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DRAWING LIST - ARCHITECTURAL

A000	COVER SHEET
A001	RESPONSIBILITY SCHEDULE, ABBREVIATIONS & SYMBOLS
A010	EGRESS PLAN
A011	APPENDIX B
A050	DEMOLITION PLAN
A100	PARTITION PLAN
A101	WALL DETAILS, DOOR SCHEDULE AND HARDWARE SCHEDULE
A110	FURNITURE & EQUIPMENT PLAN
A111	LEVEL 1 - STORAGE ROOM PLAN
A120	FLOOR FINISH PLAN
A122	MATERIAL & FINISHES SCHEDULE
A200	REFLECTED CEILING & LIGHTING PLAN
A201	CEILING DETAILS
A300	STOREFRONT ELEVATION
A301	STOREFRONT SECTIONS AND DETAILS
A310	SIGNAGE DETAILS
A400	INTERIOR ELEVATIONS
A401	INTERIOR ELEVATIONS
A402	INTERIOR ELEVATIONS - JIMMY JOHNS PREP AREA
A403	INTERIOR ELEVATIONS - TROPICAL SMOOTHIE PREP AREA
A500	MILLWORK DETAILS
A501	MILLWORK DETAILS
A502	MILLWORK DETAILS
A503	MILLWORK DETAILS
A504	MILLWORK DETAILS
A600	SPECIFICATIONS
A601	SPECIFICATIONS
A602	SPECIFICATIONS
A603	SPECIFICATIONS
A604	SPECIFICATIONS

DRAWING LIST - MECHANICAL

M-001	MECHANICAL COVER SHEET
M-101	MECHANICAL DEMOLITION LEVEL 2 NORTH CONCOURSE PLAN
M-102	MECHANICAL DUCTWORK LEVEL 2 NORTH CONCOURSE PLAN
M-103	MECHANICAL DUCTWORK ROOF NORTH CONCOURSE PLAN
M-104	MECHANICAL PIPING LEVEL 2 NORTH CONCOURSE PLAN
M-501	MECHANICAL DETAILS
M-601	MECHANICAL SCHEDULES
M-701	MECHANICAL SPECIFICATIONS
M-702	MECHANICAL SPECIFICATIONS
M-801	MECHANICAL ENERGY COMPLIANCE
M-802	MECHANICAL ENERGY COMPLIANCE

DRAWING LIST - ELECTRICAL

E-001	ELECTRIC COVER SHEET
E-101	ELECTRIC LIGHTING PLAN
E-103	ELECTRIC LIGHTING - DETAILS AND SCHEDULES
E-201	ELECTRIC POWER PLAN
E-202	ELECTRIC ENLARGED POWER PLAN
E-301	ELECTRIC TECHNOLOGY PLAN
E-601	ELECTRIC POWER - SINGLE LINE DIAGRAM
E-602	ELECTRIC POWER - SCHEDULES
E-603	ELECTRIC POWER - PANEL SCHEDULES
E-701	ELECTRIC - ENERGY COMPLIANCE
E-702	ELECTRIC - SPECIFICATIONS
E-703	ELECTRIC - SPECIFICATIONS

DRAWING LIST - PLUMBING

P-001	PLUMBING COVER SHEET
P-101	PLUMBING SANITARY LEVEL 2 NORTH CONCOURSE PLAN OVERALL
P-102	PLUMBING WATER LEVEL 2 NORTH CONCOURSE PLAN OVERALL
P-201	PLUMBING ISOMETRICS
P-501	PLUMBING- DETAILS
P-601	PLUMBING - SCHEDULES
P-701	PLUMBING SPECIFICATIONS

DRAWING LIST - KITCHEN

FS1.0	TITLE SHEET
FS1.1	FOODSERVICE EQUIPMENT PLAN - JIMMY JOHNS - FOH
FS1.2	FOODSERVICE EQUIPMENT PLAN - BOH
FS2.0	FOODSERVICE PLUMBING COORDINATION PLAN - JIMMY JOHNS - FOH
FS2.1	FOODSERVICE PLUMBING COORDINATION PLAN - BOH
FS2.2	FOODSERVICE ELECTRICAL COORDINATION PLAN - JIMMY JOHNS - FOH
FS2.3	FOODSERVICE ELECTRICAL COORDINATION PLAN - BOH
FS2.4	FOODSERVICE SPECIAL CONDITIONS PLAN - JIMMY JOHNS - FOH
FS2.5	FOODSERVICE SPECIAL CONDITIONS PLAN - BOH
FS2.6	FOODSERVICE EQUIPMENT UTILITY COORDINATION DETAILS

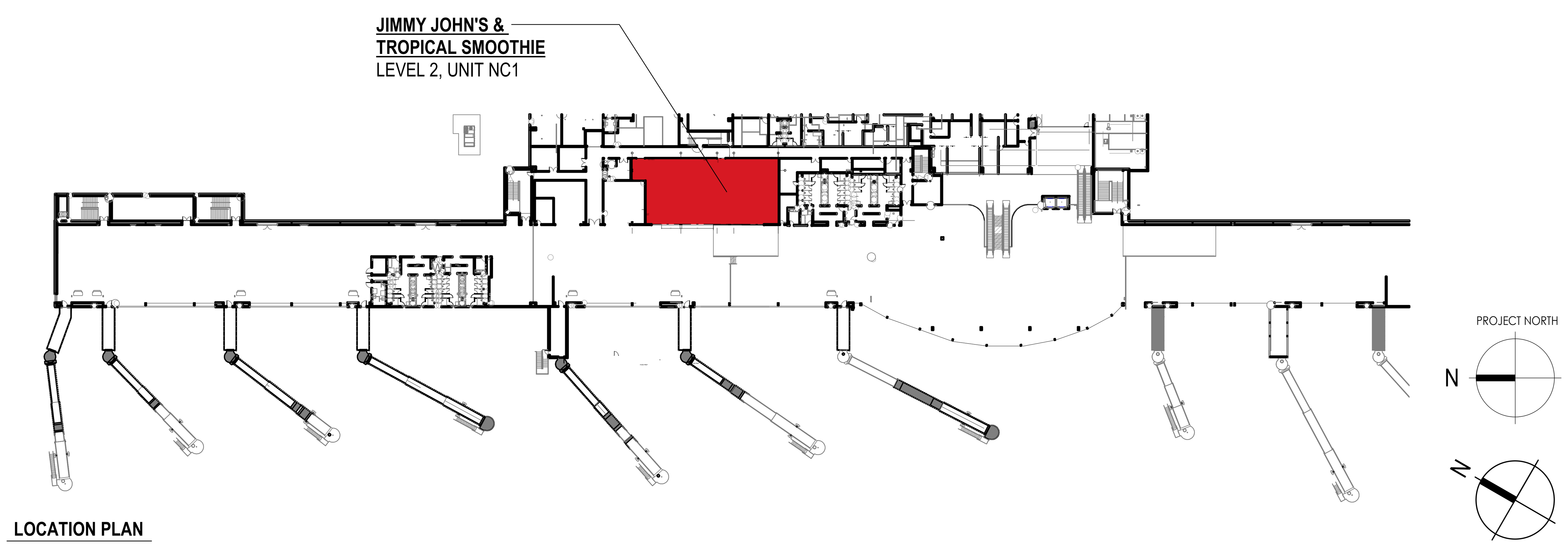
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER, NORTH CAROLINA, USA, 28732

Stantec Project Number: 144324057
Client Project Number: 3083/3084

NOTE: 3D VIEW FOR REPRESENTATIONAL PURPOSE ONLY,
SEE CONSTRUCTION DOCUMENTS FOR DETAILED DOCUMENTATION.

ISSUED FOR PERMIT 2024.12.20



LOCATION PLAN

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Revision	By	Appd	YYYY.MM.DD

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DOUGLAS G. COX — REGISTERED ARCHITECT — NORTH CAROLINA — RALEIGH, N.C.
12.27.24

Client/Project Logo

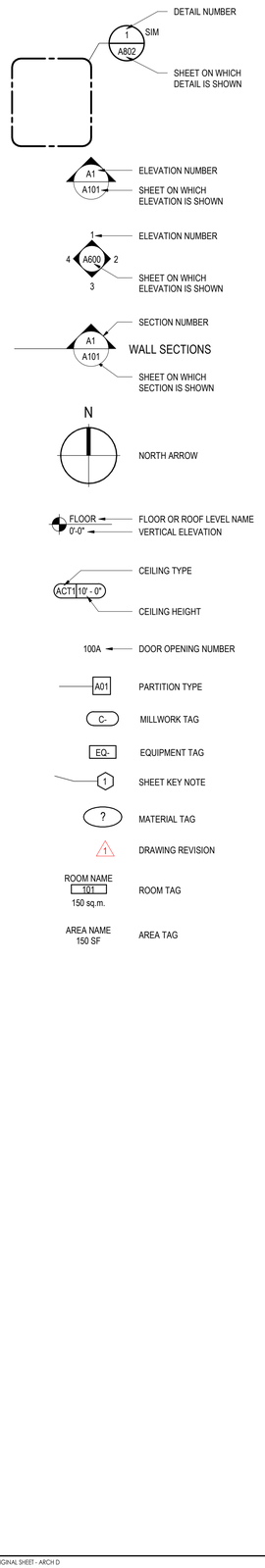
Client/Project
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title
COVER SHEET

Project No.	Scale
144324057	
Revision	Drawing No.
	A000

SYMBOLS LEGEND



ABBREVIATIONS

ACT	ACOUSTIC CEILING TILE	HSS	HOLLOW STEEL SECTION
ADD'L	ADDITIONAL	HT	HEIGHT
AFF	ABOVE FINISHED FLOOR	HVAC	HEATING, VENTILATION & AIR CONDITIONING
AL	ALUMINUM	INCL	INCLUDE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	INFO	INFORMATION
ATTEN	ATTENUATION	INSUL	INSULATION
AUTO	AUTOMATIC	INT	INTERIOR
AVG	AVERAGE	JAN	JANITOR
B/T	BETWEEN	KIT	KITCHEN
BD	BOARD	LAV	LAVATORY
BHMA	THE BUILDERS HARDWARE MANUFACTURES ASSOC.	LT. GA	LIGHT GAUGE
BLDG	BUILDING	LT. WT	LIGHT WEIGHT
BLK	BLOCK	LTG	LIGHTING
BOT	BOTTOM	M	METERS
C/C	CENTER TO CENTER	MAINT	MAINTENANCE
CCTV	CLOSED CIRCUIT TV	MATL	MATERIAL
CG	CORNER GUARD	MAX	MAXIMUM
CH	COAT HOOK	MDF	MEDIUM DENSITY FIBREBOARD
CIP	CAST IN PLACE	MECH	MECHANICAL
CLG	CEILING	MED	MEDIUM
CLO	CLOSET	MFG	MANUFACTURED
CLR	CLEAR	MIN	MINIMUM
CMU	CONCRETE MASONRY UNIT	MISC	MISCELLANEOUS
COL	COLUMN	MM	MILLIMETERS
CONC	CONCRETE	MTD	MOUNTED
CONT	CONTINUOUS	MTL	METAL
CONSTR	CONSTRUCTION	N/A	NOT APPLICABLE
COORD	COORDINATE	NAAWS	NORTH AMERICAN ARCHITECTURAL
CPT	CARPET		WOODWORK STANDARDS
CSMT	CASEMENT	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CYL	CYLINDER	NIC	NOT IN CONTRACT
C/W	COMPLETE WITH	NO	NUMBER
DBL	DOUBLE	NTS	NOT TO SCALE
DEG	DEGREE	OC	ON CENTER
DEMO	DEMOLISH, DEMOLITION	OPP	OPPOSITE
DEPT	DEPARTMENT	ORIG	ORIGINAL
DET	DETAIL	OUT	OUTLET
DIAG	DIAGONAL	PART	PARTIAL
DIFF	DIFFUSER	PBD	PARTICLE BOARD
DIM	DIMENSION	PBO	PROVIDED BY OWNER(FURNISHED & INSTALLED)
DN	DOWN	PERIM	PERIMETER
DTL	DETAIL	PLAM	PLASTIC LAMINATE
DWG	DRAWING	PLMBG	PLUMBING
EA	EACH	PLTR	PARADIES LAGARDERE TRAVEL RETAIL
EL	ELEVATION	PLYWD	PLYWOOD
ELEC	ELECTRICAL	PTD	PAINTED
EMEG	EMERGENCY	PVC	POLYVINYL CHLORIDE
ENCL	ENCLOSURE	PVF	POLYVINYLIDENE FINISH
ENG	ENGINEER	PWR	POWER
EP	ELECTRICAL PANEL	RAD	RADIUS
EQ	EQUAL	RCP	REFLECTED CEILING PLAN
EQUIP	EQUIPMENT	RECP	RECEPTACLE
EV	EQUIPMENT VENDOR	REF	REFERENCE
EXH	EXHAUST	RM	ROOM
EXIST	EXISTING	RO	ROUGH OPENING
F	FRANCHISEE	RWL	RAIN WATER LEADER
FAB	FABRICATE	SCR	SCREEN
FD	FLOOR DRAIN	SCW	SOLID CORE WOOD
FE	FIRE EXTINGUISHER	SECT	SECTION
FEC	FIRE EXTINGUISHER CABINET	SERV	SERVICE
FF&E	FIXTURES, FURNISHING & EQUIPMENT	SUSP	SUSPEND, SUSPENDED
FFE	FINISHED FLOOR ELEVATION	SYM	SYMMETRICAL
FHC	FIRE HOSE CABINET	T/P	TOP OF
FIN	FINISH, FINISHED	TBD	TO BE DETERMINED
FLR	FLOOR	TC	TENANT CONTRACTOR (PARADIES LAGARDERE)
FO	FINISH OPENING	TEL	TELEPHONE
FOB	FURNISHED BY OWNER	TEMP	TEMPORARY
FRM	FRAME	THK	THICK, THICKNESS
FRP	FIBERGLASS REINFORCED PLASTIC	THRU	THROUGH
FRPF	FIREPROOF	TYP	TYPICAL
FRT	FIRE RETARDANT TREATED	U.N.O.	UNLESS NOTED OTHERWISE
FUR	FURRED	U/S	UNDERSIDE
FVC	FIRE VALUE CABINET	UNFIN	UNFINISHED
GA	GAUGE	UT	UTILITY
GALV	GALVANIZED	V.C.T	VINYL COMPOSITE TILE
GC	GENERAL CONTRACTOR	V.I.F.	VERIFY IN FIELD
GEN	GENERAL	VAR	VARIES
GL	GLASS	VENT	VENTILATE
GLZ	GLAZING	VEST	VESTIBULE
GWB	GYPSUM WALLBOARD	VF	VINYL FABRIC
GYP	GYPSUM	VOC	VOLATILE ORGANIC COMPOUND
HC	HOLLOW CORE	W/	WITH
HDB	HARDBOARD	W/O	WITHOUT
HDW	HARDWARE	WC	WATERCLOSET
HM	HOLLOW METAL	WD	WOOD
HORIZ	HORIZONTAL	WIN	WINDOW
HR	HOUR	WT	WEIGHT

RESPONSIBILITY SCHEDULE NOTES

1. UNLESS LISTED ABOVE IT IS THE RESPONSIBILITY OF THE TENANT CONTRACTOR TO SUPPLY AND INSTALL ALL NEW CONSTRUCTION MATERIALS IN A PROFESSIONAL MANNER ALONG WITH INDUSTRY STANDARD PRACTICES AND IN ACCORDANCE WITH LEASE REQUIREMENTS.
2. ITEMS NOTED AS SUPPLIED BY CLIENT/ TENANT WILL REQUIRE RECEIVING AND COORDINATION WITH CLIENT'S SUPPLIER AND TENANT CONTRACTOR.
3. THE TENANT CONTRACTOR WILL CLARIFY WITH SUBMITTAL OF BID QUOTATION SPECIFIC ITEMS AS LISTED ABOVE.
4. ALL ITEMS SHALL BE INSTALLED PER MANUFACTURERS WRITTEN SPECIFICATIONS INCLUDED WITH THE PRODUCT.
5. COMPENSATION FOR INSPECTIONS PERFORMED AFTER NORMAL WORKING HOURS WILL BE THE RESPONSIBILITY OF THE TENANT CONTRACTOR.
6. TENANT CONTRACTOR TO COORDINATE AND CONFIRM FINAL QUANTITIES OF ALL ITEMS TO BE ORDERED BY PARADIES PROCUREMENT TEAM TO MAKE SURE THAT ITEM QUANTITIES ARE PER DRAWINGS.
7. TENANT CONTRACTOR TO PROVIDE ESCORT FOR ALL OF VENDORS.
8. ALL WORKERS ARE TO BE PROPERLY BADGED AND / OR REMAIN WITH ESCORTS.
9. DUST AND DEBRIS FROM WORK AREA ARE TO BE KEPT WITHIN SITE.
10. WORK AREAS ARE TO BE PROPERLY CORDONED OFF AND SECURED FROM THE TRAVELLING PUBLIC.
11. TOOLS AND OTHER MATERIALS ARE TO BE PROPERLY SECURED TO PREVENT ACCESS BY TRAVELLING PUBLIC.

RESPONSIBILITY SCHEDULE

RESPONSIBILITY SCHEDULE

	NOT APPLICABLE	EXISTING	LANDLORD SUPPLY	LANDLORD INSTALL	CLIENT (PLTR) SUPPLY	CLIENT (PLTR) INSTALL	TENANT (PLTR) CONTRACTOR SUPPLY	TENANT (PLTR) CONTRACTOR INSTALL	SIGNAGE CONTRACTOR SUPPLY	SIGNAGE CONTRACTOR INSTALL	KITCHEN SUPPLY	KITCHEN INSTALL	VENDOR SUPPLY	MILLWORK CONTRACTOR SUPPLY	MILLWORK CONTRACTOR INSTALL	REMARKS
GENERAL:																
BUILDING PERMIT					•											TC TO ARRANGE & PICK UP PERMIT
OTHER PERMITS, FEES, INSURANCE							•									
TEMPORARY BARRICADE					•			•								REMOVABLE/ REUSABLE TEMPORARY BARRICADE WALL. TC TO CONFIRM FINAL SPECIFICATIONS WITH CLIENT AND FINAL LAYOUT WITH AIRPORT REPRESENTATIVE.
DEMOLITION	•															
CLEAN-UP, FINAL CLEANING, TRASH REMOVAL & DUMPSTER							•	•								
SLAB X-RAYS & CORE DRILLING OF EXISTING SLAB							•	•								
STOREFRONT TENANT WALLS & FRAMING							•	•								
STOREFRONT TENANT FINISHES, WALL PANELS & HARDWARE							•	•								
STOREFRONT GLASS AND GLAZING ACCESSORIES							•	•								
WALL PARTITIONS - GWB, METAL STUD WALLS							•	•								
CARPENTRY; ROUGH & FINISH							•	•								
BLOCKING & FURRING							•	•								
DOORS & FRAMES							•	•								
DOOR HARDWARE							•	•								
ACCESS PANEL (IF APPLICABLE)							•	•								
PAINTING, FRP, METAL AND WOOD PANELS							•	•								
FLOOR REDUCER STRIP, ADHESIVES, ETC.							•	•								
WALL AND FLOOR TILES					•			•								T.C. TO SUPPLY / INSTALL WATREPROOFING MEMBRANE BETWEEN THINSETS IN BOH/KITCHEN/SERVERY AREAS
GROUT FOR FLOOR & WALL TILES							•	•								
FLOOR PENETRATIONS							•	•								
FLOOR PROTECTION							•	•								
CEILING FEATURE C/W FRT FRAMING (MAIN DINING AREA)							•	•								
WALL BASE AND MILLWORK BASE							•	•								
STRUCTURAL STEEL SUPPORTS							•	•								
WALL MOUNTED STANCHIONS (RETRACTABLE)							•	•								CONFIRM SPECS WITH CLIENT. TC TO PROVIDE BLOCKING.
FREE-STANDING STANCHIONS (FOR QUEUING)							•	•								CONFIRM SPECS WITH CLIENT.
MECHANICAL: (REFER TO MECHANICAL DRAWINGS)																
HVAC UNITS							•	•								
HVAC DISTRIBUTION - DUCTWORK, DIFFUSERS, ETC.							•	•								
AIR BALANCES							•	•								
SMOKE DETECTION							•	•								
FIRE SPRINKLER SHUT-OFF							•	•								
SPRINKLER SYSTEM MODIFICATIONS							•	•								
FIRE EXTINGUISHERS							•	•								
PLUMBING							•	•								
PLUMBING FIXTURES							•	•								
ELECTRICAL: (REFER TO ELECTRICAL DRAWINGS)																
ELECTRICAL SERVICE		•					•	•								
ELECTRICAL PANELS AND TRANSFORMERS							•	•								TC TO PROVIDE ENGINEERED HANGING SYSTEM FOR SUSPENDED ELECTRICAL TRANSFORMER AS REQUIRED
WIRING, CIRCUITING, RECEPTACLES, SWITCHES, ETC.							•	•								
EXIT SIGNS & EMERGENCY LIGHTING							•	•								
GENERAL LIGHT FIXTURES					•			•								
DIMMING, LIGHTING CONTROLS							•	•								
MILLWORK LIGHT FIXTURES								•					•	•		U.N.O. FINAL CONNECTIONS BY ELECTRICAL CONTRACTOR. MC TO REVIEW MILLWORK LIGHTING AND MAKE SURE TO ACCOMMODATE ADEQUATE SPACE FOR CONCEALED JUNCTION BOX AND WIRING.
CONNECTION & WIRING OF CASHWRAP							•	•								
TELEPHONE, P.O.S. SYSTEM CONDUIT							•	•								
P.O.S. SYSTEM					•			•								
S.C.O. SYSTEM					•			•								
FIRE ALARM/ SMOKE DETECTORS							•	•								CONFIRM EXACT LOCATION W/ STANTEC ARCHITECTURE PRIOR TO INSTALLATION
AUDIO/ VIDEO SYSTEM					•	•										
AUDIO/ VIDEO SYSTEM CONDUIT							•	•								
CCTV CAMERA					•	•										TC TO CONFIRM SPECS & LOCATION W/ CLIENT
MOUNTING POLES FOR CAMERAS							•	•								TC TO COORDINATE WITH AIRPORT REGARDING MOUNTING OF POLES ONTO BASE BUILDING CEILING. TC TO PROVIDE SUSPENSION SYSTEM AS REQUIRED (ie UNISTRUT, THREADED ROD). TC TO COORDINATE WITH PARADIES CCTV VENDOR.
CCTV CAMERA CABLING AND CONDUITS							•	•								
WIRING (DATA, PHONE, SPEAKERS, CAMERAS)							•	•								CAT 6 REQUIRED - SUPPLY AND TERMINATE. TC TO SUPPLY PULL AND TERMINATE ALL CAT6.
TCPOS SELF-ORDER KIOSK/ SYSTEM					•	•										TC TO CONFIRM FINAL SPEC WITH CLIENT AND COORDINATE WITH TRADES FOR SPACE/ ELECTRICAL REQUIREMENT AND INSTALLATION. TC TO PROVIDE CAT6 CABLING FROM TCPOS EQUIPMENT TO BOW/ AV RACK
DIGITAL MENU AND TV MONITORS AND MOUNTING HARDWARE ACCESSORIES					•			•								TC TO CONFIRM FINAL SPECS WITH PLTR AND COORDINATE WITH TRADES FOR SPACE/ ELECTRICAL REQUIREMENT AND INSTALLATION TC TO PROVIDE CAT6 CABLING FROM BACK OF TV MONITOR TO BLACK BOW/ AV RACK
KITCHEN DISPLAY SYSTEM (FOR ORDER TICKETS) AND PRINTERS					•			•								TC TO COORDINATE WITH CLIENT (PLTR)
FURNITURE, FIXTURES & EQUIPMENT:																
JIMMY JOHN'S FOH MILLWORK COUNTER AND DIEWALL					•			•								SUPPLIED BY JIMMY JOHNS VENDOR. TC TO RECEIVE AND INSTALL
TROPICAL SMOOTHIE FOH MILLWORK COUNTER AND DIE WALL					•		•	•								MILLWORK COUNTER BY TROPICAL SMOOTHIE VENDOR. TC TO RECEIVE AND INSTALL. TC TO SUPPLY/INSTALL DIE WALL
TROPICAL SMOOTHIE FOH SUSPENDED MILLWORK SOFFIT					•			•								MILLWORK SOFFIT BY TROPICAL SMOOTHIE VENDOR. TC TO RECEIVE AND INSTALL. TC TO PROVIDE REQUIRED SUPPORTS IN CEILING SPACE
BLOCKING AND CONCEALED SUPPORTS FOR MILLWORK UNITS AND FOOD SERVICE EQUIPMENT							•	•								
MILLWORK CONDIMENTS AND MILLWORK TABLE								•					•	•		TC TO RECEIVE AND COORDINATE MILLWORK INSTALLATION WITH MILLWORK VENDOR. TC TO COMPLETE FINAL HOOK-UP.
STORAGE SHELVING UNITS							•	•								TC TO ENSURE THAT SHELVES ARE SEISMICALLY RESTRAINED AS REQUIRED.
WALK-IN COOLERS/ FREEZERS					•			•								TC TO PROVIDE ENGINEERED SUPPORTS FOR CONDENSING UNITS ABOVE WALK-IN COOLERS/ FREEZERS AS REQUIRED
I.T. EQUIPMENT RACK & PATCH PANEL PER I.T. SPEC SHEET							•	•								TC TO CONFRIM SPECS WITH CLIENT PM
LOCKERS AND SAFE					•			•								TC TO RECEIVE AND COORDINATE ALL CLIENT SUPPLIED ITEMS.
BOH DESK & CHAIR					•			•								TC TO COORDINATE W/ CLIENT
TROPICAL SMOOTHIE FOH (PREP AREA) FOOD SERVICE EQUIPMENT					•			•								TC TO ENSURE THAT SHELVES ARE SEISMICALLY RESTRAINED
JIMMY JOHN'S FOH (PREP AREA) FOOD SERVICE EQUIPMENT					•			•								TC TO ENSURE THAT SHELVES ARE SEISMICALLY RESTRAINED
SHARED BOH FOOD SERVICE EQUIPMENT					•			•								TC TO ENSURE THAT SHELVES ARE SEISMICALLY RESTRAINED
METAL RAILING FOR QUEUEING													•	•		
FOH DINING TABLES AND CHAIRS					•			•								TC TO ENSURE THAT SHELVES ARE SEISMICALLY RESTRAINED
MOBILE SHELVING RACKS (LEVEL 1 STORAGE)					•			•								TC TO RECEIVE AND COORDINATE
CHAIN LINK FENCE							•	•								FULL HEIGHT CHAIN LINK FENCE C/W MAN DOOR AND LOCK
SIGNAGE & SPECIALITY:																
STOREFRONT SIGNAGE ASSEMBLY									•	•						ARTWORK BY CLIENT. TC TO COORDINATE WITH SC
GRAPHICS									•	•						ARTWORK BY CLIENT. TC TO PROVIDE WHITE PLAM PANELS TO ACCEPT APPLIED VINYL GRAPHICS
BARRICADE GRAPHICS									•	•						CLIENT TO PROVIDE GRAPHICS
TROPICAL SMOOTHIE MENU BOARDS									•	•						ARTWORK BY TROPICAL SMOOTHIE VENDOR. TC TO COORDINATE W/ SC
FRAMED ARTWORK									•	•						ARTWORK BY CLIENT. TC TO COORDINATE W/ SC
JIMMY JOHN'S WALL COVERING									•	•						ARTWORK BY JIMMY JOHNS VENDOR. TC TO COORDINATE W/ SC

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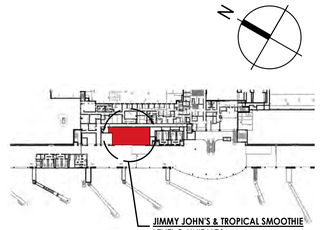
Notes



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Permit/Seal

DOUGLAS G. COX — LICENSED ARCHITECT — NORTH CAROLINA — RALEIGH, N.C.

12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

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NORTH CAROLINA, USA, 28732

Title

RESPONSIBILITY SCHEDULE, ABBREVIATIONS & SYMBOLS

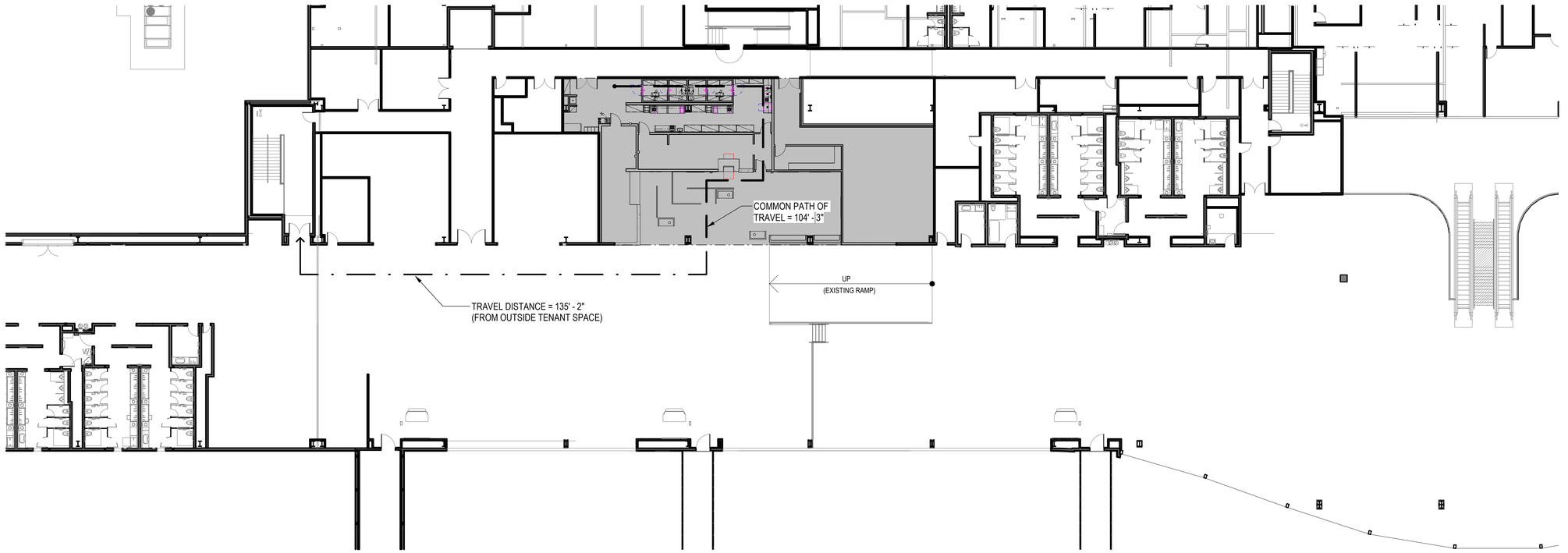
Project No.
144324057

Scale

Revision

Drawing No.
A001

ORIGINAL SHEET - ARCH D



PROJECT NORTH

N

1 EGRESS PLAN

1/16" = 1'-0"

CODE ANALYSIS

APPLICABLE CODES:	BUILDING CODE: 2018 NORTH CAROLINA BUILDING CODE
	PLUMBING CODE: 2018 NORTH CAROLINA BUILDING CODE
	MECHANICAL CODE: 2018 NORTH CAROLINA MECHANICAL CODE
	ELECTRICAL CODE: 2020 NORTH CAROLINA ELECTRICAL CODE
	ACCESSIBILITY: 2009 NORTH CAROLINA ACCESSIBILITY BUILDING CODE
PROJECT DESCRIPTION:	INTERIOR RESTAURANT WITHIN AN AIRPORT TERMINAL
MAJOR USE AND OCCUPANCY:	MAJOR USE - A2 - RESTAURANT OCCUPANCY WITHIN AN A3 PRIMARY OCCPUANCY AND S-2 STORAGE OCCUPANCY
CONSTRUCTION TYPE:	EXISTING TYPE IIB
OCCUPIED AREA:	TENANT IMPROVEMENT AREA: 4268 SF

OCCUPANCY LOAD

JIMMY JOHN'S	390 SF / 200	= 2
TROPICAL SMOOTHIE CAFE	430 SF / 200	= 2
DINING AREA + WAITING AREA	600 SF / 15 + 600 SF / 5	= 160
SHARED KITCHEN	930 SF / 200	= 5
STAFF ROOM	150 SF / 50	= 3
STORAGE	1168 SF / 300	= 4
TOTAL OCCUPANCY LOAD		= 176

EXIT COUNTS:	OCCUPANCY COUNT IS INCLUDED IN OVERALL BUILDING OCCUPANCY CALCULATIONS. EXIT ROUTES AVAILABLE THROUGH AND AS PART OF BUILDING EGRESS PLANNING.
WASHROOMS:	PROVIDED IN BASE BUILDING
BARRIER FREE DESIGN:	ENTRANCES, FLOOR ACCESSIBILITY, WASHROOMS, ETC. PER BASE BUILDING
LIFE SAFETY:	BASE BUILDING DETECTION ALARM, SIGNAGE AND EMERGENCY SYSTEM TO BE MODIFIED TO PROVIDE COVERAGE FOR TENANT SPACE
FIRE PROTECTION:	BASE BUILDING FULLY AUTOMATED, MONITORED WATERBASED SPRINKLER SYSTEM TO BE MODIFIED TO PROVIDE COVERAGE FOR TENANT SPACE
STRUCTURAL:	NO STRUCTURAL ALTERATIONS ARE REQUIRED FOR THE BASE BUILDING

EGRESS REQUIREMENTS

REQUIRED EGRESS WIDTH:	176 OCCUPANTS X 0.2 INCHES = 35.2" REQUIRED EXIT WIDTH (SECTION 1005) MIN. CLEAR EGRESS DOOR WIDTH 32"
EGRESS WIDTH PROVIDED:	DINING AREA CLEAR FIRST OPENINGS AT 13'-3" DINING AREA CLEAR SECOND OPENINGS AT 22'-9" SHARED KITCHEN - 68" PROVIDED STORAGE - 68" PROVIDED
MAXIMUM TRAVEL DISTANCE ALLOWED:	SHALL NOT EXCEED 250' TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE GROUP A2 OCCUPANCY = 250 FEET WITH SPRINKLER SYSTEM
EXITS REQUIRED:	2 EXITS MIN REQUIRED OCCUPANT LOAD GREATER THAN 50
EXITS PROVIDED:	DINING AREA - 2 EXIT PROVIDED

LEGEND

COMMON PATH OF TRAVEL (**1006.2.1**) PER TABLE (**1006.2.1**) FOR OCCUPANCY WITH AUTOMATIC SPRINKLER SYSTEM = 75 FEET ALLOWED

TRAVEL DISTANCE TO NEAREST EXIT

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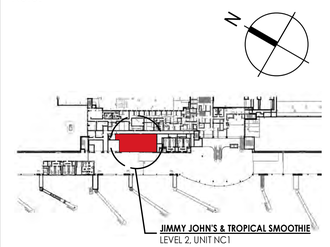
Notes



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Issued	By	Appd	YYYY.MM.DD
File Name: N/A	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

EGRESS PLAN

Project No.	Scale
144324057	As indicated
Revision	Drawing No.
	A010

1 2 3 4 5

D C B A

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: JIMMY JOHNS TROPICAL SMOOTHIE CAFE
Address: 61 TERMINAL DRIVE, LEVEL 2 CONCOURSE, UNIT NC1, FLETCHER NC Zip Code 28732
Owner/Authorized Agent: DOUGLAS COX Phone # (615) 227 -7209 E-Mail DCOX@BLUARCDESIGN.COM
Owned By: City
Code Enforcement Jurisdiction: City

CONTACT:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	DOUGLAS G. COX, ARCHITECT	DOUGLAS COX	7016	(615) 227.7209	DCOX@BLUARCDESIGN.COM
Civil				( )	
Electrical	KLH ENGINEERS	JAMES S. TAVERNELLI	035205	(859) 547.0128	JTAVERNELLI@KLHENGRS.COM
Fire Alarm	KLH ENGINEERS	JAMES S. TAVERNELLI	035205	(859) 547.0128	JTAVERNELLI@KLHENGRS.COM
Plumbing	KLH ENGINEERS	KRIS T. SCHNITGEN	04399	(859) 462.23388	KSCHNITGEN@KLHENGRS.COM
Mechanical	KLH ENGINEERS	KRIS T. SCHNITGEN	04399	(859) 462.23388	KSCHNITGEN@KLHENGRS.COM
Sprinkler-Standpipe				( )	
Structural				( )	
Retaining Walls >5' High				( )	
Other				( )	

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: 1st Time Interior Completion
2018 NC EXISTING BUILDING CODE: N/A Select one Select one
CONSTRUCTED: (date) ________ **CURRENT OCCUPANCY(S)** (Ch. 3): A-3
RENOVATED: (date) ________ **PROPOSED OCCUPANCY(S)** (Ch. 3): A-2/S-2
RISK CATEGORY (Table 1604.5): **Current:** III **Proposed:** Select one

BASIC BUILDING DATA
Construction Type: I-B
Sprinklers: Yes NFPA 13
Standpipes: Select one
Primary Fire District: Yes **Flood Hazard Area:** No
Special Inspections Required: No

Gross Building Area Table

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3rd Floor			
2nd Floor	4,268 sf of Tenant Buildout		
Mezzanine			
1st Floor			
Basement			
TOTAL	4,268 sf		

ALLOWABLE AREA

Primary Occupancy Classification(s): Assembly - A-2 N/A Select one Select one Select one Select one
Accessory Occupancy Classification(s): Storage S-2
Incidental Uses (Table 509):
Special Uses (Chapter 4 – List Code Sections):
Special Provisions: (Chapter 5 – List Code Sections):
Mixed Occupancy: Select one Separation: Select one Exception: ____________
Select one

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

______ + ______ + …… = ____ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]
2	KITCHEN	1707 SF			
2	ASSEMBLY (SEATING)	1275 SF			
2	STORAGE	1286 SF			

[1] Frontage area increases from Section 506.3 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = _______ (F)
b. Total Building Perimeter = _______ (P)
c. Ratio (F/P) = _______ (F/P)
d. W = Minimum width of public way = _______ (W)
e. Percent of frontage increase $I_f = 100[F/P - 0.25] \times W/30$ = _______ (%)
[2] Unlimited area applicable under conditions of Section 507.
[3] Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
[4] The maximum area of open parking garages must comply with Table 406.5.4.
[5] Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE[1]
Building Height in Feet (Table 504.3)[2]	N/A	N/A	
Building Height in Stories (Table 504.4)[3]	N/A	N/A	

[1] Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.
[2] The maximum height of air traffic control towers must comply with Table 412.3.1.
[3] The maximum height of open parking garages must comply with Table 406.5.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/______* REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses							
Bearing Walls	N/A						
Exterior							
North							
East							
West							
South							
Interior							
Nonbearing Walls and Partitions Exterior walls	N/A						
North							
East							
West							
South							
Interior walls and partitions							
Floor Construction Including supporting beams and joists		N/A					
Floor Ceiling Assembly							
Columns Supporting Floors							
Roof Construction, including supporting beams and joists		N/A					
Roof Ceiling Assembly							
Columns Supporting Roof							
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation		N/A					
Occupancy/Fire Barrier Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/ Sleeping Unit Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
N/A	N/A	N/A	N/A

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: Yes
Exit Signs: Yes
Fire Alarm: Yes
Smoke Detection Systems: Yes
Carbon Monoxide Detection: No

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: A010

- ☐ Fire and/or smoke rated wall locations (Chapter 7)
- ☐ Assumed and real property line locations (if not on the site plan)
- ☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
- X Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
- X Occupant loads for each area
- X Exit sign locations (1013)
- X Exit access travel distances (1017)
- X Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
- ☐ Dead end lengths (1020.4)
- X Clear exit widths for each exit door
- X Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- X Actual occupant load for each exit door
- ☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
- X Location of doors with panic hardware (1010.1.10)
- ☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- ☐ Location of doors with electromagnetic egress locks (1010.1.9.9)
- ☐ Location of doors equipped with hold-open devices
- ☐ Location of emergency escape windows (1030)
- ☐ The square footage of each fire area (202)
- ☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
- ☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS – NOT APPLICABLE
(SECTION 1107)

UNIT CLASSIFICATION	TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED
N/A								

ACCESSIBLE PARKING – NOT APPLICABLE
(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	96" SPACES	132" SPACES	
N/A					
TOTAL					

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

NOT APPLICABLE FOR THIS PROJECT – RESTROOMS IN CONCOURSE

USE		WATERCLOSETS			URINALS	LAVATORIES			SHOWERS /TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
SPACE	EXIST'G										
	NEW										
	REQ'D										

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

NOT APPLICABLE THIS PROJECT

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: Yes (The remainder of this section is not applicable)

Exempt Building: Select one Provide code or statutory reference:

Climate Zone: Select one

Method of Compliance: Select one
(If "Other" specify source here)________

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: ________
U-Value of total assembly: ________
R-Value of insulation: ________
Skylights in each assembly: ________
U-Value of skylight: ________
total square footage of skylights in each assembly: ________

Exterior Walls (each assembly)
Description of assembly: ________
U-Value of total assembly: ________
R-Value of insulation: ________
Openings (windows or doors with glazing)
U-Value of assembly: ________
Solar heat gain coefficient: ________
projection factor: ________
Door R-Values: ________

Walls below grade (each assembly)
Description of assembly: ________
U-Value of total assembly: ________
R-Value of insulation: ________

Floors over unconditioned space (each assembly)
Description of assembly: ________
U-Value of total assembly: ________
R-Value of insulation: ________

Floors slab on grade
Description of assembly: ________
U-Value of total assembly: ________
R-Value of insulation: ________
Horizontal/vertical requirement: ________
slab heated: ________

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

NOT APPLICABLE FOR THIS PROJECT

DESIGN LOADS:

Importance Factors: Snow (I_S) Select one
Seismic (I_E) Select one

Live Loads: Roof ______ psf
Mezzanine ______ psf
Floor ______ psf

Ground Snow Load: ______ psf

Wind Load: Ultimate Wind Speed ______ mph (ASCE-7)
Exposure Category Select one

SEISMIC DESIGN CATEGORY: Select one
Provide the following Seismic Design Parameters:
Risk Category (Table 1604.5) Select one
Spectral Response Acceleration S_S______ %g S_1______ %g
Site Classification (ASCE 7) Select one
Data Source: Select one
Basic structural system Select one
Analysis Procedure: Select one
Architectural, Mechanical, Components anchored? Select one

LATERAL DESIGN CONTROL: Select one

SOIL BEARING CAPACITIES:
Select one ________ psf
Pile size, type, and capacity ________

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb: 15 F
summer dry bulb: 88 F

Interior design conditions
winter dry bulb: 72 F
summer dry bulb: 74 F
relative humidity: 50%

Building heating load: 101 MBH

Building cooling load: 236 MBH

Mechanical Spacing Conditioning System
Unitary
description of unit: DX Cooling Packaged Rooftop Unit with Electric Heat
heating efficiency: N/A
cooling efficiency: 11.4 EER and 11.8 EER
size category of unit: 7.5 TON & 4 TON
Boiler
Size category. If oversized, state reason.: N/A
Chiller
Size category. If oversized, state reason.: N/A

List equipment efficiencies: 7.5-ton RTU: 11.4 EER, 4 ton RTU: 11.8 EER

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code - Performance

Lighting schedule (each fixture type)
lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture
number of ballasts in fixture
total wattage per fixture
total interior wattage specified vs. allowed (whole building or space by space)
total exterior wattage specified vs. allowed

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)
- ☐ C406.2 More Efficient HVAC Equipment Performance
- ☐ C406.3 Reduced Lighting Power Density
- ☐ C406.4 Enhanced Digital Lighting Controls
- ☐ C406.5 On-Site Renewable Energy
- ☐ C406.6 Dedicated Outdoor Air System
- ☐ C406.7 Reduced Energy Use in Service Water Heating

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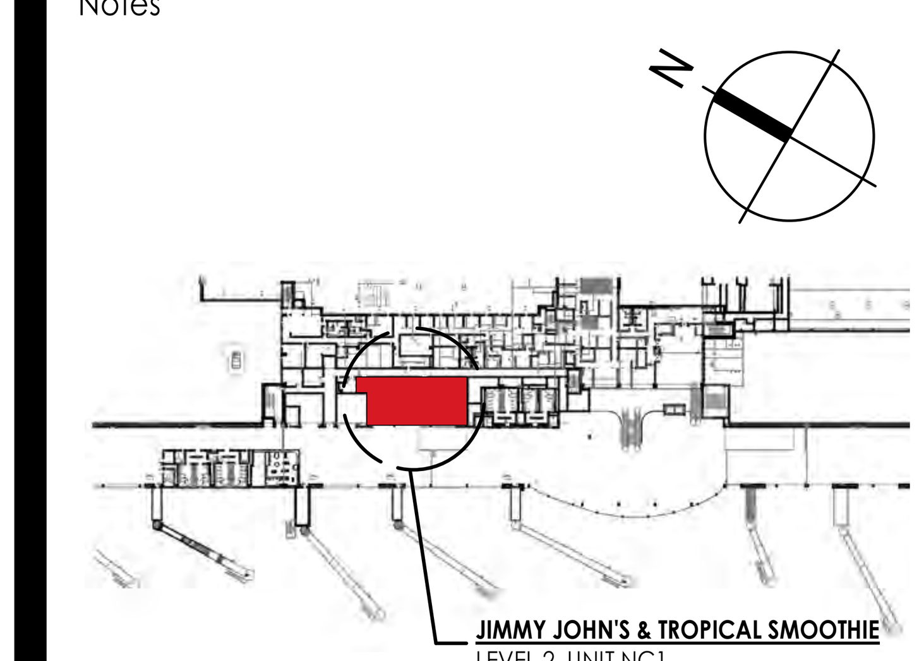

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File Name: N/A
Dwn. Dsgn. Chkd. YYYY.MM.DD

Permit/Seal

DOUGLAS G. COX REGISTERED ARCHITECT 7016 NORTH CAROLINA RALEIGH, N.C.

12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JJ JIMMY JOHN'S

Client/Project

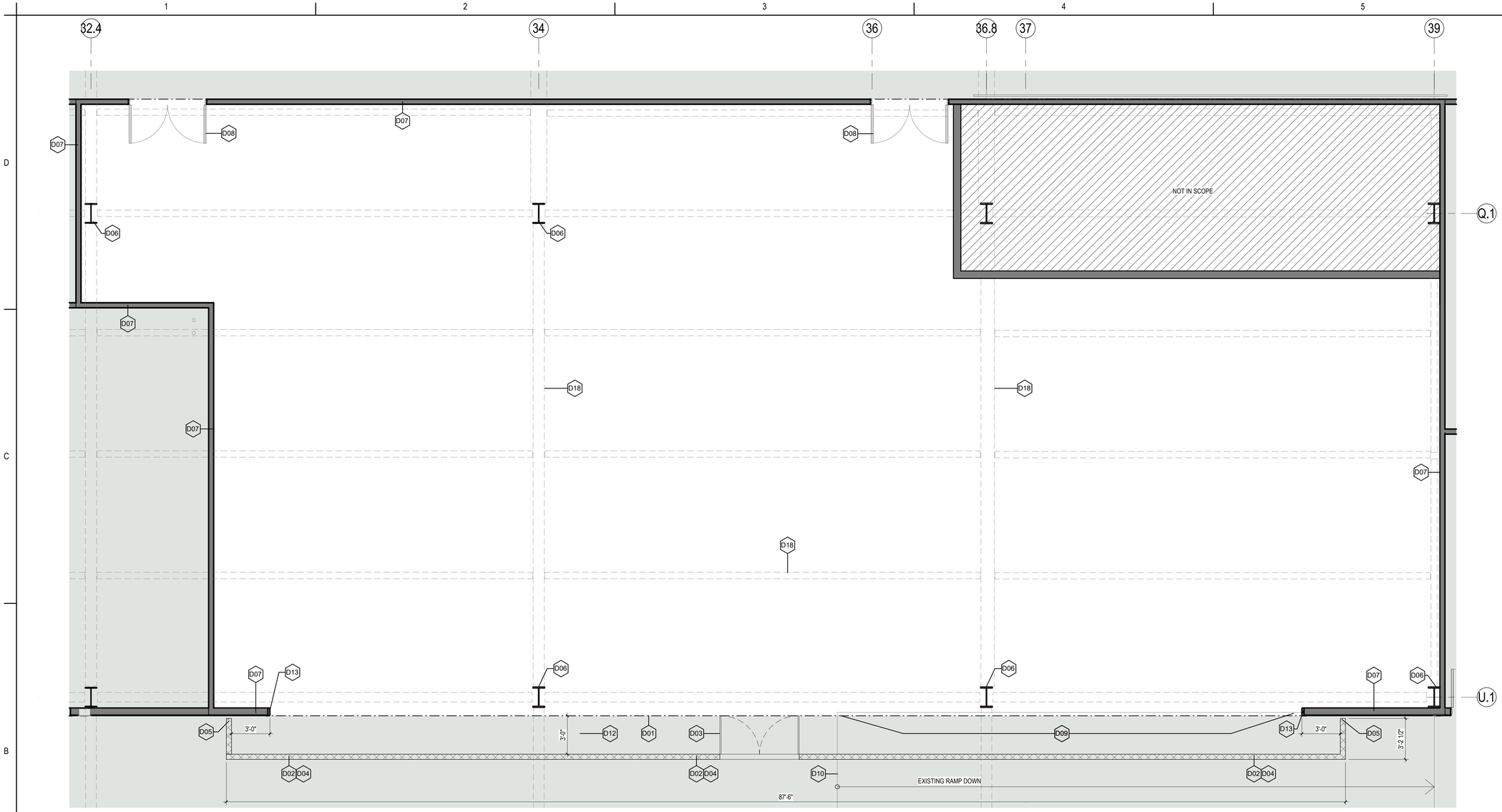
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title
APPENDIX B

Project No. 144324057
Scale
Revision
Drawing No. A011

ORIGINAL SHEET - ARCH D



PROJECT NORTH

N

1 DEMOLITION PLAN

1/4" = 1'-0"

KEYNOTE LEGEND

D01	LEASE LINE - TC TO CONFIRM WITH LANDLORD FOR FINAL LOCATION OF LEASE LINE
D02	TEMPORARY REUSABLE BARRICADE SYSTEM BY STARC SYSTEMS - REALWALL. CONFRIM FINAL SPEC WITH PARADIES PM. https://starcsystems.com/products/realwall/
D03	TEMPORARY RE-USEABLE LOCKABLE DOUBLE DOOR BY STARC SYSTEMS FOR CONSTRUCTION ACCESS. CONFRIM FINAL SPEC WITH PARADIES PM. DOOR LOCKING SYSTEM TO BE BEST DORMAKABA GROUP 7-PIN CORES PER AIRPORT KEYING SYSTEM. KEYS TO BE PROVIDED TO THE AIRPORT AUTHORITY. TC SHALL COORDINATE AND CONFIRM FINAL SPECIFIC LOCKING TYPE WITH AIRPORT REPRESENTATIVE.
D04	SIGNAGE CONTRACTOR TO APPLY GRAPHICS TO THE PUBLIC AREA SIDE OF HOARDING WALL AND ACCESS DOORS
D05	DO NOT AFFIX BARRICADE PARTITION TO EXISTING BASE BUILDING
D06	EXISTING BASE BUILDING STRUCTURAL COLUMN TO REMAIN
D07	EXISTING BASE BUILDING WALLS TO REMAIN
D08	EXISTING BASE BUILDING DOOR TO REMAIN
D09	EXISTING BASE BUILDING RAILING TO REMAIN
D10	LINE OF BASE BUILDING TOP OF RAMP
D12	EXISTING BASE BUILDING FLOOR FINISH TO REMAIN - PROTECT DURING CONSTRUCTION. EXTENT OF EXISTING BASE BUILDING FLOORING TO BE VERIFIED ON SITE
D13	EXISTING BASE BUILDING FRAMED OPENING TO REMAIN
D18	STRUCTURAL SLAB BEAMS BELOW

DEMOLITION NOTES

A	TENANT CONTRACTOR TO COORDINATE AND CONFIRM DEMOLITION SCOPE OF WORK WITH AIRPORT AUTHORITY.
B	REMOVE ALL EXISTING ELECTRICAL EQUIPMENT TO EXISTING CEILING. U.N.O.
C	RE-USE ALL EXISTING HVAC DIFFUSERS. RELOCATE AS REQUIRED PER REFLECTED CEILING PLAN. REFURBISH ALL HVAC DIFFUSERS TO LOOK NEW.
D	REFER TO MECHANICAL CONSULTANT DRAWINGS & ELECTRICAL CONSULTANT DRAWINGS FOR RELATED DEMOLITION WORK.
E	ALL EXISTING WALLS ARE TO BE PREPPED TO ACCEPT NEW FINISH. REFER TO SPEC.
F	REMOVE EXISTING FLOOR & EXPOSE CONCRETE FLOORING TO BE READY TO ACCEPT NEW FINISHES. EXISTING TENANT FLOORING UP TO TRANSITION TO MAIN CONCOURSE.
G	DO NOT REMOVE EXISTING FIRE ALARM SYSTEM / COMPONENTS WITHOUT COORDINATING WITH AIRPORT REPRESENTATIVE.
H	TENANT CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ITEMS AS INDICATED ON DRAWINGS.
I	SEE SPECIFICATIONS DIVISION 1 FOR CONSTRUCTION WASTE MANAGEMENT AND SECTION SELECTIVE DEMOLITION.
J	TENANT CONTRACTOR TO SUBMIT AND REVIEW HOARDING PLAN WITH AIRPORT AUTHORITY PRIOR TO DEMOLITION.
K	ANY OLD CONDUITS, FEEDERS, CONDUITS, ELECTRICAL ETC., THAT ARE NO LONGER USED MUST BE REMOVED BACK TO SOURCE BY THE TENANT CONTRACTOR.
L	ANY EXISTING CORED PENETRATIONS THAT ARE NO LONGER IN USE SHALL BE IN-FILLED WITH CONCRETE BY TENANT CONTRACTOR.
M	TENANT CONTRACTOR IS RESPONSIBLE TO REVIEW ANY WORK OUTSIDE OF LEASE LINE TO ENSURE WORK IS DONE PROPERLY AND TO AIRPORT AUTHORITIES SATISFACTION. NO CONSTRUCTION MATERIALS SHALL BE STORED AND LEFT BEHIND OUTSIDE OF LEASELINE UNLESS APPROVED BY AIRPORT AUTHORITY, INCLUDING CEILING SPACES.

DEMOLITION PLAN LEGEND

- NOT IN CONTRACT
- AREA IN CONTRACT
- EXISTING BASE BUILDING WALLS TO REMAIN
- AREA TO BE DEVELOPED IN PHASE 2 STAGE
- TEMPORARY BARRICADE PARTITION
- (X) KEYNOTE

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Architect

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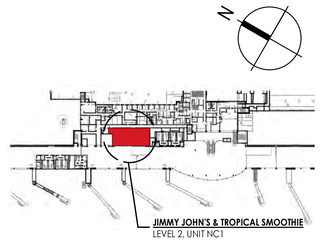
Notes



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Paradies Lagardère TRAVEL RETAIL

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JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
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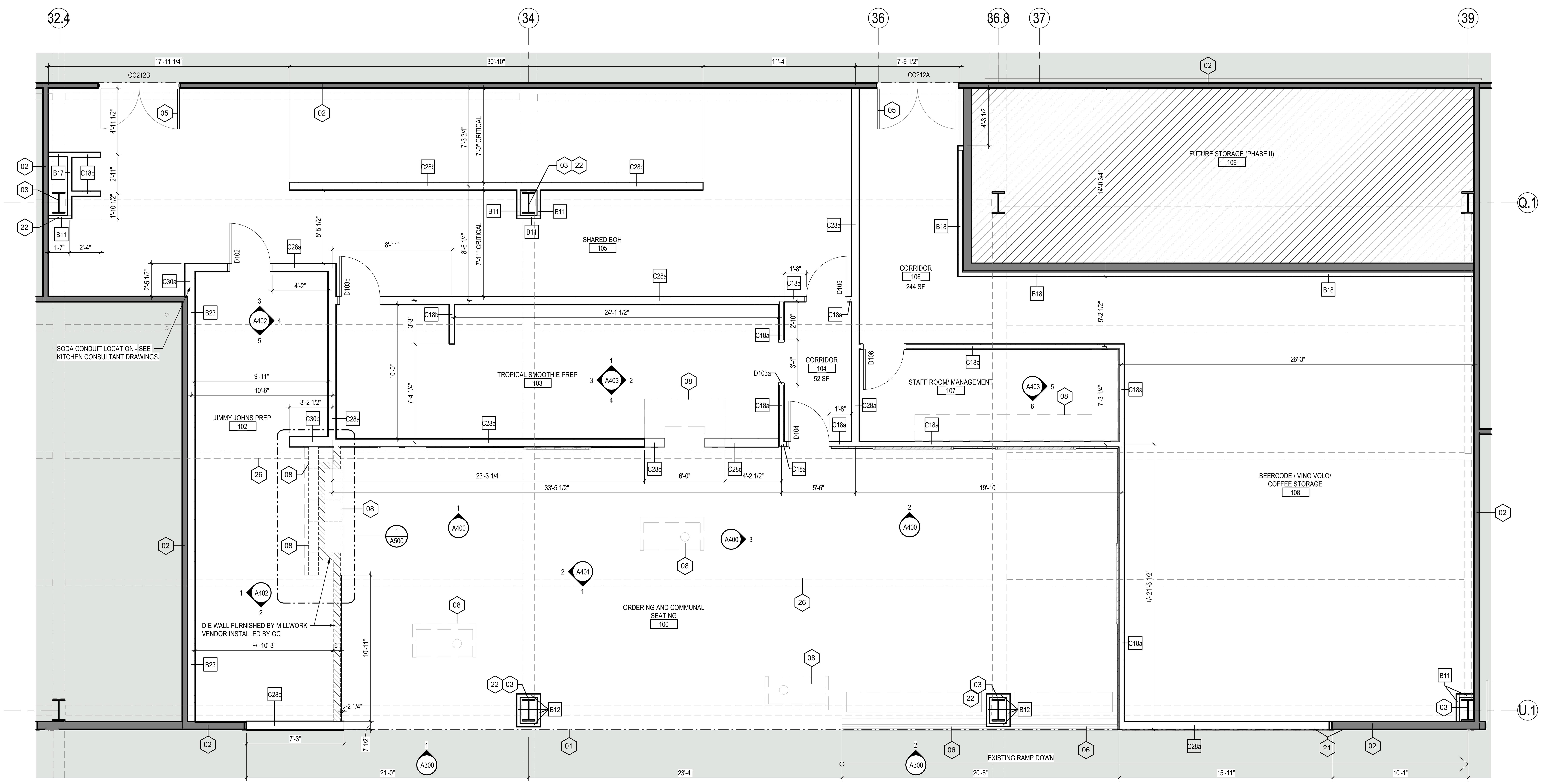
NORTH CAROLINA, USA, 28732

Title

DEMOLITION PLAN

Project No.	Scale
144324057	As indicated
Revision	Drawing No.
	A050



PROJECT NORTH

N

1 PARTITION PLAN

1/4" = 1'-0"

PARTITION SCHEDULE

TYPE	OVERALL WIDTH	GWB Thickness	FRAMING SIZE	TOP	BOTTOM	STUDS TO STRUCTURE	GWB TO STRUCTURE	INSULATION TO STRUCTURE	FIRE RATING	SOUND INSULATION	STC RATING	NOTES
Group B - Material, Stud												
B11	3 1/8"	5/8"	2 1/2"	TB2	BB1	Yes	Yes	No		No	0	
B12	3"	-	2 1/2"	TB2	BB1	Yes	Yes	No		No	0	PROVIDE 1/2" FRT PLYWOOD SUBSTRATE WITH MT-1 FINISH APPLY ON TOP
B17	4 1/4"	5/8"	3 5/8"	TB2	BB1	Yes	Yes	No		No	0	
B18	4 1/4"	5/8"	3 5/8"	TB2	BB1	Yes	Yes	No		No	0	
B23	6 5/8"	5/8"	6"	TB3	BB1	Yes	Yes	No		Yes	0	
Group C - Material, Stud, Material												
C18a	4 7/8"	5/8"	3 5/8"	TC3	BC1	Yes	Yes	No		Yes	0	
C18b	4 7/8"	5/8"	3 5/8"	TC2	BC1	Yes	Yes	No		No	0	
C28a	7 1/4"	5/8"	6"	TC3	BC1	Yes	Yes	No		Yes	0	
C28b	7 1/4"	5/8"	6"	TC3	BC1	Yes	Yes	No		No	0	
C28c	7 1/4"	5/8"	6"	-	BC1	No	No	No		No	0	REFER TO ELEVATION AND MILLWORK SECTION
C30a	9 1/4"	5/8"	8"	TC3	BC1	Yes	Yes	No		Yes	0	
C30b	9 1/4"	5/8"	8"	TC3	BC1	Yes	Yes	No		No	0	

NOTE: ALL STUDS SHOULD BE 18 GA. U.N.O.

KEYNOTE LEGEND

01	LEASE LINE - TC TO CONFIRM WITH LANDLORD FOR FINAL LOCATION OF LEASE LINE PRIOR TO START OF CONSTRUCTION
02	BASE BUILDING DEMISING WALL
03	BASE BUILDING STRUCTURAL COLUMN
05	EXISTING BASE BUILDING DOOR
06	EXISTING BASE BUILDING RAILING. TENANT CONTRACTOR TO POWDER COAT RAILING TO COLOR RAL2009.
08	MILLWORK UNITS /FLOOR FIXTURES SHOWN IN DASHED LINE
21	ALIGN NEW WALL WITH EXISTING DEMISING WALL
22	FURRING WALL TO BE INSTALLED AS TIGHT TO THE BASE BUILDING STRUCTURAL COLUMNS AS POSSIBLE.
26	STRUCTURAL SLAB BEAMS BELOW

PARTITION PLAN LEGEND

NOT IN CONTRACT

AREA IN CONTRACT

EXISTING BASE BUILDING

MILLWORK GABLE

X KEYNOTE

GENERAL CONSTRUCTION NOTES

A	THE TENANT CONTRACTOR IS TO LAYOUT ALL WORK ON SITE AND CONFIRM LAYOUT WITH THE AIRPORT PRIOR TO THE SETTING OF WALL PLATES, CORING AND CUTTING.
B	REFER TO ELECTRICAL, MECHANICAL AND KITCHEN CONSULTANTS DRAWINGS AND SPECIFICATIONS FOR ALL RELATED WORK.
C	THE TENANT CONTRACTOR IS TO ENSURE THAT THE TRANSITION BETWEEN THE TENANT FLOOR FINISH AND THE BASE BUILDING FLOOR FINISH MEETS ALL APPLICABLE CODE REQUIREMENTS AND THE TENANT FLOOR FINISH, TRANSITION AND BASE BUILDING FLOOR FINISH ARE FLUSH AND SHALL BE FLUSH WITH EACH OTHER.
D	ALL DIMENSIONS ARE TO FACE OF FINISHED MATERIAL UNLESS OTHERWISE NOTED. USE WRITTEN DIMENSIONS. DO NOT SCALE DRAWINGS.
E	ALL GWB TO BE 5/8" TYPE 'X', UNLESS OTHERWISE NOTED.
F	ALL MEDIUM DENSITY FIBERBOARD (MDF) & PLYWOOD TO BE FIRE RETARDANT TREATED 3/4" THICK UNLESS OTHERWISE NOTED.
G	TENANT CONTRACTOR IS TO MAINTAIN AND REPAIR ALL SPRAY ON AND GYPSUM BOARD FIRE PROTECTION FOR ADJACENT SPACES, STRUCTURE AND ROOF WHERE DISTRUBED, ALTERED, OR DAMAGED TO MAINTAIN EXISTING RATINGS.
H	TENANT CONTRACTOR SHALL SCAN FLOOR PRIOR TO MAKING PENETRATIONS. FERRORESONANT SCAN, X-RAY OR SIMILAR TECHNOLOGY SHALL BE UTILIZED.
I	ALL MILLWORK DRAWINGS ARE SOLELY FOR EXPRESSING DESIGN INTENT, AND ARE NOT TO BE USED FOR ACTUAL FABRICATION. FABRICATOR IS REQUIRED TO PROVIDE SHOP DRAWINGS FOR WRITTEN APPROVAL PRIOR TO FABRICATION. COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL SUBCONTRACTOR. VERIFY SIZES AND PLACEMENT OF ALL EQUIPMENT WITH OWNER PRIOR TO FABRICATION. BLACK MELAMINE TO NON-EXPOSED INTERIOR SURFACES UNLESS OTHERWISE NOTED.
J	MILLWORK CONTRACTOR TO COORDINATE CONCEALED BAR CONDUIT FLOOR LOCATION WITH ELECTRICAL CONTRACTOR AND MILLWORK CONTRACTOR.
K	COMBUSTABLE CONSTRUCTION IS NOT ALLOWED TO PENETRATE FIRE RATED ASSEMBLIES.
L	ALL WORK SHALL COMPLY WITH NFPA101.
M	FOOD PREPARATION/SERVERY AND SINK AREAS MUST HAVE CEMENT BOARD, OR OTHER WATER RESISTANT MATERIAL, EXTENDING FROM THE FLOOR UP TO 12" A.F.F. TO ACCEPT WATERPROOFING MEMBRANE. WATER RESISTANT DRYWALL OR OTHER WATER RESISTANT SUBSTRATE COMPATIBLE WITH THE FINISH MATERIAL SHOULD BEGIN AT THE CEMENT BOARD 12" A.F.F. AND IS REQUIRED ON ALL WALLS IN APPLICABLE AREAS. REFER TO SECIFICATION PAGES.
N	TENANT CONTRACTOR TO SUBMIT A SAFETY WORK PLAN, FALL PROTECTION PLAN AND ALL OTHER SAFETY REQUIREMENT PER LOCAL JURISDICTION BEFORE CONSTRUCTION BEGINS.
O	T.C. TO REVIEW ALL SLAB PENETRATIONS WITH AIRPORT PRIOR TO CUTTING AND CORING. AIRPORT REVIEW AND APPROVAL IS REQUIRED.

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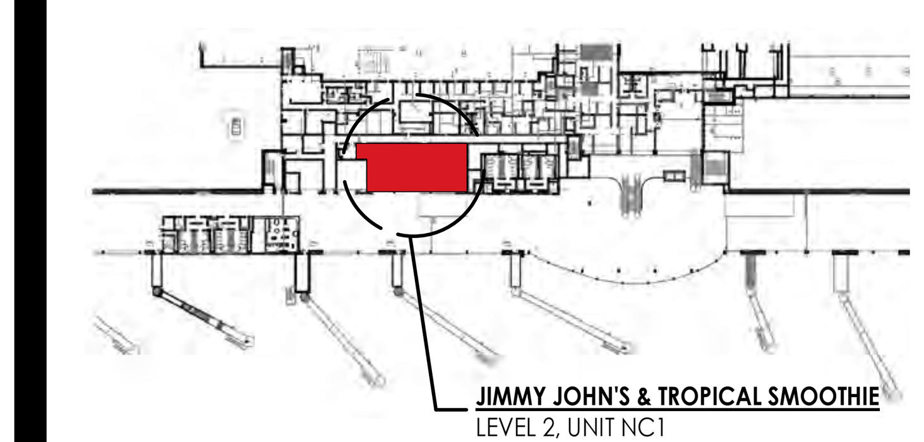
Notes



Revision	By	Appd	YYYY.MM.DD

Issued	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	MY/NY	JR	2024.12.20
ISSUED FOR 90% SUBMISSION	MY/NY	JR	2024.12.02
60% FOR VENDOR REVIEW	MY/NY	JR	2024.09.27
ISSUED FOR 60% SUBMISSION	MY/NY	JR	2024.09.26
ISSUED FOR 30% SUBMISSION	MY	JR	2024.07.12

File Name: N/A

Dwn. Dsgn. Chkd. YYYY.MM.DD

Permit/Seal

12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE

JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

PARTITION PLAN

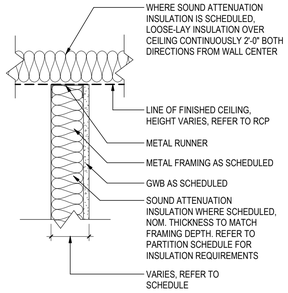
Project No.	Scale
144324057	As indicated

Revision

Drawing No.

A100

ORIGINAL SHEET - ARCH D



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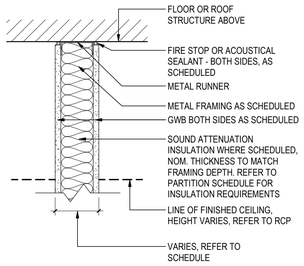
NTS



2 TOP TC1
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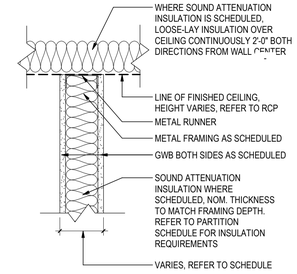
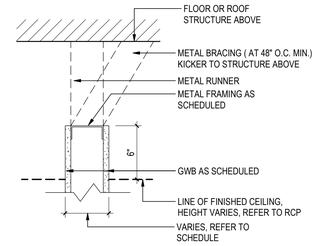


3 TOP TC3
NTS



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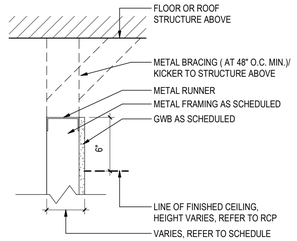
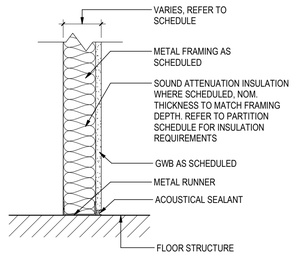
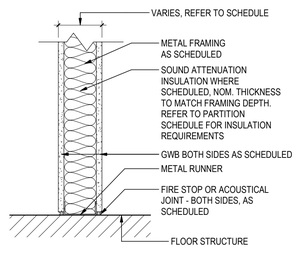


5 TOP TB2
NTS



6 BASE BB1
NTS



7 BASE BC1
NTS

DOOR SCHEDULE

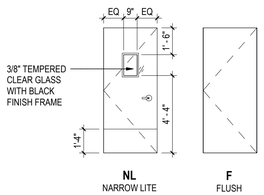
No.	Room Name	Rm. No.	Door						HDWR Set	Frame			Opening	Comments
			Clear Dim.											
			Width	Height	Thickness	Type	Mat'l	Finish		Type	Mat'l	Finish	Glaz	
D102	JIMMY JOHNS PREP	102	3'-0"	7' - 0"	1 3/4"	NL	WD	PT-2	1	1		MT-1	YES	
D103a	TROPICAL SMOOTHIE PREP	103	3'-0"	7' - 0"	1 3/4"	-	-		-	1		MT-2	-	METAL DOOR FRAME ONLY
D103b	TROPICAL SMOOTHIE PREP	103	3'-0"	7' - 0"	1 3/4"	NL	WD		1	1		MT-2	YES	
D104	ORDERING AND COMMUNAL SEATING	100	3'-0"	7' - 0"	1 3/4"	NL	WD		1	1		-	YES	
D105	CORRIDOR	104	3'-0"	7' - 0"	1 3/4"	NL	WD		1	1		MT-2	YES	
D106	CORRIDOR	106	3'-0"	7' - 0"	1 3/4"	F	WD	PT-5	1	1		PT-5	-	

HARDWARE SCHEDULE

QTY.	HARDWARE	MANUFACTURER	MODEL	FINISH	COMMENTS
GROUP 1					
3 EA	HINGES	STANLEY	600 SERIES: 1 1/2" x LENGTH TO SUIT		TO SUIT INSTALLATION
1 EA	CLOSER	LCN	LCN1461 RW/PA PS1 COVER		MOUNT ON KITCHEN SIDE.
1 EA	LOCKSET	BEST DORMAKABA GROUP	9K-3-7-D-15-C-STK-626	626	PER AIRPORT KEYING SYSTEM
2 EA	KICK PLATE	IVES	8400-84E-16 INCH x WIDTHLESS 1 1/2"	630	

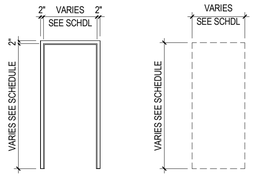
DOOR PANEL TYPES

NOTE: REFER TO DOOR SCHEDULES FOR DOOR HEIGHTS AND WIDTHS



NL NARROW LITE **F** FLUSH

FRAME TYPES



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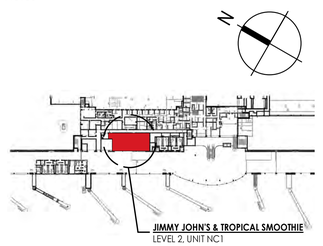

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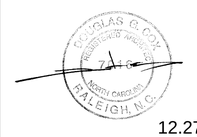
Permit/Seal



12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE JJ JIMMY JOHN'S

Client/Project

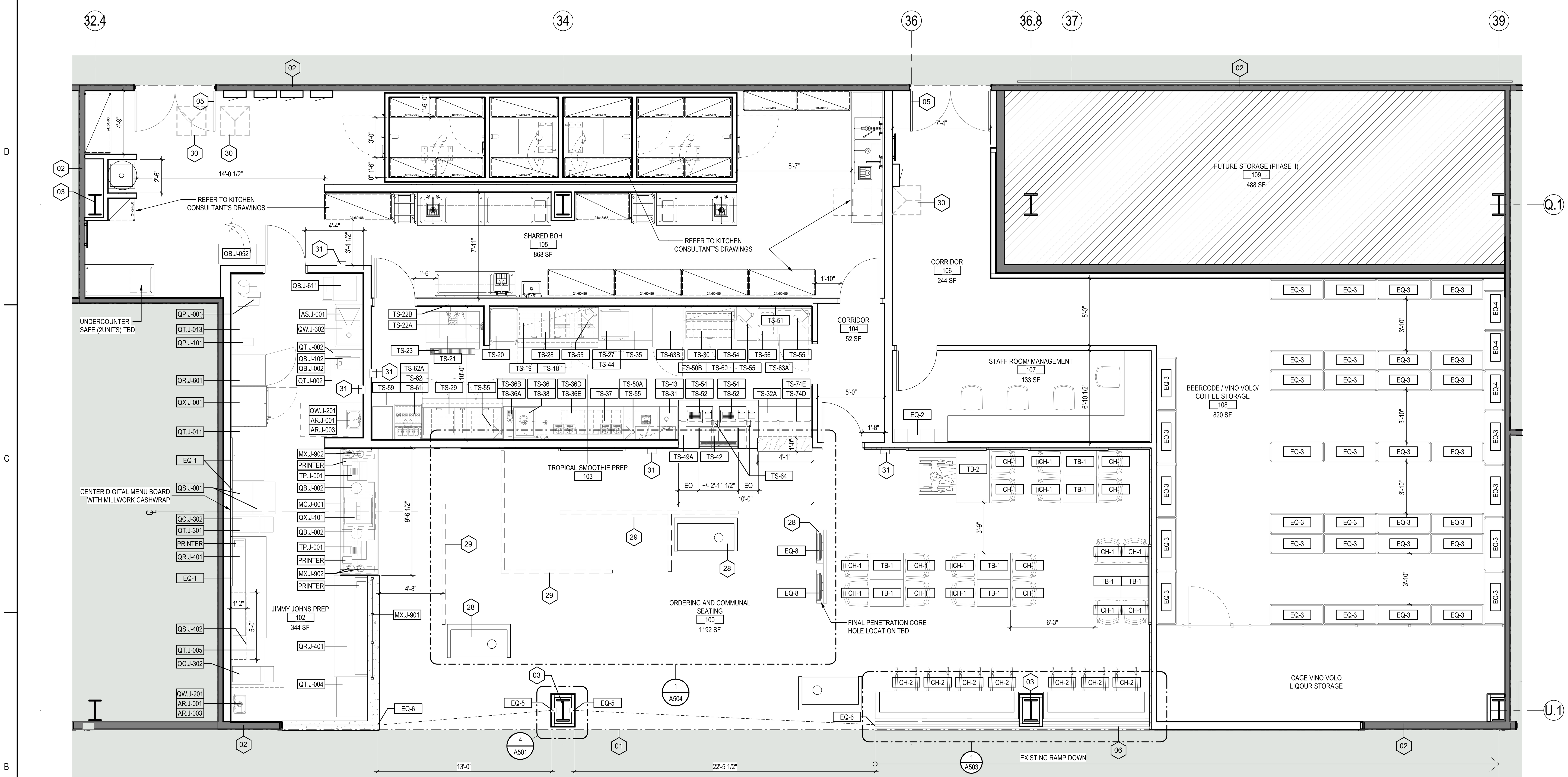
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

WALL DETAILS, DOOR SCHEDULE AND HARDWARE SCHEDULE

Project No.	Scale
144324057	As indicated
Revision	Drawing No.
	A101



PROJECT NORTH

N

1 FURNITURE & EQUIPMENT PLAN

1/4" = 1'-0"

GENERAL MILLWORK NOTES

A	ALL MERCHANDISE FIXTURES, CASHWRAP AND FURNITURE TO BE INSTALLED BY TENANT CONTRACTOR U.N.O.
B	TENANT CONTRACTOR TO VERIFY, SUPPLY AND INSTALL ALL IN-WALL BLOCKING REQUIREMENTS FOR WALL FIXTURE INSTALLATION W/ FIXTURE VENDOR.
C	TENANT CONTRACTOR TO UNCRATE, ASSEMBLE AND PLACE ALL FLOOR FIXTURES.
D	ALL MILLWORK DRAWINGS ARE SOLELY FOR EXPRESSING DESIGN INTENT AND ARE NOT TO BE USED FOR ACTUAL FABRICATION. FABRICATOR IS REQUIRED TO PROVIDE SHOP DRAWINGS FOR WRITTEN APPROVAL PRIOR TO FABRICATION. COORDINATE ALL WORK WITH ELECTRICAL SUBCONTRACTOR. VERIFY SIZES AND PLACEMENT OF ALL EQUIPMENT WITH OWNER PRIOR TO FABRICATION.
E	REFER TO ELECTRICAL AND MECHANICAL CONSULTANTS DRAWINGS AND SPECIFICATIONS FOR ALL RELATED WORK.
F	ALL DIMENSIONS ARE TO FACE OF FINISHED MATERIAL UNLESS OTHERWISE NOTED. USE WRITTEN DIMENSIONS. REFER TO PARTITION PLAN FOR WALL LAYOUT. DO NOT SCALE DRAWINGS.
G	ALL MEDIUM DENSITY FIBERBOARD (MDF) & PLYWOOD TO BE FIRE RETARDANT TREATED 3/4" THICK UNLESS OTHERWISE NOTED.
H	MILLWORK CONTRACTOR TO COORDINATE CONCEALED MAIN CASHWRAP CONDUIT FLOOR LOCATION WITH ELECTRICAL CONTRACTOR AND TENANT CONTRACTOR.
I	VERIFY ALL EXISTING SITE CONDITIONS THAT WILL AFFECT MILLWORK CONSTRUCTION & INSTALLATION & ASSEMBLY OF CASEWORKS. NOTIFY DESIGNER FOR DISCREPANCIES.
J	TENANT CONTRACTOR TO LAYOUT ALL WORK ON SITE AND CONFIRM LAYOUT WITH LANDLORD PRIOR TO THE SETTING OF WALL PLATES, CORING AND CUTTING.
K	MILLWORK CONTRACTOR TO CONFIRM ALL CASHWRAP EQUIPMENT DIMENSIONS AND REQUIREMENTS WITH CLIENT PRIOR TO FABRICATION OF CASEWORK. TENANT CONTRACTOR TO COORDINATE ALL ELECTRICAL AND I.T. REQUIREMENTS FOR CASHWRAP TO ALL INVOLVED SUBCONTRACTORS.
L	TENANT CONTRACTOR TO CONFIRM ALL HARDWARE SPECIFICATIONS AND REQUIREMENTS WITH CLIENT PROJECT MANAGER PRIOR TO PURCHASE.
M	TENANT CONTRACTOR TO INSTALL ALL CLIENT SUPPLIED FLOOR FIXTURES, SHELVING, AND DISPLAY HARDWARE.
N	MILLWORK CONTRACTOR TO VERIFY AND COORDINATE ALL DIMENSIONS/ SPACE REQUIREMENTS, INCLUDING MECHANICAL AND ELECTRICAL ITEMS IN MILLWORK WITH TENANT CONTRACTOR PRIOR TO FABRICATION OF MILLWORK FIXTURES.

FURNITURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL	SUPPLY	INSTALL
CH-1	CHAIR			PLTR	TC
CH-2	CHAIR			PLTR	TC
TB-1	TABLE			PLTR	TC
TB-2	TABLE			PLTR	TC

SPECIALTY EQUIPMENT SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL	SUPPLY	INSTALL
EQ-1	50" DIGITAL MENU BOARD			PLTR	TC
EQ-2	LOCKER			PLTR	TC
EQ-3	18"X48" SHELVING (BOH)			PLTR	TC
EQ-4	18"X36" SHELVING (BOH)			PLTR	TC
EQ-5	RECESSED WALL MOUNTED RETRACTABLE BELT BARRIERS	VISIONTRON	RETRACTA-BELT 15' & 25' BELT LENGTHS	TC	TC
EQ-6	RETRACTA-BELT RECEIVING END	VISIONTRON	RE (SMOOTH BLACK)	TC	TC
EQ-8	TCPOS SELF-ORDER KIOSK			PLTR	TC

KEYNOTE LEGEND

01	LEASE LINE - TC TO CONFIRM WITH LANDLORD FOR FINAL LOCATION OF LEASE LINE PRIOR TO START OF CONSTRUCTION
02	BASE BUILDING DEMISING WALL
03	BASE BUILDING STRUCTURAL COLUMN
05	EXISTING BASE BUILDING DOOR
06	EXISTING BASE BUILDING RAILING. TENANT CONTRACTOR TO POWDER COAT RAILING TO COLOR RAL2009.
28	MILLWORK UNITS
29	METAL RAILING
30	TC TO PROVIDE ENGINEERED HANGING SYSTEM FOR SUSPENDED ELECTRICAL TRANSFORMER AS REQUIRED. REFER TO ELECTRICAL DRAWING.
31	SEMI-RECESSED FIRE EXTINGUISHER.REFER TO ELEVATIONS FOR MOUNTING LOCATION.

JIMMY JOHNS EQUIPMENT SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL
AR.J-001	PAPER TOWEL DISPENSER - T1755TBK	SAN JAMAR	
AR.J-003	SOAP DISPENSER - INTERNATIONAL 32		
AS.J-001	SLIM JIM TRASH CAN	ULINE	H-2893BL
MC.J-001	34" HIGH CASH MILLWORK & COUNTER W/ CHIP DRAWERS	MILLWORK VENDOR	
MX.J-901	96" SNEEZE GUARD	HEL-MAR MFG	
MX.J-902	CUP DISPENSERS	SAN JAMAR	C2410C
PRINTER			
QB.J-002	SEAMLESS STAINLESS STEEL ICED TEA DISPENSER	BUNN-O-MATIC	TDO-N-3.5-00 31
QB.J-052	BAG-N-BOX CARBONATE STOR.	-	
QB.J-102	ICED TEA BREWER	BUNN-O-MATIC	TB6Q-0301
QB.J-611	ICE MAKER (WATER-COOLED) & ICE STORAGE BIN	SCOTSMAN	NH0622W-1/B 322S
QC.J-302	HIGH SPEED OVEN (RESERVED FOR FUTURE USE)	MERRYCHEF	X12DBMV6D FL1CLUS
QP.J-001	MANUAL HEAVY-DUTY SICER	HOBART	HS8-1
QP.J-101	FOOD PROCESSOR	HOBART	FP150-1
QR.J-401	91" REFRIG. PREP TABLE AND 12" X 91" S.S. OVERSHELF	KAIRAK	KBP091SL2
QR.J-601	1 DOOR REACH-IN REFRIGERATOR W/ 10 PANS	HOSHIZAKI	R1A-FS
QS.J-001	SIDE LOADING BREAK RACK	PIPER PRODUCTS	718-JJ
QS.J-402	5'-0" X 14" METRO WIRE SHELVING WITH 33PDF POST & BRACKET ASSY	METRO	WIRE
QT.J-002	STAINLESS 24" X 30" S.S. TABLE	JOHN BOOS	ST4R5-SSK
QT.J-004	STAINLESS 36" X 30" S.S. TABLE	JOHN BOOS	ST4R5-SSK
QT.J-005	STAINLESS 42" X 30" S.S. TABLE	JOHN BOOS	ST4R5-SSK
QT.J-011	STAINLESS 48" X 30" S.S. TABLE	JOHN BOOS	ST4R5-SSK
QT.J-013	STAINLESS 72" X 30" SLICER TABLE	JOHN BOOS	ST4R5-SSK
QT.J-301	STAINLESS 18" X 30" SS. TABLE	METRO	
QW.J-201	STAINLESS HAND SINK WITH FAUCET	SPG/ ZURN	EHS-1RL-NF/ Z812A1-TWM
QW.J-302	STAINLESS VEGETABLE PREP SINK & FAUCET	JOHN BOOS/ ZURN	1B16204-1D1 8L-X/ Z842H1-15F
QX.J-001	5 DECK OVEN/ PROOFER COMBINATION	PIPER PRODUCTS	OP-4D
QX.J-101	ICE DRINK DISPENSER	CORNELIUS	ENDURO 150
TP.J-001	POS TERMINAL		

TROPICAL SMOOTHIE - EQUIPMENT SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL
TS-18	MICROWAVE OVEN	ACP	TS-AMA-MOC24TR
TS-19	18" X 72", ON QUE SHELF	RANDELL	TS-RANDOS-72X18-TSC.1
TS-20	MOBILE HALF-HEIGHT STORAGE UNIT WITH WORKTOP	METRO	TS-MET
TS-21	ICE MAKER WITH BIN	SCOTSMAN	TS-SCO-NS0922A-32/ TS-SCO-B948S
TS-22A	WATER FILTER, 3-STAGE	SCOTSMAN	TS-SCO-AP1-P
TS-22B	ICE MACHINE TREATMENT SYSTEM	RGF	TS-SCO-IMSB
TS-23	CHANNEL DRAIN, 5" (3'-4" LONG)		
TS-27	MICROWAVE CONVECTION OVEN		
TS-28	REFRIGERATED PREP TABLE, 30 PAN	RANDELL	TS-RAN-9045K513TSCRC
TS-29	REFRIGERATED PREP TABLE, 30 PAN	RANDELL	TS-RAN-9045K513TSCRC
TS-30	REFRIGERATED PREP TABLE, 18 PAN	RANDELL	TS-RAN-9030K-513-TSCRC
TS-31	WORK TABLE WITH HAND SINK & DUMP SINK, 30" X 48"	STAFFORD/ T&S BRASS	23-TRO-3048R/ TS-TSB
TS-32A	WORK TABLE, 30" X 48"	JOHN BOOS	TS-JOHST6R53048SSKX
TS-35	WORK TABLE, 30" X 18"	JOHN BOOS	
TS-36	BLENDER TABLE, 30" X 108"	STAFFORD	23-TRO-108R
TS-36A	WATER SPIGOT	FERGUSON ENTERPRISES	TS-FER-PF111CP
TS-36B	WATER CONTAINER, DROP-IN	SERVER PRODUCTS	TS-SER
TS-36D	CUP DISPENSER	DISPENSE-RITE	TS-DIS-BFL-2F
TS-36E	LID DISPENSER	DISPENSE-RITE	TS-DIS-CTLD-15A
TS-37	BLENDER, BAR TYPE	VITAMIX	TS-VIT-068514-ABAB
TS-38	ICE BIN, DROP-IN	SSI	23-TRO-1074
TS-42	REFRIGERATOR, GRAB-N-GO	STRUCTURAL CONCEPTS	NE3633RSSV
TS-43	SOAP / PAPER TOWEL DISPENSERS		
TS-44	HEAT SHIELD	STAFFORD	23-TRO-1293
TS-49A	CASHIER COUNTER TOP & SUPPORT LEG	MINNESOTA	TS-MM-TSCASHCTR
TS-50A	WALL SHELF, S/S, 12" X 36"	JOHN BOOS	TS-JOHEWS81236X
TS-50B	SHELF	JOHN BOOS	TS-JOHEWS8-1248-X
TS-51	MENU BOARD SYSTEM, WALL MOUNT	OAK STREET	TS-OAK-TSMENUBOARD
TS-52	POS TERMINAL		
TS-54	POS PRINTER		
TS-55	KDS MONITOR		
TS-56	EXPO TABLE	METRO	TSEXPOSE48
TS-59	WALL-MOUNTED, WORKTOP, 30" X 18"	JOHN BOOS	TS-JOHEWS81236X
TS-60	WORK TABLE, 30" X 18"		
TS-61	SUPPLEMENT HOLDER	CAL-MIL	TS-CAL-1025-6-39
TS-62	DRAIN BOARD	JOHN BOOS	TS-JB-UBDB-2124
TS-62A	CUSTOM SHELF	JOHN BOOS	TS-JOHZ-TS32A-18-BHS1224
TS-63A	REFRIGERATOR, UNDERCOUNTER	HOSHIZAKI	HR24C-G
TS-63B	FREEZER, UPRIGHT	BEVERAGE AIR	CT1HC-1HG
TS-64	EMV CARD READER		
TS-74D	MILLWORK SOFFIT		
TS-74E	THREADED MOUNTING RODS FOR SOFFIT		

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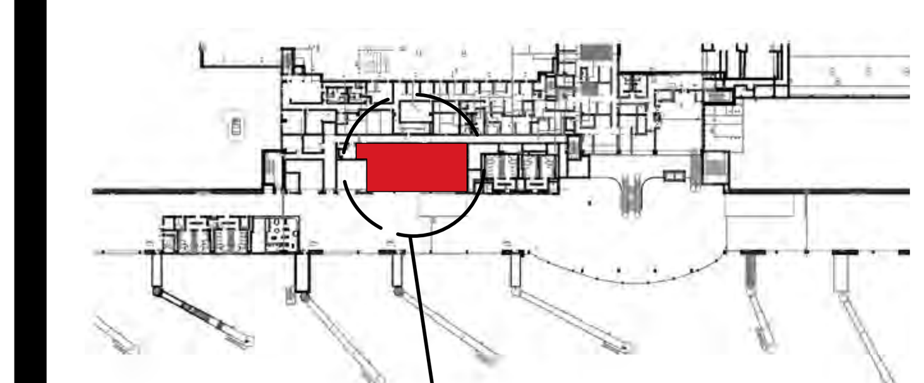
Notes



Revision	By	Appd	YYYY.MM.DD

Issued	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	MY/NY	JR	2024.12.20
ISSUED FOR 90% SUBMISSION	MY/NY	JR	2024.12.02
60% FOR VENDOR REVIEW	MY/NY	JR	2024.09.27
ISSUED FOR 60% SUBMISSION	MY/NY	JR	2024.09.26
ISSUED FOR 30% SUBMISSION	MY	JR	2024.07.12

File Name: N/A

Dwn. Dsgn. Chkd. YYYY.MM.DD

Permit/Seal

DOUGLAS G. COX — NORTH CAROLINA — RALEIGH, N.C.

12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL — tropical SMOOTHIE CAFE — JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

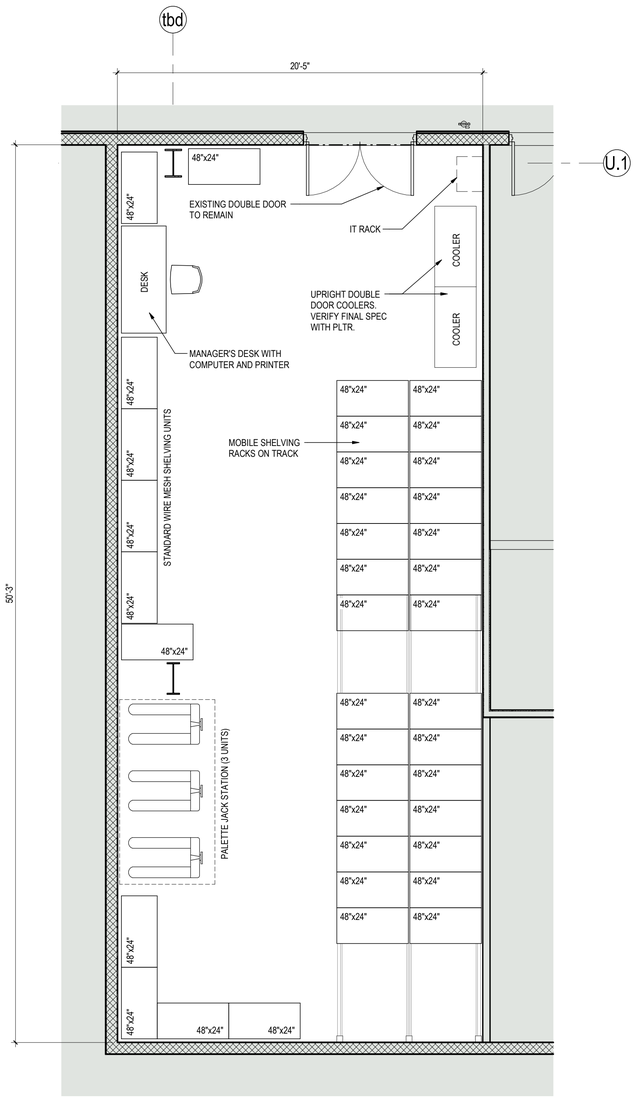
Title

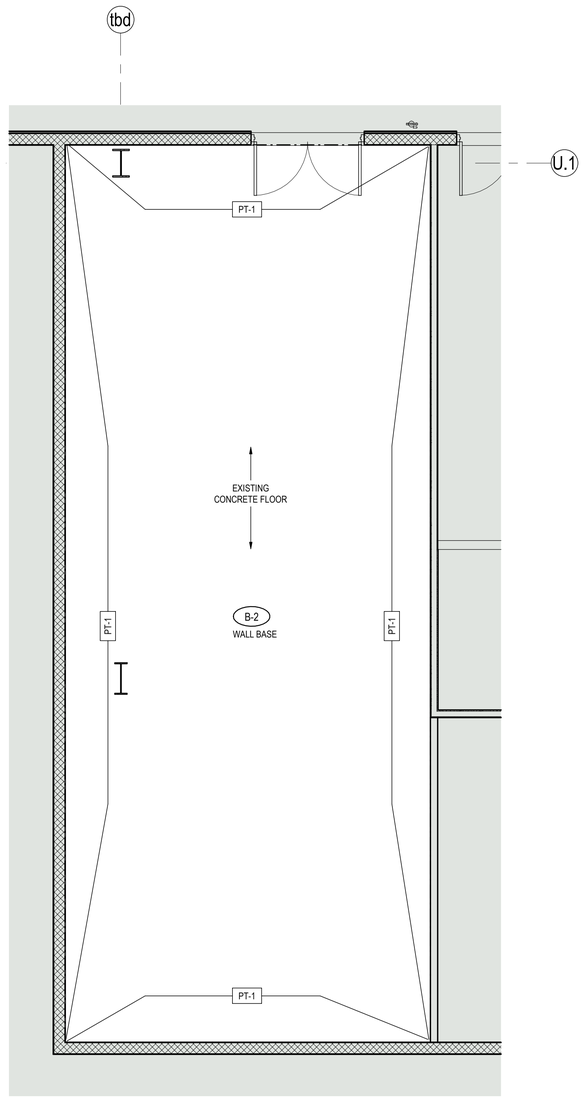
FURNITURE & EQUIPMENT PLAN

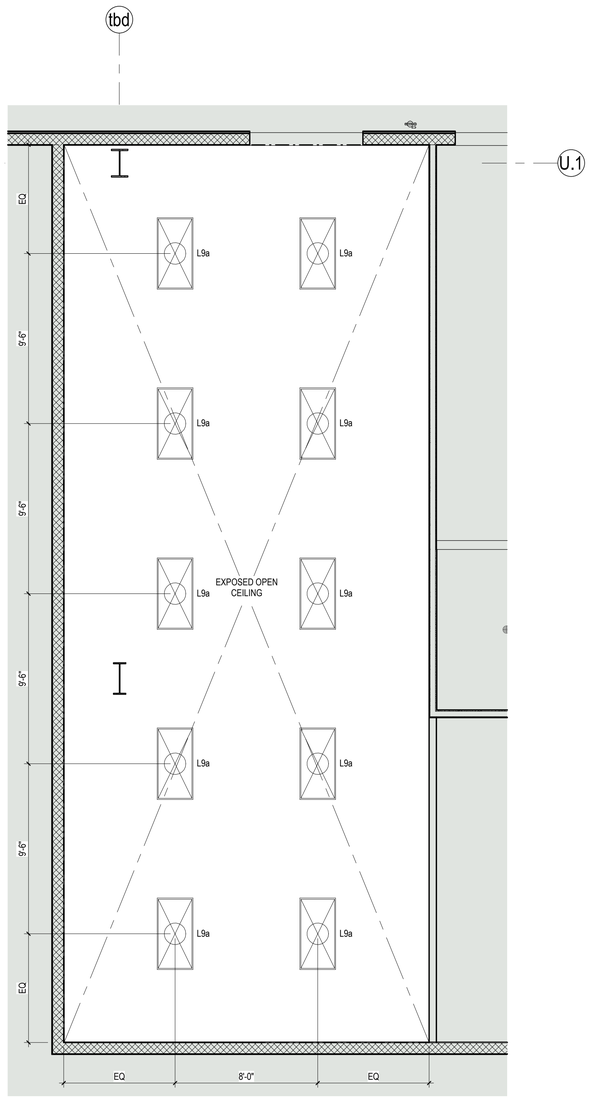
Project No.	Scale
144324057	1/4" = 1'-0"
Revision	Drawing No.
	A110

ORIGINAL SHEET - ARCH D

LIGHTING SCHEDULE (FOR LEVEL 1)			
TAG	DESCRIPTION	FINSIH	COMMENT
L9a	2'x4' LED LIGHT FIXTURE		SUSPENDED AT 9'-0" AFF







PROJECT NORTH

N

1 LEVEL 1 STORAGE ROOM PLAN

1/4" = 1'-0"

2 LEVEL 1 STORAGE ROOM FINISH PLAN

1/4" = 1'-0"

3 LEVEL 1 STORAGE ROOM LIGHTING PLAN

1/4" = 1'-0"

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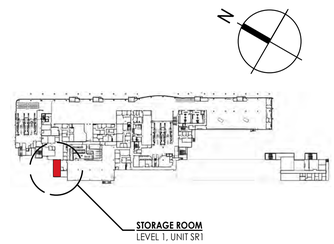

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tropical SMOOTHIE CAFE JJ JIMMY JOHN'S

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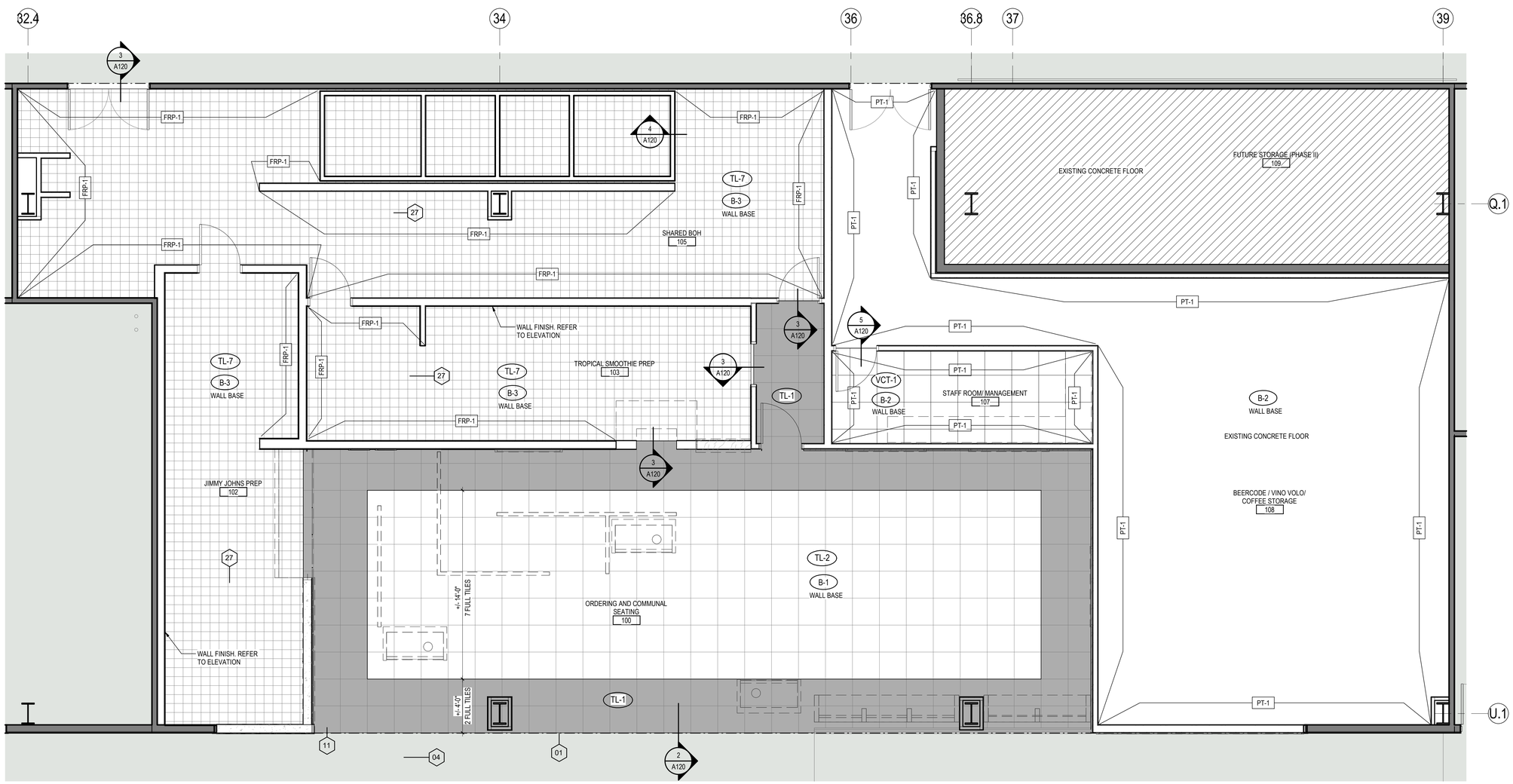
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

LEVEL 1 - STORAGE ROOM PLAN

Project No.	Scale
144324057	1/4" = 1'-0"
Revision	Drawing No.
	A111



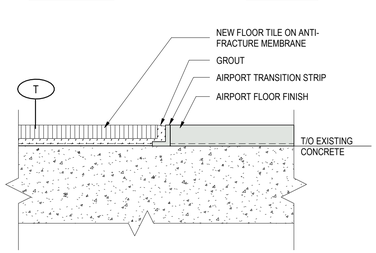
1 FLOOR FINISH PLAN

1/4" = 1'-0"

PROJECT NORTH

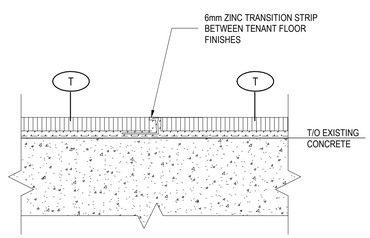
N

TENANT SPACE | CONCOURSE



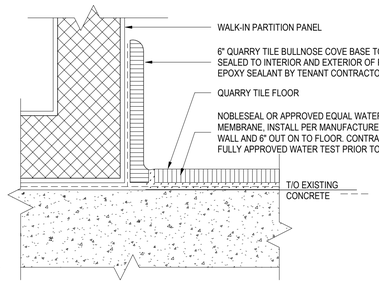
2 TILE TO CONCOURSE

N.T.S.



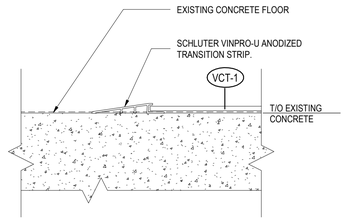
3 TILE TO TILE

N.T.S.



4 TILE BASE @ WALK-IN COOLER WALL

N.T.S.



5 TILE TO VINYL FLOOR

N.T.S.

GENERAL FINISH NOTES

A	TENANT CONTRACTOR TO PREPARE EXISTING FLOOR SLAB TO ACCEPT NEW FLOOR FINISH.
B	ALL FIELD TILE FLOORING GROUT JOINTS TO BE 1/8" WIDE AND SEALED.
C	TENANT CONTRACTOR TO PROVIDE FLOORING CONTROL JOINTS AS REQUIRED. TENANT CONTRACTOR TO REVIEW CONTROL JOINT LOCATIONS WITH DESIGNER. PROVIDE TRAFFIC TOPPING SEALANT W/COLOUR TO MATCH GROUT AT ALL CONTROL JOINTS.
D	PATCH ALL HOLES IN STRUCTURAL SLAB WITH 2HR. RATED CONCRETE CONSTRUCTION TO MATCH EXISTING AND TO PROVIDE 2HR. CONTINUOUS 2HR. RATED FLOOR SLAB SUBSTRATE.
E	PROVIDE SCHLUTER-DECO ANODIZED ALUMINUM TRANSITION STRIP BETWEEN NEW FLOORING AND EXISTING AIRPORT FLOORING.
F	SALVAGE AND REMOVE EXISTING AIRPORT FLOORING AND SURRENDER TO AIRPORT ALL FINISHES SPECIFIED.
G	ALL WALL FINISHES & TRIMS ARE TO CONTINUE BEHIND ALL FREE-STANDING PERIMETER MILLWORK UNITS.
H	ALL TILE SHALL RUN UNDER MILLWORK ITEMS, EQUIPMENT & TENANT FIXTURES.
I	TENANT CONTRACTOR TO PROVIDE HARD SURFACE PROTECTION OF TILE FLOORING DURING CONSTRUCTION.
J	PATCH AND REPAIR ALL AFFECTED BASE BUILDING ELEMENTS.
K	PROVIDE ANTI-FRACTURE MEMBRANE BETWEEN THINSETS.
L	ALL FLOOR TILES SHALL HAVE A MINIMUM DYNAMIC COEFFICIENT OF FRICTION (COF) OF 0.6.

KEYNOTE LEGEND

01	LEASE LINE - TC TO CONFIRM WITH LANDLORD FOR FINAL LOCATION OF LEASE LINE PRIOR TO START OF CONSTRUCTION
04	BASE BUILDING FLOOR FINISH - TC TO PROTECT DURING CONSTRUCTION
11	TILE SET-OUT POINT - START WITH FULL TILE
27	PROVIDE CONTINUOUS WATERPROOFING MEMBRANE IN BOH/ KITCHEN. SERVERY AREAS BETWEEN THINSET. INSTALL MEMBRANE AS PER MANUFACTURER'S RECOMMENDATION.

FINISH PLAN LEGEND

- NOT IN CONTRACT
- AREA IN CONTRACT
- X — KEYNOTE
- XX-# — WALL FINISH

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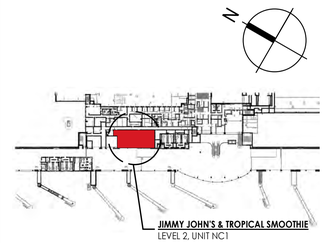

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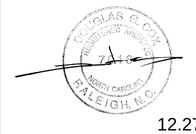


12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

FLOOR FINISH PLAN

Project No. 144324057

Scale As indicated

Revision

Drawing No. A120

MATERIALS AND FINISHES LIST

ACOUSTIC CEILING TILE

ACT-1	ACOUSTIC CEILING TILE	
ACT-2	MANU:	ARMSTRONG CEILINGS
	SERIES:	ULTIMA, TEGULAR 9/16"
	COLOR:	WHITE
	SIZE:	24"x24" (ACT-1) / 24" x48" (ACT-2)
	LOCATION:	BOH CEILING, AS NOTED
	REMARKS:	CLASS A FIRE RATED. MUST COMPLY WITH LATEST STATE BUILDING CODE.

BASE - WALL BASE

B-1	TILE BASE	
	MANU:	DALTILE
	SERIES:	PORTFOLIO
	REMARKS:	ASH GREY PF05 5/16" 6" HEIGHT MAPEI #02 PEWTER
	LOCATION:	AS NOTED, REFER TO DRAWINGS
B-2	RESILIENT WALL BASE	
	MANU:	JOHNSONITE
	SERIES:	32 PEBBLE WG
	REMARKS:	FIRE DATA - ASTM E 648 (NFPA 253): CRITICAL RADIANT FLUX - CLASS I. CONTROL SAMPLE TO BE PROVIDED TO DESIGNER FOR REVIEW.
	LOCATION:	BOH
B-3	QUARRY TILE BASE	
	MANU:	DALTILE
	SERIES:	ASHEN GREY 0T03 (2)
	CODE:	COVE BASE Q3585
	LOCATION:	AS NOTED, REFER TO DRAWINGS
	GROUT:	MAPEI #11 SAHARA BEIGE

FIRE-REINFORCED PLASTIC

FRP-1	FRP	
	MANU:	MARLITE
	SERIES:	S-100 - S/2/S
	FINISH:	SMOOTH FINISH
	COLOR:	WHITE
	SIZE:	4'X8'X3/32" OR 4'X10'X3/32"
	LOCATION:	AS NOTED, REFER TO DRAWINGS
	NOTE:	BOH WALLS - PREP SIDE OF MILLWORK WHEN SITE BUILT OUTSIDE CORNER TRIM MUST BE 1-1/2" x 1 -1/2" NON-INTEGRATED. U.N.O.

GRAPHIC PANEL

NOTE:	GRAPHICS TO BE INSTALLED PER MANUFACTURER RECOMMENDATION	
GP-1	GRAPHIC PANEL	
	1/8" CUSTOM PHENOLIC WALL PANEL WITH EMBEDDED GRAPHIC	
	MANU:	IZONE IMAGING
	SUPP:	SIGNAGE CONTRACTOR
	REP:	LYNDSAY BLAIR, 254-314-8257
	PATTERN:	CUSTOM GRAPHIC
	SIZE:	MAXIMUM PANELSIZE 60" X 144"
	THK:	1/8"
	LOCATION:	STOREFRONT

GRAPHICS

NOTE:	GRAPHICS TO BE INSTALLED PER MANUFACTURER RECOMMENDATION	
GR-1	GRAPHICS	
	SUPP:	SIGNAGE CONTRACTOR
	PATTERN:	CUSTOM GRAPHIC
	SIZE:	REFER TO INTERIOR ELEVATIONS
	LOCATION:	AS NOTED, REFER TO DRAWINGS

METAL

MT-1	POWDER COATED METAL	
	MANU:	TIGER DRYLAC
	SUPP:	MC
	FINISH:	MATTE
	CODE:	RAL7021
	LOCATION:	AS NOTED, REFER TO DRAWINGS
MT-2	POWDER COATED METAL	
	MANU:	TIGER DRYLAC
	SUPP:	MC
	FINISH:	MATTE
	CODE:	RAL9016
	LOCATION:	AS NOTED, REFER TO DRAWINGS

PLASTIC LAMINATE

PL-1	LAMINATE	
	MANU:	FENIX (FORMICA)
	COLOUR:	NERO INGO
	FINISH:	-
	CODE:	J0720
	LOCATION:	JIMMY JOHN'S, REFER TO DRAWINGS
PL-2	LAMINATE	
	MANU:	FORMICA
	COLOUR:	SPECTRUM RED
	FINISH:	MATTE
	CODE:	845C-58
	LOCATION:	JIMMY JOHN'S, REFER TO DRAWINGS
PL-3	LAMINATE	
	MANU:	WILSONART
	COLOUR:	NATURAL RECON
	FINISH:	FINE VELVET FINISH
	CODE:	7996-38
	LOCATION:	TROPICAL SMOOTHIE, REFER TO DRAWINGS
PL-4	LAMINATE	
	MANU:	ARBORITE
	COLOUR:	CUSTOM GREY
	FINISH:	-
	CODE:	S548-CA
	LOCATION:	TROPICAL SMOOTHIE, REFER TO DRAWINGS
PL-5	LAMINATE	
	MANU:	WILSONART
	COLOUR:	FROSTY WHITE
	FINISH:	MATTE
	CODE:	1573-60
	LOCATION:	TROPICAL SMOOTHIE, REFER TO DRAWINGS

PAINT

NOTES:	WALLS:	LO SHEEN EGGSHELL LATEX
	DOORS:	SEMI-GLOSS ALKYD
	CLGS:	FLAT LATEX
	SLATS:	LO SHEEN MATTE ALKYD
PT-1	LOW-VOC PAINT	
	MANU:	SHERWIN-WILLIAMS
	COLOR:	ALABASTER
	CODE:	SW7008
	LOCATION:	JIMMY JOHN'S, REFER TO DRAWINGS
PT-2	LOW-VOC PAINT	
	MANU:	SHERWIN-WILLIAMS
	COLOR:	TRICORN BLACK
	CODE:	SW6258
	LOCATION:	JIMMY JOHN'S, REFER TO DRAWINGS
PT-3	LOW-VOC PAINT	
	MANU:	SHERWIN-WILLIAMS
	COLOR:	BREAKTIME
	CODE:	SW6463
	LOCATION:	TROPICAL SMOOTHIE, REFER TO DRAWINGS
PT-4	LOW-VOC PAINT	
	MANU:	SHERWIN-WILLIAMS
	COLOR:	REAL RED
	CODE:	SW6868
	LOCATION:	JIMMY JOHN'S, REFER TO DRAWINGS
PT-5	LOW-VOC PAINT	
	MANU:	SHERWIN-WILLIAMS
	COLOR:	GRAY MATTERS
	CODE:	SW7066
	LOCATION:	JIMMY JOHN'S, REFER TO DRAWINGS
PT-6	LOW-VOC PAINT	
	MANU:	SHERWIN-WILLIAMS
	COLOR:	WESTCHESTER GRAY
	CODE:	SW2849
	LOCATION:	JIMMY JOHN'S, REFER TO DRAWINGS
PT-7	LOW-VOC PAINT	
	MANU:	SHERWIN-WILLIAMS
	COLOR:	EMOTIONAL
	CODE:	SW6621
	LOCATION:	TROPICAL SMOOTHIE, REFER TO DRAWINGS

TILE

TL-1	PORCELAIN TILE	
	MANU:	DALTILE
	SERIES:	PORTFOLIO
	COLOUR:	ASH GREY PF05
	THICKNESS:	5/16"
	SIZE:	24" X 24"
	GROUT:	MAPEI #5002 PEWTER
	LOCATION:	AS NOTED, REFER TO DRAWINGS
TL-2	PORCELAIN TILE	
	MANU:	DALTILE
	SERIES:	PORTFOLIO
	COLOUR:	DOVE GREY PF04
	THICKNESS:	5/16"
	SIZE:	24" X 24"
	GROUT:	MAPEI #5002 PEWTER
	LOCATION:	AS NOTED, REFER TO DRAWINGS
TL-3	PORCELAIN TILE	
	MANU:	DALTILE
	SERIES:	COLOR WHEEL CLASSIC
	COLOUR:	ARCTIC WHITE 0190 (GLOSS)
	THICKNESS:	5/16"
	SIZE:	3" X 6"
	GROUT:	MAPEI #5038 AVALANCHE
	LOCATION:	JIMMY JOHN'S, REFER TO DRAWINGS
TL-4	PORCELAIN TILE	
	MANU:	DALTILE
	SERIES:	COLOR WHEEL CLASSIC
	COLOUR:	ARCTIC WHITE 0190
	THICKNESS:	5/16"
	SIZE:	4" X 12"
	GROUT:	MAPEI #5009 GRAY
	LOCATION:	TROPICAL SMOOTHIE, REFER TO DRAWINGS
TL-5	PORCELAIN TILE	
	MANU:	DALTILE
	SERIES:	COLOR WHEEL CLASSIC
	COLOUR:	BLACK SUBWAY (GLOSS)
	THICKNESS:	5/16"
	SIZE:	3" X 6"
	GROUT:	MAPEI #5038
	LOCATION:	JIMMY JOHN'S, REFER TO DRAWINGS
TL-6	PORCELAIN TILE (NOT USED)	
	MANU:	CROSSVILLE
	SERIES:	SWATCHES
	COLOUR:	LIPSTICK RED GLOSS
	THICKNESS:	5/16"
	SIZE:	3" X 12"
	GROUT:	MAPEI #5038
	LOCATION:	JIMMY JOHN'S, REFER TO DRAWINGS
TL-7	QUARRY TILE	
	MANU:	DALTILE
	SERIES:	QUARRY TEXTURES
	COLOUR:	ASHEN GREY 0T03 (2)
	THICKNESS:	1/2"
	SIZE:	8" X 8"
	GROUT:	MAPEI #11 SAHARA BEIGE
	LOCATION:	BOH AS NOTED, REFER TO DRAWING

WOOD PANELLING

NOTE:	TO BE INSTALLED PER MANUFACTURER RECOMMENDATION	
WDP-1	WOOD PANEL	
	MANU:	ANTHOLOGY
	COLOR:	GREY MEDLEY OAK
	LOCATION:	JIMMY JOHN'S, REFER TO DRAWINGS

WALL COVERING

NOTE:	TO BE INSTALLED PER MANUFACTURER RECOMMENDATION	
WC-1	WALLCOVERING	
	SUPP:	SIGNAGE CONTRACTOR
	NOTES:	"JJ" WALL PAPER ARTWORK
	LOCATION:	JIMMY JOHN'S, REFER TO DRAWINGS

SOLID SURFACE

SDSU-1	SOLID SURFACE	
	MANU:	CORIAN SOLID SURFACE
	COLOUR:	RAIN CLOUD
	LOCATION:	AS NOTED, REFER TO DRAWINGS
SDSU-2	SOLID SURFACE	
	MANU:	HI-MACS
	COLOUR:	TROPICAL TEAL
	LOCATION:	TROPICAL SMOOTHIE, REFER TO DRAWINGS

QUARTZ

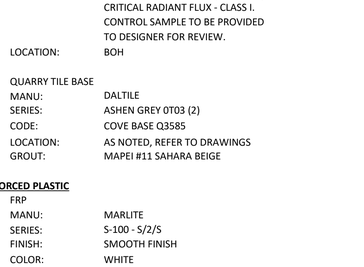
QZ-1	QUARTZ SURFACE	
	MANU:	CEASARSTONE
	COLOUR:	JET BLACK
	CODE:	3100
	LOCATION:	JIMMY JOHN'S, REFER TO DRAWINGS
QZ-2	QUARTZ SURFACE	
	MANU:	LX HAUSYS -VIATERA
	COLOUR:	SHADOW GRAY
	FINISH:	POLISHED
	LOCATION:	JIMMY JOHN'S, REFER TO DRAWINGS

SOLID WOOD

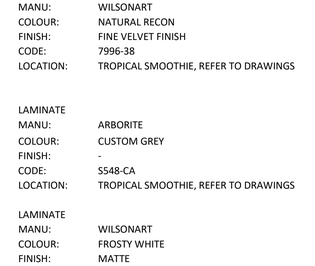
WD-1	WOOD (TBD)	
	MANU:	JOHN BOOS OR EQUAL
	TYPE:	BUTCHER BLOCK TOP LAMINATED CLEAR THROUGH, WRAP RESISTANT AND ELECTRONICALLY THERMOBONED.
	WOOD:	MAPLE -EDGE GRAINED
	THICKNESS:	1-1/2" - 1-3/4"
	FINISH:	VARNIQUE. IF VARNIQUE SURFACE IS CUT, IT WILL NEED TO BE RE-SEALED USING BOOS EZ-DO FINISH OR DURAKRYL 102
	LOCATION:	TROPICAL SMOOTHIE, REFER TO DRAWINGS
	REMARKS:	CONTROL SAMPLE TO BE PROVIDED TO DESIGNER FOR REVIEW
WD-2	WOOD	
	MANU:	TC
	COLOR:	STAIN TO MATCH PL-3
	FINISH:	CLASS A
	SIZE:	REFER TO DRAWING
	LOCATION:	AS NOTEE, REFER TO DRAWINGS
	REMARKS:	CONTROL SAMPLE TO BE PROVIDED TO DESIGNER FOR REVIEW

VINYL COMPOSITE TILE

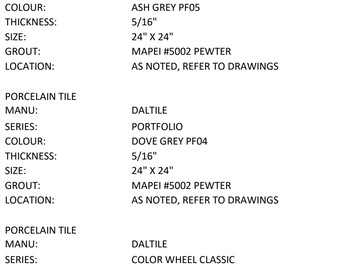
VCT-1	VINYL COMPOSITE TILE	
	MANU:	TARKETT VCT
	COLOUR:	COOL GARY
	CODE:	1324
	SIZE:	12"x12"
	LOCATION:	BOH



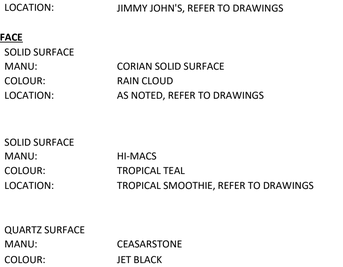
1 TILE FINISH
1 : 5



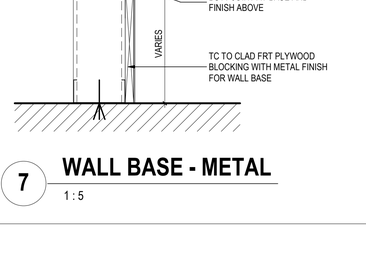
2 PLASTIC LAMINATE FINISH
1 : 5



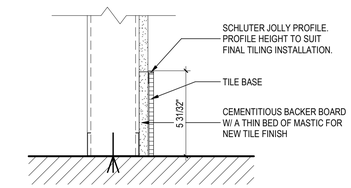
3 WOOD PANEL FINISH
1 : 5



4 GRAPHICS FINISH
1 : 5

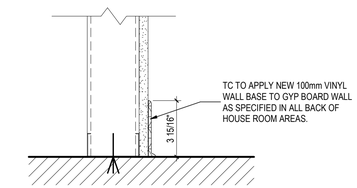


5 FRP FINISH
3" = 1'-0"

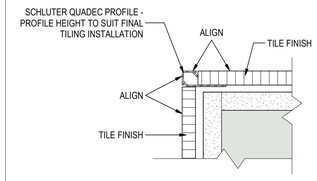


6 WALL BASE - TILE
1 : 5

7 WALL BASE - METAL
1 : 5



8 WALL BASE - VINYL
1 : 5



9 TILE CORNER DETAIL
NTS

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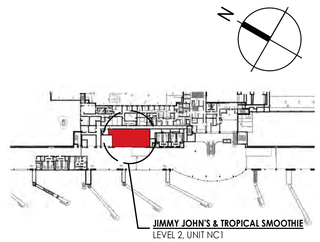
Notes



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ISSUED FOR PERMIT	MY/NY	JR	2024.12.20
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60% FOR VENDOR REVIEW	MY/NY	JR	2024.09.27
ISSUED FOR 60% SUBMISSION	MY/NY	JR	2024.09.26
ISSUED FOR 30% SUBMISSION	MY	JR	2024.07.12

Issued	By	Appd	YYYY.MM.DD
File Name: N/A	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

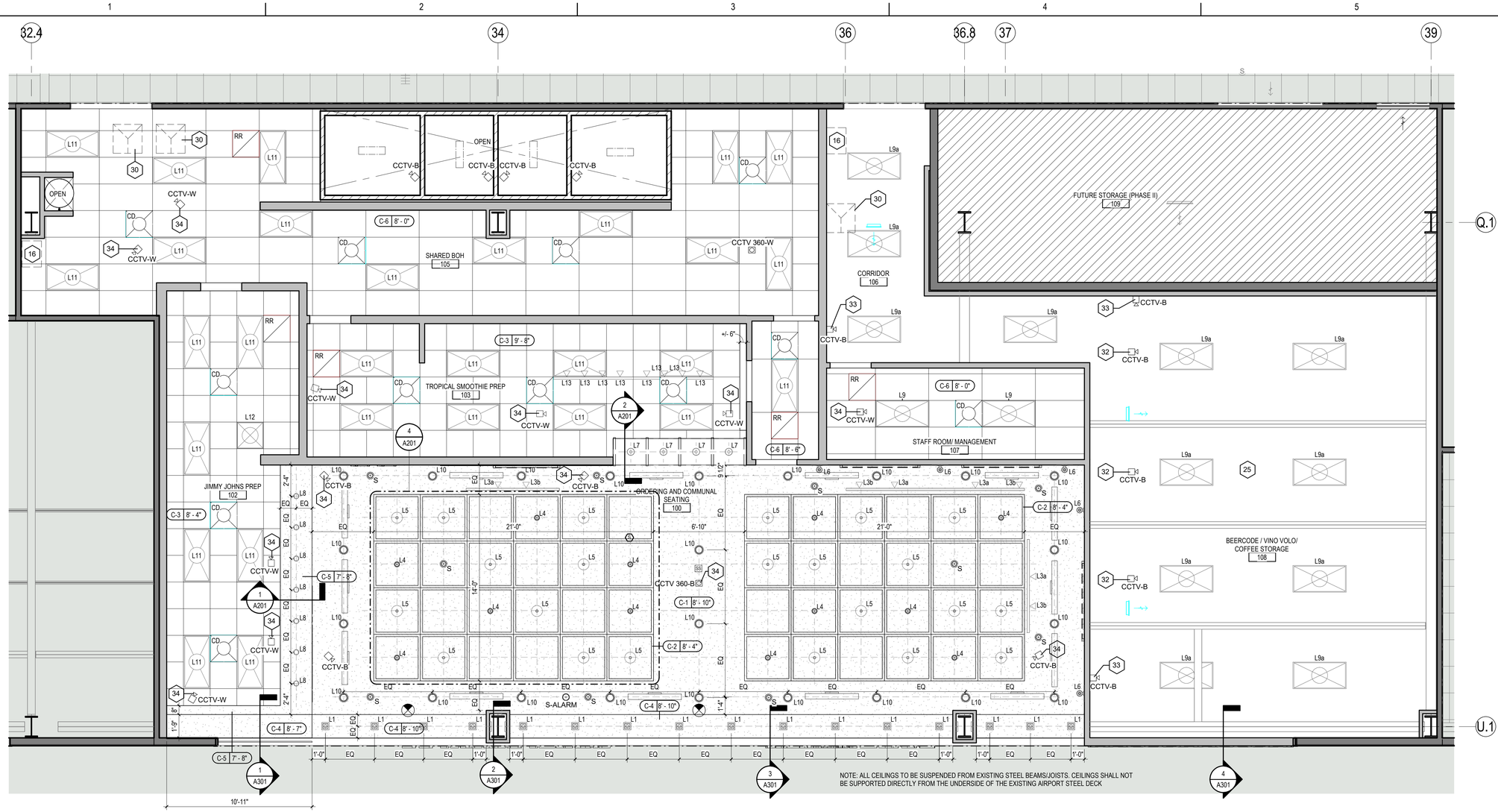
LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

MATERIAL & FINISHES SCHEDULE

Project No.	Scale
144324057	As indicated
Revision	Drawing No.
	A122

ORIGINAL SHEET - ARCH D



PROJECT NORTH

N

1 REFLECTED CEILING & LIGHTING PLAN

1/4" = 1'-0"

RCP LEGEND

	NOT IN CONTRACT
	AREA IN CONTRACT
	EXISTING BASE BUILDING
X	KEYNOTE
CCTV-B	FIXED CAMERA - CAMERA TO BE IN BLACK FINISH
CCTV-W	FIXED CAMERA - CAMERA TO BE IN WHITE FINISH
CCTV 360-B	360 DEGREES CAMERA - CAMERA TO BE IN BLACK FINISH
CCTV 360-W	360 DEGREES CAMERA - CAMERA TO BE IN WHITE FINISH
SS	CEILING MOUNTED SOUNDER STROBE. VERIFY FINAL LOCATION WITH PARADIES LAGARDERE MANAGER; IN BLACK FINISH
S-ALARM	CEILING MOUNTED SPEAKER (SECURITY ALARM) VERIFY FINAL LOCATION WITH PARADIES LAGARDERE MANAGER; IN BLACK FINISH
S	CEILING MOUNTED MUSIC SPEAKER . CONNECTED TO MOOD MEDIA AND TO BE TIED-IN TO BASE BUILDING FIRE ALARM. TENANT MUSIC TO BE TERMINATED DURING EMERGENCIES; IN BLACK FINISH
	EXIT SIGN
RR	RETURN REGISTER; IN WHITE FINISH
CD	CEILING DIFFUSER; IN WHITE FINISH
	SPRINKLERS

CEILING SCHEDULE

TYPE	DESCRIPTION	FINISH	COMMENT
C-1	GYPSUM BOARD CEILING	PT-2	
C-2	WOOD CEILING	PL-3	
C-3	2x2 ACOUSTIC TILE	ACT-1	
C-4	STOREFRONT BULKHEAD	PT-1	
C-5	GYPSUM BOARD BULKHEAD	PT-4	
C-6	2x4 ACOUSTIC TILE	ACT-2	

LIGHTING SCHEDULE

TYPE	DESCRIPTION	FINISH	COMMENT
L1	ADJUSTABLE LED DOWNLIGHT (SINGLE)	BLACK	
L3a	LED TRACK LIGHT HEAD - NARROW FLOOD	BLACK	
L3b	LED TRACK LIGHT HEAD	BLACK	
L4	SURFACE MOUNTED LED DOWNLIGHT	BLACK	
L5	FEATURE PENDANT LIGHTING		
L6	WALL SCONCE	WD-2	REFER TO ELEVATION
L7	FEATURE PENDANT LIGHTING		
L8	RECESSED DOWNLIGHT	WHITE	
L9	2'x4' LED LIGHT FIXTURE	WHITE	
L9a	2'x4' LED LIGHT FIXTURE	WHITE	
L10	RECESSED ADJUSTABLE DOWNLIGHT	BLACK	
L11	2'x4' LED LIGHT FIXTURE	WHITE	
L12	2'x2' LED LIGHT FIXTURE	WHITE	
L13	LED TRACK LIGHT HEAD	WHITE	

KEYNOTE LEGEND

16	I.T. EQUIPMENT RACK - MINIMUM 2200mm (7'-2 1/2") AFF. CONFIRM FINAL LOCATION WITH CLIENT PRIOR TO INSTALLATION.
25	EXPOSED CEILING
30	TC TO PROVIDE ENGINEERED HANGING SYSTEM FOR SUSPENDED ELECTRICAL TRANSFORMER AS REQUIRED. REFER TO ELECTRICAL DRAWING.
32	POLE MOUNTED. TC TO INSTALL POLES (BLACK FINISH). POLE HEIGHT TO SUIT CAMERA HEIGHT. CAMERA HEIGHT AT +/- 8'-0" AFF (ALIGN UNDERSIDE OF LIGHT PENDANT). TC TO PROVIDE CONCEALED BLOCKING/SUPPORT AS REQUIRED IN CEILING SPACE.
33	WALL MOUNTED. CAMERA HEIGHT AT +/- 8'-0" AFF. TC TO PROVIDE CONCEALED BLOCKING/SUPPORT AS REQUIRED IN CEILING SPACE.
34	CEILING MOUNTED. TC TO PROVIDE CONCEALED BLOCKING/SUPPORT AS REQUIRED IN CEILING SPACE.

GENERAL RCP NOTES

A	ALL CEILING HEIGHTS ARE FROM TOP OF FINISH FLOOR TO UNDERSIDE OF FINISH CEILING OR LIGHT FIXTURE - TYP. U.N.O.
B	THE TRADE CONTRACTOR SHALL SET ALL CEILING AND SOFFITS USING A LASER LEVEL TO ACHIEVE A CEILING THAT IS PLUMB, LEVEL AND SQUARE TO ALL WALLS AND SOFFITS.
C	BRACING FOR SUSPENDED CEILING MUST BE PROVIDED BY CEILING CONTRACTOR. ANY ADDITIONAL HANGERS AND SAFETY WIRES THAT MAY BE USED FOR LIGHT FIXTURES, DUCTWORK, SPEAKERS, ETC. TO BE THE RESPONSIBILITY OF THE CEILING CONTRACTOR.
D	THE TRADE CONTRACTOR TO VERIFY W/ LANDLORD, METHOD OF ATTACHMENT FOR ALL ITEMS ANCHORED TO, OR SUSPENDED FROM EXISTING STEEL STRUCTURE.
E	ARCHITECTURAL DWGS DETERMINE THE LOCATION OF LUMINAIRES & SUPERSEDE ALL OTHERS, TYP. U.N.O. - REFER TO ELECTRICAL DRAWINGS FOR EXACT FIXTURE TYPE & QUANTITIES PROVIDED.
F	PROVIDE ADEQUATE CLEARANCES FOR FIXTURES, DUCTS, CEILINGS AND RELATED PERTINENT ITEMS NECESSARY TO MAINTAIN SPECIFIC HEIGHTS ABOVE FINISH FLOOR.
G	THE TRADE CONTRACTOR TO PROVIDE NECESSARY BLOCKING AND BRACING FOR FIXTURE INSTALLATION AND ALL ELECTRICAL COMPONENTS TO COMPLETE THE FINAL INSTALLATION OF ALL FIXTURE - COORDINATE WITH FIXTURE SUPPLIER.
H	DIMENSIONS ARE FROM FACE OF GWB TYP, U.N.O.
I	COORDINATE ADDITIONAL CEILING ACCESS DOORS W/ PROJECT MANAGER AND AS REQUESTED BY LANDLORD TO MAINTAIN ACCESS TO LANDLORD EQUIPMENT.
J	ALL RIGID CONDUIT AND JUNCTION BOXES TO BE RUN TIGHT TO DECK IN A CLEAN AND ORDERLY FASHION.
K	ALL CONCEALED PLYWOOD BACKING TO BE FIRE RETARDANT TREATED.
L	ALL ACCESS DOORS, DIFFUSERS, VENTS, RETURNS, SPRINKLER COVERS ETC MUST BE PAINTED TO MATCH ADJACENT CEILING FINISH - TYP. PROVIDE ACCESS PANELS AS REQUIRED. VERIFY LOCATIONS WITH DESIGNER. REFER TO M&E DRAWINGS FOR ACCESS PANEL LOCATIONS.
M	REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING EQUIPMENT LAYOUT AND SPECIFICATIONS.
N	TENANT CONTRACTOR TO VERIFY EXISTING STRUCTURE, DUCTWORK, EQUIPMENT, ETC., DOES NOT INTERFERE WITH NEW CEILING FINISH HEIGHTS SHOWN ON CEILING PLAN. TENANT CONTRACTOR TO NOTIFY DESIGNER IMMEDIATELY IF FINISHED CEILING HEIGHTS ARE NOT ATTAINABLE.
O	TENANT MUSIC SPEAKERS TIED-INTO BASE BUILDING FIRE ALARM SYSTEM

LIGHTING NOTES

A	INSTALLATION OF LIGHTING FIXTURES SHALL BE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND ACCORDING TO CODE REQUIREMENTS.
B	LAMPS SHALL BE AS SPECIFIED PER ELECTRICAL DRAWINGS - NO EXCEPTIONS.
C	LIGHTING DISTRIBUTOR TO PROVIDE ADDITIONAL LAMPS FOR FUTURE USE. COORDINATE QUANTITY WITH TENANT REP.
D	ELECTRICAL CONTRACTOR TO PROVIDE IDENTIFICATION NAMEPLATE ON THE ELECTRICAL SERVICE BREAKERS OF THE REMOTE ELECTRICAL PANEL. EACH NAMEPLATE SHALL BE 1/8" THICK BLACK PLASTIC ETCHED IN A CONTRASTING COLOR WITH THE TENANT'S NAME. EACH PLATE SHALL BE PERMANENTLY AFFIXED TO THE DISTRIBUTION PANEL.
E	TENANT CONTRACTOR TO COORDINATE LOCATION OF POWER REQUIREMENTS IN CASEWORK WITH MILLWORK CONTRACTOR.
F	REFER TO ELECTRICAL DRAWINGS FOR ALL LIGHTING/ELECTRICAL SPECIFICATIONS, DISTRIBUTION AND CIRCUIT SPECIFICATION.

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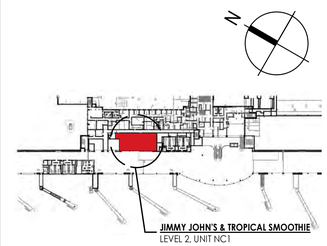
Notes



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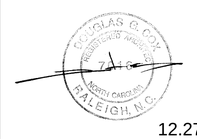

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Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

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Client/Project

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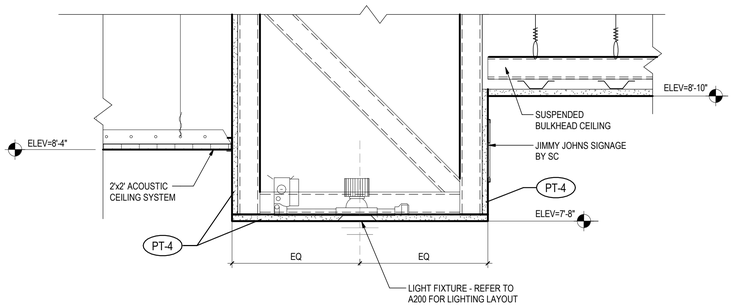
LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

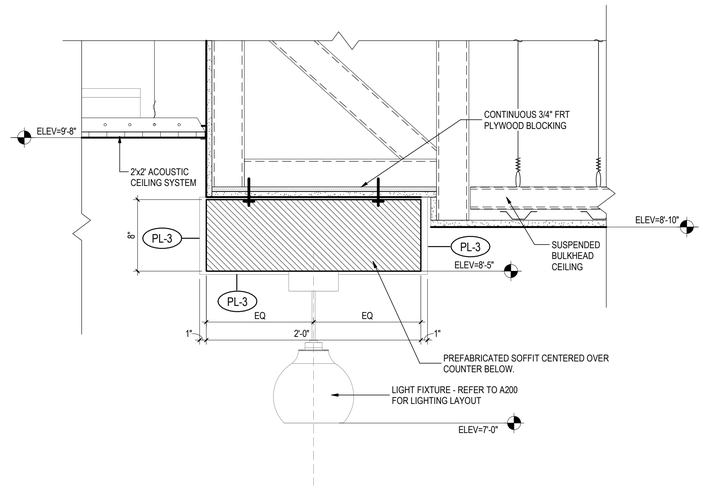
REFLECTED CEILING & LIGHTING PLAN

Project No.	Scale
144324057	As indicated
Revision	Drawing No.
	A200



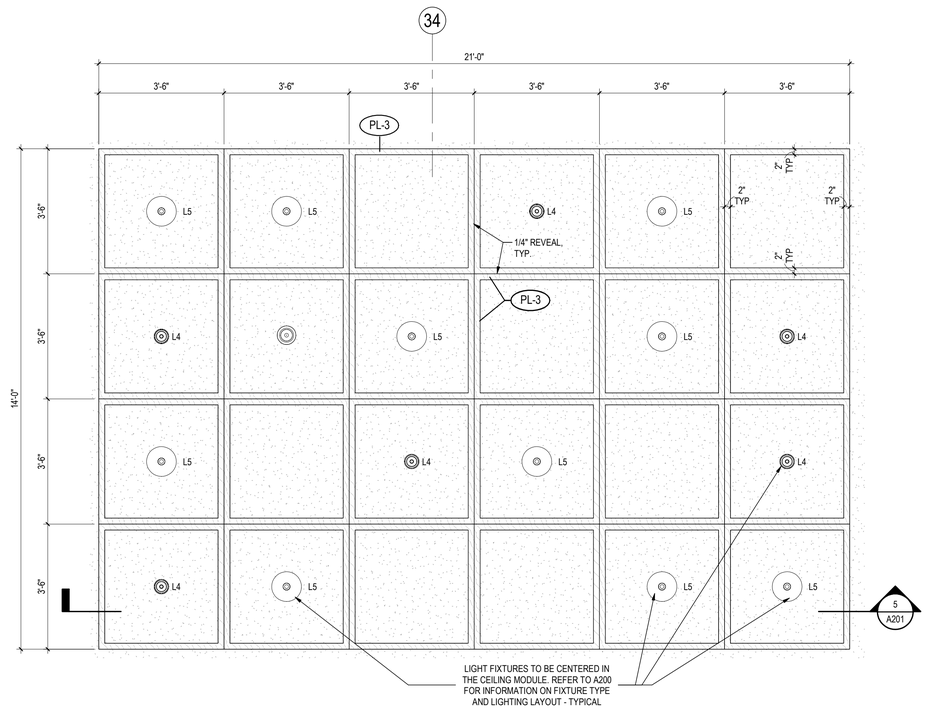
1 CEILING DETAIL

1 1/2" = 1'-0"



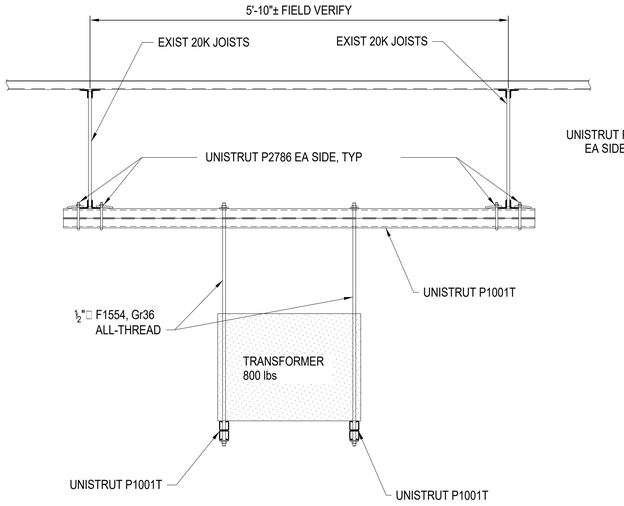
2 CEILING DETAIL

1 1/2" = 1'-0"



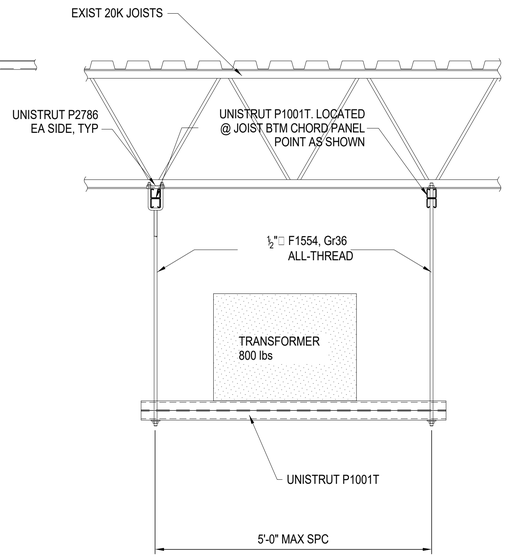
4 ENLARGED FEATURE CEILING PLAN

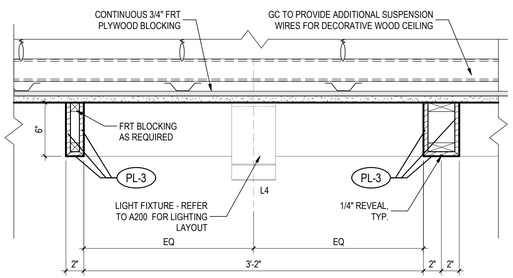
1/2" = 1'-0"

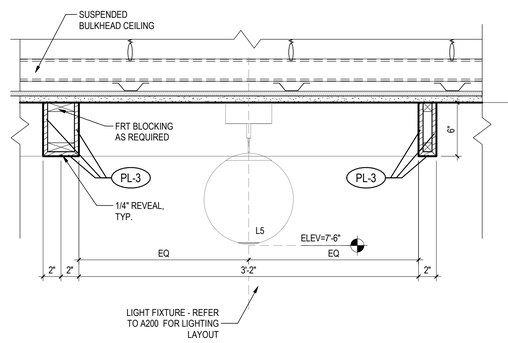


3 TRANSFORMER SUPPORT (BOH)

1" = 1'-0"







5 FEATURE CEILING DETAIL SECTION

1 1/2" = 1'-0"

NOTE: ALL CEILINGS TO BE SUSPENDED FROM EXISTING STEEL BEAMS/JOISTS. CEILINGS SHALL NOT BE SUPPORTED DIRECTLY FROM THE UNDERSIDE OF THE EXISTING AIRPORT STEEL DECK

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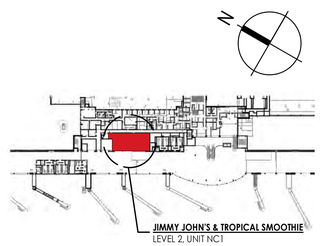

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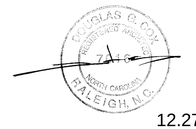

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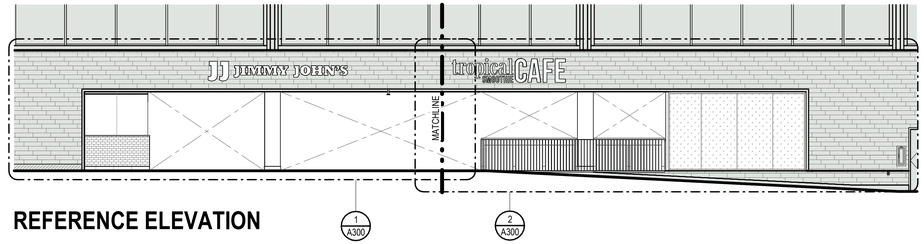
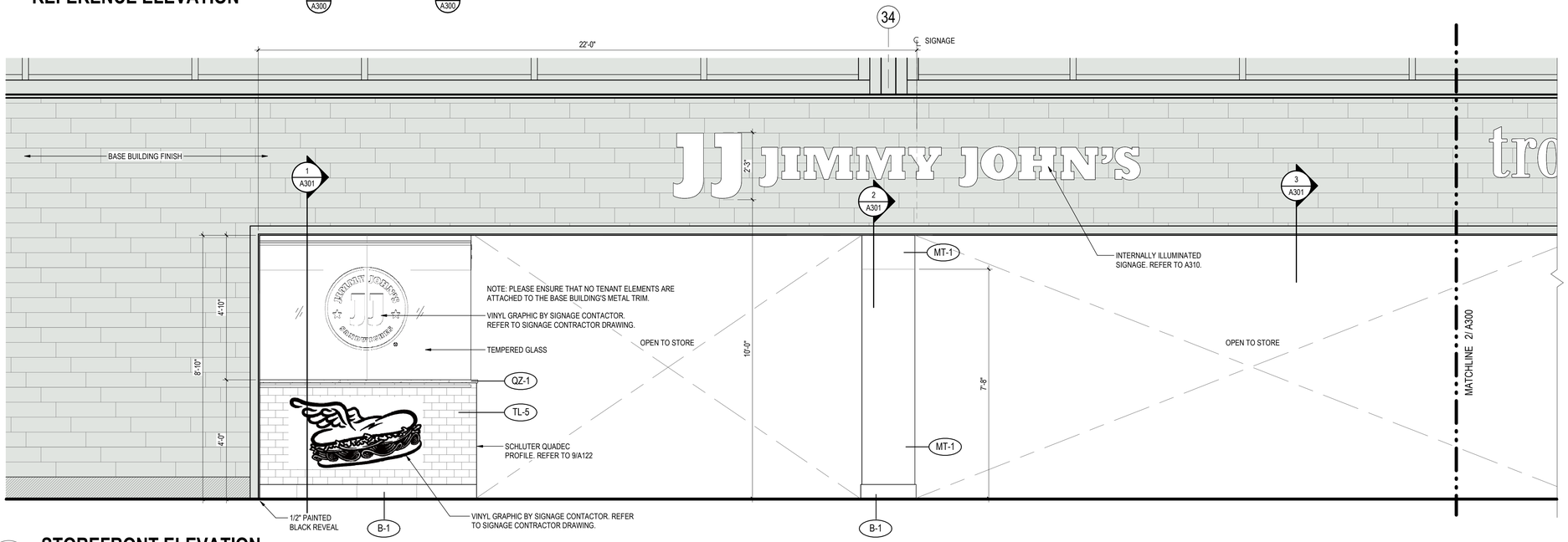
Title

CEILING DETAILS

Project No.	Scale
144324057	As indicated
Revision	Drawing No.
	A201

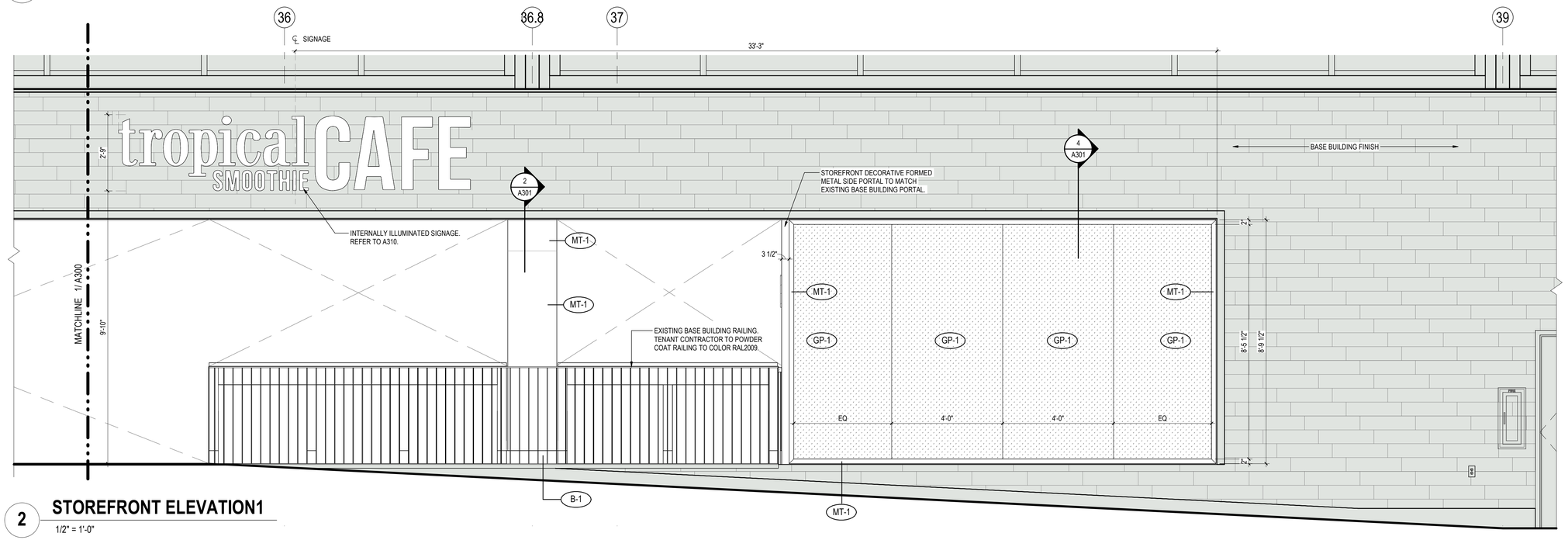


REFERENCE ELEVATION



1 STOREFRONT ELEVATION

1/2" = 1'-0"



2 STOREFRONT ELEVATION1

1/2" = 1'-0"

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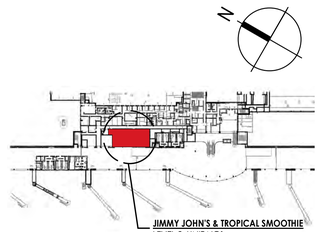

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Dwn. Dsgn. Chkd. YYYY.MM.DD

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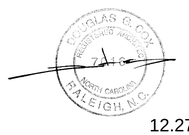

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NORTH CAROLINA, USA, 28732

Title

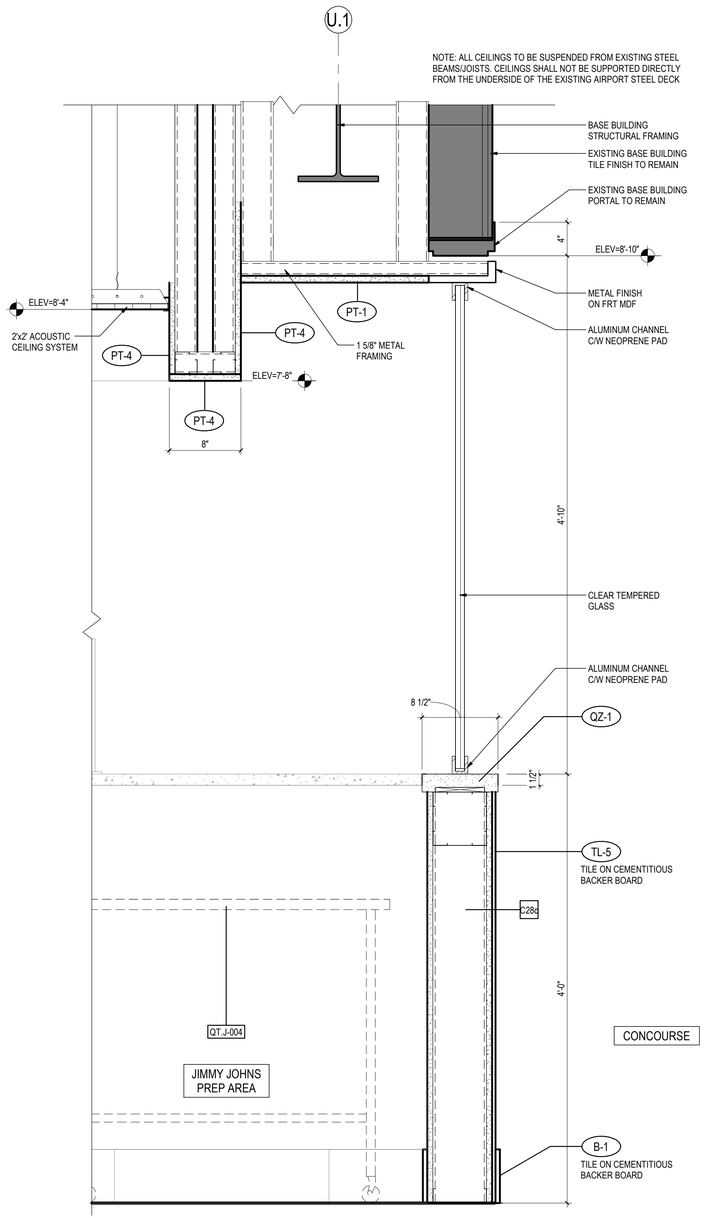
STOREFRONT ELEVATION

Project No. 144324057

Scale As indicated

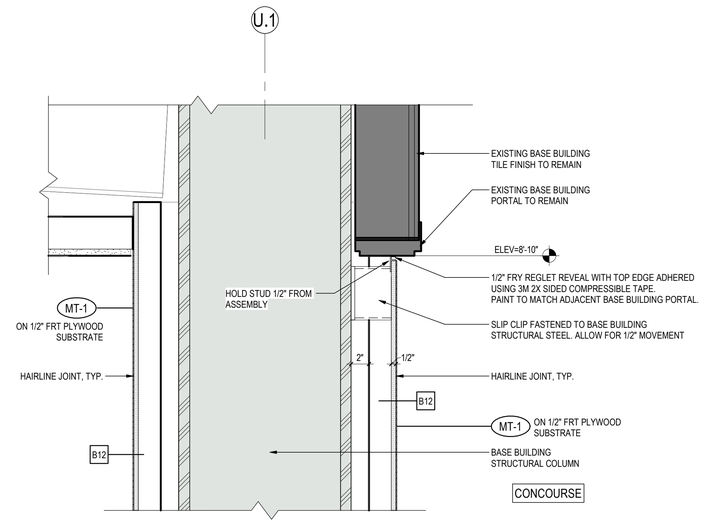
Revision

Drawing No. **A300**



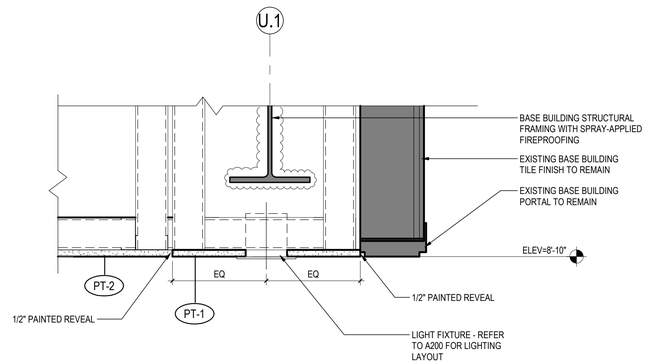
1 STOREFRONT SECTION

1 1/2" = 1'-0"



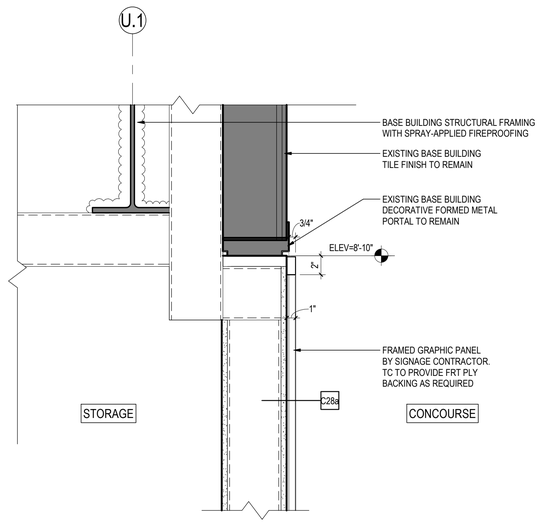
2 STOREFRONT SECTION

1 1/2" = 1'-0"



3 STOREFRONT SECTION

1 1/2" = 1'-0"



4 STOREFRONT SECTION

1 1/2" = 1'-0"

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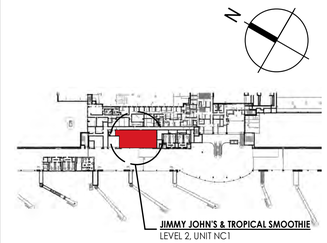

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LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

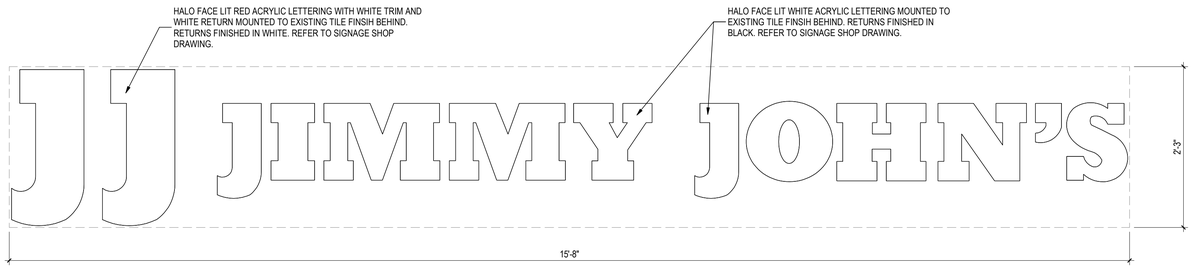
STOREFRONT SECTIONS AND DETAILS

Project No.	Scale
144324057	1 1/2" = 1'-0"

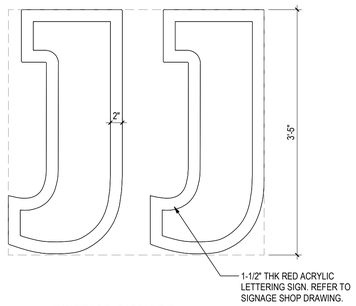
Revision

Drawing No.

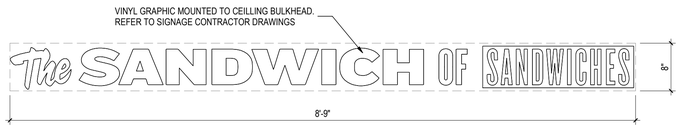
A301



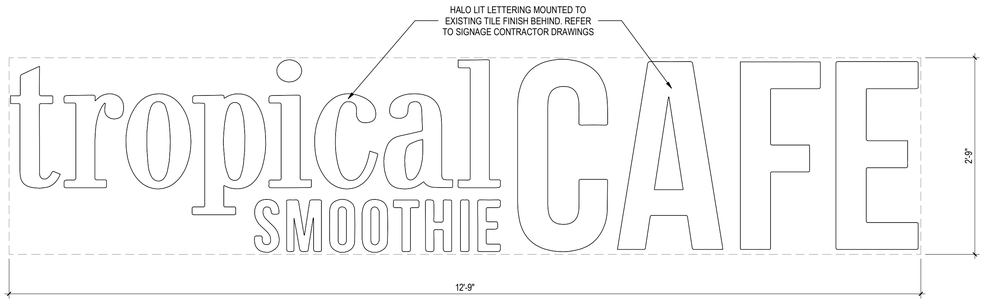
STOREFRONT MAIN SIGNAGE



INTERIOR SIGNAGE



INTERIOR BULKHEAD SIGNAGE



STOREFRONT MAIN SIGNAGE

1 **SIGNAGE**
1" = 1'-0"

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Architect

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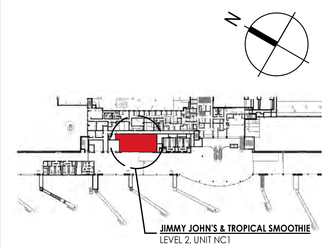


Revision	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	MY/NY	JR	2024.12.20
ISSUED FOR 90% SUBMISSION	MY/NY	JR	2024.12.02
60% FOR VENDOR REVIEW	MY/NY	JR	2024.09.27
ISSUED FOR 60% SUBMISSION	MY/NY	JR	2024.09.26
ISSUED FOR 30% SUBMISSION	MY	JR	2024.07.12

Issued	By	Appd	YYYY.MM.DD

File Name: N/A

Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Seal

12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE JJ JIMMY JOHN'S

Client/Project

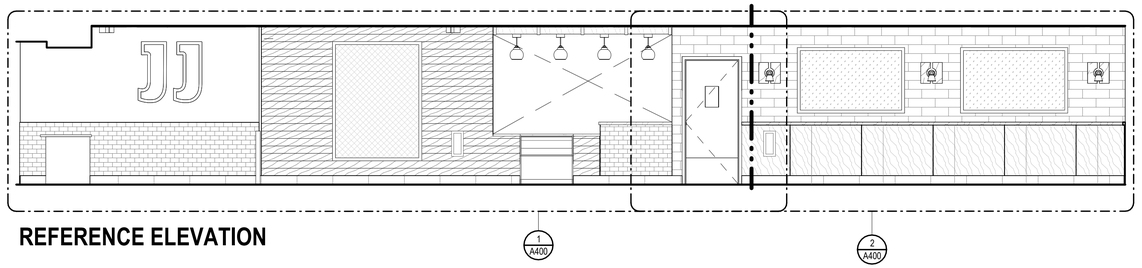
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

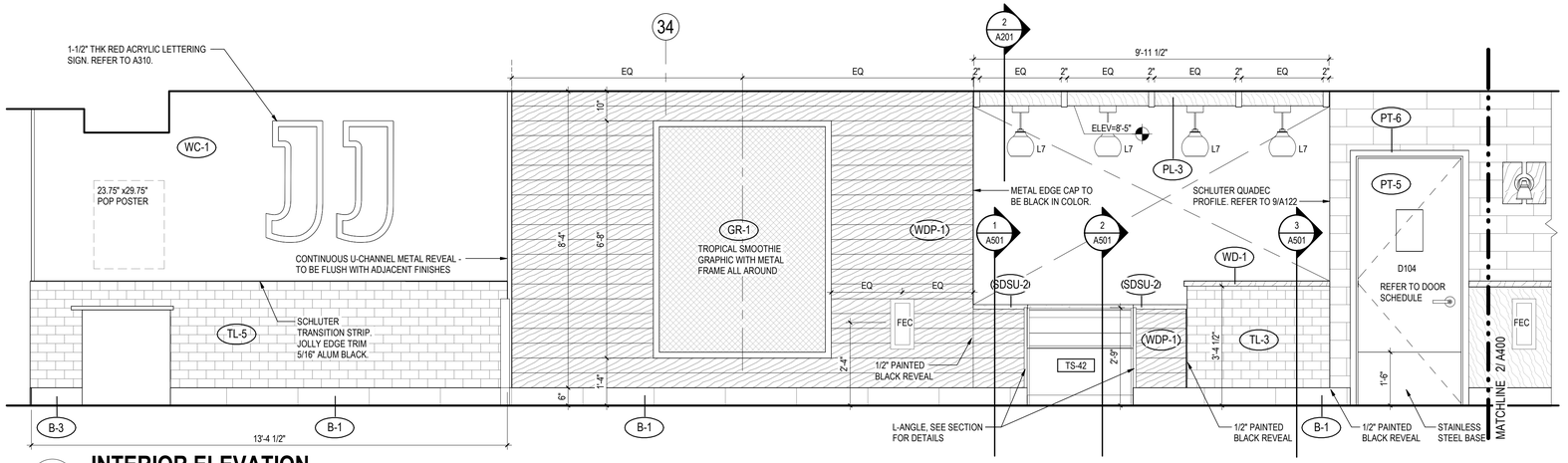
Title

SIGNAGE DETAILS

Project No.	Scale
144324057	1" = 1'-0"
Revision	Drawing No.
	A310

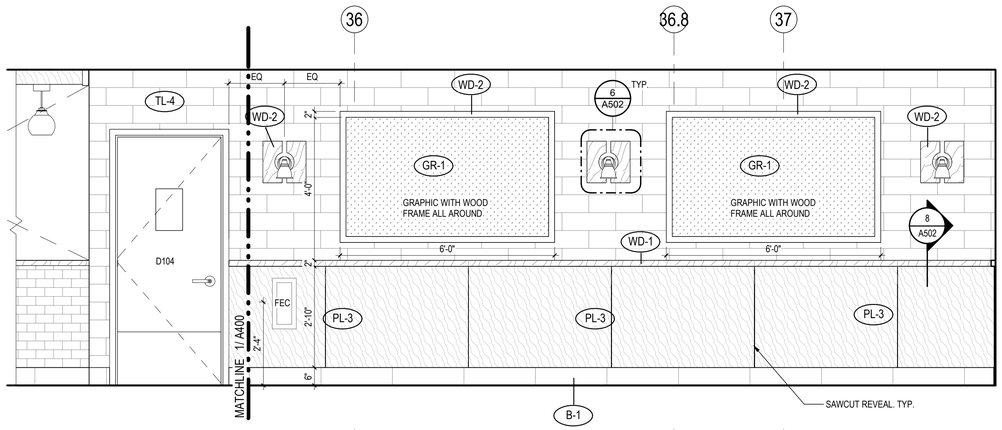


REFERENCE ELEVATION



INTERIOR ELEVATION

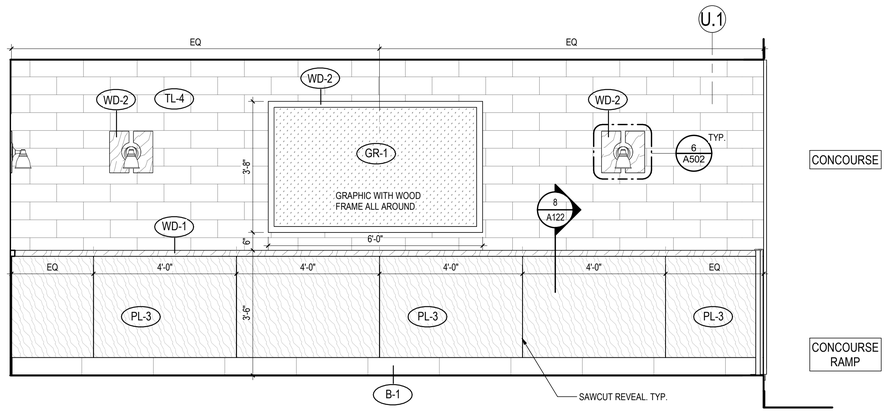
1/2" = 1'-0"



INTERIOR ELEVATION

2

1/2" = 1'-0"



INTERIOR ELEVATION

3

1/2" = 1'-0"

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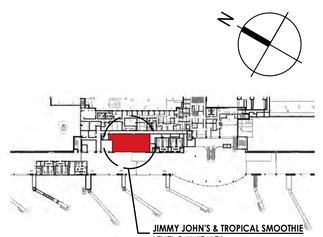

Revision	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	MY/NY	JR	2024.12.20
ISSUED FOR 90% SUBMISSION	MY/NY	JR	2024.12.02
60% FOR VENDOR REVIEW	MY/NY	JR	2024.09.27
ISSUED FOR 60% SUBMISSION	MY/NY	JR	2024.09.26
ISSUED FOR 30% SUBMISSION	MY	JR	2024.07.12

Issued	By	Appd	YYYY.MM.DD
File Name: N/A			
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

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Client/Project

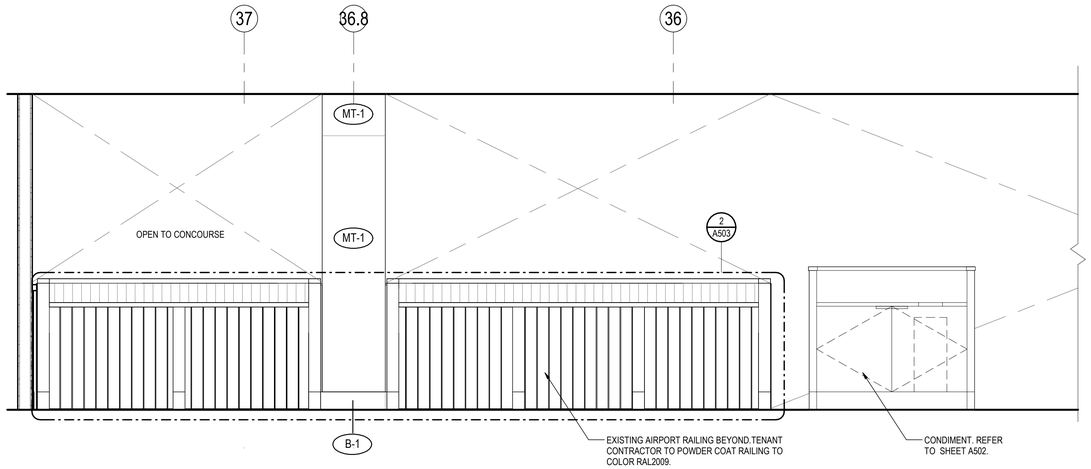
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

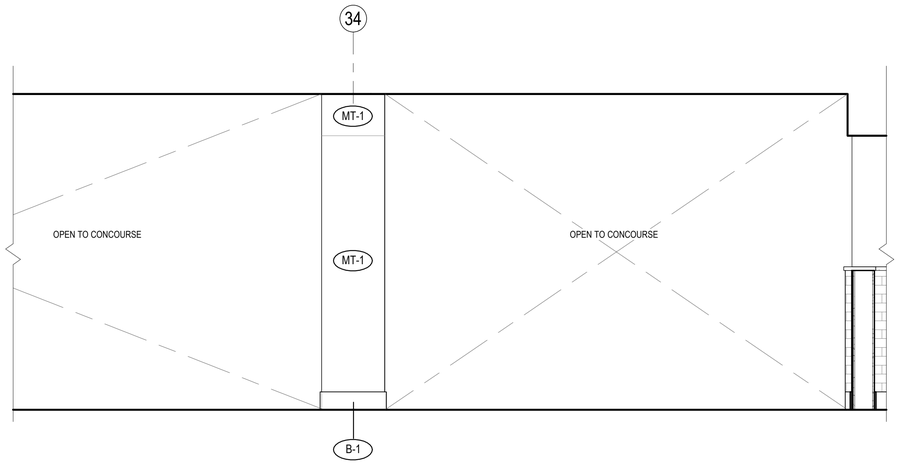
LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

INTERIOR ELEVATIONS

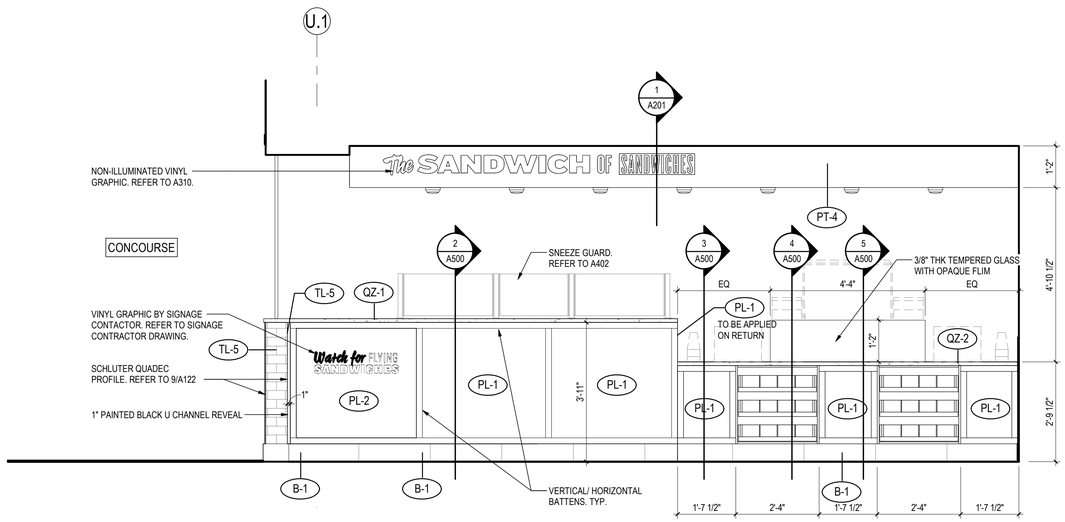
Project No.	Scale
144324057	As indicated
Revision	Drawing No.
	A400





1 INTERIOR ELEVATION

1/2" = 1'-0"



2 INTERIOR ELEVATION

1/2" = 1'-0"

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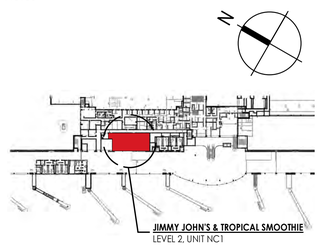


Revision	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	MY/NY	JR	2024.12.20
ISSUED FOR 90% SUBMISSION	MY/NY	JR	2024.12.02
60% FOR VENDOR REVIEW	MY/NY	JR	2024.09.27
ISSUED FOR 60% SUBMISSION	MY/NY	JR	2024.09.26
ISSUED FOR 30% SUBMISSION	MY	JR	2024.07.12

Issued	By	Appd	YYYY.MM.DD
File Name: N/A	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE JJ JIMMY JOHN'S

Client/Project

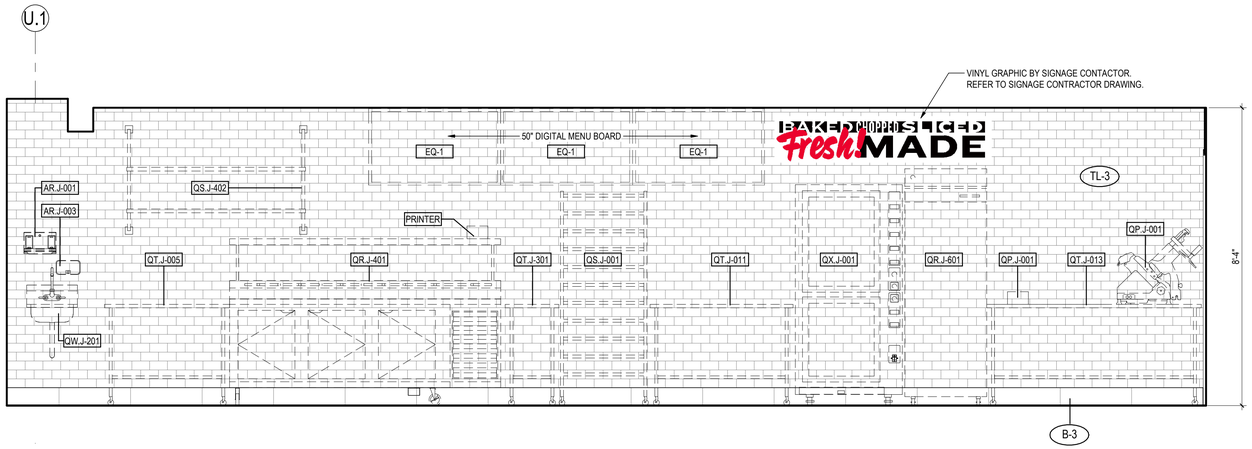
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

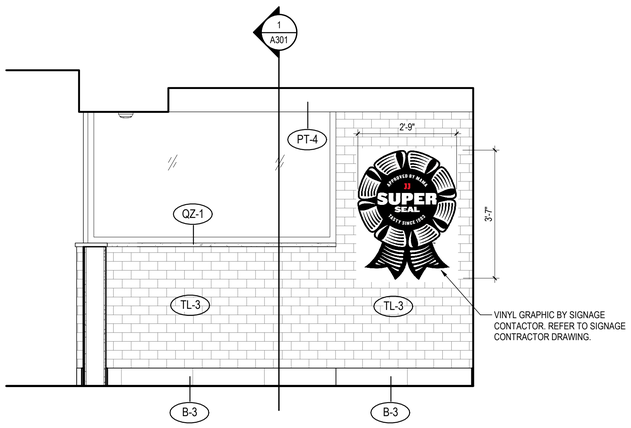
INTERIOR ELEVATIONS

Project No.	Scale
144324057	1/2" = 1'-0"
Revision	Drawing No.
	A401



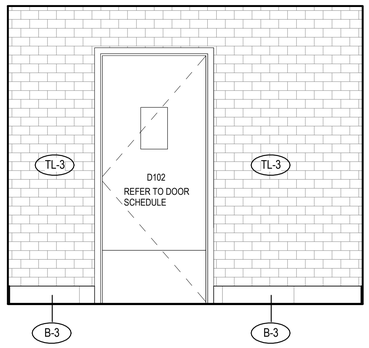
1 INTERIOR ELEVATION

1/2" = 1'-0"



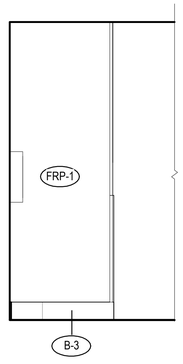
2 INTERIOR ELEVATION

1/2" = 1'-0"



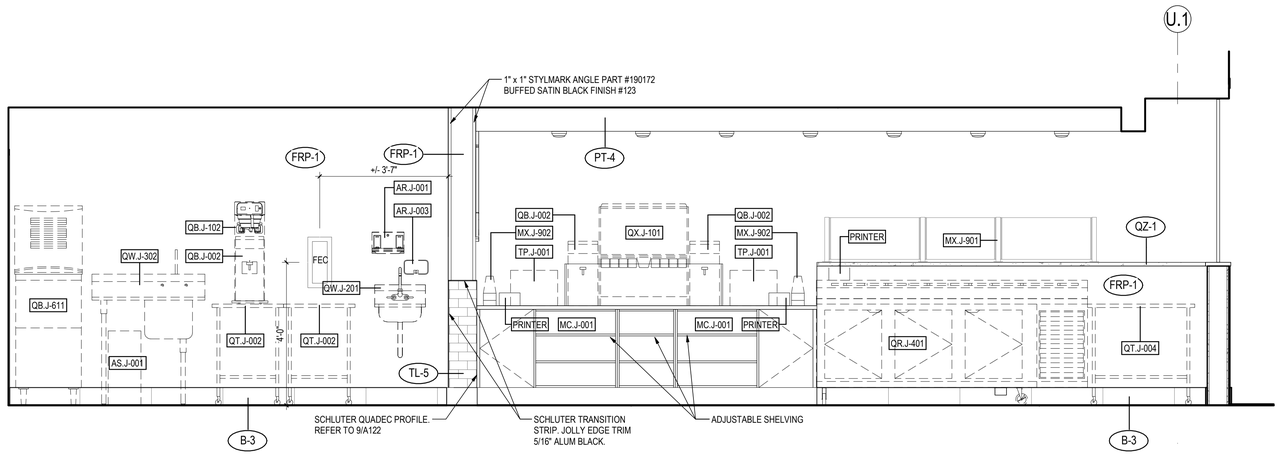
3 INTERIOR ELEVATION

1/2" = 1'-0"



5 INTERIOR ELEVATION

1/2" = 1'-0"



4 INTERIOR ELEVATION

1/2" = 1'-0"

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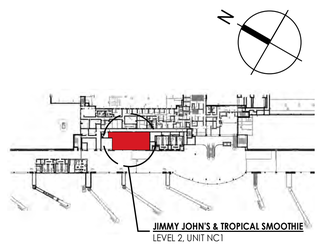


Revision

	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	MY/NY	JR	2024.12.20
ISSUED FOR 90% SUBMISSION	MY/NY	JR	2024.12.02
60% FOR VENDOR REVIEW	MY/NY	JR	2024.09.27
ISSUED FOR 60% SUBMISSION	MY/NY	JR	2024.09.26
ISSUED FOR 30% SUBMISSION	MY	JR	2024.07.12

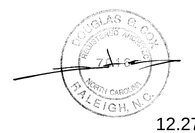
Issued

By	Appd	YYYY.MM.DD

File Name: N/A

Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Seal



12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

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Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

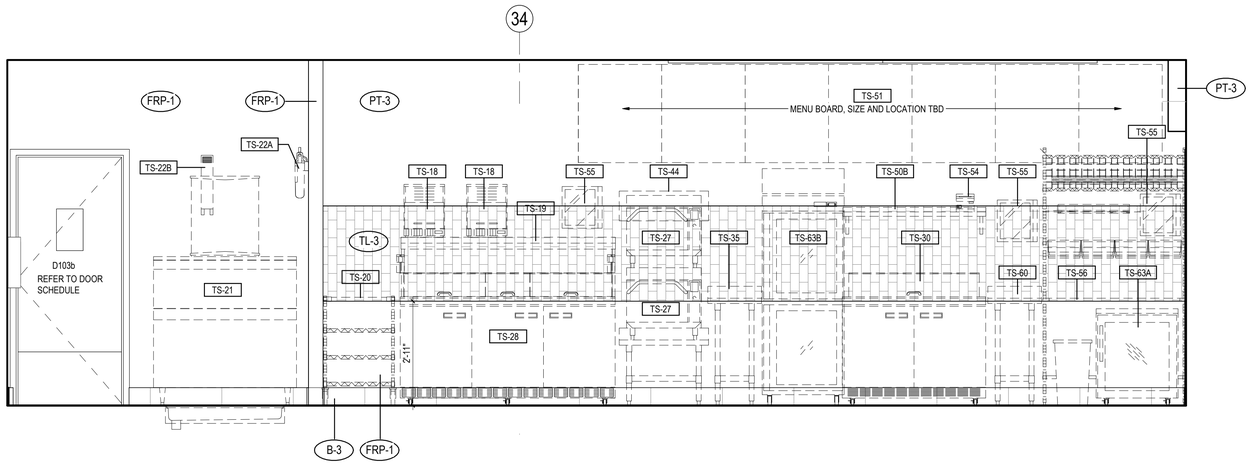
LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

INTERIOR ELEVATIONS - JIMMY JOHNS PREP AREA

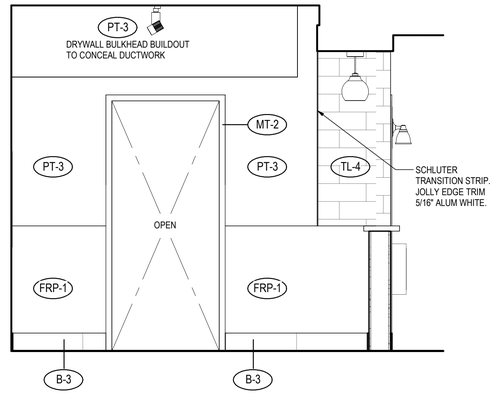
Project No.	Scale
144324057	1/2" = 1'-0"
Revision	Drawing No.
	A402

ORIGINAL SHEET - ARCH D



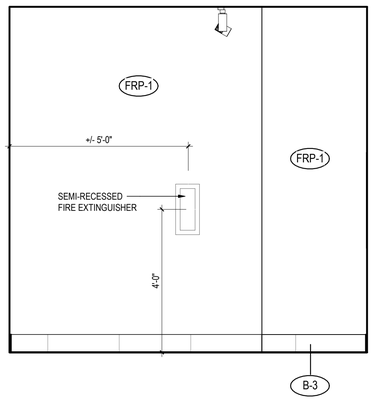
1 INTERIOR ELEVATION

1/2" = 1'-0"



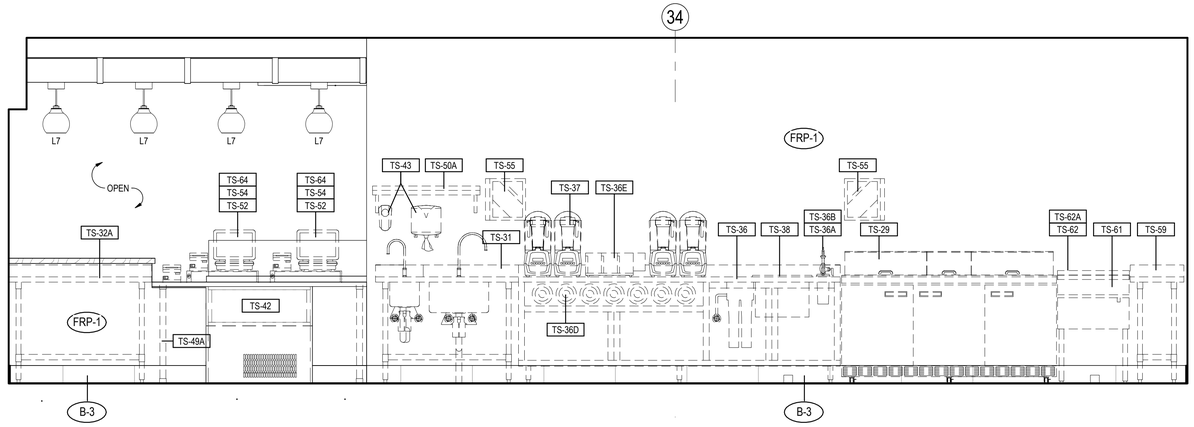
2 INTERIOR ELEVATION

1/2" = 1'-0"



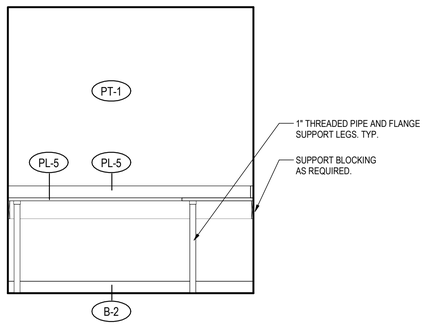
3 INTERIOR ELEVATION

1/2" = 1'-0"



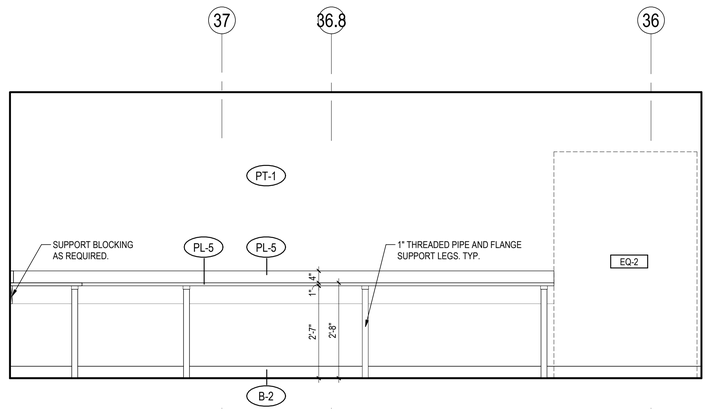
4 INTERIOR ELEVATION

1/2" = 1'-0"



5 STAFF ROOM ELEVATION

1/2" = 1'-0"



6 STAFF ROOM ELEVATION

1/2" = 1'-0"

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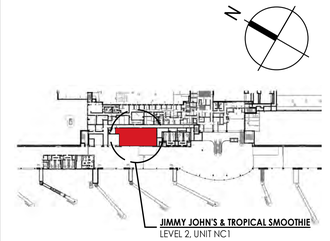


Revision	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	MY/NY	JR	2024.12.20
ISSUED FOR 90% SUBMISSION	MY/NY	JR	2024.12.02
60% FOR VENDOR REVIEW	MY/NY	JR	2024.09.27
ISSUED FOR 60% SUBMISSION	MY/NY	JR	2024.09.26
ISSUED FOR 30% SUBMISSION	MY	JR	2024.07.12

Issued	By	Appd	YYYY.MM.DD
File Name: N/A	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE JJ JIMMY JOHN'S

Client/Project

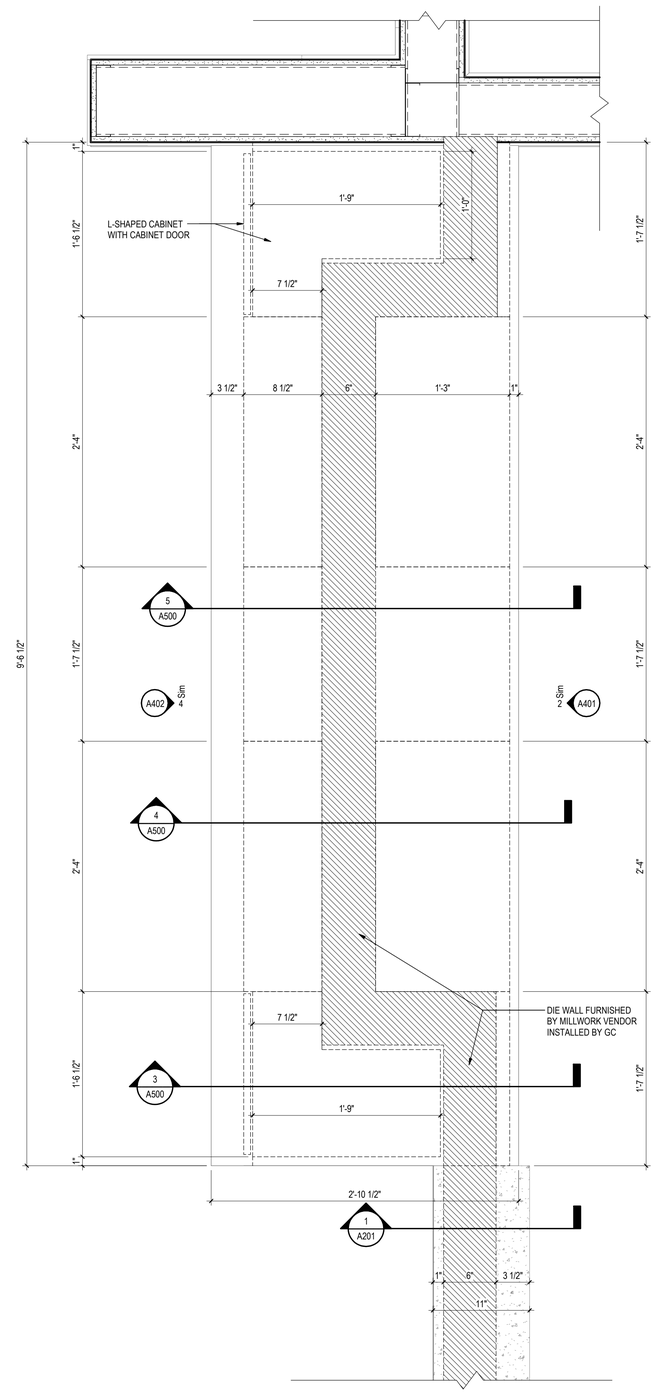
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

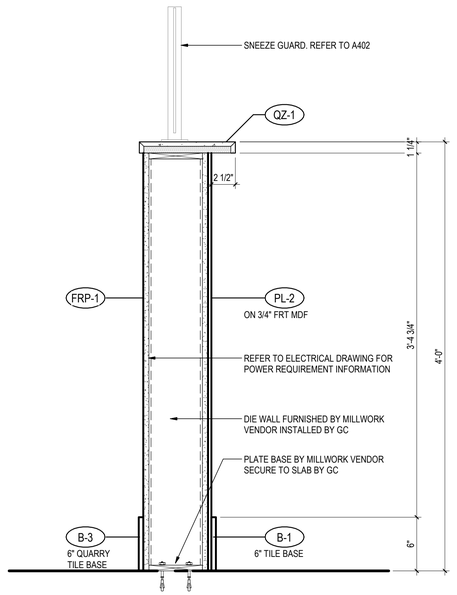
INTERIOR ELEVATIONS - TROPICAL SMOOTHIE PREP AREA

Project No.	Scale
144324057	1/2" = 1'-0"
Revision	Drawing No.
	A403



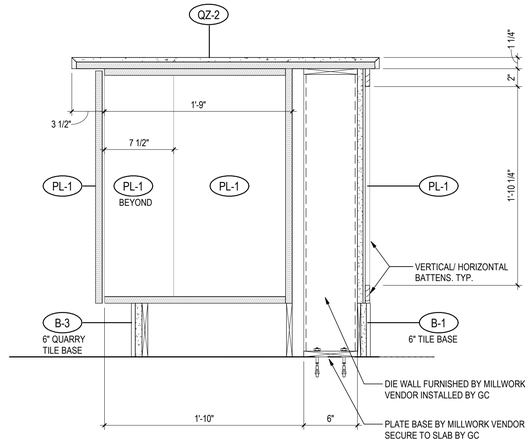
1 ENLARGED MILLWORK PLAN

1 1/2" = 1'-0"



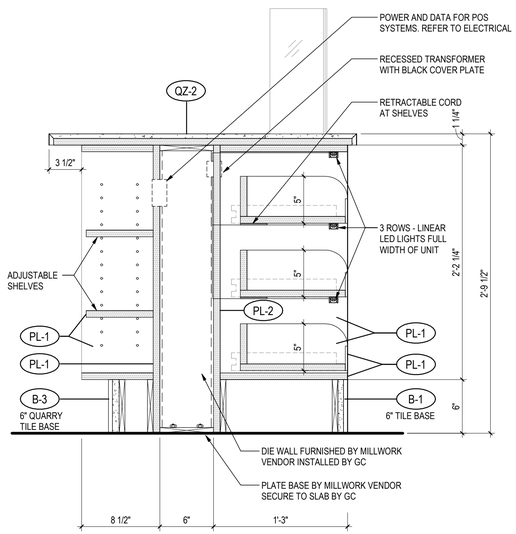
2 MILLWORK SECTION

1 1/2" = 1'-0"



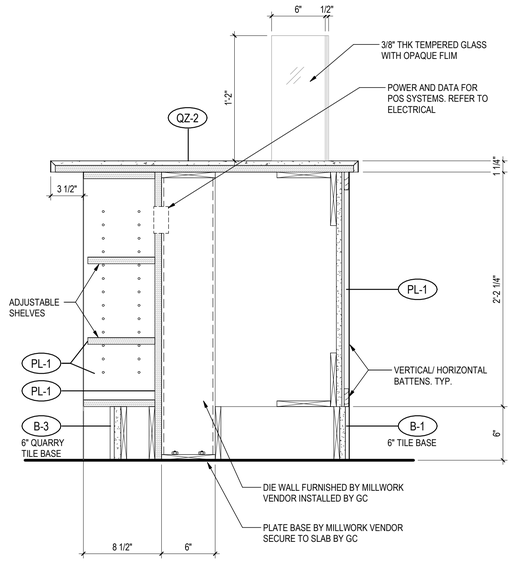
3 MILLWORK SECTION

1 1/2" = 1'-0"



4 MILLWORK SECTION

1 1/2" = 1'-0"



5 MILLWORK SECTION

1 1/2" = 1'-0"

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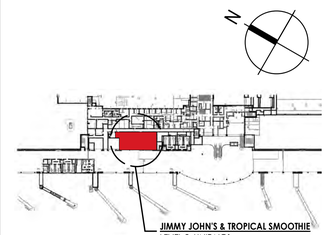

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ISSUED FOR 30% SUBMISSION	MY	JR	2024.07.12

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File Name: N/A	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

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Paradies Lagardère TRAVEL RETAIL

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Client/Project

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NORTH CAROLINA, USA, 28732

Title

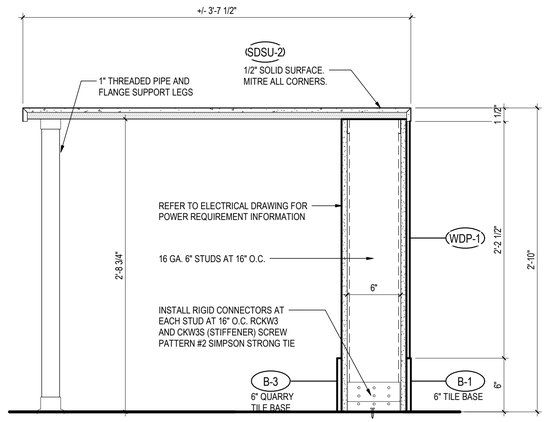
MILLWORK DETAILS

Project No.	Scale
144324057	1 1/2" = 1'-0"

Revision

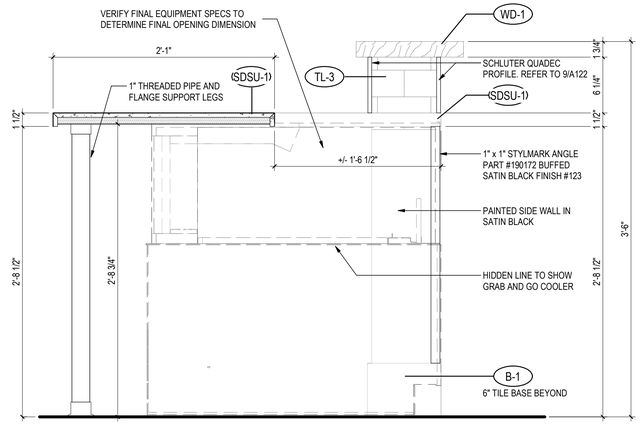
Drawing No.

A500



1 MILLWORK SECTION

1 1/2" = 1'-0"



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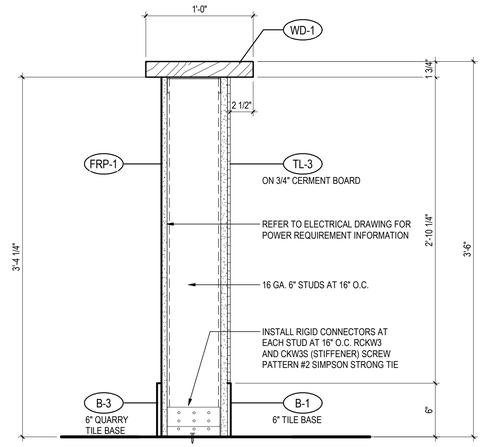
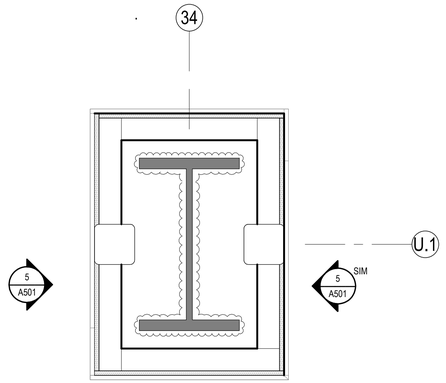
1 1/2" = 1'-0"



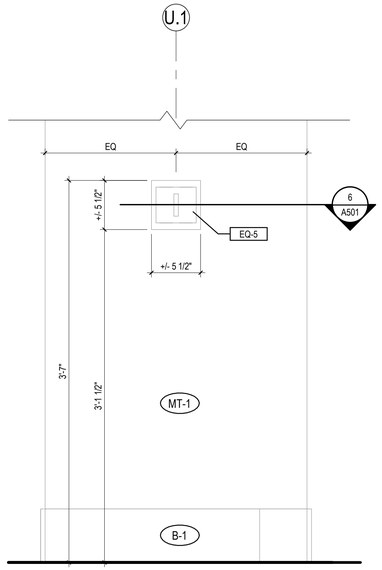
3 MILLWORK SECTION

1 1/2" = 1'-0"



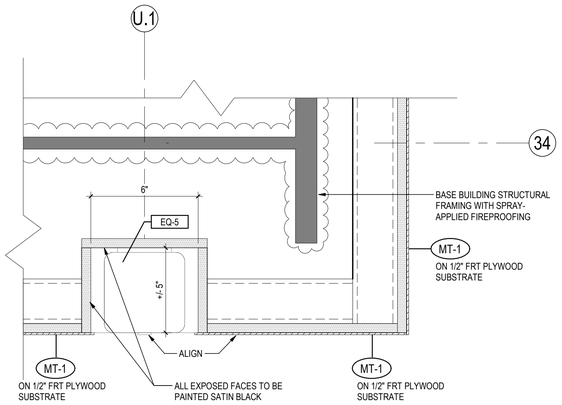
4 ENLARGED MILLWORK PLAN

1 1/2" = 1'-0"



5 ENLARGED MILLWORK ELEVATION

1 1/2" = 1'-0"



6 MILLWORK PLAN SECTION

3" = 1'-0"

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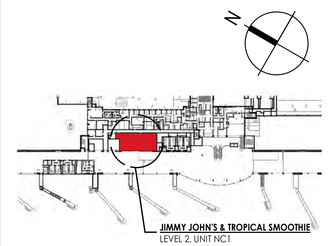

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ISSUED FOR PERMIT	MY/NY	JR	2024.12.20
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60% FOR VENDOR REVIEW	MY/NY	JR	2024.09.27
ISSUED FOR 60% SUBMISSION	MY/NY	JR	2024.09.26
ISSUED FOR 30% SUBMISSION	MY	JR	2024.07.12

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File Name: N/A	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE JJ JIMMY JOHN'S

Client/Project

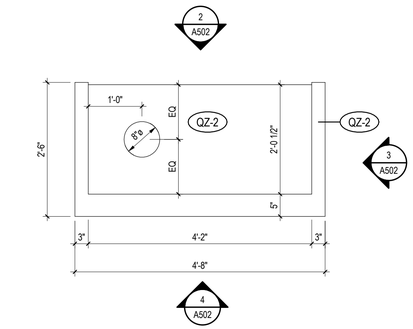
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

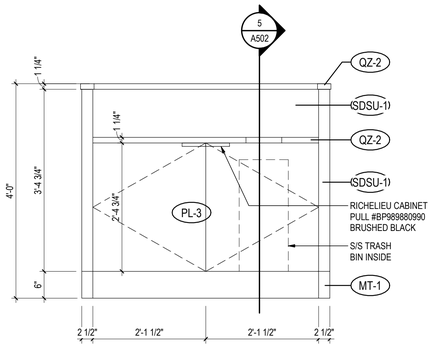
MILLWORK DETAILS

Project No.	Scale
144324057	As indicated
Revision	Drawing No.
	A501



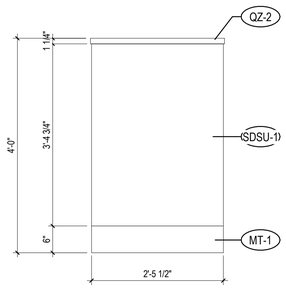
1 CONDIMENT MILLWORK PLAN

3/4" = 1'-0"



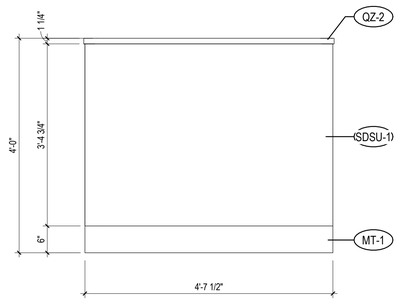
2 MILLWORK ELEVATION

3/4" = 1'-0"



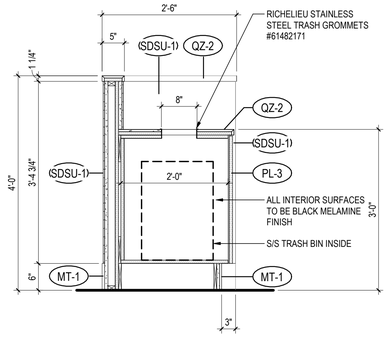
3 MILLWORK SIDE ELEVATION

3/4" = 1'-0"



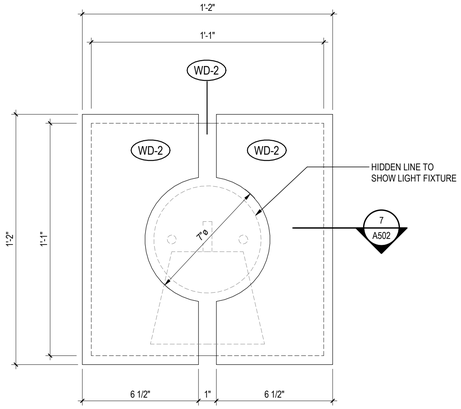
4 MILLWORK ELEVATION

3/4" = 1'-0"



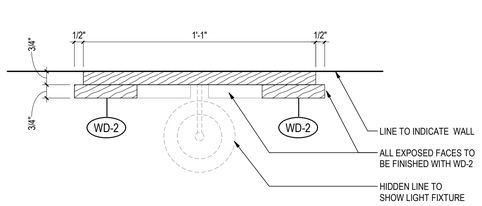
5 MILLWORK SECTION

3/4" = 1'-0"



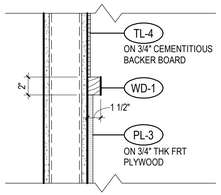
6 MILLWORK ELEVATION

3" = 1'-0"



7 MILLWORK PLAN SECTION

3" = 1'-0"



8 MILLWORK WALL SECTION

1 1/2" = 1'-0"

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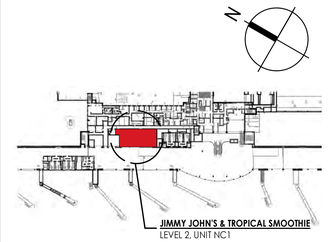

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ISSUED FOR 60% SUBMISSION	MY/NY	JR	2024.09.26
ISSUED FOR 30% SUBMISSION	MY	JR	2024.07.12
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File Name: N/A

Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Seal

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Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

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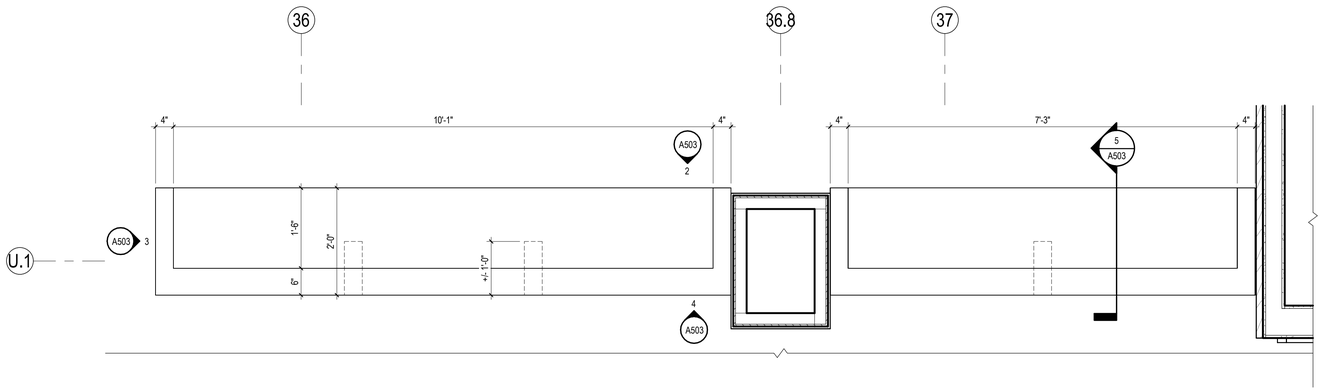
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

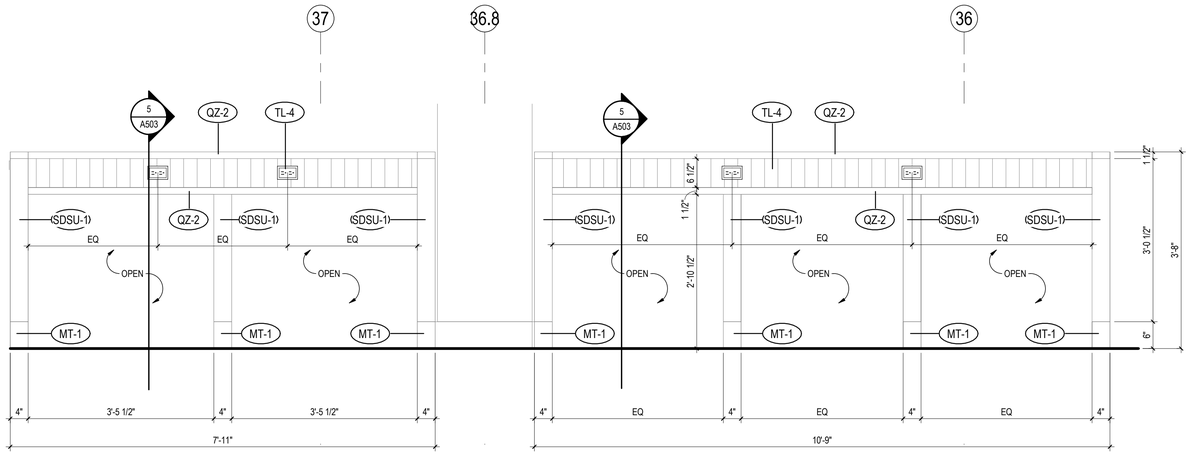
MILLWORK DETAILS

Project No.	Scale
144324057	As indicated
Revision	Drawing No.
	A502



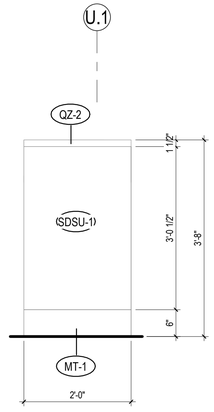
1 ENLARGED COUNTER PLAN

3/4" = 1'-0"



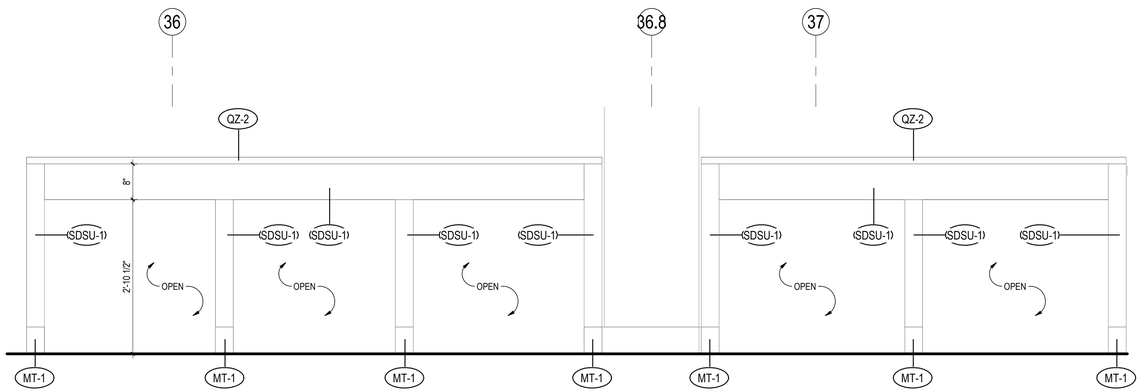
2 MILLWORK ELEVATION

3/4" = 1'-0"



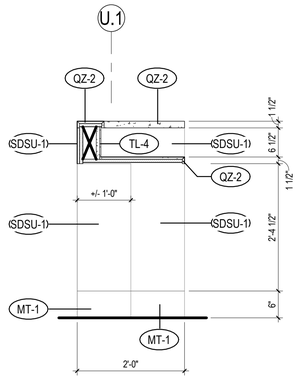
3 MILLWORK ELEVATION

3/4" = 1'-0"



4 MILLWORK ELEVATION

3/4" = 1'-0"



5 MILLWRK SECTION

3/4" = 1'-0"

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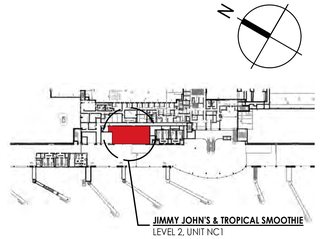

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Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

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Client/Project Logo

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Client/Project

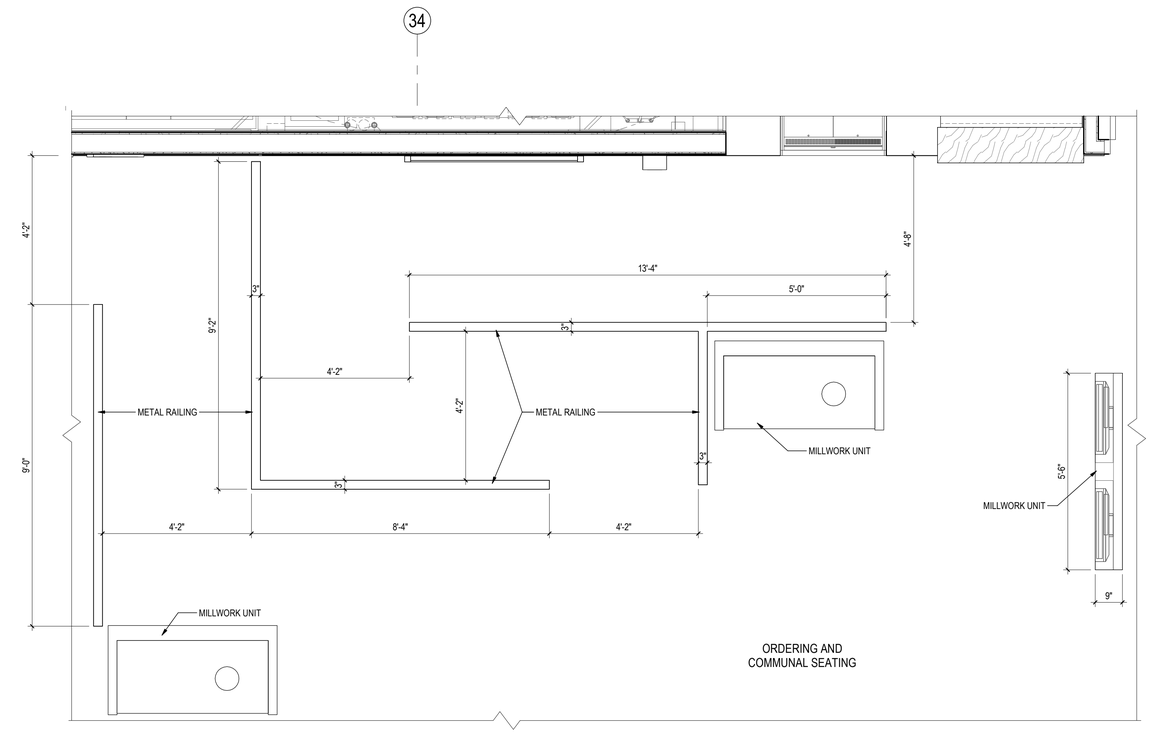
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

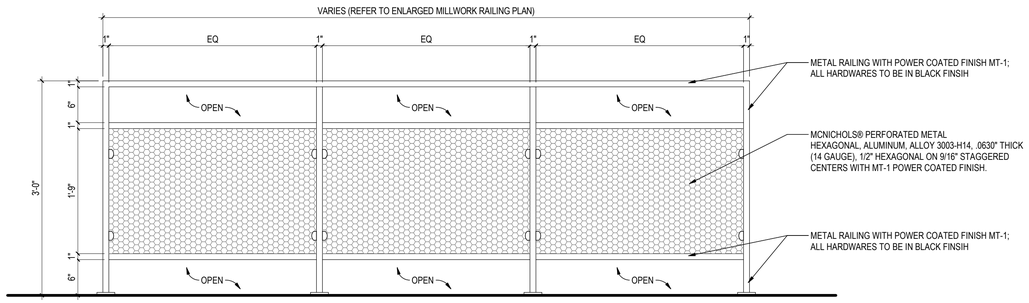
MILLWORK DETAILS

Project No.	Scale
144324057	3/4" = 1'-0"
Revision	Drawing No.
	A503



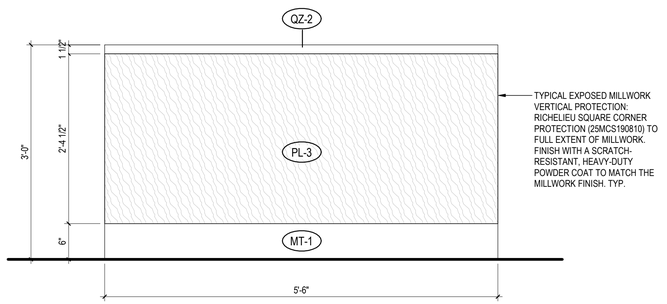
1 ENLARGED MILLWORK RAILING PLAN

1/2" = 1'-0"



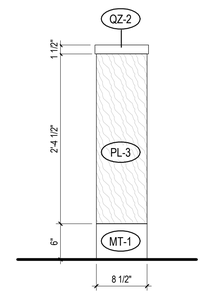
2 RAILING ELEVATION (TYP.)

1" = 1'-0"



3 MILLWORK PONY WALL

1" = 1'-0"



4 MILLWORK PONY WALL (SIDE)

1" = 1'-0"

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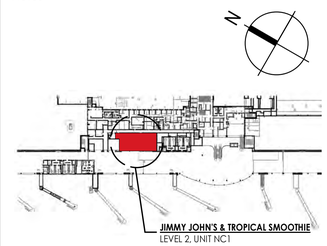

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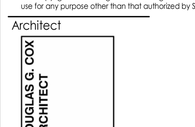

12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

MILLWORK DETAILS

Project No.	Scale
144324057	As indicated
Revision	Drawing No.
	A504

GENERAL INFORMATION

1 WHERE THE TERM "CONSULTANT" IS USED IN THE CONTRACT DOCUMENTS IT SHALL MEAN STANTEC ARCHITECTURE INC..

2 WHERE THE TERM "LANDLORD" IS USED IN THE CONTRACT DOCUMENTS IT SHALL MEAN THE PERSON OR ENTITY THAT ADMINISTERS AND CONTROLS THE PREMISES LEASED OR RENTED TO THE LEASEHOLDER/TENANT.

3 WHERE THE TERM "LEASEHOLDER/TENANT" IS USED IN THE CONTRACT DOCUMENTS IT SHALL MEAN THE PARADIES LAGARDERE TRAVEL RETAIL

4 WHERE THE TERM "CONTRACTOR" IS USED IN THE CONTRACT DOCUMENTS IT SHALL MEAN TENANT CONTRACTOR.

5 CONFORM, IF APPLICABLE, TO THE LANDLORD'S RULES AND REGULATIONS FOR TENANT CONTRACTORS WORKING IN THE BUILDING. IN PARTICULAR, INCORPORATE REQUIREMENTS OF THE LANDLORD'S TECHNICAL GUIDELINE SPECIFICATION AND DETAILS IN THE WORK.

6 ENSURE THAT THE WORK INCLUDES ALL LABOR, EQUIPMENT AND PRODUCTS REQUIRED, NECESSARY OR NORMALLY RECOGNIZED WITHIN RESPECTIVE TRADE PRACTICES, AS NECESSARY FOR THE PROPER AND COMPLETE EXECUTION OF THE WORK.

7 PERFORM ALL WORK IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS, CONSULTANT'S DIRECTIONS, MANUFACTURER'S PRINTED INSTRUCTIONS, APPROVED SAMPLES, MOCKUPS AND THE REQUIREMENTS OF REGULATORY AUTHORITIES HAVING JURISDICTION AS APPLICABLE.

8 DRAWINGS ARE IN PART DIAGRAMMATIC AND ARE INTENDED TO CONVEY SPECIFIC CONTENT OF WORK REQUIRED AND, AS SUCH, INDICATE GENERAL AND APPROXIMATE LOCATION, ARRANGEMENT AND SIZES OF MATERIALS, ELEMENTS, FIXTURES, EQUIPMENT AND OUTLETS. OBTAIN MORE ACCURATE INFORMATION ABOUT LOCATIONS, ARRANGEMENT AND SIZES BY STUDYING, AND CORRELATING THE CONTRACT DOCUMENTS AND DRAWINGS, INCLUDING COORDINATION WITH THE SHOP DRAWINGS, AND BECOMING TOTALLY FAMILIAR WITH CONDITIONS AND SPACES AFFECTING THESE MATTERS BEFORE PROCEEDING WITH THE WORK. INSTALL AND ARRANGE FIXTURES AND EQUIPMENT IN SUCH A WAY AS TO CONSERVE AS MUCH HEADROOM CLEARANCE AND SPACE AS POSSIBLE.

9 PERFORM ALL WORK IN ACCORDANCE WITH NORTH CAROLINA BUILDING COD, AIRPORT UNIVERSAL DESIGN REQUIREMENTS , AND ALL REGULATORY AUTHORITIES HAVING JURISDICTION AS APPLICABLE.

DIVISION 1 - GENERAL REQUIRMENTS.

SECTION 01 10 00 - GENERAL INSTRUCTIONS

1 ACCESS TO THE WORK FOR WORKERS, DELIVERY OF MATERIALS, USE OF ELEVATORS, GARBAGE REMOVAL, SECURITY, HOISTS, TEMPORARY POWER, WATER AND SANITARY FACILITIES SHALL BE SUBJECT TO THE RESTRICTIONS IMPOSED BY THE LANDLORD.

2 ALL WORK TO BE IN ACCORDANCE THE LANDLORD'S CONSTRUCTION RULES AND REGULATIONS.

3 INSPECT BY X-RAY OR ULTRASOUND (PER AIRPORT REQUIREMENTS) ALL FLOOR PENETRATIONS AND CONFIRM LAYOUT WITH THE LANDLORD AND LANDLORD'S STRUCTURAL ENGINEER PRIOR TO ANY CORING...

4 CONTRACTOR SHALL IDENTIFY ITS STAGING AREA TO THE LANDLORD'S SATISFACTION.

5 COOPERATE WITH OTHER CONTRACTORS WORKING ON SITE.

6 THE LEASEHOLDER/TENANT, LANDLORD AND ITS TENANTS WILL OCCUPY THE EXISTING PREMISES DURING ENTIRE CONSTRUCTION PERIOD.

7 FREE ACCESS BY THE LEASEHOLDER/TENANT, LANDLORD, ITS TENANTS AND THE PUBLIC TO AREAS NOT UNDER CONSTRUCTION SHALL BE MAINTAINED AT ALL TIMES.

8 MAINTAIN EXISTING ENTRANCES AND FIRE EXITS FREE FROM OBSTRUCTION THROUGHOUT ALTERATION WORK.

9 WHERE JOB CONDITIONS REQUIRE REASONABLE ADJUSTMENTS IN THE INDICATED LOCATIONS AND EXTENT, MAKE THE NECESSARY MODIFICATIONS AT NO ADDITIONAL COST TO THE LEASEHOLDER/TENANT.

10 OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR THE PERFORMANCE OF THE WORK.

11 EXCEPT WHERE A REFERENCE STANDARD IS SPECIFICALLY DATED IN THE SPECIFICATIONS, REFERENCES TO STANDARDS SHALL BE TAKEN TO MEAN THE LATEST EDITION IN EFFECT AT THE DATE OF AWARD OF THE CONTRACT.

SECTION 01 31 00 - PROJECT MANAGING AND COORDINATION

1 CONTRACTOR IS REQUIRED TO VISIT THE SITE PRIOR TO SUBMITTING BID TO EXAMINE SITE CONDITIONS AND ASSESS RISKS AND REQUIREMENTS FOR COMPLETING WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY OBSERVE AND DETERMINE EXISTING CONDITIONS.

2 NO PAYMENTS FOR EXTRA WORK SHALL BE MADE BY THE LEASEHOLDER/TENANT TO A CONTRACTOR FOR CONDITIONS WHICH CAN BE DETERMINED BY EXAMINATION OF THE SITE OR ATTENDANCE AT THE PRE-BID SITE/INFORMATION MEETING(S), OR BOTH.

3 ABIDE BY THE LANDLORD'S SECURITY REQUIREMENTS DURING THE WORK. OBTAIN BASE BUILDING GENERAL CONTRACTOR AND LANDLORD'S PERMISSION PRIOR TO COMMENCING ANY WORK AND ENSURE WORKERS OBSERVE ALL OF THE EXISTING SECURITY REGULATIONS WHEREVER SUCH REGULATIONS APPLY. CONTRACTOR HAS THE SOLE AND COMPLETE RESPONSIBILITY FOR SAFETY DURING THE WORK. CONTRACTOR TO EXERCISE CAUTION IN ALL MATTERS RELATING TO THE PUBLIC AND CONSTRUCTION SAFETY, AND SHALL ADHERE TO FEDERAL, STATE, MUNICIPAL AND AIRPORT HEALTH AND SAFETY REGULATIONS.

4 IF WHILE CARRYING OUT THE WORK, CONDITIONS ARE EXPOSED WHICH ARE IN CONTRAVENTION WITH APPLICABLE REGULATORY CODES AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, UNSAFE OR IN ANY WAY LESS THAN THE ACCEPTABLE INDUSTRY STANDARD FOR THE PARTICULAR ITEM, IMMEDIATELY NOTIFY THE CONSULTANT BEFORE PROCEEDING WITH FURTHER WORK. THE CONSULTANT WILL REVIEW THE CONDITION AND ISSUE THE APPROPRIATE INSTRUCTION.

5 CONTRACTOR IS RESPONSIBLE FOR SAFETY ON THE JOBSITE. COMPLY WITH THE RELEVANT OCCUPATIONAL HEALTH AND SAFETY ASSOCIATION (OSHA) REGULATIONS AT ALL TIMES.

6 EXCEPT AS SPECIFICALLY PROVIDED FOR IN OTHER SECTIONS OF THE SPECIFICATIONS, THE CONSULTANT AND CONTRACTOR WILL RESPOND PROMPTLY IN ALL MATTERS CONCERNING THE WORK AND EACH WILL BE AFFORDED A REASONABLE AMOUNT OF TIME TO RESPOND TO THE COMMUNICATION RECEIVED FROM THE OTHER. RESPONSE TIME OF UP TO FIVE (5) WORKING DAYS IS CONSIDERED REASONABLE.

7 ENSURE APPLICABLE ITEMS, ARTICLES, NOTICES AND ORDERS ARE POSTED IN CONSPICUOUS LOCATION ON SITE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LANDLORD AND ALL ACTS AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION, AND IN CONSULTATION WITH CONSULTANT.

8 IMMEDIATELY ADDRESS HEALTH AND SAFETY NON-COMPLIANCE ISSUES IDENTIFIED BY AUTHORITY HAVING JURISDICTION OR BY CONSULTANT. PROVIDE CONSULTANT WITH WRITTEN REPORT OF ACTION TAKEN TO CORRECT NON-COMPLIANCE OF HEALTH AND SAFETY ISSUES IDENTIFIED. CONSULTANT MAY STOP WORK IF NON-COMPLIANCE OF HEALTH AND SAFETY REGULATIONS IS NOT CORRECTED.

9 PROVIDE FIRE EXTINGUISHER IN ACCORDANCE WITH LOCAL AUTHORITIES HAVING JURISDICTION AND KEEP ON HAND AT ALL TIMES. CONFIRM EXACT LOCATION WITH LEASEHOLDER/TENANT AND LANDLORD IN THE FIELD. MAINTAIN ACCESS FOR THE FIRE DEPARTMENT TO THE WORK AND SPRINKLER CONNECTIONS. MAINTAIN PLACED OR INSTALLED FIRE RESISTIVE CONSTRUCTION TO PROTECT THE PORTIONS OF THE WORK DURING CONSTRUCTION.

10 THE LIMIT OF THE WORK OF THE CONTRACT IS DESIGNATED ON THE DRAWINGS. THE EXACT BOUNDARIES OF THE WORKING AREAS IN WHICH THE CONTRACTOR WILL OPERATE, HOWEVER, WILL BE DETERMINED IN THE FIELD IN CONSULTATION WITH THE LEASEHOLDER/TENANT, LANDLORD AND THE CONTRACTOR.

11 LEASEHOLDER/TENANT FURNISHED ITEMS: CONTACT LEASEHOLDER/TENANT'S CONSTRUCTION MANAGER FOR INFORMATION ON LEASEHOLDER/TENANT SUPPLIED ITEMS. SOME ITEMS ARE LEASEHOLDER/TENANT PROVIDED, CONTRACTOR INSTALLED, OTHER ITEMS ARE PROVIDED AND INSTALLED BY THE...

SECTION 01 33 00 - SUBMITTAL PROCEDURES

1 PROVIDE THREE (3) COPIES OF THE SUBMITTALS LISTED BELOW TO THE CONSULTANT FOR REVIEW AND...
  1.1 SHOP DRAWINGS AS REQUIRED IN DIVISIONS 2-12.
  1.2 PRODUCT DATA AS REQUIRED IN DIVISIONS 2-12.
  1.3 SAMPLES AS REQUIRED IN DIVISIONS 2-12.

2 SHOP DRAWINGS INDICATE MATERIALS, METHODS OF CONSTRUCTION AND ATTACHMENT OR ANCHORAGE, ERECTION DIAGRAMS, CONNECTIONS, EXPLANATORY NOTES AND OTHER INFORMATION NECESSARY FOR COMPLETION OF WORK. WHERE ARTICLES OR EQUIPMENT ATTACH OR CONNECT TO OTHER ARTICLES OR EQUIPMENT, INDICATE THAT SUCH ITEMS HAVE BEEN COORDINATED, REGARDLESS OF SECTION UNDER WHICH ADJACENT ITEMS WILL BE SUPPLIED AND INSTALLED. INDICATE CROSS REFERENCES TO DESIGN DRAWINGS AND SPECIFICATIONS.

3 WHERE COLOR, PATTERN OR TEXTURE IS CRITERION, SUBMIT FULL RANGE OF SAMPLES.

4 ALLOW FIVE (5) WORKING DAYS FOR CONSULTANT'S REVIEW OF EACH SUBMISSION.

5 ADJUSTMENTS MADE TO SUBMITTALS BY CONSULTANT ARE NOT INTENDED TO CHANGE CONTRACT PRICE. IF ADJUSTMENTS AFFECT VALUE OF WORK, STATE SUCH IN WRITING TO CONSULTANT PRIOR TO PROCEEDING WITH WORK.

6 MAKE CHANGES TO SUBMITTALS AS CONSULTANT MAY REQUIRE, CONSISTENT WITH CONTRACT DOCUMENTS. WHEN RESUBMITTING, NOTIFY CONSULTANT IN WRITING OF ANY REVISIONS OTHER THAN...

7 PROVIDE SUBMITTALS WITH REASONABLE PROMPTNESS AND IN ORDERLY SEQUENCE SO AS TO NOT CAUSE DELAY IN WORK. NO WORK DEPENDENT ON SHOP DRAWING INFORMATION SHALL PROCEED UNTIL REVIEW IS GIVEN AND VERIFICATION RECEIVED FROM THE CONSULTANT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WORK PERFORMED PRIOR TO RECEIPT OF REVIEWED SHOP DRAWINGS. NO REVIEW COMMENTS SHALL BE CONSTRUED AS AUTHORIZATION FOR CHANGES IN THE WORK.

8 NOTIFY CONSULTANT, IN WRITING AT TIME OF SUBMISSION, IDENTIFYING DEVIATIONS FROM REQUIREMENTS OF CONTRACT DOCUMENTS STATING REASONS FOR DEVIATIONS.

9 VERIFY FIELD MEASUREMENTS AND AFFECTED ADJACENT WORK ARE COORDINATED.

10 CONTRACTOR'S RESPONSIBILITY FOR ERRORS AND OMISSIONS, OR DEVIATIONS FROM REQUIREMENTS OF CONTRACT DOCUMENTS, IS NOT RELIEVED BY CONSULTANT'S REVIEW OF SUBMITTALS.

SECTION 01 33 00 - SUBMITTAL PROCEDURES CONTINUED...

11 KEEP ONE (1) REVIEWED COPY OF EACH SUBMISSION ON SITE

12 PROVIDE TO THE LEASEHOLDER/TENANT THE FOLLOWING EXTRA PRODUCTS IN QUANTITIES LISTED BELOW, LABELED AND CRATED. MATERIALS TO BE FROM THE SAME LOT OR RUN AS THOSE INSTALLED AS PART OF THE WORK.
  12.1 ONE LITER OF EACH PAINT COLOR WITH CORRECT SHEEN LEVEL.
  12.2 SIX (6) FLOOR TILES OF EACH TYPE, COLOR, MATERIAL AND SURFACE FINISH.
  12.3 ONE HALF BAG OF EACH GROUT.
  12.4 FOUR FULL LENGTH STRIPS OF EACH TYPE OF BASE.
  12.5 TEN (10) OF EACH TYPE OF CEILING TILES.

13 SUBMIT TWO (2) COPIES OF OPERATING AND MAINTENANCE MANUALS TO THE LEASEHOLDER/TENANT. MANUALS ARE TO CONTAIN INFORMATION COVERING THE CARE, CLEANING AND MAINTENANCE OF MATERIALS, FINISHES AND EQUIPMENT INSTALLED AS PART OF THE WORK. PROVIDE ANY SPARE PARTS OR SPECIAL MAINTENANCE TOOLS TO THE LEASEHOLDER/TENANT.

14 PROJECT MEETINGS WILL BE HELD AT THE SITE AT THE REQUEST OF THE LEASEHOLDER/TENANT AND THE LANDLORD. THE CONTRACTOR SHALL NOTIFY ALL PARTIES TO ATTEND. THE CONTRACTOR SHALL KEEP AND DISTRIBUTE THE MINUTES OF THESE MEETINGS. THE CONTRACTOR SHALL HOLD REGULAR MEETINGS WITH ITS TRADES AS REQUIRED FOR THE PERFORMANCE OF THE WORK.

SECTION 01 45 00 - QUALITY CONTROL

1 ALLOW AUTHORITIES HAVING JURISDICTION ACCESS TO WORK. IF PART OF WORK IS IN PREPARATION AT LOCATIONS OTHER THAN PLACE OF WORK, ALLOW ACCESS TO SUCH WORK WHENEVER IT IS IN PROGRESS.

2 GIVE TIMELY NOTICE REQUESTING INSPECTION WHENEVER PORTIONS OF THE WORK ARE DESIGNATED FOR SPECIAL TESTS, INSPECTIONS OR APPROVALS, EITHER WHEN DESCRIBED IN THE CONTRACT DOCUMENTS OR WHEN REQUIRED BY LAW IN THE PLACE OF THE WORK.

3 IF CONTRACTOR COVERS OR PERMITS TO BE COVERED WORK THAT HAS BEEN DESIGNATED FOR SPECIAL TESTS, INSPECTIONS OR APPROVALS BEFORE SUCH IS MADE, UNCOVER SUCH WORK, HAVE INSPECTIONS OR TESTS SATISFACTORILY COMPLETED AND MAKE GOOD SUCH WORK.

4 CONSULTANT OR LEASEHOLDER/TENANT MAY ORDER ANY PART OF THE WORK TO BE REVIEWED OR INSPECTED IF WORK IS SUSPECTED TO BE NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS. IF, UPON REVIEW SUCH WORK IS FOUND NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS, CORRECT SUCH WORK AND PAY COST OF ADDITIONAL REVIEW AND CORRECTION. IF SUCH WORK IS FOUND IN ACCORDANCE WITH CONTRACT DOCUMENTS, LEASEHOLDER/TENANT WILL PAY COST OF REVIEW.

5 REMOVE DEFECTIVE WORK, WHETHER RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE PRODUCTS OR DAMAGE AND WHETHER INCORPORATED IN WORK OR NOT, WHICH HAS BEEN REJECTED BY CONSULTANT AS FAILING TO CONFORM TO CONTRACT DOCUMENTS. REPLACE OR RE-EXECUTE IN ACCORDANCE WITH CONTRACT DOCUMENTS.

6 MAKE GOOD OTHER CONTRACTOR'S WORK DAMAGED BY SUCH REMOVALS OR REPLACEMENTS PROMPTLY.

7 IF IN THE OPINION OF THE CONSULTANT THAT IT IS NOT EXPEDIENT TO CORRECT DEFECTIVE WORK OR WORK NOT PERFORMED IN ACCORDANCE WITH CONTRACT DOCUMENTS, LEASEHOLDER/TENANT MAY DEDUCT FROM CONTRACT PRICE THE DIFFERENCE IN VALUE BETWEEN WORK PERFORMED AND THAT CALLED FOR BY CONTRACT DOCUMENTS, AMOUNT OF WHICH SHALL BE DETERMINED BY CONSULTANT.

8 PREPARE MOCK UPS FOR WORK SPECIFICALLY REQUESTED IN SPECIFICATIONS. INCLUDE FOR WORK OF SECTIONS REQUIRED TO PROVIDE MOCK UPS. PREPARE MOCK UPS FOR CONSULTANT'S REVIEW WITH REASONABLE PROMPTNESS AND IN ORDERLY SEQUENCE, TO NOT CAUSE DELAYS IN WORK.

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

1 A SOURCE OF TEMPORARY POWER AND WATER WILL BE PROVIDED TO THE CONTRACTOR. THE POWER PROVIDED IS LIMITED AND IS TO BE USED FOR THE OPERATION OF SMALL TOOLS AND EQUIPMENT ONLY. PROVIDE AND PAY FOR AN INDEPENDENT SOURCE OF TEMPORARY POWER REQUIRED FOR TOOLS AND EQUIPMENT DEMANDING EXCESSIVE POWER LOADS.

2 PROVIDE DUST WALL AND BARRICADES IN ACCORDANCE WITH REQUIREMENTS OF THE LANDLORD AND LOCAL AUTHORITIES HAVING JURISDICTION AND FOR PROTECTION OF THE LEASEHOLDER/TENANT, LANDLORD, ITS TENANTS AND THE PUBLIC IN THE VICINITY OF THE WORK.

3 PREVENT HAZARDOUS ACCUMULATIONS OF DUST, FUMES, MISTS, VAPORS OR GASES DURING CONSTRUCTION. PROVIDE LOCAL EXHAUST VENTILATION TO PREVENT HARMFUL ACCUMULATION OF HAZARDOUS SUBSTANCES INTO ATMOSPHERE OF OCCUPIED AREAS. DISPOSE OF EXHAUST MATERIALS IN A MANNER THAT WILL NOT RESULT IN HARMFUL EXPOSURE TO PERSONS. VENTILATE STORAGE SPACES CONTAINING HAZARDOUS OR VOLATILE MATERIALS. CONTINUE OPERATION OF VENTILATION AND EXHAUST SYSTEM FOR TIME AFTER CESSATION OF WORK PROCESS TO ASSURE REMOVAL OF HARMFUL ELEMENTS.

4 UNLESS OTHERWISE APPROVED BY THE CONSULTANT, WORK INVOLVING EXCESSIVE NOISE, VIBRATION, INCLUDING BUT NOT NECESSARILY LIMITED TO JACK HAMMERS, CONCRETE SAWS, CONCRETE DRILLS, STEEL SAWS, EXPLOSIVE ACTIVATED TOOLS OR ACTIVITIES DISRUPTIVE TO THE NORMAL OPERATION OF THE LEASEHOLDER/TENANT, OR LANDLORD, OR DANGEROUS TO THE OCCUPANTS SHALL BE CARRIED OUT DURING TIME PERIODS APPROVED BY THE LEASEHOLDER/TENANT AND LANDLORD.

5 BECOME FAMILIAR WITH ALL AVAILABLE INFORMATION AND DOCUMENTS REGARDING EXISTING BUILDING SERVICES AND ENSURE THAT THEY ARE MAINTAINED CONTINUOUSLY THROUGHOUT THE ENTIRE PERIOD OF CONSTRUCTION AND ALTERATIONS.

6 OBTAIN APPROVAL FOR CUTTING AND CORING FROM THE LANDLORD AND BASE BUILDING STRUCTURAL ENGINEER. IT SHOULD BE NOTED THAT THE EXISTING STRUCTURE MAY CONTAIN SOME ELECTRICAL CONDUIT, TAKE ADEQUATE SAFETY PRECAUTIONS.

7 DAMAGE OF ANY NATURE TO EXISTING BUILDING OR ITS CONTENTS, EXCEPT WHERE REQUIRED BY THE WORK, SHALL BE MADE GOOD TO THE SATISFACTION OF THE LANDLORD AT NO ADDITIONAL COST TO THE LEASEHOLDER/TENANT. MAKING GOOD SHALL MEAN RESTORATION TO AT LEAST ORIGINAL CONDITION IN TERMS OF STRENGTH, SAFETY, WORKMANSHIP AND APPEARANCE.

SECTION 01 61 00 - PRODUCT REQUIREMENTS

1 PROVIDE NEW PRODUCTS UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS. PRODUCTS THAT ARE NOT SPECIFIED SHALL BE OF A QUALITY BEST SUITED TO THE PURPOSE REQUIRED AND THEIR USE IS SUBJECT TO THE APPROVAL OF THE LEASEHOLDER/TENANT. REMOVE AND REPLACE DEFECTIVE PRODUCTS OR PRODUCTS THAT DO NOT CONFORM TO THE CONTRACT DOCUMENTS AT CONTRACTOR'S OWN EXPENSE AND BE RESPONSIBLE FOR ANY DELAYS AND EXPENSES CAUSED BY REJECTION.

2 PERMANENT LABELS, TRADEMARKS AND NAMEPLATES ON PRODUCTS ARE NOT ACCEPTABLE IN PROMINENT LOCATIONS, EXCEPT WHERE REQUIRED FOR OPERATING INSTRUCTIONS OR WHEN LOCATED IN MECHANICAL OR ELECTRICAL ROOMS.

3 PROVIDE FASTENINGS AND ACCESSORIES IN SAME MATERIAL, TEXTURE, COLOR AND FINISH AS ADJACENT MATERIALS, UNLESS INDICATED OTHERWISE. PREVENT ELECTROLYTIC ACTION BETWEEN DISSIMILAR METALS AND MATERIALS. SPACE ANCHORS WITHIN THEIR LOAD LIMIT OR SHEAR CAPACITY AND ENSURE THEY PROVIDE POSITIVE PERMANENT ANCHORAGE. PLASTIC, WOOD OR ANY OTHER ORGANIC MATERIAL PLUGS ARE NOT ACCEPTABLE. KEEP EXPOSED FASTENINGS TO A MINIMUM, SPACE EVENLY AND INSTALL NEATLY. FASTENINGS WHICH CAUSE SPALLING OR CRACKING OF MATERIAL TO WHICH ANCHORAGE IS MADE ARE NOT ACCEPTABLE.

4 PERFORM WORK IN ACCORDANCE WITH DETAILS, MANUFACTURER'S INSTRUCTIONS AND SPECIFIED REQUIREMENTS. SHOULD A CONFLICT EXIST BETWEEN SPECIFICATIONS AND INSTRUCTIONS, CONSULT THE CONSULTANT.

5 EXECUTE WORKMANSHIP BY WORKERS EXPERIENCED AND SKILLED IN THE RESPECTIVE DUTIES FOR WHICH THEY ARE EMPLOYED. DECISIONS AS TO STANDARD OR FITNESS OF QUALITY OF WORK IN CASES OF DISPUTE REST SOLELY WITH LEASEHOLDER/TENANT, WHOSE DECISION IS FINAL.

6 REVIEW PRODUCT DELIVERY REQUIREMENTS AND ANTICIPATE FORESEEABLE SUPPLY DELAYS FOR ANY ITEMS IMMEDIATELY UPON SIGNING CONTRACT. IF DELAYS IN SUPPLY OF PRODUCTS ARE FORESEEABLE, NOTIFY CONSULTANT OF SUCH, IN ORDER THAT SUBSTITUTIONS OR OTHER REMEDIAL ACTION MAY BE AUTHORIZED IN AMPLE TIME TO PREVENT DELAY IN PERFORMANCE OF WORK. IN EVENT OF FAILURE TO NOTIFY CONSULTANT AT COMMENCEMENT OF WORK AND SHOULD IT SUBSEQUENTLY APPEAR THAT WORK MAY BE DELAYED FOR SUCH REASON, CONSULTANT RESERVES RIGHT TO SUBSTITUTE MORE READILY AVAILABLE PRODUCTS OF SIMILAR CHARACTER, AT NO INCREASE IN CONTRACT PRICE OR CONTRACT TIME.

7 TRANSPORT, STORE AND PROTECT PRODUCTS IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS WITH SEALS AND LABELS INTACT AND LEGIBLE. STORE SENSITIVE PRODUCTS IN WEATHER TIGHT, CLIMATE CONTROLLED, ENCLOSURES IN AN ENVIRONMENT FAVORABLE TO PRODUCT. ARRANGE STORAGE OF PRODUCTS TO PERMIT ACCESS FOR INSPECTION. PERIODICALLY INSPECT TO VERIFY PRODUCTS ARE UNDAMAGED AND ARE MAINTAINED IN ACCEPTABLE CONDITION.

8 CONSULTANT WILL CONSIDER REQUESTS FOR SUBSTITUTIONS ONLY WITHIN TEN (10) DAYS AFTER DATE OF LEASEHOLDER/TENANT-CONTRACTOR AGREEMENT. SUBSTITUTIONS MAY BE CONSIDERED WHEN A PRODUCT BECOMES UNAVAILABLE THROUGH NO FAULT OF THE CONTRACTOR. DOCUMENT EACH REQUEST WITH COMPLETE DATA SUBSTANTIATING COMPLIANCE OF PROPOSED SUBSTITUTION WITH CONTRACT DOCUMENTS.

SECTION 01 73 00 - EXECUTION

1 EXAMINE EXISTING CONDITIONS PRIOR TO COMMENCING WORK, INCLUDING ELEMENTS SUBJECT TO DAMAGE OR MOVEMENT DURING CUTTING AND PATCHING.

2 ASSESS CONDITIONS AFFECTING PERFORMANCE OF WORK AFTER UNCOVERING EXISTING WORK.

3 BEGINNING OF CUTTING OR PATCHING MEANS ACCEPTANCE OF EXISTING CONDITIONS.

4 UNCOVER WORK TO INSTALL ILL-TIMED WORK.

5 REMOVE AND REPLACE DEFECTIVE OR NON-CONFORMING WORK.

6 PROVIDE OPENINGS IN NON-STRUCTURAL ELEMENTS OF WORK FOR PENETRATIONS OF MECHANICAL, ELECTRICAL AND ASSOCIATED WORK. LIMIT OPENING DIMENSIONS TO MINIMAL SIZES REQUIRED AND PERFORMED IN A NEAT AND CLEAN FASHION.

7 CUT RIGID MATERIALS USING MASONRY SAW OR CORE DRILL. PNEUMATIC OR IMPACT TOOLS NOT ALLOWED ON MASONRY OR CONCRETE WORK WITHOUT PRIOR APPROVAL.

8 PATCH OR REPLACE THE IMPERFECT PORTION OF THE SURFACE WITH MATCHING MATERIAL IN AREAS WHERE A PORTION OF AN EXISTING FINISHED SURFACE IS DAMAGED, LIFTED, STAINED, OR OTHERWISE MADE OR FOUND TO BE IMPERFECT.

9 DO NOT INCORPORATE SALVAGED OR USED MATERIAL IN NEW CONSTRUCTION UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE DRAWINGS.

10 PROVIDE ADEQUATE SUPPORT OR SUBSTRATE FOR PATCHING OF FINISHES.

11 REPAINT OR RECOAT THE PATCHED PORTIONS TO PROVIDE UNIFORM COLOR AND TEXTURE OVER THE ENTIRE SURFACE.

12 REPAINT OR RECOAT THE ENTIRE SURFACE IF THE SURROUNDING SURFACE CANNOT BE MATCHED.

13 IN THE SECTIONS OF THE SPECIFICATIONS WHICH FOLLOW THESE GENERAL REQUIREMENTS, NO CONCERTED ATTEMPT HAS BEEN MADE TO DESCRIBE EACH OF THE VARIOUS EXISTING PRODUCTS THAT MUST BE USED TO PATCH, MATCH, EXTEND OR REPLACE EXISTING WORK. OBTAIN ALL SUCH PRODUCTS IN TIME TO COMPLETE THE WORK ON SCHEDULE. SUCH PRODUCTS SHALL BE PROVIDED IN QUALITY WHICH IS IN NO WAY INFERIOR TO THE EXISTING PRODUCTS.

SECTION 01 73 00 - EXECUTION CONTINUED...

14 WHERE DRYWALL, WOOD, METAL OR OTHER FINISHED SURFACE IS CUT IN SUCH A WAY THAT A SMOOTH TRANSITION WITH NEW WORK IS NOT POSSIBLE, TERMINATE THE EXISTING SURFACE IN A NEAT FASHION ALONG A STRAIGHT LINE AT A NATURAL LINE OF DIVISION AND PROVIDE TRIM APPROPRIATE TO THE FINISHED SURFACE.

15 WHERE TWO (2) OR MORE SPACES ARE INDICATED TO BECOME ONE (1) SPACE, REWORK FLOORS AND CEILINGS SO THAT HORIZONTAL PLANES WITHOUT BREAKS, STEPS OR BULKHEADS RESULT. FLOOR SLOPE IS NOT TO EXCEED SLOPE ALLOWED BY LOCAL CODES AND ORDINANCES.

16 IN CASES OF EXTREME CHANGE OF LEVEL, 2 INCH OR MORE, OBTAIN INSTRUCTIONS FROM THE CONSULTANT AS TO METHOD OF MAKING TRANSITION. EITHER STEPPING, BULKHEADING, ENCASEMENT, RAMPING, SLOPING OR CHANGE OF TRANSITION LINE SHALL BE EMPLOYED, OR A COMBINATION OF THESE, AS DIRECTED IN EACH CASE BY THE CONSULTANT.

17 RESTORE EXISTING WORK THAT IS DAMAGED DURING CONSTRUCTION TO A CONDITION EQUAL TO ITS CONDITION AT THE TIME OF THE START OF THE WORK.

18 AT LOCATIONS IN EXISTING AREAS WHERE PARTITIONS ARE REMOVED, PATCH THE FLOORS, WALLS AND CEILINGS WITH FINISH MATERIALS TO MATCH ADJACENT FINISHES.

19 WHERE A PRODUCT OR TYPE OF CONSTRUCTION OCCURS IN THE EXISTING BUILDING, AND IT IS NOT SPECIFIED AS A PART OF THE NEW WORK, PROVIDE SUCH PRODUCTS OR TYPES OF CONSTRUCTION AS NEEDED TO PATCH, EXTEND OR MATCH THE EXISTING WORK.

20 FIT WORK AIRTIGHT TO PIPES, SLEEVES, DUCTS, CONDUIT, AND OTHER PENETRATIONS THROUGH SURFACES

21 AT PENETRATION OF FIRE RATED WALL, CEILING, OR FLOOR CONSTRUCTION, COMPLETELY SEAL VOIDS WITH FIRESTOPPING MATERIAL, FOR FULL THICKNESS OF THE CONSTRUCTED ELEMENT. REFER TO SECTION 078400.

22 CONCEAL PIPES, DUCTS AND WIRING IN FLOOR, WALL AND CEILING CONSTRUCTION OF FINISHED AREAS EXCEPT WHERE INDICATED OTHERWISE.

23 WORK PERFORMED AND MATERIALS USED SHALL BE NOT LESS THAN THE STANDARD OF QUALITY FOR THE EXISTING FINISHED BUILDING, EXCEPT WHERE SUCH EXISTING MATERIALS ARE NO LONGER AVAILABLE, ARE INAPPROPRIATE FOR THE INTENDED RECONSTRUCTION OR DETAILED OTHERWISE ON THE DRAWINGS.

24 MAKE GOOD: IN GENERAL, DEFINED AS MATCHING ADJACENT SURFACES SUCH THAT THERE IS NO VISIBLE DIFFERENCE BETWEEN EXISTING AND NEW SURFACES WHEN VIEWED IN AMBIENT LIGHT FROM A DISTANCE OF 5 FEET. IN RENOVATION AREAS, "MAKE GOOD" MEANS REPAIRING SUBSTRATE SURFACES AND, IN AREAS NOT SCHEDULED FOR REFINISHING, REFERS TO PATCHING, REPAIRING, AND FINISHING TO MATCH ADJACENT SURFACES AND INCLUDES APPLYING A NEW PAINT FINISH TO SURFACE UP TO NEXT CHANGE IN PLANE IN ALL DIRECTIONS.

SECTION 01 74 21 - WASTE MANAGEMENT AND DISPOSAL

1 KEEP SITE CLEAN AND FREE OF UNSIGHTLY COLLECTION OF WASTE MATERIALS AND DEBRIS. CLEAN AT THE END OF EACH WORK DAY.

2 MINIMIZE WASTE DISPOSAL TO LANDFILLS. EMPLOY PROCESSES THAT ENSURE THE GENERATION OF AS LITTLE WASTE AS POSSIBLE INCLUDING PREVENTION OF DAMAGE DUE TO MISHANDLING, IMPROPER STORAGE, CONTAMINATION, INADEQUATE PROTECTION OR OTHER FACTORS AS WELL AS MINIMIZING OVER PACKAGING AND POOR QUANTITY ESTIMATING.

3 DEVELOP AND IMPLEMENT PROCEDURES TO RE-USE, SALVAGE, AND RECYCLE NEW CONSTRUCTION AND DEMOLITION MATERIALS, BASED ON THE CONTRACT DOCUMENTS, ESTIMATED QUANTITIES OF AVAILABLE MATERIALS, AND AVAILABILITY OF RECYCLING FACILITIES. PROCEDURES MAY INCLUDE ON-SITE RECYCLING, SOURCE SEPARATED RECYCLING, AND/OR MIXED DEBRIS RECYCLING EFFORTS.

4 PROVIDE AND PAY FOR THE PROPER DISPOSAL AND SALVAGE OF CONSTRUCTION AND DEMOLITION MATERIALS AND WASTE. UNLESS OTHERWISE SHOWN ON THE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS, ALL SALVAGED MATERIALS BECOME THE PROPERTY OF THE CONTRACTOR.

5 MATERIALS HANDLING PROCEDURES: PREVENT CONTAMINATION OF MATERIALS TO BE RECYCLED AND SALVAGED AND HANDLE MATERIALS CONSISTENT WITH REQUIREMENTS FOR ACCEPTANCE BY DESIGNATED FACILITIES. WHERE SPACE PERMITS, SOURCE SEPARATION IS RECOMMENDED. WHERE MATERIALS MUST BE CO-MINGLED THEY MUST BE TAKEN TO A PROCESSING FACILITY FOR SEPARATION OFF SITE.

6 LIST OF COMPULSORY MATERIALS TO BE RECYCLED, INCLUDES THE FOLLOWING MATERIALS:
  6.1 OLD CORRUGATED CARDBOARD
  6.2 BEVERAGE CONTAINERS
  6.3 CLEAN DIMENSIONAL WOOD, PALETTE WOOD
  6.4 CONCRETE AND CONCRETE BLOCK
  6.5 SCRAP METAL, INCLUDING WIRE
  6.6 GYPSUM BOARD
  6.7 PLASTIC BUCKETS - WASTE REDUCED BY USING PLASTIC LINED CARDBOARD DRY PACKED MATERIALS INSTEAD OF PREMIXED MOIST PACKED MATERIALS WHERE THIS OPTION IS AVAILABLE.
  6.8 CARPET AND CARPET PAD TRIM
  6.9 PAINT (RETURN TO PAINT DEPOT)
  6.10 FLUORESCENT TUBES
  6.11 FOOD CONTAINERS
  6.12 PLASTIC SHEETING AND PACKAGING, WHERE RECYCLING PROGRAMS ARE AVAILABLE.
  6.13 RIGID PLASTIC FOAM INSULATION, WHERE RECYCLING PROGRAMS ARE AVAILABLE.

7 MISCELLANEOUS CONSTRUCTION DEBRIS: DEVELOP AND IMPLEMENT A PROGRAM TO TRANSPORT LOADS OF MIXED (COMMINGLED) NEW CONSTRUCTION AND DEMOLITION MATERIALS THAT CANNOT BE FEASIBLY SOURCE SEPARATED TO A MIXED MATERIALS RECYCLING FACILITY.

8 LEGALLY TRANSPORT AND DISPOSE OF MATERIALS THAT CANNOT BE DELIVERED TO A SOURCE SEPARATED OR MIXED RECYCLING FACILITY TO A TRANSFER STATION OR DISPOSAL FACILITY THAT CAN LEGALLY ACCEPT THE MATERIALS FOR THE PURPOSE OF DISPOSAL. USE A PERMITTED WASTE HAULER OR CONTRACTOR'S TRUCKING SERVICES AND PERSONNEL. TO CONFIRM VALID PERMITTED STATUS OF WASTE HAULERS, CONTACT THE LOCAL SOLID WASTE AUTHORITY.

9 BECOME FAMILIAR WITH THE CONDITIONS FOR ACCEPTANCE OF NEW CONSTRUCTION AND DEMOLITION MATERIALS AT RECYCLING FACILITIES, PRIOR TO DELIVERING MATERIALS.

10 DELIVER TO FACILITIES THAT CAN LEGALLY ACCEPT NEW CONSTRUCTION AND DEMOLITION MATERIALS FOR PURPOSE OF RE-USE, RECYCLING, COMPOSTING, OR DISPOSAL.

11 DO NOT BURN, BURY OR OTHERWISE DISPOSE OF SOLID WASTE ON THE PROJECT JOB-SITE. DUMPING ON AIRPORT PROPERTY IS PROHIBITED.

12 IMPLEMENT A RE-USE PROGRAM TO THE GREATEST EXTENT FEASIBLE.

13 REVENUES OR OTHER SAVINGS OBTAINED FROM RECYCLED, RE-USED, OR SALVAGED MATERIALS SHALL ACCRUE TO CONTRACTOR UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS.

14 CONFORM TO APPLICABLE CODES AND REGULATIONS FOR DISPOSAL AND REMOVAL OF COMMON AND HAZARDOUS WASTE. HANDLE AND DISPOSE OF ALL HAZARDOUS AND BANNED MATERIALS IN ACCORDANCE WITH REGIONAL AND MUNICIPAL REGULATIONS.

SECTION 01 77 00 - CLOSEOUT PROCEDURES

1 PERFORM FINAL CLEANING AND ADJUSTMENTS UPON COMPLETION AND PRIOR TO SUBSTANTIAL PERFORMANCE OF THE WORK. REMOVE GREASE, PAINT SPOTS, DIRT, DUST, STAINS, LABELS, FINGERPRINTS AND OTHER FOREIGN MATTER FROM SURFACES. REPAIR, PATCH AND TOUCH-UP MARRED SURFACES TO MATCH ADJACENT FINISHES. REPLACE CRACKED AND BROKEN GLASS. ENSURE THAT CLEANING AGENTS AND METHODS DO NOT REMOVE FINISHES AND PERMANENT PROTECTIVE COATINGS ON SURFACES BEING CLEANED.

2 SUBMIT OPERATION AND MAINTENANCE MANUALS TO LEASEHOLDER/TENANT TWO WEEKS PRIOR TO SUBSTANTIAL PERFORMANCE OF THE WORK. PREPARE INSTRUCTIONS AND DATA USING PERSONNEL EXPERIENCED IN MAINTENANCE AND OPERATION OF DESCRIBED PRODUCTS. ENSURE SPARE PARTS, MAINTENANCE MATERIALS AND SPECIAL TOOLS PROVIDED ARE NEW, UNDAMAGED OR DEFECTIVE, AND OF SAME QUALITY AND MANUFACTURE AS PRODUCTS PROVIDED IN WORK.

3 OBTAIN WARRANTIES AND BONDS, EXECUTED IN DUPLICATE BY SUBCONTRACTORS, SUPPLIERS, AND MANUFACTURERS, WITHIN TEN (10) DAYS AFTER COMPLETION OF THE APPLICABLE ITEM OF WORK. EXCEPT FOR ITEMS PUT INTO USE WITH LEASEHOLDER/TENANT'S PERMISSION, LEAVE DATE OF BEGINNING OF TIME OF WARRANTY UNTIL THE DATE OF SUBSTANTIAL PERFORMANCE IS DETERMINED. VERIFY THAT DOCUMENTS ARE IN PROPER FORM, CONTAIN FULL INFORMATION, AND ARE NOTARIZED. SUBMIT WARRANTIES AND BONDS TO LEASEHOLDER/TENANT.

DIVISION 2 - EXISTING CONDITIONS

SECTION 02 07 50 - CUTTING AND PATCHING

1 SUBCONTRACTING INFORMATION: THE RESPONSIBILITY FOR CUTTING, CORING AND PATCHING SHALL BE AS AGREED BETWEEN CONTRACTOR AND SUBCONTRACTOR.

2 TENANT CONTRACTOR'S RESPONSIBILITIES: THE CONTRACTOR SHALL CAREFULLY CHECK FOR CONCEALED PIPES, ELECTRICAL CONDUITS, AND OTHER UTILITIES BEFORE PERMITTING CUTTING OR CORING TO PROCEED. IF UNKNOWN CONCEALED UTILITIES ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE OWNER, LANDLORD AND CONSULTANT, AND FOLLOW THE CONSULTANT'S DIRECTIONS. IF ANY CONCEALED UTILITY IS DAMAGED DUE TO IMPROPER OR INCOMPLETE CHECKING, THE CONTRACTOR SHALL REPAIR OR REROUTE THE UTILITY AS DIRECTED BY THE CONSULTANT AT NO ADDITIONAL COST TO THE OWNER. THE TENANT CONTRACTOR SHALL ENSURE THAT ALL CORING, CUTTING , AND PATCHING WORK IS DONE IN COMPLIANCE WITH THESE SPECIFICATIONS.

3 SUBCONTRACTOR RESPONSIBILITIES: SUBCONTRACTORS SHALL COORDINATE WORK FOR WHICH THEY ARE RESPONSIBLE WITH THE TENANT CONTRACTOR TO MINIMIZE THE NEED FOR CORING, CUTTING AND PATCHING.

4 LIMITATIONS: DO NOT CORE, CUT, OR PATCH ANY WORK IN A MANNER THAT WOULD RESULT IN A FAILURE OF THE WORK TO PERFORM AS INTENDED, DECREASED ENERGY PERFORMANCE, INCREASED MAINTENANCE, DECREASED OPERATIONAL LIFE, OR DECREASED SAFETY.

A. STRUCTURAL WORK: DO NOT CORE OR CUT STRUCTURAL WORK OR BEARING WALLS WITHOUT WRITTEN APPROVAL FROM LANDLORD. WHERE CORING, CUTTING OR PATCHING OF STRUCTURAL WORK IS NECESSARY AND APPROVED BY LANDLORD AND CONSULTANT, PERFORM WORK IN A MANNER WHICH WILL NOT DIMINISH STRUCTURAL CAPACITY NOR INCREASE DEFLECTION OF MEMBER. PROVIDE TEMPORARY SHORING AND BRACING AS NECESSARY. ENSURE THE SAFETY OF PEOPLE AND PROPERTY AT ALL TIMES.

5 INSPECTION: BEFORE CORING, CUTTING, OR PATCHING, EXAMINE SURFACES AND CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED AND CORRECT UNSAFE AND UNSATISFACTORY CONDITIONS PRIOR TO PROCEEDING.

A. INSPECTIONS REQUIRED PRIOR TO CORING AND ACTUAL CORING WORK SHALL BE COORDINATED THROUGH THE AIRPORT INSPECTOR TO ENSURE WORK IN SPACES BELOW DOES NOT AFFECT ONGOING AIRPORT/ AIRLINE OPERATIONS.

SECTION 02 07 50 - CUTTING AND PATCHING CONTINUED...

6 PROTECTION: PROTECT ALL ADJACENT WORK FROM DAMAGE INCLUDING WATER DAMAGE FROM CORING OR CUTTING EQUIPMENT REQUIRING WATER. PROTECT THE WORK FROM ADVERSE CONDITIONS.

7 CORING AND CUTTING: CORE AND CUT WORK USING METHODS LEAST LIKELY TO DAMAGE ADJOINING WORK. USE TOOLS DESIGNED FOR DRILLING, SAWING, OR GRINDING, NOT HAMMERING OR CHOPPING. USE SAW OR DRILLS TO ENSURE NEAT, ACCURATELY FORMED HOLES TO SIZED REQUIRED WITH MINIMUM DISTURBANCE TO ADJACENT WORK. TEMPORARILY COVER OPENINGS; MAINTAIN WEATHER-TIGHTNESS AND SAFETY.

8 PATCHING: PATCH CONSTRUCTION BY FILLING, REPAIRING, REFINISHING, CLOSING UP, AND SIMILAR OPERATIONS FOLLOWING PERFORMANCE OF OTHER WORK. PATCH WITH DURABLE SEAMS THAT ARE AS INVISIBLE AS POSSIBLE. PROVIDE MATERIALS AND COMPLY WITH INSTALLATION REQUIREMENTS SPECIFIED IN OTHER SECTIONS OF THESE SPECIFICATIONS

SECTION 02 41 19 - SELECTIVE DEMOLITION

1 CONFORM TO ALL APPLICABLE BYLAWS, REGULATIONS, BUILDING CODES AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND THE LANDLORD FOR DEMOLITION WORK, DUST CONTROL, PRODUCTS REQUIRING ELECTRICAL DISCONNECTION AND RE-CONNECTION, AND OTHER ASSOCIATED...

2 PROVIDE RECORD PHOTOGRAPHS LABELED WITH DATES, TIMES AND DESCRIPTIONS TO SHOW THE "AS IS" CONDITION OF EXISTING STRUCTURES AND EXISTING ADJACENT STRUCTURES PRIOR TO COMMENCEMENT OF WORK. SUBMIT TWO (2) COPIES TO THE LEASEHOLDER/TENANT.

3 ASSIGN WORK TO TRADES EXPERIENCED, EFFICIENT AND SKILLED IN THE WORK DESIGNATED TO REMAIN OR TO BE REMOVED SO AS TO CAUSE THE LEAST DAMAGE TO EACH TYPE OF WORK ENCOUNTERED.

4 QUALIFICATIONS OF WORKERS: PROVIDE A SUPERVISOR, PRESENT AT ALL TIMES DURING THE SELECTIVE DEMOLITION WORK, THOROUGHLY FAMILIAR WITH THE WORK REQUIRED. PROVIDE ONE (1) PERSON ON SITE WHO IS RESPONSIBLE FOR MAINTAINING THE SAFETY BARRIERS AND PROTECTION OF THE WORKERS AND THE BUILDING OCCUPANTS AND PUBLIC

5 SALVAGE ITEMS INDICATED FOR TURNOVER TO THE LEASEHOLDER/TENANT AND LANDLORD AND STORE AT A LOCATION ON THE SITE AS DIRECTED BY THE LEASEHOLDER/TENANT. RELOCATE ITEMS INDICATED AS BEING RE-USED.

6 PROVIDE PROTECTION TO ENSURE MATERIALS, FINISHES AND SURFACES TO REMAIN WILL NOT BE DAMAGED, SCRATCHED, OR MARRED BY DEMOLITION WORK.

7 ENSURE THAT AFFECTED SERVICES AND UTILITIES HAVE BEEN DISCONNECTED PRIOR TO THE COMMENCEMENT OF WORK.

8 CONDUCT DEMOLITION TO MINIMIZE INTERFERENCE WITH ADJACENT AND OCCUPIED BUILDING AREAS.

9 CEASE OPERATIONS IMMEDIATELY IF STRUCTURE APPEARS TO BE IN DANGER AND NOTIFY CONSULTANT. DO NOT RESUME OPERATIONS UNTIL DIRECTED.

10 MAINTAIN UNOBSTRUCTED SAFE ACCESS FOR PERSONNEL AND REMOVAL OF MATERIALS AT ALL TIMES.

11 MAINTAIN SAFE ACCESS FOR THE PUBLIC TO THE EXISTING BUILDING AT ALL TIMES. THE CONTRACTOR SHALL CONDUCT ALL ACTIVITIES IN A MANNER THAT RESPECTS THE CONTINUING OPERATION ACTIVITIES OF THE LEASEHOLDER/TENANT AND PRESENCE OF THE PUBLIC DURING THE WORK.

12 KEEP UTILITY AND SERVICE OUTAGES TO A MINIMUM. OUTAGES WILL BE PERMITTED ONLY WITH WRITTEN PERMISSION FROM THE LEASEHOLDER/TENANT. MAKE OUTAGE REQUESTS AT LEAST THREE (3) DAYS BEFORE DATE OF PROPOSED OUTAGE. STATE HOURS OF OUTAGE IN REQUEST.

13 THE DRAWINGS MAY DIAGRAMMATICALLY SHOW SOME KNOWN UTILITIES INCLUDING ABANDONED AND RELOCATED UTILITIES IN THEIR APPROXIMATE LOCATIONS. THESE LOCATIONS ARE NOT GUARANTEED NOR IS THEIR EXISTENCE CONFIRMED.

14 PROTECT AND MAINTAIN EXISTING ACTIVE SERVICES DESIGNATED TO REMAIN OR AS REQUIRED TO FACILITATE THE WORK.

15 MAINTAIN NORMAL BUILDING TEMPERATURES AND HUMIDITY WITHIN OCCUPIED AREAS DURING WORK BY MEANS OF DUSTPROOF AND WEATHERPROOF PARTITIONS.

16 SUPPRESS DUST AND DIRT. PREVENT THE OCCURRENCE OF UNSANITARY CONDITIONS, FLOODING OR LEAKING. DO NOT ALLOW DIRT, DEBRIS OR DISCARDED MATERIALS TO ACCUMULATE ON SITE. REMOVE PROMPTLY.

17 PROVIDE TEMPORARY COVERS OVER UNCOMPLETED FLOOR, CEILING AND WALL OPENINGS FOR PROTECTION OF THE PUBLIC DURING THE WORK.

18 IF THE CONTRACTOR EXPOSES CONDITIONS WHICH ARE IN CONTRAVENTION WITH APPLICABLE REGULATORY CODES AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, UNSAFE OR IN ANY WAY LESS THAN THE ACCEPTABLE INDUSTRY STANDARD FOR THE PARTICULAR ITEM WHILE CARRYING OUT ALTERATION WORK, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CONSULTANT BEFORE PROCEEDING WITH FURTHER WORK. THE CONSULTANT WILL REVIEW THE CONDITION AND ISSUE THE APPROPRIATE INSTRUCTION

19 REPAIR AND MAKE GOOD DAMAGE TO EXISTING CONSTRUCTION CAUSED BY THE WORK OF THIS SECTION. USE MECHANICS SKILLED IN THE TYPE OF WORK INVOLVED TO REPLACE SUCH DAMAGED WORK.

DIVISION 3 – CONCRETE

03 35 00 - ARCHITECTURAL CONCRETE FINISHING

1 MATERIALS
  1.1 UNDERLAYMENT: CEMENTITIOUS, SELF LEVELLING, SINGLE COMPONENT, POLYMER MODIFIED UNDERLAYMENT AND MANUFACTURER'S LOW VOC RECOMMENDED PRIMER, FOR APPLICATION THICKNESSES TO A MINIMUM FEATHER EDGE TO ½".
  1.2 OVERLAYMENT: CEMENTITIOUS, SELF LEVELLING, SINGLE COMPONENT, POLYMER MODIFIED OVERLAYMENT, FOR APPLICATION THICKNESSES TO A MINIMUM OF ½" TO 1".
  1.3 PATCHING AND FLASH PATCHING MATERIALS: CEMENTITIOUS BASED, POLYMER MODIFIED, FINE AGGREGATE, SINGLE COMPONENT, RAPID CURING, EARLY STRENGTH FLOOR PATCHING COMPOUNDS HAVING HIGH ADHESION WITH MANUFACTURER'S RECOMMENDED PRIMER AND SURFACE PROFILE; FOR APPLICATION IN THICKNESSES TO A MINIMUM OF 1/6" TO 1".
  1.4 CRACK REPAIR AND FILLER: TWO-COMPONENT, NONSHRINK, 100% SOLIDS, MOISTURE-INSENSITIVE, VOC FREE, AND MEETING THE REQUIREMENTS OF ASTM C881.
  1.5 HARDENER: TYPE: 1, SODIUM SILICATE, PERMANENT PENETRATING SEALER AND HARDENERLIQUID APPLIED, WATER BASED, CHEMICALLY REACTIVE, NON-TOXIC, NON34
  -FLAMMABLE, AND ANTI-DUSTING HAVE LOW OR NO VOC, COLORLESS.
  1.6 HORIZONTAL SURFACE SEALER: TO ASTM C1315, WATER BASED, CLEAR.
  1.7 GENERAL PURPOSE SEALING COMPOUND FOR INTERIOR VERTICAL CONCRETE SURFACES: TO ASTM C309, TYPE 1, CLASS B COMPOUND
  1.8 OTHER MANUFACTURERS OFFERING PRODUCTS MEETING OR EXCEEDING SPECIFIED QUALITY, CHARACTERISTICS, PERFORMANCE AND OTHER REQUIREMENTS MAY BE CONSIDERED. PROPOSED SUBSTITUTIONS SHALL CLOSELY MATCH SPECIFIED PRODUCTS OR THEY MAY BE REJECTED BY THE CONSULTANT.

2 INTERIOR FLOORS INDICATED AS EXPOSED CONCRETE ARE TO BE FINISHED IN ACCORDANCE WITH THE SLAB FINISHING SCHEDULE ON THE STRUCTURAL DRAWINGS. FOR SLAB AREAS NOT NOTED IN THE FINISHING SCHEDULE, SLABS SHALL BE SMOOTH CONCRETE WITH STEEL TROWEL FINISH

3 PREPARE CONCRETE TO RECEIVE REPAIR MATERIALS, REPAIR SURFACES DAMAGED BY REMOVAL OF EXISTING FLOOR FINISHES, CONCRETE OR BUILT-IN FITTINGS SUCH AS TRENCH DRAINS.

4 CLEAN EXISTING CONCRETE SURFACES OF DIRT, LAITANCE, CORROSION, OR OTHER CONTAMINATION; WIRE BRUSH USING WATER; RINSE AND ALLOW TO DRY. FLUSH OUT CRACKS AND VOIDS WITH WATER TO REMOVE LAITANCE AND DIRT, ALLOW TO DRY.

5 INSTALL CONCRETE LEVELING COMPOUND WHERE REQUIRED:
  5.1 INSTALL PER MANUFACTURER'S INSTRUCTIONS.
  5.2 PROVIDE A SMOOTH TRANSITION BETWEEN DIFFERING FINISH LEVELS USING LEVELING COMPOUND AS SPECIFIED APPLIED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AT JUNCTIONS OF FLOORING WITH OTHER FLOORING HAVING A DIFFERING FINISHED HEIGHT.
  5.3 PREPARE CONCRETE SURFACE BY MECHANICAL ROUGHENING OR HYDRO-MILLING TO REMOVE ALL SURFACE FILM AND LAITANCE WHERE LEVELING COMPOUNDS ARE USED.
  5.4 FEATHER OUT LEVELING COMPOUND FOR A DISTANCE OF 3.0 M UNLESS OTHERWISE DETAILED.

6 INSTALL CONCRETE SEALER IN AREAS AS SCHEDULED ON DRAWINGS.
  6.1 ACCEPTED SEALING COMPOUND: VOCOMP-25 BY W. R. MEADOWS OR APPROVED ALTERNATIVE.
  6.2 INSTALL PER MANUFACTURER'S INSTRUCTIONS.

7 DO NOT USE SEALING COMPOUNDS ON SLABS WHERE IT WILL NEGATIVELY AFFECT INSTALLATION OF FLOOR FINISHES. DO NOT APPLY SEALING COMPOUND TO FLOORS DESIGNATED TO RECEIVE RESILIENT FLOORING, CERAMIC TILE OR CARPETING.

8 FINISH FLOORS AND SLABS IN ACCORDANCE WITH ACI 302.1R, RECOMMENDATIONS FOR SCREEDING, RE STRAIGHTENING, AND FINISHING OPERATIONS FOR CONCRETE SURFACES; DO NOT WET CONCRETE SURFACES

DIVISION 4 – MASONRY

SECTION 04 22 00 – UNIT MASONRY

1 SUBMIT PRODUCT DATA AND SAMPLES AS REQUIRED. SUBMIT PROPOSED MIX PROPORTIONS AND SAND ANALYSIS REPORTS AND COMPRESSIVE STRENGTH REPORTS ON THE PROPOSED MORTAR MIX(ES).

2 MATERIALS
  2.1 BURNED CLAY FACE BRICK: TO ASTM C216, INTERIOR GRADE (IG), TYPE X, DIMENSIONS AS DIRECTED ON DRAWINGS,
  2.2 CONCRETE MASONRY UNITS (STANDARD AND ARCHITECTURAL) TO ASTM C652 AND UL 618, NOMINAL SIZE, COLOR AND FACE TREATMENT AS DIRECTED ON DRAWINGS,
  2.3 MORTAR AND GROUT: PORTLAND CEMENT: TO ASTM C150, TYPE GU - GENERAL USE HYDRAULIC CEMENT (TYPE 10), MASONRY CEMENT: TO ASTM C270, TYPE N, FINE AGGREGATE: TO ASTM C144, NATURAL SAND, WATER CLEAN, POTABLE, LIME
  2.4 CLEAR UNIT MASONRY SEALER, CLEAR COATING FOR GROUND FACE TERRAZZO CONCRETE UNIT MASONRY

3 TESTING: TEST MORTAR AND GROUT IN ACCORDANCE WITH ASTM C270, BASED ON PROPERTY SPECIFICATION

4 REINFORCEMENT, TIES AND ANCHORS
  4.1 MASONRY JOINT REINFORCEMENT: IN ACCORDANCE WITH ASTM A82, WITH CORROSION PROTECTION IN ACCORDANCE WITH ASTM A153, HOT DIP GALVANIZED STEEL.
  4.2 TIES AND ANCHORS UTILIZED SHALL BE DESIGNED IN ACCORDANCE WITH UL 60947 FOR NON-CONVENTIONAL MASONRY CONNECTORS, DEFLECTION: MAXIMUM 1/12", INCLUDING FREE PLAY, WHEN ACTED UPON BY A LATERAL LOAD OF 0.45 KN, IN ALL POSSIBLE POSITIONS OF ADJUSTMENT.

SECTION 04 22 00 – UNIT MASONRY CONTINUED...

5 TOLERANCES: FOR CONCRETE UNIT MASONRY TOLERANCES IN ACCORDANCE WITH ASTM C652.1

6 CULL OUT MASONRY UNITS, IN ACCORDANCE WITH ASTM C652 AND REVIEWED RANGE OF COLOR SAMPLES, WITH CHIPS, CRACKS, BROKEN CORNERS, EXCESSIVE COLOR AND TEXTURE VARIATION.

7 INSTALL MASONRY UNITS IN ACCORDANCE WITH TMS 602-16 IN A RUNNING BOND PATTERN AND RAKED JOINTS, UNLESS OTHERWISE NOTED ON DRAWINGS.

8 MIX MORTAR INGREDIENTS IN ACCORDANCE WITH ASTM C270 IN QUANTITIES NEEDED FOR IMMEDIATE USE

9 INSTALL MASONRY CONNECTORS AND REINFORCEMENT IN ACCORDANCE WITH TMS 602-16 UNLESS INDICATED OTHERWISE

9 INSTALL CONTROL AND EXPANSION JOINT MATERIALS IN UNIT MASONRY AS MASONRY PROGRESSES; DO NOT ALLOW MATERIALS TO SPAN CONTROL AND EXPANSION JOINTS WITHOUT PROVISION TO ALLOW FOR IN-PLANE WALL OR PARTITION MOVEMENT

10 MASONRY SEALERS: APPLY MASONRY SEALER TO TERRAZZO CONCRETE UNIT MASONRY TO GLOSS LEVELS INDICATED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

11 CLEANING: PERFORM CLEANING AS SOON AS POSSIBLE AFTER INSTALLATION TO REMOVE CONSTRUCTION AND ACCUMULATED ENVIRONMENTAL DIRT

SECTION 04 40 00 – STONE VENEER

1 SUBMIT COMPLETE CUTTING AND SETTING SHOP DRAWINGS FOR ALL STONEWORK. SHOW IN DETAIL THE SIZES, SECTIONS AND DIMENSIONS OF STONE, THE ARRANGEMENT OF JOINTS AND BONDING, ANCHORING AND OTHER NECESSARY DETAILS. INDICATE AN IDENTIFYING NUMBER OR MARK FOR EACH STONE. CLEARLY INDICATE ANCHORING, DOWELLING, AND CRAMPING OF STONEWORK AND DETAIL ALL CONNECTIONS TO THE STRUCTURE.

2 INSTALLER QUALIFICATIONS: ENGAGE EXPERIENCED INSTALLER WITH A MINIMUM OF 5 YEARS EXPERIENCE WHO HAS COMPLETED SYSTEMS SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR PROJECT AND WITH RECORD OF SUCCESSFUL PERFORMANCE AND IS APPROVED BY MANUFACTURER.

3 DESIGN, FABRICATE AND INSTALL STONEWORK TO WITHSTAND NORMAL LOADS FROM GRAVITY, MOVEMENT OF BUILDING STRUCTURE, AND THERMALLY INDUCED MOVEMENT, AS WELL AS TO RESIST DETERIORATION UNDER CONDITIONS OF NORMAL USE.

4 MATERIALS
  4.1 STONE: TYPE 1 AS INDICATED ON DRAWINGS. PROVIDE CORNER UNITS, CAPS AND OTHER ACCESSORIES FOR A COMPLETE AND FINISHED INSTALLATION. ACCESSORIES TO MATCH STONE WALL MATERIAL.
  4.2 METAL LATH: MINIMUM 2.5 LB (3.4 LB FOR OPEN STUD CONSTRUCTION) GALVANIZED EXPANDED METAL LATH (DIAMOND MESH) IN ACCORDANCE WITH ASTM C847
  4.3 SEALER: SILANE BASED SEALER, BREATHABLE TYPE AS RECOMMENDED BY MANUFACTURER
  4.4 . MORTAR: TYPE S AND AS FOLLOWS:
  4.4.1 CEMENT: COMPLYING WITH ASTM C270.
  4.4.2 LIME: ASTM C207.
  4.4.3 SAND: ASTM C144, NATURAL OR MANUFACTURED SAND.
  4.4.4 COLOR PIGMENT: ASTM C979, MINERAL OXIDE PIGMENTS.
  4.4.5 WATER: POTABLE.
  4.4.6 PRE-PACKAGED LATEX-PORTLAND CEMENT MORTAR: ANSI A118.4.
  4.5 FASTENERS: GALVANIZED NAILS, SCREWS OR AS APPROVED BY STONEWORK MANUFACTURER

5 REFER TO MANUFACTURERS WRITTEN INSTRUCTIONS FOR INSTALLATION PROCEDURES AND DRAWINGS FOR DETAILS FOR MANUFACTURED VENEER AS INDICATED ON DRAWINGS.

6 VERIFY CONDITIONS OF SUBSTRATE PREVIOUSLY INSTALLED ARE ACCEPTABLE FOR STONE INSTALLATION IN ACCORDANCE WITH STONE SUPPLIERS WRITTEN INSTRUCTIONS.

7 LAY WORK TRUE TO LINE AND LEVEL. ACCURATELY SPACE COURSES, KEEP BOND PLUMB THROUGHOUT. CORNERS AND REVEALS SHALL BE PLUMB AND TRUE. CHECK WORK REGULARLY

8 FABRICATE STONE, DETAIL AND FABRICATE SUPPORTS, AND DO MASONRY WORK IN ACCORDANCE WITH TMS 602-16 EXCEPT WHERE SPECIFIED OTHERWISE.

9 DO MASONRY REINFORCING AND TYING IN ACCORDANCE WITH TMS 602-16 UNLESS SPECIFIED OTHERWISE.

10 MAKE AND USE MORTAR IN ACCORDANCE WITH ASTM 270 UNLESS SPECIFIED OTHERWISE.

11 CUTTING ANF FITTING: BUILD IN CHASES, PIPING, DUCTS, SLEEVES, GROUNDS, BLOCKING, INSERTS, SUPPORTS, CONDUIT, OUTLET BOXES, RECESSED FITTINGS, FIXTURES AND ACCESS PANELS AS REQUIRED TO COMPLETE THE WORK. COOPERATE FULLY TO ENSURE CORRECT SIZE, SHAPE AND LOCATION

12 FORM CONCAVE RECESSED JOINTS WHERE SEALED JOINTS ARE REQUIRED

13 FORM JOINTS TO SAME WIDTH AS REGULAR JOINTING, BUT NOT EXCEEDING ½" UNLESS OTHERWISE INDICATED. LOCATE JOINTS AT 19.5 FEET CENTRES MAXIMUM AND AT A MAXIMUM OF 13 FEET FROM ANY CORNERS, ANY OTHER INDICATION NOTWITHSTANDING. REFER TO ELEVATIONS ON DRAWINGS FOR LOCATIONS.

14 PROTECT MASONRY AND OTHER WORK FROM MARKING AND OTHER DAMAGE. PROTECT COMPLETED WORK FROM MORTAR DROPPINGS. USE NON-STAINING COVERINGS

15 SEAL STONEWORK IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTION

DIVISION 5 - METALS

SECTION 05 41 00 – STRUCTURAL METAL STUD FRAMING

1 SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH SECTION 01 33 00 – SUBMITTALS:
  1.1 INDICATE DESIGN LOADS, MEMBER SIZES, MATERIALS, DESIGN THICKNESS EXCLUSIVE OF COATINGS, COATING SPECIFICATIONS, CONNECTION AND BRACING DETAILS, SCREW SIZES AND SPACING, AND...
  1.2 INDICATE LOCATIONS, DIMENSIONS, OPENINGS AND REQUIREMENTS OF RELATED WORK
  1.3 INDICATE WELDS BY WELDING SYMBOLS AS DEFINED IN AWS D1.1, STRUCTURAL WELDING CODE: STEEL.

2 RETAIN A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF THE WORK, TO DESIGN FABRICATION AND ERECTION OF THE WORK OF THIS SECTION IN ACCORDANCE WITH APPLICABLE BUILDING CODE AND CONTRACT DOCUMENTS REQUIREMENTS

3 WELDING SHALL BE PERFORMED BY COMPANY CERTIFIED BY THE AMERICAN WELDING SOCIETY FOR THE TYPE OF WORK BEING PERFORMED; WELDING SHALL CONFORM TO AWS D1.1, STRUCTURAL WELDING...

4 PERFORM DESIGN, FABRICATION AND ERECTION OF THE WORK OF THIS SECTION BASED ON LIMIT STATES DESIGN PRINCIPLES USING FACTORED LOADS AND RESISTANCES, DETERMINED IN ACCORDANCE WITH AISI S100-16. CONFORM TO THE REQUIREMENTS OF INDICATED FIRE RESISTANCE RATINGS. DESIGN WALL FRAMING SYSTEM CAPABLE OF WITHSTANDING DESIGN LOADS WITHIN LIMITS AND UNDER DESIGN LOADS INDICATED ON DRAWINGS.

5 MATERIALS
  5.1 STEEL: TO AISI S100-16, FABRICATED FROM ASTM A653, GRADE 230 UNLESS OTHERWISE INDICATED ON DRAWINGS
  5.2 ZINC COATED STEEL SHEET: QUALITY TO ASTM A123, WITH Z275 FOR MASONRY VENEER ASSEMBLIES DESIGNATION COATING. CONSULTANT WILL ACCEPT HOT DIPPED ALUMINUM ZINC ALLOY WITH AZM 150 DESIGNATION COATING IN ACCORDANCE WITH ASTM A792 PROVIDED THAT CORROSION PROTECTION MEETS OR EXCEEDS REQUIREMENTS ESTABLISHED BY ASTM A653.
  5.3 FASTENERS AND WELDING MATERIALS
  5.3.1 WELDING MATERIALS CONFORMING TO AWS D1.1, STRUCTURAL WELDING CODE: STEEL; ELECTRODES MINIMUM 480 MPA TENSILE STRENGTH.
  5.3.2 BOLTS AND NUTS CONFORMING TO ASTM F3125, WITH WASHERS AND HOT DIP GALVANIZED FINISH.
  5.3.3 METAL TO METAL: SHEET METAL SCREWS CONFORMING TO ASME B18, WITH MINIMUM 0.3 MIL THICK GALVANIZED COATING AND #8 Ø; SELF DRILLING, SELF THREADING, CASE HARDENED TYPE; HEX, PAN, AND LOW PROFILE HEAD PROFILE TYPE TO SUIT APPLICATION; LENGTH SUFFICIENT TO PENETRATE NOT LESS THAN 3 FULLY EXPOSED THREADS BEYOND JOINED MATERIALS.
  5.3.4 METAL TO CONCRETE: HILTI DRILLED INSERT, MINIMUM 5/16" Ø; DO NOT USE POWDER ACTUATED FASTENERS.
  5.3.5 METAL TO STRUCTURAL STEEL: SECURE TRACK TO STRUCTURAL STEEL OVER 5/16" THICKNESS WITH HILTI DX FASTENING SYSTEM WITH ENH2 21L15MX NAILS.
  5.3.6 CONCRETE-TO-STEEL TOP TRACK CORRUGATED TIES: CORRUGATED STEEL CONVENTIONAL STRIP TIE; 7/8" WIDE X 4" TOTAL LENGTH INCLUDING 7/8" UP STAND X 1/32" (22GA) NOMINAL CORE METAL THICKNESS, HOT DIP GALVANIZED; CORRUGATIONS 3/32" DEEP X 3/8" APART; MEETING REQUIREMENTS OF ASTM A123.
  5.4 TOUCH UP PRIMER: ZINC RICH, TO SSPC PAINT 20.
  5.5 SHIMS: LOAD BEARING, HIGH DENSITY MULTI-MONOMER PLASTIC, NON-LEACHING
  5.6 FRAMING COMPONENTS: PROVIDE FRAMING COMPONENTS IN METAL CORE THICKNESS, PROFILES AND SPACING AS INIDACTED ON DRAWINGS.

6 DO WELDING IN ACCORDANCE WITH AWS D1.1, STRUCTURAL WELDING CODE.

7 CERTIFICATION OF COMPANIES: AWS D1.1 FOR STRUCTURAL STEEL AND AWS D1.2 FOR STRUCTURAL ALUMINUM.

8 DO WORK TO AISI S100-07- NASPEC.

9 ERECT COMPONENTS TO REQUIREMENTS OF REVIEWED SHOP DRAWINGS. ANCHOR TRACKS SECURELY TO STRUCTURE AT 32" ON CENTRE MAXIMUM, UNLESS LESSER SPACING PRESCRIBED ON SHOP DRAWINGS. ERECT STUDS PLUMB, ALIGNED AND SECURELY ATTACHED WITH TWO SCREWS MINIMUM, WELDED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

10 ERECTION TOLERANCES
  9.1 PLUMB: NOT TO EXCEED 1/500TH OF MEMBER LENGTH.
  9.2 CAMBER: NOT TO EXCEED 1/1000TH OF MEMBER LENGTH.
  9.3 SPACING: NOT MORE THAN +/- 1/8" FROM DESIGN SPACING.
  9.4 GAP BETWEEN END OF STUD AND TRACK WEB: NOT MORE THAN 5/32".

11 LIMIT DISTANCE FROM CENTERLINE OF LAST UNREINFORCED CUTOUT TO END OF MEMBER TO LESS THAN 12".

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Notes

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Client/Project Logo

Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
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Title
SPECIFICATIONS

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Revision
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SECTION 05 50 00 - METAL FABRICATIONS

1 PROVIDE SHOP DRAWINGS FOR THE METAL FABRICATIONS NOTED ON THE DRAWINGS:

1.1 INDICATE PROFILES, SIZES, CONNECTION ATTACHMENTS, REINFORCING, ANCHORAGE, SIZE AND TYPE OF FASTENERS, AND ACCESSORIES. INCLUDE ERECTION DRAWINGS, ELEVATIONS, AND DETAILS WHERE APPLICABLE; WELDED CONNECTIONS USING STANDARD WELDING SYMBOLS; NET WELD LENGTHS.

1.2 PREPARE SHOP DRAWINGS UNDER DIRECT SUPERVISION OF A PROFESSIONAL STRUCTURAL ENGINEER EXPERIENCED IN DESIGN OF THIS WORK AND LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED.

2 MATERIALS:

2.1 STEEL MATERIALS: MINIMUM 75% POST CONSUMER RECYCLED CONTENT, 90% TOTAL RECYCLED CONTENT.

2.2 ALUMINUM MATERIALS: MINIMUM 75% POST INDUSTRIAL RECYCLED CONTENT.

2.3 METALS SHALL BE NEW AND FREE FROM DEFECTS, WHICH MAY IMPAIR THEIR STRENGTH, DURABILITY OR APPEARANCE, AND SHALL BE ALLOYS OF THE BEST COMMERCIAL QUALITY SUITABLE FOR THE...

2.4 STRUCTURAL STEEL PLATES, ANGLES AND CHANNELS TO CONFORM TO ASTM A653, GRADE 300W.

2.5 HSS SECTIONS SHALL CONFORM TO ASTM A653 GRADE 300W, CLASS C FOR SQUARE AND RECTANGULAR SECTIONS AND TO ASTM A-500 CLASS C FOR ROUND SECTIONS.

2.6 STEEL PIPE: TO ASTM A53/A53M, STANDARD WEIGHT (SCHEDULE 40), UNLESS ANOTHER WEIGHT IS INDICATED OR REQUIRED BY STRUCTURAL LOADS, GALVANIZED FINISH

2.7 SHEET STEEL: TO ASTM A653M; GALVANIZED TO ASTM A924M, ZF275 COATING.

2.8 BOLTS FOR STEEL WORK TO CONFORM TO ASTM F3125/F3125M.

2.9 STAINLESS STEEL FASTENERS, WASHERS AND NUTS: TO ASTM F593, 18-8 AUSTENITIC STAINLESS STEEL (GRADE 8 - B8/B8A), SIZED AS REQUIRED FOR PURPOSE INTENDED, OR AS OTHERWISE INDICATED. COLD FINISHED: CONDITION B, COLD WORKED, PER ASTM A276.

2.10 ANCHOR RODS AND ORDINARY BOLTS TO CONFORM TO ASTM A307.

2.11 STAINLESS STEEL SHEET, STRIP, PLATE AND FLAT BAR: TO ASTM A666, TYPE 304 FOR INTERIOR, NO. 4 FINISH.

2.12 ALUMINUM SHEET AND PLATE: ASTM B209, ALLOY 5052.

2.13 ALUMINUM EXTRUSION TO ASTM B221/B221M, ALLOY 6063 T6.

3 WELDING TO REQUIREMENTS SPECIFIED ON APPROVED SHOP DRAWINGS.

3.1 WELDERS EMPLOYED ON THE WORK TO BE QUALIFIED TO AWS D1.1 (STEEL) AND AWS D1.2 (ALUMINUM).

3.2 OBTAIN LANDLORD APPROVAL FOR ALL WELDING ACTIVITIES ON SITE IN ADVANCE AND CONFORM TO LANDLORD REQUIREMENTS FOR THIS ACTIVITY.

3.3 PERFORM FIELD WELDING TO AWS REQUIREMENTS.

4 FINISHES - STEEL:

4.1 CLEAN SURFACES OF RUST, SCALE, GREASE, AND FOREIGN MATTER PRIOR TO FINISHING.

4.2 EXPOSED STEEL: PREPARE TO SSPC-SP3, POWER TOOL CLEANING.

4.3 DO NOT PRIME SURFACES IN DIRECT CONTACT WITH CONCRETE OR WHERE FIELD WELDING IS...

4.4 REFER TO SECTION 09 91 00 FOR PAINTING.

4.5 PRIME PAINT ITEMS WITH ONE COAT.

5 POWDER COAT FINISHES:

5.1 ELECTROSTATICALLY APPLIED THERMOSETTING POLYESTER URETHANE AND/OR EPOXY POWDER COAT FINISH IN COLOR AND SHEEN SELECTED BY THE CONSULTANT.

5.2 PROVIDE POWDER COAT FINISH OF ARCHITECTURAL METAL ITEMS WHERE SPECIFIED OR INDICATED AS PART OF THE WORK OF THIS SECTION.

5.3 THE TERM "PREFINISHED" WHEN REFERRING TO ARCHITECTURAL METAL ITEMS SHALL REFER TO POWDER COAT FINISH. POWDER COATING AS INDICATED ON INTERIOR FINISHES LIST, OR APPROVED ALTERNATIVE.

5.4 PRETREATMENT: CLEAN SUBSTRATE OF ALL DUST, SWARF AND OTHER DEBRIS FROM FABRICATION, AND MINERAL RESIDUES FROM HANDLING BY AN AQUEOUS DETERGENT SPRAY WASH DEGREASING. CHEMICALLY PRETREAT CLEANED SUBSTRATE USING A SPRAY APPLIED PHOSPHATE PRETREATMENT AS RECOMMENDED BY POWDER COATING MANUFACTURER.

5.5 COATING APPLICATION: PREHEAT SUBSTRATE AND APPLY POWDER COATING FINISH USING ELECTROSTATIC SPRAY APPLICATION TO PROVIDE A FINISHED DRY FILM THICKNESS OF APPROXIMATELY ...

6 FINISHES - ALUMINUM:

6.1 APPLY ONE (1) COAT OF BITUMINOUS PAINT TO CONCEALED ALUMINUM SURFACES IN CONTACT WITH CEMENTITIOUS OR DISSIMILAR MATERIALS.

6.2 ANODIZED ALUMINUM:

6.2.1. ALL EXPOSED ALUMINUM SHALL BE GIVEN CAUSTIC ETCH FOLLOWED BY AN ARCHITECTURAL CLASS II ANODIC COATING WITH COLOR CONFORMING TO ALUMINUM ASSOCIATION DESIGNATION AA-M10C22A31. THE COLOR SHALL BE COLOR #14 CLEAR AND SHALL MEET STANDARDS SET FORTH BY AAMA 611.

6.2.2. APPEARANCE: COATING SHALL BE CONTINUOUS, UNIFORM IN APPEARANCE, AND FREE FROM SCRATCHES AND OTHER BLEMISHES.

7 TOUCH-UP: TOUCH UP OR FIELD-PRIME ANY DAMAGES, CUT OR WELDS IMMEDIATELY AFTER ERECTION WITH GALVICRON PAINT, OR SPECIAL PRIMER AS REQUIRED.

8 APPLY FINISH METAL AS INDICATED ON DRAWINGS. UNLESS OTHERWISE NOTED ON DRAWINGS, ALL ALUMINUM EXPOSED TO VIEW TO HAVE A CLEAR MEDIUM MATTE ETCHED FINISH WITH 0.4 MIL MINIMUM THICK ANODIC COATING.

9 PREVENT DIRECT CONTACT BETWEEN DISSIMILAR METALS BY MEANS OF ISOLATING GASKETS OR A THICK COAT OF BITUMINOUS PAINT.

10 ISOLATE ALUMINUM, BY MEANS OF BITUMINOUS PAINT, FROM CONCRETE, MORTAR, MASONRY, WOOD AND DISSIMILAR METALS EXCEPT STAINLESS STEEL, ZINC, OR WHITE BRONZE OF SMALL AREA.

11 COORDINATE MILLWORK BRACKETS AND SUPPORTS WITH SECTION 06 40 00 – ARCHITECTURAL MILLWORK. PROVIDE ALL STEEL BLOCKING AND BRACING IN METAL STUD FRAMED PARTITIONS AS NECESSARY FOR A COMPLETE INSTALLATION. INCLUDE AS REQUIRED SUPPORT FOR ALL WALL-MOUNTED ITEMS AND FABRICATIONS AS INDICATED ON DRAWINGS. PROVIDE SUPPORT AT JAMBS OF DOORS AND ELSEWHERE AS REQUIRED.

12 COORDINATE ALUMINUM GLAZING CHANNELS AND STEEL SUPPORTS WITH SECTION 08 80 00 - GLASS AND GLAZING.

13 FIT AND SHOP ASSEMBLE ITEMS IN LARGEST PRACTICAL SECTIONS, FOR DELIVERY TO SITE.

14 FABRICATE ITEMS WITH JOINTS TIGHTLY FITTED AND SECURED. FABRICATE WORK SQUARE, TRUE, STRAIGHT AND ACCURATE TO DETAIL WITH SHARPLY, DEFINED PROFILES.

15 CONTINUOUSLY SEAL JOINED MEMBERS BY CONTINUOUS WELDS.

16 GRIND EXPOSED JOINTS FLUSH AND SMOOTH WITH ADJACENT FINISH SURFACE. MAKE EXPOSED JOINTS BUTT TIGHT, FLUSH, AND HAIRLINE. EASE EXPOSED EDGES TO SMALL UNIFORM RADIUS.

17 FASTENINGS: EXPOSE FASTENERS ONLY WHERE PRE-APPROVED BY CONSULTANT.

17.1 EXPOSED MECHANICAL FASTENINGS: FLUSH COUNTERSUNK SCREWS OR BOLTS; UNOBTRUSIVELY LOCATED; CONSISTENT WITH DESIGN OF COMPONENT, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE. USE STAINLESS STEEL FASTENINGS AND FITTINGS FOR STAINLESS STEEL WORK.

18 STAINLESS STEEL AND MILD STEEL FABRICATIONS:

18.1 PERFORM WORK IN ACCORDANCE WITH THE ARCHITECTURAL SHEET METAL MANUAL, AS PUBLISHED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION (SMACNA). FINISH ALL EXPOSED EDGES. ALL CORNERS AND EDGES TO BE ROUNDED, NO SHARP EDGES OR FASTENINGS. GENERALLY, RUN GRAIN VERTICALLY AND IN SAME DIRECTION BETWEEN ADJACENT STAINLESS STEEL PIECES. FORM SECTIONS SQUARE, TRUE AND ACCURATE TO SIZE, USING STEEL OF SUFFICIENT THICKNESS TO PREVENT DISTORTION, WAVES, BUCKLING, OIL-CANNING, OR OTHER DEFECTS DETRIMENTAL TO APPEARANCE AND PERFORMANCE.

18.2 PERFORM WELDING BY COMPETENT CRAFTSMEN USING THE ELECTRIC SEAMLESS HELIARC METHOD WITH FILLER RODS OF SUCH A COMPOSITION SO AS TO LEAVE A COMPLETE AND DUCTILE BUTT WELD OF THE SAME COMPOSITION AS THE ORIGINAL METAL. WORKMANSHIP SHALL BE FREE FROM PITS, CRACKS, DISCOLORATION AND OTHER MECHANICAL IMPERFECTIONS AND SHALL BE GROUND SMOOTH AND POLISHED TO MATCH ORIGINAL FINISH AND BE INVISIBLE.

18.3 WELD, GRIND, POLISH AND LEAVE CREVICE-FREE CORNERS. POLISH JOINTS AND WELDS IN STAINLESS STEEL TO A UNIFORM NO. 4 BRUSHED FINISH. NO FILLER OR SOLDERS SHALL BE USED.

18.4 ALL STRAIGHT LENGTHS SHALL BE ONE PIECE WITH ALL SEAMS, INCLUDING FIELD JOINTS, WELDED, AND GROUND SMOOTH.

18.5 PROTECT FINISHED SURFACES OF STAINLESS STEEL WITH A TOUGH FLEXIBLE REMOVABLE FILM AND, IN PARTICULAR, GUARD FROM DAMAGE BY FALLING OBJECTS, PLASTER OR MORTAR WASTE.

19 SUPPLY COMPONENTS REQUIRED FOR ANCHORAGE OF FABRICATIONS. FABRICATE ANCHORS AND RELATED COMPONENTS OF SAME MATERIAL AND FINISH AS FABRICATION, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.

20 INSTALL ITEMS PLUMB AND LEVEL, ACCURATELY FITTED, FREE FROM DISTORTION OR DEFECTS.

21 PROVIDE FOR ERECTION LOADS, AND FOR SUFFICIENT TEMPORARY BRACING TO MAINTAIN TRUE ALIGNMENT UNTIL COMPLETION OF ERECTION AND INSTALLATION OF PERMANENT ATTACHMENTS.

22 OBTAIN APPROVAL PRIOR TO SITE CUTTING OR MAKING ADJUSTMENTS NOT SCHEDULED.

SECTION 05 70 00 – ORNAMENTAL METAL FABRICATIONS

1 PRODUCT DATA: SUBMIT PRODUCT DATA FOR PRODUCTS USED IN METAL FABRICATIONS INCLUDING; BUT NOT LIMITED TO, PAINT PRODUCTS, GROUT AND FASTENERS

2 SHOP DRAWINGS: SUBMIT DETAILED SHOP AND ERECTION DRAWINGS OF EACH ORNAMENTAL METAL FABRICATION INCLUDING PLANS, ELEVATIONS, SECTIONS, AND DETAILS OF ORNAMENTAL METAL FABRICATIONS AND THEIR CONNECTIONS. SHOW ANCHORAGE AND ACCESSORY ITEMS

3 SUBMIT SHOP DRAWINGS STAMPED BY A STRUCTURAL PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF THE WORK FOR LOAD BEARING ORNAMENTAL METAL FABRICATIONS

4 FABRICATOR: USE ORNAMENTAL METAL FABRICATORS EXPERIENCED IN SUCCESSFULLY PRODUCING ORNAMENTAL METAL FABRICATIONS SIMILAR TO THOSE INDICATED FOR THE PROJECT, WITH SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS WITHOUT CAUSING DELAY IN THE WORK

5 SITE MEASUREMENTS: VERIFY DIMENSIONS BY SITE MEASUREMENTS BEFORE FABRICATION AND INDICATE MEASUREMENTS ON SHOP DRAWINGS WHERE METAL FABRICATIONS ARE INDICATED TO FIT WALLS AND OTHER CONSTRUCTION; COORDINATE FABRICATION SCHEDULE WITH CONSTRUCTION PROGRESS TO AVOID DELAYING THE WORK

6 MATERIALS

6.1 STAINLESS STEEL MATERIALS: TYPE 304 OR AS INDICATED ON DRAWINGS

6.1.1 SHEET AND STRIP TO ASTM A666

6.1.2 TUBING TO ASTM A269

6.1.3 PIPING TO ASTM A312

6.1.4 ANGLE, BARS AND SHAPES TO ASTM A276

6.1.5 FASTENERS, WASHERS AND NUTS: IN ACCORDANCE WITH ASTM F593, 18 8 AUSTENITIC STAINLESS STEEL (GRADE 8 B8/B8A), SIZED AS REQUIRED FOR PURPOSE INTENDED, OR AS OTHERWISE INDICATED. COLD FINISHED: CONDITION B, COLD WORKED, PER ASTM A276

6.1.6 FINISH: FINISH: NO. 4 FINISH, IN ACCORDANCE WITH ASTM A276 OR AS INDICATED ON DRAIWNGS

6.2 ALUMINUM MATERIALS

6.2.1 EXTRUDED PIPE: ALLOY 6063 T52 IN ACCORDANCE WITH ASTM B221

6.2.2 DRAWN PIPE: ALLOY 6063 T832 IN ACCORDANCE WITH ASTM B483

6.2.3 REINFORCING BARS: ALLOY 6061 T6 IN ACCORDANCE WITH ASTM B221

6.2.4 EXTRUDED BARS, SHAPES, AND MOULDINGS : ALLOY 6063 T52 IN ACCORDANCE WITH ASTM B221

6.2.5 EXTRUDED POSTS: ALLOY 6063 T6 IN ACCORDANCE WITH ASTM B221

6.2.6 CASTINGS: ALMAG 35 IN ACCORDANCE WITH ASTM B26

6.2.7 EXTRUDED TOE BOARD: ALLOY 6063 T52 IN ACCORDANCE WITH ASTM B221 AND THE SAFETY REQUIREMENTS OF ANSI A21.1

6.2.8 FINISH: IN ACCORDANCE WITH NAAMM METAL FINISHES MANUAL, CLEAR ANODIZED FINISH: CLASS II, AA M10C22A31 AND SHALL MEET REQUIREMENTS OF AAMA 611.

6.3 BRUSHED STAINLESS STEEL GLAZING CHANNELS: U CHANNELS WITH ROLL IN TOP LOAD GASKETS, AND ACCESSORIES, BY C. R. LAURENCE, AS REQUIRED FOR CONSTRUCTION OF STRUCTURAL GLAZING ASSEMBLIES; REFER TO DRAWINGS FOR DETAILS, LOCATIONS AND SIZES.

6.4 STAINLESS STEEL CABLE TENDONS AND FITTINGS FOR INSTALLATION AT STAIRS; TYPE 316 STAINLESS STEEL. CABLE END FITTINGS: ADJUSTABLE TOGGLE/SWAGE TURNBUCKLE AND SWAGE TOGGLE, TO BE TYPE 316 STAINLESS STEEL. REFER TO DRAWINGS FOR SIZES, LOCATIONS AND DETAILS.

6.5 GLAZING: REFER TO SECTION 08 80 50 – GLAZING

6.6 FASTENERS: SUPPLY COMPONENTS REQUIRED FOR ANCHORAGE OF FABRICATIONS; FABRICATE ANCHORS AND RELATED COMPONENTS OF SAME MATERIAL AND FINISH AS FABRICATION, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE. HAND ITEMS OVER FOR CASTING INTO CONCRETE OR BUILDING INTO MASONRY TO APPROPRIATE TRADES TOGETHER WITH SETTING TEMPLATES.

7 CUSTOM FABRICATION: FORM METAL FABRICATIONS FROM MATERIALS OF SIZE, THICKNESS, AND SHAPES INDICATED BUT NOT LESS THAN THAT NEEDED TO COMPLY WITH PERFORMANCE REQUIREMENTS. WORK TO DIMENSIONS INDICATED OR ON APPROVED SHOP DRAWINGS, USING PROVEN DETAILS OF FABRICATION AND SUPPORT. USE TYPE OF MATERIALS INDICATED OR SPECIFIED FOR VARIOUS COMPONENTS OF EACH METAL FABRICATION

8 FINISHES

8.1 POWDER COATING: POLYESTER-URETHANE THERMOSETTING RESIN BASED THERMOSETTING POWDER COATING, WEATHER RESISTANT INTENDED FOR EXTERIOR AND INTERIOR APPLICATIONS

9 PREPARATION

9.1 SUPPLY ITEMS REQUIRED TO BE CAST INTO CONCRETE, AND/OR EMBEDDED IN MASONRY WITH SETTING TEMPLATES, TO APPROPRIATE SECTIONS, INCLUDING BACK PLATES FOR INSTALLATIONS AT STEEL STUD AND GYPSUM BOARD ASSEMBLIES.

9.2 APPLY POWDER COATINGS IN ACCORDANCE WITH MANUFACTURER'S APPLICATION INSTRUCTIONS TO CLEANED AND PREPARED SURFACES USING RECOMMENDED DRY FILM THICKNESSES, AND ALLOW COATING TO CURE SUFFICIENTLY BEFORE MOVING TO SITE.

9.3 DISSIMILAR METALS: PAINT BRONZE, NICKEL-SILVER, AND ALUMINUM COMPONENTS THAT COME INTO CONTACT WITH DISSIMILAR METALS WITH A HEAVY COAT OF A PROPER PRIMER; [COAT EXPOSED ALUMINUM COMPONENTS THAT COME INTO CONTACT WITH CEMENT OR LIME MORTAR, WITH ZINC CHROMATE].

10 INSTALLATION

10.1 INSTALL MATERIAL AND PRODUCTS IN ACCORDANCE WITH APPROVED SHOP DRAWINGS, AND MANUFACTURER'S SPECIFICATIONS AND GUIDELINES.

10.2 PERFORM CUTTING, DRILLING, AND FITTING REQUIRED FOR INSTALLATION OF MISCELLANEOUS METAL FABRICATIONS; SET METAL FABRICATION ACCURATELY IN LOCATION, ALIGNMENT, AND ELEVATION; WITH EDGES AND SURFACES LEVEL, PLUMB, TRUE, AND FREE OF RACK; AND MEASURED FROM ESTABLISHED LINES AND LEVELS.

10.3 ERECT WORK SQUARE, PLUMB, STRAIGHT, AND TRUE, ACCURATELY FITTED, WITH TIGHT JOINTS AND INTERSECTIONS, AND FREE FROM DISTORTION OR DEFECTS DETRIMENTAL TO APPEARANCE OR PERFORMANCE.

10.4 SUPPLY AND INSTALL SUITABLE MEANS OF ANCHORAGE, SUCH AS DOWELS, ANCHOR CLIPS, BAR ANCHORS, EXPANSION BOLTS AND SHIELDS, AND TOGGLES.

10.5 ENSURE EXPOSED FASTENING DEVICES MATCH FINISH AND ARE COMPATIBLE WITH MATERIAL THROUGH WHICH THEY PASS.

10.6 PROVIDE COMPONENTS, TOGETHER WITH SETTING TEMPLATES, FOR BUILDING BY OTHER TRADES IN ACCORDANCE WITH SHOP DRAWINGS AND SCHEDULE.

11 CLEANING

11.1 WASH THOROUGHLY USING CLEAN WATER AND SOAP; RINSE WITH CLEAN WATER AS INSTALLATION IS COMPLETED..

11.2 DO NOT USE ACID SOLUTION, STEEL WOOL, OR OTHER HARSH ABRASIVES.

11.3 IF STAIN REMAINS AFTER WASHING, REMOVE FINISH AND RESTORE IN ACCORDANCE WITH NAAMM METAL FINISHES MANUAL.

DIVISION 6 - WOOD AND PLASTIC

SECTION 06 10 00 – ROUGH CARPENTRY

1 DELIVERY, STORAGE, AND HANDLING

1.1 DELIVER WOOD PRODUCTS BUNDLED OR CRATED TO PROVIDE ADEQUATE PROTECTION DURING TRANSIT. INSPECT WOOD PRODUCTS FOR DAMAGE UPON DELIVERY AND REMOVE AND REPLACE DAMAGED MATERIALS

1.2 STORE MATERIALS A MINIMUM OF 6" OFF THE GROUND ON BLOCKING. KEEP MATERIALS UNDER COVER AND DRY. PROVIDE FOR AIR CIRCULATION WITHIN AND AROUND STACKS AND UNDER TEMPORARY COVERINGS.

2 GRADE AND STAMP LUMBER BY AN AGENCY CERTIFIED BY NATIONAL LUMBER GRADES AUTHORITY. ANY WOOD WITHIN WALL CAVITIES OR CEILING SPACES TO BE FIRE RETARDANT TREATED.

3 MATERIALS

1.1 LUMBER: STUD GRADE, NLGA (STANDARD GRADING RULES FOR LUMBER): NIST PS 20, SOFTWOOD SPF SPECIES, GRADE, 19% MAXIMUM MOISTURE CONTENT AT TIMEOF INSTALLATION, MEETING REQUIREMENTS OF BUILDING CODE.

1.2 FURRING, BLOCKING, NAILING STRIPS, ROUGH BUCKS, CURBS: BOARD SIZES: "STANDARD" OR BETTER GRADE, 19% MAXIMUM MOISTURE CONTENT AT TIMEOF INSTALLATION, GRADE: FOR DIMENSION LUMBER SIZES PROVIDE NO. 2 OR STANDARD GRADE LUMBER PER NLGA. FOR BOARD-SIZED LUMBER, PROVIDE SHEATHING GRADE, S2S.

1.3 PANEL MATERIALS:

1.3.1 UREA FORMALDEHYDE FREE, PLYWOOD: NIST PS 1

1..2 SANDED. DOUGLAS FIR PLYWOOD: NIST PS 1

1.3.3 SHEATHING GRADE WHERE CONCEALED; "G1S" WHERE EXPOSED,

1.3.4 SOFTWOOD PLYWOOD: NIST PS 1,

1.3.5 STANDARD CONSTRUCTION, PLYWOOD AND WOOD BASED COMPOSITE PANELS: TO NIST PS 2.

1.3.6 OSB: ORIENTED STRAND BOARD PANELS TO NIST PS 2

1.3.7 TELEPHONE AND ELECTRICAL PANEL BOARDS: ¾" THICK, SQUARE EDGES, SITE BRUSH APPLIED PRESERVATIVE TREATED, PAINT FINISH.

1.4 BLOCKING FOR WALL-SUPPORTED ITEMS: ¾" THICK PLYWOOD, FRT. PROVIDE BLOCKING FOR LEASHOLDER/TENANT-SUPPLIED, TRADE CONTRACTOR-INSTALLED WASHROOM ACCESSORIES AND EQUIPMENT

SECTION 06 10 00 – ROUGH CARPENTRY CONTINUED…

5 ACCESSORIES

5.1 FASTENERS: HOT DIPPED GALVANIZED STEEL TO ASTM F2329 FOR HIGH HUMIDITY AND TREATED WOOD LOCATIONS, UNFINISHED STEEL ELSEWHERE. USE GALVANIZED STEEL FASTENERS AS RECOMMENDED BY THE MANUFACTURER THAT ARE UNAFFECTED BY THE FIRE RETARDANT TREATMENT FOR FASTENING FIRE RETARDANT TREATED WOOD PRODUCTS. FASTENERS SHALL NOT PROMOTE GALVANIC ACTION WITH SUBSTRATE SUPPORTS TO WHICH THEY COME IN CONTACT WITH

5.2 NAILS, SPIKES AND STAPLES: TO ASTM F1667 AND ASME B18.6.1.

5.3 FIRE-RETARDANT TREATMENT: PRODUCTS WITH A FLAME SPREAD INDEX OF 25 OR LESS WHEN TESTED ACCORDING TO ASTM E 84. USE TREATMENT FOR WHICH CHEMICAL MANUFACTURER PUBLISHES PHYSICAL PROPERTIES OF TREATED WOOD AFTER EXPOSURE TO ELEVATED TEMPERATURES, WHEN TESTED BY A QUALIFIED INDEPENDENT TESTING AGENCY ACCORDING TO ASTM D 5664, FOR LUMBER AND ASTM D 5516, FOR PLYWOOD.

5.4 SEALANTS: IN ACCORDANCE WITH SECTION 07 92 00 – SEALANTS. MAXIMUM ALLOWABLE VOC LIMIT 15.5 LBS/FT3 IN ACCORDANCE WITH SCAQMD RULE 1168.

5.5 GENERAL PURPOSE ADHESIVE: TO ASTM D3498. MAXIMUM ALLOWABLE VOC LIMIT 4.3 LBS/FT3 IN ACCORDANCE WITH SCAQMD RULE 1168.

6 INSTALLATION

6.1 TREAT WOOD MEMBERS IN CONTACT WITH CONCRETE SLABS ON GRADE, SET INTO CONCRETE, AND ALL WOOD MEMBERS USED AT ROOF SURFACES WITH CLEAR, AMMONIACAL COPPER QUAT (ACQ-B) OR COPPER AZOLE (CA) PRESERVATIVE TO AWPA STANDARD U1 TO OBTAIN AN AVERAGE NET RETENTION OF 0.25 LBS/FT3 BY ASSAY. ALL NEW PLYWOOD EXPOSED TO WEATHER MUST BE TREATED TO AWPA STANDARD U1. MATERIAL TO BEAR AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) STAMPS, MAXIMUM ALLOWABLE VOC LIMIT 21.7 LBS/FT3 IN ACCORDANCE WITH SCAQMD RULE #1113 - ARCHITECTURAL COATINGS

6.2 TREAT WOOD MATERIAL BY PRESSURE IMPREGNATION WITH FIRE RESISTIVE CHEMICALS IN ACCORDANCE WITH AWPA STANDARD U1 OR ASTM D-2898 TO PROVIDE A FLAME SPREAD RATING OF LESS...

6.3 TREAT WOOD MATERIAL USED AROUND WINDOW AND DOOR ROUGH OPENINGS, SERVICE ROOMS AND OTHER LOCATIONS AS SHOWN ON THE DRAWINGS.

6.4 INSTALL TELEPHONE AND ELECTRICAL PANEL BACK BOARDS WITH PLYWOOD SHEATHING MATERIAL WHERE REQUIRED. SIZE THE BACK BOARD BY 12" BEYOND SIZE OF ELECTRICAL PANEL.

6.5 INSTALL PLYWOOD BACKBOARDS ON 1" X 1" WOOD STRAPPING ALONG VERTICAL EDGES AND AT 24" ON...

6.6 WHERE REQUIRED BY CODE:

6.6.1 INSTALL FURRING AND BLOCKING AS REQUIRED TO SPACE-OUT AND SUPPORT CASEWORK, CABINET...

6.6.2 INSTALL BLOCKING FOR SEISMIC RESTRAINT AND FIXING FOR MILLWORK AND OTHER ITEMS AND EQUIPMENT.

6.6.3 INSTALL ROUGH BUCKS, NAILERS AND LININGS TO ROUGH OPENINGS AS REQUIRED TO PROVIDE BACKING FOR FRAMES AND OTHER WORK; AND AREAS TO RECEIVE HANDRAILS, GRAB BARS, TOWEL RAILS, AND WASHROOM ACCESSORIES.

6.6.4 FRAME, ANCHOR, FASTEN, TIE AND BRACE MEMBERS TO PROVIDE NECESSARY STRENGTH AND RIGIDITY FOR PURPOSE OF USE.

6.7 COUNTERSINK BOLTS WHERE NECESSARY TO PROVIDE CLEARANCE FOR OTHER WORK.

6.8 ARRANGE MEMBERS TRUE TO LINES, LEVELS AND ELEVATIONS, PLUMB AND UNIFORMLY SPACES AS REQUIRED, NOTED, AND DETAILED.

7 WOOD FRAME CONSTRUCTION (IF ALLOWED).

7.1 SPACE FRAMING MEMBERS AS REQUIRED, OR AS INDICATED OTHERWISE ON DRAWINGS. CONSTRUCT MEMBERS OF CONTINUOUS PIECES OF LONGEST POSSIBLE LENGTH.

7.3 MAKE ALLOWANCE FOR ERECTION STRESSES. SECURELY BRACE MEMBERS IN PLACE TO MAINTAIN PLUMB AND TRUE UNTIL PERMANENTLY FIXED AND HELD TO STRUCTURE.

7.4 INSTALL FIRE BLOCKING AS DETAILED.

7.5 FABRICATE WOOD FRAME CONSTRUCTION TO THE REQUIREMENTS OF THE BUILDING CODE, EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE INDICATED ON THE DRAWINGS.

7.6 MINIMUM SIZES AND SPACING OF MEMBERS, THICKNESS OF MATERIALS, ALLOWABLE SPECIES AND LUMBER GRADES, SHALL MEET THE REQUIREMENTS OF THE ABOVE NOTED STANDARDS, UNLESS INDICATED OR SPECIFIED OTHERWISE.

7.7 MINIMIZE CUTTING OF FRAMING MEMBERS FOR PIPES, ETC. BY PRIOR CONSULTATION WITH OTHER TRADES. CUTTING LIMITATIONS IN ACCORDANCE WITH THE BUILDING CODE.

7.8 CONSTRUCT FRAMING AS NECESSARY TO ACCOMMODATE THE WORK OF OTHER TRADES.

SECTION 06 20 00 - FINISH CARPENTRY

1 FINISH CARPENTRY WORK SHALL INCLUDE ALL CLEAR, KILN DRIED, DRESSED, OR RESAWN MATERIAL EXPOSED TO VIEW IN A FINISHED BUILDING INTERIOR AND EXTERIOR, INCLUDING RUNNING AND STANDING TRIM, WALL BASES, DOOR FRAMES, PANELLING, TRIM AND OTHER TRIM RELATED PRODUCTS.

2 SUBMITTALS:

2.1. SHOP DRAWINGS: FURNISH SHOP DRAWINGS FOR REVIEW. CONFIRM ALL DIMENSIONS AT SITE PRIOR TO FABRICATION. DETAIL ALL ARCHITECTURAL WOODWORK CONSTRUCTION AT LARGE SCALE NOT LESS THAN ONE-QUARTER (1/4) FULL SIZE. SHOP DRAWINGS SHALL SHOW CONSTRUCTION DETAILS OF ALL ARCHITECTURAL WOODWORK, GENERAL ARRANGEMENTS, LOCATIONS OF ALL SERVICE OUTLETS; TYPICAL AND SPECIAL INSTALLATION CONDITIONS; THE MATERIAL BEING SUPPLIED AND ALL CONNECTIONS, ATTACHMENTS, HARDWARE, ANCHORAGE AND LOCATION OF EXPOSED FASTENINGS, AS APPLICABLE. SHOP DRAWINGS TO INCORPORATE PLANS, ELEVATIONS, SECTIONS AND DETAILS FOR ALL WORK INCLUDED IN THIS SECTION. DETAILS TO SHOW AND SPECIFY ALL THICKNESS, TYPES AND FINISHES AND ALL HARDWARE.

2.2. SHOP DRAWINGS FOR SUSPENDED WOOD CEILING SYSTEM SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE WORK. PROVIDE CALCULATIONS FOR LOADINGS AND STRESSES UNDER THE PROFESSIONAL STRUCTURAL ENGINEER'S SEAL REGISTERED IN THE STATE OF THE WORK.

2.3. SAMPLES: SUBMIT FINISH SAMPLES OF EACH FINISH MATERIAL SCHEDULED ON THE DRAWINGS. SAMPLES TO INDICATE MATERIALS, HARDWARE AND FINISH. SAMPLES OF WOOD TO RECEIVE FIRE RESISTANT OR INTUMESCENT COATING ARE TO INCLUDE THE REQUIRED FIRE RESISTANT OR INTUMESCENT COATING

2 PERFORM WORK IN ACCORDANCE WITH THE NATIONAL ARCHITECTURAL ASSOCIATION OF WOODWORK STANDARDS (NAAWS), CUSTOM GRADE QUALITY. ALL CASEWORK TO BE FABRICATED AND INSTALLED TO NAAWS CUSTOM GRADE.

3 QUALITY ASSURANCE

3.1 ARCHITECTURAL WOODWORK STANDARDS (AWS) PUBLISHED BY THE ARCHITECTURAL WOODWORK INSTITUE (AWI), TOGETHER WITH AUTHORIZED ADDITIONS AND AMENDMENTS WILL BE USED AS A REFERENCE STANDARD AND SHALL FORM PART OF THIS PROJECT SPECIFICATION. WHERE DIFFERENCES OCCUR BETWEEN THE DRAWINGS AND SPECIFICATIONS REQUIREMENTS AND THE AWS, THE MORE RESTRICTIVE REQUIREMENT SHALL PREVAIL

3.2 ANY ITEM NOT GIVEN A SPECIFIC QUALITY GRADE ON THE DRAWINGS SHALL BE CUSTOM GRADE AS DEFINED IN THE NAAWS

3.3 MATERIALS AND INSTALLATION SHALL BE IN IMPERIAL UNITS MEASUREMENTS AS SPECIFIED

3.4 MATERIALS OF THIS SECTION ARE TO BE FOREST STEWARDSHIP COUNCIL GRADED WOOD. FSC-STD-01-001-V5-2 EN, 2015 FSC PRINCIPLE AND CRITERIA FOR FOREST STEWARDSHIP

4 DELIVERY, STORAGE AND HANDLING

4.1 THE ARCHITECTURAL WOODWORK MANUFACTURER AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE CERTAIN THAT ARCHITECTURAL WOODWORK IS NOT DELIVERED UNTIL THE BUILDING AND STORAGE AREAS ARE SUFFICIENTLY DRY SO THAT THE ARCHITECTURAL WOODWORK WILL NOT BE DAMAGED BY EXCESSIVE CHANGES IN MOISTURE CONTENT.

4.2 PROVIDE ARCHITECTURAL WOODWORK DELIVERY, STORAGE AND HANDLING IN ACCORDANCE WITH SECTION 2 CARE AND STORAGE OF THE NAAWS

5 MATERIALS

5.1 LUMBER

5.1.1 SOFTWOOD LUMBER: TO NIST PS 20 SPRUCE-PINE-FIR SPECIES, S4S, AVERAGE MOISTURE CONTENT OF 6% AND MAXIMUM OF 9% FOR INTERIOR WORK,

5.1.2 HARDWOOD LUMBER: SPECIES AS INDICATED, S4S, AVERAGE MOISTURE CONTENT OF 6% AND MAXIMUM OF 9% FOR INTERIOR WORK

5.2 PANEL MATERIALS

5.2.1 HARDWOOD PLYWOOD: TO HPVA HP-1, OF THICKNESS INDICATED, AND MAXIMUM SIZE SHEETS FOR APPLICATION, PREMIUM A VENEER GRADE, CORE CONSTRUCTION MDF, GRADE STAMP, NON-EXPOSED, MARKED ON THE EDGE OF EACH PANEL, INDICATING CUT, SPECIES AND GRADE, AND MANUFACTURER'S NAME. COMPLY WITH FORMALDEHYDE EMISSION REQUIREMENTS OF VOLUNTARY STANDARD HPMA FE.

5.2.2 DOUGLAS FIR PLYWOOD (DFP): NIST PS 1

5.2.3 SOFTWOOD PLYWOOD: TO NIST PS 1, [SOLID TWO SIDES]

5.2.4 POPLAR PLYWOOD (PP): TO NIST PS 1, UTILITY INTERIOR MOISTURE RESISTANT TYPE

5.2.5 PARTICLEBOARD: TO ANSI A208.1, GRADE M-2 OR BETTER, MINIMUM 45 LBS/FT3 DENSITY AND GRADE M-3, MINIMUM 46 LBS/FT3 PARTICLEBOARD FOR COUNTERTOPS AND SHELVES; CLEARLY MARK PANELS WITH GRADE MARK IN VISIBLE LOCATION; EXTRUDED PARTICLEBOARD HAVING LOOSE CORES WITH VOIDS WILL NOT BE PERMITTED; HAVING NO ADDED UREA FORMALDEHYDE.

5.2.6 HARDBOARD: TO AHA A135.4, TYPE 1 STANDARD, THICKNESS AS DIRECTED, FINISH AS DIRECTED.

5.2.7 MEDIUM DENSITY FIBREBOARD (MDF): MEETING ASTM D1037 AND ANSI A208.2, CUSTOM GRADE FOR INTERIOR USE, MINIMUM 46 LBS/FT3 DENSITY; FORMALDEHYDE EMISSIONS SHALL BE 0.30 PPM OR LESS PER 0.13 FT2/FT3 OF ROOM VALUE. ACCEPTED PRODUCT: ARREIS BY SIERRA PINE. MINIMUM 90% TOTAL RECYCLED CONTENT

SECTION 06 20 00 - FINISH CARPENTRY CONTINUED...

5.2.8. WHERE FIRE RETARDANT FIBERBOARD IS REQUIRED, PROVIDE CLASS 1 FLAME RETARDANT FIBERBOARD PANEL WHEN TESTED IN ACCORDANCE WITH ASTM E84 TO A MAXIMUM FLAME SPREAD OF 25 AND A SMOKE DEVELOPED OF 100. ACCEPTED PRODUCT: MEDITE FR BY SIERRA PINE OR PRE-APPROVED ALTERNATIVE. LOW ODOR/LOW-VOC-EMITTING, MANUFACTURED WITH A FORMALDEHYDE-FREE ADHESIVE SYSTEM SUCH THAT FORMALDEHYDE EMISSIONS DO NOT EXCEED 0.10 PPM WHEN TESTED IN ACCORDANCE WITH ASTM E1333.

5.2.9 WOOD PANELING: GRADE: QSI CUSTOM; CORE AND FACE VENEER: AS DETAILED ON THE DRAWINGS; VERTICAL GRAIN VENEER; SLIP MATCHED, EDGES FINISHED TO MATCH FACE.

5.3 DECORATIVE PLASTIC LAMINATE PANELING:

5.3.1 COMPLY WITH AWI QUALITY STANDARDS, CUSTOM GRADE.

5.3.2 PANEL CONSTRUCTION: HPDL: NEMA LD3, POST FORMING HGP TYPE OR GENERAL PURPOSE VGS TYPE; COLOR, PATTERN, AND SURFACE TEXTURE ON 1" MDF CORE.

5.3.3 CORE: MDF BOARD, FIRE RESISTANT, CLASS 1 RATING UNLESS INDICATED OTHERWISE ON DRAWINGS

5.3.4 FINISH: USE FIRE RATED PLASTIC LAMINATE AND CORE WHERE REQUIRED TO PROVIDE FLAME SPREAD RATING LESS THAN 25.

5.3.5 REFER TO FINISHES LIST FOR SPECIFIC MANUFACTURERS, PATTERNS AND COLORS. REVEALS AS INDICATED

6 CUSTOM SUSPENDED WOOD CEILING SYSTEM:

6.1 PROVIDE AN ENGINEERED CEILING SUPPORT SYSTEM, SIGNED AND SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER EXPERIENCED IN DESIGN OF THIS WORK AND LICENSED IN THE STATE OF WORK.

6.2 COMPLY WITH AWI QUALITY STANDARDS, CUSTOM GRADE.

6.3 CORE: MDF, FIRE RETARDANT TREATED, CLASS 1 RATING UNLESS INDICATED OTHERWISE ON...

6.4 FINISH: WOOD VENEER TO MATCH APPROVED SAMPLE, AS SCHEDULED ON DRAWINGS.

6.5 RETURNN WOOD VENEER OVER ALL EDGES.

6.6 SOLID HARDWOOD TRIM PIECES, FINISHED TO MATCH APPROVED SAMPLES, AS INDICATED ON...

6.7 FINISH WITH INTERIOR INTUMESCENT FIRE-RESISTIVE COATING FOR WOOD - ENSURE THAT COATING IS COMPATIBLE WITH ANY STAINS OTHER WOOD FINISHES.

7 WOOD DOOR FRAMES, DOOR CASING, WOOD TRIM AND WOOD BASES:

7.1 COMPLY WITH AWI QUALITY STANDARDS, CUSTOM GRADE.

7.2. SPECIES: AS SCHEDULED ON DRAWINGS, WITH SOLID EDGING ON EXPOSED EDGES.

7.3. STAIN AND FINISH TO MATCH CONSULTANT'S SAMPLE, PROFILE AND EDGE TREATMENT AS DETAILED.

7.4 REFER TO DRAWINGS FOR FRAME DETAILS FOR CONCEALED DOORS.

8 INTERIOR INTUMESCENT FIRE-RESISTIVE COATING FOR WOOD:

8.1 TWO COMPONENT, LOW VOC, CLEAR INTUMESCENT COATING, CERTIFIED BY INTERTEK TESTING SERVICES NALTD., OR OTHER CERTIFIED, INDEPENDENT TESTING LABORATORY.

8.2 ENSURE COMPATIBILITY BETWEEN WOOD STAINS AND INTUMESCENT COATING.

8.3 PROPERTIES: SURFACE BURNING CHARACTERISTICS: TO ASTM E84, FLAME SPREAD MAXIMUM 25; SOLIDS: 100% BY WEIGHT AND VOLUME; VOC LIMITS: ZERO; THICKNESS: WET: 8.0 MIL, DRY 8.0 MIL.

8.4 ACCEPTABLE MANUFACTURERS: "SAFECOAT CLEAR FIRE RETARDANT COATING" BY CONVOY DISTRIBUTION LTD. / CONVOY ENGINEERING OR APPROVED ALTERNATIVE.

8.5 INSTALL INTUMESCENT COATING TO MANUFACTURER'S WRITTEN INSTRUCTIONS, USING SPRAY, BRUSH OR ROLLER, AS RECOMMENDED BY MANUFACTURER. APPLY AT APPLICATION RATE AND DRY FILM THICKNESS ASRECOMMENDED BY MANUFACTURER. PROVIDE MINIMUM DRY FILM THICKNESS REQUIRED FOR THE SIZE, ORIENTATION AND FIRE-RESISTANT RATING INDICATED FOR WOOD ELEMENT TO BE PROTECTED.

8.6 APPLY ADDITIONAL COATS UNTIL CLEAR COAT IS OF UNIFORM FINISH, COLOR, AND APPEARANCE. FINISH EXPOSED SURFACES TO A SMOOTH HARD FINISH, FREE OF STREAKS, BRUSH MARKS, TROWEL MARKS, SPLATTERS AND DRIPS. ENSURE EDGES, CORNERS, CREVICES, AND EXPOSED FASTENERS RECEIVE DRY FILM THICKNESS EQUIVALENT TO THAT OF FLAT SURFACES. REMOVE EXCESS MATERIAL PROMPTLY AS WORK PROGRESSES AND UPON COMPLETION.

9 ACCESSORIES

9.1 FASTENERS: TO SUIT SIZE AND NATURE OF COMPONENTS BEING FASTENED.

9.2 NAILS AND STAPLES: TO ASTM F1667 AND ASME B18.6.1.; GALVANIZED TO ASTM F2329 FOR EXTERIOR WORK, INTERIOR HUMID AREAS AND FOR TREATED LUMBER; STAINLESS STEEL FINISH ELSEWHERE.

9.3 WOOD SCREWS: STAINLESS STEEL, TYPE AND SIZE TO SUIT APPLICATION.

9.4 SPLINES: METAL.

9.5 ADHESIVE: RECOMMENDED BY MANUFACTURER. ADHESIVES: MAXIMUM VOC LIMIT 1.9 LBS/FT3 IN ACCORDANCE WITH SCAQMD RULE 1168 - ADHESIVES AND SEALANTS APPLICATIONS

10 INSTALLATION

10.1 SCRIBE AND CUT AS REQUIRED TO FIT ABUTTING WALLS, AND SURFACES, TO FIT PROPERLY INTO RECESSES AND TO ACCOMMODATE INTERSECTING OR PENETRATING OBJECTS; SECURE MATERIALS AND COMPONENTS IN PLACE, RIGID, PLUMB AND SQUARE, WITH TIGHT, HAIRLINE JOINTS TO LOCATIONS INDICATED ON DRAWINGS AND IN ACCORDANCE WITH NAAWS, AND AS FOLLOWS:

10.1.1 FORM JOINTS TO CONCEAL SHRINKAGE

10.1.2 SET FINISHING NAILS TO RECEIVE FILLER

10.1.3 COUNTERSINK SCREWS IN ROUND CLEANLY CUT HOLE AND PLUG WITH WOOD PLUG MATCHING MATERIAL BEING SECURED

10.1.4 MATCH WOOD PIECES END TO END FOR CONSISTENT COLOR AND GRAIN APPEARANCE; SPACE AND CENTER JOINTS EVENLY IN RUNS.

11 CONSTRUCTION

11.1 POSITION ITEMS OF FINISHED CARPENTRY WORK ACCURATELY, LEVEL, PLUMB, TRUE AND FASTEN OR ANCHOR SECURELY.

11.2 DESIGN AND SELECT FASTENERS TO SUIT SIZE AND NATURE OF COMPONENTS BEING JOINED. USE PROPRIETARY DEVICES AS RECOMMENDED BY MANUFACTURER.

11.3 SET FINISHING NAILS TO RECEIVE FILLER. WHERE SCREWS ARE USED TO SECURE MEMBERS, COUNTERSINK SCREW IN ROUND SMOOTH CUT HOLE AND PLUG WITH WOOD PLUG TO MATCH MATERIAL BEING SECURED.

11.4 REPLACE ITEMS OF FINISH CARPENTRY WITH DAMAGE TO WOOD SURFACES INCLUDING HAMMER AND OTHER BRUISES.

11.5 STANDING AND RUNNING TRIM

11.5.1 BUTT AND COPE INTERNAL JOINTS OF BASEBOARDS TO MAKE SNUG, TIGHT, JOINT. CUT RIGHT ANGLE JOINTS OF CASING AND BASE WITH MITRED JOINTS.

11.5.2 FIT BACKS OF BASEBOARDS AND CASING SNUGLY TO WALL SURFACES TO ELIMINATE CRACKS AT JUNCTION OF BASE AND CASING WITH WALLS.

11.5.3 INSTALL TRIM IN CONTINUOUS LENGTHS TO SOLID BACKING USING A MINIMUM OF NAILS, COUNTERSINK AND FILL WITH MATCHING FILLER. MITER CORNERS TO FLUSH HAIRLINE JOINTS. MAKE JOINTS IN BASEBOARD, WHERE NECESSARY USING A 45 DEGREES SCARF TYPE JOINT.

11.5.4 INSTALL DOOR AND WINDOW TRIM IN SINGLE LENGTHS WITHOUT SPLICING.

11.6 INTERIOR FRAMES: SET FRAMES WITH PLUMB SIDES, LEVEL HEADS AND SILLS, AND SECURE TO WALL FRAMING WITH SUITABLE SIZED FASTENERS CONCEALED IN FINAL INSTALLATION. FRAMES SUPPLIED KNOCKED DOWN SHALL BE GLUED AND CONCEALED NAILED.

11.7 PANELLING: INSTALL PANELLING IN ACCORDANCE WITH NAAWS SECTION 8.6.1.11.

11.8 STAIRS: INSTALL STAIRS TO LOCATION AND DETAILS AS INDICATED

11.9 HANDRAILS, WALL RAILS AND BUMPER RAILS: MAKE JOINTS HAIR LINE, DOWELLED AND GLUED. INSTALL METAL BACKING PLATES BETWEEN STUDS AT BRACKET LOCATIONS TO ENSURE PROPER SUPPORT FOR BRACKETS AND BOLTS OR SELF TAPPING SCREWS. SECURE USING COUNTER SUNK SCREWS PLUGGED WITH MATCHING WOOD PLUGS.

11.10 SHELVING: INSTALL SHELVING ON LEDGERS OR SHELF BRACKETS.

SECTION 06 40 00 – ARCHITECTURAL WOODWORK

1 THE WORK OF THIS SECTION INCLUDES THE SUPPLY INSTALLATION OF SHOP MANUFACTURED ARCHITECTURAL WOODWORK.

2 WOOD USED AS PART OF THIS WORK SHALL BE FSC (FOREST STEWARDSHIP COUNCIL) CERTIFIED.

3 QUALITY ASSURANCE

3.1 ARCHITECTURAL WOODWORK STANDARDS (AWS) AND ERRATA SHALL BE USED TO ESTABLISH THE MINIMUM LEVEL OF QUALITY FOR THIS PROJECT.

3.2 PERFORM THE WORK IN ACCORDANCE WITH THE DEFINITION OF 'GOOD WORKMANSHIP' AS DEFINED IN THE AWS.

3.3 CERTIFIED COMPLIANE PROGRAM (CCP)

3.3.1 MANUFACTURE AND/OR INSTALL ARCHITECTURAL WOODWORK TO THE CURRENT AWI ARCHITECTURAL WOODWORK STANDARDS AND SUBJECT TO AN INSPECTION AT THE FACTORY AND/OR SITE BY AN APPOINTED AWI CERTIFIED INSPECTOR. INSPECTION COSTS SHALL BE INCLUDED IN THE TENDER PRICE FOR THIS PROJECT. (CONTACT YOUR LOCAL AWI CHAPTER FOR DETAILS OF INSPECTION COSTS). SHOP DRAWINGS SHALL BE SUBMITTED TO THE AWI CHAPTER OFFICE FOR REVIEW BEFORE WORK COMMENCES. WORK THAT DOES NOT MEET THE AWI ARCHITECTURAL WOODWORK STANDARDS, AS SPECIFIED, SHALL BE REPLACED, REWORKED AND/OR REFINISHED BY THE ARCHITECTURAL WOODWORK CONTRACTOR, TO THE APPROVAL OF AWI , AT NO ADDITIONAL COST TO THE OWNER.

3.3.2 IF THE WOODWORK CONTRACTOR IS AN AWI MANUFACTURER MEMBER IN GOOD STANDING, A TWO (2) YEAR AWI GUARANTEE CERTIFICATE WILL BE ISSUED. THE AWI GUARANTEE SHALL COVER REPLACING, REWORKING AND/OR REFINISHING DEFICIENT ARCHITECTURAL WOODWORK DUE TO FAULTY WORKMANSHIP OR DEFECTIVE MATERIALS SUPPLIED AND/OR INSTALLED BY THE WOODWORK CONTRACTOR, WHICH MAY APPEAR DURING A TWO (2) YEAR PERIOD FOLLOWING THE DATE OF ISSUANCE.

3.3.3 IF THE WOODWORK CONTRACTOR IS NOT AN AWI MANUFACTURER MEMBER THEY SHALL PROVIDE THE OWNER WITH A TWO (2) YEAR MAINTENANCE BOND, IN LIEU OF THE AWI GUARANTEE CERTIFICATE, TO THE FULL VALUE OF THE ARCHITECTURAL WOODWORK CONTRACT.

3.3.4 FOR MORE INFORMATION ABOUT AWI VISIT THE AWI WEBSITE AT WWW.AWIQCP.ORG AND CONTACT THE LOCAL AWI CHAPTER OFFICE

3.4 DELIVERY, STORAGE AND HANDLING

3.4.1 DELIVER, STORE, AND HANDLE MATERIALS IN ACCORDANCE WITH THE NAAWS. CONTROL THE TEMPERATURE AND HUMIDITY IN ACCORDANCE WITH NAAWS RECOMMENDATIONS, BEFORE, DURING, AND AFTER DELIVERY, DURING STORAGE, AND DURING AND AFTER INSTALLATION AS REQUIRED. PROVIDE PROTECTIVE COVERINGS OF SUITABLE MATERIAL FOR PLASTIC LAMINATE ITEMS, TAKING SPECIAL PRECAUTIONS TO PROTECT CORNERS

3.4.2 DO NOT PERMIT DELIVERY OF MILLWORK TO THE SITE UNTIL THE AREA IS SUFFICIENTLY DRY SO THAT WOODWORK SHALL NOT BE DAMAGED BY EXCESSIVE CHANGES IN AMBIENT HUMIDITY

4 MATERIALS

4.1 PROVIDE PANEL MATERIALS MEETING REQUIREMENTS FOR MOISTURE CONTENT AND GRADES IN ACCORDANCE WITH NAAWS REQUIREMENTS AND AS SPECIFIED BELOW. PANEL PRODUCTS MUST BE MANUFACTURED WITH NO ADDED UREA-FORMALDEHYDE

4.2 SOFTWOOD PLYWOOD: MEETING NIST PS 1, CROSS-BANDED, SANDED G2S, THICKNESS AS INDICATED.

4.3 POPLAR PLYWOOD: TO NIST PS 1, UTILITY INTERIOR MOISTURE RESISTANT TYPE

4.4 HARDWOOD PLYWOOD: TO HPVA HP-1, OF THICKNESS INDICATED, MAXIMUM SIZE SHEETS APPLICATION, PREMIUM A VENEER GRADE, SPECIES AS DIRECTED, CORE MDF, BLIND EDGE, MATCHING FACE VENEERS, HARDWOOD ½" WIDE X THICKNESS OF PANEL, EDGE GLUED TO SIDE OF PANEL WHERE EDGE OF PANEL IS EXPOSED.

4.5 MEDIUM DENSITY FIBREBOARD (MDF): MEETING ASTM D1037 AND ANSI A208.2, [PREMIUM] [CUSTOM] GRADE FOR INTERIOR USE, MINIMUM 44 LBS/FT3 DENSITY; FORMALDEHYDE EMISSIONS SHALL BE 0.30 PPM OR LESS PER 0.13 FT2/FT3 OF ROOM VALUE, UREA-FORMALDEHYDE FREE.

4.6 PARTICLEBOARD: TO ANSI A208.1, GRADE M-2 OR BETTER, MINIMUM 45 LBS/FT3 DENSITY AND GRADE M-3, MINIMUM 47 LBS/FT3 PARTICLEBOARD FOR COUNTERTOPS AND SHELVES.

4.7 SOFTWOOD LUMBER: TO NIST PS 20, KILN DRIED TO MAXIMUM MOISTURE CONTENT OF 12%, DRESSED 4 SIDES.

4.8 HARDWOOD: TO NATIONAL HARDWOOD LUMBER ASSOCIATION, SELECTED TO MEET AWS PREMIUM GRADE, SPECIES AS DIRECTED.

4.9 PRE-FINISHED SLOTTED DISPLAY PANELLING: MEDIUM DENSITY FIBREBOARD; NOMINAL 48 LBS/FT3 DENSITY HAVING INTERNAL BOND STRENGTH OF 110 PSI WITH FORMALDEHYDE EMISSIONS OF 0.33 PPM OR LESS HAVING; ENGINEERED GROOVES DESIGNED TO FIT STANDARD MERCHANDISING FIXTURES.

4.10 HIGH PRESSURE DECORATIVE LAMINATE (HPDL): TO ANSI/NEMA LD3; GRADES AND APPLICATION IN ACCORDANCE WITH APPLICABLE NAAWS REQUIREMENTS

4.11 LOW PRESSURE DECORATIVE LAMINATE: TO ANSI/NEMA LD3, IN ACCORDANCE WITH APPLICABLE AWS REQUIREMENTS

4.11 GLASS: FOR DOORS: TEMPERED CLEAR FLOAT, ASTM C 1048, ¼" THICK. FOR SHELVES: TEMPERED...

4. 12 STAINLESS STEEL SHEET: ASTM A480, TYPE 304 ALLOY MINIMUM 1/16" MINIMUM

4.13 SOLID SURFACING COUNTERTOPS: HOMOGENEOUS, THERMOSET POLYMER ALLOY, COMPRISED OF POLYESTER AND ACRYLIC COMPONENTS AND FILLED WITH ALUMINUM TRIHYDRATE - COLOR AND FINISH AS SCHEDULED ON DRAWINGS. ADHESIVE AND JOINT SEALER: LOW VOC TYPE AS RECOMMENDED BY SOLID SURFACING MANUFACTURER.

4.13 QUARTZ COUNTERTOPS: MINIMUM 93% CRUSHED QUARTZ AGGREGATE COMBINED WITH RESINS AND PIGMENTS AND FABRICATED INTO SLABS USING A VACUUM VIBRO-COMPACTION PROCESS- COLOR AND FINISH AS SCHEDULED ON DRAWINGS. MATERIAL SHALL BE LABELED WITH A BATCH NUMBER AND IMPRINTED WITH A MANUFACTURER'S IDENTIFYING MARK ON THE BACK. FABRICATOR SHALL HAVE FIVE YEARS' EXPERIENCE FABRICATING ARCHITECTURAL STONE AND SHALL HAVE WATER-COOLED CUTTING TOOLS. INSTALL IN ACCORDANCE TO MANUFACTURER'S RECOMMENDATIONS.

4.14 EDGING:

4.14.1 ALL EDGES OF DOOR AND DRAWER PANELS SHALL BE FINISHED THE SAME AS FACE AND BACK (6 SIDES FINISHED).

4.14.2 EDGE TYPE SHALL CONFORM TO NAAWS REQUIREMENTS. SOLID, HIGH IMPACT, PURIFIED, COLOR-THRU, ACID RESISTANT, PVC EDGING, 1/8" EDGING AT COUNTER TOPS, DRAWERS, DOORS, AND SPLASHES, 1/16" EDGING AT CABINET BOXES, EXPOSED SHELVING, AND CONCEALED SHELVING.

4.14.3 HIGH PRESSURE DECORATIVE LAMINATE EDGING: HORIZONTAL GENERAL PURPOSE GRADE (HGS): THICKNESS OF 3/64", COLOR AND FINISH TO MATCH SURFACE FINISH.

5 ACCESSORIES

5.1 CASEWORK HARDWARE:

5.1.1 HINGES: FRAMELESS CONCEALED HINGES: BHMA A156.9, B01602, 135 DEGREES OF OPENING, SELF-CLOSING. SEMI-CONCEALED HINGES FOR OVERLAY DOORS: BHMA A156.9, B01521. AS DETAILED.

5.1.2 PULLS: MILLWORK FINGER PULL CUTOUT AND BOTTOM PULL AS DETAILED UNLESS INDICATED OTHERWISE ON DRAWINGS.

5.1.3 CATCHES: MAGNETIC TYPE, BHMA A156.9, B03141.

5.1.4 SHELF RESTS AND STANDARDS: SHELF REST FOR HOLE DRILLED IN CABINET: BHMA A156.9, B0413. ADJUSTABLE SHELF STANDARD AND SUPPORTS: BHMA A156.9, B04063 WITH B04083.

5.1.5 DRAWER SLIDES: BOTTOM EDGE MOUNTED DRAWER SLIDES: BHMA A156.9, B05012. SIDE MOUNTED, FULL EXTENSION, ZINC PLATED WITH STEEL BALL BEARINGS, BHMA A156.9, B05051, AND RATED FOR FOLLOWING LOADS:

5.1.5.1 BOX DRAWER: 50 LBS/PAIR

5.1.5.2 PENCIL DRAWER: 44 LBS/PAIR

5.1.5.3. FILE DRAWER: 100LBS/PAIR

5.1.6 DOOR LOCKS: HALF MORTISE, BHMA A156.11, E07111.

5.1.7 DRAWER LOCKS: HALF MORTISE, BHMA A156.11, E07021.

5.1.8 GROMMET: HAFELE #631.26.901 SILVER PLASTIC 2-3/8". OR EQUAL

5.1.9 EXPOSED HARDWARE FINISH: SATIN STAINLESS STEEL: BHMA A156.18, CODE 630, UNLESS NOTED OTHERWISE ON DRAWINGS.

5.2 STEEL SUPPORT BRACKETS AND METAL TRIMS - COORDINATE WITH DIVISION 5

6 FABRICATION

6.1 ALL BLOCKING AND SHIMS SHALL BE FIRE RETARDANT TREATED HARDWOOD. ALL SOLID BACKING TO BE HARDWOOD OR PLYWOOD, FIRE RETARDANT TREATED IN ALL CASES.

6.2 SHOP ASSEMBLE CASEWORK FOR DELIVERY TO SITE IN UNITS EASILY HANDLED AND TO PERMIT PASSAGE THROUGH BUILDING ACCESS OPENINGS.

6.3 WHEN NECESSARY TO CUT AND FIT ON SITE, PROVIDE MATERIALS WITH AMPLE ALLOWANCE FOR CUTTING. PROVIDE TRIM FOR SCRIBING AND SITE CUTTING.

6.4 APPLY PLASTIC OR METAL LAMINATE FINISH IN FULL UNINTERRUPTED SHEETS CONSISTENT WITH MANUFACTURED SIZES. FIT CORNERS AND JOINTS HAIRLINE, SECURE WITH CONCEALED FASTENERS.

6.5 SAND WORK SMOOTH AND SET EXPOSED NAILS AND SCREWS. APPLY MATCHING WOOD FILLER TO INDENTATIONS.

6.6 FACTORY FINISHING: REFER TO DRAWINGS FOR LOCATION AND COLOR OR STAIN DESIGNATION OF FINISHES TO BE APPLIED. FINISH TO MATCH APPROVED SAMPLE. FINISH SYSTEM TO BE LOW VOC, WATER-REDUCIBLE, HIGH SOLIDS, SELF-SEAL COATING. LOW IN ODOR AND OFFERING NON-YELLOWING CHARACTERISTICS. SATIN SHEEN.

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Notes

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Paradies Lagardère TRAVEL RETAIL
tropical smoothie CAFE
JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
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SECTION 06 40 00 – ARCHITECTURAL WOODWORK CONTINUED…

7 UPHOLSTERY : DEPENDS ON PROJECT IF REQUIRED

7.1 CUSHION MATERIAL: MANUFACTURED TO THE STANDARDS OF THE POLYURETHANE FOAM ASSOCIATION AND MEETING THE REQUIREMENTS OF ASTM D5672 FOR INDENTATION RESISTANCE, COMBUSTION MODIFIED HIGH RESILIENCY FLEXIBLE POLYURETHANE FOAM.

7.2 TICKING: FIRE RETARDANT TREATED SEPARATION SHEET TO PREVENT FOAM CATCHING ON MATERIAL AND TO PROVIDE A MOISTURE RESISTANT SEPARATION BETWEEN FOAM AND FABRIC.

7.3 FABRIC: ANTI-MICROBIAL TREATED, WASHABLE AND SCRUBBABLE MATERIAL:

7.4 FASTENING DEVICES: WOVEN NYLON HOOK AND LOOP FASTENER TAPE, HIGH USE RATED WITH STITCHED AND FASTENED TO FABRICATED SEAT CUSHIONS, BACKS AND BASE, 2” WIDTH BY MAXIMUM POSSIBLE LENGTH, COLOR BLACK.

7.5 FABRICATE UPHOLSTERY ITEMS SO THAT SEAMS ARE STITCHED WATER TIGHT, CUSHIONS AND BACKS HELD IN PLACE BY HOOK AND LOOP TAPES, PADDING CAN BE REMOVED FROM CUSHIONS USING A CONCEALED ZIPPER, AND BOX WORK COMPLETED SIMILAR TO CASEWORK SPECIFIED BELOW.

8 INSTALLATION

8.1 INSTALL THE WORK PLUMB, LEVEL, TRUE AND STRAIGHT WITH NO DISTORTIONS. SHIM AS REQUIRED USING CONCEALED SHIMS.

8.2 INSTALL ITEMS WITH THE MINIMUM NUMBER OF JOINTS POSSIBLE, USING FULL-LENGTH PIECES, FROM MAXIMUM LENGTH OF LUMBER AVAILABLE. STAGGER END JOINTS IN ADJACENT PIECES. JOINTS TO BE FLUSH AND HAIRLINE.

8.3 PROVIDE ALL ANCHORS, NAILERS AND BLOCKING TO SECURE MILLWORK ITEMS. SELECT FASTENERS OF A SIZE THAT WILL NOT PENETRATE MEMBERS WHERE OPPOSITE SIDE WILL BE EXPOSED TO VIEW OR WILL RECEIVE FINISH MATERIALS.

8.4 SMOOTHLY SAND WOODWORK AND BE FREE OF BLEMISHES OR DEFECTS SUCH AS TOOL OR MACHINE MARKS, SANDING MARKS, SURPLUS GLUE, RAISED GRAIN, DELAMINATION AND WATER MARKS.

8.5 MAKE TIGHT CONNECTIONS BETWEEN MEMBERS.

8.6 INSTALL CABINETS AND CASEWORK TO PREPARED OPENINGS USING COUNTERSUNK FASTENINGS, SIZE AND SPACING AS REQUIRED TO SUIT WEIGHT OF UNIT.

8.7 INSTALL WALL MOUNTED CABINETS AND CASEWORK TO WITHSTAND SEISMIC LOADS. INSTALL FLOOR MOUNTED COMPONENTS SQUARE, LEVEL AND PLUMB. USE HARDWOOD SHIMS AS REQUIRED.

8.8 SECURE COUNTERTOPS LEVEL, SQUARE AND FREE OF WRACKING AND TWISTING. ALL JOINTS SHALL BE CONCEALED AND PROVIDE A SMOOTH SURFACE, FREE OF CHIPS, CRACKS AND OTHER DEFECTS.

8.9 INSTALL FILLER PANELS, TRIM AND MOLDINGS TO COMPLETE AND FINISH INSTALLATION. ADJUST HARDWARE FOR SMOOTH OPERATION. TOUCH-UP DAMAGED SHOP-APPLIED FINISHES.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

SECTION 07 13 52 – MODIFIED BITUMINOUS SHEET WATERPROOFING

1 SUBMITTALS:

1.1 SUBMIT PRODUCT DATA IN ACCORDANCE WITH SECTION 01 33 00 – SUBMITTAL PROCEDURES,

1.2 PROVIDE ONE ELECTRONIC COPY OF MOST RECENT TECHNICAL WATERPROOFING COMPONENTS DATA SHEETS

1.3 PROVIDE ONE ELECTRONIC COPY OF HAZARD COMMUNICATION STANDARD IN ACCORDANCE WITH OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA) AND INDICATE VOC CONTENT FOR: PRIMERS, ASPHALT, SEALERS AND FILTER FABRIC.

1.4 SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH SECTION 01 33 00 – SUBMITTAL PROCEDURES. INDICATE FLASHING, CONTROL JOINTS, TAPERED INSULATION AND PENETRATION DETAILS. PROVIDE TYPICAL DETAILS OF PENETRATIONS AND TRANSITIONS.

2 INSTALLER QUALIFICATIONS: ENGAGE EXPERIENCED INSTALLER ACCEPTABLE TO THE MEMBRANE MANUFACTURER WITH A MINIMUM OF 3 YEARS EXPERIENCE WHO HAS COMPLETED SYSTEMS SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR PROJECT AND WITH RECORD OF SUCCESSFUL PERFORMANCE.

3 OBTAIN PRIMARY WATERPROOFING MATERIALS FROM SINGLE MANUFACTURER. ENSURE MATERIALS ORDERED AND SUPPLIED ARE COMPATIBLE WITH ONE ANOTHER. PROVIDE WRITTEN DECLARATION TO CONSULTANT STATING THAT MATERIALS AND COMPONENTS, AS ASSEMBLED IN SYSTEM, MEET THIS REQUIREMENT

4 MATERIALS

4.1 SELF-ADHESIVE WATERPROOFING SYSTEM MATERIALS

4.1.1 PRIMER:TO ASTM D41 ELASTOMERIC BITUMEN, SOLVENT PRIMER WITH ADHESIVE ENHANCING RESINS TO ENHANCE ADHESION OF SELF-ADHESIVE MEMBRANES AT TEMPERATURES ABOVE 14 DEGREES FARENHEIT AS RECOMMENDED BY MEMBRANE MANUFACTURER.

4.1.2 WATERPROOFING MEMBRANE: SBS MODIFIED BITUMEN SELF-ADHERING SHEET MEMBRANE WITH CROSS-LAMINATED POLYETHYLENE FILM, COVERED BY PULL-OFF RELEASE SHEETS AND AS FOLLOWS:

4.1.2.1 MINIMUM TOTAL THICKNESS: 1/16”

4.1.2.2 TENSILE STRENGTH (MEMBRANE): 590 PSI TO ASTM D412

4.1.2.3 TENSILE STRENGTH (FILM): 590 PSI TO ASTM D412

4.1.2.4 ULTIMATE ELONGATION: 455% TO ASTM D412

4.1.2.5 FLEXIBILITY AT COLD TEMPERATURE: MINIMUM -22 DEGREES FARENHEIT

4.1.2.6 WATER VAPOUR PERMEABILITY: <0.019 PERMS TO ASTM E96

4.1.2.7 PUNCTURE RESISTANCE: 2.98 KN TO ASTM E154

4.2 THERMOFUSIBLE WATERPROOFING SYSTEM MATERIALS

4.2.1 PRIMER: BLEND OF SBS MODIFIED BITUMEN, FAST-EVAPORATING SOLVENTS AND ADHESIVE ADDITIVES

4.2.2 WATERPROOFING MEMBRANE: NON-WOVEN POLYESTER REINFORCEMENT AND SBS MODIFIED BITUMEN WITH THERMOFUSIBLE PLASTIC FILM ON BOTH FACES AND AS FOLLOWS:

4.2.2.1 MINIMUM TOTAL THICKNESS: 1/8”

4.2.2.2 TENSILE STRENGTH: MD = 25 KN/M – XD = 16 KN/M TO ASTM D5147

4.2.2.3 ULTIMATE ELONGATION: MD = 60% – XD = 65% TO ASTM D5147

4.2.2.4 COLD BENDING: MINIMUM -22 DEGREES FARENHEIT

4.2.2.5 WATER VAPOUR PERMEABILITY: <0.004 PERMS

4.2.2.6 PUNCTURE RESISTANCE: >400 N

4.3 BLINDSIDE WATERPROOFING

4.3.1 MEMBRANE: 73 MILS THICK COMPOSITE SHEET ELASTOMERIC MEMBRANE BONDED TO A SEVEN PLY PLASMATIC MATRIX AND NON WOVEN GEOTEXTILE FABRIC AS FOLLOWS:

4.3.1.1 MEMBRANE THICKNESS: 73 MILS

4.3.1.2 LOW TEMPERATURE FLEXIBILITY, ASTM D1970: PASS

4.3.1.3 RESISTANCE TO HYDROSTATIC HEAD, ASTM D5385-93: 70 M

4.3.1.4 ELONGATION, ASTM D412-06: >400%

4.3.1.5 TENSILE STRENGTH (FILM), ASTM D882: 919 PSI

4.3.1.6 CRACK CYCLING, ASTM C836: PASS

4.3.1.7 PUNCTURE RESISTANCE, ASTM E154: >934 N

4.3.1.8 PEEL ADHESION TO CONCRETE, ASTM D903: 1,754 N/M

4.3.1.9 MOISTURE VAPOR TRANSMISSION, ASTM E96 (METHOD B): 0.0011 PERMS

4.3.1.10 RESISTANCE TO PENETRATION BY TERMITES, TEXAS A&M METHOD, PERCENTAGE OF PENETRATION: 0.0%

4.3.1.11 RESISTANCE TO PENETRATION BY PESTICIDES, ASTM F2130, PERCENTAGE OF PENETRATION: 0.0%

4.3.1.12 RESISTANCE TO FUNGI IN SOIL, GSA-PBS 07115 – 16 WEEKS: NO EFFECT

4.4 UNDER SLAB MEMBRANE

4.4.1 PREAPPLIED UNDER SLAB WATERPROOF MEMBRANE: FOUR LAYER COMPOSITE SHEET MEMBRANE CONSISTING OF 31 MILS OF HIGH DENSITY POLYETHYENE, 24 MILS THICK LAYER OF SPECIALLY FORMULATED SYNTHETIC ADHESIVE, 12 MILS THICK LAYER OF PROTECTIVE COATING AND SURFACE TREATMENT WITH THE FOLLOWING PHYSICAL PROPERTIES (BASED ON BITUTHENE PERPRUFE 300):

4.4.1.1 COLOR: BLACK WITH WHITE PROTECTIVE COATING AND WHITE SURFACE TREATMENT.

4.4.1.2 THICKNESS (OVERALL) 56 MILS THICK (TEST METHOD ASTM D3767 METHOD A).

4.4.1.3 LOW TEMPERATURE FLEXIBILITY: UNAFFECTED AT -9 DEGREES FARENHEIT (TEST METHOD ASTM D1970).

4.4.1.4 ELONGATION: 300% (TEST METHOD ASTM D412).

4.4.1.5 CRACK CYCLING AT -9 DEGREES FARENHEIT, 100 CYCLES: UNAFFECTED (TEST METHOD ASTM C836).

4.4.1.6 TENSILE STRENGTH, FILM: 4000 PSI MINIMUM (TEST METHOD ASTM D412).

4.4.1.7 PUNCTURE RESISTANCE: 800 M MINIMUM (TEST METHOD ASTM E154).

4.4.1.8 PEEL ADHESION TO CONCRETE: 880 N/M MINIMUM (TEST METHOD ASTM D903 MODIFIED).

4.4.1.9 LAP ADHESION: 440 N/M MINIMUM (TEST METHOD ASTM D1876 MODIFIED).

4.4.1.10 RESISTANCE TO HYDROSTATIC HEAD: 70 M MINIMUM (TEST METHOD ASTM D5385 MODIFIED).

4.4.1.11 PERMEANCE: 0.6 NG/M SPA MAXIMUM (TEST METHOD ASTM E96 METHOD B).

4.4.1.12 WATER ABSORPTION: 0.5% MAXIMUM (TEST METHOD ASTM D570).

5 ACCESSORIES

5.1 WATERPROOFING MASTIC: SINGLE COMPONENT SEALING COMPOUND TO SEAL EXTERIOR, VERTICAL AND HORIZONTAL TERMINATIONS AS RECOMMENDED BY MANUFACTURER

5.2 PROTECTION BOARD: GLASS MESH CEMENT BACKER BOARD TO ASTM C1325, THICKNESS AS INDICATED ON DRAWINGS

SECTION 07 13 52 – MODIFIED BITUMINOUS SHEET WATERPROOFING CONTINUED…

5.3 DRAINAGE BOARD: HIGH-STRENGTH DRAINAGE PANEL CONSISTING OF POLYPROPYLENE CORE AND FABRIC FOR INSTALLATION OVER WATERPROOF MEMBRANES.

5.4 TERMINATION BAR: HIGH STRENGTH PLASTIC COMPOSITE, ULTRAVIOLET RESISTANT AS RECOMMENDED BY MEMBRANE MANUFACTURER

5.5 ADHESIVE FOR OVERLAY BOARD AND INSULATION: WATER-BASED RUBBERISED LIQUID COATING AS RECOMMENDED BY MANUFACTURER.

6 EXAMINATION:

6.1 DO NOT PROCEED WITH WORK UNTIL CONDITIONS ARE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

6.2 ENSURE SURFACES ARE SMOOTH, DRY, CLEAN AND FREE OF ICE AND DEBRIS AS PER MANUFACTURER’S RECOMMENDATIONS.

7 INSTALL PRIMER, WATERPROOF MEMBRANES AND ACCESSORIES IN ACORRDANCE WITH MANUFACTURER’S WRITTEN INSTRUCTIONS AND AS INDICATED IN THE DRAWINGS.

SECTION 07 84 00 - FIRESTOPPING AND SMOKESEALS

1 THIS SECTION INCLUDES THROUGH PENETRATION FIRESTOPPING AND SMOKESEAL SYSTEMS FOR PENETRATIONS THROUGH THE FOLLOWING FIRE RESISTANCE RATED ASSEMBLIES, INCLUDING BOTH EMPTY OPENINGS AND OPENINGS CONTAINING PENETRATING ITEMS

2 THIS SECTION PROVIDES REQUIREMENTS FOR RATED SYSTEMS OR SYSTEMS REQUIRING ENGINEERED JUDGEMENTS. USE OF MATERIALS THAT HAVE NOT BEEN TESTED IN A SYSTEM OR THAT ARE NOT CAPABLE OF OBTAINING AN ENGINEERED JUDGEMENT WILL NOT BE ACCEPTABLE FOR USE ON THIS PROJECT. MATERIALS HAVING ONLY A UL LABEL WILL NOT BE ACCEPTABLE FOR USE ON THIS PROJECT, UNLESS SUPPORTING DOCUMENTATION IS PROVIDED INDICATING ITS USE IN A LISTED ASSEMBLY.

3 SUBMITTALS:

3.1 SUBMIT SHOP DRAWINGS, PRODUCT DATA AND TEST REPORTS THAT DEMONSTRATE COMPLIANCE TO UL LABELLED ASSEMBLIES.

3.2 FIRESTOPPING MATERIALS AND SYSTEMS DESIGNED TO ACT AS A FIRESTOP AND SMOKESEAL WITHIN RATED AND NON-RATED FIRE SEPARATIONS FOR:

3.2.1 ANY THROUGH PENETRATING ITEMS SUCH AS CABLES, CABLE TRAYS, CONDUITS, DUCTS AND PIPES AND ANY POKE-THROUGH TERMINATION DEVICES, SUCH AS ELECTRICAL BOXES ALONG WITH THEIR MEANS OF SUPPORT THROUGH THE WALL OR FLOOR OPENING;

3.2.2 AT UN-PENETRATED OPENINGS;

3.2.3 AT PROJECTING OR RECESSED ITEMS;

3.2.4 AT OPENINGS AND JOINTS WITHIN AND AROUND FIRE SEPARATIONS;

3.2.5 AT PENETRATIONS THROUGH, TOP OF, INTERSECTION OF, CONTROL JOINTS IN, OPENINGS AND SLEEVES THROUGH FIRE-RESISTANCE RATED GYPSUM BOARD PARTITIONS AND WALLS;

3.2.6 AROUND MECHANICAL AND ELECTRICAL SERVICES PENETRATING FIRE SEPARATIONS;

3.2.7 RIGID DUCTS: GREATER THAN 129 CM2 ; FIRESTOPPING TO CONSIST OF BEAD OF FIRESTOPPING MATERIAL BETWEEN RETAINING ANGLE AND FIRE SEPARATION AND BETWEEN RETAINING ANGLE AND DUCT, ON EACH SIDE OF FIRE SEPARATION.

4 SEQUENCE WORK AS LATE AS POSSIBLE IN THE CONSTRUCTION SCHEDULE TO MINIMIZE RE-ENTERING FIRESTOPS AND TO PERMIT INSTALLATION OF FIRESTOPPING AND SMOKE SEAL MATERIALS TO BE INSTALLED AFTER ADJACENT WORK IS COMPLETE AND BEFORE CLOSURE OF SPACES.

5 PERFORMACE/DESIGN CRITERIA:

5.1 DELEGATED DESIGN REQUIREMENTS: DESIGN FIRESTOPPING AND SMOKESEALS REQUIRED BY THE CONTRACT DOCUMENTS TO WITHSTAND FIRE RATINGS INDICATED AND IN ACCORDANCE WITH REQUIREMENTS OF THE BUILDING CODE, AND AS DESCRIBED IN SECTION 01 35 00

5.2 MANUFACTURER SHALL DESIGN PROPRIETARY ASSEMBLIES TO WITHSTAND THE LISTED RATINGS IN ACCORDANCE WITH THE BUILDING CODE, UNDERWRITERS LABORATORIES (UL), AND AUTHORITIES HAVING JURISDICTION.

6 MATERIALS

6.1 MATERIAL COMPATIBILITY: PROVIDE FIRESTOPPING AND SMOKESEALS SYSTEMS THAT ARE COMPATIBLE WITH ONE ANOTHER, WITH THE SUBSTRATES FORMING OPENINGS, AND WITH THE ITEMS, IF ANY, PENETRATING FIRESTOPPING AND SMOKESEALS SYSTEMS, UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY FIRESTOPPING AND SMOKESEALS SYSTEM MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.

6.2 ACCESSORIES: PROVIDE COMPONENTS FOR EACH FIRESTOPPING AND SMOKESEALS SYSTEMS THAT ARE NEEDED TO INSTALL FILL MATERIALS. USE ONLY COMPONENTS SPECIFIED BY FIRESTOPPING AND SMOKESEALS SYSTEM MANUFACTURER AND APPROVED BY THE QUALIFIED TESTING AND INSPECTING AGENCY FOR FIRESTOPPING AND SMOKESEALS SYSTEMS INDICATED

7 FIRESTOPPING SYSTEMS: TESTED IN ACCORDANCE WITH ASTM E814, LISTED AND CERTIFIED BY A THIRD PARTY TESTING AGENCY AS ASBESTOS FREE, AND BEARING THE FOLLOWING RATING:

7.1 FIRESTOP SYSTEM RATING: IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE, NOT LESS THAN THE FIRE-RESISTANCE RATING OF SURROUNDING FLOOR OR WALL ASSEMBLY, AND NOT BE LESS THAN TWENTY (20) MINUTES WHEN INSTALLED IN A NON RATED FLOOR OR WALL ASSEMBLY.

7.2 FIRESTOP SYSTEM SHALL ACT AS AN EFFECTIVE SMOKE SEAL AND HAVE A FLAME SPREAD RATING LESS THAN 25.

8 FIRESTOPPING SEALS AT OPENINGS INTENDED FOR EASE OF RE-ENTRY SUCH AS CABLES: ELASTOMERIC SEALS; DO NOT USE CEMENTITIOUS OR RIGID SEAL AT SUCH LOCATIONS.

9 FIRESTOPPING AT OPENINGS AROUND PENETRATIONS FOR PIPES, DUCTWORK AND OTHER MECHANICAL ITEMS REQUIRING SOUND AND VIBRATION CONTROL: ELASTOMERIC SEAL; DO NOT USE A CEMENTITIOUS OR RIGID SEAL AT SUCH LOCATIONS.

10 PRIMERS, DAMMING AND BACKUP MATERIALS, SUPPORTS AND ANCHORING DEVICES: TO THE MANUFACTURER'S RECOMMENDATION FOR SPECIFIC MATERIAL, SUBSTRATE AND END USE AND IN ACCORDANCE WITH TESTED ASSEMBLY BEING INSTALLED AS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.

11 ACCEPTABLE MANUFACTURERS: HILTI OR PRE-APPROVED ALTERNATIVE.

12 COORDINATE FIRESTOPPING AND SMOKE SEAL WORK WITH THE MECHANICAL AND ELECTRICAL SPECIFICATIONS TO IDENTIFY CONDUIT, WIRE CABLES, DUCTWORK, PIPING AND SIMILAR PROTRUSIONS PENETRATING FIRE SEPARATIONS.

13 INSTALL FIRESTOPPING AND SMOKE SEAL MATERIAL AND COMPONENTS IN ACCORDANCE WITH UNDERWRITER'S CERTIFICATION AND THE MANUFACTURER'S INSTRUCTIONS.

14 APPLICATION

14.1 APPLY FIRESTOPPING AND SMOKESEALS MATERIALS/SYSTEMS TO MAINTAIN THE FIRE SEPARATIONS IN THE PROJECT AS INDICATED ON DRAWINGS.

14.2 SEAL HOLES OR VOIDS MADE BY THROUGH PENETRATIONS, POKE THROUGH TERMINATION DEVICES, AND UNPENETRATED OPENINGS OR JOINTS TO ENSURE CONTINUITY AND INTEGRITY OF FIRE SEPARATION ARE MAINTAINED.

14.3 PROVIDE TEMPORARY FORMING AS REQUIRED AND REMOVE FORMING ONLY AFTER MATERIALS HAVE GAINED SUFFICIENT STRENGTH AND AFTER INITIAL CURING.

14.4 TOOL OR TROWEL EXPOSED SURFACES TO NEAT FINISH.

14.5 REMOVE EXCESS COMPOUND PROMPTLY AS WORK PROGRESSES AND UPON COMPLETION

SECTION 07 92 00 - JOINT SEALANTS

1 DO NOT USE CAULKING THAT EMITS STRONG ODOURS, CONTAINS TOXIC CHEMICALS OR IS NOT CERTIFIED AS MOULD RESISTANT IN AIR HANDLING UNITS.

2 ENSURE THAT USAGE IS CONTAINED BEHIND AIR BARRIERS WHEN LOW TOXICITY SEALANTS ARE NOT POSSIBLE, VOC TO BE BELOW 4000 LBS/FT3.

3 USE ONLY PRIMERS THAT ARE QUALIFIED WITH SEALANTS.

4 PROVIDE VOC CONTENT LIMITS OF SEALANTS SHALL BE IN ACCORDANCE WITH SCAQMD RULE 1168:

5 SUBJECT TO COMPLIANCE WITH SPECIFICATIONS THE FOLLOWING PRODUCTS ARE ACCEPTABLE:

5.1. INTERIOR GENERAL-PURPOSE APPLICATIONS (DOOR FRAMES, NON SANITARY JOINTS, AND ACOUSTICAL SEALANT APPLICATIONS): LATEX SEALANT CONFORMING TO ASTM C834; SINGLE COMPONENT, SOLVENT CURING, NONSTAINING, NONBLEEDING, NONSAGGING; PAINTABLE COLOR AS SELECTED. ACCEPTABLE PRODUCTS: TREMFLEX 834 OR APPROVED ALTERNATIVE.

5.2 TRAFFIC LOCATIONS: MULTI-COMPONENT POLYURETHANE SEALANT CONFORMING TO ASTM C920, TYPE M, GRADE P, USE T AMO, CLASS 25. ACCEPTABLE PRODUCTS: THC 900 BY TREMCO OR APPROVED ALTERNATIVE.

5.3 REFER TO SECTION 09 31 00 FOR SEALANTS TO USE IN CONJUCTION WITH TILING.

5.4 MILDEW RESISTANT FOR USE IN INTERIOR SANITARY APPLICATIONS; COUNTERTOPS, BACKSPLASHES, LAVATORIES, AND PLUMBING FIXTURES. SINGLE COMPONENT SILICONE SEALANT CONFORMING TO ASTM C834 TYPE S. ACCEPTABLE PRODUCTS: TREMSIL 200 BY TREMCO OR APPROVED ALTERNATIVE.

6 ACCESSORIES:

6.1 BACKER ROD: NON-ADHERENT TYPE, OPEN OR CLOSED CELL TO SUIT APPLICATION REQUIREMENTS FLEXIBLE ROD, CONFORMING TO ASTM D1330 COMPATIBLE WITH PRIMERS AND SEALANTS USED, OF TYPE AS RECOMMENDED BY SEALANT MANUFACTURER. DIAMETER: 1/3 GREATER THAN WIDTH OF JOINT WHERE IT IS TO BE INSTALLED. POLYSTYRENE FOAM AND OPEN CELL RODS ARE NOT ACCEPTABLE.

6.2 BOND BREAKER TAPE: POLYETHYLENE TAPE/PLASTIC TAPE RECOMMENDED BY SEALANT MANUFACTURER, APPLIED TO SEALANT CONTACT SURFACES WHERE BOND TO SUBSTRATE OR BACKER ROD MUST BE AVOIDED FOR PROPER PERFORMANCE OF SEALANT. PROVIDE SELF-ADHESIVE TAPE WHERE APPLICABLE.

6.3 SOLVENTS, CLEANERS AND PRIMERS: LOW VOC, NON-STAINING, NON-CORROSIVE TYPES AS RECOMMENDED BY SEALANT MANUFACTURER FOR EACH PARTICULAR SUBSTRATE AND COMPATIBLE WITH JOINT FORMING MATERIALS.

6.4 PRIMER: NON-STAINING TYPE AS RECOMMENDED BY SEALANT MANUFACTURER

6.5 JOINT CLEANER: NON-CORROSIVE SOLVENT TYPE RECOMMENDED BY SEALANT MANUFACTURER FOR APPLICABLE SUBSTRATE MATERIALS

7 COLORS: TO MATCH ADJACENT MATERIALS, AS SELECTED BY CONSULTANT, FROM MANUFACTURER’S STANDARD COLOR RANGE

8 INSPECTION: CAREFULLY INSPECT SURFACES, MATERIALS TO RECEIVE SEALANTS AND VERIFY THEY ARE PHYSICALLY CAPABLE OF RETAINING SEALANT BOND

9 SURFACE PREPARATION: PREPARE SURFACES IN ACCORDANCE WITH MANUFACTURER’S INSTRUCTIONS

10 INSTALL SEALANTS, PRIMERS AND ACCESSORIES IN STRICT ACCORDANCE WITH ASTM C1193 AND MANUFACTURER'S INSTRUCTIONS.

DIVISION 8 – OPENINGS

SECTION 08 11 13 - STEEL DOORS AND FRAMES

1 SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH SECTION 01 33 00 – SUBMITTAL PROCEDURES. INDICATE GENERAL CONSTRUCTION OF EACH TYPE OF DOOR AND FRAME, CONFIGURATIONS, MATERIAL, MATERIAL THICKNESS, JOINTING METHODS, MORTISES, REINFORCEMENTS, ANCHORS, ARRANGEMENT OF HARDWARE, FIRE RATINGS, FINISH AND SPECIAL FEATURES.

2 MANUFACTURER/FABRICATOR: USE A MEMBER IN GOOD STANDING OF THE HOLLOW METAL MANUFACTURER’S ASSOCIATION. PERFORM WORK IN ACCORDANCE WITH HOLLOW METAL MANUFACTURERS' ASSOCIATION (HMMA), RECOMMENDED SPECIFICATIONS FOR COMMERCIAL STEEL...

3 STEEL FIRE RATED DOORS AND FRAMES: LABEL AND LIST FIRE RATED DOORS AND FRAMES BY AN ORGANIZATION IN CONFORMANCE WITH ANSI/UL 10B AND ANSI/UL 10C AND NFPA FOR RATINGS INDICATED. FIRE LABELS MUST BE FACTORY APPLIED BY THE MANUFACTURER

4 MATERIALS

4.1 DOORS AND FRAMES: COATED STEEL SHEETS TO ASTM A924/M924; COATING DESIGNATION TO ASTM A653/A653M: COMMERCIAL STEEL (CS), TYPE B, ZF180

4.2 EXTERIOR DOORS AND FRAMES AND INTERIOR HIGH HUMIDITY AREA: COATED STEEL SHEETS TO ASTM A924/M924; COATING DESIGNATION TO ASTM A653/A653M: COMMERCIAL STEEL (CS), TYPE B, ZF180 GALVANNEALED

4.3 DOOR CORE MATERIALS

4.3.1 HONEYCOMB (INTERIOR ONLY): STRUCTURAL SMALL CELL 1” MAXIMUM. KRAFT PAPER HONEYCOMB, WEIGHT: 80 LBS/REAM MINIMUM, DENSITY: 1.03 LBS/FT3 MINIMUM

4.3.2 POLYSTYRENE: RIGID EXTRUDED, CLOSED CELL INSULATION, FIRE RETARDANT TREATED MEETING THE REQUIREMENTS OF ASTM C578, TYPE 4, MINIMUM THERMAL RESISTANCE R VALUE 4.5/1” THICKNESS.

4.3.3 POLYURETHANE: RIGID, CELLULAR TYPE, BOARD, CONFORMING TO ASTM D1622, OR FOAMED-IN-PLACE, 1.8 LBS/FT3 DENSITY MINIMUM, CONTAINING NO UREA FORMALDEHYDE RESINS.

4.3.4 SEMI-RIGID MINERAL WOOL BLANKET AND BATT INSULATION, DENSITY 1.5 LBS/FT3 MINIMUM, CONFORMING TO ASTM C553.

4.3.5 POLYISOCYANURATE: RIGID, MODIFIED POLYISOCYANURATE, CLOSED CELL BOARD, TYPE 1, CONFORMING TO ASTM C1289.

4.3.6 FIBERGLASS: LOOSE BATT TYPE, DENSITY 1.5 LBS/FT3 MINIMUM, CONFORMING TO UL S702

4.4 ADHESIVES: HEAT RESISTANT, SPRAY GRADE, RESIN REINFORCED NEOPRENE/RUBBER (POLYCHLOROPRENE) BASED, LOW VISCOSITY, CONTACT CEMENT AND AS RECOMMENDED BY MANUFACTURER.

5 FINISH: PREPARE SURFACES FOR FIELD PAINTING TO ASTM D6386 AND ASTM D7396. FIELD PAINT STEEL DOORS AND FRAMES IN ACCORDANCE WITH SECTION 09 91 00 PAINTING. PROTECT WEATHERSTRIPS FROM PAINT. PROVIDE FINAL FINISH FREE OF SCRATCHES OR OTHER BLEMISHES

6 ACCESSORIES

6.1 DOOR SILENCERS (BUMPERS): GREY RUBBER, TO ANSI/BHMA A156.16 TYPE 6-180; THREE SILENCERS ON STRIKE JAMBS OF SINGLE DOOR FRAMES; TWO SILENCERS ON HEADS OF DOUBLE DOOR FRAMES; SCREW FASTENER APPLIED

6.2 FLOOR ANCHORS: 5/32” MINIMUM ADJUSTABLE FLOOR CLIP ANGLES WITH 2 HOLES FOR ANCHORAGE TO FLOOR.

6.3 EXTERIOR TOP CAPS: [RIGID POLYVINYLCHLORIDE (PVC) EXTRUSION IN ACCORDANCE WITH ASTM D4726] [STEEL].

6.4 METALLIC PASTE FILLER: TO MANUFACTURER'S STANDARD.

6.5 FASTENERS: TAMPERPROOF TYPE 304 STAINLESS STEEL SCREWS WITH COUNTERSUNK FLAT HEAD.

6.6 SEALANT: SECTION 07 92 00 – JOINT SEALANTS.

6.7 GLAZING AND GLAZING STOPS: SECTION 08 80 50 – GLAZING.

7 FABRICATION

7.1 WELDED CONSTRUCTION: ASSEMBLE UNITS BY WELDING IN ACCORDANCE WITH AWS D1.1, STRUCTURAL WELDING CODE TO PRODUCE A FINISHED UNIT SQUARE, TRUE AND FREE OF DISTORTION. WELDING SHALL BE UNDERTAKEN ONLY BY A FABRICATOR FULLY APPROVED BY THE AMERICAN WELDING SOCIETY TO THE REQUIREMENTS OF AWS D1.1, STRUCTURAL WELDING CODE.

7.2 MAKE PROVISIONS IN DOORS AND FRAMES TO SUIT REQUIREMENTS OF TRADE OR SECTION PROVIDING ELECTRICALLY OPERATED HARDWARE OR SECURITY DEVICES. PROVIDE REMOVABLE PLATES OR KNOCK OUTS FOR ELECTRICAL CONTACTS. PROVIDE JUNCTION BOXES ON SECURITY DOOR FRAMES AS REQUIRED FOR DOOR STRIKES, MAG LOCKS AND DOOR CONTACTS. ENSURE FRAMES ARRIVE ON SITE PREPARED FO...

7.3 FABRICATE FRAMES IN ACCORDANCE WITH HMMA SPECIFICATIONS. ACCURATELY FORM FRAMES TO PROFILES INDICATED. CONSTRUCT FRAMES STRAIGHT AND FREE FROM TWIST OR WARP.

7.4 FABRICATE STEEL DOORS RIGID, NEAT IN APPEARANCE, AND FREE FROM DEFECTS INCLUDING WARP AND BUCKLE; 1-3/4” THICKNESS OF TYPES AND SIZES INDICATED ON DRAWINGS. FABRICATE DOORS WITH THE FOLLOWING CLEARANCES:

7.4.1 DO NOT EXEED 1/8” FOR CLEARANCE BETWEEN DOOR AND FRAME AND BETWEEN MEETING EDGES OF DOORS SWINGING IN PAIRS.

7.4.2 DO NOT EXEED 3/4” CLEARANCE BETWEEN THE BOTTOM OF DOOR AND FLOOR OR AS REQUIRED TO ACCOMMODATE SPECIFIED HARDWARE

7.4.3 PROVIDE CLEARANCE BETWEEN BOTTOM OF DOOR AND A RAISED NON COMBUSTIBLE SILL IN ACCORDANCE WITH NFPA 80

7.4.4 PROVIDE CLEARANCE BETWEEN BOTTOM OF DOOR AND NOMINAL SURFACE OF COMBUSTIBLE FLOOR COVERINGS IN ACCORDANCE WITH NFPA 80

7.5 FABRICATE EXTERIOR DOORS: FLUSH, LOCK SEAM CONSTRUCTION, INSULATED DOORS FABRICATED IN ACCORDANCE WITH ANSI/SDI A250.8.

7.6 FABRICATE FIRE RATED DOORS: FLUSH, LOCK SEAM CONSTRUCTION, HOLLOW STEEL DOORS FABRICATED IN ACCORDANCE WITH ANSI/UL 10B AND ANSI/UL 10C AND NFPA 80.

8 EXAMINATION: VERIFY CONDITION AND DIMENSIONS OF PREVIOUSLY INSTALLED WORK UPON WHICH THIS SECTION DEPENDS. REPORT DEFECTS TO CONSULTANT. COMMENCEMENT OF WORK MEANS ACCEPTANCE OF EXISTING CONDITIONS.

9 INSTALL DOORS, FRAMES AND ACCESSORIES IN ACCORDANCE WITH REVIEWED SHOP DRAWINGS, ANSI A250.11, HMMA GUIDE SPECIFICATION FOR INSTALLATION AND STORAGE OF HOLLOW METAL DOORS AND FRAMES, MANUFACTURER’S DATA, AND AS SPECIFIED IN THIS SECTION

10 DAMAGED OR TWISTED DOOR AND FRAMES, OR DOORS WITH INTERIOR CORES OR FRAME TELEGRAPHING THROUGH, WILL BE REJECTED

11 FRAME TOLERANCES: INSTALL FRAMES TO TOLERANCES LISTED IN ANSI A250.11, AND AS FOLLOWS:

11.1 SQUARENESS: MAXIMUM 1/16” MEASURED ACROSS OPENING BETWEEN HINGE JAM AND STRIKE JAMB.

11.2 PLUMBNESS: MAXIMUM 1/16” MEASURED FROM BOTTOM OF FRAME TO HEAD LEVEL.

11.3 ALIGNMENT: MAXIMUM 1/16” MEASURED OFFSET BETWEEN FACE OF HINGE JAMB AND STRIKE JAMB RELATIVE TO WALL CONSTRUCTION.

11.4 TWIST: MAXIMUM 1/16” MEASURED FROM LEADING EDGE OF OUTSIDE FRAME RABBET TO LEADING EDGE OF INSIDE FRAME RABBET.

12 INSTALL HARDWARE IN ACCORDANCE WITH HARDWARE TEMPLATES AND MANUFACTURER'S INSTRUCTIONS AND SECTION 08 71 00 - DOOR HARDWARE.

13 TOUCH-UP AREAS WHERE GALVANIZED COATING HAS BEEN REMOVED OR DAMAGED WITH PRIMER.

SECTION 08 11 16 – ALUMINUM DOORS AND FRAMES

1 SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH SECTION 01 33 00 – SUBMITTAL PROCEDURES. INDICATE MATERIALS AND PROFILES AND PROVIDE FULL-SIZE, SCALED DETAILS OF COMPONENTS FOR EACH TYPE OF DOOR AND FRAME. SUBMIT CATALOGUE DETAILS FOR EACH TYPE OF DOOR AND FRAME ILLUSTRATING PROFILES, DIMENSIONS AND METHODS OF ASSEMBLY

2 TESTING: SUBMIT TWO COPIES OF MANUFACTURERS FIELD REPORTS.

3 SUPPLY PRODUCTS WITH FACTORY APPLIED PERFORMANCE RATING LABELS SHOWING PRIMARY AND SECONDARY DESIGNATORS AND ATTESTING TO CONFORMANCE WITH NAFS-11 AND AAMA/WDMA 101/I.S. 2/A440. ALTERNATIVELY, NAFS PERFORMANCE RATINGS AND TEST SPECIMEN DESCRIPTIONS MAY BE SHOWN ON THE FENESTRATION SHOP DRAWINGS.

4 FABRICATOR SHALL HAVE MINIMUM OF 5 YEARS SUCCESSFUL EXPERIENCE IN FABRICATION AND ERECTION OF METAL ENTRANCES OF SIMILAR SIZES, SHAPES AND FINISHES TO UNITS REQUIRED FOR THIS PROJECT AND SHALL HAVE AMPLE FACILITIES TO PRODUCE, FURNISH AND SUPPLY UNITS AS REQUIRED FOR INSTALLATION WITHOUT DELAY TO WORK.

5 PERFORMANCE/DESIGN CRITERIA: ENGAGE REGISTERED PROFESSIONAL ENGINEER TO REVIEW STRUCTURAL DESIGN AND ATTACHMENT TO BUILDING STRUCTURE, SEAL SHOP DRAWINGS, CARRY OUT FIELD REVIEWS

6 MATERIALS

6.1 ALUMINUM EXTRUSIONS: ALUMINUM ASSOCIATION ALLOY AA6063 T5, T6, OR T54 ANODIZING QUALITY

6.2 SHEET ALUMINUM: ALLOY 1100, F TEMPER, 1/8” MINIMUM THICKNESS EXPOSED SHEET FINISHED TO MATCH FRAMES AS SPECIFIED.

6.3 STEEL REINFORCEMENT: TO ASTM A653, GRADE 300 W, SHOP PAINTED WITH ZINC CHROMATE PRIMER, THICKNESS AS REQUIRED TO SUPPORT IMPOSED LOADS AND IN NO CASE LESS THAN 3/16” THICK.

6.4 FASTENERS: TO ASTM A167, STAINLESS STEEL, TYPE 316, FINISHED TO MATCH ADJACENT MATERIAL AND SELECTED TO PREVENT GALVANIC ACTION WITH FASTENED MATERIALS OF SUITABLE SIZE TO SUSTAIN IMPOSED LOADS.

6.5 GLAZING MATERIALS: REFER TO SECTION 08 80 50, SPACERS FOR GLAZING, BACKPANS/ALUMINUM SPANDRELS TO BE FULL LENGTH, PURPOSE MADE, ALUMINUM CHANNELS

6.6 SEALANT: INCLUDING PRIMER, JOINT FILLER, AS SPECIFIED IN SECTION 07 92 00.

6.7 THERMAL SEPARATOR: POLYVINYLCHLORIDE, 50 SHORE A DUROMETER HARDNESS +5

6.8 DOOR SEALS AS RECOMMENDED BY MANUFACTURER.

0.08 33 23 – OVERHEAD COILING GRILLES CONTINUED…

6 SERVICE DOORS

6.1 CURTAINS: FABRICATE OVERHEAD COILING DOOR CURTAIN OF INTERLOCKING SLATS, IN A CONTINUOUS LENGTH FOR WIDTH OF DOOR WITHOUT SPLICES WITH SLATS OF THICKNESS AND MECHANICAL PROPERTIES RECOMMENDED BY DOOR MANUFACTURER FOR PERFORMANCE, SIZE, AND TYPE OF DOOR INDICATED, AND AS FOLLOWS:

6.1.1 STEEL DOOR CURTAIN SLATS: ZINC COATED (GALVANIZED), COLD ROLLED STRUCTURAL STEEL (SS) SHEET; IN ACCORDANCE WITH ASTM A653M, Z275 COATING DESIGNATION:

6.1.1.1 MINIMUM CORE METAL (UNCOATED) THICKNESS: 24 GA.

6.1.1.2 FLAT PROFILE SLATS.

6.1.2 BOTTOM BAR: CONSISTING OF 2 ANGLES, EACH NOT LESS THAN 1.5” X 1.5” X 1/8” THICK; GALVANIZED STEEL.

6.1.3 CURTAIN JAMB GUIDES:

6.1.3.1 FABRICATE CURTAIN JAMB GUIDES OF STEEL ANGLES OR CHANNELS AND ANGLES, WITH SUFFICIENT DEPTH AND STRENGTH TO RETAIN CURTAIN, TO ALLOW CURTAIN TO OPERATE SMOOTHLY, AND TO WITHSTAND LOADING.

6.1.3.2 BUILD UP UNITS WITH 3/16” MINIMUM THICKNESS THICK GALVANIZED STEEL SECTIONS IN ACCORDANCE WITH ASTM A36M AND ASTM A123M.

6.1.3.3 SLOT BOLT HOLES FOR GUIDE ADJUSTMENT.

6.2 HOOD:

6.2.1 CONTOUR TO FIT END BRACKETS; ROLL AND REINFORCE TOP AND BOTTOM EDGES FOR STIFFNESS.

6.2.2 PROVIDE CLOSED ENDS FOR SURFACE MOUNTED HOODS AND PROVIDE FASCIA FOR ANY PORTION OF BETWEEN JAMB MOUNTING PROJECTING BEYOND WALL FACE]; PROVIDE INTERMEDIATE SUPPORT BRACKETS TO PREVENT SAGGING.

6.2.3 HOOD MATERIAL: FABRICATE HOODS FOR STEEL DOORS OF MINIMUM 24 GA THICK, HOT DIP GALVANIZED STEEL SHEET WITH Z275 ZINC COATING, IN ACCORDANCE WITH ASTM A653M.

6.2.4 SHAPE: [ROUND] [SQUARE].

6.3 FIRE RATING REQUIREMENTS: MEET REQUIREMENTS OF WITH ANSI/UL 10B AND THE FOLLOWING:

6.3.1 BAFFLE: PROVIDE AUTOMATIC DROP BAFFLE IN HOOD TO GUARD AGAINST PASSAGE OF SMOKE OR FLAME.

6.3.2 INTEGRAL SILLS: FABRICATE SILLS AS INTEGRAL PART OF FRAME ASSEMBLY OF SAME SHEET METAL, WITH 5/64" MINIMUM THICKNESS.

6.3.3 SMOKE SEALS: UL LISTED AND TESTED SMOKE SEAL PERIMETER GASKETS.

6.3.4 RATING: AS INDICATED ON DRAWINGS.

7 COUNTER BALANCING MECHANISM

7.1 COUNTERBALANCE DOORS USING ADJUSTABLE TENSION, STEEL HELICAL TORSION SPRING MOUNTED AROUND STEEL SHAFT AND CONTAINED IN SPRING BARREL CONNECTED TO DOOR CURTAIN WITH BARREL RINGS USING MANUFACTURER’S STANDARD GREASE SEALED OR SELF LUBRICATING GRAPHITE BEARINGS FOR ROTATING MEMBERS.

7.2 FABRICATE SPRING BARREL FROM HOT FORMED, STRUCTURAL QUALITY, WELDED OR SEAMLESS CARBON STEEL PIPE, OF SUFFICIENT DIAMETER AND WALL THICKNESS TO SUPPORT ROLLED UP CURTAIN WITHOUT DISTORTION OF SLATS AND TO LIMIT BARREL DEFLECTION TO NOT MORE THAN 3/32” PER 39” OF SPAN UNDER FULL LOAD.

7.3 FABRICATE SPRING BALANCE FROM ONE OR MORE OIL TEMPERED, HEAT TREATED STEEL HELICAL TORSION SPRINGS; SIZE SPRINGS TO COUNTERBALANCE WEIGHT OF CURTAIN WITH UNIFORM ADJUSTMENT ACCESSIBLE FROM OUTSIDE BARREL; INCLUDE CAST STEEL BARREL PLUGS TO SECURE ENDS OF SPRINGS TO BARREL AND SHAFT.

7.4 FABRICATE TORSION ROD FOR COUNTERBALANCE SHAFT OF COLD ROLLED STEEL, SIZED TO HOLD FIXED SPRING ENDS AND CARRY TORSION LOAD.

7.5 PROVIDE MANUFACTURER'S STANDARD CAST IRON OR COLD ROLLED STEEL PLATE MOUNTING BRACKETS.

8 MANUAL DOORS OPERATORS

8.1 MANUAL PUSH-UP OPERATION: PROVIDE COUNTERBALANCE MECHANISM REQUIRING 110 N OR LESS TO RAISE DOOR.

8.2 LOCKING: CONFIRM REQUIREMENTS WITH CONSULTANT.

9 ELECTRICAL DOOR OPERATORS

9.1 MOTORIZED OPERATOR: [½] [¾]HP, [110] [230] VOLT SINGLE PHASE, WITH AUTOMATIC RESET CURRENT SENSING OVERLOAD PROTECTION OF SIZE AND CAPACITY RECOMMENDED BY MANUFACTURER FOR SPECIFIED DOOR; FACTORY PRE-WIRED MOTOR CONTROLS, STARTER, GEAR REDUCTION UNIT, SOLENOID OPERATED BRAKE, CLUTCH, CONTROL DEVICES, INTEGRAL GEARING FOR LOCKING DOOR, AND ACCESSORIES REQUIRED FOR PROPER OPERATION, HAVING THE FOLLOWING CHARACTERISTICS:

9.1.1 SPEED: SIZED TO START, ACCELERATE, AND OPERATE DOOR IN EITHER DIRECTION FROM ANY POSITION, AT MINIMUM 8” AND MAXIMUM 12” PER SECOND.

9.1.2 TYPE: POLY-PHASE, MEDIUM INDUCTION TYPE; WITH HIGH STARTING TORQUE, REVERSIBLE, CONTINUOUS DUTY, CLASS A INSULATED IN ACCORDANCE WITH NEMA MG

9.1.3 SERVICE FACTOR: IN ACCORDANCE WITH NEMA MG 1

9.1.4 MOTOR HOUSING: [OPEN DRIP PROOF TYPE MOTOR AND CONTROLLER WITH NEMA ICS 6, TYPE 1 ENCLOSURE FOR NORMALLY DRY OPERATING ENVIRONMENT] [TOTALLY ENCLOSED, NON-VENTILATED OR FAN COOLED MOTOR, FITTED WITH PLUGGED DRAIN, AND CONTROLLER WITH NEMA ICS 6, TYPE 4 ENCLOSURE FOR WET OR HUMID OPERATING ENVIRONMENT].

9.1.5 LIMIT SWITCHES: ADJUSTABLE SWITCHES, INTERLOCKED WITH MOTOR CONTROLS SET FOR AUTOMATIC DOOR STOP AT FULLY OPENED AND FULLY CLOSED POSITIONS.

9.2 DISCONNECT DEVICE: HAND OPERATED DISCONNECT TO AUTOMATICALLY ENGAGE CHAIN AND SPROCKET OPERATOR TO RELEASE BRAKE FOR EMERGENCY MANUAL OPERATION AND DISCONNECT FROM MOTOR, WITHOUT AFFECTING TIMING OF LIMIT SWITCH; MOUNTED IN AND ACCESSIBLE LOCATION; WITH INTERLOCK DEVICE TO AUTOMATICALLY PREVENT MOTOR FROM OPERATING WHEN EMERGENCY OPERATOR IS ENGAGED.

9.3 DOOR OPERATOR TYPE: [WALL] [HOOD] [BRACKET] MOUNTED, JACKSHAFT, GEAR HEAD TYPE DOOR OPERATOR UNIT CONSISTING OF ELECTRIC MOTOR, ENCLOSED WORM GEAR RUNNING IN OIL PRIMARY DRIVE, AND CHAIN AND SPROCKET SECONDARY DRIVE; [WITH QUICK DISCONNECT RELEASE FOR MANUAL OPERATION] [WITH AUXILIARY CHAIN HOIST AND FLOOR LEVEL DISCONNECT].

9.4 REMOTE CONTROL STATION: [MOMENTARY CONTACT] [SUSTAINED PRESSURE] [KEYED], THREE BUTTON CONTROL STATION WITH PUSH BUTTON CONTROLS LABELLED "OPEN", "CLOSE", AND "STOP"; WITH [FULL GUARDED, SURFACE MOUNTED, HEAVY DUTY TYPE, WITH GENERAL PURPOSE NEMA ICS 6, TYPE 1 ENCLOSURE FOR NORMALLY DRY OPERATING ENVIRONMENT] [FULL GUARDED, STANDARD DUTY, SURFACE MOUNTED, WEATHERPROOF TYPE; NEMA ICS 6, TYPE 4 ENCLOSURE FOR WET OR HUMID OPERATING ENVIRONMENT] [; WITH KEYED OPERATOR FOR EXTERIOR OR SECURE OPERATING ENVIRONMENT].

9.5 OBSTRUCTION DETECTION DEVICE: PHOTOELECTRIC TYPE AUTOMATIC SAFETY SENSOR CAPABLE OF PROTECTING FULL WIDTH OF DOOR OPENING; ACTIVATION OF SENSOR IMMEDIATELY STOPS AND REVERSES DOWNWARD DOOR TRAVEL, TO MANUFACTURER’S STANDARD.

9.6 EMERGENCY EGRESS RELEASE: FLUSH, WALL MOUNTED HANDLE MECHANISM NOT DEPENDENT ON ELECTRIC POWER THAT ALLOWS DOOR TO OPEN FOR EGRESS IN EMERGENCY; AUTOMATICALLY RESETS MOTOR DRIVE WITHOUT AFFECTING LIMIT SWITCHES; WITH RETURN OF HANDLE TO ORIGINAL POSITION.

10 FINISHES

10.1 STEEL AND GALVANIZED STEEL FINISHES: MANUFACTURER'S STANDARD POWDER COAT FINISH CONSISTING OF PRIMER AND TOPCOAT; CUSTOM COLOR AS DIRECTED BY CONSULTANT.

11 ACCESSORIES

11.1 AUTOMATIC CLOSING DEVICE: AUTOMATIC CLOSING DEVICE; INOPERATIVE DURING NORMAL DOOR OPERATIONS, WITH CLOSING GOVERNOR UNIT TO CONTROL DOWNWARD SPEED OF THE DOOR IN ACCORDANCE WITH REQUIREMENTS OF NFPA 80; HAVING AN EASILY TESTED AND RESET RELEASE MECHANISM, DESIGNED TO BE ACTIVATED BY THE FOLLOWING:

11.1.1 GOVERNOR: CENTRIFUGAL OR VISCOUS GOVERNOR CONNECTED TO ACTIVATION COMPONENT THAT RELEASES AND CAUSES DOOR TO DROP BY GRAVITATIONAL FORCE ONLY AT A RATE OF 6‘” PER SECOND.

11.1.2 FUSIBLE LINK ACTIVATION: REPLACEABLE FUSIBLE LINKS WITH TEMPERATURE RISE AND MELTING POINT OF 167 DEGREES FARENHEIT; INTERCONNECTED AND MOUNTED ON BOTH SIDES OF DOOR OPENING.

11.1.6 OBSTRUCTION SENSING SAFETY EDGE: SENSING EDGE CAUSES DOOR TO STOP AND RETURN TO OPEN WHEN SAFETY EDGE ENCOUNTERS AN OBSTRUCTION DURING NORMAL CLOSING MODE; AND] CAUSES DOOR TO STOP AND REST ON OBSTRUCTION, AND CONTINUE TO FULLY CLOSED POSITION ONCE OBSTRUCTION IS REMOVED DURING AUTOMATIC CLOSING MODE.

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Notes

JIMMY JOHN'S & TROPICAL SMOOTHIE
LEVEL 2, UNIT NC1

Revision	By	Appd	YYYY.MM.DD
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DOUGLAS G. COX
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12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

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SECTION 08 33 36 - FOLDING GRILLES

1 INSTALLATION OF TENANT/LANDLORD SUPPLIED SIDE FOLDING DOORS. DEPENDS ON PROJECT.

2 SUBMIT THE FOLLOWING:

2.1 PRODUCT DATA: MANUFACTURER'S DATA SHEETS ON EACH ANY NEW GRILLE PANELS, ACCESSORIES OR EQUIPMENT. INCLUDE PREPARATION INSTRUCTIONS AND RECOMMENDATIONS, STORAGE AND HANDLING REQUIREMENTS AND RECOMMENDATIONS.

2.2. SHOP DRAWINGS FOR GRILLE REMODEL AND NEW GRILLE: INCLUDE OPENING DIMENSIONS AND REQUIRED TOLERANCES, CONNECTION DETAILS, ANCHORAGE SPACING, HARDWARE LOCATIONS, AND INSTALLATION DETAILS.

2.3 PROVIDE OPERATION AND MAINTENANCE DATA FOR NEW SLIDING GRILLES, CLOSURES AND...

3 PROVIDE COMPONENTS FROM A SINGLE MANUFACTURER WITH RESOURCES TO PROVIDE CONSISTENT QUALITY IN APPEARANCE. IF POSSIBLE, NEW GRILLE MANUFACTURER IS TO MATCH EXISTING GRILLE MANUFACTURER. FIELD MEASURE BEFORE FABRICATION. USE MANUFACTURER APPROVED INSTALLERS.

4 DOORS SHALL NOT TO BE INSTALLED UNTIL ALL NEARBY PAINTING, CLEANING OR DUST GENERATING WORK IS COMPLETED UNLESS THE DOORS ARE SUITABLY PROTECTED.

5 PROVIDE STRUCTURAL OR OTHER PREPARATION OF THE OPENING TO RECEIVE THE TRACK AND GRILLE, FINISH OR TRIM TO THE OPENING, CONSTRUCTION OF STORAGE POCKETS.

6 PRODUCT IS TO BE SUPPLIED BY THE LEASEHOLDER/TENANT AND INSTALLED BY THE TENANT CONTRACTOR. DEPENDS ON PROJECT.

7 MATERIALS DEPENDS ON PROJECT.

7.1 ALUMINUM EXTRUSIONS: ASTM B221/B221M, ALLOY 6063 T5.

7.2 STAINLESS STEEL SHEET, STRIP, PLATE, AND FLAT BARS: ASTM A666, TYPE 304.

7.3 SAFETY GLASS: TO ASTM C1048, TYPE TEMPERED OF THICKNESS INDICATED.

7.4 HARDWARE: MANUFACTURERS STANDARD HARDWARE

8 MANUFACTURE:

8.1. SIDE FOLDING GRILLE: MOBILFLEX, MODEL: ROYAL WITH TEMPERED GLASS. CONFIRM ALL WEIGHTS AND STACKING INFORMATION WITH MANUFACTURER. CONFIRM MODEL WITH LANDLORD.

8.2 SITE MEASUREMENTS: VERIFY DIMENSIONS BY SITE MEASUREMENTS BEFORE FABRICATION AND INDICATE MEASUREMENTS ON SHOP DRAWINGS WHERE OVERHEAD COILING GRILLES ARE REQUIRED TO FIT WITHIN OPENINGS; COORDINATE FABRICATION SCHEDULE WITH CONSTRUCTION PROGRESS TO AVOID DELAYING THE WORK.

9 OPERATION: EQUIP GRILLE FOR OPERATION BY: DEPENDS ON PROJECT.

9.1 MANUAL, INSTALL HANDLES.

10 FINISHES

10.1 CLEAR ANODIZED: CLASS I FINISH: ARCHITECTURAL CLASS I, CLEAR COATING 0.7 MILS OR THICKER IN ACCORDANCE WITH AAMA 611

11 INSTALLATION: COMPLY WITH MANUFACTURER'S WRITTEN DATA, INCLUDING PRODUCT TECHNICAL BULLETINS, PRODUCT CATALOGUE INSTALLATION INSTRUCTIONS, PRODUCT CARTON INSTALLATION INSTRUCTIONS, AND DATA SHEETS.

12 ADJUST OPERATING COMPONENTS TO ENSURE SMOOTH OPENING AND CLOSING OF SIDE FOLDING GRILLES AND CLOSURES.

13 PERFORM CLEANING OF ALUMINUM COMPONENTS IN ACCORDANCE WITH: AAMA 609.1 - VOLUNTARY GUIDE SPECIFICATION FOR CLEANING AND MAINTENANCE OF ARCHITECTURAL ANODIZED ALUMINUM.

SECTION 08 42 26 – ALL GLASS ENTRANCES

1 SUBMIT THE FOLLOWING IN ACCORDANCE WITH SECTION 01 33 00 – SUBMITALS

1.1 SUBMIT MANUFACTURER'S PRINTED PRODUCT LITERATURE, SPECIFICATIONS AND TECHNICAL DATA SHEET INCLUDING CONSTRUCTION DETAILS, MATERIAL DESCRIPTIONS, DIMENSIONS OF INDIVIDUAL COMPONENTS AND PROFILES, AND FINISHES.

2 SUBMIT SHOP DRAWINGS INDICATING FABRICATION AND INSTALLATION DETAILS INCLUDING, BUT NOT LIMITED TO, PLANS, ELEVATIONS, AND SECTIONS, DETAILS OF FITTINGS AND GLAZING, HARDWARE QUANTITIES, LOCATIONS, AND INSTALLATION REQUIREMENTS, STRUCTURAL ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR PREPARATION FOR PRODUCTS INDICATED TO COMPLY WITH DESIGN LOADS

3 SITE MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF STRUCTURAL SUPPORTS FOR ALL GLASS ENTRANCES SYSTEMS BY SITE MEASUREMENTS BEFORE FABRICATION AND INDICATE MEASUREMENTS ON SHOP DRAWINGS.

4 PERFORMANCE/DESIGN CRITERIA

4.1 PROVIDE SYSTEMS, INCLUDING ANCHORAGE, CAPABLE OF WITHSTANDING WITHOUT STRUCTURAL FAILURE, THE EFFECTS OF THE FOLLOWING:

4.1.1 DEFLECTION EXCEEDING SPECIFIED LIMIT

4.1.2 SUPPORT COMPONENTS TRANSFERRING STRESSES TO GLAZING, AND GLAZING TO GLAZING OR GLAZING TO SUPPORT CONTACT

4.1.3 STRUCTURAL LOADS

4.1.4 MOVEMENTS OF SUPPORTING STRUCTURE INCLUDING, BUT NOT LIMITED TO, STORY DRIFT AND DEFLECTION FROM UNIFORMLY DISTRIBUTED AND CONCENTRATED LIVE LOADS

4.1.5 DIMENSIONAL TOLERANCES OF BUILDING FRAME AND OTHER ADJACENT CONSTRUCTION

4.2 DEFLECTION NORMAL TO WALL PLANE: LIMITED TO 1/175 OF CLEAR SPAN FOR SPANS UP TO 161 INCHES, AND TO 1/240 OF CLEAR SPAN PLUS 1/4" OR SPANS GREATER THAN 161 INCHES OR AN AMOUNT THAT RESTRICTS EDGE DEFLECTION OF INDIVIDUAL GLAZING LITES TO 3/4", WHICHEVER IS LESS.

4.3 DEFLECTION PARALLEL TO GLAZING PLANE: LIMITED TO AMOUNT NOT EXCEEDING AN AMOUNT THAT REDUCES GLAZING BITE TO LESS THAN 75% OF DESIGN DIMENSION AND THAT REDUCES EDGE CLEARANCE BETWEEN FRAMING MEMBERS AND GLAZING OR OTHER FIXED COMPONENTS TO LESS THAN 1/8".

5 MATERIALS

5.1 TEMPERED GLASS: IN ACCORDANCE WITH ASTM C1048, THICKNESS 1/2", CATEGORY: II 540 J IMPACT RESISTANCE, EDGES AS DIRECTED.

5.2 FIRE RATED GLASS: COMPRISED OF MULTIPLE LAYERS OF TEMPERED GLASS CERAMIC, LAMINATED WITH TRANSPARENT INTUMESCENT MATERIALS, PROVIDING DISTORTION FREE VIEWING THROUGH PANE, AND IN ACCORDANCE WITH ECTOON 08 80 50 – GLAZING.

5.3 ALUMINUM: MATERIALS RECOMMENDED BY MANUFACTURER FOR TYPE OF USE AND FINISH INDICATED, AND AS FOLLOWS

5.3.1 SHEET AND PLATE: IN ACCORDANCE WITH ASTM B209/B209M, AND ANSI H35.1 AA1100-H14, OR AA5005-H32 OR H34, ANODIZING QUALITY.

5.3.2 EXTRUDED BARS, RODS, PROFILES, AND TUBES: IN ACCORDANCE WITH ASTM B221/B221M, AND ANSI H35.1 AA6063-T5 OR T6, ANODIZING QUALITY.

5.3.3 EXTRUDED STRUCTURAL PIPE AND TUBES: IN ACCORDANCE WITH ASTM B429, AND ANSI H35.1 AA6061-T6 OR AA6063-T6, ANODIZING QUALITY.

5.3.4 STRUCTURAL PROFILES: IN ACCORDANCE WITH ASTM B308/B308M, ANODIZING QUALITY.

5.3.5 WELDING RODS AND BARE ELECTRODES: AWS D1.1, STRUCTURAL WELDING CODE

5.4 STAINLESS STEEL CLADDING: IN ACCORDANCE WITH ASTM A 666, TYPE 302 OR 304 AS STANDARD WITH MANUFACTURER; [#4 DIRECTIONAL SATIN] [#6 SMOOTH DULL SATIN] [[#8 SMOOTH REFLECTIVE] FINISH

5.5 FITTINGS AND ACCESSORIES AS RECOMMENDED BY MANUFACTURER

6 HARDWARE: HEAVY DUTY HARDWARE UNITS IN SIZES, QUANTITIES, AND TYPES RECOMMENDED BY MANUFACTURER OF ALL GLASS ENTRANCES SYSTEMS; MATCH FITTING METAL AND FINISH FOR EXPOSED PARTS. HARDWARE IN ACCORDANCE WITH SECTION 08 71 00 – DOOR HARDWARE.

7 FABRICATION: PROVIDE HOLES AND CUT OUTS IN GLASS TO RECEIVE HARDWARE, FITTINGS, RAILS, AND ACCESSORIES BEFORE TEMPERING GLASS; DO NOT CUT, DRILL, OR MAKE OTHER ALTERATIONS TO GLASS AFTER TEMPERING

8 FINISHES: FINISH DESIGNATIONS PREFIXED BY AA COMPLY WITH THE SYSTEM ESTABLISHED BY THE ALUMINUM ASSOCIATION FOR DESIGNATING ALUMINUM FINISHES.

9 INSTALLATION: COMPLY WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS OR SPECIFICATIONS, INCLUDING PRODUCT TECHNICAL BULLETINS, HANDLING, STORAGE AND INSTALLATION INSTRUCTIONS, AND DATASHEETS.

10 INSTALL GLASS SYSTEMS AND ASSOCIATED COMPONENTS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. SET UNITS LEVEL AND PLUMB. MAINTAIN UNIFORM CLEARANCES BETWEEN ADJACENT COMPONENTS.

11 ADJUST DOORS AND HARDWARE TO PRODUCE SMOOTH OPERATION AND TIGHT FIT AT CONTACT POINTS AND WEATHER STRIPPING.

12 CLEANING: WASH GLASS ON BOTH FACES NOT MORE THAN FOUR (4) DAYS PRIOR TO DECLARATION OF SUBSTANTIAL PERFORMANCE FOR THE PROJECT.

SECTION 08 70 00 - FINISH HARDWARE

1 DESCRIPTION OF WORK: THIS SECTION INCLUDES, WITHOUT LIMITATION

1.1 FINISH HARDWARE FOR INTERIOR AND EXTERIOR WOOD DOORS, HOLLOW METAL DOORS AND ALUMINUM GLAZED DOORS.

1.2. LOCK CYLINDER FOR ENTRANCE DOOR TO COORDINATE WITH LOCK SPECIFIED IN DOOR SCHEDULE.

2 SUBMITTALS: IN ACCORDANCE WITH SECTION 01 33 00 – SUBMITTAL PROCEDURES

2.1 SUBMIT PRODUCT DATA MANUFACTURER'S PRINTED PRODUCT LITERATURE, SPECIFICATIONS, MANUFACTURER'S INSTALLATION INSTRUCTIONS AND DATA SHEETS.

2.2 SUBMIT SAMPLES. IDENTIFY EACH SAMPLE BY LABEL INDICATING APPLICABLE SPECIFICATION PARAGRAPH NUMBER, BRAND NAME AND NUMBER, FINISH AND HARDWARE PACKAGE NUMBER

2.3 SUBMIT KEYING SCHEDULE PREPARED BY OR UNDER THE SUPERVISION OF QUALIFIED ARCHITECTURAL HARDWARE CONSULTANT (AHC), DETAILING OWNER'S FINAL KEYING INSTRUCTIONS FOR LOCKS, INCLUDING SCHEMATIC KEYING DIAGRAM AND INDEX EACH KEY SET TO UNIQUE DOOR DESIGNATIONS

2.4 ONE REPRODUCIBLE AND ONE PRINT OF EACH SHEET, SUBMIT FAR ENOUGH IN ADVANCE OF SCHEDULE DATES FOR INSTALLATION TO PROVIDE ADEQUATE TIME FOR REVIEW AND APPROVAL

2.5 PROVIDE TEMPLATES AND PRODUCT DATA ON SPECIFIED HARDWARE TO DOOR AND FRAME MANUFACTURERS TO FACILITATE LOCATING CUT-OUTS AND REINFORCEMENTS.

2.6 PROVIDE SPECIAL WRENCHES, TOOLS AND ACCESSORIES SUPPLIED BY HARDWARE COMPONENT MANUFACTURER.

3 CLOSEOUT: PROVIDE OPERATION AND MAINTENANCE DATA FOR DOOR CLOSERS, LOCKSETS, DOOR HOLDERS ELECTRIFIED HARDWARE AND FIRE EXIT HARDWARE FOR INCORPORATION INTO MANUAL SPECIFIED IN SECTION 01 78 00 CLOSEOUT SUBMITTALS

4 QUALITY ASSURANCE

A. HARDWARE SUPPLIER SHALL HAVE SIMILAR COMMERCIAL DOOR HARDWARE EXPERIENCE FOR A MINIMUM OF FIVE (5) YEARS AND EMPLOY AN EXPERIENCED ARCHITECTURAL HARDWARE CONSULTANT WHO WILL BE AVAILABLE AT RESPONSIBLE TIMES DURING THE COURSE OF THE WORK FOR CONSULTATION TO THE OWNER, CONSULTANT, AND GENERAL CONTRACTOR.

B. CONFORM WITH LOCAL BUILDING CODE REQUIREMENTS AND NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARD 80, FIRE DOORS AND WINDOW REQUIREMENTS. PROVIDE TESTED UNDERWRITERS LABORATORIES (U.L.) HARDWARE FOR FIRE-RATED DOOR AND FRAME ASSEMBLIES. THE HARDWARE SUPPLIER SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF THIS SECTION WITH THOSE NOTED ABOVE SO AS TO OBTAIN DOOR AND HARDWARE COMBINATIONS WHICH ARE APPROVED BY GOVERNING REGULATORY AGENCIES. CONFLICTS, OMISSIONS, OR DEVIATIONS FROM THE INTENT DEFINED IN PARAGRAPH ABOVE, DISCOVERED IN THE SCHEDULE OF HARDWARE BY THE BIDDER DURING HIS REVIEW AND EXAMINATION, SHALL BE BROUGHT TO THE ATTENTION OF THE CONSULTANT FOR CLARIFICATION PRIOR TO BID OPENING.

C. ADHERE TO APPLICABLE PROVISIONS OF THE N.F.P.A. LIFE SAFETY CODE AND BARRIER FREE CODE. BRING DESCRIPANCIES TO CONSULTANT'S ATTENTION PRIOR TO SUBMITTING BID, FOR RESOLUTION OR CLARIFICATION.

5 INTENT OF DOOR HARDWARE SCHEDULE

5.1 THE INTENT OF THE HARDWARE SCHEDULE ON THE DRAWINGS IS TO PROVIDE DESIGN REQUIREMENTS FOR HARDWARE, WHICH WILL BE AESTHETICALLY APPROPRIATE AND SUITABLE TO THE FUNCTION OF EACH DOOR OR APPLICABLE ITEM.

5.2 NO WARRANTY CONCERNING THE ABSOLUTE COMPLETENESS OF THE SCHEDULE IS INTENDED. EACH BIDDER SHALL BE RESPONSIBLE FOR COMPLETE REVIEW AND INTERPRETATION OF SCHEDULES, DRAWINGS, AND BALANCE OF APPLICABLE CONTRACT DOCUMENTS. IF AMBIGUITIES OCCUR BETWEEN NARRATIVE DESCRIPTIONS AND MANUFACTURER'S MODEL, CODE, OR PART NUMBER, CONSULTANT RESERVES THE RIGHT OF INTERPRETATION OF INTENT.

5.3 INADEQUACIES, CONFLICTS, OMISSIONS, OR DEVIATIONS FROM THE INTENT DEFINED IN PARAGRAPH ABOVE, DISCOVERED BY THE BIDDER DURING HIS REVIEW AND EXAMINATION, SHALL BE BROUGHT TO THE CONSULTANT FOR CLARIFICATION PRIOR TO BID OPENING. LACK OF SUCH NOTIFICATION SHALL CONSTITUTE BIDDERS ACCEPTANCE OF FULL RESPONSIBILITY FOR PROVIDING ALL FINISH HARDWARE FOR THIS PROJECT, CONSISTENT IN QUALITY AND PERFORMANCE THROUGHOUT. SHOULD ANY DOOR BE OMITTED IN A HARDWARE SET, THE HARDWARE SUPPLIER SHALL PROVIDE HARDWARE SIMILAR TO THAT SCHEDULES FOR SIMILAR LOCATIONS.

6 PRODUCTS

6.1 USE ONE MANUFACTURER'S PRODUCTS ONLY FOR SIMILAR ITEMS

6.2 ACCEPTABLE MANUFACTURERS: REFER TO DOOR HARDWARE SCHEDULE ON THE DRAWINGS FOR ACCEPTABLE SUPPLIERS, FINISHES, AND PRODUCT SPECIFICATIONS FOR HARDWARE ITEMS

6.3 KEYING:

6.3.1 SUPPLIER SHALL MEET WITH THE OWNER REPRESENTATIVE TO FINALIZE KEYING REQUIREMENTS.

6.3.2 TC TO BE RESPONSIBLE FOR SWAPPING OUT INTERCHANGEABLE CORES W/ NEW MASTER STORE CORES & PROVIDE OWNER W/ (5) MASTER KEYS PRINTED WITH "DO NOT DUPLICATE", & INDIVIDUAL SERIAL NUMBERS. INTERCHANGEABLE CORES TO BE SHIPPED DIRECTLY TO THE OWNERS REPRESENTATIVE. INSTALLER TO REPLACE WITH INTERCHANGEABLE CORES IN THE PRESENCE OF THE OWNERS REPRESENTATIVE AND RETURN CONSTRUCTION CORES TO SUPPLIER.

6.4 AUTOMATIC SWING DOOR OPERATORS:

6.4.1 FINISH HARDWARE SUPPLIER SHALL PROVIDE AND INSTALL SURFACE MOUNTED ELECTRO-MECHANICAL SWING DOOR OPERATOR, CONSISTING OF ELECTRO-MECHANICAL SWINGING DOOR OPERATOR AND ELECTRONIC CONTROL, ALUMINUM HEADER, CONNECTING HARDWARE, AND POWER ON/OFF SWITCH AND ACTUATOR SWITCHES

6.4.2 AUTOMATIC ENTRANCE EQUIPMENT: COMPLY WITH ANSI A156.10 OR A156.19

6.5 FASTENINGS

6.5.1 USE ONLY FASTENERS PROVIDED BY MANUFACTURER. FAILURE TO COMPLY MAY VOID WARRANTIES AND APPLICABLE LICENSED LABELS.

6.5.2 SUPPLY SCREWS, BOLTS, EXPANSION SHIELDS AND OTHER FASTENING DEVICES REQUIRED FOR SATISFACTORY INSTALLATION AND OPERATION OF HARDWARE.

6.5.3 MATCH FINISH OF EXPOSED FASTENING DEVICES TO HARDWARE.

6.5.4 USE FASTENERS COMPATIBLE WITH MATERIAL THROUGH WHICH THEY PASS

7 EXECUTION

7.1 VERIFY THAT DOOR AND FRAME COMPONENTS ARE READY TO RECEIVE WORK AND CUT-OUTS, MORTISES AND REINFORCEMENTS ARE CORRECT.

7.2 BEGINNING OF INSTALLATION MEANS ACCEPTANCE OF SITE CONDITIONS.

8 INSTALLATION:

8.1 STRICTLY COMPLY WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. MOUNT HARDWARE AT LOCATIONS TO COMPLY WITH DOOR AND HARDWARE INSTITUTE RECOMMENDED LOCATIONS FOR BUILDERS HARDWARE FOR STANDARD STEEL DOORS AND FRAMES AND NATIONAL WOOD WINDOW AND DOOR ASSOCIATION A.N.S.I./ N.W.W.D.A. INDUSTRY STANDARD 1.7.

8.2 INSTALL HARDWARE TO MANUFACTURER'S INSTRUCTIONS AND REQUIREMENTS OF A.N.S.I./ D.H.I.. DO NOT INSTALL SURFACE MOUNTED ITEMS UNTIL SUBSTRATE FINISH HAS BEEN COMPLETED.

8.3 SET HARDWARE PLUMB, LEVEL AND IN EXACT ALIGNMENT AND LOCATION. CONCEAL AND COUNTERSINK FASTENERS TO THE GREATEST EXTENT POSSIBLE. USE ONLY THREADED-TO-THE-HEAD SCREWS FOR ALL HARDWARE ATTACHED TO WOOD DOORS AND FRAMES. USE #12 SCREWS FOR HINGES, CLOSERS, AND OTHER HIGHLY STRESSED HARDWARE, UNLESS OTHERWISE RECOMMENDED BY HARDWARE MANUFACTURER. DO NOT USE EXPOSED THROUGH-BOLTS TO MOUNT ANY HARDWARE. ADJUST ALL HARDWARE TO WORK EASILY, SMOOTHLY, AND CORRECTLY.

8.4 USE THE TEMPLATES PROVIDED BY HARDWARE ITEM MANUFACTURER.

8.5 MAINTAIN HEIGHTS FROM FINISHED FLOOR TO CENTER LINE OF HARDWARE ITEM PER A.N.S.I./ D.H.I. AND A.D.A. STANDARDS.

9 ADJUST AND CHECK EACH OPERATING ITEM OF HARDWARE TO ENSURE PROPER OPERATION OR FUNCTION. REPLACE ITEMS WHICH CAN NOT BE ADJUSTED TO OPERATE FREELY AND SMOOTHLY AS INDICATED FROM THE APPLICATION MADE.

10 DEMONSTRATE OPERATION, OPERATING COMPONENTS, ADJUSTMENT FEATURES, AND LUBRICATION REQUIREMENTS.

SECTION 08 80 50 – GLAZING

1 THIS SECTION INCLUDES GLAZING FOR SECTIONS REFERENCING THIS SECTION FOR PRODUCTS AND INSTALLATION.

2 SUBMITTALS

2.2 SUBMIT SHOP DRAWINGS FOR WINDOW GLAZING.

2.3 SUBMIT 12" X 12" SIZED SAMPLE OF EACH GLAZING TYPE. CONSULTANT RESERVES THE RIGHT TO CHANGE COLOR OF GLASS AFTER REVIEW OF SUBMITTED SAMPLES

2.4 SUBMIT MANUFACTURER'S INSTALLATION INSTRUCTIONS.

2.6 CERTIFICATES: PRODUCT CERTIFICATES SIGNED BY MANUFACTURER CERTIFYING MATERIALS COMPLY WITH SPECIFIED PERFORMANCE CHARACTERISTICS AND CRITERIA AND PHYSICAL REQUIREMENTS.

3 WINDOW FABRICATOR SHALL BE A MEMBER IN GOOD STANDING OF THE NATIONAL GLASS ASSOCIATION AND ADHERE TO THE RULES AND REGULATIONS FOR WORKMANSHIP, TRAINING AND PERSONNEL AS SET FORTH BY THE ASSOCIATION

4 TEMPERED GLASS SHALL BE HEAT SOAKED IN ACCORDANCE WITH EN 14179-1 AND EN 14179-2 FOR THE FOLLOWING APPLICATIONS: RAILINGS, BALUSTRADES, EXPOSED OVERHEAD LOCATIONS, EXTERIOR EXPOSURES ONE OR MORE STOREYS ABOVE PEDESTRIAN AREAS, HEAVY TEMPERED GLASS, FABRICATED GLASS WITH CUT OUTS, NOTCHES, HOLES OR COUNTERSINKS. PROVIDE MANUFACTURER'S FACTORY LABEL ON EACH UNIT CONFIRMING TEMPERED GLASS HAS BEEN HEAT SOAKED.

5 QUALITY ASSURANCE: PERFORM WORK IN ACCORDANCE WITH

5.1 GLAZING ASSOCIATION OF NORTH AMERICA (GANA) GLAZING MANUAL.

5.2 GLAZING ASSOCIATION OF NORTH AMERICA (GANA) SEALANT MANUAL.

6 PERFORMANCE / DESIGN CRITERIA

6.1 SIZE GLASS TO WITHSTAND WIND LOADS, DEAD LOADS AND POSITIVE AND NEGATIVE LIVE LOADS AS MEASURED IN ACCORDANCE WITH ANSI/ASTM E330.

6.2 LIMIT CENTER-OF-GLASS DEFLECTION TO THE SMALLEST OF:

6.2.1 DISPLACEMENT ASSOCIATED WITH THE STRUCTURAL CAPACITY OF THE GLAZING UNIT.

6.2.2 L-100, WHERE L IS THE SHORTEST SIDE DIMENSION OF THE UNIT MEASURED IN MILIMETRES.

6.2.3 3/4"

7 MATERIALS

7.1 FLOAT GLASS: GLAZING QUALITY, CLEAR, 1/4" MINIMUM THICKNESS

7.2 SAFETY FLOAT GLASS (TYPE FG-A): TO ANSI Z97.1 AND CPSC 16 CFR 1201, CLEAR, 1/4" MINIMUM THICKNESS TEMPERED

7.3 HEAT ABSORBING GLASS: 1/4" MINIMUM THICKNESS, GRADE AND TINT COLOR AS INDICATED ON DRAWINGS,

7.4 MIRROR GLASS (TYPE FG-F): FLOAT PLATE GLASS, 1/4" THICK, SIZES AS INDICATED ON DRAWINGS.

7.5 FIRE RATED GLASS: COMPRISED OF MULTIPLE LAYERS OF TEMPERED GLASS CERAMIC, LAMINATED WITH TRANSPARENT INTUMESCENT MATERIALS, PROVIDING DISTORTION FREE VIEWING THROUGH PANE. THICKNESS: AS REQUIRED BY MANUFACTURER TO MEET STRUCTURAL REQUIREMENTS FOR PERFORMANCE RAND SPECIFIED.

7.6 LOW EMISSIVITY (LOW E) GLASS: AS REQUIRED BY ASTM E2190, THICKNESS AS INDICATED

8 GLAZING COMPOUND AND ACCESSORIES FOR FIRE RATED GLAZING MATERIALS

8.1 GLAZING TAPE: CLOSED CELL POLYVINYL CHLORIDE FOAM, COILED ON RELEASE PAPER OVER ADHESIVE ON TWO SIDES, MAXIMUM WATER ABSORPTION BY VOLUME OF 2%, DESIGNED FOR COMPRESSION OF 25% TO EFFECT AN AIR AND VAPOUR SEAL.

8.2 SILICONE SEALANT: ONE-PART NEUTRAL CURING SILICONE, MEDIUM MODULUS SEALANT, TYPE S; GRADE NS; CLASS 25 WITH ADDITIONAL MOVEMENT CAPABILITY OF 50% IN BOTH EXTENSION AND COMPRESSION (TOTAL 100%); USE (EXPOSURE) NT; USES (SUBSTRATES) G, A, AND O AS APPLICABLE.

8.3 SETTING BLOCKS: HARDWOOD, GLASS WIDTH BY 4" X 3/16" THICK.

8.4 SPACERS: NEOPRENE OR OTHER RESILIENT BLOCKS OF 40 TO 50 SHORE A DUROMETER HARDNESS, ADHESIVE-BACKED ON ONE FACE ONLY, TESTED FOR COMPATIBILITY WITH SPECIFIED GLAZING COMPOUND.

8.5 CLEANERS, PRIMERS, AND SEALERS: TYPE RECOMMENDED BY MANUFACTURER OF GLASS AND GASKETS.

9 GLAZING ACCESSORIES AND HARDWARE

9.1. BUTYL SEALANT (TYPE GC-A): ASTM C920, SINGLE COMPONENT; SHORE A HARDNESS OF 10 TO 20 BLACK COLOR; NON-SKINNING.

9.2 SETTING BLOCKS: NEOPRENE, 80 TO 90 SHORE A DUROMETER HARDNESS

9.3 SPACER SHIMS: NEOPRENE, 50 TO 60 SHORE A DUROMETER HARDNESS

9.4 GLAZING TAPE: PRE-FORMED BUTYL COMPOUND WITH INTEGRAL RESILIENT TUBE SPACING DEVICE.

9.5 MIRROR ATTACHMENT ACCESSORIES: CHROME FINISH CONTINUOUS J CHANNELS AT ALL EXPOSED EDGES OR AS DETAILED ON DRAWINGS. MIRROR ADHESIVE, CHEMICALLY COMPATIBLE WITH MIRROR COATING AND WALL SUBSTRATE.

9.6 U-CHANNEL: METAL CHANNEL FRAMES TO ACCOMMODATE GLASS THICKNESS AS INDICATED ON DRAWINGS, MATERIAL: 6063-T5 ALUMINUM ALLOY, FINISH: AS DIRECTED BY CONSULTANT.

9.7 SCREWS, BOLTS AND FASTENERS: ASTM F738M; TYPE 304 STAINLESS STEEL

9.8 CLEANERS, PRIMERS, AND SEALERS: TYPE RECOMMENDED BY MANUFACTURER OF GLASS AND GASKETS.

10 SEALED INSULATING GLASS

10.1 DOUBLE PANE INSULATING GLASS UNITS: MEET OR EXCEED REQUIREMENTS OF ASTM E2190 UNITS SHALL BE CERTIFIED BY THE INSULATED GLASS MANUFACTURERS ALLIANCE (IGMA). OVERALL UNIT THICKNESS SHALL BE [1"] [1.75"] USING 1/4" GLASS THICKNESS FOR INDIVIDUAL PANES. USE TWO STAGE SEAL METHOD OF MANUFACTURE, AS FOLLOWS:

10.2 PRIMARY SEAL: POLYISOBUTYLENE SEALING COMPOUND BETWEEN GLASS AND METAL SPACER/SEPARATOR, SUPER SPACER BAR OR TDSE INTERCEPT.

10.3 SECONDARY SEAL: POLYURETHANE, SILICONE OR POLYSULPHIDE BASE SEALANT, COMPLETELY FILLING GAP BETWEEN THE TWO LITES OF GLASS AT THE EDGE UP TO THE SPACER/SEPARATOR AND...

10.4 SPACER/SEPARATOR TO PROVIDE CONTINUOUS VAPOUR BARRIER BETWEEN INTERIOR OF SEALED UNIT AND SECONDARY SEAL.

10.5 CLEAR FLOAT GLASS: TO ASTM C1036, GLAZING QUALITY, FOR INNER LITE AND EXTERIOR LITE ABOVE 2133 MM AND AS INDICATED ON DRAWINGS.

10.6 CLEAR SAFETY GLASS: TO ASTM C1048 FOR OUTER LITE BELOW 84", AS INDICATED ON DRAWINGS:

10.7 PROVIDE LOW-E COATING ON NO.3 SURFACE OF INSULATING GLASS UNITS.

10.8 GAS: 95% ARGON FILLED

10.9 OTHER GLAZING ACCESSORIES: SETTING BLOCKS TO AAMA/WDMA 101/I.S. 2.

11 GLASS RAILING: LAMINATED GLASS: TRANSPARENT, GLAZING QUALITY HAVING MINIMAL INCLUSIONS EXCEEDING THE REQUIREMENTS OF ASTM C1172, EDGES: GROUND WITH NO CHIPS, CRACKS OR FLAWS. SHARP CONERS AND EDGES EASED AND POLISHED.

11.1 LAMINATING FILM: MATERIAL: [POLYVINYL BUTYRAL (PVB)] [SENTRYGUARD PLUS (SGP)], MINIMUM FILM THICKNESS: [45 MILS] [60 MILS], COLOR AS INDICATED ON DRAWINGS.

12 EXAMINATION: VERIFY THAT OPENING FOR GLAZING ARE CORRECTLY SIZED, WITHIN TOLERANCE AND CLEAN AND THAT ADJOINING MATERIALS ARE READY TO RECEIVE WORK OF THIS SECTION

13 INSTALL WORK IN ACCORDANCE WITH THE QUALITY MANAGEMENT PROVISIONS SPECIFIED IN THIS SECTION. COMPLY WITH MANUFACTURER'S WRITTEN DATA, INCLUDING PRODUCT TECHNICAL BULLETINS, PRODUCT CATALOGUE INSTALLATION INSTRUCTIONS, PRODUCT CARTON INSTALLATION INSTRUCTIONS, AND DATA SHEETS.

14 SIZE GLASS TO CODE REQUIREMENTS AND VERIFY GLASS FOR OPENINGS ARE CORRECTLY SIZED AND ARE WITHIN ALLOWABLE TOLERANCES. INSTALL GLASS WITH FULL CONTACT AND ADHESION AT PERIMETER. MAINTAIN EDGE CLEARANCE RECOMMENDED BY GLASS MANUFACTURER.

15 PREPARATION

15.1 ENSURE ALL GLAZING REBATES SMOOTH AND TRUE, FREE OF PROJECTIONS NAILS, SCREWS, FASTENINGS PROPERLY SET TO PREVENT CONTACT WITH GLASS.

15.2 SEAL POROUS GLAZING CHANNELS OR RECESSES WITH SUBSTRATE COMPATIBLE PRIMER OR SEALER.

15.3. PRIME SURFACES SCHEDULED TO RECEIVE SEALANT.

16 INSTALLATION:

16.1 INSTALL GLAZING FOR INTERIOR AND EXTERIOR UNITS IN ACCORDANCE WITH GANA GLAZING MANUAL.

16.2 REMOVE AND REPLACE GLAZING STOPS IN ORIGINAL LOCATIONS, USING ORIGINAL FASTENERS, SECURELY SET AND UNDAMAGED.

16.3 USE SETTING BLOCKS, SPACERS AND, FOR WET GLAZING, SHIMS, AS REQUIRED TO PROPERLY SUPPORT THE GLASS, CENTRED IN PLACE IN THE GLAZING SPACE INDEPENDENT OF THE GLAZING MATERIALS AND TO UNIFORMLY DISTRIBUTE ITS LOAD.

16.4 USE A MINIMUM OF 2 SETTING BLOCKS, LOCATED AT THE QUARTER POINTS. LOCATE SPACERS AT JAMB EDGES OF GLASS, UNIFORMLY SPACED AT 24" O.C. MAXIMUM, AND 12" MAXIMUM FROM TOP TO...

16.5 ASSESS COLORED GLASS UNITS FOR COLOR UNIFORMITY AND ARRANGE TO AVOID ABRUPT VARIATION IN APPEARANCE.

SECTION 08 80 50 – GLAZING CONTINUED...

16.6 HANDLE AND INSTALL HEAT ABSORBING GLASS IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS.

16.7 PREVENT NICKS, ABRASION AND OTHER DAMAGE LIKELY TO DEVELOP STRESS ON EDGES.

16.8 SET GLASS PROPERLY CENTRED WITH UNIFORM BITE AND FACE AND EDGE CLEARANCE, FREE FROM TWIST, WARP OR OTHER DISTORTION LIKELY TO DEVELOP STRESS.

16.9 TRIM TAPE PROTRUDING MORE THAN 1/16" ABOVE STOP.

16.10 LEAVE LABELS ON GLASS UNTIL IT HAS BEEN SET AND INSPECTED AND ACCEPTED. LEAVE GLASS WHOLE AND WITHOUT CRACKS, SCRATCHES OR OTHER DEFECTS AND WITH SETTINGS IN PERFECT CONDITION AT COMPLETION. REMOVE REJECTED, BROKEN OR DAMAGED GLASS DUE TO DEFECTIVE MATERIALS OR IMPROPER SETTING AND REPLACE WITH ACCEPTABLE MATERIALS. UNITS PRODUCING DISTORTED VISION SHALL BE REJECTED AND REPLACED AT NO COST TO THE OWNER.

16.11 REMOVE, DISPOSE OF, AND REPLACE BROKEN, CUT AND ABRADED GLASS.

16.12 INSTALL GLASS PRESENCE MARKERS IN TWO CROSS STRIPES EXTENDING FROM DIAGONAL CORNERS. MAINTAIN MARKERS UNTIL FINAL CLEAN-UP

17 CLEANING

17.1 REMOVE GLAZING MATERIALS FROM FINISH SURFACES.

17.2 REMOVE LABLES AFTER WORK IS COMPLETE

17.3 CLEAN GLASS AND MIRRORS

DIVISION 9 – FINISHES

SECTION 09 21 16 - GYPSUM WALLBOARD ASSEMBLIES

1 PERFORM WORK IN ACCORDANCE WITH GYPSUM ASSOCIATION GA 216 MANUAL.

2 MANUFACTURERS: USE PRODUCTS AND MATERIALS FROM SAME SOURCE FOR ENTIRE PROJECT.

3 CONFORM TO APPLICABLE UNDERWRITER'S LABORATORY TESTING AGENCY CONSTRUCTION DETAILS WHERE TIME-RATED GYPSUM WALLBOARD ASSEMBLIES ARE INDICATED ON THE DRAWINGS PERTAINING TO THE ASSEMBLY. WHERE SPECIFIC DESIGN NUMBER LISTINGS ARE SPECIFIED HEREIN AND/OR SHOWN ON THE DRAWINGS, CONSTRUCT ASSEMBLIES TO THE MINIMUM REQUIREMENTS OF THOSE DESIGNS.

4 GYPSUM BOARD TO CONFORM TO ASTM C1396/C1396M, THICKNESS AS DETAILED. ONLY NORTH AMERICAN MANUFACTURED GYPSUM BOARD PRODUCTS ARE ACCEPTABLE. PROVIDE GYPSUM BOARD PRODUCTS WITHIN 800 KM RANGE OF PROJECT AS APPLICABLE. UNLESS SPECIFIED OTHERWISE HEREIN, ALL GYPSUM BOARD AND GYPSUM SHEATHING PRODUCTS SHALL BE MANUFACTURED BY THE FOLLOWING MANUFACTURERS: CGC INC., CERTAINTEED GYPSUM INC., GEORGIA-PACIFIC GYPSUM LLC.

5 PROVIDE GYPSUM BOARD WITH PAPER FACES CONTAINING 100% POST-CONSUMER RECYCLED CONTENT PAPER AND GYPSUM CORES CONTAINING 10% RECYCLED GYPSUM CONTENT

6 PROVIDE FIRE-RATED GYPSUM BOARD UNLESS NOTED OTHERWISE ON DRAWINGS OR SPECIFIED OTHERWISE HEREIN. FIRE-RATED GYPSUM BOARD TO CONFORM TO ASTM C1396, TYPE "X", UNDERWRITER'S LABELED FOR FIRE ENDURANCE WHEN USED IN A TESTED ASSEMBLY, THICKNESS AS INDICATED ON DRAWINGS.

7 TILE BACKER BOARD: GLASS MAT WATER AND MOULD RESISTANT, TREATED CORE GYPSUM TILE BACKING BOARD CONFORMING TO ASTM C1178/C1178M, TYPE X, THICKNESS AS INDICATED ON DRAWINGS, 48" WIDE X MAXIMUM PRACTICAL LENGTH. PRODUCT: GEORGIA PACIFIC "DENSHIELD TILE BACKER" OR APPROVED ALTERNATIVE. INSTALL ON ALL WALLS TO RECEIVE TILE.

8 ACCESSORIES

8.1 JOINT COMPOUND, TAPE AND TOPPING TO CONFORM TO ASTM C475 AND ASTM C840 FOR JOINT COMPOUND, JOINT TAPE AND TAPING COMPOUND.

8.2 METAL ACCESSORIES TO CONFORM TO ASTM C 1047.

8.3 SHEET METAL BACKING TO ASTM A924, MINIMUM 18 GA., GALVANIZED TO ASTM A653, G90 COATING.

8.4 CASING BEADS, CORNER BEADS, CONTROL JOINTS AND EDGE TRIM: TO ASTM C1047

8.5 STRIPPABLE EDGE TRIM: EXTRUDED PVC WITH PRE-MASKED L-SHAPED TAPE ON TRIM WITH TEAR AWAY PROTECTIVE SERRATED STRIP.

8.6 SEALANTS: IN ACCORDANCE WITH SECTION 07 92 00 - SEALANTS

8.7 FIRESTOPPING: REFER TO SECTION 07 84 00

8.8 RESILIENT BASE: REFER TO SECTION 09 65 00- RESILIENT FLOORING

9 FRAMING

9.1 STUDS AND TRACKS: AS INDICATED IN SECTION 09 22 00.

9.2 METAL FURRING RUNNERS, HANGERS, TIE WIRES, INSERTS, ANCHORS.

9.3 DRYWALL FURRING CHANNELS: 24 GA CORE THICKNESS GALVANIZED STEEL CHANNELS FOR SCREW ATTACHMENT OF GYPSUM BOARD.

9.4 RESILIENT CLIPS: 26 GA BASE STEEL THICKNESS GALVANIZED STEEL FOR RESILIENT ATTACHMENT OF GYPSUM BOARD.

9.5 CEILING GRID SUSPENSION SYSTEM: DIRECT-HUNG SYSTEM COMPOSED OF INTERLOCKING MAIN BEAMS AND CROSS-FURRING MEMBERS, TO ASTM C645.

9.5.1 PROTECTIVE COATING: TO ASTM A653 G40 HOT DIPPED GALVANIZED

9.5.2 CONCRETE ANCHORS: FABRICATED FROM CORROSION-RESISTANT MATERIALS WITH HOLES OR LOOPS FOR ATTACHING WIRE HANGERS AND CAPABLE OF SUSTAINING, WITHOUT FAILURE, A LOAD EQUAL TO 5 TIMES DESIGN LOAD INDICATED IN ASTM C635, TABLE 1, DIRECT HUNG

9.5.3 HANGERS, BRACES AND TIES: STEEL WIRE, GALVANIZED MINIMUM 12 GA OR GREATER AS REQUIRED FOR SUPPORT OF CEILING COMPONENTS.

10 INSULATION: TYPE 1, THICKNESS TO FILL A MINIMUM OF 90% OF THE CAVITY THICKNESS

10.1 MINERAL FIBER INSULATION FOR FIRE AND SMOKE RATED ASSEMBLIES: UN-FACED PREFORMED GREENGUARDTM OR FORMALDEHYDE FREE BINDER FIBROUS INSULATION MEETING THE REQUIREMENTS OF ASTM E84; HAVING MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED OF 20/20 AND BEING NON-COMBUSTIBLE AND IN ACCORDANCE WITH ASTM C665.

10.2 MINERAL FIBER ACOUSTICAL INSULATION FOR NON-RATED ASSEMBLIES: UN-FACED, PREFORMED GREENGUARDTM OR FORMALDEHYDE FREE BINDER FIBROUS INSULATION MEETING THE REQUIREMENTS OF ASTM C665, ASTM C423, ASTM E90 AND ASTM E413.

11 INSTALLATION

11.1 DO APPLICATION AND FINISHING OF GYPSUM BOARD IN ACCORDANCE WITH ASTM C840

11.2 INSTALL ACCESS PANELS TO ELECTRICAL OR MECHANICAL FIXTURES SUPPLIED UNDER RESPECTIVE SECTIONS.

11.3 APPLY BOARD VERTICALLY OR HORIZONTALLY, WHICHEVER RESULTS IN FEWER END JOINTS. LOCATE END JOINTS OVER SUPPORTING MEMBERS. ARRANGE END JOINTS TO OCCUR ON DIFFERENT SIDES ON OPPOSITE SIDES OF A PARTITION. LOCATE VERTICAL LEAST 12" FROM THE JAMB LINES OF OPENINGS. FIXING: SINGLE SCREW, SCREWS AT MAXIMUM 12" O.C. JOINTS: TAPED, FILLED AND SANDED.JOINTS.

11.4 INSTALL CEMETITOUS TILE BACKERBOARD IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS. METAL STUDS BEHIND CEMENTITIOUS BACKERBOARD SHALL BE A MINIMUM OF 20 GAUGE. BACKERBOARD SHALL BE ATTACHED TO STUDS USING CORROSION RESISTANT WAFER-HEAD, SELF_TAPPING SCREWS AT 6" TO 8" ALONG STUDS.

11.5 APPLY JOINT COMPOUND IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

11.6 GYPSUM BOARD FINISH: FINISH GYPSUM BOARD WALLS AND CEILINGS TO FOLLOWING LEVELS IN ACCORDANCE WITH ASSOCIATION OF THE WALL AND CEILING INDUSTRIES (AWCI) INTERNATIONAL RECOMMENDED SPECIFICATION ON LEVELS OF GYPSUM BOARD FINISH

11.7 ERECT ACCESSORIES STRAIGHT, PLUMB OR LEVEL, RIGID AND AT PROPER PLANE. USE FULL LENGTH PIECES WHERE PRACTICAL. MAKE JOINTS TIGHT, ACCURATELY ALIGNED AND RIGIDLY SECURED. MITRE AND FIT CORNERS ACCURATELY, FREE FROM ROUGH EDGES. SECURE AT 6" ON CENTRE OR USING CONTACT ADHESIVE FOR FULL LENGTH.

11.7.1 LEVEL 0: NO TAPING, FINISHING OR ACCESSORIES REQUIRED FOR AREAS OF TEMPORARY CONSTRUCTION.

11.7.2 LEVEL 1: EMBED TAPE FOR JOINTS AND INTERIOR ANGLES IN JOINT COMPOUND. SURFACES TO BE FREE OF EXCESS JOINT COMPOUND; TOOL MARKS AND RIDGES ARE ACCEPTABLE AND FOR PLENUM AREAS ABOVE CEILINGS, IN ATTICS OR IN CONCEALED SPACES.

11.7.3 LEVEL 2: EMBED TAPE FOR JOINTS AND INTERIOR ANGLES IN JOINT COMPOUND AND APPLY ONE SEPARATE COAT OF JOINT COMPOUND OVER JOINTS, ANGLES, FASTENER HEADS AND ACCESSORIES; SURFACES FREE OF EXCESS JOINT COMPOUND; TOOL MARKS AND RIDGES ARE ACCEPTABLE AND WHEN GYPSUM IS USED AS A SUBSTRATE FOR TILE.

11.7.4 LEVEL 3: EMBED TAPE FOR JOINTS AND INTERIOR ANGLES IN JOINT COMPOUND AND APPLY TWO SEPARATE COATS OF JOINT COMPOUND OVER JOINTS, ANGLES, FASTENER HEADS AND ACCESSORIES; SURFACES SMOOTH AND FREE OF TOOL MARKS AND RIDGES AND WHERE AREAS ARE TO RECEIVE A HEAVY COATING OF TEXTURED MATERIAL.

11.7.5 LEVEL 4: EMBED TAPE FOR JOINTS AND INTERIOR ANGLES IN JOINT COMPOUND AND APPLY THREE SEPARATE COATS OF JOINT COMPOUND OVER JOINTS, ANGLES, FASTENER HEADS AND ACCESSORIES; SURFACES SMOOTH AND FREE OF TOOL MARKS AND RIDGES AND WHERE LIGHT TEXTURES OR WALL COVERINGS ARE TO BE APPLIED.

11.7.6 LEVEL 5: EMBED TAPE FOR JOINTS AND INTERIOR ANGLES IN JOINT COMPOUND AND APPLY THREE SEPARATE COATS OF JOINT COMPOUND OVER JOINTS, ANGLES, FASTENER HEADS AND ACCESSORIES; APPLY A THIN SKIM COAT OF JOINT COMPOUND TO ENTIRE SURFACE; SURFACES SMOOTH AND FREE OF TOOL MARKS AND RIDGES. USE THIS LEVEL OF FINISH TO MINIMIZE JOINT PHOTOGRAPHING, IN LONG CORRIDORS, AND WHERE SEVERE LIGHTING OCCURS.

12 SUSPENDED GYPSUM BOARD CEILING SUPPORTS:

12.1 HANGERS FOR SUSPENDED WALLBOARD SHALL SUPPORT GRILLAGE INDEPENDENT OF WALLS, COLUMNS, PIPES, DUCTS.

12.2 ERECT PLUMB AND SECURELY ANCHOR TO STRUCTURAL FRAME OR IMBED IN STRUCTURAL SLAB.

12.3 SPACE HANGERS AT 48" MAXIMUM CENTERS ALONG CARRYING CHANNELS AND NOT MORE THAN 6" FROM ENDS. SPACE CARRYING CHANNELS AT MAXIMUM 48" CENTERS AND NOT MORE THAN 6" FROM PERIMETER WALLS.

12.4 AT SPLICES, LAP MEMBERS AT LEAST 12" AND WIRE_TIE EACH END WITH TWO (2) STRANDS OF WIRE.

12.5 RUN CHANNELS TRANSVERSELY TO STRUCTURAL FRAMING MEMBERS. BRACE TO PROVIDE A RIGID FRAME WITH LATERAL REINFORCING.

12.6 ERECT GYPSUM SCREW CHANNELS TRANSVERSELY ACROSS RUNNER CHANNELS AT MAXIMUM 16" CENTERS.

12.7 PROVIDE RUNNER CHANNEL AT EACH SIDE OF STANDARD RECESSED LIGHT FIXTURES, DIFFUSERS OR OTHER OPENINGS AND PROVIDE ADDITIONAL HANGERS AT EACH CORNER.

SECTION 09 22 00 – NON-STRUCTURAL METAL FRAMING

1 DESIGN ASSEMBLIES TO RESIST SAFELY AND EFFECTIVELY ALL LOADS AND EFFECTS OF LOADS IN ACCORDANCE WITH GOVERNING BUILDING CODE FOR EQUIPMENT, FIXTURES, METAL CEILINGS, CABINETS, BACKING PLATES, ANCHORAGES AND SIMILAR ITEMS SUPPORTED ON OR ANCHORED TO STEEL STUD PARTITIONS, INCLUDING WORK SHOWN ON THE DRAWINGS, EQUIPMENT SUPPLIED BY THE LEASHOLDER/TENANT TO THE CONTRACTOR FOR INSTALLATION AND EQUIPMENT SUPPLIED AND INSTALLED BY THE LEASHOLDER/TENANT. OBTAIN INFORMATION REGARDING EQUIPMENT LOADS FROM THE LEASHOLDER/TENANT.

2 MATERIALS

2.1 STEEL STUD, FURRING, AND SUSPENSION MATERIALS: MINIMUM 25% POST-CONSUMER, 50% POST-INDUSTRIAL, 75% TOTAL RECYCLED CONTENT.

2.2 STEEL STUDS TO CONFORM TO ASTM C645, "C" SHAPED, GALVANIZED TO ASTM A924, Z180 COATING, GAUGE: 25, SIZE: AS SHOWN ON THE DRAWINGS.

2.3 HEAVY GAUGE STEEL STUDS TO CONFORM TO ASTM C955, "C" SHAPED, GALVANIZED TO ASTM A924, Z180 COATING, GAUGE: 18, SIZE: AS SHOWN ON THE DRAWINGS.

2.4 MAIN RUNNER CHANNELS: SUSPENDED CEILINGS TO CONFORM TO ASTM C645, COLD FORMED STEEL CHANNELS WITH RUST INHIBITIVE COATING, SIZE: 1.5" X 0.5", GAUGE: 18.

2.5 HANGER RODS AND TIE WIRES _ SUSPENDED CEILINGS: WIRE: 9 GA. GALVANIZED WIRE; RODS: 3/16" DIAMETER ZINC COATED OR CADMIUM PLATED STEEL RODS WITH RUST INHIBITIVE COATING; TIE WIRES: MINIMUM 18 GA., SOFT ANNEALED GALVANIZED WIRE, TWO STRANDS FOR ATTACHING FURRING TO MAIN RUNNERS.

2.6 CURVING TRACKS: COMMERCIAL STEEL SHEET WITH ASTM A653, Z180, HOT DIP GALVANIZED ZINC COATING, COMPLETE WITH FLEXIBLE SLIDING STRAPS TO ALLOW FOR CURVATURE INDICATED ON...

2.7 FASTENINGS TO CONFORM TO ASTM C1002, SELF-DRILLING, SELF-THREADING CASE HARDENED SCREWS WITH BUGLE HEAD (PHILLIPS) TYPE HEAD.

2.8 SHEET METAL BACKING TO ASTM A924, MINIMUM 18 GA., GALVANIZED TO ASTM A653, G90 COATING.

2.9 ACOUSTICAL SEALANT: TO SECTION 07 92 00.

2.10 INSULATING STRIP: RUBBERIZED, MOISTURE RESISTANT 1/8" THICK CORK OR FOAM STRIP, 1/2" WIDE, WITH SELF STICKING ADHESIVE ON ONE FACE, LENGTHS AS REQUIRED.

3 INSTALLATION

3.1 INSTALL STEEL STUDS IN ACCORDANCE WITH ASTM C754.

3.2 INSTALL FLOOR AND CEILING TRACKS ACCORDING TO PARTITION LAYOUT USING SHIELD SCREWS, POWER DRIVEN FASTENERS, OR OTHER SUITABLE FASTENERS AT 24" O.C. MAXIMUM.

3.3 EXTEND STUDS TO UNDERSIDE OF STRUCTURE OVER UNLESS OTHERWISE SCHEDULED. BUILD IN STRUCTURAL DEFLECTION SYSTEM AT TOP.

3.4 FURR IN ALL EXPOSED MECHANICAL PIPING, ELECTRICAL PANEL BOARDS AND COLUMNS AS INDICATED. FURR TO MAINTAIN FIRE OR SOUND RATING INTEGRITY.

3.5 DRYWALL BULKHEADS UNRESTRAINED AT BOTTOM SHALL BE BRACED BACK TO CONSTRUCTION OVER AT 48" O.C.

3.6 INSTALL ALL ATTACHMENTS SUPPLIED BY OTHERS FOR INSTALLATION WITHIN GYPSUM DRYWALL ON STEEL STUD PARTITIONS AND IN CEILINGS FOR FIXTURES BEING HUNG FROM OR ANCHORED TO SUCH PARTITIONS OR CEILINGS.

3.7 INSTALL ACCESS PANELS TO ELECTRICAL OR MECHANICAL FIXTURES SUPPLIED UNDER RESPECTIVE SECTIONS.

4 BLOCKING AND BACKING:

4.1 PROVIDE 18 GA. SHEET METAL BLOCKING AND BACKING IN PARTITIONS FOR ANCHORING AND MOUNTING EQUIPMENT, HARDWARE, WASHROOM ACCESSORIES, CABINETS, FITTINGS AND FIXTURES NOT SUPPLIED WITH BACKING ATTACHMENTS.

4.2 FASTEN EQUIPMENT, FIXTURES AND ANCHORS TO BACKING IN THE PARTITIONS. PROVIDE BACKING FOR LEASHOLDER/TENANT SUPPLIED EQUIPMENT AND ACCESSORIES.

4.3 THE USE OF SOLID WOOD OR PLYWOOD IS SUBJECT TO SPECIFIC ITEMS AND REVIEW BY THE LEASHOLDER/TENANT AND LANDLORD. WOOD SHALL BE FIRE RETARDANT TREATED.

4.4 IN LOCATIONS WHERE SEVERAL PIECES OF EQUIPMENT ARE MOUNTED CLOSE TOGETHER, INSTALL FULL WIDTH OF SHEET METAL BACKING OVER WALL AREA RECEIVING EQUIPMENT.

4.5 REINFORCE AND FRAME ALL OPENINGS IN STEEL STUD PARTITIONS TO ADEQUATELY CARRY LOADS, BY THE USE OF ADDITIONAL FRAMING MEMBERS.

SECTION 09 31 00 – TILING

1 SUBMIT PRODUCT DATA IN ACCORDANCE WITH SECTION 01 33 00 – SUBMITTALS PROCEDURES

2 SUBMIT SAMPLES IN ACCORDANCE WITH SECTION 01 33 00 – SUBMITTALS PROCEDURES :

2.1 PROVIDE THREE (3) SAMPLES OF EACH COLOR, TYPE AND SIZE OF TILE TO THE CONSULTANT FOR REVIEW.

2.2 PROVIDE ONE (1) SAMPLE OF EACH TYPE OF DIVIDER AND TRANSITION STRIP.

2.3 PROVIDE SAMPLES OF GROUT: FURNISH COLOR CHIPS IN THE MANUFACTURER'S FULL RANGE OF COLORS FOR SELECTION OF GROUT COLOR.

3 PROVIDE SHOP DRAWINGS. INDICATE LAYOUT, PATTERN, AND RELATIONSHIP OF PAVING UNITS. INCLUDE LOCATIONS AND DETAILS FOR ALL PROPOSED CONTROL JOINTS. INDICATE JOINTS SURROUNDING PROTRUDING FIXTURES AND PROJECT-FORMED DETAILS.

4 PERFORM WORK IN ACCORDANCE WITH THE CURRENT NTCA MANUAL AND ANSI A108/A118/A136.1.

5 MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM FIVE (5) YEARS DOCUMENTED EXPERIENCE.

6 INSTALLER QUALIFICATIONS: COMPANY SPECIALIZING IN PERFORMING THE WORK OF THIS SECTION WITH MINIMUM FIVE (5) YEARS DOCUMENTED EXPERIENCE.

7 ARRANGE FOR PRODUCTION AND SHIPMENT OF THE TILE MATERIALS IN SUFFICIENT TIME TO AVOID DELAYS. SUBSTITUTIONS WILL NOT BE CONSIDERED DUE TO LAST MINUTE UNAVAILABILITY OF THE TILE. ANY EXTRA COSTS INCURRED TO ENSURE THE TIMELY DELIVERY OF THE TILE WILL BE AT THE CONTRACTORS EXPENSE.

8 DO NOT INSTALL ADHESIVES IN AN UNVENTILATED ENVIRONMENT. MAINTAIN TEMPERATURES AS SET OUT IN MANUFACTURER'S PRINTED PRODUCT INSTALLATION GUIDE DURING INSTALLATION OF MORTAR AND GROUTING MATERIALS. A VOID CONCENTRATED OR IRREGULAR HEAT DURING DRYING; PROVIDE ADEQUATE VENTILATION. MAINTAIN A MINIMUM 40 FC LIGHTING LEVEL ON WORKING SURFACE DURING WORK

9 FLOOR LEVEL TOLERANCES: PROVIDE MATERIALS TO ATTAIN FLOOR LEVELNESS TOLERANCES REQUIRED BY THIS SECTION AND AS REQUIRED BY NTCA.

10 PROVIDE A MINIMUM STATIC COEFFICIENT OF FRICTION OF 0.6 IS REQUIRED FOR LEVEL FLOORING AND 0.8 FOR RAMPS AS DETERMINED BY THE TEST METHODS DESCRIBED IN ASTM C1028.

11 MATERIALS

11.1 PORCELAIN TILE TO CONFORM TO ANSI A137.3/A108.19. PORCELAIN TILE: AN IMPERVIOUS TILE WITH WATER ABSORPTION OF 0.5% OR LESS AS MEASURED BY THE ASTM C373 TEST METHOD. PORCELAIN TYPE WITH THROUGH-BODY COLOR.

12 GROUTS AND MORTARS

12.1 PROVIDE TILE GROUT, SETTING MATERIALS, ADDITIVES, AND FACTORY-PREPARED DRY-SET MORTARS FROM THE SAME MANUFACTURER.

12.2 SETTING MATERIALS, SEALANTS AND PRIMERS MUST COMPLY WITH VOC LIMITS PRESCRIBED BY ALL APPLICABLE CODES AND ORDINANCES.

12.3 MANUFACTURER, COLOR, TEXTURE AND SIZE OF TILES: REFER TO INTERIORS FINISHES LIST

12.4 SETTING MATERIALS BY FLEXTILE LTD. SERVE AS THE BASIS OF DESIGN FOR THIS PROJECT. ALTERNATE PRODUCTS BY LATICRETE OR MAPEI WILL BE CONSIDERED. ALL SETTING MATERIALS MUST BE COMPATIBLE WITH CRACK-SUPPRESSION MEMBRANE. FOR GLASS MOSAIC WALL TILE AND LIGHT COLORED NATURAL AND COMPOSITE STONE AND MARBLE - CEMENT COLOR: WHITE.

12.5 BONDING MORTARS: COMMERCIALLY PREPARED, FACTORY-PACKAGED MIXTURES CONFORMING TO THE REFERENCED STANDARDS. PROVIDE PRODUCTS FORMULATED SPECIFICALLY FOR THE SETTING OF...

12.6 LARGE FORMAT PORCELAIN WALL AND FLOOR TILE: PREMIUM POLYMER-MODIFIED SAG-RESISTANT MORTAR MEETING OR EXCEEDING THE REQUIREMENTS OF ANSI A118.4 AND A118.11: FLEXTILE 56 SR.

12.7 ENGINEERED QUARTZ STONE TILE AND MOSAIC FLOOR TILE: FLEXTILE 51 MORTAR MIXED WITH 44 HIGH SKIDS LATEX ADDITIVE, OR APPROVED ALTERNATIVE BY LATICRETE OR MAPEI. COMPLY WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

12.8 ENGINEERED QUARTZ STONE TILE: FLEXTILE 500 US POLYMER MODIFIED GROUT FOR GROUTING WITH JOINTS 1/16" TO 1/8". JOINTS TO BE THOROUGHLY COMPACTED AND TOOLED. NO BUTT JOINTS. FLEXTILE 1600 RSG FAST-SETTING POLYMER MODIFIED SANDED GROUT FOR GROUTING WITH JOINTS 1/8" TO 5/8". JOINTS TO BE THOROUGHLY COMPACTED AND TOOLED.

12.9 GROUT FOR WALL TILES: A PREMIUM PORTLAND CEMENT-BASED GROUT CONTAINING GRADED AGGREGATES, COLORFAST PIGMENTS, AND POLYMER ADDITIVES TO ANSI A118.7. ACCEPTABLE PRODUCTS: MAPEI ULTRACOLOR PLUS GROUT OR LATICRETE 1500 SANDED GROUT.

12.10 GROUT FOR FLOOR TILES: A PREMIUM GRADE, WATER CLEANABLE, 100% SOLIDS, HIGH-STRENGTH EPOXY CHEMICAL RESISTANT NON-SAGGING GROUT TO ANSI A118.3. ACCEPTABLE PRODUCT: KERAPOXY BY MAPEI OR APPROVED ALTERNATE BY LATICRETE. NO BUTT JOINTS. JOINTS AT CONCRETE ENGINEERED QUARTZ STONE TILE TO BE THOROUGHLY COMPACTED AND TOOLED.

12.11 COLOR TO MATCH GROUT COLOR ON FINISHES LIST. IF COLOR IN NOT IN MANUFACTURER'S STANDARD RANGE, PROVIDE CUSTOM COLOR TO MATCH SCHEDULED GROUT COLOR.

12.12 MIX AND PROPORTION PRE-MIX SETTING BED AND GROUT MATERIALS IN ACCORDANCE WITH NTCA MANUAL.

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Notes

JIMMY JOHN'S & TROPICAL SMOOTHIE
LEVEL 2, UNIT NC1

Revision	By	Appd	YYYY.MM.DD
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Permit/Seal

DOUGLAS G. COX
7016

12.27.24

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE

JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 TERMINAL DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

SPECIFICATIONS

Project No.
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Scale

Revision

Drawing No.
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SECTION 09 31 00 – TILING CONTINUED…

13 ACCESSORIES:

13.1 CRACK ISOLATION MEMBRANE: 40 MILS THICK REINFORCED FABRIC REINFORCEMENT LAYER LAMINATED TO A RUBBER SHEET MEMBRANE WITH HIGH TACK PEEL AND STICK BACKING THAT COMPLIES WITH ANSI A118.12. ACCEPTABLE PRODUCT: 1000 FLEXITASTIC CRACK ISOLATION AND SOUND REDUCTION MEMBRANE BY FLEXTILE LTD.

13.2 TRANSITION STRIP AT TILE TO TILE: STAINLESS STEEL PERFORATED GALVANIZED STEEL BOTTOM SECTION/ANCHORS FOR SETTING IN MORTAR BEDS. DEPTH AND PROFILE TO SUIT TILE INSTALLATION AND PROVIDE A CLEAN EDGE. PROVIDE PRODUCT DATA ON PROPOSED TRANSITION STRIPS FOR CONSULTANT REVIEW AND SELECTION. PROVIDE SAMPLES UPON REQUEST BY CONSULTANT. ACCEPTABLE MANUFACTURER: SCHLUTER SYSTEMS.

13.3 FLOOR TRANSITION AT TILE TO RESILIENT FLOORING: AS SCHEDULED ON DRAWINGS.

13.4 WATER: FRESH, CLEAN, POTABLE, FREE FROM DELETERIOUS MATTER, ACIDS OR ALKALIS.

13.5 GROUT AND TILE SEALER: TO ASTM C1315, TYPE AS RECOMMENDED BY TILE AND GROUT MANUFACTURER TO SUIT SURFACE TO BE SEALED AND ENVIRONMENT OF INSTALLATION, LOW VOC. PATCHING AND LEVELING COMPOUND - REFER TO SECTION 03 35 00.

13.6 SEALANT FOR USE IN TILE MOVEMENT JOINTS: SILICONE SEALANT TO ASTM C920. COLOR MATCH TO GROUT. ACCEPTABLE PRODUCT: FLEXTILE ULTRA PERFORMANCE CAULK BY FLEXTILE LTD. REFER TO SECTION 07 92 00 – SEALANTS.

13.7 PATCHING AND LEVELLING COMPOUND: CEMENT BASE, ACRYLIC POLYMER COMPOUND, MANUFACTURED SPECIFICALLY FOR RESURFACING AND LEVELING CONCRETE FLOORS. PRODUCTS CONTAINING GYPSUM ARE NOT ACCEPTABLE

14 PREPARATION

14.1 CONFIRM THAT CONDITIONS OF TEMPERATURE, HUMIDITY, TRAFFIC AND USAGE ARE SUITABLE AS REQUIRED BY INSTALLATION MANUAL SPECIFICATIONS. MINIMUM TEMPERATURE NOT LESS THAN 50 DEGREES FARENHEIT

14.2 CONFIRM THAT SURFACES READY TO RECEIVE TILING ARE CURED, LEVEL AND/OR GRADED, PLUMB, SMOOTH, FIRM, FREE FROM LOOSE PARTICLES, DROPPINGS, PROJECTION, GREASE, SOLVENT, PAINT AND OTHER FOREIGN MATTER AND FROM OTHER UNSUITABLE CONDITIONS.

14.3 ENSURE SERVICE FITTINGS, ROUGH-INS, DRAINS, ARE COMPLETED AND TO THE PROPER LEVEL TO RECEIVE FINISH. REPAIR AND MAKE GOOD ANY DEFECTIVE SURFACES, INCLUDING GRINDING AND FILLING; USING FILLING MATERIALS ACCORDING TO SPECIFICATIONS AND RECOMMENDATIONS OF THE MANUFACTURER AND NTCA HANDBOOK.

14.4 REPAIR AND MAKE GOOD ANY DEFECTIVE SURFACES, INCLUDING GRINDING AND FILLING; USING FILLING MATERIALS ACCORDING TO SPECIFICATIONS AND RECOMMENDATIONS OF THE MANUFACTURER AND NTCA MANUAL.

14.5 EXAMINE SUBSTRATES BEFORE COMMENCING WORK. REPORT ANY UNSATISFACTORY CONDITIONS. STARTING WORK SHALL IMPLY ACCEPTANCE OF SUBSTRATE SURFACES.

14.6 PREPARE AND PRIME SURFACES AS REQUIRED AND AS RECOMMENDED BY THE MANUFACTURERS OF ADHESIVES AND MORTARS; AS REQUIRED BY JOB CONDITIONS TO ENSURE GOOD, PERMANENT BONDS.

15 INSTALLATION

15.1 INSTALL MATERIALS TO REQUIREMENTS OF TO NTCA MANUAL AND REVIEWED SHOP DRAWINGS. SETTING MATERIALS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

15.2 INSTALL MOVEMENT JOINTS IN LOCATIONS AND IN ACCORDANCE WITH DETAILS AS RECOMMENDED BY NTCA.

15.3 FIT TILE AROUND CORNERS, FITMENTS, FIXTURES, AND OTHER BUILT-IN OBJECTS TO MAINTAIN UNIFORM JOINT APPEARANCE. CUT EDGES SMOOTH, EVEN AND FREE FROM CHIPPING. EDGES RESULTING FROM SPLITTING NOT ACCEPTABLE.

15.4 PROVIDE UNIFORM, PLUMB, AND STRAIGHT JOINTS BETWEEN TILE, EVENLY SPACED WITH ADJACENT…

15.5 INSTALL TILE ON SUBSTRATES AS NOTED ON DRAWINGS AND SPECIFIED HEREIN UTILIZING SPECIFIED SETTING MATERIALS IN STRICT ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

15.6 LOCATE AND INSTALL CONTROL JOINTS UTILIZING COLOR MATCH SEALANT AT ALL CORNERS AND WHERE RECOMMENDED BY SUBSTRATE AND TILE MANUFACTURERS AND APPROVED BY THE CONSULTANT.

15.7 GROUT TILE USING SPECIFIED GROUT IN STRICT ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS ALL TO GIVE A FLUSH, HARD JOINT. CURE TILING AND GROUT IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

15.8 USE EXTREME CAUTION IF USING SANDED GROUTS WITH CONCRETE ENGINEERED QUARTZ STONE TILE TO PREVENT SCRATCHING, DULLING OR OTHERWISE DAMAGING THE APPEARANCE OF THE TILE'S SURFACE.

15.9 PROVIDE WATERTIGHT JOINTS BETWEEN TILES WITHOUT VOIDS, CRACKS, EXCESS GROUT. DO NOT GROUT INTERNAL VERTICAL OR HORIZONTAL CORNERS OR WHERE TILE ABUTS DISSIMILAR MATERIAL, PLUMBING FIXTURES, BUILT_IN ITEMS OR SERVICE ROUGH_INS. LEAVE JOINTS OPEN FOR SEALANT AS SPECIFIED.

15.10 APPLY SEALANT TO THE FULL HEIGHT OF VERTICAL INTERIOR CORNERS, FULL LENGTH OF HORIZONTAL INTERIOR CORNERS, AT CONTROL JOINTS AND AT JUNCTION WITH ADJOINING SURFACES/MATERIALS

15.11 APPLY SEALER IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

16 CLEAN TILE IN ACCORDANCE WITH PROCEDURES AND USING MATERIALS LISTED IN THE NTCA REFERENCE MANUAL.

17 PROTECT TILING DURING THE WORKS AND UNTIL COMPLETION OF THE WORK WITH RECOMMENDED METHODS AND MATERIALS.

SECTION 09 51 13 - ACOUSTIC PANEL CEILINGS

1 SUBMITTALS

1.1 SUBMIT SAMPLES OF CEILING PANELS AND SUSPENSION SYSTEMS TO THE CONSULTANT.

1.2 SUBMIT SHOP DRAWINGS: INDICATE GRID LAYOUT AND RELATED DIMENSIONING, JUNCTIONS WITH OTHER WORK OR CEILING FINISHES, INTERRELATION OF MECHANICAL AND ELECTRICAL ITEMS RELATED TO SYSTEM.

2 CONFORM TO CEILINGS AND INTERIOR SYSTEMS CONSTRUCTION ASSOCIATION (CISCA) REQUIREMENTS.

3 CONFORM TO APPLICABLE CODE FOR FIRE RATED ASSEMBLY AND COMBUSTIBILITY REQUIREMENTS FOR MATERIALS.

4 CEILINGS AND INTERIOR SYSTEMS CONSTRUCTION ASSOCIATION

5 DO NOT INSTALL ACOUSTIC CEILING ASSEMBLY UNTIL BUILDING IS ENCLOSED, DUST GENERATING ACTIVITIES HAVE TERMINATED, ALL OVERHEAD MECHANICAL WORK COMPLETED, TESTED AND APPROVED, AND ALL PAINTING FINISHED.

6 COORDINATE LAYOUT OF GRID FRAMING AND CEILING PANELS WITH MECHANICAL AND ELECTRICAL SERVICES AND FIXTURES.

7 ENSURE SEISMIC RESTRAINT WORK INCLUDING ANCHORING DEVICES ARE DESIGNED AND CERTIFIED BY A PROFESSIONAL ENGINEER REGISTERED IN STATE OF WORK, WHO SHALL CARRY OUT PERIODIC SITE REVIEWS OF THE WORK OF THIS SECTION DURING CONSTRUCTION AND AT COMPLETION, AND SUBMIT REPORTS AND LETTERS OF ASSURANCE IN THE FORMS ESTABLISHED BY INTERNATIONAL BUILDING CODE.

8 PANEL MATERIALS

8.1 ACOUSTIC PANELS: CONFORMING TO ASTM E1264, THE FINISHES LIST ON THE DRAWINGS LISTS SPECIFIC PRODUCTS, PATTERNS, SIZES AND COLORS UPON WHICH FINISHING SCHEMES FOR THE PROJECT HAVE BEEN BASED UPON.

9 SUSPENSION SYSTEM

9.1 MATERIAL - COMMERCIAL QUALITY COLD ROLLED STEEL, GALVANIZED; FINISH - LOW SHEEN BAKED ENAMEL; COLOR - FLAT WHITE UNLESS SCHEDULED OTHERWISE ON DRAWINGS.

9.2 COMPONENT STRENGTH: TO ASTM C635, INTERMEDIATE DUTY, CAPABLE OF SUPPORTING CEILING ASSEMBLY AS SHOWN ON THE DRAWINGS, OR SPECIFIED, WITH A MAXIMUM DEFLECTION OF 1/360TH OF THE SPAN, INCLUDING MECHANICAL AND ELECTRICAL COMPONENTS.

9.3 SUSPENSION SYSTEMS AS SCHEDULED ON THE DRAWINGS. MOLDINGS AND TRIM: AS MANUFACTURED BY SUSPENSION SYSTEM MANUFACTURER AND FINISHED TO MATCH SUSPENSION COMPONENTS. PROVIDE CIRCULAR TRIMS FOR CIRCULAR COLUMNS. FASTENERS: AS RECOMMENDED BY THE MANUFACTURER TO SUIT THE PURPOSE FOR WHICH THEY ARE INTENDED.

10 PREPARATION

10.1 ENSURE ALL DROP BULKHEADS ARE LOCATED AND COMPLETED PRIOR TO INSTALLATION. LAY OUT GRID SYSTEM IN ACCORDANCE WITH CEILING PLANS. OBTAIN ALL DATA AND DIMENSIONS FROM MECHANICAL AND ELECTRICAL TRADES GOVERNING THE EXACT LOCATION AND SUSPENSION OF CEILING FIXTURES AND FITTINGS.

11 INSTALLATION

11.1 INSTALL SUSPENSION SYSTEMS IN ACCORDANCE WITH ASTM C636, THE MANUFACTURER'S DIRECTIONS AND CONFORMING TO REFLECTED CEILING PLAN AS SHOWN ON THE DRAWINGS. IF CEILING SYSTEMS SUBJECT TO SEISMIC LOADING INSTALL SYSTEM IN ACCORDANCE WITH ASTM E580.

11.2 PROVIDE AND INSTALL FRAMING MEMBERS, HANGERS AND FASTENINGS OF ADEQUATE STRENGTH TO SAFELY CARRY ALL LOADS. DO NOT HANG ON MECHANICAL OR ELECTRICAL LINES, DUCTS OR SERVICES.

11.3 MAXIMUM DEFLECTION SHALL BE 1/360TH OF THE SPAN. INSTALL SUPPLEMENTAL HANGERS WHERE THE WEIGHT OF ITEMS SUPPORTED CAUSE DEFLECTION TO EXCEED 1/360.

11.4 INSTALL WALL AND EDGE MOLDINGS WHERE TILE ABUTS WALLS OR OTHER VERTICAL SURFACES. PROVIDE TRIM FRAMES TO SUIT MECHANICAL AND ELECTRICAL FIXTURES AS REQUIRED, COORDINATE WITH MECHANICAL AND ELECTRICAL.

11.5 LOCATE HANGERS FOR CEILING SUPPORTED EQUIPMENT IN ACCORDANCE WITH ASTM C636. EXCEPT WHERE FIXTURES ARE INDEPENDENTLY SUPPORTED, USE POSITIVE FASTENING DEVICES TO FIX FIXTURES TO SUSPENSION SYSTEM.

11.6 INSTALL CEILING PANELS IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AND APPROVED MOCKUPS. ENSURE ALL MECHANICAL, ELECTRICAL WORK AND FINISHED PAINTING HAVE BEEN COMPLETED BEFORE INSTALLING PANELS. NEATLY CUT AND FIT CEILING PANELS TO SUSPENSION SYSTEM. NEATLY MAKE ALL CUTOUTS IN PANELS AS REQUIRED FOR FIXTURES. FACTORY CUT LARGE OPENINGS. WHERE REVEAL EDGE PANELS ARE CUT, ROUT EDGES TO PROVIDE A CONSISTENT SHADOW LINE EDGE ON ALL SIDES.

12 REPLACE ANY DEFECTIVE OR MARKED PANELS, TILES, OR SUSPENSION SYSTEM UPON COMPLETION OF THE WORK, CLEAN CEILING PANELS, AND SUSPENSION SYSTEMS.

SECTION 09 68 00 – SHEET AND TILE CARPETING

1 SUBMITTALS

1.1 SUBMIT PRODUCT DATA, IN ACCORDANCE WITH SECTION 01 33 00 – SUBMITAL PROCEDURES. SUBMIT DATA FOR EACH CARPET, UNDER-CUSHION, ADHESIVE, CARPET PROTECTION AND SUBFLOOR PATCHING COMPOUND.

1.2 SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH SECTION 01 33 00 – SUBMITTAL PROCEDURES. INDICATE LOCATIONS AND LENGTHS OF SEAMS FOR CARPETED AREAS. INDICATE NAP DIRECTION, OPEN EDGES, SPECIAL PATTERNS, AND OTHER DETAILS REQUIRED BY CONSULTANT TO CLARIFY WORK.

1.3 SUBMIT DUPLICATE SAMPLES 24" X 24" PIECES OF EACH TYPE OF CARPET SPECIFIED, DUPLICATE 12" X 12" PIECES FOR EACH COLOR SELECTED, TERMINATION EDGE STRIP, AND BASE AND DIVIDER STRIP

1.4 SUBMIT CLOSEOUT DATA IN ACCORDANCE WITH SECTION 01 78 00 – CLOSEOUT SUBMITTALS. SUBMIT MAINTENANCE DATA: INCLUDE MAINTENANCE PROCEDURES, RECOMMENDATIONS FOR MAINTENANCE MATERIALS AND EQUIPMENT, AND SUGGESTED SCHEDULE FOR CLEANING.

1.5 PROVIDE EXTRA MATERIALS OF CARPET, CARPET BASE, AND ADHESIVES IN ACCORDANCE WITH SECTION 01 78 00 CLOSEOUT SUBMITTALS. PROVIDE 6 YD2 OF EACH COLOR, PATTERN AND TYPE OF CARPETING. PROVIDE IN ONE CONTINUOUS FULL WIDTH ROLL. EXTRA MATERIALS TO BE FROM SAME PRODUCTION RUN AS INSTALLED MATERIALS.

2 INDOOR AIR QUALITY: COMPLIANCE WITH CRI GREEN LABEL INDOOR AIR QUALITY PROGRAM, CRI IAQ REQUIREMENTS FOR MAXIMUM TOTAL VOLATILE CHEMICALS RELEASED INTO AIR. LABEL EACH CARPET PRODUCT WITH CRI IAQ LABEL.

3 MOISTURE: ENSURE SUBSTRATE IS WITHIN MOISTURE LIMITS AND ALKALINITY LIMITS PRESCRIBED BY MANUFACTURER. PREPARE MOISTURE TESTING AND PROVIDE REPORT TO CONSULTANT.

4 DO NOT INSTALL CARPET UNTIL SPACE IS ENCLOSED AND WEATHERPROOF, WET WORK IN SPACE IS COMPLETED AND NOMINALLY DRY, WORK ABOVE CEILINGS IS COMPLETE.

5 MATERIALS:

5.1 PROVIDE CARPET TILE WITH YARN TO AATCC 20, PERMANENT BUILT-IN ANTI-STATIC FILAMENT, CLASS 1 FLAMMABILITY TO ASTM E648, COLOR AND BASIS OF DESIGN AS INDICATED ON DRAWINGS.

5.2 PROVIDE CARPET SHEET OF 100% FIRST QUALITY BULK CONTINUOUS FILAMENT YARN, SYNTHETIC BACKING, CLASS 1 FLAMMABILITY TO ASTM E 648, COLOR AND BASIS OF DESIGN AS INDICATED ON DRAWINGS.

6 ACCESSORIES

6.1 RESILIENT BASE: AS INDICATED IN SECTION 09 65 00

6.2 UNDERCUSION: AS RECOMMENDED BY CARPET SHEET MANUFACTURER.

6.3 SEAMING CEMENT: HOT MELT ADHESIVE TAPE OR SIMILAR PRODUCT RECOMMENDED BY CARPET MANUFACTURER FOR TAPING SEAMS AND BUTTING CUT EDGES AT BACKING TO FORM SECURE SEAMS AND TO PREVENT PILE LOSS AT SEAMS.

6.4 SEAMING SEALER ADHESIVE: TYPE RECOMMENDED BY CARPET MANUFACTURER FOR PURPOSE INTENDED.

6.5 FLOOR CARPET TILE ADHESIVE, SELF RELEASE TYPE, RECOMMENDED BY THE CARPET TILE MANUFACTURER. CARPET TILE ADHESIVE SHALL BE A LOW ODOUR BASED TYPE FREE OF VOLATILE HYDROCARBONS SUCH AS TOLUENE AND MINERAL SPIRITS. A HAZARD COMMUNICATION STANDARD ACCEPTABLE TO OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA) SHALL BE PROVIDED TO OWNER FOR THE CARPET TILE ADHESIVE AND SEAM CEMENT PROPOSED FOR USE.

6.6 ADHESIVES: WATER RESISTANT, MILDEW RESISTANT, NON STAINING TYPE TO SUIT PRODUCTS AND SUBFLOOR CONDITIONS INDICATED THAT COMPLY WITH FLAMMABILITY REQUIREMENTS FOR INSTALLED CARPET AS RECOMMENDED BY THE CARPET MANUFACTURER.

6.7 CONCRETE FLOOR SEALER: TO ASTM C1315.

6.8 SUBFLOOR PATCHING COMPOUND: REFER TO SECTION 03 35 00 – CONCRETE FINISHING.

7 INSTALLATION

7.1 PREPARE FLOOR SURFACES IN ACCORDANCE WITH CRI CARPET INSTALLATION STANDARD FOR INSTALLATION OF COMMERCIAL CARPET.

7.2 INSTALL SHEET CARPETING USING MINIMUM OF PIECES. INSTALL IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AND IN ACCORDANCE WITH CARPET AND RUG INSTITUTE CARPET INSTALLATION STANDARD OF COMMERCIAL CARPET.

7.3 LAY TILE CARPET WITH BUTT SEAMS. APPLY ACRYLIC RELEASE TYPE ADHESIVE AND INSTALL TILE CARPET IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS

7.3 FINISH INSTALLATION TO PRESENT SMOOTH WEARING SURFACE FREE FROM CONSPICUOUS SEAMS, BURRING AND OTHER FAULTS.

7.4 INSTALL RESILIENT BASE IN ACCORDANCE WITH SECTION 09 65 00.

8 CLEANING AND PROTECTION

8.1 VACUUM CARPETS CLEAN IMMEDIATELY AFTER COMPLETION OF INSTALLATION. PROTECT TRAFFIC AREAS.

8.2 PROHIBIT TRAFFIC ON FLOOR FOR 48 HOURS AFTER INSTALLATION.

SECTION 09 72 16 – VINYL WALL COVERING

1 SUBMITTALS

1.1 SUBMIT PRODUCT DATA, IN ACCORDANCE WITH SECTION 01 33 00 – SUBMITAL PROCEDURES. SUBMIT PRODUCT DATA FOR EACH PRODUCT SPECIFIED, INDICATE PHYSICAL CHARACTERISTICS, DURABILITY, FADE RESISTANCE AND FLAME RESISTANCE CHARACTERISTICS, AND REQUIRED SURFACE PREPARATION MATERIALS.

1.2 SUBMIT 8" X 10" MINIMUM SAMPLES OF WALL FABRIC TO THE CONSULTANT FOR FINAL APPROVAL PRIOR TO ORDERING. LABEL SAMPLES WITH MANUFACTURER'S NAME, QUALITY, COLOR, TEXTURE AND WEIGHT.

1.3 PROVIDE EXTRA MATERIALS OF VINYL COATED FABRIC WALL COVERING, ADHESIVES AND CLEANERS IN ACCORDANCE WITH SECTION 01 78 00 CLOSEOUT SUBMITTALS

2 REGULATORY REQUIREMENTS: PROVIDE WALL COVERINGS AND ADHESIVES WITH FLAME SPREAD REQUIREMENTS MEETING REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND TESTED AND LABELLED IN ACCORDANCE WITH ASTM E84 OR ANOTHER TESTING AND LABELLING AGENCY ACCEPTABLE TO AUTHORITY HAVING JURISDICTION.

3 PROVIDE MOCK-UP IN ACCORDANCE WITH SECTION 01 45 00 – QUALITY CONTROL

4 MATERIALS:

4.1 VINYL WALL COVERING: MATERIALS MEETING REQUIREMENTS OF ASTM F793, 54" FINISHED WIDTH, UL LABELLED, WEIGHT AS DIRECTED, COLORS AND BASIS OF DESIGNS INDICATED ON DRAWINGS

4.2 SUBSTRATE PRIMER/SEALER: WHITE PIGMENTED LOW VOC ACRYLIC BASE PRIMER/SEALER SPECIFICALLY FORMULATED FOR USE WITH VINYL WALL COVERINGS

4.3 ADHESIVE: MILDEW RESISTANT, LOW VOC AS RECOMMENDED BY THE WALLCOVERING MANUFACTURER AND AS REQUIRED TO MINIMIZE FLAME SPREAD RATING OF VINYL WALL COVERING MATERIAL.

5 INSTALLATION

5.1 EXAMINE SURFACES TO RECEIVE WALL COVERING AND REPORT SURFACES WHICH ARE NOT CLEAN, TRUE, AND FREE OF IRREGULARITIES, OR WHICH HAVE DEFECTS WHICH WILL INTERFERE WITH PROPER APPLICATION OF WALL COVERING.

5.2 PREPARE SURFACES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN REQUIREMENTS; CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR WALL COVERING BOND, INCLUDING MOULD, MILDEW, OIL, GREASE, INCOMPATIBLE PRIMERS, DIRT, AND DUST

5.3 INSTALL WALL COVERINGS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS WITH NO GAPS OR OVERLAPS, NO LIFTED OR CURLED EDGES AND NO VISIBLE SHRINKAGE; REMOVE AIR BUBBLES, WRINKLES, BLISTERS AND OTHER DEFECTS.

5.4 LEAVE COMPLETED WORK SMOOTH, CLEAN, WITHOUT WRINKLES, GAPS, OVERLAPS OR AIR POCKETS.

6 CLEANING: CLEAN WALL COVERINGS OF ALL ADHESIVES, DUST, DIRT AND OTHER CONTAMINANTS.

SECTION 09 91 10 - PAINTING

1 PERFORM THE WORK IN ACCORDANCE WITH THE MPI ARCHITECTURAL PAINTING SPECIFICATION MANUAL.

2 SUBMIT PRODUCT DATA IN ACCORDANCE WITH SECTION 01 33 00 – SUBMITTAL PROCEDURES.

3 TEST REPORTS: SUBMIT CERTIFIED TEST REPORTS FOR PAINT FROM APPROVED INDEPENDENT TESTING LABORATORIES, INDICATING COMPLIANCE WITH SPECIFICATIONS FOR SPECIFIED PERFORMANCE CHARACTERISTICS AND PHYSICAL PROPERTIES.

4 CONTRACTOR: MINIMUM OF FIVE YEARS PROVEN SATISFACTORY EXPERIENCE. PROVIDE LIST OF LAST THREE COMPARABLE JOBS INCLUDING, JOB NAME AND LOCATION, SPECIFYING AUTHORITY, AND PROJECT MANAGER.

5 PROVIDE 10 FT X 10 FT MOCK UP. PREPARE AND PAINT DESIGNATED SURFACE, AREA, ROOM OR ITEM (IN EACH COLOR SCHEME) TO SPECIFIED REQUIREMENTS, WITH SPECIFIED PAINT OR COATING SHOWING SELECTED COLORS, GLOSS/SHEEN, TEXTURES.

6 SUBMIT TWO SAMPLES 12" X 12" IN SIZE ILLUSTRATING EACH COLOR AND LUSTRE, ON REPRESENTATIVE SUBSTRATE. STEP EACH COAT BACK SO THAT ALL COATS REMAIN EXPOSED. PROVIDE DETAILED PAINTING SCHEDULE INDICATING TYPE AND LOCATION OF SURFACE, PAINT MATERIALS, AND NUMBER OF COASTS TO BE APPLIED.

7 DELIVER PAINT MATERIALS TO JOB SITE IN SEALED ORIGINAL LABELED CONTAINERS BEARING THE MANUFACTURER'S NAME, TYPE OF PAINT, BRAND NAME, COLOR DESIGNATION AND INSTRUCTIONS FOR MIXING AND/OR REDUCING.

8 SCHEDULE PAINTING OPERATIONS TO PREVENT DISRUPTION OF AND BY OTHER TRADES. SCHEDULE PAINTING OPERATIONS TO PREVENT DISRUPTION OF OCCUPANTS IN AND ABOUT THE BUILDING. CARRY OUT PAINTING IN OCCUPIED FACILITIES DURING HOURS APPROVED BY THE OWNER OR LANDLORD AS APPLICABLE. SCHEDULE WORK SUCH THAT PAINTED SURFACES WILL HAVE DRIED BEFORE OCCUPANTS ARE AFFECTED.

9 ONLY MATERIALS (PRIMERS, PAINTS, COATINGS, VARNISHES, STAINS, LACQUERS, FILLERS, ETC.) LISTED IN THE LATEST EDITION OF THE MPI APPROVED PRODUCT LIST (APL) AND FOR INTERIOR SYSTEMS, LISTED AS INSTITUTIONAL LOW-ODOR, LOW-VOC OR HIGH PERFORMANCE ARCHITECTURAL LATEX SYSTEMS ARE ACCEPTABLE FOR USE ON THIS PROJECT. ALL SUCH MATERIAL SHALL BE FROM A SINGLE MANUFACTURER FOR EACH SYSTEM USED. PAINTS AND MATERIALS TO BE LEAD AND MERCURY FREE.

10 WHERE REQUIRED, PAINTS AND COATINGS SHALL MEET THE FLAME SPREAD REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.

11 NO RECYCLED CONTENT PAINTS AND PRIMERS WILL BE ALLOWED ON INTERIOR APPLICATIONS.

12 SUPPLY PAINT MATERIALS IN ACCORDANCE WITH COLOR SCHEDULES PROVIDED UNLESS OTHERWISE APPROVED BY THE CONSULTANT. COLOR MATCHING WILL BE PERMITTED.

13 GENERALLY PAINT AS FOLLOWS UNLESS OTHERWISE INDICATED ON DRAWINGS:

13.1 WALLS WILL BE PAINTED THE SAME COLOR IN A GIVEN AREA.

13.2 PAINT DOORS, FRAMES AND DOOR TRIM GENERALLY THE SAME COLOR, BUT A DIFFERENT COLOR THAN WALLS.

13.3 PAINT ACCESS DOORS, REGISTERS, RADIATORS AND COVERS, PRIME COATED BUTTS, PRIME_COATED DOOR CLOSERS AND EXPOSED SPRINKLER AND SERVICE PIPING, DUCTWORK AND ELECTRICAL CONDUIT AND SUSPENSIONS WITH COLOR, TEXTURE AND SHEEN TO MATCH ADJACENT SURFACES.

13.4 BACK PRIME AND PAINT PLYWOOD SERVICE PANELS TO MATCH PAINTED WALL.

13.5 PAINT THE INSIDE OF LIGHT VALENCES GLOSS WHITE.

13.6 PAINT THE INSIDE OF DUCTWORK BEHIND LOUVERS, GRILLES AND DIFFUSERS FOR A MINIMUM OF 18" OR BEYOND SIGHTLINE, WHICHEVER IS GREATER, USING FLAT BLACK NON REFLECTING PAINT.

14 REFER TO THE MPI MANUAL FOR SURFACE PREPARATIONS. DO NOT PAINT UNLESS SUBSTRATES AND ENVIRONMENTAL CONDITIONS ARE ACCEPTABLE.

15 PROVIDE METHOD OF PAINT APPLICATION GENERALLY ACCEPTED TRADE METHOD FOR THE BUILDING AND IN ACCORDANCE WITH MANUFACTURER'S PRINTED DIRECTIONS.

16 DO NOT APPLY MATERIALS WHEN SURFACE AND AMBIENT TEMPERATURES OR RELATIVE HUMIDITY ARE OUTSIDE RANGES REQUIRED BY MANUFACTURER. HUMIDITY MAXIMUM 50%; LIGHT LEVEL OF 80 FOOT CANDLES MEASURED AT MID-HEIGHT AT SUB-STRATA SURFACE.

17 REFER TO THE MASTER PAINTERS INSTITUTE (MPI) MAINTENANCE REPAINTING MANUAL FOR REFINISHING WORK, AND THE ARCHITECTURAL PAINTING SPECIFICATION MANUAL FOR NEW WORK.

18 PROVIDE THREE FINISH COATS FOR SURFACES THAT ARE SCHEDULED TO RECEIVE A DEEP HUE.

19 APPLY EACH COAT AT THE PROPER CONSISTENCY.

20 SAND LIGHTLY BETWEEN COATS TO ACHIEVE REQUIRED FINISH AND TO REMOVE DEFECTS VISIBLE FROM A DISTANCE UP TO 38".

21 DO NOT APPLY FINISHES ON SURFACES THAT ARE NOT SUFFICIENTLY DRY. EACH COAT OF FINISH SHOULD BE DRY AND HARD BEFORE A FOLLOWING COAT IS APPLIED UNLESS THE MANUFACTURER'S DIRECTIONS STATE OTHERWISE.

22 TINT FILLER TO MATCH WOOD WHEN CLEAR FINISHES ARE SPECIFIED; WORK FILLER WELL INTO THE GRAIN AND BEFORE IT HAS SET, WIPE THE EXCESS FROM THE SURFACE. APPLY FILLER BEFORE APPLICATION OF FINISHES.

23 PRIME TOP AND BOTTOM EDGES OF WOOD AND METAL DOORS WITH UNDERCOATER, STAIN OR VARNISH, DEPENDING ON THE FINISH SPECIFIED. RE-PRIME WOOD DOOR EDGES IMMEDIATELY (SAME DAY) AFTER THEY ARE CUT, TRIMMED OR PLANED.

24 INCLUDE COLUMNS, STEEL FRAMING, JOISTS, BEAMS, PURLINS, BRACING, BULKHEADS, IN ROOMS SCHEDULED TO BE PAINTED AND/OR PRIMED.

25 PAINT ELECTRICAL PIPES, CONDUIT, HANGERS, DUCTS AND EQUIPMENT TO MATCH ADJACENT SURFACE COLOR UNLESS OTHERWISE SPECIFIED. CONFIRM EXTENT OF FINISHING AND COLOR SCHEMES FOR EXPOSED CEILINGS WITH THE CONSULTANT PRIOR TO APPLICATION.

26 REMOVE PAINT WHERE SPILLED, SPLASHED OR SPATTERED USING METHODS THAT ARE NOT DETRIMENTAL TO AFFECTED SURFACES PROMPTLY AS THE WORK PROCEEDS AND ON COMPLETION OF THE WORK.

27 THE FOLLOWING TITLES AND CODE NUMBERS REFER TO THE MPI ARCHITECTURAL PAINTING SPECIFICATION MANUAL. PAINT INTERIOR SURFACES IN ACCORDANCE WITH MPI PAINTING MANUAL REQUIREMENTS FOLLOWING INDICATED CODES FOR EACH SURFACE.

27.1 INTERIOR WOOD PAINTED: SYSTEM: INT 6.3V INSTITUTIONAL LOW ODOR / LOW VOC GLOSS LEVEL 5.

27.2 INTERIOR WOOD CASEWORK: SYSTEM: INT 6.4M WATERBORNE ACRYLIC CLEAR, GLOSS LEVEL 5 OR INT 6.4H LACQUER, PIGMENTED, GLOSS LEVEL 5.

27.3 INTERIOR METAL: SYSTEM: GALVANIZED METAL: INT 5.3B - W.B. LIGHT INDUSTRIAL COATING, LOW ODOR / LOW VOC GLOSS LEVEL 5; METAL FABRICATIONS: INT 5.1B - W.B. LIGHT INDUSTRIAL COATING, LOW ODOR / LOW VOC GLOSS LEVEL 5.

27.4 GYPSUM BOARD: SYSTEM: INT 9.2M INSTITUTIONAL LOW ODOR / LOW VOC FINISH; ALL WALLS TO BE GLOSS LEVEL 3 UNLESS OTHERWISE INDICATED; CEILINGS AND BULKHEADS: GLOSS LEVEL 3.

27.5 MECHANICAL AND ELECTRICAL SERVICES: SYSTEM AS DESCRIBED FOR METALS ABOVE. IN UNFINISHED AREAS LEAVE EXPOSED CONDUITS, PIPING, HANGERS, DUCTWORK AND OTHER MECHANICAL AND ELECTRICAL EQUIPMENT IN ORIGINAL FINISH AND TOUCH-UP SCRATCHES AND MARKS. DO NOT PAINT OVER NAMEPLATES.

28 INVESTIGATE EXISTING SUBSTRATES FOR PROBLEMS RELATED TO PROPER AND COMPLETE PREPARATION OF SURFACES TO BE PAINTED. REPORT TO CONSULTANT DAMAGES, DEFECTS, UNSATISFACTORY OR UNFAVOURABLE CONDITIONS BEFORE PROCEEDING WITH WORK.

29 CLEAN AND PREPARE SURFACES IN ACCORDANCE WITH MPI - ARCHITECTURAL PAINTING SPECIFICATION MANUAL REQUIREMENTS AND COATING MANUFACTURER'S RECOMMENDATIONS. REFER TO MPI MANUAL IN REGARD TO SPECIFIC REQUIREMENTS

30 APPLY PAINT ONLY TO DRY, CLEAN, PROPERLY CURED AND ADEQUATELY PREPARED SURFACES IN AREAS WHERE DUST IS NO LONGER GENERATED BY CONSTRUCTION ACTIVITIES SUCH THAT AIRBORNE PARTICLES WILL NOT AFFECT THE QUALITY OF FINISHED SURFACES.

31 APPLY PAINT MATERIALS IN ACCORDANCE WITH PAINT MANUFACTURER'S WRITTEN APPLICATION INSTRUCTIONS.

DIVISION 10 - SPECIALTIES

SECTION 10 26 00 – IMPACT RESISTANT WALL PROTECTION

1 SUBMITTALS: SUBMIT PRODUCT DATA AND SHOP DRAWINGS IN ACCORDANCE WITH SECTION 01 33 00 – SUBMITTALS. INDICATE, BY LARGE SCALE DETAILS, MATERIALS, FINISHES, DIMENSIONS, ANCHORAGE AND ASSEMBLY.

2 SUBMIT DUPLICATE 12" LONG SAMPLES OF PROFILES AND COLORS. PREPARE APPROX. 10 FT SAMPLE OF FEATURE WALL PROTECTION AND CORNER PROTECTION.

3 MATERIALS

3.1 EXTRUDED RIGID PLASTIC: ASTM D1784, CLASS 1, TEXTURED, CHEMICAL AND STAIN RESISTANT, HIGH IMPACT RESISTANT PVC OR ACRYLIC MODIFIED VINYL PLASTIC WITH INTEGRAL COLOR THROUGHOUT

2 3.2 PLASTIC SHEET WALL COVERING MATERIAL: ASTM D1784, CLASS 1, TEXTURED, CHEMICAL AND STAIN RESISTANT, SEMI RIGID, HIGH IMPACT RESISTANT PVC OR ACRYLIC MODIFIED VINYL PLASTIC SHEET WITH INTEGRAL COLOR THROUGHOUT

3.3 FIBRE REINFORCED PLASTICS (FRP): FIBERGLASS ROVING REINFORCEMENT WITH RESIN MIX CONSISTING OF POLYESTER COPOLYMER, INORGANIC FILLERS, PIGMENTS AND CATALYSTS

3.4 ALUMINUM EXTRUSIONS: ALLOY AND TEMPER RECOMMENDED BY MANUFACTURER FOR TYPE OF USE AND FINISH INDICATED BUT WITH NOT LESS THAN STRENGTH AND DURABILITY PROPERTIES SPECIFIED IN ASTM B221 FOR ALLOY 6063 T5.

3.5 STAINLESS STEEL SHEET: ASTM A240

4 CORNER GUARDS

4.1 METAL CORNER GUARDS: SURFACE MOUNTED, FABRICATED FROM SINGLE PIECE, TYPE 304 STAINLESS STEEL, NO. 4 SATIN FINISH FORMED METAL WITH EASED EDGES; BEND ANGLE TURN TO MATCH WALL CONDITION. THICKNESS AND SIZE AS INDICATED ON DRAWINGS. MOUNTING AS DIRECTED.

5 WALL PROTECTION

5.1 IMPACT RESISTANT WALL COVERING: EXTRUDED RIGID PLASTIC TO ASTM D1784, 80 MILS THICKNESS, 48" X 96" DIMENSION, HEIGHT AS INDICATED ON DRAWINGS. ACCEPTABLE MANUFACTURER: ALTRO.

5.2 IMPACT RESISTANT WALL COVERING: FIBRE REINFORCED PLASTIC (FRP) PANEL RESISTANT TO ROT, CORROSION, AND STAINING AND WILL NOT SUPPORT GROWTH OF MOLD OR MILDEW. ACCEPTABLE MANUFACTURER: PANOLAM.

5.3 IMPACT RESISTANT CHAIR RAIL: EXTRUDED RIGID PLASTIC TO ASTM D1784

SECTION 10 26 00 – IMPACT RESISTANT WALL PROTECTION CONTINUED…

6 ACCESSORIES:

6.1 PROVIDE MANUFACTURER'S RECOMMENDED VINYL WELD RODS

6.2 PROVIDE MANUFACTURERS JOINT STRIPS, START AND EDGE TRIM, AND CUT-TILE TRANSITION STRIPS.

6.3 ADHESIVE: WATER RESISTANT TYPE AS RECOMMENDED BY MANUFACTURER FOR SUBSTRATE.

6.4 END CAPS AND CORNERS: PREFABRICATED, INJECTION MOULDED PLASTIC; COLOR MATCHING COVER; FIELD ADJUSTABLE FOR CLOSE ALIGNMENT WITH SNAP ON COVER.

6.5 FASTENERS: ALUMINUM, NONMAGNETIC STAINLESS STEEL, OR OTHER NON-CORROSIVE METAL SCREWS, BOLTS, AND OTHER FASTENERS COMPATIBLE WITH ITEMS BEING FASTENED. USE SECURITY TYPE FASTENERS WHERE EXPOSED TO VIEW.

7 PREPARATION: SURFACES MUST BE FREE FROM DUST AND CLEANED PRIOR TO INSTALLATION. THE WORKING ENVIRONMENT MUST ALSO BE DUST FREE. FAILURE TO COMPLY WITH THESE CONDITIONS WILL REDUCE THE BOND STRENGTH BETWEEN THE ADHESIVE AND SUBSTRATE, AND MAY CAUSE THE PANELS TO DEBOND.

8 INSTALL IMPACT RESISTANT WALL PROTECTION UNITS LEVEL, PLUMB, AND TRUE TO LINE WITHOUT DISTORTIONS. DO NOT USE MATERIALS WITH CHIPS, CRACKS, VOIDS, STAINS, OR OTHER DEFECTS THAT MIGHT BE VISIBLE IN THE FINISHED WORK.

9 INSTALL IMPACT RESISTANT WALL PROTECTION UNITS IN LOCATIONS AND AT MOUNTING HEIGHTS INDICATED ON DRAWINGS.

10 PROVIDE SPLICES, MOUNTING HARDWARE, ANCHORS, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION.

11 CLEAN PLASTIC COVERS AND ACCESSORIES USING A STANDARD, AMMONIA BASED, HOUSEHOLD CLEANING AGENT IMMEDIATELY AFTER COMPLETION OF INSTALLATION.

SECTION 10 44 00 – SIGNAGE

1 SUBMITTALS: SHOP DRAWINGS: INDICATE SIGN STYLES, LETTERING FONT, FOREGROUND AND BACKGROUND COLORS, LOCATIONS, OVERALL DIMENSIONS OF EACH SIGN, CONSTRUCTION, ATTACHMENT, ILLUMINATION, ETC. AND SIGN LOCATION PLAN, SHOWING LOCATION, TYPE AND TOTAL NUMBER OF SIGNS REQUIRED.

2 DESIGN COMPONENTS TO ALLOW FOR EXPANSION AND CONTRACTION FOR A MINIMUM MATERIAL TEMPERATURE RANGE OF 77 DEGREES FARENHEIT, WITHOUT CAUSING BUCKLING, EXCESSIVE OPENING OF JOINTS OR OVER STRESSING OF ADHESIVES, WELDS AND FASTENERS.

3 FORM WORK TO REQUIRED SHAPES AND SIZES, WITH TRUE CURVE LINES AND ANGLES. PROVIDE NECESSARY REBATES, LUGS AND BRACKETS FOR ASSEMBLY OF UNITS. USE CONCEALED FASTENERS WHENEVER AND WHEREVER POSSIBLE.

4 SHOP FABRICATE SO FAR AS PRACTICABLE. JOINTS FASTENED FLUSH TO CONCEAL REINFORCEMENT, OR WELDED WHERE THICKNESS OR SECTION PERMITS.

5 CONTACT SURFACES OF CONNECTED MEMBERS BE TRUE. ASSEMBLED SO JOINTS WILL BE TIGHT AND PRACTICALLY UNNOTICEABLE, WITHOUT USE OF FILLING COMPOUND.

6 PROVIDE SIGNS WITH FINE, EVEN TEXTURE AND BE FLAT AND SOUND. LINES AND MITERS SHARP, ARISES UNBROKEN, PROFILES ACCURATE AND ORNAMENT TRUE TO PATTERN. PLANE SURFACES BE SMOOTH FLAT AND WITHOUT OIL-CANNING, FREE OF RACK AND TWIST. MAXIMUM VARIATION FROM PLANE OF SURFACE PLUS OR MINUS 12 MILS. RESTORE TEXTURE TO FILED OR CUT AREAS.

7 LEVEL OR STRAIGHTEN WROUGHT WORK. MEMBERS SHALL HAVE SHARP LINES AND ANGLES AND SMOOTH SURFACES.

8 CONFIRM EXTRUDED MEMBERS ARE FREE FROM EXTRUSION MARKS. SQUARE TURNS AND CORNERS SHARP, CURVES TRUE.

9 DRILL HOLES FOR BOLTS AND SCREWS. CONCEAL FASTENINGS WHERE POSSIBLE. EXPOSED ENDS AND EDGES MILL SMOOTH, WITH CORNERS SLIGHTLY ROUNDED. FORM JOINTS EXPOSED TO WEATHER TO EXCLUDE WATER.

10 FINISH HOLLOW SIGNS WITH MATCHING MATERIAL ON ALL FACES, TOPS, BOTTOMS AND ENDS. EDGE JOINTS TIGHTLY MITERED TO GIVE APPEARANCE OF SOLID MATERIAL.

11 PROPERLY PRIME. FINISH COATING OF PAINT TO HAVE COMPLETE COVERAGE WITH NO LIGHT OR THIN APPLICATIONS ALLOWING SUBSTRATE OR PRIMER TO SHOW. FINISHED SURFACE SMOOTH, FREE OF SCRATCHES, GOUGES, DRIPS, BUBBLES, THICKNESS VARIATIONS, FOREIGN MATTER AND OTHER IMPERFECTIONS.

SECTION 10 44 00 – SIGNAGE CONTINUED…

12 CLEAN AND ADJUST MOVABLE PARTS, INCLUDING HARDWARE, TO OPERATE AS DESIGNED WITHOUT BINDING OF DEFORMATION OF MEMBERS. DOORS AND COVERS CENTERED IN OPENING OR FRAME. ALL CONTACT SURFACES FIT TIGHT AND EVEN WITHOUT FORCING OR WARPING COMPONENTS.

13 PRE-ASSEMBLE ITEMS IN SHOP TO GREATEST EXTENT POSSIBLE TO MINIMIZE FIELD SPLICING AND ASSEMBLY. DISASSEMBLE UNITS ONLY AS NECESSARY FOR SHIPPING AND HANDLING LIMITATIONS. CLEARLY MARK UNITS FOR RE-ASSEMBLY AND COORDINATED INSTALLATION.

14 DO NOT MANUFACTURE SIGNS UNTIL FINAL SIGNAGE SHOP DRAWINGS AND SIGN LOCATION PLAN HAVE BEEN REVIEWED BY THE CONSULTANT RETURNED TO THE CONTRACTOR.

15 INSTALL SIGNAGE TO MANUFACTURER INSTRUCTIONS.

16 PROTECT PRODUCTS AGAINST DAMAGE DURING FIELD HANDLING AND INSTALLATION. PROTECT ADJACENT EXISTING AND NEWLY PLACED CONSTRUCTION AND FINISHES AS NECESSARY TO PREVENT DAMAGE DURING INSTALLATION. PAINT AND TOUCH UP ANY EXPOSED FASTENERS AND CONNECTING HARDWARE TO MATCH COLOR AND FINISH OF SURROUNDING SURFACE.

17 MOUNT SIGNS IN PROPER ALIGNMENT, LEVEL AND PLUMB ACCORDING TO THE SIGN LOCATION PLAN AND THE DIMENSIONS GIVEN ON ELEVATION AND SIGN LOCATION DRAWINGS. WHERE OTHERWISE NOT DIMENSIONED, SIGNS SHALL BE INSTALLED WHERE BEST SUITED TO PROVIDE A CONSISTENT APPEARANCE THROUGHOUT THE PROJECT. WHEN EXACT POSITION, ANGLE, HEIGHT OR LOCATION IS IN DOUBT, CONTACT CONSULTANT FOR CLARIFICATION.

18 BE RESPONSIBLE FOR ALL SIGNS THAT ARE DAMAGED, LOST OR STOLEN WHILE MATERIALS ARE ON THE JOB SITE AND UP UNTIL THE COMPLETION AND FINAL ACCEPTANCE OF THE JOB.

19 CLEAN EXPOSED SIGN SURFACES AT COMPLETION OF SIGN INSTALLATION. CLEAN AND REPAIR ANY ADJOINING SURFACES AND LANDSCAPING THAT BECAME SOILED OR DAMAGED AS A RESULT OF INSTALLATION OF SIGNS.

20 LOCATE SIGNS AS SHOWN ON THE SIGN LOCATION PLANS.

21 CERTAIN SIGNS MAY BE INSTALLED ON GLASS. A BLANK GLASS BACK UP IS REQUIRED TO BE PLACED ON OPPOSITE SIDE OF GLASS EXACTLY BEHIND SIGN BEING INSTALLED. THIS BLANK GLASS BACK UP IS TO BE THE SAME SIZE AS SIGN BEING INSTALLED.

22 BE RESPONSIBLE FOR VERIFYING THAT BEHIND EACH SIGN LOCATION THERE ARE NO UTILITY LINES THAT WILL BE AFFECTED BY INSTALLATION OF SIGNS. ANY DAMAGE DURING INSTALLATION OF SIGNS TO UTILITIES WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CORRECT AND REPAIR.

23 FURNISH INSERTS AND ANCHORING DEVICES WHICH MUST BE SET IN CONCRETE OR OTHER MATERIAL FOR INSTALLATION OF SIGNS. PROVIDE SETTING DRAWINGS, TEMPLATES, INSTRUCTIONS AND DIRECTIONS FOR INSTALLATION OF ANCHORAGE DEVICES WHICH MAY INVOLVE OTHER TRADES.

DIVISION 11 - EQUIPMENT

SECTION 11 52 13 – AUDIO/VISUAL EQUIPMENT

1 COORDINATE WALL CONSTRUCTION AND PROVIDE REQUIREMENTS FOR BLOCKING AND REINFORCEMENTS REQUIRED TO SUPPORT AUDIO/VISUAL EQUIPMENT INSTALLED INTO ADJACENT CONSTRUCTION; AND COORDINATE CONNECTION TO ELECTRICAL AND COMMUNICATIONS CABLING FOR AUDIO/VISUAL EQUIPMENT.

2 SUBMIT PRODUCT DATA IN ACCORDANCE WITH SECTION 01 33 00 - SUBMITTALS

3 SUBMIT MANUFACTURER'S WRITTEN INSTRUCTIONS FOR CLEANING, OPERATIONS AND MAINTENANCE PROCEDURES; LIST OF REPAIR AND REPLACEMENT PARTS SHOWING PICTURES AND IDENTIFICATION NUMBERS; AND NAME OF ORIGINAL INSTALLER AND CONTACT INFORMATION.

4 ELECTRICAL REQUIREMENTS: ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES SHALL BE LISTED AND LABELLED IN ACCORDANCE WITH UNDERWITERS LABORATORIES AND MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, AND BE MARKED FOR INTENDED USE.

5 USE EXPERIENCED INSTALLER WHO HAS COMPLETED INSTALLATIONS OF AUDIO/VISUAL EQUIPMENT SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THE PROJECT

6 SMART BOARDS: INTERACTIVE FLAT PANEL WITH TOUCH TECHNOLOGY AND AS FOLLOWS:

6.1 ASPECT RATION: 16:9

6.2 OPTIMAL RESOLUTION: 3840 X 2160 AT 30 HZ

6.3 CONTRAST RATIO (TYPICAL): 1400:1

6.4 BRIGHTNESS (TYPICAL): 280 – 360 CD/M2

6.5 VIEWING ANGLE: 178O

6.6 AUDIO: TWO 10 W INTEGRATED SIDE FIRING SPEAKERS

6.7 NOISE LEVEL: 35 DBA

6.8 POWER REQUIREMENTS: CONFIRM WITH ELECTRICAL.

7 MOUNTING ACCESSORIES: PROVIDE MANUFACTURERS RECOMMENDED MOUNTING ACCESSORIES IN SIZE...

8 VERIFICATION OF CONDITIONS: VERIFY THAT SUBSTRATES AND MOUNTING CONDITIONS, AND ELECTRICAL SERVICES ARE COMPATIBLE WITH SPECIFIED AUDIO/VISUAL EQUIPMENT; STARING WITH INSTALLATION WILL DENOTE ACCEPTANCE OF WORK SITE CONDITIONS.

9 CONFIRMATION OF INSTALLATION: COORDINATE WITH CONSULTANT AND CONFIRM FINAL PLACEMENT OF AUDIO/VISUAL EQUIPMENT BEFORE STARTING INSTALLATION.

10 INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND REVIEWED SHOP DRAWINGS; PLUMB, TRUE, LEVEL AND RIGID, AND SECURELY ATTACHED TO MOUNTING SYSTEMS FORMING A PART OF RECOMMENDED INSTALLATION, BACK UP DEVICES AND BLOCKING REINFORCEMENTS.

11 PROTECTION: PROTECT AUDIO/VISUAL EQUIPMENT AFTER INSTALLATION FROM DAMAGE DURING CONSTRUCTION; REMOVE AND REPLACE DAMAGE COMPONENTS OR UNITS IF DAMAGE OCCURS DESPITE SUCH PROTECTION.

12 ENGAGE AUTHORIZED SERVICE REPRESENTATIVE TO TRAIN OWNER'S PERSONNEL ON PROPER OPERATION OF AUDIO/VISUAL EQUIPMENT.

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Notes

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JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

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Title

SPECIFICATIONS

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Revision

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GENERAL ELECTRICAL INSTALLATION NOTES

A. CODE COMPLIANCE: PROVIDE ALL ELECTRICAL WORK COMPLIANT WITH ALL PREVAILING CODES.
B. LISTINGS: PROVIDE MATERIALS, COMPONENTS AND ASSEMBLED COMPONENTS WITH LISTINGS AND LABELS FROM A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL), MANUFACTURED, LISTED AND LABELED FOR THEIR INTENDED USE.
C. RATED BUILDING SURFACES: SEPARATE DEVICE BOXES BY A MINIMUM OF 6 INCHES WHERE INSTALLED BACK-TO-BACK WITHIN DEMISING WALLS TO MAINTAIN REQUIRED FIRE AND SOUND RATING (TYPICAL OF ALL DEVICE BOXES INSTALLED ON DEMISING WALLS). PROVIDE LISTED FIRE-RATED WRAPS AROUND ALL RECESSED OUTLET, DEVICE AND EQUIPMENT BOXES IN FIRE/SMOKE RATED WALLS, CEILINGS AND FLOORS TO MEET OR EXCEED THE RESPECTIVE FIRE/SMOKE RATING OF THE SURFACE.
D. RATED PENETRATIONS: SEAL ALL PENETRATIONS THROUGH FIRE-RATED AND/OR SMOKE-RATED MEMBRANES (FLOORS, WALLS, CEILINGS, ETC.) USING SEALANT PRODUCTS THAT MEET OR EXCEED THE RATING OF THE RESPECTIVE MEMBRANE.
E. GANGED DEVICES: INSTALL WIRING DEVICES GANGED WHEREVER POSSIBLE FOR INSTANCES WHERE THEY ARE SHOWN TOGETHER. THIS INCLUDES LOCATIONS ABOVE COUNTERS AND WORK SURFACES WHERE APPLICABLE.
F. OUTLET BOXES NEAR CORNERS: INSTALL WALL-MOUNTED SWITCHES, CONTROLS, RECEPTACLES, OUTLETS, ETC. AT LEAST 6 INCHES FROM WALL CORNERS.
G. CONCEALMENTS: CONCEAL ALL CONDUIT DROPS AND RISES WITHIN WALLS, AND PROVIDE FLUSH-MOUNTED WALL OUTLET BOXES UNLESS OTHERWISE INDICATED.
H. DOCUMENTS OF OTHER TRADES: REVIEW DOCUMENTS OF OTHER TRADES, INCLUDING ARCHITECTURAL, PRIOR TO SUBMITTING A BID. PROVIDE ELECTRICAL WORK FOR EQUIPMENT, DEVICES, ETC. OF OTHER TRADES AS REQUIRED TO RENDER THEM FULLY OPERATIONAL. REFER TO ARCHITECTURAL ELEVATIONS FOR INTENDED LOCATIONS AND MOUNTING HEIGHTS FOR EQUIPMENT AND OUTLETS, ETC. PRIOR TO COMMENCING WITH ANY RELATED ROUGH-IN WORK.
I. SCHEMATIC REPRESENTATIONS: CIRCUITING WORK SHOWN ON DRAWINGS IS FOR SCHEMATIC GENERAL GRAPHIC REPRESENTATION ONLY. DETERMINE SPECIFICS IN FIELD (POINT-TO-POINT ROUTING, HOME-RUN LOCATIONS, METHODS OF CONCEALMENT, ETC.). LOCATIONS AND ROUTING INDICATED ON PLANS ARE SCHEMATIC AND DIAGRAMMATIC IN NATURE. LAYOUT AND INSTALL ALL ELECTRICAL WORK IN STRICT COMPLIANCE WITH CHAPTER 1, PART II, ARTICLE 110.26 OF THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70).
J. HOME-RUN DESIGNATIONS: HOME-RUN DESIGNATIONS INDICATED ON PLANS ARE SCHEMATIC DESIGNATIONS ONLY. DETERMINE EXACT CIRCUIT ASSIGNMENTS IN FIELD BASED ON FIELD CONDITIONS. PROVIDE COLOR-CODED CONDUCTOR INSULATION ACCORDINGLY, CODED PROPERLY DEPENDING ON SYSTEM, PHASE, NEUTRAL, ETC. PROVIDE EQUIPMENT AND PANELBOARD SCHEDULES THAT ACCURATELY INDICATE INSTALLED CONDITIONS.
K. LOCAL DISCONNECTS AND CONTROLS AT EQUIPMENT: LOCAL DISCONNECTS AND LOCAL CONTROLS SHOWN AT OR ON EQUIPMENT IN PLAN-VIEW ARE SHOWN FOR SCHEMATIC ASSOCIATIONS ONLY. AVOID INSTALLING DISCONNECTS OR CONTROLS ON EQUIPMENT ENCLOSURES. INSTALL ON ADJACENT WALLS OR BUILDING STRUCTURE, OR PROVIDE FIELD-FABRICATED UNISTRUT OR EQUIVALENT ASSEMBLIES AS NEEDED. PROVIDE FIELD COORDINATION WITH SITE CONDITIONS AND OTHER TRADES, AND PROVIDE ALL RELATED WORK IN STRICT COMPLIANCE WITH NFPA 70, INCLUDING ARTICLE 110.26. PROVIDE A PERMANENT LABEL ON LOCAL DISCONNECTS NOTING THE EQUIPMENT IT SERVES AND THE PANEL AND CIRCUIT NUMBER FEEDING THE EQUIPMENT PER NFPA 70, ARTICLE 110.22(A).
L. EQUIPMENT & LOAD COORDINATION: REFER TO AND COORDINATE WITH POWER FLOOR PLANS, EQUIPMENT SCHEDULES (INCLUDING EQUIPMENT COORDINATION SCHEDULES), DRAWINGS OF ALL TRADES, ALL DIVISIONS AND SECTIONS OF SPECIFICATIONS AND INSTALLERS OF ALL TRADES. BASED ON ACTUAL EQUIPMENT BEING PROVIDED, DETERMINE AND PROVIDE APPROPRIATE BREAKERS, FUSES, CONDUCTORS, CONTROLS, POWER DISTRIBUTION EQUIPMENT, ETC. PERFORM THESE SERVICES PRIOR TO FURNISHING POWER DISTRIBUTION EQUIPMENT SUBMITTALS.
M. EXTERIOR ELECTRICAL WORK AND WORK SUBJECT TO MOISTURE: EXTERIOR ELECTRICAL WORK SHALL BE WEATHERPROOF AND WATER-TIGHT, AND SHALL BE RUST-RESISTANT. PROVIDE XHHW-2 CONDUCTORS FOR ALL APPLICATIONS THAT ARE BELOW GRADE OR SUBJECT TO MOISTURE. PROVIDE MINIMUM NEMA 3R ENCLOSURES FOR ALL OUTDOOR EQUIPMENT AND ALL INDOOR EQUIPMENT THAT IS SUBJECT TO MOISTURE. PROVIDE NEMA 1 ENCLOSURES FOR ALL OTHER INDOOR EQUIPMENT.
N. EQUIPMENT GROUNDING CONDUCTORS: PROVIDE EQUIPMENT GROUNDING CONDUCTORS IN STRICT COMPLIANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70), INCLUDING ARTICLE 250 AND TABLE 250.122. THESE CONDUCTORS MAY OR MAY NOT BE INDICATED ON SINGLE-LINE DIAGRAMS OR ELSEWHERE, BUT SHALL BE PROVIDED UNDER BASE BID NEVERTHELESS.
O. OVERHEAD WORK: HOLD ALL NEW OVERHEAD ELECTRICAL WORK AS TIGHTLY AS POSSIBLE TO THE BOTTOM OF THE OVERHEAD STRUCTURE. DO NOT INSTALL ANY ELECTRICAL WORK WITHIN SIX INCHES OF ROOF DECKING.
P. COORDINATION DRAWINGS: LAYOUT ALL PROPOSED RACEWAY ROUTING, ELEVATIONS, INSTALLATION METHODS, ETC. ON COORDINATION DRAWINGS AND COORDINATE ALL PROPOSED RACEWAY ROUTING WITH ALL AFFECTED TRADES PRIOR TO COMMENCING WITH WORK. IN ADDITION, REVIEW THE INFORMATION WITH ARCHITECT, ENGINEER AND OWNER FOR ALL AREAS WHERE THE RACEWAYS WILL BE VISIBLE AFTER COMPLETION OF CONSTRUCTION.
Q. JUNCTION AND PULL BOXES: LOCATE JUNCTION AND PULL BOXES SO THAT THEY REMAIN ACCESSIBLE AFTER ALL CONSTRUCTION WORK IS COMPLETE. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO COMMENCEMENT OF THE WORK. LOCATE BOXES IN A MANNER THAT AVOIDS HAVING TO USE ACCESS PANELS. IF ACCESS PANELS ARE INEVITABLE, PROVIDE THEM RATED TO MEET OR EXCEED THE FIRE AND/OR SMOKE RATINGS OF THE RESPECTIVE CEILING OR WALL, AND OBTAIN APPROVAL OF DESIGN PROFESSIONALS FOR EACH LOCATION..
R. CONDUCTOR TERMINATIONS: IN CASES WHERE CONDUCTOR SIZES ARE TOO LARGE TO FIT INTO LUGS/TERMINALS, PROVIDE APPROPRIATE FACTORY LUG KITS FOR AFFECTED EQUIPMENT IF AVAILABLE. ELSEWHERE, PROVIDE INSULATED BUTT-SPLICES OR EQUIVALENT METHOD, WITH TAILS SIZED TO FIT LUGS/TERMINALS. PROVIDE SPLICES IN SEPARATE BOXES IF REQUIRED BASED ON FIELD CONDITIONS, BOX SIZE LIMITATIONS, ETC. CONCEAL BOXES IN ACCESSIBLE OVERHEAD JOIST SPACES IN FINISHED REGULARLY OCCUPIED AREAS.
S. TYPE MC, AC, NM, SE CABLE: WHERE MORE THAN TWO TYPE MC, AC, NM, OR SE CABLES CONTAINING TWO OR MORE CURRENT CARRYING CONDUCTORS IN EACH CABLE ARE INSTALLED IN CONTACT WITH THERMAL INSULATION, CAULK, OR SEALING FOAM MAINTAIN SPACING BETWEEN CABLES.

ELECTRIC CONDUIT AND WIRE MATERIAL SCHEDULE

MC - METAL CLAD CABLE
MI - MINERAL INSULATED CABLE
HMC - HEALTHCARE METAL CLAD CABLE
USE - UNDERGROUND SERVICE ENTRANCE CABLE
SE - SERVICE ENTRANCE CABLE
UF - UNDERGROUND FEEDER
NM - NON-METALLIC SHEATHED CABLE
RMC - RIGID METAL CONDUIT
RNC - RIGID NON-METALLIC CONDUIT
RTRC - REINFORCED THERMOSETTING RESIN CONDUIT
LIM - LINE ISOLATION MONITOR

ARC - ALUMINUM RIGID CONDUIT
EMT - ELECTRIC METALLIC TUBING
ENT - ELECTRIC NON-METALLIC TUBING
FMC - FLEXIBLE METALLIC CONDUIT
GRC - GALVANIZED RIGID STEEL CONDUIT
HDPE - HIGH DENSITY POLYETHYLENE CONDUIT
IMC - INTERMEDIATE METAL CONDUIT
LFMC - LIQUID-TIGHT FLEXIBILE METALLIC CONDUIT
LFNC - LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT
SCH 40 PVC - SCHEDULE 40 POLYVINYL CHLORIDE CONDUIT
SCH 80 PVC - SCHEDULE 80 POLYVINYL CHLORIDE CONDUIT

CONDUIT APPLICATION	CONDUCTOR TYPE	RACEWAY TYPE	RACEWAY AND CONDUCTOR NOTES
---FIRE ALARM---			
EXISTING HOLLOW PARTITIONS	NON-PLENUM RATED	EMT	
CONCEALED	NON-PLENUM RATED	EMT	
EXPOSED	NON-PLENUM RATED	EMT	
CONCEALED, ABOVE ACCESSIBLE CEILINGS	PLENUM RATED	J-HOOKS	
CONCEALED, ABOVE INACCESSIBLE CEILINGS	NON-PLENUM RATED	EMT	
EMBEDDED IN CONCRETE SLAB	NON-PLENUM RATED	RNC (SCH 40 PVC)	
---POWER - INDOOR---			
EXISTING HOLLOW PARTITIONS	THHN	EMT	
CONCEALED	THHN	EMT	
CONCEALED, MASONRY	THHN	RNC (SCH 40 PVC)	
VERTICAL RISERS FROM BELOW GRADE INCLUDING ELBOW	XHHW-2	RMC (GRC)	
CONNECTION TO SYSTEMS FURNITURE	THHN	LFMC	
EMBEDDED IN CONCRETE SLAB	THHN	RNC (SCH 40 PVC)	
LUMINAIRE WHIPS IN ACCESSIBLE CEILING, 72" MAX	THHN	MC	
CONNECTION TO VIBRATING EQUIPMENT, 72" MAX	THHN	LFMC	
EXPOSED	THHN	EMT	
UNDERGROUND	XHHW-2	RNC (SCH 40 PVC)	
EMBEDDED IN CONCRETE WALL	THHN	RNC (SCH 40 PVC)	
---TECHNOLOGY---			
EXISTING HOLLOW PARTITIONS	NON-PLENUM RATED	EMT	
CONCEALED, ABOVE INACCESSIBLE CEILINGS	NON-PLENUM RATED	EMT	
CONCEALED, ABOVE ACCESSIBLE CEILINGS	PLENUM RATED	J-HOOKS	

ELECTRIC DRAWING INDEX

SHEET NUMBER	SHEET NAME
E-001	ELECTRIC COVER SHEET
E-101	ELECTRIC LIGHTING PLAN
E-103	ELECTRIC LIGHTING - DETAILS AND SCHEDULES
E-201	ELECTRIC POWER PLAN
E-202	ELECTRIC ENLARGED POWER PLAN
E-301	ELECTRIC TECHNOLOGY PLAN
E-601	ELECTRIC POWER - SINGLE LINE DIAGRAM
E-602	ELECTRIC POWER - SCHEDULES
E-603	ELECTRIC POWER - PANEL SCHEDULES
E-604	ELECTRIC POWER - PANEL SCHEDULES
E-701	ELECTRIC - ENERGY COMPLIANCE
E-702	ELECTRIC - SPECIFICATIONS
E-703	ELECTRIC - SPECIFICATIONS

ELECTRIC LEGEND

SYMBOL	DESCRIPTION
LIGHTING AND LIGHTING CONTROLS	
	LUMINAIRE (REFER TO THE LUMINAIRE SCHEDULE) NOTE THAT OTHER SHAPES MAY ALSO BE USED TO REPRESENT LUMINAIRES
	SHADED LUMINAIRES DENOTE THOSE CONNECTED TO EMERGENCY OR STANDBY POWER AS APPLICABLE (UNSWITCHED LUMINAIRES ARE EGRESS LIGHTS AND/OR NIGHT-LIGHTS THAT OPERATE 24/7)
	TRACK LIGHTING IN LENGTH SHOWN AND WITH NUMBER OF LUMINAIRE HEADS AS INDICATED PROVIDE ALL REQUIRED ACCESSORIES (FITTINGS, END CAPS, POWER FEEDS, ETC.)
A NL a EL	A = LUMINAIRE TYPE, NL = NIGHT-LIGHT (UNSWITCHED), a = SWITCHING DESIGNATION, EL = EGRESS LUMINAIRE (ILLUMINATES PATH OF EGRESS, UNSWITCHED UNLESS OTHERWISE NOTED)
RECEPTACLES AND MISCELLANEOUS OUTLETS	
	SINGLE ("SIMPLEX"), DUPLEX, AND DOUBLE DUPLEX ("QUAD") RECEPTACLE RESPECTIVELY
	RECEPTACLES ON EMERGENCY OR STANDBY POWER CIRCUIT DIAMOND OUTLINE MAY BE APPLIED TO ANY SPECIALTY RECEPTACLE SYMBOL
	RECEPTACLES WITH USB OUTLETS
H C T 42" W SW L	RECEPTACLE ATTRIBUTES 42" = MOUNT RECEPTACLE AT THIS HEIGHT ABOVE GRADE / FINISHED FLOOR C = INSTALL ABOVE COUNTER AND BACKSPLASH H = INSTALL RECEPTACLE HORIZONTALLY L = LIT (PROVIDE ILLUMINATED FACE OR INDICATOR LIGHT TO INDICATE THERE IS POWER TO RECEPTACLE) SW = SPLIT WIRED T = TAMPER-RESISTANT W = WEATHER PROOF WHILE IN USE COVER AND WEATHER RESISTANT RECEPTACLE
MISCELLANEOUS	
$ $MS $MSR	MOTOR RATED TOGGLE SWITCH, MANUAL STARTER WITH PILOT LIGHT, AND MANUAL STARTER WITH PILOT LIGHT WITH EXTERNAL RELAY FOR CONTROL OR MONITORING RESPECTIVELY - ALL MAY BE KEYED "K"
	HEAVY DUTY DISCONNECT SWITCH (NON-FUSED) (LEFT) HEAVY DUTY DISCONNECT SWITCH (FUSED) (RIGHT)
	ELECTRICAL PANELBOARD OR DISTRIBUTION BOARD (DIMENSIONS MAY VARY / FLUSH OR SURFACE MOUNTED AS INDICATED)
FRONT	DRY TYPE TRANSFORMER - FLOOR MOUNTED ON CONCRETE PAD (LEFT), SUSPENDED FROM CEILING OR WALL (RIGHT)
SINGLE LINE DIAGRAM	
	GROUNDING ELECTRODE PER NFPA 70 ARTICLE 250 MINIMUM
400 400 300	HEAVY DUTY DISCONNECT SWITCH (NON-FUSED)(LEFT) (FUSED)(RIGHT) SIZES MAY BE SHOWN ONLY IN SCHEDULE
PANEL NAME	ELECTRICAL PANELBOARD OR DISTRIBUTION BOARD
	SURGE PROTECTIVE DEVICE

TECHNOLOGY LEGEND

SYMBOL	DESCRIPTION
TELECOMMUNICATIONS	
	WALL DATA OUTLET WAP = WIRELESS ACCESS POINT
AUDIO-VISUAL SYSTEMS	
SP	CEILING SPEAKER
SECURITY SYSTEMS	
C	CEILING SECURITY CAMERA
CABLE / RACEWAY / SPACE	
ER-02-01,13	CIRCUIT HOME RUN WITH RACK IDENTIFIER AND PORT NUMBER
	CABLING / RACEWAY INSTALLED CONCEALED IN WALLS OR ABOVE CEILING
	CABLING / RACEWAY INSTALLED BELOW FLOOR OR GRADE
	CABLE TRAY
	LADDER RACK
	SERVICE POLE - POWER AND TECHNOLOGY WHERE APPLICABLE.
UP DN	4" CONDUIT SLEEVE UP OR DOWN THROUGH FLOOR
	CONDUIT SLEEVE THROUGH WALL

FIRE ALARM LEGEND

SYMBOL	DESCRIPTION
FIRE ALARM DEVICES	
S	FIRE ALARM DUCT SMOKE DETECTOR AND SAMPLING TUBE
cd	FIRE ALARM SYSTEM CEILING / OVERHEAD MOUNTED STROBE-ONLY DEVICE (PROVIDE CANDELA (cd) RATING FOR STROBE AS INDICATED ON DRAWINGS)
cd C	FIRE ALARM SYSTEM CEILING / OVERHEAD MOUNTED HORN / STROBE DEVICE (PROVIDE CANDELA (cd) RATING FOR STROBE AS INDICATED ON DRAWINGS)

PLAN-VIEW AND GRAPHIC LINE TYPES

WORK SHOWN BOLD-CONTINUOUS INDICATES NEW WORK (UNLESS OTHERWISE INDICATED)

WORK SHOWN FADED INDICATES EXISTING WORK TO REMAIN OR NEW WORK BY OTHERS AS APPLICABLE (UNLESS OTHERWISE INDICATED)

WORK SHOWN BOLD-DASHED INDICATES SELECTIVE DEMOLITION WORK (UNLESS OTHERWISE INDICATED)

ELECTRIC LEGEND

SYMBOL	DESCRIPTION
WIRE / CABLE / RACEWAY	
LPA-1,3	BRANCH CIRCUIT HOME RUN WITH PANEL NAME AND CIRCUIT NUMBER(S)
	CABLING / RACEWAY INSTALLED CONCEALED IN WALLS OR ABOVE CEILING
	CABLING / RACEWAY INSTALLED BELOW FLOOR OR GRADE
	CABLE TRAY
	FEEDER DUCT / BUS DUCT
J	FLUSH MOUNTED JUNCTION BOX OR PULL BOX AS APPLICABLE FOR APPLICATION
P	FLUSH MOUNTED PULL BOX
UP DN	CONDUIT UP OR DOWN

ABBREVIATIONS

42"	DISTANCE ABOVE FINISHED FLOOR / GRADE / PAVEMENT	LR	LEGALLY REQUIRED STANDBY
AF	AMP FRAME OF FUSED SWITCH OR CIRCUIT BREAKER	LI	LONG - INSTANTANEOUS
AFCI	ARC-FAULT CIRCUIT INTERRUPTER	LSI	LONG - SHORT - INSTANTANEOUS
AT	AMP TRIP OF FUSED SWITCH OR CIRCUIT BREAKER	LSIG	LONG - SHORT - INSTANTANEOUS - GROUND FAULT
ATS	AUTOMATIC TRANSFER SWITCH	MCB	MAIN CIRCUIT BREAKER
BAS	BUILDING AUTOMATION SYSTEM	MFR	MANUFACTURER
C.T.C.	WORK UNDER DIVISION 27 OR 28 AS APPLICABLE	MLO	MAIN LUGS ONLY
C/B	CIRCUIT BREAKER	MTS	MANUAL TRANSFER SWITCH
C / CH	COUNTER HEIGHT OR SPECIAL HEIGHT DEVICE	MW	MICROWAVE OVEN
DW	DISHWASHER	NIC	NOT IN CONTRACT (SHOWN FOR REFERENCE ONLY)
E	EMERGENCY	NTS	NOT TO SCALE
E.C.	WORK UNDER DIVISION 26	OFE	OWNER-FURNISHED EQUIPMENT - INSTALLED AND WIRED BY E.C.
EMS	ENERGY MANAGEMENT SYSTEM	OS	OPTIONAL STANDBY
EPO	EMERGENCY POWER OFF	P.C.	WORK UNDER DIVISION 22
ER	EQUIPMENT ROOM	(R)	RELOCATE
ERM	ENERGY REDUCTION MAINTENANCE SWITCH	S.C.	WORK UNDER DIVISION 21
ESP	EMERGENCY STANDBY RATING	SCCR	SHORT CIRCUIT CURRENT RATING
ETR	EXISTING TO REMAIN	SPD	SURGE PROTECTIVE DEVICE
EWC	ELECTRIC WATER COOLER	ST	SHUNT TRIP
EX.	EXISTING	TAAC	TO ABOVE ACCESSIBLE CEILING
FBO	FURNISHED BY OTHERS - INSTALLED AND WIRED BY E.C.	TR	TAMPER RESISTANT
FIBO	FURNISHED AND INSTALLED BY OTHERS - WIRED BY E.C.	TTB	TELEPHONE TERMINAL BOARD
FP	RECEPTACLE TO BE USED FOR A FLAT PANEL DISPLAY.	TYP	TYPICAL
FWE	FURNISHED WITH EQUIPMENT BY OTHERS - INSTALLED AND WIRED BY E.C.	UCR	UNDER COUNTER REFRIGERATOR
GD	GARBAGE DISPOSAL	UL	UNDERWRITER'S LABORATORY
GFEP	GROUND FAULT EQUIPMENT PROTECTION	U.L.S.E.	LISTED FOR SERVICE ENTRANCE
GFI / GFCI	GROUND FAULT CIRCUIT INTERRUPTER DEVICE	UNO	UNLESS NOTED OR INDICATED OTHERWISE ON DRAWINGS OR IN SPECIFICATIONS
GND	GROUND	VFD / VSD	VARIABLE FREQUENCY / SPEED DRIVE
H.C.	WORK UNDER DIVISION 23	VIF	VERIFY IN FIELD
H.O.A.	"HAND - OFF - AUTO" SWITCH	VM	VENDING MACHINE
IG	ISOLATED GROUND	VP	VANDAL PROOF
Isc	SHORT CIRCUIT CURRENT	W / WP	WEATHERPROOF
		WG	WIRE GUARD
		WR	WEATHER RESISTANT
		X	RATED FOR CLASSIFIED LOCATION

PLAN-VIEW AND GRAPHIC LINE TYPES

WORK SHOWN BOLD-CONTINUOUS INDICATES NEW WORK (UNLESS OTHERWISE INDICATED)

WORK SHOWN FADED INDICATES EXISTING WORK TO REMAIN OR NEW WORK BY OTHERS AS APPLICABLE (UNLESS OTHERWISE INDICATED)

WORK SHOWN BOLD-DASHED INDICATES SELECTIVE DEMOLITION WORK (UNLESS OTHERWISE INDICATED)

ELECTRIC DESIGN CRITERIA

APPLICABLE BUILDING CODES

2018 NORTH CAROLINA BUILDING CODE (BASED ON THE INTERNATIONAL BUILDING CODE)
2017 NFPA 70 - NATIONAL ELECTRICAL CODE (NEC)
2013 NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE
2018 NORTH CAROLINA STATE ENERGY CODE (BASED ON 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) W/ AMENDMENTS.)

TESTING/COMMISSIONING FOR LIGHTING CONTROLS

LIGHTING CONTROL DEVICES AND SYSTEMS SHALL BE TESTED TO ENSURE THE HARDWARE AND SOFTWARE IS CALIBRATED, PROGRAMMED, AND IN PROPER WORKING ORDER. INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED INSTALLATION REPORTS AND CERTIFICATES (UNLESS COMMISSIONING IS BEING PERFORMED IN WHICH CASE THE COMMISSIONING PROVIDER SHALL BE RESPONSIBLE FOR ALL REPORTS, CERTIFICATES, ETC.) AND SHALL PROVIDE MANUALS FOR LIGHTING CONTROL DEVICES TO OWNER PRIOR TO PROJECT CLOSE-OUT AND ALSO INCLUDE THE NAME AND ADDRESS OF AT LEAST ONE SERVICING AGENCY FOR THE LIGHTING CONTROL EQUIPMENT. INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR CONTRACTING WITH APPROPRIATE PARTIES TO ARRANGE FOR TESTING OF THE LIGHTING CONTROL SYSTEMS AND SHALL BE RESPONSIBLE FOR ENSURING ALL REQUIRED FUNCTIONAL PERFORMANCE TESTING FORMS/REPORTS ARE COMPLETED AND SUBMITTED TO THE OWNER AND LOCAL AHJ PRIOR TO PROJECT CLOSE-OUT (NO LATER THAN WITHIN 90 DAYS OF PROJECT CLOSEOUT). FUNCTIONAL PERFORMANCE TESTING OF LIGHTING CONTROLS SHALL FOLLOW THE REQUIREMENTS LISTED IN THE APPLICABLE ENERGY CODE INCLUDING (BUT NOT LIMITED TO) VERIFICATION OF THE PERFORMANCE OF OCCUPANCY SENSORS, AUTOMATIC TIME SWITCHES, AND DAYLIGHT HARVESTING CONTROLS.

SEISMIC DESIGN REQUIREMENTS

PROVIDE SEISMIC BRACING FOR ALL NON-STRUCTURAL COMPONENTS AS REQUIRED BY THE CURRENTLY ADOPTED VERSION OF THE INTERNATIONAL BUILDING CODE AND ASCE-7.

CONTRACTOR SHALL PROVIDE SIGNED AND SEALED SIESMIC DRAWINGS AND CALCULATIONS BY A LICENSED PROFESSIONAL STRUCTURAL ENGINEER AND SUBMIT TO THE DESIGN TEAM FOR REVIEW.

REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR SEISMIC DESIGN CRITERIA.

SEISMIC DESIGN CATEGORY: D

Stantec

Consultant

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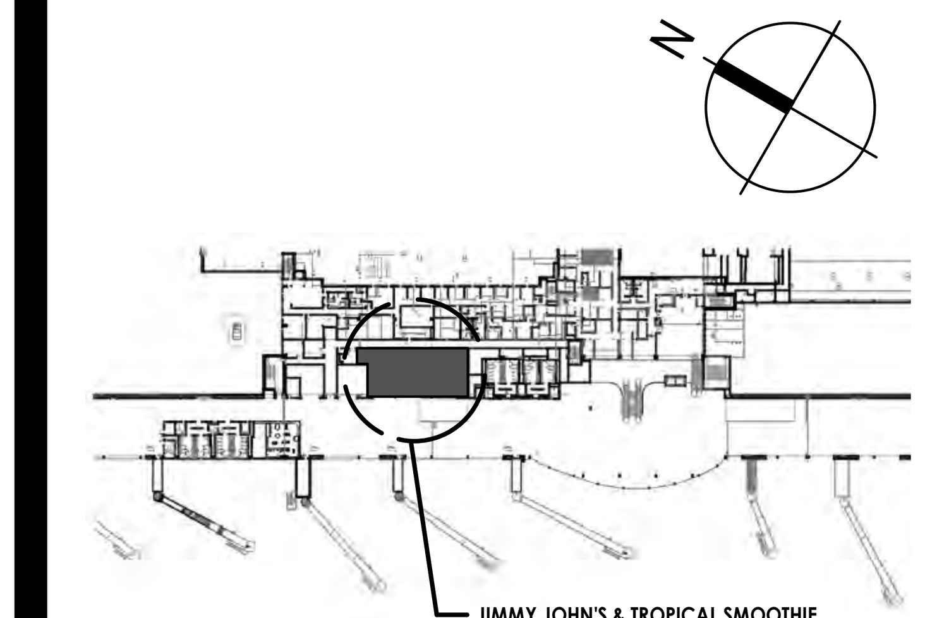
Notes



JIMMY JOHN'S & TROPICAL SMOOTHIE
LEVEL 2, UNIT NC1

Revision	By	Appd	YYYY.MM.DD

Issued	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
ISSUED FOR 60% SUBMISSION	KLH	KLH	2024.09.27

File Name: N/A — Dwn. Dsgn. Chkd. YYYY.MM.DD

Permit/Seal
FIRM LICENSE #C-4774
NORTH CAROLINA PROFESSIONAL SEAL 035205 ENGINEER JAMES S. TAVERNELLI
12/27/2024

Client/Project Logo
Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JJ JIMMY JOHN'S

Client/Project
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE
LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER, NORTH CAROLINA, USA, 28732

Title
ELECTRIC COVER SHEET

Project No. — Scale
Revision — Drawing No. **E-001**

ORIGINAL SHEET - ARCH D

ELECTRIC CURRENT LIMITER SCHEDULE

PROVIDE INTEGRAL CURRENT LIMITERS AS SPECIFIED IN THIS SCHEDULE FOR EACH CIRCUIT IN THIS SCHEDULE. ATTACH CURRENT LIMITER TO THE END OF THE TRACK. WHERE ONE CIRCUIT FEEDS MULTIPLE RUNS OF TRACK PROVIDE ALL ADDITIONAL END-FEEDS AND CONNECTORS NECCESSARY SO THAT A SINGLE CURRENT LIMITER FEEDS ALL TRACK SEGMENTS ON THAT CIRCUIT.

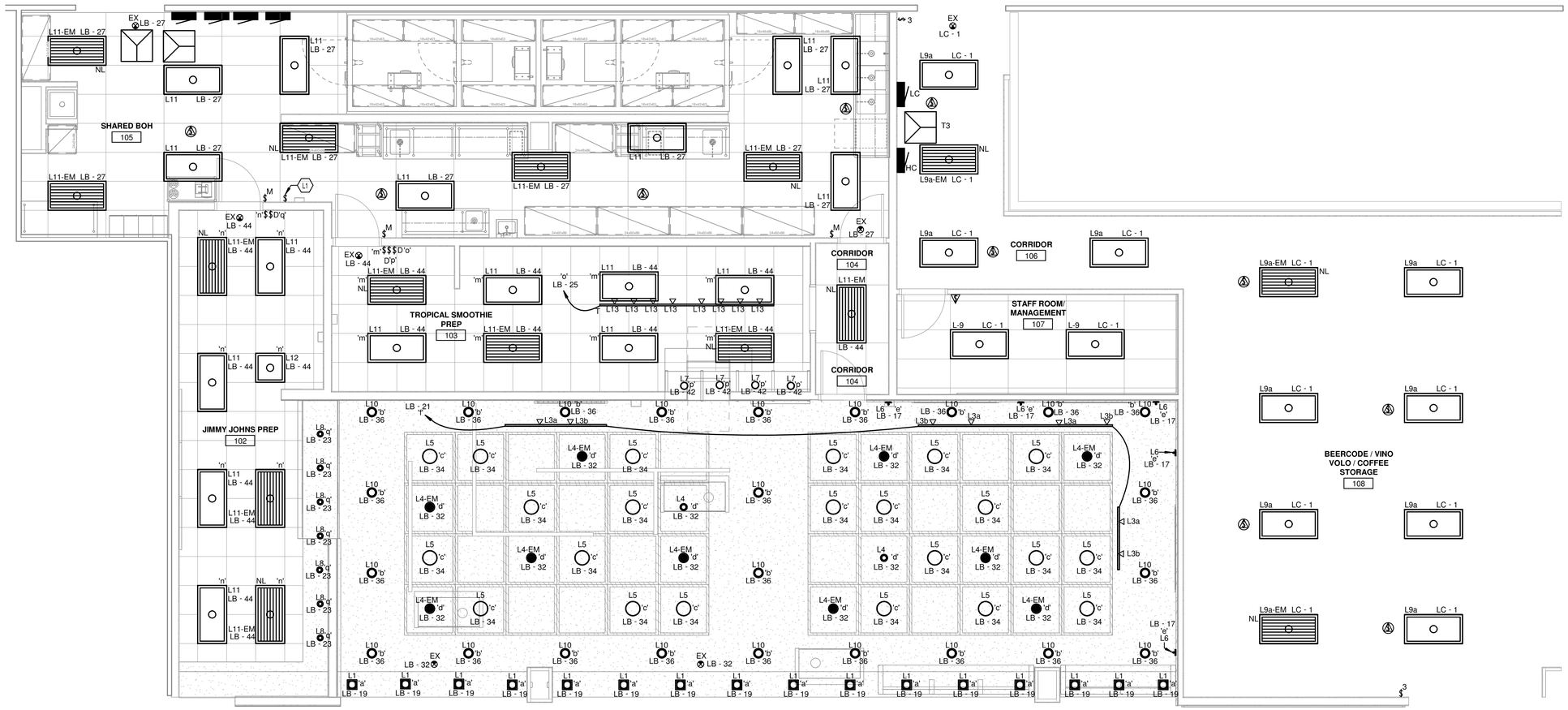
		FED FROM					
MANUFACTURER	VOLTAGE	PANEL	CIRCUIT	CONNECTED LOAD	EXTRA CAPACITY (%)	RATING	LOAD NAME
Juno	120 V	LB	21	1.27 A	25	2.00 A	TRACK LTG DINING
Juno	120 V	LB	25	0.67 A	25	1.00 A	TRACK LTG TROP PREP

GENERAL LIGHTING PLAN NOTES

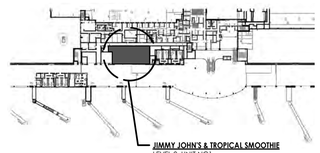
A. EXIT SIGN CONNECTIONS: CONNECT ALL EXIT SIGNAGE AHEAD OF ANY SWITCHING.
B. INDOOR EGRESS LIGHTING: CONNECT ALL INDOOR EGRESS LIGHTING, DESIGNATED "EL", AHEAD OF ANY SWITCHING, UNLESS CONTROL METHODS ARE INDICATED OTHERWISE FOR A GIVEN AREA.
C. BATTERY BACKUP DEVICES: WHERE INDICATED IN DOCUMENTS, PROVIDE UL 924 LISTED BATTERY DEVICES, WHICH AUTOMATICALLY REVERT TO FULL ILLUMINATION FOR THE AFFECTED LUMINAIRES IN THE EVENT OF LOSS OF POWER FROM THE NORMAL POWER SUPPLY CIRCUIT. PROVIDE UNSWITCHED "HOT" TO SUCH COMPONENTS TO PROVIDE CONTINUOUS POWER EVEN IF LUMINAIRE IS TURNED OFF USING NORMAL LIGHTING CONTROLS.
D. TRANSFER/RELAY-CONTROL DEVICES: WHERE INDICATED IN DOCUMENTS, PROVIDE TRANSFER/RELAY-CONTROL DEVICES, WHICH AUTOMATICALLY REVERT TO FULL ILLUMINATION FOR THE AFFECTED LUMINAIRES IN THE EVENT OF LOSS OF POWER FROM THE NORMAL POWER SUPPLY CIRCUIT. PROVIDE UNSWITCHED "HOT" TO SUCH COMPONENTS, TO PROVIDE CONTINUOUS POWER EVEN IF LUMINAIRE IS TURNED OFF USING NORMAL LIGHTING CONTROLS.

KEYED NOTES

L1	LOCATION OF MASTER SWITCH BANK. SEE "SWITCH BANK WALL PLATE DETAIL" ON SHEET E-103 FOR MORE INFORMATION.



1 ELECTRIC LIGHTING LEVEL 2 NORTH CONCOURSE PLAN
1/4" = 1'-0"



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Notes

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ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
ISSUED FOR 60% SUBMISSION	KLH	KLH	2024.09.27

Issued	By	Appd	YYYY.MM.DD
File Name: N/A	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

FIRM LICENSE #C-4774
NORTH CAROLINA PROFESSIONAL SEAL 035205 ENGINEER JASON S. TAVERNELL
12/27/2024

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
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Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE
LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

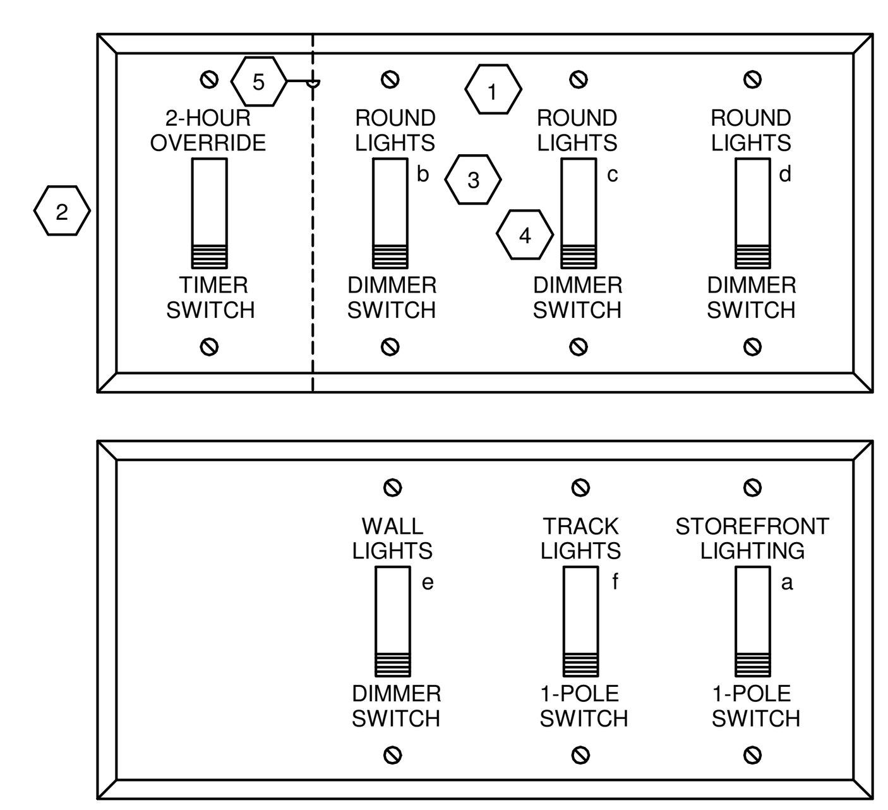
ELECTRIC LIGHTING PLAN

Project No.	Scale
	As indicated
Revision	Drawing No.
	E-101

ELECTRIC LUMINAIRE SCHEDULE

GENERAL NOTES:
A. REFER TO DRAWINGS FOR MOUNTING TYPE, NUMBER OF FACES AND ARROWS OF EXIT SIGNS. VERIFY IN FIELD PRIOR TO INSTALLATION.
B. VERIFY COMPATIBILITY WITH VOLTAGE, CONTROLS, ETC. FOR ALL LUMINAIRE COMPONENTS
C. COORDINATE EACH LUMINAIRE LOCATION WITH THE ARCHITECTURAL REFLECTED CEILING PLANS, CEILING INSTALLERS, ETC. AND PROVIDE APPROPRIATE MOUNTING SYSTEM REQUIRED FOR EACH LUMINAIRE. ALSO, PROVIDE PLASTER FRAMES, WALL BRACKETS, SUPPORTS, OR OTHER APPURTENANCES AS REQUIRED FOR PROPER AND COMPLETE INSTALLATIONS.
D. WEAR CLEAN WHITE COTTON GLOVES WHEN HANDLING EXPOSED REFLECTIVE LUMINAIRE SURFACES. REMOVE PLASTIC SHIPPING BAGS ONLY AFTER INTERIOR WORK IS COMPLETE, AND CLEAN ALL SURFACES WITH CLEAN DRY CHEESECLOTH.
E. MOUNTING HEIGHTS INDICATED ARE TO THE BOTTOM OF THE LUMINAIRE, UNLESS OTHERWISE NOTED.
F. PRODUCTS: PROVIDE PRODUCTS INDICATED ON DRAWINGS AND SCHEDULES. WHERE MULTIPLE MANUFACTURER SERIES/MODEL NUMBERS ARE LISTED FOR A SINGLE LUMINAIRE, PROVIDE ONE OF THOSE LISTED. WHERE A SPECIFIC MANUFACTURER SERIES/MODEL NUMBER IS LISTED AS BASIS-OF-DESIGN, AND WHERE IT IS STATED THAT EQUIVALENTS WILL BE CONSIDERED, ANY PROPOSED NON-LISTED LUMINAIRES ARE SUBJECT TO REVIEW BY DESIGN PROFESSIONAL(S), SUBMITTALS FOR WHICH SHALL BE FURNISHED AT LEAST (10) DAYS PRIOR TO BID DUE DATE OR THEY WILL NOT BE CONSIDERED. THESE PRE-BID SUBMITTALS SHALL CLEARLY STATE EXACTLY WHAT IS BEING PROPOSED AND SHALL DEMONSTRATE COMPLIANT EQUIVALENCY. SIMILAR REQUESTS FOR PROPOSED SUBSTITUTIONS MAY BE MADE ONLY AFTER BIDS ARE RECEIVED, AND ONLY IF OWNER CHOOSES TO CONSIDER SUBSTITUTION REQUESTS. DESIGN PROFESSIONAL(S) AND OWNER RESERVE THE RIGHT TO REJECT ALL PRODUCTS THAT ARE NOT DEEMED TO BE FULLY EQUIVALENT TO THE BASIS-OF-DESIGN LISTING(S). SUBMIT ALL REQUESTS AND QUESTIONS THROUGH THE FORMALLY-ESTABLISHED BIDDING PROCESS, NOT DIRECTLY TO ENGINEER.

TYPE	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING	FLANGE KIT	LIGHT SOURCE	LAMP QTY	LUMEN OUTPUT (L)	DRIVER	DRIVER QTY	BATTERY	BATTERY TYPE	DIMMING PROTOCOL	FINISH	LOAD (VA)	UNIVERSAL VOLTAGE (MVOLT)	VOLTAGE	PHASE	COMMENTS
EX	EXIT SIGN - BATTERY - ALUMINUM	DUAL-LITE	SE	UNIVERSAL		LED	1	0	ELECTRONIC	1	Yes	INTEGRAL-90 MINUTES-SELF-DIAGNOSTIC	NONE	BLACK WITH BRUSH ALUMINUM FACE, RED LETTERS	4 VA	Yes	120 V	1	
L1	SINGLE-HEAD DOWNLIGHT	SOLAIS	SAR11-1-OF-BK-BK-NFL-9-35-1600-UNV2	RECESSED	Yes	LED	1	1200	ELECTRONIC	1	No	NONE	0-10V	BLACK	16 VA	Yes	120 V	1	25 DEGREE BEAM
L3a	TRACK HEAD	SOLAIS	LCM-1-NFL-9-35-2000-XX-J	TRACK		LED	1	2000	ELECTRONIC	1	No	NONE	0-10V	TBD	19 VA	No	120 V	1	24 DEGREE BEAM
L3b	TRACK HEAD	SOLAIS	LCM-1-FL-9-35-2000-XX-J	TRACK		LED	1	2000	ELECTRONIC	1	No	NONE	0-10V	TBD	19 VA	No	120 V	1	40 DEGREE BEAM
L4	CYLINDER DOWNLIGHT	MAXILUME	FPR6-LED-2000-DIM10-120-MWD-35K-90-WH-BK	SURFACE	No	LED	1	2000	ELECTRONIC	1	No	NONE	0-10V	BLACK	21 VA	No	120 V	1	
L4-EM	CYLINDER DOWNLIGHT	MAXILUME	FPR6-LED-2000-DIM10-120-MWD-35K-90-EMG-LED-20W-WH-BK	SURFACE	No	LED	1	2000	ELECTRONIC	1	Yes	INTEGRAL-90 MINUTE	0-10V	BLACK	21 VA	No	120 V	1	
L5	ROUND PENDANT	CDS LIGHTING	TREND-P-LG-USV	PENDANT		LED	1	1100	ELECTRONIC	1	No	NONE	ELV	WHITE	12 VA	Yes	120 V	1	
L6	WALL SCONCE	RENWIL HOSPITALITY	TURTLE BAY	WALL	No	LED	1	1100	ELECTRONIC	1	No	NONE	ELV	WHITE	40 VA	Yes	120 V	1	BULB TBD
L7	SMALL CURVED PENDANT	LIGHTOLOGY	JYC63458	PENDANT		LED	1	1100	ELECTRONIC	1	No	NONE	ELV	CLEAR	40 VA	No	120 V	1	BULB NOT INCLUDED
L8	ROUND FIXED DOWNLIGHT	3G LIGHTING	3G-DL45RF	RECESSED	Yes	LED	1	4000	ELECTRONIC	1	No	NONE	0-10V	TBD	43 VA	Yes	120 V	1	
L9a	LED PANEL	LITHONIA	CPANL 2X4 AL06 SWW7 M2	SUSPENDED	No	LED	1	6000	ELECTRONIC	1	No	NONE	0-10V	WHITE	55 VA	Yes	120 V	1	MOUNT AT 10'-0" AFF
L9a-EM	LED PANEL	LITHONIA	FIXTURE: CPANL 2X4 AL06 SWW7 M2 BATTERY: ILB CP20 HE A	SUSPENDED	No	LED	1	6000	ELECTRONIC	1	Yes	INTEGRAL-90 MINUTE	0-10V	WHITE	55 VA	Yes	120 V	1	MOUNT AT 10'-0" AFF
L10	ROUND FIXED DOWNLIGHT	3G LIGHTING	3G-DL45RA-22-H90-35K-60D-UNV-DIM-BT-BI-XX-WL	RECESSED	Yes	LED	1	2200	ELECTRONIC	1	No	NONE	0-10V	BLACK	22 VA	Yes	120 V	1	60 DEGREE BEAM; WET LOCATION
L11	LED FLAT PANEL	ORACLE	24-FPL-BL-LED-3000L-DIM10-MVOLT-35K-85	RECESSED	No	LED	1	3000	ELECTRONIC	1	No	NONE	0-10V	WHITE	30 VA	Yes	120 V	1	
L11-EM	LED FLAT PANEL	ORACLE	24-FPL-BL-LED-3000L-DIM10-MVOLT-35K-85-0-EMG-LED-20W	RECESSED	No	LED	1	3000	ELECTRONIC	1	Yes	INTEGRAL-90 MINUTE	0-10V	WHITE	30 VA	Yes	120 V	1	
L12	LED FLAT PANEL	ORACLE	22-FPL-BL-LED-3000L-DIM10-MVOLT-35K-85	RECESSED	No	LED	1	3000	ELECTRONIC	1	No	NONE	0-10V	WHITE	30 VA	Yes	120 V	1	
L13	TRACK HEAD	JUNO	R600L G2 35K 80CRI PDIM FL WH	TRACK		LED	1	900	ELECTRONIC	1	No	NONE	ELV	WHITE	10 VA	Yes	120 V	1	FLOOD LENSE
L-9	LED PANEL	LITHONIA	CPX 2X4 XXXX 80CRI SWW7 SWL	T-BAR	No	LED	1	6032	ELECTRONIC	1	No	NONE	0-10V	WHITE	48 VA	Yes	120 V	1	
T	ONE CIRCUIT TRACK	JUNO	R-XFT-WH	SURFACE							No			WHITE	0 VA	Yes	120 V	1	



KEYED NOTES:

1. SEE SPECIFICATIONS FOR WALL PLATE MATERIAL, STYLE AND TYPE (TYPICAL).
2. SWITCHING DESIGNATION (TYPICAL).
3. TYPE OF SWITCH (TYPICAL).

GENERAL NOTES:

A. COORDINATE DIMMING TECHNOLOGY WITH LIGHTING PROVIDED PRIOR TO ORDERING.
B. WHEN DIFFERENT BRANCH CIRCUITS ARE PRESENT IN THE OUTLET BOX, PROVIDE A STEEL BARRIER TO SEPARATE CIRCUITS.

262726.00-01 - SWITCH BANK WALL PLATE DETAIL

SCALE: NONE

ELECTRIC CONTACTOR SCHEDULE

NOTES:
1) PROVIDE A MINIMUM OF (2) SPARE CONTACTS IN EACH CONTACTOR UNLESS NOTED OTHERWISE.
2) REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3) CONTACTOR DESIGNATIONS DO NOT INDICATE QUANTITY OF CONTACTORS, THEY INDICATE CONTACTOR GROUPING(S) AND COMMON CONTROL METHODS ONLY. PROVIDE QUANTITY OF CONTACTOR(S) NEEDED TO ACCOMMODATE NUMBER OF POLES SHOWN.

CONTROL ZONE DESCRIPTION & CONTACTOR CONTROL METHOD

C1 - SIGNAGE

C2 - DINING

C3 - FOOD PREP

SUPPLY	CIRCUIT NUMBER	NUMBER OF POLES	CONTACT CURRENT	LOAD NAME
C1				
LA	43	1	10 A	SIGNAGE | CONTINUOUS ORDERING 100
LA	47	1	10 A	SIGNAGE | CONTINUOUS SEATING 101
LA	45	1	10 A	SIGNAGE | CONTINUOUS ORDERING 100
C2				
LB	32	1	2 A	LTG 100,101
LB	34	1	2 A	LTG
LB	36	1	4 A	LTG 101,100
LB	17	1	2 A	LTG SEATING 101
LB	19	1	2 A	LTG 100,101
LB	21	1	1 A	TRACK LTG DINING
C3				
LB	23	1	3 A	LTG JIMMY JOHNS PREP 102
LB	42	1	1 A	LTG
LB	44	1	4 A	LTG 105,103,104,102
LB	25	1	1 A	TRACK LTG TROP PREP

LIGHTING CONTROL DESIGN INTENT

STOREFRONT SIGNAGE:
HARDWARE: LIGHTING CONTACTOR(S) AND TIMECLOCK.
CONTROL INTENT: STOREFRONT SIGNAGE SHALL TURN "ON" AND "OFF" BASED ON THE TIME SCHEDULE(S) PROGRAMMED INTO THE TIMECLOCK.

SALES AREA DISPLAY LIGHTS:
HARDWARE: WALL MOUNTED TOGGLE SWITCH, LIGHTING CONTACTOR AND TIMECLOCK.
CONTROL INTENT: DURING BUSINESS HOURS (HOURS PROGRAMMED INTO TIMECLOCK) THE SALES AREA DISPLAY LIGHTS AND TRACK LIGHTING SHALL TURN "ON" AND "OFF" BASED ON THE TIME SCHEDULE(S) PROGRAMMED INTO THE TIMECLOCK.
THE TIMER SWITCH SHALL OVERRIDE THE TIMECLOCK SCHEDULING (FOR A MAXIMUM OF 2-HOURS) AND ALLOW FOR AFTER HOURS CONTROL OF THE LIGHTING.

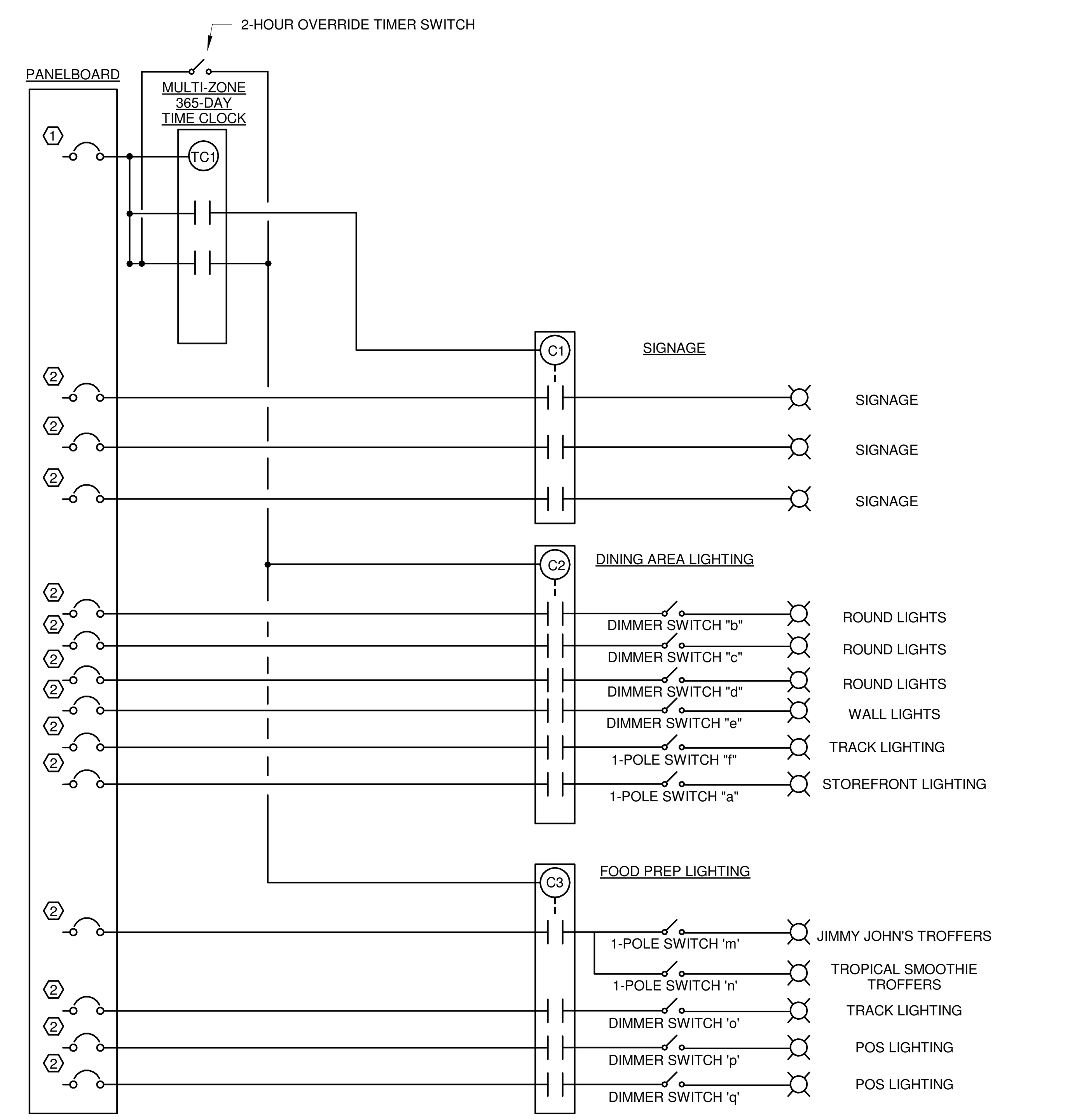
SALES AREA AND WAITING AREA GENERAL LIGHTING:
HARDWARE:WALL MOUNTED TOGGLE SWITCHES, LIGHTING CONTACTOR AND TIMECLOCK, TIMER SWITCH.
CONTROL INTENT: DURING BUSINESS HOURS (HOURS PROGRAMMED INTO TIMECLOCK) THE SALES AREA GENERAL LIGHTING AND WAITING AREA SHALL TURN "ON" AND "OFF" BASED ON THE TIME SCHEDULE(S) PROGRAMMED INTO THE TIMECLOCK.
THE TIMER SWITCH SHALL OVERRIDE THE TIMECLOCK SCHEDULING (FOR A MAXIMUM OF 2-HOURS) AND ALLOW FOR AFTER HOURS CONTROL OF THE LIGHTING. OCCUPANCY SENSORS SHALL OVERRIDE THE TIMECLOCK SCHEDULING FOR 15 MINUTES WHILE MOTION IS DETECTED IN SALES AND IN WAITING.

BACK OF HOUSE CEILING AND UNDERCABINET LIGHTS:
HARDWARE: MOMENTARY SWITCHES AND OCCUPANCY SENSORS.
CONTROL INTENT: OCCUPANCY SENSORS PROVIDE SHUT OFF CONTROL OF LIGHTING. MOMENTARY SWITCH PROVIDES MANUAL CONTROL.

KEYED NOTES:

1. PROVIDE TIME-BASED CONTROL FOR APPLICABLE CIRCUITS AS DEFINED ON TIMECLOCK SCHEDULE.
2. PROVIDE CONTACTOR CONTROL FOR APPLICABLE CIRCUITS AS DEFINED ON LIGHTING CONTACTOR SCHEDULE.

NOTE:
THE ONLY OCCUPANCY SENSOR CONTROL LIGHTING SHOWN ON THIS DETAIL IS THAT RELATED TO LABELED SWITCHES. OTHER ROOMS, WITH INTUITVE SWITCHING, ARE NOT SHOWN.



LIGHTING CONTROL DIAGRAM

SCALE: NONE

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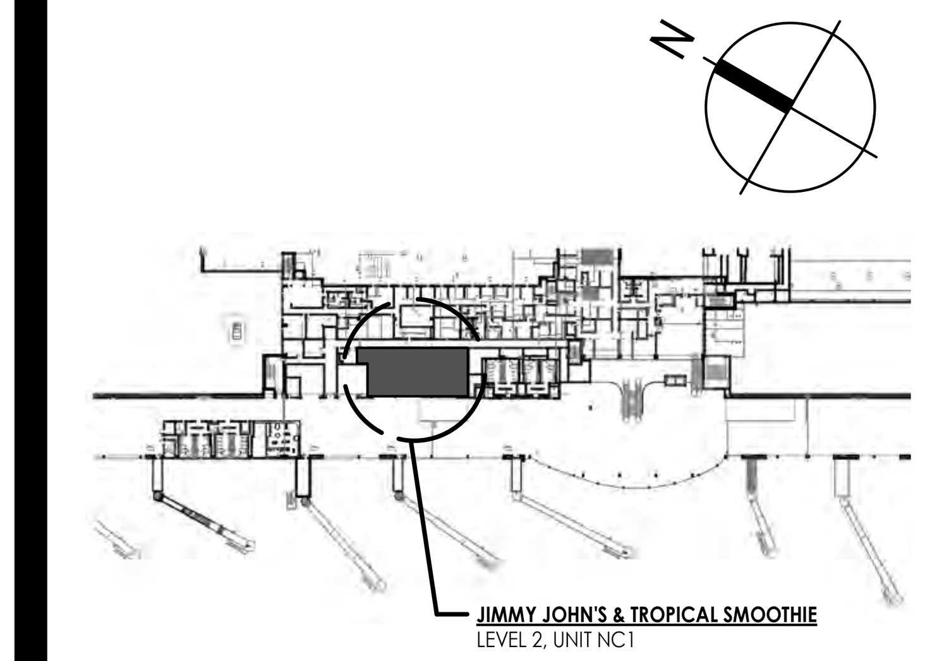

Revision	By	Appd	YYYY.MM.DD

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ISSUED FOR PERMIT	KLH	KLH	2024.12.27
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Dwn. Dsgn. Chkd. YYYY.MM.DD

Permit/Seal

FIRM LICENSE #C-4774
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035205 JAMES S. TAVERNELLI
12/27/2024

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

ELECTRIC LIGHTING - DETAILS AND SCHEDULES

Project No.

Scale
1/8" = 1'-0"

Revision

Drawing No.
E-103

ORIGINAL SHEET - ARCH D

ELECTRIC FIXTURE SCHEDULE

FIXTURE ID	DESCRIPTION	CONNECTION	LOAD CLASSIFICATION	ELECTRICAL DATA	PANEL	CIRCUIT NUMBER	COMMENTS	SPACE: NUMBER	SPACE: NAME
100	(GE) WALK-IN LIGHTING, ALARM, DOOR HEAT, AND HEAT TAPE	HARD-WIRED	Non-Continuous	120 V/1-180 VA	LB	28		105	SHARED BOH
100A	REFRIGERATOR EVAP	HARD-WIRED	Non-Continuous	120 V/1-108 VA	LB	38		105	SHARED BOH
102	(GE) WALK-IN LIGHTING, ALARM, DOOR HEAT, AND HEAT TAPE	HARD-WIRED	Non-Continuous	120 V/1-180 VA	LB	28		105	SHARED BOH
102A	FREEZER EVAP.	HARD-WIRED	Non-Continuous	208 V/2-104 VA	LB	14,16		105	SHARED BOH
104	(GE) WALK-IN LIGHTING, ALARM, DOOR HEAT, AND HEAT TAPE	HARD-WIRED	Non-Continuous	120 V/1-180 VA	LB	28		105	SHARED BOH
104A	FREEZER EVAP.	HARD-WIRED	Non-Continuous	208 V/2-104 VA	LB	14,16		105	SHARED BOH
106	(GE) WALK-IN LIGHTING, ALARM, DOOR HEAT, AND HEAT TAPE	HARD-WIRED	Non-Continuous	120 V/1-180 VA	LB	28		105	SHARED BOH
106A	REFRIGERATOR EVAP	HARD-WIRED	Non-Continuous	120 V/1-108 VA	LB	38		105	SHARED BOH
121	WAREWASHER	HARD-WIRED	Kitchen Equipment	208 V/2-4992 VA	LA	7,9		105	SHARED BOH
122	(G) BAG-N-BOX RACK W/ C02 TANKS	NEMA 5-15R	Kitchen Equipment	120 V/1-600 VA	LA	25		105	SHARED BOH
900	WALK-IN LIGHTING, ALARM, DOOR HEAT, AND HEAT TAPE	HARD-WIRED	Non-Continuous	120 V/1-180 VA	LC	11		108	BEERCODE / VINO VOLO / COFFEE STORAGE
900A	REFRIGERATOR EVAP	HARD-WIRED	Non-Continuous	120 V/1-108 VA	LC	9		108	BEERCODE / VINO VOLO / COFFEE STORAGE
901	WALK-IN LIGHTING, ALARM, DOOR HEAT, AND HEAT TAPE	HARD-WIRED	Non-Continuous	120 V/1-180 VA	LC	7		108	BEERCODE / VINO VOLO / COFFEE STORAGE
901A	FREEZER EVAP.	HARD-WIRED	Non-Continuous	120 V/1-104 VA	LC	5		108	BEERCODE / VINO VOLO / COFFEE STORAGE
CO9	CONVENIENCE OUTLET	NEMA 5-15R	Receptacle	120 V/1-180 VA	LA	2		105	SHARED BOH
CO10	CONVENIENCE OUTLET	NEMA 5-15R	Receptacle	120 V/1-180 VA	LA	2		105	SHARED BOH
CO11	(G)PRINTER WITH SHELF	NEMA 5-15R	Receptacle	120 V/1-180 VA	LA	2		105	SHARED BOH
CO12	CONVENIENCE OUTLET	NEMA 5-15R	Receptacle	120 V/1-180 VA	LA	31		105	SHARED BOH
CO13	(G)PRINTER WITH SHELF	NEMA 5-15R	Receptacle	120 V/1-180 VA	LA	2		105	SHARED BOH
TP.J-001	(G) POS TERMINAL	NEMA 5-20R	Kitchen Equipment	120 V/1-500 VA	LB	29		100	ORDERING

KEYED NOTES

E1	KCU AND CORRESPONDING DISCONNECT ON ROOF.
E2	USB RECEPTACLE MOUNTED IN MILLWORK.
E3	VERIFY LOCATIONS OF STORAGE COOLER/FREEZER EQUIPMENT WITH FOOD SERVICE DRAWINGS.
E4	PROVIDE POWER AND CONTROL WIRING, CONNECTIONS, ETC. FOR SIGNAGE. COORDINATE EXACT LOCATION, HEIGHT, AND ELECTRICAL REQUIREMENTS WITH SIGNAGE INSTALLER AND PROVIDE ELECTRICAL WORK ACCORDINGLY. WHERE THE SIGN IS NOT PROVIDED WITH AN INTEGRAL DISCONNECTING MEANS, PROVIDE FLUSH-MOUNTED, LOCAL DISCONNECT SWITCH INSTALLED IN A CONCEALED, BUT ACCESSIBLE, LOCATION WITHIN SITE OF THE SIGN. WHERE THIS IS NOT POSSIBLE, PROVIDE LOCK-OUT, TAG-OUT BREAKER IN SOURCE PANELBOARD IN LIEU OF LOCAL DISCONNECT SWITCH AND A LABEL INSIDE THE SIGN ENCLOSURE IDENTIFYING THE BREAKER'S LOCATION PER NEC 600.6(A)(2).
E5	RECEPTACLE MOUNTED ABOVE FREEZER/COOLER.
E6	TRANSFORMERS TO BE TRAPEZE MOUNTED ABOVE. COORDINATE WITH STRUCTURAL ENGINEER FOR EXACT MOUNTING SPECIFICATIONS PRIOR TO INSTALL.

GENERAL POWER PLAN NOTES

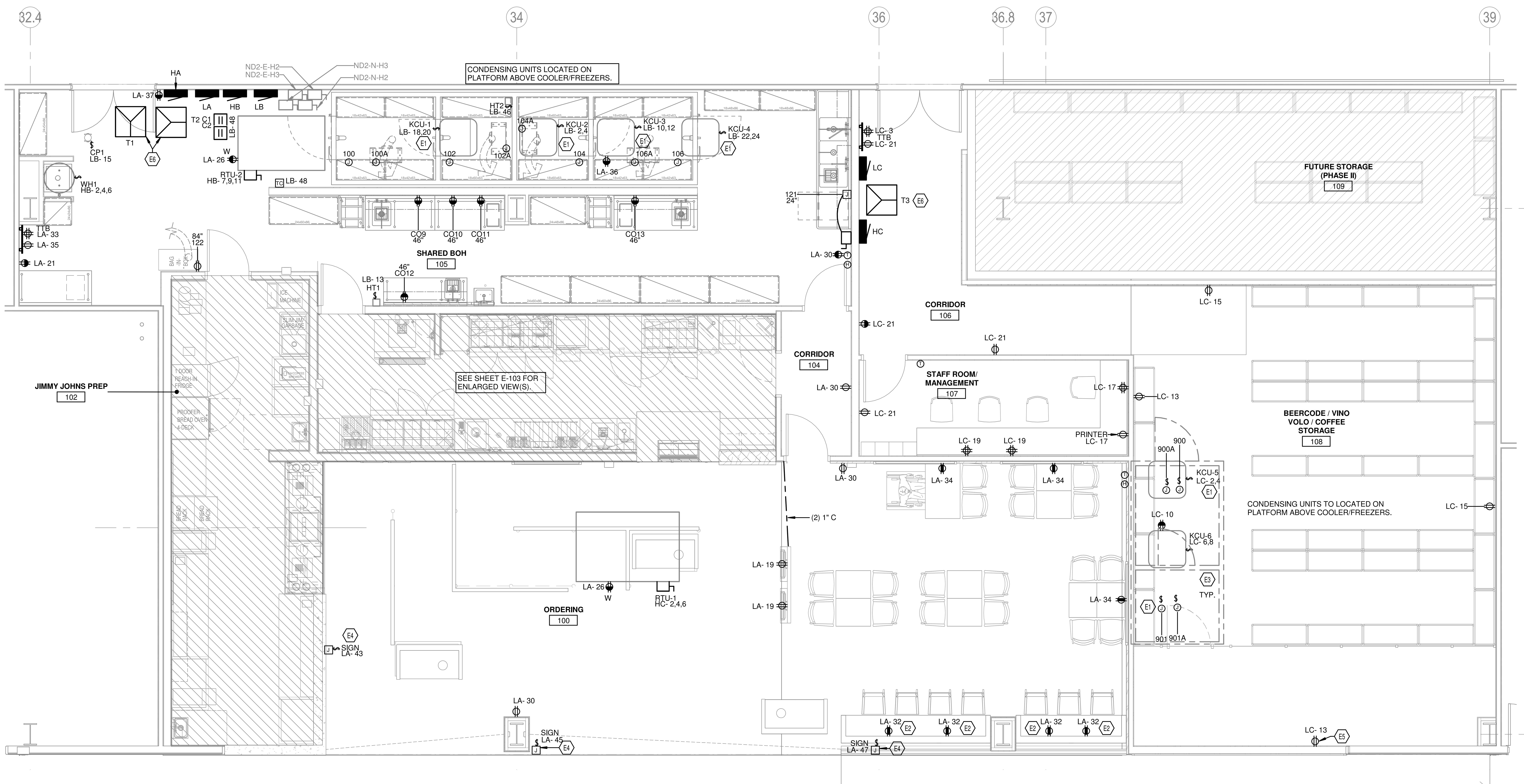
A. EQUIPMENT COORDINATION SCHEDULES: REFER TO EQUIPMENT COORDINATION SCHEDULES FOR REQUIREMENTS ASSOCIATED WITH EQUIPMENT CIRCUITING, CONNECTIONS, ANCILLARY DEVICES AND EQUIPMENT, ETC. COORDINATE LOCATIONS AND REQUIREMENTS FOR ALL EQUIPMENT WITH RESPECTIVE EQUIPMENT SUPPLIERS AND INSTALLERS PRIOR TO ORDERING ANY RELATED MATERIALS OR COMMENCING WITH ANY RELATED ROUGH-IN WORK.

B. TECHNOLOGY SYSTEMS: PROVIDE RACEWAY AND PATHWAY SYSTEMS FOR ALL TECHNOLOGY WORK. INCLUDE OUTLET BOXES, CONDUITS, RACEWAYS, J-HOOKS, CABLE TRAY, ETC. AS REQUIRED FOR COMPLETE OPERATIONAL SYSTEMS. COORDINATE ALL RELATED WORK (INCLUDING ASSOCIATED POWER) WITH OWNER (INCLUDING OWNER'S PROJECT MANAGER), FIELD CONDITIONS, FURNITURE INSTALLER(S), TECHNOLOGY INSTALLER(S) AND WORK OF OTHER TRADES AND SUPPLIERS/INSTALLERS AS APPLICABLE. TERMINATE ALL CONDUITS FROM OUTLET BOXES TO NEAREST ACCESSIBLE CEILING CAVITY, OR TO OVERHEAD STRUCTURAL SPACE FOR AREAS WITH NO CEILINGS. PROVIDE CONDUITS WITH SWEEP BENDS, PULL STRINGS, PLASTIC BUSHINGS AND IDENTIFICATION AT OVERHEAD ENDS. PROVIDE BLANK WALL PLATES TO MATCH WIRING DEVICE WALL PLATES.

C. STOREFRONT WINDOWS: INSTALL RECEPTACLE(S) INDICATED ABOVE STOREFRONT WINDOWS WITHIN 18 INCHES OF THE TOP OF STOREFRONT WINDOWS, AND INSTALL COMPLIANT WITH NEC, INCLUDING ARTICLE 210.62.

D. TRIM AND DOOR FINISHES: PROVIDE FACTORY-PAINTED OR FIELD-PAINTED TRIMS AND DOORS TO MATCH WALL FINISH COLOR FOR ALL PANELBOARDS AND SIMILAR EQUIPMENT THAT ARE INSTALLED RECESSED IN FINISHED WALLS. IF FIELD-PAINTED, PAINT ALL SIDES AND EDGES WITH TWO COATS OF PAINT BEFORE INSTALLATION, AND LET DRY BEFORE INSTALLING THEM. ENSURE THAT NO COMPONENTS ARE (DOORS, LATCHES, SCREWS, ETC.) ARE "PAINTED SHUT".

E. SIGNAGE: COORDINATE ALL SIGNAGE REQUIREMENTS WITH OWNER (INCLUDING OWNER'S PROJECT MANAGER), SIGNAGE SUPPLIERS AND INSTALLERS, AND ARCHITECT TO DETERMINE SPECIFICS REGARDING LOCATIONS, POWER, CONTROL, AND OTHER PERTINENT INFORMATION. PROVIDE POWER (ON DEDICATED CIRCUIT(S)) FOR SIGNAGE REQUIRING POWER CONNECTIONS. PROVIDE PHOTOCELL AND TIME-BASED CONTROL, CONFIGURED AS DIRECTED BY OWNER. PROVIDE ALL ELECTRICAL WORK, INCLUDING DISCONNECTING MEANS, COMPLIANT WITH ARTICLE 600 OF NFPA 70. COMPLY WITH LANDLORD REQUIREMENTS WHERE APPLICABLE.



1 ELECTRIC POWER LEVEL 2 NORTH CONCOURSE PLAN
1/4" = 1'-0"

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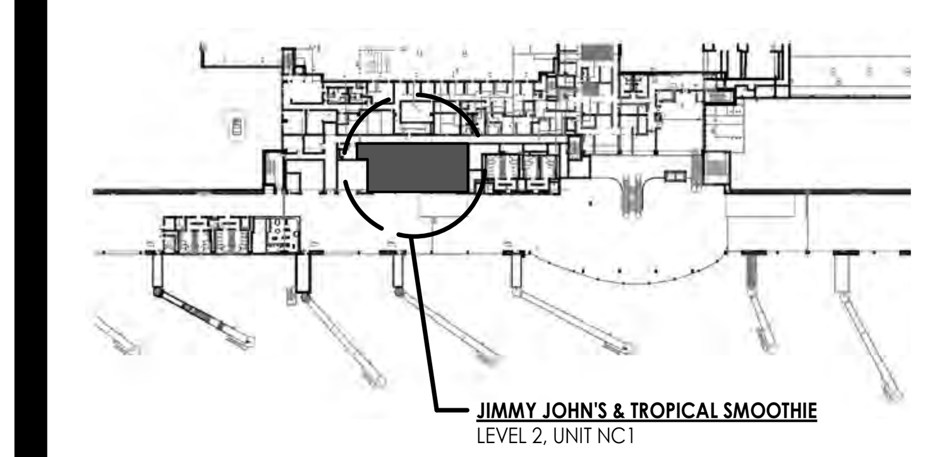

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Permit/Seal

FIRM LICENSE #C-4774
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035205 J. S. TAVERNELL
12/27/2024

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

ELECTRIC POWER PLAN

Project No.

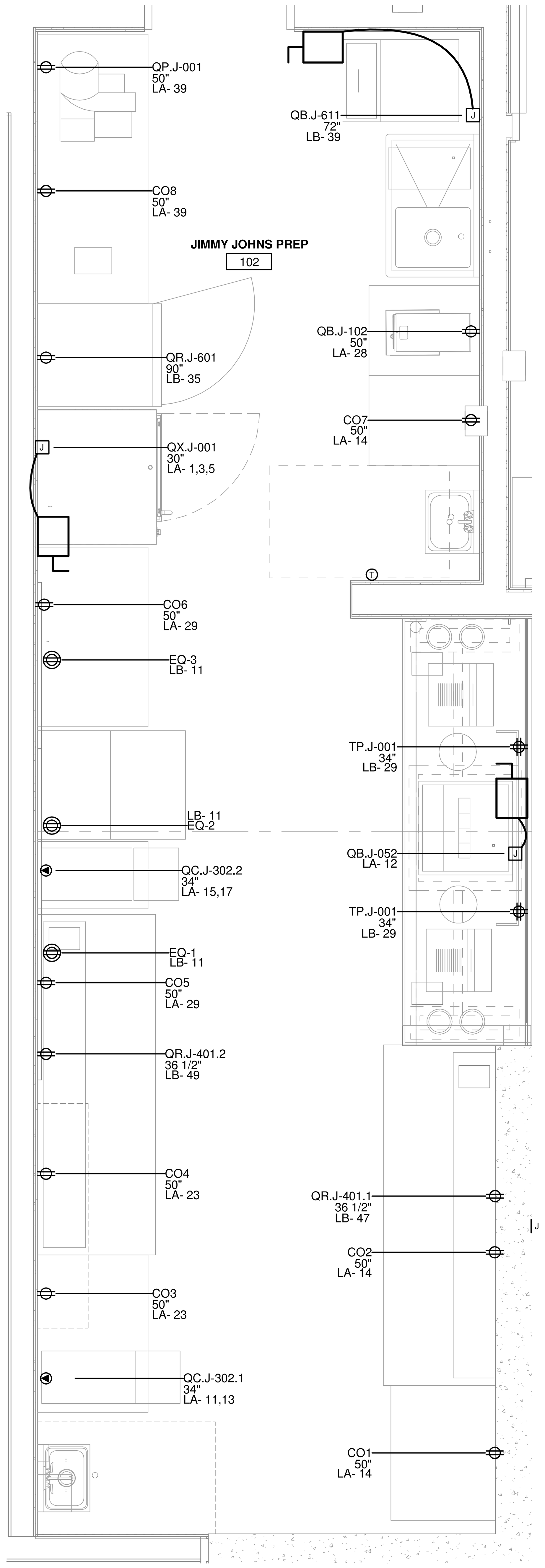
Scale
As indicated

Revision

Drawing No.
E-201

ORIGINAL SHEET - ARCH D

1	2	3	4	5



1 ELECTRIC POWER LEVEL 2 NORTH CONCOURSE PLAN
1/2" = 1'-0"

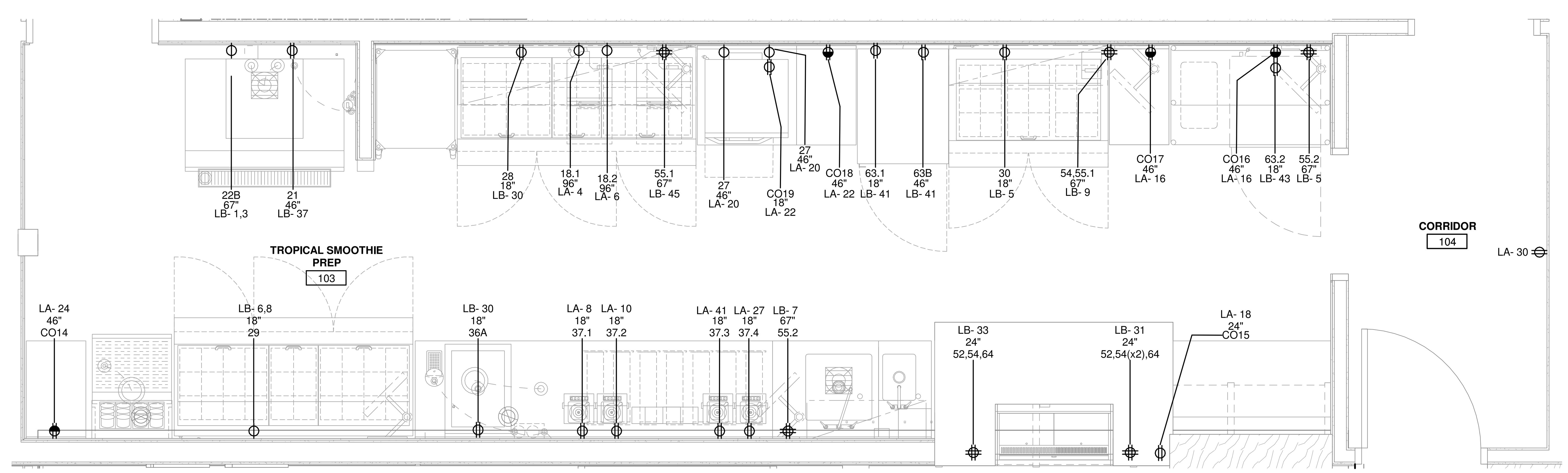
ELECTRIC FIXTURE SCHEDULE - JIMMY JOHNS

Fixture ID	KLH Breaker Description	Connection	LOAD CLASSIFICATION	ELECTRICAL DATA	PANEL	CIRCUIT NUMBER	COMMENTS
CO1	(G) CONVENIENCE OUTLET	NEMA 5-15	Receptacle	120 V/1-180 VA	LA	14	
CO2	(G) CONVENIENCE OUTLET	NEMA 5-15	Receptacle	120 V/1-180 VA	LA	14	
CO3	(G) CONVENIENCE OUTLET	NEMA 5-15	Receptacle	120 V/1-180 VA	LA	23	
CO4	(G) CONVENIENCE OUTLET	NEMA 5-15	Receptacle	120 V/1-180 VA	LA	23	
CO5	(G) CONVENIENCE OUTLET	NEMA 5-15	Receptacle	120 V/1-180 VA	LA	29	
CO6	(G) CONVENIENCE OUTLET	NEMA 5-15	Receptacle	120 V/1-180 VA	LA	29	
CO7	(G) CONVENIENCE OUTLET	NEMA 5-15	Receptacle	120 V/1-180 VA	LA	14	
CO8	(G) CONVENIENCE OUTLET	NEMA 5-15	Receptacle	120 V/1-180 VA	LA	39	
EQ-1	(G) DIGITAL MENU BOARD	NEMA 5-15	Continuous	120 V/1-300 VA	LB	11	
EQ-2	(G) DIGITAL MENU BOARD	NEMA 5-15	Continuous	120 V/1-300 VA	LB	11	
EQ-3	(G) DIGITAL MENU BOARD	NEMA 5-15	Continuous	120 V/1-300 VA	LB	11	
QB.J-052	ICE DRINK DISPENSER	HARD-WIRED	Kitchen Equipment	120 V/1-360 VA	LA	12	
QB.J-102	(G) ICED TEA BREWER	NEMA 5-15R	Kitchen Equipment	120 V/1-1728 VA	LA	28	
QB.J-611	ICE MAKER AND STORAGE BIN	HARD-WIRED	Kitchen Equipment	120 V/1-1152 VA	LB	39	
QC.J-302.1	(G)HIGH SPEED OVEN	NEMA 6-30R	Kitchen Equipment	208 V/2-6000 VA	LA	11,13	
QC.J-302.2	(G)HIGH SPEED OVEN	NEMA 6-30R	Kitchen Equipment	208 V/2-6000 VA	LA	15,17	
QP.J-001	(G) MANUAL HEAVY DUTY SLICER	NEMA 5-20R	Kitchen Equipment	120 V/1-312 VA	LA	39	
QR.J-401.1	(G) REFRIGERATED PREP TABLE	NEMA 5-15R	Kitchen Equipment	120 V/1-1150 VA	LB	47	
QR.J-401.2	(G) REFRIGERATED PREP TABLE	NEMA 5-15R	Kitchen Equipment	120 V/1-1150 VA	LB	49	
QX.J-001	FIVE DECK OVEN/PROOFER COMBO	HARD-WIRED	Kitchen Equipment	208 V/3-9810 VA	LA	1,3,5	

ELECTRIC FIXTURE SCHEDULE - TROPICAL SMOOTHIE

FIXTURE ID	DESCRIPTION	CONNECTION	LOAD CLASSIFICATION	ELECTRICAL DATA	PANEL	CIRCUIT NUMBER	COMMENTS
18.1	(G)ON CUE OVEN	NEMA 5-15	Kitchen Equipment	120 V/1-960 VA	LA	4	
18.2	(G)ON CUE OVEN	NEMA 5-15	Kitchen Equipment	120 V/1-960 VA	LA	6	
21	(G)ICE MAKER W/ BIN	NEMA 5-15	Kitchen Equipment	120 V/1-372 VA	LB	37	
22B	(G)ICE MACHINE TREATMENT SYSTEM	NEMA 6-20	Kitchen Equipment	208 V/2-3100 VA	LB	1,3	
27	(G)MICROWAVE CONVECTION OVEN	NEMA 5-15	Kitchen Equipment	120 V/1-14 VA	LA	20	
28	(G)REFRIGERATED PREP TABLE, 30 PAN	NEMA 6-30	Kitchen Equipment	120 V/1-180 VA	LB	30	
29	(G)REFRIGERATED PREP TABLE, 30 PAN	NEMA 6-30	Kitchen Equipment	208 V/2-5700 VA	LB	6,8	
30	(G)REFRIGERATED PREP TABLE, 18 PAN	NEMA 5-15	Kitchen Equipment	120 V/1-1440 VA	LB	5	
37.1	(G)BLENDER, BAR TYPE	NEMA 5-15	Kitchen Equipment	120 V/1-1440 VA	LA	8	
37.2	(G)BLENDER, BAR TYPE	NEMA 5-15	Kitchen Equipment	120 V/1-1440 VA	LA	10	
37.3	(G)BLENDER, BAR TYPE	NEMA 5-15	Kitchen Equipment	120 V/1-1440 VA	LA	41	
37.4	(G)BLENDER, BAR TYPE	NEMA 5-15	Kitchen Equipment	120 V/1-1440 VA	LA	27	
42	(G) REFRIGERATOR, GRAB-N-GO	NEMA 5-15	Receptacle	120 V/1-1800 VA	LB	26	
52,54(x2),64	(G)POS TERMINAL, PRINTER (x2), AND EMV CARD READER	NEMA 5-15	Non-Continuous	120 V/1-557 VA	LB	31	
52,54,64	(G)POS TERMINAL, PRINTER, AND EMV CARD READER	NEMA 5-15	Non-Continuous	120 V/1-527 VA	LB	33	
54,55.1	(G) KDS MONITOR AND PRINTER	NEMA 5-15	Non-Continuous	120 V/1-90 VA	LB	9	
55.1	(G)KDS MONITOR	NEMA 5-15	Non-Continuous	120 V/1-60 VA	LB	45	
55.2	(G) KDS MONITOR	NEMA 5-15	Non-Continuous	120 V/1-60 VA	LB	<varies>	
63.1	(G)UNDERCOUNTER REFRIGERATOR	NEMA 5-15	Kitchen Equipment	120 V/1-540 VA	LB	41	
63.2	(G)UNDERCOUNTER REFRIGERATOR	NEMA 5-15	Kitchen Equipment	120 V/1-540 VA	LB	43	
63B	(G)UNDERCOUNTER REFRIGERATOR	NEMA 5-15	Kitchen Equipment	120 V/1-540 VA	LB	41	
CO14	CONVENIENCE OUTLET	NEMA 5-15	Receptacle	120 V/1-180 VA	LA	24	
CO15	(G) CONVENIENCE OUTLET	NEMA 5-15	Receptacle	120 V/1-180 VA	LA	18	
CO16	CONVENIENCE OUTLET	NEMA 5-15	Receptacle	120 V/1-180 VA	LA	16	
CO17	CONVENIENCE OUTLET	NEMA 5-15	Receptacle	120 V/1-180 VA	LA	16	
CO18	CONVENIENCE OUTLET	NEMA 5-15	Receptacle	120 V/1-180 VA	LA	22	
CO19	(G) CONVENIENCE OUTLET	NEMA 5-15	Receptacle	120 V/1-180 VA	LA	22	

KEYED NOTES



2 ELECTRIC POWER LEVEL 2 NORTH CONCOURSE PLAN
1/2" = 1'-0"

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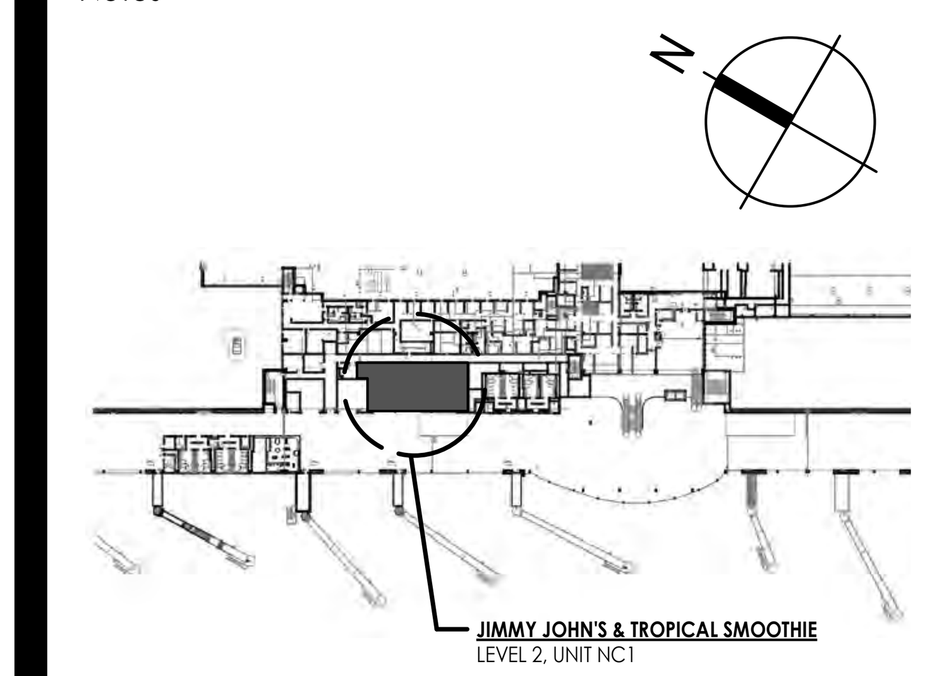
Notes



Revision	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	KLH	KLH	2024.12.27
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Permit/Seal

FIRM LICENSE #C-4774
NORTH CAROLINA PROFESSIONAL SEAL 035205 ENGINEER JAMES S. TAVERNELL
12/27/2024

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

ELECTRIC ENLARGED POWER PLAN

Project No.	Scale 1/2" = 1'-0"
Revision	Drawing No. E-202

Autodesk Docs://14402407_JIMMY_JOHNS_TROPICAL_SMOOTHIE_CAFE/26847.00-23-MEP-Jimmy Johns Tropical Smoothie - AVL.rvt

12/27/2024 2:29:18 PM

ORIGINAL SHEET - ARCH D

KEYED NOTES

T1	SPEAKER DEDICATED TO SECURITY SYSTEM
T2	STROBE DEDICATED TO SECURITY SYSTEM
T3	DATA MOUNTED IN MILLWORK

GENERAL NOTES:

A. NOTHING SET FORTH IN THESE DRAWINGS SHALL RELEASE ANY CONTRACTOR FROM HIS RESPONSIBILITY TO PROVIDE APPROPRIATE QUANTITIES, FIELD MEASUREMENTS, DIMENSIONAL STABILITY, INSTALLATION, ANCHORAGE, AND COORDINATION WITH OTHER TRADES; OR RELEASE HIM FROM HIS RESPONSIBILITY TO IDENTIFY AND RESOLVE DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, OR FREE HIM OF HIS RESPONSIBILITY TO ALERT DESIGNER TO ERRORS OR OMISSIONS.

B. CONTRACTOR SHALL UTILIZE THESE DRAWINGS IN CONJUNCTION WITH THE SPECIFICATIONS TO DETERMINE THE FULL SCOPE, INTENT AND REQUIREMENTS OF THE PROJECT. SPECIFICATIONS AND DRAWINGS ARE INTENDED TO BE COMPLEMENTARY, NOT MUTUALLY EXCLUSIVE. WORK SHOWN ON THE DRAWINGS BUT NOT LISTED IN THE SPECIFICATIONS, AND WORK DESCRIBED IN THE SPECIFICATIONS BUT NOT SHOWN ON THE DRAWINGS SHALL BE INTERPRETED AS THOUGH WORK WERE FULLY DESCRIBED IN BOTH PLACES. THE HIGHER QUANTITY, HIGHER QUALITY, MORE LABOR INTENSIVE AND OVERALL MORE STRINGENT AND MORE COSTLY REQUIREMENT SHALL APPLY UNLESS OTHERWISE CLARIFIED IN WRITING PRIOR TO BID.

C. EACH CONTRACTOR SHALL VERIFY IN THE FIELD ALL EXISTING APPLICABLE CONDITIONS AND DIMENSIONS SHOWN ON THE DRAWINGS AND AS PERTINENT TO THE INTENT OF THESE DRAWINGS. ANY DISCREPANCY DISCOVERED SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER PRIOR TO THE COMMENCEMENT OF ANY WORK AFFECTED BY, OR RELATED TO, SUCH DISCREPANCY. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH, OR CAUSED BY HIS FAILURE TO COMPLY WITH THIS REQUIREMENT.

D. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR JOB CLEANLINESS. PROJECT AREAS SHALL BE THOROUGHLY CLEANED AND TRASH DISPOSED OF AT THE END OF EACH WORK DAY. OWNER'S FACILITIES SHALL NOT BE USED FOR WASTE DISPOSAL.

E. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL SURFACES AND FINISHES IN THE INTERIOR OR EXTERIOR OF THE FACILITY. DAMAGED SURFACES OR FINISHES RESULTING FROM THE PERFORMANCE OF THE WORK OR NEGLIGENCE SHALL BE REPAIRED AT NO COST TO THE OWNER AND BE MADE TO MATCH THE EXISTING FINISHES OR SURFACES TO THE SATISFACTION OF THE OWNER.

F. FOR COORDINATION PURPOSES, OCCASSIONALLY AN ITEM OF WORK WILL BE SHOWN ON THE E SERIES DRAWINGS AND THE T SERIES DRAWINGS. IN ADDITION, THE SAME WORK MAY BE INCLUDED ON MULTIPLE T SERIES DETAIL SHEETS FOR SIMILAR REASONS.

G. FOR MULTI-PHASED PROJECTS. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITY SERVICES AND BUILDING SYSTEMS. THE CONTRACTOR SHALL COORDINATE WITH THE OWNERS IT REPRESENTATIVE AS NECESSARY TO ALLOW FOR OPERATION ACCEPTABLE TO THE OWNER DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE TEMPORARY WIRING AS NECESSARY.

H. PROVIDE DUST PROTECTION WHEN WORKING IN EXISTING FACILITIES. SEAL OFF ALL WORK AREAS FROM REMAINDER OF THE EXISTING FACILITY.

GENERAL CABLING NOTES:

A. PLENUM CABLE REQUIRED. ALL CABLE THAT WILL NOT BE INSTALLED IN A FULLY ENCLOSED CONDUIT SYSTEM SHALL BE RATED FOR INSTALLATION WITHIN A RETURN AIR PLENUM.

B. ALL INSTALLED CABLING SHALL BE CONTINUOUS AND WITHOUT SPLICES, EXCEPT WHERE OTHERWISE NOTED.

C. COLORS OF CABLING USED FOR ALL TECHNOLOGY WORK SHALL BE REVIEWED AND APPROVED PRIOR TO PROCUREMENT AND INSTALLATION.

GENERAL ROUGH-IN AND PATHWAY NOTES:

A. PROVIDE PATHWAYS FOR COMMUNICATIONS AND SECURITY SYTEMS CABLING. REFER TO SECTIONS "PATHWAYS FOR COMMUNICATIONS".

B. ROUGH-IN/PATHWAYS SHALL BE CLOSELY REVIEWED AND COORDINATED PRIOR TO INSTALLATION. IT IS THE RESPONSIBILITY OF THE ROUGH-IN PROVIDER TO THROUGHLY REVIEW AND UNDERSTAND THE REQUIREMENTS OF THE SYSTEMS THAT WILL USE THE PATHWAYS.

C. WHERE CONDUITS ARE SPECIFIED "TAAC" (TO ABOVE ACCESSIBLE CEILING) THIS SHALL MEAN THAT CONDUITS SHALL BE STUBBED INTO AN ACCESSIBLE CEILING CAVITY WITHIN THE SAME ROOM AS THE DEVICE THE CONDUIT SERVES.

D. WHERE DEVICE CONDUITS ARE SPECIFIED "TAHC" (TO ABOVE ACCESSIBLE HALLWAY/CORRIDOR CEILING) THIS SHALL MEAN THAT CONDUITS SHALL BE RUN CONTINUOUS AND STUBBED OUT INTO AN ACCESSIBLE CEILING CAVITY WITHIN THE NEAREST CORRIDOR FEATURING AN ACCESSIBLE CEILING CAVITY.

E. CONDUIT INSTALLER SHALL INSTALL PULL STRINGS IN ALL CONDUITS IMMEDIATELY AFTER INSTALLATION.

F. WHERE CONDUIT IS SHOWN AND/OR SPECIFIED, PROVIDE PULL BOXES SHOWN ON THE DRAWINGS PLUS ADDITIONAL PULL BOXES FOR EVERY 180 DEGREES OF CONDUIT BEND AND 100 FEET OF CONDUIT.

G. PROVIDE COVER PLATES FOR JUNCTION AND PULL BOXES. COORDINATE MATERIAL AND FINISH OF BLANK PLATES TO MATCH SURROUNDING PLATES.

H. WHERE A MOUNTING HEIGHT MEASUREMENT IS APPLIED TO A ROUGH-IN, THE MEASUREMENT SHALL BE REFERENCED TO THE CENTER OF THE ROUGH-IN DEVICE.

I. PATHWAYS SHALL BE INSTALLED IN A CONCEALED MANNER. EXPOSED CONDUIT SHALL NOT BE PERMITTED IN FINISHED AREAS.

J. PROVIDE CODE-COMPLIANT FIRE-STOPPING FOR PATHWAYS THROUGH FIRE-RATED WALLS, FLOORS AND CEILINGS.

K. PROVIDE CONDUITS WITH NYLON END-BUSHINGS. INSTALL BUSHINGS AT THE END OF EACH CONDUIT AND EACH ADDITIONAL LOCATION WHERE CABLES COULD BE DAMAGED WHEN PULLING THEM THROUGH THE CONDUIT.

L. DEVICES TO BE INSTALLED AT COUNTER HEIGHT, CASEWORK OR FURNITURE SHALL BE CLOSELY COORDINATED IN THE FIELD WITH ARCHITECT, CASEWORK AND FURNITURE VENDORS PRIOR TO ROUGH-IN.

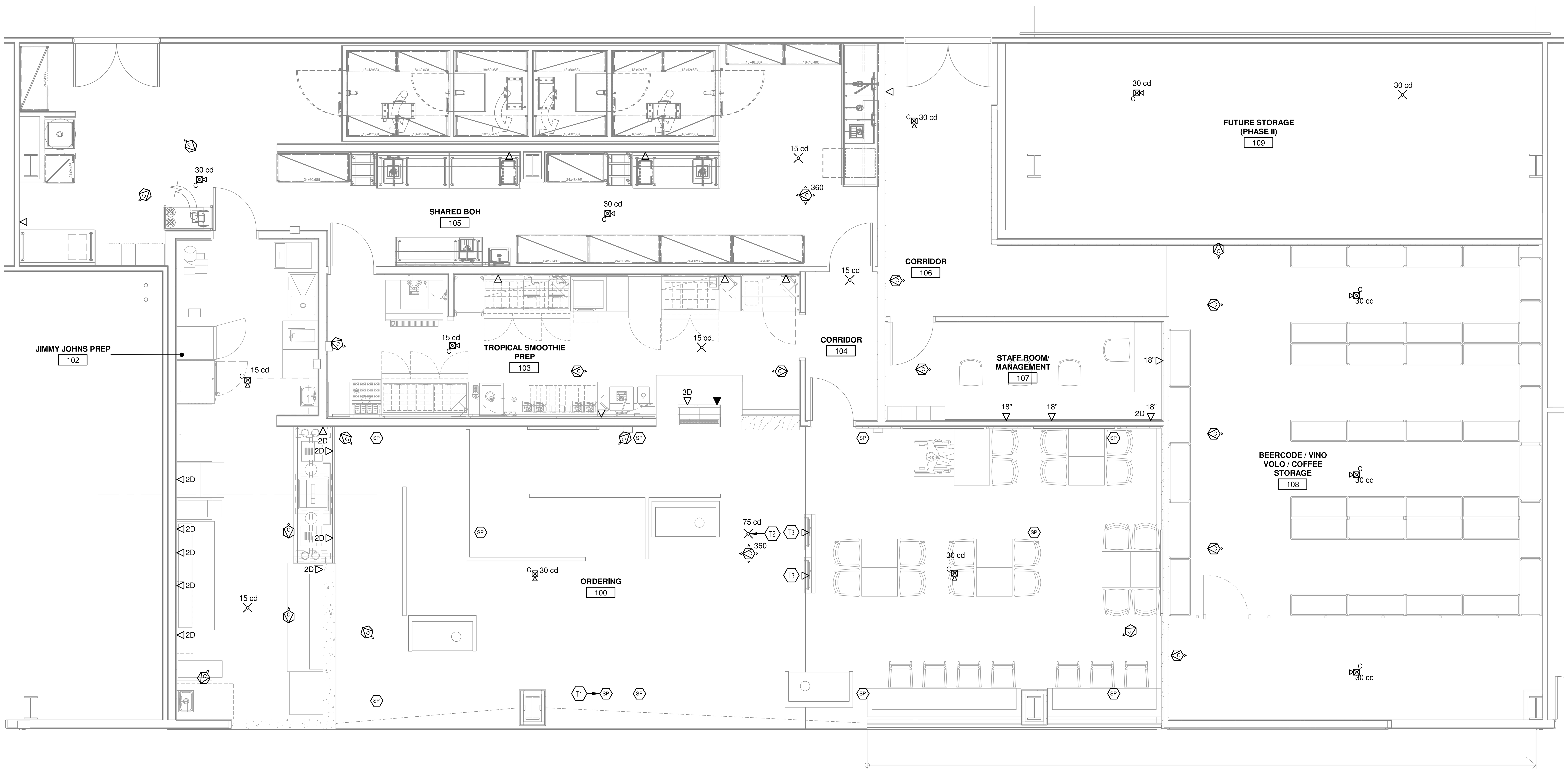
M. WHERE FLOORBOXES, POWER POLES AND OTHER DUAL SERVICE PATHWAYS ARE INDICATED ON THE DRAWINGS. PATHWAY DEVICES SHALL BE PROVIDED BY THE EC. SEE ELECTRIC DRAWINGS FOR REQUIREMENTS AND ADDITIONAL INFORMATION.

N. MANY COMMUNICATIONS DEVICES ARE INTENDED TO HAVE ADJACENT POWER OR INTEGRAL RECEPTACLES (MULTI-SERVICE) TO SERVE THE SAME EQUIPMENT. COORDINATE THE LOCATION OF SEPARATE DEVICES SO THAT THEY ARE LOCATED ADJACENT AND AT THE SAME ELEVATION. FACEPLATES SHALL BE COORDINATED TO THE SAME TYPE AND COLOR.

O. CONDUITS STUBBED INTO THE CEILING CAVITY SHALL BE MARKED WITH AN INDELIBLE MARKER INDICATING THE CONDUIT'S INTENDED USE. MARK CONDUIT WITHIN SIX INCHES OF THE CONDUIT BUSHING SO AS TO BE READABLE FROM BELOW.

P. LADDER RACK AND OTHER COMMUNICATION TECHNOLOGY CABLING PATHWAYS DEPICTED ON THE ENLARGED FLOOR PLANS SHALL BE PROVIDED AS INDICATED. ADDITIONAL PRODUCTS NECESSARY FOR PROFESSIONAL WIRE MANAGEMENT WITHIN THE MAIN EQUIPMENT ROOM <ER> AND ALL TELECOMMUNICATION ROOMS <TR> SHALL BE ALSO BE PROVIDED AS NECESSARY.

Q. PROVIDE A MINIMUM OF ONE (1) 2-INCH DIAMETER THROUGH-THE-WALL CONDUIT SLEEVES FOR USE AS COMMUNICATION AND SECURITY CABLE PATHWAYS INTO EACH SPACE CONTAINING COMMUNICATION AND SECURITY DEVICES. ROUTE CONDUITS FROM ABOVE ACCESSIBLE CEILING TO THE NEAREST HALLWAY/CORRIDOR FEATURING AN ACCESSIBLE CEILING CAVITY.



1 ELECTRIC TECHNOLOGY PLAN
1/4" = 1'-0"

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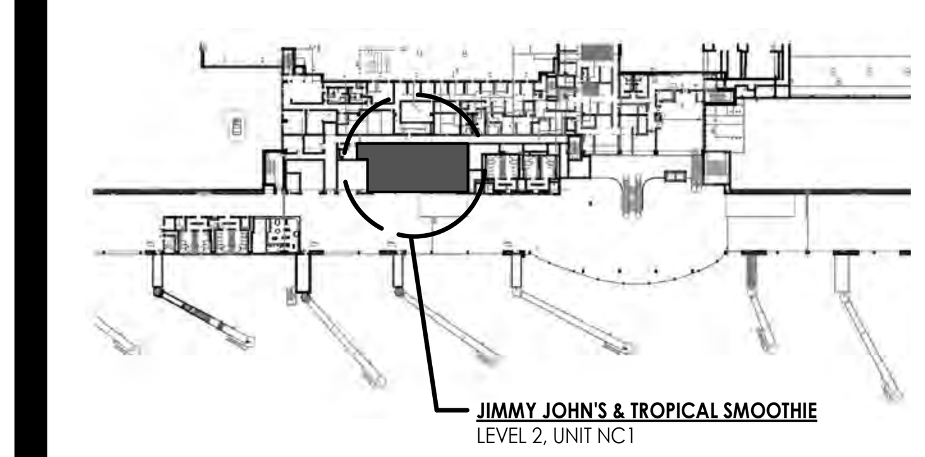

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Permit/Seal
FIRM LICENSE #C-4774
NORTH CAROLINA PROFESSIONAL SEAL 035205 ENGINEER JAMES S. TAVERNELLI
12/27/2024

Client/Project Logo
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LEVEL 2 CONCOURSE, UNIT NC1
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61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title
ELECTRIC TECHNOLOGY PLAN

Project No.

Scale
As indicated

Revision

Drawing No.
E-301

ELECTRIC PANELBOARD AND SWITCHBOARD SCHEDULE

TYPICAL EQUIPMENT NAME NOMENCLATURE:
1 - POWER DISTRIBUTION SYSTEM (BLANK - NORMAL, E - EMERGENCY, S - STANDBY, L - LIFE SAFETY)
2 - DESCRIPTION (H - 480Y/277V, L - 208Y/120V)
3 - FLOOR / LEVEL
4 - SEQUENCE

ALL ALUMINUM BUSSING SHALL BE TIN-PLATED. ALL COPPER BUSSING SHALL BE EITHER TIN-PLATED OR SILVER-PLATED

EQUIPMENT	PHASE	SPACE NUMBER	SPACE NAME	SUPPLY FROM	POWER BRANCH	TYPE	VOLTAGE	PHASE	WIRES	DEMAND (kVA)	DEMAND (A)	MAINS RATING (A)	MAINS FRAME RATING (A)	MAINS TYPE	BUSSING (PLATED)	MOUNTING	FEEDER	LUGS TYPE	SPD	ULSE	GEC	ENCLOSURE TYPE	FAULT CURRENT (A)	SHORT CIRCUIT RATING (A)	NOTES
HA	New Construction	105	SHARED BOH	ND2-N-H3	NORMAL	Branch Panelboard	480	3	4	36082 VA	43 A	100	100	MAIN LUGS ONLY	COPPER OR ALUMINUM	SURFACE	(4) #3 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED					NEMA 1	5964	14000	
HB	New Construction	105	SHARED BOH	ND2-E-H3	OPTIONAL STANDBY	Branch Panelboard	480	3	4	58946 VA	71 A	100	100	MAIN LUGS ONLY	COPPER OR ALUMINUM	SURFACE	(4) #3 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED					NEMA 1	6341	14000	
HC	New Construction	106	CORRIDOR	ND2-E-H2	OPTIONAL STANDBY	Branch Panelboard	480	3	4	39880 VA	48 A	100	100	MAIN LUGS ONLY	COPPER OR ALUMINUM	SURFACE	(4) #3 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED					NEMA 1	4488	14000	
LA	New Construction	105	SHARED BOH	T1	NORMAL	Branch Panelboard	208	3	4	36082 VA	100 A	150	150	THERMAL MAGNETIC	COPPER OR ALUMINUM	SURFACE	(4) #1/0 AWG CU, (1) #6 AWG CU GND. IN 2" CONDUIT 75C RATED					NEMA 1	4460	10000	
LB	New Construction	105	SHARED BOH	T2	OPTIONAL STANDBY	Branch Panelboard	208	3	4	39685 VA	110 A	150	150	THERMAL MAGNETIC	COPPER OR ALUMINUM	SURFACE	(4) #1/0 AWG CU, (1) #6 AWG CU GND. IN 2" CONDUIT 75C RATED					NEMA 1	4520	10000	
LC	New Construction	106	CORRIDOR	T3	OPTIONAL STANDBY	Branch Panelboard	208	3	4	12804 VA	36 A	150	150	THERMAL MAGNETIC	COPPER OR ALUMINUM	SURFACE	(4) #1/0 AWG CU, (1) #6 AWG CU GND. IN 2" CONDUIT 75C RATED					NEMA 1	4114	10000	

ELECTRIC TRANSFORMER SCHEDULE

TYPICAL EQUIPMENT NAME NOMENCLATURE:
1 - POWER DISTRIBUTION SYSTEM (BLANK - NORMAL, E - EMERGENCY, S - STANDBY, L - LIFE SAFETY)
2 - DESCRIPTION (H - 480Y/277V, L - 208Y/120V)
3 - FLOOR / LEVEL
4 - SEQUENCE

GENERAL TRANSFORMER NOTES:
A. FOR FLOOR-MOUNTED TRANSFORMERS, PROVIDE PERMANENT MARKING ON TRANSFORMER THAT READS "STORING ITEMS ON TOP OF TRANSFORMER IS PROHIBITED."

EQUIPMENT	PHASE	SPACE NUMBER	SPACE NAME	SUPPLY FROM	TYPE	RATING	DEMAND	PRIMARY VOLTAGE	PRIMARY WIRES	SECONDARY VOLTAGE	SECONDARY WIRES	WINDINGS	ENCLOSURE TYPE	MOUNTING	NOTES
T1	New Construction	105	SHARED BOH	HA	Dry Type Transformers	45.0 kVA	36.1 kVA	480 V	3	208	4	COPPER OR ALUMINUM	NEMA 1	OVERHEAD	TRAPEZE MOUNTED ABOVE PANELBOARDS. COORDINATE INSTALLATION WITH STRUCTURAL ENGINEER AND AIRPORT REPRESENTATIVE.
T2	New Construction	105	SHARED BOH	HB	Dry Type Transformers	45.0 kVA	39.7 kVA	480 V	3	208	4	COPPER OR ALUMINUM	NEMA 1	OVERHEAD	TRAPEZE MOUNTED ABOVE PANELBOARDS. COORDINATE INSTALLATION WITH STRUCTURAL ENGINEER AND AIRPORT REPRESENTATIVE.
T3	New Construction	106	CORRIDOR	HC	Dry Type Transformers	45.0 kVA	12.8 kVA	480 V	3	208	4	COPPER OR ALUMINUM	NEMA 1	OVERHEAD	TRAPEZE MOUNTED ABOVE PANELBOARDS. COORDINATE INSTALLATION WITH STRUCTURAL ENGINEER AND AIRPORT REPRESENTATIVE.

ELECTRIC FEEDER SCHEDULE

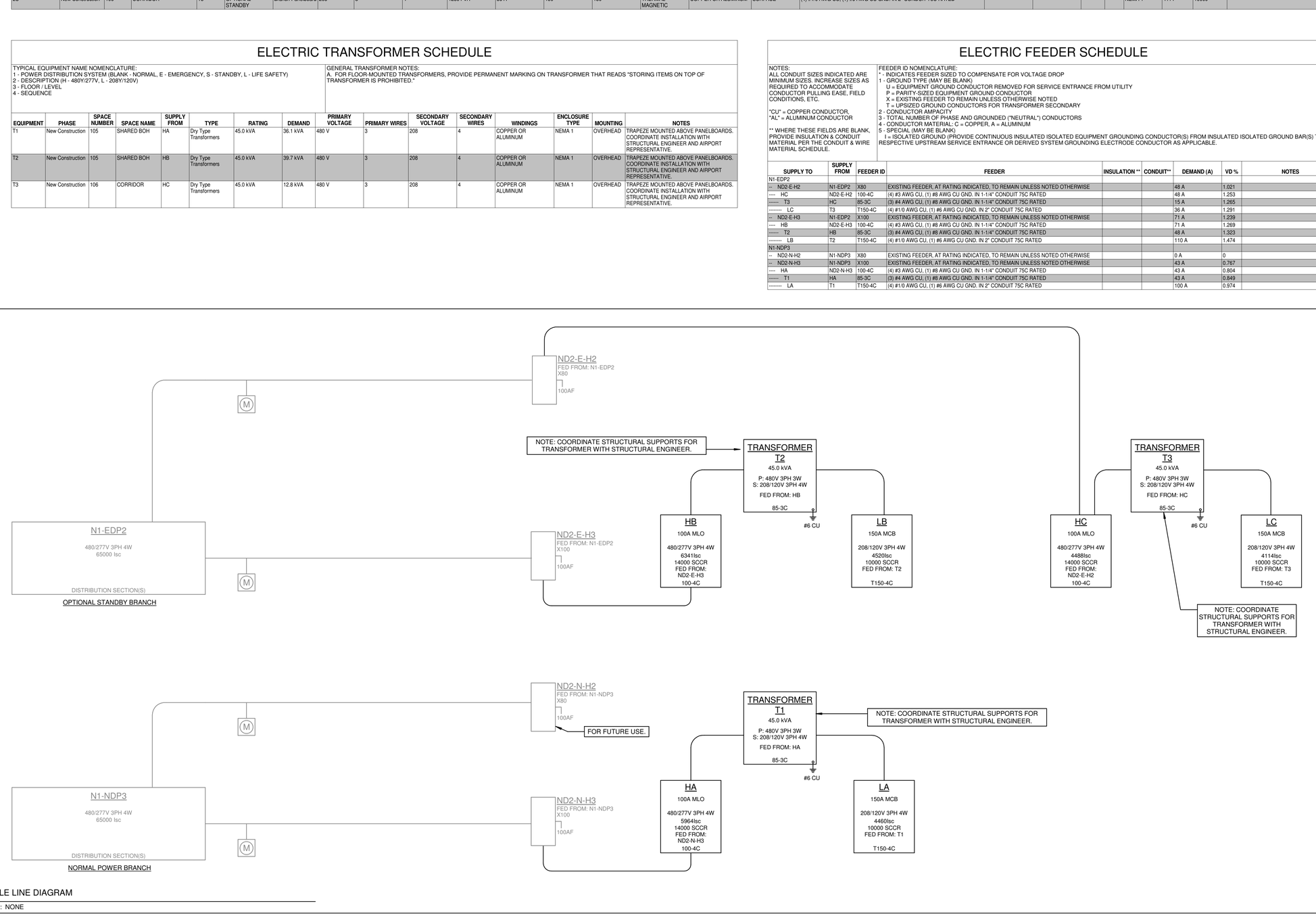
NOTES:
ALL CONDUIT SIZES INDICATED ARE MINIMUM SIZES. INCREASE SIZES AS REQUIRED TO ACCOMMODATE CONDUCTOR PULLING EASE, FIELD CONDITIONS, ETC.

"CU" = COPPER CONDUCTOR,
"AL" = ALUMINUM CONDUCTOR

** WHERE THESE FIELDS ARE BLANK, PROVIDE INSULATION & CONDUIT MATERIAL PER THE CONDUIT & WIRE MATERIAL SCHEDULE.

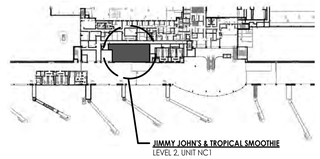
FEEDER ID NOMENCLATURE:
* - INDICATES FEEDER SIZED TO COMPENSATE FOR VOLTAGE DROP
1 - GROUND TYPE (MAY BE BLANK)
U = EQUIPMENT GROUND CONDUCTOR REMOVED FOR SERVICE ENTRANCE FROM UTILITY
P = PARITY-SIZED EQUIPMENT GROUND CONDUCTOR
X = EXISTING FEEDER TO REMAIN UNLESS OTHERWISE NOTED
T = UPSIZED GROUND CONDUCTORS FOR TRANSFORMER SECONDARY
2 - CONDUCTOR AMPACITY
3 - TOTAL NUMBER OF PHASE AND GROUNDED ("NEUTRAL") CONDUCTORS
4 - CONDUCTOR MATERIAL: C = COPPER, A = ALUMINUM
5 - SPECIAL (MAY BE BLANK)
I = ISOLATED GROUND (PROVIDE CONTINUOUS INSULATED ISOLATED EQUIPMENT GROUNDING CONDUCTOR(S) FROM INSULATED ISOLATED GROUND BAR(S) TO RESPECTIVE UPSTREAM SERVICE ENTRANCE OR DERIVED SYSTEM GROUNDING ELECTRODE CONDUCTOR AS APPLICABLE.

SUPPLY TO	SUPPLY FROM	FEEDER ID	FEEDER	INSULATION **	CONDUIT**	DEMAND (A)	VD %	NOTES
N1-EDP2								
-- ND2-E-H2	N1-EDP2	X80	EXISTING FEEDER, AT RATING INDICATED, TO REMAIN UNLESS NOTED OTHERWISE			48 A	1.021	
---- HC	ND2-E-H2	100-4C	(4) #3 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED			48 A	1.253	
------ T3	HC	85-3C	(3) #4 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED			15 A	1.265	
-------- LC	T3	T150-4C	(4) #1/0 AWG CU, (1) #6 AWG CU GND. IN 2" CONDUIT 75C RATED			36 A	1.291	
-- ND2-E-H3	N1-EDP2	X100	EXISTING FEEDER, AT RATING INDICATED, TO REMAIN UNLESS NOTED OTHERWISE			71 A	1.239	
---- HB	ND2-E-H3	100-4C	(4) #3 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED			71 A	1.269	
------ T2	HB	85-3C	(3) #4 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED			48 A	1.323	
-------- LB	T2	T150-4C	(4) #1/0 AWG CU, (1) #6 AWG CU GND. IN 2" CONDUIT 75C RATED			110 A	1.474	
N1-NDP3								
-- ND2-N-H2	N1-NDP3	X80	EXISTING FEEDER, AT RATING INDICATED, TO REMAIN UNLESS NOTED OTHERWISE			0 A	0	
-- ND2-N-H3	N1-NDP3	X100	EXISTING FEEDER, AT RATING INDICATED, TO REMAIN UNLESS NOTED OTHERWISE			43 A	0.767	
---- HA	ND2-N-H3	100-4C	(4) #3 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED			43 A	0.804	
------ T1	HA	85-3C	(3) #4 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED			43 A	0.849	
-------- LA	T1	T150-4C	(4) #1/0 AWG CU, (1) #6 AWG CU GND. IN 2" CONDUIT 75C RATED			100 A	0.974	



SINGLE LINE DIAGRAM

SCALE: NONE



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Notes

Revision	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
ISSUED FOR 60% SUBMISSION	KLH	KLH	2024.09.27

Issued	By	Appd	YYYY.MM.DD
File Name: N/A	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

FIRM LICENSE #C-4774

NORTH CAROLINA PROFESSIONAL SEAL 035205 ENGINEER CHRISTOPHER S. TAVERNELLI

12/27/2024

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

ELECTRIC POWER - SINGLE LINE DIAGRAM

Project No.

Scale
1/8" = 1'-0"

Revision

Drawing No.
E-601

PLUMBING ELECTRICAL COORDINATION SCHEDULE

ABBREVIATIONS		CONTRACTOR TYPE		MOTOR CONTROL TYPE		CONTROL TYPE		SHORT CIRCUIT RATING
DC	LOCAL DISCONNECT	EC	ELECTRICAL CONTRACTOR	CS	COMBINATION STARTER	TC	TIMECLOCK	WHERE SHORT CIRCUIT RATING CODE REQUIRED VALUE INDICATES "YES" APPLICABLE EQUIPMENTS SHORT CIRCUIT RATING SHALL EXCEED THE AVAILABLE FAULT CURRENT VALUE INDICATED.
MC	MOTOR CONTROL (POWER)	EX	EXISTING	MCC	MOTOR CONTROL STARTER	CPT	CONTROL POWER TRANSFORMER	
SD	DUCT SMOKE DETECTOR	FC	FIRE PROTECTION CONTRACTOR	MG	MAGNETIC STARTER OR CONTACT	BAS	BUILDING AUTOMATION SYSTEM	
CN	CONTROLS	GC	GENERAL CONTRACTOR	MS	MANUAL STARTER	LOW	LOW VOLTAGE CONTROLS	
TS	TOGGLE SWITCH	HC	HVAC CONTRACTOR	VFD	VARIABLE FREQUENCY DRIVE	LINE	LINE VOLTAGE CONTROLS	
C/B	H.A.C.R. CIRCUIT BREAKER AT SOURCE PANELBOARD	MFR	MANUFACTURER	MSR	MANUAL STARTER W/ CONTROL RELAY	RLINE	REVERSE ACTING LINE VOLTAGE THERMOSTAT	
FUSE	FUSE AT LOCAL DISCONNECT (VERIFY FIELD RATING)	PC	PLUMBING CONTRACTOR	OV	OVERCURRENT PROTECTION	MAN	MANUAL	
FLA	OPERATING FULL LOAD AMPS	OR	OWNER OR OTHERS			FA	FIRE ALARM	
MCA	MINIMUM CIRCUIT AMPACITY					CO	CARBON MONOXIDE SENSOR	
CP	CORD AND PLUG CONNECTION					INT	INTEGRAL TO EQUIPMENT	
[BLANK]	HARD WIRED (WHEN INDICATED FOR DC TYPE)					ASD	AREA SMOKE DETECTOR	
						DSD	DUCT SMOKE DETECTOR	

EQUIPMENT MARK	DESCRIPTION	VOLTAGE	PHASE	EMERGENCY	HP	WATTS	HTG KW	FLA	MCA	OCP	FED FROM	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE	FA SHUTDOWN	SHORT CIRCUIT RATING CODE REQUIRED?	AVAILABLE FAULT CURRENT
HT1	PLUMBING HEAT TRACE PANEL	120 V	1				0.3	15				EC	EC	EC	--	--	--	--	LINE	PC	PC	PC		No	1685
HT2	PLUMBING HEAT TRACE PANEL	120 V	1				0.06	15				EC	EC	EC	--	--	--	--	LINE	PC	PC	PC		No	1860
CP1	DOMESTIC HOT WATER CIRCULATION PUMP	120 V	1		0.04			1.45				EC	EC	EC	MG	MFR	MFR	MFR	LINE	PC	PC	EC		No	1992
WH1	TANK TYPE ELECTRIC WATER HEATER	480 V	3				11					EC	EC	EC	--	--	--	--	INT	MFR	MFR	MFR		No	3464

HVAC ELECTRICAL COORDINATION SCHEDULE

ABBREVIATIONS		CONTRACTOR TYPE		MOTOR CONTROL TYPE		CONTROL TYPE		SHORT CIRCUIT RATING
DC	LOCAL DISCONNECT	EC	ELECTRICAL CONTRACTOR	CS	COMBINATION STARTER	TC	TIMECLOCK	WHERE SHORT CIRCUIT RATING CODE REQUIRED VALUE INDICATES "YES" APPLICABLE EQUIPMENT'S SHORT CIRCUIT RATING SHALL EXCEED THE AVAILABLE FAULT CURRENT VALUE INDICATED.
MC	MOTOR CONTROL (POWER)	EX	EXISTING	MCC	MOTOR CONTROL STARTER	CPT	CONTROL POWER TRANSFORMER	
SD	DUCT SMOKE DETECTOR	FC	FIRE PROTECTION CONTRACTOR	MG	MAGNETIC STARTER OR CONTACT	BAS	BUILDING AUTOMATION SYSTEM	
CN	CONTROLS	GC	GENERAL CONTRACTOR	MS	MANUAL STARTER	LOW	LOW VOLTAGE CONTROLS	
TS	TOGGLE SWITCH	HC	HVAC CONTRACTOR	VFD	VARIABLE FREQUENCY DRIVE	LINE	LINE VOLTAGE CONTROLS	
C/B	H.A.C.R. CIRCUIT BREAKER AT SOURCE PANELBOARD	MFR	MANUFACTURER	MSR	MANUAL STARTER W/ CONTROL RELAY	RLINE	REVERSE ACTING LINE VOLTAGE	
FUSE	FUSE AT LOCAL DISCONNECT (VERIFY FIELD RATING)	PC	PLUMBING CONTRACTOR	OV	OVERCURRENT PROTECTION	MAN	THERMOSTAT	
FLA	OPERATING FULL LOAD AMPS	OR	OWNER OR OTHERS			FA	MANUAL	
MCA	MINIMUM CIRCUIT AMPACITY					CO	FIRE ALARM	
CP	CORD AND PLUG CONNECTION					INT	CARBON MONOXIDE SENSOR	
[BLANK]	HARD WIRED (WHEN INDICATED FOR DC TYPE)					ASD	INTEGRAL TO EQUIPMENT	
						DSD	AREA SMOKE DETECTOR...	

CONNECTION MARK	DESCRIPTION	VOLTAGE	PHASE	EMERGENCY	HP	WATTS	HTG KW	FLA	MCA	OCP	FED FROM	DC TYPE	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE	SHORT CIRCUIT RATING CODE REQUIRED?	AVAILABLE FAULT CURRENT
KCU-1	AIR SOURCE OUTDOOR CONDENSING UNIT - REFRIGERATOR	208 V	1	NO					15	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	2666
KCU-2	AIR SOURCE OUTDOOR CONDENSING UNIT - FREEZER	208 V	1	NO					21	25			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	2820
KCU-3	AIR SOURCE OUTDOOR CONDENSING UNIT - FREEZER	208 V	1	NO					21	25			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	2620
KCU-4	AIR SOURCE OUTDOOR CONDENSING UNIT - REFRIGERATOR	208 V	1	NO					15	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	1853
KCU-5	AIR SOURCE OUTDOOR CONDENSING UNIT - REFRIGERATOR	208 V	1	NO					15	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	1557
KCU-6	AIR SOURCE OUTDOOR CONDENSING UNIT - FREEZER	208 V	1	NO					21	25			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	1963
RTU-1	PACKAGED ROOFTOP UNIT, ELECTRIC HEAT	480 V	3	NO			15		30	30			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	2730
RTU-2	PACKAGED ROOFTOP UNIT, ELECTRIC HEAT	480 V	3	NO			6		14	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	4501

ELECTRIC DISCONNECT SCHEDULE

NOTES:
A. WIRES: THE NUMBER OF WIRES INDICATED INCLUDES A GROUNDED (NEUTRAL) CONDUCTOR UNLESS IT WAS VERIFIED DURING DESIGN THAT ONE IS NOT REQUIRED. THE GROUNDED CONDUCTOR MAY BE OMITTED IF NOT REQUIRED BY THE EQUIPMENT BEING SERVED.
B. ENCLOSURE: WHERE FIELD IS BLANK, PROVIDE NEMA 1 ENCLOSURE FOR INDOOR INSTALLATIONS, NEMA 3R ENCLOSURE FOR OUTDOOR INSTALLATIONS OR INDOOR INSTALLATIONS SUBJECT TO MOISTURE, AND NEMA 4X FOR ALL KITCHEN AND WASH DOWN AREAS.
C. SHORT CIRCUIT RATING: WHERE FIELD IS BLANK, PROVIDE A SHORT CIRCUIT RATING THAT EXCEEDS THE LISTED FAULT CURRENT.

EQUIPMENT	SPACE NUMBER	SPACE NAME	SUPPLY FROM	CIRCUIT NUMBER	VOLTAGE	PHASE	WIRES	TRIP RATING (A)	FRAME RATING (A)	DEMAND (A)	OCP TYPE	FEEDER OR BRANCH CIRCUIT	ULSE	GEC	ENCLOSURE	FAULT CURRENT (A)	SHORT CIRCUIT RATING (A)	COMMENTS
CP1	105	SHARED BOH	LB	15	120 V	1	2	20	20	1 A		(2) #12 AWG CU, (1) #12 AWG CU GND. IN 3/4" CONDUIT 60C RATED			NEMA 1	1992		
HT1	105	SHARED BOH	LB	13	120 V	1	2	20	20	15 A		(2) #12 AWG CU, (1) #12 AWG CU GND. IN 3/4" CONDUIT 60C RATED			NEMA 3R	1685		
HT2	105	SHARED BOH	LB	46	120 V	1	2	20	20	15 A		(2) #12 AWG CU, (1) #12 AWG CU GND. IN 3/4" CONDUIT 60C RATED			NEMA 3R	1860		
KCU-1	105	SHARED BOH	LB	18,20	208 V	1	3	15	15	14 A		(3) #12 AWG CU, (1) #12 AWG CU GND. IN 3/4" CONDUIT 60C RATED			NEMA 1	2666		
KCU-2	105	SHARED BOH	LB	2,4	208 V	1	3	25	25	19 A		(3) #10 AWG CU, (1) #10 AWG CU GND. IN 3/4" CONDUIT 60C RATED			NEMA 1	2820		
KCU-3	105	SHARED BOH	LB	10,12	208 V	1	3	25	25	19 A		(3) #10 AWG CU, (1) #10 AWG CU GND. IN 3/4" CONDUIT 60C RATED			NEMA 1	2620		
KCU-4	105	SHARED BOH	LB	22,24	208 V	1	3	15	15	14 A		(3) #12 AWG CU, (1) #12 AWG CU GND. IN 3/4" CONDUIT 60C RATED			NEMA 1	1853		
KCU-5	108	BEERCODE / VINO VOLO / COFFEE STORAGE	LC	2,4	208 V	1	3	15	15	14 A		(3) #12 AWG CU, (1) #12 AWG CU GND. IN 3/4" CONDUIT 60C RATED			NEMA 1	1557		
KCU-6	108	BEERCODE / VINO VOLO / COFFEE STORAGE	LC	6,8	208 V	1	3	25	25	19 A		(3) #10 AWG CU, (1) #10 AWG CU GND. IN 3/4" CONDUIT 60C RATED			NEMA 1	1963		
WH1	105	SHARED BOH	HB	2,4,6	480 V	3	4	20	20	13 A		(4) #12 AWG CU, (1) #12 AWG CU GND. IN 3/4" CONDUIT 60C RATED			NEMA 1	3464		
RTU-1	100	ORDERING	HC	2,4,6	480 V	3	4	30	30	27 A		(4) #10 AWG CU, (1) #10 AWG CU GND. IN 3/4" CONDUIT 60C RATED			NEMA 3R	2730		
RTU-2	105	SHARED BOH	HB	7,9,11	480 V	3	4	15	15	13 A		(4) #12 AWG CU, (1) #12 AWG CU GND. IN 3/4" CONDUIT 60C RATED			NEMA 3R	4501		

ELECTRIC EQUIPMENT SUPPLY SCHEDULE

EQUIPMENT MARK	SUPPLY FROM	CKT	EMERG.	LOAD (kVA)	AVAILABLE FAULT CURRENT	VOLTS	POLE	HTG KW	WATT	HP	FLA (A)	MCA (A)	ROD OCP (A)	BREAKER RATING (A)
CP1	LB	15		0.17	1992	120 V	1			0.04	1.45			20
HT1	LB	13		1.80	1685	120 V	1	0.3			15			20
HT2	LB	46		1.80	1860	120 V	1	0.06			15			20
KCU-1	LB	18,20	NO	2.81	2666	208 V	2					15	15	15
KCU-2	LB	2,4	NO	3.93	2820	208 V	2					21	25	25
KCU-3	LB	10,12	NO	3.93	2620	208 V	2					21	25	25
KCU-4	LB	22,24	NO	2.81	1853	208 V	2					15	15	15
KCU-5	LC	2,4	NO	2.81	1557	208 V	2					15	15	15
KCU-6	LC	6,8	NO	3.93	1963	208 V	2					21	25	25
RTU-1	HC	2,4,6	NO	22.45	2730	480 V	3	15				30	30	30
RTU-2	HB	7,9,11	NO	10.48	4501	480 V	3	6				14	15	15
WH1	HB	2,4,6		11.00	3464	480 V	3	11						20

Consultant
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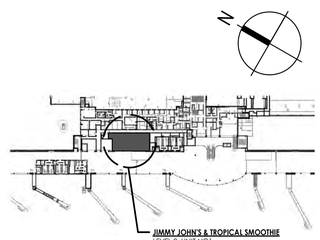
Notes



Revision	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
ISSUED FOR 60% SUBMISSION	KLH	KLH	2024.09.27

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Permit/Seal
FIRM LICENSE #C-4774
NORTH CAROLINA PROFESSIONAL SEAL 035205 ENGINEER JAMES S. TAVERNELLI
12/27/2024

Client/Project Logo
Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JJ JIMMY JOHN'S

Client/Project
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE
LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title
ELECTRIC POWER - SCHEDULES

Project No.
Scale
Revision
Drawing No.
E-602

1	2	3	4	5

PANEL NAME: HC

SUPPLY FROM: ND2-E-H2 | BUSSING: COPPER OR ALUMINUM | MOUNTING: SURFACE | PHASE: New Construction
LOCATION: CORRIDOR 106 | MAINS RATING (A): 100 | FAULT CURRENT (A): 4488 | SURGE SUPRESSION:
DISTRIBUTION SYSTEM: 480/277V 3PH 4W | MAINS TYPE: MAIN LUGS ONLY | SHORT CIRCUIT RATING (A): 14000 | ULSE:
FEEDER: (4) #3 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED | FEEDER ID: 100-4C | LUGS TYPE: | 200% NEUTRAL:
ENCLOSURE TYPE: NEMA 1 | ISOLATED GROUND:

CKT	CIRCUIT DESCRIPTION	VD%	AWG	GND	TRIP	FRAME	POLE	A	A	B	B	C	C	POLE	FRAME	TRIP	GND	AWG	VD%	CIRCUIT DESCRIPTION	CKT
1								5.39	7.48												2
3	(LT) T3	SL	SL	SL	70 A	70 A	3			3.13	7.48			3	30 A	30 A	#10	#10	0.473	RTU-1 | ORDERING 100	4
5												3.11	7.48								6
7								0.00	0.00												8
9	SPARE	--	--	--	20 A	20 A	3			0.00	0.00			3	20 A	20 A	--	--	--	SPARE	10
11												0.00	0.00								12
13	SPARE	--	--	--	20 A	20 A	1	0.00	0.00					1	20 A	20 A	--	--	--	SPARE	14
15	SPARE	--	--	--	20 A	20 A	1			0.00	0.00			1	20 A	20 A	--	--	--	SPARE	16
17	SPARE	--	--	--	20 A	20 A	1					0.00	0.00	1	20 A	20 A	--	--	--	SPARE	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 CONNECTED LOAD:	12.9 kVA		10.6 kVA		10.6 kVA									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	NOTES:	BREAKER QUANTITIES (NEW ONLY)
Lighting	760 VA	125.00%	950 VA		(6) 20A / 1P, (2) 20A / 3P, (1) 30A / 3P, (1) 70A / 3P(LT)
Motor	29186 VA	119.23%	34798 VA		
Non-Continuous	1072 VA	100.00%	1072 VA		
Receptacle	3060 VA	100.00%	3060 VA		

PANEL TOTALS	
TOTAL CONNECTED LOAD:	34.1 kVA
DEMAND CALCULATION NOTES:	
TOTAL DEMAND:	39.9 kVA
TOTAL DEMAND AMPS:	**48 A**

PANEL NAME: HB

SUPPLY FROM: ND2-E-H3 | BUSSING: COPPER OR ALUMINUM | MOUNTING: SURFACE | PHASE: New Construction
LOCATION: SHARED BOH 105 | MAINS RATING (A): 100 | FAULT CURRENT (A): 6341 | SURGE SUPRESSION:
DISTRIBUTION SYSTEM: 480/277V 3PH 4W | MAINS TYPE: MAIN LUGS ONLY | SHORT CIRCUIT RATING (A): 14000 | ULSE:
FEEDER: (4) #3 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED | FEEDER ID: 100-4C | LUGS TYPE: | 200% NEUTRAL:
ENCLOSURE TYPE: NEMA 1 | ISOLATED GROUND:

CKT	CIRCUIT DESCRIPTION	VD%	AWG	GND	TRIP	FRAME	POLE	A	A	B	B	C	C	POLE	FRAME	TRIP	GND	AWG	VD%	CIRCUIT DESCRIPTION	CKT
1								15.48	3.67												2
3	T2	SL	SL	SL	70 A	70 A	3			12.39	3.67			3	20 A	20 A	#12	#12	0.212	WH1 | SHARED BOH 105	4
5												15.47	3.67								6
7								3.49	0.00												8
9	RTU-2 | SHARED BOH 105	0.1	#12	#12	15 A	15 A	3			3.49	0.00			3	20 A	20 A	--	--	--	SPARE	10
11												3.49	0.00								12
13	SPARE	--	--	--	20 A	20 A	1	0.00	0.00					1	20 A	20 A	--	--	--	SPARE	14
15	SPARE	--	--	--	20 A	20 A	1			0.00	0.00			1	20 A	20 A	--	--	--	SPARE	16
17	SPARE	--	--	--	20 A	20 A	1					0.00	0.00	1	20 A	20 A	--	--	--	SPARE	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 CONNECTED LOAD:	22.6 kVA		19.5 kVA		22.6 kVA									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	NOTES:	BREAKER QUANTITIES (NEW ONLY)
Continuous	2700 VA	125.00%	3375 VA		(1) 15A / 3P, (6) 20A / 1P, (2) 20A / 3P, (1) 70A / 3P
Kitchen Equipment	28380 VA	65.00%	18447 VA		
Lighting	3112 VA	125.00%	3890 VA		
Motor	24127 VA	110.85%	26746 VA		
Non-Continuous	4508 VA	100.00%	4508 VA		
Receptacle	1980 VA	100.00%	1980 VA		

PANEL TOTALS	
TOTAL CONNECTED LOAD:	64.8 kVA
DEMAND CALCULATION NOTES:	
TOTAL DEMAND:	58.9 kVA
TOTAL DEMAND AMPS:	**71 A**

PANEL NAME: HA

SUPPLY FROM: ND2-N-H3 | BUSSING: COPPER OR ALUMINUM | MOUNTING: SURFACE | PHASE: New Construction
LOCATION: SHARED BOH 105 | MAINS RATING (A): 100 | FAULT CURRENT (A): 5964 | SURGE SUPRESSION:
DISTRIBUTION SYSTEM: 480/277V 3PH 4W | MAINS TYPE: MAIN LUGS ONLY | SHORT CIRCUIT RATING (A): 14000 | ULSE:
FEEDER: (4) #3 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED | FEEDER ID: 100-4C | LUGS TYPE: | 200% NEUTRAL:
ENCLOSURE TYPE: NEMA 1 | ISOLATED GROUND:

CKT	CIRCUIT DESCRIPTION	VD%	AWG	GND	TRIP	FRAME	POLE	A	A	B	B	C	C	POLE	FRAME	TRIP	GND	AWG	VD%	CIRCUIT DESCRIPTION	CKT
1								15.09	0.00												2
3	T1	SL	SL	SL	70 A	70 A	3			17.83	0.00			3	20 A	20 A	--	--	--	SPARE	4
5												15.39	0.00								6
7								0.00	0.00					1	20 A	20 A	--	--	--	SPARE	8
9	SPARE	--	--	--	20 A	20 A	3			0.00	0.00			1	20 A	20 A	--	--	--	SPARE	10
11												0.00	0.00	1	20 A	20 A	--	--	--	SPARE	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 CONNECTED LOAD:	15.1 kVA		17.8 kVA		15.4 kVA									

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	NOTES:	BREAKER QUANTITIES (NEW ONLY)
Continuous	3600 VA	125.00%	4500 VA		(3) 20A / 1P, (2) 20A / 3P, (1) 70A / 3P
Kitchen Equipment	37510 VA	65.00%	24382 VA		
Receptacle	7200 VA	100.00%	7200 VA		

PANEL TOTALS	
TOTAL CONNECTED LOAD:	48.3 kVA
DEMAND CALCULATION NOTES:	
TOTAL DEMAND:	36.1 kVA
TOTAL DEMAND AMPS:	**43 A**

PANEL SCHEDULE LEGEND

*	=	WIRE SIZED TO COMPENSATE FOR VOLTAGE DROP
**	=	REFER TO DRAWINGS FOR SPECIFICATIONS
(#)	=	NEW CIRCUIT TO EXISTING CIRCUIT BREAKER
(->)	=	CONNECT BRANCH CIRCUIT, WHICH WAS DISCONNECTED FROM ANOTHER SOURCE AS PART OF SELECTIVE DEMOLITION, TO POLE SPACE(S) INDICATED, DETERMINE EXACT POLE ASSIGNMENT(S) BASED ON EXISTING COLOR-CODING OF THE BRANCH CIRCUIT CONDUCTOR INSULATION. PROVIDE NEW BREAKER IF REQUIRED.
(A)	=	PROVIDE ARC FAULT CIRCUIT INTERRUPTER (AFCI) CIRCUIT BREAKER
(AG)	=	PROVIDE COMBINATION ARC FAULT (AFCI) / GROUND FAULT (GFCI) CIRCUIT INTERRUPTER CIRCUIT BREAKER
(AT)	=	EXISTING FUSIBLE SWITCH/CIRCUIT BREAKER WITH NEW FUSES/TRIP RATING
(DO)	=	PROVIDE DRAW-OUT CIRCUIT BREAKER
(ERM)	=	PROVIDE ENERGY REDUCTION MAINTENANCE (REDUCED ENERGY) CIRCUIT BREAKER
(EX)	=	EXISTING CIRCUIT TO REMAIN
(F)	=	CIRCUIT FOR FUTURE USE. PROVIDE BREAKER INDICATED. LOAD SHOWN FOR REFERENCE ONLY.
(G)	=	PROVIDE GROUND-FAULT CIRCUIT INTERRUPTER (GFCI) CIRCUIT BREAKER
(GE)	=	PROVIDE GROUND-FAULT EQUIPMENT PROTECTION (GFEP) CIRCUIT BREAKER
(GS)	=	PROVIDE SPECIAL PURPOSE GROUND-FAULT CIRCUIT INTERRUPTER (SPGFCI) CIRCUIT BREAKER
(H)	=	PROVIDE HANDLE TIE
(L)	=	PROVIDE LOCK-ON DEVICE
(LI)	=	PROVIDE ELECTRONIC LONG AND INSTANTANEOUS ADJUSTABILITY
(LSI)	=	PROVIDE ELECTRONIC LONG, SHORT, AND INSTANTANEOUS ADJUSTABILITY
(LSIA)	=	PROVIDE ELECTRONIC LONG, SHORT, INSTANTANEOUS, AND GROUND-FAULT ALARM ADJUSTABILITY
(LSIG)	=	PROVIDE ELECTRONIC LONG, SHORT, INSTANTANEOUS, AND GROUND-FAULT ADJUSTABILITY
(LT)	=	PROVIDE LOCK-OUT/TAG-OUT DEVICE
SL	=	SEE THE SINGLE LINE DIAGRAM / SCHEDULE FOR WIRE SIZE AND VOLTAGE DROP
(ST)	=	PROVIDE SHUNT TRIP CIRCUIT BREAKER

PANEL SCHEDULE GENERAL NOTES

A. PROVIDE HACR RATED BREAKERS ON ALL MOTOR LOADS.
B. ALL CONDUCTORS SHOWN ARE COPPER.
C. ALL VOLTAGE DROP CALCULATIONS AND COMPENSATED WIRE SIZES ARE BASED ON RIGHT ANGLE CIRCUIT LENGTHS. ACTUAL VOLTAGE DROP MAY VARY BASED ON INSTALLED WIRE LENGTH.
D. VOLTAGE DROP CALCULATIONS AND WIRE SIZES SHOWN IN THE PANEL SCHEDULES ARE FOR HOMERUN CONDUCTORS ONLY. FOR CIRCUITS WITH MORE THAN 1 DEVICE, THESE SIZES ASSUME THE CONDUCTORS DOWNSTREAM OF THE HOMERUN DEVICE ARE THE MINIMUM SIZE REQUIRED BY THE NEC BASED ON THE RATING OF THE CIRCUIT. WHERE THIS IS NOT THE CASE, IT HAS BEEN INDICATED ON THE DRAWINGS. VOLTAGE DROP TO THE FARTHEST DEVICE HAS BEEN CALCULATED TO NEVER EXCEED 5%.
E. RECEPTACLE LOADS CALCULATED AT 100% OF FIRST 10kVA, 50% OF REMAINDER. MOTOR LOADS CALCULATED AT 125% OF THE LARGEST MOTOR, 100% OF ALL OTHER MOTORS.

PANEL KEY

--	--	--
--	--	HC
--	HB	HA

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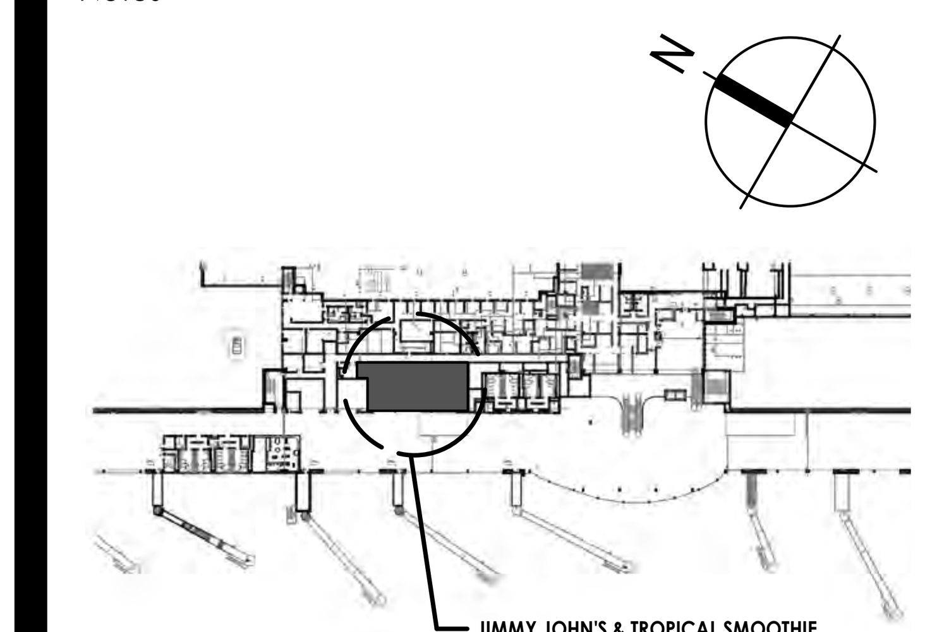
Notes



Revision	By	Appd	YYYY.MM.DD

Issued	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
ISSUED FOR 60% SUBMISSION	KLH	KLH	2024.09.27

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Dwn. Dsgn. Chkd. YYYY.MM.DD

Permit/Seal

FIRM LICENSE #C-4774
NORTH CAROLINA PROFESSIONAL SEAL 035205 ENGINEER JAMES S. TAVERNELLI
12/27/2024

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

ELECTRIC POWER - PANEL SCHEDULES

Project No. | Scale

Revision | Drawing No.

E-603

ORIGINAL SHEET - ARCH D

PANEL NAME: LA

BUSSING: COPPER OR ALUMINUM | MOUNTING: SURFACE | PHASE: New Construction
SUPPLY FROM: T1 | MAINS RATING (A): 150 | FAULT CURRENT (A): 4460 | SURGE SUPRESSION:
LOCATION: SHARED BOH 105 | MAINS TYPE: THERMAL MAGNETIC | SHORT CIRCUIT RATING (A): 10000 | ULSE:
DISTRIBUTION SYSTEM: 208/120V 3PH 4W | FEEDER ID: T150-4C | LUGS TYPE: | 200% NEUTRAL:
FEEDER: (4) #1/0 AWG CU, (1) #6 AWG CU GND. IN 2" CONDUIT 75C RATED | ENCLOSURE TYPE: NEMA 1 | ISOLATED GROUND:

CKT	CIRCUIT DESCRIPTION	VD%	AWG	GND	TRIP	FRAME	POLE	A		B		C		POLE	FRAME	TRIP	GND	AWG	VD%	CIRCUIT DESCRIPTION	CKT
1								3.27	0.72					1	20 A	20 A	#12	#12	0.471	(G) PRINTER WITH SHELF CONVENIENCE OUTLET |...	2
3	FIVE DECK OVEN/PROOFER COMBO	KITCHEN EQUIPMENT JIMMY JOHNS PREP 102	0.497	#8	#10	35 A	35 A	3			3.27	0.96		1	20 A	20 A	#12	#12	1.149	(G) ON CUE OVEN	KITCHEN EQUIPMENT TROPICA...	4
5												3.27	0.96	1	20 A	20 A	#12	#12	1.169	(G) ON CUE OVEN	KITCHEN EQUIPMENT TROPICA...	6
7	(L) WAREWASHER	KITCHEN EQUIPMENT SHARED BOH 105	1.592	#10	#10	30 A	30 A	2	2.50	1.44				1	20 A	20 A	#12	#12	2.073	(G) BLENDER, BAR TYPE	KITCHEN EQUIPMENT...	8
9											2.50	1.44		1	20 A	20 A	#12	#12	2.107	(G) BLENDER, BAR TYPE	KITCHEN EQUIPMENT...	10
11	(G) HIGH SPEED OVEN	KITCHEN EQUIPMENT JIMMY JOHNS PREP 102	1.066	#8	#10	40 A	40 A	2					3.00	0.36	1	20 A	20 A	#12	#12	0.452	ICE DRINK DISPENSER	KITCHEN EQUIPMENT...	12
13									3.00	0.54				1	20 A	20 A	#12	#12	0.458	(G) CONVENIENCE OUTLET	KITCHEN EQUIPMENT...	14
15	(G) HIGH SPEED OVEN	KITCHEN EQUIPMENT JIMMY JOHNS PREP 102	0.813	#8	#10	40 A	40 A	2			3.00	0.36		1	20 A	20 A	#12	#12	0.54	CONVENIENCE OUTLET	RCPT TROPICAL...	16
17													3.00	0.18	1	20 A	20 A	#12	0.334	(G) CONVENIENCE OUTLET	RCPT TROPICAL...	18
19	RCPT SEATING 101		0.818	#12	#12	20 A	20 A	1	0.36	0.03				1	20 A	20 A	#12	#12	0.033	(G) MICROWAVE CONVECTION OVEN	KITCHEN...	20
21	RCPT SHARED BOH 105		0.154	#12	#12	20 A	20 A	1			0.18	0.36		1	20 A	20 A	#12	#12	0.469	(G) CONVENIENCE OUTLET CONVENIENCE OUTLE...		22
23	(G) CONVENIENCE OUTLET	KITCHEN EQUIPMENT...	0.428	#12	#12	20 A	20 A	1					0.36	0.18	1	20 A	20 A	#12	0.179	CONVENIENCE OUTLET	RCPT TROPICAL...	24
25	(G) BAG-N-BOX RACK W/ C02 TANKS	KITCHEN...	0.287	#12	#12	20 A	20 A	1	0.60	0.36				1	20 A	20 A	#12	#12	0.176	RCPT		26
27	(G) BLENDER, BAR TYPE	KITCHEN EQUIPMENT...	2.245	#12	#12	20 A	20 A	1			1.44	1.73		1	20 A	20 A	#12	#12	1.367	(G) ICED TEA BREWER	KITCHEN EQUIPMENT...	28
29	(G) CONVENIENCE OUTLET	KITCHEN EQUIPMENT...	0.299	#12	#12	20 A	20 A	1					0.36	0.72	1	20 A	20 A	#12	1.262	RCPT 101,104		30
31	CONVENIENCE OUTLET	RCPT SHARED BOH 105	0.152	#12	#12	20 A	20 A	1	0.18	0.72				1	20 A	20 A	#12	#12	2.006	RCPT SEATING 101		32
33	RCPT SHARED BOH 105		0.247	#12	#12	20 A	20 A	1			0.36	0.54		1	20 A	20 A	#12	#12	1.262	RCPT SEATING 101		34
35	RCPT SHARED BOH 105		0.127	#12	#12	20 A	20 A	1					0.18	0.18	1	20 A	20 A	#12	#12	0.192	RCPT SHARED BOH 105		36
37	RCPT SHARED BOH 105		0.038	#12	#12	20 A	20 A	1	0.18	0.00				1	20 A	20 A	--	--	--	SPARE		38
39	(G) CONVENIENCE OUTLET	MANUAL HEAVY DUTY...	0.24	#12	#12	20 A	20 A	1			0.49	0.00		1	20 A	20 A	--	--	--	SPARE		40
41	(G) BLENDER, BAR TYPE	KITCHEN EQUIPMENT...	2.215	#12	#12	20 A	20 A	1					1.44	0.00	1	20 A	20 A	--	--	--	SPARE		42
43	SIGNAGE	CONTINUOUS ORDERING 100	1.663	#12	#12	20 A	20 A	1	1.20	0.00				1	20 A	20 A	--	--	--	SPARE		44
45	SIGNAGE	CONTINUOUS ORDERING 100	2.438	#12	#12	20 A	20 A	1			1.20	0.00		1	20 A	20 A	--	--	--	SPARE		46
47	SIGNAGE	CONTINUOUS SEATING 101	1.976	*#10	*#10	20 A	20 A	1					1.20	0.00	1	20 A	20 A	--	--	--	SPARE		48
49	SPARE		--	--	--	20 A	20 A	1	0.00	0.00				1	20 A	20 A	--	--	--	SPARE		50
51	SPARE		--	--	--	20 A	20 A	1			0.00	0.00		1	20 A	20 A	--	--	--	SPARE		52
53	SPARE		--	--	--	20 A	20 A	1					0.00	0.00	1	20 A	20 A	--	--	--	SPARE		54
		TOTAL CONNECTED LOAD:							15.1 kVA		17.8 kVA		15.4 kVA								

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	NOTES:	BREAKER QUANTITIES (NEW ONLY)
Continuous	3600 VA	125.00%	4500 VA		(29) 20A / 1P, (16) 20A / 1P(G), (1) 30A / 2P(L), (1) 35A / 3P, (2) 40A / 2P(G)
Kitchen Equipment	37510 VA	65.00%	24382 VA		
Receptacle	7200 VA	100.00%	7200 VA		

PANEL TOTALS
TOTAL CONNECTED LOAD: 48.3 kVA
DEMAND CALCULATION NOTES:
TOTAL DEMAND: 36.1 kVA
TOTAL DEMAND AMPS: **100 A**

PANEL SCHEDULE LEGEND

*	=	WIRE SIZED TO COMPENSATE FOR VOLTAGE DROP
**	=	REFER TO DRAWINGS FOR SPECIFICATIONS
(#)	=	NEW CIRCUIT TO EXISTING CIRCUIT BREAKER
(->)	=	CONNECT BRANCH CIRCUIT, WHICH WAS DISCONNECTED FROM ANOTHER SOURCE AS PART OF SELECTIVE DEMOLITION, TO POLE SPACE(S) INDICATED, DETERMINE EXACT POLE ASSIGNMENT(S) BASED ON EXISTING COLOR-CODING OF THE BRANCH CIRCUIT CONDUCTOR INSULATION. PROVIDE NEW BREAKER IF REQUIRED.
(A)	=	PROVIDE ARC FAULT CIRCUIT INTERRUPTER (AFCI) CIRCUIT BREAKER
(AG)	=	PROVIDE COMBINATION ARC FAULT (AFCI) / GROUND FAULT (GFCI) CIRCUIT INTERRUPTER CIRCUIT BREAKER
(AT)	=	EXISTING FUSIBLE SWITCH/CIRCUIT BREAKER WITH NEW FUSES/TRIP RATING
(DO)	=	PROVIDE DRAW-OUT CIRCUIT BREAKER
(ERM)	=	PROVIDE ENERGY REDUCTION MAINTENANCE (REDUCED ENERGY) CIRCUIT BREAKER
(EX)	=	EXISTING CIRCUIT TO REMAIN
(F)	=	CIRCUIT FOR FUTURE USE. PROVIDE BREAKER INDICATED. LOAD SHOWN FOR REFERENCE ONLY.
(G)	=	PROVIDE GROUND-FAULT CIRCUIT INTERRUPTER (GFCI) CIRCUIT BREAKER
(GE)	=	PROVIDE GROUND-FAULT EQUIPMENT PROTECTION (GFEP) CIRCUIT BREAKER
(GS)	=	PROVIDE SPECIAL PURPOSE GROUND-FAULT CIRCUIT INTERRUPTER (SPGFCI) CIRCUIT BREAKER
(H)	=	PROVIDE HANDLE TIE
(L)	=	PROVIDE LOCK-ON DEVICE
(LI)	=	PROVIDE ELECTRONIC LONG AND INSTANTANEOUS ADJUSTABILITY
(LSI)	=	PROVIDE ELECTRONIC LONG, SHORT, AND INSTANTANEOUS ADJUSTABILITY
(LSIA)	=	PROVIDE ELECTRONIC LONG, SHORT, INSTANTANEOUS, AND GROUND-FAULT ALARM ADJUSTABILITY
(LSIG)	=	PROVIDE ELECTRONIC LONG, SHORT, INSTANTANEOUS, AND GROUND-FAULT ADJUSTABILITY
(LT)	=	PROVIDE LOCK-OUT/TAG-OUT DEVICE
SL	=	SEE THE SINGLE LINE DIAGRAM / SCHEDULE FOR WIRE SIZE AND VOLTAGE DROP
(ST)	=	PROVIDE SHUNT TRIP CIRCUIT BREAKER

PANEL SCHEDULE GENERAL NOTES

A. PROVIDE HACR RATED BREAKERS ON ALL MOTOR LOADS.
B. ALL CONDUCTORS SHOWN ARE COPPER.
C. ALL VOLTAGE DROP CALCULATIONS AND COMPENSATED WIRE SIZES ARE BASED ON RIGHT ANGLE CIRCUIT LENGTHS. ACTUAL VOLTAGE DROP MAY VARY BASED ON INSTALLED WIRE LENGTH.
D. VOLTAGE DROP CALCULATIONS AND WIRE SIZES SHOWN IN THE PANEL SCHEDULES ARE FOR HOMERUN CONDUCTORS ONLY. FOR CIRCUITS WITH MORE THAN 1 DEVICE, THESE SIZES ASSUME THE CONDUCTORS DOWNSTREAM OF THE HOMERUN DEVICE ARE THE MINIMUM SIZE REQUIRED BY THE NEC BASED ON THE RATING OF THE CIRCUIT. WHERE THIS IS NOT THE CASE, IT HAS BEEN INDICATED ON THE DRAWINGS. VOLTAGE DROP TO THE FARTHEST DEVICE HAS BEEN CALCULATED TO NEVER EXCEED 5%.
E. RECEPTACLE LOADS CALCULATED AT 100% OF FIRST 10kVA, 50% OF REMAINDER. MOTOR LOADS CALCULATED AT 125% OF THE LARGEST MOTOR, 100% OF ALL OTHER MOTORS.

PANEL NAME: LC

BUSSING: COPPER OR ALUMINUM | MOUNTING: SURFACE | PHASE: New Construction
SUPPLY FROM: T3 | MAINS RATING (A): 150 | FAULT CURRENT (A): 4114 | SURGE SUPRESSION:
LOCATION: CORRIDOR 106 | MAINS TYPE: THERMAL MAGNETIC | SHORT CIRCUIT RATING (A): 10000 | ULSE:
DISTRIBUTION SYSTEM: 208/120V 3PH 4W | FEEDER ID: T150-4C | LUGS TYPE: | 200% NEUTRAL:
FEEDER: (4) #1/0 AWG CU, (1) #6 AWG CU GND. IN 2" CONDUIT 75C RATED | ENCLOSURE TYPE: NEMA 1 | ISOLATED GROUND:

CKT	CIRCUIT DESCRIPTION	VD%	AWG	GND	TRIP	FRAME	POLE	A		B		C		POLE	FRAME	TRIP	GND	AWG	VD%	CIRCUIT DESCRIPTION	CKT
1	LTG 106,108	0.128	#12	#12	20 A	20 A	1	0.76	1.40					2	15 A	15 A	#12	#12	1.319	KCU-5	BEERCODE / VINO VOLO / COFFEE STORAGE 108	2
3	RCPT CORRIDOR 106	0.034	#12	#12	20 A	20 A	1			0.36	1.40										4
5	FREEZER EVAP.	NON-CONT. BEERCODE / VINO...	0.173	#12	#12	20 A	20 A	1				0.10	1.97	2	25 A	25 A	#10	#10	1.231	KCU-6	BEERCODE / VINO VOLO / COFFEE STORAGE 108	6
7	WALK-IN LIGHTING, ALARM, DOOR HEAT, AND HEA...	0.294	#12	#12	20 A	20 A	1	0.18	1.97												8
9	REFRIGERATOR EVAP	NON-CONT. BEERCODE /...	0.151	#12	#12	20 A	20 A	1			0.11	0.18		1	20 A	20 A	#12	#12	0.265	RCPT	BEERCODE / VINO VOLO / COFFEE STORAG...	10
11	WALK-IN LIGHTING, ALARM, DOOR HEAT, AND HEA...	0.256	#12	#12	20 A	20 A	1					0.18	0.00	1	20 A	20 A	--	--	--	SPARE		12
13	(G) RCPT BEERCODE / VINO VOLO / COFFEE...	0.411	#12	#12	20 A	20 A	1	0.36	0.00					1	20 A	20 A	--	--	--	SPARE		14
15	RCPT BEERCODE / VINO VOLO / COFFEE STORAG...	0.383	#12	#12	20 A	20 A	1			0.36	0.00			1	20 A	20 A	--	--	--	SPARE		16
17	PRINTER	NON-CONT. STAFF ROOM/ MANAGEMEN...	0.92	#12	#12	20 A	20 A	1				0.86	0.00	1	20 A	20 A	--	--	--	SPARE		18
19	RCPT STAFF ROOM/ MANAGEMENT 107		0.633	#12	#12	20 A	20 A	1	0.72	0.00				1	20 A	20 A	--	--	--	SPARE		20
21	RCPT 101,107,106,105		0.123	#12	#12	20 A	20 A	1			0.72	0.00		1	20 A	20 A	--	--	--	SPARE		22
23	SPARE		--	--	--	20 A	20 A	1					0.00	0.00	1	20 A	20 A	--	--	--	SPARE		24
25	SPARE		--	--	--	20 A	20 A	1	0.00	0.00				1	20 A	20 A	--	--	--	SPARE		26
27	SPARE		--	--	--	20 A	20 A	1			0.00	0.00		1	20 A	20 A	--	--	--	SPARE		28
29	SPARE		--	--	--	20 A	20 A	1					0.00	0.00	1	20 A	20 A	--	--	--	SPARE		30
31	SPARE		--	--	--	20 A	20 A	1	0.00	0.00				1	20 A	20 A	--	--	--	SPARE		32
33	SPARE		--	--	--	20 A	20 A	1			0.00	0.00		1	20 A	20 A	--	--	--	SPARE		34
35	SPARE		--	--	--	20 A	20 A	1					0.00	0.00	1	20 A	20 A	--	--	--	SPARE		36
37	SPARE		--	--	--	20 A	20 A	1	0.00	0.00				1	20 A	20 A	--	--	--	SPARE		38
39	SPARE		--	--	--	20 A	20 A	1			0.00	0.00		1	20 A	20 A	--	--	--	SPARE		40
41	SPARE		--	--	--	20 A	20 A	1					0.00	0.00	1	20 A	20 A	--	--	--	SPARE		42
		TOTAL CONNECTED LOAD:							5.4 kVA		3.1 kVA		3.1 kVA								

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	NOTES:	BREAKER QUANTITIES (NEW ONLY)
Lighting	760 VA	125.00%	950 VA		(1) 15A / 2P, (37) 20A / 1P, (1) 20A / 1P(G), (1) 25A / 2P
Motor	6739 VA	114.58%	7722 VA		
Non-Continuous	1072 VA	100.00%	1072 VA		
Receptacle	3060 VA	100.00%	3060 VA		

PANEL TOTALS
TOTAL CONNECTED LOAD: 11.6 kVA
DEMAND CALCULATION NOTES:
TOTAL DEMAND: 12.8 kVA
TOTAL DEMAND AMPS: **36 A**

PANEL NAME: LB

BUSSING: COPPER OR ALUMINUM | MOUNTING: SURFACE | PHASE: New Construction
SUPPLY FROM: T2 | MAINS RATING (A): 150 | FAULT CURRENT (A): 4520 | SURGE SUPRESSION:
LOCATION: SHARED BOH 105 | MAINS TYPE: THERMAL MAGNETIC | SHORT CIRCUIT RATING (A): 10000 | ULSE:
DISTRIBUTION SYSTEM: 208/120V 3PH 4W | FEEDER ID: T150-4C | LUGS TYPE: | 200% NEUTRAL:
FEEDER: (4) #1/0 AWG CU, (1) #6 AWG CU GND. IN 2" CONDUIT 75C RATED | ENCLOSURE TYPE: NEMA 1 | ISOLATED GROUND:

CKT	CIRCUIT DESCRIPTION	VD%	AWG	GND	TRIP	FRAME	POLE	A		B		C		POLE	FRAME	TRIP	GND	AWG	VD%	CIRCUIT DESCRIPTION	CKT
1	(G) ICE MACHINE TREATMENT SYSTEM	KITCHEN EQUIPMENT TROPICAL SMOOTHIE PREP 103	0.784	#12	#12	20 A	20 A	2	1.55	1.97				2	25 A	25 A	#10	#10	0.615	KCU-2	SHARED BOH 105	2
3											1.55	1.97									4
5	(G) KDS MONITOR	REFRIGERATED PREP TABLE, 1...	2.009	#12	#12	20 A	20 A	1					1.50	2.85	2	35 A	35 A	#10	#8	0.815	(G) REFRIGERATED PREP TABLE, 30 PAN	KITCHEN EQUIPMENT TROPICAL SMOOTHIE PREP 103	6
7	(G) KDS MONITOR	KITCHEN EQUIPMENT TROPIC...	0.087	#12	#12	20 A	20 A	1	0.06	2.85											8
9	(G) KDS MONITOR AND PRINTER	KITCHEN...	0.125	#12	#12	20 A	20 A	1			0.09	1.97									10
11	(G) DIGITAL MENU BOARD	KITCHEN EQUIPMENT...	0.979	#12	#12	20 A	20 A	1					0.90	1.97	2	25 A	25 A	#10	#10	0.741	KCU-3	SHARED BOH 105	12
13	(GE) HT1	SHARED BOH 105	1.368	#12	#12	20 A	20 A	1	1.80	0.10											14
15	CP1	SHARED BOH 105	0.099	#12	#12	20 A	20 A	1			0.17	0.10									16
17	LTG SEATING 101		0.406	#12	#12	20 A	20 A	1					0.20	1.40	2	20 A	20 A	#12	#12	0.05	FREEZER EVAP.	NON-CONT. SHARED BOH 105	18
19	LTG 100,101		0.403	#12	#12	20 A	20 A	1	0.25	1.40											20
21	TRACK LTG DINING		0.218	#12	#12	20 A	20 A	1			0.15	1.40									22
23	LTG JIMMY JOHNS PREP 102		0.308	#12	#12	20 A	20 A	1					0.30	1.40	2	15 A	15 A	#12	#12	1.049	KCU-4	SHARED BOH 105	24
25	TRACK LTG TROP PREP		0.108	#12	#12	20 A	20 A	1	0.08	1.80											26
27	LTG STAFF ROOM/ MANAGEMENT 107		0.134	#12	#12	20 A	20 A	1			0.40	0.72			1	20 A	20 A	#12	#12	0.311	(GE) WALK-IN LIGHTING, ALARM, DOOR HEAT, AND...		28
29	(G) POS TERMINAL	KITCHEN EQUIPMENT...	0.993	#12	#12	20 A	20 A	1					1.00	0.36	1	20 A	20 A	#12	#12	0.357	(G) CONVENIENCE OUTLET	REFRIGERATED PREP...	30
31	(G) POS TERMINAL, PRINTER (X2), AND EMV CARD...		0.953	#12	#12	20 A	20 A	1	0.56	0.26					1	20 A	20 A	#12	#12	0.36	LTG 100,101		32
33	(G) POS TERMINAL, PRINTER, AND EMV CARD...		0.843	#12	#12	20 A	20 A	1			0.53	0.26			1	20 A	20 A	#12	#12	0.338	LTG		34
35	(G) ONE DOOR REACH-IN REFRIGERATOR	KITCH...	0.458	#12	#12	20 A	20 A	1					0.52	0.53	1	20 A	20 A	#12	#12	0.571	LTG 101,100		36
37	(G) ICE MAKER W/ BIN	BB	0.284	#12	#12	20 A	20 A	1	0.37	0.22					1	20 A	20 A	#12	#12	0.105	REFRIGERATOR EVAP	NON-CONT. SHARED BOH...	38
39	(G) ICE MAKER AND STORAGE BIN	KITCHEN...	0.676	#12	#12	20 A	20 A	1			1.15	0.06			1	20 A	20 A	#12	#12	0.069	(G) KDS MONITOR	NON-CONT. TROPICAL...	40
41	(G) UNDERCOUNTER REFRIGERATOR	KITCHEN...	1.346	#12	#12	20 A	20 A	1					1.08	0.16	1	20 A	20 A	#12	#12	0.263	LTG		42
43	(G) UNDERCOUNTER REFRIGERATOR	KITCHEN...	0.833	#12	#12	20 A	20 A	1	0.54	0.52					1	20 A	20 A	#12	#12	0.353	LTG 105,103,104,102		44
45	(G) KDS MONITOR	KITCHEN EQUIPMENT TROPIC...	0.064	#12	#12	20 A	20 A	1			0.06	1.80			1	20 A	20 A	#12	#12	1.163	(GE) HT2	SHARED BOH 105	46
47	(G) REFRIGERATED PREP TABLE	KITCHEN...	1.445	#12	#12	20 A	20 A	1					1.15	0.15	1	20 A	20 A	#12	#12	0.021	C1 C2	SHARED BOH 105	48
49	(G) REFRIGERATED PREP TABLE	KITCHEN...	1.445	#12	#12	20 A	20 A	1	1.15	0.00					1	20 A	20 A	--	--	--	SPARE		50
51	SPARE		--	--	--	20 A	20 A	1			0.00	0.00			1	20 A	20 A	--	--	--	SPARE		52
53	SPARE		--	--	--	20 A	20 A	1					0.00	0.00	1	20 A	20 A	--	--	--	SPARE		54
		TOTAL CONNECTED LOAD:							15.5 kVA		12.4 kVA		15.5 kVA								

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	NOTES:	BREAKER QUANTITIES (NEW ONLY)
Continuous	2700 VA	125.00%	3375 VA		(2) 15A / 2P, (19) 20A / 1P, (18) 20A / 1P(G), (3) 20A / 1P(GE), (1) 20A / 2P, (1) 20A / 2P(G), (2) 25A / 2P, (1) 35A / 2P(G)
Kitchen Equipment	17380 VA	65.00%	11297 VA		
Lighting	3112 VA	125.00%	3890 VA		
Motor	13652 VA	107.20%	14635 VA		
Non-Continuous	4508 VA	100.00%	4508 VA		
Receptacle	1980 VA	100.00%	1980 VA		

PANEL TOTALS
TOTAL CONNECTED LOAD: 43.3 kVA
DEMAND CALCULATION NOTES:
TOTAL DEMAND: 39.7 kVA
TOTAL DEMAND AMPS: **110 A**

PANEL KEY

--	--	--
--	--	LS
--	LA	LB

Consultant

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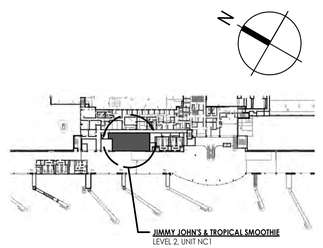
Notes



Revision	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
ISSUED FOR 60% SUBMISSION	KLH	KLH	2024.09.27

Issued	By	Appd	YYYY.MM.DD
File Name: N/A	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

FIRM LICENSE #C-4774

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE
LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

ELECTRIC POWER - PANEL SCHEDULES

Project No. | Scale

Revision | Drawing No.

E-604

COM*check* Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2015 IECC
Project Title: 26847.00 - Jimmy Johns Tropical Smoothie - Ashville Regional Airport, Fletcher, NC
Project Type: Alteration
Construction Site:

Owner/Agent:

Designer/Contractor:
KLH Engineers
1538 Alexandria Pike
Fort Thomas, KY 41075

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-CORRIDOR (Common Space Types:Corridor/Transition <8 ft wide)	202	0.66	133
2-BEERCODE / VINO VOLO / COFFEE STORAGE (Common Space Types:Storage >=50 - <=1000 sq.ft.)	819	0.63	516
3-JIMMY JOHNS PREP (Common Space Types:Food Preparation)	352	1.21	426
4-SEATING (Common Space Types:Dining Area - Bar Lounge/Leisure)	509	1.07	545
5-SHARED BOH (Common Space Types:Food Preparation)	868	1.21	1050
6-CORRIDOR 104 (Common Space Types:Corridor/Transition <8 ft wide)	52	0.66	34
7-ORDERING (Common Space Types:Dining Area - Bar Lounge/Leisure)	689	1.07	737
8-TROPICAL SMOOTHIE PREP (Common Space Types:Food Preparation)	320	1.21	387
9-STAFF ROOM/ MANAGEMENT (Common Space Types:Office - Enclosed)	133	1.11	148
		Total Allowed Watts =	3976

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)
CORRIDOR (Common Space Types: Corridor/Transition <8 ft wide, 202 sq.ft.)				
L9a: L9a: LED PANEL: Other:	1	4	55	220
BEERCODE / VINO VOLO / COFFEE STORAGE (Common Space Types: Storage >=50 - <=1000 sq.ft., 819 sq.ft.)				
L9a: L9a: LED PANEL: Other:	1	8	55	440
JIMMY JOHNS PREP (Common Space Types: Food Preparation, 352 sq.ft.)				
L8: L8: ROUND FIXED DOWNLIGHT: Other:	1	7	43	301
L11: L11: LED FLAT PANEL: Other:	1	4	30	120
L12: L12: LED FLAT PANEL: Other:	1	1	30	30
L11-EM: L11-EM: LED FLAT PANEL: Other:	1	3	30	90
SEATING (Common Space Types: Dining Area - Bar Lounge/Leisure, 509 sq.ft.)				
L1: L1: SINGLEHEAD DOWNLIGHT: Other:	1	7	16	112
L4: L4: CYLINDER DOWNLIGHT: Other:	1	1	21	21

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
L10: L10: ROUND FIXED DOWNLIGHT: Other:	1	10	22	220
L6: L6: WALL SCONCE: Other:	1	3	40	120
Track lighting: Wattage based on current limiting device capacity	0	0	240	240
L4-EM: L4-EM: CYLINDER DOWNLIGHT: Other:	1	5	21	105
SHARED BOH (Common Space Types: Food Preparation, 868 sq.ft.)				
L11: L11: LED FLAT PANEL: Other:	1	8	30	240
L11-EM: L11-EM: LED FLAT PANEL: Other:	1	5	30	150
CORRIDOR 104 (Common Space Types: Corridor/Transition <8 ft wide, 52 sq.ft.)				
L11-EM: L11-EM: LED FLAT PANEL: Other:	1	1	30	30
ORDERING (Common Space Types: Dining Area - Bar Lounge/Leisure, 689 sq.ft.)				
L1: L1: SINGLEHEAD DOWNLIGHT: Other:	1	9	16	144
L4: L4: CYLINDER DOWNLIGHT: Other:	1	1	21	21
L10: L10: ROUND FIXED DOWNLIGHT: Other:	1	14	22	308
L4-EM: L4-EM: CYLINDER DOWNLIGHT: Other:	1	5	21	105
TROPICAL SMOOTHIE PREP (Common Space Types: Food Preparation, 320 sq.ft.)				
L11: L11: LED FLAT PANEL: Other:	1	5	30	150
L11-EM: L11-EM: LED FLAT PANEL: Other:	1	3	30	90
Track lighting: Wattage based on current limiting device capacity	0	0	120	120
STAFF ROOM/ MANAGEMENT (Common Space Types: Office - Enclosed, 133 sq.ft.)				
L-9: L-9: LED PANEL: Other:	1	2	48	96
			Total Proposed Watts =	3473

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project 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 2015 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

COM*check* Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2015 IECC

Requirements: 100.0% were addressed directly in the COM*check* 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	Requirement will be met.

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
C405.2.1 [EL15][1]	Lighting controls installed to uniformly reduce the lighting load by at least 50%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.1 [EL18][1]	Occupancy sensors installed in required spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.1, C405.2.2.3 [EL23][2]	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.2.1 [EL22][2]	Automatic controls to shut off all building lighting installed in all buildings.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.3 [EL16][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.3, C405.2.3.1, C405.2.3.2 [EL20][1]	Primary sidelighted areas are equipped with required lighting controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.3, C405.2.3.1, C405.2.3.3 [EL21][1]	Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.4 [EL4][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.4 [EL8][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	Requirement will be met.
C405.3 [EL6][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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	Requirement will be met.
C405.4.1 [FI18][2]	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.*
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	Requirement will be met.
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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

Stantec

Consultant

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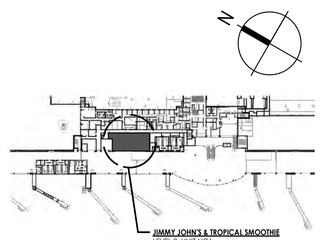
Notes



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ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
ISSUED FOR 60% SUBMISSION	KLH	KLH	2024.09.27

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File Name: N/A	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

FIRM LICENSE #C-4774

NORTH CAROLINA PROFESSIONAL SEAL 035205 ENGINEER TAVERNELLI

12/27/2024

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

ELECTRIC - ENERGY COMPLIANCE

Project No. Scale

Revision Drawing No.

E-701

26 05 01.00 - COMMON WORK RESULTS FOR ELECTRIC

The General Provisions of the Contract including the General and Supplemental Conditions and General Requirements apply to the work in this section. Before submitting a bid, examine documents of all other trades, visit the site and get acquainted with all conditions that may in any way affect the execution of this contract. Take measurements and be responsible for exact size and locations of all openings required for the installation of work. Noted dimensions convey desired locations for devices. Coordinate with owner representative on site prior to deviating from noted dimensions for any reason. Where detailed method of installation is not indicated or where variations exist between described work and approved practice, direction of the Owners representative on job site shall be followed.

Whenever the words "contractor", "this contractor", etc. appear on drawings or in these specifications for the Electrical Work, it shall refer to the Electrical Sub-Contractor. Whenever the word "Provide" appears in these documents, it shall be interpreted to mean "Furnish and Install". Whenever the word "Relocate" appears in these documents, it shall be interpreted to disconnect electrical feed, make safe including lock out, store and protect device, reinstall, rework and extend conduit and wire to new location, re-energize and test.

The exact mounting height of devices shall be determined in the field with relation to architectural details and equipment being served. It shall be the responsibility of this contractor to coordinate outlet location with equipment. The Owners representative shall be permitted to relocate any outlet prior to installation within a 15 foot limit at no additional charge in contract price. All fasteners, hangers and methods of hanging exposed work in finished areas shall be submitted to the Owners representative for approval before installation.

The contract includes all items of material and labor required for the complete installation and full operation of the electrical work as shown on the drawings and hereinafter specified. All materials and methods shall be in accordance with applicable codes, regulations and/or ordinances and meet the approval of local inspection authority having jurisdiction. The latest edition of NFPA 70 (NEC/National Electrical Code) shall be the minimum requirement for all work. Examine the drawings and specifications for compliance with the above codes, regulations and ordinances and base bid and work accordingly. Obtain and pay for all permits and inspections related to this work. A certificate of approval for work from inspection authority shall be given to the Owner before final acceptance will be given by Owners representative.

All work, materials, and equipment shall have a one-year warranty after acceptance of the work by the Owner. Any defective items shall be removed and replaced at the electrical sub-contractor's expense and to the satisfaction of the engineer and owner's representative.

Perform work under this contract in close harmony with other contractors so completed work shall present a neat and workmanlike installation. Exposed finished materials and equipment shall be carefully cleaned and wiped to remove grease, smudges, fingerprints, dust and other spots and left smooth and clean. During the progress of the work, the electrical sub-contractor shall carefully clean the job site and shall leave the premises and all portions of the building in which he is working free of debris and in a clean and safe condition.

This contractor shall be responsible for the training of owner's representatives of each system to the satisfaction of the Owners representative.

The Electrical Contractor shall consult the Plumbing, HVAC and Structural plans (where applicable) in all instances before installing his work so that his work will not interfere with those branches. In the event of a conflict, this contractor shall report to the Owners representative at once and do no further work to be installed until a satisfactory arrangement is decided upon. Any work done, or equipment placed in position by this contractor, creating a conflict in violation hereof, shall be readjusted to the satisfaction of the Owner's representative at the expense of the contractor. The decision of the Owners representative shall be final in regard to changes due to conflicting conditions. Contractor shall complete his work or any part thereof at such time as may be designated by the Owner, so that it can be used for temporary or permanent use and such use of the system shall not be construed as an acceptance of same by Owner.

Two sets of electrical drawings shall be provided as record drawings which shall be separate, clean, copies reserved for the purpose of showing a complete picture of the work as actually installed. These drawings shall also serve as work progress report sheets and the electrical contractor shall make any notations, neat and legible thereon daily as work proceeds. The drawings shall be available for inspection at all times and shall be kept at the job at a location designated by the Owners representative. At the completion of the work, these record drawings shall be signed by the electrical contractor, dated and returned to the Owners representative. Final payment of contract will not be made until receipt and review of said drawings.

Provide two neatly bound (with tabbed sections) copies of maintenance books, instruction books and parts list pertaining to all equipment furnished. Submit to the Owners representative for approval. Final payment will not be made until drawings for record, maintenance and instruction manuals are delivered to the Owners representative.

26 05 02.00 - COMMON ELECTRICAL MATERIALS AND METHODS

All materials and equipment shall be new. All materials, apparatus and equipment shall bear the seal of Underwriters Laboratories Inc. (UL), or a similar credible testing agency, label where regularly supplied. Certain manufacturers of material and equipment are specified and plans are detailed according to this material. This contractor shall base his bid on furnishing and installing this make of material and equipment.

Where more than one make of material or equipment is specified, the contractor shall state in his bid which make he proposes to furnish. Shop drawings shall be submitted on material and equipment to be furnished by the contractor for Engineers approval. This approval to be obtained prior to shipment of equipment.

Hold routing of new raceways in new and existing buildings as tightly as possible to the structure above. Obtain approval of owner's representative prior to installation. Do not install any electrical work within 6 inches of roof decking.

Neatly dress all work. Install all work parallel and perpendicular to surfaces or exposed structural members, and follow surface contours, where possible. Install splice and tap connectors which possess equivalent or better mechanical strength and insulation rating than conductors being spliced. Use splice and tap connectors which are compatible with conductor material. All wires shall be run continuous from outlet to outlet/luminaire to luminaire. Insulation value of joints shall be 100% in excess of wire. Provide adequate length of conductors within electrical enclosures and train the conductors to terminal points with no excess. Bundle multiple conductors, with conductors no larger than 10 AWG cabled in individual circuits. Make terminations so there is no bare conductor at the terminal.

Maintain a uniform elevation for all cable runs wherever possible. All cables shall be supported/anchored at maximum 4 foot intervals and within 12" of box or outlet and shall not sag. Install cables in a manner that prevents overheating. Cables shall be fastened directly to the structure using factory clamps/clips specifically designed for the respective cable (Caddy or equal).

Keep conductor splices to minimum. Pull conductors simultaneously where more than one is being installed in same raceway. Use UL listed pulling compound or lubricant, where necessary. Increase wire sizes to offset voltage drop as/if required.

Branch subfeeder circuits shall be installed as shown on the floor plans. Where outlets are indicated by letters on plans, they shall be controlled by corresponding switches.

Outlets shall be located approximately as shown on the plans and shall be wired to provide control of outlets indicated. All wires of any one circuit shall be run in the same conduit.

Mechanical wire splicers shall be Scotchlock insulated type, TandB Stakon or approved equal. The conductors terminating at each wired outlet shall be left not less than 8" long at their outlet fittings to facilitate installment of devices or luminaires. Friction and rubber tape conform to Federal Specifications HH-T-11 and HH-T-111. Plastic electrical tape shall be Scotch #33+ or approved equal.

Do not share neutrals when amongst multiple branch circuits or with multi-wire branch circuits.

Provide grounding electrode conductors for service entrances and derived systems.

Provide all feeders and branch circuits with insulated (green covering) equipment grounding.

Only install conduit exposed on rooftops when it is impossible to do otherwise, or only if specifically indicated for such installation case-by-case elsewhere in documents. Installation convenience, financial considerations, lack of coordination with other trades and similar rationale are not sufficient reasons for doing so. In cases where conduits must be installed on rooftops, de-rate conductors and modify conduit sizes as needed to accommodate this condition. Provide expansion fittings, which are UL listed and labeled for the respective applications, at all building expansion joints and at maximum distances of 100 feet. Paint all such conduits with at least two coats of UV-resistant weatherproof paint. Provide white paint on flat rooftops that have finishes white in color, and for otherwise-colored roof finishes that are not visible from the building interior or from the ground outdoors. Elsewhere select colors to match surrounding surfaces; submit colors to Architect for review in advance of procuring paint.

Provide all cutting and patching required for the admission of work. Any damage done by this contractor to the building during the progress of work shall be made good at contractor's own expense. All patching shall be done by a skilled craftsman in that respective trade. It shall be the responsibility of this contractor to supervise the installation of, and pay for all additional members, wood or metal and labor which may be required to support any type of permanent or temporary electrical apparatus employed in the execution of this contractor's work.

Access Doors: Do not use access doors unless special prior written permission is granted from the Owner's Representative. Install pull boxes, junction boxes, etc. in areas which are accessible after completion of construction. Do not install pull boxes or junction boxes above gypsum board or similar inaccessible ceiling systems. Where there is no other recourse but to provide an access door/panel, and where approval of Owner's Representative has been obtained, provide required access doors/panels as required for a complete code-compliant electrical installation as defined below. Provide access doors in fire/smoke ratings that meet or exceed the surrounding surface that is being penetrated.

Seal all new floor, ceiling, wall, slab, etc. penetrations to match or exceed existing assembly fire ratings. Provide sleeve seals for all sleeves, provide sleeves for all penetrations. All penetrations of fire-rated or smoke-rated wall, floors ceilings, etc. shall be sealed immediately after raceways are installed. All new electrically related work shall be supported directly from building structural members. New electrically related work shall not be supported from ductwork, ductwork hanger, ceiling supports, existing conduit support, etc.

26 05 03.00 - SUBMITTALS FOR ELECTRICAL SYSTEMS

Provide submittals in accordance with the Contract Documents. In addition to Division 01, the Contractor is advised to review and comply with the requirements articulated within each Division and within each section of that Division.

Some Divisions may include a division-specific "Submittal Requirements for …." section. Where this section exists, it articulates additional requirements for submittals that apply to the work of that Division.
The following requirements help to identify, track and keep the project organized for all parties involved. They are necessary to ensure a timely turnaround and an appropriate technical review. Submittals that do not conform to the administrative requirements are rejected and returned, without technical review.

Supply submittals for each section: Submittals shall be supplied on a section-by-section and type-by-type basis. For example, independent product data submittals shall be furnished for each section that requires product data submittals. Independent shop drawing submittals shall be furnished for each section that requires shop drawings. Separate PDF file packages shall be supplied for each section, for each submittal type. Each PDF shall represent a single standalone submittal.

Include a transmittal: Transmittals shall enumerate each submittal for each section of each type and iteration.

Include cover sheet / title page: The cover sheet shall include the information identified in the contract documents. It shall be included as the first page of each electronic and/or hardcopy document-based submittal. An editable and printable PDF form created with editable fields and specification compliant appearance is available from KLH upon request. It is also downloadable from the KLH website at www.klhengrs.com.

Include an index: The index shall enumerate the contents of the submittal.

Include checklists: Where checklists are included with the specifications, complete and include them within the appropriate submittal. Supply complete submittals: Complete submittals of each type are required. Partial submittals will be rejected. Where a section requires a product data submittal, all product data for that section shall be supplied together, at one time, as one complete submittal. When resubmittal is required (e.g. Revise and Resubmit) the revised submittal shall be more complete, more accurate and more contract-compliant than its rejected predecessor. The submittal number (for each section and type) shall increment for each subsequent submittal (00 – Original submission, 01 – First Resubmission, 02 – Second Resubmission, etc…). Resubmittals shall include a copy of the reviewers comments supplied with the prior submittal rejection and shall be amended with a description of the specific action taken to comply with the reviewer's comments. The absence of this on resubmittal is cause for rejection.

Name electronic files to match the submittal ID and cover sheet: The electronic file name of submittals shall match the submittal ID included on the submittals cover page. For example: The original/first product data submittal for Section 260519 would be labeled as "260519.00-PD-00"; the first resubmittal of same shall be labeled "260519.00-PD-01". The original/first shop drawings submittal file for the same section would be labeled "260519.00-SD-00"; the first resubmittal of same shall be labeled "260519.00-SD-01".

If expressly permitted by the Owner and the terms of the Contract, editable electronic drawings may be made available for the creation of shop and as-built drawings upon request. Drawings will be made available at the discretion of the Engineer.

"Request Drawings" form can be accessed, filled out and submitted at http://www.klhengrs.com (right hand side of page - Contractor Resources). Direct access to this form can be found here:
http://files.klhengrs.com/requestdrawings.html

26 05 19.00 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

Submittal Requirements
Product Data
For each type of conductor and cable.

Furnish and install all necessary cable of the size and type indicated on the drawings or specified hereinafter. All wire shall be copper. All wiring shall be new. No wire smaller than #12 AWG shall be installed unless specifically designated. Use of #14 color coded wire will be allowed for control circuits only. Provide stranded conductors for all sizes unless indicated otherwise.

Provide THHN/THWN-2 insulation for all conductors as appropriate for the locations where installed. Provide color coded insulation/jacket for phase identification. All wires shall be rated at 600 volts. Provide type XHHW-2 insulation for all wiring below grade or subject to moisture.

Unless specifically indicated otherwise on drawings, provide grounded ("neutral") conductors that are at least parity-sized with corresponding phase/line conductors for all applications.

All conductors shall be rated for 90 deg. C. minimum. Provide with green insulated equipment ground conductor. Provide compatible steel fittings with integral red plastic insulated throat bushings. Cables shall be 90 deg. C. rated with all components and fittings listed for grounding and compliant with the following: UL Std.4 and UL Std. 83; ANSI E119 and E814; NFPA 70.

Cables: Route cables perpendicular and parallel to the building architectural lines, surfaces, and structural members, keeping offsets to a minimum and following surface contours where possible. Maintain a uniform elevation for cable runs wherever possible. Support and anchor cables at maximum 4 foot intervals and within 12" of box or outlet in a manner that prevents sagging. Install cables in a manner that prevents overheating. Fasten cables directly to the structure using factory clamps and clips (zip ties and like products are not permitted) specifically designed for the respective cable (Caddy or equal). Cables may be utilized only if code-approved for the intended use and in the limited applications defined below.

Type MC (Metal-Clad) Cable: Form from continuous length of spirally wound, interlocked zinc-coated or galvanized (inside and outside) strip steel or aluminum jacket, with stranded copper conductors with 90 deg. C THHN insulation system. Provide only where permitted in the Conduit/Wire Material Schedule shown on the drawings

26 05 26.00 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

All metallic conduit, surface raceways, wireways, supports, cabinet and equipment shall be grounded.

26 05 29.00 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

It shall be the responsibility of the electrical contractor to supervise the installation of and pay for all additional members, wood or metal and labor which may be required to support any type of permanent or temporary electrical apparatus employed in the execution of the electrical contractor's work. Provide supports, anchors, sleeves and seals furnished as part of factory-fabricated equipment as required. Locations and routing that may be shown on plans are schematic and diagrammatic in nature. Metallic products shall be galvanized steel.

Conduit shall be supported by approved straps, fasteners and hangers. Hangers shall be suspended from rods. Perforated straps will not be acceptable. Fasteners shall be lead expansion shields in block or concrete, toggle bolts in hollow walls, machine screws on metal surfaces and wood screws on wood construction. At building expansion joints and where deflection is expected, conduits shall be provided with expansion fittings with bonding jumpers. Conduits passing through structural members shall be provided with stub and coupling or sleeve in the member. Where moisture conditions are encountered, a hole shall be drilled at the lowest point in the conduit run. Also provide sleeves for all fire wall and smoke partition penetrations (sealed accordingly).

All conduit shall be supported independently from all other building systems and shall be supported directly from structural components. Electrically related work shall not be supported from ductwork, ductwork hangers, ceiling supports, existing conduit supports, etc.

Use of synthetic or plastic "tie-wraps", "zip ties", "wire ties" and similar products are not permitted as a permanent means of anchoring, securing, supporting or otherwise installing any cables, conductors, conduits, raceways, devices, equipment or other electrical work.

All conduits, raceways and cables (where applicable) shall be routed parallel and perpendicular to building structural members. Any and all noncompliant work installed by the electrical contractor shall be removed and reinstalled by the electrical contractor to the satisfaction of the Owner's representative and the Engineer, at the expense of the electrical contractor. At building expansion joints and where deflection is expected, provide conduits with expansion fittings with bonding jumpers. Conduits passing through structural members shall be provided with stub and coupling or sleeve in the member. Where moisture conditions are encountered, a hole shall be drilled at the lowest point in the conduit run. Provide sleeves for all fire wall and smoke partition penetrations (sealed accordingly).

Stem lengths of all pendant fixtures shall be as directed by the owner's representative. All fasteners, hangers and method of hanging exposed work in finished areas shall be submitted to the owner's representative for review before installation. Fasteners shall be zinc-coated, type, grade, and class as required for a neat finished installation.

Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded. Install anchor bolts to elevations required for proper attachment to supported equipment. Provide female expansion anchors, and install studs and nuts after equipment is positioned. Provide bushings for floor/wall-mounted equipment anchors to allow for resilient media between anchor bolts/studs and mounting hole in concrete.

Touchup Painting: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting.

Provide supports for multiple raceways capable of supporting combined weight of supported systems, equipment, connected systems and associated components/contents. Provide supports adequate in tension, shear, and pullout force to resist maximum loads calculated or imposed for this project, with a minimum structural safety factor of five times the applied force.

Coordinate installation of roof curbs, equipment supports, and roof penetrations.

Steel Slotted Support Systems: Comply with MFMA-4, factory-fabricated components for field assembly. Construct with all necessary fittings which mate and match with U-channel. Provide metallic coatings that are hot-dip galvanized after fabrication and applied according to MFMA-4. Provide channel dimensions that are selected for applicable load criteria. Comply with NECA 1 and NECA 101 unless requirements in this or other specification sections are stricter.

Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted, sized so capacity can be increased by at least 50 percent in future without exceeding specified design load limits. Secure raceways and cables to these supports with two-bolt conduit clamps, single-bolt conduit clamps, or single-bolt conduit clamps using spring friction action for retention in support channel as applicable.

Overhead Electric Work: Install work so that no raceway or cable is within six inches below roof deck(s). Suspend and support overhead electrical work from roof trusses and joists/joist girders only at panel points, at top cord only, unless otherwise indicated.

Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb.

Roof Decks: Do not suspend overhead hangers, or support any other overhead electrical work, from roof decks.

Plywood Equipment Boards: Lumber shall be preservative treated in accordance with AWPB LP-2, and kiln dried to a moisture content of not more than 19 percent. Provide plywood panels; APA C-D PLUGGED INT, with exterior glue; thickness as indicated, or if not indicated, not less than 3/4 inches deep. Provide marine grade plywood where subject to moisture conditions. Unless otherwise noted, boards shall be painted with two coats of good grade weatherproof flat gray non-conductive fire-retardant paint on all sides and edges (prior to mounting) and plumbed in a true vertical position. Provide nominal 1/2" rustproof spacers between back of plywood and wall. Maintain at least 4 inches from bottom of plywood equipment boards and the finished floor surface. Unless directed otherwise in field, plywood equipment boards shall be 8 feet high by 3/4 inches deep by length shown on drawings (as dimensioned or as scaled) or length as required to accommodate equipment if not indicated on drawings. Provide plywood equipment boards at locations as shown on drawings. Unless directed otherwise in field, plywood equipment boards shall be provided for all surface mounted panelboards and systems "head-end" equipment for all applications where located in mechanical or electrical rooms and only where specifically shown on drawings for all other applications.

26 05 33.00 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

Normal system power feeders and branch circuits shall be installed in separate raceways from emergency system power. All wiring for different power voltages shall be installed in raceway systems separate from each other. All wiring for the various electrical systems shall be installed in raceway systems separate from each other.

All fittings shall be set-screw or compression type steel, with insulated throats. Unless indicated otherwise on drawings or in other parts of the electrical specifications, all wiring of all systems shall be installed in conduit.

Conduit shall be cleaned inside before any wires are pulled. Conduit ends shall be capped and plugged with standard accessories as soon as conduit has been permanently installed. Conduit installed without conductors shall be provided with sweep bends and baling wire for pulling.

All joints shall be made tight with watertight couplings matching conduit and all corners shall be made with long radius elbows. The ends of all conduits shall be cut square and reamed and all joints brought to a shoulder. Conduit shall be continuous between outlets to make a complete installation and to provide a continuous ground. Suitable supports and fastening shall be provided for conduit.

All raceways shall be entirely free of plaster, mortar, water and other foreign matter before installing conductors or cables.

In general, gang type outlet boxes shall not be used. The outlet box locations indicated on drawings shall be considered approximate, and therefore, it shall be incumbent upon this contractor to study the general construction with relation to spaces and equipment surrounding each outlet. All outlet, switch and junction boxes shall be made of code galvanized steel complete with rings and screw cover plates and located where shown and noted on drawings. Where conduit is concealed, boxes shall not be less than 4" square x 1-1/2" deep. All boxes shall be equipped with proper covers to bring flush with finished wall surface.

Where outlet boxes occur in block, cinder, or concrete block, facing tile or other material where such materials form the finished wall surface, the opening for the box shall be cut neatly and of the size that the cover plate will cover all parts of the opening. Condulets shall be used on exposed raceways. In general, junction boxes shall be constructed of #12 gauge steel with removable front fastened on with counter sunk head screws or other approved means. For special application, junction boxes shall be noted, detailed and/or sized on the drawings or in the field as required.

Prior to rough-in, verify all box/device mounting heights and locations in field with Owners representative. In general, where not located at counter areas, the height of boxes from finished floor to center of boxes shall be as follows, unless otherwise noted on plans. In cases where using center of box for measurement would result in a switch-height device having an operable component higher than 48 inches above finished floor, install boxes lower as needed so that uppermost part of operable component is no higher than 48 inches.
Switches: 3'10"
Receptacles: 1'6" (unless counter height)
Telephone Outlets (desk phone): 1'6"
Telephone Outlets (Wall phone): 3'10"
Data Cable Outlets: 1'6"
Control Stations: 3'10"
Other devices: As directed in field.

26 05 48.00 - VIBRATION AND SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS

Provide seismic bracing of mechanical and electrical components where required by code. Provide seismic restraint systems to meet total design lateral force requirements for support and restraint of piping, ductwork, equipment and other similar systems and equipment where required by the applicable building code.

Seismic restraint designer shall coordinate all attachments with the structural engineer of record. Provide engineered stamped and signed drawings of seismic design. Seismic restraint designer shall provide visual inspection after installation and approve installation of seismic design components. Design analysis shall include calculated dead loads, static seismic loads, and capacity of materials utilized for the connection of the equipment or system to the structure. Analysis shall detail anchoring methods, bolt diameter, and embedment depth. All seismic restraint devices shall be designed to accept without failure the forces calculated per the applicable building code. Friction from gravity loads shall not be considered resistance to seismic forces.

26 05 53.00 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

Provide manufacturers standard self-adhesive vinyl tape not less than 3 mils thick by 1-1/2" wide. Where applicable, install on all concealed raceways at connection to all junction boxes, pull boxes, equipment, wall/floor/roof penetrations, etc. Unless otherwise indicated or required by governing regulations, provide orange tape with black letters. Provide circuit identification bands for all cables and conductors. Provide manufacturers standard color coding for cable/conductor jacket and/or insulation for all cables and conductors of all systems. Match identification with marking system used in existing systems (where applicable), shop drawings, contract documents, and similar previously established identification for projects electrical work. Provide on all conductors of all systems.

The following insulation color code shall be used for system and voltage identification. This shall apply to both feeder and branch circuit wiring. Interchange of colors shall not be permitted.

208Y/120V System:	Black, Red, Blue
and White (neutral)	
480Y/277V System:	Brown, Orange,
Yellow and Gray (neutral)	
Equipment Grounding:	Green
Systems:	To match existing
where applicable - verify in field.	

Provide engraved plastic-laminate sign on major units of electrical equipment, including panelboards, disconnects, starters, control panels, etc. Except as otherwise indicated, provide single line of text, 1/2" high lettering, on 1-1/2" high sign (2" high where 2 lines are required), white lettering in black field. Unless determined otherwise in field, provide text matching terminology and numbering of the contract documents and shop drawings. Secure to substrate with fasteners, except use adhesive where fasteners should not or cannot penetrate substrate.

All equipment and system identification nomenclature shown on drawings or listed herein is shown for general design and installation reference only. The actual nameplate, etc. nomenclature for this project shall be verified by electrical contractor in field prior to fabrication and where applicable, shall be an extension of existing nomenclature used on the site as determined in field by electrical contractor.

Equipment to Be Labeled: All enclosures for all electrical equipment furnished or installed under Divisions 26 and 28; Remote-controlled switches, dimmer modules, and control devices, via engraved wall plates; Miscellaneous Control Stations; Access doors and panels for concealed electrical items; Other similar equipment designated by owner's representative, architect or engineer in field.

26 05 84.00 - MECHANICAL EQUIPMENT

Provide all necessary electrically related work as required to render all mechanical equipment (including plumbing, heating, ventilating and air conditioning equipment) fully operational and fully compliant with all local and national codes. This includes, prior to ordering materials or commencing with rough-in, reviewing equipment submittal data and coordinating with installing contractors to ensure the correct size, rating and quantity of conductors are provided.

Provide raceway, wiring, connections, and terminations for power and interlocks for electrically operated equipment.

Provide disconnect switch ahead of all equipment, including controls, unless shown otherwise on the drawings. Provide NEMA 3R enclosures where installed outdoors and where installed indoors in areas subject to moisture. Ground metal frames of equipment by connecting frames to the grounded metal raceway and to a full-size green ground conductor. Provide the necessary electrical connections to the specified equipment. Where mechanical equipment lugs cannot accommodate conductor sizes, provide ILSCO ClearTap Insulated Multi-Tap Connectors.

Sizes, electrical ratings, etc. of equipment and wiring shown on drawings are based on the respective equipment basis of design. If different manufacturer(s) or model(s) are supplied, provide necessary coordination in field (prior to ordering materials and prior to rough-in) and provide the necessary size of related electrical equipment, wiring, conduit, etc.

Prior to furnishing submittals and prior to rough-in, determine exact electrically related characteristics, loads, voltages, disconnect and starter requirements, locations, mounting heights, connection points, etc. of mechanical equipment.

Disconnect and Controller Locations: Locations shown on drawings are indicated for schematic purposes only. Determine exact locations in field. Refer to Electrical Coordination Schedules on drawings. Provide disconnects, starters, accessories, wiring, connections, services, etc. where defined as "EC" in the schedule. Information in this section supplements the information in the schedules. Provide power wiring and connections for all equipment (including motor dampers and accessories where applicable) as required to render equipment fully operational. Install local disconnects and starters at 48 inches to top of outlet box or enclosure where applicable above finished floor/slab/grade. Provide flush mounted units in finished areas. Provide key operated manual starters where accessible to unauthorized personnel, including general public.

Maintenance Receptacles: Provide duplex GFCI receptacle within 25 feet of all electrically operated equipment of any nature that requires periodic testing or maintenance. This applies for all indoor and outdoor equipment. Provide Type WR duplex GFCI weatherproof receptacle for outdoor applications (including rooftops) and for applications subject to high humidity or moisture.

Domestic Water Heaters (Electric): Provide local disconnect switch, and power wiring and connections. Provide interlock wiring with circulating pumps, flow switches and aquastat controls where applicable.

Domestic Hot Water Circulating Pumps (Return Line): Provide manual starter with pilot light, and wire pump to operate through the aquastat. Refer to wiring diagrams on drawings for further definition.

Heat Trace (Direct-Connected): Review documents of all mechanical trades to determine extent and specifics related to heat trace requirements for the project. Any loads, quantities, circuits, connection locations, etc. that may be indicated on electrical drawings are shown for design-phase schematic representation only. Coordinate with all installers that may have heat trace for their piping or equipment to determine loads, quantities, required circuits, connection locations, etc. for each application. Provide such coordination prior to furnishing submittals and prior to commencing with any rough-in work. Provide power wiring (ground fault equipment-protected). Provide identified local weatherproof non-fused disconnect and related field wiring/connections. Provide Type XHHW-2, low-leakage, branch circuit conductors. Keep branch circuit wire splices to an absolute minimum and properly insulated to prevent leakage. Provide Ground Fault Equipment Protection (GFEP) type circuit breakers at source panelboards for these branch circuits, per NFPA 70, Article 427, even if not shown as such on schedules. Provide power wiring and connections as required to render all heat trace fully operational.

General Control Wiring Requirements: Unless specifically indicated as empty conduit on drawings or herein, provide electrical control and interlock work as shown on drawings. Provide additional control work as specifically indicated herein. Coordinate HVAC thermostat and sensor locations in field (case by case) with Architect, Owner's Representative and equipment installer to ensure that they are placed in locations that will not interfere with furniture, equipment, artwork, wall-hung specialties, room finishes, etc. Field-verify these wall locations case by case, prior to rough-in, since locations shown on drawings are schematic only.

Schematic Thermostat and Sensor Locations: Refer to applicable drawings and documents.

Low Voltage Thermostats and Sensors: Provide 4-inch square by 2-1/8 inch deep wall outlet boxes at 46 inches above finished floor to center of outlet box (with single-gang rings) for each unit. Provide one 3/4 inch empty conduit from each location, turned out above accessible ceilings (in joist space or against overhead slab/deck). Identify conduit in ceiling cavity; provide sweep bends, bushings and drag line.

Motor Operated Dampers: Provide wiring associated with interlock of motors to associated motor dampers. Provide local disconnect at each motor damper if fan is not furnished with one. Where HVAC equipment or exhaust fans are controlled by VFC/VFD units, wire motor operated dampers (MOD's) back to the respective VFC/VFD unit separately from the respective exhaust fan power wiring, with (2) #12 AWG in 3/4 inch conduit. Provide local disconnect for each such MOD.

260590.00 - ELECTRICAL SPECIALTIES

Product Data
For equipment, materials and systems specified in this section. Include product data, descriptive information, technical data, wiring diagrams, etc.
Door Bell System
Provide Edwards #660 flush strap-mounted bells, or equivalent by Federal Signal, Jenkins, NuTone or others, 8-10VAC, 15 VA. Provide 2-1/8 inch deep wall outlet back-boxes.
Provide Edwards #852 pushbuttons, or equivalent by Federal Signal, Jenkins, NuTone or others, flush "panel" mounted type rated at 10A at 12VAC/24VAC. Provide descriptive instructional engraving as directed by Design Professional. Provide 3-1/2 inch deep wall outlet back-boxes.
Provide Edwards #88-250 transformer, or equivalent by Federal Signal, Jenkins, NuTone or others, rated 120V primary and 4/8/12/16/20/24V secondary (40/80/125/160/200/250 VA). Install accessible (concealed in finished areas) per NFPA 70 and in a manner which permits proper cooling of the transformer. Provide power VA rating of the transformer as required for the loads plus 100% spare capacity for future addition of audible devices. Provide local primary switch at the transformer as a local disconnect and provide secondary fusing. Provide low voltage cable that is #16 AWG minimum.
Commercial/Institutional Kitchen Equipment
Provide a complete wiring system to kitchen equipment. Refer to -series drawings and specifications for further definition of work required. Determine exact location, mounting height and termination requirements from the kitchen equipment contract drawings and from manufacturer's equipment submittals. Provide either direct connections or cord & plug connections (including cords, plugs and receptacles) as determined in field; verify case by case prior to rough-in. Verify electrical ratings in field prior to rough-in. Make final connections to equipment.
Provide disconnect switches for direct-wired equipment and receptacles for cord & plug equipment. Provide local power disconnect device for equipment that is more than fifty feet or out of sight from the serving panelboard. Install, wire and connect special purpose receptacles and associated cords. Provide 120V standard receptacles and common use receptacles such as a 30A or 50A range receptacle.
Provide wiring and connections to equipment, controls, defrosters, condensers, compressors, lights, fans, heaters, heating elements, etc., which may not be detailed on plans, as applicable.
Refer to kitchen equipment drawings for additional details and provide related electrical work as required to render equipment fully operational.
Provide GFCI protection for all 15 and 20 ampere receptacles throughout the kitchen. Utilize GFCI receptacles for all accessible receptacles and GFCI branch circuit breakers for all inaccessible receptacles.

26 09 19.00 - ENCLOSED CONTACTORS

Provide contactors equipped with external pilot lights in cover, and external HOA selector switches in cover. Wire contactors for lighting applications so that the "AUTO" position is the normal activated condition (i.e. photocell controlled, photocell/time-clock controlled, remote switch controlled, BAS controlled, etc.); so that the "OFF" position is manual override to turn lighting off; and so that the "HAND" position is manual override to turn lighting on. Provide contactors with field convertible N.O./N.C. contacts and descriptive nameplates.

Electrically Held Contactors: Provide contactors equal to Square D Class 8903 (or Allen-Bradley Bul. 500L-BA*94 series) for tungsten lighting loads, ballast lighting loads, and small resistance heating loads. Provide contactors that are electrically operated and electrically held (EOEH). Provide contactors in factory NEMA 1 enclosures, with 120V coils (unless indicated otherwise elsewhere or otherwise required to render controls fully operable). Provide "dry" contacts rated at 30A, minimum 250V (600V if required by application). Provide number of poles (minimum of three poles) and number of contactors as required for each application. Field verify coil voltage ratings.

26 09 23.00 – LOCAL LIGHTING CONTROLS

Submittal Requirements
Product Data
For equipment, materials and systems specified in this section. Include product data, descriptive information, technical data, wiring diagrams, load restrictions, etc.

General Requirements
Finishes & Wall Plates: Refer to specification 262726.00 – Wiring Devices and match all requirements.

Toggle Switches:
Refer to specification 262726.00 – Wiring Devices.

Momentary-Contact Toggle Switches: Provide Standard of Quality equal to Legrand LVS-1, 3 Amp, 24 VAC/VDC, single-pole, double-throw with center rest, designed to fit conventional toggle switch openings.

Wall-Box Dimmers
Provide dimmer switches equal to Leviton #TSL06 series in configurations shown on the drawings. Dimmer shall be compatible with the light fixtures controlled, specification grade, full dimming range. DO not break off side heat-sink

Stantec

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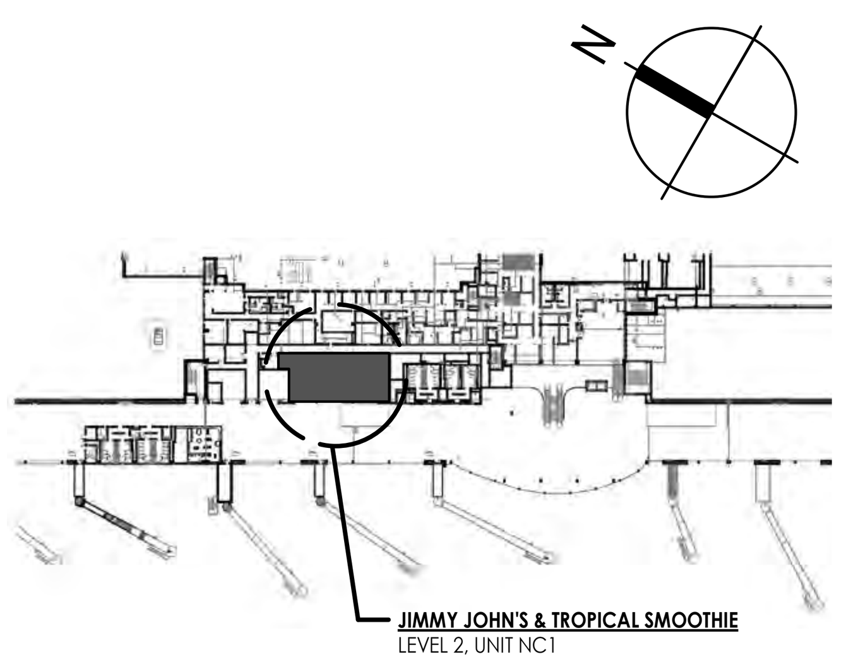
Notes



Revision	By	Appd	YYYY.MM.DD

Issued	By	Appd	YYYY.MM.DD
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Permit/Seal
FIRM LICENSE #C-4774
NORTH CAROLINA PROFESSIONAL SEAL 035205 ENGINEER JAMES S. TAVERNELLI
12/27/2024

Client/Project Logo
Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JJ JIMMY JOHN'S

Client/Project
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE
LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER, NORTH CAROLINA, USA, 28732

Title
ELECTRIC - SPECIFICATIONS

Project No.
Scale
Revision
Drawing No.
E-702

sections when ganging dimmers. Modular, full wave, solid-state units with integral, quiet on-off switches, with audible frequency and EMI/RFI suppression filters.

Time Clocks
365-Day Multi-Purpose Time Clocks: Provide time clock that is programmable 365-day/24-hour with override controls and holiday option. Provide number of channels indicated on the drawings. Provide required external contactors, relays, etc. to render the control systems fully operational. Verify zone control requirements in field prior to rough-in. Provide 100-hour carryover.

Occupancy Sensors, Dual Technology Wall Switches: Provide Wattstopper DW-100 wall switch (or equivalent) and configure as manual on, auto off (vacancy sensor) unless otherwise specified on drawings. Provide with time delay as specified on drawings. If no time delay is specified, program to 10 minutes.

Occupancy Sensors, Dual Technology Ceiling Sensors: Provide Wattstopper DT-300 ceiling mounted occupancy sensor (or equivalent). Provide with time delay as specified on drawings. If no time delay is specified, program to 20 minutes. Adjust sensitivity based on field conditions and occupancy of room to provide 100% coverage without nuisance tripping. Provide Wattstopper BZ-150 universal voltage pack(s) as required to properly power all occupancy sensors and provide switching per the design intent. In areas where multiple occupancy sensors control a single zone together, interlock occupancy sensors/power packs per manufacturer instructions to meet control intent.

26 22 00.00 - LOW-VOLTAGE TRANSFORMERS

Submittal Requirements
Product Data
For each type and size include rated nameplate data, capacities, weights, dimensions, minimum clearances, location and size of each connection, performance, etc.

Specifications below are applicable to all distribution transformers rated 600V and less, with capacities up to 1000 kVA. Subject to compliance with requirements, provide equipment of one of the following manufacturers: Eaton Electrical Inc.; GE/ABB; Siemens Energy and Automation, Inc.; Square D, a brand of Schneider Electric.

Transformers shall be factory-assembled and tested, air-cooled units for 60-Hz service, grain-oriented, non-aging silicon steel cores, and listed for continuous operation at listed kVA. Provide terminal enclosure, with cover, to accommodate primary and secondary coil wiring connections, and to accommodate electrical supply raceway terminal connectors. Provide terminal leads with connectors installed. Provide wiring connectors suitable for copper or aluminum wiring. Coil connections shall be brazed or pressure type.

Transformer enclosures shall be gray in color.

Insulation shall be 220 degree C, UL-component-recognized insulation system with a maximum of 150 degree C rise above 40 degree C ambient temperature.

Transformers shall have a minimum number of taps as follows:
Smaller than 3 kVA: One 5% tap above normal full capacity
Between 7.5 and 24kVA: One 5% tap above normal full capacity
Above 24kVA: Two 2.5% taps above and four 2.5% taps below full capacity.

Maximum sound levels, when factory tested according to IEEE C57.12.91 shall be as follows:
Smaller than 9kVA: 45Db
30 to 50kVA: 45Db
51 to 150kVA: 50dB

Floor-Mounted Transformers: Coordinate size and location of concrete bases with actual transformer provided. Cast anchor-bolt inserts into bases. Concrete, reinforcement and formwork requirements are specified with concrete. Coordinate structure-hanging supports/wall-mounting supports with actual transformer that is provided.

Wall/Overhead-Mounted Transformers: Install wall-mounting and overhead-mounting transformers level and plumb with brackets fabricated by transformer manufacturer, or other means and methods specifically approved by or recommended by transformer manufacturer for the affected transformer, and install as recommended by transformer manufacturer. Also, provide companion vibration isolators procured from transformer manufacturer. Submit specific proposed installation means, methods, weights, sketches, details, etc. to Design Professionals for review and comment prior to commencing with any related work.

26 24 16.00 – PANELBOARDS

Submittal Requirements
Product Data
For each provide bus configuration, current ratings, voltage ratings, SCCR Ratings, overcurrent protective device(s), surge suppression device(s), accessory, and components indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.

Subject to compliance with requirements, provide panelboard products of one of the following (for each type and rating of panelboard and enclosure): Square D Company, GE/ABB, Siemens, Eaton/Cutler-Hammer.

Panelboards shall bear UL labels for their specific applications. Panelboards shall be suitable for service voltage with number of branch circuits of capacity scheduled. Refer to the drawings for bussing material. Where copper is specified provide silver or tin plating. Unless otherwise indicated, panelboards and sections thereof, if any, shall have main-lugs-only of capacity equal to, or greater than, the rating or setting of the over the current protective device next back on the line. All circuit breaker panelboard bus assemblies shall be of the distributed (sequence) bussing type throughout, so that any 2 adjacent single pole breakers and/or spaces shall be replaceable by a 2-pole internal common trip breaker, and any 3 adjacent single pole breakers and/or spaces shall be replaceable by a 3 pole internal common trip breaker, 15 amp through 70 amp inclusive, without disturbing any other breaker. All panelboards shall be UL listed and labeled for use as service entrance equipment where being used as such.

Distribution Panels shall be equal to Square D I-Line series with bolt-on branch breakers
480Y/277V panelboards shall be equal to Square D NF with bolt-on branch breakers
208Y/120V panelboards shall be equal to Square D NQ with bolt-on branch breakers

All branch circuit breakers shall be full ambient compensated thermal magnetic molded case with quick-make and quick-break action and positive handle trip indication, both on manual and on automatic operation. Breakers shall be of the over-the-center toggle operating type with the handle going to a position between "on" and "off" to indicate automatic tripping. All breakers shall be bolt-on type.

All circuit breakers shall be full size. "Tandem" or "split" breakers shall not be permitted. All multi-pole breakers shall have internal common trip with all load side box lugs of one breaker in the same gutter. All circuit breakers shall have sealed cases to prevent tampering. All 15 and 20 ampere branch circuit breakers shall be UL Listed as SWD (switching duty). All 15-70 ampere branch circuit breakers shall be HACR Type. All GFCI circuit breakers shall be UL Class A with maximum threshold of 5 mA. All branch circuit breakers serving all ballasted (fluorescent/HID) lighting loads shall be HID rated.

Provide all electrical distribution related equipment with appropriately braced bussing and properly rated breakers, fuses, etc. for the available fault currents. In existing buildings where fault current values are not indicated on drawings, coordinate with existing "upstream" distribution equipment provide equipment SCCR to meet or exceed same.

Provide barriers around any energized phase busbar or terminal supplied from a feeder tap, transformer, or service entrance conductors.

Fill out panelboard's circuit directory card upon completion of installation work. Directories shall be neatly typewritten. All panelboard directories shall include the actual room names/numbers that are selected for interior signage/designation.

All recessed panelboards shall be provided with a minimum of three 1-1/4" empty conduits terminated to a single 12" X 12" X 6" deep junction box above accessible ceiling.

26 27 26.00 - WIRING DEVICES

Submittal Requirements
Product Data
For each type include electrical characteristics, configurations, ratings, markings, colors, etc.

Unless specifically indicated otherwise, or directed otherwise in field, coordinate finishes for wiring devices with architect and owner prior to ordering. Where applicable, devices on different branches of power shall be a different color.

Provide grounded ("neutral") conductors in all wall switch, dimmer and other lighting control outlet boxes, even if not immediately utilized.

Provide wall plates with engraved legends where indicated on drawings and/or where required per 26 05 53.00 - IDENTIFICATION FOR ELECTRICAL SYSTEMS Section. All device wall plates shall be standard size; "midway", "oversized" ("jumbo") or "extra deep" wall plates shall not be acceptable. Construct with metal screws for securing plates to devices; screw heads colored to match finish of plates. Except where/if indicated otherwise on drawings, wall plates in finished areas shall be commercial specification grade, satin finish stainless steel, with beveled edges, equal to Leviton Type 430 series. Wall plates in unfinished areas shall be galvanized steel unless otherwise noted. Refer to architectural finish schedules and owner representative for additional information.

Wall-Box Type Lighting Controls:
Refer to specification 260923.00 – Local Lighting Controls for types not listed here.

Toggle Switches:
Provide toggle switches equal to Leviton #122x-2 series in configurations shown on the drawings. Provide switches that are flush, self-grounding with green ground screw, back and side wired, and specification grade. 120/277V, 20A, AC quiet type.

Receptacles:

Special purpose receptacles shall be of the size, type and manufacturer as indicated on the plans or as determined in field.

Weather Resistant (WR) GFCI Receptacles: Provide for all receptacles installed in damp or wet locations. Any receptacle shown on the drawings with "WP/GFCI" next to it denoting exterior cover shall be installed with a WR GFCI receptacle. Provide duplex weather resistant receptacles equal to Leviton # W7899 series. Provide Weather-Resistant Receptacles with UL "WR" marking. For receptacle circuits protected with 15A breakers, provide NEMA 5-15R equivalents.

Duplex and Single Specification Grade Receptacles: 2-pole, 3-wire grounding, self-grounding, green grounding screw, ground terminals and poles internally connected to mounting yoke, color coded base, 20-amperes, 125-volts, with metal plaster ears, back and side wiring, NEMA configuration 5-20R. Provide duplex receptacles equal to Leviton #5362 series. For receptacle circuits protected with 15A breakers, provide NEMA 5-15R equivalents. Provide receptacles equal to Leviton #5361 series for simplex (single) applications. Provide clock hanger receptacles equal to Leviton #5361-CH.

Self-Grounding Commercial Specification grade, Duplex Receptacles, Ground-Fault Circuit Interrupters: Feed-thru type, capable of protecting connected downstream receptacles on single circuit, grounding type UL-rated 943, Class A, Group 1, specification grade, 20-amperes rating (device and feed-thru), 125-volts, 60 Hz; with solid-state ground-fault sensing and signaling (maximum threshold of 5mA at 0.025 seconds maximum); equip with 20-ampere plug configuration, NEMA 5-20R. Provide ground fault circuit interrupter duplex receptacles equal to Leviton #8898 series. For receptacle circuits protected with 15A breakers, provide NEMA 5-15R equivalents. Where GFCI protected receptacles are shown on drawings, provide a separate GFCI receptacle for each one shown. Do not feed downstream receptacles from load-side (GFCI-protected) terminals of upstream receptacles.

26 28 13.00 – FUSES

Extra Material
Fuses: Furnish fuses equal to 10% of project quantity not exceeding (10) for each amperage. Furnish no fewer than (2) for single phase applications and (3) for three phase applications.

All fuses shall be of the same manufacturer. Subject to compliance with requirements, provide fuses of one of the following: Bussman, LittelFuse, Shawmut (A4BQ series).

Except as otherwise indicated, provide fuses of types, sizes, ratings, and average time-current and peak let-through current characteristics indicated, which comply with manufacturer's standard design, materials, and constructed in accordance with published product information, and with industry standards and configurations. Fuses 1 ampere through 600 amperes shall be rejection type. Fuses 601 amperes through 6000 amperes shall be Hi-Cap, bolt type.

Provide UL Class RK5 time-delay, dual-element (with pure silver links) fuses equal to Bussman #LPS-RK5 (600V) or Bussman #LPN-RK5 (250V) rated 60 Hz with 200,000 RMS symmetrical interrupting current rating for protecting general duty motors.

Provide factory fuse identification labels, installed on the inside of the door of each switch indicating type and size of fuses installed. For types and ratings required, furnish additional fuses, amounting to 10 percent of fuses supplied, but not less than one set of 3 of each kind.

Each fuse shall be clearly factory marked with classification, characteristics, ampere ratings, voltage ratings, etc. Fuses shall not be shipped installed in switches nor shall they be installed in the equipment until the equipment until the equipment is ready to be energized.

Prior to installing fuses for protection of specific equipment, motors, etc., verify recommended fuse size/type in field from respective equipment manufacturer. If a conflict in fuse size/type results between manufacturer's recommendations and above specifications, contact engineer. Provide all required fuses under base bid. Install fuses in fused switches.

26 28 16.00 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS

Submittal Requirements
Product Data
For each type include dimensioned elevations, sections, weights, and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes. Include current ratings, voltage ratings, short circuit current ratings, accessories, breaker features, trip unit information as appropriate, etc.

Subject to compliance with requirements, provide equipment of one of the following manufacturers: ABB/GE; Siemans/ITE; Square D Co.; Westinghouse/Cutler-Hammer. Disconnect switches shall be equal to Square D Type HD. All Safety Switches/Disconnects shall be heavy duty, safety type, quick make and quick break and externally operated. Unless noted otherwise on drawings or directed otherwise in field, all disconnect switches shall be fused. Unless noted otherwise on drawings or directed otherwise in field, brace all disconnect switches for 200,000 A.I.C. Provide heavy-duty switches, with fuses of classes and current ratings indicated and UL listed for use as service equipment under UL Standard 98 or 869. Where current limiting fuses are indicated, provide switches with non-interchangeable feature suitable only for current limiting type fuses. Install disconnect switches within sight of controller position unless otherwise indicated.

26 51 00.00 - LIGHTING

Submittal Requirements
Product Data
For each type include detailed product information, light source, color temperature, color rendering index, lumen outputs, life, driver manufacturer, model and type, ceiling connection details, integral controls as applicable, drawings of custom fixtures or components, wiring diagrams, warranty, etc. Arrange luminaire submittals in booklet form with separate sheets for each luminaire, assembled by luminaire "type" in alphabetical order.

All recessed luminaires shall be equipped with necessary plaster frames and surface trim.

All junction boxes and serviceable components for recessed luminaires shall be readily accessible for service or replacement from below the ceiling, without removing any ceiling components (other than tiles).

All luminaires utilized for emergency and/or egress lighting shall be connected ahead of switching. All drivers of the same type shall be of the same manufacturer and catalog number. All LED modules of the same type shall be of the same manufacturer and catalog number.

Light Emitting Diode (LED) Systems: Provide factory installed LED modules that are specifically designed for, and matched and mated to, the respective luminaire in which they are used. Provide LED modules that can easily be replaced in the field and are readily accessible for replacement. Provide color temperature as indicated in Luminaire Schedule. Provide factory installed driver(s) for the LED source utilized that are specifically coordinated to the LED source and luminaire in which they are used. Provide driver(s) having specific operating characteristics defined in the Luminaire Schedule. Provide driver(s) that can easily be replaced in the field and are readily accessible for replacement. Provide specification sheet for the specific driver as part of the Luminaire Submittal. Provide Total Harmonic Distortion (THD) rating of less than 20 percent. Provide factory-installed integral filtering system to ensure THD does not exceed 20 percent regardless of quantities and/or mixes with other manufactured LED systems.

All surface and recessed ceiling luminaires installed on grid or tile ceilings shall be installed to agree with module of ceiling either displacing a tile, or unit on center of tile, or centered on grid lines.

Provide luminaires and/or luminaire outlet boxes with hangers to properly support luminaire weight. All luminaires installed in or on suspended ceiling systems shall be anchored directly to the building structural system above. Such anchoring shall be independent of the ceiling support system. All luminaires shall be installed plumb and level. Support surface mounted luminaires greater than 2 feet in length at a point in addition to the outlet box luminaire stud.

Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting aimable luminaires to suit actual occupied conditions. Provide up to two visits to Project during other-than-normal occupancy hours for this purpose. Some of this work may be required after dark. Adjust aimable luminaires in the presence of Owner's Representative and Design Professionals.

26 60 01.00 – ELECTRICAL COORDINATION OF OTHER DIVISION EQUIPMENT

Product Data Submittal Requirements
Provide equipment electrical characteristic data for equipment specified under other divisions of this project for an electrical coordination review. Submit each type of equipment submittal as a separate submittal, for example: Pool Equipment, Kitchen Equipment, Gymnasium Equipment, Motorized Shades, etc. Each submittal should be label as 266001-PD-## where ## increments from 00 for each submittal.

28 46 21.25 - FIRE ALARM SYSTEM EXTENSION

Submittal Requirements
Product Data
For each type of devices including catalog numbers, electrical characteristics, ratings, color, temperature limitations, etc. Submit as separate submittal (PD) but at same time as Shop Drawings for this section.
Shop Drawings
Provide a complete set of floor plan drawings showing conduit sizes and number of conductors required to all components plus detailed wiring connections required at each type of device. Clearly show the intended location of all field devices and their connections to the system. Include battery calculations, voltage drop calculations, critical dimensions, ductwork sizes for sampling tubes and associated required dimensions, wiring diagrams, sequence of operation, cable sizes and types, etc. Shop Drawings shall be prepared by persons with the following qualifications: Trained and certified by manufacturer in fire-alarm system design, and licensed and certified by authorities having jurisdiction. Submit as separate submittal (SD) but at same time as Product Data for this section.

Refer to Division 26 sections for requirements associated with all electrical work not specifically defined in this section, which shall be considered additional and concurrent scope of work that is associated with work of this section. Provide all work in strict compliance with all prevailing codes, standards and ordinances, including NFPA 70 and NFPA 72.

Qualifications of system designers, installers, programming personnel, inspection personnel, testing personnel and maintenance personnel shall be trained and certified by manufacturer for installation of units required for this Project. Provide all materials, labor and services to provide fully operational modifications to and extensions of existing facility fire alarm system(s).

Provide submittals for equipment, materials and systems specified in this section. Include cuts, descriptive information, technical data, wiring diagrams, system battery calculations, plan-view layouts, legend, point-to-point wiring, etc. Identify all information that is specific to this project.

The fire alarm system supplier shall provide to the electrical contractor a complete set of floor plan drawings showing conduit sizes and number of conductors required to all components plus detailed wiring connections required at each type of device.

It shall be the responsibility of the Fire Alarm System Manufacturer to furnish submittals to the authority having jurisdiction for approval. This action shall be taken during the shop drawing procedure. The system must be approved by this authority and a copy submitted to the Engineer with the shop drawing submittal. All fire alarm system working drawings shall be provided by manufacturer.

Program detailed device and room descriptions so that any trouble, supervisory or alarm condition clearly annunciates floor level, room number, room name, device, and indication of normal, alarm, trouble and supervisory status at fire alarm control panel(s), at fire alarm annunciator panel(s) and at the supervising central station.

Initiating Device, Notification Appliance and Signaling Line Circuits: Class A or Class A and B (provide Class A for circuits that provide isolation module protection for zones). Provide power-limited cables that have a temperature rating of at least 60 degrees C; provide additional marking for conductor size and temperature ratings for cables rated in excess of 60°C (140°F).

Interruption of Existing Fire-Alarm Service: Do not interrupt fire-alarm service to facilities occupied by Owner or others unless owner and others have been notified with at least two-day notice and approval.

Maintain existing equipment fully operational until new equipment has been tested and accepted. As new equipment is installed, label it "NOT IN SERVICE" until it is accepted. Remove labels from new equipment when put into service.

Added Devices and Extension of Existing System:

Verify that existing fire-alarm system is operational without troubles before making changes or connections. Connect new equipment to existing control panel in existing part of the building.

Connect new equipment to existing monitoring equipment at the supervising station.

Expand, modify, and supplement existing control/monitoring equipment as necessary to extend existing control/monitoring functions to the new points. New components shall be capable of merging with existing configuration without degrading the performance of either system.

Perform reacceptance testing to verify the proper operation of added or replaced devices and appliances. Initiating Device, Notification Appliance, and Signaling Line Circuits: NFPA 72, Class A, B, or A and B as required to match existing conditions.

Provide materials and labor as required to result in a fully operational extension and modification to the existing fire alarm system.

Where indicated on drawings, remove existing fire alarm devices in affected areas and protect during demolition and construction phases. Clean and reinstall these existing devices as indicated on drawings. Relocate devices as indicated on drawings and extend conduit and wiring as required. Modify and/or extend related existing wiring using code-compliant and landlord-compliant methods as required for a complete operational system.

Provide fire alarm system devices of the same manufacturer as, compatible with, and UL Listed and labeled for use on, the existing building fire alarm system.

Provide auxiliary contacts if required for special applications. All strobe alarms shall be compliant with NFPA and ADA.

Install wall-mounted devices at the following heights above finished floor:
Fire Alarm Manual Pull Stations: 46" to top of operating handle.
Fire Alarm Visual-Only and A/V Annunciators: 80" to bottom of outlet box.

All new wiring shall be installed in strict accordance with manufacturer's requirements.

The installation shall include a complete system test of the equipment by the local representative of the system installed. This test shall be performed in the presence of representatives of the Owner, and local fire department and other Authority/Authorities Having Jurisdiction (AHJ) if/as applicable.

Provide all required modifications (cards, power supplies, hardware, firmware, software, etc.) to the existing Fire Alarm system as required to render the entire extension fully operable.

The audio/visual and visual-only alarm indicating devices shall be white ADA-compliant units wall mounted at 6'8" to bottom of outlet box as shown on plans. Synchronize strobe units wherever required by any authority having jurisdiction, including ADAAG. Additionally, where required by local authority, the strobes shall meet ANSI S3.41 temporal code.

Provide isolation modules as/if required to isolate wire to wire shorts on a data loop to limit the number of other modules or detectors that are incapacitated by the short circuit fault and/or grounds. Isolation modules shall be part of the smoke detector base. The isolation modules shall permit the entire system to operate independently of the area disconnected by the isolation module due to wiring faults. Provide isolation modules and wiring configurations (using Class A, or Class A and B, pathways) for fault isolation so that any one fault will not cause any part of the system to go down other than the zone of the fault; provide zoning compliant with prevailing codes, including NFPA 72, with at least one zone per floor (more if areas are subdivided into multiple zones by fire and/or smoke barriers).

Provide monitor modules in quantities as required to interface all "non-intelligent" devices into the system. Application examples include fire alarm system remotes panels, remote power supplies, etc. as applicable. Refer to documents of all trades since some such devices may not be specifically shown on electrical drawings. Review fire suppression system submittals and installation drawings to determine exact quantities and locations for devices that require monitor modules, as project drawings may not include all devices that require monitoring; provide monitor modules, wiring, connections, programming, etc. accordingly.

Provide control modules for all auxiliary devices and all supervised control functions such as air handler shutdowns.

Photoelectric Smoke Detectors: Provide photoelectric type smoke detectors. Provide contact bases for all applications where auxiliary contacts are required. Smoke detector locations shall not exceed the rated coverage of the detector and, in general, shall be no more than 15 feet from a wall or 30 feet apart. Placement Restrictions: Locate detectors no closer than 3 feet horizontally from air-supply diffuser or return-air opening; Locate detectors no closer than 12 inches from any part of a lighting fixture; Locate detectors no closer than 3 feet horizontally from the tip of a ceiling fan blade. Locate detectors no closer than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower, unless this would prevent placement of a detector that is required by prevailing codes. Locate detectors no closer than 6 feet horizontally from a permanently installed cooking appliance, unless this would prevent placement of a detector that is required by prevailing codes.

Provide ceiling mounted smoke detector located above each control/power unit (all types, including those for associated systems), and above all remote annunciators.

Provide ceiling mounted photoelectric smoke detector located above each Fire Alarm Control Unit (FACU), if not already existing.

Provide all required 120V AC power as required to energize all new fire alarm related components. This requirement applies whether or not such power work is shown on the drawings. Branch circuits serving fire alarm related equipment shall be dedicated to fire alarm related equipment only.

Duct Smoke Detectors:

Provide intelligent duct-mounted photoelectric smoke detectors to match fire alarm system. Install the duct detector in an indoor accessible location, positioned in the duct per NFPA. Provide sampling tube, test station and all other required accessories.

Unless otherwise required by prevailing code(s), provide all duct smoke detectors in the return air duct/plenum of the respective air handling equipment, or in multiple locations of the return duct branches if necessary to meet the minimum straight distances that are required by manufacturer of smoke duct detectors. Refer to HVAC ductwork drawings, and to HVAC installer's coordination drawings, for configurations when determining actual locations and quantities of duct smoke detectors. Where more than one detector is already indicated associated with a particular piece of air handling equipment, there are special reasons for the additional detectors (i.e. split returns, return risers serving multiple floors, etc.); coordinate all locations for same with the HVAC installer.

In cases where multiple HVAC units serve a common space, provide interlocking functionality so that activation of any one duct smoke detector (or spot smoke detector where applicable) provides shutdown functions for all HVAC units that collectively serve the affected space.

Provide all required power and control wiring so that upon detection of smoke, the following sequence of operations occurs: Report as alarm or supervisory signal to the fire alarm system and monitoring central station based on prevailing codes and direction from AHJ – verify in field with AHJ); The respective HVAC unit shuts down (including applicable dampers); Associated smoke dampers close, if present (wired and configured to automatically re-open on duct detector reset).

Provide keyed test/monitor station (with status/alarm/trouble indicating LED's) on the ceiling or wall (flush in finished areas) beneath the duct detector at discreet but readily visible location as determined in field unless specific location is shown on drawings. Provide engraved (or approved equivalent method) plate at each remote station to read: "#### Duct Smoke Detector", where #### is the equipment identification used on drawings. Connect to fire alarm system.

Stantec

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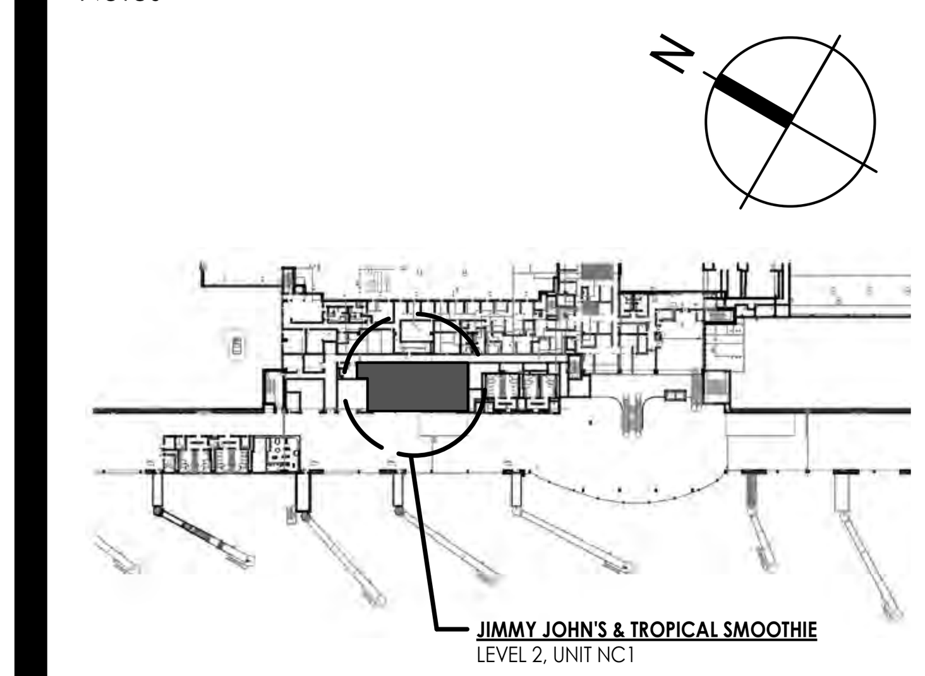
Notes



Revision	By	Appd	YYYY.MM.DD

Issued	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
ISSUED FOR 60% SUBMISSION	KLH	KLH	2024.09.27

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Permit/Seal
FIRM LICENSE #C-4774
NORTH CAROLINA PROFESSIONAL SEAL 035205 ENGINEER JAMES S. TAVERNELL
12/27/2024

Client/Project Logo
Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JJ JIMMY JOHN'S

Client/Project
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE
LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER, NORTH CAROLINA, USA, 28732

Title
ELECTRIC - SPECIFICATIONS

Project No.
Scale
Revision
Drawing No.
E-703

1	2	3	4	5

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
PLAN-VIEW LINE TYPES	
	WORK SHOWN FADED INDICATES EXISTING WORK TO REMAIN OR NEW WORK BY OTHERS AS APPLICABLE
— — — —	WORK SHOWN BOLD-DASHED INDICATES SELECTIVE DEMOLITION WORK
————	WORK SHOWN BOLD-CONTINUOUS INDICATES NEW WORK
DRAWING SET APPEARANCE	
TO BETTER COMMUNICATE SCOPE TO PERMIT AGENCIES AND CONTRACTORS, EACH DRAWING IN THIS DRAWING SET HAS BEEN CREATED IN BOTH "COLOR" AND "BLACK AND WHITE". THERE EXISTS A COLOR LAYER WITHIN EACH DRAWING WHERE VISIBILITY IS CONTROLLED THROUGH THE PDF LAYER MANAGER. THIS LAYER VISIBILITY CAN BE TOGGLED DISPLAYING EITHER "COLOR" OR "BLACK AND WHITE". TO MAINTAIN SCOPE BASED SHADING WHEN PRINTING TO PAPER, BLACK AND WHITE NEEDS TO BE VISIBLE. FOR FURTHER INSTRUCTIONS, REFER TO CONTRACTOR RESOURCES ON OUR WEBSITE AND DOWNLOAD "DRAWING COLOR INSTRUCTIONS". WWW.KLHENGRS.COM - CONTRACTOR RESOURCES (RIGHT HAND SIDE OF PAGE).	
PIPING LINE TYPES	
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
CD	CONDENSATE DRAIN
MECHANICAL MISCELLANOUS	
	CONNECT TO EXISTING (FIELD VERIFY EXISTING UTILITY SERVICE TYPE, PRIOR TO MAKING CONNECTION)
MECHANICAL STATS & SENSORS	
T	LOW VOLTAGE THERMOSTAT
H	HUMIDISTAT
MECHANICAL DUCTWORK ACCESSORIES	
	DUCT WITH MANUAL VOLUME DAMPER
S	DUCT MOUNTED SMOKE DETECTOR (HARD WIRE INTERLOCK TO FAN MOTOR BY E.C.) FURNISHED BY E.C., INSTALLED BY M.C.
MECHANICAL AIR DEVICES	
SR	SUPPLY REGISTER
RR	RETURN REGISTER
CD	CEILING DIFFUSER
CD-10"Ø	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
	LINEAR SLOT DIFFUSER
MECHANICAL DUCTWORK	
UP	SUPPLY DUCT WITH ELBOW TURNED UP
DN	SUPPLY DUCT WITH ELBOW TURNED DOWN
UP	RETURN DUCT WITH ELBOW TURNED UP
DN	RETURN DUCT WITH ELBOW TURNED DOWN
UP	EXHAUST DUCT WITH ELBOW TURNED UP
DN	EXHAUST DUCT WITH ELBOW TURNED DOWN
24X12 SA	SUPPLY DUCT
24X12 RA	RETURN DUCT
24X12 EA	EXHAUST DUCT
24X12 OA	OUTSIDE AIR DUCT
	1" LINED DUCTWORK
	FLEXIBLE DUCTWORK CONNECTION
	BRANCH TAKEOFF
	REDUCER, CONCENTRIC
	REDUCER, NONCONCENTRIC

MECHANICAL CODE SUMMARY

NAME OF PROJECT: JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

ADDRESS: LEVEL 2 CONCOURSE, UNIT NC1 ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER, NORTH CAROLINA, USA, 28732

PROPOSED USE: AIRPORT

OWNER/CONTACT PERSON: JARED MERRILL - JMERRILL@FYLAVL.COM

CODE ENFORCEMENT JURISDICTION: A-3

BUILDING OCCUPANCY: BUNCOMBE COUNTY

GROSS BUILDING AREA: 4648 SF

METHOD OF COMPLIANCE: TOTAL BUILDING PERFORMANCE

THERMAL ZONE: 4A

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT.
EXTERIOR DESIGN CONDITIONS:
- WINTER HEATING DRY BULB: 14.9 F
- SUMMER COOLING DRY BULB: 87.9 F
- SUMMBER COOLING MEAN COINCIDENT WET BULB: 70.7 F
- SUMMER EVAPORATION WET BULB: 73.7 F

INTERIOR DESIGN CONDITIONS:
- WINTER DRY BULB: 72 F
- SUMMER DRY BULB: 74 F
- RELATIVE HUMIDITY: 50%

BUILDING HEATING LOAD: 102.64 MBH
BUILDING COOLING LOAD: 239.03 MBH

MECHANICAL SPACING CONDITIONING SYSTEM
- DESCRIPTION OF UNIT: SEE SCHEDULES
- HEATING EFFICIENCY: SEE SCHEDULES
- COOLING EFFICIENCY: SEE SCHEDULES
- HEAT OUTPUT OF SYSTEMS: SEE SCHEDULES
- COOLING OUTPUT OF SYSTEMS: SEE SCHEDULES

SCOPE OF WORK NOTES

A. PERFORM A PRE-CONSTRUCTION TEST AND BALANCE REPORT FOR EXISTING HVAC SYSTEM. VERIFY THAT THE REQUIRED CFM CAN BE PROVIDED BY THE EXISTING HVAC SYSTEM AND THE NEW REQUIRED CFM IS WITHIN THE MANUFACTURER'S LISTED PERFORMANCE RANGE.

B. FIELD VERIFY DIFFUSER NECK SIZE AND VERIFY THAT THE NEW REQUIRED CFM CAN BE PROVIDED BY THE EXISTING DISTRIBUTION DUCTWORK. BALANCE NEW DIFFUSERS TO THE SCHEDULED AIRFLOW AFTER WORK IS COMPLETE. BALANCE THE EXISTING HVAC EQUIPMENT TO THE NEW TOTAL REQUIRED CFM AND OUTSIDE AIR SCHEDULE. VERIFY THAT THE NEW TOTAL CFM IS WITHIN THE MANUFACTURER'S LISTED PERFORMANCE RANGE. PROVIDE A COPY OF THE FINAL CERTIFIED AIR BALANCE REPORT TO THE OWNER.

C. PROVIDE AS-BUILT DRAWINGS OF EXISTING CONDITIONS DETERMINED FROM THE PRE-CONSTRUCTION SITE VISIT. PROVIDE ADDITIONAL DRAWINGS, CALCULATIONS AND OTHER DOCUMENTATION REQUIRED FOR THE BUILDING DEPARTMENT.

FIELD VERIFY ALL CONDITIONS

DESIGN DRAWINGS ARE SCHEMATIC. THIS CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING FIELD CONDITIONS. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

GENERAL DEMOLITION NOTE

MECHANICAL CONTRACTOR TO REMOVE EXISTING HVAC EQUIPMENT, DUCTWORK, HANGERS, INSULATION, AIR DEVICES, CONTROLS AND MISCELLANEOUS EQUIPMENT, ETC... NOT INTENDED FOR REUSE.

GENERAL NOTES

A. ALL RECTANGULAR RETURN AIR AND SUPPLY AIR DUCTWORK SHALL BE LINED WITH ACOUSTICAL LINER THE FIRST 15 FEET. IF CONCEALED, THE REMAINDER SHALL BE WRAPPED. IF EXPOSED, INTERNALLY LINE AS INDICATED ON PLANS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. IN GENERAL, MOUNT DUCTWORK AT 15'-0" AFF TO CLEAR ALL LIGHTS UNLESS OTHERWISE NOTED OR REQUIRED BY FIELD CONDITIONS.
B. CONICAL BELLMOUTH FITTINGS WITH MANUAL BALANCING DAMPER TO BE USED FOR ALL ROUND BRANCH TAPS ABOVE ACCESSIBLE LAY-IN CEILINGS. CONICAL BELLMOUTH FITTINGS WITHOUT MANUAL BALANCING DAMPERS TO BE USED FOR ALL ROUND BRANCH TAPS ABOVE INACCESSIBLE DRYWALL CEILINGS WITH BALANCING REQUIRED WITHIN 2 FT. OF DIFFUSER WITH PLASTER FRAME.
C. FLEX DUCT SHALL BE LIMITED TO 5'-0" IN LENGTH, NO DUCT BOARD ALLOWED, WIDTH OF DUCT SUPPORTS SHALL BE 2" WIDER THAN THE DUCT.
D. THE HVAC CONTRACTOR IS RESPONSIBLE FOR COORDINATING BOX-OUT LOCATIONS FOR ALL DRYWALL MOUNTED AIR DEVICES WITH GENERAL CONTRACTOR AND CEILING FRAME.
E. MECHANICAL CONTRACTOR TO PROVIDE TENANT WITH AS-BUILT DRAWINGS, ALL EQUIPMENT SHOP DRAWINGS, INFORMATION ON THERMOSTATS, CONTROL WIRING DIAGRAMS AND OTHER PERTINENT INFORMATION AT COMPLETION OF PROJECT.
F. SEE ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS.
G. CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT AND DUCTWORK NOT SHOWN TO REMAIN IS FULLY REMOVED AND NOT ABANDONED.
H. HVAC CONTRACTOR IS REQUIRED TO VISIT THE JOB SITE TO BECOME FAMILIAR WITH MAJOR ITEMS SUCH AS STRUCTURAL ELEMENTS, PLUMBING LOCATIONS, AND ELECTRICAL RUNS. ADDITIONALLY, HVAC CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND DIMENSIONS OF SUCH ITEMS AS HVAC UNITS, DUCTWORK, ETC. PRIOR TO BID, AND CONTACT THE OWNER'S CONSTRUCTIONS REP./ARCHITECT/ENGINEER AND REPORT ANY DIFFERENCES/DISCREPANCIES IN THE DRAWINGS FOR A DECISION.
I. COORDINATE ALL DUCTWORK PRIOR TO DUCTWORK FABRICATION. INSTALL DUCTWORK AS HIGH AS POSSIBLE. COORDINATE THE PATH OF THE DUCTWORK WITH THE LIGHTING PLAN, SPRINKLER PIPING, EXISTING STRUCTURE, EXISTING DUCTWORK AND ALL OTHER EXISTING CONDITIONS (TYPICAL).
J. ALL MATERIALS EXPOSED WITHIN PLENUMS SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTME E 84.
K. ALL EXPOSED DUCTS TO BE PAINTED TO MATCH CEILING.

STANDARD HVAC ABBREVIATIONS

AAV	AUTOMATIC AIR VENT
ACCESS	ACCESSORIES
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AMP	AMPERE
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ARI	AIR CONDITIONING AND REFRIGERATION INSTITUTE
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
BAS	BUILDING AUTOMATION SYSTEM
BD	BACKDRAFT DAMPER
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CD	CEILING DIFFUSER
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CAST IRON
CLG	COOLING
CO	CARBON MONOXIDE
CO2	CARBON DIOXODE
COP	COEFFICIENT OF PERFORMANCE
CV	CONSTANT VOLUME
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
DB	DECIBELS
DB	DRY-BULB TEMPERATURE
DC	DISCONNECT
DDC	DIRECT DIGITAL CONTROLS
DEG	DEGREE DELTA(CHANGE IN TEMPERATURE)
DIA	DIAMETER
DIW	DEIONIZED WATER
DP	DEW POINT TEMPERATURE
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EG	EXHAUST GRILLE
EMERG	EMERGENCY POWER
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EX.	EXISTING
F	FAHRENHEIT
F&T	FLOAT AND THERMOSTATIC
FA	FREE AREA
FD	FIRE DAMPER
FLA	FULL LOAD AMPERES
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET
FURN	FURNISHED
GA	GAUGE
GAL	GALLONS
GPM	GALLONS PER MINUTE
HD	HEAD
HOA	HAND/OFF/AUTOMATIC
HP	HORSEPOWER
HPR	HIGH PRESSURE RETURN (STEAM CONDENSATE)
HSTAT	HUMIDISTAT
HTG	HEATING
HWR	HEATING HOT WATER RETURN
HWS	HEATING HOT WATER SUPPLY
HZ	HERTZ
I/O	INPUT/OUTPUT
IAQ	INDOOR AIR QUALITY
IN HG	INCHES OF MERCURY
IN WC	INCH WATER COLUMN
IN WG	INCH WATER GAUGE
IPLV	INTERGRATED PART LOAD VALUE
INST	INSTALLED
KW	KILOWATT
KWH	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LBS/HR	POUNDS PER HOUR
LF	LINEAR FOOT (FEET)
LPR	LOW PRESSURE RETURN (STEAM CONDENSATE)
LPS	LOW PRESSURE STEAM
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	1000 BTUH
MCA	MINIMUM BRANCH CIRCUIT AMPACITY
MERV	MINIMUM EFFICIENCY REPORTING VALUE
MIN	MINIMUM
MOD	MOTOR OPERATED DAMPER
MPR	MEDIUM PRESSURE RETURN (STEAM CONDENSATE)
MPS	MEDIUM PRESSURE STEAM
MRI	MAGNETIC RESONANCE IMAGING
MVD	MANUAL VOLUME DAMPER
NA	NOT APPLICABLE
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OCP	OVER CURRENT PROTECTION
PD	PRESSURE DROP
PPM	PARTS PER MILLION
PRS	PRESSURE REGULATING (VALVE) STATION
PRV	PRESSURE REGULATING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH – ABSOLUTE
PSIG	POUNDS PER SQUARE INCH – GAGE
RA	RETURN AIR
RAT	RETURN AIR TEMPERATURE
RH	RELATIVE HUMIDITY
RL	REFRIGERANT LIQUID LINE
RLA	RUN LOAD AMPERE
RO	REVERSE OSMOSIS
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
SA	SUPPLY AIR
SAT	SUPPLY AIR TEMPERATURE
SC	SHADING COEFFICIENT
SCD	SMOKE CONTROL DAMPER
SD	SMOKE DETECTOR
SENS	SENSIBLE HEAT
SP	STATIC PRESSURE
TAB	TESTING, ADJUSTING, BALANCE
TDH	TOTAL DYNAMIC HEAD
TDS	TOTAL DISSOLVED SOLIDS
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
UL	UNDERWRITERS LABORATORY
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
WB	WET-BULB (TEMPERATURE)
WG	WATER GAGE
WPD	WATER SIDE PRESSURE DROP
WIRE	WIRED

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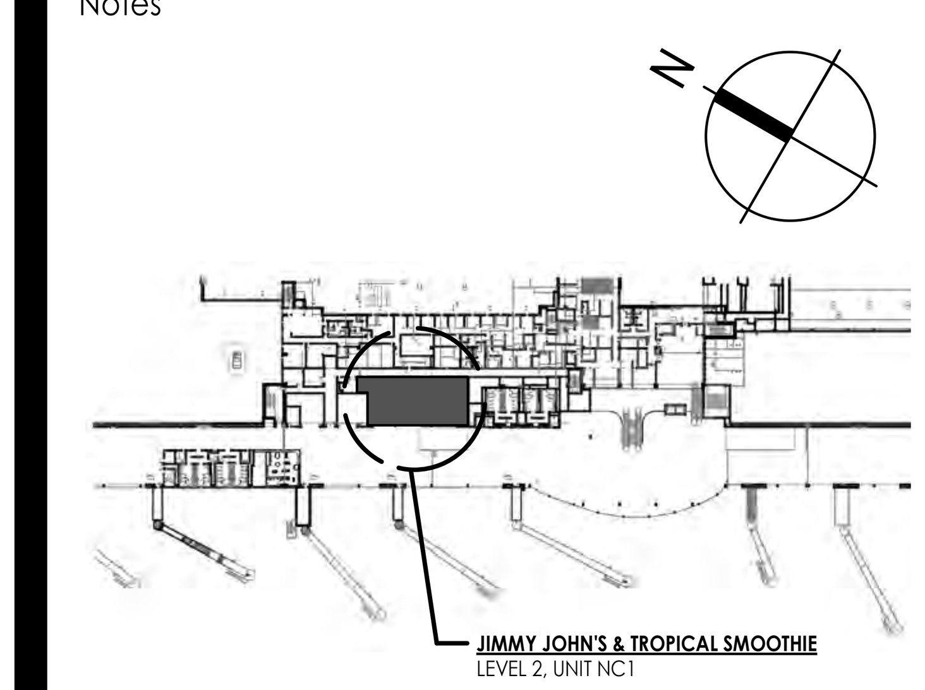
Notes



Revision	By	Appd	YYYY.MM.DD

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ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
ISSUED FOR 60% SUBMISSION	KLH	KLH	2024.09.27

File Name: N/A

Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Seal
FIRM LICENSE #C-4774
NORTH CAROLINA PROFESSIONAL SEAL 043999 ENGINEER
12/27/2024

Client/Project Logo
Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JIMMY JOHN'S

Client/Project
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE
LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title
MECHANICAL COVER SHEET

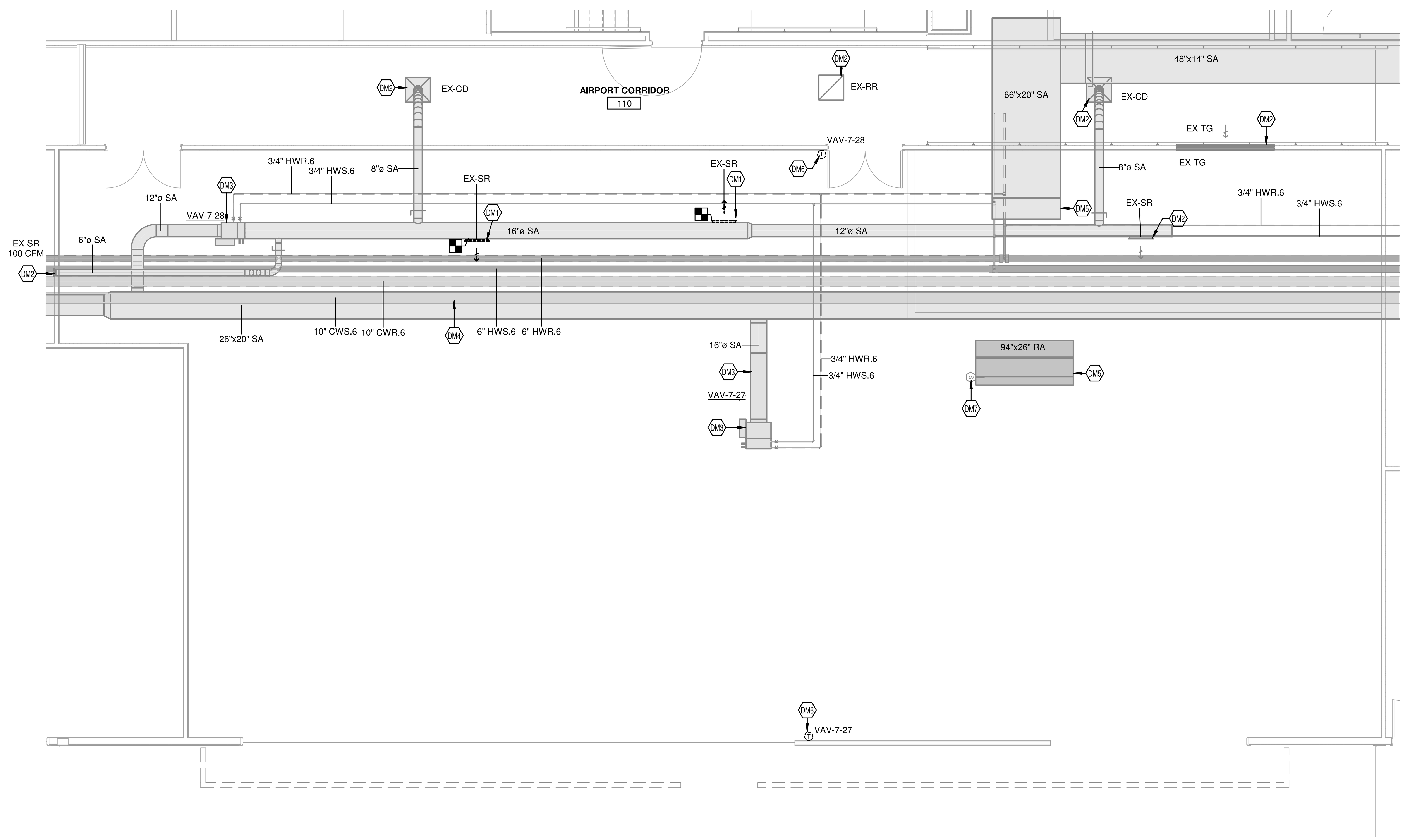
Project No.

Scale
1/8" = 1'-0"

Revision

Drawing No.
M-001

ORIGINAL SHEET - ARCH D



1 MECHANICAL DEMOLITION PLAN - LEVEL 2 NORTH CONCOURSE
3/16" = 1'-0"

KEYED NOTES

DM1	DEMOLISH AIR DEVICE SHOWN. PATCH AND SEAL EXISTING DUCTWORK AIR TIGHT PER SMACNA GUIDELINES. REPAIR AND REPLACE INSULATION.
DM2	EXISTING AIR DEVICE TO AND ASSOCIATED DUCTWORK TO REMAIN. FIELD VERIFY EXACT LOCATION. SEE NEW WORK PLAN FOR ADDITIONAL INFORMATION.
DM3	EXISTING VAV BOX AND ALL ASSOCIATED PIPING AND DUCTWORK TO REMAIN. FIELD VERIFY EXACT LOCATION. SEE NEW WORK PLAN FOR ADDITIONAL INFORMATION.
DM4	ALL EXISTING HOT AND COLD WATER PIPING IN SPACE TO REMAIN. FIELD VERIFY EXACT LOCATION AND ROUTING.
DM5	EXISTING DUCT DROP AND ALL ASSOCIATED DUCTWORK, AIR DEVICES, AND EQUIPMENT FROM EXISTING AHU-9 ON ROOF TO REMAIN. FIELD VERIFY EXACT LOCATION. SEE NEW WORK PLAN FOR ADDITIONAL INFORMATION.
DM6	EXISTING THERMOSTAT TO BE RELOCATED. SEE NEW WORK PLAN FOR NEW LOCATION.
DM7	EXISTING TO REMAIN RETURN DUCT SMOKE DETECTOR.

RATED WALL LEGEND

NON-RATED PARTITION	
1 HOUR FIRE BARRIER	
2 HOUR FIRE BARRIER	

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ORIGINAL SHEET - ARCH D

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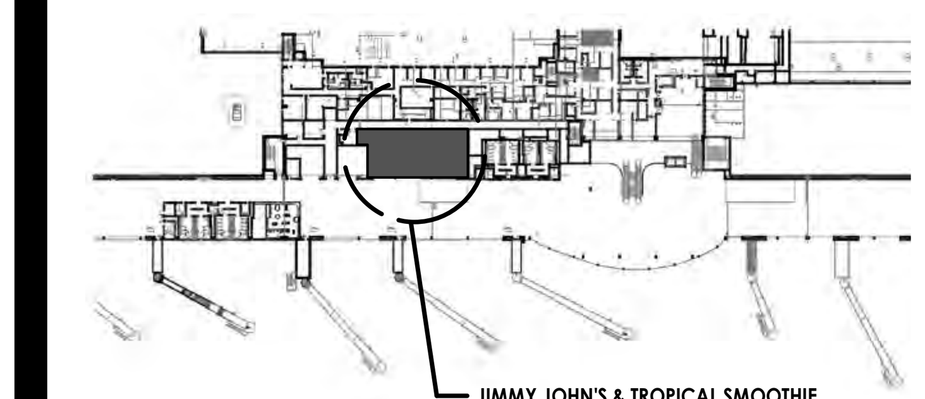
Notes



Revision	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
ISSUED FOR 60% SUBMISSION	KLH	KLH	2024.09.27
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File Name: N/A				
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Permit/Seal
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NORTH CAROLINA PROFESSIONAL SEAL 043999 ENGINEER
12/27/2024

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LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
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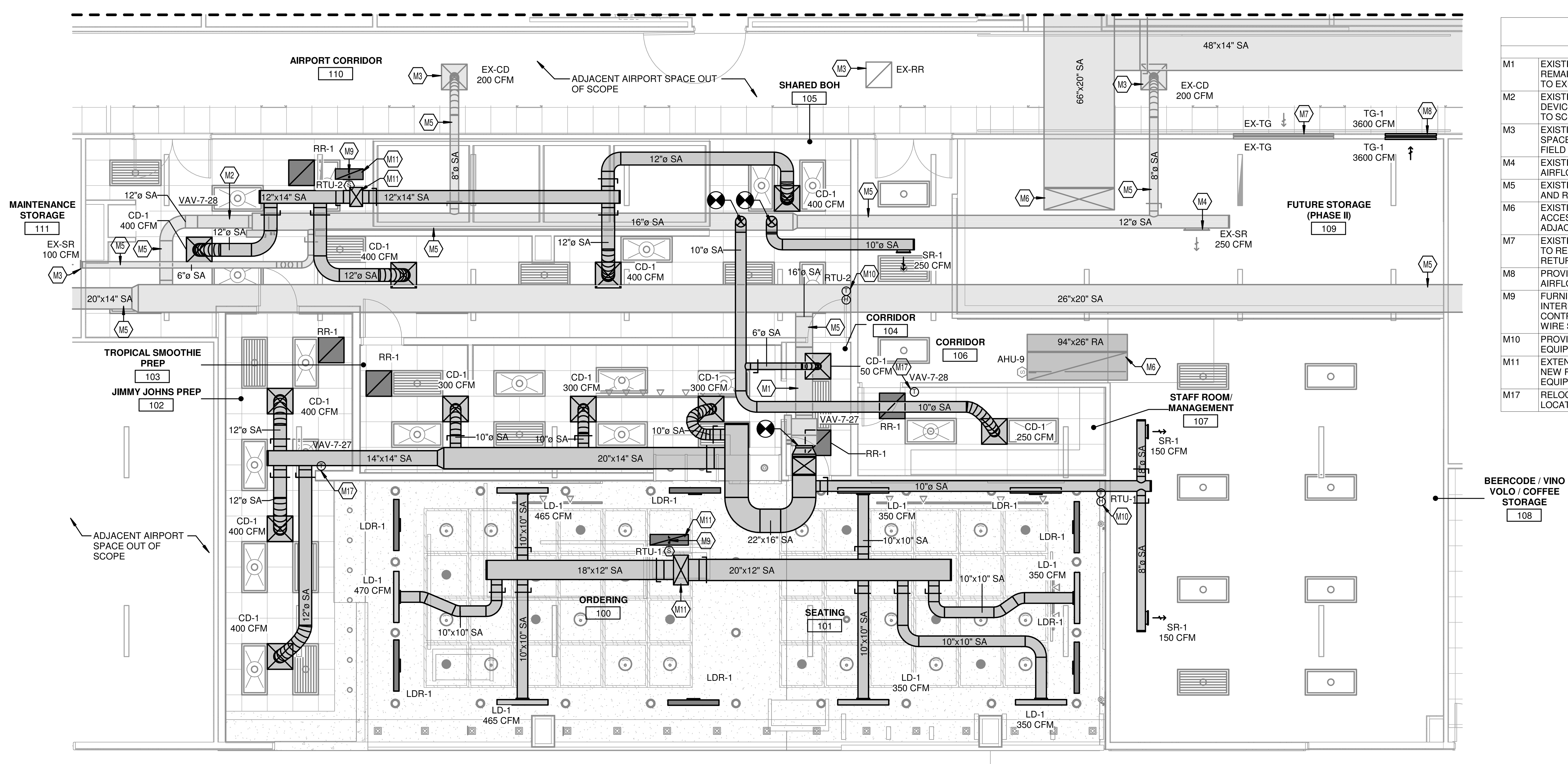
NORTH CAROLINA, USA, 28732

Title
MECHANICAL DEMOLITION LEVEL 2 NORTH CONCOURSE PLAN

Project No.	Scale
	As indicated
Revision	Drawing No.
	M-101



1 MECHANICAL NEW WORK PLAN - LEVEL 2 NORTH CONCOURSE
3/16" = 1'-0"

KEYED NOTES

M1	EXISTING VAV BOX AND ALL EXISTING PIPING AND DUCTWORK TO REMAIN. BALANCE TO SCHEDULED AIRFLOW. CONNECT NEW DUCTWORK TO EXISTING VAV BOX AS SHOWN. FIELD VERIFY EXACT LOCATION.
M2	EXISTING VAV BOX AND ALL EXISTING PIPING, DUCTWORK, AND AIR DEVICES TO REMAIN UNLESS SPECIFIED ON DEMOLITION PLAN. BALANCE TO SCHEDULED AIRFLOW.
M3	EXISTING AIR DEVICE AND DUCTWORK SERVING ADJACENT AIRPORT SPACE TO REMAIN. CLEAN AND BALANCE TO EXISTING CFM AS SHOWN. FIELD VERIFY EXACT LOCATION.
M4	EXISTING AIR DEVICE TO REMAIN. CLEAN AND BALANCE TO SCHEDULED AIRFLOW.
M5	EXISTING DUCTWORK TO REMAIN. FIELD VERIFY EXACT LOCATION, SIZE, AND ROUTING.
M6	EXISTING DUCT DROP AND ALL ASSOCIATED DUCTWORK, AIR DEVICES, ACCESSORIES, AND EQUIPMENT FROM EXISTING AHU ON ROOF SERVING ADJACENT SPACES TO REMAIN. FIELD VERIFY EXACT LOCATION.
M7	EXISTING TRANSFER GRILLE FOR RETURN AIR FROM ADJACENT SPACES TO REMAIN. FIELD VERIFY EXACT SIZE AND LOCATION AND ENSURE RETURN AIR PATH IS MAINTAINED.
M8	PROVIDE NEW TRANSFER GRILLES IN FULL HEIGHT WALL FOR RETURN AIRFLOW FROM SPACE TO AHU SERVING EXISTING VAV BOXES.
M9	FURNISH AND INSTALL NEW SMOKE DETECTOR IN AIR DUCT MAIN. INTERLOCK SMOKE DETECTOR TO FAN MOTOR. ELECTRICAL CONTRACTOR SHALL INTERLOCK SMOKE DETECTOR TO FAN MOTOR AND WIRE SMOKE DETECTOR TO REMOTE ANNUNCIATOR.
M10	PROVIDE THERMOSTAT AND EXTEND CONTROL WIRING FROM HVAC EQUIPMENT TO THERMOSTAT AT LOCATION SHOWN.
M11	EXTEND DUCTWORK UP THROUGH OPENING IN ROOF AND CONNECT TO NEW ROOFTOP UNIT. VERTICAL DUCTWORK TO BE SAME SIZE AS THE EQUIPMENT CONNECTION.
M17	RELOCATE EXISTING THERMOSTAT AND EXTEND CONTROL WIRING TO LOCATION SHOWN.

RATED WALL LEGEND

NON-RATED PARTITION

1 HOUR FIRE BARRIER

2 HOUR FIRE BARRIER

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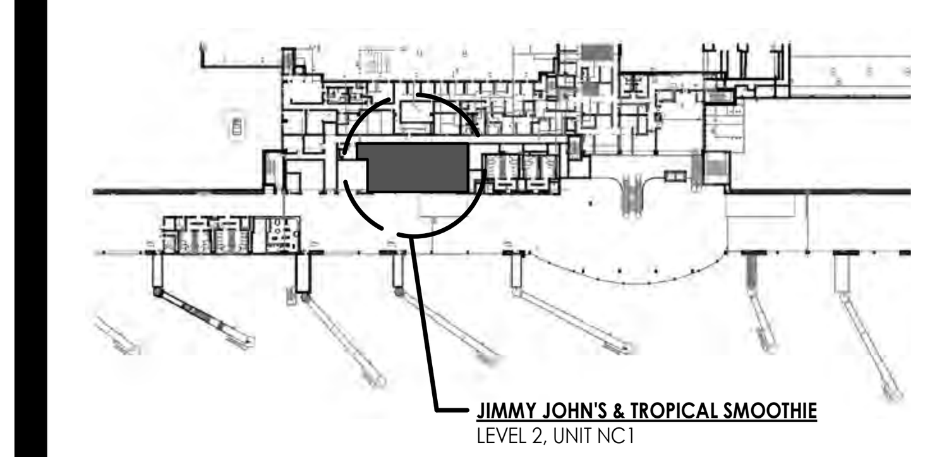
Notes



Revision	By	Appd	YYYY.MM.DD

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ISSUED FOR PERMIT	KLH	KLH	2024.12.27
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ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
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Title

MECHANICAL DUCTWORK LEVEL 2 NORTH CONCOURSE PLAN

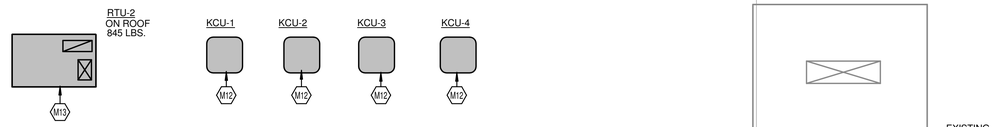
Project No.

Scale
As indicated

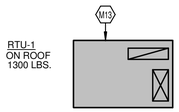
Revision

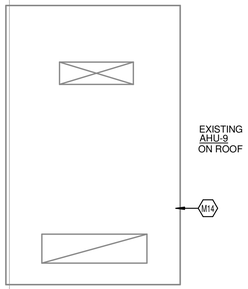
Drawing No.
M-102

ORIGINAL SHEET - ARCH D

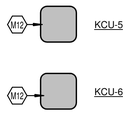


NOTE: CONDENSATE TO DRAIN ONTO ROOF.





NOTE: EXISTING AHU-9 SERVES ADJACENT AIRPORT SPACES. EXISTING VAV-7-27 AND VAV-7-28 ARE SERVED BY EXISTING AHU-7 NOT SHOWN ON PLAN.



1 MECHANICAL NEW WORK ROOF PLAN - LEVEL 2 NORTH CONCOURSE
3/16" = 1'-0"

KEYED NOTES

M12	INSTALL REMOTE WALK-IN COOLER AND FREEZER CONDENSING UNITS ON ROOF PURCHASED BY OTHERS. REFER TO KITCHEN EQUIPMENT PLANS FOR ADDITIONAL INFORMATION. PROVIDE PENETRATIONS AND DOGHOUSE FOR FOR REFRIGERANT PIPING. VERIFY FINAL LOCATION WITH KITCHEN EQUIPMENT VENDOR.
M13	PROVIDE ROOFTOP UNIT AS SCHEDULED. BALANCE TO SCHEDULED AIRFLOW. MAINTAIN ALL CODE AND MANUFACTURER CLEARANCES.
M14	EXISTING AHU SERVING ADJACENT AIRPORT SPACES ON ROOF TO REMAIN. FIELD VERIFY EXACT LOCATION

NOTE: TERMINAL PROJECT WILL PROVIDE HEADER STEEL, CURBS, OPENING, ETC... WORK WILL BE PERFORMED BY TERMINAL ROOF CONTRACTOR TO MAINTAIN NEW ROOF WARRANTY.

RATED WALL LEGEND

NON-RATED PARTITION	
1 HOUR FIRE BARRIER	
2 HOUR FIRE BARRIER	

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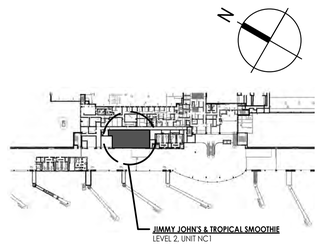

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FIRM LICENSE #C-4774

NORTH CAROLINA PROFESSIONAL SEAL 043999 ENGINEER KARL SCHNEIDER

12/27/2024

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Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

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NORTH CAROLINA, USA, 28732

Title

MECHANICAL DUCTWORK ROOF NORTH CONCOURSE PLAN

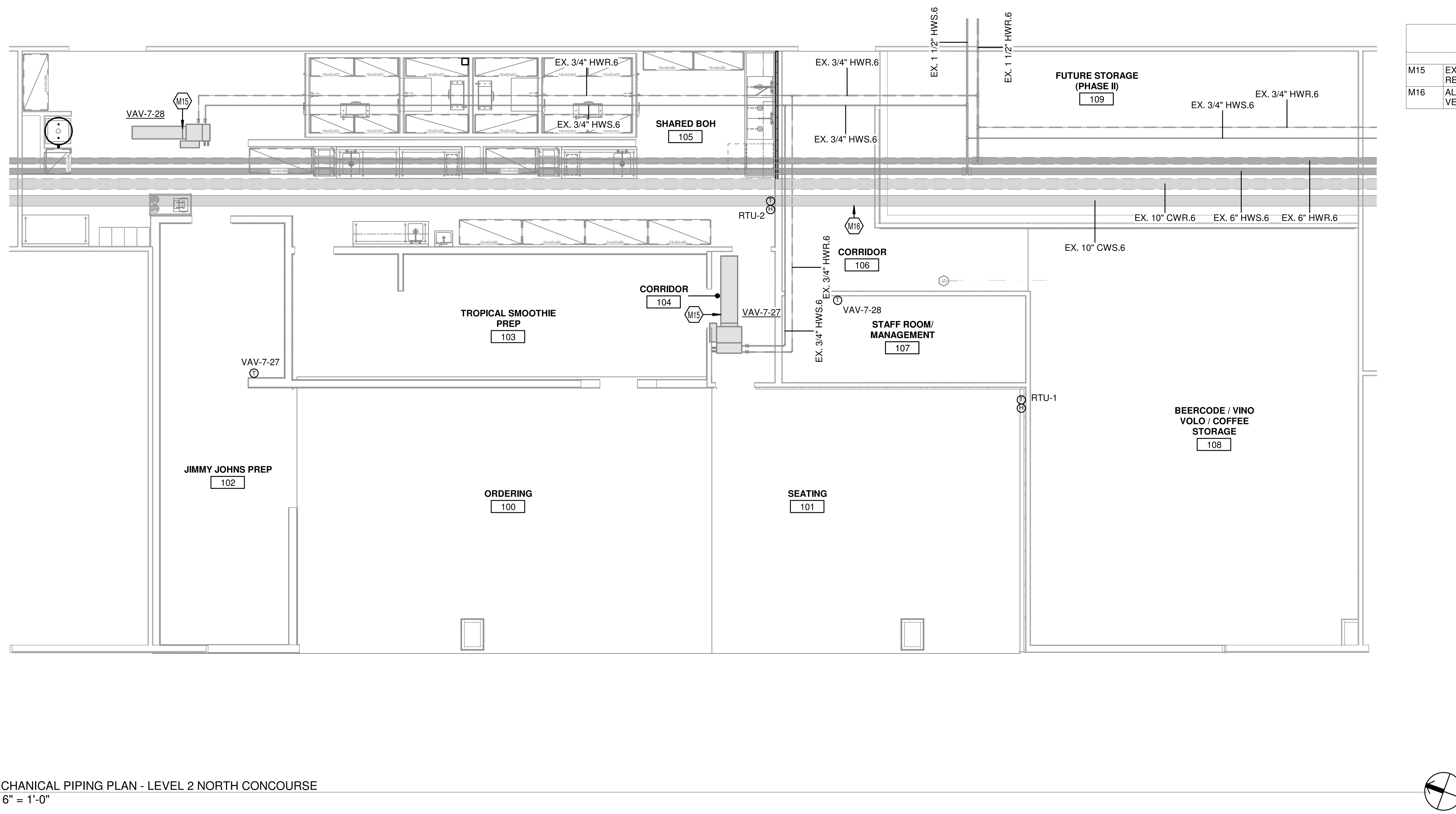
Project No.

Scale
As indicated

Revision

Drawing No.
M-103

ORIGINAL SHEET - ARCH D



KEYED NOTES

M15	EXISTING VAV BOX AND ALL ASSOCIATED PIPING AND DUCTWORK TO REMAIN
M16	ALL EXISTING HOT AND COLD WATER PIPING IN SPACE TO REMAIN. FIELD VERIFY EXACT LOCATION AND ROUTING.

RATED WALL LEGEND

- NON-RATED PARTITION
- 1 HOUR FIRE BARRIER
- 2 HOUR FIRE BARRIER

1 MECHANICAL PIPING PLAN - LEVEL 2 NORTH CONCOURSE
3/16" = 1'-0"

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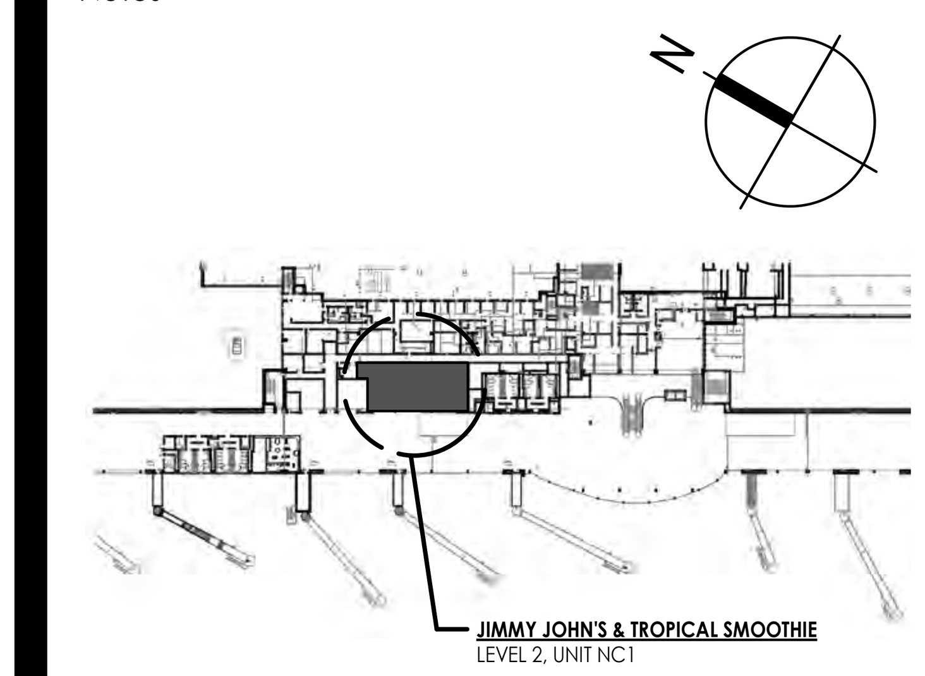

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File Name: N/A

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Permit/Seal

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12/27/2024

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JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

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Title

MECHANICAL PIPING LEVEL 2 NORTH CONCOURSE PLAN

Project No.

Scale
As indicated

Revision

Drawing No.
M-104

ORIGINAL SHEET - ARCH D

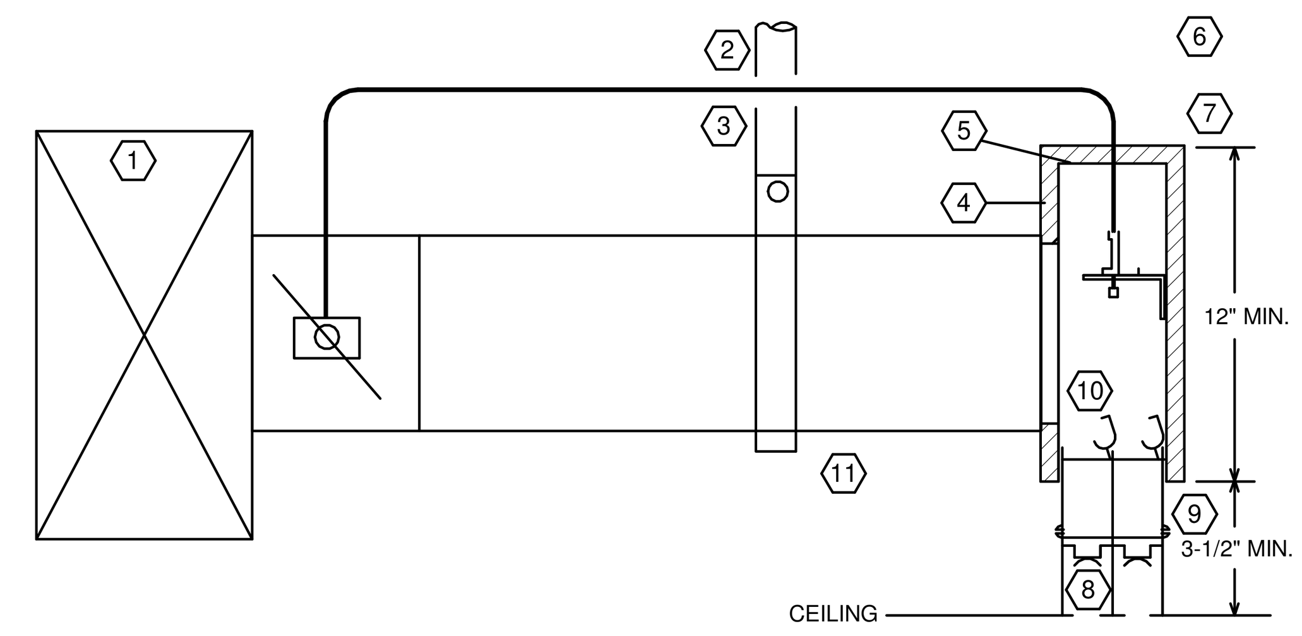
12/27/2024 2:30:28 PM Autodesk Docs://14424057_JIMMY_JOHNS_TROPICAL_SMOOTHIE_CAFE/24047.00-23-MEP Jimmy Johns Tropical Smoothie - AVL.rvt

GENERAL NOTES:

A. WHERE LINEAR DIFFUSER IS ADJACENT TO WINDOWS, ADJUST PATTERN CONTROLLER TO DIRECT AIRFLOW HORIZONTALLY TOWARDS WINDOWS.
B. OMIT FLEX DUCT ON DISTRIBUTION SYSTEMS THAT PENETRATE 1-HR FIRE BARRIERS. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF FIRE BARRIERS.

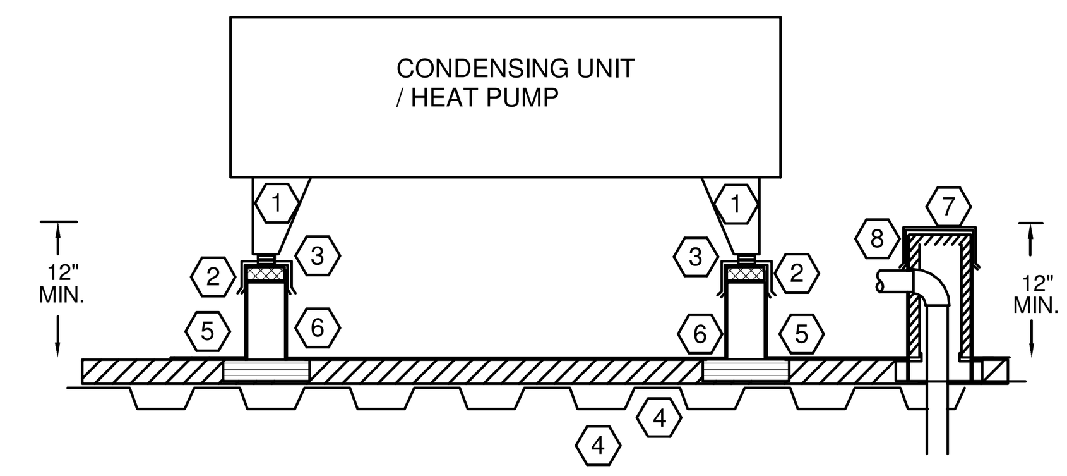
KEYED NOTES:

1. LOW PRESSURE SUPPLY DUCT
2. 1" WIDE BAND AND CLAMP.
3. SHEET METAL SCREW.
4. SHEET METAL PLENUM.
5. 1/2" ACOUSTICAL LINING.
6. PATTERN CONTROLLER.
7. SCREWS, MIN 6" ON CENTER & SEAL AIRTIGHT, TYP, BOTH SIDES
8. VOLUME ADJUSTER
9. BAND CLAMP
10. INACCESSIBLE VOLUME DAMPERS SHALL BE ADJUSTABLE FROM THE FACE OF THE DIFFUSER BY USE OF THE BOWDEN CABLE CONTROL SYSTEM (#270-275 CONTROLLER) MANUFACTURED BY YOUNG REGULATOR COMPANY OR APPROVED EQUIVALENT.
11. SHEET METAL BRANCH DUCT



233713.00-12 - PLENUM/LINEAR DIFFUSER W/ YOUNG REG.

SCALE: NONE



KEYED NOTES:

1. ANCHOR UNIT TO CURB
2. PRESSURE TREATED WOOD NAILER
3. VIBRATION ISOLATORS
4. ROOF DECK
5. PREFABRICATED EQUIPMENT SUPPORT
6. SINGLE MEMBRANE ROOFING, FLASH PER MFG'R RECOMMENDATIONS. FLASH UP AND OVER WOOD NAILER.
7. PREFABRICATED DOG HOUSE
8. SEAL AND FLASH OPENING

GENERAL NOTES:

A. ON PROJECTS WITH BUILT-UP ROOFS, ADD CANT ON EQUIPMENT SUPPORTS AND PREFABRICATE PIPING CHASE
B. PLACE EQUIPMENT ACROSS BAR JOIST OR ADD ADDITIONAL STRUCTURAL STRUCTURAL STEEL AS NECESSARY TO CARRY EQUIPMENT WEIGHT
C. LOCATE A MINIMUM OF 10'-0" FROM EDGE OF ROOF AND ROOF HATCH.

236213.00-02 - EQUIPMENT SUPPORT

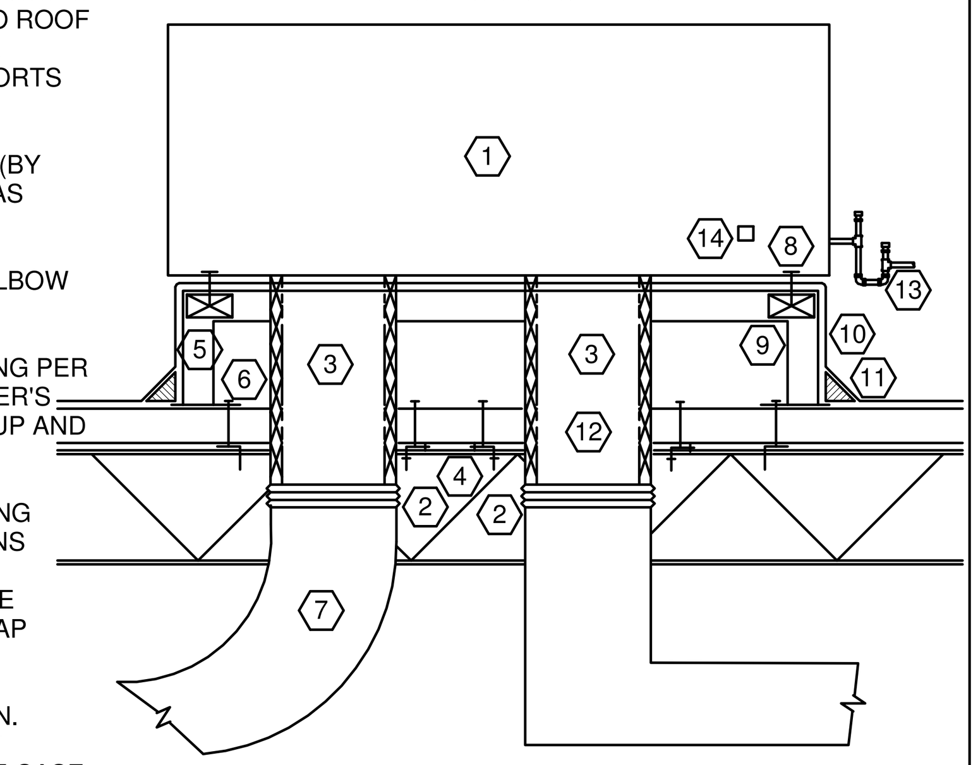
SCALE: NONE

KEYED NOTES:

1. ROOFTOP AIR CONDITIONING UNIT LOCATE A MINIMUM OF 10'-0" FROM EDGE OF ROOF AND ROOF HATCH
2. CANVAS FLEXIBLE CONNECTION
3. 1" ACOUSTICALLY LINED DUCTS
4. 4x4 ANGLE FASTENED TO ROOF DECK AND STRUCTURAL SYSTEM PROVIDE SUPPORTS AS REQUIRED
5. FACTORY FABRICATED, INSULATED ROOF CURB (BY SAME MANUFACTURER AS UNIT)
6. FASTEN CURB TO DECK
7. INSULATED RADIUSED ELBOW
8. SECURE TO CURB
9. WOOD NAILER
10. CURB TYPE AND FLASHING PER ROOFING MANUFACTURER'S REQUIREMENTS FLASH UP AND OVER NAILOR
11. CANT STRIP
12. ROOF DECK, CUT OPENING FOR DUCT PENETRATIONS ONLY
13. CONDENSATE TRAP - SEE CONDENSATE DRAIN TRAP DETAIL
14. HIGH WATER ALARM IN CONDENSATE DRAIN PAN. WIRE TO BREAK 24 VOLT CONTROL POWER IN THE CASE OF A HIGH WATER EVENT.

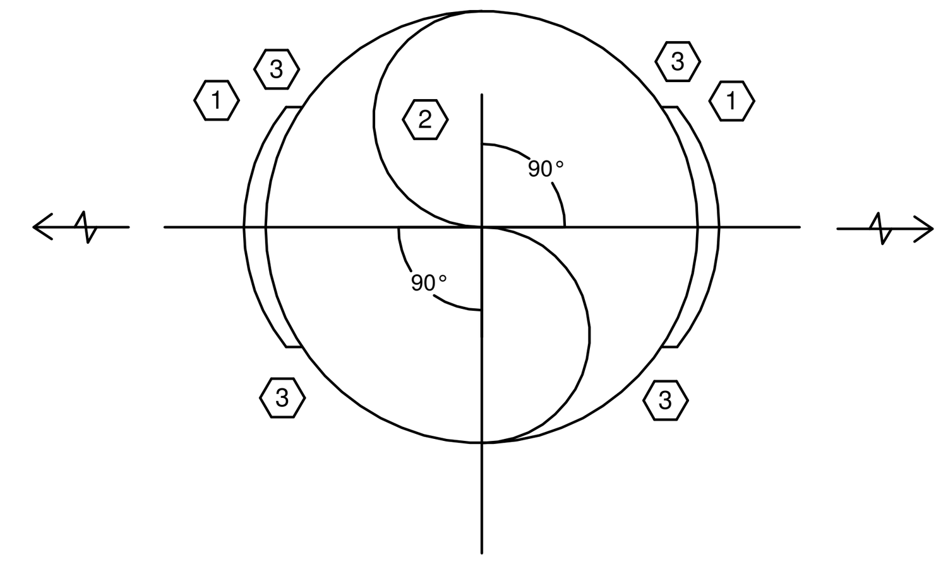
GENERAL NOTES:

A. CONTRACTOR SHALL PROVIDE CURB TO MAINTAIN 10" MINIMUM ABOVE FINISHED ROOFING SYSTEM. PROVIDE ADDITIONAL BLOCKING AS REQUIRED TO ACCOMMODATE ROOF INSULATION THICKNESS.
B. FINAL LOCATION AND STRUCTURAL VERIFICATION BY OTHERS.



237433.00-05 - ROOF CURB & MOUNTING D

SCALE: NONE

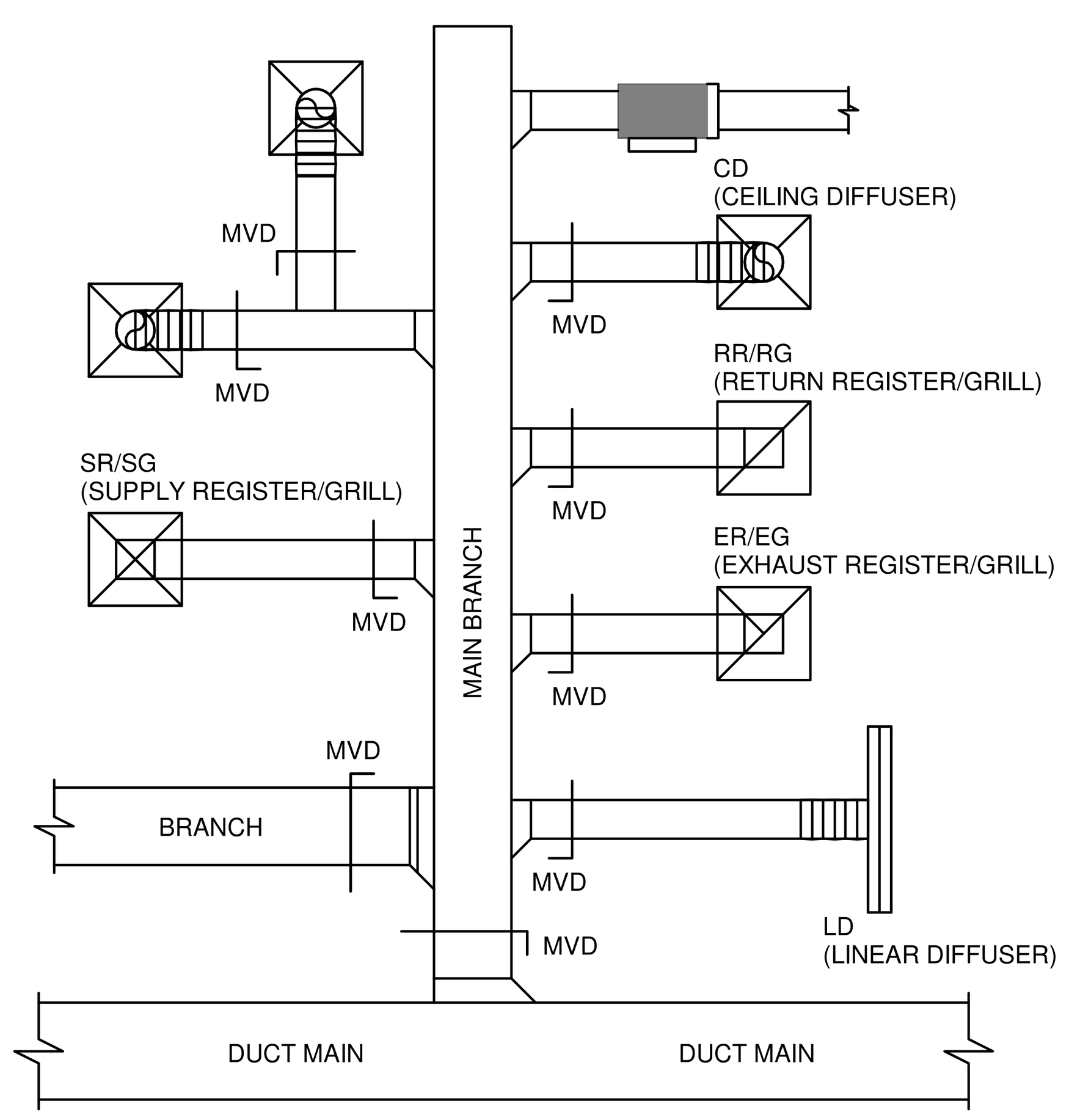


KEYED NOTES:

1. SPIRAL SUPPLY DUCT MOUNTED GRILLE WITH ADJUSTABLE, DOUBLE DEFLECTION LOUVER AND SCOOP DAMPER. (TO BE SIZED AS SCHEDULED)
2. SUPPLY DUCT
3. SEAL JOINTS BETWEEN COLLAR AND MAIN DUCT

233713.00-24 - ANGLED REGISTER INSTALLATION 0 DEGREES

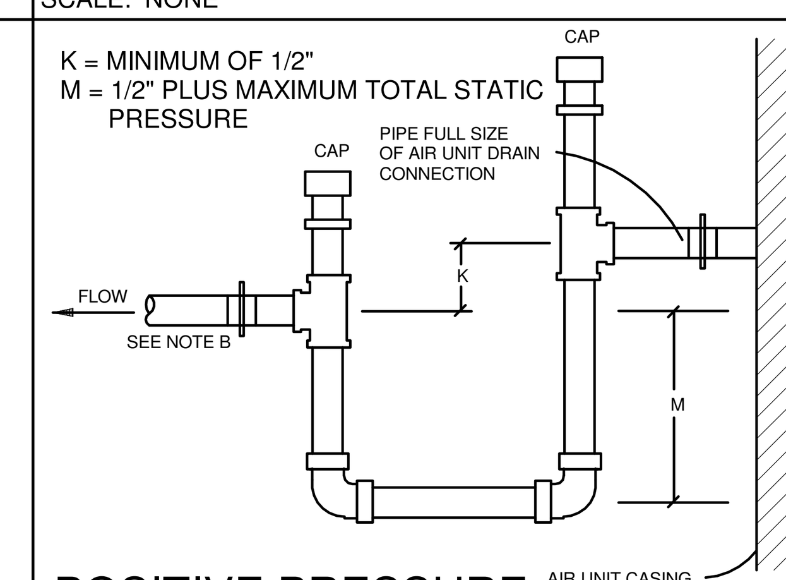
SCALE: NONE



233713.00-20 - DAMPER LOCATIONS

SCALE: NONE

K = MINIMUM OF 1/2"
M = 1/2" PLUS MAXIMUM TOTAL STATIC PRESSURE

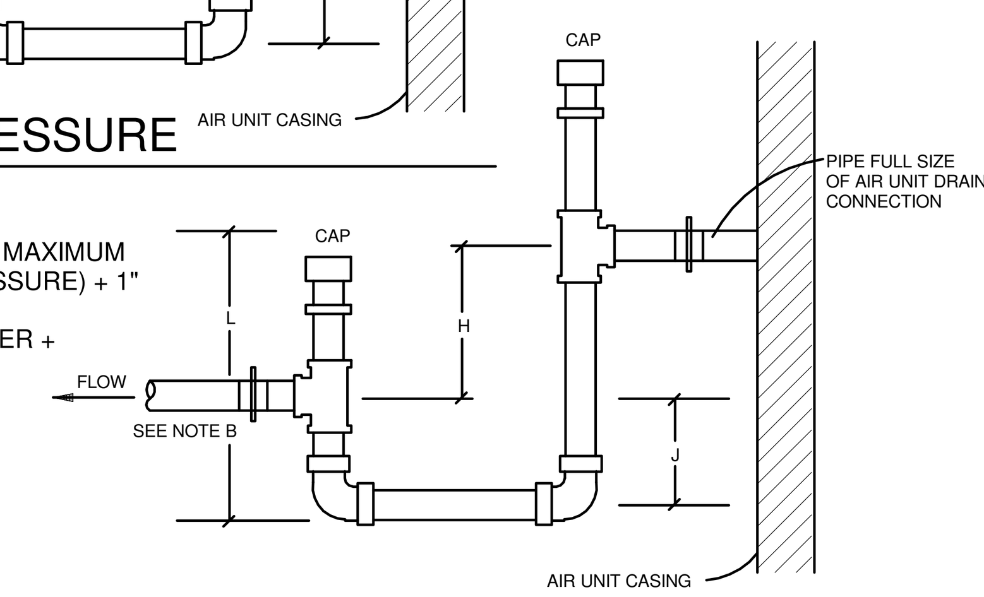


GENERAL NOTES:

A. LOCATE TRAPS SO AS TO BE ACCESSIBLE FOR CLEANING.
B. CONDENSATE PIPING SHALL GRADUALLY SLOPE DOWN FROM DRAIN TRAP.
C. CONFIRM TRAP REQUIREMENTS WITH EQUIPMENT MANUFACTURER.
D. REFER TO SPECIFICATIONS FOR MATERIAL AND INSULATION REQUIREMENTS.
E. PROVIDE UNION UPSTREAM AND DOWNSTREAM OF TRAP.

POSITIVE PRESSURE

H = (1" FOR EACH 1" OF MAXIMUM NEGATIVE STATIC PRESSURE) + 1"
J = HALF OF H
L = H + J + PIPE DIAMETER + INSULATION

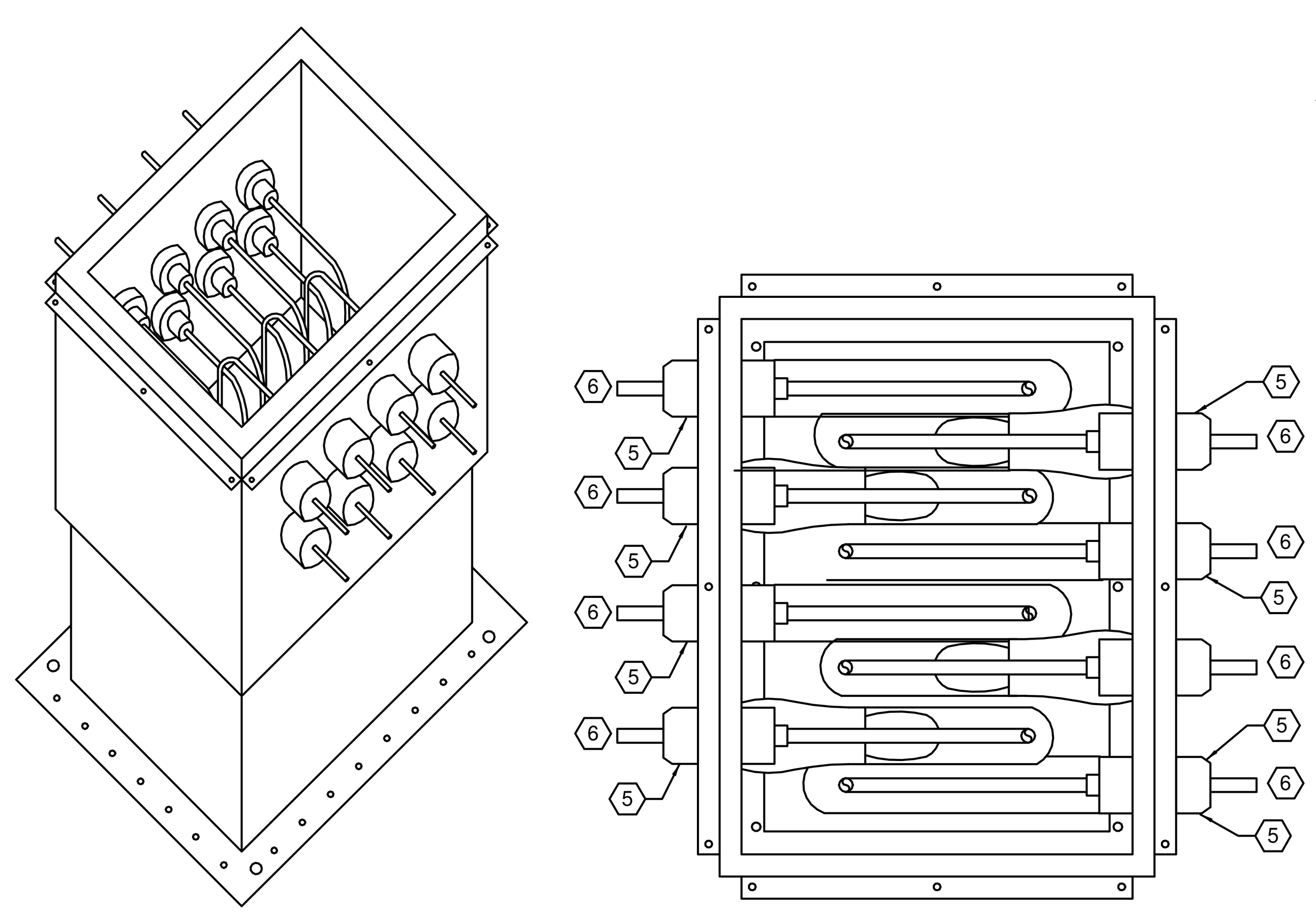


NEGATIVE PRESSURE

NOTE: OUTDOOR UNITS AND UNITS LOCATED IN UNCONDITIONED SPACES WHICH PROVIDE COOLING IN THE WINTER MUST HAVE HEAT TRACE ON THE CONDENSATE PIPING.

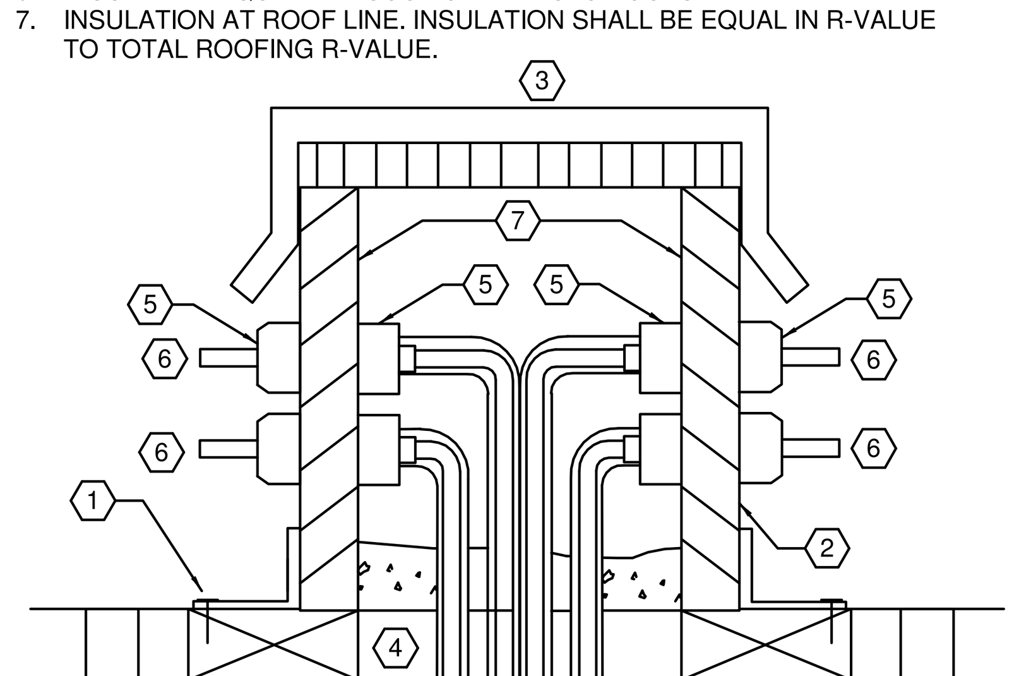
232113.23-05 - CONDENSATE DRAIN TRAP POSITIVE & NEGATIVE

SCALE: NONE



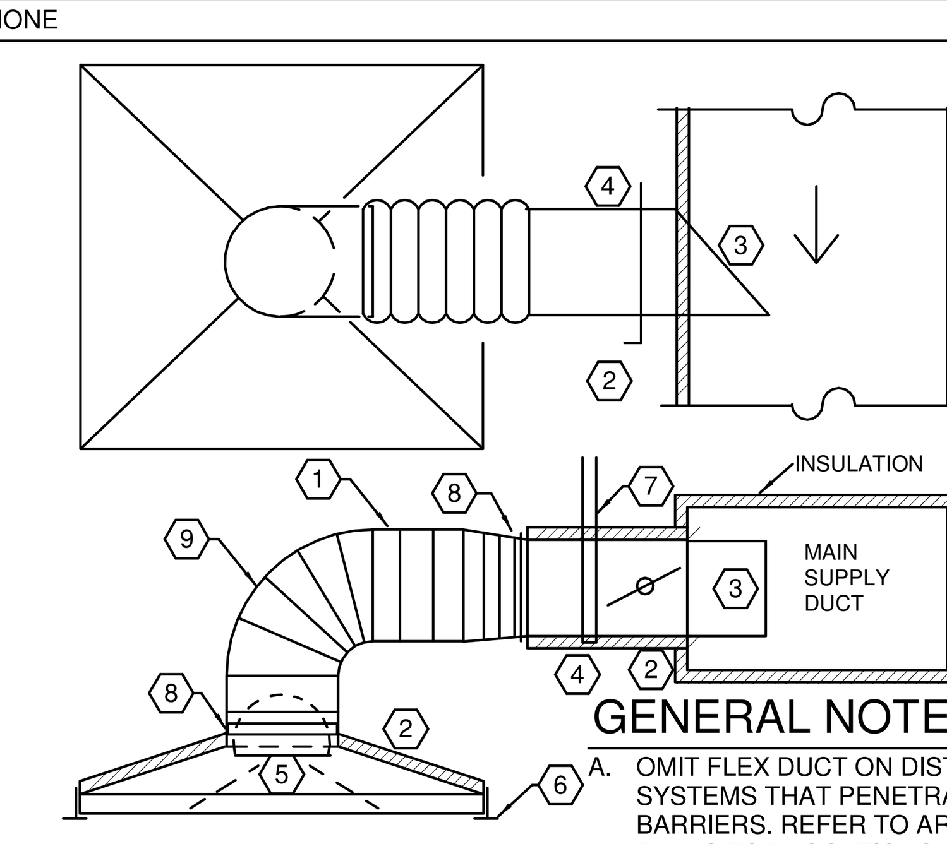
KEYED NOTES:

1. ALUMINUM MOUNTING FLANGE ANCHORED TO DECK
2. WELDED POWER-COATED ALUMINUM HOUSING WITH ELASTOMETRIC INSULATION.
3. WELDED POWDER-COATED ALUMINUM CAP
4. OPENING THRU ROOF. SIZE BASED ON PIPING INSTALLATION REQUIREMENTS
5. PIPE EXIT SEAL MADE OF HIGH UV PROTECTED PVC PLASTIC WITH LIQUID TIGHT SEAL ON EITHER SIDE OF THE THREADED FITTING
6. INSULATED LIQUID AND SUCTION LINE STUB OUTS
7. INSULATION AT ROOF LINE. INSULATION SHALL BE EQUAL IN R-VALUE TO TOTAL ROOFING R-VALUE.



232313.00-01 - PRE-FABRICATED DOG HOUSE FOR REFRIGERANT PIPING

SCALE: NONE



GENERAL NOTES:

A. OMIT FLEX DUCT ON DISTRIBUTION SYSTEMS THAT PENETRATE 1-HR FIRE BARRIERS. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF FIRE BARRIERS.

KEYED NOTES:

1. MAXIMUM LENGTH OF INSUL. FLEX DUCT EQUALS 5 FEET. FLEX NOT PERMITTED IN INACCESSIBLE CEILINGS
2. INSULATED DUCT, COLLAR AND DIFFUSER BY HVAC CONTRACTOR
3. SCOOP
4. SPIN IN FITTING WITH MANUAL VOLUME DAMPER
5. INTERNAL BUTTERFLY DAMPER FOR DRYWALL APPLICATIONS ONLY. (PROVIDE KEY FOR ADJUSTMENT)
6. SECURE TO CEILING PER MANUFACTURER'S RECOMMENDATIONS AND PER CEILING FINISH. PROVIDE GRID CLIPS PER MFG'R REQUIREMENTS. PROVIDE FRAMING FOR DRYWALL INSTALLATION.
7. HANGER, SECURE TO STRUCTURE AND DUCTWORK
8. PEEL BACK INSULATION AND PROVIDE STRAPPING AND SHEET METAL SCREWS AT FLEX CONNECTION TO DUCT. THEN PROVIDE STRAPPING AROUND INSULATION
9. SUPPORT FLEX TO PREVENT COLLAPSING

233713.00-04 - DIFFUSER INSTALLATION TYPICAL

SCALE: NONE

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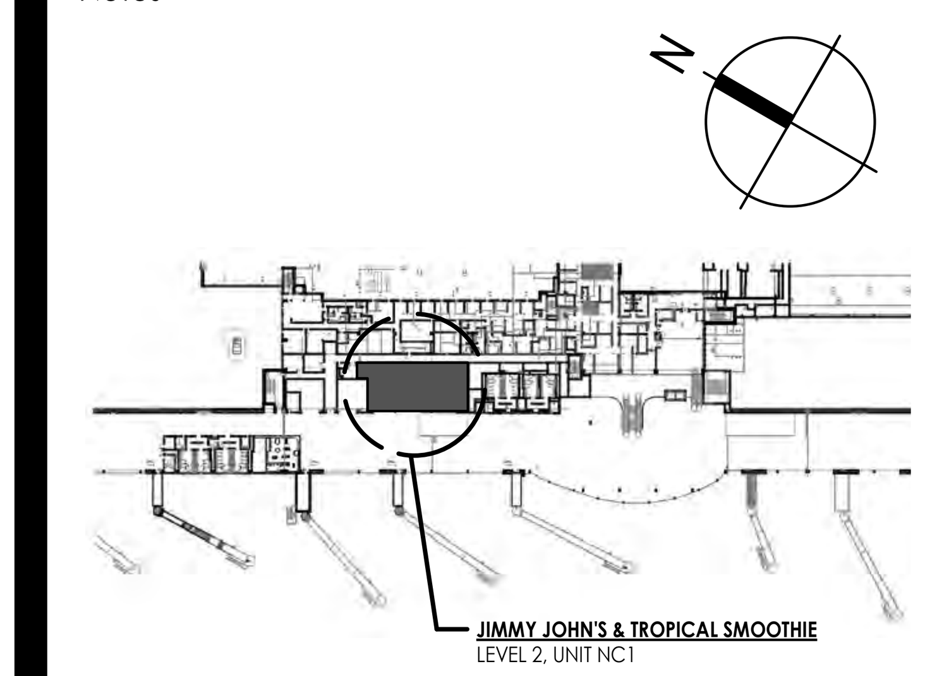

Revision	By	Appd	YYYY.MM.DD

Issued	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
ISSUED FOR 60% SUBMISSION	KLH	KLH	2024.09.27

File Name: N/A

Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Seal

FIRM LICENSE #C-4774

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER, NORTH CAROLINA, USA, 28732

Title

MECHANICAL DETAILS

Project No.

Scale
1/8" = 1'-0"

Revision

Drawing No.
M-501

ORIGINAL SHEET - ARCH D

HVAC ELECTRICAL COORDINATION SCHEDULE

ABBREVIATIONS

DC	LOCAL DISCONNECT
MC	MOTOR CONTROL (POWER)
SD	DUCT SMOKE DETECTOR
CN	CONTROLS
TS	TOGGLE SWITCH
C/B	H.A.C.R. CIRCUIT BREAKER AT SOURCE PANELBOARD
FUSE	FUSE AT LOCAL DISCONNECT (VERIFY FIELD RATING)
FLA	OPERATING FULL LOAD AMPS
MCA	MINIMUM CIRCUIT AMPACITY
CP	CORD AND PLUG CONNECTION
[BLANK]	HARD WIRED (WHEN INDICATED FOR DC TYPE)

CONTRACTOR TYPE

EC	ELECTRICAL CONTRACTOR
EX	EXISTING
FC	FIRE PROTECTION CONTRACTOR
GC	GENERAL CONTRACTOR
HC	HVAC CONTRACTOR
MFR	MANUFACTURER
PC	PLUMBING CONTRACTOR
OR	OWNER OR OTHERS

MOTOR CONTROL TYPE

CS	COMBINATION STARTER
MCC	MOTOR CONTROL STARTER
MG	MAGNETIC STARTER OR CONTACT
MS	MANUAL STARTER
VFD	VARIABLE FREQUENCY DRIVE
MSR	MANUAL STARTER W/ CONTROL RELAY
OV	OVERCURRENT PROTECTION

CONTROL TYPE

TC	TIMECLOCK
CPT	CONTROL POWER TRANSFORMER
BAS	BUILDING AUTOMATION SYSTEM
LOW	LOW VOLTAGE CONTROLS
LINE	LINE VOLTAGE CONTROLS
RLINE	REVERSE ACTING LINE VOLTAGE
MAN	THERMOSTAT
FA	MANUAL
CO	FIRE ALARM
INT	CARBON MONOXIDE SENSOR
ASD	INTEGRAL TO EQUIPMENT
DSD	AREA SMOKE DETECTOR...

SHORT CIRCUIT RATING

WHERE SHORT CIRCUIT RATING CODE REQUIRED VALUE INDICATES "YES" APPLICABLE EQUIPMENT'S SHORT CIRCUIT RATING SHALL EXCEED THE AVAILABLE FAULT CURRENT VALUE INDICATED.

CONNECTION MARK	DESCRIPTION	VOLTAGE	PHASE	EMERGENCY	HP	WATTS	HTG KW	FLA	MCA	OCP	FED FROM	DC TYPE	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE	SHORT CIRCUIT RATING CODE REQUIRED?	AVAILABLE FAULT CURRENT
KCU-1	AIR SOURCE OUTDOOR CONDENSING UNIT - REFRIGERATOR	208 V	1	NO					15	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	2666
KCU-2	AIR SOURCE OUTDOOR CONDENSING UNIT - FREEZER	208 V	1	NO					21	25			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	2820
KCU-3	AIR SOURCE OUTDOOR CONDENSING UNIT - FREEZER	208 V	1	NO					21	25			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	2620
KCU-4	AIR SOURCE OUTDOOR CONDENSING UNIT - REFRIGERATOR	208 V	1	NO					15	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	1853
KCU-5	AIR SOURCE OUTDOOR CONDENSING UNIT - REFRIGERATOR	208 V	1	NO					15	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	1557
KCU-6	AIR SOURCE OUTDOOR CONDENSING UNIT - FREEZER	208 V	1	NO					21	25			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	1963
RTU-1	PACKAGED ROOFTOP UNIT, ELECTRIC HEAT	480 V	3	NO			15		30	30			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	2730
RTU-2	PACKAGED ROOFTOP UNIT, ELECTRIC HEAT	480 V	3	NO			6		14	15			EC	EC	EC	MG	MFR	MFR	MFR	LOW	HC	HC	HC	Yes	4501

HVAC ACCESSORIES

ACCESSORIES:

1. MOTOR DAMPER
2. ENTHALPY ECONOMIZER
3. 14 " ROOF CURB
4. HAIL GUARDS
5. INTAKE HOOD
6. VIBRATION ISOLATION
7. FLAT FILTER
8. FILTER/MIXING BOX
9. ACCESS DOOR
10. FLEX CONNECTIONS
11. MOUNTING COLLAR
12. HOT GAS BYPASS
13. FACE/BYPASS DAMPER
14. CONDENSATE PUMP
15. MOTOR GUARD
16. GREASE TRAP
17. DUCT FLANGES
18. BASE RAIL
19. HUMIDIFIER
20. CO2 SENSORS
21. FIELD INSTALLED ECON POWERED EXHAUST
22. ECON BAROMETRIC RELIEF
23. HOT GAS REHEAT COIL
24. SHAFT GROUNDING BRUSHES

HVAC ROOFTOP UNITS SCHEDULE

Equipment shall be braced and labeled by the equipment manufacturer to withstand the minimum scheduled available fault current value for listed equipment.

EQUIPMENT MARK	DESCRIPTION	STATUS	WEIGHT (lbs)	MANUFACTURER	MODEL	MIN EER	CFM (cfm)	ESP (in WC)	OACFM (cfm)	NOMINAL TONS	OA EAT WB (Deg F)	MAT CLG DB (Deg F)	MAT CLG WB (Deg F)	CLG MBH (mbh)	CLG SENS (mbh)	LAT DB (Deg F)	LAT CLG WB (Deg F)	MAT HTG (Deg F)	HTG MBH (mbh)	ELECTRIC CONNECTION SUMMARY	AVAILABLE FAULT CURRENT	ACCESSORIES
RTU-1	PACKAGED ROOFTOP UNIT, ELECTRIC HEAT	NEW	1300	CARRIER	50FC-N08B3M6	11.4	2800	1	672	7.5	71	78	65	89	68	55	54	59	47	RTU-1 - 480V/3PH, 15 KW HTG, 30 MCA, 30A OCP	2730	2,3,4,10,21,23
RTU-2	PACKAGED ROOFTOP UNIT, ELECTRIC HEAT	NEW	845	CARRIER	50FC-B05B3M6	11.8	1600	1	130	4	71	77	65	38	35	55	54	66	11	RTU-2 - 480V/3PH, 6 KW HTG, 14 MCA, 15A OCP	4501	2,3,4,10,21,23

NOTE: ROOFTOP UNITS TO HAVE DUEAL ENTHALPY ECONOMIZERS WITH LOW LEAK DAMPERS, 14" ROOF CURBS, HAIL GUARDS, FIELD INSTALLED, POWERED EXHAUST, HOT GAS REHEAT, A2L REFRIGERANT, ECM SUPPLY FAN, STAINLESS STEEL DRAIN PAN, CRANKCASE HEATERS, LOW AMBIENT COOLING, FACTORY DISCONNECT, ANTI-SHORT CYCLE TIMER, HINGED ACCESS PANELS, MODULATING HOT GAS REHEAT, AND A FACTORY DDC CONTROLLER WITH BACNET PROTOCOL CAPABLE OF TYING INTO THE BAS. REFERENCE SPECIFICATIONS AND SEQUENCE OF OPERATIONS ON SHEETS M-701 AND SHEET M-702 FOR ADDITIONAL INFORMATION.

HVAC VAV - SINGLE DUCT - HYDRONIC HEAT SCHEDULE

EQUIPMENT MARK	DESCRIPTION	DUCT CONN (in)	STATUS	MANUFACTURER	MODEL	MAX CFM (cfm)	MIN CFM (cfm)	HMIN CFM (cfm)	HTG MBH (mbh)	EAT (Deg F)	LAT (Deg F)	EWT (Deg F)	LWT (Deg F)	HW GPM	ELECTRIC CONNECTION SUMMARY	AVAILABLE FAULT CURRENT
VAV-7-27	SINGLE DUCT VAV BOX W/ HOT WATER HEAT	16	EXISTING	PRICE	SDV	2400	1200	1200	29	55	78	140	120	3.50 GPM		
VAV-7-28	SINGLE DUCT VAV BOX W/ HOT WATER HEAT	12	EXISTING	PRICE	SDV	1300	650	650	16	55	78	140	120	2.40 GPM		

NOTE: EXISTING VAV BOXES, VAV-7-27 AND VAV-7-28, ARE SERVED BY AHU-7 NOT SHOWN ON PLAN. AHU-7 PROVIDES 20% OUTDOOR AIR.

HVAC DIFFUSERS AND REGISTERS SCHEDULE

TAG	MANUFACTURER	MODEL	FACE	MOUNTING	MATERIAL	FINISH	DAMPER TYPE	BORDER STYLE	REMARKS
CD-1	TITUS	OMNI-AA	24"x24"	CEILING	ALUMINUM	STANDARD WHITE	OPPOSED BLADE	LAY IN MOUNTING	
LD-1	TITUS	FL-20	4'-0"-(1) 2" SLOT	CEILING	ALUMINUM	STANDARD WHITE	PARALLEL BLADE	BORDER TYPE 22, TAP & SPACKLE	COORDINATE FINISH WITH ARCHITECT.
LDR-1	TITUS	FL-20	4'-0"-(1) 2" SLOT	CEILING	ALUMINUM	STANDARD WHITE	PARALLEL BLADE	BORDER TYPE 22, TAP & SPACKLE	COORDINATE FINISH WITH ARCHITECT.
RR-1	TITUS	350FL	24"x24"	CEILING	ALUMINUM	STANDARD WHITE	PARALLEL BLADE	LAY IN MOUNTING	
SR-1	TITUS	S300FL	12"x12"	DUCT	ALUMINUM	STANDARD WHITE	SCOOP DAMPER	SURFACE MOUNT	
TG-1	TITUS	350FL	48"x24"	SIDEWALL	ALUMINUM	STANDARD WHITE	PARALLEL BLADE	SURFACE MOUNT	

HVAC LOAD SCHEDULE

THE HEATING AND COOLING LOAD CALCULATIONS ARE BASED ON THE CLTD/CLF (COOLING LOAD TEMPERATURE DIFFERENCE/COOLING LOAD FACTOR) METHOD. ASSUMPTIONS AND EXECUTION OF THESE METHODS ARE PER ASHRAE 183-2007 STANDARD FOR PEAK COOLING AND HEATING LOAD CALCULATIONS IN BUILDINGS EXCEPT LOW-RISE RESIDENTAL BUILDINGS.

COOLING LOAD BREAKDOWN

CROOF	SENSIBLE HEAT GAIN FROM ROOF
CWALL	SENSIBLE HEAT GAIN FROM EXTERIOR WALLS
CPART	SENSIBLE HEAT GAIN FROM PARITIONS
CGLASS	SENSIBLE HEAT GAIN FROM GLAZING
CSOLAR	SENSIBLE HEAT GAIN FROM SOLAR GAIN THROGH GLAZING
CLIGHTS	SENSIBLE HEAT GAIN FROM INTERIOR LIGHTING
CEQUIP	SENSIBLE HEAT GAIN FROM PLUG LOADS, COMPUTERS, ETC.
CPSENS	SENSIBLE HEAT GAIN FROM PEOPLE
CSSENS	TOTAL SENSIBLE HEAT GAIN TO SPACE
CFAN	SENSIBLE HEAT GAIN FROM AIR HANDLER FAN
COAS	SENSIBLE HEAT GAIN FROM OUTDOOR VENTILATION AIR
CTSENS	TOTAL SENSIBLE HEAT GAIN
CPLAT	LATENT HEAT GAIN FROM PEOPLE
COAL	LATENT HEAT GAIN FROM OUTDOOR VENTILATION AIR
CTLAT	TOTAL LATENT HEAT GAIN
CTOT	TOTAL HEAT GAIN (SENSIBLE + LATENT)

HEATING LOAD BREAKDOWN

HROOF	HEAT LOSS FROM ROOF
HWALL	HEAT LOSS FROM EXTERIOR WALLS
HPART	HEAT LOSS FROM PARTITIONS
HGLASS	HEAT LOSS FROM GLAZING
HSLAB	HEAT LOSS FROM SLAB
HSPACE	TOTAL HEAT LOSS FROM SPACE
HOA	HEAT LOSS FROM OUTDOOR VENTILATION AIR
HTOT	TOTAL HEAT LOSS

EQUIPMENT MARK	CROOF	CWALL	CPART	CGLASS	CSOLAR	CLIGHTS	CEQUIP	CPSENS	CSSENS	CFAN	COAS	CTSENS	CPLAT	COAL	CTLAT	CTOT	HROOF	HWALL	HPART	HGLASS	HSPACE	HSLAB	HOA	HTOT
RTU-1	3.16	0	0	0	0	18.37	0	35.6	57.14	1.4	8.96	67.5	9.4	12.51	21.91	89.41	6.55	0	0	0	6.55	0	40.14	46.69
RTU-2	1.5	0	0	0	0	4.9	26.34	0	32.75	0.8	1.73	35.28	0	2.42	2.42	37.7	2.98	0	0	0	2.98	0	7.77	10.75
VAV-7-27	2.51	0	0	0	0	8.1	40.94	2.75	54.3	1.2	5.99	61.49	2.2	8.37	10.57	72.06	4.29	0	0	0	4.29	0	26.85	31.14
VAV-7-28	2.38	0	0	0	0	20.82	3.41	3.37	29.98	0.65	2.1	32.73	1.4	2.93	4.33	37.06	3.15	0	0	0	3.15	0	9.41	12.56

HVAC VENTILATION SCHEDULE

NUMBER	NAME	AREA	LEVEL	PEOPLE	OA PER PERSON	OA PER SQ FT.	REQ SUP	ACT SUP	REQ OA	ACT OA	ACT RET	ACT EXH	CRIT OA	PRESSURE
100	ORDERING	689 SF	LEVEL 2 NORTH CONCOURSE	21	7.5	0.12	485	1400	336	336	1400	0	21.4	Neutral
101	SEATING	509 SF	LEVEL 2 NORTH CONCOURSE	26	7.5	0.18	445	1400	336	336	1400	0	25.6	Neutral
102	JIMMY JOHNS PREP	352 SF	LEVEL 2 NORTH CONCOURSE	6	7.5	0.12	1355	1200	206	206	1200	0	9.1	Neutral
103	TROPICAL SMOOTHIE PREP	320 SF	LEVEL 2 NORTH CONCOURSE	5	7.5	0.12	1000	900	155	155	900	0	10.5	Neutral
104	CORRIDOR	52 SF	LEVEL 2 NORTH CONCOURSE	0	0	0	20	50	9	9	50	0	0	Neutral
105	SHARED BOH	868 SF	LEVEL 2 NORTH CONCOURSE	0	0	0.12	1450	1600	130	130	1600	0	8.1	Neutral
106	CORRIDOR	202 SF	LEVEL 2 NORTH CONCOURSE	0	0	0	200	250	43	43	250	0	0	Neutral
107	STAFF ROOM/ MANAGEMENT	133 SF	LEVEL 2 NORTH CONCOURSE	7	5	0.06	130	250	43	43	250	0	21.5	Neutral
108	BEERCODE / VINO VOLO / COFFEE STORAGE	819 SF	LEVEL 2 NORTH CONCOURSE	0	0	0.12	270	300	52	52	300	0	40.9	Neutral
109	FUTURE STORAGE (PHASE II)	488 SF	LEVEL 2 NORTH CONCOURSE	0	0	0.12	160	250	43	43	250	0	29.3	Neutral
110	AIRPORT CORRIDOR	2667 SF	LEVEL 2 NORTH CONCOURSE	0	0	0	670	400	69	69	400	0	0	Neutral
111	MAINTENANCE STORAGE	216 SF	LEVEL 2 NORTH CONCOURSE	0	0	0	55	100	17	17	100	0	0	Neutral
TOTAL		7315 SF												

Stantec

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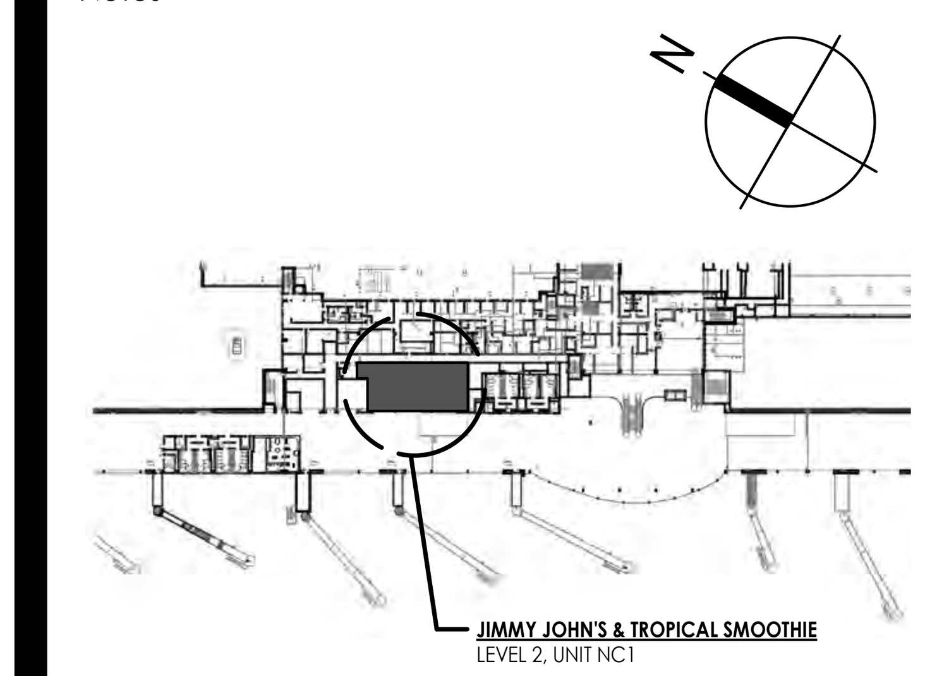
COLUMBUS, OHIO

Notes



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Permit/Seal

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NORTH CAROLINA PROFESSIONAL SEAL 043999 ENGINEER

12/27/2024

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE

JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

MECHANICAL SCHEDULES

Project No.

Scale

Revision

Drawing No.

M-601

ORIGINAL SHEET - ARCH D

SECTION 23 05 01.00 – COMMON REQUIREMENTS FOR HVAC

General
General Provisions of the Contract including General and Supplementary Conditions and General Requirements apply to work of this section.
Scope
The base bid includes furnishing all materials, labor, tools, and equipment and the performance of all work required to install a complete heating and air conditioning system as outlined herein.
Guarantee
The contractor shall provide a guarantee in written form stating that all work under this section shall be free of defective work, materials, or parts for a period of one year from the date of owner's final acceptance and shall repair, revise or replace at no cost to the owner any such defects occurring within the guarantee period. Contractor shall also state in written form that any items or occurrences arising during the guarantee period will be attended to in a timely manner and will in no case exceed four (4) working days from date of notification by owner.
Quality Assurance
Provide a complete installation in conformance with the following standards.
ASHRAE: American Society of Heating, Refrigerating and Air Conditioning Engineers
NFPA: National Fire Protection Association
SMACNA: Sheet Metal and Air Conditioning Contractors National Association.
Statewide Building Code
IMC: International Mechanical Code
Permits, Fees, Inspections, Laws and Regulations
Permits and fees of every nature required in connection with this work shall be obtained and paid for by this contractor who shall also pay for all the installation fees and similar charges. Laws and regulations, which bear upon or affect the various branches of this work shall be complied with by this contractor and are hereby made a part of this contract. All work, which such laws require to be inspected, shall be submitted to the proper public official for inspection and a certificate of final approval must be furnished.
Work in Existing Spaces
General: Care shall be taken when working in existing spaces so as not to damage existing walls and cellings where work is being performed.
Ceilings: Where work is being performed above ceilings, and the architectural drawings do not indicate ceiling modifications by the general contractor, it shall be the responsibility of this contractor to remove and replace existing ceilings where work is being performed. In those instances, all repair and installation of new grid, ceiling panels, etc shall be the responsibility of this contractor. Match existing finishes.
Walls & Floors: It shall be the responsibility of this contractor to patch existing walls and floors and match existing finishes where work is being removed or installed and patching is being performed, unless noted otherwise on the architectural drawings.
Demolition
Any Equipment to be demolished shall also include the demolition of any and all ductwork, piping etc serving or served by the equipment, all accessories, air devices, wiring, gas piping, venting, control wiring and power wiring associated with the equipment.
Demolition shall be coordinated with all trades. All materials shall be turned over to the owner or disposed at the owner's direction.
Contractor is responsible for reclaiming any refrigerant in association with the demolition in accordance with all local, state and federal regulations.
Any roof or wall penetration shall be patched watertight to the satisfaction of the architect.
Tests and Adjustments
No ducts, piping, fixtures or equipment shall be concealed or covered until they have been inspected and approved by the Architect and the inspector who shall be notified by the contractor when the work is ready for inspection.
Work shall be completely installed, tested and leak tight before inspection is required. All tests shall be repeated to the satisfaction of those making the inspection.
Architectural coordination items
Cutting and Patching: Cut and drill all openings in walls and floors required for the installation. Secure approval of Engineer before cutting and drilling. Neatly patch all openings cut.
Fire Caulking: Patching through fire rated walls and enclosures shall not diminish the rating of that wall or enclosure. Patch shall be equal to rockwool, firestop, caulk or approved "rated" patch.
Access Panels and Pathways: Furnish all access panels required for proper servicing of equipment. Provide access panels for all concealed valves, vents, controls, cleanout doors, and sprinkler devices required by NFPA. Provide access panels for all fire and/or fire & smoke dampers. Provide frame as required for finish. Furnish panels to General Contractor. Exact locations to be approved by the Architect. Minimum size to be 12" x 12", units to be 16 gauge steel, locking device shall be screwdriver cam locks.
project conditions
Where new HVAC systems are required to be connected to existing HVAC systems, it is the contractor's responsibility to verify the location, size, pressure, condition, and they shall verify that the existing HVAC system is indeed the correct and appropriate HVAC system before any work is done. Provide all necessary camera scoping and dye testing as necessary. If there is any need for concern, if it is determined that the existing HVAC system is not a correct or appropriate HVAC system or not connected to a correct or appropriate HVAC system, if the condition of the existing HVAC system is not viable for re-use, or any other condition that would not allow the proper functioning of the new HVAC system, the contractor shall notify the engineer in writing immediately via RFI and wait for direction before proceeding.
Interruption of Existing HVAC Services: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
Notify, Architect, Construction Manager, and Owner no fewer than seven days in advance of proposed interruption of service.
Do not proceed with interruption of service without Architect's written permission.
MECHANICAL EQUIPMENT COMMON REQUIREMENTS
INSPECTION
Examine areas and conditions under which mechanical equipment is to be installed. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Installer.
Uncrate equipment and inspect for damage. Verify that nameplate data corresponds with unit designation.
INSTALLATION
General: Install mechanical equipment as indicated, and in accordance with manufacturer's installation instructions.
Location: Install each unit level/plum and accurately in position indicated in relation to other work; and maintain sufficient clearance for normal service and maintenance, but in no case less than that recommended by manufacturer.
Coordinate with other trades to assure correct recess size for recessed units.
Protect interior mechanical equipment with protective covers during balance of construction.
For ducted equipment, connect ductwork to units with flexible duct connections. Provide transitions to exactly match unit duct connection size. Provide 1" acoustic duct lining on return air side a minimum of 10' from fan.
Piping: Restrictors or piping changes shall be made as necessary to achieve manufacturers recommended pressure drops. The findings shall be reported to the engineer at project closeout.
Provide trap at drain piping connection to unit sized per manufacturer's recommendations.
Access: Provide access space around and over mechanical equipment for service as indicated, but in no case less than that recommended by manufacturer or required by code in effect.
Access Panels: Furnish all access panels required for proper servicing of equipment. Provide access panels for all concealed valves, vents, controls and cleanout doors, and sprinkler devices required by NFPA. Provide frame as required for finish. Furnish panels to General Contractor. Exact locations to be approved by the Architect. Minimum size to be 12" x 12", units to be 16 gauge steel, locking device shall be screwdriver cam locks.
Rooftop mechanical equipment shall be installed a minimum of 10'-0" from any roof edge regardless of location indicated on plans, unless a screen wall or railing is installed per the local building code. See the architectural plans for coordination.
Roof Curbs: Furnish roof curbs to roofing Installer for installation. Install and secure roof curb to roof structure, in accordance with National Roofing Contractor's Association (NRCA) installation recommendations and shop drawings. Install and secure units on curbs and coordinate roof penetrations and flashing. Install according to roofing manufacturer's recommendation and specifications.
Rooftop supports: Provide rooftop equipment rails for mechanical equipment located on the roof that spans two or more bar joists. Verify roof structure, mounting supports, and membrane installations are completed to the proper point to allow installation of roof mounted units.
Indoor Suspended Equipment: Install suspended from structure with all threaded rod and vibration isolators.
ELECTRICAL COORDINATION ITEMS
Electrical Wiring: Install electrical devices furnished by manufacturer but not specified to be factory-mounted.
Furnish copy of manufacturer's wiring diagram submittal to Electrical Installer.
Verify that electrical wiring installation is in accordance with manufacturer's submittal and installation requirements of Division 26 sections. Do not proceed with equipment start-up until wiring installation is acceptable to equipment installer.
Install electric heating terminal units including components in accordance with equipment manufacturer's written instructions, and with recognized industry practices; complying with applicable installation requirements of NEC and NECA's "Standard of Installation".
Tighten connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque tightening values for equipment connectors. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL Std 486A.
Grounding: Provide equipment grounding connections for electric heating terminals as indicated. Tighten connections to comply with tightening torque values specified in UL Std 486A to assure permanent and effective grounding.
FIELD QUALITY CONTROL
Testing: After installation has been completed, test to demonstrate proper operation of mechanical equipment at performance requirements specified. When possible, field correct malfunctioning units, then retest to demonstrate compliance. Replace units, which cannot be satisfactorily corrected. Test controls and demonstrate compliance with requirements.
Cleaning: After construction is completed, including painting, clean unit exposed surfaces, vacuum clean coils and inside of cabinets. Clean factory-finished surfaces. Repair any marred or scratched surfaces with manufacturer's touch-up paint.
START-UP
Provide the services of a factory-authorized service representative to start-up rooftop units, in accordance with manufacturer's written start-up instructions. Test controls and demonstrate compliance with requirements. Replace damaged or malfunctioning controls and equipment.
TRAINING OF OWNER'S PERSONNEL
Provide services of manufacturer's technical representative for 1-half day to instruct Owner's personnel in operation and maintenance of units. Schedule training with Owner, provide at least 7-day notice to Contractor and Engineer of training date.

SECTION 23 05 03.00 – SUBMITTALS FOR HVAC

General
Where submittals are required by the Contract Documents, they shall be prepared and supplied in accordance with the Contract Documents. In addition to Division 01, the Contractor is advised to review and comply with the requirements articulated within each Division and within each section of that Division.
Some Divisions may include a division-specific "Submittal Requirements for ...." section. Where this section exists, it articulates additional requirements for submittals that apply to the work of that Division.
The following requirements help to identify, track and keep the project organized for all parties involved. They are necessary to ensure a timely turnaround and an appropriate technical review. Submittals that do not conform to the administrative requirements are rejected and returned, without technical review.
Requirements
Supply submittals for each section: Submittals shall be supplied on a section-by-section and type-by-type basis. For example, independent product data submittals shall be furnished for each section that requires product data submittals. Independent shop drawing submittals shall be furnished for each section that requires shop drawings. Refer to the specifications for identification of which submittals are required for the project. Separate PDF file packages shall be supplied for each section, for each submittal type, where electronic submittals are required. Each PDF shall represent a single standalone submittal. Separately bound and identified submittals shall be provided where hardcopies are required.
Include a transmittal: Transmittals shall enumerate each submittal for each section of each type and iteration.
Include cover sheet / title page: The cover sheet shall include the information identified in the contract documents. It shall be included as the first page of each electronic and/or hardcopy document-based submittal. An editable and printable PDF form created with editable fields and specification compliant appearance is available from KLH upon request. It is also downloadable from the KLH website at www.klhengrs.com.
Include an index: The index shall enumerate the contents of the submittal.
Include checklists: Where checklists are included with the specifications, complete and include them within the appropriate submittal. Supply complete submittals: Complete submittals of each type are required. Partial submittals will be rejected. Where a section requires a product data submittal, all product data for that section shall be supplied together, at one time, as one complete submittal. Do not send half the product data as one submittal and the other half as a separate one. When resubmittal is required (e.g. Revise and Resubmit) the revised submittal shall be more complete, more accurate and more contract-compliant than its rejected predecessor. The submittal number (for each section and type) shall increment for each subsequent submittal (00 – Original submission, 01 – First Resubmission, 02 – Second Resubmission, etc...). Resubmittals shall include a copy of the reviewer's comments supplied with the prior submittal rejection and shall be amended with a description of the specific action taken to comply with the reviewer's comments. The absence of this on resubmittal is cause for rejection.
Name electronic files to match the submittal ID and cover sheet: The electronic file name of submittals shall match the submittal ID included on the submittals cover page.
For example: The original/first product data submittal for Section 234116 would be labeled as "234116.00-PD-00"; the first resubmittal of same shall be labeled "234116.00-PD-01". The original/first shop drawings submittal file for the same section would be labeled "234116.00-SD-00"; the first resubmittal of same shall be labeled "234116.00-SD-01".
Use of Electronic Drawings from the Owner's Design Team
Plan drawings for the Project were created with AutoCAD and Revit.
If expressly permitted by the Owner and the terms of the Contract, editable electronic versions of standard-scale, AutoCAD-based plan drawings may be made available for the creation of shop and as-built drawings.
Due to the proprietary nature of internal design systems, editable native-software versions of some drawings, including but not limited to system diagrams and details will not be made available in an editable form. In these cases, electronic versions of the drawings may be made available only in PDF, JPG or similar non-editable electronic form, at the sole discretion of the Design Professional.
The Request Drawings form can be accessed, filled out and submitted at the following internet address (scroll down to bottom of home page): http://www.klhengrs.com.

SECTION 23 05 29.00 – HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT

Submittal Requirements
Product Data: For each type of product indicated.
Shop Drawings: Fabrication and installation details.

General
Support all piping, ductwork and equipment by hangers or brackets properly from the building structure. Support from decking above is prohibited. Furnish structural steel members where required to support piping and equipment. No portion of piping or valves shall be supported by equipment.
Ductwork - Support by means of hangers as follows:

Duct Width	Hanger Size and Type	Max. Spacing
30 or less	(#16 gage)	8
31 to 60	(#14 gage)	8

A pair of hangers shall be located at every transverse joint and elsewhere according to the table.

SECTION 23 05 93.00 – TESTING, ADJUSTING AND BALANCING FOR HVAC

Submittal Requirements
Shop Drawings: Certified Reports: Submit testing, adjusting, and balancing reports bearing the seal and signature of the Test and Balance Engineer. The reports shall be certified proof that the systems have been tested, adjusted, and balanced in accordance with the referenced standards; are an accurate representation of how the systems have been installed; are a true representation of how the systems are operating at the completion of the testing, adjusting, and balancing procedures; and are an accurate record of all final quantities measured, to establish normal operating values of the systems. Final Report: Upon verification and approval prepare final reports, type written, and organized and formatted as specified below. Submit 2 complete sets of final report to the owner.

General
Test, adjust, and balance the following mechanical systems:
Supply air systems, all pressure ranges
Return air systems.
Exhaust air systems.
Hydronic systems.
Verify temperature control system operation.
Test systems for proper sound and vibration levels.
Quality Assurance
Codes and Standards:
AABC: "National Standards for Total System Balance".
ASHRAE: ASHRAE Handbook, 2011 Applications, Chapter 38, Testing, Adjusting, and Balancing.
Qualifications
The contractor shall procure the services of an independent Balance and Testing Agency, approved by the Engineer, and a member of Associated Air Balance Council (AABC) or NEBB, which specializes in the balancing and testing of heating, ventilating and air conditioning systems, to balance, adjust and test all air and water systems and equipment as herein specified. All work by this agency shall be done under direct supervision of a qualified heating and ventilating Engineer employed by this agency. All instruments used by this agency shall be accurately calibrated and maintained in good working order.
Sequencing and Scheduling
Test, adjust, and balance the air systems before hydronic, steam, and refrigerant systems.
Test, adjust and balance air conditioning systems during summer season and heating systems during winter season, including at least a period of operation at outside conditions within 5 deg F wet bulb temperature of maximum summer design condition, and within 10 deg F dry bulb temperature of minimum winter design condition.
Take final temperature readings during seasonal operation.
Check all filters for cleanliness, provide new as required.
Check dampers (volume and fire) for correct and locked position, and temperature control for completeness of installation before starting fans. Place outlet dampers in full open position. Lubricate all motors and bearings. Check fan belt tension. Check fan rotation.
Open valves to full open position. Remove and clean all strainers. Set temperature controls so all coils are calling for full flow.
Air balance and testing shall not begin until the system has been completed and is in full working order. The Contractor shall put all heating, ventilating and air conditioning systems and equipment into full operation and shall continue the operation of same during each working day of testing and balancing. The contractor shall submit within 30 days after receipt of contract, 8 copies of submittal data for the testing and balancing of the air conditioning, heating, and ventilating systems. The Air Balance and Testing Agency shall provide proof of having successfully completed at least five projects of similar size and scope.
The air balancing contractor shall include the additional cost to change every fan factory installed sheave, pulley and/or belt of in order to obtain the design air flows.
Renovations: In areas where existing HVAC equipment is being utilized, balancing contractor shall include the cost to pre-check each equipment air flows, serving the area of work, prior to demolition, and re-check and adjust each air handler after new construction. Air flows of existing air handlers serving existing spaces shall be similar after project is complete.
Performing Testing, Adjusting and Balancing
Perform testing and balancing procedures on each system identified, in accordance with the detailed procedures outlined in the referenced standards.
Cut insulation, ductwork, and piping for installation of test probes to the minimum extent necessary to allow adequate performance of procedures.
Patch insulation, ductwork, and housings, using materials identical to those removed.
Seal ducts and piping, and test for and repair leaks.
Seal insulation to re-establish integrity of the vapor barrier.
Mark equipment settings, including damper control positions; valve indicators, fan speed control levers, and similar controls and devices, to show final settings. Mark with paint or other suitable, permanent identification materials.
Retest, adjust, and balance systems subsequent to significant system modifications, and resubmit test results.

SECTION 23 07 13.00 – DUCT INSULATION

Submittal Requirements
Product Data: For each product indicated.
Shop Drawings: Include plans, elevations, sections, details and attachments to other work.

All liners, insulation and adhesives shall have a flame spread index not more than 25 and a smoke developed index of not more than 50. Insulation shall have a minimum installed thermal resistance value of R6 or code minimum, whichever higher.
Rigid Fiberglass Ductwork Insulation: Glass fibers bonded with a thermosetting resin. Comply with ASTM C 612, Type IB, without facing and with vapor barrier all-service jacket manufactured from kraft paper, reinforcing scrim, aluminum foil, and vinyl film.
Flexible Fiberglass Ductwork Insulation: Glass fibers bonded with a thermosetting resin. Comply with ASTM C 553, Type II, without facing and with vapor barrier all-service jacket manufactured from kraft paper, reinforcing scrim, aluminum foil, and vinyl film.
Vapor Barrier Material for Ductwork: Paper-backed aluminum-foil, except as otherwise indicated; strength and permeability rating equivalent to factory-applied vapor barriers on adjoining ductwork insulation, where available; with following additional construction characteristics:
High Puncture Resistance: Low vapor transmission (for ducts in exposed areas: Mech. Rooms, etc.)
Moderate Puncture Resistance: Medium vapor transmission (for ducts in concealed areas).
All ductwork shall be insulated except:
Double wall ductwork
Fabric ductwork
Metal ducts with duct liner of sufficient thickness to comply with energy code.
Factory insulated flexible ductwork
Factory insulated plenums and casings
Flexible connectors
Vibration control devices
Factory insulated access panels and doors
Supply ductwork exposed in conditioned spaces excluding mechanical rooms, server rooms and electric equipment rooms
Toilet exhaust, general exhaust and return ductwork in an insulated joist or attic space.

SECTION 23 09 93.00 – SEQUENCE OF OPERATIONS FOR HVAC CONTROLS

Submittal Requirements
Product Data: Provide written sequences of operation for each controlled system and piece of equipment.

VAV Boxes
Provide low voltage DDC controller, transformer, differential pressure transmitter, actuator and wiring for VAV box with two-way control valve for hot water reheat operation. Temperature Controls Contractor shall field or factory mount controller at their expense. TCC shall provide all 120 power wiring as required for transformers and temperature control panels. TCC shall connect to existing spare at electrical panel board and provide proper circuit breaker per NEC and label panel board accordingly.
TCC shall route all low voltage wiring to VAV boxes, controllers and thermostats for complete operation. VAV box manufacturer shall furnish flow ring, ½" round damper shaft for direct mounting of actuator, and control enclosure.
Provide wall mounted temperature sensor(s) with digital display of room temperature, setpoint, discharge CFM and discharge air temperature with connections to BAS panel. Sensor(s) shall have setpoint adjustment capability (+/- 3 deg. F. adjustable from setpoint determined by BAS), override feature (2 hours, adjustable thru BAS), and communications jack for connection of palmtop computer.

Single Duct VAV
Provide two-way, failsafe open, modulating control valve for hot water reheat coils.
On a call for heat, VAV damper shall modulate down to minimum setpoint position. On a further call for heating, hot water control valve shall open and modulate to maintain space temperature. On a call for cooling, control valve shall shut and damper shall modulate open to satisfy room temperature. Provide supply air temperature sensor tied to BAS.
During un-occupied mode VAV boxes shall be capable of stroking fully closed for temperature control.

Controls
Electrical contractor will provide power wiring. HVAC contractor shall provide all the low voltage wiring of HVAC units and controls, thermostats and controllers.
Thermostat shall be by the manufacturer of the HVAC unit (heat/cool/auto/off) with night setback. Provide plastic protective cover for all thermostats. Replace controls on existing unit, adjust and calibrate controls.

Low Voltage Thermostats
Low voltage thermostats shall be furnished, installed and wired by the HVAC contractor. The electrical contractor shall provide 4" square x 1- 1/2" deep wall outlet boxes (with single-gang rings) for all thermostats/sensors. The electrical contractor shall provide one 3/4" empty conduit from each thermostat/sensor location, turned out above accessible ceilings (in joist space or against overhead slab/deck). The HVAC/Temperature Control Contractor shall provide all other necessary conduit, raceway and wiring related work. Conduit shall be identified in ceiling cavity and shall be provided with sweep bends, bushings and dragline.
The HVAC/Temperature Control Contractor shall coordinate with the General Contractor to ensure thermal envelope is maintained at these locations.

General Control Wiring Requirements and Installation Methods
Except where specifically indicated otherwise above, the HVAC/Temperature Control Contractor shall provide all electrical work as required for all temperature control related wiring (i.e. conduit, raceway, outlet boxes, junction boxes, wiring, etc.) in accordance with Electrical Specifications requirements. All conduit shall be 3/4" minimum.
Coordinate all thermostat/sensor locations in field (case by case) with Architect, Owner and Electrical Contractor to ensure that they are placed in locations that will not interfere with furniture, equipment, artwork, wall-hung specialties, room finishes, etc. All thermostat/sensor wall locations indicated on HVAC drawings are schematic only and must be verified case-by-case prior to rough-in.
All electrical work as described in this specification shall be per the latest edition of the National Electrical Code (NEC) and per applicable state and local codes.
Where "free-air" installation methods (either exposed above the ceilings, in bridle rings or in cable trays) are permitted under Electrical Specifications above ceilings, provide plenum-rated cables wherever plenum ceilings (if any) exist and install as defined under Electrical Specifications. Install low voltage circuits, located in concrete slabs and masonry walls, in inaccessible locations, or exposed in occupied areas, in electrical conduit regardless of what wiring methods are permitted under Electrical Specifications.
Where cable trays or bridle rings are provided by the electrical contractor for low voltage cables, these raceways may be utilized for control wiring by this contractor (provide special color coded jackets, label cable jackets per Electrical Specifications and group control wiring cables together). Provide conduit drops from cable tray/bridle ring paths to wall outlet boxes and equipment unless directed otherwise under Electrical Specifications.
Regardless of permitted methods in Electrical Specifications, all cables/wiring installed concealed by gypsum board, masonry or other inaccessible materials in walls or above ceilings shall be installed in conduit, 3/4" minimum.
All conduit, bridle rings, raceway, outlet boxes, etc. necessary for complete operational installation of control wiring shall be provided (furnished and installed) by the temperature control contractor in strict compliance with Electrical Specifications documents. Coordinate all work with all other applicable trades including the electrical contractor.
Provide all required conduit work to and between equipment in a manner compliant with that described above (i.e. between VAV boxes, to boilers, starters, condensing units, etc. as applicable).
Install control wiring without splices between terminal points, color-coded. Install in neat workmanlike manner, securely fastened. Install in accordance with National Electrical Code and per Electrical Specifications.
Install circuits over 25 volt with color-coded No. 12 wire in electrical metallic tubing, per Electrical Specifications.
Install circuits under 25 volt with color-coded No. 18 wire with 0.031" high temperature (105 degs. F) plastic insulation on each conductor and plastic sheath over all.
Install electronic circuits with color-coded No. 22 wire with 0.023" polyethylene insulation on each conductor with plastic-jacketed copper shield over all.

Smoke Detector
All duct smoke detectors will be furnished by electrical contractor, installed by the HVAC contractor, and wired by the electrical contractor per local codes. HVAC contractor will interlock fan with smoke detector.

SECTION 23 31 13.00 – METAL DUCTS

Submittal Requirements
Product Data: For liners, adhesives, sealants and gaskets.
Shop Drawings: Sheet metal thickness, reinforcing details, duct layouts indicating sizes, configuration, liner material, elevation and static pressure class.

Ductwork Materials
Exposed Ductwork Materials: Where ductwork is indicated to be exposed to view in occupied spaces, provide materials which are free from visual imperfections including pitting, seam marks, roller marks, stains and discolorations, and other imperfections, including those which would impair painting. Mechanical contractor shall confirm ductwork paint scope and color with architect.
Exposed ductwork which is to be painted shall have paint grip applied and be oil free.
Sheet Metal: Except as otherwise indicated, fabricate ductwork from galvanized sheet steel, lock forming quality; with G 90 zinc coating and mill phosphatized for exposed locations. Minimum gauge shall be 24.
Miscellaneous Ductwork Materials
Volume Dampers: Provide volume dampers in all branch ducts or as required for balancing to required air flows.
Fittings: Provide radius type fittings fabricated of multiple sections with maximum 15 deg. change of direction per section. Unless specifically detailed otherwise, use 45 deg. laterals and 45 deg. elbows for branch takeoff connections. Where 90 deg. branches are indicated, provide conical type tees.
Duct Sealant: Non-hardening, non-migrating mastic or liquid elastic sealant, type applicable for fabrication/installation detail, as compounded and recommended by manufacturer specifically for sealing joints and seams in ductwork.
Duct Cement: Non-hardening migrating mastic or liquid neoprene based cement, type applicable for fabrication/installation detail, as compounded and recommended by manufacturer specifically for cementing fitting components, or longitudinal seams in ductwork.
Ductwork Support Materials: Except as otherwise indicated, provide hot-dipped galvanized steel fasteners, anchors, rods, straps, trim and angles for support of ductwork.
Flexible Ducts
Either spiral-wound spring steel with flameproof vinyl sheathing, or corrugated aluminum. Unless specifically mentioned, the maximum length of flex duct on the supply equals 5 feet. Flex is not allowed for return, relief or exhaust applications. The flexible ducts indicated for use in the H.V.A.C. system shall conform to the requirements of UL 181 for Class 0 or Class 1 flexible air ducts and shall be so identified.
Where installed in unconditioned spaces other than return air plenums, provide 1" thick 1-1/2 lb. continuous flexible fiberglass sheath with vinyl vapor barrier jacket.
Installation is not permitted above drywall ceilings and inaccessible ceilings.
Fabrication
Shop fabricate ductwork in 4, 8, 10 or 12-ft lengths, unless otherwise indicated or required to complete runs. All ductwork shall be Pittsburgh Construction with a minimum of thickness of 24 gauge. In addition, ductwork used in systems over 3" W.G. shall have cold sealant applied.
Shop fabricate ductwork of gauges and reinforcement complying with SMACNA "HVAC Duct Construction Standards".
Lined Duct
Fabricate ductwork with duct liner in each section of duct where indicated. Laminate liner to internal surfaces of duct in accordance with instructions by manufacturers of lining and adhesive, and fasten with mechanical fasteners.
Duct liner to be 3-lb density for acoustic requirements 1" thick or as noted. Size of ductwork shown on the drawings is free net area, outside dimension of ducts will need to be increased if lined duct is used.
Size of ductwork shown on the drawings is free net area, outside dimension of ducts will need to be increased if lined duct is used.
Duct Liner: Fibrous glass of thickness indicated. 3-lb density. All liners, insulation and adhesives shall have a flame spread index not more than 25 and a smoke developed index of not more than 50.
Duct Liner Adhesive: As recommended by insulation manufacturer and complying with NFPA 90A or NFPA 90B.
Duct Liner Fasteners: Comply with SMACNA HVAC Duct Construction Standards.
Installation of Metal Ductwork
General: Assemble and install ductwork in accordance with recognized industry practices which will achieve air-tight (5% leakage for systems rated 3" and under; 1% for systems rated over 3") and noiseless (no objectionable noise) systems, capable of performing each indicated service. Install each run with minimum number of joints.
Align ductwork accurately at connections, within 1/8" misalignment tolerance and with internal surfaces smooth.
Support ducts rigidly with suitable ties, braces, hangers and anchors of type which will hold ducts true-to-shape and to prevent buckling. Support vertical ducts at every floor.
Sealing: Seal all longitudinal seams, S's and drives and all joints with mastic or cement. Install according to SMACNA standards.
Balancing Dampers: The sheet metal contractor shall be fully responsible for installing balancing dampers in the ductwork, (whether shown on the drawing or not) in order to arrive at the intended air flow. The balancing sub-contractor shall provide direction and assistance in determining locations where dampers are required. Additional dampers, if required shall be installed at no additional cost to the owner.
Wall Penetrations: Seal and pack around all ducts and piping sleeves which pass through walls that extend to bottom side of structure and rated walls.
Field Fabrication: Complete fabrication of work at project as necessary to match shop-fabricated work and accommodate installation requirements.
Routing: Locate ductwork runs, except as otherwise indicated, vertically and horizontally and avoid diagonal runs wherever possible. Run ductwork in shortest route which does not obstruct useable space or block access for servicing building and its equipment. Hold ducts close to walls, overhead construction, columns, and other structural and permanent enclosure elements of building. Limit clearance to 1/2" where furring is shown for enclosure or concealment of ducts, but allow for insulation thickness, if any. Where possible, locate insulated ductwork for 1" clearance outside of insulation. Wherever possible in finished and occupied spaces, conceal ductwork from view, by locating in mechanical shafts, hollow wall construction or above suspended ceilings. Do not encase horizontal runs in solid partitions, except as specifically shown.
Coordinate layout with suspended ceiling and lighting layouts and similar finished work.
Electrical Equipment Spaces: Do not route ductwork through transformer vaults and their electrical equipment spaces and enclosures.
Penetrations: Where ducts pass through interior partitions and exterior walls, and are exposed to view, conceal space between construction opening and duct or duct insulation with sheet metal flanges of same gage as duct. Overlap opening on 4 sides by at least 1-1/2". Fasten to duct and substrate.
All dampers shall be low leakage with edge and blade seals. Damper manufacturers are subject to specification compliance. Provide products by one of the following:
Greenheck Fan Corporation
Nailor Industries
Pottorff
Ruskin Company
Young Regulator Company
Coordination: Coordinate duct installations with installation of accessories, dampers, coil frames, equipment, controls and other associated work of ductwork system.
Installation of Duct Liner
General: Install duct liner in accordance with SMACNA HVAC Duct Construction Standards. Size of ductwork shown on the drawings is free net area, outside dimension of ducts will need to be increased if lined duct is used.
Store internally lined ductwork up off of the floor. Protect internally lined ductwork from water and dust.
The following ductwork shall be lined in addition to that shown per plans:
Return from open ceiling plenum return to HVAC unit.
Supply and return ductwork 10 feet downstream of HVAC unit.
Transfer air ducts.
Supply air duct 10 feet downstream of VAV box.
Butter the leading edge of all internal duct lining with the manufacturer's recommended adhesive.
Inspect and repair all damaged lining prior to installation of ductwork.
Installation of Flexible Ducts
Maximum Length: For any duct run using flexible ductwork, do not exceed 5' - 0" extended length.
Installation shall have smooth full radius turns down to diffuser.
Installation not permitted above inaccessible ceilings.

23 37 13.00 – DIFFUSERS, REGISTERS AND LOUVERS

Submittal Requirements
Product Data: For each type of product indicated.

DIFFUSERS, GRILLES AND REGISTERS
Manufacturer: Subject to compliance with requirements, provide diffusers of one of the following:
Anemostat Products Div., Dynamics Corp. of America.
Metal-Aire
Titus Products Div., Philips Industries, Inc.
Tuttle and Bailey.
Price
Louvers and dampers
Provide louvers and dampers of size as noted.
Manufacturer: Subject to compliance with requirements, provide diffusers of one of the following:
Aerolite
Prefco
Pottorff
Greenheck
Ruskin

23 62 13.00 – AIR COOLED CONDENSING UNITS

Submittal Requirements
Product Data: For each type of product indicated.

Warranty on Motor/Compressor: Provide written warranty, signed by manufacturer, agreeing to replace/repair, within warranty period, motors/compressors with inadequate or defective materials and workmanship, including leakage, breakage, improper assembly, or failure to perform as required; provided manufacturer's instructions for handling, installing, protecting, and maintaining units have been adhered to during warranty period. Replacement is limited to component replacement only, and does not include labor for removal and reinstallation.
Warranty Period: 5 years from date of owner acceptance.

Installation
Roof Support: Install roof-mounted units on pre-engineered equipment supports equal to Pate Company. Anchor unit to supports with removable fasteners. Provide pre-engineered "doghouse" for installing wiring and refrigerant piping through roof. Provide cant strip and flash per roofing manufacturer's requirements for all roof supports. See division 7 for additional information.
Roof Support: The condensing unit(s) shall be installed a minimum of 10'-0" from any roof edge regardless of location indicated on plans, unless a screen wall or railing is installed per the local building code. See the architectural plans for coordination.
Field Quality Control
Testing: Charge systems with refrigerant and oil, and test for leaks. Repair leaks and replace lost refrigerant and oil.

23 74 33.00 – PACKAGED OUTDOOR ROOFTOP UNITS

Submittal Requirements
Product Data: For each type of product indicated.

Warranty
Warranty on Compressor and Heat Exchanger: Provide written warranty, signed by manufacturer, agreeing to replace/repair, within warranty period, compressors and heat exchangers with inadequate and defective materials and workmanship, including leakage, breakage, improper assembly, or failure to perform as required; provided manufacturer's instructions for handling, installing, protecting, and maintaining units have been adhered to during warranty period. Replacement is limited to component replacement only, and does not include labor for removal and reinstallation.
Warranty Period: 5 years from date of owner acceptance.

STAGED VOLUME
General: Rooftop unit shall be factory-assembled and tested, designed for roof or slab installation and, consisting of compressors, condensers, evaporator coils, condenser and evaporator fans, refrigeration and temperature controls, filters, and dampers. Capacities and electrical characteristics are scheduled. Casing manufacturer's standard casing construction, having corrosion protection coating, and exterior finish. Casings

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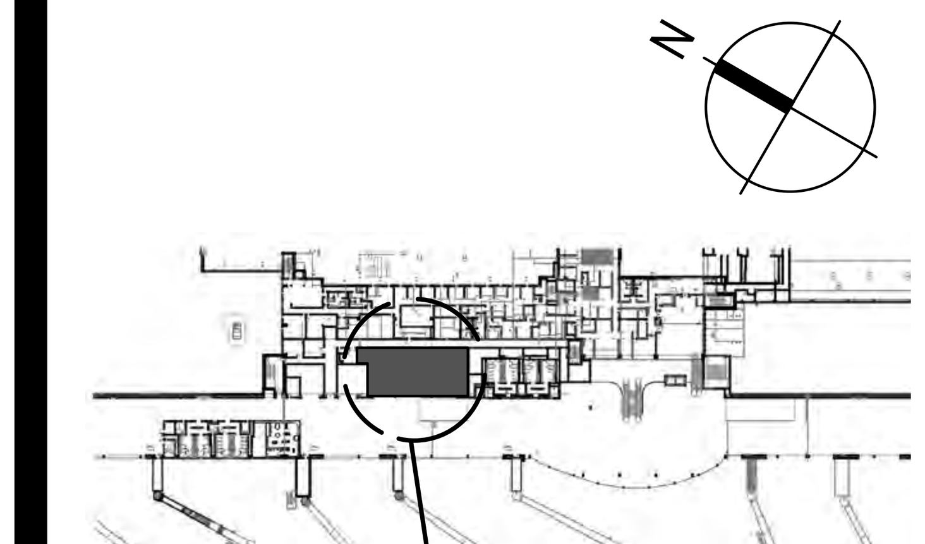
Notes



JIMMY JOHN'S & TROPICAL SMOOTHIE
LEVEL 2, UNIT NC1

Revision	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
ISSUED FOR 60% SUBMISSION	KLH	KLH	2024.09.27
Issued	By	Appd	YYYY.MM.DD

File Name: N/A
Dwn. Dsgn. Chkd. YYYY.MM.DD

Permit/Seal
FIRM LICENSE #C-4774
NORTH CAROLINA PROFESSIONAL SEAL 043999 ENGINEER
12/27/2024

Client/Project Logo
Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JIMMY JOHN'S

Client/Project
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE
LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title
MECHANICAL SPECIFICATIONS

Project No. Scale

Revision Drawing No.
M-701

ORIGINAL SHEET - ARCH D

shall have removable panels or access doors for inspection and access to internal parts, a minimum of 1" thick thermal insulation, knockouts for electrical and piping connections, and an exterior condensate drain connection, and lifting lugs.

Unit casing shall be single wall construction.

Roof Curbs: Manufacturer's standard construction, insulated and having corrosive protective coating, complete with factory-installed wood nailer and drain nipple. Construction shall be in accordance with NRCA Standards.

Evaporator Fans: Forward-curved, centrifugal, belt-driven fans with adjustable sheaves; and permanently lubricated motor bearings.

Condenser fans: Propeller-type, direct-driven fans with permanently lubricated bearings.

Coils: Aluminum plate fin and seamless copper tube type. Fins shall have collars drawn, belled and firmly bonded to the tubes by means of mechanical expansion of the tubes. No soldering or tinning shall be used in the bonding process. Coils shall have a galvanized steel casing. Coils shall be mounted in the coil casing with same end connections accessible for service. Coils shall be removable from the unit through the roof or through the piping enclosure. Coil section shall be completely insulated.

Refrigerant cooling coils: have an equalizing type vertical distributor to ensure each coil circuit receives the same amount of refrigerant. Coils shall be proof (450 psig) and leak (300 psig) tested with air pressure under water, then cleaned, dehydrated, and sealed with a holding charge of nitrogen.

Condensate Pan: Provide IAQ steel, double sloping drain pain. Provide high condensate in primary condensate pan to de-energize unit upon detection of high condensate levels.

Compressors: Serviceable, semi-hermetic, or hermetic compressors with integral vibration isolators, and crankcase heaters, which de-energize during compressor operation. Units shall also have:

Lead compressor shall be 2-stage.

Safety Controls:
low pressure cutout, manual reset;
high pressure cutout, manual reset;
compressor motor overload protection, manual reset;
anti-recycling timing device;
adjustable low-ambient lockout;
oil pressure switch.

Controls:
high limit cutout;

Enthalpy Economizer Control:
Provide dual enthalpy economizer control. Provide return and outside air dampers, outside air filter, fully modulating electric control system with dry control, and adjustable mixed-air thermostat. System shall be capable of driving 100% closed for unoccupied mode, minimum outside air position and modulation to 100 percent open outside air capability. Provide automatic changeover through adjustable control device.

Economizer Fault Detection and Diagnostics – Provide fault detection and diagnostics to monitor outside airflow temperature, return airflow temperature, supply airflow temperature, refrigerant gas and liquid pressures. Unit controller shall provide status of available free cooling, enabled economizer, enabled compressor(s), enabled heating, mixed air low limit cycle and current value of all sensors. Provide manual override of each operating mode (occupied and unoccupied heating and cooling, economizer and shutdown) for testing and verification. System shall be able to detect air temperature sensor failure, not economizing when unit should be or shouldn't be, dampers not modulating and excessive outside air. Temperature sensors shall have an accuracy of +/-2 deg. F across the range of 40. deg F to 80 deg. F. Refrigerant pressure sensors shall have an accuracy of +/- 3%. Faults shall be annunciated at unit's thermostat.

Heating Types:
Electric heat sections: manufacturer's standard construction electric heat coils, factory-wire for single point wiring connection. Complete with over-current and over-heat protection devices.

Temperature Control:
Temperature control: factory-installed, demand-oriented solid-state control system above 5 tons shall have minimum of 2 cooling steps and 2 heating steps. Controls shall include solid-state thermostats with dead-band, and sub-base with system and fan switches. Other control features include:

Relief:
Power Exhaust Fan – Shall be factory installed for units larger than 5 tons. Shall include relief damper section with mist eliminator. Dampers open to relieve positive pressure within the building. Available only with economizer.

Filters:
Provide air filters to fit in filter box, with a Maximum filter face velocity of 500 fpm, of the following type:
Disposable Type: Provide 30% efficient disposable type air filters 2" thick, consisting of viscous coated fibers with filtering media encased in fiberboard cell sides having perforated metal grids on each side to provide media support.

Options:
Low Ambient Control - Shall allow compressor operation for cooling down to 0 F outside air temperature.
Hail guards protecting the condenser fins.

Controls:
Self Contained: Programmable Electronic Night Setback Thermostat - Shall provide heating setback and cooling setup with 7-day, programming capability. Optional remote sensor available.

Manufacturers: Subject to compliance with requirements, provide rooftop units of one of the following:
Aaon
Addison
Carrier Air Conditioning, Div of Carrier Corp.
Lennox Industries Inc.
Trane; a division of Ingersoll Rand.
Daikin
Valent
Greenheck
Captiveaire

Rooftop Units Sequence of Operations

1. Control Package
   - A. The system shall be controlled by a programable thermostat
   - B. The Thermostat shall be BACnet and WIFI Compatible (BACnet for future use)
   - C. The Thermostat shall be capable of using a remote sensor to monitor the supply air temp
   - D. The Thermostat shall be capable of using a remote space temperature sensor
   - E. The Thermostat shall be capable of using an App or Web site to set time schedules and change setpoints
   - F. Occupied Mode
     - 1) The Thermostat shall enable the supply fan to operate continuous
     - 2) The Thermostat shall enable the heating to maintain the heating setpoints
     - 3) The Thermostat shall enable the cooling to maintain the cooling setpoints
   - G. Unoccupied Mode
     - 1) The Thermostat shall enable the supply fan based on the unoccupied heating and cooling setpoints
     - 2) The Thermostat shall enable the heating to maintain the unoccupied heating setpoints
     - 3) The Thermostat shall enable the cooling to maintain the unoccupied cooling setpoints
2. Startup
   - A. The Unit Controller will use an optimal start algorithm for morning start-up. This algorithm will minimize the unoccupied warm-up or cool-down period while still achieving comfort conditions by the start of scheduled occupied period.
   - B. Morning Warm Up
     - 1) Outside Air Damper shall be closed
     - 2) Return Air Damper shall be open
     - 3) Supply Fan shall be on
     - 4) The Heat shall be on until the space temperature or return air temperature or the averaged space temperature satisfies the Occupied Heating Setpoint
     - 5) When Morning Warm up is complete the unit shall return to normal operation
   - C. Morning Cool Down
     - 1) Outside Air Damper shall be closed
     - 2) Return Air Damper shall be open
     - 3) Supply Fan shall be on
     - 4) The Cooling shall be on until the space temperature or return air temperature or the averaged space temperature satisfies the Occupied Cooling Setpoint
     - 5) When Morning Cool Down is complete the unit shall return to normal operation
3. Supply Fan Control
   - A. The Unit Controller shall enable the Supply Fan based on a Time Schedule or Unoccupied Setpoints
   - B. The unit will use an optimal start algorithm for morning start-up. This algorithm will minimize the unoccupied warm-up or cool-down period while still achieving comfort conditions by the start of scheduled occupied period.
   - C. The Unit Controller shall monitor the space temp from a wall mounted temperature sensor
   - D. Occupied Mode
     - 1) The unit controller shall change the supply fan speed between low and high speed
     - 2) When the space temp is below the heating setpoint the supply fan shall be at low speed for stage 1 heating
     - 3) When the space temp is below the heating setpoint the supply fan shall be at high speed for stage 2 heating
     - 4) When the space temp is above the cooling setpoint, the supply fan shall be at low speed for stage 1 cooling
     - 5) When the space temp is above the cooling setpoint, the supply fan shall be at high speed for stage 2 cooling
   - E. Unoccupied Mode
     - 1) The Supply Fan will cycle on / off based on the unoccupied setpoints
     - 2) When the space temperature is below the heating setpoint the supply fan shall be at low speed for stage 1 heating
     - 3) When the space temperature is below the heating setpoint the supply fan shall be at high speed for stage 2 heating
     - 4) When the space temperature is above the cooling setpoint, the supply fan shall be at low speed for stage 1 cooling
     - 5) When the space temperature is above the cooling setpoint, the supply fan shall be at high speed for stage 2 cooling
   - F. Alarms
     - 1) Fail Safe Mode: Supply Fan shall be disabled when a Fail Safe command is received
4. Supply Fan Safety
   - A. A high supply air static pressure switch shall be installed down stream of the supply fan
   - B. The switch shall be installed within 10 ft of the supply fan and before any dampers
   - C. The switch shall be interlocked with the supply fan and disable the supply fan when the supply duct static pressure is above 4.0" wc (adj)
   - D. The switch shall have a manual reset
   - E. The supply duct static pressure setpoint shall be determined by the TAB contractor
5. Minimum Outside Air Control
   - A. The Economizer shall maintain a minimum position during occupied mode
   - B. The Economizer Minimum Position shall be determined by the TAB Contractor
   - C. The Economizer shall be closed during unoccupied mode
   - D. Fail Safe Mode : The economizer damper shall close
6. Economizer Control
   - A. The Economizer Mode shall be enabled whenever
     - 1) The outside air temperature is below 65 deg (adj)
     - 2) The outside enthalpy is less than 22 btu / lb. (adj)
     - 3) The supply fan is on
     - 4) Cooling Mode is enabled when the economizer damper is open 100% and the mixed air temperature setpoint is not satisfied
     - 5) Heating Mode is disabled
   - B. The economizer damper shall modulate to maintain a mixed air temperature of 2 deg. (adj) below the supply air temperature setpoint
   - C. Fail Safe Mode : The economizer damper shall close
7. Relief Control
   - A. The controller will measure building static pressure and modulate the powered exhaust fan to maintain a building static pressure setpoint 0.05" wc. (adj)
   - B. The building static pressure sensor shall be located in the space and reference the outdoor pressure
8. Cooling Control
   - A. The Unit Controller shall enable DX Cooling based on a Time Schedule or Unoccupied Setpoints and supply fan status
   - B. The Unit Controller shall monitor the space temperature from a wall mounted temperature sensor
   - C. DX Cooling shall be disabled below 55 deg. (adj) Outside Air Temperature
   - D. Occupied Mode
     - 1) The Unit Controller shall monitor the supply fan status and once the supply fan is proven on, shall enable the DX cooling to maintain the occupied cooling setpoint
     - 2) The DX Cooling shall stage on and off based on a PID Loop algorithm
   - E. Unoccupied Mode
     - 2) The DX Cooling shall stage on and off based on a PID Loop algorithm
   - F. Alarms
     - 1) Fail Safe Mode: Cooling shall be disabled when a Fail Safe command is received
9. Heating Control
   - A. The Unit Controller shall enable Electric Heat based on a Time Schedule or Unoccupied Setpoints and supply fan status
   - B. The Unit Controller shall monitor the space temperature from a wall mounted temperature sensor
   - C. Electric Heating shall be disabled above 75 deg (adj) Outside air temperature
   - D. Occupied Mode
     - 1) The Unit Controller shall monitor the supply fan status and once the supply fan is proven on, shall enable the Electric heating to maintain the occupied heating setpoint
   - E. Unoccupied Mode
   - F. Alarms
     - 1) Fail Safe Mode: Electric Heating shall be disabled when a Fail Safe command is received
10. Auxiliary Heating
   - A. The Unit Controller shall enable Electric Heat based on a Time Schedule or Unoccupied Setpoints and supply fan status
   - B. The Unit Controller shall monitor the space temperature from a wall mounted temperature sensor
   - C. Electric Heating shall be disabled above 75 deg (adj) Outside air temperature
   - D. Occupied Mode
     - 1) The Unit Controller shall monitor the supply fan status and once the supply fan is proven on, shall enable the Electric heating to maintain the occupied heating setpoint
   - E. Unoccupied Mode
   - F. Alarms
     - 1) Fail Safe Mode: Electric Heating shall be disabled when a Fail Safe command is received
11. Dehumidification
   - A. Dehumidification shall be enabled when the space / return air relative humidity is above the space / return air relative humidity setpoint
   - B. Dehumidification shall be enabled when the system is occupied
   - C. Dehumidification shall be enabled when the supply fan status is on
   - D. When dehumidification is enabled, cooling shall be enabled and hot gas reheat shall be enabled
   - E. Cooling output shall be 100%
   - F. Hot Gas Reheat shall modulate to maintain the supply air temp setpoint 70 deg. (adj)
   - G. Fail Safe Mode : The Cooling and Hot Gas Reheat shall be Disabled
   - H. High Humidity Alarm - Space / Return Air Humidity is 5% higher than the Humidity setpoint for 15 min. (adj)
12. Smoke Detector
   - A. A Duct Smoke Detector shall be installed per local codes to shutdown the equipment
   - B. The Unit Controller shall monitor the Duct Smoke Detector and shall enable Fail Safe Mode
13. Fire Alarm Shut Down
   - A. The Unit Controller shall monitor the Fire Alarm System and shall enable Fail Safe Mode
   - B. The Unit Controller shall reset Fail safe Mode when the Fire Alarm input is cleared
14. Filter Pressure Drop
   - A. Provide static pressure differential switch across each filter which will alarm the system on high static pressure limits.
15. Restart
   - A. At shutdown the rooftop unit shall go to fail safe position. Fail safe position is defined by the following.
     - 1) The supply fan is off, the outside air damper is closed, the compressor(s) are off.
     - 2) The supply fan shall cycle in conjunction with either the heating or cooling system to maintain a minimum/maximum space temperature depending on the season.
     - 2) The supply fan shall cycle in conjunction with either the heating or cooling system to maintain a minimum/maximum space temperature depending on the season.
16. Shut Down
   - A. At shutdown the rooftop unit shall go to fail safe position. Fail safe position is defined by the following.
     - 1) The supply fan is off, the outside air damper is closed, the compressor(s) are off.
     - 2) The supply fan shall cycle in conjunction with either the heating or cooling system to maintain a minimum/maximum space temperature depending on the season.
17. Compressor Lockout
   - A. Provide 24 volt control wiring from factory installed compressor lockout relay to Emergency Generator Transfer switch dry contacts. When generator is energized, cooling shall be locked out of operation. Provide all necessary controls, wiring and interlocks.

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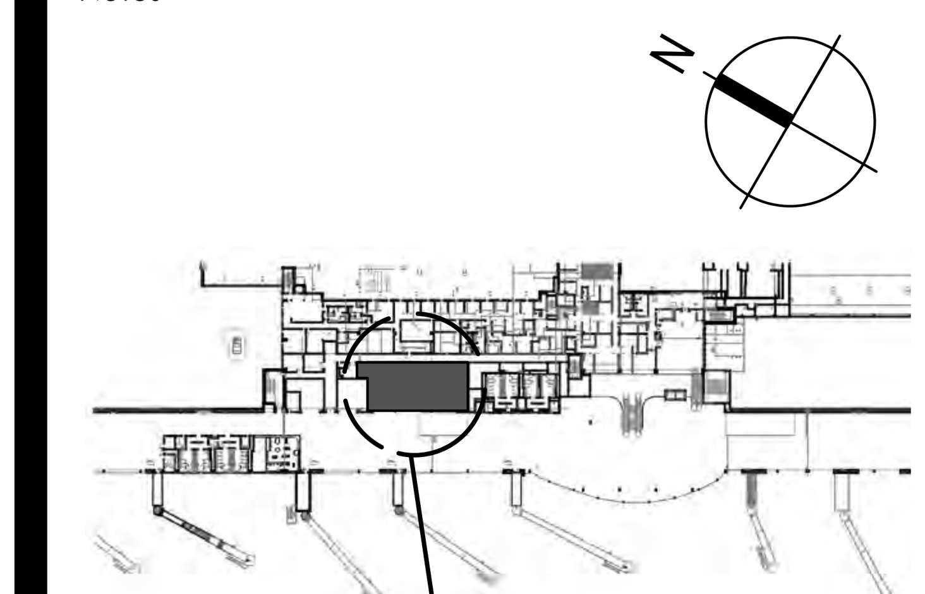
Notes



Revision	By	Appd	YYYY.MM.DD

Issued	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
ISSUED FOR 60% SUBMISSION	KLH	KLH	2024.09.27

File Name: N/A

Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Seal

FIRM LICENSE #C-4774

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043999

12/27/2024

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE

JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

MECHANICAL SPECIFICATIONS

Project No.

Scale

Revision

Drawing No.

M-702

COM*check* Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code: 2015 IECC
Project Title: Jimmy Johns Tropical Smoothie - Ashville Regional Airport
Location: Fletcher, North Carolina
Climate Zone: 4a
Project Type: Alteration

Construction Site: Owner/Agent: Designer/Contractor:

Mechanical Systems List

Quantity System Type & Description

1 7.5 Ton RTU (Single Zone):
Heating: 1 each - Central Furnace, Electric, Capacity = 51 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 90 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 11.40 EER, Required Efficiency = 11.20 EER
Proposed Part Load Efficiency = 12.80 IEER, Required Part Load Efficiency = 12.80 IEER
Fan System: FAN SYSTEM 1 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 1 Supply, Single-Zone VAV, 2800 CFM, 3.0 motor nameplate hp, 1.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency , fan exception: Single fan <= 5HP

1 4 Ton RTU (Single Zone):
Heating: 1 each - Central Furnace, Electric, Capacity = 20 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 48 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 14.00 SEER, Required Efficiency = 14.00 SEER
Proposed Part Load Efficiency = 12.80 , Required Part Load Efficiency = 0.00
Fan System: FAN SYSTEM 2 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 2 Supply, Single-Zone VAV, 1600 CFM, 2.0 motor nameplate hp, 0.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency , fan exception: Single fan <= 5HP

1 Water Heater:
Electric Storage Water Heater, Capacity: 50 gallons w/ Circulation Pump
No minimum efficiency requirement applies

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2015 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

COM*check* Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2015 IECC

Requirements: 100.0% were addressed directly in the COM*check* 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	Requirement will be met.
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	Requirement will be met.

Additional Comments/Assumptions:

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C403.2.4.5, C403.2.4.6 (FO9)[1]	Snow/ice melting system sensors for future connection to controls. Freeze protection systems have automatic controls installed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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	Requirement will be met.
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	Requirement will be met.
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	Requirement will be met.
C404.7 (PL8)[1]	Water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system 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	Requirement will be met.

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	Requirement will be met.
C403.2.13 (ME71)[2]	Unenclosed spaces that are heated use only radiant heat.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.7 (ME113)[2]	Fault detection and diagnostics installed with air-cooled unitary DX units having economizers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.6.1 (ME59)[1]	Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.6.2 (ME115)[1]	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7 (ME57)[1]	Exhaust air energy recovery on systems meeting Table C403.2.7(1) and C403.2.7(2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.8 (ME116)[1]	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.9 (ME60)[2]	HVAC ducts and plenums insulated. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.9 (ME10)[2]	Ducts and plenums sealed based on static pressure and location.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.9.1.3 (ME11)[1]	Ductwork operating >3 in. water column requires air leakage testing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3 (ME62)[2]	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.4.6 (ME110)[1]	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. *See the Mechanical Systems list for values.*

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
C408.2.2.1 (ME53)[2]	Air outlets and zone terminal devices have means for air balancing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5, C403.5.1, C403.5.2 (ME123)[1]	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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

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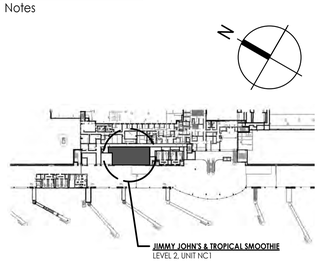

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NORTH CAROLINA PROFESSIONAL SEAL 043999 ENGINEER JARROD SCOTT HEIL
12/27/2024

Client/Project Logo
Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE JJ JIMMY JOHN'S

Client/Project
JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE
LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title
MECHANICAL ENERGY COMPLIANCE

Project No. Scale

Revision Drawing No.
M-801

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.3 [FI8][3]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.2 [FI27][3]	HVAC systems and equipment capacity does not exceed calculated loads.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1.2 [FI38][3]	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1.3 [FI20][3]	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2 [FI39][3]	Each zone equipped with setback controls using automatic time clock or programmable control system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2.1, C403.2.4.2.2 [FI40][3]	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2.3 [FI41][3]	Systems include optimum start controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.3 [FI11][3]	Heat traps installed on supply and discharge piping of non-circulating systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.4 [FI25][2]	All piping insulated in accordance with section details and Table C403.2.10.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.6.1 [FI12][3]	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank. System return pipe is a dedicated return pipe or a cold water supply pipe.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.1 [FI28][1]	Commissioning plan developed by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.3.1 [FI31][1]	HVAC equipment has been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.2 [FI10][1]	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.3 [FI32][1]	Economizers have been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.4 [FI29][1]	Preliminary commissioning report completed and certified by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.1 [FI7][3]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.3 [FI43][1]	An air and/or hydronic system balancing report is provided for HVAC systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.4 [FI30][1]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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

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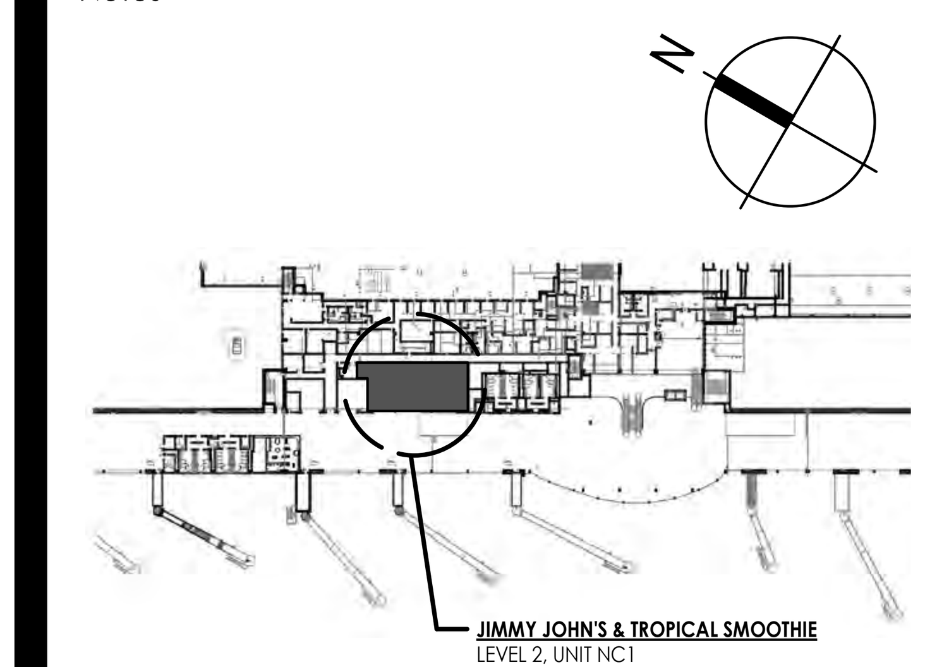

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FIRM LICENSE #C-4774
NORTH CAROLINA PROFESSIONAL SEAL 043999 ENGINEER
12/27/2024

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL
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JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

MECHANICAL ENERGY COMPLIANCE

Project No.

Scale

Revision

Drawing No.

M-802

PLUMBING LEGEND

SYMBOL	DESCRIPTION
PLAN-VIEW LINE TYPES	
	WORK SHOWN FADED INDICATES EXISTING WORK TO REMAIN OR NEW WORK BY OTHERS AS APPLICABLE
	WORK SHOWN BOLD-DASHED INDICATES SELECTIVE DEMOLITION WORK
	WORK SHOWN BOLD-CONTINUOUS INDICATES NEW WORK
	DIRECTION OF FLOW
PIPING LINE TYPES	
S1	SANITARY WASTE PIPING
V1	VENT PIPING
S2	GREASE WASTE PIPING
C1	DOMESTIC COLD WATER PIPING
H1	DOMESTIC HOT WATER PIPING
HR1	DOMESTIC HOT WATER RETURN PIPING
C3	FILTERED WATER PIPING
G1	NATURAL GAS PIPING
C4	TWICE FILTERED WATER PIPING

DRAWING SET APPEARANCE

TO BETTER COMMUNICATE SCOPE TO PERMIT AGENCIES AND CONTRACTORS, EACH DRAWING IN THIS DRAWING SET HAS BEEN CREATED IN BOTH "COLOR" AND "BLACK AND WHITE". THERE EXISTS A COLOR LAYER WITHIN EACH DRAWING WHERE VISIBILITY IS CONTROLLED THROUGH THE PDF LAYER MANAGER. THIS LAYER VISIBILITY CAN BE TOGGLED DISPLAYING EITHER "COLOR" OR "BLACK AND WHITE". TO MAINTAIN SCOPE BASED SHADING WHEN PRINTING TO PAPER, BLACK AND WHITE NEEDS TO BE VISIBLE.
FOR FURTHER INSTRUCTIONS, REFER TO CONTRACTOR RESOURCES ON OUR WEBSITE AND DOWNLOAD "DRAWING COLOR INSTRUCTIONS".
WWW.KLHENGRS.COM - CONTRACTOR RESOURCES (RIGHT HAND SIDE OF PAGE).

SYMBOL	DESCRIPTION
PLUMBING ACCESSORIES	
	UNION
	PIPE CAP
	STRAINER
	PRESSURE GAUGE
	THERMOMETER
	CO - CLEANOUT, WCO - WALL CLEANOUT
	FCO - FLOOR CLEANOUT, GCO - GRADE CLEANOUT
	FLOOR DRAIN, AREA DRAIN
	FLOOR SINK
	TRENCH DRAIN
	DOWNSPOUT (EXTERIOR)
	EXPANSION TANK
PIPE VALVES	
	SHUT-OFF VALVE
	CHECK VALVE
	SOLENOID VALVE
	PRESSURE REGULATOR VALVE
	GAS PRESSURE REGULATOR
	PRESSURE AND TEMPERATURE RELIEF VALVE
	BACKFLOW PREVENTER
	DOUBLE CHECK VALVE BACKFLOW PREVENTER
	TRAP PRIMER VALVE
PLUMBING SYMBOLS	
	PIPE UP
	PIPE DOWN
	PIPE TEE DOWN
	PIPE TEE UP
1	RISER NUMBER
	CONNECT TO EXISTING (FIELD VERIFY EXISTING UTILITY SERVICE TYPE, PRIOR TO MAKING CONNECTION)
	VENT THROUGH ROOF
PLUMBING MISCELLANEOUS	
	CIRCULATION PUMP, RETURN PUMP

STANDARD PLUMBING ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE	HW	DOMESTIC HOT WATER
AD	AREA DRAIN	HWR	HOT WATER RETURN
AFF	ABOVE FINISHED FLOOR	IE	INVERT ELEVATION
AFG	ABOVE FINISHED GRADE	IN WC	INCH WATER COLUMN
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	KW	KILOWATT
		KWH	KILOWATT HOUR
APPROX	APPROXIMATE	LPG	LIQUID PROPANE GAS
ASPE	AMERICAN SOCIETY OF PLUMBING ENGINEERS	LV	LAVATORY
		MAU	MAKEUP AIR UNIT
AV	ACID VENT	MAX	MAXIMUM
AW	ACID WASTE	MBH	1000 BTUH
BAS	BUILDING AUTOMATION SYSTEM	MH	MANHOLE
BFP	BACKFLOW PREVENTER	MIN	MINIMUM
BT	BATHTUB	MOCP	MAXIMUM OVERCURRENT PROTECTION
BTU	BRITISH THERMAL UNIT	MS	MOP SINK
BTUH	BRITISH THERMAL UNIT PER HOUR	MV	MIXING VALVE
BWV	BACK WATER VALVE	N	NITROGEN
CA	COMPRESSED AIR	NC	NORMALLY CLOSED
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CFH	CUBIC FEET PER HOUR	NO	NITROUS OXIDE
CFM	CUBIC FEET PER MINUTE	NOM	NOMINAL
CI	CAST IRON	NTS	NOT TO SCALE
CO	CLEAN OUT	O	OXYGEN
CO2	CARBON DIOXIDE	OCP	OVER CURRENT PROTECTION
CP	CIRCULATION PUMP	OD	OVERFLOW DRAIN
CW	DOMESTIC COLD WATER	OI	OIL INTERCEPTOR
DF	DRINKING FOUNTAIN	PC	PLUMBING CONTRACTOR
DI	DEIONIZED WATER	PRV	PRESSURE REGULATING VALVE
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DN	DOWN	RD	ROOF DRAIN
DS	DOWNSPOUT	RH	ROOF HYDRANT
DSN	DOWNSPOUT NOZZLE	RO	REVERSE OSMOSIS
EC	ELECTRICAL CONTRACTOR	RPZ	REDUCED PRESSURE ZONE VALVE
ET	EXPANSION TANK	RTU	ROOF TOP UNIT
EWC	ELECTRIC WATER COOLER	S	SANITARY
EWH	ELECTRIC WATER HEATER	SI	SOLIDS INTERCEPTOR
EX	EXISTING	SK	SINK
F	FAHRENHEIT	SOFT	SOFT WATER
FCO	FLOOR CLEAN OUT	SPEC	SPECIFICATION
FD	FLOOR DRAIN	SQ FT	SQUARE FOOT (FEET)
FFE	FINISHED FLOOR ELEVATION	ST	STORM PIPING
FLA	FULL LOAD AMPERES	TD	TRENCH DRAIN
FS	FLOOR SINK	TEMP	TEMPERATURE
FT	FEET	TMV	THERMOSTATIC MIXING VALVE
FW	FILTERED WATER	TP	TRAP PRIMER
G	GAS	UH	UNIT HEATER
GCO	GRADE CLEAN OUT	UR	URINAL
GWH	GAS FIRED WATER HEATER	VAC	VACUUM
GI	GREASE INTERCEPTOR	VFD	VARIABLE FREQUENCY DRIVE
GPD	GALLONS PER DAY	VP	VACUUM PUMP
GPH	GALLONS PER HOUR	VTR	VENT THRU ROOF
GPM	GALLONS PER MINUTE	WAGD	WASTE ANESTHESIA GAS
GPR	GAS PRESSURE REGULATOR	WB	WASHER BOX
GW	GREASE WASTE	WC	WATER CLOSET
H&CW	HOT & COLD WATER	WCO	WALL CLEAN OUT
HB	HOSE BIBB	WH	WALL HYDRANT
HC	HVAC CONTRACTOR	WF	WATER FILTER
HD	HUB DRAIN	YH	YARD HYDRANT
HP	HORSEPOWER		

ORIGINAL SHEET - ARCH D

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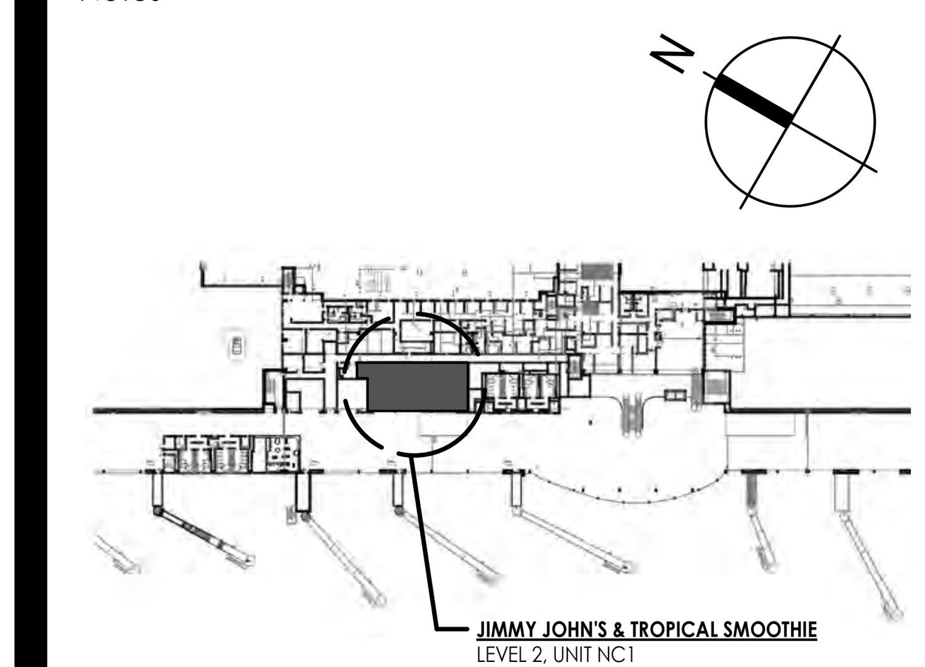

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12/27/2024

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

PLUMBING COVER SHEET

Project No.

Scale
1/8" = 1'-0"

Revision

Drawing No.
P-001

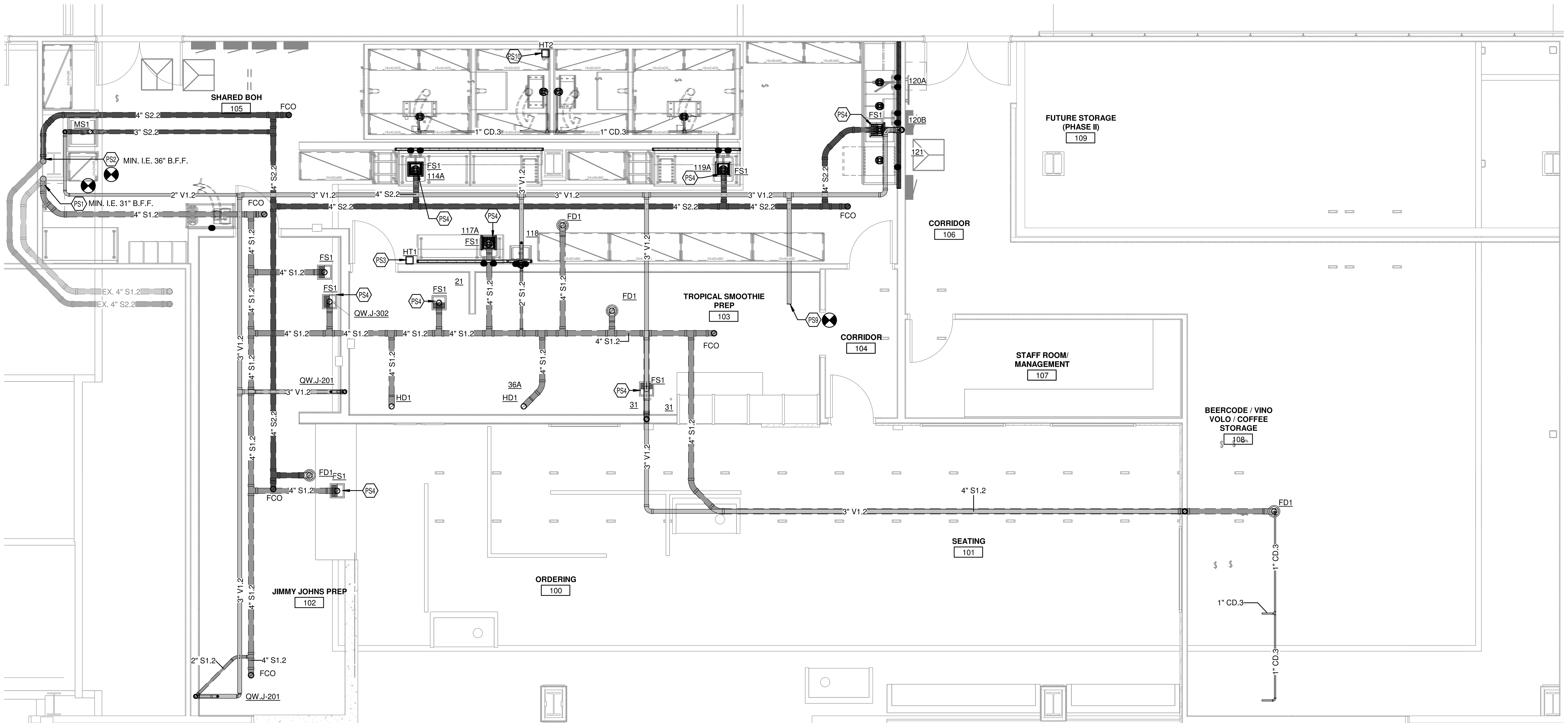
GREASE INTERCEPTOR CALCULATIONS							
FIXTURE	LENGTH (IN.)	WIDTH (IN.)	HEIGHT (IN.)	DRAIN RATE (MIN.)	DISCHARGE LOAD (GPM)	NUMBER OF COMPARTMENTS	TOTAL DISCHARGE LOAD (GPM)
EMERGENCY FLOOR DRAIN	--	--	--	1	0.00	3	0.00
FLOOR SINK (4")	--	--	--	1	19.03	3	57.09
TOTAL DISCHARGE FLOW RATE (GPM)							**57.09**
PROVIDED GREASE INTERCEPTOR DISCHARGE FLOW RATE (GPM)							**100.00**
SIZED PER IPC SECTION 1003.3.5, TABLE 1003.3.5.1, AND PDI G101 TABLE 8.3.2. UNKNOWN DISCHARGE FLOW RATES FOR FLOOR DRAIN/SINK FIXTURES BASED ON ASPE VOLUME 3 TABLE 11-7.							

Pipe Type Legend

Mark	Color	System Name	Pipe Material
S1.2		S1 - Sanitary	2 - Cast Iron - Hubless - ASTM A888
S2.2		S2 - Grease Waste	2 - Cast Iron - Hubless - ASTM A888
V1.2		V1 - Vent	2 - Cast Iron - Hubless - ASTM A888

KEYED NOTES

PS1	CONNECT NEW SANITARY SEWER TO EXISTING SANITARY SEWER MAIN IN THIS APPROXIMATE AREA. COORDINATE EXACT SIZE, INVERT AND LOCATION OF SANITARY PIPE CONNECTION WITH LANDLORD PRIOR TO BEGINNING WORK. INVERT ELEVATION OF EXISTING SANITARY PIPE TO BE NO LESS THAN INDICATED ON PLAN. CONTACT ENGINEER OF RECORD IF INVERT ELEVATION OF EXISTING SANITARY PIPE IS HIGHER THAN LISTED ELEVATION. COORDINATE ROUTING WITH EXISTING CONDITIONS. REPORT ANY DISCREPANCIES WITH OWNER AND ENGINEER OF RECORD.
PS2	CONNECT NEW GREASE TO EXISTING GREASE MAIN IN THIS APPROXIMATE AREA. COORDINATE EXACT SIZE, INVERT AND LOCATION OF GREASE PIPE CONNECTION WITH LANDLORD PRIOR TO BEGINNING WORK. EXISTING GREASE WASTE PIPING CONDITION SHALL BE EVALUATED VIA SCOPING FOR POTENTIAL REPAIRS TO EXISTING GREASE WASTE PIPING SYSTEM. CONTACT ENGINEER OF RECORD IF INVERT ELEVATION OF EXISTING GREASE PIPE IS HIGHER THAN LISTED ELEVATION. COORDINATE ROUTING WITH EXISTING CONDITIONS. REPORT ANY DISCREPANCIES WITH OWNER AND ENGINEER OF RECORD.
PS3	ALL NEW UNDER SLAB GREASE WASTE PIPING SHALL BE HEAT TRACED, HT1, WITH 2" THICK FLEXIBLE ELASTOMERIC INSULATION.
PS4	DRAIN PLUMBING FIXTURE/EQUIPMENT TO ADJACENT FLOOR SINK. TERMINATE WITH APPROVED AIR GAP. REFER TO FOOD SERVICE DRAWINGS FOR ADDITIONAL INSTALLATION INFORMATION.
PS9	DESIGN INTENT IS TO CONNECT NEW VENT PIPING TO EXISTING 3" VENT IN APPROXIMATE LOCATION. FIELD VERIFY EXISTING SIZE, SYSTEM TYPE, DIRECTION OF FLOW, AND LOCATION PRIOR TO BID. IF CONDITIONS IN FIELD DIFFER THAN SHOWN, CONTACT ENGINEER IMMEDIATELY.
PS10	ALL FREEZER CONDENSATE TO BE HEAT TRACED , HT2, WITH 2" THICK FLEXIBLE ELASTOMERIC INSULATION. HT2 TO SERVE FREEZER CONDENSATE IN SHARED KITCHEN FREEZER AND BEER STORAGE FREEZER.



1 PLUMBING SANITARY & VENT PLAN - LEVEL 2 NORTH CONCOURSE - OVERALL
1/4" = 1'-0"

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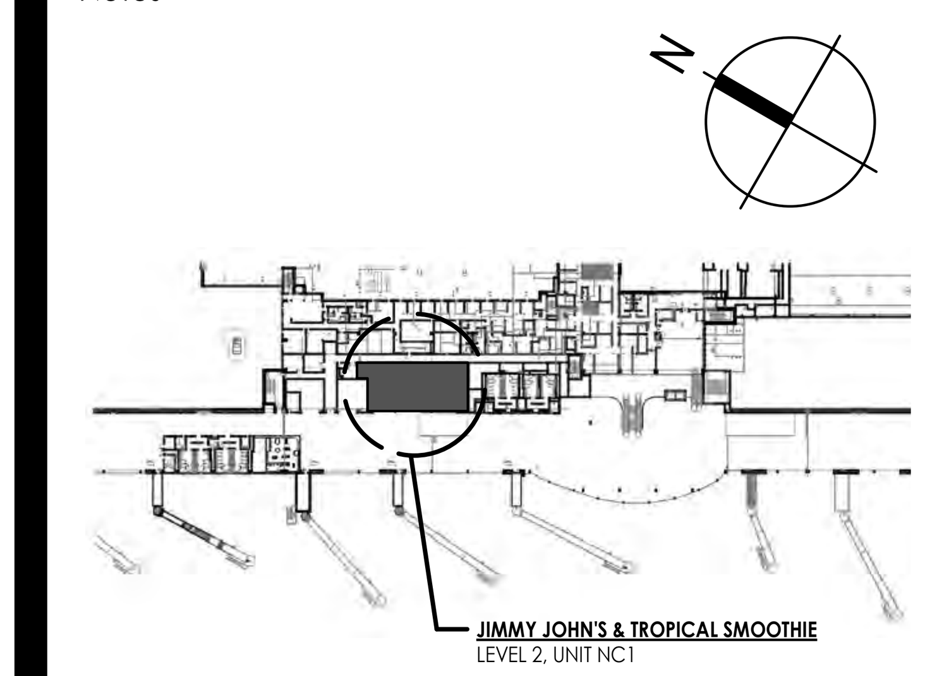

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12/27/2024

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LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

PLUMBING SANITARY LEVEL 2 NORTH CONCOURSE PLAN OVERALL

Project No.

Scale
1/4" = 1'-0"

Revision

Drawing No.
P-101

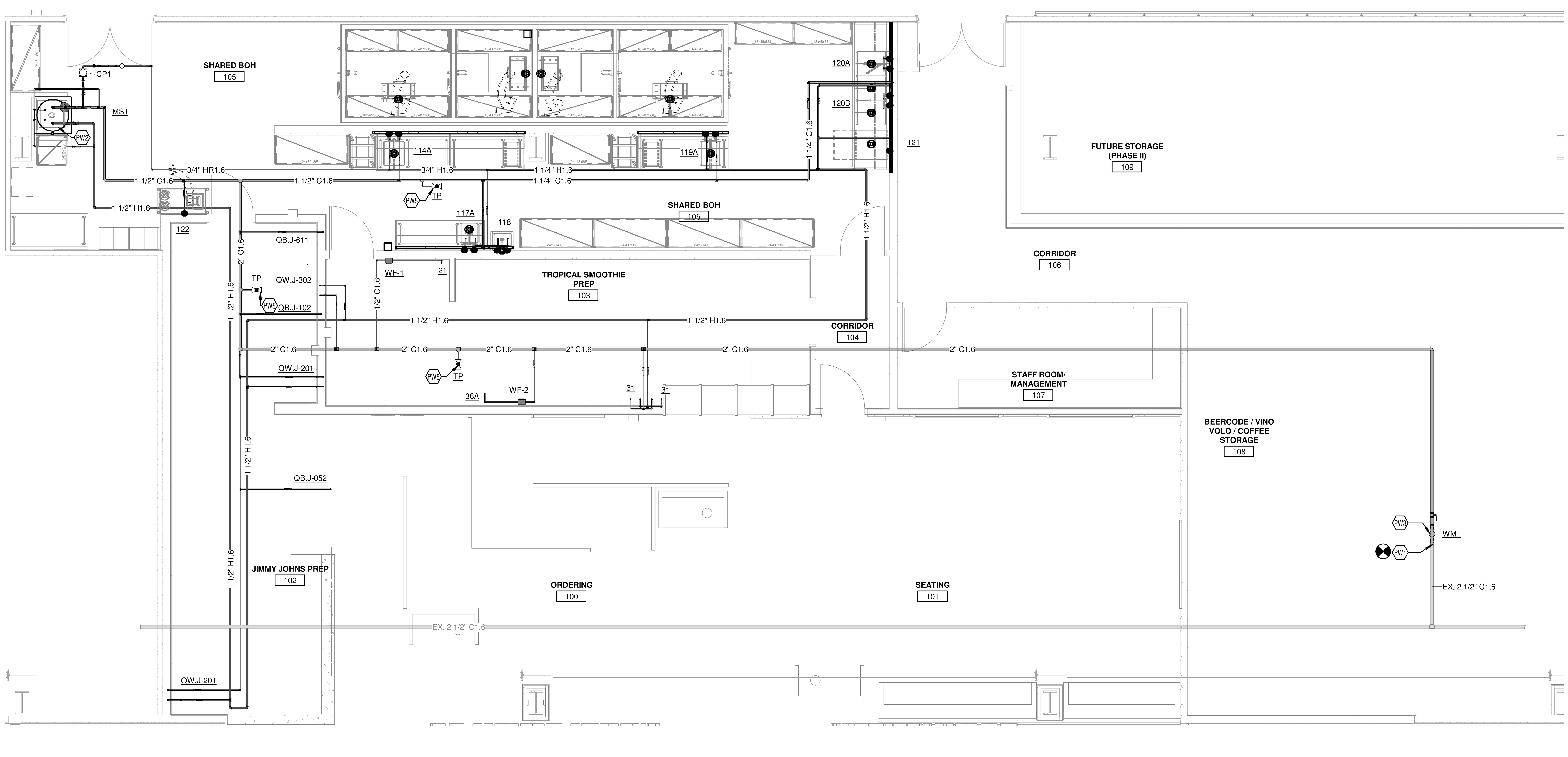
ORIGINAL SHEET - ARCH D

Pipe Type Legend

Mark	Color	System Name	Pipe Material
C1.6		C1 - Domestic Cold Water	6 - Copper - Type L - ASTM B88
C3.6		C3 - Domestic Cold Filtered Water	6 - Copper - Type L - ASTM B88
H1.6		H1 - Domestic Hot Water	6 - Copper - Type L - ASTM B88
HR1.6		HR1 - Hot Water Return	6 - Copper - Type L - ASTM B88

KEYED NOTES

PW1	EXTEND AND CONNECT NEW WATER PIPE TO EXISTING WATER PIPE AS SHOWN ON PLAN. FIELD VERIFY CONDITION OF THE PIPING, EXACT LOCATION, SIZE, SYSTEM TYPE AND PRESSURE. COORDINATE ROUTING WITH EXISTING CONDITIONS AND AIRPORT. REPORT ANY DISCREPANCIES TO OWNER AND EOR.
PW2	PROVIDE ELECTRIC HOT WATER HEATER ABOVE MOP SINK WITH 7'-0" CLEAR TO BOTTOM OF WATER HEATER SUPPORT PLATFORM.
PW3	TERMINAL CONTRACTOR WILL PROVIDE NEW BACNET WATER METER AND SHUT OFF VALVE. WATER METER TO BE MOUNTED ABOVE CEILING AT THE POINT THE PROJECT PROVIDED WATER FEED ENTERS THE SPACE.
PW5	TRAP PRIMER TO SERVE ADJACENT FLOOR DRAIN.



1 PLUMBING WATER PLAN - LEVEL 2 NORTH CONCOURSE - OVERALL
1/4" = 1'-0"

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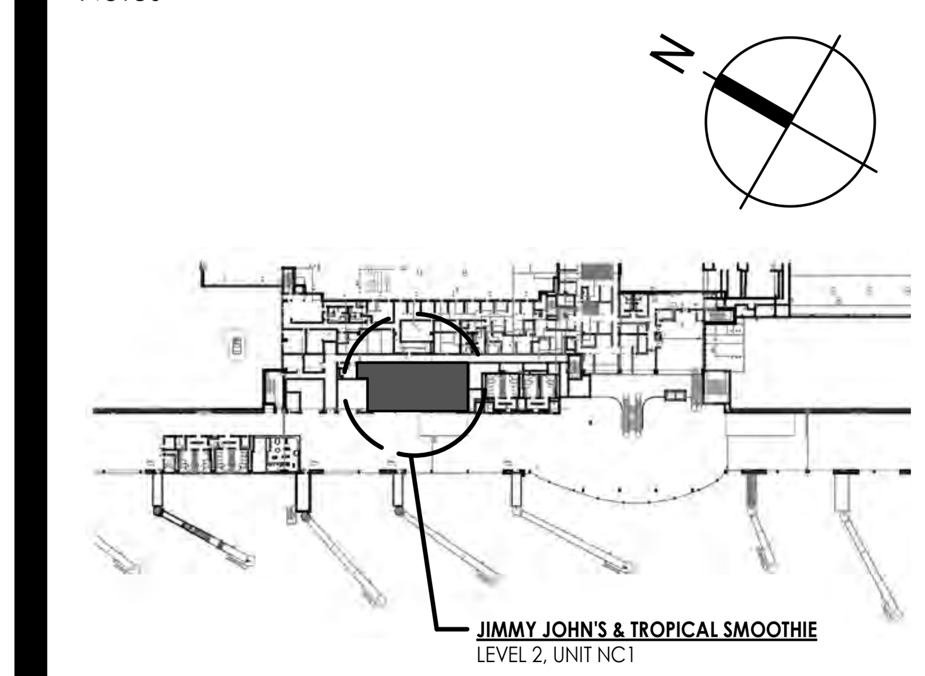
Notes



Revision	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
ISSUED FOR 60% SUBMISSION	KLH	KLH	2024.09.27
Issued	By	Appd	YYYY.MM.DD

File Name: N/A

Dwn. Dsgn. Chkd. YYYY.MM.DD

Permit/Seal

FIRM LICENSE #C-4774

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043999

12/27/2024

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE

JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

PLUMBING WATER LEVEL 2 NORTH CONCOURSE PLAN OVERALL

Project No.

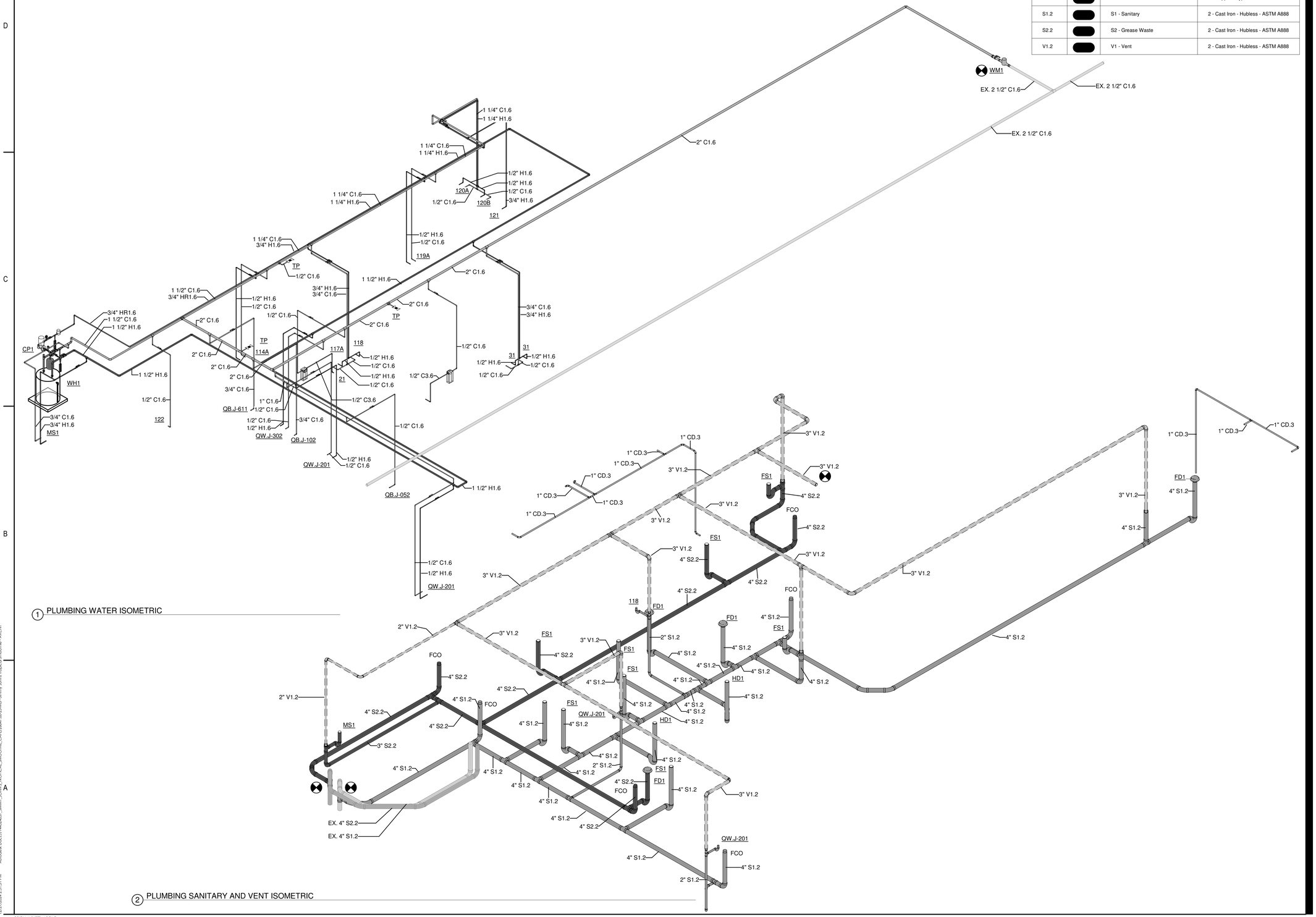
Scale 1/4" = 1'-0"

Revision

Drawing No.

P-102

ORIGINAL SHEET - ARCH D



Pipe Type Legend

Mark	Color	System Name	Pipe Material
C1.6	●	C1 - Domestic Cold Water	6 - Copper - Type L - ASTM B88
C3.6	●	C3 - Domestic Cold Filtered Water	6 - Copper - Type L - ASTM B88
H1.6	●	H1 - Domestic Hot Water	6 - Copper - Type L - ASTM B88
HR1.6	●	HR1 - Hot Water Return	6 - Copper - Type L - ASTM B88
S1.2	●	S1 - Sanitary	2 - Cast Iron - Hubless - ASTM A888
S2.2	●	S2 - Grease Waste	2 - Cast Iron - Hubless - ASTM A888
V1.2	●	V1 - Vent	2 - Cast Iron - Hubless - ASTM A888

① PLUMBING WATER ISOMETRIC

② PLUMBING SANITARY AND VENT ISOMETRIC

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Notes

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SEAL 043999

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ASHEVILLE REGIONAL AIRPORT (AVL)
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Title

PLUMBING ISOMETRICS

Project No.

Scale

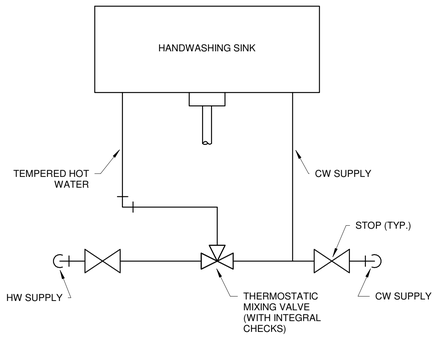
Revision

Drawing No.

P-201

12/27/2024 2:31:51 PM   Autodesk Docs://144324057_JIMMY_JOHN'S_TROPICAL_SMOOTHIE_CAFE/26847.00-23-MEP-Jimmy Johns Tropical Smoothie - AVL.rvt

ORIGINAL SHEET - ARCH D



223001.00-01 - THERMOSTATIC MIXING VALVE TMV DETAIL

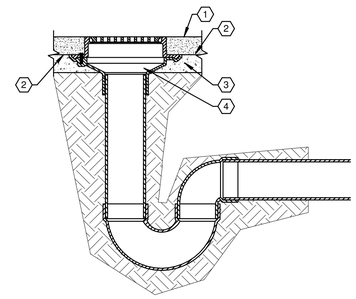
SCALE: NONE

GENERAL NOTES:

A. SLOPE FLOOR TO DRAIN TO FLOOR DRAIN.

KEYED NOTES:

1. FINISH FLOOR SLAB - SLOPE TO DRAIN.
2. WATER PROOFING MEMBRANE. FLASHING FLANGE (IF APPLICABLE).
3. STRUCTURAL SLAB
4. FLOOR DRAIN BODY.

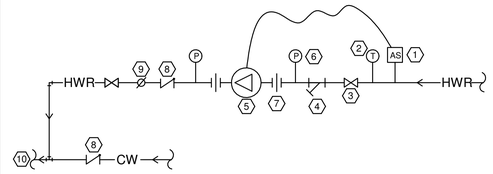


221316.00-01 - FLOOR DRAIN DETAIL

SCALE: NONE

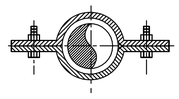
KEYED NOTES:

1. AQUASTAT WIRED TO START CIRCULATING PUMP WHEN LINE WATER TEMPERATURE DROPS 10°F BELOW DESIRED HOTWATER LOOP TEMPERATURE. AQUASTAT/THERMAL WELL SHALL HAVE ADJUSTABLE TEMPERATURE RANGE OF 50°F-160°F.
2. TEMPERATURE GAUGE AND SNUBBER.
3. BALL VALVE (TYPICAL).
4. WYE STRAINER
5. HOT WATER RECIRCULATION PUMP.
6. PRESSURE GAUGE AND SNUBBER (TYPICAL) **CRITICAL TO INSTALLATION**.
7. UNION (TYPICAL).
8. CHECK VALVE.
9. BALANCING VALVE.
10. RETURN LINE TO HOT WATER SUPPLY SYSTEM.



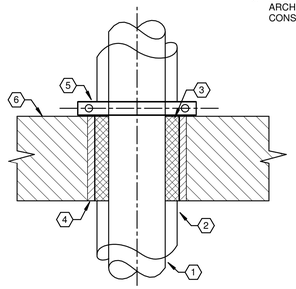
221123.00-01 - HOT WATER RECIRCULATION PUMP

SCALE: NONE



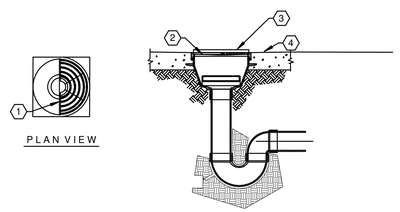
KEYED NOTES:

1. PIPE.
2. PIPE INSULATION.
3. 2 HOUR FIRE RATED SEALANT FOR FIRE RATED PENETRATIONS.
4. SCHEDULE 40 STEEL PIPE SLEEVE TO BE 1" LARGER THAN THE OUTSIDE SURFACE OF PIPE INSULATION AND FLUSH TO WALL SURFACE. DO NOT SUPPORT PIPING WITH SLEEVE.
5. RISER CLAMP.
6. FINISHED FLOOR. REFER TO ARCHITECTURAL PLANS FOR FLOOR CONSTRUCTION TYPE.



KEYED NOTES:

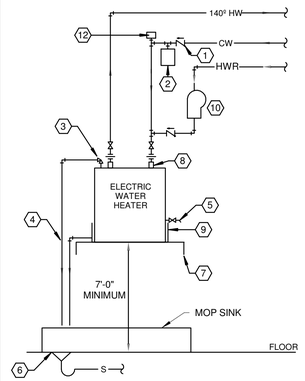
1. HALF GRATE.
2. FLOOR SINK.
3. EXTEND 1" ABOVE FINISHED FLOOR.
4. FINISHED FLOOR.



PLAN VIEW

221313.00-05 - FLOOR SINK WITH SEDIMENT BUCKET

SCALE: NONE



KEYED NOTES:

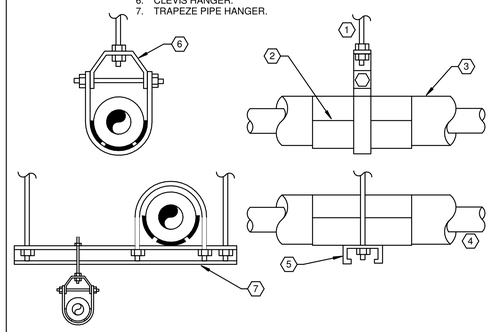
1. CHECK VALVE.
2. 8 GALLON EXPANSION TANK.
3. ASME APPROVED TEMPERATURE AND PRESSURE RELIEF VALVE, 210°F, 125 PSI.
4. RELIEF PIPE, FULL SIZE OF OPENING.
5. DRAIN VALVE.
6. MOP SINK
7. MOUNT ON BRACKETS OR SUSPEND FROM JOISTS ABOVE.
8. HEAT TRAP NIPPLE.
9. DRAIN PAN.
10. RECIRCULATING PUMP. REFER TO RECIRCULATING PUMP DETAIL FOR FURTHER PIPING SCHEMATICS.
11. NOT USED
12. VACUUM RELIEF VALVE.

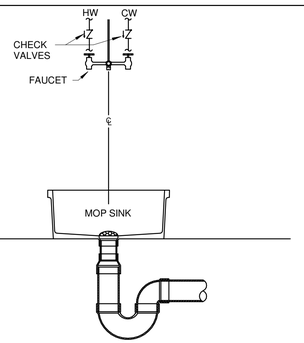
223300.00-00 - SHELF MOUNTED ELECTRIC WATER HEATER

SCALE: NONE

KEYED NOTES:

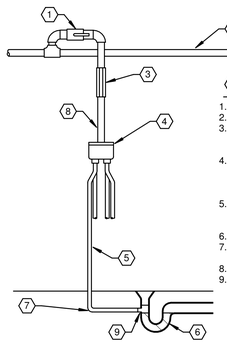
1. HANGER ROD.
2. GALVANIZED STEEL PIPE SHIELD AND 360° CALCIUM SILICATE INSULATION HANGER SUPPORT.
3. PIPE INSULATION.
4. PIPE.
5. UNISTRUT CHANNEL.
6. CLEVIS HANGER.
7. TRAPEZE PIPE HANGER.





NOTES:

1. SEAL TOP OF SINK TO WALL USING A CONTINUOUS BEAD OF SILICONE CAULKING, WHEREVER SINK ABUTS WALL.
2. FOR EXTERIOR MASONRY AND SOLID WALLS APPLICATION PROVIDE SURFACE MOUNT WATER SUPPLY LINES. WHEN POSSIBLE ROUTE WATER SUPPLY LINES INSIDE INTERIOR STUD WALLS.
3. INCLUDE MOP HANGER, HOSE & HOSE BRACKET, WALL AND BUMPER GUARDS.



KEYED NOTES:

1. SHUT-OFF VALVE.
2. DOMESTIC COLD WATER LINE.
3. TRAP PRIMER VALVE WITH BACKFLOW PREVENTER AND VACCUM BREAK.
4. DISTRIBUTION UNIT FOR MULTIPLE FLOOR DRAINS. (OMIT DISTRIBUTION UNIT WHEN SERVING SINGLE DRAIN.)
5. MINIMUM 1/2" COPPER FLOOR DRAIN TRAP MAKE-UP WATER LINE. (TYPICAL)
6. WATER SEAL.
7. SLOPE PIPING BELOW SLAB TO FLOOR DRAIN.
8. 1/2" SUPPLY SIZE.
9. IF DRAIN DOES NOT HAVE INTEGRAL TRAP PRIMER CONNECTION, PROVIDE TRAP PRIMER FITTING EQUAL TO ZURN Z1023

NOTE: TRAP PRIMER LINE SHALL NOT EXCEED 20 FT.

221119.00-07 - TRAP PRIMER DETAIL

SCALE: NONE

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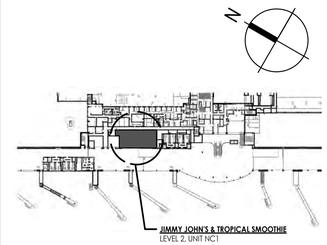
Notes



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ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
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File Name: N/A	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

FIRM LICENSE #C-4774

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

PLUMBING- DETAILS

Project No.

Scale
1/8" = 1'-0"

Revision

Drawing No.
P-501

1	2	3	4	5

EQUIPMENT SCHEDULE / EQUIPMENT PLUMBING SCHEDULE

NO.	QTY	EQUIPMENT DESCRIPTION	PROVIDER	VENDOR	INSTALL	FIN. CON.	WATER HOT	WATER COLD	ROUGH-IN HEIGHT	WASTE DIRECT	WASTE INDIRECT	ROUGH-IN HEIGHT	REMARKS
4	1	THREE COMPARTMENT SINK	F	EV	EV	PC					(3) 1-1/2"	REMARKS	RUN I.W. TO FLOOR SINK, MANIFOLD DRAINS
5	1	PRE-RINSE FAUCET	F	EV	EV	PC	1/2"	1/2"	22"				
21	1	ICE MAKER W / BIN	F	EV	EV	EC/PC		1/2"	REMARKS		(2) 3/4"	REMARKS	RUN I.W. TO FLOOR SINK, FILTERED CW FROM #22
22	1	WATER FILTER, 3-STAGE	F	EV	EV	PC		1/2"	84"				P.C.TO RUN CW TO ITEM #21
23	1	CHANNEL DRAIN, 5" (3'-4" LONG)	GC	SPS	PC	PC				3"		REMARKS	VERIFY REQUIREMENTS W/SUPPLIER
24	2	PREP SINK	F	EV	EV	PC	1/2"	1/2"	22"		1-1/2"	REMARKS	P.C. TO RUN I.W. TO FLOOR SINK
31	1	WORK TABLE W/HAND SINK & DUMP SINK, 30" X 48"	F	EV	EV	PC	(2) 1/2"	(2) 1/2"	22"	1-1/2"	1-1/2"	18"	P.C. TO RUN I.W. TO FLOOR SINK
36	1	BLENDER TABLE	F	EV	EV	PC					1/2"	REMARKS	P.C. TO RUN I.W TO HUB DRAIN
36A	1	WATER SPIGOT	F	EV	EV	PC		1/2"	REMARKS				FILTERED CW FROM #36C
36C	1	WATER FILTER, 2-STAGE	F	EV	EV	PC		1/2"	22"				P.C TO RUN CW TO ITEM #36B
38	1	ICE BIN, DROP-IN	F	EV	EV	PC					1"	REMARKS	P.C. TO RUN I.W TO HUB DRAIN
62	1	DRAIN BOARD	F	EV	EV	PC					1"	REMARKS	P.C. TO RUN I.W. TO HUB DRAIN

FOODSERVICE PLUMBING SCHEDULE

ITEM	QTY	DESCRIPTION	COLD WATER SIZE	COLD WATER HT. AFF	HOT WATER SIZE	HOT WATER HT. AFF	FILTERED WATER SIZE	FILTERED WATER HT. AFF	WASTE CONNECTIONS IW SIZE	WASTE CONNECTIONS DW SIZE	WASTE CONNECTIONS DW HT. AFF	PLUMBING NOTES (SEE SCHEDULE NOTES)
100A	1	Evaporator - Refrigerator							3/4"			L
102A	1	Evaporator - Freezer							3/4"			L
104A	1	Evaporator - Freezer							3/4"			L
106A	1	Evaporator - Refrigerator							3/4"			L
114	1	Work Table							2"			L
114A	1	Faucet, Splash Mount	1/2"	14"	1/2"	14"						
117	1	Work Table							2"			D
117A	1	Faucet, Splash Mount	1/2"	14"	1/2"	14"						
118	1	Hand Sink	1/2"	14"	1/2"	14"				1-1/2"	21"	
119	1	Work Table							2"			D
119A	1	Faucet, Splash Mount	1/2"	14"	1/2"	14"						
120	1	3-Compartment Sink							(3) 2"			D
120A	1	Faucet, Pre-Rinse - Add a Faucet	1/2"	14"	1/2"	14"						
120B	1	Faucet, Splash Mount	1/2"	14"	1/2"	14"						
121	1	Warewasher, Undercounter, Low Temp			1/2"	14"			1"			D, 120°F Minimum HW temp at machine. 140°F Recommended.
122	1	Bag-n-box Rack/ w/ CO2 Tanks	1/2"	72"								N

FOODSERVICE PLUMBING SCHEDULE

ITEM	QTY	DESCRIPTION	COLD SIZE SIZE	COLD SIZE HT.	HOT WATER SIZE	HOT WATER HT.	FILTERED WATER SIZE	FILTERED WATER HT.	WASTE CONNECTIONS IW SIZE	WASTE CONNECTIONS DW SIZE	WASTE CONNECTIONS DW HT.	PLUMBING NOTES (SEE SCHEDULE NOTES)
QB.J-052	1	ICE DRINK DISPENSER	1/2"	STUB-UP					3/4"			D. Coordinate w/ Millwork Trades
QB.J-102	1	ICED TEA BREWER	1/2"	60"								
QB.J-611	1	ICE MAKER & ICE STORAGE BIN	1/2"	72"					(1) 3/4", (1) 1/2"			D
QW.J-201	2	S/S HAND SINK W/ FAUCET	1/2"	18"	1/2"	18"				1 1/2"	16"	
QW.J-302	1	S/S VEGETABLE PREP SINK	1/2"	18"	1/2"	18"			1 1/2"			D

REFER TO FOOD SERVICE DRAWINGS FOR FINAL KITCHEN SCHEDULE INFORMATION.

DOMESTIC WATER EXPANSION TANK SCHEDULE

PRODUCT						MISC		GENERAL	
MARK	SHEET(S)	DESCRIPTION	MANUFACTURER	MODEL	SECTION NUMBER	STORAGE VOLUME	ACCESSORIES	LOCATION	STATUS
ET1	P-102, P-201	DOMESTIC WATER EXPANSION TANK	WILIKINS	WXTP-8	22 00 00.00	8	OR EQUAL	SHARED BOH 105	NEW

PLUMBING HEAT TRACE PANEL SCHEDULE

PRODUCT						GENERAL		MISC
MARK	SHEET(S)	DESCRIPTION	MANUFACTURER	MODEL	SECTION NUMBER	LOCATION	STATUS	ACCESSORIES
HT1	P-101, P-102	PLUMBING HEAT TRACE PANEL	CHROMALOX	CPR3-1	22 00 00.00	--	--	3W/FT, PROVIDE WITH CTC1-00 SINGLE CIRCUIT CONTROLLER, PROVIDE AS-BM AMBIENT SENSOR.
HT2	P-101, P-102	PLUMBING HEAT TRACE PANEL	CHROMALOX	CPR3-1	22 00 00.00	--	--	3W/FT, PROVIDE WITH CTC1-00 SINGLE CIRCUIT CONTROLLER, PROVIDE AS-BM AMBIENT SENSOR.

PRODUCT	SUMMARY	ELECTRICAL								INSTANCE ELECTRICAL
MARK	ELECTRIC CONNECTION SUMMARY	CN FURNISHED BY	CN INSTALLED BY	CN TYPE	CN WIRED BY	MC FURNISHED BY	MC INSTALLED BY	MC TYPE	MC WIRED BY	FAULT CURRENT
HT1	HT1 - 120V/1PH, 0.3 KW HTG, 15A FLA	PC	PC	LINE	PC	--	--	--	--	HT1: 1477
HT2	HT2 - 120V/1PH, 0.06 KW HTG, 15A FLA	PC	PC	LINE	PC	--	--	--	--	HT2: 1610

FLOOR DRAIN SCHEDULE

PRODUCT						GENERAL		MISC	FIXTURE UNITS	TRAP INFORMATION
MARK	SHEET(S)	DESCRIPTION	MANUFACTURER	MODEL	SECTION NUMBER	LOCATION	STATUS	ACCESSORIES	DFU	TRAP PRIMER
FD1	P-101, P-201	FLOOR DRAIN	ZURN	Z-415	22 13 19.00	REFER TO PLAN	NEW	TYPE "N" STRAINER. PROVIDE WITH COMPLETE BODY ASSEMBLY WITH TRAP PRIMER CONNECTION.	6	YES

FLOOR SINK SCHEDULE

PRODUCT						GENERAL		MISC	FIXTURE UNITS	TRAP INFORMATION
MARK	SHEET(S)	DESCRIPTION	MANUFACTURER	MODEL	SECTION NUMBER	LOCATION	STATUS	ACCESSORIES	DFU	TRAP PRIMER
FS1	P-101, P-201	FLOOR SINK	WADE	W-9140-16-1	22 13 19.00	SHARED BOH 105, JIMMY JOHNS PREP 102, TROPICAL SMOOTHIE PREP 103.	NEW	NICKLE-BRONZE STRAINER, 3/4" GRADE.	6	NO

TANK TYPE ELECTRIC WATER HEATER SCHEDULE

PRODUCT							MISC		GENERAL		ELECTRICAL	DESIGN CONDITIONS	
MARK	SHEET(S)	DESCRIPTION	MANUFACTURER	MODEL	OPERATING WEIGHT	SECTION NUMBER	STORAGE VOLUME	ACCESSORIES	LOCATION	STATUS	EFFICIENCY	EWT	LWT
WH1	P-102, P-201	TANK TYPE ELECTRIC WATER HEATER	AO SMITH	DEL50D	166	22 33 00.00	50	--	SHARED BOH 105	--	--	40	140

PRODUCT	SUMMARY	ELECTRICAL								INSTANCE ELECTRICAL
MARK	ELECTRIC CONNECTION SUMMARY	CN FURNISHED BY	CN INSTALLED BY	CN TYPE	CN WIRED BY	MC FURNISHED BY	MC INSTALLED BY	MC TYPE	MC WIRED BY	FAULT CURRENT
WH1	WH1 - 208V/3PH, 11 KW HTG	MFR	MFR	INT	MFR	--	--	--	--	WH1: --

DOMESTIC HOT WATER CIRCULATION PUMP SCHEDULE

PRODUCT							GENERAL				MISC	FLOW INFORMATION	
MARK	SHEET(S)	DESCRIPTION	MANUFACTURER	MODEL	OPERATING WEIGHT	SECTION NUMBER	ENTERING PSIG	LEAVING PSIG	LOCATION	STATUS	ACCESSORIES	FLUID FLOW	PUMP HEAD
CP1	P-102, P-201	DOMESTIC HOT WATER CIRCULATION PUMP	TACO	0014	12	22 11 23.00	55.4	64.5	SHARED BOH 105	--	CONTROLLED BY TIMECLOCK AND AQUASTAT.	2	21

PRODUCT	SUMMARY	ELECTRICAL								INSTANCE ELECTRICAL
MARK	ELECTRIC CONNECTION SUMMARY	CN FURNISHED BY	CN INSTALLED BY	CN TYPE	CN WIRED BY	MC FURNISHED BY	MC INSTALLED BY	MC TYPE	MC WIRED BY	FAULT CURRENT
CP1	CP1 - 120V/1PH, 0.04 HP, 1.45A FLA	PC	PC	LINE	EC	MFR	MFR	MG	MFR	CP1: 1686

MOP SINK SCHEDULE

PRODUCT						GENERAL		MISC	VALVE/FAUCET INFORMATION		FIXTURE UNITS				FLOW INFORMATION	TRAP INFORMATION
MARK	SHEET(S)	DESCRIPTION	MANUFACTURER	MODEL	SECTION NUMBER	LOCATION	STATUS	ACCESSORIES	FIXTURE MFG	FIXTURE MODEL	DFU	WSFU	CW SFU	HW SFU	FLUID FLOW	INTEGRAL TRAP
MS1	P-101, P-102, P-201	MOP SINK	FIAT	MSB-2424	22 40 00.00	SHARED BOH 105	NEW	PROVIDE FAUCET FIAT 83-AA, HOSE AND HOSE BRACKET, MOP HANGER, VINYL BUMP GUARD, SILICON SEALANT.	FIAT	83-AA	2	3	2.25	2.25	--	NO

ORIGINAL SHEET - ARCH D

Stantec

Consultant

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
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859-442-8058 FAX
LEXINGTON, KENTUCKY
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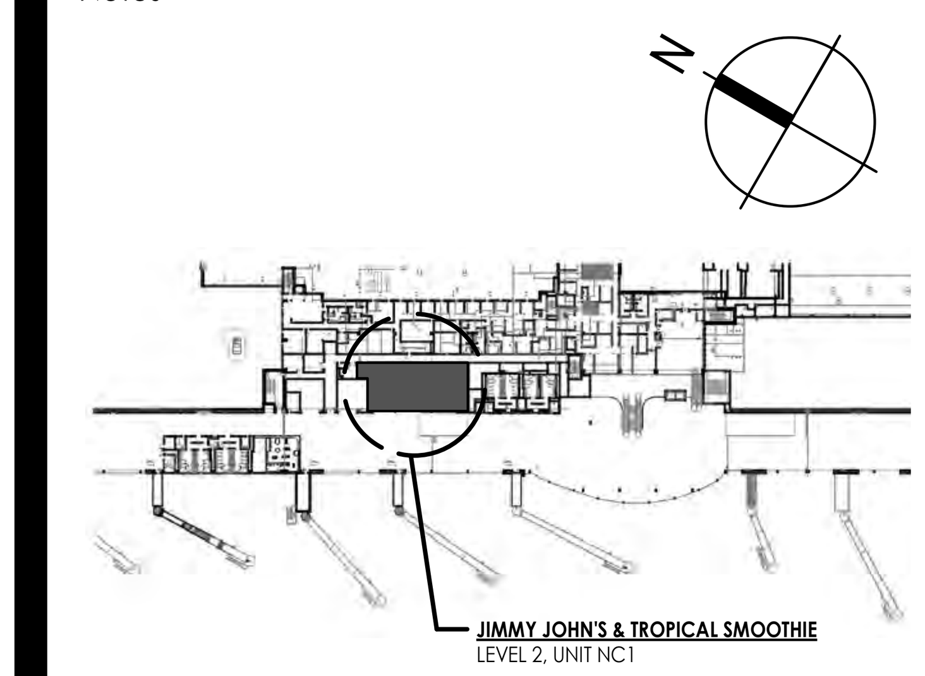
COLUMBUS, OHIO

Notes



Revision	By	Appd	YYYY.MM.DD

Issued	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
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Permit/Seal

FIRM LICENSE #C-4774
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043999 KRISTA SCHWAGEN
12/27/2024

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL
tropical SMOOTHIE CAFE
JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

PLUMBING - SCHEDULES

Project No.

Scale

Revision

Drawing No.

P-601

SECTION 22 05 00.00 - COMMON WORK RESULTS FOR PLUMBING

GENERAL

The General Provisions of the Contract including the General and Supplemental Conditions and General Requirements apply to the work in this section. Before submitting a bid, examine documents of all other trades, visit the site and get acquainted with all conditions that may in any way affect the execution of this contract.
Contractor shall obtain and pay for all permits, certificates of inspection and approvals required.
Submittal of a bid indicates that the contractor has examined the drawings, specifications, and had an opportunity to visit the site to be able to provide a comprehensive complete bid to include providing all materials, labor, tools, and equipment required to provide complete plumbing systems as outlined in Division-22.
Clearly state all full load amps (FLA), voltages and model numbers on all submittals.
Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories. Provide wiring diagrams: For power, signal, and control wiring.

APPLICABLE STANDARDS

The installation of all plumbing work shall conform to all the following, but not limited, applicable local and municipal utility standards, rules and regulations, plumbing codes and statutes having jurisdiction.
All plumbing fixtures, equipment, accessories, and appurtenances shall be NSF/ANSI 61-372 compliant
North Carolina Building Code;
North Carolina Plumbing Code;
American Society for Test Materials (ASTM);
National Sanitation Foundation (NSF);
American Standards Association (ASA);
Underwriters Laboratories (UL);
National Fire Protection Association (NFPA);
National Electric Code (NEC);

PLANS AND SPECIFICATIONS

Obtain the latest owner design and construction standards document(s). Comply with all owner-specific requirements in addition to requirements set forth in these specifications and accompanying drawings. Should there be a conflict, the owner's standards shall take precedence, unless prevailing codes and regulations mandate otherwise.
The drawings that accompany these specifications are diagrammatic. Wherever possible make use of submittal data and verify all dimensions on site. Provide additional fittings as required by site conditions and codes at no additional cost to conform to the structure, avoid obstructions, provide required service clearances and preserve headroom. Do not scale from drawings, all measurements should be taken in the field.

EXISTING CONDITIONS

Where new plumbing systems are required to be connected to existing plumbing systems, provide all camera scoping and dye testing necessary to verify the exact location, size, invert elevation, pressure, pipe integrity, and system type to ensure a proper connection is executed. The contractor shall notify the engineer immediately if it is found a proper connection cannot be executed.

CUTTING, PATCHING AND DEMOLITION

The contractor shall be responsible for damages to the grounds, walks, road, building, piping systems, electrical systems, and their equipment and contents, caused by leaks in the piping systems being installed or having been installed by him. The contractor shall repair at his expense all damaged so caused. All repair work shall be done as directed by and in such manner as satisfactory to the architect.
Owner reserves the right to make emergency repairs as required to keep equipment in operation without voiding the contractor's guarantee bond nor relieving the contractor of his responsibilities during the bonding period.
Cut and drill all openings in roofs, walls, and floors required for the installation. Neatly patch all openings cut. Hold cutting and patching to a minimum by arranging with other contractors for all sleeves and openings before construction is started. When drilling/cutting concrete slabs, utilize ground penetrating radar (GPR) and/or X-ray scanning equipment to verify the location is free from obstructions, including but not limited to: structural rebar/strands/tendons, electrical conduit/wiring, and/or piping/ductwork.

EXCAVATION AND BACKFILL

Perform all excavation and backfilling required for this work. Contractor shall consult with utility company prior to beginning excavation. At a minimum, all piping shall be laid on a bed of sand, 6" deep, well tamped into place and properly graded to permit the pipe to have an even bearing throughout its entire length. Sand shall be installed around the piping in 6" lifts to a point 6" above the piping.
INTERRUPTION OF EXISTING SERVICES
Interruption of Existing Plumbing Services: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
Notify, Architect, Construction Manager, and Owner no fewer than seven days in advance of proposed interruption of service.
Do not proceed with interruption of service without Architect's written permission.

WARRANTY

This contractor shall warrant that all work under this section shall be free of defective work, materials and parts for a period of one year after acceptance of the work and shall repair, revise, and replace, at no cost to the owner, any such defects occurring within the warranty period.
Use of Electronic Drawings from the Owner's Design Team
If expressly permitted by the Owner and the terms of the Contract, editable electronic drawings may be made available for the creation of shop and as-built drawings upon request. Drawings will be made available at the discretion of the Engineer. "Request Drawings" form can be accessed, filled out and submitted at http://www.klhengrs.com (right hand side of page - Contractor Resources). Direct access to this form can be found here: http://files.klhengrs.com/requestdrawings.html

22 05 03.00 - SUBMITTALS FOR PLUMBING

Provide submittals in accordance with the Contract Documents. In addition to Division 01, the Contractor is advised to review and comply with the requirements articulated within each Division and within each section of that Division.
Some Divisions may include a division-specific "Submittal Requirements for …." section. Where this section exists, it articulates additional requirements for submittals that apply to the work of that Division.
The following requirements help to identify, track and keep the project organized for all parties involved. They are necessary to ensure a timely turnaround and an appropriate technical review. Submittals that do not conform to the administrative requirements are rejected and returned, without technical review.
Supply submittals for each section: Submittals shall be supplied on a section-by-section and type-by-type basis. For example, independent product data submittals shall be furnished for each section that requires product data submittals. Independent shop drawing submittals shall be furnished for each section that requires shop drawings.
Separate PDF file packages shall be supplied for each section, for each submittal type. Each PDF shall represent a single standalone submittal.
Include a transmittal: Transmittals shall enumerate each submittal for each section of each type and iteration.
Include cover sheet / title page: The cover sheet shall include the information identified in the contract documents. It shall be included as the first page of each electronic and/or hardcopy document-based submittal. An editable and printable PDF form created with editable fields and specification compliant appearance is available from KLH upon request. It is also downloadable from the KLH website at www.klhengrs.com.
Include an index: The index shall enumerate the contents of the submittal.
Include checklists: Where checklists are included with the specifications, complete and include them within the appropriate submittal. Supply complete submittals: Complete submittals of each type are required. Partial submittals will be rejected. Where a section requires a product data submittal, all product data for that section shall be supplied together, at one time, as one complete submittal. When resubmittal is required (e.g. Revise and Resubmit) the revised submittal shall be more complete, more accurate and more contract-compliant than its rejected predecessor. The submittal number (for each section and type) shall increment for each subsequent submittal (00 – Original submission, 01 – First Resubmission, 02 – Second Resubmission, etc…).
Resubmittals shall include a copy of the reviewers comments supplied with the prior submittal rejection and shall be amended with a description of the specific action taken to comply with the reviewer's comments. The absence of this on resubmittal is cause for rejection.
Name electronic files to match the submittal ID and cover sheet: The electronic file name of submittals shall match the submittal ID included on the submittals cover page. For example: The original/first product data submittal for Section 220523 would be labeled as "220523.00-PD-00"; the first resubmittal of same shall be labeled "220523.00-PD-01". The original/first shop drawings submittal file for the same section would be labeled "220523.00-SD-00"; the first resubmittal of same shall be labeled "220523.00-SD-01".
If expressly permitted by the Owner and the terms of the Contract, editable electronic drawings may be made available for the creation of shop and as-built drawings upon request. Drawings will be made available at the discretion of the Engineer.
"Request Drawings" form can be accessed, filled out and submitted at http://www.klhengrs.com (right hand side of page - Contractor Resources). Direct access to this form can be found here:
http://files.klhengrs.com/requestdrawings.html

22 05 17.00 – SLEEVES AND SLEEVE SEALS FOR PLUMBING PIPING

SLEEVES
Steel Pipe: ASTM A 53, Type E, Grade B, Schedule 40, galvanized, plain ends.

EXECUTION
Install steel pipe sleeves two sizes larger than pipes passing through floors, rated walls, building foundation walls or masonry construction. Sleeves are not required for core drilled holes.

For sleeves that will have sleeve-seal systems installed, select sleeves of size large enough to provide 1-inch annular clear space between piping and concrete slabs and walls.

Install sleeves in concrete floors, concrete roof slabs, and concrete walls as new slabs and walls are constructed.
Permanent sleeves are not required for holes in slabs formed by molded-PE or -PP sleeves.
Cut sleeves to length for mounting flush with both surfaces.
Exception: Extend sleeves installed in floors of mechanical equipment areas or other wet areas 2 inches above finished floor level.
Using grout, seal the space outside of sleeves in slabs and walls without sleeve-seal system.

Install sleeves for pipes passing through interior partitions.
Cut sleeves to length for mounting flush with both surfaces.
Install sleeves that are large enough to provide 1/4-inch annular clear space between sleeve and pipe or pipe insulation.
Seal annular space between sleeve and piping or piping insulation; use joint sealants appropriate for size, depth, and location of joint.

Seal sleeves and piping with material rating equivalent to the wall rating. Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestop materials where required.

22 05 23.00 - GENERAL DUTY VALVES

Submittal Requirements
Product Data: For each type of product indicated.
GENERAL
Provide stops or isolation valves on domestic water supplies to isolate hot and cold water to each fixture, including all equipment and equipment provided by others.
Access shall be provided to all valves. Provide fire-rated access panel(s) to maintain full access to concealed valves.
Ball valves - 2 inch and smaller: Lead-Free, 150 psi @ 250°F minimum pressure rating, cast bronze body, blowout-proof stem.
Butterfly Valves - 3" and up: Ductile Iron Butterfly Valve, 200 WOG, Lug Body, Lever Operator.
Approved Manufacturers: Milwaukee Valve, NIBCO, and Watts Water Technologies Co.
Valves to conform to: MSS-SP-110 Type I/ MSS-SP-67 Type I, NSF/ANSI -61/372.
Check valves - to be same size as system piping it accompanies. Lead-free, bronze body, 250 WOG, non-shock, spring check valve. Conforms to the following standard(s): MSS-SP-80 I, NSF/ANSI -61/372

22 05 29.00 – HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT

GENERAL
Provide hangers, supports, clamps, attachments, and structural steel members where required to support piping and equipment from building structure.
Support of piping from the decking or equipment is prohibited.
Arrange for grouping of parallel runs of horizontal piping supported together on field-fabricated, heavy-duty trapeze hangers where possible. Trapeze hangers shall conform to: MSS SP-69, Type 59. Horizontal-Piping Clamps: Provide Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3) for suspension of pipes requiring clamp flexibility and up to 4 inches of insulation.
Vertical-Piping Clamps: Provide extension pipe or Riser Clamps (MSS Type 8) for support of pipe risers.
Hangers shall be sized to allow insulation to pass through unobstructed.
Hanger and support types:
Hangers: Provide adjustable, Steel Clevis Hangers (MSS Type 1) for suspension of noninsulated or insulated, stationary pipes.
Horizontal-Piping Clamps: Provide Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3) for suspension of pipes requiring clamp flexibility and up to 4 inches of insulation.
Vertical-Piping Clamps: Provide extension pipe or Riser Clamps (MSS Type 8) for support of pipe risers.
Hangers and supports shall be placed at all changes in direction, valves and equipment.
The maximum horizontal spacing of cast-iron pipe hangers can be 10' where 10-foot lengths of pipe are installed.
Piping shall also be supported at each change in direction, valves and equipment.
Clevis-type hangers shall and supports shall conform to: MSS SP-58, Type 1-58.

22 05 33.00 –HEAT TRACING FOR PLUMBING PIPING

Submittal Requirements
Product Data: For each type of product indicate rated heating capacities, length of cables, and controllers.
Clearly state model numbers on all submittals.
Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation. Delegated design submittals include the following:
Heat Trace Circuit Layout Drawings, including:
Location/identification of area to be traced, heater circuit number, electrical load, heater catalog numbers, heater termination points, start-up temperature, location of all components, material list and quantities of all components, heating cable layout.
GENERAL
SELF-REGULATING, PARALLEL-RESISTANCE HEATING CABLES FOR PIPE FREEZE PROTECTION AND GREASE WASTE FLOW MAINTENANCE
Basis-of-Design Product: Subject to compliance with requirements, provide RAYCHEM, a brand of nVent; XL-Trace Pipe Freeze/Flow Maintenance or comparable product by one of the following:
Chromalox inc.
Thermon Americas Inc.
Source Limitations: Obtain heat-tracing components and controllers from single manufacturer. To ensure system integrity and meet warranty requirements, only components and controllers supplied by cable manufacturer are to be used.
Heating cable and connection kit shall be included in a UL Listed, CSA Certified, and FM Approved system.
SYSTEM DESCRIPTION
Complete pipe freeze protection system for grease waste . System consists of a self-regulating heating cable, connection kits, accessories, and energy-efficient control, monitoring, and Building Management System (BMS) communication capabilities. The heating cable shall have an approved suitable jacket for above ground water piping applications, and an approved suitable jacket for below ground grease waste piping applications.
Grease flow maintenance of above ground, sanitary grease waste piping.
Grease flow maintenance of below ground, sanitary grease waste piping.
Delegated Design: Engage manufacturer to design complete and functional heat-tracing system as required by Project documents.
Maximum Operating and Exposure Temperature: 150 deg F.
INSTALLATION
All heat-tracing components including power connections, splices, tees, crosses or end seal, must be installed above grade and protected from abuse or damage. In accordance with NEC and CEC, electrical connections are not permitted to be installed below grade.
In the field, all heating cables shall be meggered with a minimum of 2,500 V dc for self-regulating cable when the cable is received at the Project Site prior to installation, after installation but prior installation of insulation, after insulation is installed, and at final commissioning prior to being energized.
Installation to conform to all NEC and IEEE applicable standards.
PROTECTION
Protect installed heating cables, including non-heating leads, from damage and moisture ingress during construction. Remove and replace damaged heat-tracing cables as necessary to ensure a complete and functioning system.

22 05 53.00 - IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

PIPING
Provide self-adhesive pipe labels with white background and black lettering, contact type with permanent adhesive backing. Include identification of piping service using same designations or abbreviations as used on the drawings and an arrow indicating flow direction.
EQUIPMENT
Provide self-adhesive plastic equipment labels with white background and black lettering, contact type with permanent adhesive backing, 160 degree F temperature.
Include equipment's drawing designation and specification section number where equipment is specified.

22 07 19.00 – PLUMBING SYSTEM INSULATION

GENERAL
Insulation shall be listed and labeled per ASTM E 84 for plenum installations employing slip on techniques.
Provide insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of piping including fittings, valves, and specialties.
Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application.
PIPING SYSTEMS REQUIRING INSULATION
Insulate domestic cold water piping, associated fittings and valves with flexible elastomeric 1/2" wall thickness insulation.
Insulate domestic hot water piping, associated fittings and valves with 1" thick flexible elastomeric, 1-1/2" thick fiberglass insulation or per local energy code, whichever greater.
Insulate domestic hot water return piping, associated fittings and valves with 1" wall thickness insulation or per local energy code, whichever greater.
Insulate plumbing piping where heat trace is installed, coordinate insulation thickness and material type with heat trace manufacturer providing the system.
Insulate waste piping above ceilings that receive condensate with 1/2" wall thickness insulation.
Insulate exposed sanitary drains, domestic water, domestic hot water, and stops for plumbing fixtures for people with disabilities.
FLEXIBLE ELASTOMERIC INSULATION
Closed-cell, sponge- or expanded-rubber materials.
Comply with ASTM C 534, Type I for tubular materials and Type II for sheet materials.
Adhesives, Sealers, and Protective Finishes: As recommended by insulation manufacturer for applications indicated.
Manufacturers: Subject to compliance with requirements, available products that may be incorporated into the work include, and are limited to, the following:
Aeroflex USA, Inc.; Aerocel., Armacell LLC; AP Armaflex.,K-Flex USA;
FIBERGLASS INSULATION
Fiberglass piping insulation: ASTM C 547, Class 1
Encase pipe fittings insulation with one-piece pre-molded PVC fitting covers.
Vapor Barrier Material: Paper-backed aluminum foil, except as otherwise indicated, strength and permeability rating equivalent to adjoining pipe insulation jacketing.
Staples, Bands, Wires, and Cement: As recommended by insulation manufacturer for applications indicated.
Adhesives, Sealers, and Protective Finishes: As recommended by insulation manufacturer for applications indicated.
Manufacturers: Subject to compliance with requirements, available products that may be incorporated into the work include, and are limited to, the following:
Armstrong World Industries, Inc., Owens-Corning Fiberglass Corp., Johns Manville.
ADHESIVES
Materials shall be compatible with insulation materials, jackets, and substrates and for bonding insulation to itself and to surfaces to be insulated, unless otherwise indicated.
Insulation for handicap accessible fixtures
All handicap lavatory p-trap and angle stop assemblies shall be insulated with trap wrap protective kit manufactured by Proflo model PF202WH or equal.
Abrasion resistant, anti-microbial vinyl exterior cover shall be smooth. For traps, the insulation shall have a cleanout nut cap to allow service to the trap without disassembly.
For stops, the insulation shall have a lock lid that prevents tampering but allows access without removal of the insulation. Fasteners shall remain substantially out of sight.
Manufacturers: subject to compliance with requirements: Proflo, Truebro, Plumberex

22 11 16.00 – DOMESTIC WATER PIPING

Submittal Requirements
Product Data: For each type of product indicated.
GENERAL
Install piping concealed from view unless noted otherwise, free of sags and bends. Do not enclose, cover, or put piping into operation until it has been inspected and approved by authorities having jurisdiction. Clean and disinfect potable domestic water piping using approved procedures by authorities having jurisdiction or AWWA C651, whichever is more rigorous.
Install at right angles; diagonal runs are prohibited unless otherwise shown. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.
Coordinate all piping with all other trades.
Provide water pressure regulators where necessary to limit the incoming water pressure to 80 psi inside the building.
DOMESTIC WATER PIPING ABOVE GROUND:
Hard copper tube, ASTM B 88, Type L; wrought-copper, solder-joint fittings; and soldered joints.
Solder Filler Metals: ASTM B 32, lead-free alloys.
Flux: ASTM B 813, water flushable.
Type "L"; copper pressure-seal joint; and pressure-seal joint systems.
CATHODIC PROTECTION
Provide dielectric insulation at points where copper or brass pipe comes in contact with ferrous piping, reinforcing steel or other dissimilar metal in structure.

22 11 19.00 – DOMESTIC WATER PIPING SPECIALTIES

Submittal Requirements
Product Data: For each type of product indicated.
Manufacturers: Subject to compliance with requirements, available products that may be incorporated into the work include, and are limited to, the following:
Conbraco Industries, Inc., Watts Water Technologies Co., Zurn Industries, LLC., Thermomegatech, Acorn Engineering Co., and Caleffi, N. America., MIFAB, Inc., Precision Plumbing Products, Inc., Sioux Chief Manufacturing Company, Inc., Jay R. Smith Mfg. Co., Provent Systems, Rector Seal.
DUAL CHECK VALVE BACKFLOW PREVENTER
Provide a dual check valve backflow preventer that complies with ASSE 1022 at connection of domestic water supply to any permanently connected potable water dispensing equipment such as ice makers, coffee machines, and beverage dispensers or where indicated in the contract documents.
Beverage dispensing equipment backflow preventer
Provide a continuous pressure backflow preventer with stainless steel body, threaded connections and complies with ASSE 1022.
Carbonated beverage dispenser backflow preventer
Provide a continuous pressure dual check valve backflow preventer with stainless steel body, threaded connections and complies with ASSE 1032.
BALANCING VALVES
Provide balancing valves where required for proper balancing of water systems as shown on the contract documents.
Balancing valves shall be equal to Red-White Valve Corporation model 9517AB (NPT) or model 9519 (solder).
Valve shall have brass body, globe valve regulation and isolation properties, fixed orifice design for precise measurement, integral memory stop to ensure repeatable setting, full shutoff without affecting memory settings, high and low pressure metering points, precision indicator windows, rugged top set hand-wheel assembly, pressure rating of 300 psi, and temperature rating of 15 deg. F to 260 deg. F.
VACUUM BREAKERS
Vacuum breakers shall be equal to Watts model LF288A for piping connections or Watts LF8 series for hose connections. Vacuum breakers shall comply with ASSE 1001 for piped connections, ASSE 1011 for hose connections, bronze body and threaded connections with rough bronze finish.
PRESSURE REDUCING VALVES
Provide pressure reducing valve to regulate incoming domestic water pressure in excessive of 80 psig. Pressure reducing valve shall be equal to Watts model LF223S, comply with ASSE 1003, initial working pressure of 300 psig, integral strainer, lead-free brass body with threaded connections.
STRAINERS
Provide lead-free wye-pattern strainer rated for 125 psig minimum, bronze body, threaded connections, stainless steel screen with round perforations of 0.020 inch and pipe plug drain. Provide strainers on supply side of each pressure reducing valve, solenoid valve and pump.
TRAP-SEAL PRIMER DEVICE
The plumbing contractor shall provide trap primers for all floor drains. Provide access panel in wall or ceiling for all concealed trap primers. Install trap seal primer valves with outlet piping pitched down toward drain trap a minimum of 1% and connect to floor drain body, trap or inlet fitting. Coordinate exact location with architect prior to installation.
WATER TAB METERS
Displacement-Type Water Meters:
Plumbing contractor to coordinate with landlord for exact model and manufacturer.
Description: Displacement-Type Water Meter complying with AWWA C700.
Remote Registration System: Direct-reading type complying with AWWA C706; modified with signal-transmitting assembly, low-voltage connecting wiring, and remote register assembly as required by landlord or owner. Mount reader in an accessible location.
WATER HAMMER ARRESTERS
Provide water-hammer arresters in water piping according to PDI-WH 201.
Standard: ASSE 1010 or PDI-WH 201.
Type: Metal bellows or copper tube with piston.
Size: ASSE 1010, sizes AA and A through F, or PDI-WH 201, sizes a through F.

22 11 23.00 – RECIRCULATION DOMESTIC WATER PUMP

Submittal Requirements
Product Data: For each type of product indicated.
GENERAL
Hot-water circulating pump shall be constructed of the following: in-line wet-rotor, lead-free bronze body, plastic impeller, with ceramic bearings. Working pressure to be a minimum 125 psig with a maximum continuous operating temperature of 220° F.
Pump shall be controlled with an aquastat and timer.
Aquastat: Electric; surface mounted sensing element.
Adjustable temperature control of hot-water circulation from 65 to 200 °F.
Timer: Electric; for control of hot-water circulation.
Programmable type, seven-day, twenty-four hour clock with manual override on-off switch. Programmable for pre-set times during the day for each day for seven days.
Approved Manufacturers: Armstrong Pumps Inc, Bell & Gossett/Goulds Water Technology; Xylem Inc., Taco inc., Honeywell International inc.
Pumps shall conform to: UL 778, NSF 61/372.
CONNECTIONS
On water heating systems with separate storage tanks, interlock pump between water heater(s) and hot-water storage tank(s) with water heater burner and time-delay relay.

22 13 16.00 - SANITARY, WASTE AND VENT PIPING SYSTEM

Submittal Requirements
Product Data: For each type of product indicated.
GENERAL
Provide a complete soil, waste and vent system in the building and on the site as indicated on the drawings and as specified herein.
Above ground soil, waste and vent piping within buildings including soil stacks, vent stacks, horizontal branches, traps, and connections to fixtures and drains.
Underground building drain piping including mains, branches, traps, connections to fixtures and drains, and connections to stacks, terminating at connection to existing sanitary sewer.
INTERIOR PIPING ABOVE GRADE
No-Hub cast iron soil, waste, and vent piping and fittings 1-1/2" and larger shall conform to ASTM A-888. Pipe couplings shall conform to ASTM C 1277 and CISPI 310.
Piping alignment shall be as indicated on the drawings using approved wye branches or eight bands for direction changes and shall be surely supported or secured to maintain such alignment.
Soil, waste and vent piping smaller than 1-1/2" shall be Type "M" copper and conform to ASTM B-306.]
BELOW GRADE PIPING
Hub and Spigot cast iron soil, waste, and vent piping and fittings 2" and larger shall conform to ASTM A-74 with ASTM C-564 gasketed joints.
Piping alignment shall be as indicated on the drawings using approved wye branches or eight bands for direction changes and shall be surely set and buried to maintain such alignment.
Soil, waste and vent piping smaller 1-1/2" and smaller below grade shall not be permitted
Slope piping according to local codes.
Protection shall be given to all footings and other structural elements during underground work adjacent to such items. Refer to architectural and/or structural drawings for locations.
Vent all fixtures, connect branch vents to main vent risers at least six inches above flood rim of fixtures. Pitch vent lines back to soil or waste pipe, free of drops and sags.
Cleanouts shall be full size of pipe up to 4", and 4" for larger sizes. For underground and concealed lines, provide cleanouts in accessible positions at each right angle turn and at intervals not to exceed fifty feet. In floors, install flush with finish floor with extension pipe from cleanout wye.

22 13 19.00 - SANITARY WASTE PIPING SPECIALTIES

Submittal Requirements
Product Data: For each type of product indicated.
CLEANOUTS
Floor cleanout equal to Zurn Z-1400 adjustable floor cleanout.
Wall cleanout equal to Zurn Z-1443 with smooth nickel bronze square wall access panel and frame.

Provide a sanitary tee with threaded cap cleanout plug for changes-in-direction in aboveground horizontal waste piping.
Manufacturers: Subject to compliance with requirements, available products that may be incorporated into the work include, and are limited to, the following:
Jay R Smith MFG. Co., Watts Drainage Products Inc., Zurn Plumbing Products Group.
FLOOR DRAINS
Provide floor drains in compliance with ASME A112.6.3.
Provide floor drains with trap-seal primer fitting. All floor drains located in rooms with tile floors shall be provided with manufacturer's standard square grate, unless noted otherwise.
Refer to plumbing drain schedule for project specific floor drain manufacturers and models.
Manufacturers: Subject to compliance with requirements, available products that may be incorporated into the work include, and are limited to, the following:
Jay R Smith MFG. Co., Watts Drainage Products Inc., Zurn Plumbing Products Group.
FLOOR SINKS
Provide floor sinks in compliance with ASME A112.6.7. All floor sinks shall have a cast iron body unless noted otherwise. All floor sinks located in a commercial kitchen to have a half grate cover unless noted otherwise.
Refer to plumbing drain schedule for project specific floor drain manufacturers and models.
Manufacturers: Subject to compliance with requirements, available products that may be incorporated into the work include, and are limited to, the following:
Jay R Smith MFG. Co., Watts Drainage Products Inc., Zurn Plumbing Products Group.

22 30 01.00 - POINT OF USE THERMOSTATIC MIXING VALVES

Submittal Requirements
Product Data: For each type of product indicated.
GENERAL
Thermostatic mixing valves shall be provided for all public hand washing sinks and lavatories and shall be ASSE 1070 listed, lead free, sweat connections, 125 psi operating pressure and have integral checks. Mount under sink or lavatory. Set outlet temperature of thermostatic mixing valve to 105 degrees F.
Point-of use thermostatic mixing valves shall be equal to Powers LFG480. Route tempered water to hot water side of sink and lavatories.
Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the work include, and are limited to, the following:
Symmons, Acorn Engineering, Powers, Bradley

22 33 00.00 - COMMERCIAL ELECTRIC, DOMESTIC WATER HEATERS

Submittal Requirements
Product Data: For each type of product indicated.
TANK TYPE
Provide commercial electric tank type water heater as scheduled. Comply with UL 1453 Standard.
Provide corrosion resistant metal drain pan with raised edges at the base of the water heater and include drain outlet.
Provide field fabricated piping heat trap arrangement according to ASHRAE/IESNA 90.1.
Provide combination temperature and pressure relief valve, ASME rated and stamped with relieving capacity at least as great as heat input and pressure setting less than water heater's rated operating pressure.
Provide water heater stands or mounting brackets with manufacturer's factory fabricated steel capable of supporting water heater.
Provide steel pressure-rated thermal expansion tank constructed with welded joints and factory-installed butyl rubber diaphragm, pre-charged to minimum system operating pressure at tank.
Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the work include, and are limited to, the following:
Bock Water Heaters, Bradford White Corp., Lochinvar Corp., State Industries.

22 40 00.00 - PLUMBING FIXTURES

Submittal Requirements
Product Data: For each type of product indicated.
GENERAL
Refer to plumbing fixture schedule and install per the manufacturer's installation and operation manual.
Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the work include, and are limited to, the following:
American Standard, Kohler Co., Zurn Industries, LLC.

Stantec

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Consultant

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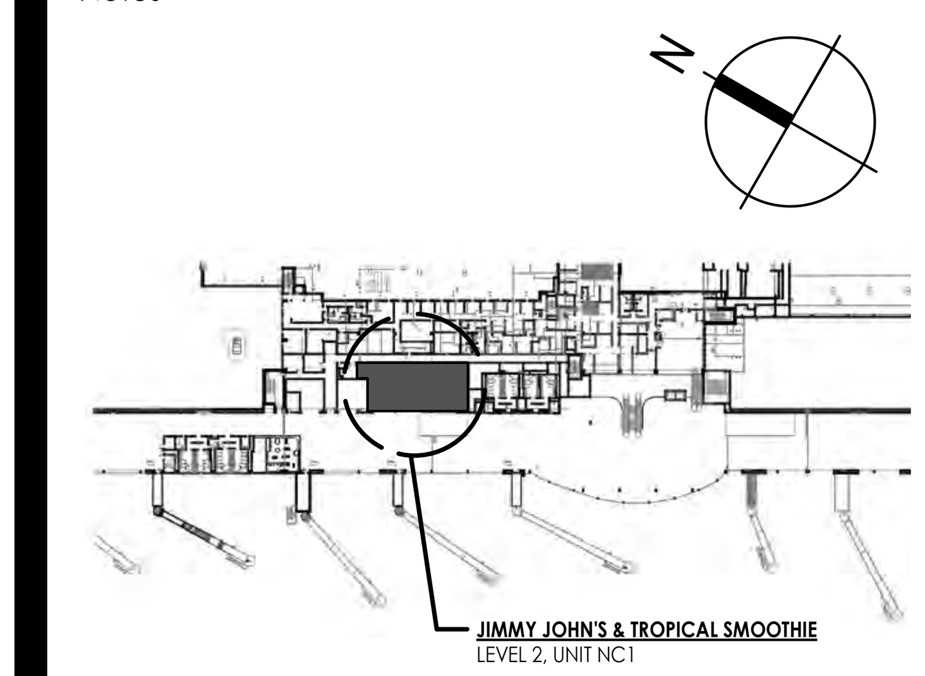
Notes



Revision	By	Appd	YYYY.MM.DD

Issued	By	Appd	YYYY.MM.DD
ISSUED FOR PERMIT	KLH	KLH	2024.12.27
ISSUED FOR 90% SUBMISSION	KLH	KLH	2024.12.02
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Permit/Seal

FIRM LICENSE #C-4774

Client/Project Logo

Paradies Lagardère TRAVEL RETAIL

tropical SMOOTHIE CAFE

JJ JIMMY JOHN'S

Client/Project

JIMMY JOHN'S & TROPICAL SMOOTHIE CAFE

LEVEL 2 CONCOURSE, UNIT NC1
ASHEVILLE REGIONAL AIRPORT (AVL)
61 FLETCHER DRIVE SUITE 1 FLETCHER,
NORTH CAROLINA, USA, 28732

Title

PLUMBING SPECIFICATIONS

Project No.

Scale

Revision

Drawing No.

P-701