

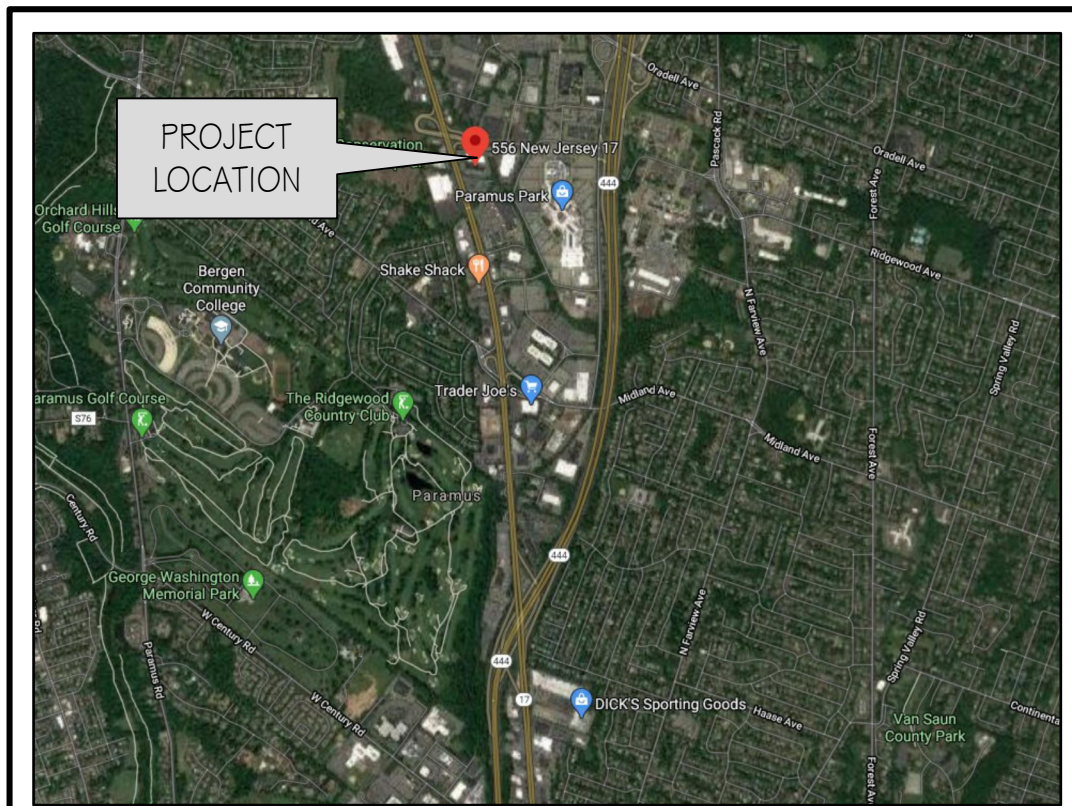
PROPOSED FIT OUT FOR:

DUCK DONUTS

556 ROUTE 17 NORTH
PARAMUS, NJ 07652



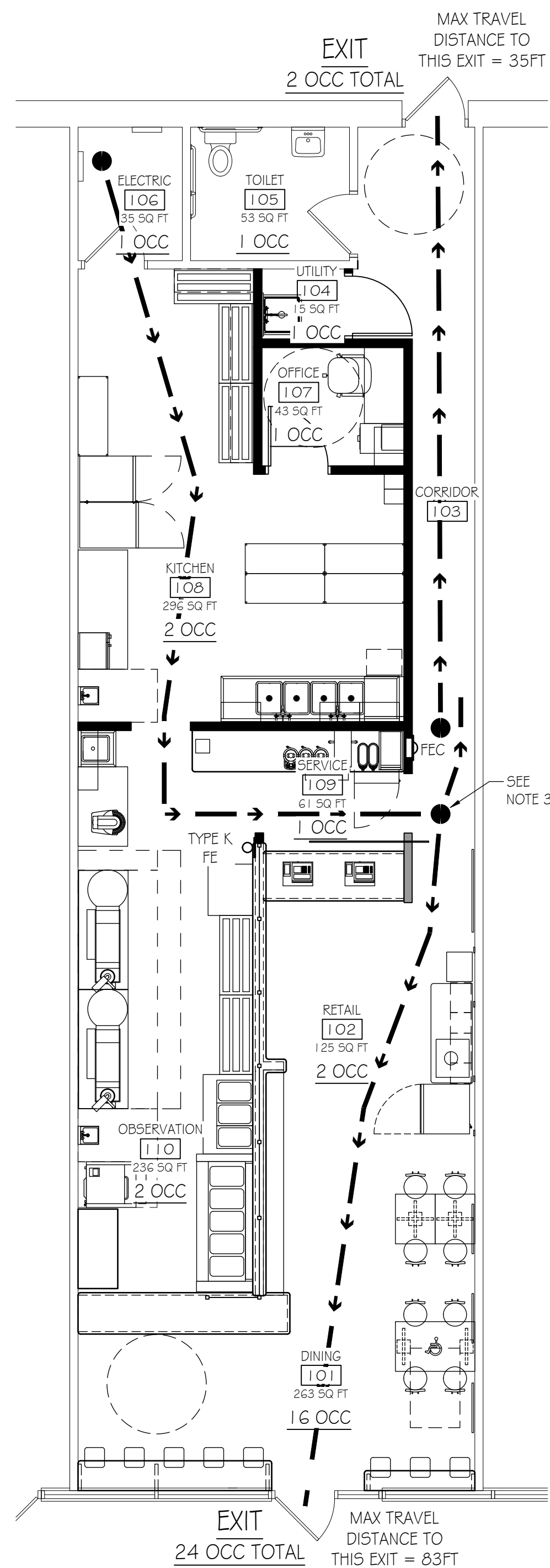
SITE LOCATION MAP



VICINITY MAP

OCCUPANCY AND EGRESS

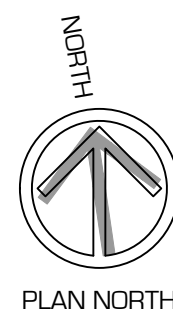
LEASE SPACE TOTAL OCCUPANCY = 26 (1,370 SQ FT)



- NOTES:**
1. PATHS OF EGRESS TRAVEL SHOWN HAVE BEEN DETERMINED TO REPRESENT THE MAXIMUM TRAVEL DISTANCE TO THE EXIT THEY DISCHARGE TO. AS SUCH, PATH OF EGRESS TRAVEL DISTANCES FROM ANY OTHER AREA TO EACH RESPECTIVE EXIT ARE NOT DEPICTED, AS THEY WILL BE LESS THAN THE ONES SHOWN.
 2. OCCUPANT LOADS FOR EACH ROOM OR AREA HAVE BEEN CALCULATED BASED ON TABLE 1004.1.1 FLOOR AREA ALLOWANCES PER OCCUPANT, OR BASED ON SEATING PROVIDED FOR THE AREA.
 3. CHOICE OF TWO SEPARATE PATHS OF EGRESS IS PROVIDED AT THIS POINT; THIS CREATES A 66FT COMMON PATH OF TRAVEL, THE LONGEST CALCULATED IN THIS TENANT SPACE..

LEGEND:

- RECESSED FIRE EXTINGUISHER AND CABINET
- SURFACE MOUNTED FIRE EXTINGUISHER
- EXIT SIGNS
- PATH OF EGRESS TRAVEL, SEE NOTE 1



CONTACTS

PROPERTY OWNER

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REVIEW, APPROVAL STATUTES AND AUTHORITIES

BUILDING CODE SUMMARY:

AUTHORITY HAVING JURISDICTION:
THE UNIFORM CONSTRUCTION CODE (UCC) 5:2-3
BOROUGH OF PARAMUS, BERGEN COUNTY

- 2018 INTERNATIONAL BUILDING CODE THE NJ EDITION
- NATIONAL ELECTRIC CODE / NEC 2017
- IECC 2015 / ASHRA STANDARD 90.1 2016
- UCC REHABILITATION SUBCODE NJAC 5:23-6
- NFPA 13 2013, IBC NJ ED. 2018
- NJAC 5:23-7 AND ICC / ANSI A11 JULY 1, 2018
- INTERNATIONAL MECHANICAL CODE 2018
- INTERNATIONAL FUEL GAS CODE 2018
- NATIONAL STANDARD PLUMBING CODE / NSPC 2018

DESCRIPTION OF WORK:

- Demolish existing wall partitions and casework for new floor plan layout.
- Construct new walls and doors to create a donut shop.

PROJECT VITALS:

- BUILDING SQUARE FOOTAGE 1,370± SQ FT
- OCCUPANCY GROUP 'B'
- BUILDING IS SINGLE STORY
- THE BUILDING IS SPRINKLERED
- TOTAL SPACE OCCUPANCY: 26 OCC (EST)
- TOTAL SPACE SQUARE FOOTAGE: 1,370 SQ FT

BUILDING ELEMENT	REQUIRED FOR CODE CONSTRUCTION TYPE II-B	PROVIDED THIS PROJECT
Primary Structural Frame Load Bearing	0 hr	N/A
Exterior Walls (Load Bearing)	0 hr	N/A
Interior Walls (Load Bearing)	0 hr	N/A
Interior Walls & Partitions (Non-Load Bearing)	0 hr	0 hr
Floor Construction, including supporting beams & joists	0 hr	N/A
Roof Construction, including supporting beams & joists	0 hr	N/A
Exit Walls Fire-Resistance Rating (Hours) (Non-Load Bearing)	0 hr	N/A
Spaces with one Exit or Exit Access Doorway	B Occupancy Max Occupant Load (OL) = 49 Max Common Path of Egress Travel Distance with Sprinkler System = 100 (OL ≤ 30)	See Egress Plan for Occ Loads and Travel Distances
Exit Access Travel Distance	300' (Group B Maximum with sprinkler system)	83'
Corridor Fire-Resistance Rating	0 hr (Occupant load = <30) (With sprinkler system)	0 hr
Minimum Corridor Width	Occupancy Category: Occupant load <50 = 36 inches	Provided, See Architectural Drawings
Emergency Lighting	Exitways, exit doors. Rooms used for assembly in excess of 750 sq. ft. Exterior lighting over required exit discharge.	Provided, See Electrical Drawings
Fire Extinguishers	For Moderate Hazard Occupancy: (1) 2-A Extinguisher per 1,500 sq. ft. Maximum travel distance to extinguisher not to exceed 75'. 2 Provided, See Architectural Drawings	2 Provided, See Architectural Drawings

2018 IBC THE NEW JERSEY EDITION

CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION
SECTION 304.1 BUSINESS, GROUP B - FOOD PROCESSING ESTABLISHMENT UNDER 2500 SF

CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS

TABLE 508.4
REQUIRED SEPARATION OF OCCUPANCIES

OCCUPANCY B
NO SEPARATION NECESSARY - SINGLE OCCUPANCY CLASSIFICATION (No change from existing)

CHAPTER 6 - TYPES OF CONSTRUCTION

SECTION 602 CONSTRUCTION CLASSIFICATION
602.2 - TYPE II - BUILDING ELEMENTS...ARE OF NON-COMBUSTIBLE MATERIALS...EXCEPT AS PERMITTED...ELSEWHERE IN THIS CODE (no change from existing)

CHAPTER 10 - MEANS OF EGRESS

1005.3.2 - OTHER EGRESS COMPONENTS. THE CAPACITY, IN INCHES, OF MEANS OF EGRESS COMPONENTS OTHER THAN STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH COMPONENT BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.2 INCH (5.1 MM) PER OCCUPANT. EXCEPTIONS:
1. FOR OTHER THAN GROUP H AND I-2 OCCUPANCIES, THE CAPACITY, IN INCHES, OF MEANS OF EGRESS COMPONENTS OTHER THAN STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH COMPONENT BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.15 INCH (3.8 MM) PER OCCUPANT IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 AND AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5.2.2. (Other portions of this code require minimum egress widths greater than what would be calculated at the minimum widths provided along the means of egress path (in all cases it would be the doors) per this code text, which means this portion of code will be automatically met.)

1006.2.1 - EGRESS BASED ON OCCUPANT LOAD AND COMMON PATH OF EGRESS TRAVEL DISTANCE. TWO EXITS OR EXIT ACCESS DOORWAYS FROM ANY SPACE SHALL BE PROVIDED WHERE THE DESIGN OCCUPANT LOAD OR THE COMMON PATH OF EGRESS TRAVEL DISTANCE EXCEEDS THE VALUES LISTED IN TABLE 1006.2.1.

1011.1 - WHERE REQUIRED, EXITS AND EXIT ACCESS DOORS SHALL BE MARKED BY AN APPROVED EXIT SIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL...EXCEPTIONS:
1. EXIT SIGNS ARE NOT REQUIRED IN ROOMS OR AREAS THAT REQUIRE ONLY ONE EXIT OR EXIT ACCESS. (This project meets the requirements of this section and exit signs shall be provided at exit access doorways.)

CHAPTER 10 - MEANS OF EGRESS (continued)

1006.2.1 - EGRESS BASED ON OCCUPANT LOAD AND COMMON PATH OF EGRESS TRAVEL DISTANCE. TWO EXITS OR EXIT ACCESS DOORWAYS FROM ANY SPACE SHALL BE PROVIDED WHERE THE DESIGN OCCUPANT LOAD OR THE COMMON PATH OF EGRESS TRAVEL DISTANCE EXCEEDS THE VALUES LISTED IN TABLE 1006.2.1. (See Egress plan for common path of egress compliance.)

CHAPTER 11 - ACCESSIBILITY - Accessible entrances, parking, and routes to the building are required and have been provided. Accessible toilets are required and have been provided.

CHAPTER 12 - INTERIOR ENVIRONMENT

1210.1 - FLOORS AND WALL BASE MATERIALS - IN OTHER THAN DWELLING UNITS, TOILET, BATHING AND SHOWER ROOM FLOOR FINISH MATERIALS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE. (This project meets the requirements of this section.)
1210.2 - WALLS AND PARTITIONS - WALLS AND PARTITIONS WITHIN 2 FEET OF SERVICE SINKS, URINALS AND WATER CLOSETS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE TO A HEIGHT OF NOT LESS THAN 4 FEET. (This project meets the requirements of this section.)

2018 NATIONAL STANDARD PLUMBING CODE

CHAPTER 7 - PLUMBING FIXTURES FIXTURE FITTINGS AND PLUMBING APPLIANCES

7.21.4 - SEPARATE FACILITIES. a. SEPARATE TOILET FACILITIES SHALL BE PROVIDED FOR EACH SEX.

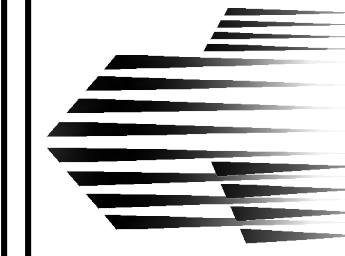
EXCEPTIONS:
(3) IN BUSINESS OCCUPANCIES WITH A TOTAL FLOOR AREA OF 1500 SQUARE FEET OR LESS, ONE TOILET FACILITY, DESIGNED FOR USE BY NO MORE THAN ONE PERSON AT A TIME, SHALL SATISFY THE REQUIREMENTS FOR SERVING CUSTOMERS AND EMPLOYEES OF BOTH SEXES. (This project meets the requirements and cited exception for this section.)

7.21.1 - NUMBER OF FIXTURES. SEE EXCERPT FROM TABLE 7.21.1 BELOW

OCCUPANT LOAD	OCCUPANCY B	WATER CLOSETS		LAVATORIES		DRINKING FOUNTAIN	SERVICE SINK
		MALE	FEMALE	MALE	FEMALE		
26 OCC (13 male) (13 female)	REQUIRED	1 REQ'D	1 REQ'D	1 REQ'D	1 REQ'D	0 REQ'D	1
	PROVIDED	1 (shared)	1 (shared)	1 (shared)	1 (shared)	0	1

7.21.8 - FOOD SERVICE ESTABLISHMENTS. c. DRINKING WATER FACILITIES SHALL NOT BE REQUIRED IN RESTAURANTS OR OTHER FOOD SERVICE ESTABLISHMENTS IF DRINKING WATER SERVICE IS PROVIDED OR AVAILABLE UPON REQUEST.

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CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND PROMPTLY REPORT ANY ERRORS TO LARRY E. SAYLOR.

DATE: 05.01.20
DRAWN BY: KSH
CHECKED BY: LES
PROJECT #: 20011

#	REVISIONS:	DATE:
1		
2		
3		
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5		

PROPOSED FIT OUT FOR:
DUCK DONUTS
556 ROUTE 17 NORTH
PARAMUS, NJ 07652

COVER AND CODE INFORMATION

GO.01

ABBREVIATIONS

THIS ABBREVIATION LIST IS A STANDARD AND NOT ALL ABBREVIATIONS ARE NECESSARILY USED ON THIS PROJECT

A/C	AIR CONDITIONING	CO	CLEANOUT	EXT	EXTERIOR	L	LENGTH, LONG	PG	PLATE GLASS	SSM	SOLID SURFACE MATERIAL
AB	ANCHOR BOLT	COL	COLUMN	FA	FIRE ALARM	LAB	LABORATORY	PL	PLATE; PROPERTY LINE	STD	STANDARD
AC	ACOUSTICAL	CONC	CONCRETE	FB	FACE BRICK	LAM	LAMINATE(D)	PLAM	PLASTIC LAMINATE	STL	STEEL
ACT	ACOUSTICAL CEILING TILE	CONST	CONSTRUCTION	FD	FLOOR DRAIN	LBL	LABEL	PLAS	PLASTER	STR	STRUCTURAL
ACC	ACCESS	CONT	CONTINUOUS OR CONTINUE	FE	FIRE EXTINGUISHER	LL	LIVE LOAD	PLF	POUNDS/LINEAR FOOT	SUS	SUSPENDED
ADH	ADHESIVE	CONTR	CONTRACT(OR)	FEC	FIRE EXTINGUISHER CABINET	LINTEL	LINTEL	P	PAINT	T&G	TONGUE AND GROOVE
ADJ	ADJACENT JOINT	CPT	CARPET	FHS	FIRE HOSE STATION	LVR	LOUVER	PROJ	PROJECT	T	TREAD
AFF	ABOVE FINISHED FLOOR	CSMT	CASEMENT	FIN	FINISH(ED)	MAS	MASONRY	PSF	POUNDS/SQUARE FOOT	TB	TEST BORING
ALT	ALTERNATE	CST	CAST STONE	FLG	FLASHING	MAX	MAXIMUM	PSI	POUNDS/SQUARE INCH	TEL	TELEPHONE
ALUM	ALUMINUM	CT	CERAMIC TILE	FLR	FLOOR(ING)	MECH	MECHANIC(AL)	PT	POINT	TG	TEMPERED GLASS
ANC	ANCHOR, ANCHORAGE	CTR	COUNTER	FND	FOUNDATION	MET	METAL	PTD	PAPER TOWEL DISPENSER	THK	THICKNESS
ANOD	ANODIZED	CYD	CUBIC YARD	FR	FRAME(D), (ING)	MFR	MANUFACTURE (ER)	PTN	PARTITION	THR	THRESHOLD
AP	ACCESS PANEL	DBL	DOUBLE	FT	FOOT (FEET)	MH	MANHOLE	PVC	POLYVINYL CHLORIDE	TOS	TOP OF STEEL
APC	ACOUSTICAL PANEL CEILING	DF	DRINKING FOUNTAIN	FTG	FOOTING	MIL	MILLIMETER	PWD	PLYWOOD	TPD	TOILET PAPER DISPENSER
ARCH	ARCHITECT (URAL)	DIA	DIAMETER	FUR	FURRED (ING)	MIN	MINIMUM	QT	QUARRY TILE	TPTN	TOILET PARTITION
AUTO	AUTOMATIC	DIM	DIMENSION	GA	GAGE, GAUGE	MIR	MIRROR	R	RADIUS, RISER	TSL	TOP OF SLAB
BD	BOARD	DIV	DIVISION	GB	GRAB BAR	MISC	MISCELLANEOUS	RCP	REINFORCED CONCRETE PIPE	TV	TELEVISION
BLDG	BUILDING	DL	DEAD LOAD	GC	GENERAL CONTRACT(OR)	MO	MOLDING, MOULDING	RD	ROOF DRAIN	TYP	TYPICAL
BLK	BLOCK(ING)	DMT	DEMOUNTABLE	GD	GRADE, GRADING	MRD	MEAL ROOF DECKING	RE	REINFORCE(D), (ING)	UC	UNDERCUT
BM	BENCH MARK	DP	DAMP/PROOFING	GL	GLASS, GLAZING	MT	METAL THRESHOLD	REF	REFERENCE	VERT	VERTICAL
BP	BEARING PLATE	DR	DOOR	GVL	GRAVEL	OWSJ	OPEN-WEB STEEL JOIST	REM	REMOVE	VB	VAPOR BARRIER
BRG	BEARING	D5	DOWNSPOUT	GWB	GYP/SUM WALL BOARD	PC	PLUMBING CONTRACT(OR)	RES	RESILIENT	VCB	VINYL COVE BASE
BRK	BRICK	DTL	DETAIL	GYP	GYP/SUM	PCC	PRECAST CONCRETE	RFG	ROOFING	VCT	VINYL COMPOSITION
B5MT	BASEMENT	DWG	DRAWING	HCP	HANDICAPPED ACCESSIBLE	PCF	POUNDS/CUBIC FOOT	RL	RAIL(ING)	VJ	V-JOINT(ED)
BUR	BUILT-UP ROOFING	E	EAST	HC	HEATING CONTRACT(OR)	PERF	PERFORATE(D)	RM	ROOM	W	WITH
BW	BOTH WAYS	EC	ELECTRICAL CONTRACT(OR)	HCP	HANDICAPPED ACCESSIBLE	NOM	NOMINAL	RO	ROUGH OPENING	W/O	WITHOUT
CB	CATCH BASIN	EF	EACH FACE	HDW	HARDWARE	NRC	NOISE REDUCTION COEFFICIENT	ROW	RIGHT OF WAY	WC	WATER CLOSET
CFL	COUNTERFLASHING	EIFS	EXTERIOR INSULATION FINISH SYSTEM	HM	HOLLOW METAL	NTS	NOT TO SCALE	RWC	RAINWATER CONDUCTOR	WD	WOOD
CFT	CUBIC FOOT	EJ	EXPANSION JOINT	HORZ	HORIZONTAL	OC	ON CENTER(S)	S	SOUTH	WG	WIRE GLASS
CH	CEILING HEIGHT	ELEC	ELECTRIC(AL)	HTG	HEATING	OD	OUTSIDE DIAMETER	5CH	SCHEDULE	WP	WATERPROOFING
CI	CAST IRON	ELEV	ELEVATOR/ELEVATION	HVAC	HEATING/VENTILATION/AIR CONDITIONING	OPG	OPENING	5D	STORMDRAIN	WSCT	WAINSCOT
CIP	CAST-IN-PLACE CONCRETE	EMER	EMERGENCY	HWD	HARDWOOD	OSB	ORIENTED STRAND BOARD	SEC	SECTION	WWF	WELDED WIRE FABRIC
CJ	CONTROL (CONST.) JOINT	EPDM	MEMBRANE RUBBER ROOFING	ID	INSIDE DIAMETER	OWSJ	OPEN-WEB STEEL JOIST	5F	SQUARE FOOT (FEET)		
CK	CAULK(ING)	EQ	EQUAL	INCL	INCLUDE(D), (ING)	PC	PLUMBING CONTRACT(OR)	5FGL	SAFETY GLASS		
CL	CENTERLINE	EW	EACH WAY	INSL	INSULATE(D), (ION)	PCC	PRECAST CONCRETE	5HTH	SHEATHING		
CLG	CEILING	EW	ELECTRIC WATER COOLER	INT	INTERIOR	PCF	POUNDS/CUBIC FOOT	5NT	SEALANT		
CLR	CLEAR(ANCE)	EXH	EXHAUST	INV	INVERT	PERF	PERFORATE(D)	5PEC	SPECIFICATION (S)		
CMF	CORRUGATED METAL PIPE	EX,EXIST	EXISTING	JC	JANITOR'S CLOSET	PERI	PERIMETER	5Q	SQUARE		
CMU	CONCRETE MASONRY UNIT	EXP	EXPOSED; EXPANSION	JT	JOINT	PFB	PREFABRICATE(D)	5S	STAINLESS STEEL		

MATERIALS

	EARTH, COMPACT FILL
	CONCRETE
	CRUSHED STONE
	CONC. MASONRY UNITS
	FACE MASONRY UNITS
	GROUT/ SEALANT/ SAND/ GYP BD
	WOOD BLOCKING
	FINISH WOOD
	PLYWOOD
	RIGID INSULATION
	BATT INSULATION
	STEEL

SYMBOLS

	SECTION NO. / REFERENCE SHEET NO.
	DETAIL NO. / REFERENCE SHEET NO. / DETAILED AREA
	ELEVATION DESIGNATION / REFERENCE SHEET NO. / INTERIOR ELEVATION MARKER
	ROOM TAG
	WINDOW TAG
	EQUIPMENT TAG
	SHEET KEYNOTE
	DEMOLITION KEYNOTE
	REVISION TAG
	WALL/PARTITION TYPE TAG
	DOOR TAG
	REVISION CLOUD
	SPOT ELEVATION
	EXISTING SPOT ELEVATION (PLAN)
	COLUMN REFERENCE GRID
	LEVEL LINE
	FLOOR LINE
	MAIN LEVEL
	LEVEL LINE
	NEW OR REQUIRED SPOT ELEVATION

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DATE: 05.01.20
 DRAWN BY: KSH
 CHECKED BY: LES
 PROJECT #: 20011

ADA DETAILS & STANDARDS

STANDARDS ARE EXCERPTS AMERICAN NATIONAL STANDARDS/ANSI A117.1-2009

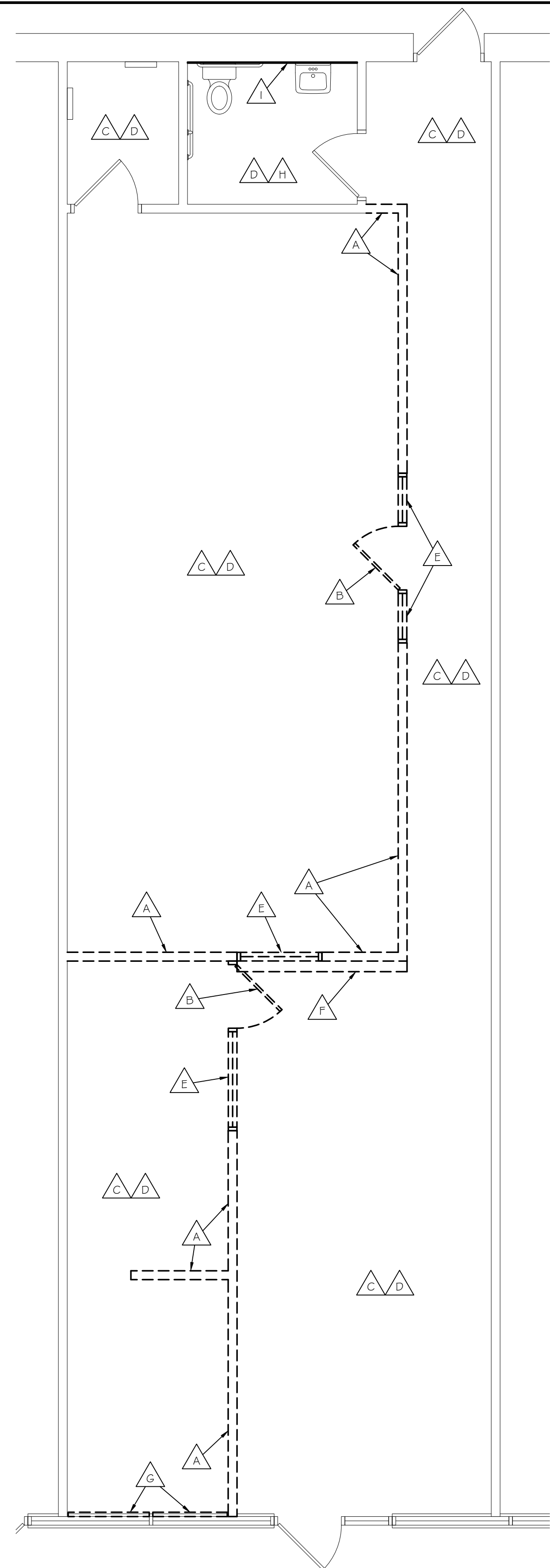
FIRE EXTINGUISHER: MOUNTING HEIGHT	DIMENSIONS OF ADULT-SIZED WHEELCHAIR	DIMENSIONS OF ADULT-SIZED WHEELCHAIR	WHEELCHAIR TURNING SPACE	PARALLEL APPROACH	FORWARD APPROACH	CLEAR WIDTH OF ACCESSIBLE ROUTE	DOORS AND GATES IN SERIES	SIGNAGE: TOILET (ADAPT TO GENDER)	EXIT SIGN - POST AT ALL EXITS
WALKING PARALLEL TO A WALL	FRONT APPROACH-SWINGING DOOR	FRONT APPROACH-SWINGING DOOR	HINGE SIDE APPROACH-SWINGING DOOR	HINGE SIDE APPROACH-SWINGING DOOR	LATCH APPROACH-SWINGING DOOR	LATCH APPROACH-SWINGING DOOR	FRONT APPROACH-SLIDING, FOLDING & NO DOOR	POCKET OR HINGE SIDE APPROACH-SLIDING, FOLDING & NO DOOR	STOP OR LATCH SIDE APPROACH-SLIDING, FOLDING & NO DOOR
STANDARD TOILET STALL	TYPE 'B' DWELLING UNITS/SLEEPING UNITS CLEAR FLOOR SPACE @ WATER CLOSETS	CLEAR FLOOR SPACE @ WATER CLOSETS	PROTRUDING AND RECESSED DISPENSER OUTLET LOCATION	SIDE WALL GRAB BARS	REAR WALL GRAB BARS	PAPER TOWEL DISPENSER AND DISPOSAL	MIRROR	TOE AND KNEE CLEARANCES	TOE AND KNEE FLOOR SPACE CLEARANCE
TRANSFER SHOWER	STANDARD ROLL-IN SHOWER	CONTROLS AND HAND SHOWER LOCATION	DRINKING FOUNTAIN	ALCOVE CLEAR FLOOR SPACE	CONTROLS: MOUNTING HEIGHTS	RAMP	ACCESSIBLE PARKING SPACE	ACCESSIBLE PARKING SPACE	ACCESSIBLE PARKING SPACE

DATE:	05.01.20
DRAWN BY:	KSH
CHECKED BY:	LES
PROJECT #:	20011
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REVISIONS:	
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PROPOSED FIT OUT FOR:
DUCK DONUTS
 566 ROUTE 17 NORTH
 PARAMUS, NJ 07652

GENERAL AND INFORMATION AND ACCESSIBILITY REQUIREMENTS

GO.02



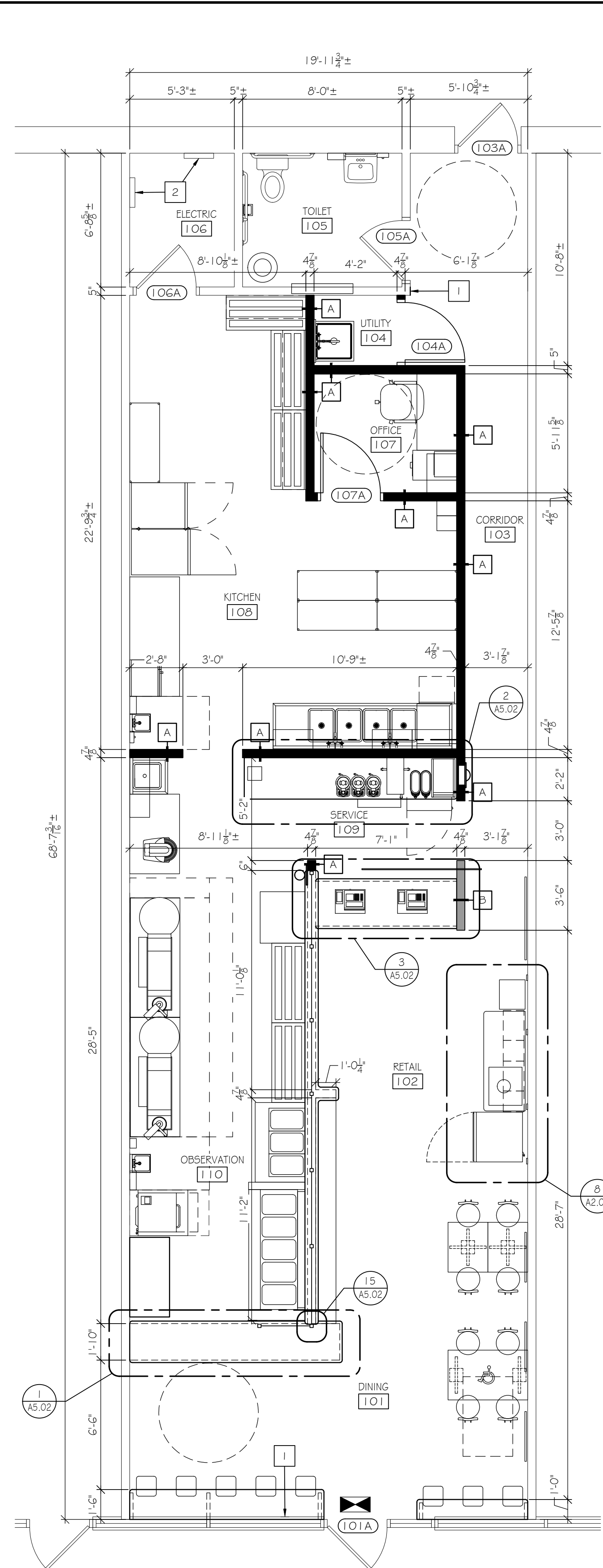
DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

DEMOLITION KEYNOTES:

- A REMOVE WALL FLOOR TO CEILING.
- B REMOVE DOOR, FRAME AND HARDWARE.
- C REMOVE FINISH FLOORING AND BASE.
- D REMOVE APC TILE AND GRID, LIGHTS AND HVAC DIFFUSERS.
- E REMOVE SIDELITES AND BORROWED LITES.
- F REMOVE BULKHEAD.
- G REMOVE WINDOW TREATMENT.
- H EXISTING FLOORING TO REMAIN. CLEAN AND WAX FLOOR TO LIKE NEW CONDITION.
- I REMOVE MIRROR AND REPAIR WALL AS NEEDED.

DEMOLITION PLAN NOTES:

1. INSPECT CONDITIONS ABOVE ACOUSTIC CEILING TILE IN NEW FRONT OF HOUSE LOCATION. IF CONDITIONS ARE ACCEPTABLE FOR AN OPEN CEILING, THEN PROCEED WITH DEMOLITION. IF WIRING IS NOT SECURED AND NOT IN CONDUIT, REMOVE AND REPLACE AND INSTALL IN CONDUIT. CONNECT ANY LOOSE BRACING, CLEAN AND PREPARE SURFACES ABOVE ACOUSTIC CEILING TILE FOR PAINT. IF CONDITIONS ARE NOT ACCEPTABLE FOR AN OPEN CEILING, NOTIFY THE ARCHITECT AND PROJECT MANAGER.
2. INSPECT CONDITIONS OF CT WALLS IN TOILET ROOM. IF TOILET TISSUE DISPENSER CAN BE INSTALLED AT LOCATION OF EXISTING HOLES TO MEET ADA REQUIREMENTS, THEN PROCEED WITH INSTALLATION AND CLEAN WALL TILE TO LIKE NEW CONDITION. IF HOLES CANNOT BE COVERED BY TOILET TISSUE DISPENSER, REMOVE TILE ON ALL WALLS AND REPLACE WITH FRP.

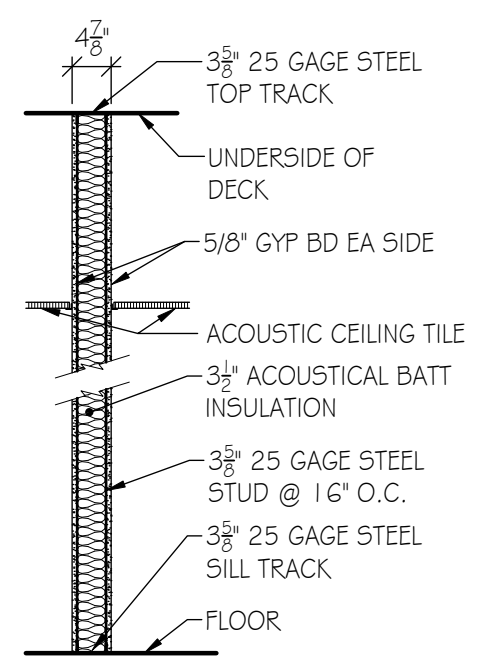


FLOOR PLAN
SCALE: 1/4" = 1'-0"

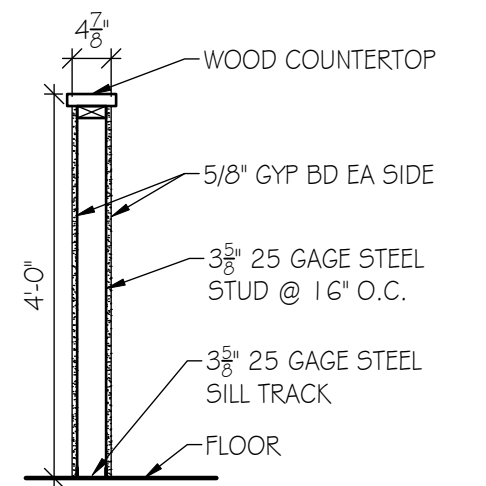
FLOOR PLAN KEYNOTES:

- 1 PATCH GYP BD AND FINISH PER ROOM FINISH SCHEDULE.
- 2 EXISTING ELECTRICAL PANELS TO REMAIN.

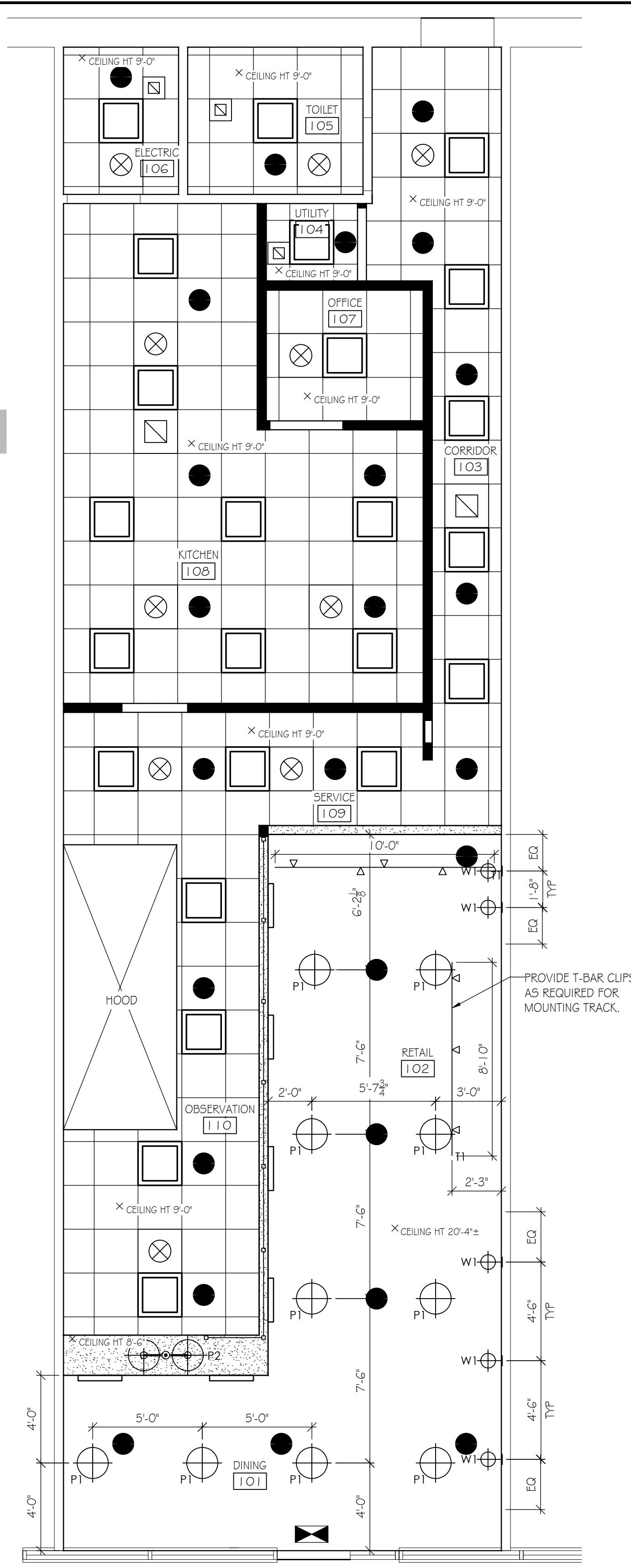
TYPICAL WALL TYPES



WALL TYPE A



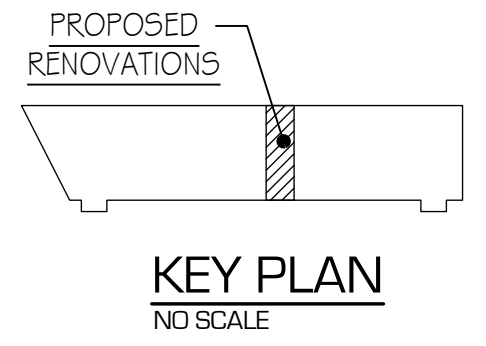
WALL TYPE B



REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

REFLECTED CEILING PLAN NOTES:

1. CEILINGS IN FRONT OF HOUSE TO BE EXPOSED. SEE FINISH SCHEDULE.
2. CEILINGS IN BACK OF HOUSE TO BE 9'-0" MINIMUM. COORDINATE HEIGHT WITH CONTRACTOR TO ACCOMMODATE MECHANICAL EQUIPMENT.
3. GYP BD BULKHEADS TO BE 8'-6".
4. PICK UP COUNTER AND US SOFFIT AREAS WHERE THERE IS A GYP BD CEILING, PAINT P-2, TYP.
5. UNDERSIDE OF SHADE ON P1 PENDANT LIGHTS TO BE MOUNTED AT 10'-0" AFF.
6. T1 TRACK LIGHTING MOUNTING HEIGHT (W/S TRACK): 10'-0" AT COFFEE/MERCHANDISE, 12'-0" AT MENU BOARD SOFFIT. PROVIDE T-BAR CLIPS AS REQUIRED FOR MOUNTING TRACK ON GRID.
7. CENTERLINE OF CANOPY ON W1 WALL SCONCE TO BE MOUNTED AT 9'-8 1/2" AFF., TYP.
8. DUCK DONUTS NATIONAL LIGHT FIXTURE VENDOR IS P5GI. CONTACT IS ADRIAN BORROWS duckdonuts@p5gi.com
9. EXISTING SPRINKLER HEADS ARE 12'-8 1/2" AFF. ADJUST LOCATION AND HT AS REQUIRED FOR NEW LAYOUT.



KEY PLAN
NO SCALE

GENERAL NOTES:

1. ALL INTERIOR DIMENSIONS ARE GIVEN TO FACE OF FINISHED WALL SURFACE UNLESS NOTED OTHERWISE.
2. SEE WALL TYPE LEGEND FOR WALL CONSTRUCTION.
3. SEE SHEET GO.02 FOR ADA REQUIREMENTS. REPORT ANY CONFLICTS BETWEEN THE DETAILS ON SHEET GO.02 AND THE INFORMATION ON THIS SHEET (FOUND PRIOR TO OR DURING WORK) TO THE ARCHITECT.
4. EXISTING BUILDING INFORMATION SHOWN WITHIN THE ENTIRETY OF THESE CONTRACT DOCUMENTS IS BASED ON FIELD SURVEY PERFORMED BY TKS ARCHITECTS FEBRUARY 2020, EXISTING DRAWINGS PROVIDED BY FRANCHISEE, AND PHOTOGRAPHIC REFERENCES. FROM INVESTIGATIONS AND FIELD SURVEYS, LOCATIONS AND THE NATURE OF PHYSICAL CONDITIONS, UTILITIES, MATERIALS, ETC., CAN ONLY BE VIEWED AS APPROXIMATE AND THEREFORE IT IS THE CONTRACTOR'S RESPONSIBILITY AND PART OF THE SCOPE OF WORK TO FIELD VERIFY EXISTING CONDITIONS AND ALL DIMENSIONS PRIOR TO ORDERING MATERIALS AND PROCEEDING WITH WORK, AND TO IMMEDIATELY REPORT ANY INCONSISTENCIES (FOUND PRIOR TO OR DURING WORK) TO THE ARCHITECT.
5. PROPOSED BUILDING INFORMATION SHOWN WITHIN THE ENTIRETY OF THESE CONTRACT DOCUMENTS IS TO BE VIEWED ONLY AS ACCURATE WITHIN THE LIMITS OF CURRENT DESIGN TECHNOLOGY, AND THEREFORE IT IS THE CONTRACTOR'S RESPONSIBILITY AND PART OF THE SCOPE OF WORK TO VERIFY CONSTRUCTIBILITY OF PROPOSED WORK AND ALL DIMENSIONS PRIOR TO ORDERING MATERIALS AND PROCEEDING WITH WORK, AND TO IMMEDIATELY REPORT ANY INCONSISTENCIES (FOUND PRIOR TO OR DURING WORK) TO THE ARCHITECT.
6. ALL INTERIOR WALLS ARE CONSTRUCTED OF 3 5/8" 20 GA METAL STUD UNLESS NOTED OTHERWISE.
7. SEE SHEET A1.02 FOR EQUIPMENT PLAN AND SCHEDULE.

LEGEND:

- EXISTING CONSTRUCTION TO REMAIN
- NEW CONSTRUCTION
- EXISTING DOOR (HALF-OPEN)
- NEW DOOR (FULL OPEN)
- RECESSED FIRE EXTINGUISHER CABINET AND FIRE EXTINGUISHER
- SURFACE MOUNTED FIRE EXTINGUISHER
- SURFACE-MOUNTED FIRE EXTINGUISHER CABINET AND FIRE EXTINGUISHER

CEILING SYMBOL LEGEND:

- GYP BD BULKHEAD, PAINTED P2
- EXP, EXPOSED CEILING
- SUSPENDED ACOUSTICAL CEILING (2X2)
- 2x2 RECESSED FOOD SAFE DOWNLIGHT
- EXIT LIGHTS
- SPRINKLER HEAD
- HVAC SUPPLY AND RETURNS
- PENDANT
- PENDANT
- WALL SCONCE
- SUSPENDED TRACK LIGHTING
- EXHAUST GRILL

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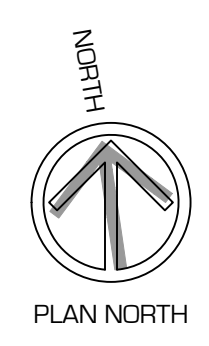
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PROPOSED FIT OUT FOR:
DUCK DONUTS
556 ROUTE 17 NORTH
PARAMUS, NJ 07652

DEMOLITION PLAN,
FLOOR PLAN &
REFLECTED CEILING
PLAN

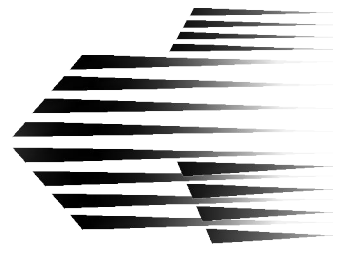
A1.01



PLAN NORTH

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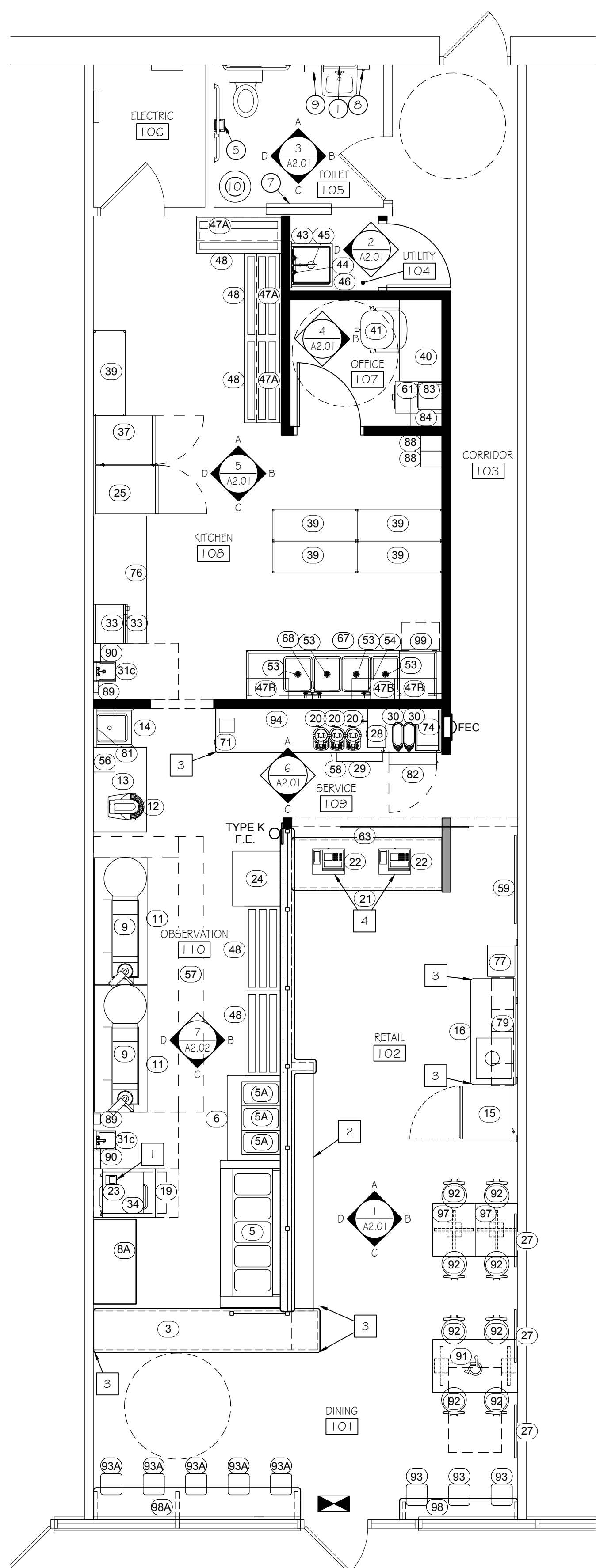
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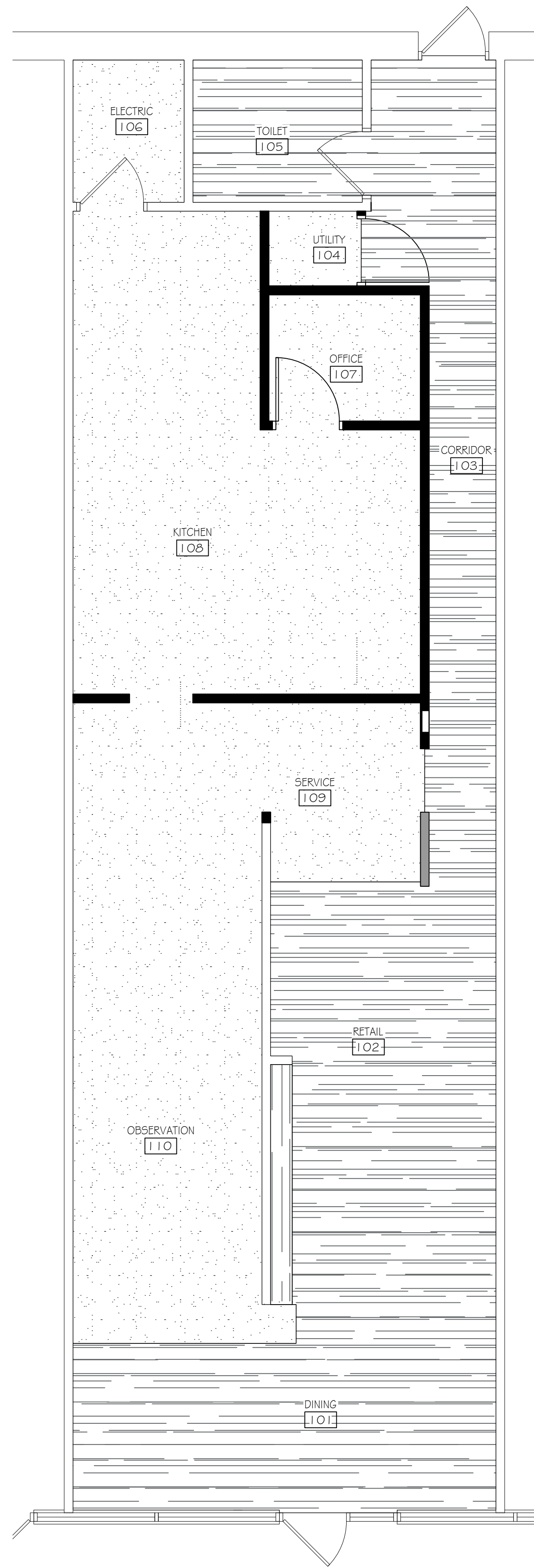
EQUIPMENT PLAN &
SCHEDULE

A1.02





EQUIPMENT PLAN
SCALE: 1/4" = 1'-0"

#	Qty.	Description	Manufacturer	Model	Width	Depth	Height	Color	Power	Amps	Watts	Motor HP	Dedicated Breaker	Dedicated Circuit	Plug Config	Gas	Water	Drain	Supplied By	Installed By	Comments	
3	1	CUSTOM COUNTER	SEE DETAILS		128"	25"	34"												GC	GC	SEE SHEET A5.02 FOR CABINET DETAILS	
4	0	WORK TABLE	ADVANCE TABCO	FMS-304	48"	30"	37"												KEP	KEP		
5	1	5 WELL STEAM TABLE	DUKE	EP305SW	72 3/8"	30"	34"		208V/60/1-PH	18.0	3750			Yes	NEMA L6-30				KEP	KEP	INCLUDE 3 SINGLE-TIER SPEED RAILS BY EAGLE GROUP. (2) 34" & (1) 70"	
5A	3	COUNTER TOP WARMING UNIT	VOLLRATH, CAYENNE	1001 WARMERS	13 3/4"	21 3/4"	9"		120V	5.8	700			Yes	NEMA 5-15P				KEP	KEP		
6	1	EQUIPMENT STAND	ADVANCE TABCO	ES-LS-304-X	48"	30"	24"												KEP	KEP		
8A	1	WORK CENTER	EAGLE GROUP	T2448	48"	24"	33 1/2"												KEP	KEP	SS W/ UNDERSHELVES (SD-C) & CASTERS	
8B	0	SS WALL SHELF	ADVANCE TABCO	WS-12-72	72"	12"	1 1/2"												KEP	KEP	SATIN FINISH SS	
9	2	DOUGHNUT MAKER	BELSHAW	MARK V WITH ROTO COOLER	52"	20"	24"		208-240/50-60/3	25	9100	30	Yes						BELSHAW	DDFC	PROVIDE SHUNT TRIP BREAKER TIED TO HOOD AS REQ'D	
10	0	DOUGHNUT MAKER	BELSHAW	MARK II WITH ROTO COOLER	41"	20"	24"		208-240/50-60/3	15	5800	20	Yes						BELSHAW	DDFC	PROVIDE SHUNT TRIP BREAKER TIED TO HOOD AS REQ'D	
11	2	SS EQUIPMENT STAND W/ CASTERS	ADVANCE TABCO	TFMS-306 TA-255	72"	30"	24"												KEP	KEP		
12	1	MIXER 10 QT	GLOBE	SP10	14 1/8"	20 1/4"	32 1/16"		115/60/1			1/3	Yes						KEP	KEP	WITH EXTRA BOWL	
13	1	WORK TABLE	REGENCY	600W730X48BS	48"	30"	34"												KEP	KEP		
14	1	SS SINK 1-COMP. SINK W/O DRAINBOARDS	REGENCY	600S11717G	22"	22 7/8"	44 3/4"										3/4"	1 1/2"	KEP	KEP*	PROVIDE MIXING VALVE MANUALLY SET FOR 90 DEG. WATER	
15	1	REFRIGERATOR SINGLE GLASS DOOR	BY DRINK SUPPLIER		30"	30"	78 5/8"												COCA-COLA	COCA-COLA		
16	1	COFFEE COUNTER	SEE DETAILS		60"	25 3/4"	34"							Yes					GC	GC	SEE SHEET A5.02 FOR CABINET DETAILS	
19	1	UNDERCOUNTER REFRIGERATOR	TURBO AIR	TUR-28SD-D2-N	27 1/2"	30"	30 5/8"		115/60/1	2.2					NEMA 5-15P				KEP	KEP		
20	4	COFFEE URN, 1.5 GAL. TF SRVR W/ BASE	BUNN	DSG SST 42750.0000	9 1/3"	13"	22 3/4"	STAINLESS											BUNN	BUNN		
21	1	CUSTOM CHECKOUT COUNTER	SEE DETAILS		85"	30"	34"												GC	GC	SEE SHEET A5.02 FOR CABINET DETAILS. PROVIDE HOLES FOR P.O.S.	
22	2	ALL IN ONE COMPUTER WITH 15" MONITORS	SAM4'S	ER350 W/ 57	15 3/4"	17 3/4"	10"		10	1100			Yes						DREXEL	DREXEL	PROVIDE HOLES IN COUNTER FOR ELECTRICAL WIRES	
23	1	POS REMOTE PRINTER	SAM4'S	ELLIX 20	5"	6"	5"		10				Yes						DREXEL	DREXEL		
24	1	ICE CREAM FREEZER	MB MASTER BUILT	COLDIN-3 SERIES, MSF-31AN	31"	27"	33"		115	1.1		1/3	Yes	NEMA 5-15P					KEP	KEP	2 BASKETS	
25	1	REFRIGERATOR 1-DOOR REACH-IN	HOSHIZAKI	CR1S-FS	27 1/2"	34"	79 1/2"		115/60/1	4		1/5	Yes	NEMA 5-15P					KEP	KEP	4" CASTERS	
26	0	COFFEE/TEA MAKER (DOUBLE BREWER)	BUNN	DUAL TF DBC 34800.0003	21 4/5"	20 1/5"	35 7/10"		240/60/1	27.5	6600			Yes					BUNN	BUNN	PROVIDE HOLE IN COUNTER FOR WATER TUBE	
27	3	BRANDING BOARD	BUNN	CB-DV, TALL 120V, 53100.010	10 1/4"	22"	35"	STAINLESS	120/240	17	4050		Yes	NEMA 5-15P			1/2"		BUNN	BUNN	PROVIDE HOLE IN COUNTER FOR WATER TUBE	
28	1	SINGLE COFFEE BREWER	MANITOWOC	LY-0140A	28"	28"	38 1/2"		115/60/1	5			Yes	NEMA 5-15P			3/8" 1/2"		BUNN	BUNN		
30	2	COLD BREWER	BUNN	TDO-N-3.5 DISPENSER 39600.0000	16 1/4"	16 3/4"	21 7/8"	STAINLESS											BUNN	BUNN		
31C	2	HAND SINK WITH SPLASH ON BOTH SIDES	KLINGER'S TRADING	KTI SSPHS-1000-11	11"	13"	11 1/4"											1/2"	1 1/2"	KEP	KEP*	
32	0	REFRIGERATED COUNTER-TOP PREP UNIT	ARCTIC AIR	ACP40	39 1/2"	15 1/2"	11"												KEP	KEP		
33	2	ICING MICROWAVE	AMANA	RCS10DSE	22"	19"	14"		120/60/1		1000		Yes	NEMA 6-30P					KEP	KEP		
34	1	SANDWICH OVEN	MERRYCHEF	EIKON e3	23 1/2"	24 1/2"	21 3/4"		208/240	30	4700		Yes						KEP	KEP		
35	0	MICROWAVE SHELF	ADVANCE TABCO	MS-24-24-EC-X	24"	24"	11 1/2"												KEP	KEP		
36	0	SANDWICH MICROWAVE	AMANA	RCS10TS	22"	17 1/4"	13 3/4"		120/60/1	13	1550		Yes						KEP	KEP		
37	1	FREEZER 1-DOOR REACH-IN	HOSHIZAKI	CF1S-FS	27 1/2"	33 3/4"	79 3/4"		115/60/1	9		1/2	Yes	NEMA 5-15P					KEP	KEP	4" CASTERS	
39	5	METAL WIRE SHELVING	CENTAUR	C1848C	48"	18"	74 5/8"	CHROME											KEP	KEP		
40	1	DESK	HON	HON34002RZP	46"	24"	30"	WALNUT/BLACK											OWNER	GC		
41	1	DESK CHAIR	STAPLES ISLIE	Z2650R	23 4/5"	25 3/5"	37"	BLACK											OWNER	GC	MAY USE ALTERNATE	
43	1	MOP SINK	ZURN	Z1996-24	24"	24"	10"											3/4"	3"	GC	GC	
44	1	MOP SINK FAUCET	ZURN	Z1996-SF																GC	GC	
45	1	MOP SINK HOSE AND BRACKET	ZURN	HH-2436	0"	9 3/8"	0"													GC	GC	
46	1	MOP HANGER	ZURN	Z1996-MH	28"	1"	3"													GC	GC	
47A	3	POST-TYPE AND DIRECT WALL MOUNTS	CENTAUR	C1448K	48"	14"		GREEN EPOXY											KEP	KEP		
47B	3	POST-TYPE AND DIRECT WALL MOUNTS	CENTAUR	C1424K	24"	14"		GREEN EPOXY											KEP	KEP		
48	5	DUNAGE RACK SLOTTED	CHANNEL	ADE2048	48"	20"	11"												KEP	KEP		
50	0	REFRIGERATOR 2-DOOR REACH-IN	SATURN	S49R	54 1/2"	31"	83"		115/60/1	7		1/3	Yes						KEP	KEP		
52	0	SS SINK 3-BASIN WITH DRAINBOARDS	EAGLE GROUP	412-16-3-24L	80 3/8"	27 1/2"	34 1/2"												KEP	KEP*		
53	4	WASTE VALVE	T&S BRASS	B-3952															KEP	KEP*		
54	2	POT SINK FAUCET	T&S BRASS	B-3231-02															KEP	KEP*	8" WALL MOUNT, 12" SWING NOZZLE	
55	0	SS WALL SHELF	ADVANCE TABCO	WS-12-72	72"	12"	60"												KEP	KEP		
56	1	SS WALL SHELF	ADVANCE TABCO	WS-12-36	36"	12"	60"												KEP	KEP		
57	1	KITCHEN HOOD FOR OBSERVATION AREA	CAPTIVAIRE	NCA-FA, NCA-HPFA	144"	48"	24"							Yes					CAPTIVAIRE	GC		
58	1	ICE MACHINE WATER FILTER	3M	ICE120-S	4.5"	4.5"	17"												KEP	KEP*		
59	1	ANNOUNCEMENT BOARD			50"		48"												DDFC	GC		
61	1	FILE CABINET	STAPLES	I3447	18"	26 1/2"	28 3/8"												OWNER	GC		
63	1	MENU BOARD			72"	12"	42"												OWNER	GC	CUSTOM MADE BY GRAPHICS COMPANY	
65	0	SS WALL SHELF	ADVANCE TABCO	WS-12-48	48"	12"	60"												KEP	KEP		
67	1	SS SINK 4-BASIN WITH DRAINBOARDS	EAGLE GROUP	414-16-4-18	107 3/4"	27 1/2"	37 1/2"											1/2"	1 1/2"	CFSE	CFSE*	
68	1	HYDRO-FORCE PRE-RINSE UNIT	T&S BRASS	B-0133-ADF12-B															KEP	KEP*		
71	1	HI-POWER BLENDER	WARING COMMERCIAL XTREME	MX1000TXP	8 1/2"	8 1/4"	16"		120V, 50/60HZ	13			Yes						KEP	KEP		
72	0	COFFEE GRINDER	BUNN	GG-2T DBC 33700.0000	8"	18"	25"		120/60/1	9.4	1128		Yes						BUNN	BUNN		
74	1	ESPRESSO MACHINE	MIRA UNIC	MIRA HIGH PROFILE	14"	23"	26"						Yes					1/2"	1/2"	J GROSS CO	J GROSS CO	PROVIDE HOLE IN COUNTER FOR WATER TUBE
76	1	SS TABLE	ADVANCE TABCO	FMS-306	72"	30"	35 1/2"												KEP	KEP		
77	1	MERCHANDISE CRATES	WAYFAIR TRADE	VEGETABLE CRATE	17 3/4"	15 1/2"													OWNER	GC		
79	1	MERCHANDISE CRATES (ABOVE COFFEE)	WAYFAIR TRADE	LARGE CRATE	48"	12"	60"												KEP	KEP		
80	0	REACH-IN DOUBLE DOOR FREEZER	TRUE	T-49F	54 1/8"	29 1/2"	78 3/8"												KEP	KEP		
81	1	POT SINK FAUCET	REGENCY	600FW88LL	12"	11"	4 1/2"															



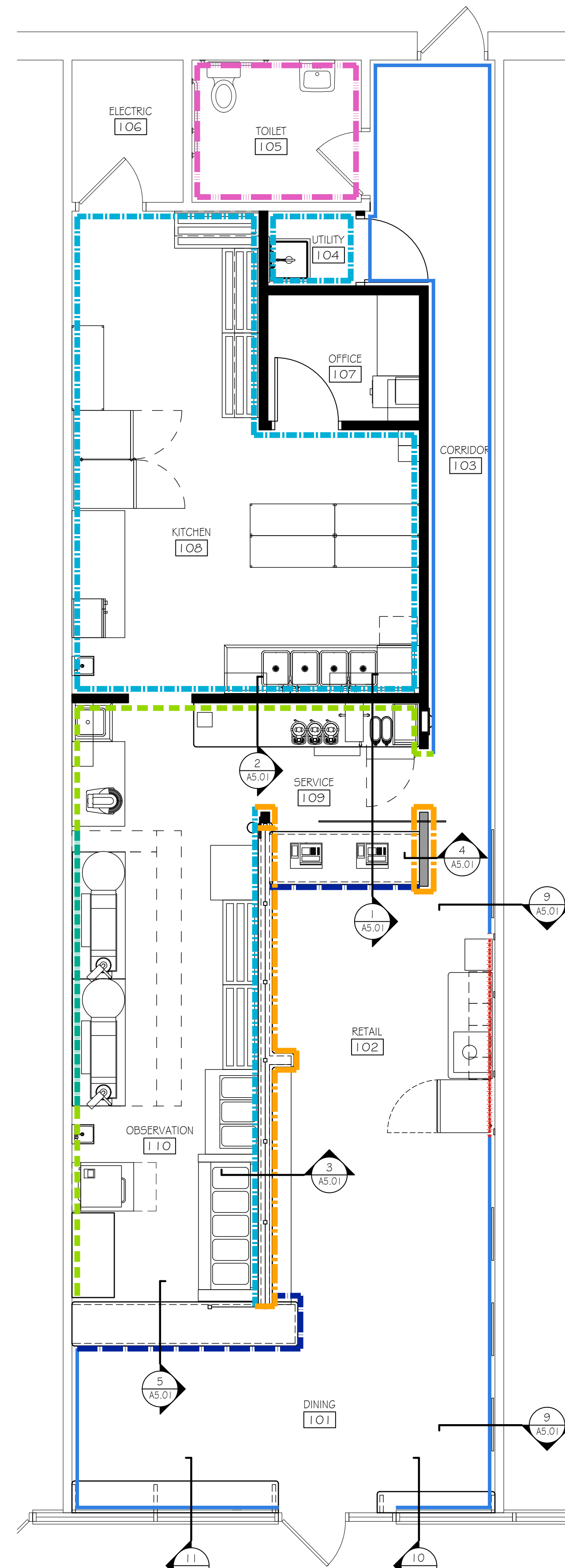
FLOORING PLAN
SCALE: 1/4" = 1'-0"

FLOORING LEGEND:

-  LVT-1 LINEAR VINYL TILE, PARTERRE VIA DONIA DESIGNS
COLOR - INGRAINED LANCASTER PATINA
TOTAL SQ FT = 596
-  EF-1 EPOXY FLOORING, FEATURE FLOORING, JETROCK
COLOR - MOUNTAIN SLATE, 3/16" THICKNESS
TOTAL SQ FT = 730









FLOORING PLAN NOTES:

1. FLOORING TRANSITION BETWEEN LVT-1 AND EF-1 TO BE TS-1. REFER TO COLOR LEGEND.



WALL FINISHES FLOOR PLAN
SCALE: 1/4" = 1'-0"

FINISHES SYMBOL LEGEND
(PRINT THIS SHEET IN COLOR):

-  BEADBOARD WAINSCOT, WP-1 WITH WP-5 TRIM
-  SCORED FIBERGLASS REINFORCED PLASTIC, FRP-2
-  FIBERGLASS REINFORCED PANELS, FRP-1
-  VINYL CLADDING, VC-1
-  SHAKE CLADDING, WP-3
-  NATURAL WOOD PLANKS, WP-4
-  STAINLESS STEEL BY OTHERS
-  FIBERGLASS REINFORCED PANEL WAINSCOT, FRP-3
INSTALL FRP-3 FROM FF TO 4'-0", PAINT GYP BD P-1
FROM 4'-0" TO CLG.

NOTE: SEE FINISH SCHEDULE FOR MORE INFORMATION.

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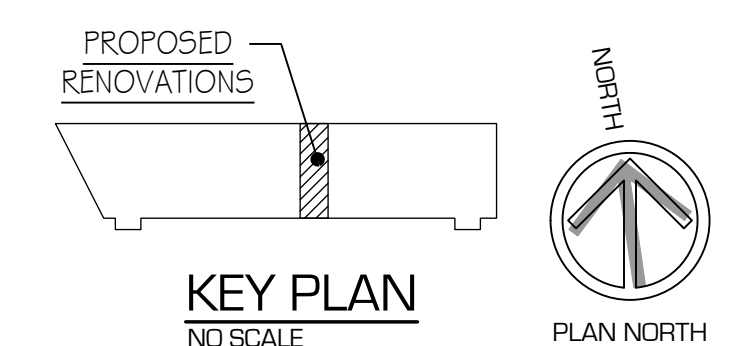
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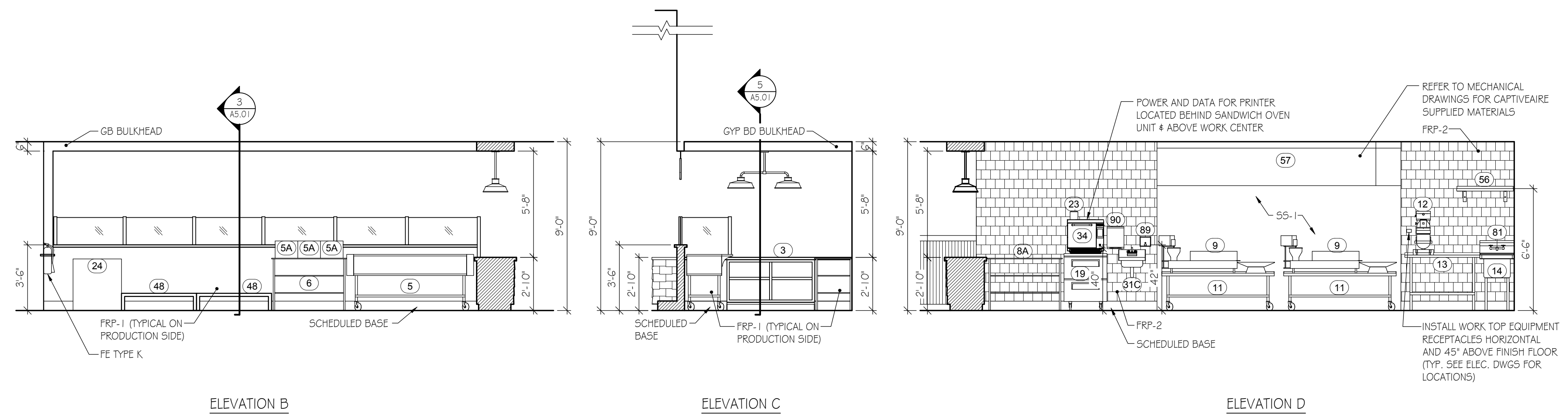
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PROPOSED FIT OUT FOR:
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PARAMUS, NJ 07652

FLOORING PLAN &
WALL FINISHES
FLOOR PLAN

A1.03



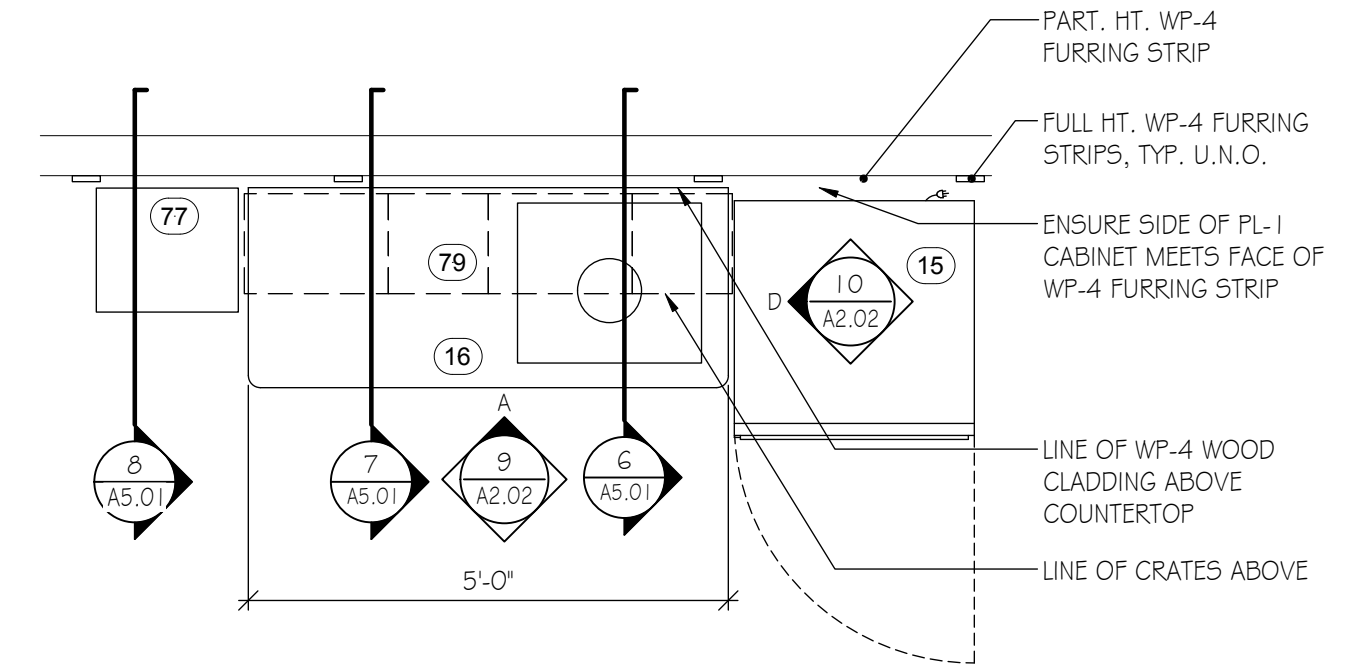


ELEVATION B

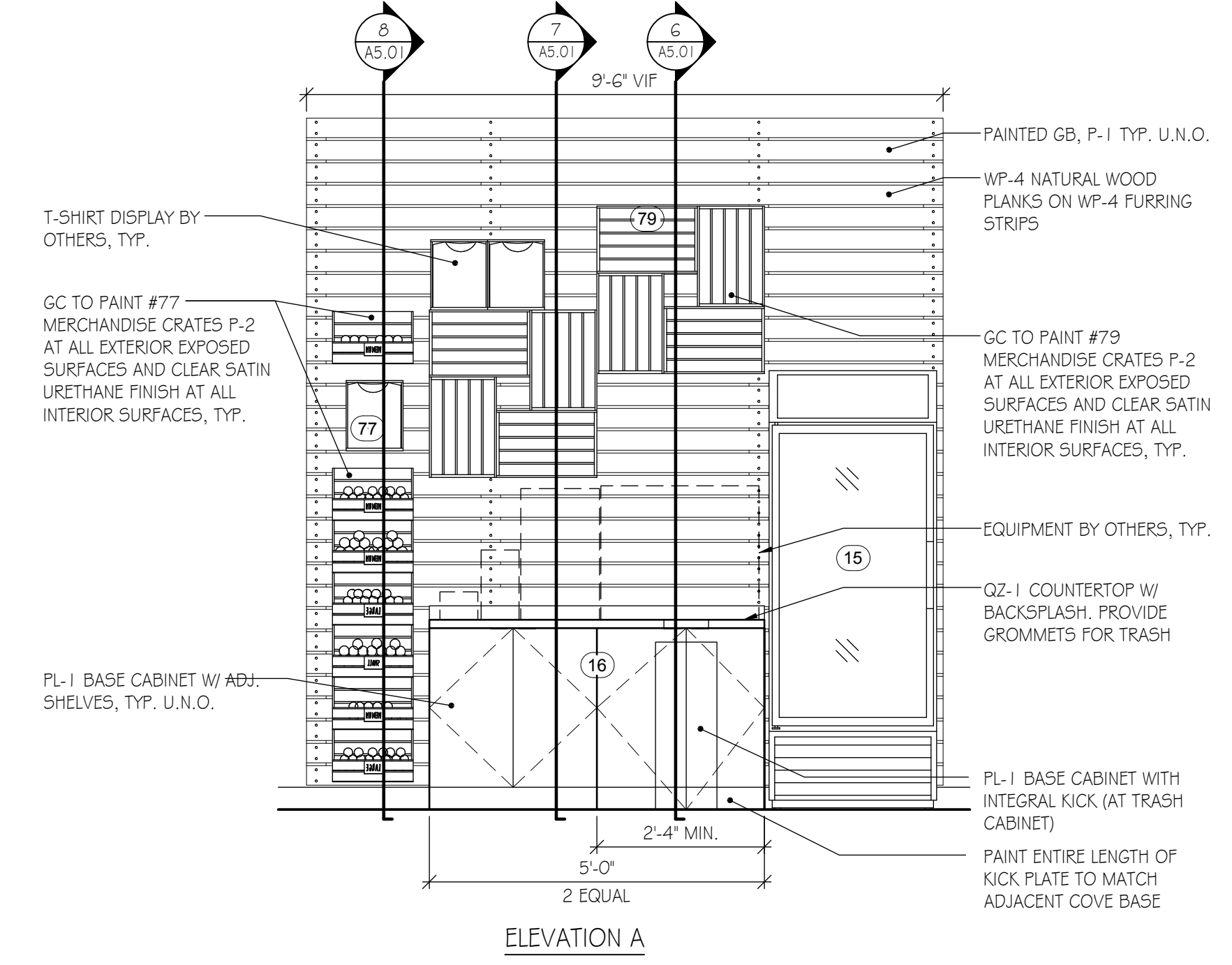
ELEVATION C

ELEVATION D

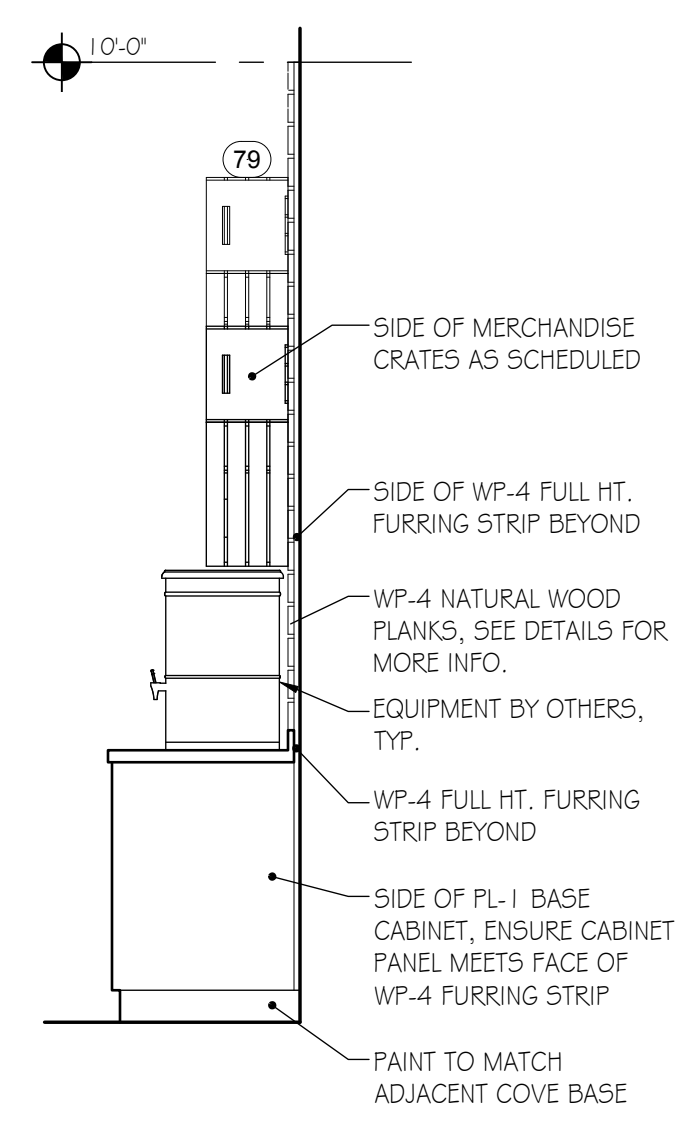
7 OBSERVATION 110 - ELEV.
SCALE: 1/4" = 1'-0"



8 PLAN AT COFFEE/MERCHANDISE MILLWORK (ROTATED)
SCALE: 1/2" = 1'-0"



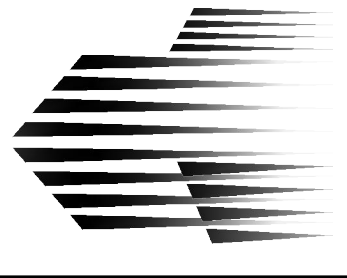
9 ELEVATION AT COFFEE/MERCHANDISE MILLWORK
SCALE: 1/2" = 1'-0"



10 ELEV. AT COFFEE/MERCH. MILLWORK
SCALE: 1/2" = 1'-0"

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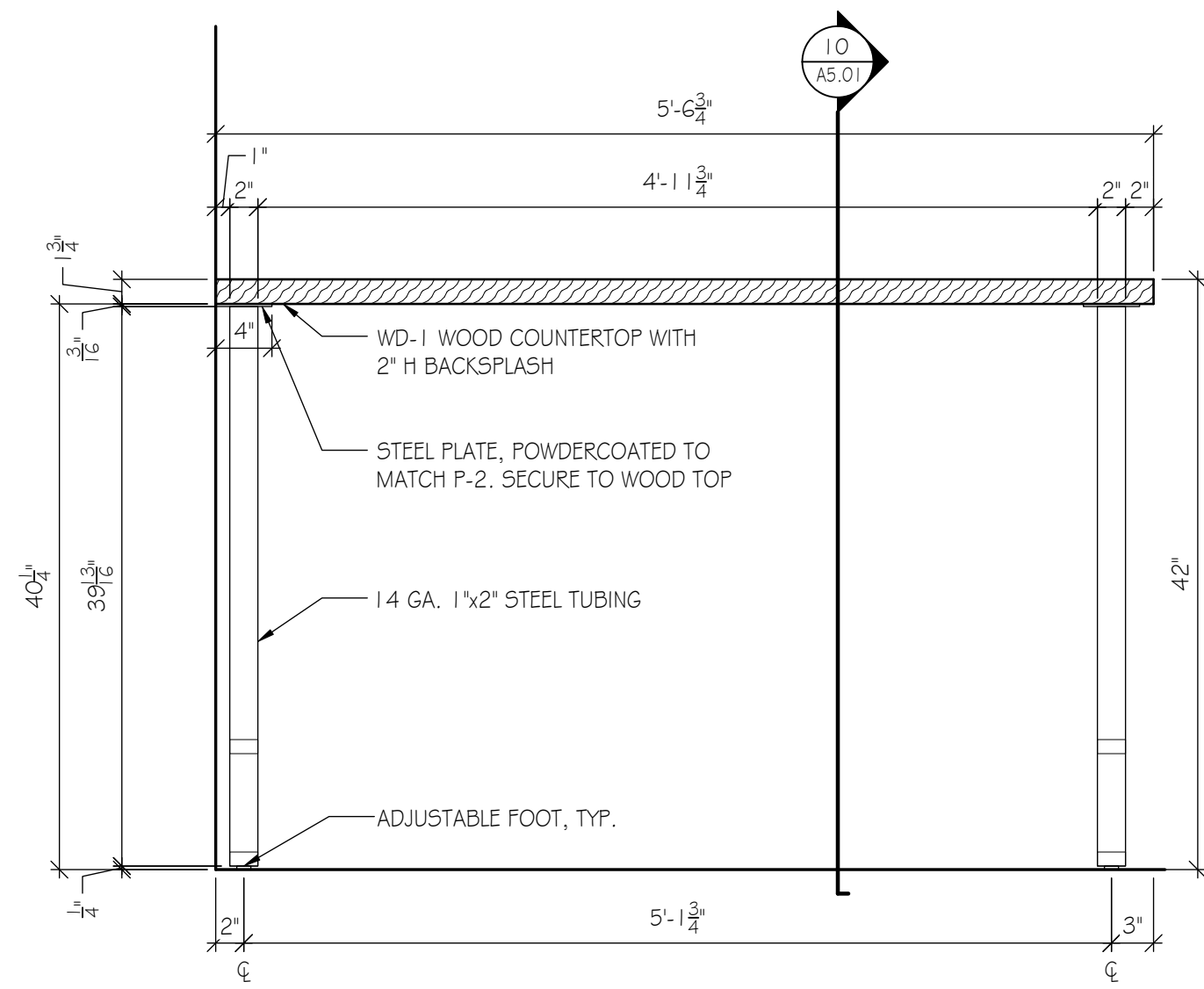
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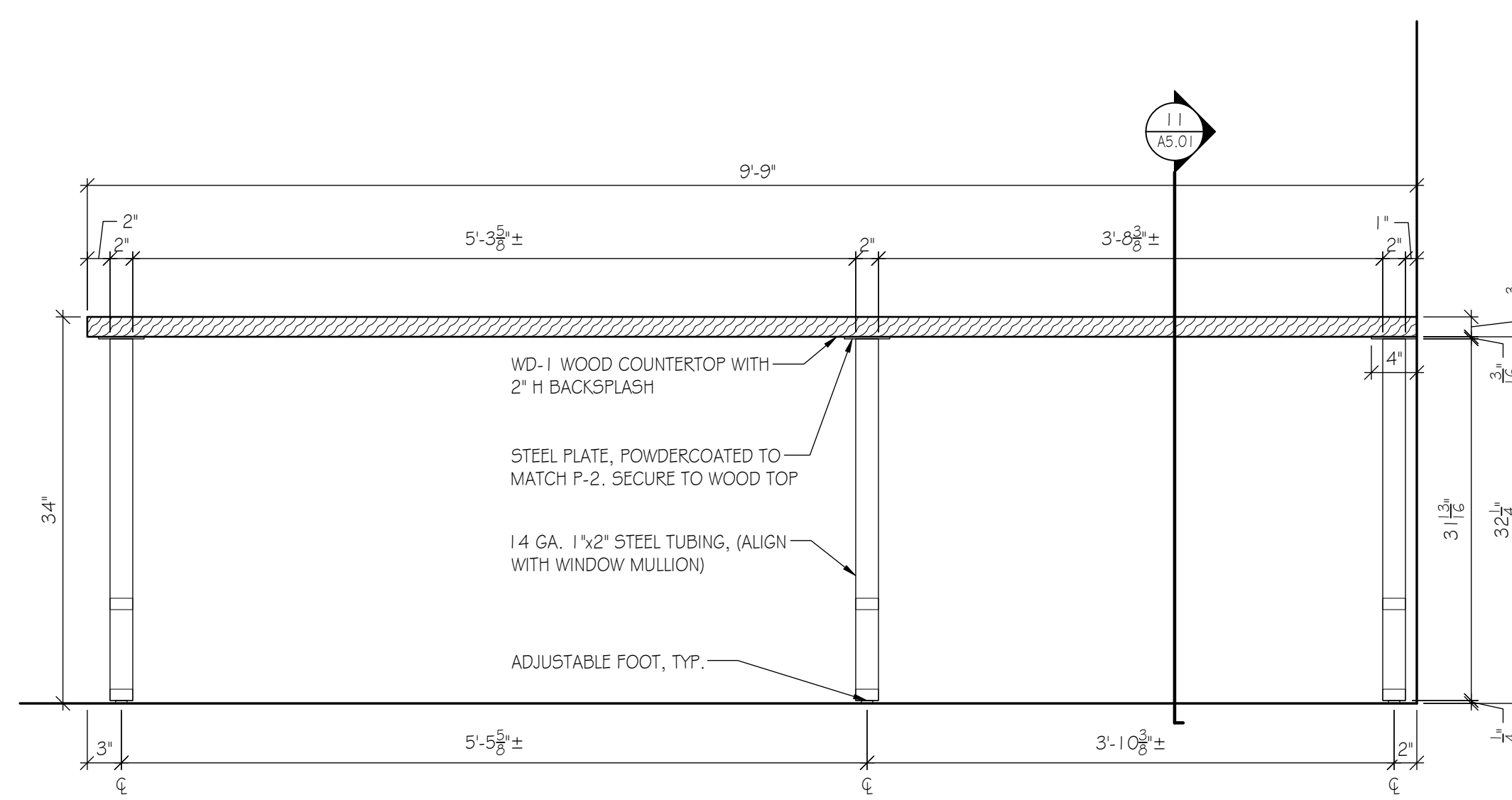
PROPOSED FIT OUT FOR:
DUCK DONUTS
566 ROUTE 17 NORTH
PARAMUS, NJ 07652

INTERIOR ELEVATIONS & MILLWORK DETAILS

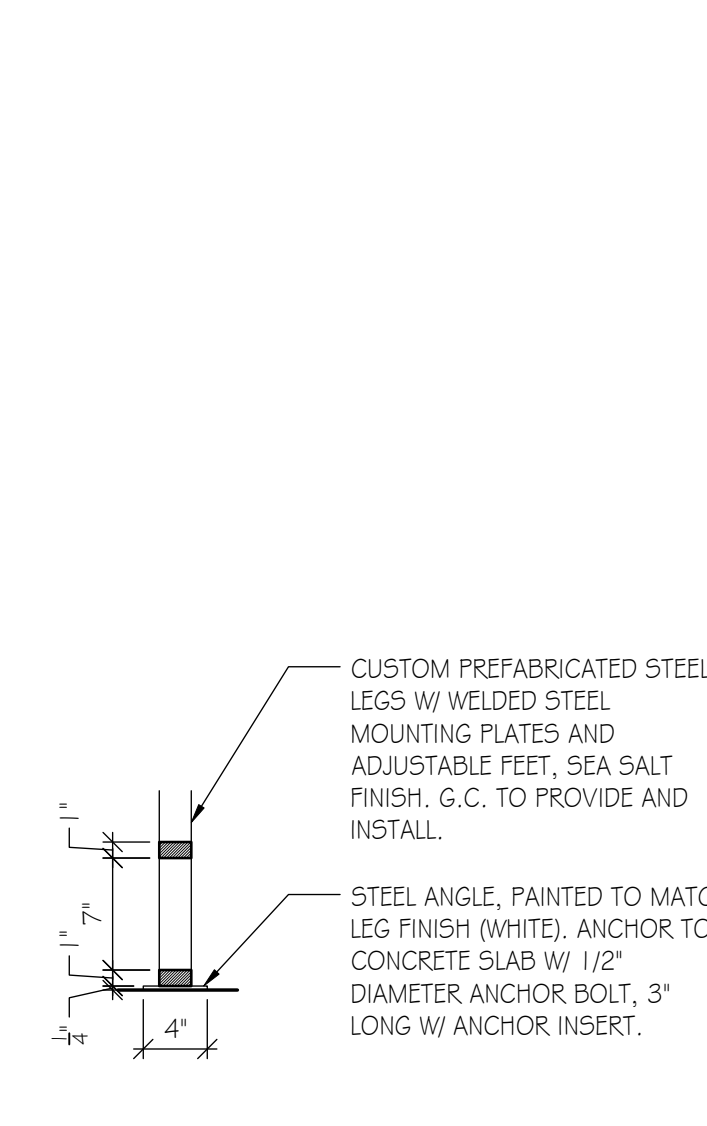
A2.02



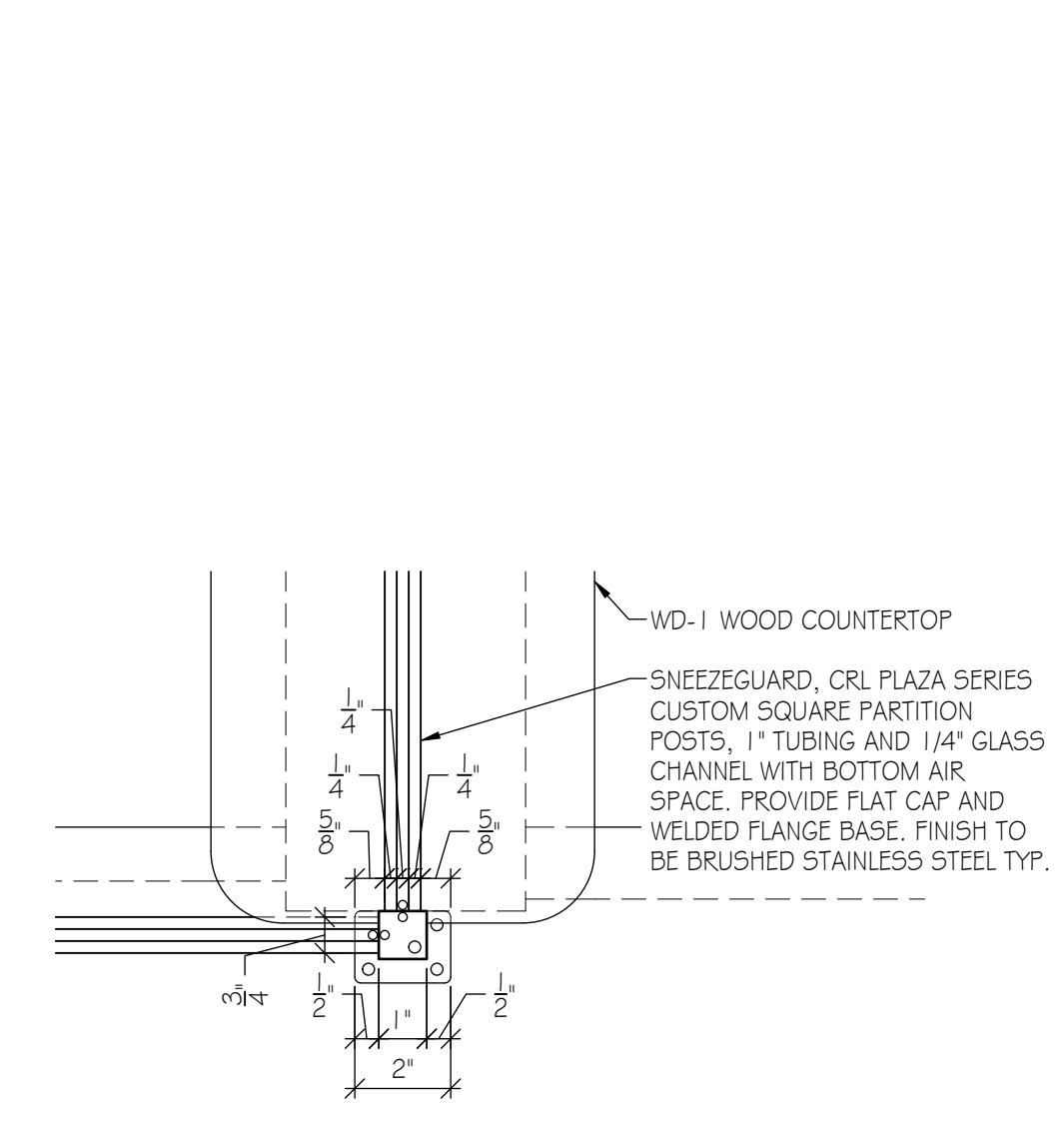
12 SECTION
A5.02 SCALE: 1" = 1'-0"



13 SECTION
A5.02 SCALE: 1" = 1'-0"



14 SECTION
A5.02 SCALE: 1" = 1'-0"



15 SECTION
A5.02 SCALE: 3\"/>

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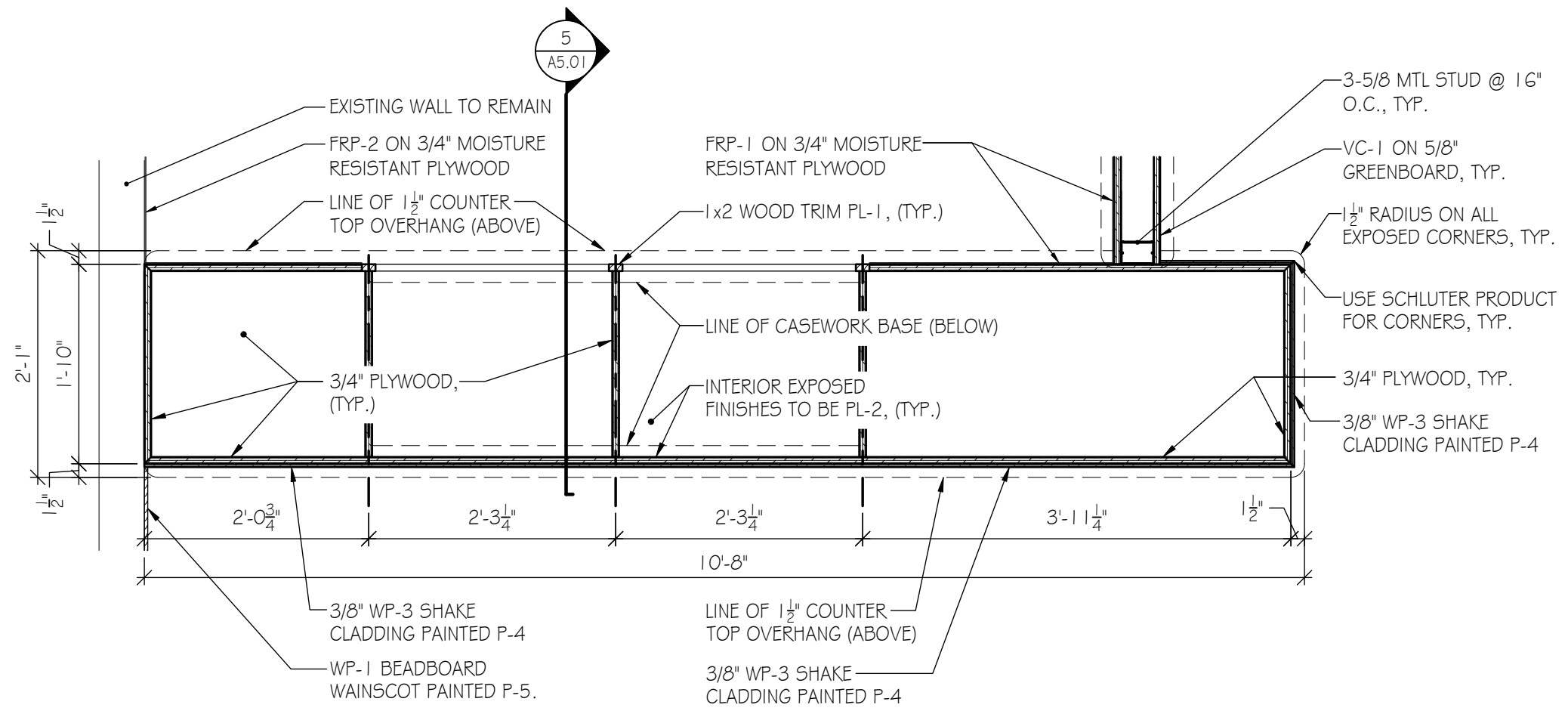
LARRY E. SAYLOR
 LICENSE NO. AL3819
 AIA, NCARB
 ARCHITECT
 990 CENTURY DRIVE SUITE 103
 MECHANICSBURG, PA. 17055
 PHONE: 717.697.1799

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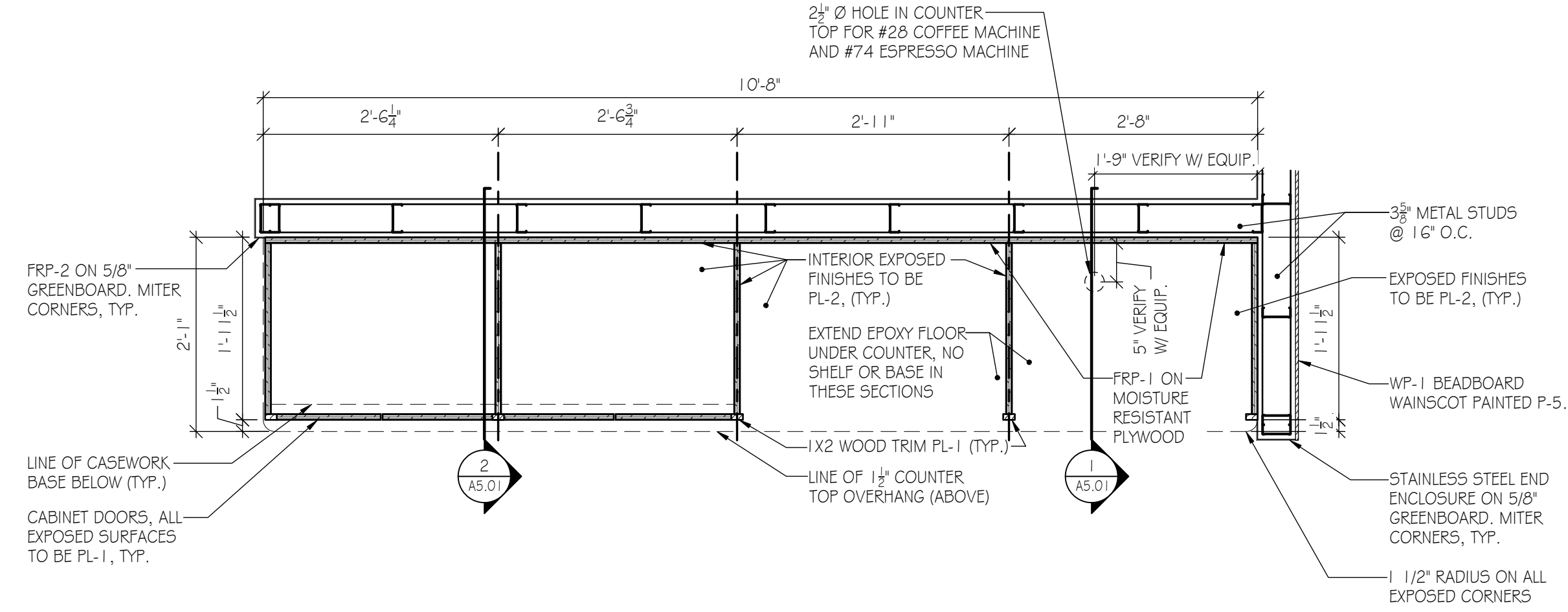
CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND PROMPTLY REPORT ANY ERRORS TO LARRY E. SAYLOR.

DATE: 05.01.20
 DRAWN BY: KSH
 CHECKED BY: LES
 PROJECT #: 20011

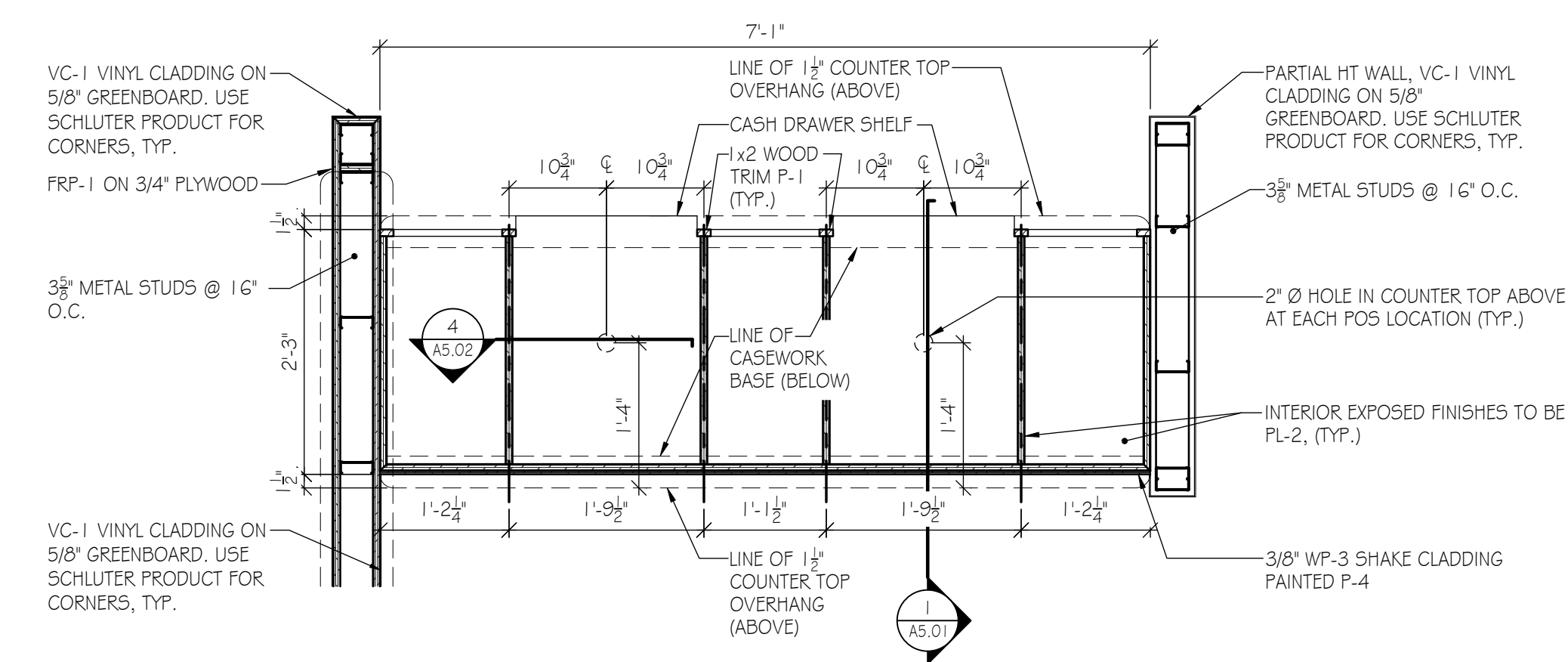
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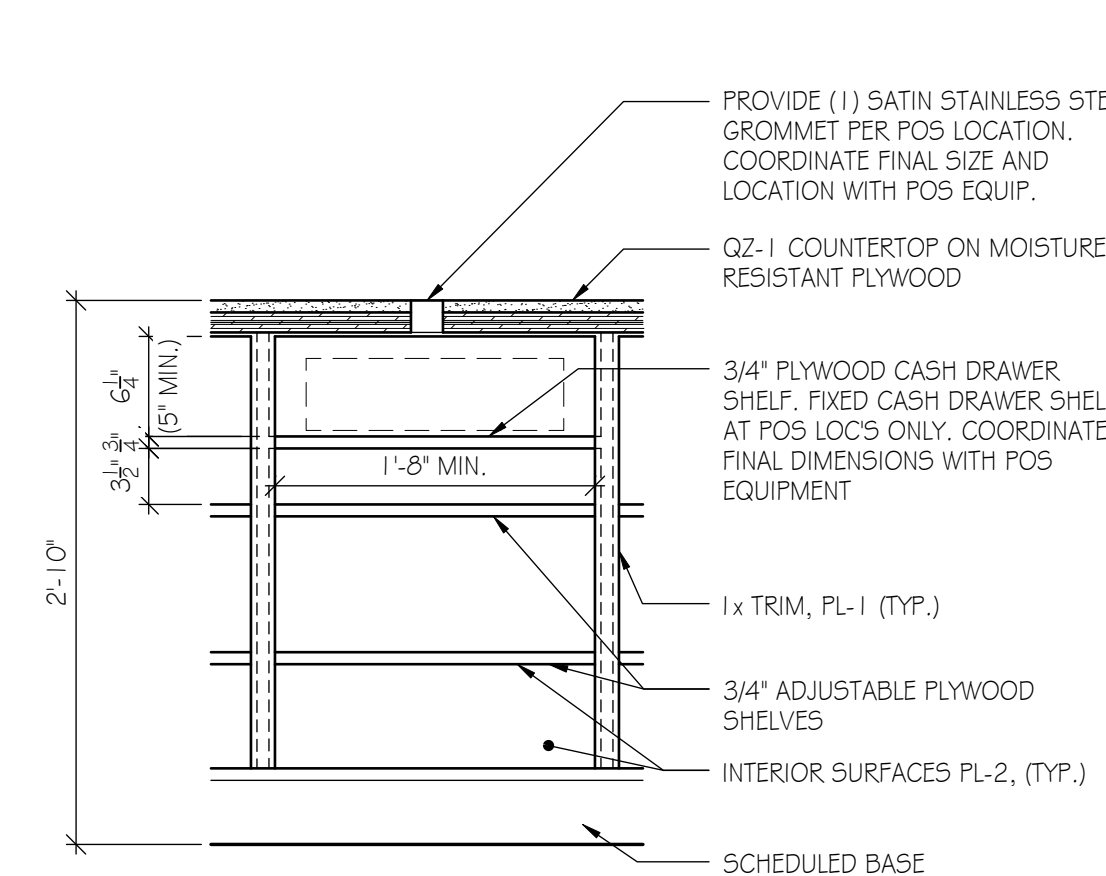
1 CUSTOMER SERVICE COUNTER UNDER COUNTER PLAN
A5.02 SCALE: 3/4" = 1'-0"



2 BACK COUNTER UNDER COUNTER PLAN
A5.02 SCALE: 3/4" = 1'-0"



3 CUSTOMER CHECKOUT COUNTER UNDER COUNTER PLAN
A5.02 SCALE: 3/4" = 1'-0"



4 CASH DRAWER SHELF ELEVATION
A5.02 SCALE: 1" = 1'-0"

PROPOSED FIT OUT FOR:
DUCK DONUTS
 566 ROUTE 17 NORTH
 PARAMUS, NJ 07652

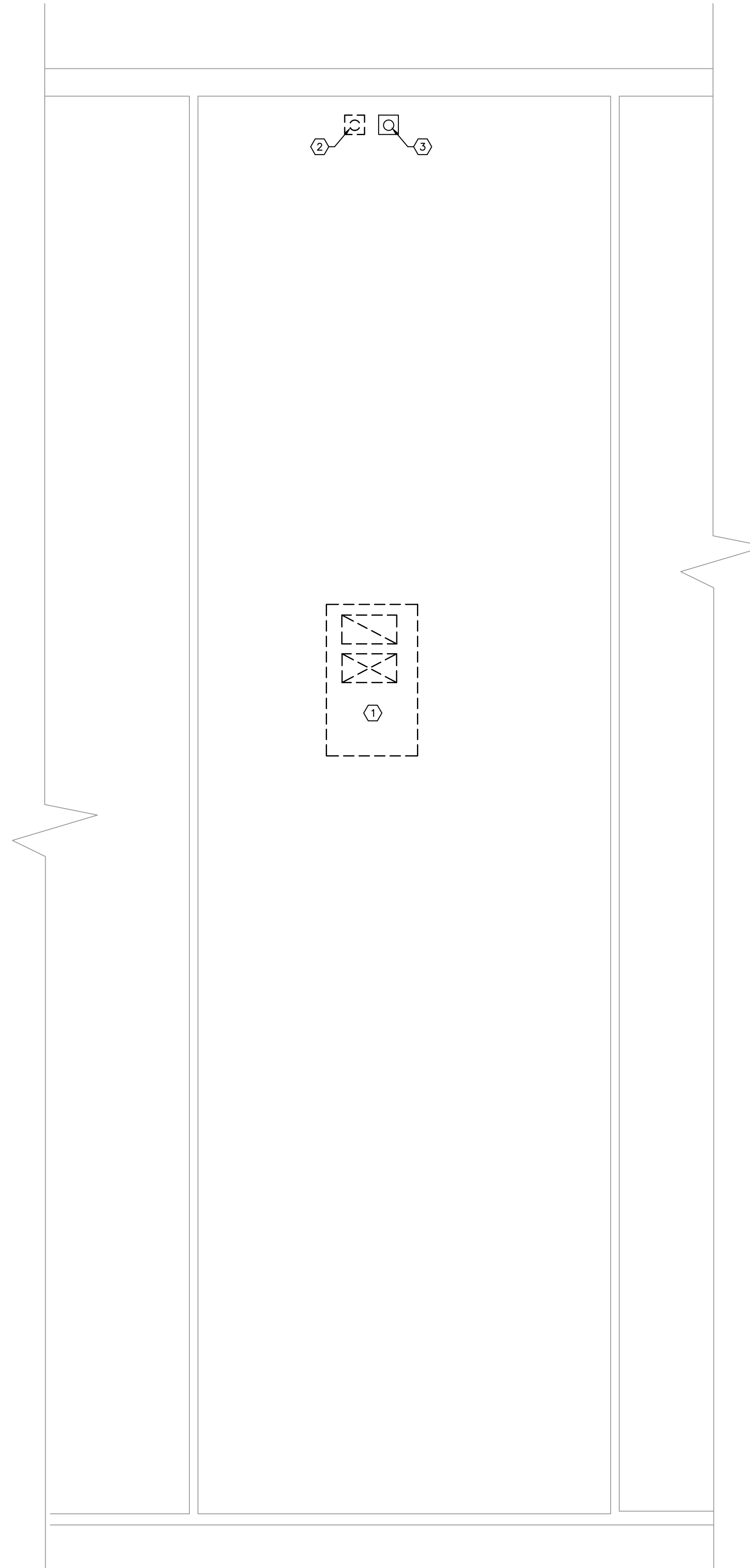
INTERIOR SECTIONS & DETAILS

A5.02



DEMOLITION KEYED NOTES:

- ① EXISTING ROOFTOP UNIT, ROOFCURB AND ALL RELATED SUPPLY AND RETURN AIR TO BE REMOVED, EXISTING ROOF OPENINGS TO BE REUSED AND MODIFIED AS REQUIRED FOR NEW UNIT.
- ② EXISTING ROOF VENT TO BE REMOVED AND REPLACED.
- ③ EXISTING ROOF VENT TO REMAIN.



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DATE: 05.01.2020
 DRAWN BY: JDL/JLM/JPK
 CHECKED BY: BRM
 PROJECT #: 20011

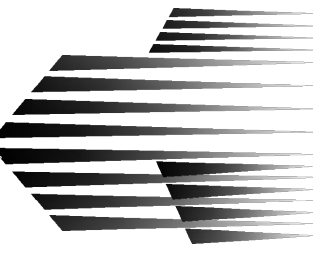
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PROPOSED FIT OUT FOR:
DUCK DONUTS
 556 ROUTE 17 NORTH
 PARAMUS, NJ 07652

MECHANICAL
 ROOF PLAN
 DEMOLITION

M1.1

A
M1.1 MECHANICAL PARTIAL ROOF PLAN-DEMOLITION
 SCALE: 1/4" = 1'-0"



ROOFTOP UNIT SCHEDULE

TAG	LOCATION	SYSTEM CFM		SUPPLY FAN		COMPRESSORS			DX COOLING COIL		HEATING SECTION			ELECTRICAL DATA			BASIS OF DESIGN		EFFICIENCY (EER)	REMARKS	
		MAX SUPPLY	MIN O/A	HP	SP IN H2O EXT	QTY.	DESIGN AMB °F	STAGES	NET SENSIBLE MBH	NET TOTAL MBH	FUEL	STAGES	MAX INPUT	MIN MBH OUT	V/	MCA	MOPD	MANUF.			MODEL #
RT-1	ROOF	3,000	375	2.75	1.0	1	95	2	72	92	N.G.	MOD	200	160	208/3	42.4	50	TRANE	YHC-092	12.6	1,2,3,4,5,6,7,8,9,10

- REMARKS:
1. PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION WITH FACTORY MOUNTED DISCONNECT SWITCH WITH CIRCUIT BREAKER.
 2. PROVIDE WITH HINGED ACCESS DOORS AND 2" FILTER RACK WITH MERV 8 FILTERS.
 3. PROVIDE 14" HIGH PREFABRICATED ROOFCURB.
 4. PROVIDE THROUGH BASE ELECTRICAL AND GAS CONNECTIONS.
 5. PROVIDE WITH ANTI-SHORT CYCLE TIME AND CONDENSATE OVERFLOW SWITCH.
 6. PROVIDE UNIT WITH 100% ENTHALPY ECONOMIZER AND POWER EXHAUST.
 7. PROVIDE WITH RETURN AIR DUCT SMOKE DETECTOR.
 8. PROVIDE WITH HOT GAS REHEAT WITH RETURN AIR HUMIDISTAT.
 9. PROVIDE WITH MODULATING GAS HEAT AND STAINLESS STEEL HEAT EXCHANGER..
 10. PROVIDE UNIT WITH WIRELESS ZONE SENSOR WITH LCD, REMOTE INDOOR SENSOR AND SPACE HUMIDISTAT.

EXHAUST FANS

TAG	LOCATION	SYSTEM SERVED	TYPE	AIRFLOW (CFM)	STATIC PRESSURE ("W.G.)	FAN		MOTOR			BASIS OF DESIGN	REMARKS
						RPM	DRIVE	HP/W	VOLTS/PHASE	ENCL.		
EF-1	JC	GENERAL EXHAUST	CEILING MOUNTED FC	70	0.375	887	DIRECT	25W	120/1	STND.	GREENHECK SP-A90-VG	1,2,3,4
EF-2	UTILITY	GENERAL EXHAUST	CEILING MOUNTED FC	175	0.375	900	DIRECT	55W	120/1	STND.	GREENHECK SP-A200	2,3,4,5

- REMARKS:
1. PROVIDE WALL SWITCH WITH PILOT LIGHT AND TIME DELAY RELAY
 2. PROVIDE WITH DISCONNECT
 3. PROVIDE UNIT MOUNTED SPEED CONTROLLER
 4. PROVIDE SPRING HANGER KIT
 5. PROVIDE LINE VOLTAGE THERMOSTAT FOR CONTROL OF FAN.

VENTILATION SCHEDULE

SPACE	AREA (FT2)	IMC CODE REQUIREMENTS		OCCUPANTS	TOTAL OUTSIDE AIR REQUIRED PER IMC	TOTAL PROVIDED
		CFM/PERSON	CFM/FT2			
RTU-1						
RETAIL/CORRIDOR	550	7.5	0.12	10	141	375
SERVICE	730	7.5	0.18	9	199	
RESTROOM	54	-	-	-	EXHAUST	
UTILITY	15	-	-	-	EXHAUST	
TOTAL			TOTAL REQUIRED		340	

AIR BALANCE SCHEDULE

UNIT	OUTDOOR AIR CFM	EXHAUST AIR CFM
RTU-1	375	-
MAU-1	1462	-
KEF-1	-	1,680
RESTROOM (EXISTING)	-	70
UTILITY	-	70
TOTAL	1,837	1,820

DIFFUSER AND REGISTER SCHEDULE

TAG	MAXIMUM CFM	NECK SIZE (IN)	NOMINAL OVERALL SIZE (IN)	THROW (FT) (NOTE 2)	MAXIMUM STATIC PRESSURE (IN. W.C.)	MAXIMUM NOISE CRITERIA	MODEL NO. (REMARK 6)	REMARKS
S-1	100	6ø/15X15	24x24	3-4-7	0.10	25	TDCA	1,2,3,4,5,6,7
S-2	200	8ø/15X15	24x24	3-4-7	0.10	25	TDCA	1,2,3,4,5,6,7
S-3	300	10ø/15X15	24x24	3-4-7	0.10	25	TDCA	1,2,3,4,5,6,7
S-4	400	12ø/15X15	24x24	3-4-7	0.10	25	TDCA	1,2,3,4,5,6,7
S-5	225	14X6	16X8	9-13-22	0.10	25	300FL	1,2,3,4,5,6,7,8
R-1	1600	22x22	24x24	-	0.10	25	510	1,2,3,4,5,6,7,8

- REMARKS:
1. S=SUPPLY, R=RETURN/RELIEF, EXHAUST, TRANSFER.
 2. THROW AT TERMINAL VELOCITY OF 50, 100, 150 FPM & 0° DEFLECTION
 3. DUCT RUN OUT SIZE SHALL MATCH DIFFUSER NECK SIZE UNLESS OTHER WISE NOTED ON PLAN
 4. DATA BASED ON TESTING IN ACCORDANCE WITH ASHRAE STANDARD 70 AND ADC 1062
 5. PROVIDE WITH OB BALANCE DAMPER.
 6. BASIS OF DEIGN MANUFACTURER: TITUS
 7. FINISH SHALL BE WHITE UNLESS OTHER WISE NOTED ON ARCHITECTURAL PLAN
 8. PROVIDE SQUARE TO ROUND CONNECTION.
 9. PROVIDE WITH AIR SCOOP.

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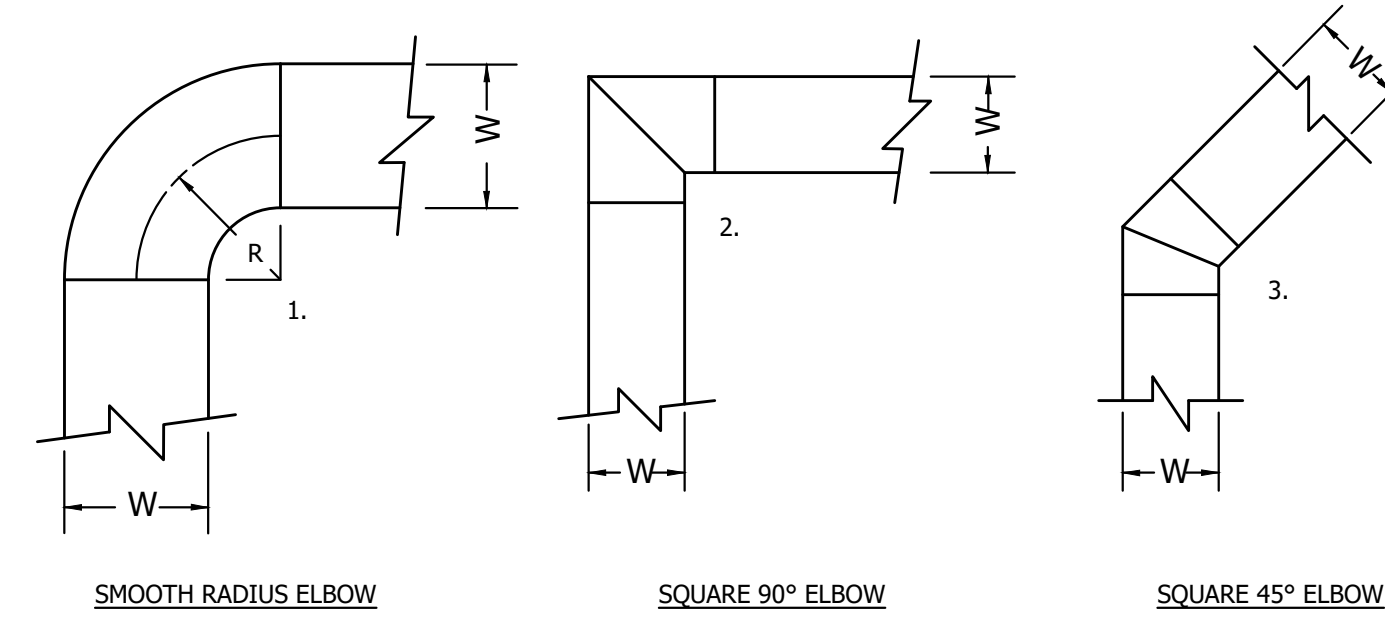
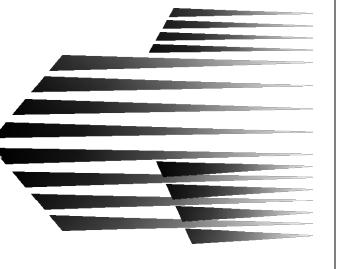
DATE: 05.01.2020
 DRAWN BY: JDL/JLM/JPK
 CHECKED BY: BRM
 PROJECT #: 20011

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PROPOSED FIT OUT FOR:
DUCK DONUTS
 566 ROUTE 17 NORTH
 PARAMUS, NJ 07652

MECHANICAL
 EQUIPMENT
 SCHEDULES

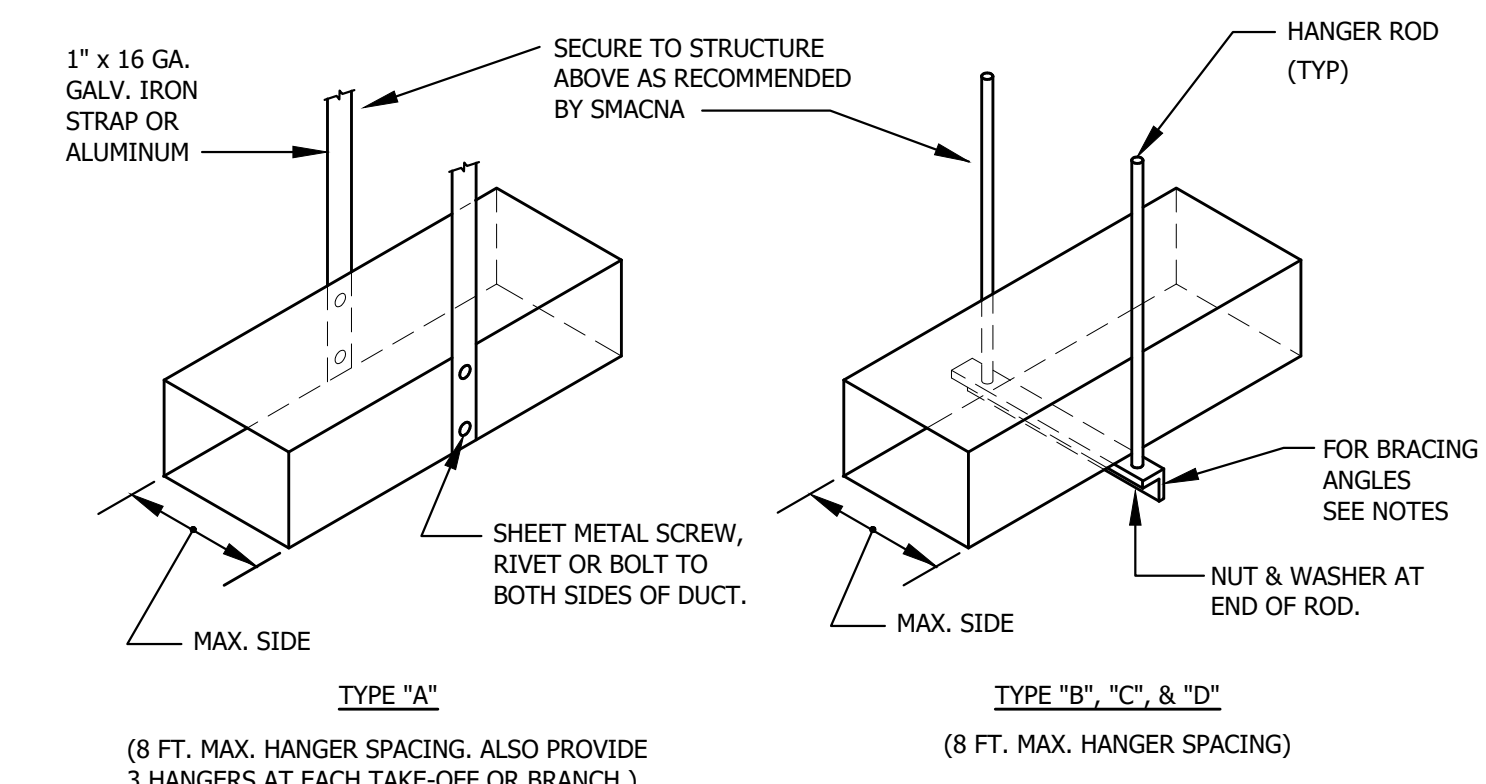
M6.1



NOTES:

1. R/W RATIO SHALL BE NO LESS THAN 1.0
2. PROVIDE TURNING VANES IN ALL 90° SQUARE ELBOWS UNLESS OTHERWISE NOTED ON PLANS
3. PROVIDE TURNING VANES IN ALL 45° SQUARE ELBOWS UNLESS OTHERWISE NOTED ON PLANS

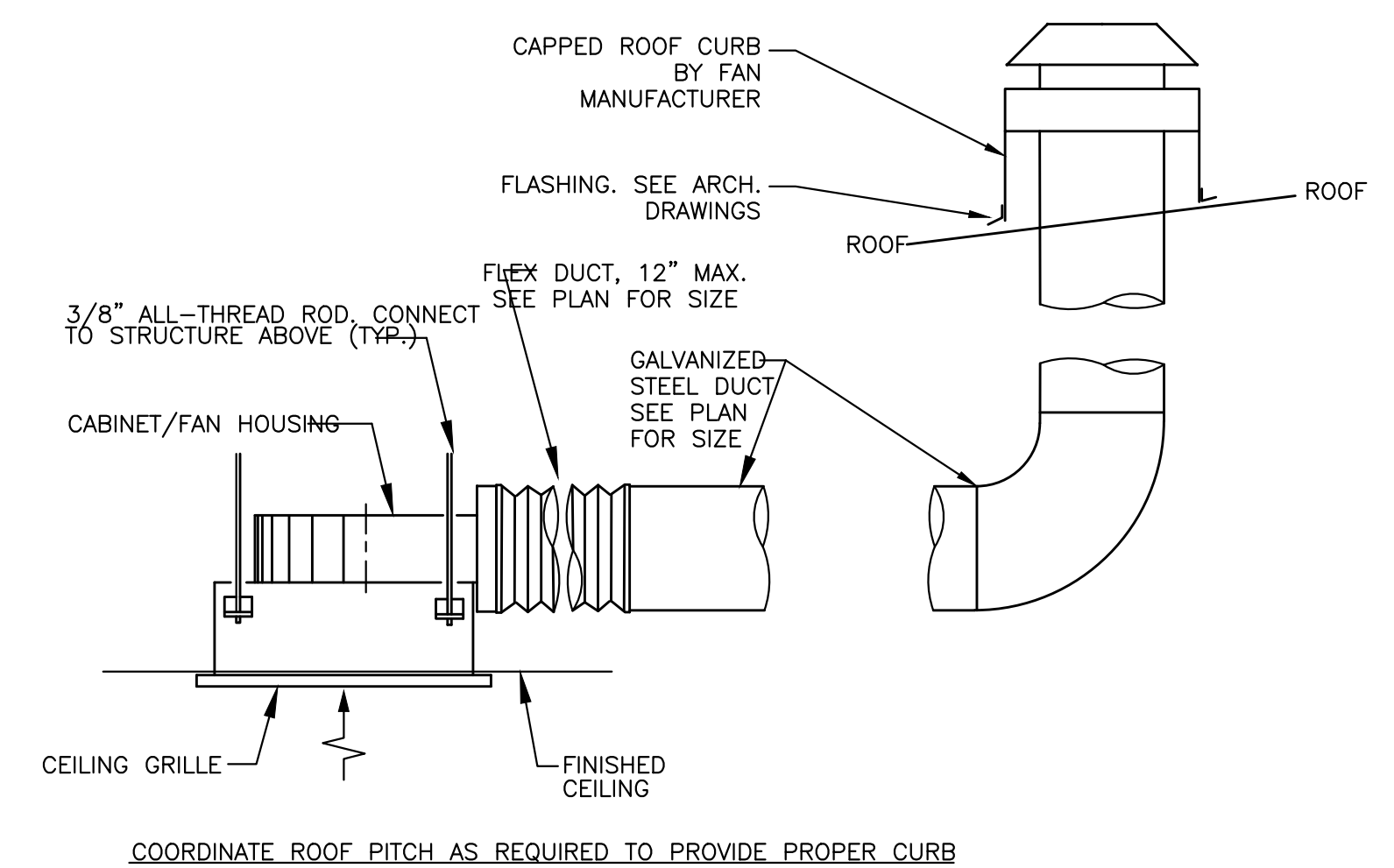
1 TYPICAL DUCTWORK ELBOW DETAILS
 SCALE: NOT TO SCALE



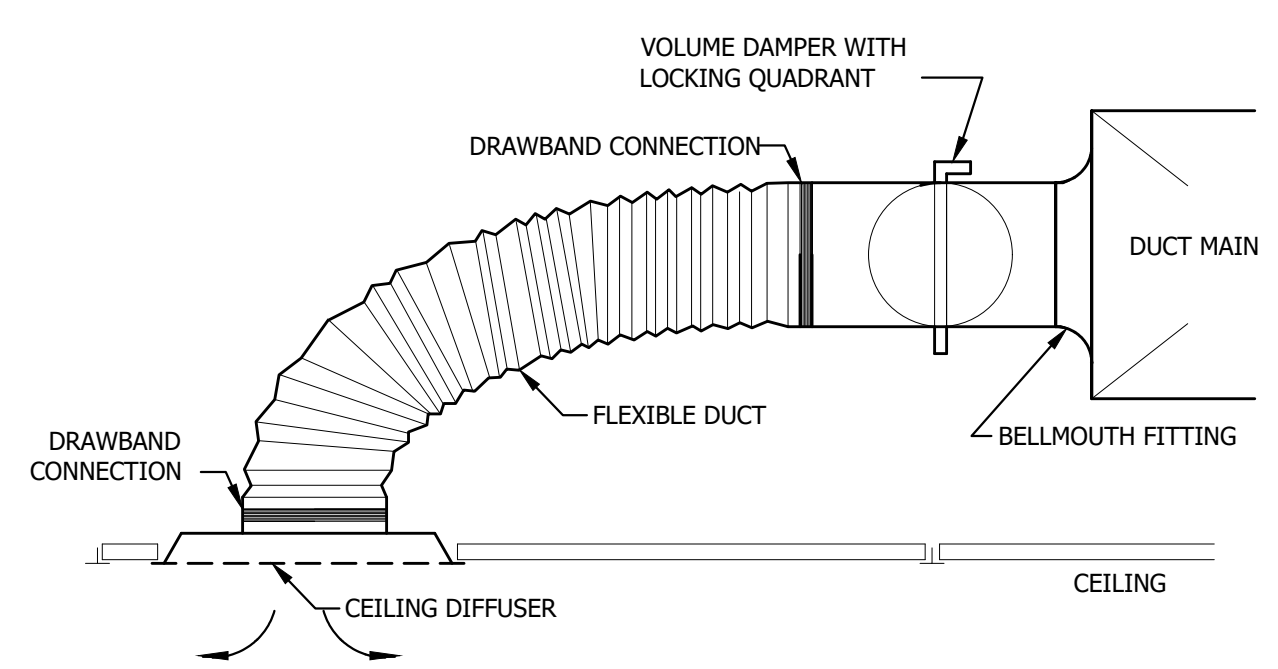
DUCT DIMENSION	HANGER TYPE	ROD DIA.	ANGLE SIZE	SPACING MAX
UP TO 18"	A	1" STRAP	---	8'-0"
19" TO 60"	B	5/16"	1-1/2" X 1-1/2" X 1/8"	8'-0"
61" TO 96"	C	3/8"	1-1/2" X 1-1/2" X 3/16"	8'-0"
OVER 96"	D	1/2"	2" X 2" X 1/4"	4'-0"

- NOTES:**
1. FOR SEVERAL DUCTS ON ONE HANGER, TYPE "B", "C", OR "D" MAY BE USED. SIZE OF HANGER SHALL BE SELECTED ON SUM OF DUCT WIDTHS EQUAL TO MAX. WIDTH OF DUCT SCHEDULE.
 2. DO NOT ATTACH DUCT HANGERS TO ROOF DECK OR BOTTOM

3 DUCT SUPPORT DETAIL
 SCALE: NOT TO SCALE



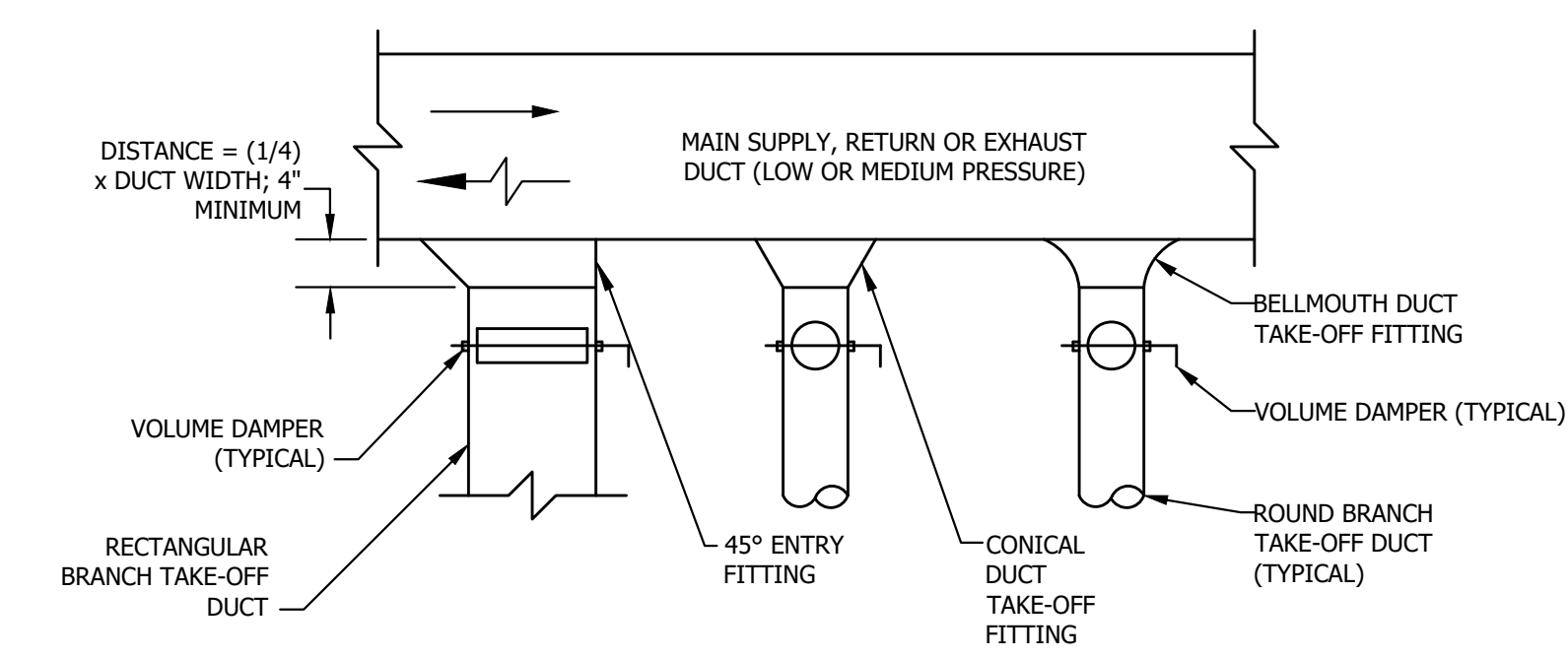
2 LOW PROFILE EXHAUST FAN DETAIL
 SCALE: NOT TO SCALE



NOTES:

1. INSULATED FLEXIBLE DUCT - SHALL BE PRE-STRETCHED BEFORE INSTALLATION
2. LENGTH NOT TO EXCEED 5 FEET
3. DIAMETER TO BE EQUAL TO DIFFUSER INLET SIZE UNLESS OTHERWISE NOTED

4 DIFFUSER FLEXIBLE DUCT CONNECTION DETAIL
 SCALE: NOT TO SCALE



NOTES:

1. SPIN-IN DUCT TAKE-OFF FITTINGS MAY BE USED IN LIEU OF CONICAL OR BELLMOUTH FITTINGS ONLY WHERE MAIN DUCT DIMENSIONS ARE NOT SUFFICIENT TO ALLOW THE USE OF A CONICAL OR BELLMOUTH. SEAL ALL TAKE-OFF AND OTHER DUCT FITTINGS AIR TIGHT AS PER SPECIFICATION.
2. FABRICATE BRANCH DUCT TAKE-OFF FITTINGS PER LATEST EDITION OF SMACNA DUCT CONSTRUCTION MANUAL, AS INDICATED ON PLANS, OR AS DESCRIBED IN THE SPECIFICATION.
3. ALLPLIES TO SUPPLY AND EXHAUST RUNOUTS TO GRILLES, REGISTERS, AND DIFFUSERS.

5 BRANCH TAKE-OFF DUCT DETAIL
 SCALE: NOT TO SCALE

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 CHECKED BY: BRM
 PROJECT #: 20011

#	REVISIONS:	DATE:
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4		
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PROPOSED FIT OUT FOR:
DUCK DONUTS
 566 ROUTE 17 NORTH
 PARAMUS, NJ 07652

MECHANICAL SCHEDULES AND DETAILS

HOOD INFORMATION - Job#4301056

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	TYPE	APPLIANCE DUTY	DESIGN CFM/ft	TOTAL EXH. CFM	EXHAUST PLENUM RISER(S)				TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG.				
									WIDTH	LENG.	HEIGHT	DIA.			CFM	VEL.	S.P.	END TO END	ROW
1		4824 ND-2-PSP-F	12' 0"	600 Deg.	I	Heavy	140	1680			4"	14"	1680	1572	-0.362"	1462	430 SS Where Exposed	ALONE	ALONE

PATENT NUMBERS
AC-PSP (United States) - US Patent 7963830 B2
AC-PSP Wall (Canada) - CA Patent 2820509
AC-PSP Island (Canada) - CA Patent 2520330

HOOD INFORMATION

HOOD NO.	TAG	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WGT		
		TYPE	QTY.	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY.	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM TYPE	SIZE			ELECTRICAL MODEL #	SWITCHES QUANTITY
1		SS Baffle with Handles	9	16"	16"	30%	7	L55 Series E26	NO	Right	12"x48"x24"	Ansul R102	3.0/3.0	DCV-1111	1 Light 1 Fan	YES	794 LBS

HOOD OPTIONS

HOOD NO.	TAG	OPTION
1		FIELD WRAPPER 18.00" High Front, Left, Right BACKSPLASH 80.00" High X 156.00" Long 430 SS Vertical RIGHT QUARTER END PANEL 23" Top Width, 0" Bottom Width, 23" High 430 SS LEFT QUARTER END PANEL 23" Top Width, 0" Bottom Width, 23" High 430 SS INSULATION FOR BACK OF HOOD

PERFORATED SUPPLY PLENUM(S)

HOOD NO.	TAG	POS.	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG.	DIA.	CFM	S.P.
1		Front	156"	12"	6"	MUA	10"	24"		487	0.131"
						MUA	10"	24"		487	0.131"
						MUA	10"	24"		487	0.131"

GREASE DUCT & CHIMNEY SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "DW" IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "DW" DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER THE MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURES LISTING MODEL "DW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12".
DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN HORIZONTAL RUNS.
IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW-2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

CAPTIVEAIRE SYSTEMS RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

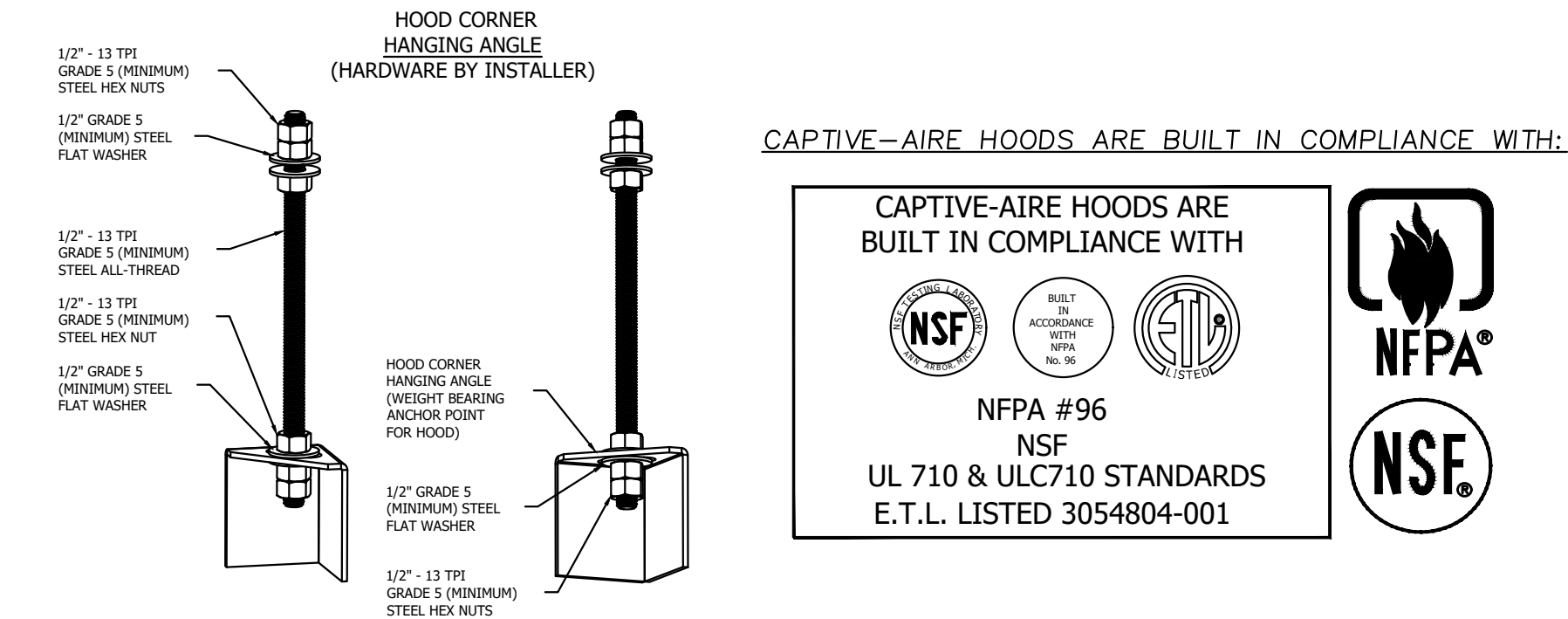
HVAC DISTRIBUTION NOTE
HIGH VELOCITY DIFFUSERS OR HVAC RETURNS SHOULD NOT BE PLACED WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

VERIFY CEILING HEIGHT
HEIGHT REQUIRED TO VERIFY THAT HOOD FITS SPACE AND TO SIZE THE ENCLOSURE PANELS

CUSTOMER APPROVAL TO MANUFACTURE:
Approved as Noted
Approved with NO Exception Taken
Revised and Resubmitted
SIGNATURE: _____ Date: _____
Your Title: _____

****HOOD SYSTEM PROVIDED UNDER NATIONAL ACCOUNT TO DUCK DONUTS****
DUCK DONUTS PROVIDES: ALL HOODS, FANS, FIRE SYSTEMS, CONTROLS, SINGLE WALL DUCTWORK
MECHANICAL CONTRACTOR: :
PROVIDES MECHANICAL INSTALLATION TO GC, INSTALLS OWNER PROVIDED GREASE DUCTWORK, PROVIDES AND INSTALLS FIRE WRAP ON DUCT AS REQUIRED TO MEET INSPECTIONS. PROVIDES AND INSTALLS SUPPLY DUCTWORK FOR HOOD.

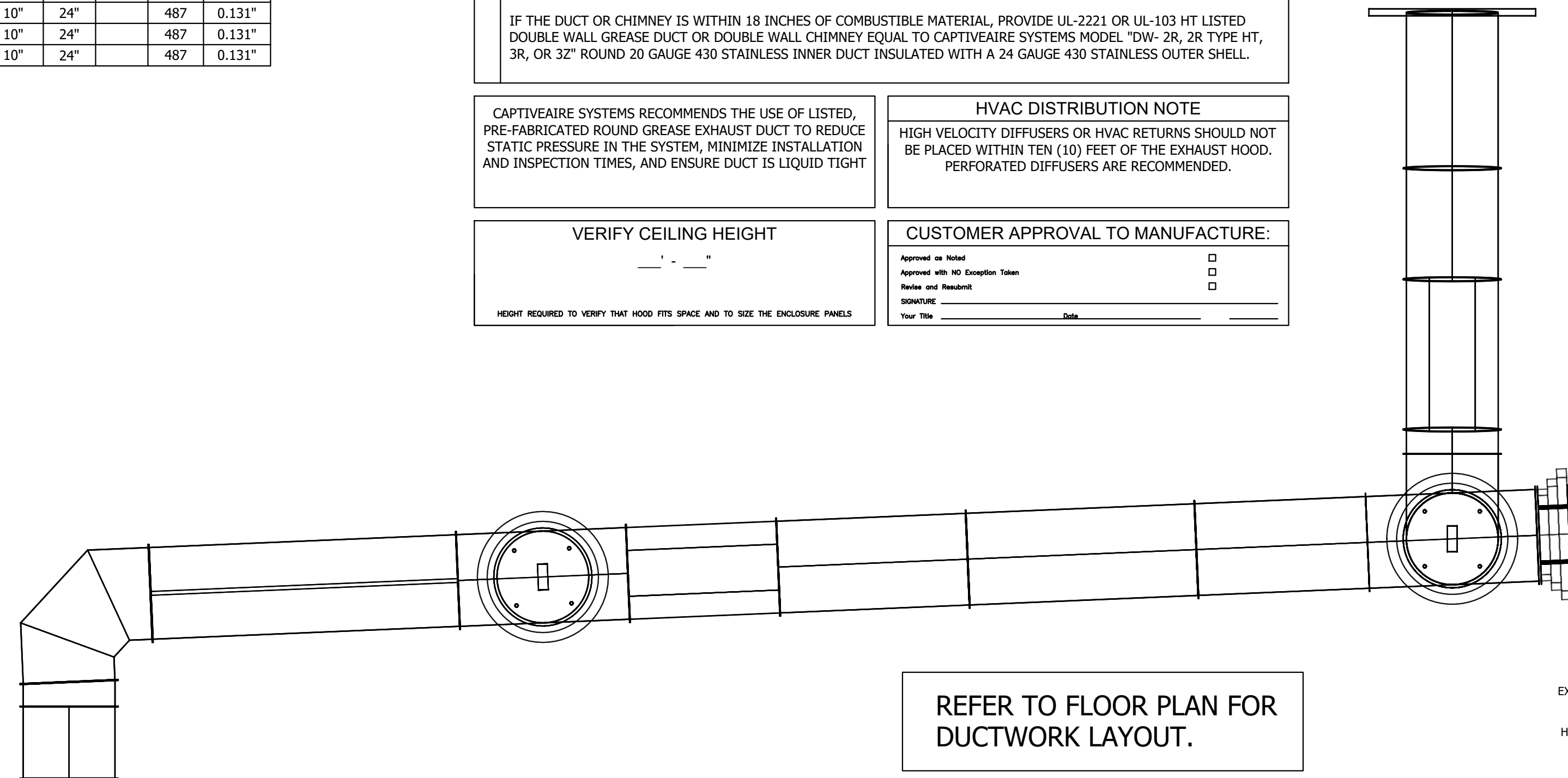
FOR QUESTIONS
CONTACT: JOE WYLLIE
NORTH CAROLINA REGIONAL OFFICE
PHONE: (919) 825-3566
EMAIL: REG36@CAPTIVEAIRE.COM FAX: (919) 227-5917



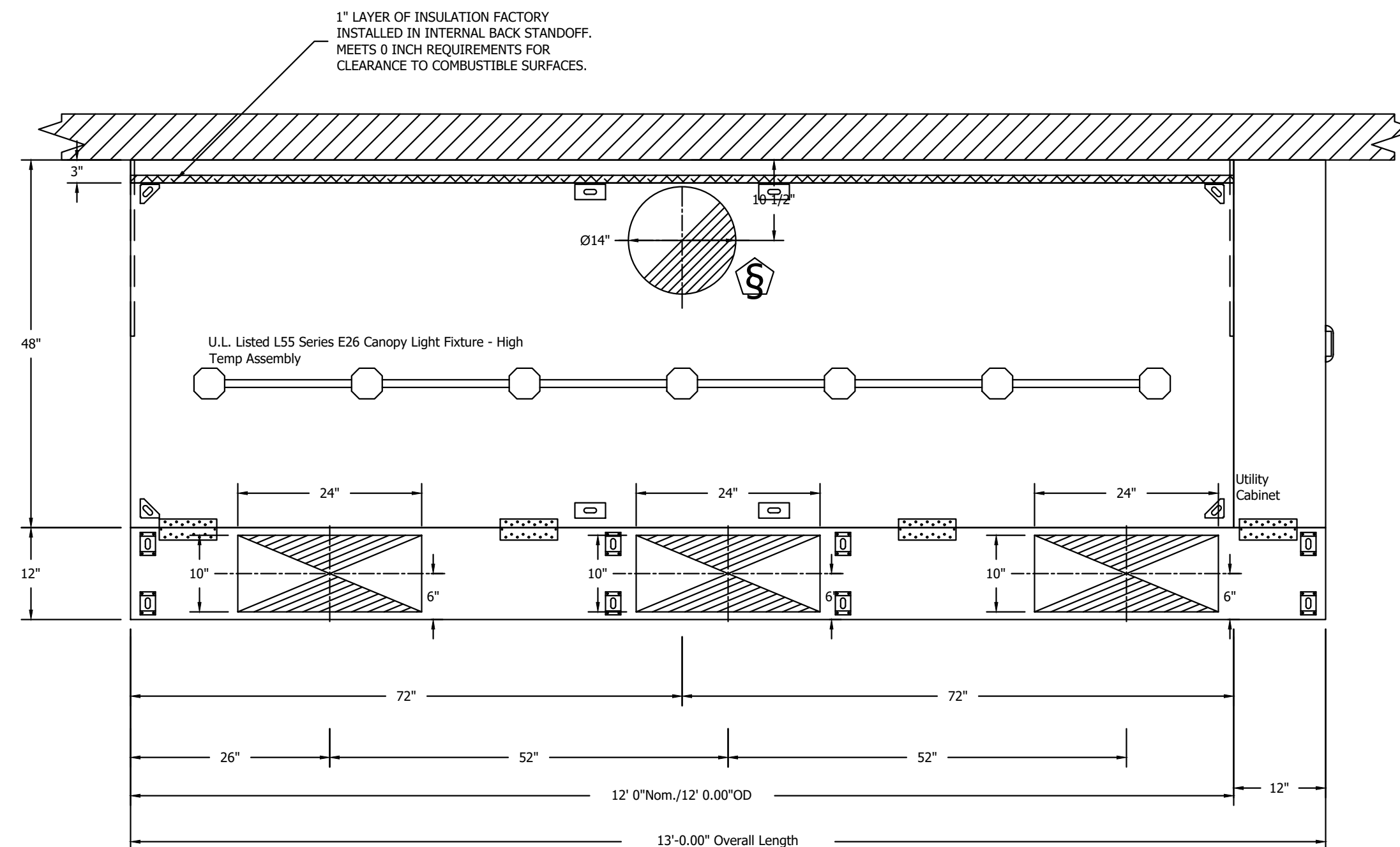
ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD, SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

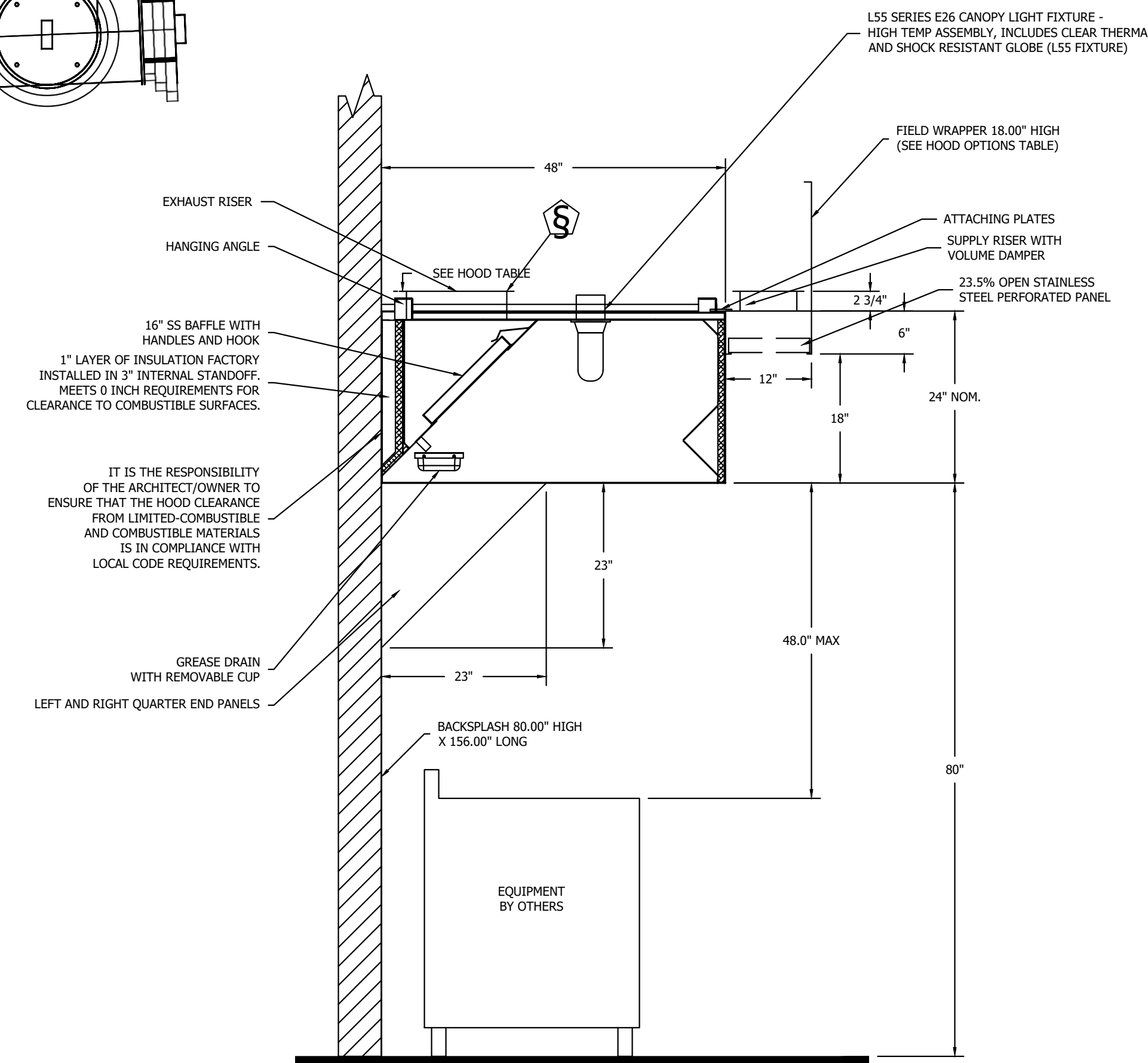
CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH
NSF
NFPA #96
NSF
UL 710 & ULC710 STANDARDS
E.T.L. LISTED 3054804-001



REFER TO FLOOR PLAN FOR DUCTWORK LAYOUT.



PLAN VIEW - Hood #1
12' 0.00" LONG 4824ND-2-PSP-F
NOTE: Additional hanging angles provided for hoods 12' and longer.



SECTION VIEW - MODEL 4824ND-2-PSP-F HOOD - #1

CAPTIVEAIRE
Eastern North Carolina
1215 MANOR DR, SUITE 206, MECHANICSBURG, PA 17055 PHONE: (919) 825-3566 FAX: (919) 227-5917 EMAIL: reg36@captivaire.com www.captivaire.com

DUCK DONUTS-PARAMUS NJ
556 ROUTE 17 NORTH,
PARAMUS, NJ, 07652

DATE: 3/20/2020
DWG.#: 4301056
DRAWN BY: reg36
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 1

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PROPOSED FIT OUT FOR:
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PARAMUS, NJ 07652

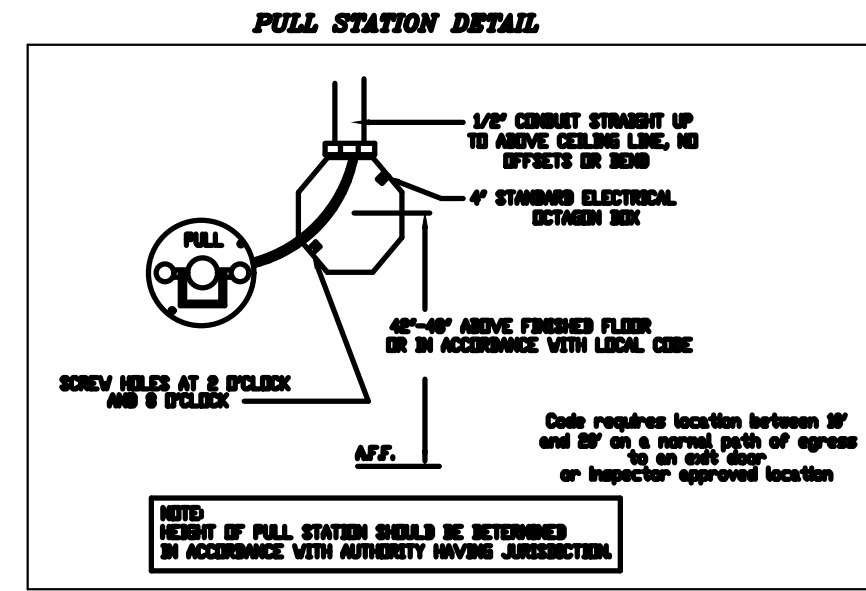
MECHANICAL SCHEDULES AND DETAILS

M8.2

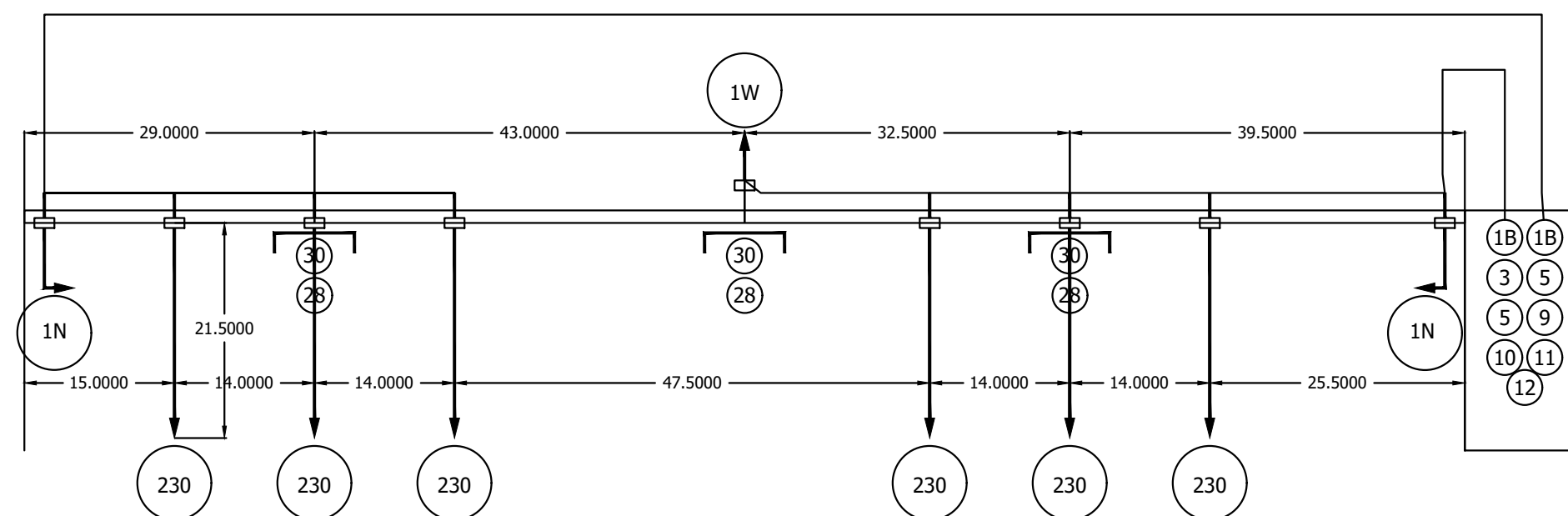
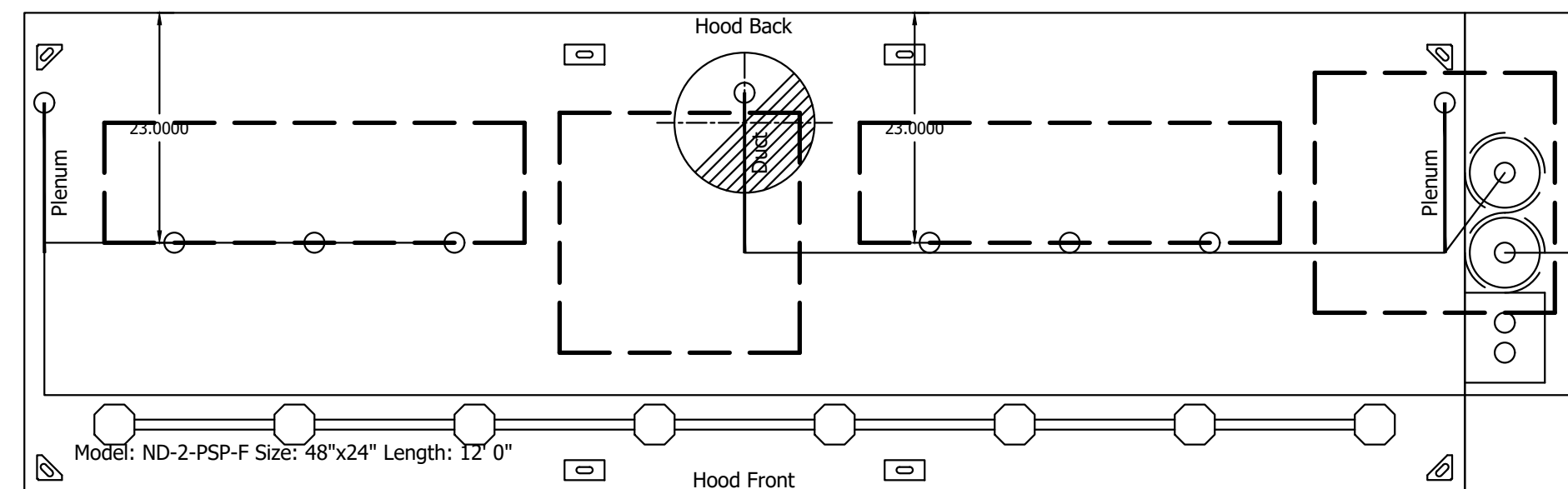
UL 300 HOOD FIRE SUPPRESSION SYSTEM

FIRE SYSTEM NO.	Tag	TYPE	SIZE	INSTALLATION	
				SYSTEM	
1		Ansul R102	3.0/3.0 = 22 FLOW CAPACITY	Fire Cabinet	

UL 300 HOOD FIRE SUPPRESSION SYSTEM-



System Size: ANSUL-3.0/3.0 Total FP required: 15 OF 22



Fryer-S w/Drip Board ELECTRIC DONUT FRYER 45.00\"/>
Table No Proximity Rating 24.00\"/>
Fryer-S w/Drip Board ELECTRIC DONUT FRYER High Proximity 45.00\"/>
Table No Proximity Rating 24.00\"/>

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH:

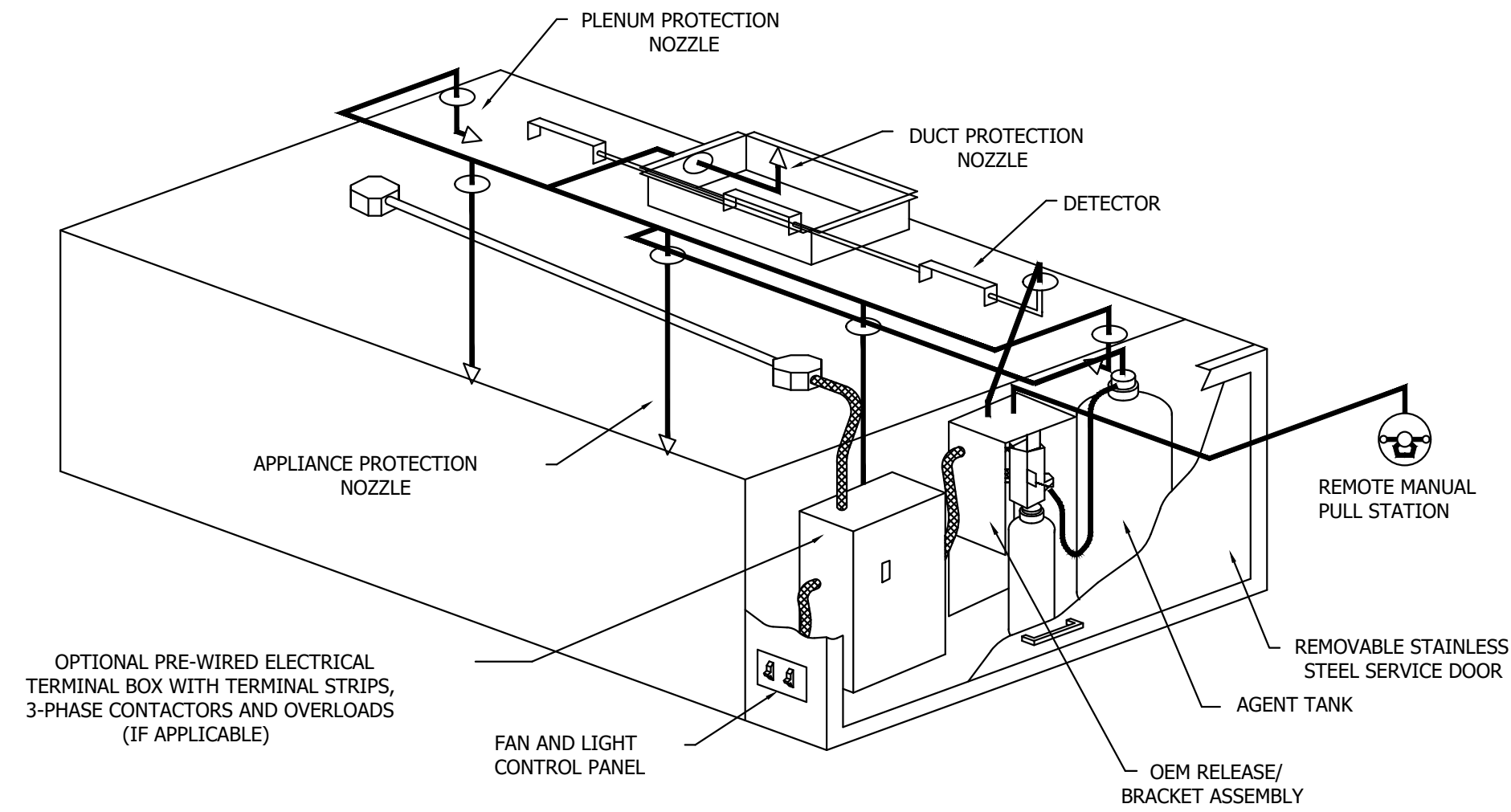
CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH

NFPA #96
NSF
UL 710 & ULC710 STANDARDS
E.T.L. LISTED 3054804-001

HOOD SYSTEM PROVIDED UNDER NATIONAL ACCOUNT TO DUCK DONUTS
DUCK DONUTS PROVIDES: ALL HOODS, FANS, FIRE SYSTEMS, CONTROLS, SINGLE WALL DUCTWORK.

MECHANICAL CONTRACTOR: :
PROVIDES MECHANICAL INSTALLATION TO GC, INSTALLS OWNER PROVIDED GREASE DUCTWORK,
PROVIDES AND INSTALLS FIRE WRAP ON DUCT AS REQUIRED TO MEET INSPECTIONS.
PROVIDES AND INSTALLS SUPPLY DUCTWORK FOR HOOD.

FOR QUESTIONS
CONTACT: JOE WYLIE
NORTH CAROLINA REGIONAL OFFICE
PHONE: (919) 825-3566
EMAIL: REG36@CAPTIVEAIRE.COM FAX: (919) 227-5917



TYPICAL ANSUL R-102 SYSTEM LAYOUT

- NOTES
- FIELD PIPE DROPS AS SHOWN
 - SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS
 - RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
 - MAXIMUM 9 ELBOWS IN SUPPLY LINE.
 - MINIMUM 72 INCHES OF AGENT LINE FROM TANK TO FIRST NOZZLE.
 - IF APPLICABLE, PRE-PIPED CHARBROILER DROPS ARE SHIPPED LOOSE.
 - FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS

System Size: ANSUL-3.0/3.0 Total FP required: 15
Hood # 1 12' 0.00" Long x 48" Wide x 24" High
Riser # 1 Size: 14" Dia.
Hood # 1 Metal Blow-Off Caps included.

LEGEND - FIRE CABINET ANSUL SYSTEM

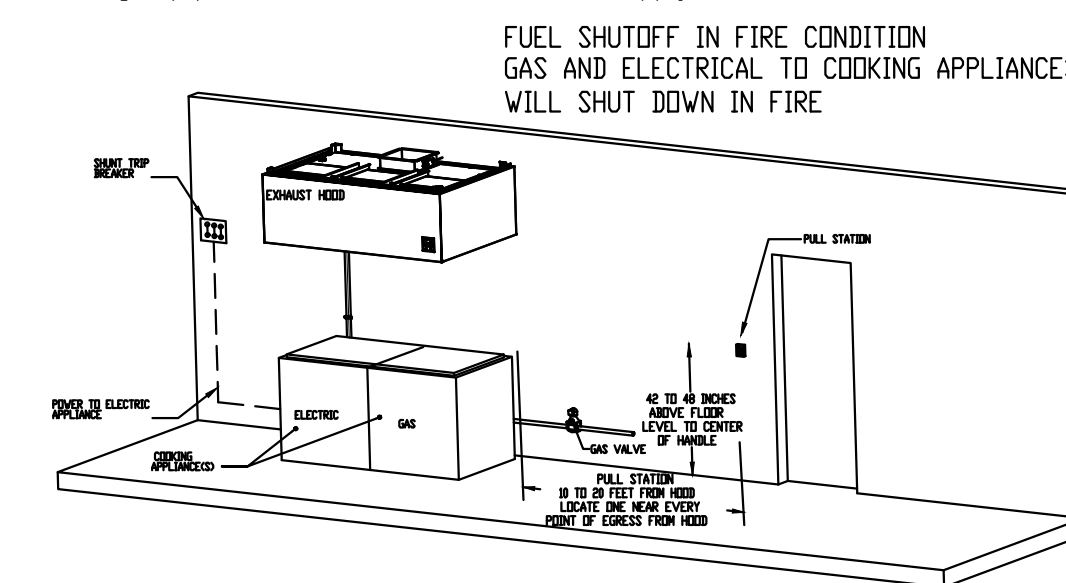
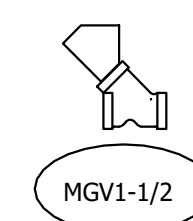
- 1A 1.5 GALLON TANK
- 1B 3 GALLON TANK
- 2 OEM AUTOMAN RELEASE
- 3 OEM REGULATED RELEASE
- 4 OEM REGULATED ACTUATOR
- 5 ANSULEX LIQUID AGENT (3 GAL.)
- 6 ANSULEX LIQUID AGENT (1.5 GAL.)
- 7 CARTRIDGE (101-20)
- 8 CARTRIDGE (101-10)
- 9 CARTRIDGE (101-30)
- 9A CARTRIDGE (LT-A-101-30)
- 9B DOUBLE TANK CARTRIDGE
- 10 TEST LINK
- 11 DOUBLE MICROSWITCH
- 12 HOSE ASSEMBLY
- 1100 DUCT NOZZLE (430913)
- 2W DUCT NOZZLE (419337)
- 1W NOZZLE ASSEMBLY (419336)
- 1F NOZZLE ASSEMBLY (419333)
- 1N NOZZLE ASSEMBLY (419335)
- 1/2N NOZZLE ASSEMBLY (419334)
- 3N NOZZLE ASSEMBLY (419338)
- 245 NOZZLE ASSEMBLY (419340)
- 230 NOZZLE ASSEMBLY (419339)
- 2120 NOZZLE ASSEMBLY (419343)
- 290 NOZZLE ASSEMBLY (419342)
- 260 NOZZLE ASSEMBLY (419341)
- 28 DETECTOR BRACKET
- 29 LOW TEMP FUSIBLE LINK
- 30 HIGH TEMP FUSIBLE LINK
- MGV MECHANICAL GAS VALVE
- EGV ELECTRICAL GAS VALVE
- 34 REMOTE MANUAL PULL STATION
- S SWIVEL ADAPTOR

FIRE SYSTEM OPERATION

- Kitchen hood shall be constructed and installed per NFPA 96.
- Hood Electrical Control Panel and Fire Control System shall shut down kitchen hood make up air fan upon activation of fire extinguishing system. Kitchen hood exhaust fan shall continue to operate or power on upon activation. The hood electrical panel and fire system will provide interlock for automatic operation of fire suppression system with:
 - Mechanical gas valve (If Gas present) (installed by mechanical/plumbing contractor)
 - Hood supply and exhaust fan (wiring by elec)
 - Remote manual pull station (by hood fire system distr)
 - Fire alarm system notification (by Fire alarm Contractor or electrician)
- See Hood details for drawings
- All exposed piping with fire suppression system shall be covered with a chrome sleeve.
- Mechanical contractor shall install conduit in wall for manual pull station. Pull Station shall be located at or near a means of egress from the cooking area.
- Fire suppression system shall be in accordance with UL 300.

All Fire System Piping will be 3/8" schedule 40 black iron.

NC FIRE CODE 904.11.2
System Interconnection:
The Actuation of the fire extinguishing system shall automatically shut down the fuel or electrical power supply to the cooking equipment. The fuel and electrical supply reset shall be manual.



#	REVISIONS:	DATE:
1		
2		
3		
4		
5		

PROPOSED FIT OUT FOR:
DUCK DONUTS
556 ROUTE 17 NORTH
PARAMUS, NJ 07652

MECHANICAL
SCHEDULES
AND
DETAILS

EXHAUST FAN INFORMATION - Job#4301056

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	H.P.	B.H.P.	φ	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS.)	SONES
1	KEF-1	DUBSHFA	1680	0.600	1133	0.750	0.2860	3	208	2.6	532 FPM	94	11.3

CONDENSER DETAILS

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CONDENSER NO.	TONNAGE	VOLTAGE	PHASE	FREQUENCY	MCA	RLA	MAX. FUSE SIZE	MIN. WIRE SIZE	SEER
2	KMUA-1	A1-D.250-G10-MPU	1	3	208-230	3 PHASE	60 Hz	14.5 Amps	11.9 Amps	20 Amps	14 AWG	14

MUA FAN INFORMATION - Job#4301056

FAN UNIT NO.	TAG	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP.	RPM	H.P.	B.H.P.	φ	VOLT	FLA	MCA	MOCP	COOLING COIL ENTERING DB TEMP.	COOLING COIL ENTERING WB TEMP.	COOLING COIL LEAVING DB TEMP.	COOLING COIL LEAVING WB TEMP.	COOLING COIL TOTAL CAPACITY	COOLING COIL SENSIBLE CAPACITY	COOLING COIL LATENT CAPACITY	WEIGHT (LBS.)	SONES
2	KMUA-1	A1-D.250-G10-MPU	G10	A1-D.250	1000	1462	0.375	974	1.000	0.4600	3	208	3.4	4.3A	15A	92.0°F	74.0°F	78.0°F	68.3°F	31.1 MBH	21.9 MBH	9.2 MBH	1129	15.4

GAS FIRED MAKE-UP AIR UNIT(S)

FAN UNIT NO.	TAG	INPUT BTUS	OUTPUT BTUS	TEMP. RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
2	KMUA-1	171626	157896	100 deg F	7 in. w.c. - 14 in. w.c.	Natural	92

FAN OPTIONS

FAN UNIT NO.	TAG	OPTION (Qty. - Descr.)
1	KEF-1	1 - Grease Box
2	KMUA-1	1 - Motorized Backdraft Damper for A1-D Housing
		1 - Low Fire Start
		1 - Inlet Pressure Gauge, 0-35"
		1 - Manifold Pressure Gauge, -5 to 15" wc
		1 - Cooling Thermostat and Relay (Not req for evap)
		1 - Full Crating For Commercial Heater
		1 - Downturn Plenum for Size 1 DX Coil Module
		1 - 3 Ton Single Circuit Modular Packaged Cooling Option for Size 1 DF/EH MUA (1,100 to 1,800 cfm), 208V/230V, 3 phase. Cooling Thermostat or Programmable Stat Required for Proper Operation.
		1 - Separate 120V Wiring Package (Required and used only for DCV or Prewire with VFD) - Three Phase Only

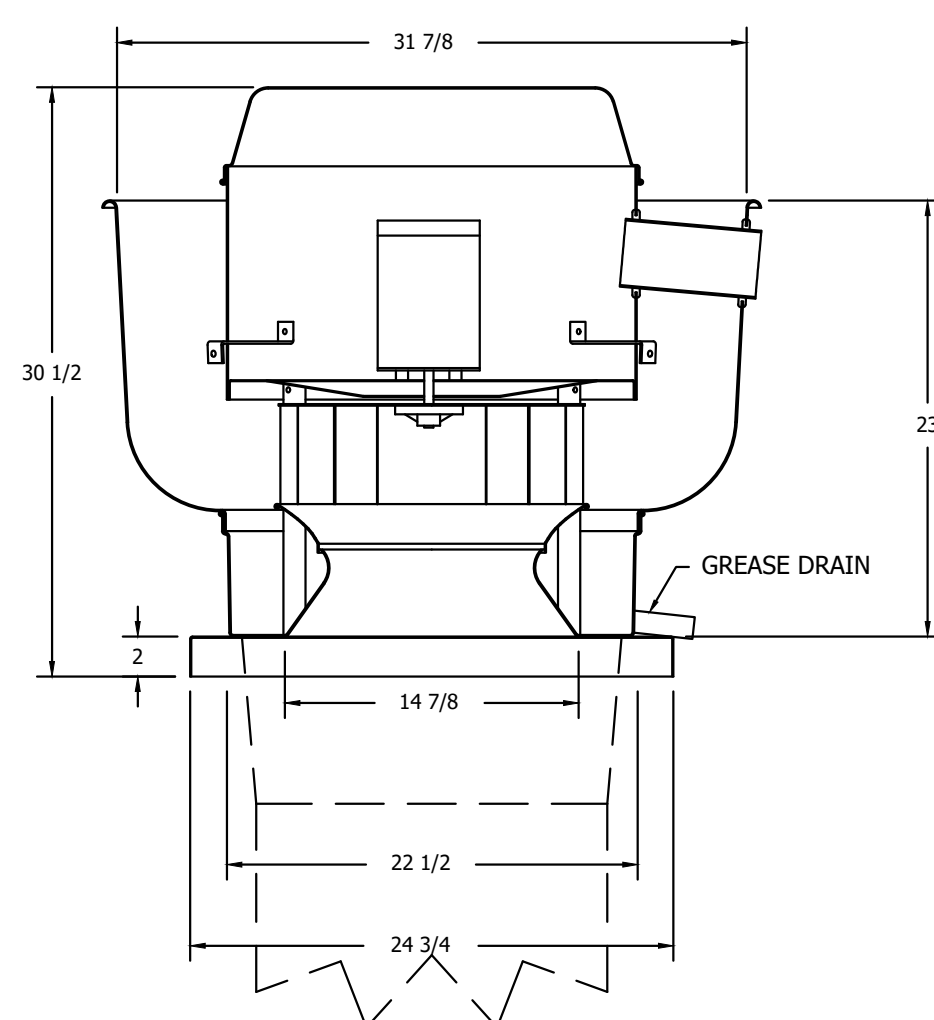
FAN ACCESSORIES

FAN UNIT NO.	TAG	EXHAUST				SUPPLY		
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF-1	YES						
2	KMUA-1						YES	

CURB ASSEMBLIES

NO.	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF-1	41 LBS	Curb	23.000"W x 23.000"L x 24.000"H Vented Hinged
2	# 2		83 LBS	Rail	6.000"W x 21.000"L x 14.000"H
2	# 2	KMUA-1	83 LBS	Curb	21.000"W x 71.000"L x 14.000"H Insulated

FAN #1 DUBSHFA - EXHAUST FAN (KEF-1)



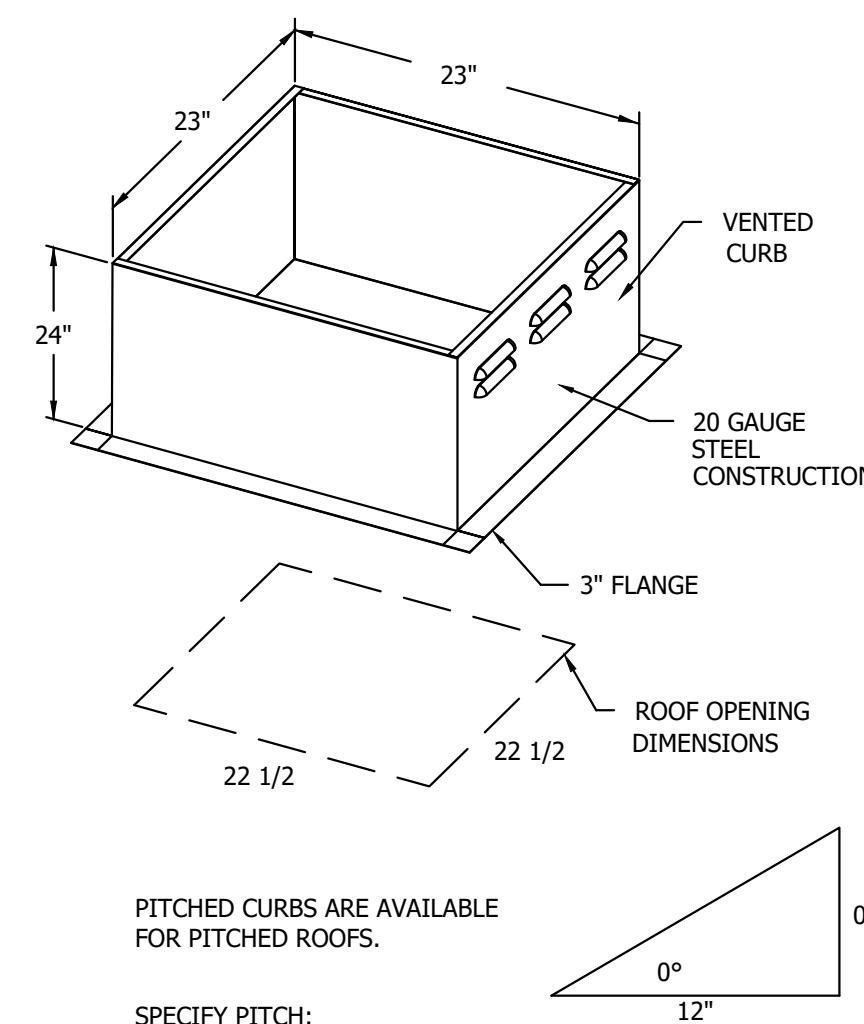
FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762 AND ULC-5645
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

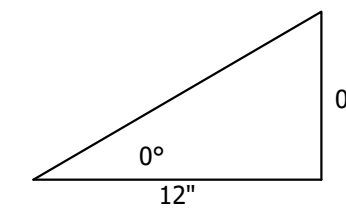
ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS
GREASE BOX.



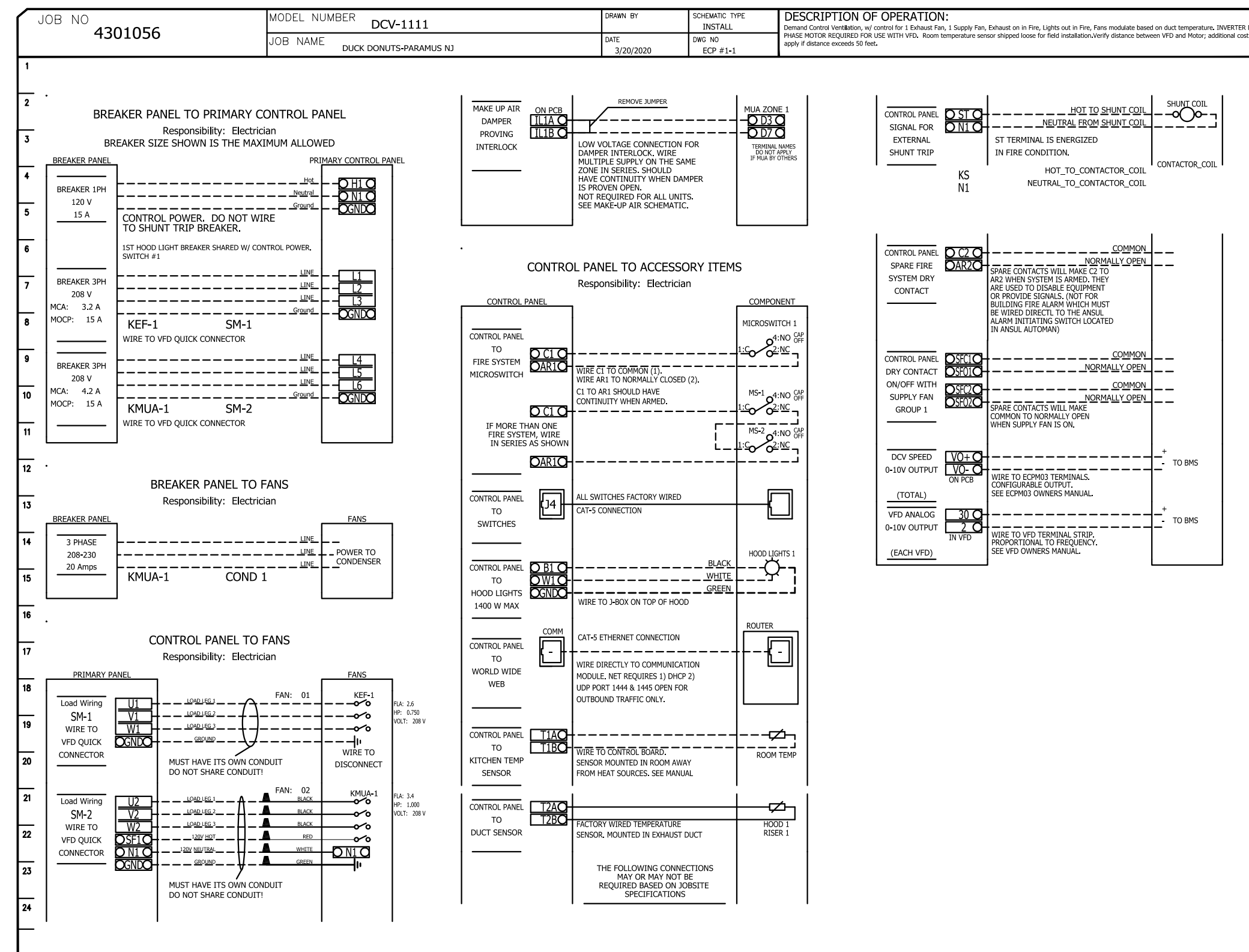
PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE

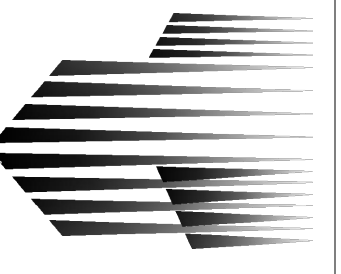


ELECTRICAL PACKAGE - Job#4301056

NO.	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	φ	H.P.	VOLT	FLA
1		DCV-1111	Utility Cabinet Right	O4 - Utility Cabinet Right	1 Light	Smart Controls DCV	KEF-1	Exhaust	3	0.750	208	2.6
				Hood # 1	1 Fan		KMUA-1	Supply	3	1.000	208	3.4



LARRY E. SAYLOR
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AIA, NCARB
ARCHITECT
930 CENTURY DRIVE SUITE 103
MECHANICSBURG, PA. 17055
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DATE: 05.01.2020
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CHECKED BY: BRM
PROJECT #: 20011

#	REVISIONS:	DATE:

PROPOSED FIT OUT FOR:
DUCK DONUTS
556 ROUTE 17 NORTH
PARAMUS, NJ 07652

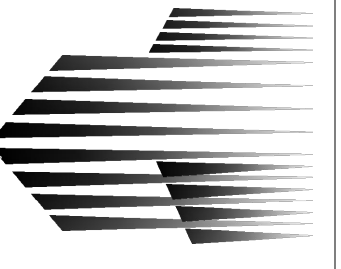
DUCK DONUTS-PARAMUS NJ
556 ROUTE 17 NORTH,
PARAMUS, NJ, 07652

DATE: 3/20/2020
DWG.#:
4301056
DRAWN BY: reg36
SCALE:
3/4" = 1'-0"
MASTER DRAWING

SHEET NO.
3

MECHANICAL
SCHEDULES
AND
DETAILS

M8.4



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PROPOSED FIT OUT FOR:
DUCK DONUTS
556 ROUTE 17 NORTH
PARAMUS, NJ 07652

MECHANICAL
SCHEDULES
AND
DETAILS

M8.5

CAPTIVE

Eastern North Carolina

1215 MANOR DR, SUITE 206, MECHANICSBURG, PA, 17055

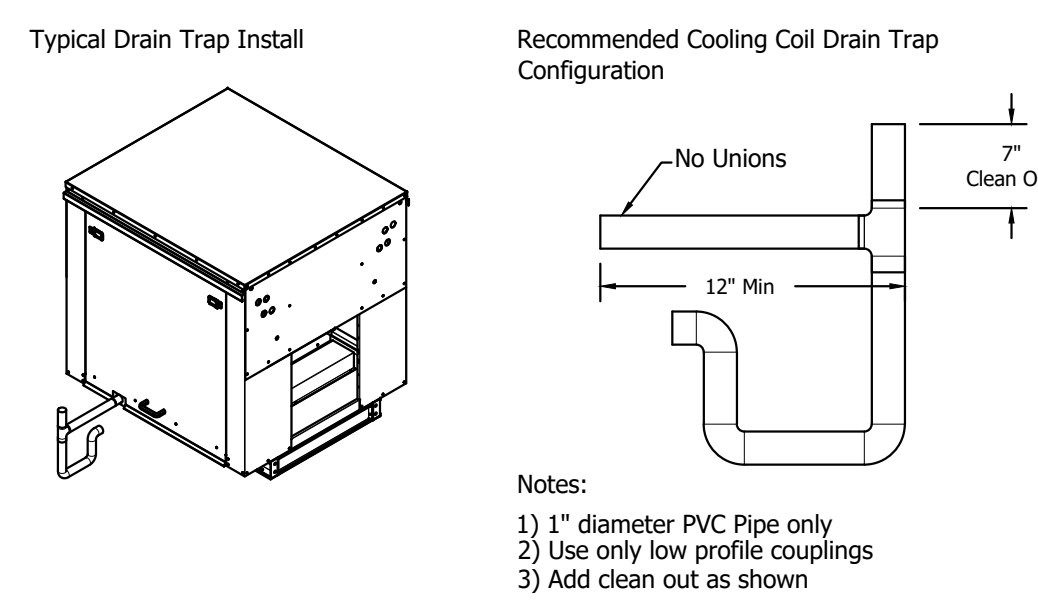
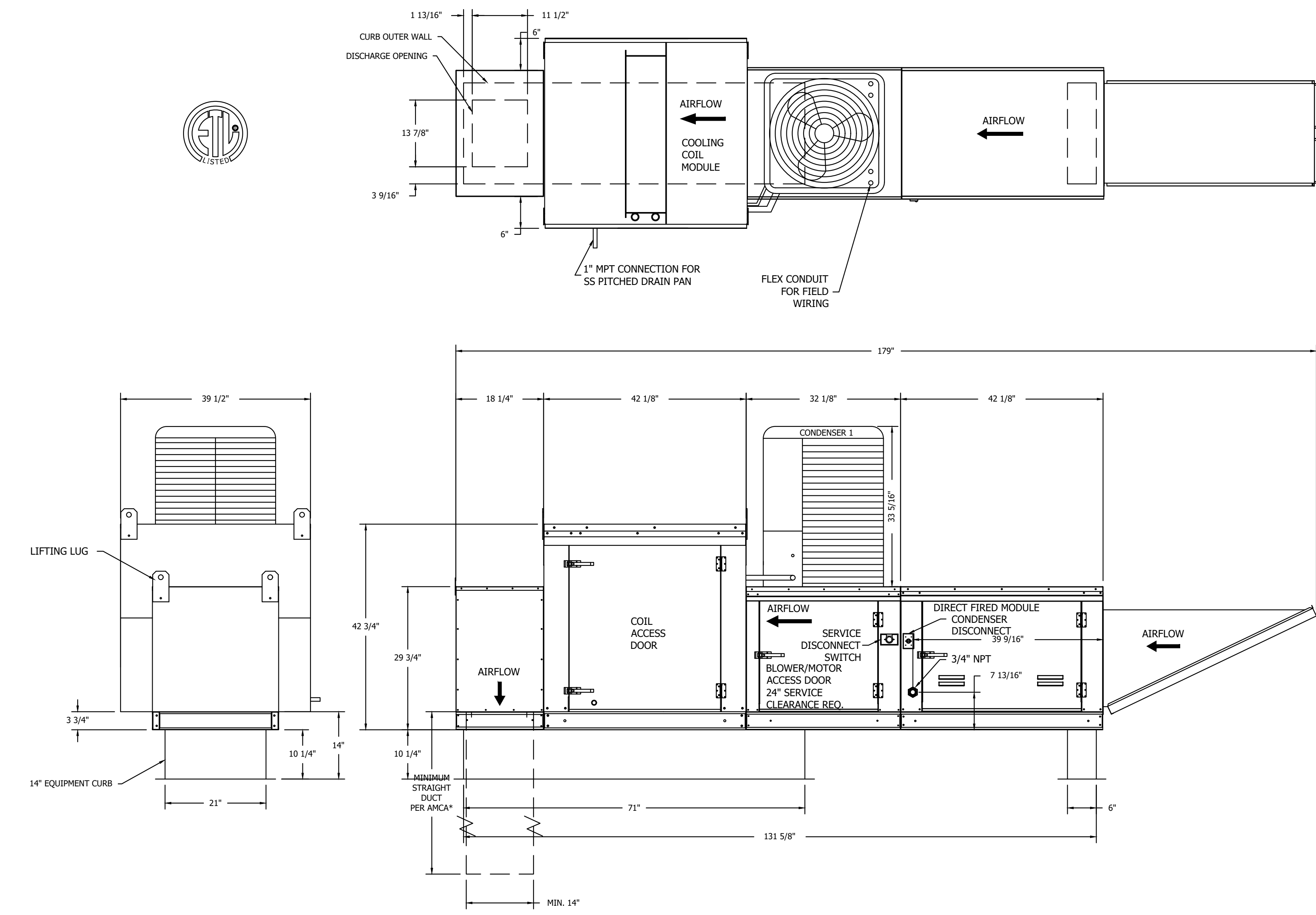
DUCK DONUTS-PARAMUS NJ
556 ROUTE 17 NORTH,
PARAMUS, NJ, 07652

DATE: 3/20/2020
DWG.#: 4301056
DRAWN BY: reg36
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 4

- FAN #2 A1-D-250-G10-MPU - HEATER (KMA-1)
- DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 10" BLOWER
 - INTAKE HOOD WITH EZ FILTERS
 - DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT
 - MOTORIZED BACK DRAFT DAMPER 16" X 18" FOR SIZE 1 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, TB1205 ACTUATOR INCLUDED
 - LOW FIRE START. ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
 - GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE
 - GAS PRESSURE GAUGE, -5 TO +15 INCHES WC, 2.5" DIAMETER, 1/4" THREAD SIZE
 - OX COOLING INTAKE AIR THERMOSTAT AND RELAYS MOUNTED IN UNIT - SET POINT FOR THERMOSTAT SHOULD BE 85°F.
 - FULL CRATING FOR COMMERCIAL HEATERS FOR SHIPPING.
 - DOWNTURN PLENUM FOR SIZE 1 COOLING COIL MODULE - REQUIRED FOR DOWN DISCHARGE COOLING COIL APPLICATIONS
 - 3 TON, SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION FOR SIZE 1 DF/EH MODULAR PACKAGED UNIT. INCLUDES CONDENSER, DX COIL, FILTER/DRYER KIT, THERMAL EXPANSION VALVE, R410A REFRIGERANT, AND REFRIGERANT PIPING. (1,100 TO 1,800 CFM) NOT BUILT WITH OPPOSITE SIDE CONTROLS OR OPPOSITE AIRFLOW DIRECTION. CONDENSERS REQUIRE SEPARATE 208V, 3 PHASE POWER SUPPLY UNLESS ORDERED WITH SINGLE POINT CONNECTION. COIL = 2E21001N
 - SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.

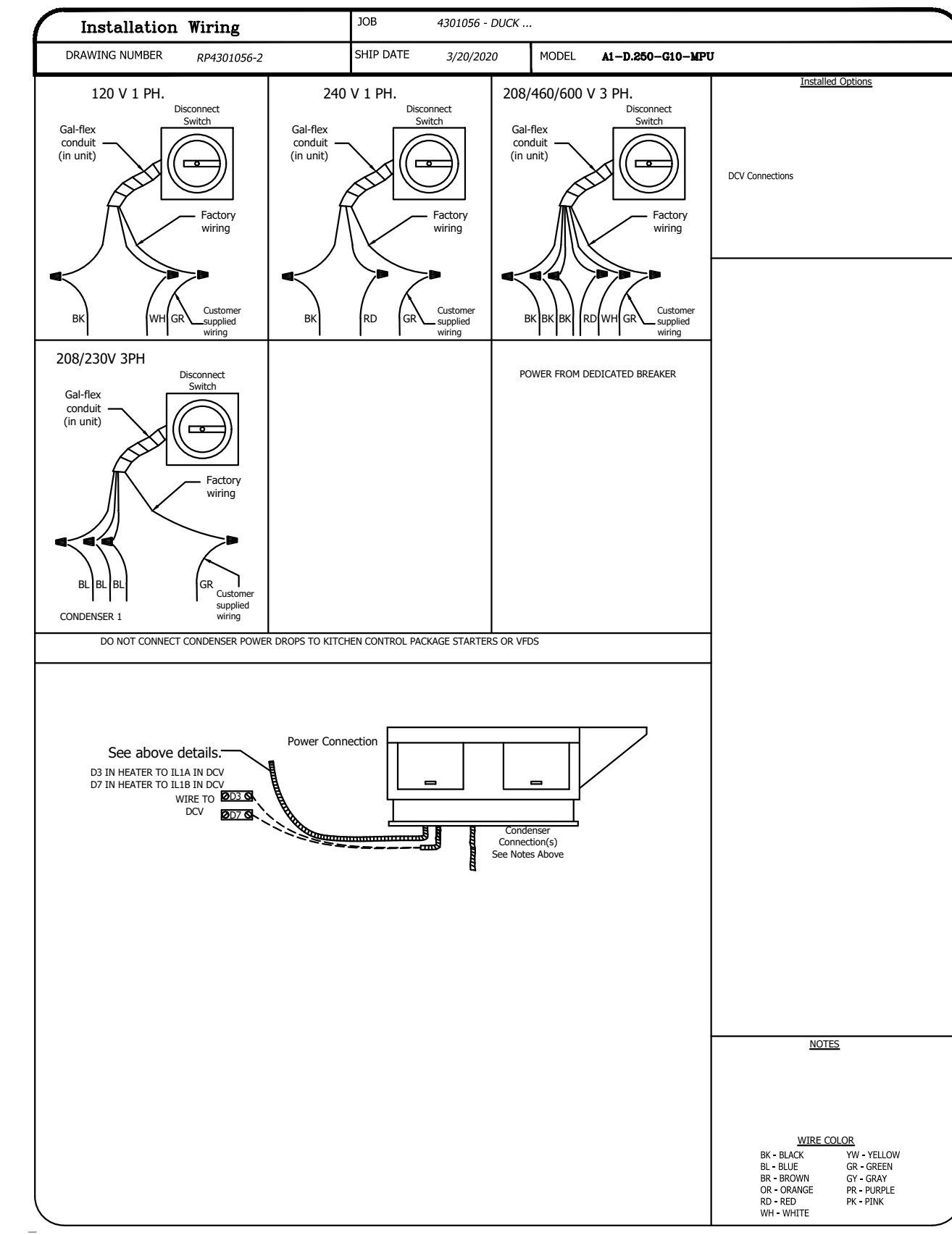
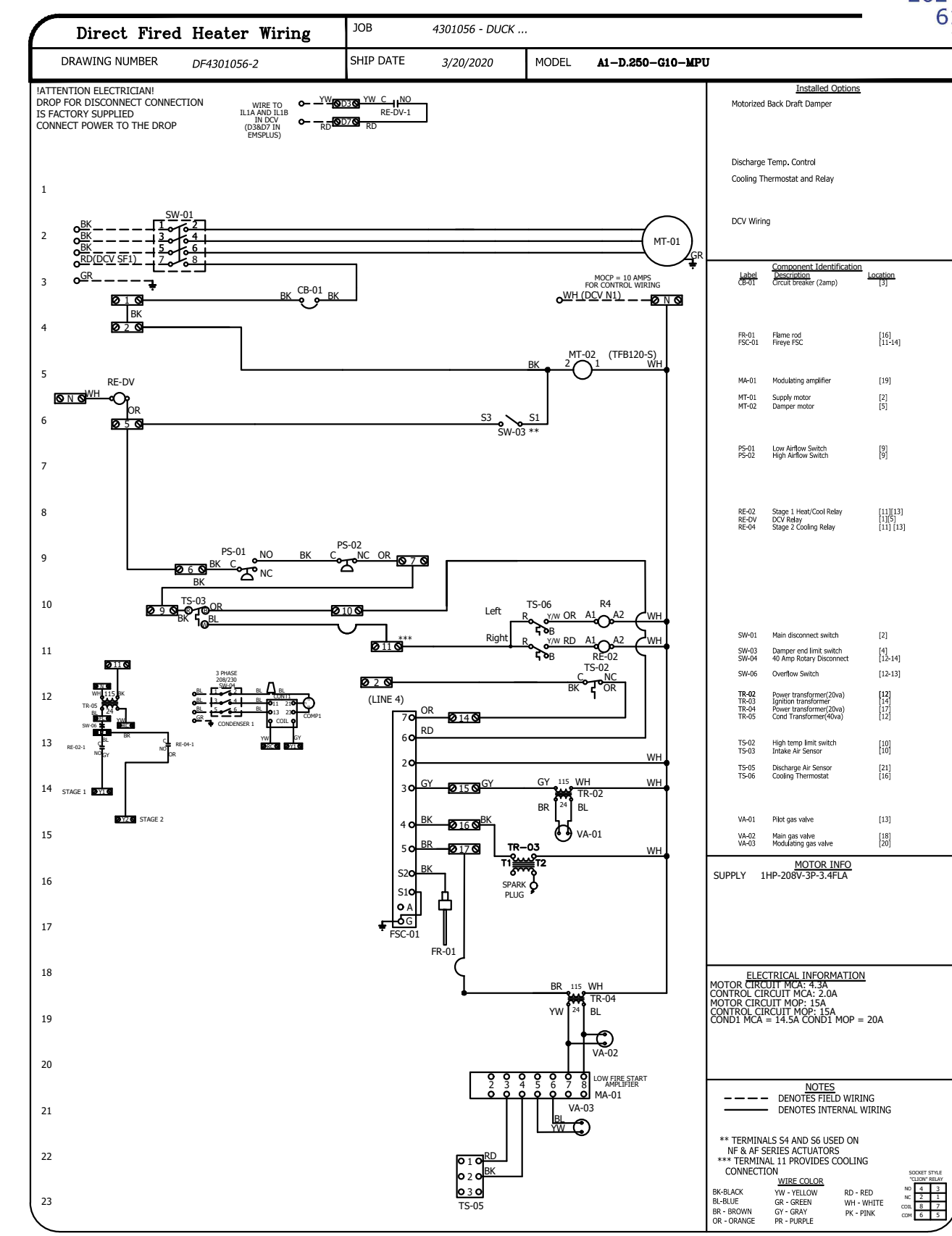
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT.
SUGGESTED STRAIGHT DUCT SIZE IS 14" X 14"

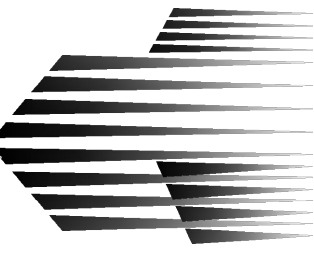
SUPPLY SIDE HEATER INFORMATION:
WINTER TEMPERATURE = 16°F. TEMP. RISE = 100°F.
BTUS CALCULATED OFF STANDARD AIR DENSITY
OUTPUT BTUS AT ALTITUDE OF 0.0 FT. = 157896
INPUT BTUS AT ALTITUDE OF 0.0 FT. = 171626



Direct Fired (DF) Profile Plate Assembly

Direct Fired Profile Plate Specifications:
Description:
Direct fired burners shall have patented (US Patent No.: US662952B2), self-adjusting profile plates designed to ensure proper air velocity and pressure drop across the burner. Profile plates shall allow burners to achieve clean combustion by limiting by-product levels to a maximum of 5ppm of carbon monoxide (CO), and 0.5ppm of nitrogen dioxide (NO2). Units shall be configured with the blower mounted downstream of the burner. This arrangement will ensure a consistent airflow, regardless of inlet air temperature.
Application:
Spring loaded burner profile plates are engineered to automatically react to the momentum of a fresh air stream, without the need for any motors or actuators to mechanically adjust them. With this feature, all DF units are designed for demand control ventilation (DCV) requirements.
Configurations:
All profile plate assemblies shall be included in the DF unit's ETL listing and comply with combined safety standards ANSI Z83.4 and CSA 3.7 (non-recirculating DF heaters) and ANSI Z83.18 (recirculating DF heaters).
General Construction:
-Profile plates shall be formed from G90 galvanized steel.
-Profile plates shall vary in size per unit.
-Profile plates shall be mounted along the same plane as the discharge of the burner.
-Design shall incorporate properly torqued, permanently mounted spring hinges.
-Spring hinges shall be made from plated steel.





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DATE: 05.01.2020
 DRAWN BY: JDL/JLM/JPK
 CHECKED BY: BRM
 PROJECT #: 20011

#	REVISIONS:	DATE:				
1						
2						
3						
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PROPOSED FIT OUT FOR:
DUCK DONUTS
 566 ROUTE 17 NORTH
 PARAMUS, NJ 07652

MECHANICAL SPECIFICATIONS

M9.1

15050 Basic Mechanical Requirements

1. General
 - A. The owner accepts no responsibility for loss or damage to materials or structures on site, or for the salvage value or which the contractor may have reflected on his bid. The contractor shall effectually protect at his own expense, his work, materials, or equipment and is liable to injury during construction period.
 - B. Contractor shall file, secure, and pay for any necessary approvals, permits and inspections.
 - C. All systems shall be tested in accordance with the requirements of all federal, state, and local authorities having jurisdiction. contractor shall coordinate tests with local officials.
 - D. Prior to testing the contractor shall make all system adjustments required for proper operation.
2. Scope of Work
 - A. It is the intent of the drawings and specification that the contractor shall provide a working installation complete in every detail and all items necessary for a complete installation shall be furnished if specified or shown on the drawings.
 - B. Upon completion of the work, all equipment shall be thoroughly cleaned and left in first class condition.
 - C. The contractor shall be responsible for the startup of all systems.
3. Work by Others
 - A. The general contractor will build into his work all sleeves, anchors, inserts, chases, recesses, openings, etc. necessary for the installation of the heating and ventilating work unless otherwise noted. This contractor shall provide information as to the location of such items to the general contractor prior to construction.
 - B. Equipment specified to be furnished under this section shall be complete with electric motors and starting equipment where required or specified.
4. Drawings
 - A. The drawings are generally diagrammatic and indicative of the work to be installed. Exact locations of equipment and points of termination shall be approved by the architect/engineer. Should it be found that any system or equipment cannot be installed as shown on the drawings, the architect/engineer shall be consulted before installation or making changes to the layout.
 - B. Prepare a set of legible record drawings showing all interior and exterior piping and equipment with sizing and location by dimension. All exterior piping shall be located by dimension from the building walls or curb lines.
5. Regulations
 - A. The mechanical installation shall meet the latest requirements of the international building codes and NFPA, in addition to the state, municipal or other authority laws, rules, or regulations applicable to the work.
 - B. Underwriters' laboratories (ul) listings and national electric manufacturer's association's (NEMA) stamps or seals shall be evidenced where applicable to electrical apparatus forming parts of the mechanical equipment.
6. Shop Drawings and Catalog Data
 - A. The contractor shall submit seven (7) copies of shop drawings, catalog cuts, etc. to the architect of all equipment. Shop drawings shall be corrected as directed by the architect/engineer and be re-submitted until satisfactory. No work shown on any shop drawings shall be executed until such drawings are reviewed and released for the contractor's use.
7. Warranty
 - A. This contractor shall warrant that the materials and workmanship used in the erection of this installation are as herein specified. He is to make good any defects in same which become apparent within 1 year from date of substantial completion of work, providing such defects are due to faulty materials or workmanship and not to misuse of apparatus by the owner or his employees, or tenants.
8. Workmanship and Materials
 - A. All work shall be installed in a first-class, neat, and workmanlike manner by mechanics experienced in the trade involved and shall be acceptable to the architect.
9. Instruction to Operating Personnel
 - A. The contractor shall furnish the services of qualified personnel, approved by the architect, and thoroughly familiar with each completed installation to instruct the owner's operating personnel in the proper operation of all systems, and the proper care of all equipment and apparatus included under this contract.

15080 Mechanical Insulation

1. Quality Assurance
 - A. Applicator: Company specializing in mechanical insulation application with minimum five years' experience on similar type projects.
 - B. Materials: UL listed; flame spread/smoke developed rating of 25/50 in accordance with latest editions of ASTM E84, NFPA 255, UL 181 and UL 723.
 - C. Energy Efficiency: conform to thickness specified herein and to meet minimum requirements of North American Insulation Manufacturer's Association (NAIMA) and ASHRAE Standard 90.1-1999 and applicable addendums.
 - D. Installation: all insulation shall be installed in accordance with National Insulation Contractors Association (NICA) National Standards, NFPA 90A and 90B.
 - E. All adhesives, cements, finishes, jackets, etc. shall be UL listed or labeled for use as applied to insulation and designed specifically for use in the insulation.
2. Submittals
 - A. Submit shop drawings and product data under provisions of Division 1 and Division 15.
 - B. Include product description, list of materials and thickness for each service, and locations.
3. Duct Insulation Materials
 - A. Flexible Glass Fiber Blanket: ASTM C 1200; commercial grade; noncombustible; minimum R-5 installed for ductwork in conditioned space, minimum R-8 for ductwork outside of the building envelope.
 - i. Vapor Barrier Jacket: foil scrim-kraft (FSK); ASTM C 1136, Type I maximum vapor transmission rate of 0.02 perms.
 - B. Applies to all ductwork hard and flexible.
4. Execution
 - A. Verify that site conditions are ready to receive work in compliance with manufacturer recommendations.
 - B. Commencement of installation indicates acceptance of site conditions by the installer.
 - C. Ensure that testing of equipment and ductwork has been successfully completed prior to installing insulations.
 - D. Ensure that equipment and ductwork are clean and dry and that insulation is clean and dry, and in good mechanical condition with all factory applied vapor or weather barriers intact and undamaged.
 - E. Install materials and accessories in accordance with manufacturer's written instructions.
 - F. Maintain ambient temperatures and conditions required by manufacturers of adhesives, mastics and insulation cements during and after installation for a minimum period of 24 hours.
 - G. Replace existing duct insulation disturbed in making new connections with new insulation and covering to match existing.
 - H. On cold surfaces where a vapor barrier must be maintained, insulation shall be applied with a continuous, unbroken moisture and vapor seal. All hangers, supports, anchors or other projections that are secured to cold surfaces shall be insulated and vapor sealed to prevent condensations.

- I. Where insulated ducts pass through openings, the full specified thickness of the insulation shall pass through he is opening. Where fire stopping material is used in fire rated walls, butt insulation tight to fire and smoke stopping material, or to collar, at wall and floor penetrations. Where fire and smoke stopping material does not extend full depth of sleeve insulation shall extend inside sleeve to butt against fire and smoke stopping material.
- J. The finished installation shall present a neat and acceptable appearance which includes but is not limited to: all jackets smooth, all vapor barriers sealed properly, no evidence of "ballooning" of the jackets, or sagging insulation, all valves, dampers, gauges, unions, etc. accessible. The owner's representative shall be the final judge of acceptance of workmanship.
- K. Insulation shall be protected from moisture and weather during storage and installation.
5. Duct Insulation Installation
 - A. Install insulation materials with smooth and even surfaces. Butt joints firmly together to ensure complete and tight fit over surfaces to be covered.
 - B. Maintain the integrity of factory applied vapor barrier jacketing on all insulation, protecting it against puncture, tear of other damage. Coat staples with suitable sealant to maintain vapor barrier integrity. Seal all cut ends of insulation to maintain vapor barrier.
 - C. Duct insulation at fire dampers shall be extended over supporting angle iron and sealed to wall.
 - D. The tops of all diffusers shall be insulated similar to the connecting ductwork to prevent condensation.
 - E. Penetrations: extend ductwork insulation without interruption through walls, floors, and similar ductwork penetrations. Continue insulation vapor barrier through penetrations.
 - F. Install a flexible glass fiber blanket insulation to obtain specified R-value. Insulation shall not be compressed more than 25% of its nominal thickness.
6. Duct Insulation Schedule:
 - A. Interior, concealed locations:
 - i. Flexible glass fiber blanket: 2" thick (R-5 minimum installed).

15580 Condensate Piping

1. Regulatory Requirements
 - A. General: all materials specified in this section shall conform with the appropriate sections of NFPA 90A, NFPA 90B, NFPA 91, NFPA 96 and other specific requirements as specified herein.
2. Condensate Piping
 - A. Fittings and joints 2" and under: wrought copper conforming to ASME B16.15 and B16.18. solder joints in accordance with ASTM B828. Solder shall conform with ASTM B32 and NSF 61. Flux shall conform with ASTM B813 and NSF 61.
3. Insulation
 - A. Provide 1" flexible elastomeric on all interior condensate piping.

15855 Air Distribution

1. Regulatory Requirements
 - A. General: all materials specified in this section shall conform with the appropriate sections of NFPA 90A, NFPA 90B, NFPA 91 and NFPA 96 and other specific requirements as specified herein.
 - B. The fabrication of all ductwork and ductwork accessories shall conform to the appropriate SMACNA standards.
2. Submittals
 - A. Submit shop drawings and product data under provisions of section 15050.
 - B. Ductwork:
 - i. Coordination drawings: refer to article, submittals in section 15050.
 - ii. Indicate duct material, pressure classifications, joint construction, and seal method.
 - C. Flexible ducts and clamps, with manufacturers installation instructions.
 - D. Furnish sheet metal shop drawings of complete duct system.
3. Operation and Maintenance Data
 - A. Submit operation and maintenance data to requirements of section 15050.
 - B. Include manufacturer's descriptive literature, operating instructions and maintenance and repair data and parts lists
 - C. Include instructions for operating, changing and periodic cleaning of filters.
 - D. Include operating instructions, directions for resetting constant volume regulators.
4. General Installation
 - A. Install devices in accordance with manufacturer's instructions.
 - B. Seal all connections airtight.
 - C. Clean and remove all dirt and debris.
 - D. Re-paint/touch-up as necessary.
5. Duct Construction and Installation
 - A. Fabricate and install ductwork and accessories in accordance with referenced SMACNA standards:
 - i. Drawings show the general layout of ductwork and accessories but do not show all required fittings and offsets that may be necessary to connect ducts to equipment, boxes, diffusers, grilles, etc. and to coordinate with other trades. Fabricated ductwork based on field measurements. Provide all necessary fitting and offsets at no additional cost to the owner. Coordinate with other trades for space available and relative location of HVAC equipment and accessories on the ceiling grid. Duct sizes on the drawings are inside dimensions which shall be altered by contractor to a dimension with the same air handling characteristics where necessary to avoid interferences and clearance difficulties.
 - ii. Provide duct transitions, offsets and connections to dampers, coils, and other equipment in accordance with SMACNA standards, section II. Provide streamliner, when an obstruction cannot be avoided and must be taken in by a duct. Repair galvanized areas with galvanizing repair compound.
 - iii. Provide bolted construction and tie-rod reinforcement in accordance with SMACNA standards, section VI.
 - iv. Construct casings, eliminators, and pipe penetrations in accordance with SMACNA standards, Section VI. Design casing access doors to swing against air pressure so that pressure helps to maintain a tight seal.
 - v. Proper provisions shall be made for expansion and contraction of ductwork.
 - B. Install duct hangers and supports in accordance with SMACNA standards, Section IV.
6. Diffusers, Boots, Registers, and Grilles
 - A. Install air outlets and inlets in accordance with manufacturer's written instructions and in accordance with recognized industry practices to ensure that products serve intended functions.
 - B. Connect diffusers to low pressure ducts with five-foot maximum length of flexible duct. Hold in place with strap or clamp.
 - C. Coordinate exact location of air outlets and inlets and make necessary adjustments in position to conform with architectural features, symmetry, and lighting arrangement. Refer to reflected ceiling plans (where applicable) for general locations. Unless otherwise indicated, locate units in center of acoustical ceiling modules.
 - D. Check and verify the various ceiling and wall types with the architect and general contractor. The contractor shall be responsible for ordering the correct type inlet and/or outlet with all associated hardware, mounting accessories and trims, for accommodating the type ceiling or wall in which inlets and/or outlets are to be installed.

- E. Where diffusers, registers and grilles cannot be installed to avoid seeing inside the duct, paint the inside of the duct with flat black paint to reduce visibility.
- F. Furnish to the owner, with receipt, three operating keys for each type of air outlet and inlet that requires them.

15990 Testing, Adjusting, and Balancing

1. Coordination of Work and Intent
 - A. It is the intent of this specification section to provide for a completely tested, adjusted, and balanced (TAB) installation by a NEBB or AABC certified contractor.
 - B. Any additional balancing dampers which are required for balancing shall be provided by the mechanical contractor.
 2. Work Included, But Not Limited To
 - A. Equipment Testing and Operation, verify proper operation and control of all equipment.
 - B. Adjusting and setting of all volume control devices to achieve proper air distribution, pressures, and patterns in all parts of the supply, return and exhaust air systems.
 - C. Adjusting and setting of belt driven fans to achieve design or optimum total delivered airflow (CFM).
 3. Equipment Testing and Operation
 - A. All equipment shall be tested and operated for proper operation.
 - B. Controls shall be tested and operated for proper operation.
 - C. All modes of operation and sequence of operation (heating, cooling, backup heating, fan and dampers) shall tested to verify proper operation.
- All measured air quantities shall be within +/-10% of design air quantities where achievable.
4. Air System Balancing
 - A. Adjusting of individual outlets shall be performed. Outlets shall be set for the air pattern required and all main supply air dampers shall be adjusted and set for the design indication.
 - B. All measured air quantities shall be within +/-10% of design air quantities where achievable.
 4. Report Requirements
 - C. Submit written reports upon completion of the balancing work.

MECHANICAL GENERAL NOTES

1. Codes and standards listed in specifications and drawings are minimum standards. Where requirements on the drawings or specifications exceed the minimum code requirements, the drawings or specifications shall govern.
2. The power ratings of motors and other mechanical equipment and the electrical characteristics of electrical systems serving them have been established as minimums which allow that equipment to function properly to provide the required capacities. Power ratings include reasonable safety factors to accommodate common differences between design parameters and field construction practices. Equipment with power ratings less than those indicated on the drawings shall not be permitted.
3. Reasonable efforts have been made to coordinate electrical requirements of mechanical equipment with the electrical systems serving that equipment. Differences among manufacturers of mechanical equipment make it impossible to produce a single electrical design which will satisfy the varying electrical requirements of those manufacturers. Consequently, the contractor shall coordinate the electrical requirements of the mechanical equipment specified in this project with the equipment furnished on this project and provide electrical systems required by that equipment. This coordination effort shall be completed prior to the installation of either the mechanical equipment of the electrical systems serving that equipment. Electrical system revisions required to coordinate with the mechanical equipment furnished shall be provided at no additional cost to the owner.
4. Drawings indicate general locations of fixtures, apparatus, equipment, piping, and ductwork. Changes on location shall be made to accommodate existing or new building conditions and coordination with other trades, including HVAC, plumbing, electrical, fire protection, structural, and architectural, shall be made without additional costs to the owner.
5. Thoroughly clean/flush all (existing and new) hydronic piping systems with clean water. Afterwards, remove and clean or replace strainer screens.
6. All HVAC systems shall be tested and balanced according to NEBB and SMACNA standards.
7. Provide access to equipment and portions of building systems requiring service.
8. Do not install ductwork, piping, or equipment in electrical rooms, elevator machine rooms, or elevator shafts, unless explicitly indicated on the drawings. Piping, ductwork, and equipment shall not be installed directly above or 42" in front of electrical equipment (switchgear, switchboards, panels, motor control centers, variable frequency drives, transformers or starters) from the floor the structure above.
9. Unless indicated otherwise, equipment and materials shall be new and of the customary standard and quality furnished by the designated manufacturer for that catalog number.
10. Air systems shall operate without aerodynamic noise generated from faulty installation of ductwork, diffusers, or any portion of the air distribution system.
11. Support piping independently of equipment. Hanger rods shall be suspended from the structure. Do not suspend from other piping, conduit, equipment, or ductwork.
12. All work referenced under division 15 or division 23 shall be done by the mechanical contractor.
13. Drawings indicate design intent. Contractor is responsible to field verify all installations. Contractor is responsible for coordination between other trades to assure the proper installation of all equipment.
14. All piping, ductwork, insulation, conduits, supports, and HVAC equipment exposed to view shall be painted. Color shall be selected by architect.
15. Where ductwork is exposed, duct seams shall be minimized and shall be of high quality workmanship.
16. HVAC contractor shall provide all wall and ceiling access panels required for fire dampers and fire/smoke dampers. Coordinate final location with architect.
17. All fire dampers and fire/smoke dampers shall be dynamic rated type "B" dampers with access panels in ductwork. All dampers shall be installed per manufacturer instructions with breakout in ductwork.

MECHANICAL GENERAL DUCTWORK NOTES

1. All ductwork shall be galvanized except as otherwise noted. All dryer ductwork shall be aluminum. All pool, pool equipment and pool restroom ductwork shall be aluminum.
2. Changes in shape or dimension shall be made with maximum transition of 1 to 7.
3. Separate galvanized sheet metal from aluminum of copper with lead or felt gaskets.
4. Provide supplemental stiffening and supports to ducts and apparatus casings to prevent drumming, sagging and to provide a structurally sound assembly.
5. Provide offsets and transitions to coordinate with other work.
6. Provide ductwork and transitions to connect ductwork to equipment and coils.
7. Install flexible ductwork in a fully extended condition without sags and kinks.
8. Install duct mounted smoke detectors in accessible locations.
9. Unless otherwise noted, provide 1" thick duct lining for a minimum of 20 feet of ductwork from the supply air discharge and return air inlet of air handling units, fan coil units, and blower coils. For all lined ductwork, dimensions indicated on drawings shall be clear inside dimensions measure from face-of-liner to face-of-liner.
10. All fire dampers and fire /smoke dampers shall be dynamic rated type "B" dampers with access panels in ductwork. All dampers shall be installed per manufacturer instructions with breakout in ductwork.

MECHANICAL GENERAL PIPING NOTES

1. Install piping to allow access valves, air vents, equipment requiring access, and to provide maximum headroom.
2. Provide offsets to maintain ceiling height and to coordinate with other trades.
3. Install valves in horizontal piping with valve stems at or above the piping center line.
4. Arrange piping for venting of air and drainage of entire system.
5. Horizontal runouts of condensate piping shall be 2" in diameter and shall be run below slab.

MECHANICAL GENERAL AUTOMATIC TEMPERATURE CONTROLS NOTES

1. Transformers or filters for operation of automatic temperature controls from building power circuits shall be provided under division 23.
2. Wiring lower than 110 volts for interlocked devices, DDC controllers, terminal control units, flow measuring devices, and other power consuming control devices shall be furnished and installed under division 23. Wiring 110 volts and higher for interlaced devices, DDC controllers, terminal control units, flow measuring devices, and other power consuming control devices shall be furnished and installed under division 26.
3. Provide supplemental stiffening and supports to ducts and apparatus casings to prevent drumming, sagging, and to provide a structurally sound assembly.
4. Branch circuit wiring and conduit furnished for control equipment power shall be separate from other power wiring. Each circuit shall extend to a 120V branch circuit panel, and identified 120V, 20 ampers, single pole branch circuit breaker furnished in the panel to serve the circuit. No more than 2 DDC controller installations shall operate from a single 120V branch circuit, unless indicated otherwise.
5. Where systems are served by emergency power, controls for operation of those systems shall also be served by emergency power.
6. Where dampers prevent airflow through and air handling unit or fan, those dampers shall be proven open prior to starting the unit or fan. Proof shall be by mechanical safety limit switch activated by the damper blade. For service with variable frequency drives the switch shall be wired in the automatic and had/test positions and in the bypass position for variable frequency drives with bypass.
7. All low voltage wiring shall be plenum rated. Mechanical contractor shall furnish all low voltage wiring required for automatic temperature controls systems. Low voltage wiring is all wire operating a voltage below 110 volts.

MECHANICAL GENERAL CUTTING AND PATCHING NOTES

1. Where existing walls, roofs, floors, etc. are required to be cut or penetrated, this contractor shall provide both the means for cutting and rough patching as required.
2. Rough patching shall be done in a manner that temporarily seals the building envelope weather tight in preparation for final patching by the general contractor.
3. This contractor shall fully coordinate with the general contractor as to not allow any portion of the building envelope to remain unfinished or weather sealed for any amount of time.

ABBREVIATIONS

ABV	ABOVE	P	PARTIAL
AFF	ABOVE FINISHED FLOOR	PC	PLUMBING CONTRACTOR
AP	ACCESS PANEL	PDR	PLENUM DRAIN
		PERF	PERFORATED
BFP	BACKFLOW PREVENTER	P-	PLUMBING FIXTURE IDENTIFICATION
BLDG	BUILDING	PH	PHASE
BLW	BELOW	PI	PRESSURE INDICATOR
BSMT	BASEMENT	PIV	POST INDICATOR VALVE
		POS	POSITIVE
CFH	CUBIC FEET PER HOUR	PRESS	PRESSURE
CFM	CUBIC FEET PER MINUTE	PS	PRESSURE SWITCH
CHP	CONCRETE HOUSEKEEPING PAD	PSI	POUNDS PER SQUARE INCH
CI	CAST IRON	PSIG	POUNDS PER SQUARE INCH GAUGE
CLG	CEILING	PSIA	POUNDS PER SQUARE INCH ABSOLUTE
CO	CLEAN OUT	PT	PRESSURE TRANSMITTER
COL	COLUMN	PV	PLUG VALVE
COMP	COMPRESSOR	PVC	POLYVINYL CHLORIDE
CONC	CONCRETE	PVS	POLYVINYL COATED STEEL
CONN	CONNECTION		
CONT'N	CONTINUATION	QD	QUICK DISCONNECT
CONTR	CONTRACTOR	QTY	QUANTITY
CP	CONCRETE PIPE	RAC	RUN ABOVE CEILING
CS	CUP SINK	RAF	RUN ABOVE FLOOR
°C	DEGREES CENTIGRADE	RATC	RUN AT CEILING
		RBC	RUN BELOW CEILING
DIA	DIAMETER	RBF	RUN BELOW FLOOR
DIAG	DIAGRAM	RBG	RUN BELOW GRADE
DISCH	DISCHARGE	RBJ	RUN BELOW JOIST
DIW	DOWN IN WALL	RCP	REINFORCED CONCRETE PIPE
DN	DOWN	RD	ROOF DRAIN
DWG	DRAWING	REL	RELIEF
		REQD	REQUIRED
(E)	EXISTING	RICW	RUN IN CASEWORK
EA	EACH	RIE	RUN IN ENCLOSURE
ELEV	ELEVATION	RIW	RISE IN WALL
ENT	ENTERING	RM	ROOM
EQ	EQUAL	ROD	ROOF OVERFLOW DRAIN
EQUIP	EQUIPMENT		
EQUIV	EQUIVALENT	SA	SHOCK ABSORBER
ETC	AND SO FORTH	SCH	SCHEDULE
EWC	ELECTRIC WATER COOLER	SCHM	SCHEMATIC
EW	EYE WASH	S/S	SERVICE SINK
EXT	EXTERNAL	SPEC	SPECIFICATION
		SQ	SQUARE
°F	DEGREES FAHRENHEIT	SS	STAINLESS STEEL
FA	FROM ABOVE	STD	STANDARD
FB	FROM BELOW	STL	STEEL
FD	FLOOR DRAIN	STR	STRUCTURAL
FIN	FINISHED	SUP	SUPPLY
FL	FLANGE	SYS	SYSTEM
FLEX	FLEXIBLE	SIP	STEAM IN PLACE
FLR	FLOOR	S/SHO	SAFETY SHOWER
FP	FIRE PROTECTION		
FPH	FEET PER MINUTE	TDH	TOTAL DYNAMIC HEAD
FPS	FEET PER SECOND	TEMP	TEMPERATURE
FS	FLOW SWITCH	TP	TOTAL PRESSURE
FT	FEET	TT	TEMPERATURE TRANSMITTER
FTB	FLOOR TO BOTTOM	TP	TYPICAL
FTC	FLOOR TO CENTERLINE	TI	TEMPERATURE INDICATOR
FPH	FROST PROOF HYDRANT		
FXC	FLEXIBLE CONNECTION	VI	VIBRATION ISOLATOR
		VTR	VENT THROUGH ROOF
GA	GAUGE		
GALV	GALVANIZED	W	WIDTH
GC	GENERAL CONTRACTOR	W/	WITH
GPD	GALLONS PER DAY	W/O	WITHOUT
GPH	GALLONS PER HOUR	WC	WATER CLOSET
GPM	GALLONS PER MINUTE	WCH	WATER CLOSET-HANDICAPPED
		WM	WATER METER
HT	HEIGHT		
HB	HOSE BIBB		
HD	HEAD (SEE SCHEDULES)		
HR	HOUR		
HTR	HEATER		
ID	INTERNAL DIAMETER		
INCL	INCLUDING		
INV	INVERT		
K	TYPE OF COPPER TUBING		
LT	LEVEL TRANSMITTER		
LAV	LAVATORY		
MAX	MAXIMUM		
MC	MECHANICAL CONTRACTOR		
MR	MOP RECEPTOR		
MED	MEDIUM		
MFR	MANUFACTURER		
MIN	MINIMUM		
MISC	MISCELLANEOUS		
MTD	MOUNTED		
M	TYPE OF COPPER TUBING		
N	NEW		
NC	NORMALLY CLOSED		
NIC	NOT IN CONTRACT		
NH	NO HUB		
No	NUMBER		
NO	NORMALLY OPEN		
NPW	NON-POTABLE WATER		
NOM	NOMINAL		
NTS	NOT TO SCALE		
OD	OUTSIDE DIMENSION		
OPG	OPENING		
OS	OPEN SITE		
OT	OFF TOP		
OZ	OUNCE		

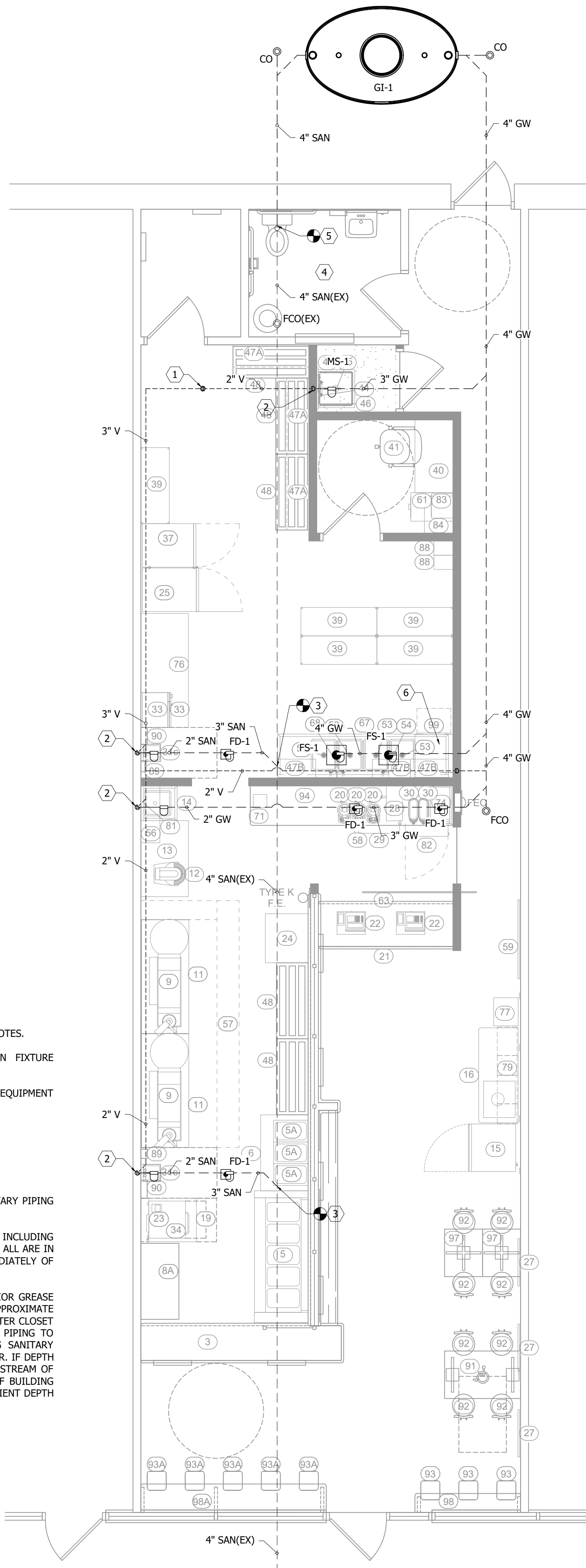
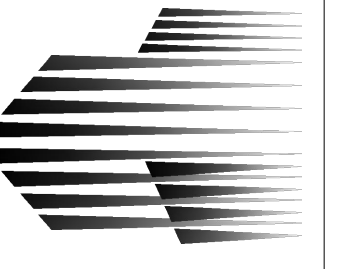
PLUMBING PIPING DESIGNATIONS	
SYMBOL	TYPE
	EXISTING PIPING TO REMAIN
	EXISTING PIPING TO BE REMOVED
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATED
	SANITARY DRAIN
	VENT
	EQUIPMENT DRAIN
	LAB WASTE
	LAB VENT
	FIRE MAIN
	PURE STEAM
	PURE STEAM CONDENSATE
	COMPRESSED AIR
	SPRINKLER
	STORM WATER
	HIGH PRESSURE STEAM
	HIGH PRESSURE CONDENSATE
	LOW PRESSURE STEAM
	LOW PRESSURE CONDENSATE
	TOWER WATER SUPPLY
	TOWER WATER RETURN
	VACUUM
	NATURAL GAS
	PROPANE GAS
	DISTILLED WATER SUPPLY
	DISTILLED WATER RETURN
	DEIONIZED WATER SUPPLY
	DEIONIZED WATER RETURN
	WATER FOR INJECTION SUPPLY
	WATER FOR INJECTION RETURN
	USP PURIFIED WATER SUPPLY
	PROCESS HOT WATER RECIRCULATION
	PROCESS WASTE
	PROCESS VENT
	HELIUM
	NITROGEN
	OXYGEN
	HYDROGEN

PLUMBING PIPING SYMBOLS	
SYMBOL	DESCRIPTION
	PRESSURE REDUCING VALVE (PRV)
	GATE VALVE
	GLOBE VALVE
	PLUG VALVE
	BUTTERFLY VALVE
	VALVE IN RISE OR DROP
	BALL VALVE
	SWING CHECK VALVE
	LIFT CHECK VALVE
	GATE VALVE, ANGLE
	GLOBE VALVE, ANGLE
	THREE-WAY CONTROL VALVE
	TWO-WAY CONTROL VALVE
	SOLENOID VALVE
	TEMPERATURE AND PRESSURE RELIEF VALVE
	RELIEF/SAFETY VALVE
	GAS COCK
	GAS PRESSURE REGULATOR
	STRAINER
	STRAINER WITH BLOW OFF VALVE
	FLEXIBLE CONNECTION
	SPRINKLER HEAD
	PIPE RISE
	PIPE DROP
	UNION - SCREWED OR FLANGED
	FLOW SWITCH
	TEMPERATURE TRANSMITTER
	PRESSURE TRANSMITTER OR PRESSURE SWITCH
	THERMOMETER OR TEMPERATURE INDICATOR
	GAUGE WITH GAUGE COCK / PRESSURE INDICATOR
	BACKFLOW PREVENTOR (REDUCED ZONE)

PLUMBING PIPING SYMBOLS	
SYMBOL	DESCRIPTION
	BACKFLOW PREVENTER (DOUBLE CHECK VALVE)
	WATER HAMMER ARRESTOR
	CIRCUIT SETTING BALANCING VALVE
	HOSE BIBB
	ROOF DRAIN
	OPEN SITE DRAIN
	FLOOR DRAIN
	AREA DRAIN
	CLEANOUT
	WALL CLEANOUT

PLUMBING RISER DESIGNATIONS	
SYMBOL	TYPE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	SANITARY STACK
	VENT
	RAIN WATER CONDUCTOR
	FIRE
	WET STACK
	LAB WASTE STACK
	LAB VENT
	LAB AIR
	LAB VACUUM
	NATURAL GAS
	DEIONIZED WATER

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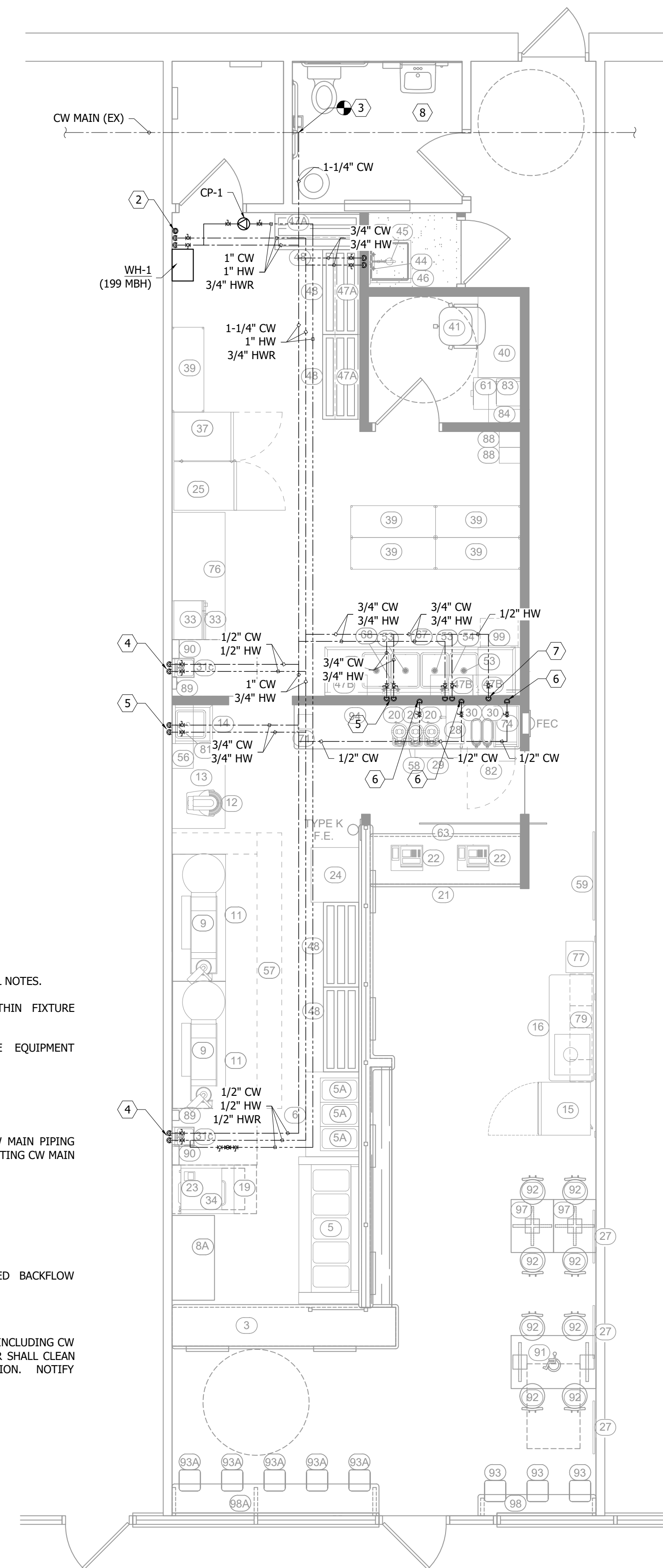
CONSTRUCTION PLAN GENERAL NOTES:

1. REFER TO SHEET P0.1 FOR ALL SYMBOLS AND ABBREVIATIONS.
2. REFER TO SHEET P9.1 FOR PLUMBING SPECIFICATIONS AND GENERAL NOTES.
3. REFER TO SHEET P6.1 FOR PIPING CONNECTION SIZES WITHIN FIXTURE SCHEDULES.
4. REFER TO ARCHITECTURAL DRAWINGS FOR FOOD SERVICE EQUIPMENT SPECIFICATIONS.

CONSTRUCTION PLAN KEY NOTES

- ① 3" VENT THRU ROOF.
- ② 2" VENT UP FROM FIXTURE.
- ③ EXTEND AND CONNECT NEW 3" SANITARY PIPING TO EXISTING SANITARY PIPING BELOW SLAB. FIELD VERIFY EXACT LOCATION OF BELOW SLAB PIPING.
- ④ ALL PLUMBING FIXTURES IN RESTROOM ARE EXISTING TO REMAIN, INCLUDING SANITARY AND VENT PIPING. CONTRACTOR SHALL CLEAN AND ENSURE ALL ARE IN OPTIMAL WORKING CONDITION. NOTIFY ARCHITECT/ENGINEER IMMEDIATELY OF ANY FUNCTIONAL ISSUES.
- ⑤ DESIGN INTENT IS TO CONNECT SANITARY WASTE FROM NEW EXTERIOR GREASE INTERCEPTOR TO EXISTING SANITARY WASTE BELOW SLAB IN THIS APPROXIMATE LOCATION AND WILL REQUIRE TEMPORARY REMOVAL OF EXISTING WATER CLOSET AND SAW CUTTING OF SLAB AS REQUIRED TO TIE NEW SANITARY PIPING TO EXISTING. CONTRACTOR SHALL FIELD VERIFY DEPTH OF EXISTING SANITARY PIPING PRIOR TO ANY DEMOLITION WORK WITHIN BUILDING INTERIOR. IF DEPTH OF EXISTING PIPING IS INSUFFICIENT, NEW SANITARY PIPING DOWNSTREAM OF GREASE INTERCEPTOR WILL BE REQUIRED TO RUN THRU LENGTH OF BUILDING AND CONNECT TO EXISTING SANITARY AT A LOCATION WHERE SUFFICIENT DEPTH IS AVAILABLE.
- ⑥ PIPE DISHWASHER INDIRECT WASTE DRAIN TO NEAREST FLOOR SINK.

A PLUMBING FLOOR PLAN - SANITARY & VENT
 P2.1 SCALE: 1/4" = 1'-0"



CONSTRUCTION PLAN GENERAL NOTES:

1. REFER TO SHEET P0.1 FOR ALL SYMBOLS AND ABBREVIATIONS.
2. REFER TO SHEET P9.1 FOR PLUMBING SPECIFICATIONS AND GENERAL NOTES.
3. REFER TO SHEET P6.1 FOR PIPING CONNECTION SIZES WITHIN FIXTURE SCHEDULES.
4. REFER TO ARCHITECTURAL DRAWINGS FOR FOOD SERVICE EQUIPMENT SPECIFICATIONS.

CONSTRUCTION PLAN KEY NOTES

- ① 1" GAS FROM ROOF ABOVE. SEE SHEET P2.2 FOR CONTINUATION.
- ② EXTEND AND CONNECT NEW 1-1/4" CW PIPING TO EXISTING CW MAIN PIPING ABOVE RESTROOM CEILING. FIELD VERIFY EXACT LOCATION OF EXISTING CW MAIN PIPING ABOVE CEILING.
- ③ 1" GAS UP TO WATER HEATER.
- ④ 1/2" CW AND 1/2" HW DOWN TO FIXTURE.
- ⑤ 3/4" CW AND 3/4" HW DOWN TO FIXTURE.
- ⑥ 1/2" CW DOWN TO FIXTURE. PROVIDE FOOD SERVICE LISTED BACKFLOW PREVENTER, BFP-1, PRIOR TO CONNECTION WITH EQUIPMENT.
- ⑦ 1/2" HW DOWN TO FIXTURE.
- ⑧ ALL PLUMBING FIXTURES IN RESTROOM ARE EXISTING TO REMAIN, INCLUDING CW AND HW PIPING AND POINT-OF-USE WATER HEATER. CONTRACTOR SHALL CLEAN AND ENSURE ALL ARE IN OPTIMAL WORKING CONDITION. NOTIFY ARCHITECT/ENGINEER IMMEDIATELY OF ANY FUNCTIONAL ISSUES.

B PLUMBING FLOOR PLAN - WATER & GAS
 P2.1 SCALE: 1/4" = 1'-0"

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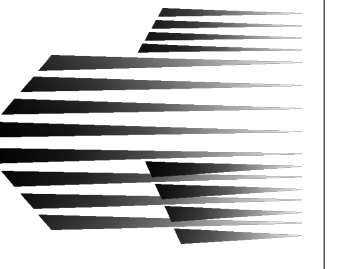
CONTRACTOR SHALL VERIFY
 ALL DIMENSIONS AND
 EXISTING CONDITIONS AND
 PROMPTLY REPORT ANY
 ERRORS TO LARRY E. SAYLOR.

DATE: 05.01.2020
 DRAWN BY: JDL/JLM/JPK
 CHECKED BY: BRM
 PROJECT #: 20011

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PROPOSED FIT OUT FOR:
DUCK DONUTS
 556 ROUTE 17 NORTH
 PARAMUS, NJ 07652

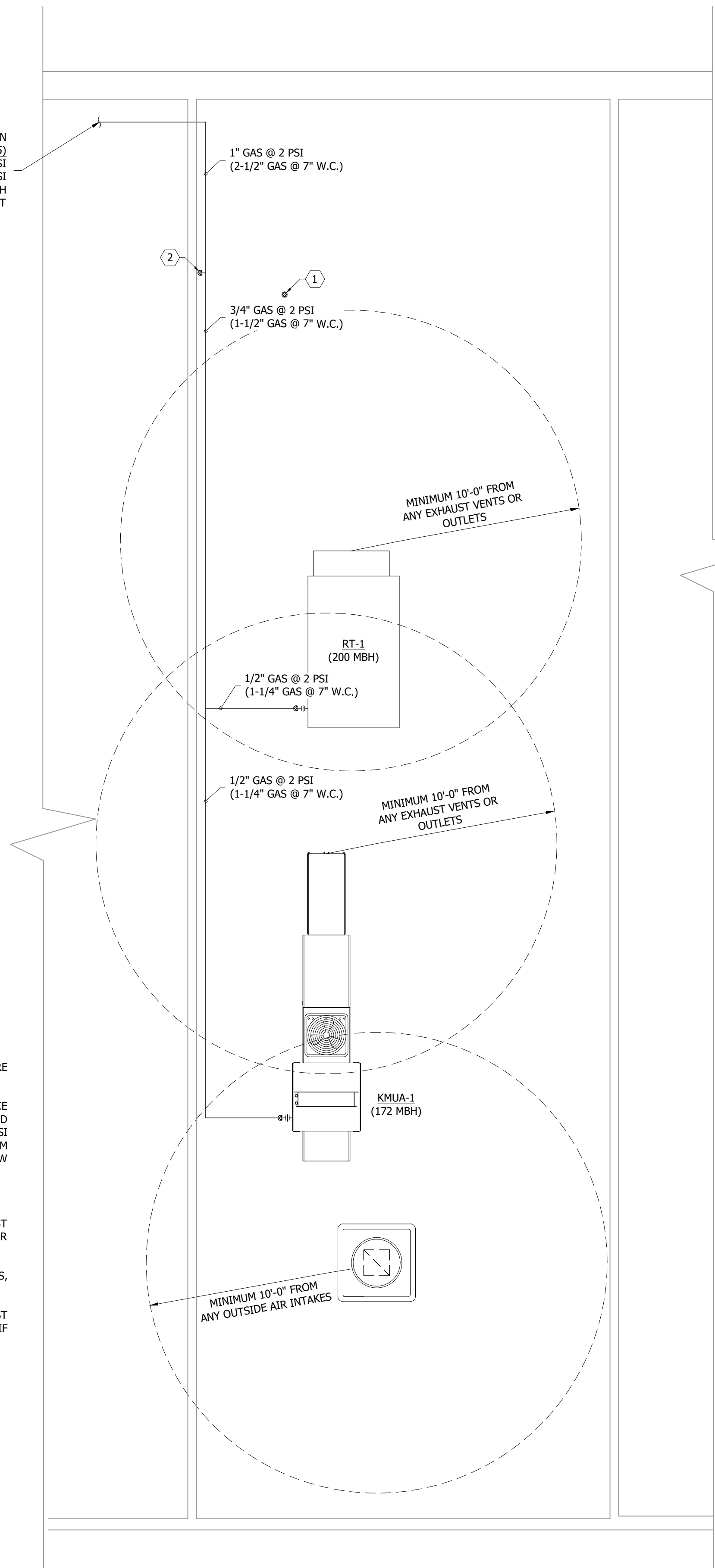
PLUMBING
 FLOOR
 PLANS



NATURAL GAS PIPING GENERAL NOTES:

1. GAS PIPING HAS BEEN DESIGNED AND SHALL BE INSTALLED IN ACCORDANCE WITH CHAPTER 4 OF THE INTERNATIONAL FUEL GAS CODE - 2018.
2. GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH MALLEABLE IRON FITTINGS. WHERE GAS PIPING CONNECTS TO EQUIPMENT IT SHALL BE PROVIDED WITH A DRIP LEG THE FULL SIZE OF THE SUPPLY PIPE, A 100% SHUT OFF GAS COCK AND A UNION. ALL OUTSIDE GAS PIPING SHALL BE GALVANIZED STEEL PIPE.
3. GAS SUPPLY PRESSURE = 2 PSI.
4. PORTIONS OF GAS PIPING SYSTEM INSTALLED IN CONCEALED LOCATIONS SHALL NOT HAVE UNIONS, TUBE FITTINGS OR RUNNING THREADS.
5. GAS PIPING INSTALLED EXTERIOR TO THE BUILDING SHALL BE PROPERLY SUPPORTED AND PROTECTED FROM CORROSION IN ACCORDANCE WITH IFGC-2015 SECTION 404.9. PIPING INSTALLED ON ROOF SURFACE SHALL BE ELEVATED ABOVE ROOF A MINIMUM OF 3-1/2" AND SHALL BE PROPERLY SECURED TO MEANS OF ELEVATION.

NATURAL GAS DELIVERY DESIGN
 IFGC 2018 TABLE 402.4(5)
 PRESSURE = 2.0 PSI
 PRESSURE DROP = 1.0 PSI
 TOTAL LOAD: 770 MBH
 LENGTH: 250 FEET



CONSTRUCTION PLAN GENERAL NOTES:

1. REFER TO SHEET P0.1 FOR ALL SYMBOLS AND ABBREVIATIONS.
2. REFER TO SHEET P9.1 FOR PLUMBING SPECIFICATIONS AND GENERAL NOTES.
3. REFER TO SHEET P6.1 FOR PIPING CONNECTION SIZES WITHIN FIXTURE SCHEDULES.
4. DESIGN INTENT IS TO REPLACE ALL EXISTING GAS PIPING BACK TO SERVICE ENTRANCE ON REAR OF BUILDING DUE TO EXISTING PIPING BEING UNDERSIZED FOR NEW EQUIPMENT REQUIREMENTS. INTENT IS TO UTILIZE A 2 PSI DISTRIBUTION SYSTEM AS NOTED ABOVE. SHOULD 2 PSI NOT BE AVAILABLE FROM GAS COMPANY, PIPING SIZES SHALL BE ADJUSTED TO ACCOUNT FOR LOW PRESSURE DISTRIBUTION OF 7" W.C.

CONSTRUCTION PLAN KEY NOTES

- ① 3" VENT THRU ROOF FROM BELOW. LOCATE A MINIMUM OF 10'-0" FROM NEAREST MECHANICAL AIR INTAKE AS INDICATED BY DASHED CIRCLE. SEE SHEET P2.1 FOR CONTINUATION.
- ② 3/4" GAS @ 2 PSI (1-1/2" GAS @ 7" W.C.) DOWN THRU ROOF TO WATER HEATERS, WH-1 AND WH-2. SEE SHEET P2.1 FOR CONTINUATION.
- ③ EXTEND NEW GAS PIPING TO EXISTING GAS METER BANK LOCATED AT NORTHWEST CORNER OF BUILDING. COORDINATE WITH GAS COMPANY FOR NEW METER (IF NECESSARY) AT DISTRIBUTION PRESSURE NOTED.

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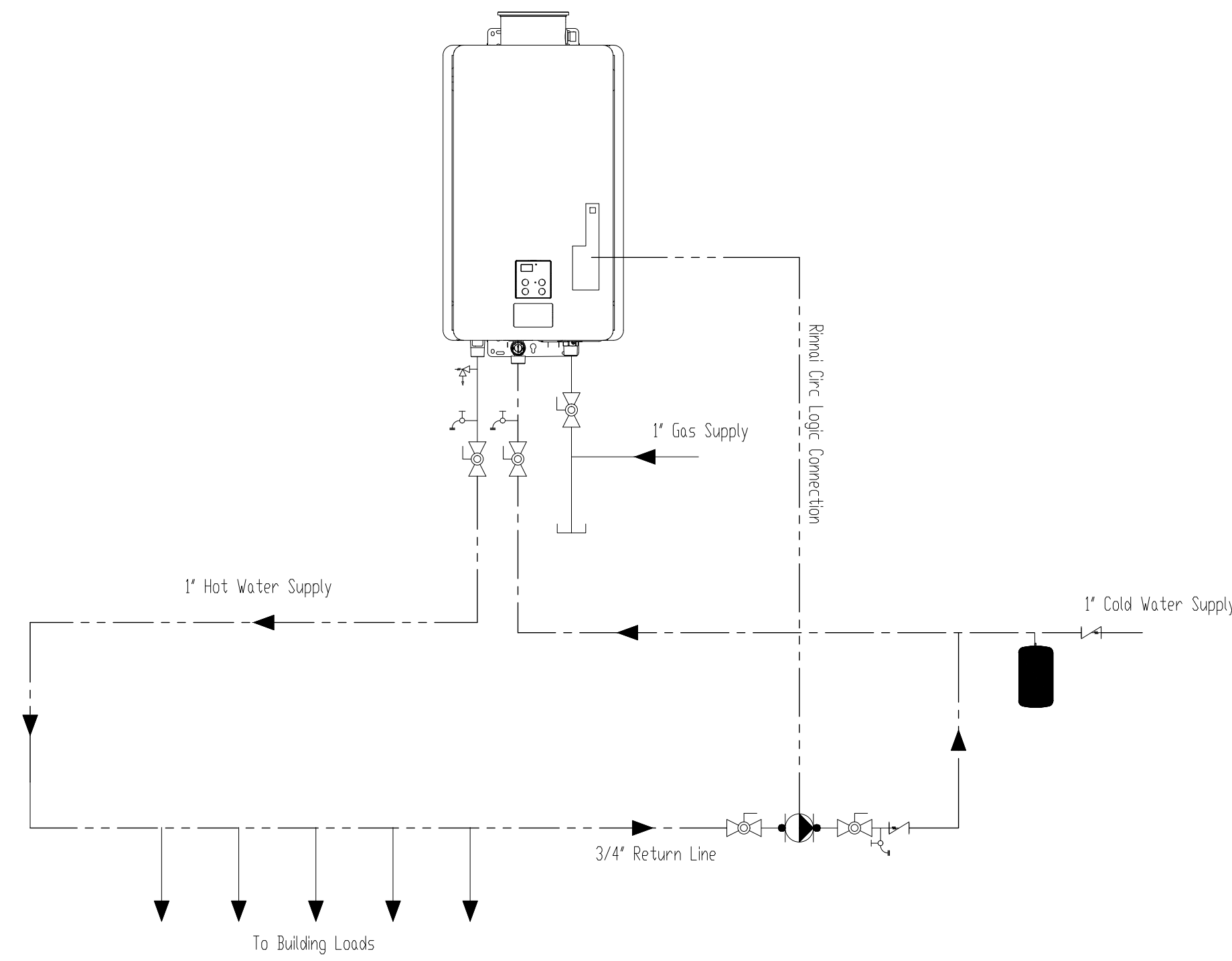
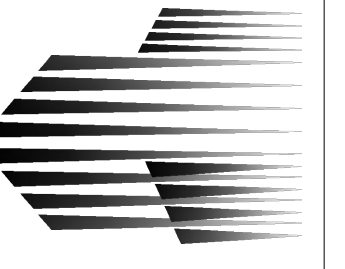
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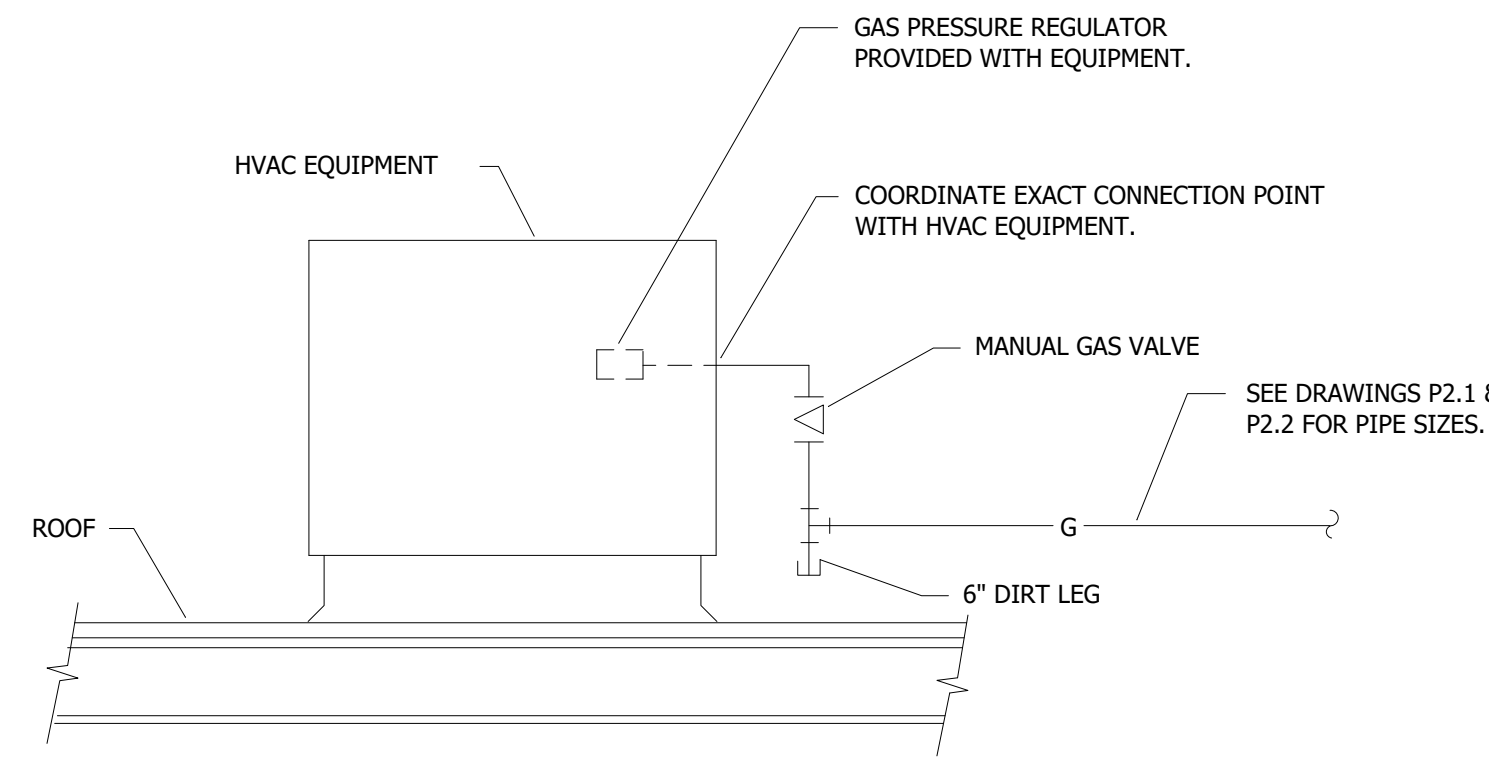
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PLUMBING
 ROOF PLAN

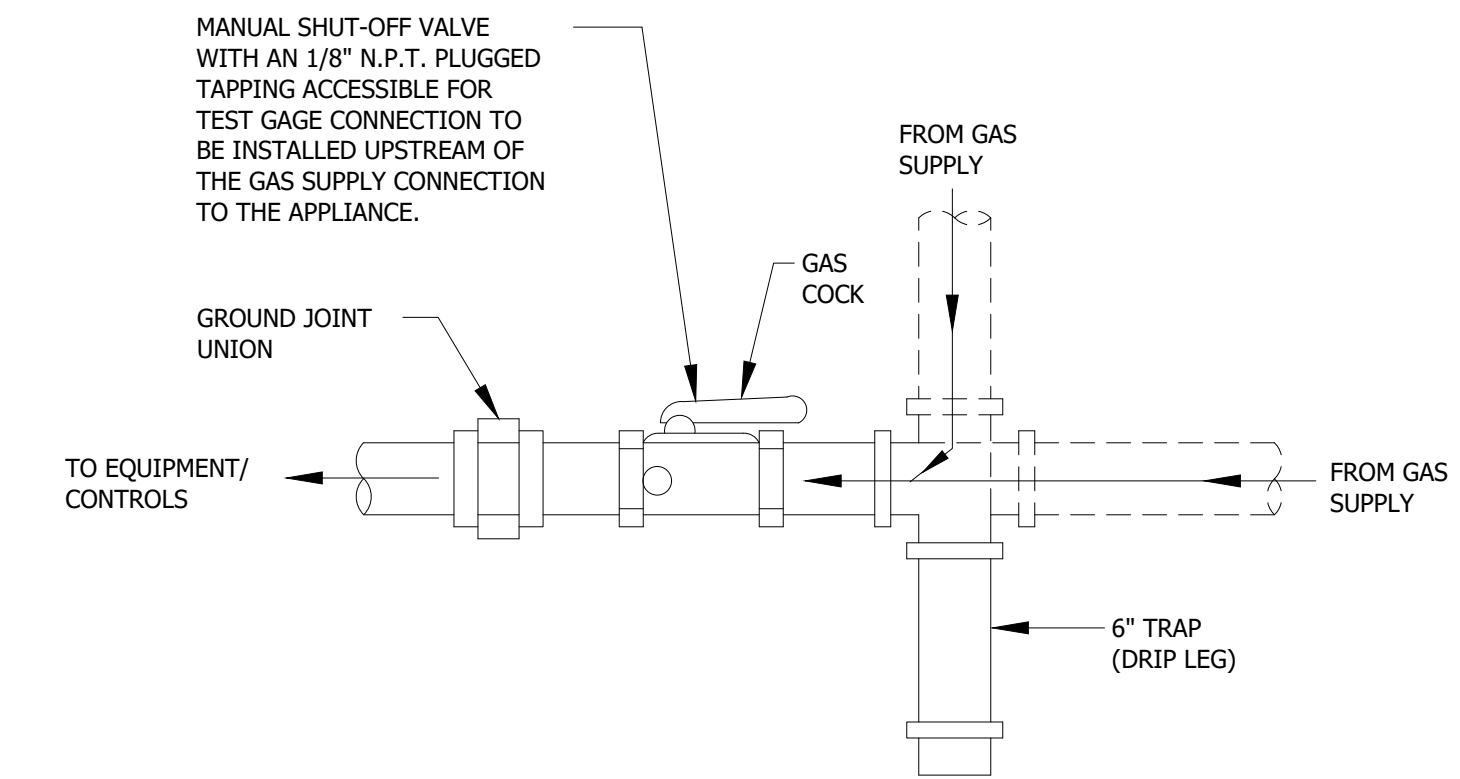
P2.2



INSTANTANEOUS GAS-FIRE WATER HEATER DETAIL
 NOT TO SCALE



TYPICAL ROOFTOP GAS PIPING DETAIL
 NOT TO SCALE



GAS CONNECTION TO EQUIPMENT DETAIL
 NOT TO SCALE

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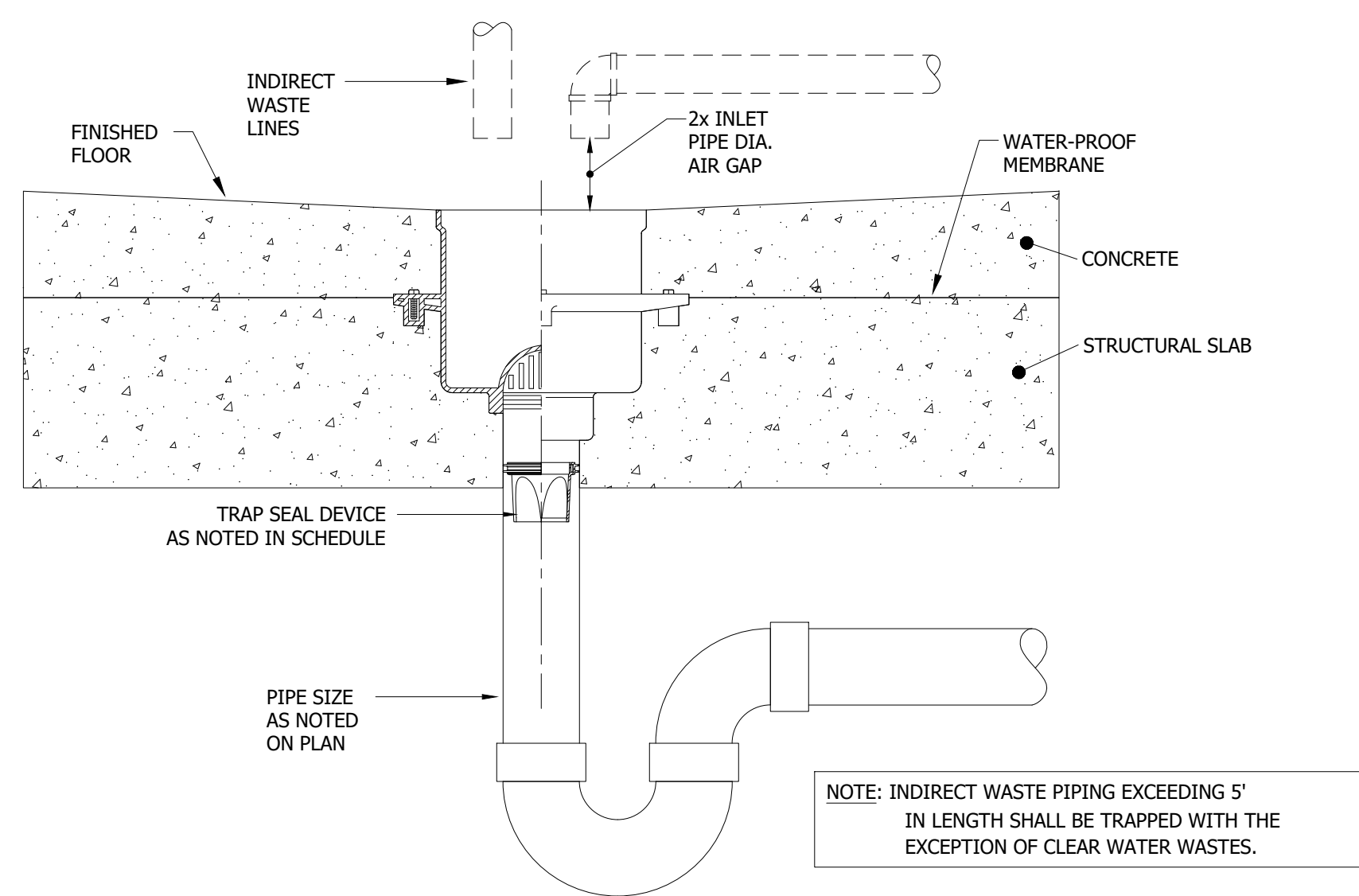
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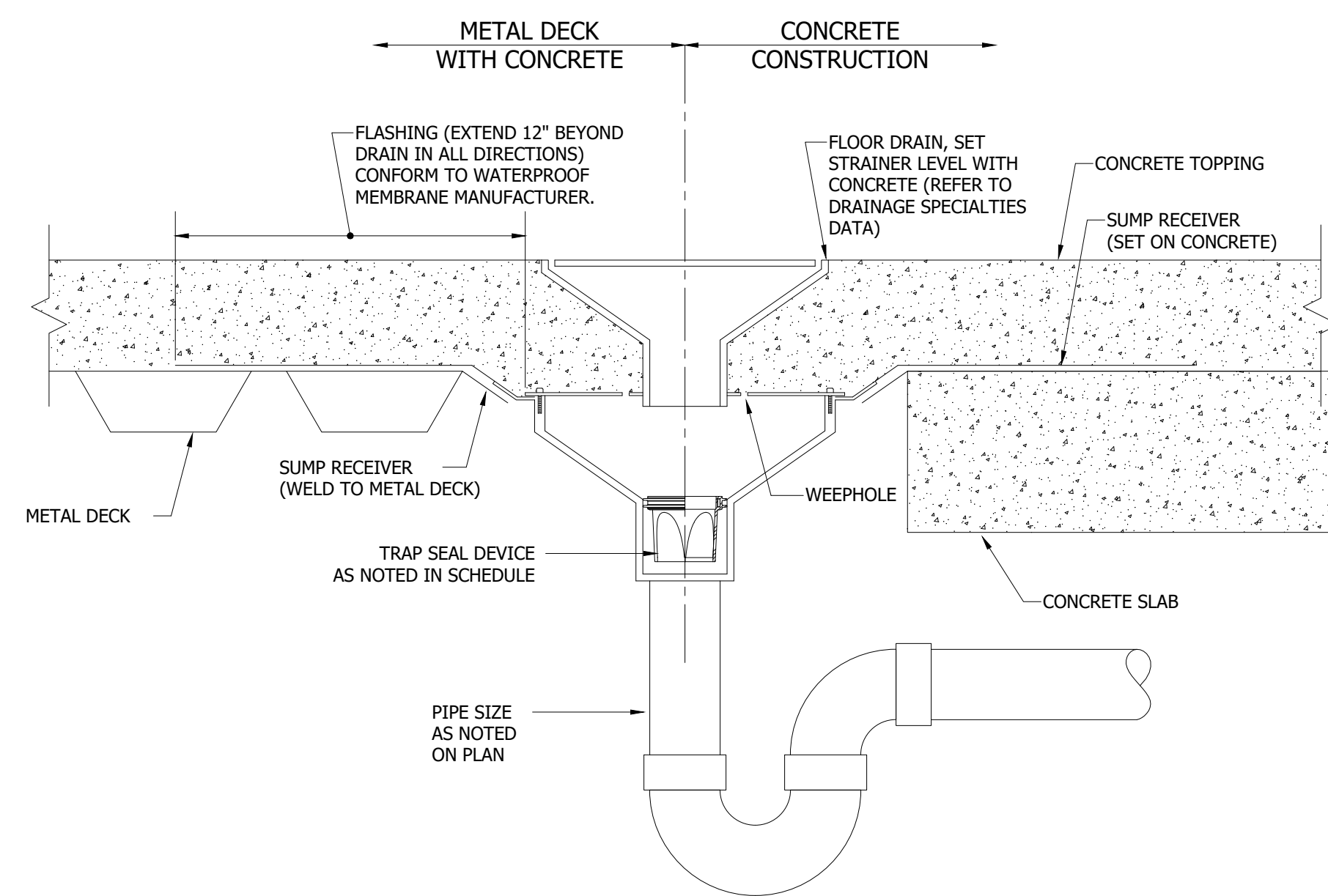
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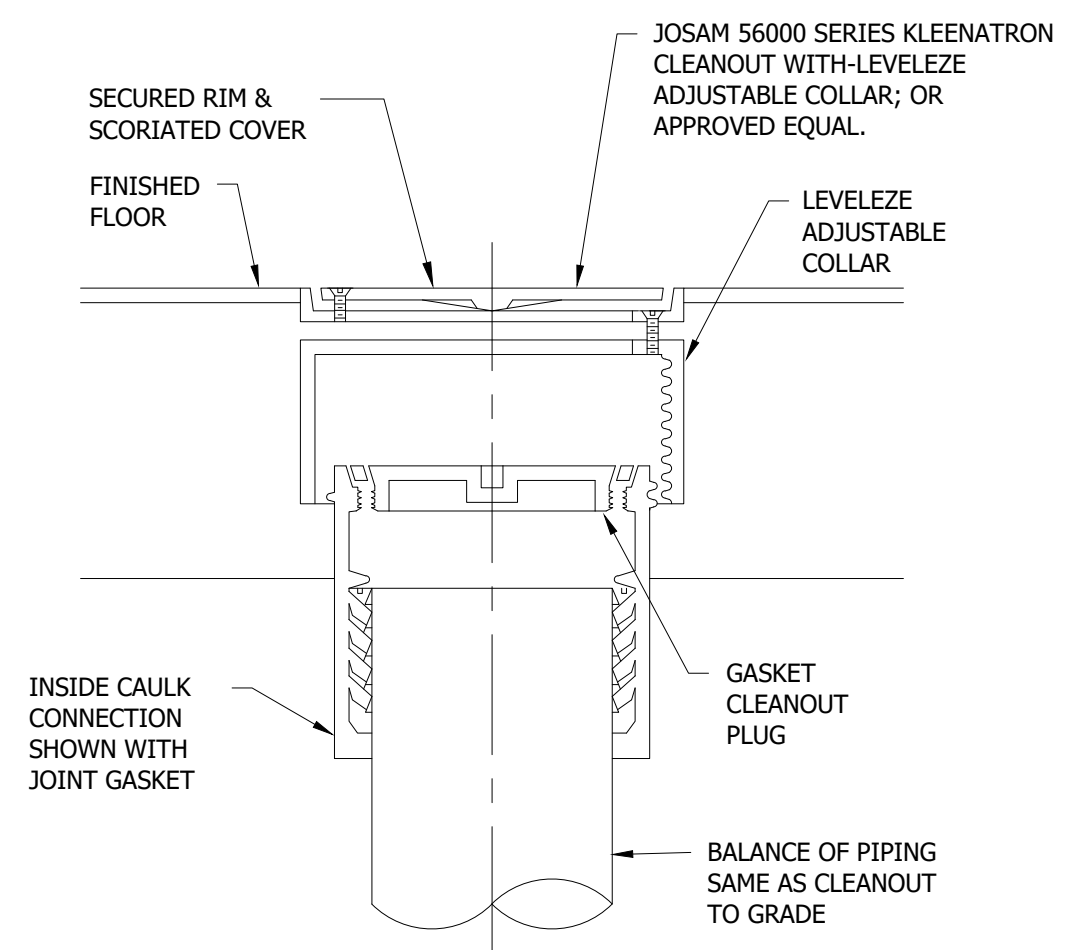
**PLUMBING
 DETAILS**



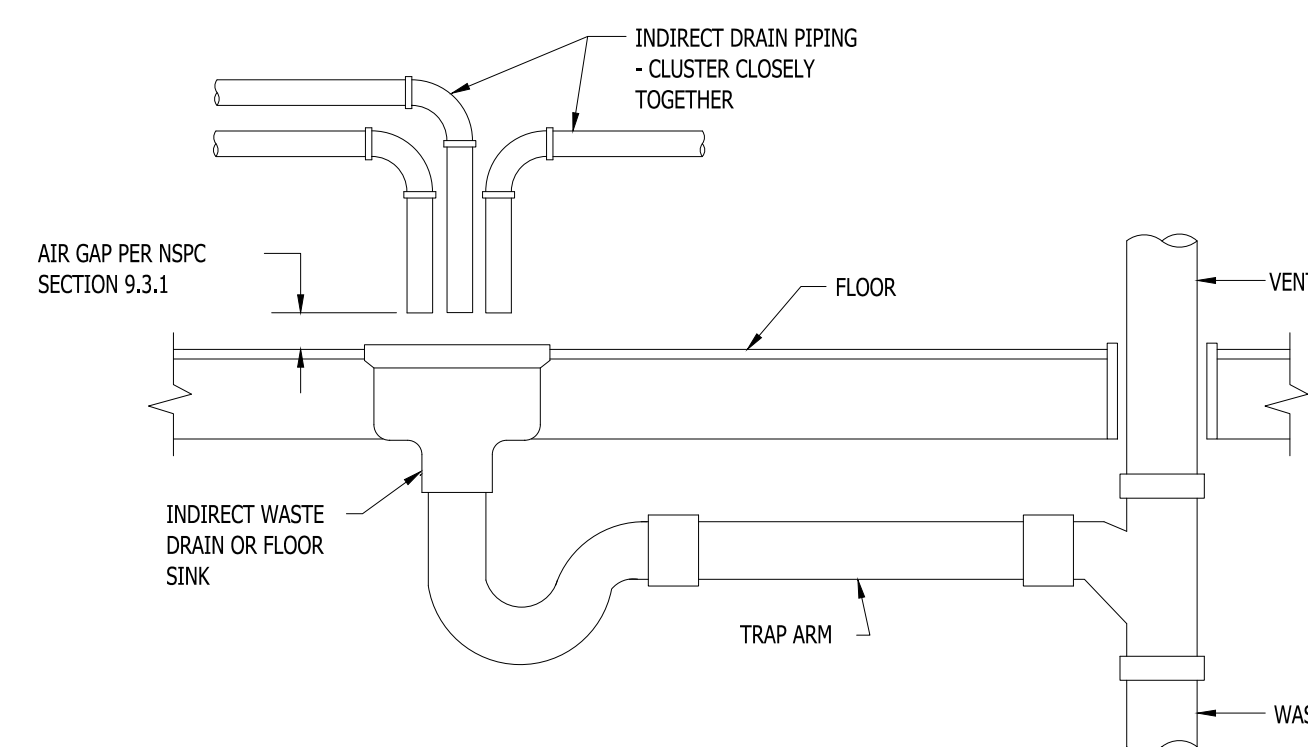
FLOOR SINK DETAIL
 NOT TO SCALE



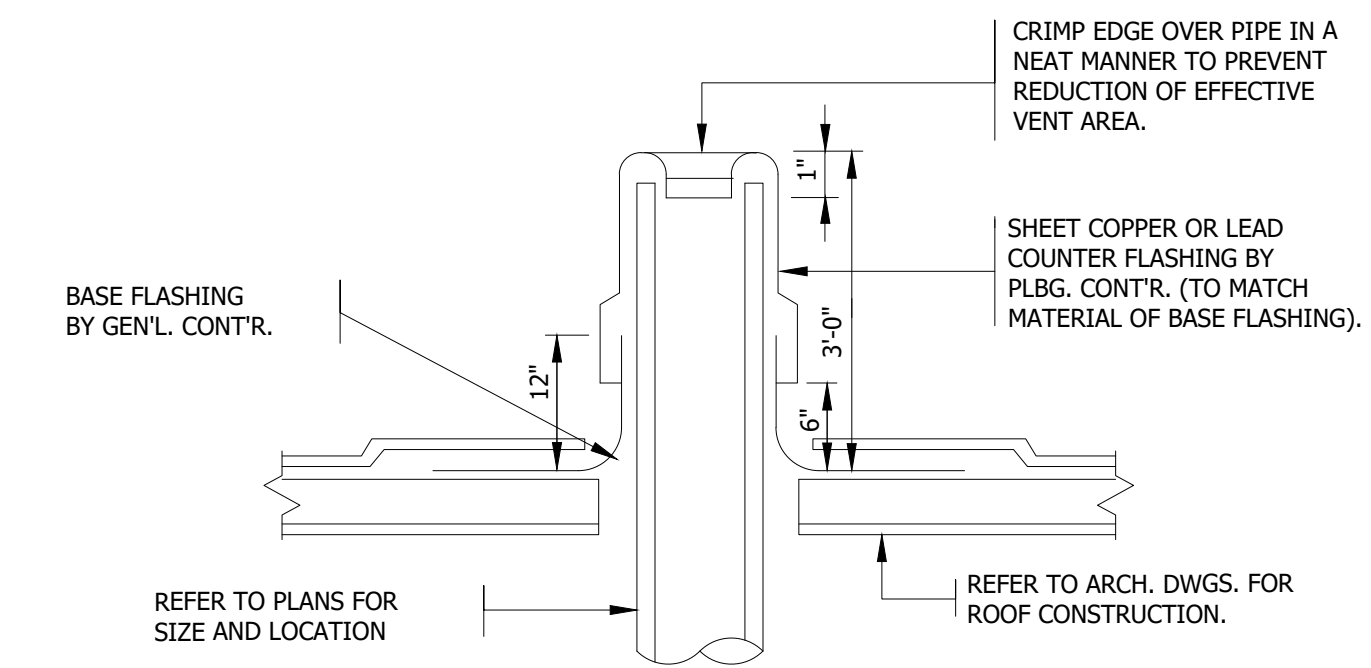
FLOOR DRAIN DETAIL
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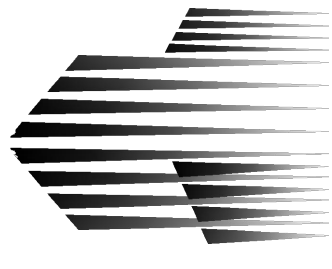
FLOOR CLEANOUT DETAIL
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INDIRECT WASTE DRAIN DETAIL
 NOT TO SCALE



PLUMBING VENT THROUGH FLAT ROOF DETAIL
 NOT TO SCALE



15400 Plumbing

1. General

- A. Reasonable efforts have been made to coordinate electrical requirements of plumbing equipment with the electrical systems serving that equipment. Differences among manufacturers of plumbing equipment make it impossible to produce a single electrical design which will satisfy the varying electrical requirements of those manufacturers. Consequently, the contractor shall coordinate the electrical requirements of the plumbing equipment designed on this project with the equipment actually furnished on this project and provide electrical systems required by that equipment. This coordination effort shall be completed prior to the installation of either the plumbing equipment or the electrical systems serving that equipment. Electrical system revisions required to coordinate with the plumbing equipment actually furnished shall be provided at no extra cost to the owner.
- B. The drawings are generally diagrammatic and indicative of all requirements for material and installation listed in the 2015 International Plumbing Code including all state and local regulations are minimum standards. Where requirements on the drawings or specifications exceed the minimum code requirements, the drawings or specifications shall govern.
- C. It is the intent of the drawings and specifications that the plumbing contractor shall furnish and install all equipment, products, fixtures, piping, fittings, materials, etc. except where indicated otherwise as required including all miscellaneous items necessary for completion of the installation whether or not specified or shown on the drawings to provide a complete and properly functioning plumbing installation free of all defects acceptable to the owner and architect.
- D. The power ratings of motors and other mechanical equipment and the electrical characteristics of electrical systems serving them have been established as minimums which allow that equipment to function properly to produce the required capacities. Power ratings include reasonable safety factors to accommodate common differences between design parameters and field construction practices. Equipment with power ratings less than those indicated on the drawings shall not be permitted.
- E. Reasonable efforts have been made to coordinate electrical requirements of mechanical equipment with the electrical systems serving that equipment. Differences among manufacturers of mechanical equipment make it impossible to produce a single electrical design which will satisfy the varying electrical requirements of those manufacturers. Consequently, the contractor shall coordinate the electrical requirements of the mechanical equipment actually provided. Exact locations of equipment and points of termination shall be approved by the architect/engineer. The drawings are not intended to show exact locations or to show every pipe, fitting, valve, or appurtenance required for a complete installation. The contractor shall provide all items and/or material as necessary.
- F. Drawings indicate general locations of apparatus, equipment, piping and ductwork. Changes on location shall be made to accommodate existing or new building conditions and coordination with other trades, including HVAC, plumbing, electrical, fire protection, structural, and architectural shall be made without additional cost to the owner.
- G. All plumbing work shall be installed in a first-class, neat and workmanlike manner by personnel experienced in the trade involved using the latest methods and practices accepted in the industry and shall also be acceptable to the architect/engineer.
- H. Debris and demolished materials shall be cleared from the site at frequent intervals. Do not allow debris to accumulate to the extent that it will interfere with work or passage of the employees. Disposal of all debris shall be the responsibility of the plumbing contractor. All unwanted construction materials and equipment shall be legally disposed of, off the site, unless noted otherwise.
- I. Do not install piping or equipment in electrical rooms, elevator rooms, or elevator shafts, unless explicitly indicated on the drawings. Piping, ductwork, and equipment (switchgear, switchboards, panels, motor control centers, variable frequency drives, transformers or starters) shall not be installed directly above or 42" in front of electrical equipment from the floor to the structure above.
- J. Unless indicated otherwise, equipment and materials shall be new and of the customary standard and quality furnished by the designated manufacturer for that catalog number.
- K. Support piping independently of equipment. Hanger rods shall be suspended from the structure. Do not suspend from other piping, equipment or ductwork.
- L. In areas where structure is exposed and without finished ceilings, all ductwork, piping, conduit, etc. shall be installed in a neat and orderly manner to the satisfaction of the architect. All items shall run parallel or perpendicular to the structural steel.
- M. No pipe shall be installed vertically or horizontally in exterior wall cavity, except for items such as wall hydrants, rainwater conductors, electrical fixtures, etc., for which penetrations shall be horizontal minimum (perpendicular through cavity) to meet the intended installation at masonry veneer. Such conduit or pipe shall be vertical through masonry unit cores or intended chases of masonry backup wall.
- N. The manufacturers and model numbers listed on the schedules and details are the basis of design for this project and shall set the minimum standard for quality, capacity, performance and features, and is not intended to preclude other equal manufacturers submission for review.
- O. Paint mechanical systems or portions of mechanical systems that are installed in exposed areas of location exposed to view from occupied space. Paint color and materials shall be as specified by architect.
- P. Install all equipment and material in accordance with manufacturer's printed installation instructions and recommendations. Where there is a conflict between the manufacturer and code the code shall apply unless the manufacturer is more restrictive. Maintain clearances for clearance access to maintain and service equipment, valves and controls. All dimensions shall be taken from certified manufacturer's dimension installation sheets and rough in dimensions.
- Q. All piping shall be located as shown on the drawings, connecting to all plumbing fixtures and other equipment requiring water, and with outlets adjacent to the equipment furnished under other contracts requiring connections. All piping shall be concealed in walls, partitions, or above ceilings except in mechanical equipment rooms and elsewhere as noted.
- R. Plumbing contractor is responsible for cutting and patching of remaining walls, floor assembly, and ceiling assembly as necessary to install their work. Patching around this work shall maintain one hour ratings at stair tower walls and floor or ceiling assemblies.
- S. Plumbing contractor is responsible to make all arrangements with the code officials for inspections and obtain all permits required by state and local authorities having jurisdiction for this project. Repair and provide construction and as-built drawings as required.

2. Coordination Requirements

- A. Before starting work the contractor shall make a thorough examination of those portions of the structure in which the work is to be performed. All existing field conditions and dimensions shall be verified and confirmed on the project site.

- B. Report to the professional any and all conditions which may interfere with or otherwise affect or prevent the proper execution and completion of the work. Do not start the work until such conditions have been examined and a course of action mutually agreed upon. Coordinate location and installation of mechanical work with other trades to avoid conflicts and interferences. Modifications due to field conditions shall be made as required.
 - C. Coordinate final locations of mechanical equipment with architectural plans. Do not scale drawings. Refer to the architectural drawings for all exact dimensions and confirm all dimensions in the field.
- 3. Pipe Insulation**
- A. All copper piping: closed cell flexible elastomeric type: ASTM C534 Type I; flexible, water resistant, non-absorbent, ozone resistant; maximum K value of 0.25 at 75 degrees F mean temperature, maximum service temperature of 220 degrees F and shall be UL listed and FM approved.
 - B. All cast iron piping: closed cell flexible elastomeric type: ASTM C534 Type I; flexible, water resistant, non-absorbent, ozone resistant; maximum K value of 0.25 at 75 degrees F mean temperature, maximum service temperature of 220 degrees F and shall be UL listed and FM approved.
 - C. Install insulation materials with smooth and even surfaces. Insulate each continuous run of piping with full length units of insulation, with single cut piece to complete run. Do not use cut pieces or scraps abutting each other. Butt insulation joints firmly to ensure complete, tight fit over all piping surfaces.
 - D. Penetrations: extend piping insulation without interruption through walls, floors and similar penetrations. Continue insulation vapor barrier through penetrations.
 - E. Support piping systems 3" in diameter or less using saddles of the proper length and spacing under the insulation, per the insulating manufacturer's requirements.
 - F. Piping insulation schedule:
 - i. Cold Water: 1" thick
 - ii. Hot Water: 1" thick
 - iii. Hot Water Return: 1" thick
 - iv. Storm Piping: 1" thick
- 4. Domestic Water Piping**
- A. Fittings and joints 4" and under: wrought copper conforming to ASME B16.15 and B16.18. Solder joints in accordance with ASTM B828. Solder shall conform with ASTM B32 and NSF 61, flux shall conform with ASTM B813 and NSF 61.
 - B. Fittings and joints over 2": wrought fittings conforming to ASME B16.50 with brazed joints in accordance with AS.8.
- 5. Sanitary Sewer and Vent Piping**
- A. Schedule 40 PVC pipe: class 12454-B, ASTM D-1784 with DWV fittings.
 - B. Joints, solvent weld conforming to ASTM D 2855 with purple primer conforming to ASTM F656.
 - C. Slope on sanitary piping 2-1/2" and greater shall be 1% (1/8" per foot) in direction of flow. Sanitary piping 2" and smaller shall be 2% (1/4" per foot) in direction of flow.
 - D. All vent piping shall be slope as to allow condensation to flow back to the fixture's waste piping.
- 6. Storm Piping**
- A. Cast iron pipe: service weight, ASTM A-74, ASTM A-888 with ASTM fittings.
 - i. Joints, no-hub or bell and spigot. ASTM B16, ASTM A-74, ASTM A-888.
 - B. PVC: schedule 40, solid-wall, ASTM D 2665 with ASTM fittings.
 - i. Joints, solvent welding conforming to ASTM D 2564.
 - C. Slope or storm piping 2-1/2" and greater shall be 1% (1/8" per foot) in direction of flow. Storm piping 2" and smaller shall be 2% (1/4" per foot) in direction of flow.
- 7. Gas Piping**
- A. Steel pipe: ASTM A53/A53M, black steel, schedule 40, Type E or S, Grade B.
 - i. Malleable-iron threaded fittings: ASME B16.3, Class 150, standard pattern.
 - ii. Wrought-steel welding fittings: ASTM A234/A234M for butt welding and socket welding.
 - iii. Unions: ASME B16.39, Class 150, malleable iron with brass-to-iron seat, ground joint and threaded ends.
 - B. Valve: iron body brass plug valve is designed and tested to comply with ANSI/ASME metallic gas valves for use in gas piping systems up to 125 PSIG.
- 8. Valves - General**
- A. Install two-piece ball valves with full port stainless steel ball for shut-off and to isolate equipment, for all systems and at the base of all vertical risers.
 - B. Install ball valves with standard port, memory stop and locking handle for throttling, bypass, or manual flow control services.
 - C. Provide adequate space for actuator handle in the open and closed position and for packing replacement. All valving installation shall be accessible with extended operator shafts as required to clear piping insulation.
 - D. Valves shall be provided at all branches from the hot and cold water mains and risers.
- 9. Hangers and Supports**
- A. Overhead supports: provide one of the following types of hanger for overhead support of horizontal piping:
 - i. For copper tubing where hangers are in direct contact with tubing, use clevis type steel hanger, copper plated with supporting rod to suit.
 - ii. For all other piping 4" and smaller, use clevis type hangers, provide supporting rods for hangers of diameter as indicated by the hanger manufacturer with locknuts for each.
 - B. Where hangers are below ceilings in finished areas, provide cast iron ceiling plates with setscrew.
 - C. Piping shall be supported at distances not exceeding the space as specified in Section 308 of the International Plumbing Code and in accordance with MSS SP-69.
- 10. Fire Stopping:**
- A. Use either factory built (firestop devices) or field erected (through penetration firestop systems) to form a specific building system maintaining required integrity of the fire barrier and stop the passage of gases or smoke.
 - B. Through-penetration firestop systems and firestop devices tested in accordance with ASTM E814 or UL 1479 using the "F" or "T" rating to maintain the same rating and integrity as the fire barrier being sealed. "T" ratings are not required for penetrations smaller than or equal to 4" nominal

- pipe or 16 square inches in overall cross-sectional area.
- C. Firestop sealants used for firestopping or smoke sealing shall have the following properties:
 - i. Contain no flammable or toxic solvents.
 - ii. Have no dangerous or flammable odor gassing during the drying or curing of products.
 - iii. Be water resistant after drying or curing and unaffected by high humidity, condensation or transient water exposure.
 - iv. When used in exposed areas shall be capable of being sanded and finished with similar surface treatments as used on the surrounding wall or floor surface.
 - D. M. UL, WH, rated or tested by an approved laboratory in accordance with ASTM E814. With a maximum flame spread of 25 and smoke development of 50 in accordance with ASTM E84.
 - E. Provide firestopping at all penetrations of sanitary and vent piping into gypsum board ceiling into the attic space and at floor penetrations.
- 11. Domestic Water Service - Protection**
- A. Domestic water supply lines into the suite shall be protected by an approved reduced pressure principle back flow preventer valve.
 - B. All domestic water supply lines to the building or suite having a line pressure in excess of 65 psi shall be provided with an approved pressure reducing valve.
- 12. Testing and Cleaning**
- A. The sanitary system shall be tested as per the International Plumbing Code.
 - B. The water system shall be tested to two times the building system pressure but not more than 160 psi and as directed by the International Plumbing Code. The system shall be thoroughly flushed and chlorinated per International Plumbing Code and American Water Works or American AWWA.
- 13. Submittals - Shop Drawings and Catalog Data**
- A. The contractor shall submit seven (7) copies of shop drawings, catalog cuts, etc. of all proposed equipment and materials to the engineer for review. Shop drawings not approved by the architect/engineer shall be re-submitted until satisfactory. No work shown on any shop drawings shall be executed until such drawings are reviewed and released for the contractor's use.
 - B. Review is only for conformance with the design concept of the project and for compliance with requirements of the contract documents. Deviations from requirements of the contract documents which have not been expressly identified by contractor in writing are not approved. Contractor is solely responsible for verification of field conditions, for accuracy and completeness of dimensions and quantities, fabrication, construction means, methods, techniques, sequences and procedures, and coordinating all portions of the work. Review does not relieve the contractor from these or other obligations under the contract.
- 14. Warranty and Guarantee**
- A. This contractor shall warrant the materials and workmanship used in the erection of this installation as herein specified. Contractor is to correct any defects in same which become apparent within one (1) year from date of substantial completion of work, providing such defects are due to faulty materials or workmanship.

PLUMBING GENERAL NOTES

1. Provide all labor and materials needed for a complete and properly operational plumbing system.
2. The drawings as prepared are diagrammatic but shall be followed as closely as construction of the project and the work of the trades will permit. Equipment locations indicated are approximate. Coordinate exact locations and required clearances with equipment supplier and all trades prior to installation. Do not scale location dimensions from these drawings.
3. The contractor is responsible for checking and verifying all conditions and dimensions and for coordination of his work with that of other trades. Perform work in an orderly manner and with the least possible interference.
4. All contractors shall examine the site and review the drawings and specifications prior to submitting a proposal.
5. Contractor shall verify depth, size, and location of all existing utilities in field prior to starting work.
6. Work shall be subject to the approval of the architect and owner.
7. Work shall conform to or meet the requirements of the latest edition building codes accepted by the authority having jurisdiction.
8. Valves and fittings shall have a maximum lead content of 8% lead. Lead free solder shall conform to ASTM B 32 and flux shall conform to ASTM B 813. Soldered joints must be done in accordance with STM B 828. Lead free shall mean a chemical composition equal to or less than 0.2% lead.
9. Contractor shall protect the piping from stress and strain. Contractor shall protect the in-slab piping from corrosion and stress and strain to conform.
10. All materials, equipment, and devices shall, as a minimum, meet the requirements of UL where UL requirements are established for those items. All items shall be listed and labeled by UL as suitable for the purpose used.
11. All equipment and materials incorporated in this work shall be new unless specifically noted otherwise and shall be current products by manufacturers regularly engaged in the production of such products.
12. All factory applied coatings and finishes shall be provided without rust, scratches, or dents.
13. The plumbing contractor shall obtain and pay for all permits and inspections as required to complete installations indicated on these drawings.
14. Provide owner with certificates of final inspections and acceptance from the authority having jurisdiction.

PLUMBING COORDINATION REQUIREMENTS

1. Coordinate location and installation of plumbing work with other trades to avoid conflicts and interferences. Modifications due to field conditions shall be completely resolved by contractor in accordance with recommendations of the construction manager or general contractor.
2. Coordinate final locations of plumbing equipment with architectural plans.
3. Provide to the construction manager or general contractor dimensioned locations and size of all required floor, wall, and roof openings. Provide for installation of sleeves and framing as required.

PLUMBING INSTALLATION REQUIREMENTS

1. Install all equipment and material in accordance with manufacturers printed installation instructions and recommendations. Maintain manufacturer recommended clearances as required to maintain and service equipment, valves, and controls.
2. All installation and work shall be performed in a neat, workmanlike manner so as not to damage any surfaces, equipment, or materials.
3. All equipment and piping shall be supported in an approved manner from the building structure and include hangers and restraints in accordance with all applicable codes and seismic restraint requirements.
4. Provide pipe escutcheons at all exposed penetrations of floor, walls, and ceilings.
5. All piping shall be concealed in hung ceilings, chases, and furred spaces unless specifically otherwise noted.
6. The manufacturers and model numbers listed on the schedules and details are the basis of design for this project. This information is provided for reference purposes only and is not intended to preclude submittal of other manufacturers of equal quality subject to approval by the construction manager or general contractor.
7. Pipe sizes are in inches unless specifically noted otherwise.
8. Slope sanitary and storm sewer piping a minimum of 1/4" per foot for piping 2" and smaller and 1/8" per foot for piping larger than 2".
9. Runouts to equipment shall be sized as indicated and increased or reduced at point of final connection to equipment.
10. All systems shall be tested for proper operation in accordance with applicable code or regulation.
11. Plumbing contractor shall seal all pipe penetrations through walls, floor, and roofs watertight. Seal all pipe penetrations through fire-rated partitions with UL rated fire retardant caulking compound.
12. Plumbing contractor shall provide trap primers or trap seal on all floor drains as per applicable code.
13. Any cutting or patching necessary to permit the installation of any work under this contract shall be the responsibility of the plumbing contractor.
14. The plumbing contractor shall provide gas and domestic water shutoff valves at all take off branches and at connection to each fixture or piece of equipment.
15. The plumbing contractor shall provide access doors for cleanouts, domestic water, gas shutoff valves, etc.
16. The plumbing contractor is required to visit the site to determine any field conditions that may affect his bid.
17. All PVC sanitary and vent piping located in return air plenums shall be wrapped with 3M fire barrier plenum wrap rated for return air plenums. Refer to mechanical drawings for return air plenum locations.
18. All storm piping located in return air plenums shall be wrapped with 3M fire barrier plenum wrap rated for return air plenums. Refer to mechanical drawings for return air plenum locations.
19. The plumbing contractor shall provide all indirect waste piping from equipment to floor drains and floor sinks. Insulated all drain piping from ice machines.

PLUMBING FOOD SERVICE NOTES

1. All piping above commercial areas where food is stored, displayed, prepared, or served shall be made with the least number of joints and shall be connected to a vertical stack at the nearest wall of vertical building support and the construction shall be performed as follows:
 - A. Piping subject to operation at temperatures that form condensation on the exterior of the pipe shall be thermally insulated with minimum 2" thick rigid fiberglass insulation with all service jacket.
 - B. Where piping is run in ceilings above these areas the ceiling shall be of the removable type or shall be provided with access panels to provide a ready access for inspection of piping.
2. All exposed piping in the food service area, including piping exposed under countertops and along walls beneath sinks and equipment, shall be chrome plated or stainless steel.

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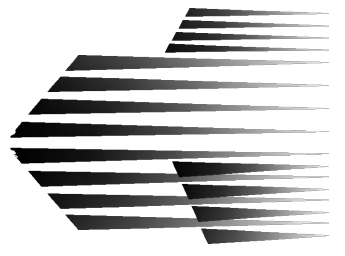
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DATE: 05.01.2020
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 CHECKED BY: BRM
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PROPOSED FIT OUT FOR:
DUCK DONUTS
 556 ROUTE 17 NORTH
 PARAMUS, NJ 07652

PLUMBING SPECIFICATIONS



GENERAL FIRE PROTECTION SYSTEM DATA

1. BUILDING OWNER: XXX
2. BUILDING ADDRESS: 556 ROUTE 17 NORTH PARAMUS, NJ 07652
3. CONSTRUCTION: XXX
4. IBC USE GROUP: XXX
5. MAXIMUM BUILDING HEIGHT: XX'-XX" / X STORIES (MAXIMUM XX' ALLOWED PER 2015 IBC 504.3)
6. AREA PROTECTED BY SPRINKLER SYSTEM: XX,XXX SF
7. TYPE OF HAZARD: ORDINARY
8. MAXIMUM SPRINKLER HEAD SPACING: PER NFPA 13 REQUIREMENTS
9. MAXIMUM SQUARE FOOTAGE PER SPRINKLER HEAD: PER NFPA 13 REQUIREMENTS
10. PRELIMINARY AND WORKING PLANS THESE DRAWINGS ARE PRELIMINARY SPRINKLER PLANS AS DEFINED BY NFPA 13. THE PIPE SIZING SHOWN ON THESE DRAWINGS ARE BASED ON THE LIGHT HAZARD PIPE SCHEDULES SHOWN IN CHAPTER 8 OF NFPA 13. THE SPRINKLER CONTRACTOR IS RESPONSIBLE FOR PREPARING WORKING SPRINKLER PLANS, OBTAINING HYDRANT TEST DATA (PERFORMED WITHIN LAST 6 MONTHS), AND PERFORMING HYDRAULIC CALCULATIONS. THE SPRINKLER CONTRACTOR MAY RESIZE SPRINKLER PIPING IN ACCORDANCE WITH HYDRAULIC CALCULATIONS. THE SPRINKLER CONTRACTOR MAY RELOCATE SPRINKLER HEADS PROVIDED THAT ALL NFPA 13 SPACING REQUIREMENTS ARE MET AND THERE ARE NO INTERFERENCES WITH OTHER MECHANICAL OR ELECTRICAL EQUIPMENT. THE WORKING DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. THE ENGINEER SHALL SIGN AND SEAL THE FINAL WORKING DRAWINGS.
11. INSTALLATION SEQUENCE THE MECHANICAL AND ELECTRICAL SYSTEM COMPONENTS SHALL BE INSTALLED IN THE FOLLOWING SEQUENCE: 1. DUCTWORK AND AIR HANDLERS 2. SANITARY AND DOMESTIC WATER PIPING 3. SPRINKLER PIPING 4. ELECTRICAL WIRING AND CONDUIT THE SPRINKLER CONTRACTOR SHALL COORDINATE THE WORKING SPRINKLER PLANS WITH THE DUCTWORK SHOP DRAWINGS.

FIRE PROTECTION GENERAL NOTES

- SUBMISSION OF PROPOSAL DIRECTLY OR INDIRECTLY IN CONNECTION WITH THIS WORK SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE UNDER WHICH HE/SHE WILL BE OBLIGATED TO OPERATE SHOULD HE/SHE BE AWARDED THE WORK UNDER THIS CONTRACT. NO EXTRA CHARGE WILL BE ALLOWED FOR FAILURE OF ANY BIDDER TO EXAMINE THE SITE PRIOR TO BID.
- CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS IN THE FIELD, AND SHALL ADVISE THE ARCHITECT/ENGINEER AND THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK.
- ALL WORK SHALL CONFORM TO ALL STATE AND LOCAL CODES, RULES AND REGULATIONS AND ORDINANCES.
- CONTRACTOR SHALL SECURE AND PAY ALL FEES AND PERMITS PERTAINING TO THE CONTRACT.
- ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. THE CONTRACTOR SHALL PROVIDE ALL HANGERS AND SUPPORTS REQUIRED FOR A COMPLETE INSTALLATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR WORKMEN'S IDENTIFICATION AND BADGING, SAFETY AND FIRE PROTECTION, CONTRACTOR'S LIABILITY INSURANCE, BARRICADES, WARNING SIGNS, TRASH REMOVAL, CUTTING AND PATCHING.
- CONTRACTOR SHALL SCHEDULE ALL SHUTDOWNS THAT AFFECT UTILITIES AND PORTIONS OF THE BUILDING THAT MUST REMAIN IN OPERATION WITH THE OWNER.
- CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER AND ALL OTHER CONTRACTORS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RIGGING, HANDLING AND PROTECTION OF MATERIALS.
- CONTRACTOR SHALL PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT AND TRANSFER TO POINT OF INSTALLATION, OWNER FURNISHED ITEMS.
- WHERE CONDUIT, CABLES, DUCTWORK OR PIPING PASSES THROUGH FIRE RATED FLOORS OR WALLS, THE SLEEVES SHALL BE COMPLETELY SEALED WITH A FIRE STOP MATERIAL THAT IS UL LISTED AND ACCEPTED BY THE BUILDING DEPARTMENT AND FIRE DEPARTMENT AS BEING SUITABLE FOR THIS SERVICE SUCH AS DOW CORNING CORP., SILICONE ELASTOMER, DOW CORNING 3-6548 SILICONE RTV FOAM, OR APPROVED EQUAL. THIS MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER TO MAINTAIN THE FIRE RATING OF THE PENETRATED WALL OR FLOOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORING AS IT RELATES TO HIS/HER WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BEAM PENETRATIONS AS IT RELATES TO HIS/HER WORK. CONTRACTOR SHALL SUBMIT SIZE AND LOCATION TO THE STRUCTURAL ENGINEER FOR REVIEW AND DETAIL.
- CONTRACTOR SHALL SUBMIT SIX (6) SETS OF SHOP DRAWINGS AND EQUIPMENT CUTS TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING ANY WORK.
- UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SUPPLY THE OWNER WITH COMPLETE SET OF AS-BUILT DRAWINGS AND OPERATION AND MAINTENANCE MANUALS.
- PROVIDE A WET PIPE SYSTEM IN ACCORDANCE WITH NFPA 13 TO SERVE ALL HEATED AREAS OF THE BUILDING. THE WET SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED TO PROVIDE THE PRESCRIBED DENSITY UNIFORMLY OVER THE MOST REMOTE AREA. COPIES OF THE CALCULATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.
- PROVIDE A DRY PIPE SYSTEM IN ACCORDANCE WITH NFPA 13 TO SERVE ENTIRE ATTIC AREA AND ANY AREAS SUBJECT TO FREEZING. THE DRY SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED TO PROVIDE THE PRESCRIBED DENSITY UNIFORMLY OVER THE MOST REMOTE AREA. COPIES OF THE CALCULATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.
- SPRINKLERS SHALL BE CENTERED IN SPACES AND LOCATED SYMMETRICALLY WITH LIGHTING FIXTURES AND DIFFUSERS AS SHOWN.
- THE SPRINKLER SPACING AND LOCATIONS IN THE ENTIRE SPRINKLER SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NFPA-13.
- THE ENTIRE BUILDING SHALL BE SPRINKLERED. THIS SHALL INCLUDE THE CONCEALED COMBUSTIBLE SPACES. AREAS SUBJECT TO FREEZING SHALL BE SERVED BY A DRY PIPE SPRINKLER SYSTEM. CONCEALED COMBUSTIBLE SPACES WILL INCLUDE BUT NOT LIMITED TO: ATTIC SPACE, AND OVERHANGING ROOF SPACES.
- PROVIDE A WET STAND PIPE SYSTEM IN ACCORDANCE WITH NFPA. THE STAND PIPE SYSTEM SHALL BE HYDRAULICALLY CALCULATED IN ACCORDANCE WITH NFPA.
- PROVIDE INSPECTOR TEST STATIONS AT THE MOST REMOTE POINT OF THE SPRINKLER SYSTEM.
- THE WATER SOURCE FOR THE SPRINKLER SYSTEM IS PSL CAMPUS WATER. CONTRACTOR IS RESPONSIBLE TO COORDINATE A FLOW TEST WITH OWNER, RESULTS SHALL BE USED FOR ENTIRE SYSTEM DESIGN.
- THE SPRINKLER CONTRACTOR SHALL REVIEW ALL PROJECT DRAWINGS AND COORDINATE THE INSTALLATION OF THE PIPING WITH ALL OTHER TRADES FOR THE PROJECT.
- ALL OS&Y VALVES TO HAVE TAMPER SWITCHES.
- THE DRY PIPE RISER SHALL BE COMPLETE WITH ALL ACCESSORIES AS REQUIRED BY NFPA 13 INCLUDING THE FOLLOWING: DRY PIPE ALARM VALVE, 2" MAIN DRAIN, WATER MOTOR GONG, (2) GAGES, AIR PRESSURE MAINTENANCE DEVICE ACCELERATOR, ALARM LINE STRAINER, PRESSURE SWITCH, WATER FLOW SWITCH, ALARM TEST VALVE, AND AIR COMPRESSOR CAPABLE OF RESTORING PRESSURE WITH-IN 30 MINUTES.
- THE WET PIPE RISER SHALL BE COMPLETE WITH ALL ACCESSORIES AS REQUIRED BY NFPA 13 INCLUDING THE FOLLOWING: WET PIPE ALARM VALVE, 2" MAIN DRAIN, WATER MOTOR GONG, (2) GAGES, RETARDING CHAMBER, PRESSURE SWITCH, WATER FLOW SWITCH, ALARM TEST VALVE.
- DO NOT INSTALL SPRINKLER PIPING OR ANY OTHER EQUIPMENT OVER ELECTRICAL PANELS AND EQUIPMENT. MAINTAIN A MINIMUM OF 36" CLEAR IN FRONT OF ELECTRICAL PANELS AND EQUIPMENT.
- PROVIDE A WILKINS MODEL 350ADA-6" DOUBLE CHECK DETECTOR ASSEMBLY. PROVIDE TAMPER SWITCHES ON EACH VALVE, COORDINATE WIRING WITH EC.
- LABEL ALL SPRINKLER PIPING WITH COLORED, WATERPROOF, ALL TEMPERATURE, SELF-ADHERING LABELS AND DIRECTIONAL ARROWS AS MANUFACTURED BY SETON.
- SPRINKLER HEADS SHALL BE AS FOLLOWS:
 A. HEADS IN CEILINGS IN PUBLIC AREAS: CONCEALED, WHITE COVER PLATE.
 B. HEADS IN CEILINGS IN OFFICES/MEETING: CONCEALED, WHITE COVER PLATE.
 C. SIDEWALL HEADS IN PUBLIC AREAS: WHITE SEMI-RECESSED
 D. SIDEWALL DRY HEADS SERVING EXTERIOR: CHROME SEMI-RECESSED
 E. HEADS IN CEILINGS OF STAIRS/STORAGE ROOMS/STORAGE: CHROME SEMI-RECESSED
 F. HEADS IN MECHANICAL ROOMS/UTILITY ROOMS: CHROME

FIRE PROTECTION DESIGN AND INSTALLATION NOTES

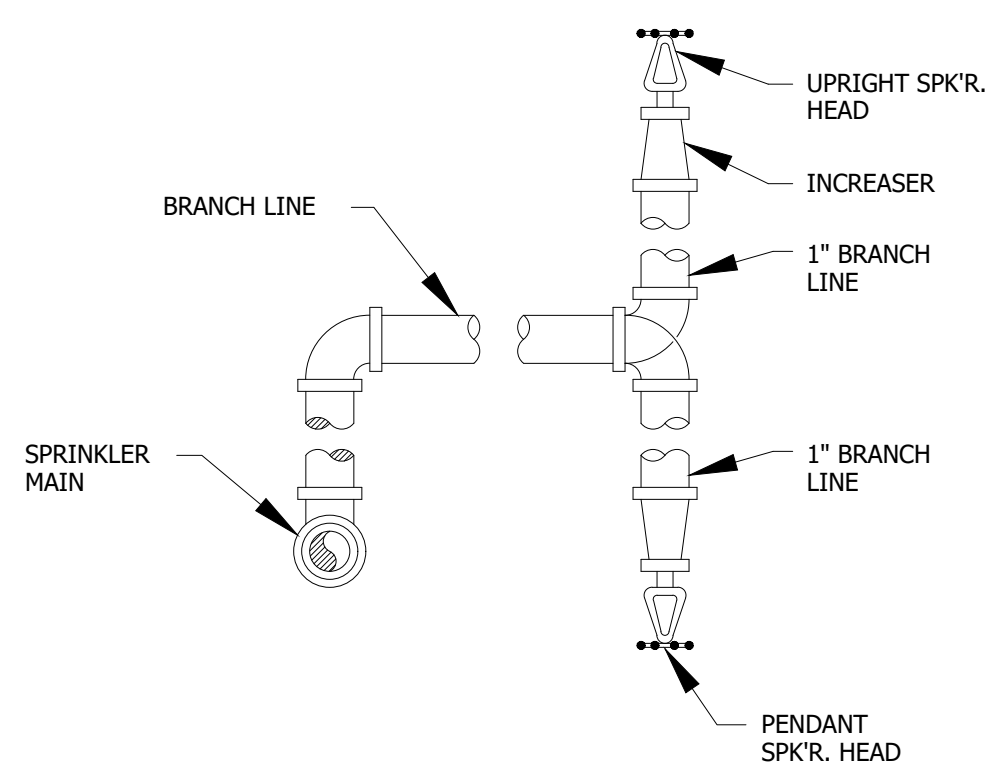
- SCOPE OF WORK
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR REQUIRED TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
 - THE WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH NFPA 13 (LATEST EDITION), ALL CODES AND OTHER NFPA REGULATIONS GOVERNING WORK OF THIS NATURE.
 - ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED EQUAL" BY THE ENGINEER OR ARCHITECT.
- PERMITS
 - THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES.
- SHOP DRAWINGS
 - SUBMIT MATERIAL LIST AND SHOP DRAWINGS FOR MAJOR EQUIPMENT TO THE ARCHITECT/ENGINEER FOR APPROVAL.
- SPRINKLER PIPING
 - PIPE SHALL BE MADE OF STEEL, MADE TO ANY OF THREE SPECIFICATIONS LISTED. WELDING WILL NOT BE PERMITTED IF THERE ARE ANY SPRINKLERS CONNECTED THERETO.
 - ASTM A53
 - ASTM A120
 - ASTM A135
 - PIPING MATERIAL MAY BE SCHEDULE 10 (THINWALL) PROVIDED JOINTS ARE MADE BY ROLL-GROOVE COUPLING. THREADING WILL NOT BE PERMITTED.
 - PIPING MATERIAL MAY BE SCHEDULE 40 WITH FLANGED, ROLL-GROOVE COUPLINGS OR THREADED JOINTS.
- PIPE SUPPORTS
 - ALL HANGERS MUST BE AN APPROVED TYPE BY NFPA 13. NO SPRINKLER PIPING IS TO BE SUPPORTED FROM ANY MECHANICAL OR ELECTRICAL DEVICES.
 - ALL PIPE SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN A NEAT AND WORKMANLIKE MANNER. VERTICAL RISERS SHALL BE SUPPORTED AT EACH FLOOR LEVEL WITH STEEL PIPE CLAMPS. THE USE OF WIRE OR STRAP METAL HANGERS TO SUPPORT PIPES WILL NOT BE PERMITTED. HANGING PIPES FROM OTHER PIPES WILL NOT BE PERMITTED. PIPING SHALL BE CAREFULLY COORDINATED BEFORE INSTALLATION WITH OTHER SYSTEMS AND EQUIPMENT IN CHASES AND OTHER CONTESTED AREAS.
 - MAXIMUM DISTANCE BETWEEN PIPE SUPPORTS:
 - 12'-0" FOR 1-1/4" DIAMETER PIPE AND SMALLER
 - 15'-0" FOR 1-1/2" DIAMETER PIPE AND LARGER
- WORKING PLANS
 - THE DRAWINGS INCLUDED AS PART OF THIS SET OF CONSTRUCTION DOCUMENTS ARE DEFINED AS PRELIMINARY SPRINKLER PLANS AS SPECIFIED IN SECTION 8.1 OF NFPA 13. FINAL WORKING DRAWINGS SHALL BE PREPARED BY THE SPRINKLER CONTRACTOR AND REVIEWED AND APPROVED BY A PROFESSIONAL ENGINEER.
- TESTS
 - ACCEPTANCE AND HYDROSTATIC TESTS SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 10 OF NFPA 13.
- MISCELLANEOUS
 - DO NOT SCALE THIS DRAWING FOR EXACT DIMENSIONS. VERIFY ALL FIGURES, CONDITIONS AND DIMENSIONS AT THE JOB SITE.
 - THE SPRINKLER PLANS ARE INTENDED TO BE DIAGRAMMATIC. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION.
- GUARANTEE
 - MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE GUARANTEED FOR PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE. DEFECTS WHICH APPEAR DURING THAT PERIOD SHALL BE CORRECTED AT THE SPRINKLER CONTRACTOR'S EXPENSE.

FIRE PROTECTION SYMBOLS

	GATE VALVE		WATER MOTOR GONG
	VALVE IN PIT		DELUGE RISER
	POST INDICATOR VALVE		PREACTION RISER
	KEY-OPERATED VALVE		SPRINKLER RISER
	OS&Y VALVE		PENDENT-RECESSED
	BUTTERFLY VALVE		UPRIGHT
	NON INDICATING VALVE (NONRISING-STEM VALVE)		PRIVATE HYDRANT ONE HOSE OUTLET
	CHECK VALVE		PUBLIC HYDRANT TWO HOSE OUTLET
	BACKFLOW PREVENTER (DOUBLE CHECK VALVE ASSEMBLY)		PUBLIC HYDRANT TWO HOSE OUTLET AND PUMPER CONNECTION
	BACKFLOW PREVENTER (REDUCED PRESSURE ZONE-RPZ)		WALL HYDRANT
	ALARM CHECK VALVE		SIAMESE FIRE DEPT. CONN.
	DRY PIPE VALVE		FREESTANDING SIAMESE TWO HOSE OUTLET
	DRY PIPE VALVE		SIAMESE FIRE DEPT. CONN.
	DELUGE VALVE		CONNECT TO EXISTING
	PREACTION VALVE		POINT OF DEMOLITION
	INSPECTORS TEST STATION		EXISTING FIRE PROTECTION PIPING
	FIRE DEPT. HOSE VALVE		PREACTION SPRINKLER PIPING
	FLOW SWITCH		NO SPRINKLER WORK UNDER THIS CONTRACT
	TAMPER SWITCH		

FIRE PROTECTION SYSTEM DESIGN NOTE:

FIRE PROTECTION PLANS AS SHOWN ARE FOR BIDDING PURPOSES ONLY. FIRE PROTECTION CONTRACTOR SHALL OBTAIN CURRENT FLOW TEST DATA AND PROVIDE HYDRAULIC CALCULATIONS FOR SYSTEM PIPE SIZING IN ACCORDANCE WITH NFPA 13 AND INTERNATIONAL FIRE CODE 2015. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS INDICATING HYDRAULIC CALCULATIONS, PIPING LAYOUT AND SIZING. SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL STATE, LOCAL, GOVERNING AND APPLICABLE CODES.



**SPRINKLER HEAD
 INSTALLATION DETAIL**
 NOT TO SCALE

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CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND PROMPTLY REPORT ANY ERRORS TO LARRY E. SAYLOR.

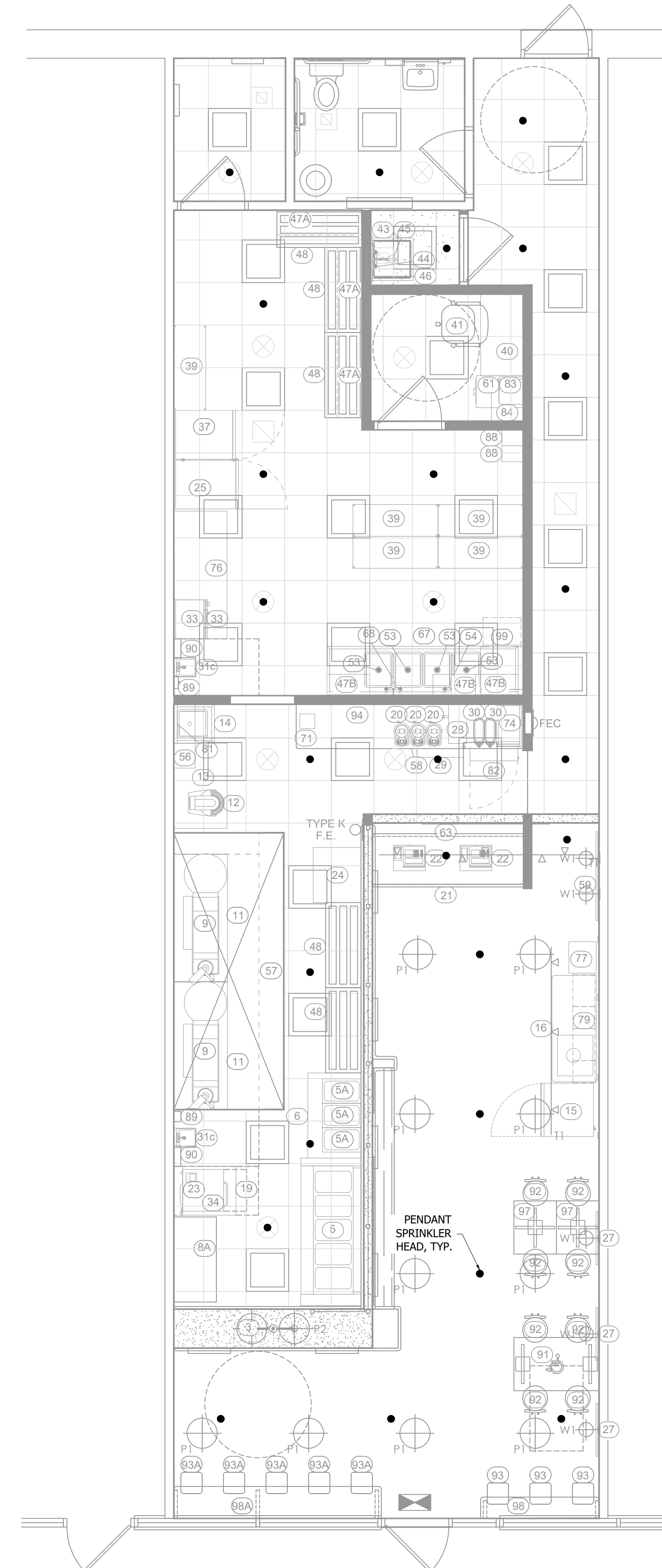
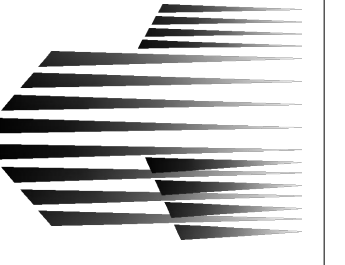
DATE: 05.01.2020
 DRAWN BY: JDL/JLM/JPK
 CHECKED BY: BRM
 PROJECT #: 20011

#	REVISIONS:	DATE:				

PROPOSED FIT OUT FOR:
DUCK DONUTS
 556 ROUTE 17 NORTH
 PARAMUS, NJ 07652

FIRE PROTECTION
 INFORMATION
 SHEET

FPO.1



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#	REVISIONS:	DATE:
1		
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3		
4		
5		

PROPOSED FIT OUT FOR:
DUCK DONUTS
 556 ROUTE 17 NORTH
 PARAMUS, NJ 07652

FIRE
 PROTECTION
 FLOOR PLAN

FP2.1

A FIRE PROTECTION FLOOR PLAN
 FP2.1 SCALE: 1/4" = 1'-0"

ABBREVIATIONS

A or AMP	AMPERES	LRA	LOCK ROTOR AMPERES
AF	AMP FRAME	LGT	LIGHTING
AFC	ABOVE FINISHED CEILING	LV	LOW VOLTAGE
AFF	ABOVE FINISHED FLOOR		
AFG	ABOVE FINISHED GRADE		
AHU	AIR HANDLING UNIT	M	MAIN
A.I.C.	AMPERE INTERRUPTING CAPACITY	MAX	MAXIMUM
AH	AMMETER	MCB	MECHANICAL CIRCUIT BREAKER
ARCH	ARCHITECT	MFG	MANUFACTURER
AS	AMMETER SWITCH	MLO	MAIN LUGS ONLY
AT	AMP TRIP	M.O.	MECHANICALLY OPERATED
ATC	AUTOMATIC TEMPERATURE CONTROL	MTD	MOUNTED
ATS	AUTOMATIC TRANSFER SWITCH	MTS	MANUAL TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE	MV	MEDIUM VOLTAGE
		N	NEUTRAL
BFF	BELOW FINISHED FLOOR	N.C.	NORMALLY CLOSED
BFG	BELOW FINISHED GRADE	NEC	NATIONAL ELECTRIC CODE
BKR	BREAKER	N.I.C.	NOT IN CONTRACT
B.O.D.	BASIS OF DESIGN	N.O.	NORMALLY OPEN
		N.T.S.	NOT TO SCALE
C	CONDUIT	O.C.	ON CENTER
C/B	CIRCUIT BREAKER	OCF	OVERCURRENT PROTECTION
CL	CENTERLINE		
CLG	CEILING	P	POLE
CPT	CONTROL POWER TRANSFORMER	PB	PULL BOX
CT	CURRENT TRANSFORMER	PC	PLUMBING CONTRACTOR
	COPPER	PF	POWER FACTOR
DEMO DEMOLITION		PH OR Ø	PHASE
DC	DIRECT CURRENT	PNL	PANEL
DIA	DIAMETER	PRI	PRIMARY
DISC	DISCONNECT	P.S.I	POUNDS PER SQUARE INCH
DPDT	DOUBLE POLE, DOUBLE THROW	PT	POTENTIAL TRANSFORMER
		PVC	PHOTOVOLTAIC
E OR EX	EXISTING	PV	POLYVINYL CHLORIDE
EC	ELECTRICAL CONTRACTOR	PWR	POWER
EDH	ELECTRIC HAND DRYER		
EF	EXHAUST FAN	QTY	QUANTITY
ELEC	ELECTRICAL	REC	RECEPTACLE
EM	EMERGENCY	RSS	RIGID GALVANIZED STEEL
EMT	ELECTRICAL METALLIC TUBING	RTU	ROOF TO UNIT
ENCL	ENCLOSURE	SEC	SECONDARY
E.O.	ELECTRICALLY OPERATED	SLD	SINGLE LINE DIAGRAM
ETD	EXISTING TO BE DEMOLISHED	SLV	SLEEVE
ETR	EXISTING TO REMAIN	SPEC	SPECIFICATION
ETRL	EXISTING TO BE RELOCATED	SPD	SURGE PROTECTION DEVICE
EWC	ELECTRIC WATER COOLER	SPOT	SINGLE POLE, DOUBLE THROW
		SPST	SINGLE POLE, SINGLE THROW
F	FUSED	S.T.A.	SHUNT TRIP
FA	FIRE ALARM	STD	STANDARD
FACP	FIRE ALARM CONTROL PANEL	STP	SHIELDED TWISTED PAIR
FCU	FAN COIL UNIT	SW	SWITCH
FLA	FULL LOAD AMPERES	SYS	SYSTEM
FLUOR	FLUORESCENT	TEL	TELEPHONE
		TV	TELEVISION
G	EQUIPMENT GROUND CONDUCTOR	TYP	TYPICAL
GA	GAUGE	TS	TIME SWITCH
GC	GENERAL CONTRACTOR		
GFI	GROUND FAULT INTERRUPTER	UH	UNIT HEATER
GND	GROUND	UF	UNFUSED
		UG	UNDERGROUND
HID	HIGH INTENSITY DISCHARGE	ULL	UNDERWRITERS LABORATORY
H-O-A	HAND-OFF-AUTOMATIC	UPS	UNINTERRUPTIBLE POWER SUPPLY
HP	HORSE POWER	UTP	UNSHIELDED TWISTED PAIR
HT	HEIGHT		
HV	HIGH VOLTAGE	V	VOLTS
HWAC	HEATING, VENTILATING, AIR CONDITIONING	V.A	VOLT AMPERES
		VAV	VARIABLE AIR VOLUME
		VM	VOLT METER
ILL	ILLUMINATION	W	WIRE
IMC	INTERMEDIATE METALLIC CONDUIT	WATT	WATT
		WP	WEATHERPROOF
JB	JUNCTION BOX	XP	EXPLOSION PROOF
KCMILKILO	CIRCULAR MILS		
KVA	KILOVOLT AMPERES		
KW	KILOWATTS		
KWH	KILOWATT-HOUR		

FIRE ALARM GENERAL NOTES

- F-1 FIRE ALARM SYSTEM SHALL BE DESIGNED FOR HIGH AMBIENT NOISE.
- F-2 FIRE ALARM STROBES WITH LIGHT VISIBLE FROM A GIVEN AREA SHALL BE SYNCHRONIZED.
- F-3 FIRE ALARM WIRING SHALL BE INSTALLED IN CONDUIT. ALL CONDUIT SHALL BE CONCEALED WITHIN THE BUILDING STRUCTURE AND ABOVE CEILINGS WHEREVER POSSIBLE.
- F-4 CONTRACTOR SHALL CROSS ZONE DETECTION SYSTEM IN ORDER TO MINIMIZE FALSE ALARMS.

TECHNOLOGY SYSTEMS/SECURITY GENERAL NOTES

- TS-1 DATA/TELEPHONE RACEWAYS/PATHWAYS; COORDINATE WITH THE TECHNOLOGY CABLING CONTRACTOR FOR ALL CONDUIT AND RACEWAY REQUIREMENTS FOR THE TECHNOLOGY/CABLING SYSTEMS.
- TS-2 THE GENERAL CONTRACTOR SHALL COORDINATE AND PROVIDE A COMPLETE SECURITY SYSTEM THAT INCORPORATES INTRUSION ALARMS.
- TS-3 COORDINATE WITH OWNER FOR DESIRED FUNCTIONS AND ZONE COVERAGE.
- TS-4 SECURITY SYSTEM SHALL BE UL APPROVED.
- TS-5 SECURITY RACEWAYS/PATHWAYS SHALL BE COORDINATED WITH THE BUILDING OWNER AND TENANT. ALL CONDUIT AND RACEWAY REQUIREMENTS FOR THE SECURITY SYSTEMS SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR.

THE ELECTRICAL SYSTEMS PRESENTED ON THE SUBSEQUENT DRAWINGS WERE DESIGNED IN ACCORDANCE WITH THE FOLLOWING APPLICABLE CODES AND STANDARDS:

- THE NATIONAL ELECTRICAL CODE (NEC)
- INTERNATIONAL BUILDING CODE (IBC)
- INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
- ASHRAE STANDARD 90.1

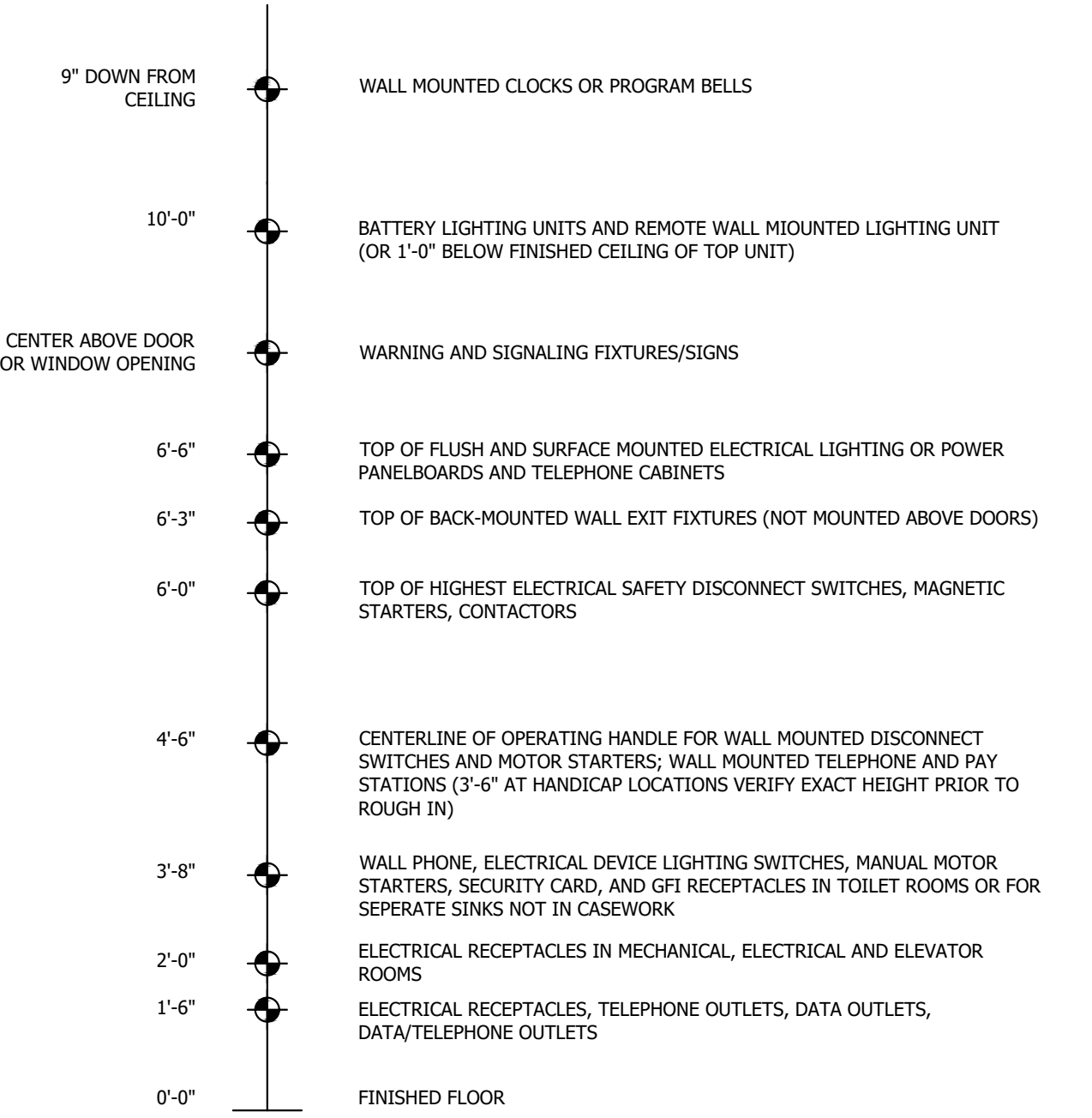
ELECTRICAL DEMOLITION GENERAL NOTES

- ED-1 CONTRACTOR TO REMOVE ALL EXISTING LIGHTING FIXTURES. LIGHTING FIXTURE AND ALL ASSOCIATED WIRING AND CONDUIT TO BE REMOVED BACK TO SOURCE.
- ED-2 DEMOLITION OF ALL EXISTING ELECTRICAL EQUIPMENT AND ASSOCIATED PIPING SHALL BE COORDINATED WITH NEW WORK INSTALLATION.
- ED-3 AT EQUIPMENT/ DEVICES/ LIGHTING FIXTURES BEING REMOVED, ABANDON CONDUIT AND BOXES IN BLOCK WALLS TO REMAIN. REMOVE ALL WIRE AND CONDUIT EXPOSED AND ABOVE CEILING BACK TO SOURCE. COVER ALL BOXES TO REMAIN IN BLOCK WALL WITH BLANK COVER PLATES.
- ED-4 THIS CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY/ALL DAMAGES TO EXISTING FLOORS, FLOOR TILES, WALLS, CEILINGS, FURNISHINGS, ETC. DUE TO THE REMOVAL PROCESS OF ELECTRICAL EQUIPMENT AND ALL ASSOCIATED ITEMS.
- ED-5 ALL MATERIAL AND EQUIPMENT REMOVED SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.
- ED-6 DISCONNECT AND REMOVE ALL SWITCHES, RECEPTACLES, ETC. FROM WALLS BEING REMOVED. ENSURE THAT ALL ADJACENT DEVICES REMAINING ARE ENERGIZED.
- ED-7 THE DEMOLITION PLAN AS SHOWN IS NOT TO BE CONSIDERED ALL INCLUSIVE BUT IS TO BE A GENERAL GUIDE TO THE SCOPE OF THE DEMOLITION. ALL DEMOLITION MUST BE PERFORMED AS REQUIRED TO BRING THE AREA SHOWN TO A STATE WHERE THE NEW CONSTRUCTION WORK CAN BE ACCOMPLISHED AS SHOWN ON THESE CONSTRUCTION DOCUMENTS.
- ED-8 CONTRACTOR SHALL REMOVE ALL EXISTING LIGHTING FIXTURES, BOXES, WIRING, AND CONDUITS FROM WALLS OR CEILING BEING REMOVED. EXISTING CIRCUIT BREAKERS SERVING THE REMOVED ITEMS SHALL BE MADE SPARE.
- ED-9 MAINTAIN CONTINUITY OF ALL EXISTING CIRCUITS REMAINING IN OTHER AREAS.
- ED-10 ALL EXISTING CONDUITS AND WIRING NOT BEING USED SHALL BE REMOVED BACK TO SOURCE.
- ED-11 LABEL ALL UNUSED CIRCUIT BREAKERS IN PANELS AS SPARES. IDENTIFY EQUIPMENT AND LOADS THAT REMAIN CONNECTED. PROVIDE UPDATED PANEL SCHEDULE AS PART OF 'AS BUILT' SUBMITTAL.
- ED-12 ALL ITEMS BEING REMOVED AS SHOWN IN HEAVY DASHED LINES.
- ED-13 ALL ITEMS TO REMAIN ARE SHOWN IN SOLID LIGHT LINES.

BRANCH CIRCUIT WIRING REQUIREMENTS	
120 OR 277 VOLT, 1Ø, 2W CIRCUIT	
CIRCUIT BREAKER	MINIMUM CONDUCTOR REQUIREMENT
20A-1P	2 #12AWG + 1 #12AWG GROUND IN ¾" CONDUIT
30A-1P	2 #10AWG + 1 #10AWG GROUND IN ¾" CONDUIT
40A-1P	2 #8AWG + 1 #10AWG GROUND IN ¾" CONDUIT
50A-1P	2 #6AWG + 1 #10AWG GROUND IN ¾" CONDUIT
60A-1P	2 #6AWG + 1 #10AWG GROUND IN ¾" CONDUIT
208 VOLT, 1Ø, 2W CIRCUIT	
20A-2P	2 #12AWG + 1 #12AWG GROUND IN ¾" CONDUIT
30A-2P	2 #10AWG + 1 #10AWG GROUND IN ¾" CONDUIT
40A-2P	2 #8AWG + 1 #10AWG GROUND IN ¾" CONDUIT
50A-2P	2 #6AWG + 1 #10AWG GROUND IN ¾" CONDUIT
60A-2P	2 #6AWG + 1 #10AWG GROUND IN ¾" CONDUIT
120/208 VOLT, 1Ø, 3W CIRCUIT	
20A-2P	3 #12AWG + 1 #12AWG GROUND IN ¾" CONDUIT
30A-2P	3 #10AWG + 1 #10AWG GROUND IN ¾" CONDUIT
40A-2P	3 #8AWG + 1 #10AWG GROUND IN ¾" CONDUIT
50A-2P	3 #6AWG + 1 #10AWG GROUND IN ¾" CONDUIT
60A-2P	3 #6AWG + 1 #10AWG GROUND IN ¾" CONDUIT
208 OR 480 VOLT, 3Ø, 3W CIRCUIT	
20A-3P	3 #12AWG + 1 #12AWG GROUND IN ¾" CONDUIT
30A-3P	3 #10AWG + 1 #10AWG GROUND IN ¾" CONDUIT
40A-3P	3 #8AWG + 1 #10AWG GROUND IN ¾" CONDUIT
50A-3P	3 #6AWG + 1 #10AWG GROUND IN ¾" CONDUIT
60A-3P	3 #6AWG + 1 #10AWG GROUND IN ¾" CONDUIT
208Y120 OR 480Y277 VOLT, 3Ø, 4W CIRCUIT	
20A-3P	4 #12AWG + 1 #12AWG GROUND IN ¾" CONDUIT
30A-3P	4 #10AWG + 1 #10AWG GROUND IN ¾" CONDUIT
40A-3P	4 #8AWG + 1 #10AWG GROUND IN ¾" CONDUIT
50A-3P	4 #6AWG + 1 #10AWG GROUND IN 1" CONDUIT
60A-3P	4 #6AWG + 1 #10AWG GROUND IN 1" CONDUIT
NOTES:	
1. ALL BRANCH CIRCUIT WIRING IN THIS TABLE IS BASED ON CONDUIT RUNS THE FOLLOWING LENGTHS: 120V - 65 FEET 277 V - 150 FEET IF CIRCUITS LENGTHS EXCEED THESE VALUES, THE WIRE SIZE SHALL BE INCREASED PER THE VOLTAGE DROP SCHEDULE. RACEWAYS SHALL BE INCREASED ACCORDINGLY. LARGE CABLES SHALL BE REDUCED IN A JUNCTION BOX PRIOR TO DEVICE TERMINATION. WIRE REDUCERS SHALL BE PROVIDED AT CIRCUIT BREAKER AS REQUIRED.	
2. IF MC CABLE IS APPROVED FOR USE BY ENGINEER AND AHJ, THE MC CABLE SHALL INCLUDE A FULL SIZE INSULATED GROUND CONDUCTOR. SIZE OF WIRING SHALL BE PER THE ABOVE SCHEDULE AND VOLTAGE DROP SCHEDULE.	
3. ALL AMPACITIES ARE BASED ON 75°C TEMPERATURE RATING OF CONDUCTORS AS INDICATED IN THE NATIONAL ELECTRIC CODE.	

ELECTRICAL GENERAL NOTES

- E-1 THESE GENERAL ELECTRICAL NOTES APPLY TO ALL DRAWINGS IN THE PROJECT.
- E-2 THE ELECTRICAL CONTRACTOR SHALL REVIEW ALL OF THE CONTRACT DOCUMENTS (DRAWINGS, SPECIFICATIONS, EQUIPMENT CUTSHEETS) AND ANY OWNER PROVIDED EQUIPMENT FOR ELECTRICAL REQUIREMENTS AND INCLUDE ALL ELECTRICAL WORK.
- E-3 COORDINATE EXACT TERMINATION METHODS (RECEPTACLES OR HARDWARE) WITH EQUIPMENT (MECHANICAL, APPLIANCE, OWNER PROVIDED EQUIPMENT) CUTSHEETS PRIOR TO ROUGH-IN.
- E-4 COORDINATE EXACT LOCATION AND MOUNTING HEIGHTS WITH ARCHITECTURAL DOCUMENTS PRIOR TO ROUGH-IN.
- E-5 REFER TO ARCHITECTURAL DOCUMENTS AND DETAILS FOR EXACT LOCATION AND MOUNTING REQUIREMENTS FOR ALL WIRING DEVICES AND LIGHT FIXTURES. DISCREPANCY BETWEEN THE ARCHITECTURAL DOCUMENTS AND MEP DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY.
- E-6 COORDINATE ALL CEILING MOUNTED DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLANS (RCP'S). IF THE ARCHITECTURAL RCP DOES NOT INDICATE THE LOCATION FOR ANY CEILING MOUNTED ITEMS, CONFIRM WITH THE ARCHITECT THE EXACT LOCATION PRIOR TO ROUGH-IN AND INSTALLATION.
- E-7 WHERE MULTIPLE WIRING DEVICES ARE SHOWN IN ONE LOCATION, THESE DEVICES SHALL BE MOUNTED UNDER A COMMON COVERPLATE UNLESS NOTED OTHERWISE. WHERE SWITCHES ARE SHOWN ADJACENT TO DIMMERS, THE SWITCH SHALL MATCH THE DIMMER STYLE AND FUNCTION. SECTIONAL WALL PLATES ARE NOT PERMITTED.
- E-8 PRIOR TO ROUGH-IN, THE CONTRACTOR SHALL COORDINATE FINAL CONNECTION OF ALL OWNER FURNISHED EQUIPMENT AND EQUIPMENT FURNISHED UNDER OTHER DIVISIONS OF THE WORK IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AND INSTALLATION REQUIREMENTS.
- E-9 MOTOR STARTERS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR. VARIABLE SPEED DRIVES/VARIABLE FREQUENCY DRIVES (REFERRED TO AS VSDS OR VFDS) SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR. AT ALL VSDS AND VFDS, A MOTOR DISCONNECT SHALL BE PROVIDED AT THE MOTOR THAT IS INTERLOCKED TO THE VSD/VFD. THE ELECTRICAL CONTRACTOR SHALL MEET WITH THE MECHANICAL CONTRACTOR TO COORDINATE ALL THE MOTOR STARTING REQUIREMENTS, (INCLUDING VSD/VFD) AND NECESSARY MOTOR STARTERS, VSD AND VFD ACCESSORIES. THE ELECTRICAL CONTRACTOR SHALL SUBMIT A MOTOR STARTER SCHEDULE AS A PART OF THE SHOP DRAWINGS THAT INDICATES ALL OF THE MOTOR STARTERS, VSDS AND VFDS CHARACTERISTICS AND ACCESSORIES. THIS SUBMITTAL SHALL INCLUDE A RESPONSIBILITY MATRIX INDICATING WHO PROVIDES THE EQUIPMENT AND START-UP. THE ELECTRICAL CONTRACTOR SHALL ACCEPT ALL MOTOR STARTERS INCLUDING VSD/VFDS AND SHALL MOUNT/INSTALL ALL MOTOR STARTERS INCLUDING VSDS/VFDS. ALL NECESSARY WIRING BETWEEN MOTOR POWER SOURCE, VSDS/VFDS, MOTOR DISCONNECTS AND MOTOR TERMINATION POINTS SHALL BE PROVIDED.
- E-10 WHEREVER THE WORD "PROVIDE" IS USED, IT SHALL MEAN TO "FURNISH AND INSTALL COMPLETE AND READY FOR USE." CONTRACTOR SHALL PROVIDE ALL TESTING AND INSTRUCTIONS REQUIRED FOR OPERATION AND MAINTENANCE OF EQUIPMENT AND SYSTEMS INSTALLED.
- E-11 THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL BARE THE COSTS OF ALL NECESSARY PERMITS AND INSPECTIONS.
- E-12 ALL WORKMANSHIP, MATERIALS, AND EQUIPMENT SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER OWNER OCCUPANCY.
- E-13 ALL OPENINGS CUT THROUGH WALLS BY THE CONTRACTOR SHALL BE RESEALED WITH APPROPRIATE FIRE RATED MATERIAL AFTER COMPLETION OF WORK.
- E-14 ALL NEW WORK SHALL BE CONCEALED IN CEILINGS, WALLS, ETC UNLESS OTHERWISE NOTED.
- E-15 MATERIAL, FINAL FINISHES, AND COLORS OF ALL DEVICES SHALL BE COORDINATED WITH ARCHITECT.
- E-16 CONFIRM ALL DOOR SWINGS BEFORE INSTALLING SWITCH BOXES.
- E-17 CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF SUSPENDED AND/OR SURFACE MOUNTED LUMINAIRES IN MECHANICAL, ELECTRICAL, AND STORAGE AREAS WITH OTHER TRADES PRIOR TO ROUGH-IN AND INSTALLATION.
- E-18 ELECTRICAL CONTRACTOR SHALL PROVIDE EXPANSION FITTINGS IN ALL RACEWAYS CROSSING CONSTRUCTION OR EXPANSION JOINTS.
- E-19 UNLESS OTHERWISE INDICATED, ALL PANELS, CABINETS, AND THE LIKE IN ELECTRICAL CLOSETS OR EQUIPMENT ROOMS ARE TO BE MOUNTED ON STRUCTURAL CHANNEL FRAMING WHICH SHALL BE HUNG DIRECTLY FROM STRUCTURAL STEEL WORK OR SUPPLEMENTARY MEMBERS OR ANCHORS EMBEDDED IN CONCRETE. ALL HUNG LOADS SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER.
- E-20 MAINTAIN SEPARATION OF EMERGENCY CIRCUIT WIRING FROM NORMAL CIRCUIT WIRING PER THE NEC.
- E-21 ALL WORK SHALL BE PERFORMED AS REQUIRED BY APPLICABLE SECTIONS OF NEC CODE, GOVERNING LOCAL CODES, LAWS, AND REGULATIONS.
- E-22 ALL CONFLICT, WHICH MAY PREVENT THE COMPLETION OF WORK AS INTENDED, SHALL BE BROUGHT TO THE OWNER/ARCHITECT/ENGINEER'S ATTENTION. THE CONTRACTOR SHALL NOT PROCEED WITH ANY RELATED WORK UNTIL ALL CONFLICTS ARE RESOLVED AND THE CLARIFYING INFORMATION IS ISSUED TO THE CONTRACTOR.
- E-23 CONTRACTOR SHALL COORDINATE ALL LOCATIONS OF DISCONNECTS AND OTHER ELECTRICAL DEVICES WITH LOCATIONS OF ACCESS PANELS. ALL ELECTRICAL DISCONNECTS, DEVICES, AND ALL ACCESS PANELS INCLUDE IN COORDINATION DRAWINGS PACKAGE.
- E-24 TEMPORARY OUTAGES TO MAKE FINAL TERMINATIONS AND CONNECTIONS SHALL BE MINIMIZED WHEREVER POSSIBLE AND SHALL BE SCHEDULED WITH THE OWNER TWO WEEKS PRIOR TO AN ANTICIPATED BUILDING SHUTDOWN.
- E-25 BUILDING WIRING SHALL INCLUDE INSULATED GROUND AND NEUTRAL CONDUCTOR FOR ALL CIRCUITS. NEUTRAL CONDUCTORS SHALL NOT SERVE MORE THAN ONE CIRCUIT.
- E-26 PROVIDE ALL MATERIALS, BRACING, HANGERS, AND EQUIPMENT REQUIRED FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM. ALL MATERIAL AND EQUIPMENT INSTALLED SHALL BE NEW AND U.L. LISTED.
- E-27 PROVIDE COMPLETE AS-BUILT DRAWINGS INDICATING ALL CHANGES IN EQUIPMENT/DEVICES/CONDUIT LOCATIONS AND DELIVER TO OWNER UPON COMPLETION OF THE WORK.
- E-28 BRANCH CIRCUIT HOMERUNS TO REFERENCED PANELBOARD SHALL BE SIZED PER NEC UNLESS SHOWN OR SPECIFIED OTHERWISE.
- E-29 MINIMUM CONDUIT SIZE SHALL BE ¾" AND MINIMUM WIRE SIZE SHALL BE #12 AWG; THW, THHW, OR THWN (75°C RATING). ALL HOMERUNS SHALL BE IN CONDUIT.
- E-30 IF A DISCONNECT IS INSTALLED ON THE LOAD SIDE OF A VFD, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL REQUIRED CONTROL INTERLOCK FEATURES.
- E-31 CONTRACTOR SHALL VERIFY NEMA TYPE RECEPTACLE CONFIGURATIONS REQUIRED FOR FURNISHED EQUIPMENT. WHERE EQUIPMENT IS NOT PROVIDED WITH CORD AND PLUG, THE CONTRACTOR SHALL SUPPLY CORD AND PLUG IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AS CONFORMING TO THE NEC.
- E-32 CONTROL/POWER WIRING REQUIRED BUT NOT SHOWN FOR, AND NOT LIMITED TOM THERMOSTATS, CONTROLLERS, VFD CONTROLS, EQUIPMENT MANUFACTURER CONTROL PANELS, DAMPER MOTORS, CONTROL MOTORS, VALVES, SENSING DEVICES (TEMPERATURE, PRESSURE, HUMIDITY, LEVEL, FLOW, ON-OFF, FIRE ALARM DEVICES) SHALL BE SUPPLIED AND INSTALLED TO PROVIDE A COMPLETE AND USABLE FACILITY AS SPECIFIED. COORDINATE WITH OTHER DISCIPLINES AND PROVIDE AS REQUIRED.
- E-33 ALL WIRING METHODS FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH AND AS APPROVED BY THE N.E.C. FOR THE USE INTENDED. ALL CONDUCTORS ASSOCIATED WITH THE ELECTRICAL SERVICE ENTRANCE AND PANELBOARD FEEDERS SHALL BE INSTALLED IN CONDUIT OR AS OTHERWISE SPECIFIED ON THE DRAWINGS.
- E-34 ALL WIRING SHALL BE RUN CONCEALED IN WALLS AND PARTITIONS IN FINISHED SPACES OR ABOVE CEILING TILES UNLESS OTHERWISE SPECIFIED, OR APPROVED BY THE ARCHITECT.
- E-35 CONDUITS THAT ARE PERMITTED TO BE RUN EXPOSED IN UNFINISHED SPACES AND ARE DETERMINED BY THE ARCHITECT TO BE EXPOSED TO PHYSICAL DAMAGE OR WATER, SHALL BE GALVANIZED RIGID STEEL.
- E-36 RACEWAYS, BOXES, ETC. PROVIDED AS PART OF THIS CONTRACT AND INSTALLED ABOVE SUSPENDED CEILINGS, SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE INDEPENDENT OF THE CEILING SYSTEM, DUCTS, PIPING OR OTHER SYSTEMS.
- E-37 JUNCTION AND PULLBOXES SHALL BE INSTALLED AT SUCH LOCATIONS AS MAY BE REQUIRED TO FACILITATE THE INSTALLATION OF ELECTRICAL CONDUCTORS. EACH BOX SHALL BE PROVIDED WITH A REMOVABLE COVER. BOXES SHALL BE SMOOTH SQUARE AND TRUE, SHALL BE SET PARALLEL WITH THE WALLS AND CEILINGS AND SHALL NOT BE PLACED IN LOCATIONS MADE INACCESSIBLE BY PIPING, DUCTS OR OTHER EQUIPMENT.
- E-38 CIRCUIT BREAKERS SHALL HAVE QUICK-MAKE, QUICK-BREAK MECHANISM AND THERMAL MAGNETIC TRIP ELEMENTS. THE QUANTITY OF POLES, AMPERE RATING SHALL BE AS INDICATED ON THE DRAWINGS. MINIMUM INTERRUPTING RATING OF ANY CIRCUIT BREAKER SHALL BE 10,000 AMPERES SYMMETRICAL.
- E-39 CONNECT EMERGENCY BATTERY LIGHTING UNITS, REMOTE HEADS AND EXIT SIGNS TO HOT WIRE AHEAD OF ANY LOCAL SWITCHING.
- E-40 ELECTRICAL CONTRACTOR TO SUPPLY ALL GROUNDING & BONDING REQUIREMENTS PER NEC.
- E-41 ALL COMPUTER WORKSTATIONS WILL HAVE VOICE AND DATA DEVICES. ALL ELECTRICAL CIRCUITS FEEDING VOICE AND DATA EQUIPMENT SHALL HAVE AN ISOLATED NEUTRAL.
- E-42 SUBMIT FOR APPROVAL, DETAILED SHOP DRAWINGS AND CATALOG CUT SHEETS FOR ALL EQUIPMENT AND MATERIAL. ORDER OR DELIVER TO THE JOB SITE MATERIAL AND EQUIPMENT FOR WHICH THERE IS APPROVED SHOP DRAWINGS.
- E-43 MC CABLING IS ACCEPTABLE WHERE ALLOWED BY AHJ. MC CABLING IS ACCEPTABLE ABOVE ACCESSIBLE CEILINGS, IN FRAMED WALLS, AND WHERE NOT EXPOSED TO PHYSICAL DAMAGE. WIRING IN ALL OTHER LOCATIONS SHALL BE INSTALLED IN EMT OR RMC PER CODE.

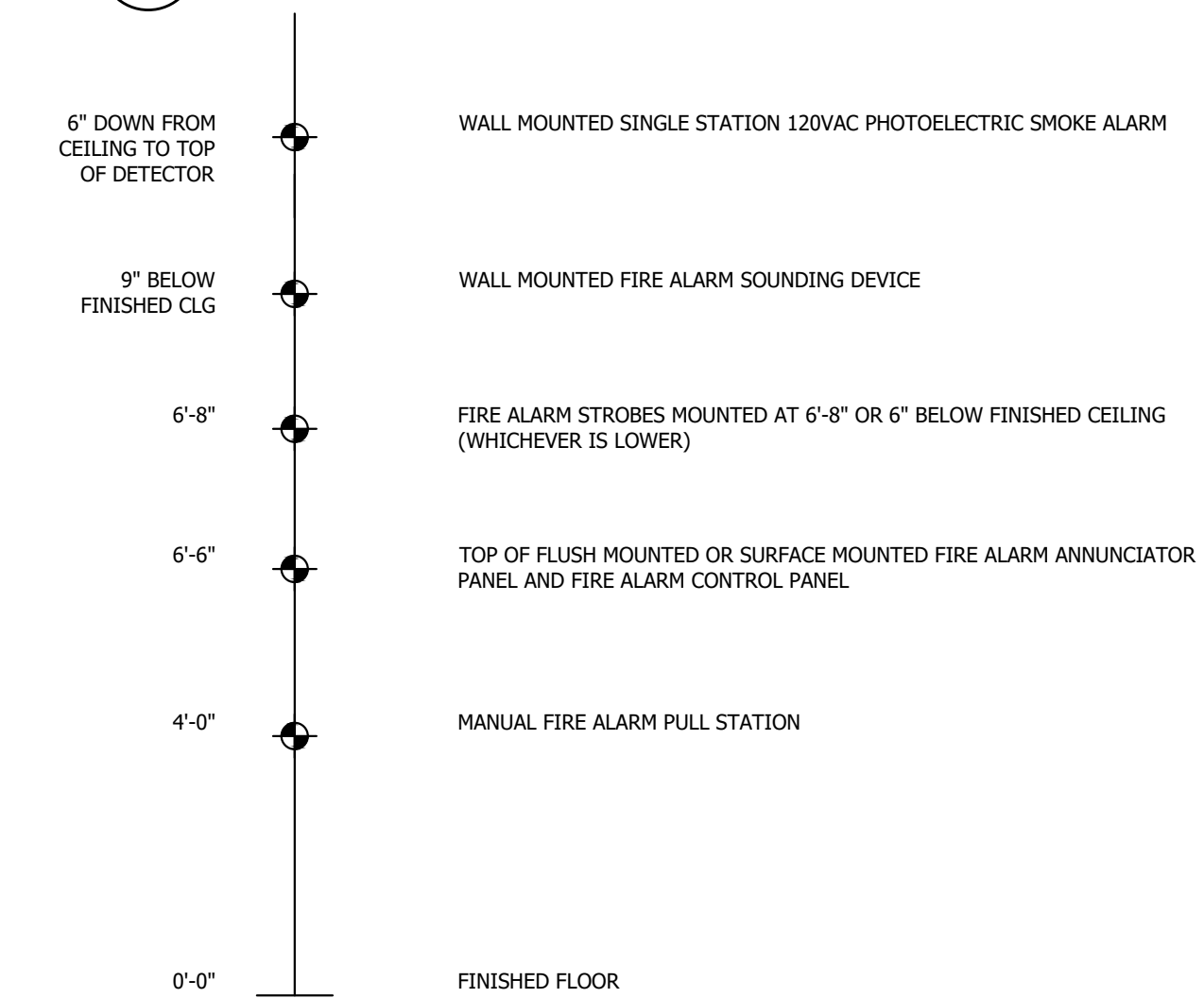


1 ELECTRICAL DEVICE MOUNTING HEIGHTS

NOTES:

1. THE ABOVE MOUNTING HEIGHTS SHALL BE ADHERED TO UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON THE DRAWINGS OR SPECIFICATIONS.
2. MOUNTING HEIGHTS TO CENTER OF OUTLETS UNLESS OTHERWISE NOTED. IN MASONRY CONSTRUCTION THE ABOVE MOUNTING HEIGHTS SHALL BE USED FOR REFERENCE TO NEAREST BLOCK OF BRICK COURSING.
3. CONFIRM ELEVATIONS FOR DEVICES MOUNTED ABOVE COUNTER OR CASEWORK. COORDINATE WITH ARCHITECTURAL ROOM ELEVATIONS AND DETAILS AND CASEWORK CONTRACTOR. ALL DEVICE MOUNTING HEIGHTS SHALL BE LOCATED TO ALLOW SUFFICIENT SPACE FOR INSTALLATION OF COUNTER AND/OR ASSOCIATED BACKSPLASH.

1 ELECTRICAL DEVICE MOUNTING HEIGHTS

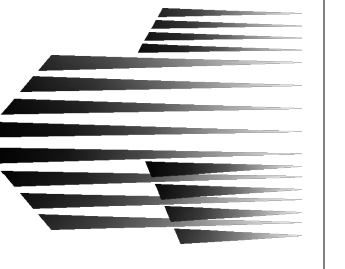


2 FIRE ALARM DEVICE MOUNTING HEIGHTS

NOTES:

1. THE ABOVE MOUNTING HEIGHTS SHALL BE ADHERED TO UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON THE DRAWINGS OR SPECIFICATIONS.

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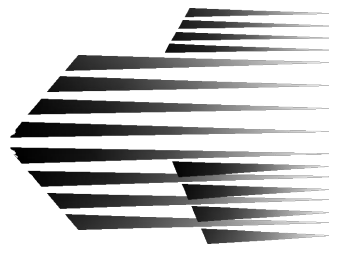
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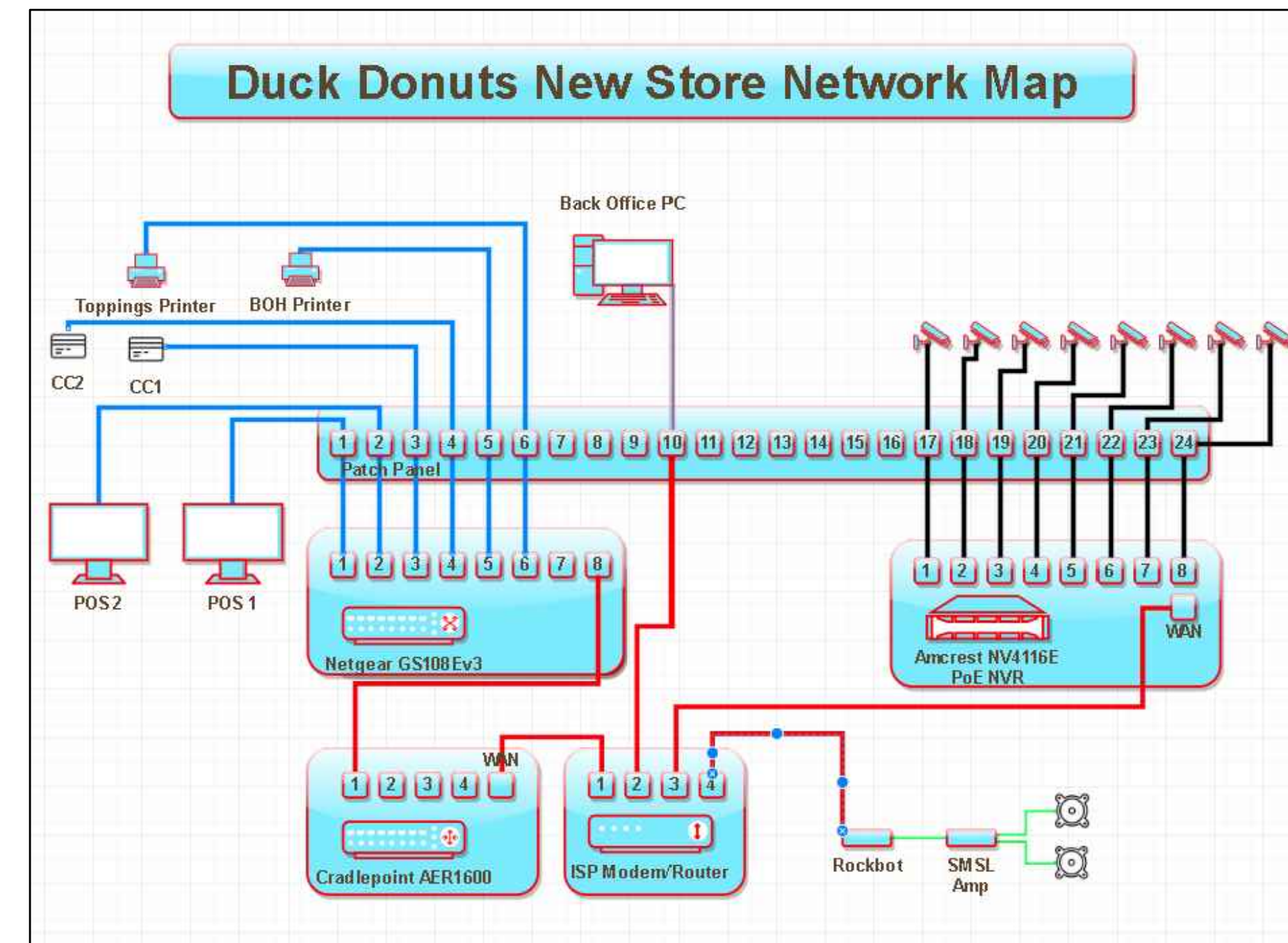
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RECEPTACLE SCHEDULE					
POWER SYMBOL	RECEPTACLE TYPE	NEMA TYPE	VOLTAGE	MANUFACTURER, MODEL #	REMARKS
⊙	SIMPLEX	L5-20R	125	LEGRAND, 5361W	(1)
⊙	DUPLEX	L5-20R	125	LEGRAND, 5362W	(1)
⊙	QUADRUPLEX	L5-20R	125	LEGRAND, (2) 5362W	(1)
⊙	GFCI DUPLEX	L5-20R	125	LEGRAND, 2095W	(1)
⊙ WP	WEATHER-RESISTANT DUPLEX	L5-20R	125	LEGRAND, 2095TRWRW	(1) (3)
⊙ IG	ISOLATED GROUND DUPLEX	L5-20R	125	LEGRAND, IF5362	(1)
⊙ CT	COUNTER TOP DUPLEX	L5-20R	125	LEGRAND, TR5362W	(1)
⊙	TVSS DUPLEX	L5-20R	125	LEGRAND, IG5362WSP	(1)
⊙	30 AMP RECEPTACLE	L6-30R	250	LEGRAND	(1)
⊙	50 AMP RECEPTACLE	14-50	125/250	LEGRAND	(1)
⊙	SPECIAL RECEPTACLE	NEMA CODE	VOLTAGE	MANUFACTURER, MODEL #	REMARKS
⊙	SPECIAL RECEPTACLE	NEMA CODE	VOLTAGE	MANUFACTURER, MODEL #	REMARKS
⊙ P	QUADRUPLEX FLOOR RECEPTACLE	L5-20R	120	LEGRAND, (2) 5362W	(1)
⊙	SYSTEMS FURNITURE POWER WHIP	N/A	120	WIREMOLD, 4FFATCBK-4FFCTCBK	
—	POWER POLE	L5-20R	120	WIREMOLD, VS662345 WIREMOLD, VL662345	
—	MULTI-OUTLET ASSEMBLY	L5-15R	120	3'-0" LONG, WIREMOLD, 20GB206S 5'-0" LONG WIREMOLD, 20GB512S 6'-0" LONG WIREMOLD, 20GB612S	

REMARKS:
 (1) PROVIDE WITH SHIM-LOCKS.
 (2) PROVIDE WITH "WHILE-IN-USE" WEATHERPROOF BOX & COVER LEGRAND, MODEL #WJUCAGV

FIRE ALARM DEVICE SYMBOLS		
FIRE ALARM SYMBOL	DESCRIPTION	REMARKS
⊙	PHOTOELECTRIC SMOKE DETECTOR	
⊙ DD	DUCT MOUNTED SMOKE DETECTOR	
⊙ HD	HEAT DETECTOR	
⊙	MANUAL PULL STATION	
⊙	FIRE ALARM SPEAKER	
⊙	FIRE ALARM SPEAKER/STROBE	
⊙	FIRE ALARM STROBE	
⊙	FIRE ALARM CONTROL PANEL	
⊙	FIRE ALARM ANNUCIATOR PANEL	
⊙	SUPERVISED RELAY	
⊙	PRESSURE SWITCH	
⊙	TAMPER SWITCH	
⊙	FLOW SWITCH	
⊙	DOOR HOLD	
⊙ BT	BEAM DETECTOR TRANSMITTER	
⊙ BR	BEAM DETECTOR RECEIVER	



A NETWORK WIRING DIAGRAM
 E0.2 SCALE: NONE

SWITCH SCHEDULE					
SWITCH SYMBOL	SWITCH	TYPE	VOLTAGE	MANUFACTURER	REMARKS
S	SINGLE POLE		120/277	LEGRAND, CS820AC1W	
S ₃	THREE WAY		120/277	LEGRAND, CS820AC3W	
S ₄	FOUR WAY		120/277	LEGRAND, CS820AC4W	
S _{os}	PIR OCCUPANCY SENSOR		120/277	LEGRAND, OS3005W	
S _{3os}	PIR THREE WAY OCCUPANCY SENSOR		120/277	LEGRAND, OS3005	
S _D	DIMMER SWITCH		120/277	LUTRON DVSTV-WH	(1) (3) (4)
S _P	SWITCH W/ PILOT LIGHT		120/277	LEGRAND, PS20AC1WSL	
S _K	KEY OPERATED SWITCH		120/277	LEGRAND, PS20AC1WL	(5)
S _M	MOTOR RATED SWITCH		120/277	LEGRAND, 20 AMP- PS20AC2HP 30 AMP- 7802/7803 40 AMP- 7842/7843	(2)
⊙ S	DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR		120/277		
⊙ PC	PHOTOCELL		120/277		
⊙ DS	DAYLIGHT SENSOR		120/277	DAYLIGHT SENSOR TO CONTROL LIGHTING PER IECC	

REMARKS:
 (1) DIMMERS SHALL BE DERATED WHEN FINS ARE BROKEN. REFER TO MANUFACTURER DERATING REQUIREMENTS.
 (2) PROVIDE SWITCH SIZE AS REQUIRED FOR MOTOR HP SIZE.
 (3) PROVIDE DIMMER TYPE AS REQUIRED FOR LIGHTING LOAD.
 (4) WHERE THREE WAY DIMMERS ARE REQUIRED, PROVIDE APPROPRIATE COMPANION DIMMER.
 (5) PROVIDE 2 KEYS WITH EACH KEY SWITCH, LEGRAND MODEL #500K.

INFORMATION TECHNOLOGY SCHEDULE				
IT SYMBOL	DEVICE TYPE	MANUFACTURER	MODEL #	REMARKS
# ▽	DATA OUTLET	ORTRONICS	JACK TYPE: TRACJACK, OR-T35600 FACEPLATE: OR-40300545 THRU OR-40300549	(1)
▽ (#)	TELEPHONE OUTLET	ORTRONICS	JACK TYPE: TRACJACK, OR-T35600 FACEPLATE: OR-40300545 THRU OR-40300549	(2)
# ▽ (#)	COMBINATION DATA/TELEPHONE OUTLET	ORTRONICS	JACK TYPE: TRACJACK, OR-T35600 FACEPLATE: OR-40300545 THRU OR-40300548	(1)
⊙	SYSTEMS FURNITURE DATA WHIP	WIREMOLD	WIREMOLD, 4FFATCBK-4FFCTCBK	
⊙	FLOOR MOUNTED DATA RACK	ORTRONICS	OR-MM10716	

REMARKS:
 (1) '#' INDICATES QUANTITY OF DATA OUTLETS. PROVIDE FACEPLATE APPROPRIATE FOR QUANTITY OF DATA OUTLETS.
 (2) '▽ (#)' INDICATES QUANTITY OF TELEPHONE OUTLETS. PROVIDE FACEPLATE APPROPRIATE FOR QUANTITY OF TELEPHONE OUTLETS.
 (3) SEE INDIVIDUAL DATA RACK ELEVATION PLANS FOR DATA RACK LAYOUT.

PANELS SCHEDULE						
PANEL SYMBOL	MOUNTING	VOLTAGE	PHASE	MANUFACTURER, TYPE	MAX AMP RATING	REMARKS
□	SURFACE	208Y120	3φ	SQUARE, NQOD	MCB - 400 MLO - 600	(1)
■	SURFACE	480Y277	3φ	SQUARE D, NF	MCB - 600 MLO - 800	(1)
□	SURFACE	240/120	1φ	SQUARE D, NQOD	MCB - 400 MLO - 600	(1)
□	RECESSED	208Y120	3φ	SQUARE D, NQOD	MCB - 400 MLO - 600	(1)
■	RECESSED	480Y277	3φ	SQUARE D, NF	MCB - 600 MLO - 800	(1)
□	RECESSED	240/120	1φ	SQUARE D, NQOD	MCB - 400 MLO - 600	(1)
□	SURFACE	208Y120	3φ	SQUARE D, I-LINE	MCB - 800 MLO - 1200	(1)
■	SURFACE	480Y277	3φ	SQUARE D, I-LINE	MCB - 800 MLO - 1200	(1)

REMARKS:
 (1) SEE INDIVIDUAL PANEL SCHEDULES FOR AIC RATINGS AND BREAKER REQUIREMENTS

POWER DEVICE SYMBOLS	
POWER SYMBOL	DESCRIPTION
⊙	JUNCTION BOX
⊙	MOTOR CONNECTION, HORSEPOWER, VOLTAGE, AND PHASE AS INDICATED
⊙	DISCONNECT SWITCH - NOMENCLATURE AS FOLLOWS - SIZE/POLES/FUSE SIZE/NEMA RATING
⊙	COMBINATION MOTOR STARTER - TYPE/SIZE/NEMA ENCLOSURE AS INDICATED.

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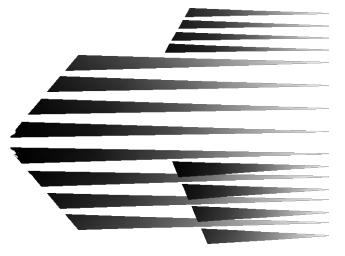
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ELECTRICAL SYMBOLS



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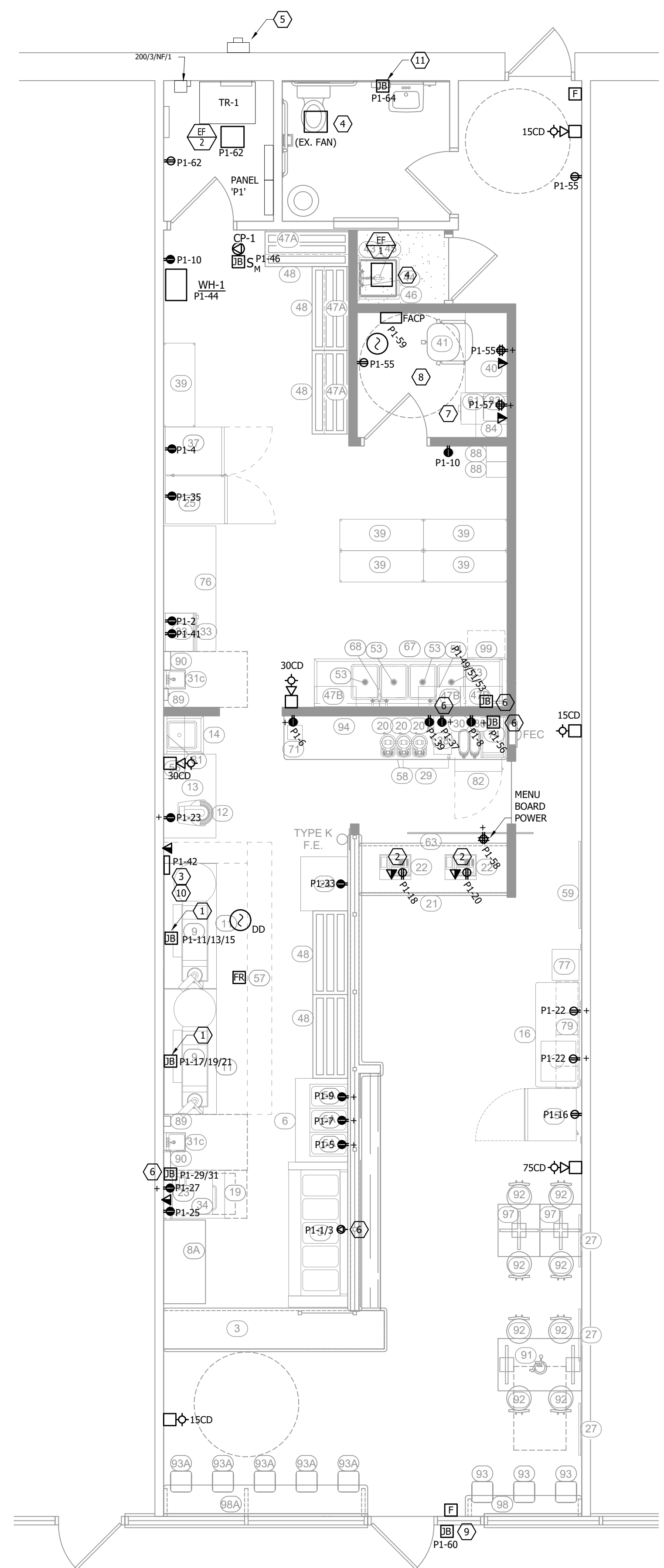
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POWER
 FLOOR
 PLAN

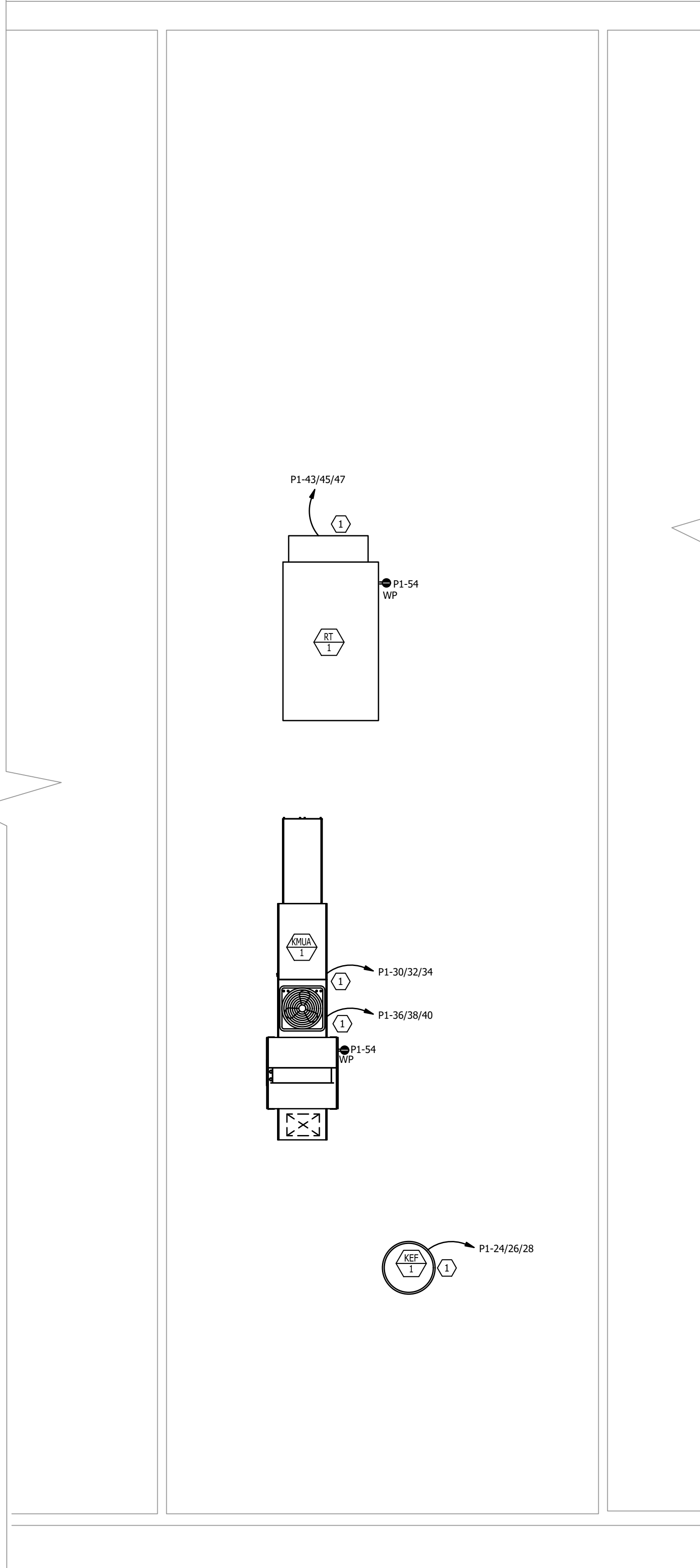
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- NEW WORK KEYED NOTES:**
- HARD WIRED CONNECTION TO DONUT MAKER. PROVIDE LOW VOLTAGE SHUNT TRIP CONNECTION TO HOOD CONTROL PANEL AS REQUIRED.
 - MOUNT POWER AND DATA INSIDE SERVICE COUNTER MILLWORK. COORDINATE WITH MILLWORK SHOP DRAWINGS AND MANUFACTURER FOR INSTALLATION REQUIREMENTS.
 - HOOD CONTROL PANEL. SEE WIRING DIAGRAM ON MECHANICAL DRAWINGS FOR REQUIREMENTS.
 - CIRCUIT TO LOCAL LIGHTING CIRCUIT AND CONNECT TO SWITCH WITH PILOT LIGHT AND TIME DELAY (REFER TO MECH SCHEDULE)
 - NEW METER BASE AND ACCESSORIES. COORDINATE FINAL LOCATION WITH UTILITY COMPANY AND OWNER.
 - CONFIRM NEMA PLUG CONFIGURATION WITH KITCHEN SUPPLIER EQUIPMENT. SUBMIT ALL EQUIPMENT PLUG NON-STANDARD CONFIGURATIONS FOR REVIEW.
 - ASSEMBLE AND INSTALL NETWORK CABINET. BOTTOM OF NETWORK CABINET TO BE MOUNTED 36" BELOW FINISHED CEILING. PROVIDE A QUAD RECEPTACLE FOR NETWORK CABINET MOUNTED 6" BELOW THE NETWORK CABINET. INSTALL NETWORK/LOW-VOLTAGE PATCH PANEL INSIDE, AT TOP OF NETWORK CABINET. TERMINATE NETWORK/LOW-VOLTAGE CABLE (CAT6 ETHERNET CABLE) AT PATCH PANEL. SEE WIRING DIAGRAM ON THIS SHEET. PROVIDE (4) CAT6 CABLES FROM PATCH PANEL TO POS SYSTEM (REGISTER COUNTER). PROVIDE (1) CAT6 CABLE FROM PATCH PANEL TO POS TICKET PRINTER AT TOPPING LOCATION. PROVIDE (1) CAT6 CABLE FROM PATCH PANEL TO BACK OF HOUSE POS TICKET PRINTER. PROVIDE (1) CAT 6 FROM PATCH PANEL TO BACK OFFICE COMPUTER. PROVIDE (8) CAT6 CABLES FROM PATCH PANEL FOR SECURITY CAMERAS LOCATED THROUGHOUT THE SPACE. COORDINATE SECURITY CAMERA LOCATIONS WITH ARCHITECT/PROJECT MANAGER. TERMINATE ALL CABLES AT PUNCH DOWN PATCH PANEL AS NOTED ON WIRING DIAGRAM ON SHEET E201. PROVIDE DATA JACKS AND/OR WALL PLATES WHERE NEEDED. PROVIDE 14 GAUGE SPEAKER WIRE, RUN WIRE TO NETWORK CABINET. COORDINATE SPEAKER LOCATIONS WITH ARCHITECT/PROJECT MANAGER. SECURITY CAMERAS AND SPEAKERS TO BE PROVIDED BY FRANCHISEE, GC TO COORDINATE INSTALLATION. CAT5E WIRE CAN BE USED IN LIEU OF SPECIFIED CAT6 WIRE.
 - FOR BACK OFFICE COMPUTER PROVIDE DOUBLE DUPLEX RECEPTACLE WITH DATA CONNECTION. MOUNT RECEPTACLES AT 36" AFF.
 - CONNECTION FOR EXTERIOR SIGNAGE AS REQUIRED. CONTROL VIA TIMECLOCK/PHOTOCELL.
 - CONTROLS/LIGHTING CIRCUIT FOR KITCHEN HOOD. ALL COOKING EQUIPMENT WITHIN HOOD FOOTPRINT SHALL HAVE SHUNT TRIP BREAKERS CONTROLLED BY HOOD CONTROL PANEL. COORDINATE ALL FINAL CONNECTIONS WITH CAPTIVE AIR. PROVIDE DATA CONNECTION FOR CONTROLS. DUCT DETECTOR, SAMPLING TUBE, AND REMOTE TEST SWITCH PROVIDED BY EC AND INSTALLED BY MC. FIRE ALARM SUPERVISORY RELAY SHALL BE TIED TO FIRE ALARM CONTROL PANEL.
 - RECONNECT EXISTING WATER HEATER TO NEW CIRCUIT AS INDICATED.

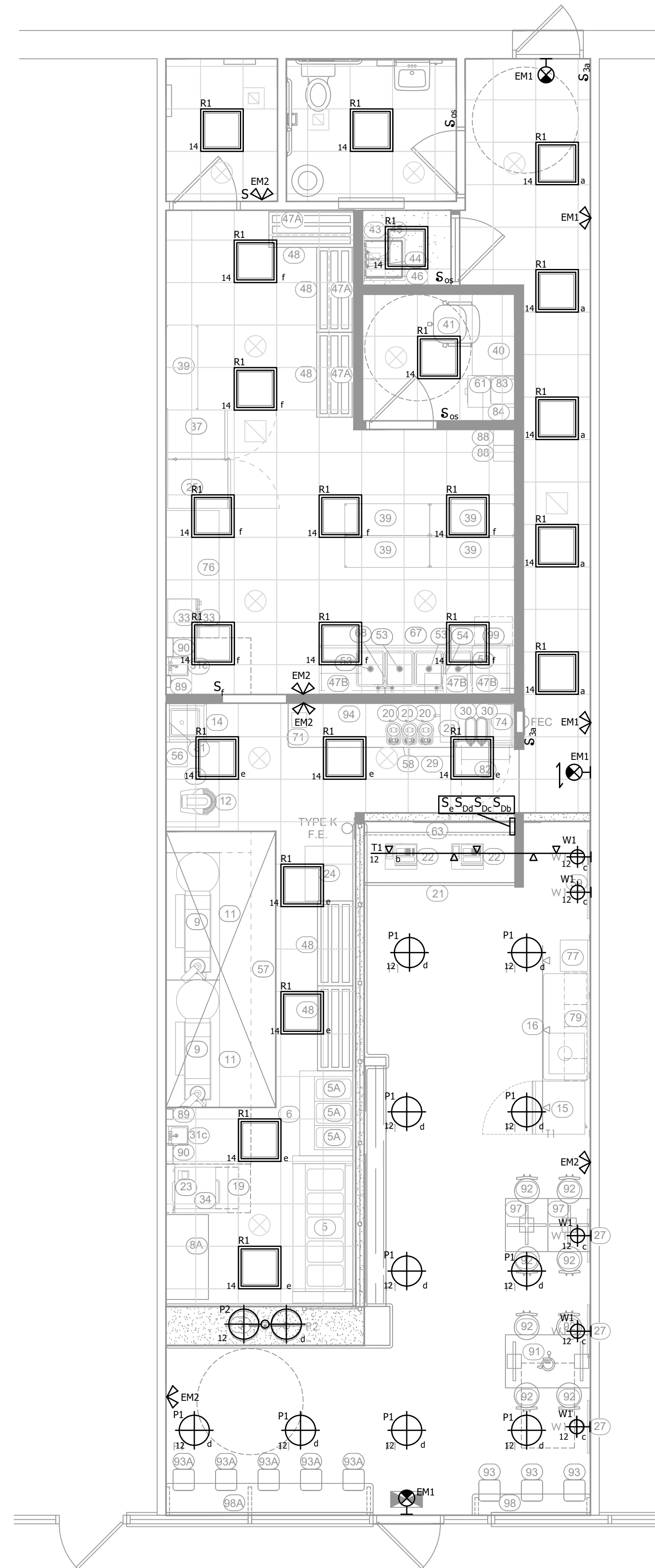
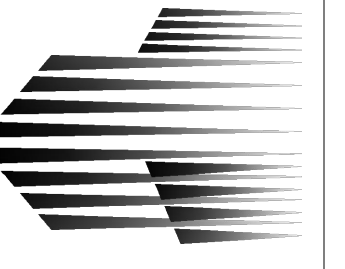
A
E2.1 ELECTRICAL FIRST FLOOR PLAN - POWER
 SCALE: 1/4" = 1'-0"

- NEW WORK GENERAL NOTES:**
- PROVIDE DIGITAL 24 HOUR ASTRONOMICAL TIME CLOCK, TORK DC100A-7 OR EQUAL FOR CONTROL OF EXTERIOR LIGHTING FIXTURES. COORDINATE LOCATION OF TIMECLOCK WITH OWNER.



B
E2.1 ELECTRICAL PARTIAL ROOF PLAN
 SCALE: 1/4" = 1'-0"

- NEW WORK KEYED NOTES:**
- POWER TO FACTORY INSTALLED QUICK CONNECT/AFD/DISCONNECT SWITCH.



A
E3.1 ELECTRICAL FIRST FLOOR PLAN - LIGHTING
 SCALE: 1/4" = 1'-0"

- NEW WORK GENERAL NOTES:**
1. ALL EMERGENCY LIGHTING AND EXIT SIGNS SHALL BE WIRED TO LOCAL ZONE UNSWITCHED 120V NORMAL CIRCUIT.
 2. ALL CIRCUITS INDICATED ARE TO PANEL 'P1'.

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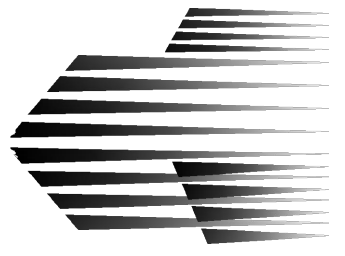
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PROPOSED FIT OUT FOR:
DUCK DONUTS
 566 ROUTE 17 NORTH
 PARAMUS, NJ 07652

LIGHTING
 FLOOR
 PLAN

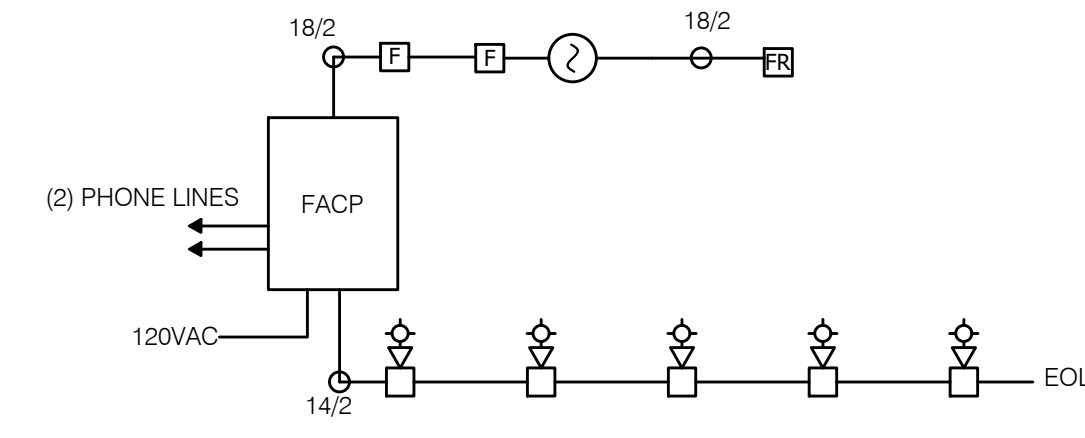
E3.1



LIGHTING FIXTURE SCHEDULE												
FIXTURE ID	FIXTURE SYMBOL	FIXTURE TYPE			LAMP					MOUNTING	FIXTURE VOLTAGE	REMARKS
		MANUFACTURER	MODEL #	DESCRIPTION	LAMP QUANTITY	LAMP TYPE	LAMP WATTAGE	CCT	CRI			
R1	□	LITELINE	EDGE 22 WH 120	2X2 LED RECESSED TROFFER	1	LED	40	3500	80	RECESSED	MVOLT	
P1	⊕	BOCK	P273-SN518-LED (48" STEM)	PENDANT FIXTURE	1	LED	10	3500	80	RECESSED	MVOLT	
P2	⊕⊕	BOCK	P273-SN518-DOUBLE LED (48" STEM)	PENDANT FIXTURE	1	LED	10	3500	80	RECESSED	MVOLT	
T1	— —	WAC	HTK 104 WT (HEAD) HT-10-WT TRACK AND ACCESSORIES	TRACK LIGHTING WITH 6 FOOT TRACK, END MOUNT, AND CONNECTORS	1	LED		3500	80	RECESSED	MVOLT	TRACK HEAD ALT MURV LED WALL WASH MURV-31-LED-WT-TS1-120-WW-3CLA-3K CLASS A
W1	⊕	BOCK	P273-SN508-LED WALL MOUNT	SCONCE FIXTURE	1	LED	10	3500	80	RECESSED	MVOLT	
X1	⊕	LITHONIA	LHQM S W R HO	HIGH OUTPUT THERMOPLASTIC LED EXIT SIGN, SINGLE FACE, LEAD-CALCIUM BATTERY BACK-UP, SELF DIAGNOSTICS	-	LED	1.0	-	-	CEILING	120	
EM1	∨	LITHONIA	EML2-L50	TWIN HEAD, ADJUSTABLE LAMP, THERMOPLASTIC, 12 VOLT, 1.5W LED LAMPS, NICKEL-CADMIUM BATTERY BACK-UP, SELF DIAGNOSTICS	-	LED	1.0	-	-	WALL	120	
EM2	∨	LITHONIA	EML2-LED-HO	TWIN HEAD, ADJUSTABLE LAMP, THERMOPLASTIC, 12 VOLT, 1.5W LED LAMPS, NICKEL-CADMIUM BATTERY BACK-UP, HIGH OUTPUT, SELF DIAGNOSTICS	2	LED	1.5	-	-	WALL	120	

LIGHTING FIXTURE SCHEDULES GENERAL NOTES

- L-1 FIXTURES, LAMPS, AND RELATED DEVICES FURNISHED UNDER THIS CONTRACT SHALL CARRY THE APPROVAL LABEL OF U.L. OR E.T.L. FOR THE SPECIFIC APPLICATION IN WHICH THEY ARE USED.
- L-2 CONTRACTOR SHALL CONFIRM THAT FIXTURE VOLTAGE AND FIXTURE CEILING TRIMS ARE COMPATIBLE WITH THEIR APPLICATION PRIOR TO ORDERING FIXTURES.
- L-3 CONTRACTOR SHALL SELECT, FURNISH, AND INSTALL THE CORRECT SIZE OF SECONDARY WIRING FROM REMOTE TRANSFORMERS AND/OR REMOTE BALLASTS AS REQUIRED TO KEEP VOLTAGE DROP IN THE SECONDARY WIRING BELOW 3% OF RATED VOLTAGE.
- L-4 CONTRACTOR SHALL PROVIDE LABOR AND EQUIPMENT FOR FOCUSING OF ADJUSTABLE FIXTURES AND PRESETTING OF LIGHTING CONTROL SYSTEMS. FOCUSING AND PRESETTING SHALL BE DONE IN THE PRESENCE OF THE DESIGN PROFESSIONAL. CONTRACTOR SHALL FOCUS LIGHTING AFTER DARK IF DIRECTED BY THE OWNER/DESIGN PROFESSIONAL. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF ONE SUCCESSFUL NIGHT-TIME AIMING SESSION WITH THE OWNER AND DESIGN PROFESSIONAL. CONTRACTOR SHALL PROVIDE AT LEAST ONE DAY OF A FACTORY-TRAINED AND CERTIFIED TECHNICIAN TO PROVIDE WARRANTY START-UP AND PROGRAMMING FOR ALL LIGHTING CONTROL SYSTEM AND PROGRAMMABLE LIGHTING FIXTURES.
- L-5 LIGHT FIXTURES SHALL BE PROVIDED BY DDFC PREFERRED LIGHTING VENDOR "FACILITY SOLUTIONS GROUP".



NOTE: CONFIRM ALL WIRE QUANTITIES AND SIZES WITH FIRE ALARM SYSTEM VENDOR.

FIRE ALARM SCHEMATIC REQUIREMENTS

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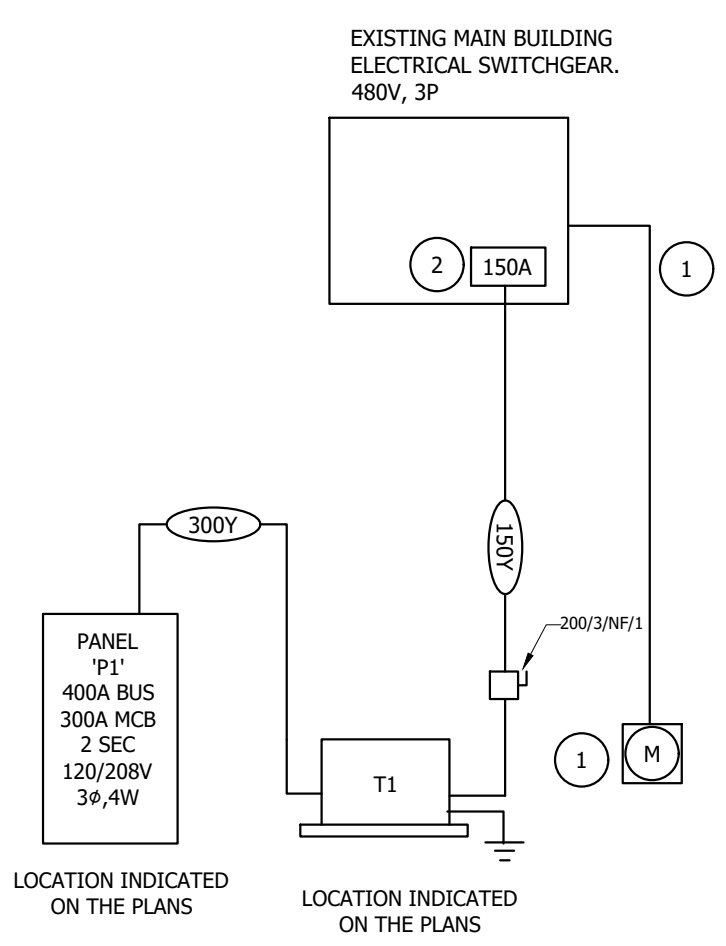
ELECTRICAL SCHEDULES & SINGLE LINE DIAGRAM

COPPER WIRING FEEDER SCHEDULE			
AMP RATING	FEEDER TAG	CONDUCTOR	RACEWAY SIZE
60	60Y	3 #6 AWG + 1 #6 AWG NEUTRAL + 1 #10 AWG GROUND	1"
70	70Y	3 #4 AWG + 1 #4 AWG NEUTRAL + 1 #8 AWG GROUND	1 1/4"
100	100Y	3 #1 AWG + 1 #1 AWG NEUTRAL + 1 #8 AWG GROUND	1 1/2"
125	125Y	3 #1/0 AWG + 1 #1/0 AWG NEUTRAL + 1 #6 AWG GROUND	2"
150	150Y	3 #1/0 AWG + 1 #1/0 AWG NEUTRAL + 1 #6 AWG GROUND	2"
175	175Y	3 #2/0 AWG + 1 #2/0 AWG NEUTRAL + 1 #6 AWG GROUND	2"
200	200Y	3 #3/0 AWG + 1 #3/0 AWG NEUTRAL + 1 #4 AWG GROUND	2"
225	225Y	3 #4/0 AWG + 1 #4/0 AWG NEUTRAL + 1 #4 AWG GROUND	2 1/2"
250	250Y	3 #250 KCMIL + 1 #250 KCMIL NEUTRAL + 1 #4 AWG GROUND	3"
300	300Y	3 #350 KCMIL + 1 #350 KCMIL NEUTRAL + 1 #4 AWG GROUND	3"
350	350Y	3 #500 KCMIL + 1 #500 KCMIL NEUTRAL + 1 #3 AWG GROUND	4"
400	400Y	3 #600 KCMIL + 1 #600 KCMIL NEUTRAL + 1 #1/0 AWG GROUND	4"
500	500Y	2 SETS OF (3 #250 KCMIL + 1 #250 KCMIL NEUTRAL + 1 #2 AWG GROUND)	(2) 3"
600	600Y	2 SETS OF (3 #350 KCMIL + 1 #350 KCMIL NEUTRAL + 1 #1 AWG GROUND)	(2) 3 1/2"
800	800Y	2 SETS OF (3 #600 KCMIL + 1 #600 KCMIL NEUTRAL + 1 #1/0 AWG GROUND)	(2) 4"
1000	1000Y	3 SETS OF (3 #500 KCMIL + 1 #500 KCMIL NEUTRAL + 1 #2/0 AWG GROUND)	(3) 3 1/2"
1200	1200Y	3 SETS OF (3 #600 KCMIL + 1 #600 KCMIL NEUTRAL + 1 #3/0 AWG GROUND)	(3) 4"

NOTES:
 1. ALL AMPACITIES ARE BASED ON 75°C TEMPERATURE RATING OF CONDUCTORS AS INDICATED IN THE NATIONAL ELECTRIC CODE.
 2. FEEDERS MAY HAVE A COMBINATION OF OVERSIZED NEUTRAL AND ISOLATED GROUND. REFER TO SINGLE LINE DIAGRAM FOR FEEDER TYPES.

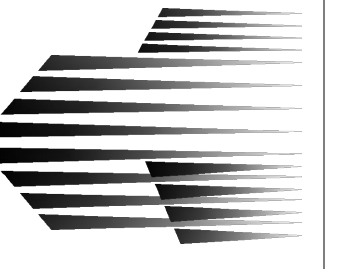
VOLTAGE DROP SCHEDULE	
120 VOLT	
WIRE SIZE	CONDUIT/FEEDER LENGTH
#12 AWG	0'-1" TO 65'-0"
#10 AWG	65'-1" TO 120'-0"
#8 AWG	120'-1" TO 180'-0"
#6 AWG	180'-1" AND ABOVE

TRANSFORMER SCHEDULE									
TRANSFORMER SYMBOL	TRANSFORMER KVA	B.O.D. MANUFACTURER & MODEL #	PRIMARY VOLTAGE	PRIMARY AMPERAGE	PRIMARY OCP	SECONDARY VOLTAGE	SECONDARY AMPERAGE	SECONDARY OCP	BONDING AND ELECTRODE CONDUCTOR
T1	112.5	SQUARE D	480 Δ	135	150	208Y120	312	300	#4 AWG IN 3/4" CONDUIT



1 ELECTRICAL SINGLE LINE DIAGRAM
 SCALE: N.T.S.

- NOTES BY SYMBOLS**
- 1 PROVIDE WIRING, CONDUIT, METER BASE AS REQUIRED BY UTILITY COMPANY. COORDINATE WITH BUILDING OWNER FOR ALL SHUTDOWN WORK.
 - 2 PROVIDE 150A, 3P, 480V BREAKER IN THE SPACE MADE AVAILABLE DURING DEMOLITION.



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PROPOSED FIT OUT FOR:
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 PARAMUS, NJ 07652

ELECTRICAL
 PANEL
 SCHEDULES

E6.2

PANEL: "P1"		BUS AMP: 400				AMPS MAIN BREAKER: 300 A MCB																
MOUNTING: SURFACE		PHASE: 3		WIRE: 4		VOLTAGE: 208Y120		AIC: 22,000														
CKT	CIRCUIT DESCRIPTION	BREAKER		WIRE		GND	KVA/PH			KVA/PH			COND			GND	WIRE		BREAKER		CIRCUIT DESCRIPTION	CKT
		P	AMP	NO	SIZE		SIZE	A	B	C	A	B	C	SIZE	SIZE		NO	AMP	P			
1	5 WELL STEAM TABLE	2	30	2	10	10	3/4	1.8		1			3/4	12	12	2	20	1			ICING MICROWAVE	2
3								1.8			1.1		3/4	12	12	2	20	1			FREEZER	4
5	CT WARMING UNIT	1	20	2	12	12	3/4		0.7			1.3	3/4	12	12	2	20	1			HI POWER BLENDER	6
7	CT WARMING UNIT	1	20	2	12	12	3/4	0.7		0.5			3/4	12	12	2	20	1			UNDERCOUNTER REFRIGERATOR	8
9	CT WARMING UNIT	1	20	2	12	12	3/4		0.7		0.4		3/4	12	12	2	20	1			KITCHEN CONV RECPT	10
11									3.0			0.5	3/4	12	12	2	20	1			CUSTOMER SEATING LIGHTING	12
13	DONUT MAKER (NOTE #1)	3	30	2	10	10	3/4	3.0		0.6			3/4	12	12	2	20	1			BOH LIGHTING	14
15								3.0			1.0		3/4	12	12	2	20	1			GLASS DOOR REFRIGERATOR	16
17									3.0		1.0		3/4	12	12	2	20	1			POS POWER	18
19	DONUT MAKER (NOTE #1)	3	30	4	10	10	3/4	3.0		1.0			3/4	12	12	2	20	1			POS POWER	20
21								3.0			0.4		3/4	12	12	2	20	1			MISC POWER	22
23	MIXER	1	15	2	12	12	3/4		0.8			0.3										24
25	UNDERCOUNTER REFRIG	1	20	2	12	12	3/4	0.3			0.3		3/4	12	12	4	15	3			KEF-1	26
27	POS PRINTER	1	20	2	12	12	3/4		1.1			0.3										28
29										2.4			1.7									30
31	SANDWICH OVEN	2	30	2	10	10	3/4	2.4			1.7		3/4	12	12	4	20	3			KMUA-1 CONDENSER	32
33	ICE CREAM FREEZER	1	20	2	12	12	3/4		0.8			1.7										34
35	REACH IN REFRIGERATOR	1	20	2	12	12	3/4		0.5			0.5										36
37	BUNN COFFEE MAKER SINGLE	1	20	2	12	12	3/4	1.8			0.5		3/4	12	12	4	15	3			KMUA-1 FAN	38
39	ICE MAKER UNDERCOUNTER	1	20	2	12	12	3/4		0.5			0.5										40
41	ICING MICROWAVE	1	20	2	12	12	3/4			1		1.4	3/4	12	12	2	15	1			KITCHEN CONTROL PANEL	42
1) PROVIDE SHUNT TRIP BREAKER AND WIRE TO HOOD CONTROL PANEL AS REQUIRED. ALL EQUIPMENT UNDER HOOD SHALL HAVE SHUNT TRIP. REVIEW TO MECHANICAL DRAWINGS FOR CONTROL PANEL WIRING TO EQUIPMENT.							TOTALS		13.0	10.9	11.4	5.6	5.4	6.7								
									PANEL TOTALS			18.6	16.3	18.1								

PANEL: "P1" SECTION 2		BUS AMP: 400				AMPS MAIN BREAKER: 400 A MLO																
MOUNTING: SURFACE		PHASE: 3		WIRE: 4		VOLTAGE: 208Y120		AIC: 22,000														
CKT	CIRCUIT DESCRIPTION	BREAKER		WIRE		GND	KVA/PH			KVA/PH			COND			GND	WIRE		BREAKER		CIRCUIT DESCRIPTION	CKT
		P	AMP	NO	SIZE		SIZE	A	B	C	A	B	C	SIZE	SIZE		NO	AMP	P			
43								5			0.2		3/4	12	12	2	20	1			WH-1	44
45	RT-1	3	50	4	8	8	3/4		5		0.1		3/4	12	12	2	20	1			RECIR PUMP	46
47									5												SPARE	48
49								3.5													SPARE	50
51	DISHWASHER	3	35	4	8	10	3/4		3.5		1.0		3/4	12	12	2	20	1			WH-1	52
53									3.5		0.4		3/4	12	12	2	20	1			ROOF TOP RECEIPT	54
55	BACK OFFICE/CORR RECPT	1	20	2	12	12	3/4	0.8			1.7		3/4	12	12	2	20	2			ESPRESSO MACHINE	56
57	IT RACK	1	20	2	12	12	3/4		1.9		0.5		3/4	12	12	2	20	1			DIGITAL MENU BOARD POWER	58
59	FACP	1	20	2	12	12	3/4				1.0		3/4	12	12	2	20	1			EXTERIOR SIGNAGE	60
61	SPARE	1	20								0.3		3/4	12	12	2	20	1			ELEC RM EF-2, RECPT	62
63	SPARE	1	20								1.5		3/4	12	12	2	20	1			EXISTING WATER HEATER	64
65	SPARE	1	20																		SPARE	66
67	SPARE	1	20																		SPARE	68
69	SPACE ONLY																				SPARE	70
71	SPACE ONLY																				SPARE	72
73	SPACE ONLY																				SPARE	74
75	SPACE ONLY																				SPACE ONLY	76
77	SPACE ONLY																				SPACE ONLY	78
79	SPACE ONLY																				SPACE ONLY	80
81	SPACE ONLY																				SPACE ONLY	82
83	SPACE ONLY																				SPACE ONLY	84
TOTALS							9.3	10.4	9.5	2.2	3.1	0.8										
									PANEL TOTALS			11.5	13.5	10.3								

DRAWING SPECIFICATIONS - ELECTRICAL (DIVISION 16)

SECTION 16001 - SCOPE OF WORK

- 1. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND SERVICES FOR THE PROPER INSTALLATION AND OPERATION OF THE ELECTRICAL WORK AS INDICATED ON THE DRAWINGS.
2. REMOVE OR RELOCATE EXISTING ELECTRICAL EQUIPMENT AS REQUIRED BY THE PROJECT.
3. TEST AND OPERATE ALL SYSTEMS TO DEMONSTRATE TO THE OWNER THAT THE INSTALLATION OF THESE SYSTEMS CONFORM TO DESIGN INTENT.

SECTION 16050- BASIC ELECTRICAL REQUIREMENTS

- 1. COMPLY WITH ALL RULES AND REGULATIONS OF THE OWNER, ALL LOCAL, STATE AND FEDERAL LAWS, THE RULES OF THE NATIONAL FIRE PROTECTION ASSOCIATION (INCLUDING THE NEC), THE OWNER'S UNDERWRITER, AND ALL PUBLIC UTILITIES HAVING CONNECTION WITH ANY OF THE AFFECTED SYSTEMS. ALL EQUIPMENT SHALL BE UL LABELED.
2. OBTAIN, PAY FOR AND DELIVER ALL PERMITS, CERTIFICATES OF INSPECTION, AND PAY ALL COSTS, REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. DELIVER ALL PERMITS, CERTIFICATES AND APPROVALS TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE OF THE WORK.
3. APPLY FOR SERVICE FROM THE ELECTRIC UTILITY COMPANY AND SCHEDULE THEIR WORK IN COORDINATION WITH THE PROJECT.

- 4. FURNISH INDEPENDENT INSPECTION AGENCY CERTIFICATES FOR ALL ELECTRICAL WORK. ALL CERTIFICATES SHALL BE IN DUPLICATE AND SHALL BE DELIVERED TO THE ENGINEER AND SHALL BECOME THE PROPERTY OF THE OWNER.
5. VERIFY ALL EXISTING CONDITIONS IN THE FIELD BEFORE SUBMITTING A BID. NO ALLOWANCE WILL BE MADE FOR EXTRA COSTS ARISING FROM FAILURE TO DO SO.

- 6. IT IS THE INTENTION OF THE DRAWINGS AND SPECIFICATIONS TO CALL FOR CLEAR FINISHED WORK, TESTED AND READY FOR OPERATION. PROVIDE ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE IN ALL RESPECTS AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED OR SHOWN, WITHOUT ADDITIONAL EXPENSE. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT MANIFESTLY NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE VARIOUS SYSTEMS, SHALL BE INCLUDED IN THE WORK.

- 7. SUBMIT 7 COPIES OF SHOP DRAWINGS. SHOP DRAWINGS SHALL INCLUDE PLANS, ELEVATIONS, SECTIONS, MOUNTING DETAILS OF COMPONENT PARTS, POINT TO POINT INTERCONNECTION DIAGRAMS, ELEMENTARY DIAGRAMS, SINGLE LINE DIAGRAMS AND ANY OTHER DRAWINGS NECESSARY TO SHOW THE FABRICATION AND CONNECTION OF THE COMPLETE ITEM OR SYSTEM.
8. KEEP RECORD DRAWINGS IN THE JOB SITE OFFICE. MAINTAIN RECORD DRAWINGS DAILY AND MAKE THEM AVAILABLE FOR INSPECTION BY THE OWNER OR ENGINEER UPON DEMAND. AT THE COMPLETION OF THE PROJECT, BIND THE PRINTS INTO A SET AND FORWARD THEM TO THE ENGINEER. THE RECORD DRAWINGS SHALL CONSIST OF A SEPARATE SET OF WHITE PRINTS OF THE CONTRACT DRAWINGS ON WHICH SHALL BE RECORDED IN INK OR COLORED PENCIL THE FOLLOWING:

- a. DIMENSIONED LOCATIONS OF CONDUITS BURIED BELOW, OR CAST INTO, CONCRETE FLOOR SLABS.
b. LIGHTING FIXTURE ARRANGEMENTS, IF DIFFERENT FROM CONTRACT DRAWINGS.
c. LOCATIONS OF ELECTRIC PANELS, MOTOR STARTERS, AND OTHER WALL MOUNTED EQUIPMENT, IF DIFFERENT FROM CONTRACT DRAWINGS.
d. ALL WORK ADDED TO THE CONTRACT BY FIELD SKETCHES, APPENDUM OR CHANGE ORDER.

- 9. BEFORE COMPLETION OF THE INSTALLATION, FURNISH THREE COPIES OF MANUALS COVERING IN DETAIL ALL REQUIRED INSTRUCTIONS FOR THE OPERATION OF THE SYSTEMS PROVIDED.
10. FURNISH ALL LABOR REQUIRED BY THE ENGINEER, OR INSPECTION AGENCIES TO EXAMINE THE WORK DURING THE COURSE OF CONSTRUCTION.

- 11. FURNISH A WRITTEN WARRANTY FOR THE INSTALLATION, STATING THAT ALL MATERIALS AND EQUIPMENT AND THE SYSTEMS WHICH THEY COMPRISE ARE FREE FROM DEFECTS OR FLAWS IN WORKMANSHIP OR OPERATION, AND ARE FUNCTIONING PROPERLY AND CAPABLE OF PROVIDING SATISFACTORY OPERATION IN ACCORDANCE WITH DESIGN INTENT. REPAIR OR REPLACE ANY DEFECTIVE WORKMANSHIP, DEFECTIVE MATERIALS OR EQUIPMENT, OR CORRECT UNSATISFACTORY PERFORMANCE, WITHOUT EXPENSE TO THE OWNER. MAKE REPAIRS OR CORRECTIONS PROMPTLY AND AT THE CONVENIENCE OF THE OWNER. THE WARRANTY SHALL BE IN EFFECT FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF THE SYSTEMS AS A WHOLE.

- 12. MATERIAL OR EQUIPMENT SPECIFIED BY MANUFACTURER, BRAND NAME, TYPE OR CATALOG NUMBER, ARE DESIGNED TO ESTABLISH STANDARDS OF DESIRED QUALITY, PERFORMANCE, DIMENSIONS AND OTHER CHARACTERISTICS. SUBSTITUTIONS WILL NOT BE PERMITTED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER, WHERE ANY SUBSTITUTION REQUIRES REDESIGN OR RELOCATION OF THE STRUCTURES, PIPING, RACEWAYS, WIRING OR ANY OTHER PART OF THE ELECTRICAL, MECHANICAL, OR ARCHITECTURAL WORK. ALL REDESIGN SHALL BE PREPARED BY THE CONTRACTOR AT HIS OWN EXPENSE AND SUBMITTED FOR THE APPROVAL OF THE ENGINEER. ALL ADDITIONAL WORK MADE NECESSARY BY THE SUBSTITUTION SHALL BE PROVIDED WITHOUT EXTRA COST.

- 13. UPON REQUEST, PROVIDE COPIES OF MATERIAL SAFETY DATA SHEETS (MSDS) FOR ANY MATERIALS USED IN THE WORK AND NOT SUPPLIED BY THE OWNER. MSDS SHEETS SHALL BE PROVIDED BEFORE DELIVERY OF MATERIALS TO THE JOB SITE.

- 14. ALL WORK SHALL BE PERFORMED BY WORKMEN SKILLED IN THE TRADE. ALL WORKMANSHIP SHALL PRESENT A NEAT AND FINISHED APPEARANCE. COMPLY WITH NECA RULES WHEREVER POSSIBLE.

- 15. PROTECT THE BUILDING, ITS CONTENTS AND ALL NEW WORK AGAINST DAMAGE FROM ANY SOURCE UNTIL FINAL COMPLETION AND ACCEPTANCE BY THE OWNER. REPAIR OR REPLACE ANY DAMAGED WORK AT NO COST TO THE OWNER.

- 16. AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL AND RUBBISH.
17. PROVIDE ALL RIGGING, SCAFFOLDING, LADDERS, AND OTHER EQUIPMENT REQUIRED FOR THE INSTALLATION OF THE WORK.

- 18. ESTABLISH CLEARANCES REQUIRED TO DELIVER AND INSTALL ALL EQUIPMENT. IF STRUCTURES OR EQUIPMENT MUST BE ALTERED TO PROVIDE PASSAGE, RESTORE STRUCTURES, EQUIPMENT AND SYSTEMS TO THEIR ORIGINAL CONDITION.
19. MAKE A COMPLETE INSPECTION OF ALL THE ELECTRICAL WORK AFTER COMPLETION OF THE PROJECT. PERFORM TESTS IN COMPLIANCE WITH EACH EQUIPMENT MANUFACTURER'S TEST PROCEDURES AND THE ACCEPTANCE TEST STANDARDS OF THE INTERNATIONAL ELECTRICAL TESTING ASSOCIATION (NETA). PROVIDE ALL INSTRUMENTS, METERS, WIRING, PERSONNEL, ETC., REQUIRED FOR TESTING.

- 20. AFTER ALL ADJUSTMENTS AND TESTS HAVE BEEN COMPLETED, CLEAN ALL PARTS OF THE INSTALLATION, INCLUDING INTERIORS OF BOXES, CABINETS AND EQUIPMENT ENCLOSURES. CLEAN LIGHTING FIXTURE LENSES AND REFLECTORS WITH ANTI-STATIC DETERGENT TO ENSURE RATED OUTPUT.

SECTION 16110 - CONDUIT SYSTEMS

- 1. INSTALL ALL WIRE AND CABLES IN ELECTRICAL METALLIC TUBING UNLESS OTHERWISE SPECIFIED OR INDICATED BY THE DRAWINGS. ELECTRICAL METALLIC TUBING (EMT) SHALL BE GALVANIZED STEEL IN ACCORDANCE WITH FS WWC 540, ANSI C80.3 AND UL 791 FITTINGS 1-1/4-INCH AND SMALLER SHALL BE COMPRESSION TYPE AND 1-1/2-INCH AND LARGER SHALL BE SET SCREW TYPE. ALL FITTINGS SHALL BE OF WROUGHT STEEL CONSTRUCTION.

- 2. RIGID ALUMINUM CONDUIT WITH THREADED FITTINGS SHALL BE USED FOR ALL CONDUIT INSTALLATIONS EXPOSED TO THE WEATHER. RIGID ALUMINUM CONDUIT SHALL BE 6063 ALLOY, T41 TEMPER, CONFORMING TO FS WWC 540, ANSI C80.5 AND UL 6. FITTINGS SHALL BE THREADED TYPE OF ALUMINUM CONSTRUCTION.

- 3. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED FOR CONNECTION TO MOTORS AND OTHER EQUIPMENT WHICH PRODUCE OR TRANSMIT VIBRATION OR NOISE, UNLESS THE MOTORS OR EQUIPMENT ARE MOUNTED ABOVE SUSPENDED CEILING. PROVIDE SUITABLE BONDING JUMPER FOR ALL CONNECTIONS. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE CONSTRUCTED OF SINGLE STRIP, FLEXIBLE, CONTINUOUS, INTERLOCKED AND DOUBLE WRAPPED STEEL, GALVANIZED INSIDE AND OUTSIDE AND COATED WITH LIQUID-TIGHT JACKET OF FLEXIBLE POLYVINYL CHLORIDE (PVC). FITTINGS SHALL BE LIQUID-TIGHT COMPRESSION TYPE.

- 4. FLEXIBLE METALLIC CONDUIT (MIN. 1/2-INCH TRADE SIZE) SHALL BE USED FOR CONNECTION FROM A JUNCTION BOX TO LIGHTING FIXTURES, MOTORS AND SIMILAR EQUIPMENT MOUNTED IN A SUSPENDED CEILING, AS WELL AS FOR CONNECTION TO TRANSFORMERS. FLEXIBLE METAL CONDUIT SHALL BE FORMED FROM CONTINUOUS LENGTH OF SPIRALLY WOUND, INTERLOCKED ZINC-COATED STRIP STEEL CONFORMING TO FS WWC 566 AND UL 1. FITTINGS SHALL BE OF THE THREADED, HINGED CLAMP TYPE.

- 5. RIGID STEEL CONDUIT SHALL BE USED WHERE CONDUIT IS ENCASED IN THE BUILDING'S POURED CONCRETE CONSTRUCTION. RIGID STEEL CONDUIT SHALL BE HOT DIP GALVANIZED CONFORMING TO FS WWC 581, ANSI C80.1 AND UL 6.
6. FITTINGS SHALL BE THREADED TYPE OF GALVANIZED MALLEABLE IRON CONSTRUCTION.

- 7. HEAVY WALL PVC CONDUIT SHALL BE USED FOR ALL GROUNDING CONDUCTORS AND OTHER SPECIFIC USES AS INDICATED BY THE DRAWINGS. HEAVY WALL PVC CONDUIT SHALL BE SCHEDULE 40, 90 DEGREES C, UL RATED, CONSTRUCTED OF POLYVINYL CHLORIDE AND CONFORMING TO NEMA TC-2 FOR DIRECT BURIAL OR NORMAL ABOVE GROUND USE. FITTING SHALL BE OF THE SOLVENT WELD TYPE. CONDUITS SHALL BE SUPPORTED WITH NON-METALLIC DEVICES.

- 8. MINIMUM SIZE CONDUIT UNLESS OTHERWISE INDICATED SHALL BE 3/4-INCH TRADE SIZE. ALL CONDUITS WHICH ARE TO REMAIN EMPTY SHALL BE PROVIDED WITH A NYLON PULL LINE. CONDUITS SHALL BE INDEPENDENTLY SUPPORTED FROM THE BUILDING STRUCTURE AND SHALL NOT BE ATTACHED TO THE SUPPORT SYSTEMS PROVIDED BY OTHER TRADES UNLESS SPECIFICALLY INDICATED.

- 9. PROVIDE SLEEVES FOR ALL CONDUITS PASSING THROUGH FLOOR SLABS AND WALLS. THE ANNULAR SPACE BETWEEN THE WALL AND THE SLEEVE SHALL BE SET TO A MINIMUM AND FILLED WITH FIRE STOP MATERIALS. SLEEVES SHALL BE NOMINALLY 1-INCH TRADE SIZE LARGER AND CONSTRUCTED OF THE SAME MATERIAL AS THE CONDUIT BEING INSTALLED.

- 10. PROVIDE SLEEVES FOR ALL CONDUITS PASSING THROUGH FLOOR SLABS AND WALLS. THE ANNULAR SPACE BETWEEN THE WALL AND THE SLEEVE SHALL BE SET TO A MINIMUM AND FILLED WITH FIRE STOP MATERIALS. SLEEVES SHALL BE NOMINALLY 1-INCH TRADE SIZE LARGER AND CONSTRUCTED OF THE SAME MATERIAL AS THE CONDUIT BEING INSTALLED.

- 11. SMALL OFFICE OCCUPANCY SENSORS SHALL BE WATTSOPER MODEL DW-100 DUAL TECHNOLOGY WALL SWITCH TYPE FOR MOUNTING IN A SINGLE-GANG WALL BOX. SET SENSORS FOR MANUAL ON, AUTO OFF OPERATION.

SECTION 16120 - WIRE AND CABLES (600 VOLT AND BELOW)

- 1. WIRE AND CABLES FOR FEEDER AND BRANCH CIRCUITS SHALL BE SINGLE ANNEALED STRANDED COPPER CONDUCTORS WITH CONDUCTIVITY OF NOT LESS THAN 98 PERCENT AT 20 DEGREES C. WIRE AND CABLE SHALL BEAR THE UL LABEL AND SHALL MEET OR EXCEED THE REQUIREMENTS OF ICEA-NECA STANDARDS 5-19-81 AND ASTM D-1352.

- 2. WIRE SIZES SHALL GENERALLY BE AS FOLLOWS:
a. CONTROL AND INTERLOCK WIRING NO. 14 AWG.
b. BRANCH CIRCUIT AND FEEDER WIRING NO. 12 AWG AND LARGER.

- 3. WIRE AND CABLE INSULATION SHALL BE AS FOLLOWS:
a. CONDUCTORS NO. 14 AWG SHALL BE 600 VOLT TYPE THHN FOR DRY AND WET LOCATIONS WITH A MAXIMUM OPERATING TEMPERATURE OF 75 DEGREES C.
b. CONDUCTORS SIZE 250 KCMIL AND LARGER SHALL BE 600 VOLT TYPE THHN/THWN OR XHHW FOR DRY AND WET LOCATIONS WITH A MAXIMUM OPERATING TEMPERATURE OF 90 AND 75 DEGREES C, RESPECTIVELY.

- 4. FOR CONVENIENCE IN TESTING AND MAINTENANCE ALL SECONDARY CONDUCTORS SHALL BE COLOR-CODED IN ACCORDANCE WITH THE ESTABLISHED BUILDING STANDARD. CONTROL CIRCUIT WIRING SHALL HAVE SEPARATED IDENTIFYING COLORS OR NUMBERS.

- 5. METAL-CLAD CABLE (TYPE MC) SHALL BE PERMISSIBLE FOR INSTALLATION OF INDOOR BRANCH CIRCUITS NOT MORE THAN 30 AMPERES ABOVE ACCESSIBLE CEILING AND IN HOLLOW DRYWALL PARTITIONS, WITHOUT BEING INSTALLED IN RACEWAYS, IF PERMISSIBLE BY CODE. TYPE MC CABLES SHALL NOT BE INSTALLED EXPOSED, INCLUDING IN ELECTRICAL CLOSETS. TYPE MC CABLE SHALL BE SUPPORTED AND SECURED NOT EXCEEDING EVERY 6- FEET, AND SHALL BE SECURED WITHIN 12-INCHES OF EVERY BOX, CABINET, OR FITTING FOR CABLES. TYPE MC CABLE SHALL NOT BE USED IN HEALTH CARE FACILITIES. METAL-CLAD CABLE (TYPE MC) SHALL BE COPPER, MULTI CONDUCTOR TYPE, WITH NO MORE THAN EIGHT CONDUCTORS. THE INTERLOCKING SHEATH SHALL BE OF EITHER GALVANIZED STEEL OR ALUMINUM. CONDUCTORS SHALL BE SOFT-ANNEALED COPPER, MEETING ASTM B3, AND STRANDED AS PER ASTM B8. TYPE MC CABLE SHALL BE UL LABELED. THE GROUNDING CONDUCTOR SHALL BE INSULATED AND SHALL BE ROUTED WITH THE CIRCUIT CONDUCTORS.

- 6. TYPE NM NON-METALLIC SHEATHED CABLE IF PERMITTED BY AHJ SHALL BE PERMISSIBLE FOR INSTALLATION OF INDOOR BRANCH CIRCUITS WHERE CONCEALED. TYPE NM CABLES SHALL NOT BE INSTALLED EXPOSED, INCLUDING IN ELECTRICAL CLOSETS. TYPE NM CABLE SHALL BE SUPPORTED AND SECURED NOT EXCEEDING EVERY 4-12 FEET, AND SHALL BE SECURED WITHIN 12-INCHES OF EVERY BOX, CABINET, OR FITTING FOR CABLES. TYPE NM CABLES SHALL BE COPPER, MULTI-CONDUCTOR TYPE WITH GROUND, WITH NO MORE THAN FOUR CONDUCTORS. CONDUCTORS SHALL BE SOFT-ANNEALED COPPER, MEETING NEMA WC 70. TYPE NM CABLE SHALL BE UL LABELED. THE GROUNDING CONDUCTOR SHALL BE ROUTED WITH THE CIRCUIT CONDUCTORS, WHERE INSULATED, THE INSULATION SHALL BE GREEN IN COLOR.

- 7. PROVIDE UL LABELED CONNECTORS OF AMPACITY RATINGS AND TYPES FOR APPLICATIONS INDICATED.
a. CONNECTIONS FOR WIRE SIZES NO. 14 AWG THROUGH NO. 10 AWG SHALL BE MADE WITH 3-M "SCOTCHLOK" SPRING CONNECTORS.
b. CONDUCTORS NO. 8 AWG AND LARGER SHALL BE SPLICED AND TAPPED WITH COLOR-KEYED WROUGHT COPPER COMPRESSION CONNECTORS AS MANUFACTURED BY THOMAS & BETTS. THE MANUFACTURER'S RECOMMENDED TOOLING SHALL BE USED FOR INSTALLATION. LONG BARREL, SLEEVES, TWO HOLE LUGS, AND "C" TYPE CONNECTORS SHALL BE USED. SPLICE AND TAP CONNECTORS SHALL BE COMPATIBLE WITH CONDUCTOR MATERIAL.

- 8. UNLESS SPECIFICALLY INDICATED OTHERWISE, EACH SINGLE PHASE BRANCH CIRCUIT SHALL CONSIST OF RESPECTIVE PHASE CONDUCTOR AND A DEDICATED NEUTRAL CONDUCTOR.

- 9. PROVIDE A SEPARATE INSULATED GROUND WIRE IN EACH FEEDER, BRANCH CIRCUIT AND OTHER CONDUITS CONTAINING CURRENT CARRYING CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN-COLORED OR IDENTIFIED WITH GREEN TAPE AT ALL ACCESS POINTS.

- 10. PROVIDE UL LABELED CONNECTORS OF AMPACITY RATINGS AND TYPES FOR APPLICATIONS INDICATED.
a. CONNECTIONS FOR WIRE SIZES NO. 14 AWG THROUGH NO. 10 AWG SHALL BE MADE WITH 3-M "SCOTCHLOK" SPRING CONNECTORS.
b. CONDUCTORS NO. 8 AWG AND LARGER SHALL BE SPLICED AND TAPPED WITH COLOR-KEYED WROUGHT COPPER COMPRESSION CONNECTORS AS MANUFACTURED BY THOMAS & BETTS. THE MANUFACTURER'S RECOMMENDED TOOLING SHALL BE USED FOR INSTALLATION. LONG BARREL, SLEEVES, TWO HOLE LUGS, AND "C" TYPE CONNECTORS SHALL BE USED. SPLICE AND TAP CONNECTORS SHALL BE COMPATIBLE WITH CONDUCTOR MATERIAL.

- 11. UNLESS SPECIFICALLY INDICATED OTHERWISE, EACH SINGLE PHASE BRANCH CIRCUIT SHALL CONSIST OF RESPECTIVE PHASE CONDUCTOR AND A DEDICATED NEUTRAL CONDUCTOR.

- 12. PROVIDE A SEPARATE INSULATED GROUND WIRE IN EACH FEEDER, BRANCH CIRCUIT AND OTHER CONDUITS CONTAINING CURRENT CARRYING CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN-COLORED OR IDENTIFIED WITH GREEN TAPE AT ALL ACCESS POINTS.

- 13. PROVIDE UL LABELED CONNECTORS OF AMPACITY RATINGS AND TYPES FOR APPLICATIONS INDICATED.
a. CONNECTIONS FOR WIRE SIZES NO. 14 AWG THROUGH NO. 10 AWG SHALL BE MADE WITH 3-M "SCOTCHLOK" SPRING CONNECTORS.
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- 14. UNLESS SPECIFICALLY INDICATED OTHERWISE, EACH SINGLE PHASE BRANCH CIRCUIT SHALL CONSIST OF RESPECTIVE PHASE CONDUCTOR AND A DEDICATED NEUTRAL CONDUCTOR.

- 15. PROVIDE A SEPARATE INSULATED GROUND WIRE IN EACH FEEDER, BRANCH CIRCUIT AND OTHER CONDUITS CONTAINING CURRENT CARRYING CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN-COLORED OR IDENTIFIED WITH GREEN TAPE AT ALL ACCESS POINTS.

- 16. PROVIDE UL LABELED CONNECTORS OF AMPACITY RATINGS AND TYPES FOR APPLICATIONS INDICATED.
a. CONNECTIONS FOR WIRE SIZES NO. 14 AWG THROUGH NO. 10 AWG SHALL BE MADE WITH 3-M "SCOTCHLOK" SPRING CONNECTORS.
b. CONDUCTORS NO. 8 AWG AND LARGER SHALL BE SPLICED AND TAPPED WITH COLOR-KEYED WROUGHT COPPER COMPRESSION CONNECTORS AS MANUFACTURED BY THOMAS & BETTS. THE MANUFACTURER'S RECOMMENDED TOOLING SHALL BE USED FOR INSTALLATION. LONG BARREL, SLEEVES, TWO HOLE LUGS, AND "C" TYPE CONNECTORS SHALL BE USED. SPLICE AND TAP CONNECTORS SHALL BE COMPATIBLE WITH CONDUCTOR MATERIAL.

- 17. UNLESS SPECIFICALLY INDICATED OTHERWISE, EACH SINGLE PHASE BRANCH CIRCUIT SHALL CONSIST OF RESPECTIVE PHASE CONDUCTOR AND A DEDICATED NEUTRAL CONDUCTOR.

- 18. PROVIDE A SEPARATE INSULATED GROUND WIRE IN EACH FEEDER, BRANCH CIRCUIT AND OTHER CONDUITS CONTAINING CURRENT CARRYING CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN-COLORED OR IDENTIFIED WITH GREEN TAPE AT ALL ACCESS POINTS.

- 19. PROVIDE UL LABELED CONNECTORS OF AMPACITY RATINGS AND TYPES FOR APPLICATIONS INDICATED.
a. CONNECTIONS FOR WIRE SIZES NO. 14 AWG THROUGH NO. 10 AWG SHALL BE MADE WITH 3-M "SCOTCHLOK" SPRING CONNECTORS.
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- 21. PROVIDE A SEPARATE INSULATED GROUND WIRE IN EACH FEEDER, BRANCH CIRCUIT AND OTHER CONDUITS CONTAINING CURRENT CARRYING CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN-COLORED OR IDENTIFIED WITH GREEN TAPE AT ALL ACCESS POINTS.

- 22. PROVIDE UL LABELED CONNECTORS OF AMPACITY RATINGS AND TYPES FOR APPLICATIONS INDICATED.
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- 23. UNLESS SPECIFICALLY INDICATED OTHERWISE, EACH SINGLE PHASE BRANCH CIRCUIT SHALL CONSIST OF RESPECTIVE PHASE CONDUCTOR AND A DEDICATED NEUTRAL CONDUCTOR.

- 24. PROVIDE A SEPARATE INSULATED GROUND WIRE IN EACH FEEDER, BRANCH CIRCUIT AND OTHER CONDUITS CONTAINING CURRENT CARRYING CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN-COLORED OR IDENTIFIED WITH GREEN TAPE AT ALL ACCESS POINTS.

- 25. PROVIDE UL LABELED CONNECTORS OF AMPACITY RATINGS AND TYPES FOR APPLICATIONS INDICATED.
a. CONNECTIONS FOR WIRE SIZES NO. 14 AWG THROUGH NO. 10 AWG SHALL BE MADE WITH 3-M "SCOTCHLOK" SPRING CONNECTORS.
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- 26. UNLESS SPECIFICALLY INDICATED OTHERWISE, EACH SINGLE PHASE BRANCH CIRCUIT SHALL CONSIST OF RESPECTIVE PHASE CONDUCTOR AND A DEDICATED NEUTRAL CONDUCTOR.

- 27. PROVIDE A SEPARATE INSULATED GROUND WIRE IN EACH FEEDER, BRANCH CIRCUIT AND OTHER CONDUITS CONTAINING CURRENT CARRYING CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN-COLORED OR IDENTIFIED WITH GREEN TAPE AT ALL ACCESS POINTS.

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- 31. PROVIDE UL LABELED CONNECTORS OF AMPACITY RATINGS AND TYPES FOR APPLICATIONS INDICATED.
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- 32. UNLESS SPECIFICALLY INDICATED OTHERWISE, EACH SINGLE PHASE BRANCH CIRCUIT SHALL CONSIST OF RESPECTIVE PHASE CONDUCTOR AND A DEDICATED NEUTRAL CONDUCTOR.

- 33. PROVIDE A SEPARATE INSULATED GROUND WIRE IN EACH FEEDER, BRANCH CIRCUIT AND OTHER CONDUITS CONTAINING CURRENT CARRYING CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN-COLORED OR IDENTIFIED WITH GREEN TAPE AT ALL ACCESS POINTS.

- 7. FOUR-WAY TOGGLE SWITCHES SHALL BE SPECIFICATION GRADE, QUIET TYPE RATED 15 AMPERES, 120 VOLTS, 60 HERTZ, HUBBELL RS415, OR APPROVED EQUAL.

- 8. WALLPLATES SHALL BE FOR SINGLE WIRING DEVICES OF TYPES, SIZES AND WITH GANGING AND CUTOUTS AS REQUIRED. WALLPLATES SHALL BE STANDARD SIZE, NYLON.

- 9. PROVIDE AN INSULATED EQUIPMENT GROUNDING CONDUCTOR CONNECTION FOR ALL WIRING DEVICES, UNLESS OTHERWISE INDICATED.

- 10. PRIOR TO ENERGIZING CIRCUITRY, TEST WIRING FOR ELECTRICAL CONTINUITY AND FOR SHORT-CIRCUITS. ENSURE PROPER POLARITY OF CONNECTIONS IS MAINTAINED.

- 11. SMALL OFFICE OCCUPANCY SENSORS SHALL BE WATTSOPER MODEL DW-100 DUAL TECHNOLOGY WALL SWITCH TYPE FOR MOUNTING IN A SINGLE-GANG WALL BOX. SET SENSORS FOR MANUAL ON, AUTO OFF OPERATION.

- 12. PROVIDE UL LABELED CONNECTORS OF AMPACITY RATINGS AND TYPES FOR APPLICATIONS INDICATED.
a. CONNECTIONS FOR WIRE SIZES NO. 14 AWG THROUGH NO. 10 AWG SHALL BE MADE WITH 3-M "SCOTCHLOK" SPRING CONNECTORS.
b. CONDUCTORS NO. 8 AWG AND LARGER SHALL BE SPLICED AND TAPPED WITH COLOR-KEYED WROUGHT COPPER COMPRESSION CONNECTORS AS MANUFACTURED BY THOMAS & BETTS. THE MANUFACTURER'S RECOMMENDED TOOLING SHALL BE USED FOR INSTALLATION. LONG BARREL, SLEEVES, TWO HOLE LUGS, AND "C" TYPE CONNECTORS SHALL BE USED. SPLICE AND TAP CONNECTORS SHALL BE COMPATIBLE WITH CONDUCTOR MATERIAL.

- 13. UNLESS SPECIFICALLY INDICATED OTHERWISE, EACH SINGLE PHASE BRANCH CIRCUIT SHALL CONSIST OF RESPECTIVE PHASE CONDUCTOR AND A DEDICATED NEUTRAL CONDUCTOR.

- 14. PROVIDE A SEPARATE INSULATED GROUND WIRE IN EACH FEEDER, BRANCH CIRCUIT AND OTHER CONDUITS CONTAINING CURRENT CARRYING CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN-COLORED OR IDENTIFIED WITH GREEN TAPE AT ALL ACCESS POINTS.

- 15. PROVIDE UL LABELED CONNECTORS OF AMPACITY RATINGS AND TYPES FOR APPLICATIONS INDICATED.
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- 25. UNLESS SPECIFICALLY INDICATED OTHERWISE, EACH SINGLE PHASE BRANCH CIRCUIT SHALL CONSIST OF RESPECTIVE PHASE CONDUCTOR AND A DEDICATED NEUTRAL CONDUCTOR.

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- 30. PROVIDE UL LABELED CONNECTORS OF AMPACITY RATINGS AND TYPES FOR APPLICATIONS INDICATED.
a. CONNECTIONS FOR WIRE SIZES NO. 14 AWG THROUGH NO. 10 AWG SHALL BE MADE WITH 3-M "SCOTCHLOK" SPRING CONNECTORS.
b. CONDUCTORS NO. 8 AWG AND LARGER SHALL BE SPLICED AND TAPPED WITH COLOR-KEYED WROUGHT COPPER COMPRESSION CONNECTORS AS MANUFACTURED BY THOMAS & BETTS. THE MANUFACTURER'S RECOMMENDED TOOLING SHALL BE USED FOR INSTALLATION. LONG BARREL, SLEEVES, TWO HOLE LUGS, AND "C" TYPE CONNECTORS SHALL BE USED. SPLICE AND TAP CONNECTORS SHALL BE COMPATIBLE WITH CONDUCTOR MATERIAL.

- 31. UNLESS SPECIFICALLY INDICATED OTHERWISE, EACH SINGLE PHASE BRANCH CIRCUIT SHALL CONSIST OF RESPECTIVE PHASE CONDUCTOR AND A DEDICATED NEUTRAL CONDUCTOR.

- 32. PROVIDE A SEPARATE INSULATED GROUND WIRE IN EACH FEEDER, BRANCH CIRCUIT AND OTHER CONDUITS CONTAINING CURRENT CARRYING CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN-COLORED OR IDENTIFIED WITH GREEN TAPE AT ALL ACCESS POINTS.

- 33. PROVIDE UL LABELED CONNECTORS OF AMPACITY RATINGS AND TYPES FOR APPLICATIONS INDICATED.
a. CONNECTIONS FOR WIRE SIZES NO. 14 AWG THROUGH NO. 10 AWG SHALL BE MADE WITH 3-M "SCOTCHLOK" SPRING CONNECTORS.
b. CONDUCTORS NO. 8 AWG AND LARGER SHALL BE SPLICED AND TAPPED WITH COLOR-KEYED WROUGHT COPPER COMPRESSION CONNECTORS AS MANUFACTURED BY THOMAS & BETTS. THE MANUFACTURER'S RECOMMENDED TOOLING SHALL BE USED FOR INSTALLATION. LONG BARREL, SLEEVES, TWO HOLE LUGS, AND "C" TYPE CONNECTORS SHALL BE USED. SPLICE AND TAP CONNECTORS SHALL BE COMPATIBLE WITH CONDUCTOR MATERIAL.

- 34. UNLESS SPECIFICALLY INDICATED OTHERWISE, EACH SINGLE PHASE BRANCH CIRCUIT SHALL CONSIST OF RESPECTIVE PHASE CONDUCTOR AND A DEDICATED NEUTRAL CONDUCTOR.

- 35. PROVIDE A SEPARATE INSULATED GROUND