PANEL WIRING DIAGRAM

Distribution Panel: MDP

LOCATION:
SUPPLY FROM:
MOUNTING: SURFACE
ENCLOSURE: NEMA 3R

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. SERIES RATING: 65K
MAINS TYPE: MCB
MAINS RATING: 1200 A
MCB RATING:

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	A		B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
	1	PANEL-A (SUB-FEEDS PANEL-POS)	250 A	3	31.15	35.00					3	250 A	PANEL-B	2	
--	3	--	--	--			32.06	33.66			--	--	--	4	--
--	5	--	--	--					30.05	33.33	--	--	--	6	--
	7	PANEL-C	250 A	3	27.87	15.01					3	150 A	ROOFTOP UNIT (AC-1)	8	
--	9	--	--	--			28.06	15.01			--	--	--	10	--
--	11	--	--	--					28.56	15.01	--	--	--	12	--
ST	13	PANEL-D2	250 A	3	22.34	24.03					3	250 A	PANEL-D1	14	ST
--	15	--	--	--			22.34	25.02			--	--	--	16	--
--	17	--	--	--					22.34	23.79	--	--	--	18	--
	19	ROOF TOP UNIT (AC-3)	100 A	3	9.97	9.97					3	100 A	ROOFTOP UNIT (AC-2)	20	
--	21	--	--	--			9.97	9.97			--	--	--	22	--
--	23	--	--	--					9.97	9.97	--	--	--	24	--
	25	TVSS	30 A	3	0.00	21.13					3	250 A	PANEL-D3	26	ST
--	27	--	--	--			0.00	21.13			--	--	--	28	--
--	29	--	--	--					0.00	21.13	--	--	--	30	--
			Total Load:		196.5 kVA		197.2 kVA		194.1 kVA						
			Total Amps:		1640.2 A		1646.4 A		1617.9 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HEAT	12204 VA	100.00%	12204 VA		
HVAC	131922 VA	100.00%	131922 VA	**Total Conn. Load:**	587.5 kVA
HVAC COOL	2544 VA	100.00%	2544 VA	**Total Est. Demand:**	523.8 kVA
KITCHEN EQUIPMENT	146195 VA	65.00%	95027 VA	**Total Conn.:**	1630.7 A
KITCHEN REFRIG EQUIPMENT	35600 VA	65.00%	23140 VA	**Total Est. Demand:**	1453.8 A
LIGHTING	13636 VA	125.00%	17045 VA		
MISCELLANEOUS	2177 VA	100.00%	2177 VA		
Motor	19197 VA	102.98%	19769 VA		
Power	360 VA	100.00%	360 VA		
RECEPTACLES	18097 VA	77.63%	14049 VA		
MISCELANEOUS	2288 VA	100.00%	2288 VA		
KITCHEN EQUIPMENT (100% DEMAND)	203256 VA	100.00%	203256 VA		

LOAD SUMMARY

TOTAL CONNECTED KVA	IF TOTAL LOAD IS 0_200 KVA	IF TOTAL LOAD IS 201_325 KVA	IF TOTAL LOAD IS 326-800 KVA	IF TOTAL LOAD IS OVER 800 KVA	DIVERSIFIED AMPS AT 208 VOLT
587.47 kVA	0	0	380.61	0	1057.25

CALCULATION PER NEC 220.88
(NOT ALL ELECTRIC RESTAURANT LOAD)

Branch Panel: A

LOCATION:
SUPPLY FROM: MDP
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. SERIES RATING: 65K/10K
MAINS TYPE: MLO
MAINS RATING: 250 A

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	A		B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
H	1	TELEPHONE DT VIDEO (190)	20 A	1	0.456	1.020					1	20 A	DOUBLE LEMONADE BUBBLER (310)	2	H
	3	OFFICE GEN OUTLETS (CO2,669)	20 A	1			0.720	1.656			1	20 A	TEA BREWER (305)	4	I
	5	OFF GEN OUTLETS, PRINTER, MUSIC	20 A	1					0.720	1.656	1	20 A	TEA BREWER (305)	6	I
H	7	GENERAL OUTLET	20 A	1	0.180	0.960					1	20 A	SINGLE REFRIG (443GT)	8	I
	9	GENERAL OUTLETS	20 A	1			0.100	2.350			1	20 A	PANEL-POS THRU PIB	10	M
H	11	DRINK TOWER (315W)	20 A	1					1.200	0.564	1	20 A	U.C. REFRIG (420LA)	12	I
H	13	U.C. REFRIG (420)	20 A	1	0.564	1.200					1	20 A	DRINK TOWER (315W)	14	I
H	15	U.C. REFRIG (420)	20 A	1			0.564	0.240			1	20 A	SECURITY SYSTEM	16	L
I	17	U.C. REFRIG (421)	20 A	1					0.756	1.244	3	15 A	COOLER CONDENSER / EVAP COIL (449)	18	LO
I	19	SANDWICH SLIDE (563S)	20 A	1	0.548	1.244					--	--	--	20	--
I	21	DOUBLE REFRIG WORK TABLE (431T)	20 A	1			0.756	1.140			--	--	--	22	--
I	23	SANDWICH SLIDE (563D)	20 A	1					1.096	1.200	1	20 A	DRINK TOWER (315W)	24	I
	25	CARBONATOR (320)	20 A	1	0.744	1.752					3	35 A	FREEZER CONDENSER / EVAP COIL (410)	26	LO
	27	CARBONATOR (320)	20 A	1			0.744	1.908			--	--	--	28	--
	29	CARBONATOR (320)	20 A	1					0.744	1.908	--	--	--	30	--
	31	CARBONATOR (320)	20 A	1	0.744	0.180					1	20 A	PICK-UP SHELF	32	
H	33	DOUBLE LEMONADE BUBBLER (310)	20 A	1			1.020	0.500			1	20 A	FREEZER HEAT TAPE (410)	34	F
	35	SPARE	20 A	1					0.000	1.920	1	20 A	CIR A1-HOT HOLDING CABINET (562A)	36	I
	37	BOOSTER PUMP	20 A	2	1.144	3.000					2	40 A	DRIVE-THRU EH-1	38	
--	39	--	--	--			1.144	3.000			--	--	--	40	--
H	41	GENERAL OUTLETS	20 A	1					0.180	1.800	1	20 A	CIR B1-VERTICAL TOASTER (500A)	42	I
	43	SPARE	20 A	1	0.000	0.180					1	20 A	OPTIONAL DARPRO OIL TANK	44	I
	45						0.000				1	20 A	SPARE	46	
	47									0.180	1	20 A	CIR C1-GENERAL OUTLET (122)	48	I
	49	CCTV TECH CLOSET	20 A	1	0.360	0.180					1	20 A	CIR C2-GENERAL OUTLET (122)	50	I
	51	GEN OUTLET TECH CLOSET	20 A	1			0.180	1.920			1	20 A	CIR D1-HOT HOLDING CABINET (580H)	52	I
	53	GEN OUTLET TECH CLOSET	20 A	1					0.180	0.180	1	20 A	DROP CORD OUTLET	54	I
	55	SPARE	20 A	1	0.000	0.756					1	20 A	DOUBLE REFRIG WORK TABLE (432)	56	I
	57	RF-1	20 A	1			0.528	0.212			1	20 A	DROP CORD OUTLET	58	I
I	59	FLOOR MIXER (600T)	20 A	1					0.960	2.496	2	30 A	CIR H1-RADIANT TOASTER (500B)	60	I
I	61	VECTOR OVEN (505VT)	30 A	3	2.642	2.496					--	--	--	62	--
--	63	--	--	--			2.642	0.180			1	20 A	CIR F1-GEN OUTLET	64	I
--	65	--	--	--					2.642	0.564	1	20 A	CIR E1-U.C. REFRIG (420L)	66	I
I	67	VECTOR OVEN (505VT)	30 A	3	2.642	0.660					1	20 A	CIR F2-HOT HOLDING CABINET (564B)	68	I
--	69	--	--	--			2.642	0.000			1	20 A	SPARE	70	
--	71	--	--	--					2.642	1.920	1	20 A	CIR D2-HOT HOLDING CABINET (580H)	72	I
I	73	CIR G1-VERTICAL TOASTER (500A)	20 A	1	1.800	2.496					2	30 A	CIR H2-SPARE/FUTURE (500B)	74	I
I	75	CIR A2-HOT HOLDING CABINET (562A)	20 A	1			1.920	2.496			--	--	--	76	--
I	77	CIR B2-HOT HOLDING CABINET (564B)	20 A	1					0.660	2.642	3	30 A	VECTOR OVEN (505VT)	78	I
I	79	CIR E2-U.C. REFRIG (420L)	20 A	1	0.564	2.642					--	--	--	80	--
I	81	CIR G2-COLD RAIL (439L)	20 A	1			0.852	2.642			--	--	--	82	--
	83	SPARE	20 A	1					0.000	0.000	1	20 A	SPARE	84	
			Total Load:		31.15 kVA		32.06 kVA		30.05 kVA						
			Total Amps:		261.0 A		268.5 A		250.5 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	15196 VA	100.00%	15196 VA		
KITCHEN EQUIPMENT	62226 VA	65.00%	40447 VA	**Total Conn. Load:**	93.3 kVA
KITCHEN REFRIG EQUIPMENT	6108 VA	65.00%	3970 VA	**Total Est. Demand:**	69.9 kVA
LIGHTING	32 VA	125.00%	40 VA	**Total Conn.:**	258.9 A
MISCELLANEOUS	1889 VA	100.00%	1889 VA	**Total Est. Demand:**	194.1 A
Motor	2916 VA	119.62%	3488 VA		
RECEPTACLES	4897 VA	100.00%	4897 VA		

Branch Panel: POS

LOCATION:
SUPPLY FROM: A
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 120/120 Single
PHASES: 1
WIRES: 3
2+G+IG
PROVIDE A JUMPER FOR PHASE A & B

A.I.C. SERIES RATING: 10K
MAINS TYPE: MLO
MAINS RATING: 100 A
MCB RATING:

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
H,IG	1	COUNTER STATIONS (180,182)	15 A	1	0.212	0.260			1	15 A	CCTV RACK TECH CLOSET	2	IG
	3	SPACE	--	1			--	--	1	--	SPACE	4	
	5	SPACE	--	1	--	0.070			1	15 A	OFFICE RECEPTACLE (COMP)	6	IG
	7	SPACE	--	1			--	--	1	--	SPACE	8	
H,IG	9	DT POS STATION (180,182)	15 A	1	0.325	0.249			1	15 A	PASS THRU MONITORS (183,182L)	10	H
	11	SPACE	--	1			--	--	1	--	SPACE	12	
H,IG	13	MLOP POS STATIONS (180,182L)	15 A	1	0.372	0.040			1	15 A	NETWORK RACK TECH CLOSET	14	IG
	15	SPACE	--	1			--	--	1	--	SPACE	16	
H,IG	17	MLOP MONIOTORS (183)	15 A	1	0.264	0.050			1	15 A	ISP MODEM	18	IG
	19	SPACE	--	1			--	--	1	--	SPACE	20	
H,IG	21	PASS THRU MONITORS (183,182L)	15 A	1	0.508	--			1	--	SPACE	22	
	23	SPACE	--	1			--	0.000	1	20 A	BACKFED MAIN BREAKER	24	LO
				Total Load:	2.35 kVA		0.00 kVA						
				Total Amps:	19.6 A		0.0 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
MISCELLANEOUS	1389 VA	100.00%	1389 VA		
RECEPTACLES	961 VA	100.00%	961 VA	**Total Conn. Load:**	2.4 kVA
				Total Est. Demand:	2.4 kVA
				Total Conn.:	19.6 A
				Total Est. Demand:	19.6 A

GFCI REQUIREMENTS PER 2020 NEC:

THE CONTRACTOR SHALL PROVIDE GROUND FAULT PROTECTION FOR ALL RECEPTACLE OUTLET BRANCH CIRCUITS IN THE KITCHEN / FOOD PREPARATION AREAS IN ACCORDANCE WITH THE 2020 EDITION OF THE NEC.

Branch Panel: B

LOCATION:
SUPPLY FROM: MDP
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. SERIES RATING: 65K/10K
MAINS TYPE: MLO
MAINS RATING: 250 A

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	A		B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
H	1	GENERAL OUTLET	20 A	1	0.180	0.000					1	20 A	SPARE	2	
H	3	GENERAL OUTLET	20 A	1			0.360	1.500			1	20 A	FOOD COOKER/WARMER (565C)	4	I
H	5	GENERAL OUTLET	20 A	1					1.380	1.128	1	20 A	SINGLE REACH-IN FREEZER (400)	6	I
H	7	MILKSHAKE DISPENSER (300a)	20 A	1	0.480	0.180					1	20 A	GENERAL OUTLET	8	H
	9	ROOF MOUNTED ICE MAKER (380C)	25 A	3			1.704	1.848			1	20 A	FRY HOLDING STATION (560)	10	I
--	11	--	--	--					1.704	1.128	1	20 A	SINGLE REACH-IN FREEZER (400)	12	I
--	13	--	--	--	1.704	1.848					1	20 A	FRY HOLDING STATION (560)	14	I
I	15	INTERIOR ICE MAKER (380B)	15 A	1			0.610	0.500			1	20 A	D.T. WINDOW	16	
H	17	DOUBLE LEMONADE BUBBLER (310)	20 A	1					1.020	1.704	3	20 A	ROOF MOUNTED ICE MAKER (380C)	18	
LO,I	19	ICE CREAM MACHINE (300X)	30 A	3	2.280	1.704					--	--	--	20	--
--	21	--	--	--			2.280	1.704			--	--	--	22	--
--	23	--	--	--					2.280	1.920	1	20 A	DOUBLE THAWING CABINET (444D)	24	
	25	ROOF RECEPTACLES	20 A	1	1.080	0.610					1	15 A	INTERIOR ICE MAKER (380,380A)	26	I
	27	DINING AREA OUTLETS	20 A	1			1.080	0.000			1	20 A	SPARE	28	
	29	DINING AREA OUTLETS	20 A	1					1.260	0.000	1	20 A	FACP (WHEN REQUIRED)	30	L
I	31	FLY LIGHT SYSTEM (211B,C)	20 A	1	0.408	0.360					1	20 A	GENERAL OUTLETS	32	
H	33	DOUBLE LEMONADE BUBBLER (310)	20 A	1			1.020	0.000			1	20 A	REFUSE ENCLOSURE	34	
H	35	LEMON JUICER STAND (607)	20 A	1					0.192	0.360	1	20 A	T500 SHUNT TRIP (269,270)	36	L
LO,I	37	ICE CREAM MACHINE (300X)	20 A	3	1.800	0.180					1	20 A	GENERAL OUTLETS/DOORBELL	38	
--	39	--	--	--			1.800	1.997			2	20 A	COFFEE MAKER (308)	40	I
--	41	--	--	--					1.800	1.997	--	--	--	42	--
LO	43	HEATED AIR DOOR (AD-1)	45 A	3	4.068	0.960					1	20 A	UNHEATED AIR DOOR (AD-2)	44	LO
--	45	--	--	--			4.068	2.185			1	20 A	OPTIONAL COMPRESSOR	46	
--	47	--	--	--					4.068	0.000	1	20 A	(1 OF 2 LOCATIONS)	48	
	49	ROOF MOUNTED ICE MAKER (380C)	25 A	3	1.704	1.800					1	20 A	TRASH COMPACTOR (TC)	50	I
--	51	--	--	--			1.704	0.600			1	15 A	INTERIOR ICE MAKER (380D)	52	I
--	53	--	--	--					1.704	0.540	1	20 A	GENERAL OUTLETS	54	H
H	55	MANAGERS STATION (GEN)	20 A	1	0.360	1.920					1	20 A	THAWING CABINET (444SL)	56	
I	57	VECTOR OVEN (505VT)	30 A	3			2.642	1.080			1	20 A	DINING AREA OUTLETS	58	
--	59	--	--	--					2.642	0.720	1	20 A	TEAM MEMBER OUTLETS	60	
--	61	--	--	--	2.642	1.800					1	20 A	TRASH COMPACTOR (TC)	62	I
	63	SPARE	20 A	1			0.000	0.180			1	20 A	GENERAL OUTLET	64	
LO,I	65	ICE CREAM MACHINE (300X)	20 A	3					1.800	0.500	1	20 A	SPRINKLER MONITORING CONTROL...	66	
--	67	--	--	--	1.800	2.288					1	20 A	CO2 MONITORING PANELS (BURG &...	68	
--	69	--	--	--			1.800	0.000			1	20 A	SPARE	70	
LO,I	71	ICE CREAM MACHINE (300X)	30 A	3					2.280	--	1	--	SPACE	72	
--	73	--	--	--	2.280	--					1	--	SPACE	74	
--	75	--	--	--			2.280	--			1	--	SPACE	76	
I	77	DRINK TOWER (315W)	20 A	1					1.200	--	1	--	SPACE	78	
I	79	U.C. REFRIG (420L)	20 A	1	0.564	--					1	--	SPACE	80	
	81	GENERAL OUTLETS	20 A	1			0.720	--			1	--	SPACE	82	
	83	SPARE	20 A	1					0.000	--	1	--	SPACE	84	
			Total Load:		35.00 kVA		33.66 kVA		33.33 kVA						
			Total Amps:		292.1 A		280.9 A		277.7 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HEAT	12204 VA	100.00%	12204 VA		
KITCHEN EQUIPMENT	48784 VA	65.00%	31709 VA	**Total Conn. Load:**	101.6 kVA
KITCHEN REFRIG EQUIPMENT	21559 VA	65.00%	14013 VA	**Total Est. Demand:**	77.6 kVA
LIGHTING	120 VA	125.00%	150 VA	**Total Conn.:**	282.1 A
MISCELLANEOUS	288 VA	100.00%	288 VA	**Total Est. Demand:**	215.4 A
Motor	7745 VA	107.05%	8291 VA		
RECEPTACLES	8640 VA	100.00%	8640 VA		
MISCELANEOUS	2288 VA	100.00%	2288 VA		

Branch Panel: C

LOCATION:
SUPPLY FROM: MDP
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. SERIES RATING: 65K/10K
MAINS TYPE: MLO
MAINS RATING: 250 A

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	A		B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
J	1	KITCHEN LTG	20 A	1	0.506	0.590					1	20 A	REFUSE ENCLOSURE	2	
J	3	KITCHEN LTG	20 A	1			0.831	0.212			1	20 A	DROP CORD OUTLET	4	I
J	5	RESTROOM LTG & EF-4	20 A	1					0.818	0.212	1	20 A	DROP CORD OUTLET	6	I
J	7	DINING AREA LTG	20 A	1	0.224	0.120					1	20 A	ITIMER (184T)	8	I
J	9	SERVE AREA LTG	20 A	1			0.595	0.000			1	20 A	SPARE	10	
J	11	DINING AREA LTG	20 A	1					0.594	0.120	1	20 A	BREADING TABLE (440CT)	12	I
	13	SPARE	20 A	1	0.000	0.180					1	20 A	DROP CORD OUTLET	14	I
J	15	WATER HEATER/PUMP	20 A	1			1.440	0.120			1	20 A	DROP CORD OUTLET (184)	16	I
H	17	MENUBOARDS (672)	20 A	1					0.702	0.000	1	20 A	SPARE	18	
B	19	DIRECTIONAL SIGNS	20 A	1	0.500	0.000					1	20 A	SPARE	20	
E	21	PARKING LOT LTG	20 A	1			0.489	0.804			1	20 A	REFRIG EQUIPMENT STAND (422T)	22	I
E	23	PARKING LOT LTG	20 A	1					0.326	0.180	1	20 A	DROP CORD OUTLET	24	I
	25	SPARE	20 A	1	0.000	0.180					1	20 A	DROP CORD OUTLET	26	I
	27	SPARE	20 A	1			0.000	0.180			1	20 A	DROP CORD OUTLET	28	I
D	29	SECURITY/FLAGPOLE LTG	20 A	1					0.347	0.180	1	20 A	DROP CORD OUTLET	30	I
C	31	BLDG EXTERIOR LTG	20 A	1	0.288	0.180					1	20 A	DROP CORD OUTLET	32	I
J,S	33	MLOP & OMD CANOPY LTG	20 A	1			1.184	0.180			1	20 A	DROP CORD OUTLET	34	I
LO	35	FRZR/COOLER LTG (410/449)	20 A	1					1.500	0.180	1	20 A	DROP CORD OUTLET	36	I
B	37	MAIN ID SIGN	20 A	1	0.980	1.080					1	20 A	SALAD PREP TABLE (441)	38	I
B	39	MAIN ID SIGN	20 A	1			0.800	0.180			1	20 A	DROP CORD OUTLET	40	I
B	41	MAIN ID SIGN	20 A	1					0.800	0.756	1	20 A	DBL WORKTOP REFRIGERATOR (432T)	42	I
B	43	BUILDING SIGNAGE	20 A	1	0.500	0.180					1	20 A	DROP CORD OUTLET	44	I
B	45	BUILDING SIGNAGE	20 A	1			1.000	0.180			1	20 A	DROP CORD OUTLET	46	I
B	47	BUILDING SIGNAGE	20 A	1					0.500	1.587	1	25 A	HOOD EXHAUST FAN (EF-1)	48	A
B	49	BUILDING SIGNAGE	20 A	1	1.000	1.587					1	25 A	HOOD EXHAUST FAN (EF-2)	50	A
LO,S	51	DRIVE THRU ORDERING	20 A	1			0.720	1.584			1	20 A	MLOP CANOPY FANS	52	I,J,S
J,S,I	53	OMD CANOPY FANS	20 A	1					1.056	0.546	1	20 A	HOOD CJ FANS	54	A
I	55	DROP CORD OUTLET	20 A	1	0.180	1.300					2	20 A	SPARE/FUTURE EGG STATION (F503T)	56	I
I	57	FUTURE BREADING TABLE (F440CT)	20 A	1			0.120	1.300			--	--	--	58	--
I	59	SINGLE REFRIG (442WCT)	20 A	1					0.840	1.300	2	20 A	EGG STATION (503T)	60	I
I	61	BREADING TABLE (440CT)	20 A	1	0.120	1.300					--	--	--	62	--
	63	FUTURE/RACK AC TECH CLOSET	20 A	1			1.272	1.300			2	20 A	EGG STATION (503T)	64	I
	65	FUTURE/RACK AC TECH CLOSET	20 A	1					1.272	1.300	--	--	--	66	--
I	67	RETHERMALIZER (592)	30 A	3	2.642	6.447					3	60 A	DISHWASHER (363H)	68	LO,SB
--	69	--	--	--			2.642	6.447			--	--	--	70	--
--	71	--	--	--					2.642	6.447	--	--	--	72	--
	73	DOUBLE THAWING CABINET (444D)	20 A	1	1.920	1.920					1	20 A	FUTURE DBL THAW CAB (F444D)	74	
	75	ROOFTOP UNIT (AC#4)	40 A	3			3.963	0.373			1	20 A	OPTIONAL SALAD SPINNER	76	H
--	77	--	--	--					3.963	0.212	1	20 A	DROP CORD OUTLET	78	I
--	79	--	--	--	3.963	--					1	--	SPACE	80	
	81	OMD CANOPY OUTLET	20 A	1			0.180	--			1	--	SPACE	82	
	83	OMD CANOPY OUTLET	20 A	1					0.180	--	1	--	SPACE	84	
			Total Load:		27.87 kVA		28.06 kVA		28.56 kVA						
			Total Amps:		232.2 A		234.1 A		238.2 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	11889 VA	100.00%	11889 VA		
HVAC COOL	2544 VA	100.00%	2544 VA	**Total Conn. Load:**	84.5 kVA
KITCHEN EQUIPMENT	35186 VA	65.00%	22871 VA	**Total Est. Demand:**	73.2 kVA
KITCHEN REFRIG EQUIPMENT	7933 VA	65.00%	5156 VA	**Total Conn.:**	234.5 A
LIGHTING	13484 VA	125.00%	16855 VA	**Total Est. Demand:**	203.1 A
Motor	8536 VA	104.65%	8933 VA		
Power	360 VA	100.00%	360 VA		
RECEPTACLES	4560 VA	100.00%	4560 VA		

PANELBOARD NOTES

- (A) CONTROLLED BY RELAY IN CONTROL PANEL CFA-T500 AND STORE-OPEN EXHAUST FAN SWITCH. PANELBOARD SUPPLIER TO PROVIDE NOTATION ON CIRCUIT THAT THE CFA-T500 ALSO HAS AN INTEGRAL BREAKER ON THE FAN CIRCUITS FOR THE DISCONNECTION OF POWER AT THE CONTROLLER PER THE NEC. SEE CFA-T500 CONTROL PANEL CONNECTION DIAGRAM ON E-001.
- (B) CONTROLLED BY EXTERIOR SIGN RELAY IN CONTROL PANEL CFA-T500.
- (C) CONTROLLED BY EXTERIOR LIGHTING RELAY IN CONTROL PANEL CFA-T500.
- (D) CONTROLLED BY EXTERIOR LIGHTING RELAY - DUSK TO DAWN ZONE.
- (E) CONTROLLED BY PARKING LOT LIGHTING CONTROL SWITCH.
- (F) GFCI TYPE BREAKER TO BE 30MA TYPE BREAKER.
- (H) THE CONTRACTOR SHALL PROVIDE GROUND FAULT TYPE RECEPTACLES FOR ALL 120 VOLT, 15 AND 20 AMP, RECEPTACLES IN THE KITCHEN/FOOD PREPARATION AREA UNLESS NOTED OTHERWISE. (NOTE THAT THE RECEPTACLES FOR THE QEP BOXES, THE KITCHEN/SERVING AREA, EQUIPMENT, AND THE CIRCUIT FOR THE FLY SYSTEM SHALL BE PROTECTED BY GROUND FAULT TYPE CIRCUIT BREAKERS RATHER THAN GROUND FAULT TYPE RECEPTACLES SINCE ISOLATED GROUNDING TYPE RECEPTACLES, AND CLOCK TYPE RECEPTACLES ARE NOT AVAILABLE AS GROUND FAULT TYPE.) GFCI BREAKERS REQUIRE A DEDICATED NEUTRAL (NOT SHARED) TO OPERATE PROPERLY.
- (I) GFCI TYPE BREAKER TO BE 5MA TYPE BREAKER.
- (IG) ISOLATED GROUND.
- (J) CONTROLLED BY INTERIOR LIGHTING RELAYS IN CONTROL PANEL T-500. LIGHTS SHALL TURN ON WHEN STORE IS OCCUPIED.
- (L) LOCK-ON.
- (LO) LOCK-OFF FOR MAINTENANCE.
- (M) HIGH MAG LOAD.
- (SB) THRU (1) SB6100-020-0 GFCI PROTECTION DEVICE IN SB6000 PANEL ENCLOSURE OR (1) SB6100-021-0 GFCI PROTECTION DEVICE SURFACE MOUNTED ENCLOSURE FOR 80 AMP FRYERS; OR (1) SB5060-021-0 GFCI PROTECTION DEVICE SURFACE MOUNTED ENCLOSURE FOR 60 AMP DISHWASHER.
- (ST) SHUNT TRIP. INTERLOCK W/ FIRE SUPPRESSION SYSTEM VIA T-500 PANEL.
- (S) SURGE PROTECTION FOR INDIVIDUAL CIRCUIT. MOUNT SINGLE CIRCUIT SURGE PROTECTION DEVICE (SQUARE D) SDSA1175T TO FACEPLATE MOUNTED ON JUNCTION BOX DIRECTLY ABOVE PANELBOARD SERVING LOAD.

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

KEA ENGINE

Branch Panel: D1

LOCATION:
SUPPLY FROM: MDP
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. SERIES RATING: 65K/10K
MAINS TYPE: MLO
MAINS RATING: 250 A

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	A		B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
I	1	PRESSURE FRYER (523)	50 A	3	4.563	2.892					3	50 A	CHARGRILL COOKER (524)	2	I
--	3	--	--	--			4.563	3.384			--	--	--	4	--
--	5	--	--	--					4.563	2.772	--	--	--	6	--
I	7	PRESSURE FRYER (523)	50 A	3	4.563	2.892					3	50 A	CHARGRILL COOKER (524)	8	I
--	9	--	--	--			4.563	3.384			--	--	--	10	--
--	11	--	--	--					4.563	2.772	--	--	--	12	--
I	13	PRESSURE FRYER (523)	50 A	3	4.563	4.560					3	50 A	SPARE/FUTURE FRYER (F523)	14	I
--	15	--	--	--			4.563	4.560			--	--	--	16	--
--	17	--	--	--					4.563	4.560	--	--	--	18	--
	19	SPACE	--	1	--	--					1	--	SPACE	20	
	21	SPACE	--	1			--	--			1	--	SPACE	22	
	23	SPACE	--	1					--	--	1	--	SPACE	24	
	25	SPACE	--	1	--	--					1	--	SPACE	26	
	27	SPACE	--	1			--	--			1	--	SPACE	28	
	29	SPACE	--	1					--	--	1	--	SPACE	30	
				Total Load:	24.03 kVA		25.02 kVA		23.79 kVA						
				Total Amps:	200.6 A		208.8 A		198.3 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
KITCHEN EQUIPMENT (100% DEMAND)	72847 VA	100.00%	72847 VA		
				Total Conn. Load:	72.8 kVA
				Total Est. Demand:	72.8 kVA
				Total Conn.:	202.2 A
				Total Est. Demand:	202.2 A

Branch Panel: D2

LOCATION:
SUPPLY FROM: MDP
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. SERIES RATING: 65K/10K
MAINS TYPE: MLO
MAINS RATING: 250 A

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	A		B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
SB	1	OPEN FRYER (522)	80 A	3	7.446	7.446					3	80 A	FUTURE OPEN FRYER (F522)	2	SB
--	3	--	--	--			7.446	7.446			--	--	--	4	--
--	5	--	--	--					7.446	7.446	--	--	--	6	--
SB	7	OPEN FRYER (522A)	80 A	3	7.446	--					1	--	SPACE	8	
--	9	--	--	--			7.446	--			1	--	SPACE	10	
--	11	--	--	--					7.446	--	1	--	SPACE	12	
	13	SPACE	--	1	--	--					1	--	SPACE	14	
	15	SPACE	--	1			--	--			1	--	SPACE	16	
	17	SPACE	--	1					--	--	1	--	SPACE	18	
	19	SPACE	--	1	--	--					1	--	SPACE	20	
	21	SPACE	--	1			--	--			1	--	SPACE	22	
	23	SPACE	--	1					--	--	1	--	SPACE	24	
	25	SPACE	--	1	--	--					1	--	SPACE	26	
	27	SPACE	--	1			--	--			1	--	SPACE	28	
	29	SPACE	--	1					--	--	1	--	SPACE	30	
				Total Load:	22.34 kVA		22.34 kVA		22.34 kVA						
				Total Amps:	186.1 A		186.1 A		186.1 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
KITCHEN EQUIPMENT (100% DEMAND)	67011 VA	100.00%	67011 VA		
				Total Conn. Load:	67.0 kVA
				Total Est. Demand:	67.0 kVA
				Total Conn.:	186.0 A
				Total Est. Demand:	186.0 A

Branch Panel: D3

LOCATION:
SUPPLY FROM: MDP
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. SERIES RATING: 65K/10K
MAINS TYPE: MLO
MAINS RATING: 250 A

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	A		B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
I	1	PRESSURE FRYER (523)	50 A	3	4.563	4.563					3	50 A	PRESSURE FRYER (523)	2	I
--	3	--	--	--			4.563	4.563			--	--	--	4	--
--	5	--	--	--					4.563	4.563	--	--	--	6	--
I	7	SPARE/FUTURE FRYER (F523)	50 A	3	4.560	7.446					3	80 A	OPEN FRYER (522A)	8	SB
--	9	--	--	--			4.560	7.446			--	--	--	10	--
--	11	--	--	--					4.560	7.446	--	--	--	12	--
	13	SPACE	--	1	--	--					1	--	SPACE	14	
	15	SPACE	--	1			--	--			1	--	SPACE	16	
	17	SPACE	--	1					--	--	1	--	SPACE	18	
	19	SPACE	--	1	--	--					1	--	SPACE	20	
	21	SPACE	--	1			--	--			1	--	SPACE	22	
	23	SPACE	--	1					--	--	1	--	SPACE	24	
	25	SPACE	--	1	--	--					1	--	SPACE	26	
	27	SPACE	--	1			--	--			1	--	SPACE	28	
	29	SPACE	--	1					--	--	1	--	SPACE	30	
				Total Load:	21.13 kVA		21.13 kVA		21.13 kVA						
				Total Amps:	176.1 A		176.1 A		176.1 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
KITCHEN EQUIPMENT (100% DEMAND)	63398 VA	100.00%	63398 VA		
				Total Conn. Load:	63.4 kVA
				Total Est. Demand:	63.4 kVA
				Total Conn.:	176.0 A
				Total Est. Demand:	176.0 A

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

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NY LICENSE #062261-1

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR LRG
RELEASE: 22.08
PRINTED FOR
ISSUED FOR BID **10/04/2022**

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY MN

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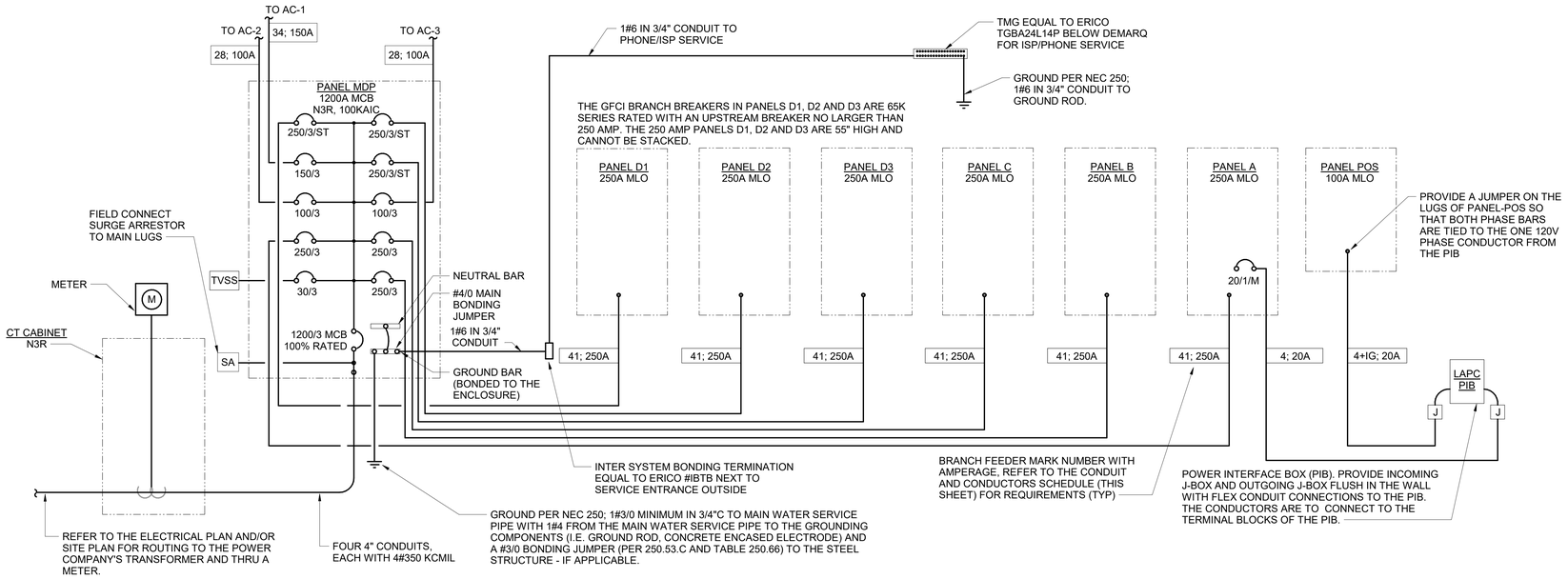
SHEET
PANEL SCHEDULES

SHEET NUMBER
E-501b

9/29/2022 3:48:44 PM Autodesk Docs://NY_04937_Levittown_2021.4_FSR/04937_Levittown_ELE.rvt
50-LSR-04937-E-501b-PANEL SCHEDULES



C2 SINGLE LINE DIAGRAM
NO SCALE

SINGLE-LINE DIAGRAM NOTES

1. VERIFY SERVICE LOCATIONS AND CONFORM TO THE REQUIREMENTS OF THE POWER COMPANY AND/OR DEVELOPER. POWER COMPANY AND/OR DEVELOPER SHALL BE CONTACTED PRIOR TO BEGINNING CONSTRUCTION TO ARRANGE AND VERIFY FOR THE INSTALLATION OF THE POWER COMPANY SERVICE, METER, AND OTHER ITEMS.
2. GROUND ALL EQUIPMENT AND SERVICES IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE, LOCAL APPLICABLE CODES, AND ALSO AS INDICATED ON DRAWINGS.
3. MAKE NECESSARY INSPECTIONS OF EXISTING SITE AND SERVICE LOCATIONS AS REQUIRED FOR THIS WORK AND MAKE ALLOWANCE FOR EXISTING CONDITIONS BEFORE SUBMITTING BID. VERIFY WORK REQUIRED WITH POWER COMPANY AND TELEPHONE COMPANY.
4. CUT AND PATCH THE CONSTRUCTION WORK AS REQUIRED FOR PROPER INSTALLATION OF THE ELECTRICAL WORK. ALL PATCHING SHALL MATCH THE SURROUNDING WORK TO THE SATISFACTION OF THE ARCHITECT. ALL CONDUIT SHALL BE INSTALLED CONCEALED UNLESS SPECIFICALLY APPROVED BY THE ARCHITECT. COORDINATE SAW CUTTING WITH LANDLORD'S OR OWNER'S REPRESENTATIVE.
5. WIRE AND CABLE:
   A. CONDUCTORS SHALL BE COPPER, #12 AWG, MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE.
   B. CONDUCTOR #10 AWG AND SMALLER SHALL BE SOLID AND #8 AWG AND LARGER SHALL BE STRANDED. INSULATION SHALL BE 600 VOLT, THHN/THWN.
6. PROVIDE ENGRAVED LAMINATED PHENOLIC BLOCK-ON-WHITE (UNLESS NOTED OTHERWISE) NAMEPLATES SECURED TO EQUIPMENT WITH ADHESIVE AND SCREWS FOR PANELBOARDS, RELAY CABINETS, TRANSFORMERS, DISTRIBUTION BOARDS, AND MAIN PANELBOARD - IDENTIFYING EQUIPMENT DESIGNATION (CORRESPONDING WITH DESIGNATION USED ON DRAWINGS) AND EQUIPMENT VOLTAGE. LETTERING SHALL BE 1/4" HIGH. PROVIDE LABELS FOR CIRCUIT BREAKERS, FUSIBLE SWITCHES AND STARTERS IN PANELBOARDS AND DISTRIBUTION BOARDS FOR EACH DEVICE IDENTIFYING EQUIPMENT CONTROLLED. LETTERING SHALL BE 1/8" HIGH.
7. ALL DEVICES SHALL HAVE AN INTERRUPTING CAPACITY NOT LESS THAN THE POWER COMPANY AVAILABLE FAULT CURRENT, OR AS INDICATED ON THE DRAWINGS. ELECTRICAL CONTRACTOR SHALL CONTACT UTILITY COMPANY AND REEQUEST AVAILABLE FAULT CURRENT AT THE SECONDARY TERMINALS OF THE UTILITY TRANSFORMER AND SUBMIT TO EOR FOR REVIEW AND FINAL SELECTION OF INTERRUPTING RATINGS OF ALL ELECTRICAL EQUIPMENT.
8. 120/208 VOLT BRANCH CIRCUIT PANELBOARD BREAKERS SHALL HAVE A MINIMUM U.L. SERIES RATING OF 65 KAIC WITH UP-STREAM FEEDER BREAKERS AS NOTED.
9. AVAILABLE SPACE FOR MAIN PANELBOARD IS LIMITED. PANELBOARD MUST FIT IN ALLOCATED SPACE. COORDINATE WITH CONSTRUCTION AS REQUIRED.
10. ALL WIRING SHALL BE IN CONDUIT, E.M.T OR RIGID. FLEXIBLE CONDUIT MAY ONLY BE USED FOR FINAL CONNECTIONS AND WITH GREEN EQUIPMENT GROUNDING CONDUCTORS.

SWITCHGEAR AND CONTROL EQUIPMENT NOTES

1. PURCHASE PANELBOARDS, SURGE ARRESTOR, AND TVSS FROM AN APPROVED NATIONAL ACCOUNTS VENDOR (SEE SHEET E-902 SECTION C16440, PANELBOARDS) PROVIDING SQUARE-D EQUIPMENT. NO SUBSTITUTIONS ALLOWED.
2. PURCHASE CONTROL PANEL 'CFA-T500' FROM SUNCOAST ENVIRONMENTAL, INC. (NO SUBSTITUTIONS ALLOWED). ALL EQUIPMENT IN THE CONTROL PANEL SHALL BE INSTALLED, WIRED AND CONNECTED AT THE FACTORY, INCLUDING AUTOMATIC LIGHTING CONTROL SYSTEM, LIGHTING RELAYS, HVAC STARTERS, POWER SUPPLIES, MISCELLANEOUS RELAYS AND CONTROLS, AND THERMOSTATS.
3. CONTRACTOR SHALL PROVIDE PANEL FEEDERS A, B, C, D1, D2, D3, AND POS, BRANCH CIRCUIT CONDUIT AND WIRE, AND INSTALL ALL EQUIPMENT AS REQUIRED.
4. ALL BREAKERS AND PANELS SHALL BE SQUARE-D.
5. TVSS AND SURGE ARRESTOR UNITS SHALL BE MOUNTED DIRECTLY ADJACENT TO THE SIDE OF THE MAIN DISTRIBUTION PANEL IN NEMA 3R ENCLOSURES. CLOSE NIPPLE THE UNITS TO THE SIDE OF THE PANEL. PROVIDE CONNECTION OF TVSS UNIT TO BREAKER IN PANEL. CONNECT SURGE ARRESTOR TO MAIN INCOMING LUGS OF THE PANEL. CONNECT USING MINIMUM LENGTH OF WIRE WITHOUT SHARP BENDS IN THE WIRE AND SHALL NOT BE LENGTHENED FROM WIRE LENGTH PROVIDED WITH THE TVSS OR SURGE SUPPRESSOR DEVICE.

B1 CONDUIT AND CONDUCTORS SCHEDULE

Mark	OCP Device	Conductors Total Amps		Conductors					Raceway Size (Nominal Inches)							
				Phase & Neutral			Min Eq Grd		No.	Phase, Neutral & Equip Grd				With IG		
No.	(Amp/Poles)	60d C	75d C	Qty	Size	Type	Qty/Set	Size	Sets	EMT	IMC	RIGID	PVC	EMT	IMC	PVC
1	20/1	20	-	2	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
2	20/2	20	-	3	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
3	20/3	20	-	4	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
4	25/1	30	-	2	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
5	25/2	30	-	3	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
6	25/3	30	-	4	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
7	30/1	30	-	2	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
8	30/2	30	-	3	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
9	30/3	30	-	4	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
10	40/1	40	-	2	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
11	40/2	40	-	3	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
12	40/3	40	-	4	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	1.00
13	45/3	55	-	4	6	THHN	1	10	One	1.00	1.00	1.00	1.00	1.00	1.00	1.00
14	50/1	55	-	2	6	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
15	50/2	55	-	3	6	THHN	1	10	One	0.75	0.75	0.75	0.75	1.00	1.00	1.00
16	50/3	55	-	4	6	THHN	1	10	One	1.00	1.00	1.00	1.00	1.00	1.00	1.00
17	60/1	70	-	2	4	THW	1	8	One	1.00	1.00	1.00	1.00	1.25	1.00	1.25
18	60/2	70	-	3	4	THW	1	8	One	1.25	1.00	1.25	1.25	1.25	1.25	1.25
19	60/3	70	-	4	4	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	1.25	1.25
20	70/1	70	-	2	4	THW	1	8	One	1.00	1.00	1.00	1.00	1.25	1.00	1.25
21	70/2	70	-	3	4	THW	1	8	One	1.25	1.00	1.25	1.25	1.25	1.25	1.25
22	70/3	70	-	4	4	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	1.25	1.25
23	80/2	85	-	3	3	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	1.25	1.25
24	80/3	85	-	4	3	THW	1	8	One	1.25	1.25	1.25	1.25	1.50	1.25	1.50
25	90/2	95	-	3	2	THW	1	8	One	1.25	1.25	1.25	1.25	1.50	1.25	1.50
26	90/3	95	-	4	2	THW	1	8	One	1.50	1.25	1.50	1.50	1.50	1.50	1.50
27	100/2	110	-	3	1	THW	1	6	One	1.50	1.50	1.50	1.50	2.00	2.00	2.00
28	100/3	110	-	4	1	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
29	110/2	-	150	3	1/0	THW	1	6	One	1.25	1.25	1.25	1.25	1.50	1.25	1.50
30	110/3	-	150	4	1/0	THW	1	6	One	1.50	1.25	1.50	1.50	1.50	1.50	1.50
31	125/2	-	150	3	1/0	THW	1	6	One	1.50	1.50	1.50	1.50	2.00	2.00	2.00
32	125/3	-	150	4	1/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
33	150/2	-	150	3	1/0	THW	1	6	One	2.00	1.50	2.00	2.00	2.00	2.00	2.00
34	150/3	-	150	4	1/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
35	175/2	-	175	3	2/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
36	175/3	-	175	4	2/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.50	2.50	2.50
37	200/2	-	200	3	3/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.50	2.50	2.50
38	200/3	-	200	4	3/0	THW	1	6	One	2.50	2.00	2.50	2.50	2.50	2.50	2.50
39	225/2	-	230	3	4/0	THW	1	4	One	2.50	2.00	2.50	2.50	2.50	2.50	2.50
40	225/3	-	230	4	4/0	THW	1	4	One	2.50	2.50	2.50	2.50	2.50	3.00	3.00
41	250/3	-	255	4	250	THW	1	4	One	2.50	3.00	3.00	3.00	3.00	3.00	3.00
42A	300/3	-	285	4	300	THW	1	4	One	3.00	3.00	3.00	3.00	3.00	3.00	3.00
42B	300/3	-	310	4	350	THW	1	4	One	3.00	3.00	3.00	3.00	3.00	3.00	3.00
43A	350/3	-	335	4	400	THW	1	4	One	3.00	3.50	3.50	3.50	3.50	3.50	3.50
43B	350/3	-	380	4	500	THW	1	4	One	3.50	3.50	3.50	3.50	3.50	3.50	3.50
44A	400/3	-	380	4	500	THW	1	3	One	3.50	3.50	3.50	3.50	3.50	3.50	3.50
44B	400/3	-	400	4	3/0	THW	1	3	Two	2.50	2.50	2.50	2.50	2.50	2.50	2.50
45A	600/3	-	570	4	300	THW	1	1	Two	3.00	3.00	3.00	3.00	3.00	3.00	3.00
45B	600/3	-	620	4	350	THW	1	1	Two	3.00	3.00	3.00	3.00	3.00	3.00	3.50
46A	800/3	-	760	4	500	THW	1	1/0	Two	3.50	3.50	3.50	3.50	3.50	3.50	3.50
46B	800/3	-	820	4	600	THW	1	1/0	Two	4.00	4.00	4.00	4.00	4.00	4.00	4.00
47	1000/3	-	1005	4	400	THW	1	2/0	Three	3.50	3.50	3.50	3.50	3.50	3.50	3.50
48	1200/3	-	1240	4	350	THW	1	3/0	Four	3.50	3.50	3.50	3.50	3.50	3.50	4.00
49	1600/3	-	1675	4	400	THW	1	4/0	Five	4.00	4.00	4.00	4.00	4.00	4.00	4.00

Notes:
Conductors are rated at 600 volt or below and are to be copper.

NEC Table 310.15(B)(16) - formerly Table 310.16 - is used for the basis of the conductor ampacities, which is not more than three current carrying conductors in a raceway at an ambient temperature of 30 deg C with 60 deg C rated conductors and connectors per 110.14-C-1 for up to 100 amp rated and up to #1 AWG conductors for equipment terminations and 75 deg C rated conductors and termination connectors for larger than 100 amp or above #1 AWG conductors.

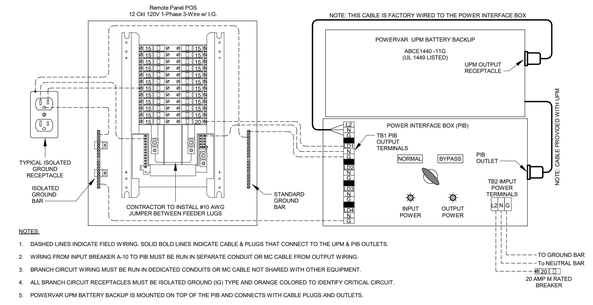
NEC Tables 4, 5, and Appendix C is used for the basis of the conduit sizes. Table C1 for EMT, Table C4 for IMC, Table C8 for Rigid, and Table C10 for PVC (Sch 40).

All Branch Feeders and Branch Circuits shall include a green Equipment Grounding Conductor.

Omit Grounding conductor on Service Entrance Feeders.

Omit Neutral conductor on all Delta primary transformer feeders or single-phase 2 pole loads and 3 phase loads not requiring a neutral.

The above conductors are not calculated for Voltage Drop. Any circuits that exceed 100 feet shall be calculated by the Installer to have less than a three percent voltage drop on feeders and five percent on branch circuits per the NEC.



NOTES:
1. DASHED LINES INDICATE FIELD WIRING. SOLID BOLD LINES INDICATE CABLE & PLUGS THAT CONNECT TO THE UPM & PIB OUTLETS.
2. WIRING FROM INPUT BREAKER A-10 TO PIB MUST BE RUN IN SEPARATE CONDUIT OR MC CABLE FROM OUTPUT WIRING.
3. BRANCH CIRCUIT WIRING MUST BE RUN IN DEDICATED CONDUITS OR MC CABLE NOT SHARED WITH OTHER EQUIPMENT.
4. ALL BRANCH CIRCUIT RECEPTACLES MUST BE ISOLATED GROUND (IG) TYPE AND ORANGE COLORED TO IDENTIFY CRITICAL CIRCUIT.
5. POWERVAR UPM BATTERY BACKUP IS MOUNTED ON TOP OF THE PIB AND CONNECTS WITH CABLE PLUGS AND OUTLETS.

A1 POS AND LAPC/PIB WIRING DIAGRAM
NO SCALE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

KEA ENGINEERS
Engineering Excellence since 1984
KEA ENGINEERS
186 WOOD AVE. SOUTH, 1ST FLOOR
ISELIN, NJ 08830
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ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

CHICK-FIL-A
Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR ALL
RELEASE: 22.08
PRINTED FOR
ISSUED FOR BID 10/04/2022

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY MN

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SHEET
SINGLE LINE DIAGRAM AND NOTES

SHEET NUMBER
E-502

9/29/2022 3:48:47 PM Autodesk Docs://NY_04937_Levittown_2021.4_FSR/04937_Levittown_ELE.rvt
50-LSR-04937-E-502-SINGLE LINE DIAGRAM AND NOTES

SECTION C16100
ELECTRICAL GENERAL PROVISIONS

PART 1- GENERAL

1.01 WORK INCLUDED
A. Provide all materials, labor and equipment required to furnish and install a complete electrical system as indicated on drawings and as specified herein.

1.02 REGULATORY REQUIREMENTS
A. Equipment furnished shall be UL listed where such label is available. Installation shall conform to UL standards where applicable.

B. Electrical work shall be installed in accordance with drawings and specifications, NEC and NFPA codes in effect at project location, state and local electrical and building codes and special codes having jurisdiction over specific portions within complete installation.

C. Obtain permits and certificates of approval from all authorities having jurisdiction over the installation and pay all fees required.

1.03 SUBMITTALS
A. Submit list of materials and equipment prior to manufacture, order or installation and within twenty days after award of contract for approval. Include each item of material and equipment whether or not shop drawings are also required. List shall include name of manufacturer, catalog number and other complete identification as well as dimensions and detailed data. Submittals shall be included for the following:
1. Lighting Fixtures
2. Panelboards/Breakers
3. Wiring Devices and Device Plates
4. Enclosed Switches

B. Certified shop drawings and submittals shall bear stamp of approval of contractor as evidence that drawings have been checked. Drawings submitted without this stamp of approval will not be considered and will be returned for proper resubmission.

C. If submittals show variances or substitutions from requirements of contract, contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment. Otherwise contractor shall not be relieved of responsibility for executing work in accordance with contract even though such submittals have been approved.

1.04 SITE VISIT
A. Visit job site prior to bid date to determine actual conditions under which work shall be done, to familiarize oneself with project and to verify total scope of work required. Failure to do so shall not constitute a reason for an extra charge.

SECTION C16101
BASIC MATERIALS AND METHODS

PART 1 - GENERAL

1.01 COORDINATION
A. Obtain and review shop drawings, product data, and manufacturer's instructions for equipment furnished under other sections to determine connection locations and requirements.

B. Sequence rough-in of electrical connections to coordinate with installation and start-up of equipment furnished under other sections.

PART 2 - PRODUCTS

2.01 SUBSTITUTIONS
A. Where specifications list one or more manufacturers and do not include "or approved equal", furnish materials made by one of manufacturers listed. Where "or approved equal" is included, contractor may substitute equal products by another manufacturer subject to approval by engineer and owner.

PART 3 - EXECUTION

3.01 INSTALLATION
A. Make electrical connections to utilization equipment in accordance with equipment manufacturer's instructions.

B. Drawings are diagramatic and shall not be scaled for exact sizes or locations, they are not intended to disclose absolute or unconditional knowledge of actual field conditions.

C. Protect work and materials from damage by weather, entrance of water and dirt. Cap conduit during installation. Avoid damage to materials and equipment in place.

D. Satisfactorily repair or remove and replace damaged work with new materials. Deliver equipment and materials to job site in original, unopened, labeled containers. Store ferrous materials to prevent rusting. Store finished materials and equipment to prevent staining and discoloring.

E. Trenches shall be excavated 6" below elevation of bottom of conduit.

F. Failure to route conduit through building without interfering with other equipment and construction shall not constitute a reason for an extra charge. Equipment, conduit and fixtures shall fit into available spaces in building and shall not be introduced into building at such times and manner as to cause damage to structure. Equipment requiring service shall be readily accessible.

3.02 TESTING AND EQUIPMENT SERVICING
A. Make test to ensure that entire system is in proper operating condition, and that adjustments and apparatus setting of circuit breakers, fuses, control equipment and apparatus have been made. Correct defects discovered during tests.

3.03 REMOVAL OF DEBRIS
A. Remove surplus materials and debris caused by, or incidental to, electrical work. Remove such debris at frequent intervals. Keep job clean during construction.

3.04 IDENTIFICATION OF EQUIPMENT
A. Identify electrical distribution equipment, disconnects, and contactors with black laminated plastic name-plates, attached with two screws, engraved with 1/4" high, white letters.

3.05 TEMPORARY LIGHTING AND POWER IN AREAS OF CONSTRUCTION
A. Provide, maintain and remove after construction is completed, temporary lighting adequate for workman safety and temporary power for all trades including any 3 phase power required.

B. Provide and maintain barricade lighting where required to adequately protect owner against liability for damage to public or personnel. All lamps used in barricade shall be 60 watt red, installed in weatherproof socket with wire guard. All wiring shall be approved for weatherproof installation.

3.06 GUARANTEE-WARRANTY
A. Guarantee work to be free from defects of materials and workmanship for a period of one year from date of final acceptance of building. Repair and replace defective work and other work damaged thereby which becomes defective during term of guarantee-warranty. Furnish owner with three written copies of guarantee-warranty.

SECTION C16120
RACEWAYS AND CONDUIT SYSTEMS

PART 1 - PRODUCTS

1.01 ACCEPTABLE MANUFACTURERS
A. Rigid IMC, and EMT conduit shall be hot-dipped, galvanized, or electro-galvanized steel by Allied, Republic, Triangle, Wheatland, or approved equal.

B. PVC conduit shall be Carlon, schedule 40, 90 degrees C. rated, unless otherwise noted.

C. MC cable shall be manufactured by AFC Cable Systems or approved equal. Type "AC-90" is not allowed. All MC Cables shall have a green equipment ground conductor and an additional isolated ground (green + yellow stripe) conductor for isolated ground circuits (POS system). Fittings used for connecting MC cable to boxes, cabinets, or other equipment shall be listed and identified for such use.

D. Associated couplings, connectors and fittings shall be steel as manufactured by Raco or equivalent. Catalog numbers used below are those of Raco.

E. Erickson Couplings, Series 1502, shall be used where neither length of conduit can be rotated.

F. Insulated bushings shall be series 1402.

G. EMT box connectors shall be compression or set-screw fittings.

H. Conduit, connectors, couplings and fittings shall be UL listed and labeled.

1.02 ELECTRICAL METALLIC TUBING (EMT)
A. Use Electrical Metallic Tubing (EMT) where drawings call for conduit to be:
1. Concealed in walls.
2. Installed above suspended ceilings.
3. Installed exposed, above 6 feet.
4. Installed for panelboard feeders above slab.

1.03 INTERMEDIATE METAL CONDUIT (IMC)
A. Use Intermediate Metal Conduit (IMC) where drawings call for conduit to be:
1. Installed for panelboard feeders ran below ground.
2. Installed in wet locations (interior and exterior).
3. Installed exposed below 6 feet.

1.04 POLYVINYL CHLORIDE (PVC) RACEWAY
A. Use PVC raceway for:
1. Underground service entrance conduits for telephone and power.
2. Exterior branch circuits installed underground.
3. Interior branch circuit conduits installed in or under concrete slab on ground floor.

1.05 RIGID STEEL CONDUIT (RSC)
A. Use Rigid Steel Conduit for:
1. Install underground for power Service Entrance elbows penetrating floor slab.
2. Exposed to physical damage.

1.06 FLEXIBLE METAL CONDUIT
A. Provide flexible metal conduit for termination at equipment subject to motion and vibration.

B. Length shall not exceed 6 feet in accessible ceiling areas.

C. Shall not be concealed in walls.

D. Where exposed to continuous or intermittent moisture, conduit shall be UL Type EF liquidtight or type as indicated.

E. For connection to ceiling mounted lighting fixtures from outlet boxes.

1.07 MC (METAL-CLAD) CABLE
A. MC Cable shall be UL listed per standard 1569, color coded copper conductors (type THHN), the sheathing shall be constructed of interlocking galvanized steel, and shall conform to the requirements of Article 330 of the National Electrical Code.

B. MC Cable with an isolated grounding conductor shall be used, concealed above ceiling and in walls, for the connection of the Point Of Sales (POS) system equipment from the isolated ground receptacles to the panelboard serving the POS loads when allowed by local codes and Article 330 of the National Electrical Code.

C. MC Cable may be used when allowed by local codes and Article 330 of the National Electrical Code for branch circuits (except the main homerun to the panelboard which shall be conduit with conductors) for the following:
1. Lighting
2. Dining area receptacles
3. Fly Lights
4. Building mounted signage
5. Office area receptacles

D. MC Cable shall not be used for branch circuits serving Kitchen Equipment Items and similar circuits in the Kitchen, the Drive- Thru area, and the Serving area's back counter.

PART 2 - EXECUTION

2.01 INSTALLATION
A. Minimum size of conduits shall be 1/2 inch.

B. Run concealed conduits in direct line with long sweep bends or offsets. Run exposed conduits parallel to and at right angles to building lines. Group multiple conduit runs in banks.

C. Cap ends of conduits to prevent entrance of water and other foreign material during construction.

D. Provide No. 12 AWG copper pull wires or nylon cord in all empty conduits. Steel wire not acceptable as pull wire.

E. Where IMC enters a cabinet, junction box, or pull box conductors shall be protected by an insulated bushing. Locknuts shall be installed on conduit outside and inside enclosure.

F. In areas where enclosed and gasketed fixtures and weatherproof devices are specified, where Rigid Conduit enters a sheet metal enclosure, junction box and outlet box, and not terminated in a threaded hub, a steel, or malleable iron nylon insulated hub, complete with recessed sealing "O"ring or sealing locknut shall be used.

G. Provide seal-off fitting in all conduits entering a cold temperature area such as freezers and dry refrigerators.

H. In concrete slabs, block up conduit from forms and securely fasten in place, all conduits in slabs shall have a minimum of 4" inches concrete coverage above.

I. Failure to route conduit through building without interfering with other equipment, and construction shall not constitute a reason for an extra charge. Equipment, conduit, and fixtures shall fit into available spaces in building and shall not be introduced into building at such times and manner as to cause damage to structure or equipment. Equipment requiring servicing shall be readily accessible.

2.02 EMT (ELECTRICAL METALLIC TUBING) RACEWAY
A. Do not use Electrical Metallic Tubing in cinder concrete or cinder fill or where conduit system is in contact with dissimilar metals or in wet locations.

2.03 PVC RACEWAY
A Use threaded fittings for all connectors and adapters.

B. Provide 1/4-inch nylon pull rope in all primary power and incoming telephone service entrance conduits.

C. PVC conduit shall convert to galvanized rigid metal per detail on drawings.

2.04 FLEXIBLE METAL CONDUIT
A. Where fittings for liquid tight flexible conduit are brought into an enclosure with a knock-out, a gasket assembly, consisting of one piece "O" ring, with Buna-N sealing material, series 3400, shall be installed on outside of box. Fittings shall be made of either steel or malleable iron only, and shall have insulated throats or insulated bushings.

B. In dry locations, where final connections to motors and other equipment may be made with Flexible Metal Conduit, fittings shall be of steel or malleable iron only with insulated throats or insulated bushings, and shall be of wedge and screw type having an angular wedge fitting between convolutions of conduit.

2.05 MC CABLE
A. MC Cable may be used for branch circuits as noted in Part 1 above and where the local code allows use of MC Cable. The installation shall conform to Article 330 of the National Electrical Code and shall be concealed in walls and above ceilings. (Exposed MC Cable will not be acceptable.)

B. MC Cables shall be secured and supported by the building structure per the National Electrical Code and any local code requirements. MC Cable shall not lay on ceilings.

SECTION C16121
CONDUCTORS

PART 1 - PRODUCTS

1.01 CONDUCTORS
A. Provide 98% conductivity copper conductors with 600-volt insulation. For conductors No. 12 AWG and No. 10 AWG, provide solid type. For all conductors No. 8 AWG and larger, provide stranded type. All conductors shall have THHN/THWN insulation unless noted otherwise.

B. Conductors shall be manufactured by Triangle, American, Rome, Southwire or approved equal.

C. Provide No. 14 AWG type THHN fixture conductors, for conductors entering lighting fixtures.

D. Branch circuit conductors shall be minimum #12 AWG, copper.

PART 2 - EXECUTION

2.01 INSTALLATION
A. Install pull boxes in circuits or feeders over 100 feet long.

B. Make all splices or connections only at outlet, pull or junction boxes.

C. All conductors and connections shall test free of grounds, shorts, and opens prior to energizing circuit.

D. Provide No. 10 wire in lieu of No. 12 wire for any branch circuit in excess of 100 feet linear length to prevent excessive voltage drop.

E. Use Ideal wing nuts, Scotchlok Type Y, R, G, or B, or approved equivalent connectors for fixture connections at outlet boxes.

F. Make feeder taps and joints with OZ Type T, PT, PM or PTS, or approved equivalent clamp connectors as manufactured by Kupler, or with approved compression sleeves. Wrap connectors with No. 10 Electro-Seal or approved equivalent plastic filler and vinyl tape.

G. Leave a minimum of 8" slack wire in every outlet box.

H. Provide color coded wire and with a different color for each phase and neutral and ground as follows: Phase A, B, C: Black, Red and Blue respectively; Neutral: White; Isolated Ground: Green with Yellow Stripes. Approved color tape is acceptable for feeders using larger than #6 conductors.

I. All conductors shall be continuous from origin to panel or equipment termination without splices where possible. Where splices and taps are necessary or are required, they shall be made in splice boxes with suitable connectors.

J. Tighten all electrical connectors and terminals, including screws and bolts, in accordance with manufacturer's published torque tightening values. Where manufacturer's torquing requirements are not indicated,tighten connectors and terminals to comply with tightening torques specified in UL486A and UL486B.

SECTION C16122
OUTLET AND JUNCTION BOXES

PART 1 - GENERAL

1.01 PROJECT CONDITIONS
A. Verify field measurements are as shown on drawings.

B. Verify locations of floor boxes and outlets in work areas prior to rough-in.

PART 2 - PRODUCTS

2.01 OUTLET BOXES

A. Sheet metal outlet boxes: galvanized steel.

B. Cast boxes: type FS, cast feralloy. Provide gasketed cover by box manufacturer.

C. Manufacturers: National, Appleton, General Electric, RACO, or Steel City.

D. Provide boxes for fixtures with fixture studs in center.

E. Outlet boxes for lighting, switches and receptacles in interior areas with exposed conduit shall be pressed steel and in exterior areas with exposed conduit shall be cast metal with threaded hubs, "FS" type. Use galvanized steel for concealed boxes. Boxes shall be 1-1/2" deep minimum.

2.02 PULL AND JUNCTION BOXES
A. Sheet metal boxes: galvanized steel.

B. Surface-mounted cast metal box: type 4; flat-flanged, surface-mounted junction box.
1. Material: galvanized cast iron.
2. Cover: furnish with ground flange, neoprene gasket, and stainless steel cover screws.

C. In-ground cast metal box: inside flanged, recessed cover box for flush mounting.
1. Material: galvanized cast iron.
2. Cover: nonskid cover with neoprene gasket and stainless steel cover screws.
3. Cover legend: electric.

D. Manufacturers: National, Appleton, General Electric, RACO, Oz-Gedney or Steel City.

PART 3 - EXECUTION

3.01 INSTALLATION
A. Install electrical boxes as shown on drawings, and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.

B. Install pull boxes and junction boxes above accessible ceilings.

C. Inaccessible ceiling areas: Install outlet and junction boxes no more than 6 inches from ceiling access panel or from removable recessed light fixture.

D. Use flush mounting outlet boxes in finished areas.

E. Use stamped steel bridges to fasten flush mounting outlet box between studs.

F. Install flush mounted box without damaging wall insulation or reducing its effectiveness.

G. Use adjustable steel channel fasteners for hung ceiling outlet box.

H. Do not fasten boxes to ceiling support wires.

I. Support boxes independently of conduit, except cast box that is connected to two Rigid Metal Conduits both supported within 12 inches of box.

J. Use gang box where more than one device is mounted together. Do not use sectional box.

K. Use gang box with plaster ring for single device outlets.

L. Use cast outlet box in exterior locations and wet locations.

3.02 OUTLET BOXES
A. Select boxes according to intended use and type of outlet. Ceiling outlet boxes shall be 4" octagon and 1-1/2" deep. Use 2-1/8" deep octagon boxes or 4" square boxes required. All ceiling outlet boxes shall have a fixture stud of no bolt self-locking type installed if required to hang the fixture specified at the outlet.

3.03 JUNCTION BOXES
A. Junction boxes shall be sized according to number of conductors in box or type of service to be provided. Minimum junction box size 4-11/16" square and 2-1/8" deep. Provide screw covers for junction boxes.

B. Use code gauge steel with screw covers for pull boxes with prime coat and provide with screw cover. Size pull boxes according to the NEC.

C. Provide pull box every 100 feet of conduit run or where excessive number of bends necessitates a box for ease of wire installation.

SECTION C16123
GROUNDING AND BONDING

PART 1 - PRODUCTS

1.01 ROD ELECTRODES
A. Material: copper-clad steel.

B. Diameter: 3/4 inch.

C. Length: 10 feet.

1.02 MECHANICAL CONNECTORS
A. Material: bronze.

1.03 GROUNDING CONDUCTOR (WIRE)
A. Material: stranded copper, sized to meet NFPA 70, Article 250 requirements.

PART 2 - EXECUTION

2.01 INSTALLATION
A. Install rod electrodes at locations indicated. Install additional rod electrodes as required to achieve resistance to ground of less than 25 ohms.

B. Provide grounding electrode conductor and connect to reinforcing steel in foundation footing.

C. Provide bonding to meet regulatory requirements.

D. Bond together each metallic raceway, pipe, duct and other metal objects.

E. Provide isolated grounding conductor for circuits supplying all isolated ground outlets. Insulation shall be green with yellow stripe. Size per NEC Table 250.66. This isolated grounding conductor shall run in addition to equipment grounding conductor and along with the branch circuit conductors.

2.02 GROUNDING
A. Ground electrical system in accordance with NEC Article 250 and local authorities having jurisdiction.

B. Install a #3/0 bare copper wire bond across the water meter attached to ground clamps on water line on each side of meter. Arrangements shall be made to do this work at the time the water meter is installed.

C. From the point of entrance of the water main into the building and on the meter side of the main inside water valve and union install a stranded copper cable #3/0 in 1-1/4" conduit to the main distribution panel. Connect the cable to the equipment ground bus.

D. Install a green equipment grounding conductor in each raceway, sized per NEC Table 250-122. Terminate on equipment ground bus within panelboard serving load.

E. Install #6 awg copper grounding conductor from ground bar in main telephone box to inter system bonding termination to grounded neutral bus in main distribution panel.

F. All separate grounding electrode conductors shall be bonded together to limit potential differences between them and between their associated wiring systems. This includes the power system, telephone system, etc.

2.03 FIELD QUALITY CONTROL
A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.

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5200 Buffington Road
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30349-2998

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186 WOOD AVE. SOUTH, 1ST FLOOR
ISELIN, NJ 08830
TEL: (732) 635 0044 • FAX: (732) 635 1777
NY STATE CERTIFICATE OF AUTHORIZATION #0019115

ARMEN KHACHATURIAN P.E.
NY LICENSE #062261-1

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Levittown

3859 Hempstead Turnpike
Levittown, NY 11714

FSR#04937

BUILDING TYPE / SIZE: P14 LSR ALL
RELEASE: 22.08
PRINTED FOR
ISSUED FOR BID 10/04/2022

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2552
DATE 10/04/2022
DRAWN BY MN

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SHEET
ELECTRICAL SPECIFICATIONS

SHEET NUMBER
E-901

9/29/2022 3:48:47 PM Autodesk Docs://NY_04937_Levittown_2021.4_FSR/04937_Levittown_ELE.rvt
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SECTION C16124
SUPPORTING DEVICES AND HANGERS

PART 1 - PRODUCTS

1.01 ACCEPTABLE MANUFACTURERS
A. Supporting devices and hangers shall be manufactured by RACO Fasteners, or approved equivalent.

PART 2 - EXECUTION

2.01 INSTALLATION
A. Secure conduits to within 3' of each outlet box, junction box, cabinet, fitting, etc., and at intervals not to exceed ten feet (10') and in accordance with the National Electric Code. In seismic zones, support conduits 1" and under at 6' intervals.

B. Install clamps secured to structure for feeder and other conduits routed against the structure. Use drop rods and hangers or racks to support conduits run apart from the structure.

C. Provide and install suitable angle iron, channel iron or steel metal framing with accessories to support or brace electrical equipment including safety switches, fixtures, panelboards, etc.

D. Use of chains, perforated iron, baling wire, or tie wire for supporting conduit runs is not permitted.

E. For support of low voltage wiring not required to be in conduit, bundle cables together in a neat manner using approved nylon tie wraps. Bundled cables shall be supported with "J" hooks on telephone type bridle rings, a minimum of 6 feet on centers. Clearly identify all differing types of cables being run and tag with tape tags regarding telephone, POS System, music / communication, security, etc. for various system utilizing said cable. Identification tape shall be provided at minimum intervals of 25 feet on center and within each building space.

F. Provide a system of supporting devices and hangers to insure secure support or bracing for conduit, electrical equipment, including safety switches, fixtures, panelboards, outlet boxes, junction boxes, cabinets, etc.

SECTION C16140
WIRING DEVICES AND PLATES

PART 1 - PRODUCTS

1.01 WALL SWITCHES
A. Ratings: 20 amps, 120/277 volts a.c. or as identified on drawings.

B. Devices: (Cooper/Arrow Hart catalog numbers are listed unless notedotherwise):
1. Single pole toggle switches: 20 AMP device - #AH1221-GY (Kitchen) or #AH1221-B (Dining) 20 AMP Pilot lights illuminated with load on - #AH1221-PL

2. Double pole toggle switches: 20 AMP device - #AH1222-GY (Kitchen) or #AH1222-B (Dining)

3. Three-way toggle switches: 20 AMP device - #AH1223-GY (Kitchen) or #AH1223-B (Dining)

1.02 RECEPTACLES
A. Devices: (Cooper/Arrow Hart catalog numbers are listed unless otherwise noted):
1. Specification grade devices to be 20 amp, 125 volts, a.c. receptacles:
a. Single (simplex) device: #1877-GY (Kit) or #1877-B (Dining)
b. Duplex device: #CR20-GY (Kitchen) of #CR20-B (Dining)
c. Tamper resistant duplex device: #TRCR20-B or #TR7756-B (with USB charging)
d. GF (ground-fault circuit interrupter) duplex device: #VGF20-GY (Kitchen) or #VGF20-B (Dining)
e. IG (isolated ground) duplex device: #IG5362-RN (orange face)

B. Color:
1. Devices mounted in the FRP or tile shall be gray.
2. Devices mounted in wood finish shall be brown.
3. Isolated ground receptacles shall be orange.

1.03 SPECIAL DEVICES
A. Manual motor starter switch: SQ. D Class 2510, Type F, for use on motors up to 3/4 horsepower. Provide NEMA 1 enclosure in dry locations; provide NEMA 3R enclosure in wet or exterior locations.

1.04 WALL PLATES
A. Provide blank plates on all outlet boxes for future outlets, or outlets without devices. Plate style shall match device plates.

B. Provide non-metallic weatherproof covers for duplex GF receptacles located outside or in wet locations that feature 'while-in-use' cover equivalent to Arrow Hart #WIU-1.

C. Where devices installed in exposed boxes or conduit fittings; provide properly designed plates and covers equal to Arrow Hart RS-Series exposed work covers.

D. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted boxes.

E. Color:
1. Wall plates mounted in FRP or tile shall be smooth satin stainless steel 302-ss series.
2. Wall plates mounted in wood finish shall be brown nylon plastic.
3. Isolated ground wall plates shall be orange nylon plastic with a circuit number printed in 3/16 inch black lettering on clear adhesive label adhered to plate.

PART 2 - EXECUTION

2.01 INSTALLATION

A. Mounting
1. Mount switches and receptacles at height above finished floor as indicated on plans, and legend.
2. Mount switches on strike side of door maximum 8" from door frame. Outlet box for switch shall be located clear of door frame. Coordinate with architectural plans prior to rough-in.
3. Install switches with off position down.
4. Do not use the feed thru feature for the GF Type receptacle, unless required by the plans.
5. Use jumbo sized plates for outlets installed in masonry walls.
6. Each receptacle shall be provided with a #12 green grounding jumper between the ground terminal of the receptacle and the outlet box.
7. The grounding conductor to each receptacle shall be installed such that the removal of the device will not interfere with the continuity of the ground.

B. Testing
1. Test each switch and verify proper operation with energized circuit.
2. Test each receptacle for proper polarity on energized circuit.
3. Test each GF receptacle with a GF receptacle tester and verify circuit is opened by GF device at milli-ampere ranges established by the manufacturer.

SECTION C16440
PANELBOARDS

PART 1 - PRODUCTS

1.01 MANUFACTURER (via Chick-fil-A National Accounts Program)
A. Square-D (for all Regions): from Villa Lighting, Dave Christanell (800)325-0963

1.02 PANELBOARD FEATURES
A. Panelboards shall have a minimum symmetrical interrupting rating to meet or exceed the available symmetrical interrupting fault current at the device intended to interrupt current.

B. Bus bars shall be copper.

C. Provide factory-installed copper ground bus in each panelboard with lugs or connectors on bar.

D. Provide electrically isolated, factory installed, neutral bus in each 3 phase, 4 wire or 1 phase 3 wire panelboard.

E. In addition to the ground bus required by paragraph 1.02D (above), provide factory installed, electrically isolated, copper ground bus in each panelboard serving isolated ground receptacles.

F. Main lugs and main circuit breaker lugs shall be UL Listed for use with both aluminum and copper conductors.

G. Provide panelboard doors with chrome-plated locks and catches. All locks shall be keyed alike. Provide two keys for each lock.

H. Provide thermal-magnetic circuit breakers which are rated for 40 degrees C ambient temperature. Breakers shall be quick-make, quick-break type trip with trip indication shown by handle position other than on or off. Multi-pole breakers shall have a common trip handle. Tandem type circuit breakers shall not be permitted.

I. MDP 100% rated main breaker, 1200 Amps or higher, shall be equipped with Arc Flash Maintenance Setting switch for use as a temporary arc-flash incident energy reduction device during maintenance activities.

J. Provide typed directory card with clear holder for each panelboard.

PART 2 - EXECUTION

2.01 INSTALLATION
A. Panelboards shall be mounted at height above finished floor such that the height of the top-most breaker in the panel is not more than 6-1/2 feet above finished floor in its highest position per the NEC.

B. Where multiple panelboards are installed on walls in common areas of buildings, the panelboards shall be installed with the top of all panelboards at the same height.

C. Provide blank filler plates over all unused spaces in panelboards.

D. A typed directory card shall indicate devices being served and the space name where the device is located.

E. Provide minimum of one (1) 3/4" empty spare conduit for every 3 poles of spare breaker or space in the panelboard. Stub conduit to nearest accessible ceiling space. Label conduit as spare at panelboard and termination point.

F. Non-isolated ground bars shall be grounded to panelboard can and main service entrance ground bus with a code sized grounding conductor installed in the same conduit as the phase and neutral conductors.

G. Circuits using a common neutral shall be installed in accordance with the National Electrical Code.

H. Inspect each panelboard for proper installation, physical damage, tightness and installation of overcurrent devices. Verify proper color coding of conductors. Correct or repair all items found in inspection.

I. Neutral wires, ground wires, and isolated ground wires shall be connected to the appropriate panel bus bar. Do not mix bus wire connections.

SECTION C16441
ENCLOSED SWITCHES
PART 1 - PRODUCTS

1.01 MANUFACTURERS
A. Square D
B. GE / ABB
C. Siemens

1.02 ENCLOSED SWITCHES
A. Nonfusible switch assemblies: NEMA KS 1, General Duty Type for 208 volt load interrupter enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in on position. Handle lockable in off position. Provide equipment ground lug in each switch.

B. Enclosures: NEMA KS 1.
1. Interior dry locations: Type 1.
2. Exterior locations: Type 3R.

SECTION C16442
UTILITY SERVICE ENTRANCE AND DISTRIBUTION SYSTEM

PART 1 - GENERAL

1.01 SYSTEM DESCRIPTION
A. The underground electrical system service characteristics shall be 208Y/120 volts, Three Phase, Four Wire service and shall extend from utility company transformer secondary.

B. Metering of electrical usage shall be located as required by local electrical utility company. Coordinate requirements with local utility company.

C. Distribution system originates at secondary of utility transformer and includes service entrance conduit and conductors, distribution equipment, lighting panelboards, utilization equipment, overcurrent devices, disconnecting means, controls, branch and feeder circuits, etc.

PART 2 - PRODUCTS

2.01 MATERIALS
A. Furnish service entrance conduit, cable, and miscellaneous hardware as required by plans and specifications for electrical service entrance and system grounding at main electrical service.

PART 3 - EXECUTION

3.01 EXAMINATION AND PREPARATION
A. Coordinate exact locations of electrical service utility transformer, metering equipment, service lateral, etc. prior to commencement of installation. Contact engineer with conflicts prior to bid.

B. Ensure pad mounted transformer is not located within roadway or sidewalk.

C. Coordinate with local electrical utility for all utility company requirements and provide for the following items and any others required by the utility:
1. Concrete pad for utility transformer with required dimensions and details.
2. Primary underground conduit, excavation, and backfill requirements.
3. Pay for all fees associated with establishment of electrical service.
4. Furnish list of loads to the electrical utility company serving the facility.
5. Verify that utility company clearances are provided on all sides of utility equipment.

D. Ensure proper access to utility equipment is maintained.

E. Provide pull rope, excavation in accordance with electrical utility company requirements, backfill and concrete envelope for primary in accordance with electrical utility company requirements. Turn conduits up riser pole as required. Cap spare conduits 12 inches above grade with plumbers pipe cap.

F. Provide secondary lugs on utility transformer and perform drilling and installation of lugs in accordance with utility requirements. Type of lugs shall be in accordance with electrical utility company requirements. Connect service conductor to transformer secondary lugs as directed by electrical utility.

SECTION C16500
LIGHTING FIXTURES (LUMINAIRES)

PART 1 - GENERAL

1.01 ACCEPTABLE MANUFACTURERS AND VENDORS
A. Lighting fixtures indicated on lighting fixture schedule are to be purchased from the National Account Vendor for the region of the project (verify region designation with Owner's Representative):

1. Villa Lighting - all regions. Contact at Villa Lighting: Dave Christanell at 800-325-0963, fax- 314-531-8720, email - davec@villalighting.com

B. Lamps to be Osram-Sylvania and will typically be provided with the luminaire by the lighting manufacturer.

1.02 FIXTURE REQUIREMENTS
A. Provide regulating, HPF ballasts in all HID lighting fixtures. HID lamp types shall be as indicated on the drawings.

B. Recessed fluorescent lighting fixture ballasts shall be provided with integral thermal protection.

C. Provide energy-saving Instant or Rapid Start lamps for all fluorescent fixtures.

D. All lamps and ballasts shall meet or exceed the requirements of the National Energy Policy Act of 1992 and any other applicable Codes or Criteria.

E. All components of recessed fixtures shall be accessible without disturbing fixture in or on ceiling.

F. Energy saving ballasts and energy saving lamps provided shall be compatable for operation together.

G. Exterior fixtures and poles shall be suitable for exterior use, shall be UL Listed, and shall be a standard design for exterior application.

H. Exterior poles for fixtures with luminaires installed shall be designed for maximum constant velocity wind load with luminaires installed, applicable to the geographic area.

1.03 CONTROLS
A. Lighting contactors shall be Square-D, GE / ABB, Cutler-Hammer or Siemens of types and quantity shown on drawings, except those furnished with the switchgear as part of the National Account Program by Suncoast Environmental Controls (SEC).

1.04 EMERGENCY LIGHTING UNITS
A. Batteries shall supply emergency power for lighting with minimum operating time of 1-1/2 hours.

B. Emergency lighting shall be automatically operational upon normal utility power failure.

PART 3 - EXECUTION

3.01 INSTALLATION
A. Lighting fixtures shall be structurally supported. Fluorescent fixtures mounted in suspended ceilings shall be supported by and attached to ceiling system as required by NEC Article 410. In addition, fluorescent troffers shall be supported at two opposite corners to building structure.

B. Recessed fixtures in dropped ceiling areas shall be connected to power source using flexible conduit. Flexible conduit shall contain a separate insulated green No. 12 copper ground wire. Flexible conduit shall be connected to junction box and fixture. Green ground wire shall provide ground continuity between conduit system and fixture. Grounding conductors shall be permanently and mechanically connected between fixture and conduit system so as to be electrically continuous.

C. Fixtures surface mounted on exposed tee bar ceilings shall use grip clamps on tee bars to support fixtures.

D. Wire shall be continuous from splice in outlet box of building wiring system to lamp socket or ballast terminals.

E. Maintain the integrity of enclosures on enclosed and gasketed fixtures. Minimize the number of enclosure penetrations and make such penetrations water and dust tight with appropriate gaskets and fittings.

F. Concrete bases shall be provided for all exterior ground mounted or pole mounted fixtures.

G. Install accessories furnished with each fixture.

H. Wiring from pole bases to pole mounted luminaire shall be No. 12 with fuse protection provided by a 30 amp, 600 volt waterproof fuseholder with Bussman 'Limitron' fuse of ampere rating 3 times the load current.

I. Surface and recessed fixtures on or in plastered or drywall ceilings shall be supported by support channels. Support channels shall span across main support channels and shall not depend upon ceilings for support.

3.02 FIELD QUALITY CONTROL
A. Relamp fixtures that have failed lamps at substantial completion.

SECTION C16596
SPECIAL SYSTEMS

PART 1 - GENERAL

1.01 WORK INCLUDED
A. Furnish and install raceway system for music / communications security, CCTV, POS, and other owner-furnished systems, consisting of empty conduits, junction boxes, outlet boxes, and device plates, etc., as specified and shown on owner selected vendor wiring schematics. Cable, equipment, and installation of the interior system will be provided by the owner's system vendor.

B. Interior system equipment will be furnished by Owner's Vendor.

C. Install special backboxes furnished by Owner's Vendor. Coordinate with the Vendor for the installation. Coordinate with the Vendor if backboxes are to be contractor provided in order to provide and install the appropriate item for the Vendor.

PART 2 - PRODUCTS

2.01 MATERIALS
A. Provide 4-11/16" square boxes, with plaster rings. Provide device plates for system outlets as specified in Section 16141. Provide separate conduit to nearest accessible ceiling space from each outlet.

B. Cable shall be in conduit where installed in walls or inaccessible ceilings.

C. Minimum conduit size shall be 3/4" .

PART 3 - EXECUTION

3.01 INSTALLATION
A. Furnish and install conduits, junction boxes, outlet boxes, and plates.

B. Provide one #10 equivalent nylon pull wire in each system empty conduit.

C. Provide a complete raceway system in accordance with interior system vendor requirements. Interior system vendor shall review the drawings. Contractor shall provide for any additional or varying requirements.

D. Final connections and testing of systems will be provided by the system vendor. Contractor shall contact the owner's vendor and schedule the work so as to complete system installation and testing prior to occupancy of the facility.

E. Terminate each conduit stub-up or termination with nylon insulated bushing.

SECTION C16597
TELEPHONE SERVICE

PART 1 - GENERAL

1.01 WORK INCLUDED
A. Furnish and install telephone system consisting of empty conduits, junction boxes, outlet boxes, device plates, etc., as specified and shown on owner selected vendor wiring schematics. Cable, equipment, and installation of the interior system will be provided by the owner's system vendor.

B. Provide underground PVC, Schedule 40, service conduit as required by plans.

C. Telephone Utility Company will provide service entrance cable.

D. Interior telephone system will be furnished by owner's vendor.

E. Special backboxes (unless otherwise noted) and faceplates will be furnished by the owner's vendor.

PART 2 - PRODUCTS

2.01 MATERIALS
A. Provide 4-11/16" square boxes, with plaster rings. Provide device plates for telephone outlets to match those specified in wiring device section. Provide separate conduit to nearest accessible ceiling space from each outlet.

B. Minimum conduit size shall be 3/4".

C. Provide lightning arrester for telephone service entrance at main telephone backboard in accordance with UL96A paragraph 11.2 and NFPA 780.

D. Cable shall be in conduit where installed in walls or above inaccessible ceiling spaces.

PART 3 - EXECUTION

3.01 INSTALLATION
A. Provide one #10 equivalent nylon pull wire in each empty telephone conduit.

B. Provide trenching, backfilling, etc., for installation of service entrance conduit in accordance with other divisions, plans, and telephone utility requirements. Provide pull wire in empty conduit.

C. Coordinate with the local utility for point of service and type of service required. Pay for any utility company charges and fees for establishment of service.

D. Provide a complete raceway system in accordance with telephone utility company and interior system vendor/utility requirements. Telephone utility company and interior system vendor shall review the drawings. Contractor shall provide for any additional or varying requirements.

E. Terminate each conduit stub-up or termination with nylon insulated bushings.

F. Final connections and testing of system will be provided by the system vendor. Contractor shall contact the owner and vendor and schedule the work.

CLOSE OUT DOCUMENT REQUIREMENTS

Provide the following to the building owner upon completion of construction:

1. Submittal data stating equipment rating and selected options for each piece of equipment requiring maintenance.
2. Operation manuals and maintenance manuals for each piece of equipment requiring maintenance. Required routine maintenance actions shall be clearly identified.
3. Names and addresses of at least one qualified service agency.
4. A complete narrative of how each system is intended to operate.

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Atlanta, Georgia
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CONSULTANT PROJECT # 2552
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SHEET
ELECTRICAL SPECIFICATIONS

SHEET NUMBER
E-902

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