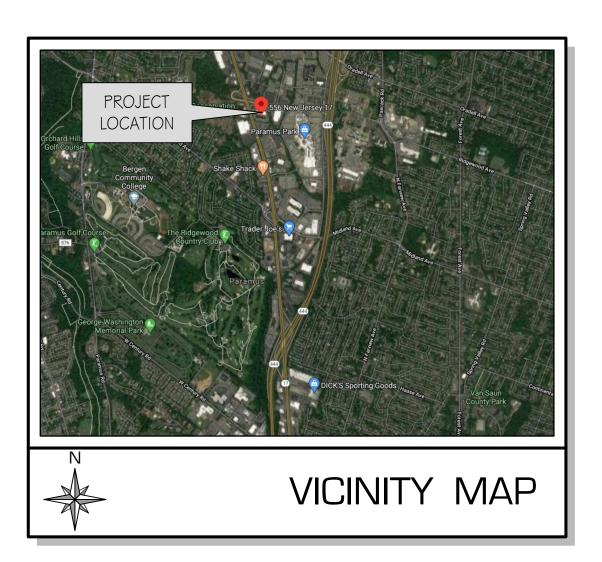
PROPOSED FIT OUT FOR:

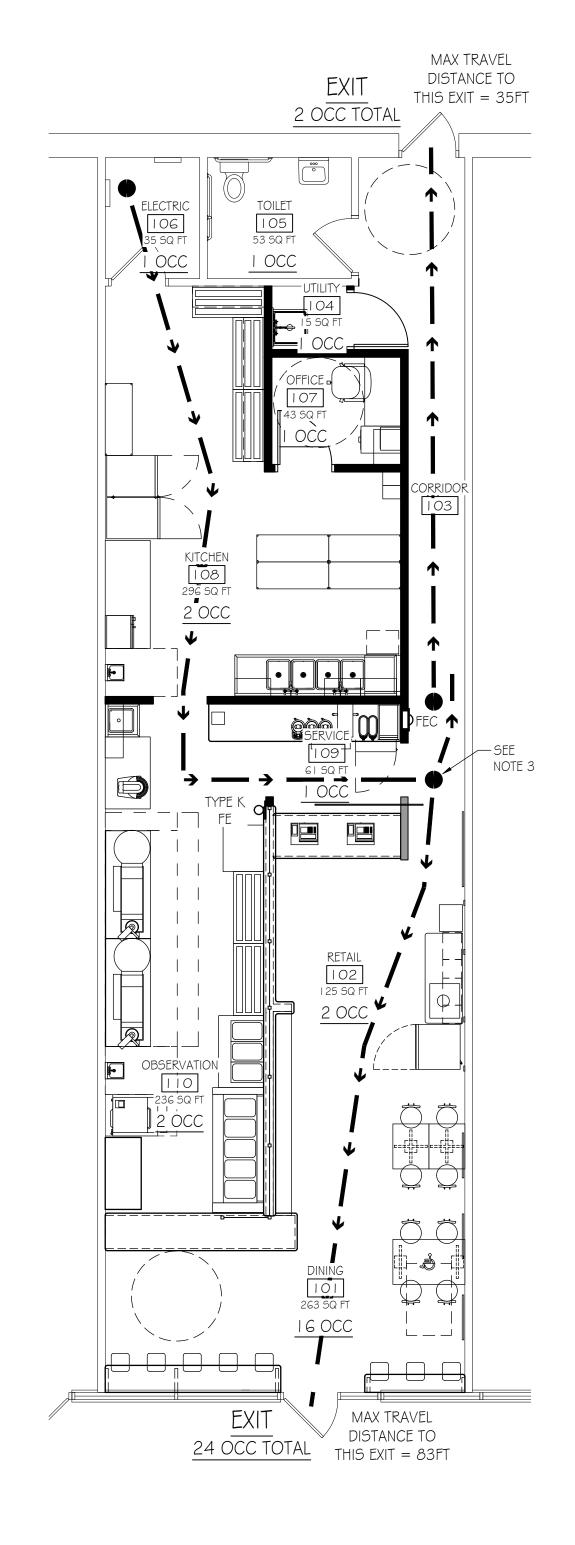
DUCK DONUTS 556 ROUTE 17 NORTH PARAMUS, NJ 07652





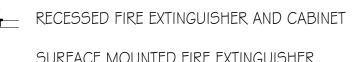
OCCUPANCY AND EGRESS

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

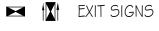


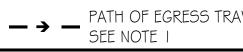
- I. PATHS OF EGRESS TRAVEL SHOWN HAVE BEEN DETERMINED TO REPRESENT THE MAXIMUM TRAVEL DISTANCE TO THE EXIT THEY DISCHARGE TO. AS SUCH, PATH OF EGRESS TRAVEL DISTANCES FROM ANY OTHER AREA TO EACH RESPECTIVE EXIT ARE NOT DEPICTED, AS THEY WILL
- BE LESS THAN THE ONES SHOWN. 2. OCCUPANT LOADS FOR EACH ROOM OR AREA HAVE BEEN CALCULATED BASED ON TABLE 1004.1.1 FLOOR AREA ALLOWANCES PER OCCUPANT, OR BASED ON SEATING PROVIDED FOR
- 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:



SURFACE MOUNTED FIRE EXTINGUISHER







CONTACTS

PROPERTY OWNER

SETTER PARTNERS, LLC 244 WEST 39TH ST, 4TH FL NEW YORK, NY 10018 PHONE: 201.741.6921

ARCHITECT

LARRY E. SAYLOR, AIA, NCARB 930 CENTURY DR. SUITE 103 MECHANICSBURG, PA 17055 PHONE: 717.697.1799

FRANCHISEE GOLDENEYE DUCK LLC. C/O NALIN AMIN

247 WEST ST EDISON, NJ 08820 PHONE: 848.219.021

MEP ENGINEER ENTEGRA INTEGRATED ENERGY ENGINEERING 262 DICKINSON DR

READING, PA 19605 PHONE: 610.750.9129 www.entegraeng.com

BUILDING CODE SUMMARY

AUTHORITY HAVING JURISDICTION:

THE UNIFORM CONSTRUCTION CODE (NJAC 5:23)

2018 INTERNATIONAL BUILDING CODE THE NJ EDITION

BOROUGH OF PARAMUS, BERGEN COUNTY

-NATIONAL ELECTRIC CODE / NEC 2017

• OCCUPANCY GROUP "B"

BUILDING IS SINGLE STORY

THE BUILDING IS SPRINKLERED

-NFPA 13 2013, IBC NJ ED. 2018

DESCRIPTION OF WORK

PROJECT VITALS:

-IECC 2015 / ASHRA STANDARD 90.1 2016

-UCC REHABILITATION SUBCODE NJAC 5:23-6

DRAWING INDEX

GENERAL

COVER AND CODE INFORMATION GENERAL INFORMATION AND ACCESSIBILITY REQUIREMENTS

ARCHITECTURAL

REVIEW, APPROVAL STATUTES AND AUTHORITIES

-NJAC 5:23-7 AND ICC / ANSI ATTJULY 1, 2018

TOTAL SPACE OCCUPANCY:

TOTAL SPACE SQUARE FOOTAGE:

26 OCC (EST)

1,370 SQ FT

-NATIONAL STANDARD PLUMBING CODE / NSPC 2018

-INTERNATIONAL MECHANICAL CODE 2018

-INTERNATIONAL FUEL GAS CODE 2018

10.1	DEMOLITION PLAN, FLOOR PLAN \$	
	REFLECTED CEILING PLAN	1
1.02	EQUIPMENT PLAN \$ SCHEDULE	1

FLOORING PLAN & WALL FINISHES

FLOOR PLAN INTERIOR ELEVATIONS \$ TOILET

ACCESSORY SCHEDULE INTERIOR ELEVATIONS \$ MILLWORK

INTERIOR SECTIONS & DETAILS

INTERIOR SECTIONS \$ DETAILS RM FINISH & DOOR SCHEDULE

MECHANICAL

MECHANICAL INFORMATION SHEET MECHANICAL ROOF PLAN

DEMOLITION MECHANICAL FLOOR & ROOF PLAN

MECHANICAL EQUIPMENT SCHEDULES MECHANICAL SCHEDULES & DETAILS MECHANICAL SCHEDULES \$ DETAILS

MECHANICAL SCHEDULES \$ DETAILS MECHANICAL SCHEDULES \$ DETAILS MECHANICAL SPECIFICATIONS

PLUMBING

Primary Structural Frame

Interior Walls & Partitions

Floor Construction, including

supporting beams \$ joists

Roof Construction, including

supporting beams \$ joists

Tours) (Non-Load Bearing)

Corridor Fire-Resistance

Mınımum Corridor Width

Imergency Lighting

Fire Extinguishers

Access Doorway

ravel Distance

Spaces with one Exit or Exit

Ext Walls Fire-Resistance Ratino

Exterior Walls

(Load Bearing)

Interior Walls

Load Bearing)

(Non-Load Bearing)

PLUMBING INFORMATION SHEET

PLUMBING FLOOR PLANS PLUMBING ROOF PLAN PLUMBING RISER & SCHEDULE

> PLUMBING DETAILS PLUMBING SPECIFICATIONS

FIRE PROTECTION

FIRE PROTECTION FLOOR PLAN

ELECTRICAL INFORMATION SHEE POWER FLOOR PLAN LIGHTING FLOOR PLAN ELECTRICAL SCHEDULES & SINGL

LINE DIAGRAM

ELECTRICAL PANEL SCHEDULES ELECTRICAL DETAILS **ELECTRICAL SPECIFICATIONS**

PROVIDED THIS PROJECT

N/A

N/A

N/A

0 hr

N/A

N/A

See Egress Plan for Occ

oads and Travel Distances

83'

O hr

Provided, See

Architectural Drawings

Provided.

See Electrical Drawings

2 Provided,

See Architectural Drawings

COPYRIGHT © 2020 BY LARRY E. ŠAYLOR. THIS DRAWING AND NFORMATION RELATED TO

COPIED OR USED IN ANY WA AUTHORIZATION OF LARRY I SAYLOR. THIS DRAWING NO FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

THIS DRAWING SHALL NOT E

CONTRACTOR SHALL VERIFY LL DIMENSIONS AND EXISTING CONDITIONS AND PROMPTLY REPORT ANY ERRORS TO LARRY E. SAYLO

DRAWN BY CHECKED BY: PROJECT #: 20011

4 4

7.2 I.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.

2018 IBC THE NEW JERSEY EDITION

CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION SECTION 304. I BUSINESS, GROUP B - FOOD PROCESSING ESTABLISHMENT UNDER 2500 SF

• Demolish existing wall partitions and casework for new floor plan layout.

• Construct new walls and doors to create a donut shop.

BUILDING SQUARE FOOTAGE 1,370± SQ FT

CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS

REQUIRED SEPARATION OF OCCUPANCIES

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.

I. 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 O. I.5 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 caluculated 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 (See Occupancy and Egress plan Note #3 this sheet for common path of egress compliance.)

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: I. EXIT SIGNS ARE NOT REQUIRED IN ROOMS OR AREAS THAT REQUIRE ONLY ONE EXIT OR EXIT

(This project meets the requirements of this section and exit signs shall be provided at exit access

CHAPTER 12 - INTERIOR ENVIRONMENT 210.1 - FLOORS AND WALL BASE MATERIALS - IN OTHER THAN DWELLING UNITS, TOILET, BATHING AND SHOWER ROOM

(See Egress plan for common path of egress compliance.)

provided. Accessible toilets are required and have been provided.

CHAPTER 10 - MEANS OF EGRESS (continued)

FLOOR FINISH MATERIALS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE. (This project meets the requirements of this section.)

REQUIRED FOR CODE CONSTRUCTION TYPE II-B

0 hr

O hr

O hr

O hr

O hr

O hr

Separation ≥30ft / Group B Occupancy / Type II-B Constr

B Occupancy | Max Occupant Load (OL) = 49

Max Common Path of Egress Travel Distance with Sprinkler

System = $100 \text{ (OL} \leq 30)$

(Group B Maximum with sprinkler system)

(Occupant load = <30) (With sprinkler system)

Occupancy Category:

Occupant load <50 = 36 inches

Exitways, exit doors. Rooms used for assembly in excess of

750 sf. Exterior lighting over required exit discharge.

For Moderate Hazard Occupancy:

to extinguisher not to exceed 75'.

006.2.1 - EGRESS BASED ON OCCUPANT LOAD AND COMMON PATH OF EGRESS TRAVEL DISTANCE. TWO EXITS OR

COMMON PATH OF EGRESS TRAVEL DISTANCE EXCEEDS THE VALUES LISTED IN TABLE 1006.2.1.

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

EXIT ACCESS DOORWAYS FROM ANY SPACE SHALL BE PROVIDED WHERE THE DESIGN OCCUPANT LOAD OR THE

1) 2-A Extinguisher per 1,500 sf. Maximum travel distance

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

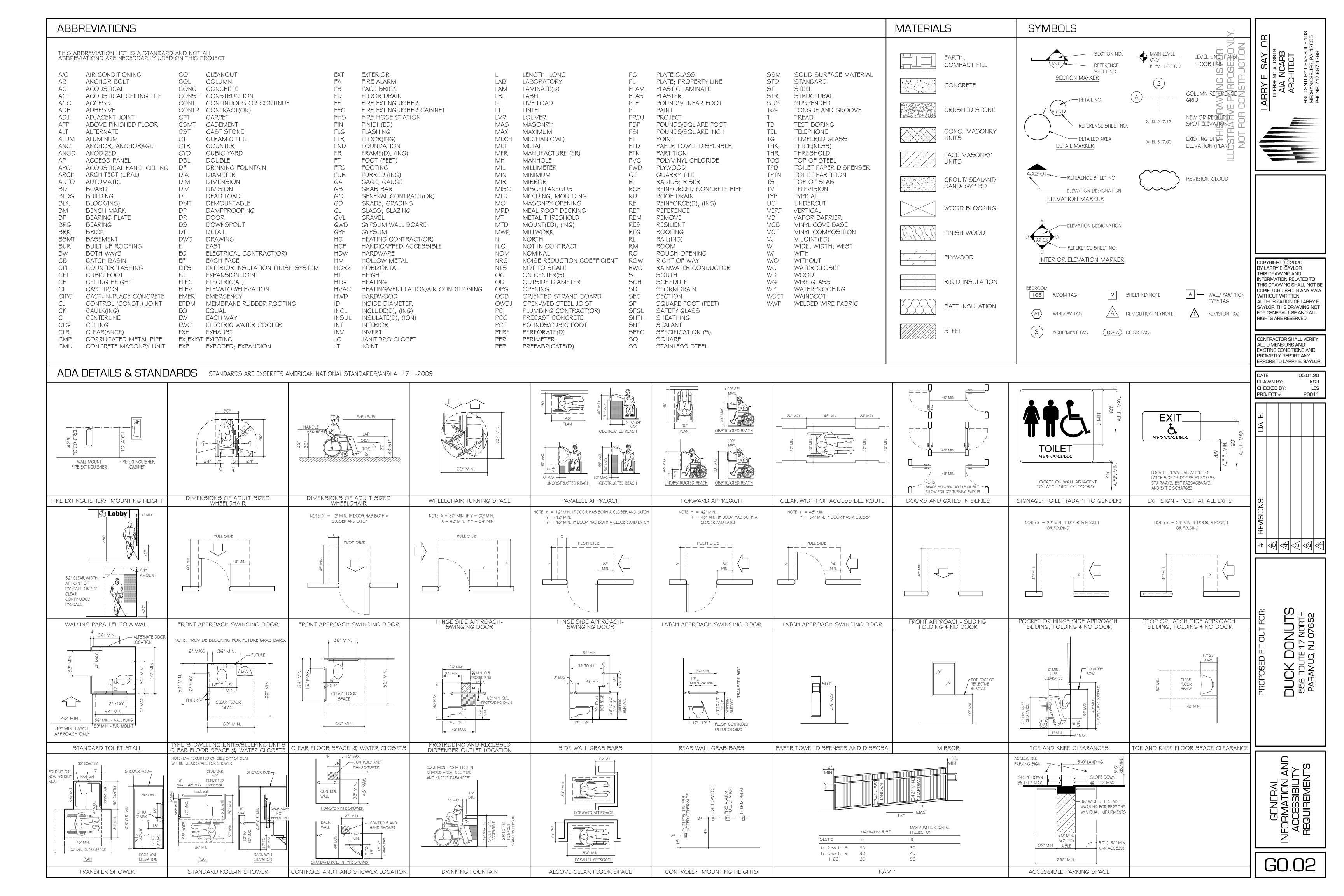
CHAPTER 7 - PLUMBING FIXTURES FIXTURE FITTINGS AND PLUMBING APPLIANCES

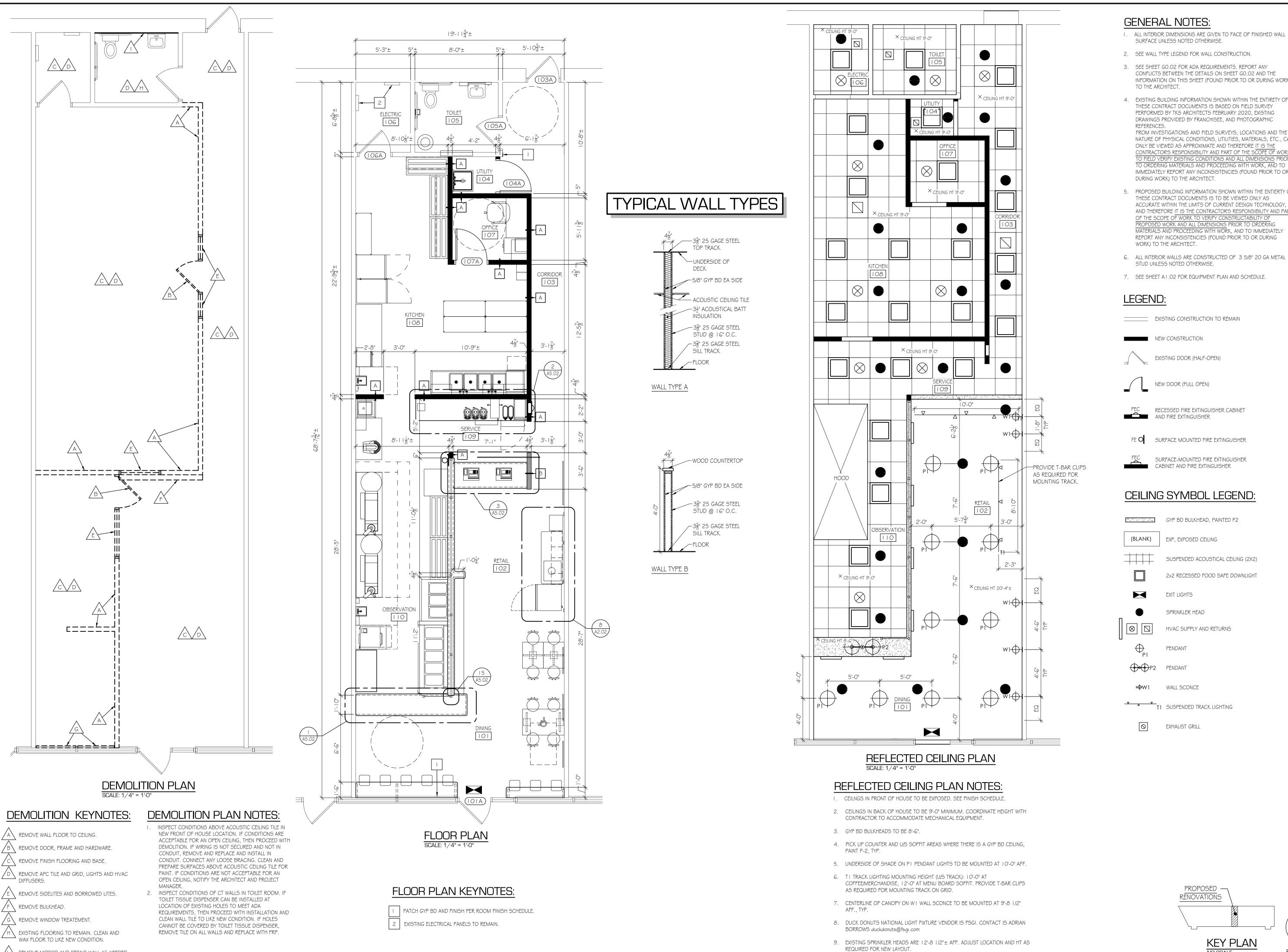
7.21.4 - SEPARATE FACILITIES. a. SEPARATE TOILET FACILITIES SHALL BE PROVIDED FOR EACH SEX.

(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	OCCUPANCY	WATER (CLOSETS	ORIES	DRINKING	SERVICE	
	LOAD	В	MALE	FEMALE	MALE	FEMALE	FOUNTAIN	SINK
I FLR	26 OCC (13 male)	REQUIRED	I REQ'D	I REQ'D	I REQ'D	I REQ'D	o req'd	
MAIN	(13 female)	PROVIDED	l (shared)	l (shared)	l (shared)	l (shared)	0	





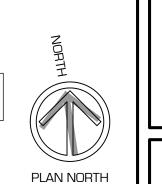
REMOVE MIRROR AND REPAIR WALL AS NEEDED.

CONFLICTS BETWEEN THE DETAILS ON SHEET GO.O2 AND THE INFORMATION ON THIS SHEET (FOUND PRIOR TO OR DURING WORK)

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

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 O 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

PROPOSED BUILDING INFORMATION SHOWN WITHIN THE ENTIERTY 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 CONSTRUCTABILITY OF PROPOSED WORK AND ALL DIMENSIONS PRIOR TO ORDERING MATERIALS AND PROCEEDING WITH WORK, AND TO IMMEDIATELY



A1.01

COPYRIGHT(C)2020

BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO

WITHOUT WRITTEN

THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY

AUTHORIZATION OF LARRY E SAYLOR. THIS DRAWING NOT

FOR GENERAL USE AND ALL

CONTRACTOR SHALL VERIFY

ERRORS TO LARRY E. SAYLOF

LES

20011

ALL DIMENSIONS AND EXISTING CONDITIONS AND PROMPTLY REPORT ANY

DRAWN BY:

CHECKED BY:

PROJECT #:

RIGHTS ARE RESERVED.

SEE SHEET A5.02 FOR CABINET DETAILS

INCLUDE 3 SINGLE-TIER SPEED RAILS BY EAGLE GROUP: (2) 34" & (1) 70"



COPYRIGHT © 2020 BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY WITHOUT WRITTEN AUTHORIZATION OF LARRY E SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

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

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

Company Comp	WSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS	VORK CENTER S WALL SHELF OUGHNUT MAKER	EAGLE GROUP ADVANCE TABCO	T2448 WS-12-72	48" 72"	24" 12"	33 1/2" 1 1/2"									KEP	KEP	,
A PACE	SS DO DO SS SS SS CO UI CO CO CO All PO PO CO PO CO PO PO PO	S WALL SHELF OUGHNUT MAKER	ADVANCE TABCO	WS-12-72	72"	12"	1 1/2"											,
March Marc	DO DO DO SS	OUGHNUT MAKER		-												KEP	KEP	SATIN FINISH SS
Description Column Colum	DO SS MI W SS RE CC UI CC Al		BELSHAW	MADIC VANITUI DOTO COOLED		00"												OF THE FINIOUS OO
Company Comp	SS MI WW SS RE CC UI CC CI Al	OUGHNUT MAKER		MARK V WITH ROTO COOLER	52"	20"	24"		208-240/50-60/3	25	9100	3	0 Yes			BELSHAW	DDFC	PROVIDE SHUNT TRIP BREAKER TIED TO HOOD AS REQ'D
March Marc	MI W SS RE CO UI CO	OCCINION WELL	BELSHAW	MARK II WITH ROTO COOLER	41"	20"	24"		208-240/50-60/3	15	5800	2	0 Yes			BELSHAW	DDFC	PROVIDE SHUNT TRIP BREAKER TIED TO HOOD AS REQ'D
Control Cont	W SS RE CO UI CO CI AL	S EQUIPMENT STAND W/ CASTERS	ADVANCE TABCO	TFMS-306 TA-255	72"	30"	24"									KEP	KEP	
Second Control Contr	SS RE CC UI CC CI AI	IIXER 10 QT	GLOBE	SP10	14 15/16"	20 1/4"	32 1/16"		115/60/1			1/3	Yes			KEP	KEP	WITH EXTRA BOWL
Part	RE CO UI CO CO AL PO	VORK TABLE	REGENCY	600WT30X48BS	48"	30"	34"											
Part	RE CO UI CO CO AL PO	S SINK 1-COMP. SINK W/O DRAINBOARDS			22"	22 7/8"	44 3/4"								3/4" 1 1/2"	KFP	KFP*	PROVIDE MIXING VALVE MANUALLY SET FOR 90 DEG. WATER
Company Comp	CC UI CC CI AI														0, 1, 1, 1, 2	COCA-COLA		
March Marc	UI CC CI AI PC					100							Yes			_		SEE SHEET A5 02 FOR CABINET DETAILS
Description	C(Cl Al P(_ ·		115/60/1	2.2			163	NEMA 5 15D				OLE SHEET ASSET ON GABINET BETAILS
Comparison	CI Al PC								115/60/1	2.2				INEIVIA 5-15P		1	KEP	
A. RIGIC CONTINUES AND	Al PC	•						STAINLESS									-	OFF CHEFT AS OF FOR CARINET RETAIL OF PROVIDE HOLES FOR ROOM
Control (MAPPE)	PC									40	1100							·
Company						17 3/4"					1100							PROVIDE HOLES IN COUNTER FOR ELECTRICAL WIRES
REPORT 1970						6"	J			-							_	
Company Comp	IC	CE CREAM FREEZER	MB MASTER BUILT		· ·	27"				1.1		1/3	Yes					
The part of the	RI	EFRIGERATOR 1-DOOR REACH-IN	HOSHIZAKI	CR1S-FS	27 1/2"	34"	79 1/2"		115/60/1	4		1/5		NEMA 5-15P		KEP	KEP	4" CASTERS
MAIL COMPRESSOR MAIL COMPR	C	OFFEE/TEA MAKER (DOUBLE BREWER)	BUNN	DUAL TF DBC 34600 0003	21 4/5"	20 1/5"	35 7/10"		240/60/1	27.5	6600		Yes		1/2"	BUNN	BUNN	PROVIDE HOLE IN COUNTER FOR WATER TUBE
Control Authority March	BF	RANDING BOARD			24"		40"									KEP	GC	
Control Authority March	SI	INGLE COFFEE BREWER	BUNN	ICB-DV, TALL 120V, 53100.0101	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
Designation of the content of the				1		28"	38 1/2"			5			Yes	NFMA 5-15P		KFP		
Manual Professional Professio														112	0.0			
Second Conference Seco			<u> </u>					STAINLEGG							1/2" 1 1/2"		VED*	
Control Cont						1.0									1/2 1 1/2			
MARCH MARC									400/00/4		4000			NIERAA O COO		1		
Microscope Mic						1.0								NEMA 6-30P				
PARTICULATION PARTICULATIO			<u> </u>						208/240	30	4700		Yes			1		
March Marc	M	IICROWAVE SHELF			24"	24"										1		
OPTION CONTINUE	SA	ANDWICH MICROWAVE	AMANA	RCS10TS	22"	17 1/4"	13 3/4"		120/60/1	13	1550		Yes			KEP	KEP	
DER CHAR PATA PET SITE STATE PET SITE PET S	FF	REEZER 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
DER CHAR PATA PET SITE STATE PET SITE PET S	М	IETAL WIRE SHELVING	CENTAUR	C1848C	48"	18"	74 5/8"	CHROME								KEP	KEP	
DESCRIANGE STAPARS NUMBER 20090 24 25 25 25 25 25 25 25																OWNER		
MOP SINCE MARCHEST					. •		100											MAY LISE ALTERNATE
MONE MARCH CARN								BLACK							2/4" 2"			INAT OOL ALTERIVATE
MOST PARTIES MO					24	24	10											
MAPH MASSINE					0"	0.0/01	0.11								1/2"	_		
POST-PYER AND DIRECT WALL MOUNTS CORTANA C1498K 4" 1" CORES PROVY FOR						9 3/8"	0"											
POST TYPE AND DIRECT WALL SQUARTS CHANKE C				1		1"	3"											
DANNER FORCE SOFTED DANNEL ASCENSIA	PC	OST-TYPE AND DIRECT WALL MOUNTS	CENTAUR	C1448K	48"	14"	-	GREEN EPOXY								KEP	KEP	
REFELICITATION 2-000TR REACH-HN SIRT SIRT SIRT SIRT FINE SIRT SIRT FINE SIRT S	PC	OST-TYPE AND DIRECT WALL MOUNTS	CENTAUR	C1424K	24"	14"	-	GREEN EPOXY								KEP	KEP	
SS SMAN SENSEM WITH DRANSON/RIGHT 15 SMANS 0.9032 17 27 27 27 27 27 27 2	DI	UNAGE RACK SLOTTED	CHANNEL	ADE2048	48"	20"	11"									KEP	KEP	
SS SMAN SENSEM WITH DRANSON/RIGHT 15 SMANS 0.9032 17 27 27 27 27 27 27 2	RE	EFRIGERATOR 2-DOOR REACH-IN	SATURN	S49R	54 1/2"	31"	83"		115/60/1	7		1/3	Yes			KEP	KEP	
MASTE VALVE TAS BRASS 8,3902 F	SS	S SINK 3-BASIN WITH DRAINBOARDS				27 1/2"	34 1/2"								3/4" 2"	KEP	KEP*	
FOT SAM FAULET SAM MALE PROPERTY SAM MAL					00 0/0		0.1.1.2											
S. SWALL SHEEF																		8" WALL MOUNT 12" SWING NO77LE
SAMALISHEF ADVANCE TARGO WS 12-36 59" 12" 00"					70"	40"	60"								1/2			0 WALL MOONT, 12 SWING NOZZEL
KITCHEN PRODUCT OF RESERVATION AFREA APT A						-	1											
COF MACHINE WATER INTER MM																		
ANOLYCIMENT BOADD STAP IFS 3447 19" 29 12" 29 18"				,			24"						Yes					
FILE CABNET STAYLES 1947 18" 28 12" 28 38"	IC	CE MACHINE WATER FILTER	3M	ICE120-S	4.5"	4.5"	17"								3/8"	KEP		
MENUBOARD SS WALL SHELF ADVANCE TABLO WS-12-48 68" 12" 60" 50"	IA A	NNOUNCEMENT BOARD			50"		48"										GC	
SS WALL SHELF ADVANCE TARGO WS 12 49 48" 12" 60" 12"	FI	ILE CABINET	STAPLES	13447	18"	26 1/2"	28 3/8"									OWNER	GC	
SS SINK-48ASIN WITH DRANBOARDS EAGLE GROUP 44-164-41 107 34" 2712" 3712"	M	IENU BOARD			72"	1/2"	42"									FAST SIGNS	GC GC	CUSTOM MADE BY GRAPHICS COMPANY
SS SINK-48ASIN WITH DRANBOARDS EAGLE GROUP 44-164-41 107 34" 2712" 3712"	SS	S WALL SHELF	ADVANCE TABCO	WS-12-48	48"	12"	60"									KEP	KEP	
HYDOR-FORCE PRE-RINSE UNIT H-POWER BLADER WARKS COMMERCOL, XITEME MAY ROCK					107 3/4"	27 1/2"	37 1/2"								1/2" 1 1/2"	CESE	CESE*	
H-POWER BLENDER WARNEG COMMERCAL XTREW WATCHISTORY BLY B			Ų.		101 0/1		02								172 1 172			
COPFEC GINIDER BUNN GS-27 DBC 33700.0000 B 19" 29" 29" 12000/1 9.4 1128 Visis Wisis BUNN					0 1/2"	0 1/4"	16"		120\/ 50/60U7	12			Voc					
ESPRESS OMACHINE MIRA UNIC MIRA HIGH PROFILE 4" 22" 26" 26" 53" 30" 35											1100							
STABLE ADVANCE TABCO									120/60/1	9.4	1128						_	
MERCHANDIDISE CRATES (ADVECOFFE) MERCHANDIDISE CRATES (ADVECOFFE) MAYAIR TRADE LARGE CRATE MECHANDIDISE CRATES (ADVECOFFE) MAYAIR TRADE LARGE CRATE TAPF TAPF S4 18" S2 1/2" TAPF TAPF TRUE TAPF T													Yes		1/2" 1/2"			PROVIDE HOLE IN COUNTER FOR WATER TUBE
MERCHANIDISE CRATES (ABOVE COFFEE) WAYFART TRADE LARGE CRATE THUE T.49F 54 1/8" 29 1/2" 78 3/8" T.49F F.41/8" T.49F							35 1/2"											
REFRICENCY 600FW88LL 12" 412" 4 12" 15 16 No 5-15P KEP KEP POT SINK FAUCET REGENCY 600FW88LL 12" 4 12" 4 12" 5 16 No 5-15P KEP KEP REFRICENCY 600FW88LL 12" 15 12" 4 12" 5 16 No 5-15P KEP KEP REFRICENCY 600FW88LL 12" 15 12" 15 12" 15 16 No 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 No 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 15" 15" 15" 15" 15" 15" 15" 15" 15" 15			WAYFAIR TRADE		17 3/4"	15 1/2"										OWNER	GC	
REFRICENCY 600FW88LL 12" 412" 4 12" 15 16 No 5-15P KEP KEP POT SINK FAUCET REGENCY 600FW88LL 12" 4 12" 4 12" 5 16 No 5-15P KEP KEP REFRICENCY 600FW88LL 12" 15 12" 4 12" 5 16 No 5-15P KEP KEP REFRICENCY 600FW88LL 12" 15 12" 15 12" 15 16 No 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 No 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 19" 6 NO 5-15P KEP KEP SAFE BASKALARGE AX 11930 15 13" 15 12" 15" 15" 15" 15" 15" 15" 15" 15" 15" 15	MI	MERCHANIDISE CRATES (ABOVE COFFEE)	WAYFAIR TRADE	LARGE CRATE	-											OWNER	GC	
POT SINK FAUCET REGENCY 600FWBBLL 12" 11" 4 1/2" 12" 14 1/2" 12" 14 1/2" 15 15 16 No 5-15P 12" 16EP KEP*		· · · · · · · · · · · · · · · · · · ·	TRUE		54 1/8"	29 1/2"	78 3/8"									KEP	KEP	
REFRIGERATOR 1-DOOR UNDERCOUNTER SAFE SAFE SARSKALARGE AX11930 15 1/3° 13 1/2° 19° 15 1/6 No 5-15P NOWNER GC OWNER GC MOUNT ABOVE DESK, 12° MIN. BETWEEN TOP OF RACK & CEILING STAFF LOCKERS ULINE H-4910 9° 12° 31° STAFF LOCKERS ULINE H-4910 9° 12° STAFF LOCKERS UNINE GC GC GC SURFACE MOUNTED MOWNER GC GC GC SURFACE MOUNTED MOWNER GC GC															1/2"	KEP	KEP*	
SAFE BARSKALARGE AX11930 15 1/3" 13 1/2" 19"						1			115/60/1	15		1/6	No	5-15P	··=	1		
STAFLOCKERS										1.5			1.40					
STAFF LOCKERS												+		+			_	MOUNT ADOVE DECK 40" MINI DETWEEN TOD OF DAOK & OF UNIO
LIQUID SOAP DISPENSER																		MOUNT ABOVE DESK, 12" MIN. BETWEEN TOP OF RACK & CEILING
PAPER TOWEL DISPENSER BY OTHERS SUFFACE MOUNTED 40" AFF TO PAPER TOWEL ACCESS				П-49 IU	9"	12"	31"											
4-TOP DINING TABLETOP (ADA) XXXX														1				
CUSTOMER CHAIR																		
CUSTOMER BAR CHAIR SINGER FLASH FURNITURE CH-31320-30-SiL-GG 12" 12" 30" -	4-	-TOP DINING TABLETOP (ADA)	XXXX	-	30"	48"	29 1/4"	LIGHTLY TOASTED		<u></u>						OWNER	GC/OWNER	BASE: 22" W WELDED x BASE W/ SEA SALT FINISH
CUSTOMER BAR CHAIR SINGER FLASH FURNITURE CH-31320-30-SIL-GG 12" 12" 30" -	CI	CUSTOMER CHAIR	XXXX	ONE TON STOOL W/ BACK	15"	15"	18"	CAUTION YELLOW								OWNER	GC/OWNER	
CUSTOMER BAR CHAIR SINGER FLASH FURNITURE CH-31320-24-SIL-GG 12" 12" 24" - 12" 42" 42" 42" 42" 42" 42" 42" 42" 42" 4	CI	CUSTOMER BAR CHAIR	SINGER FLASH FURNITURF		12"	12"	30"	-										
BACK COUNTER SEE DETAILS 128" 25" 42" SEE DETAILS SEE DETAILS, PROVIDE HOLES FOR COFFEE EQUIP. & SIN GC GC SEE A5.02 FOR DETAILS, PROVIDE HOLES FOR COFFEE EQUIP. & SIN GC GC SPECIFICATION TBD BY MEP ENGINEER SED WATER HEATER ON-DEMAND RINNAI RU98 18 5/16" 12 5/8" 25 11/16" 120/60/1 64 19900 3/4 GC GC QUANTITY TBD BY MEP ENGINEER SED DETAILS - 66 3/4" 12" 42" SEE DETAILS - 66 3/4" 12" 42" SEE DETAILS - 117" 18" 34" SEE DETAILS SEE DETAILS - 117" 18" 34" SEE DETAILS SEE D								_										
GREASE TRAP (NOT ON DWG, SEE NOTE) WATER HEATER ON-DEMAND RINNAI RU98 18 5/16" 12 5/8" 25 11/16" 12 0/60/1 64 19900 3/4 GC GC QUANTITY TBD BY MEP ENGINEER 2-TOP DINING TABLETOP XXXX - CUSTOMER BAR COUNTER SEE DETAILS - 117" 18" 34" - 100														+				SEE A5 02 FOR DETAILS, PROVIDE HOLES FOR COFFEE FOLLID & SINK
WATER HEATER ON-DEMAND RINNAI RU98 18 5/16" 12 5/8" 25 11/16" 120/60/1 64 19900 3/4 GC GC QUANTITY TBD BY MEP ENGINEER 120/60/1 120/60/			CLL DETAILO		. 20		1-							+				-
2-TOP DINING TABLETOP XXXX - 24" 30" 29 1/4" LIGHTLY TOASTED OWNER GC/OWNER BASE: 22" W WELDED x BASE W/ SEA SALT FINISH CUSTOMER BAR COUNTER SEE DETAILS - 66 3/4" 12" 42" - GC GC GC GC CUSTOMER BAR COUNTER SEE DETAILS - 117" 18" 34" - - GC GC GC			DININAL	DLIOS	10 5/40"	10 5/0"	OF 44/40"		120/60/4		64	+		+ + + + + + + + + + + + + + + + + + + +	0000 3/4			
CUSTOMER BAR COUNTER SEE DETAILS - 66 3/4" 12" 42" CUSTOMER BAR COUNTER SEE DETAILS - 117" 18" 34" - GC											04	+		19	9000 3/4			
CUSTOMER BAR COUNTER SEE DETAILS - 117" 18" 34" GC GC					<u> </u>			LIGHTLY TOASTED										BASE: 22" W WELDED X BASE W/ SEA SALT FINISH
DISHWASHER, UNDERCOUNTER CHAMPION UH130B 221 3/8" 40 1/2" 33 3/4" - - -	CI	CUSTOMER BAR COUNTER	SEE DETAILS															
, , , , , , , , , , , , , , , , , , ,	DI	ISHWASHER, UNDERCOUNTER	CHAMPION	UH130B	221 3/8"	40 1/2"	33 3/4"			-		-	-	-		KEP	KEP	SEE SPEC FOR DETAILS

SUPPLIER/INSTALLER ABBREVIATIONS & NOTES:

Manufacturer

VOLLRATH, CAYENNE

EP305SW

1001 WARMERS

13 3/4" 21 3/4"

SEE DETAILS

ADVANCE TABCO

CUSTOM COUNTER

5 WELL STEAM TABLE

COUNTER TOP WARMING UNIT

WORK TABLE

- KEP KITCHEN EQUIPMENT PROVIDER
 KITCHEN EQUIPMENT PROVIDER WILL DELIVER, INSTALL, AND REMOVE DEBRIS FROM JOBSITE.

 ANY EQUIPMENT REQUIRING PLUMBING AND/OR ELECTRICAL CONNECTIONS
 WILL BE PLACED WITHIN 3 FEET OF FINAL LOCATION FOR TRADES TO
- DDFC DUCK DONUTS FRANCHISING COMPANY
- GC GENERAL CONTRACTOR

ACCESS.

* REQUIRES TRADE SPECIFIC FINAL HOOKUP

GENERAL NOTES:

- I. FINAL DESIGN DOCUMENTS SHALL MEET ALL BUILDING CODES, ORDINANCES, AND DEPARTMENTS HAVING JURISDICTION.
- 2. TECHNICAL INFORMATION PROVIDED IS PRELIMINARY AND SHOULD BE VARIFIED WITH SUPPLIER BEFORE FINAL PUMBING, MECHANICAL, AND ELECTRICAL DESIGN IS COMPLETED.
- ALL MATERIAL SHOULD BE VERIFIED TO BE COMPLIANT WITH BUILDING CONSTRUCTION TYPE.
- 4. PROVIDE GFI OUTLETS IN KITCHEN AS REQUIRED.
- 5. ALL DATA WIRING TO BE INSTALLED BY GENERAL CONTRACTOR.
- 6. GENERAL CONTRACTOR TO PROVIDE CAT 5E DATA PORT TO HOOD LOCATION FOR HOOD CONTROL PANEL.

EQUIPMENT PLAN KEYNOTES:

- PROVIDE TWO CAT 5E CABLES FROM 63" AFF AT PRINTERS TO EACH POS. PROVIDE DOUBLE DUPLEX RECEPTACLE 63" AFF AT EACH PRINTER.
- 2 CHILDREN'S VIEWING STEP

Yes NEMA L6-30 Yes NEMA 5-15P

KEP

- 3 | SOLID SURFACE COUNTER TOPS SHALL MEET LOCAL HEALTH CODE REQUIREMENTS. PROVIDE I $\frac{1}{2}$ " RADIUSED CORNER AT ALL COUNTER TOP CORNERS.
- PROVIDE SHELF UNDER POS FOR CASH DRAWER AND PROVIDE DEDICATED DOUBLE DUPLEX RECEPTACLE, DATA, AND TELEPHONE BELOW COUNTER TOP AT EACH POS.

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

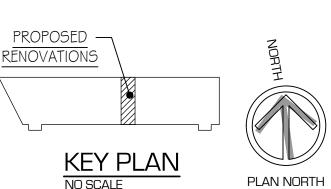
3

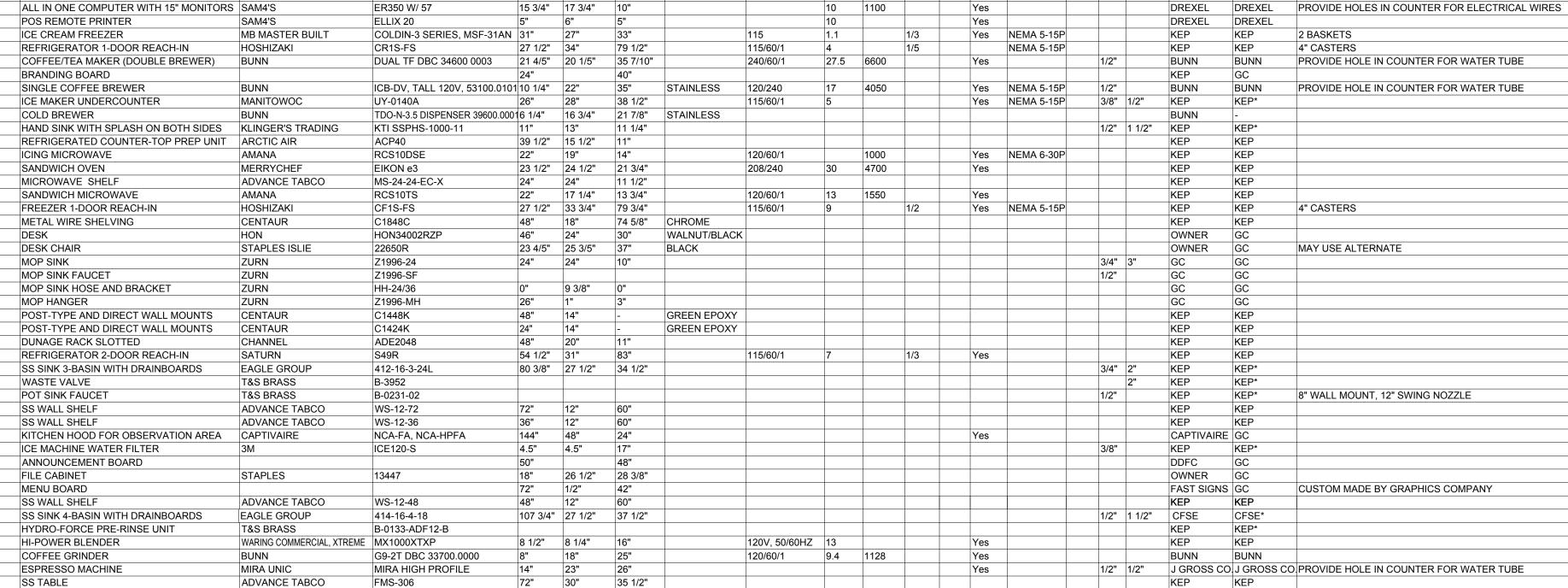
ELECTRIC I 06

103

39

39





Equipment Schedule

120V

208V/60/1-PH 18.0

FLOORING LEGEND:

LINEAR VINYL TILE, PARTERRE VIA DONIA DESIGNS COLOR - INGRAINED LANCASTER PATINA TOTAL SQ FT = 596

TOTAL SQ FT = 730

EPOXY FLOORING, FEATURE FLOORING, JETROCK COLOR - MOUNTAIN SLATE, 3/16" THICKNESS

FLOORING PLAN NOTES: I. FLOORING TRANSITION BETWEEN LVT-I AND EF-I TO BE TS-I.
REFER TO COLOR LEGEND.

FINISHES SYMBOL LEGEND 105 (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-I ______ 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.

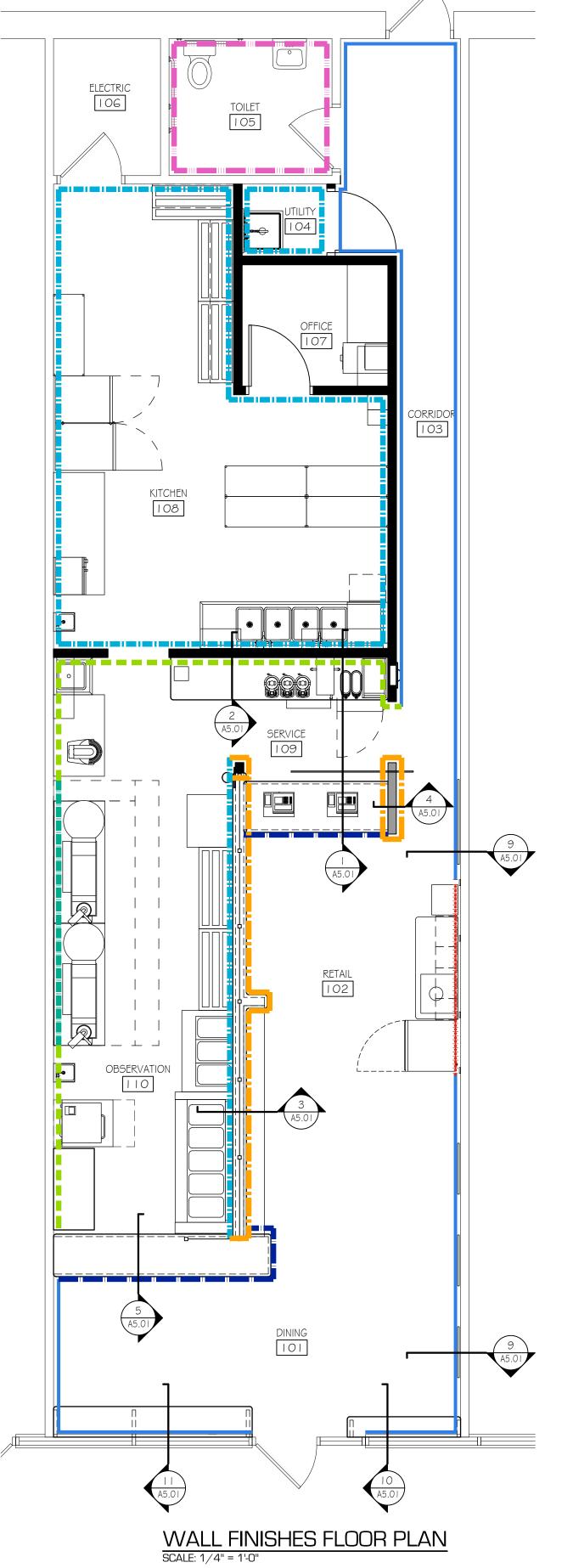
NOTE: SEE FINISH SCHEDULE FOR MORE INFORMATION.

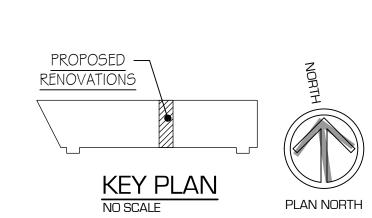
COPYRIGHT © 2020 BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY WITHOUT WRITTEN AUTHORIZATION OF LARRY E SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

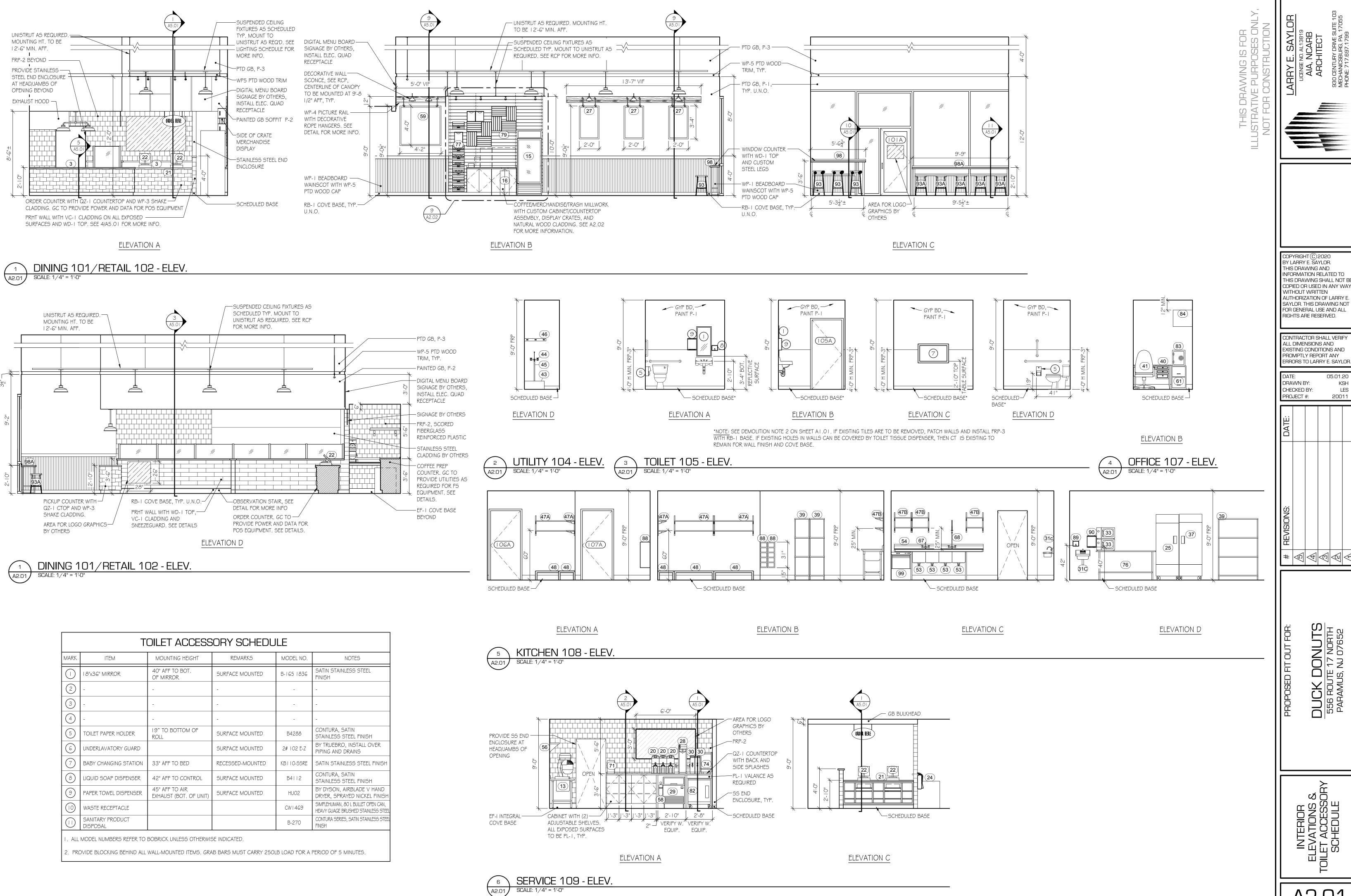
CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND PROMPTLY REPORT ANY

ERRORS TO LARRY E. SAYLOR DRAWN BY: KSH LES CHECKED BY: PROJECT #: 20011

A1.03



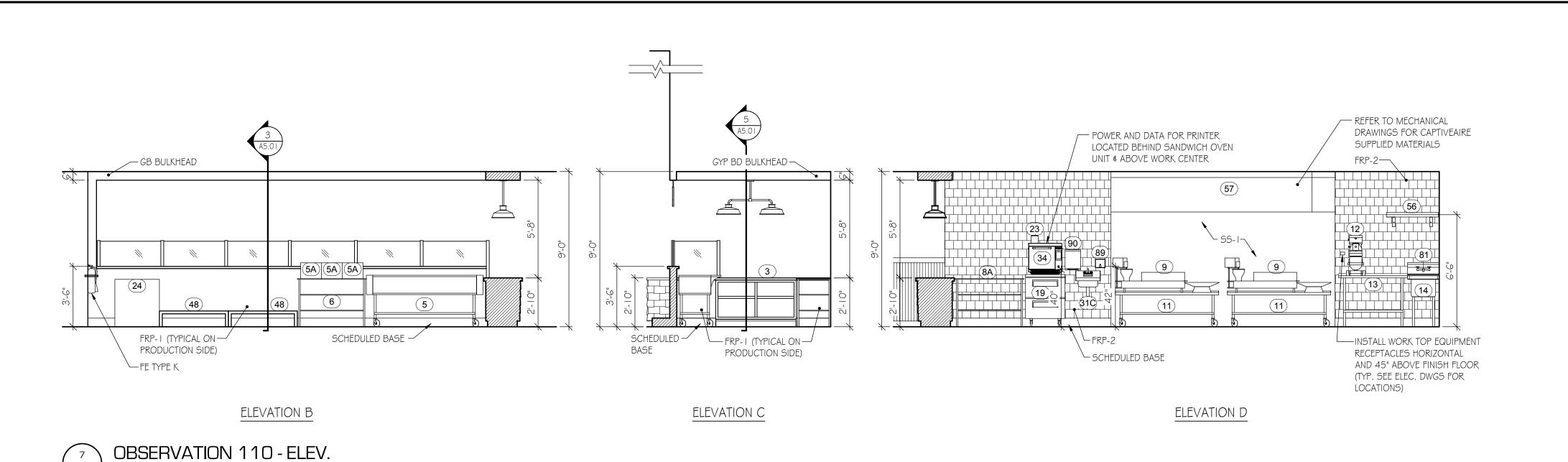


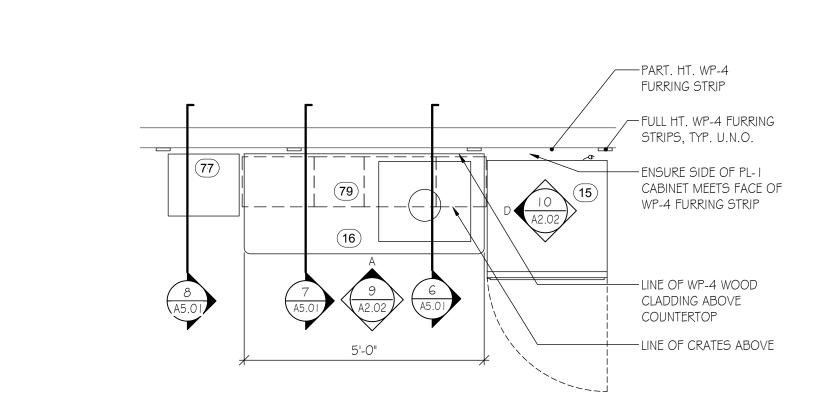


A2.01

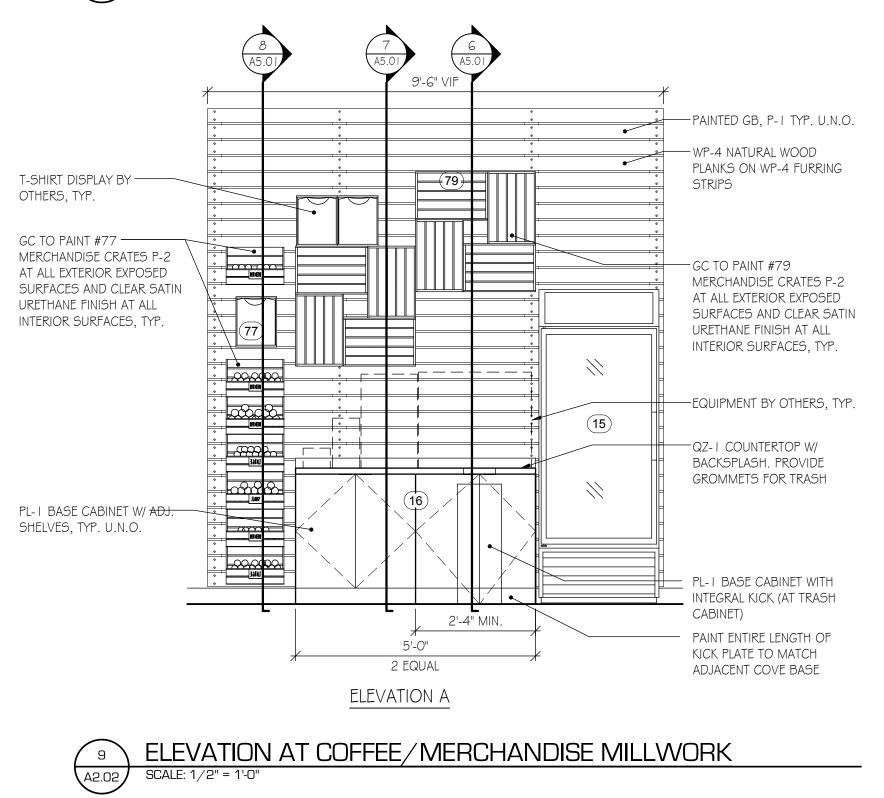
LES

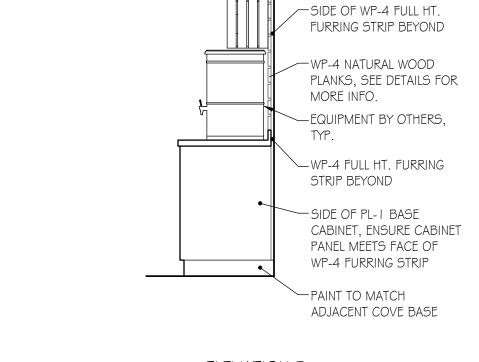
20011











-SIDE OF MERCHANDISE

CRATES AS SCHEDULED

ELEVATION D

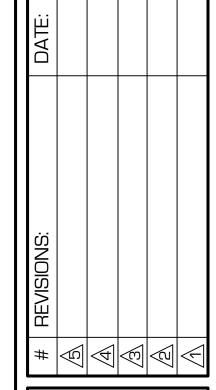


THIS DRAWING IS FOR ILLUSTRATIVE PURPOSES ONL NOT FOR CONSTRUCTION

COPYRIGHT © 2020
BY LARRY E. SAYLOR.
THIS DRAWING AND
INFORMATION RELATED TO
THIS DRAWING SHALL NOT BE
COPIED OR USED IN ANY WAY
WITHOUT WRITTEN
AUTHORIZATION OF LARRY E.
SAYLOR. THIS DRAWING NOT
FOR GENERAL USE AND ALL
RIGHTS ARE RESERVED.

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

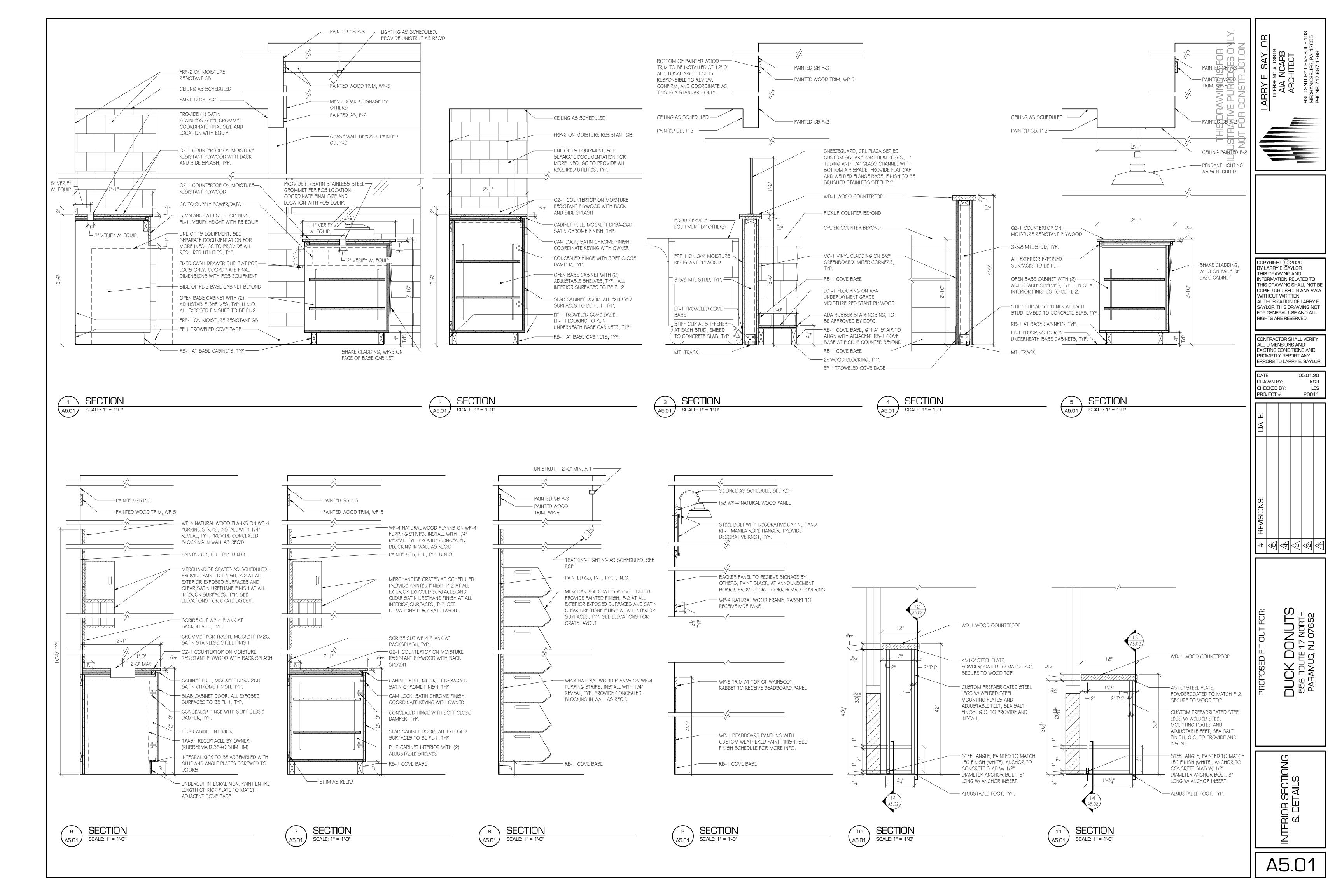


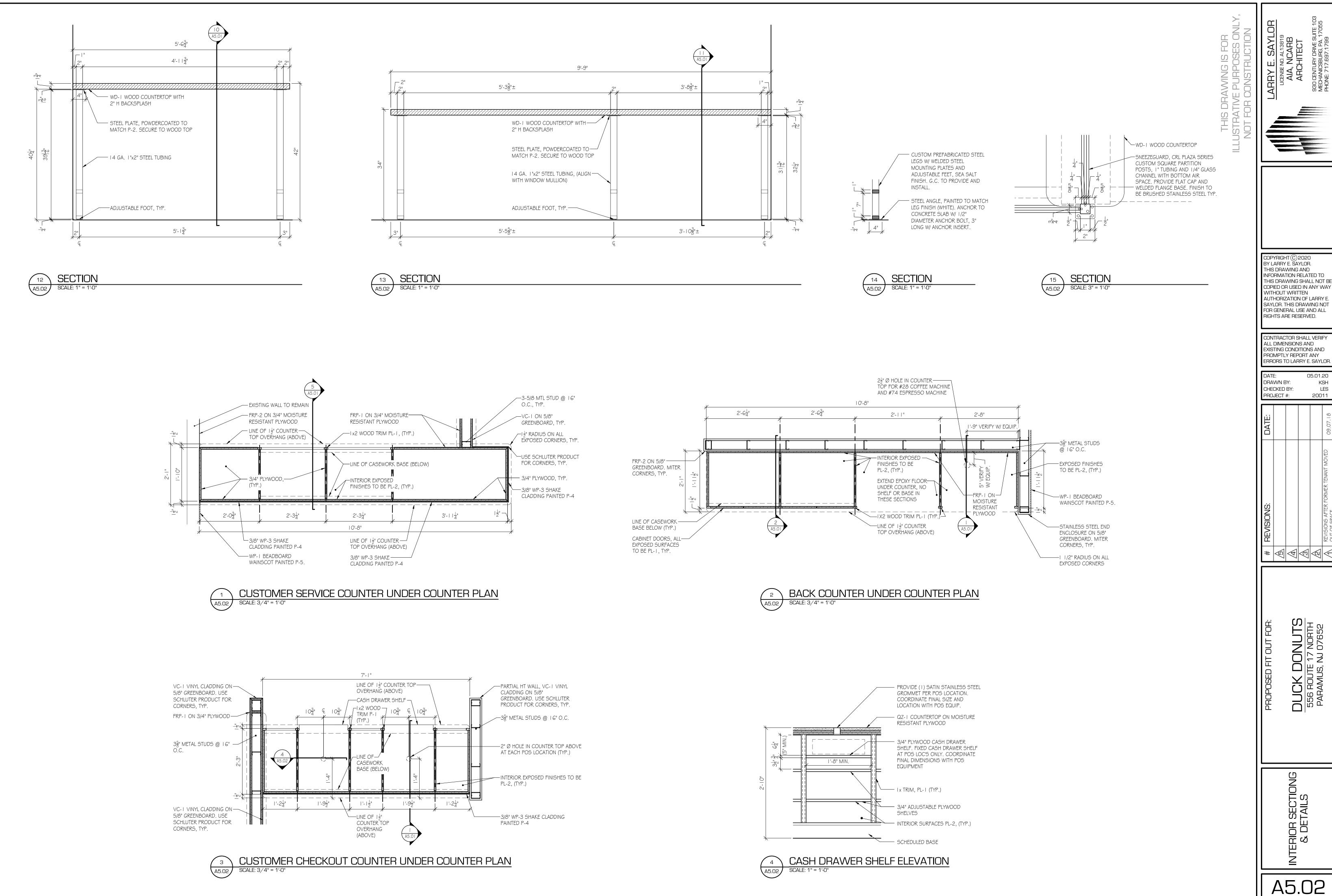
DUCK DONUTS

556 ROUTE 17 NORTH

INTERIOR ELEVATIONS & IILLWORK DETAILS

A2.02





A5.02

LES

20011

CORK BOARD ROI CR- I	<u>L - CR</u>	ROPE - RP RP-1	
MANUFACTURER:		MANUFACTURI	ER: KNOT AND ROPE SUPPLY
TYPE: THICKNESS:	BB14 GRADE CORK ROLL 6.0mm MINIMUM	STYLE: THICKNESS:	MANILA ROPE 3/4"
LOCATION:	ANNOUNCEMENT BOARD, ADJACENT TO PICK UP COUNTER	FINISH: CONTACT:	APPLY FIRE RETARDANT AS REQUIRED FOR C COMPLIANCE CRAIG KEIRSTEAD, 419.873.8300
FIBERGLASS REINI FRP-1	FORCED PANEL - FRP		craig@knotandrope.com
MANUFACTURER: TYPE:	MARLITE STANDARD FRP PANELS	STAINLESS ST	EEL WALL PANEL - SS
FINISH:	WHITE	FINISH:	STAINLESS STEEL
TEXTURE: INSTALL:	SMOOTH HOLD PANELS 6" ABOVE FLOOR. USE MARLITE	FLOORING TRA	NSITION - TS
	M370 PVC EDGE TRIM AT TRANSITION IN WALL FINISH, FRP-1 TO EF-1 TROWELED COVE BASE.	TS- I MANUFACTURI	ER: SCHLUTER
LOCATION:	DIE WALL CLADDING, INTERIOR AT MAIN COUNTER, TYP.U.N.O., AND FULL HEIGHT WALL CLADDING IN	TYPE:	SCHIENE AE 45 SATIN ANODIZED ALUMINUM
	PREP KITCHEN	FINISH: CONTACT:	JOEY MILES, 540.419.7079,
OTHER:	PROVIDE ALL TRIM COMPONENTS FOR COMPLETE INSTALLATION		jmiles@schluter.com
CONTACT:	GREG LEARY, 330.243.7187, gleary@marlite.com	VINYL CLADDIN VC- I	NG - VC
EDD 0	geary@mante.com	MANUFACTURI	ER: PARTERRE VIA DONIA DESIGNS
FRP-2 MANUFACTURER:		COLLECTION: STYLE:	STORRI KENNETT
TYPE:	SYMMETRIX SCORED FRP PANELS, C 100-G63 SUBWAY TILE	COLOR: SIZE:	CHALK 7.25"x48"x0. 20" PLANK
SIZE: COLOR:	4'x I O'x3/32" WHITE W/ SANI-COAT FINISH	NOTE:	FOR VERTICAL INSTALLATIONS USE AEROSOL ADHESIVE PER MFR RECOMMENDATIONS
NOTE:	GC TO PROVIDE SEAMING DIAGRAM AT COFFEE	CONTACT:	KELLY DONIA, 610.517.1329
	PREP WALL AND AREAS WITH SIGNAGE/GRAPHICS, TYP. PROVIDE ALL TRIM COMPONENTS FOR		kelly@doniadesigns.com
CONTACT:	COMPLETE INSTALLATION GREG LEARY, 330.243.7187,	WOOD COUNT	ERTOP - WD
0011171011	gleary@marlite.com	MANUFACTURI	ER: BOSSEN ARCHITECTURAL MILLWORK
FRP-3	ALTERNATE WALL COVERING IN TOILET ROOM	STYLE: SPECIES:	I I/2" COUNTERTOPS AMERICAN WHITE OAK
MANUFACTURER: TYPE:	ARTIZAN FRP PANELS	FINISH: TEXTURE:	LIGHTLY TOASTED RECLAIMED/DESTRESSED LOOK
FINISH: LOCATION:	5343 CREMELLO WAINSCOT PANELS IN ADA TOILET	LOCATION:	DINING BAR COUNTERTOP AND PARTIAL HEIG DIE WALL CAP
OTHER:	PROVIDE ALL TRIM COMPONENTS FOR COMPLETE	OTHER:	USE MANUFACTURER SUPPLIED TOUCH UP KI
	INSTALLATION. TOP OF WAINSCOT TO BE 4'-0" AFF.		ALL EXPOSED JOINTS AND EDGES FOR CONTINUOUS FINISHED COUNTERTOP
CONTACT:	GREG LEARY, 330.243.7187, gleary@marlite.com	CONTACT:	PAUL DENYSE, 856.786.1100 EXT. 103 phd@mouldings-etc.com
METAL - MTL		WALL PROTECT	, - 0
MTL-1	BOSSEN APCHITECTURAL MILLUADE	WP-I	BEAD BOARD WAINSCOT
TYPE:	BOSSEN ARCHITECTURAL MILLWORK STEEL TUBE	STYLE:	ER: NANTUCKET BEADBOARD V-GROOVE SHEET
SIZE: FINISH:	I "x2" TYP. PAINTED TO MATCH P-2	SPECIES:	NATURAL BIRCH VENEER ON MDF SUBSTRATI UNFINISHED
LOCATION:	CUSTOM STEEL METAL LEGS AT DINING COUNTER	SIZE: FINISH:	6" ON CENTER, 1/2" THICK CUSTOM WEATHERED PAINT FINISH WITH PAII
PAINT - P P-I			P-5
MANUFACTURER:	BENJAMIN MOORE	LOCATION:	GENERAL WAINSCOT THROUGHOUT FOH ARE, SEE ELEVATIONS.
COLOR: LOCATION:	2060-70 TEAR DROP GENERAL WALL PAINT IN FOH AREAS, TYP. U.N.O.	OTHER:	PROVIDE MOCK UP FINISH SAMPLE FOR CLIE APPROVAL
P-2	,,	CONTACT:	MAURA CRAGO, 610.640.4180, mcrago@taguelumber.com
MANUFACTURER:	BENJAMIN MOORE	un o	v v
COLOR: LOCATION:	OC-46 HALO PAINT @ MENU BOARD SOFFIT, GYP BD CEILINGS,		SHAKE CLADDING ER: MAIBEC VIA TAGUE LUMBER
	AND ACCENT PAINT @ CRATES	STYLE:	VICTORIAN SQUARE, SAMPLE NUMBER B3703 I -290808-IP
P-3 MANUFACTURER:	BENJAMIN MOORE	SPECIES: GRADE:	EASTERN WHITE CEDAR NANTUCKET
COLOR:	2060-40 TORONTO BLUE	SIZE:	5" WIDTH x 16" LENGTH, 3/8" BASE THICKNES
LOCATION:	EXPOSED CEILINGS (PAINT ALL SURFACES TO MATCH P-3 INCLUDING HVAC AND PIPING	EXPOSURE: FINISH:	5" FACTORY PRE-FINISHED W/ I-COAT OF P-4 P.
	THROUGHOUT, TYP.)	LOCATION: OTHER:	COUNTER DIE WALL AT ORDER AND PICK-UP GC TO PROVIDE PAINT TOUCH UPS IN FIELD
P-4 MANUFACTURFR:	BENJAMIN MOORE	CONTACT:	MAURA CRAGO, 610.640.4180, mcrago@taquelumber.com
COLOR:	1679 BEDFORD BLUE		0
	ACCENT PAINT @ WP-3 SHAKE CLADDING	WP-4 MANUFACTURI	NATURAL WOOD PLANKS ER: GHOST WOOD PRODUCTS
P-5 MANUFACTURER:	SHERWIN WILLIAMS	SPECIES: TEXTURE:	PINE SHIPLAP WEATHERED
COLOR:	SW6860 EROS PINK ACCENT PAINT @ WAINSCOT WP-1, TRIM WP-5,	FINISH:	SILVER CITY FINISHED
LOCATION:	ACCENT PAINT @ WAINSCOT WP-1, TRIM WP-5, AND INTERIOR OF CRATES.	SIZE:	I xG N WITH SQUARE EDGE AT COFFEE/MERCI WALL CLADDING. I x4 N WITH SQUARE EDGE /
PLASTIC LAMINATE	E - PL	LOCATION:	PICTURE RAILS. ACCENT WOOD WALL PLANKS IN DINING AND
PL- I MANUFACTURER:		OTHER:	QUEUE AREAS REFER TO ELEVATIONS FOR MORE INFO.
STYLE:	SOLID 5-030	CONTACT:	HOME DEPOT STORE SKU #1001550240
COLOR: FINISH:	STEEL BLUE ESSE	WP-5	PAINTED WOOD TRIM
LOCATION:	COFFEE/MERCH/TRASH AND COFFEE PREP EXTERIOR BASE CABINETS	MANUFACTURI TYPE:	ER: BY GC PAINT GRADE HARDWOOD
CONTACT:	SUSAN KERSCH, 610.724.2492, susan@kerschdesignresources.com	SPECIES: SIZE:	POPLAR OR SIMILAR 1x4 N
DI O	องอลกเล กอก ออกเนออาหุทก ฮอบบก อฮอ, อบทก	SIZE: FINISH:	PAINTED P-5 AT WP-1 WAINSCOT TRIM, P-3 A
PL-2 MANUFACTURER:		LOCATION:	+ I 2'-0" AFF., AND P- I AT HALL TRIM. TRIM AT TOP OF WP- I WAINSCOT AND
STYLE: COLOR:	SOLID S-032 ASH GREY		CONTINUOUS TRIM AT 12'-0" AFF AT FOH AR IN EXPOSED CEILING CONDITIONS ONLY
FINISH:	ESSE		III DA OOLO OLILINO OONDITIONO UNLI
LOCATION:	COFFEE/MERCH/TRASH CABINET INTERIOR, BASE CABINETS AT ORDER AND PICK UP COUNTERS		
CONTACT:	INTERIOR SUSAN KERSCH, 610.724.2492,	NOTE:	_ FLOORING FINISH MATERIALS ARE SLIP-RESISTAI
	susan@kerschdesignresources.com		ON-GLOSSY OR HIGH POLISHED) PER IBC 1003.4
QUARTZ - QZ			TP BOARD IS CLASS A FINISH MATERIAL PER IBC T
QZ- I MANUFACTURER:			03.9
COLOR: FINISH:	KENSHO POLISHED		NNT SPECIFICATIONS: SHELL @ WALLS (BENJAMIN MOORE, FRESH STAR
EDGE:	3/4"	HIGI	HIDING ALL PURPOSE PRIMER 0046 AND REGAL
LOCATION:	COUNTERTOPS AT ORDER, PICKUP, COFFEE PREP, AND COFFEE/TRASH		ECT WATERBORNE INTERIOR EGGSHELL PAINT 054
CONTACT:	TRACY DELGRIPPO, 267.372.9535, tracyd@cosentino.com		T @ CEILINGS (BENJAMIN MOORE, FRESH START H NG ALL PURPOSE PRIMER 0046 AND REGAL SELEC
PURRED COME BA	, -		TERBOARNE INTERIOR FLAT PAINT 0547).
RUBBER COVE BA			MI-GLOSS @ TRIM (BENJAMIN MOORE, FRESH STA
MANUFACTURER: TYPE:	JOHNSONITE VIA SPARTAN SURFACES TRADITIONAL RUBBER WALL BASE		H HIDING ALL PURPOSE PRIMER 0046 AND REGAL ECT WATERBORNE INTERIOR SEMI-GLOSS PAINT
COLOR:	80 FAWN CB, TYP. U.N.O.	055	
SIZE: OTHER:	4" HIGH, COVED, TYP. U.N.O. PROVIDE PRE-MANUFACTURED CORNERS, TYP.		WORK (BENJAMIN MOORE ADVANCE WATERBORN
	PROVIDE 15.2cm H COVE BASE AND ADA RUBBER NOSING AT OBSERVATION STAIR, SEE	INTE	RIOR ALKYD PAINT PRIMER 790 AND ADVANCE TERBORNE INTERIOR ALKYD SEMI-GLOSS PAINT 79
CONITACT	DETAILS.		
CONTACT:	KEITH KNECHT, 215.272.7085	• BEN	JAMIN MOORE CONTACT: LINDA CIPRIANO,

kknecht@spartansurfaces.com

 SHERWIN WILLIAMS CONTACT: SHELLY BEEKLEY, 215.806.3579, shelly.a.beekley@sherwin.com

703.966.0934, linda.cipriano@benjaminmoore.com

<u>CEILING</u>	FINISHES:
ACOUSTICAL PANI APC - I	EL CEILING - APC
MANUFACTURER:	ARMSTRONG CEILING
TYPE: COLOR:	ultima healthzone White
SIZE: GRID:	24"x24" SQUARE LAY-IN 5/ 6" WHITE
CONTACT:	NANCY MEDL, 215.219.3675,
	namedl@armstrongceilings.com
ACOUSTICAL PANI APC - 2	
MANUFACTURER: TYPE:	ARMSTRONG CEILING CALLA COLORATIONS SQUARE TEGULAR
COLOR: SIZE:	2824LA (LAGOON) 24"x24" SQUARE LAY-IN
GRID:	15/16" LAGOON
NOTE:	ACCENT CEILING TILE/GRID ASSEMBLY TO BE USED IN FRONT OF HOUSE AREAS WHEN
LOCATION:	EXPOSED CEILING (EXP) CANNOT BE ACHIEVED FRONT OF HOUSE AREAS (DINING AND QUEUE
LOCATION.	AREAS WHERE EXP CEILING CONDITION CANNOT
CONTACT:	BE ACHEIVED, DDFC MUST APPROVE) NANCY MEDL, 215.219.3675,
	namedl@armstrongcellings.com
EXPOSED CEILING EXP-I	- EXP
MANUFACTURER:	
TYPE: FINISH:	EXISTING EXPOSED CEILING PAINT P-3 ON ALL SURFACES INCLUDING HVAC
NOTE:	AND PIPING THROUGHOUT, TYP. EXPOSED CEILING IS PREFERRED. WHERE EXPOSE
	CEILINGS CANNOT BE ACHIEVED, PROVIDE APC-2
LOCATION:	CEILING FRONT OF HOUSE AREAS
GYPSUM BOARD -	- GB
GB- I	
MANUFACTURER: TYPE:	GYPSUM WALL BOARD
FINISH: LOCATION:	PAINTED P-2, TYP. PICKUP COUNTER AND U/S SOFFIT AREAS
FLUURIN EPOXY FLOORING	NG FINISHES:
EF-I	(SEE QTF-1 FOR ALTERNATE)
MANILIFACTI IRFR.	
SERIES:	FEATURE FLOORING JETROCK
	FEATURE FLOORING
SERIES: COLOR:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING
SERIES: COLOR: SIZE: OTHER: CONTACT:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com
SERIES: COLOR: SIZE: OTHER:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAM LVT-I MANUFACTURER:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUI JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR RECOMMENDATIONS KELLY DONIA, 610.517.1329
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAY LVT-I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR. RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLANT LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: QUARRY TILE FLOO QTF- I MANUFACTURER:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUI JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: QUARRY TILE FLOO QTF- I MANUFACTURER: SERIES:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: MANUFACTURER: CONTACT: MANUFACTURER: COLOR: SIZE: COLOR: SIZE: COLOR: SIZE: COLOR: SIZE: COLOR: SIZE: SIZE: COLOR: SIZE: SIZE: COLOR: SIZE: SIZE: COLOR: SIZE:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUI JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR. RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES 77507 PURITAN GREY 6"x6"
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: MANUFACTURER: CONTACT: MANUFACTURER: COLOR: SERIES: COLOR: SERIES: COLOR:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES 77507 PURITAN GREY
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: MANUFACTURER: QUARRY TILE FLOO QTF- I MANUFACTURER: SERIES: COLOR: SIZE: GROUT COLOR: OTHER:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUI JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES 77507 PURITAN GREY 6"x6" LATICRETE 27, HEMP PROVIDE COORDINATING 6" TILE COVE BASE IN ALL AREAS WITH QTF-1 FLOORING
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: MANUFACTURER: COLOR: SIZE: COLOR: SIZE: COLOR: SIZE: GROUT COLOR:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR. RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES 77507 PURITAN GREY 6"x6" LATICRETE 27, HEMP PROVIDE COORDINATING 6" TILE COVE BASE IN ALL AREAS WITH QTF-1 FLOORING ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS (OBSERVATION, OPEN KITCHEN, PREP
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: MANUFACTURER: QUARRY TILE FLOO QTF- I MANUFACTURER: SERIES: COLOR: SIZE: GROUT COLOR: OTHER:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR. RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES 77507 PURITAN GREY 6"x6" LATICRETE 27, HEMP PROVIDE COORDINATING 6" TILE COVE BASE IN ALL AREAS WITH QTF-1 FLOORING ALTERNATE FLOORING THROUGHOUT KITCHEN ALTERNATE FLOORING THROUGHOUT KITCHEN ALL AREAS WITH QTF-1 FLOORING ALTERNATE FLOORING THROUGHOUT KITCHEN
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: MANUFACTURER: SIZE: NOTE: CONTACT: MANUFACTURER: SERIES: COLOR: SIZE: GROUT COLOR: OTHER: LOCATION: CONTACT: CONTACT:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORING TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR. RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES 77507 PURITAN GREY 6"x6" LATICRETE 27, HEMP PROVIDE COORDINATING 6" TILE COVE BASE IN ALL AREAS WITH QTF-1 FLOORING ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS (OBSERVATION, OPEN KITCHEN, PREP KITCHEN) ED KLINGIS, 610.279.2700
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: MANUFACTURER: SERIES: COLOR: SIZE: GROUT COLOR: OTHER: LOCATION: CONTACT: CONTACT: CONTACT:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORING TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR. RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES 77507 PURITAN GREY 6"x6" LATICRETE 27, HEMP PROVIDE COORDINATING 6" TILE COVE BASE IN ALL AREAS WITH QTF-1 FLOORING ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS (OBSERVATION, OPEN KITCHEN, PREP KITCHEN) ED KLINGIS, 610.279.2700 ITION - TS FLOORING TRANSITION BETWEEN LVT-1 AND EF-
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: MANUFACTURER: SERIES: COLOR: SIZE: GROUT COLOR: OTHER: LOCATION: CONTACT: CONTACT: CONTACT: CONTACT: FLOORING TRANS TS- I MANUFACTURER: SERIES: COLORING TRANS TS- I MANUFACTURER: SERIES:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORING TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR. RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES 77507 PURITAN GREY 6"x6" LATICRETE 27, HEMP PROVIDE COORDINATING 6" TILE COVE BASE IN ALL AREAS WITH QTF-1 FLOORING ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS (OBSERVATION, OPEN KITCHEN, PREP KITCHEN) ED KLINGIS, 610.279.2700 ITION - TS FLOORING TRANSITION BETWEEN LVT-1 AND EF- SCHLUTER SCHIENE AE 45
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: MANUFACTURER: COLOR: SIZE: NOTE: CONTACT: COLOR: SIZE: GROUT COLOR: OTHER: LOCATION: CONTACT: FLOORING TRANS TS- I MANUFACTURER:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES 77507 PURITAN GREY 6"x6" LATICRETE 27, HEMP PROVIDE COORDINATING 6" TILE COVE BASE IN ALL AREAS WITH QTF-1 FLOORING ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS (OBSERVATION, OPEN KITCHEN, PREP KITCHEN) ED KLINGIS, 610.279.2700 ITION - TS FLOORING TRANSITION BETWEEN LVT-1 AND EF- SCHLUTER
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLOR: SIZE: NOTE: CONTACT: MANUFACTURER: SERIES: COLOR: SIZE: GROUT COLOR: OTHER: LOCATION: CONTACT: FLOORING TRANS TS- I MANUFACTURER: SERIES: FINISH: CONTACT:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUI JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA 6"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES 77507 PURITAN GREY 6"x6" LATICRETE 27, HEMP PROVIDE COORDINATING 6" TILE COVE BASE IN ALL AREAS WITH QTF-1 FLOORING ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS (OBSERVATION, OPEN KITCHEN, PREP KITCHEN) ED KLINGIS, 610.279.2700 ITION - TS FLOORING TRANSITION BETWEEN LVT-1 AND EF- SCHILUTER SCHIENE AE 45 SATIN ANODIZED ALUMINUM JOEY MILES, 540.419.7079, JIMIES@schluter.com E FLOORING - VCT 2ND ALTERNATE FLOORING THROUGHOUT TON ATTERNATE FLOORING THROUGHOUT TON ALTERNATE FLOORING THROUGHOUT
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: MANUFACTURER: SERIES: COLOR: SIZE: GROUT COLOR: OTHER: LOCATION: CONTACT: MANUFACTURER: SERIES: COLOR: SIZE: GROUT COLOR: OTHER: LOCATION: WINYL COMPOSITE VCT- I MANUFACTURER:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/16" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORING TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA G"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES 77507 PURITAN GREY G"X6" LATICRETE 27, HEMP PROVIDE COORDINATING 6" TILE COVE BASE IN ALL AREAS WITH QTF-1 FLOORING ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS (OBSERVATION, OPEN KITCHEN, PREP KITCHEN) ED KLINGIS, 610.279.2700 ITION - TS FLOORING TRANSITION BETWEEN LVT-1 AND EF- SCHLUTER SCHIENE AE 45 SATIN ANODIZED ALUMINUM JOEY MILES, 540.419.7079, JMILES@schluter.com E FLOORING - VCT 2ND ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 ARMSTRONG
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: MANUFACTURER: SERIES: COLOR: SIZE: GROUT COLOR: OTHER: LOCATION: CONTACT: FLOORING TRANS TS- I MANUFACTURER: SERIES: FINISH: CONTACT: VINYL COMPOSITE VCT- I MANUFACTURER: SERIES: COLOR: SIZE: GROUT COLOR: OTHER: LOCATION: MANUFACTURER: SERIES: FINISH: CONTACT: VINYL COMPOSITE VCT- I MANUFACTURER: SERIES: COLOR:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/1 G" THICK TROWEL JETROCK UP WALL G" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA G"X3G"XO. 120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR. RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES 77507 PURITAN GREY G"XG" LATICRETE 27, HEMP PROVIDE COORDINATING 6" TILE COVE BASE IN ALL AREAS WITH QTF-1 FLOORING ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS (OBSERVATION, OPEN KITCHEN, PREP KITCHEN) ED KLINGIS, 610.279.2700 ITION - TS FLOORING TRANSITION BETWEEN LVT-1 AND EF- SCHILUTER SCHIENE AE 45 SATIN ANODIZED ALUMINUM JOEY MILES, 540.419.7079, JMILES@schluter.com E FLOORING - VCT 2ND ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 ARMSTRONG STANDARD EXCELON IMPERIAL TEXTURE FIELD GRAY
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: MANUFACTURER: SERIES: COLOR: SIZE: GROUT COLOR: OTHER: LOCATION: CONTACT: FLOORING TRANS TS- I MANUFACTURER: SERIES: FINISH: CONTACT: VINYL COMPOSITE VCT- I MANUFACTURER: SERIES: FINISH: CONTACT:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/1 G" THICK TROWEL JETROCK UP WALL 6" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUL JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA C"X3G"X0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR. RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES 77507 PURITAN GREY G"XG" LATICRETE 27, HEMP PROVIDE COORDINATING 6" TILE COVE BASE IN ALL AREAS WITH QTF-1 FLOORING ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS (OBSERVATION, OPEN KITCHEN, PREP KITCHEN) ED KLINGIS, 610.279.2700 ITION - TS FLOORING TRANSITION BETWEEN LVT-1 AND EF- SCHLUTER SCHILUTER SCHIENE AE 45 SATIN ANODIZED ALUMINUM JOEY MILES, 540.419.7079, JIMIES@schluter.com E FLOORING - VCT 2ND ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 ARMSTRONG STANDARD EXCELON IMPERIAL TEXTURE FIELD GRAY 12"x12"x1/8"
SERIES: COLOR: SIZE: OTHER: CONTACT: LINEAR VINYL PLAN LVT- I MANUFACTURER: COLLECTION: STYLE: COLOR: SIZE: NOTE: CONTACT: MANUFACTURER: SERIES: COLOR: SIZE: GROUT COLOR: OTHER: LOCATION: CONTACT: FLOORING TRANS TS- I MANUFACTURER: SERIES: FINISH: CONTACT: VINYL COMPOSITE VCT- I MANUFACTURER: SERIES: COLOR: SIZE: GROUT COLOR: OTHER: LOCATION: MANUFACTURER: SERIES: CONTACT: VINYL COMPOSITE VCT- I MANUFACTURER: SERIES: COLOR: SIZE: COLOR: SIZE: COLOR: SIZE:	FEATURE FLOORING JETROCK MOUNTAIN SLATE 3/1 G" THICK TROWEL JETROCK UP WALL G" FOR INTEGRAL COVE BASE, TYP. PROVIDE TRANSITION STRIP A REQUIRED PER ADJACENT FINISHES. EF FLOORIN TO EXTEND UNDER ALL MILLWORK, TYP. CONSUI JETROCK TYPICAL DETAILS FOR FLOORING TRANSITIONS BASED ON SITE CONDITIONS. LEE BLAKE, 443.409.0150 lee.blake@featureflooring.com NK TILE - LVT PARTERRE VIA DONIA DESIGNS INGRAINED LANCASTER PATINA G"x36"x0.120 (3mm) PLANK PREPARE SUBSTRATE AND INSTALL PER ALL MFR RECOMMENDATIONS KELLY DONIA, 610.517.1329 kelly@doniadesigns.com DRING - QTF ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 METROPOLITAN CERAMICS QUARRY BASICS CLEAR TONES 77507 PURITAN GREY G"x6" LATICRETE 27, HEMP PROVIDE COORDINATING 6" TILE COVE BASE IN ALL AREAS WITH QTF-1 FLOORING ALTERNATE FLOORING THROUGHOUT KITCHEN AREAS (OBSERVATION, OPEN KITCHEN, PREP KITCHEN) ED KLINGIS, 610.279.2700 ITION - TS FLOORING TRANSITION BETWEEN LVT-1 AND EF- SCHILUTER SCHIENE AE 45 SATIN ANODIZED ALUMINUM JOEY MILES, 540.419.7079, JMILES SCHIUTER. SCHIENE AE 45 SATIN ANODIZED ALUMINUM JOEY MILES, 540.419.7079, JMILES SCHIUTER. SCHIENE AE 45 SATIN ANODIZED ALUMINUM JOEY MILES, 540.419.7079, JMILES SCHIUTER. SCHIENE AE 45 SATIN ANODIZED ALUMINUM JOEY MILES, 540.419.7079, JMILES SCHIUTER. SCHIENE AE 45 SATIN ANODIZED ALUMINUM JOEY MILES, 540.419.7079, JMILES SCHIUTER. SCHIENE AE AS SATIN ANODIZED ALUMINUM JOEY MILES, 540.419.7079, JMILES SCHIUTER. SCHIENE AE AS SATIN ANODIZED ALUMINUM JOEY MILES, 540.419.7079, JMILES SCHIUTER. SCHIENE AE AS SATIN ANODIZED ALUMINUM JOEY MILES, 540.419.7079, JMILES GENORING THROUGHOUT KITCHEN AREAS IN LIEU OF EF-1 ARMSTRONG STANDARD EXCELON IMPERIAL TEXTURE FIELD GRAY

GULAR		
BLY TO BE WHEN		
BE ACHIEVED AND QUEUE		
ITION CANNOT DVE)		
		LO
	NO.	
	101	DININ
UDING HVAC WHERE EXPOSED	102	RETAI
PROVIDE APC-2	103	CORF
	104	UTILIT
	105	TOILE
	106	ELECT OFFIC
AREAS	108	KITCH
	109	SERVI
	110	OBSE
, TYP. CONSULT OORING NDITIONS.		
. PER ALL MFR.		
OUT KITCHEN		
COVE BASE IN ; DUT KITCHEN CHEN, PREP		
LVT-1 AND EF-1		
JGHOUT		
KTURE		
EAS OF VCT-1 OUT KITCHEN CHEN, PREP		

									=	DULE	CHED	ISH S	FINI	OOM	R											
															5	WALL										
	WORK	CASE		DOW	WINE		OR	DO	` 7	CEILING	(EST	W	UTH	50	AST	E,	RTH	NO	-	BASE		FLOOR	f	LOCATION	
REMARKS	CNTR	CAB	TREAT	TRIM	SILL	WDW	TRIM	DOOR	HT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	HT.	FIN.	MAT.	FIN.	SUB.	ROOM NAME	NO.
	QZ-1	-	-	-	-	-	ETR	ETR	20'-4"±	P-3	EXP	P-3, P-1, P-5	EGB, WP-I	P-3, P-1, P-5	EGB, WP-I	P-3, P-1, P-5		P-3, P-2, P-4	GB, WP-3	4"	-	RB-1	LVT-I	С	DINING	01
PROVIDE 6" H COVE BASE AND ADA RUE NOSING AT OBSERVATION STAIR.	QZ-I	-	-	-	-	-	-	-	20'-4"±	P-3	EXP	P-3, P-4, P-2	VC-I	-	-	P-3, P-1, P-5	WP-4	P-3, P-2, P-1, P-4	GB, WP-3	4"	-	RB-1	LVT-1	С	RETAIL	102
	-	-	-	-	-	-	P-5	P-5	9'-0"	-	APC-I	P-5, P-1	WP-I, EGB, GB	P-5 P-1	WP-1 GB	P-5 P-1	WP-1 EGB	P-5 P-1	WP-1 EGB	4"	-	RB-1	LVT-1	С	CORRIDOR	103
	-	-	-	-	-	-	P-5	P-5	9'-0"	-	APC-I	FRP-1	GB	FRP-1	GB	FRP-1	GB	FRP-1	EGB	6"	-	EF-1	EF-I	С	UTILITY	04
SEE DEMOLITION NOTE 2 ON SHEET A1.	-	-	-	-	-	-	P-5	P-5	9'-0"	-	APC-I	P-1, FRP-3	EGB	P-1, FRP-3*	EGB	P-1, FRP-3*	EGB	P-1, FRP-3*	EGB	4"	-	RB-1	LVT- I	С	TOILET	105
	-	-	-	-	-	-	P-2	P-2	9'-0"	-	APC-1	P-2	EGB	P-2	EGB	P-2	EGB	P-2	EGB	6"	-	EF-I	EF-I	С	ELECTRIC	06
	-	-	-	-	-	-	P-2	P-2	9'-0"	-	APC-1	P-2	GB	P-2	GB	P-2	GB	P-2	GB	6"	-	EF-1	EF-I	С	OFFICE	107
	-	-	-	-	-	-	-	-	9'-0"	-	APC-I	FRP-1	EGB	FRP-1	GB	FRP-1	GB	FRP-1	GB, EGB	6"	-	EF-1	EF-I	С	KITCHEN	108
	QZ-I	PL-2	-	-	-	-	-	-	9'-0"	-	APC-I	-	-	VC-I	GB	FRP-2, VC-1	GB	FRP-2	GB	6"	-	EF-I	EF-I	С	SERVICE	109
	QZ-1	PL-2	-	-	-	-	-	-	9'-0"	-	APC-1	FRP-2, SS-1	EGB	1	-	FRP-1	GB	FRP-2	GB	6"	-	EF-I	EF-I	С	OBSERVATION	10

	DOOR SCHEDULE															
	DOOR DESCRIPTION FRAME											HDW	REMARKS			
NO.	LOCATION	RATING	TYPE	WIDTH	HEIGHT	THICK.	MAT'L.	GLS.	TYPE	HEAD DETAIL	JAMB DETAIL	SILL DETAIL	MAT'L.	WIDTH	TYP.	KLIVIANO
IOIA	DINING - 101	-	ETR	-	-	-	-	-	-	-	-	-	-	-	ETR	
103A	CORRIDOR - 103	-	ETR	-	-	-	-	-	-	-	-	-	-	-	ETR	SEE FINISH SCHEDULE FOR DOOR FINISH
104A	UTILITY - 104	-	А	3'-0"	7'-0"	1 3/4"	НМ	-	HM-I	H-1	J- I	S-I	НМ	5 5/8"	2.0	
105A	TOILET - 105	-	ETR	-	-	-	-	-	-	-	-	-	-	-	1.0	SEE FINISH SCHEDULE FOR DOOR FINISH
106A	ELECTRIC - 106	-	ETR	-	-	-	-	-	-	-	-	-	-	-	2.0	SEE FINISH SCHEDULE FOR DOOR FINISH
107A	OFFICE - 107	-	А	3'-0"	7'-0"	1 3/4"	НМ	-	HM-I	H-1	J- I	S-I	НМ	5 5/8"	3.0	

3.01 HARDWARE SCHEDULE

A. THE HARDWARE SETS REPRESENT THE DESIGN INTENT AND DIRECTION OF THE OWNER AND ARCHITECT. THEY ARE A GUIDELINE ONLY AND SHOULD NOT BE CONSIDERED A DETAILED HARDWARE SCHEDULE. DISCREPANCIES, CONFLICTING HARDWARE AND MISSING ITEMS SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT WITH CORRECTIONS MADE PRIOR TO THE BIDDING PROCESS. OMITTED ITEMS NOT INCLUDED IN A HARDWARE SET SHOULD BE SCHEDULED WITH THE APPROPRIATE ADDITIONAL HARDWARE REQUIRED FOR PROPER APPLICATION AND FUNCTIONALITY.

HARDWARE SET 1.0

Doors: 105A

3 Hinges I Privacy Locks, Lever I Door Closer

Stanley, FBB 168 Series 4½", Primed for Paint, Painted P-5 Schlage, ND-Series Heavy Duty Lockset, Athens Lever, ND40S Bath/Privacy Lock, Finish: US26D Satin Chrome LCN, 1460 Series Overhead Closer, Hinge (Pull Side) Mounting, Aluminum (689) Finish Ives, FS I 3 Floor Dome Stop, US26D Satin Chrome Finish

I Wall Stop 3 Silencers Ives, SR64 Gray Finish

HARDWARE SET 2.0

Doors: 104A, 106A

3 Hinges Stanley, FBB 168 Series $4\frac{1}{2}$, Primed for Paint, Painted P-5 l Lockset, Lever I Door Closer LCN, 1460 Series Overhead Closer, Hinge (Pull Side) Mounting,

Aluminum (689) Finish Ives, FS I 3 Floor Dome Stop, US26D Satin Chrome Finish I Wall Stop Ives, SR64 Gray Finish 3 Silencers

REFER TO

SCHEDULE

TYPE 'A'

DOOR ELEVATIONS

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

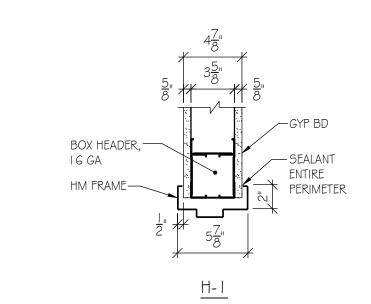
HARDWARE SET 3.0 Doors: 107A

> REFER TO $2" - SCHEDULE \cdot [-2]$

> > HM-I

DOOR FRAME ELEVATIONS

Stanley, FBB 168 Series $4\frac{1}{2}$, Primed for Paint, Painted P-5 3 Hinges I Cylindrical Lock (classroom) Schlage ND 70 Heavy Duty Classroom Lever Lock, RHO, 626 3 Silencers Ives, SR64 Gray Finish



DOOR SCHEDULE NOTES:

APPROVED EQUAL, TYPE MFPC5 FLUSH DOOR "B"

GRADE VENEER, PRIMED 6 SIDES, 5-PLY PARTICLE

BOARD CORE W/ BIRCH VENEER, PAINTED P-5.

2. DOOR FRAME MANUFACTURER TO BE STEELCRAFT

OR APPROVED EQUAL. COLD ROLLED STEEL

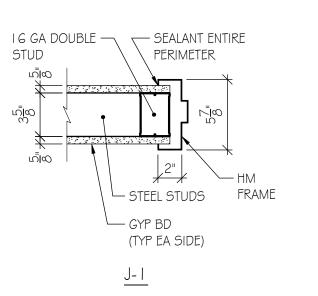
KNOCKDOWN FRAME, PRIMED AND PAINTED.

REMAIN: GC TO REPAIR FINISH TO LIKE NEW

3. ALL DOORS \$ FRAMES THAT ARE EXISTING TO

CONDITION AS REQUIRED.

I. DOOR MANUFACTURER TO BE MOHAWK OR



__WOOD DOOR FINISH — FLOOR

ABBREVIATIONS:

EXP

FRP

505

55

VCT WC

WD

ACOUSTICAL PANEL CEILING BEAD BOARD CONCRETE CORK BOARD ROLL EXISTING CONCRETE **EPOXY FLOORING** EXISTING GYP BD EXISTING TO REMAIN

EGB ETR EXPOSED CEILING FIBERGLASS REINFORCED PANEL GROUT GYPSUM BOARD HOLLOW METAL

GB НМ LVT LINEAR VINYL PLANK TYLE MTL METAL PAINT QTF QUARRY TILE FLOORING QZ QUARTZ RB

RUBBER COVE BASE SCWD SOLID CORE WOOD DOOR SOLID SURFACE STAINLESS STEEL STAIR TREAD

TEMPERED GLASS TEMPERED INSULATED GLASS FLOORING TRANSITION VINYL COVE WALL BASE VINYL COMPOSITE TILE VINYL WALL COVERING WOOD COUNTERTOP WALL PROTECTION

DOOR FRAME DETAILS SCALE: 1 1/2" = 1'-0"

<u>S-1</u>

A5.03

COPYRIGHT(C)2020

BY LARRY E. SAYLOR.

THIS DRAWING AND

WITHOUT WRITTEN **AUTHORIZATION OF LARRY E.**

INFORMATION RELATED TO

THIS DRAWING SHALL NOT BE

COPIED OR USED IN ANY WAY

SAYLOR. THIS DRAWING NOT

FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

CONTRACTOR SHALL VERIFY

EXISTING CONDITIONS AND

ERRORS TO LARRY E. SAYLOF

4 4 4

LES

20011

PROMPTLY REPORT ANY

DRAWN BY:

CHECKED BY:

PROJECT #:

ALL DIMENSIONS AND

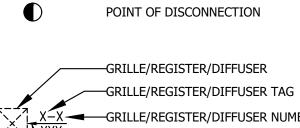
MECHANICAL ABBREVIATIONS

			-
AC ACC	ALTERNATING CURRENT AIR COOLED CONDENSER	KW KWH	KILOWATTS KILOWATT HOUR
ACU	AIR CONDITIONING UNIT		
AD ADJ	ACCESS DOOR ADJUSTABLE	LAT	LEAVING AIR TEMPERATURE (°F)
AF	AIR FOIL	LBS	POUNDS
AFF AHU	ABOVE FINISHED FLOOR AIR HANDLING UNIT	LD	LINEAR DIFFUSER
AP	ACCESS PANEL	LF	LINEAR FEET
ARCH ATC	ARCHITECTURE AUTOMATIC TEMPERATURE CONTROL	LWT	LEAVING WATER TEMPERATURE (°F)
ATM	ATMOSPHERE		
AUX AVG	AUXILIARY AVERAGE	M MAU	MOTOR OPERATED MAKEUP AIR UNIT
AWG	AMERICAN WIRE GAUGE	MAX	MAXIMUM
		MB MBH	MIXING BOX 1000 BTUH
В	BOILER	MC	MECHANICAL CONTRACTOR
BDD BHP	BACKDRAFT DAMPER BRAKE HORSEPOWER	MCC MFR	MOTOR CONTROL CENTER MANUFACTURER
BOD	BOTTOM OF DUCT	MIN	MINIMUM
BOS BTU	BOTTOM OF STEEL BRITISH THERMAL UNIT	MISC MMBH	MISCELLANEOUS 1,000,000 BTUH
BTUH	BTU PER HOUR		,,
CAV	CONSTANT ATD VOLLIME	NA NC	NOT APPLICABLE
CAV CC	CONSTANT AIR VOLUME COOLING COIL	NC NC	NOISE CRITERIA, dB RE 20 uPa NORMALLY CLOSED
CFM CH	CUBIC FEET PER MINUTE CHILLER	NIC NO	NOT IN CONTRACT NORMALLY OPEN
C&I	CHILLER CONTROLS & INSTRUMENTATION	NO NTS	NOT TO SCALE
CLG	CEILING	^	
CMU COND	CONCRETE MASONRY UNIT CONDENSATE	OA OAT	OUTSIDE AIR OUTSIDE AIR TEMPERATURE
CONT	CONNECTION	OAD	OUTSIDE AIR DAMPER
CONT. CORR	CONTINUATION CORRIDOR	OBD OZ	OPPOSED BLADE DAMPER OUNCE
CT CU	COOLING TOWER CONDENSING UNIT		
CUH	CABINET UNIT HEATER	Р	PUMP
CV	CONTROL VALVE	PC PD	PLUMBING CONTRACTOR
CU FT CVS	CUBIC FEET CONTROL VALVE STATION	PH	PRESSURE DROP PHASE
		PHC PROP	PREHEAT COIL PROPELLER
		PSI	PROPELLER POUNDS PER SQUARE INCH
D dB	DIFFUSER OR REGISTER DECIBEL, RE 10 WATT	PSIG P+F	PSI, GAUGE PITCH AND FLOW
DBT	DRY BULB TEMPERATURE (°F)	FTI	FITCH AND I LOW
DDC DEG	DIRECT DIGITAL CONTROL DEGREE FAHRENHEIT (°F)	QTY	QUANTITY
DIA	DIAMETER		
DIM DN	DIMENSION DOWN	R RA	REGISTER RETURN AIR
DP	DEW POINT TEMPERATURE (°F)	RC	ROOM CRITERIA, dB RE 20 uPa
DX DWG	DIRECT EXPANSION DRAWING	RF RH	RETURN/RELIEF AIR FAN RELATIVE HUMIDITY
	Divwing	RHC	REHEAT COIL
E EA	EXHAUST EXHAUST AIR	RPM	REVOLUTIONS PER MINUTE
EAT	ENTERING AIR TEMPERATURE (°F)	_	
EC EER	ELECTRICAL CONTRACTOR ENERGY EFFICIENCY RATIO	S SA	SMOKE DETECTOR SUPPLY AIR
EF	EXHAUST FAN	SEER	SEASONAL ENERGY EFFICIENCY RATI
EFF ELEV	EFFICIENCY ELEVATION	SENS SF	SENSIBLE SQUARE FEET
ESP	EXTERNAL STATIC PRESSURE	SP	STATIC PRESSURE (IN. WG.)
ET ETR	EXPANSION TANK EXISTING TO REMAIN	SPEC SQ	SPECIFICATION SQUARE
EWT	ENTERING WATER TEMPERATURE (°F)	SS	STAINLESS STEEL
F	FILTER	SV	SOLENOID VALVE
FA FC	FACE AREA FORWARD CURVED	Т	THERMOSTAT
FCU	FAN COIL UNIT	TEMP	TEMPERATURE (°F)
FD FLR	FLOOR DRAIN FLOOR	TOD TOP	TOP OF DUCT TOP OF PIPE
FP	FIRE PROTECTION	TOS	TOP OF STEEL
FPM FR	FEET PER MINUTE FINNED RADIATION	TSP TSTAT	TOTAL STATIC PRESSURE THERMOSTAT
FT	FEET	TYP	TYPICAL
FVEL F&T	FACE VELOCITY FLOAT AND THERMOSTATIC		
		UC UH	UNDERCUT UNIT HEATER
GA	GAUGE OR GAGE	UL	UNDERWRITERS LABORATORY
GAL GALV	GALLON GALVANIZED	UV	UNIT VENTILATOR
GC	GENERAL CONTRACTOR		VALVE VOLT
GH GPM	GRAVITY HOOD GALLONS PER MINUTE	V VA	VALVE, VOLT VOLT-AMPERE
		VD	VOLUME DAMPER
HC HOA	HEATING COIL HAND-OFF-AUTOMATIC	VEL VFD	VELOCITY VARIABLE FREQUENCY DRIVE
HOA HP	HAND-OFF-AUTOMATIC HORSEPOWER	VFV	VAV, WITH FAN
HR	HOUR	VOL	VOLUME
HVU HWST	HEATING & VENTILATING UNIT HOT WATER SUPPLY TEMPERATURE		MATT
HX	HEAT EXCHANGER	W WB	WATT WET BULB TEMPERATURE (°F)
IB	INVERTED BUCKET TRAP	WC	WATER COLUMN
IFB	INVERTED BUCKET TRAP INTEGRAL FACE & BYPASS	WG WMS	WATER GAUGE WIRE MESH SCREEN
IN	INCH		<u></u>

IRON PIPE SIZE

PIPING SYMBOLS

	(NAME) E ———	—— EXISTING PIPE
		EXISTING PIPE TO BE REMOVED
	, ,	
<u>HEATING</u>		
	Α ———	COMPRESSED AIR
	ATV —	ATMOSPHERIC VENT
	PC	PUMPED CONDENSATE
	MU	MAKE-UP WATER (COLD WATER FILL)
	VAC ———	VACUUM AIR
	HWS ———	LOW TEMPERATURE HOT WATER SUPPLY
	HWR	LOW TEMPERATURE HOT WATER RETURN
	HPS —	HIGH PRESSURE STEAM
	MPS —	MEDIUM PRESSURE STEAM
	LPS —	LOW PRESSURE STEAM
	HPC	HIGH PRESSURE CONDENSATE
	MPC	MEDIUM PRESSURE CONDENSATE
	LPC	LOW PRESSURE CONDENSATE
AIR CONDI	ITIONING & RE	FRIGERATION CONDENSER WATER SUPPLY
AIR CONDI	ITIONING & RE	
AIR CONDI	ITIONING & RE	
AIR CONDI	ITIONING & RE CS ——— CR ———	CONDENSER WATER SUPPLY
AIR COND	CS ————————————————————————————————————	CONDENSER WATER SUPPLY CONDENSER WATER RETURN
AIR COND	CS ————————————————————————————————————	CONDENSER WATER SUPPLY CONDENSER WATER RETURN DUAL TEMPERATURE WATER SUPPLY
AIR COND	CS ————————————————————————————————————	CONDENSER WATER SUPPLY CONDENSER WATER RETURN DUAL TEMPERATURE WATER SUPPLY DUAL TEMPERATURE WATER RETURN
AIR COND	CS ————————————————————————————————————	CONDENSER WATER SUPPLY CONDENSER WATER RETURN DUAL TEMPERATURE WATER SUPPLY DUAL TEMPERATURE WATER RETURN DRAIN LINE
AIR COND	CS ————————————————————————————————————	CONDENSER WATER SUPPLY CONDENSER WATER RETURN DUAL TEMPERATURE WATER SUPPLY DUAL TEMPERATURE WATER RETURN DRAIN LINE FILL LINE
AIR COND	CS ————————————————————————————————————	CONDENSER WATER SUPPLY CONDENSER WATER RETURN DUAL TEMPERATURE WATER SUPPLY DUAL TEMPERATURE WATER RETURN DRAIN LINE FILL LINE REFRIGERANT LIQUID
AIR COND	CS ————————————————————————————————————	CONDENSER WATER SUPPLY CONDENSER WATER RETURN DUAL TEMPERATURE WATER SUPPLY DUAL TEMPERATURE WATER RETURN DRAIN LINE FILL LINE REFRIGERANT LIQUID REFRIGERANT SUCTION
AIR COND	CS ————————————————————————————————————	CONDENSER WATER SUPPLY CONDENSER WATER RETURN DUAL TEMPERATURE WATER SUPPLY DUAL TEMPERATURE WATER RETURN DRAIN LINE FILL LINE REFRIGERANT LIQUID REFRIGERANT SUCTION CHILLED WATER SUPPLY



POINT OF NEW CONNECTION

GRILLE/REGISTER/DIFFUSER TAG X-X GRILLE/REGISTER/DIFFUSER NUMBER BALANCING CFM —AIR FLOW DIRECTION THERMOSTAT

MOUNT TOP OF THERMOSTAT 48" AFF REVERSE ACTING THERMOSTAT, MOUNT TOP OF THERMOSTAT 48" AFF TEMPERATURE SENSOR, MOUNT TOP OF SENSOR 48" AFF

EMERGENCY BOILER SHUTOFF, MOUNT TOP OF CONTROLS 48" AFF

DUCT WU	RK SYMBOLS	
DOUBLE LINE		SINGLE LINE
20x12	DUCT WIDTH x DEPTH	20x12
	DUCT TO BE REMOVED	<i>5</i>
	ACOUSTICAL DUCT LINING	
2 10"	ROUND DUCT	10"
	INCLINED RISE, IN DIRECTION OF AIR FLOW	S R
D -	INCLINED DROP, IN DIRECTION OF AIR FLOW	<u> </u>
	FLEXIBLE DUCT CONNECTION	5
	ELBOW WITH TURNING VANES	
	STANDARD RADIUS ELBOW	
, ,	DAMPER IN————————————————————————————————————	~ ^ ~
	FIRE/SMOKE	
S	SMOKE DETECTOR	S
VD VD	MANUAL VOLUME DAMPER	√D √D
M	MOTOR OPERATED DAMPER	M
BDD	BACKDRAFT DAMPER	BDD
	RUNOUT TO SQUARE SUPPLY DIFFUSER WITH FLEX DUCT	,—
	RUNOUT TO ROUND SUPPLY DIFFUSER WITH FLEX DUCT	$\leftarrow \sim \sim$
	RETURN GRILLE/REGISTER	,
	RETURN GRILLE/REGISTER SUPPLY REGISTER, DIFFUSER, OR GRILLE (WALL TYPE)	,

DUCTWORK SYMBOLS

MISCELLANEOUS	
SUPPLY DIFFUSER 4-WAY BLOW	
SUPPLY DIFFUSER 2-WAY BLOW	—
SUPPLY DUCT (SECTION)	
RETURN, OR TRANSFER DUCT (SECTION)	
EXHAUST DUCT (SECTION)	

PIPING SYMBOLS

早 ^{AV}	
MVı	— AUTOMATIC AIR VENT
MV; 	— MANUAL AIR VENT
D	— CONCENTRIC REDUCER OR INCREASER
	ECCENTRIC REDUCER OR INCREASER
I	TOD COMMECTION AT DEC OD 00 DEC
	TOP CONNECTION, 45 DEG OR 90 DEGBOTTOM CONNECTION, 45 DEG OR 90 DEG
Ť	— BOTTOM CONNECTION, 43 DEG OR 30 DEG
	— SIDE CONNECTION OR TEE FITTING
	CAPPED OUTLET
>	— CHANGE IN ELEVATION OF PIPE
0	PIPE RISE OR ELBOW TURNED UP
	PIPE DROP OR ELBOW TUNED DOWNUNION OR FLANGE
	STRAINERSTRAINER W/ BLOWDOWN
	AND HOSE END CONNECTION
¥	— THERMOMETER
Q	
<u>T</u>	— PRESSURE GAUGE
T	THERMOMETER WELL
T	— NEEDLE VALVE
₽FS	— FLOW SWITCH
₽PS	PRESSURE SWITCH
₽P/T	— TEST PLUG
	— PUMP
	BLIND FLANGE
——————————————————————————————————————	HOSE END CONNECTION
X	— PIPE ANCHOR
	PIPE GUIDE
	— EXPANSION JOINT
\square	— FLOAT & THERMOSTATIC STEAM TRAP
	— INVERTED BUCKET STEAM TRAP
<u>ALVES</u>	
ф	— BALL
——————————————————————————————————————	— BUTTERFLY
	— GATE
──	— GLOBE
I \ \[\frac{\tau}{1}	— PLUG
<u> </u>	— CALIBRATED BALANCE/FLOW MEASURE
	— PRESSURE REDUCING VALVE
	— CHECK VALVE (ARROW INDICATED DIRECTION OF FLOW
≯	
	— RELIEF (R) OR SAFETY (S)
	DRAIN VALVE W/ HOSE CONNECTION AND SEAL CAP
	— SOLENOID
· · · · · · · · · · · · · · · · · · ·	— ATC, TWO-WAY
—————————————————————————————————————	— ATC, THREE-WAY
—————————————————————————————————————	REFRIGERANT EXPANSION, AUTOMATIC
<u> </u>	REFRIGERANT EXPANSION, THERMAL
Г М Т	

REFRIGERANT EXPANSION, ELECTRIC

—— FLOW CONTROL VALVE (A=AUTOMATIC, M=MANUAL)

integrated energy engineering 262 Dickinson Drive | Reading | PA | 19605 610-750-9129 | www.entegraeng.com

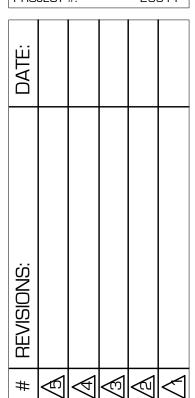


COPYRIGHT © 2020
BY LARRY E. SAYLOR.
THIS DRAWING AND
INFORMATION RELATED TO
THIS DRAWING SHALL NOT BE
COPIED OR USED IN ANY WAY WITHOUT WRITTEN
AUTHORIZATION OF LARRY E.

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

SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

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



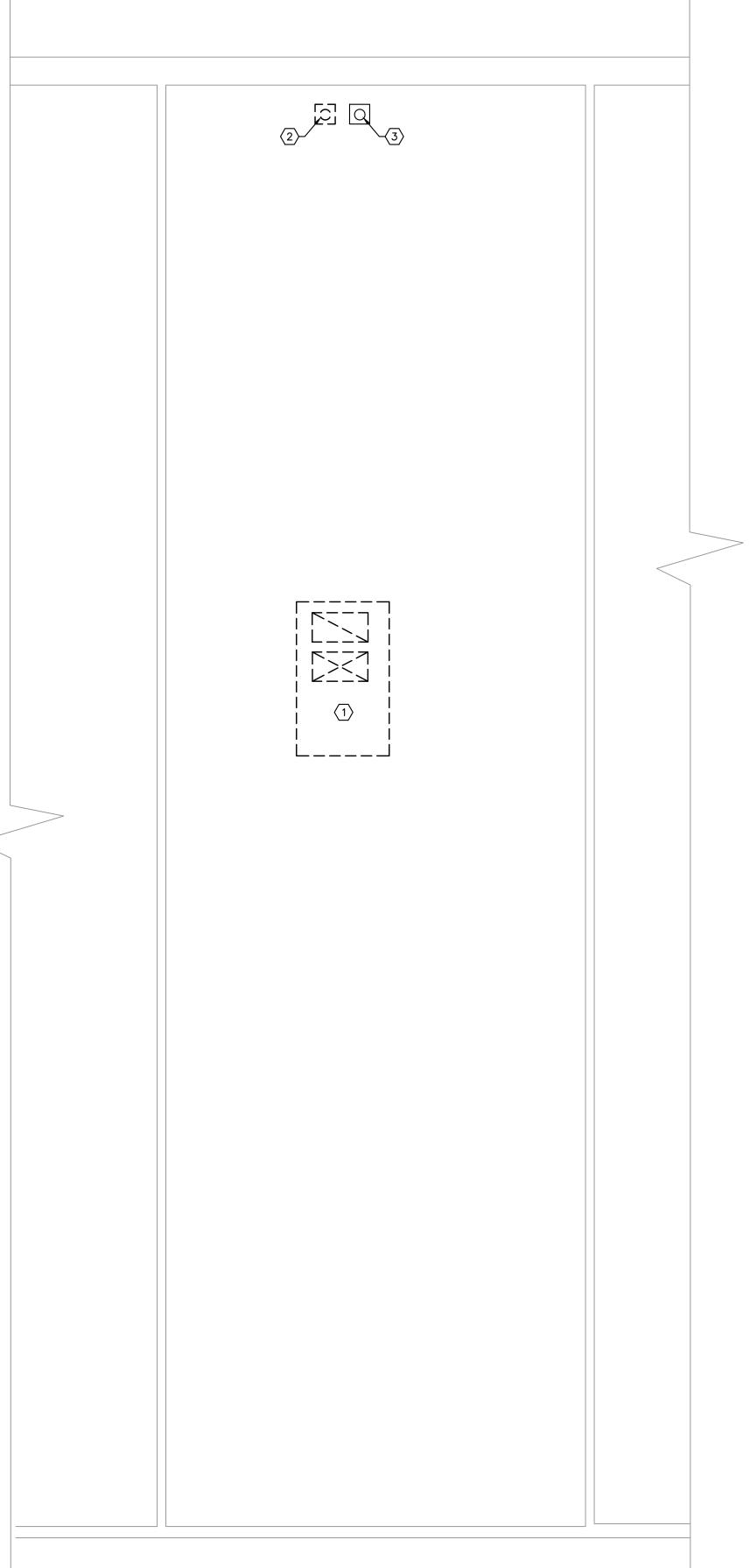
PROPOSED FIT OUT FOR:



-en	-eq	ra
integrated of 262 Dickinson Dr 610-750-9129	rive Reading	PA 19605

DEMOLITION KEYED NOTES:

- 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.



A MECHANICAL PARTIAL ROOF PLAN-DEMOLITION

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

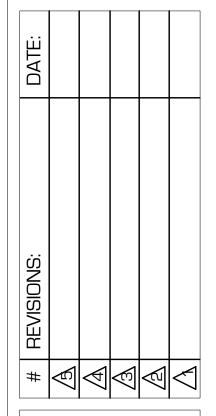


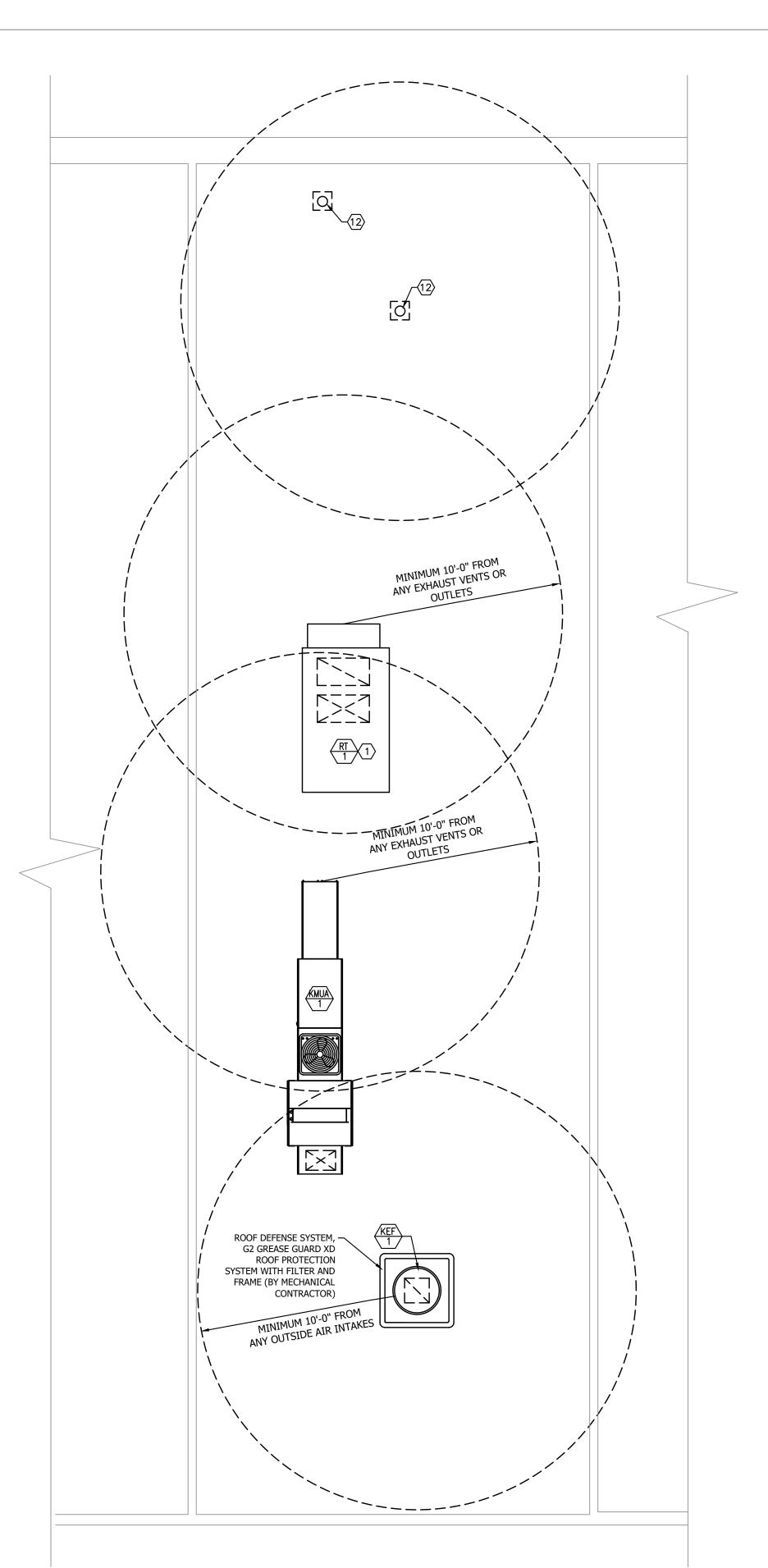
COPYRIGHT © 2020 BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY WITHOUT WRITTEN
AUTHORIZATION OF LARRY E.
SAYLOR. THIS DRAWING NOT
FOR GENERAL USE AND ALL

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

RIGHTS ARE RESERVED.

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





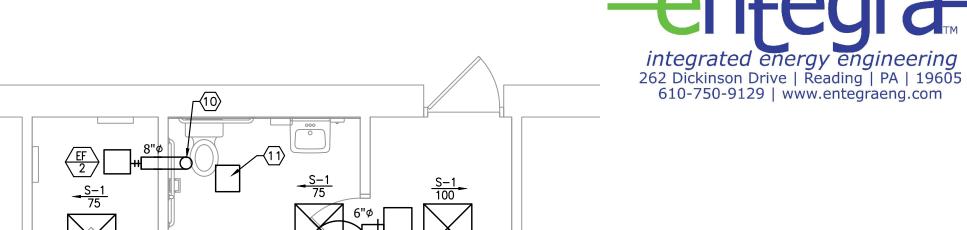
B MECHANICAL PARTIAL ROOF PLAN
M2.1 SCALE: 1/4" = 1'-0"

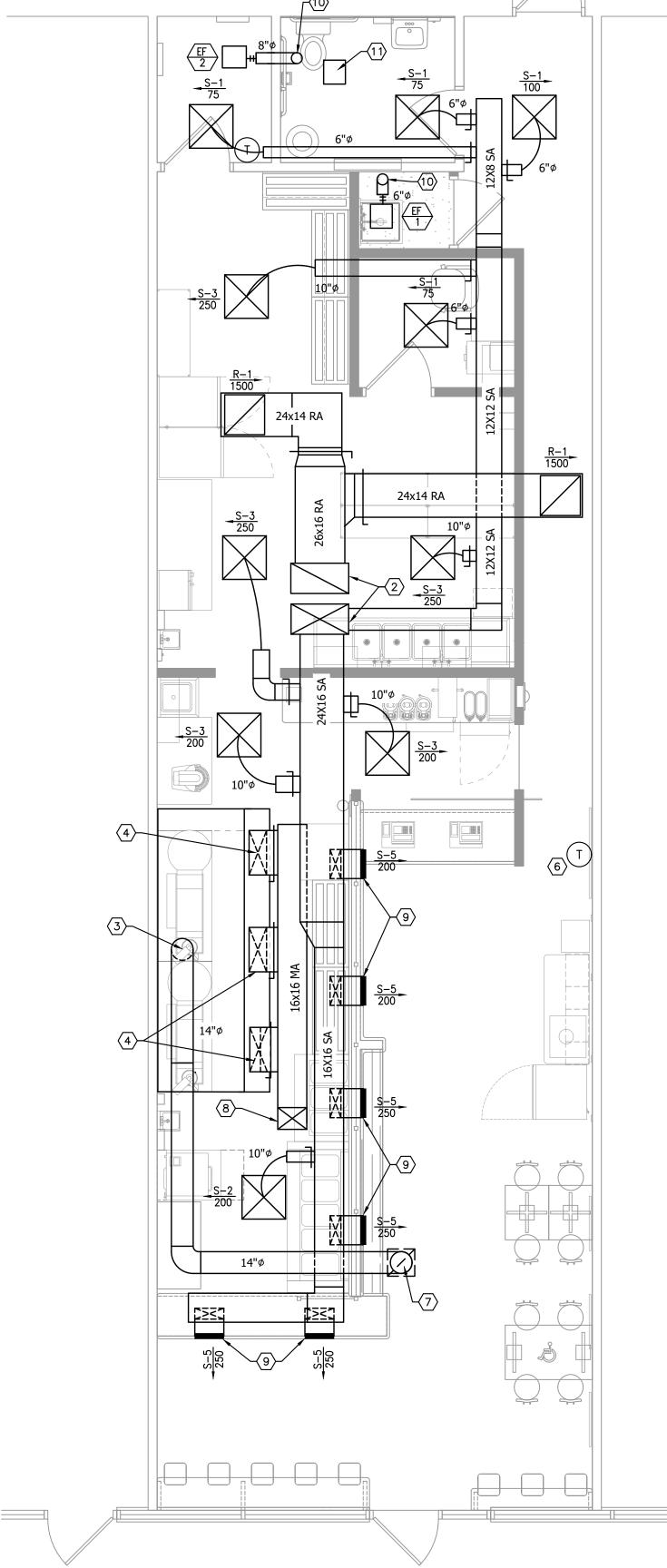
NEW WORK KEYED NOTES:

- 1 RTU INSTALLED ON 14" ROOFCURB.
- SUPPLY AND RETURN AIR DUCTWORK UP TO RTU-1. TRANSITION AS REQUIRED.
- CONNECT 14" DIAMETER GREASE EXHAUST DUCTWORK TO EXHAUST COLLAR ON HOOD, COORDINATE WITH HOOD SUPPLIER. ALL EXHAUST DUCTWORK TO SINGLE WALL PREFABRICATED STAINLESS STEEL GREASE DUCTWORK AS MANUFACTURER BY CAPTIVEAIRE MODEL DW. ALL GREASE EXHAUST DUCTWORK TO BE INSULATED WITH 3M ZERO CLEARANCE DUCT WRAP.
- CONNECT 24X10 MAKEUP AIR DUCTWORK TO SUPPLY COLLAR ON HOOD, COORDINATE WITH HOOD SUPPLIER. ALL MAKEUP AIR DUCTWORK WITHIN 18" OF HOOD TO BE INSULATED WITH 3M ZERO CLEARANCE DUCT
- 6" DUCT FROM CEILING MOUNTED MOUNTED EXHAUST FAN TO 24X8 BRICK VENT, REFER TO DETAIL.
- NEW HONEYWELL WIFI VISIONPRO SERIES 8000 PROGRAMMABLE THERMOSTAT WITH NIGHT SETBACK. OUTSIDE AIR DAMPER TO OPEN WHENEVER IN OCCUPIED MODE.
- 14" DIAMETER GREASE EXHAUST DUCTWORK UP TO ROOF MOUNTED KEF-1. ALL EXHAUST DUCTWORK TO SINGLE WALL PREFABRICATED STAINLESS STEEL GREASE DUCTWORK AS MANUFACTURER BY CAPTIVEAIRE MODEL DW. ALL GREASE EXHAUST DUCTWORK TO BE INSULATED WITH 3M ZERO CLEARANCE DUCT WRAP.
- 8 CONNECT 16X16 MAKEUP AIR DUCTWORK UP TO KMUA-1.
- PROVIDE SIDEWALL GRILLE IN FACE OF SOFFIT, COORDINATE FINAL ELEVATION WITH ARCHITECT.
- (10) EXHAUST DUCT UP THROUGH ROOF TO ROOF CAP, REFER TO DETAIL.
- $\overline{\langle 11 \rangle}$ EXISTING EXHAUST FAN TO REMAIN.
- 12) EXHAUST ROOF CAP, REFER TO DETAI

DUCTWORK NOTES

- 1. ALL DUCTWORK SIZES NOTED ARE FREE AREA SIZES.
- 2. PROVIDE TURNING VANES IN ALL SUPPLY DUCTWORK ELBOWS.
- 3. ALL DUCT JUNCTIONS SHALL BE CONSTRUCTED OF 45 DEGREE TAKE-OFFS.
- 4. ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN STRICT ACCORDANCE WITH SMACNA AND ASHRAE STANDARDS.
- 5. COORDINATE EXACT LOCATIONS OF DIFFUSERS/DUCTWORK WITH LIGHTS, SPRINKLERS, AND CEILING WITH REFLECTED CEILING PLAN AND ARCHITECT.
- 6. COORDINATE ALL DUCTWORK CONNECTIONS TO EXHAUST HOODS PROVIDED BY OTHERS, COORDINATE FINAL LOCATIONS AND SIZES PRIOR TO FABRICATION.





MECHANICAL FIRST FLOOR PLAN

M2.1 SCALE: 1/4" = 1'-0"

ICENSE NO. AL13819
AIA, NCARB
ARCHITECT
30 CENTURY DRIVE SUITE 103
AECHANICSBURG, PA. 17055
HONE: 717.697.1799



COPYRIGHT © 2020
BY LARRY E. SAYLOR.
THIS DRAWING AND
INFORMATION RELATED TO
THIS DRAWING SHALL NOT BE
COPIED OR USED IN ANY WAY
WITHOUT WRITTEN

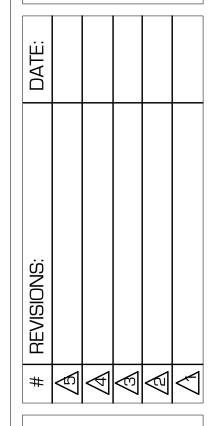
AUTHORIZATION OF LARRY E.

SAYLOR. THIS DRAWING NOT

FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

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



SSE ROUTE 17 NORTH

MECHANICAL FLOOR AND ROOF PLAN



									ROC	FTO	P UI	NIT S	SCHE	DULE	<u>.</u>						
TAG	LOCATION	SYSTEM CF	CFM MIN	S HP	UPPLY FAN SP IN H2O		OMPRESSOR DESIGN		DX COOLI NET	NET			HEATING SECT	MIN		TRICAL I			S OF DESIGN	EFFICIENCY	REMARKS
		SUPPLY	O/A		EXT	QTY.	AMB °F	STAGES	SENSIBLE MBH	TOTAL MBH	FUEL	STAGES	MAX INPUT	MBH OUT	V/	MCA	MOPD	MANUF.	MODEL #	(EER)	
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

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.

			EXHA	AUST	FANS							
AVELOW STATIC FAN MOTOR												
TAG	LOCATION	SYSTEM SERVED	ТҮРЕ	AIRFLOW (CFM)	PRESSURE ("W.G.)	RPM	DRIVE	HP/W	VOLTS/ PHASE	ENCL.	BASIS OF DESIGN	REMARKS
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 RE	QUIREMENTS	OCCUPANTS	TOTAL OUTSIDE AIR REQUIRED	TOTAL PROVIDED								
SFACE	ANLA (112)	CFM/PERSON	CFM/FT2	OCCUPANTS	PER IMC	TOTAL PROVIDED								
RTU-1														
RETAIL/CORRIDOR	550	7.5	0.12	10	141									
SERVICE	730	7.5	0.18	9	199	375								
RESTROOM	54	-	-	-	EXHAUST									
UTILITY	UTILITY 15		-	-	EXHAUST									

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	6¢/15X15	24x24	3-4-7	0.10	25	TDCA	1,2,3,4,5,6,7						
S-2	200	8¢/15X15	24x24	3-4-7	0.10	25	TDCA	1,2,3,4,5,6,7						
S-3	300	10¢/15X15	24x24	3-4-7	0.10	25	TDCA	1,2,3,4,5,6,7						
S-4	400	12¢/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						

1. S=SUPPLY, R=RETURN/RELIEF, EXHAUST, TRANSFER.

THROW AT TERMINAL VELOCITY OF 50, 100, 150 FPM & 0° DEFLECTION DUCT RUN OUT SIZE SHALL MATCH DIFFUSER NECK SIZE UNLESS OTHER WISE NOTED ON PLAN

DATA BASED ON TESTING IN ACCORDANCE WITH ASHRAE STANDARD 70 AND ADC 1062

PROVIDE WITH OB BALANCE DAMPER. BASIS OF DEIGN MANUFACTURER: TITUS

FINISH SHALL BE WHITE UNLESS OTHER WISE NOTED ON ARCHITECTURAL PLAN

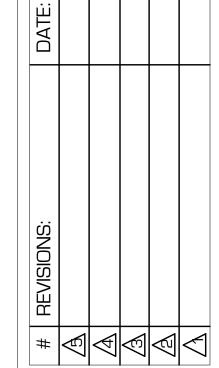
PROVIDE SQUARE TO ROUND CONNECTION. 9. PROVIDE WITH AIR SCOOP.

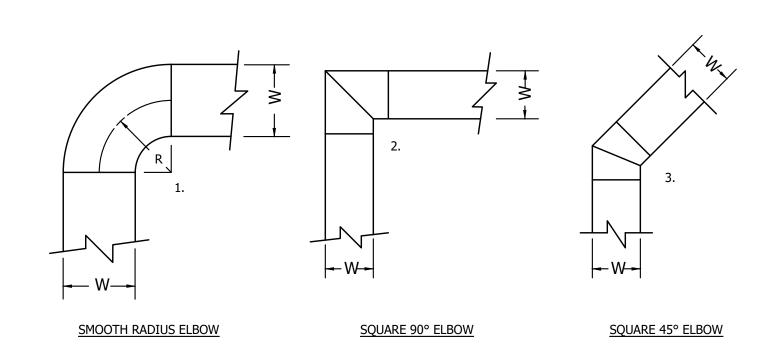


COPYRIGHT © 2020 BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY WITHOUT WRITTEN AUTHORIZATION OF LARRY E. SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

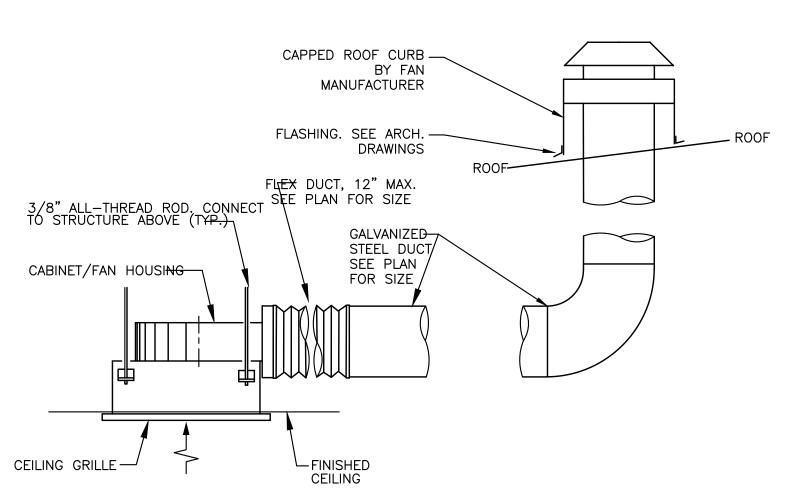
CONTRACTOR SHALL VERIFY
ALL DIMENSIONS AND
EXISTING CONDITIONS AND PROMPTLY REPORT ANY ERRORS TO LARRY E. SAYLOR.

	DATE	Ξ:		05.01.2020				
	DRA	WN E	DL/JI	_M/J	PK			
	CHE	CKED	BY:		BF	RM		
	PRO	JECT	#:		200	D11		
	ATE:							
	λ							
	П							



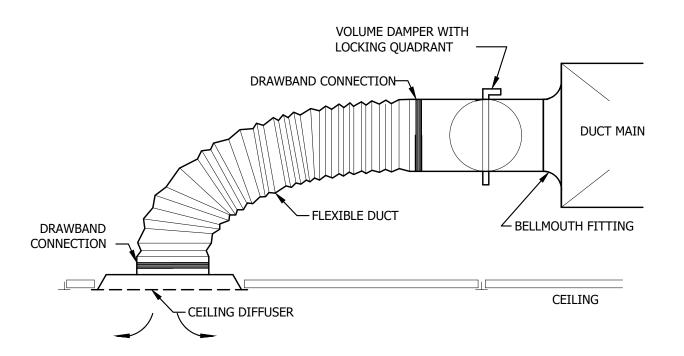


- 1. R/W RATIO SHALL BE NO LESS THAN 1.0
- 2. PROVIDE TURNING VANES IN ALL 90° SQUARE ELBOWS UNLESS OTHERWISE NOTED ON PLANS
- 3. PROVIDE TURNING VANES IN ALL 45° SQUARE ELBOWS UNLESS OTHERWISE NOTED ON PLANS
-) TYPICAL DUCTWORK ELBOW DETAILS SCALE: NOT TO SCALE



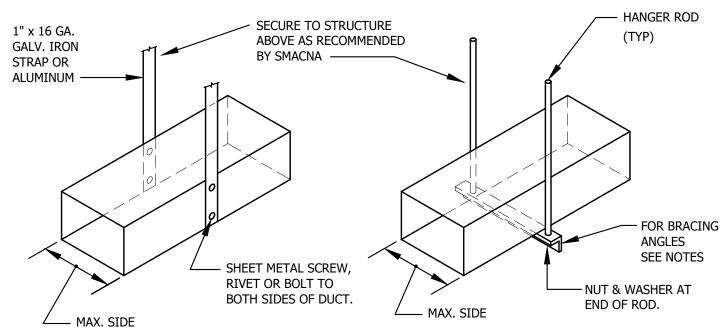
COORDINATE ROOF PITCH AS REQUIRED TO PROVIDE PROPER CURB

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
- DIFFUSER FLEXIBLE DUCT CONNECTION DETAIL SCALE: NOT TO SCALE



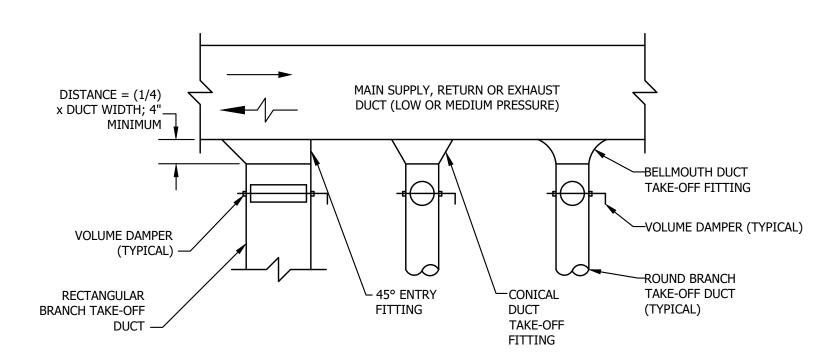
TYPE "A" (8 FT. MAX. HANGER SPACING. ALSO PROVIDE 3 HANGERS AT EACH TAKE-OFF OR BRANCH.)

TYPE "B", "C", & "D" (8 FT. MAX. HANGER SPACING)

DUCT DIMENSION	HANGER TYPE	ROD DIA.	ANGLE SIZE	SPACING MAX
UP TO 18"	Α	1" STRAP		8'-0"
19" TO 60"	В	5/16"	1-1/2" x 1-1/2" x 1/8"	8'-0"
61" TO 96"	С	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"

- 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





- 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.
- 2. SEAL ALL TAKE-OFF AND OTHER DUCT FITTINGS AIR TIGHT AS PER SPECIFICATION.
- 3. FABRICATE BRANCH DUCT TAKE-OFF FITTINGS PER LATEST EDITION OF SMACNA DUCT CONSTRUCTION MANUAL, AS INDICATED ON PLANS, OR AS DESCRIBED IN THE SPECIFICATION.
- 4. ALLPLIES TO SUPPLY AND EXHAUST RUNOUTS TO GRILLES, REGISTERS, AND DIFFUSERS.

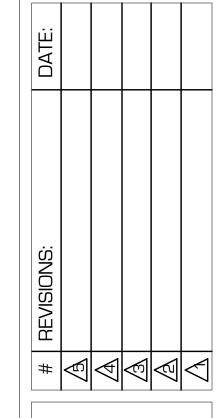
5 BRANCH TAKE-OFF DUCT DETAIL

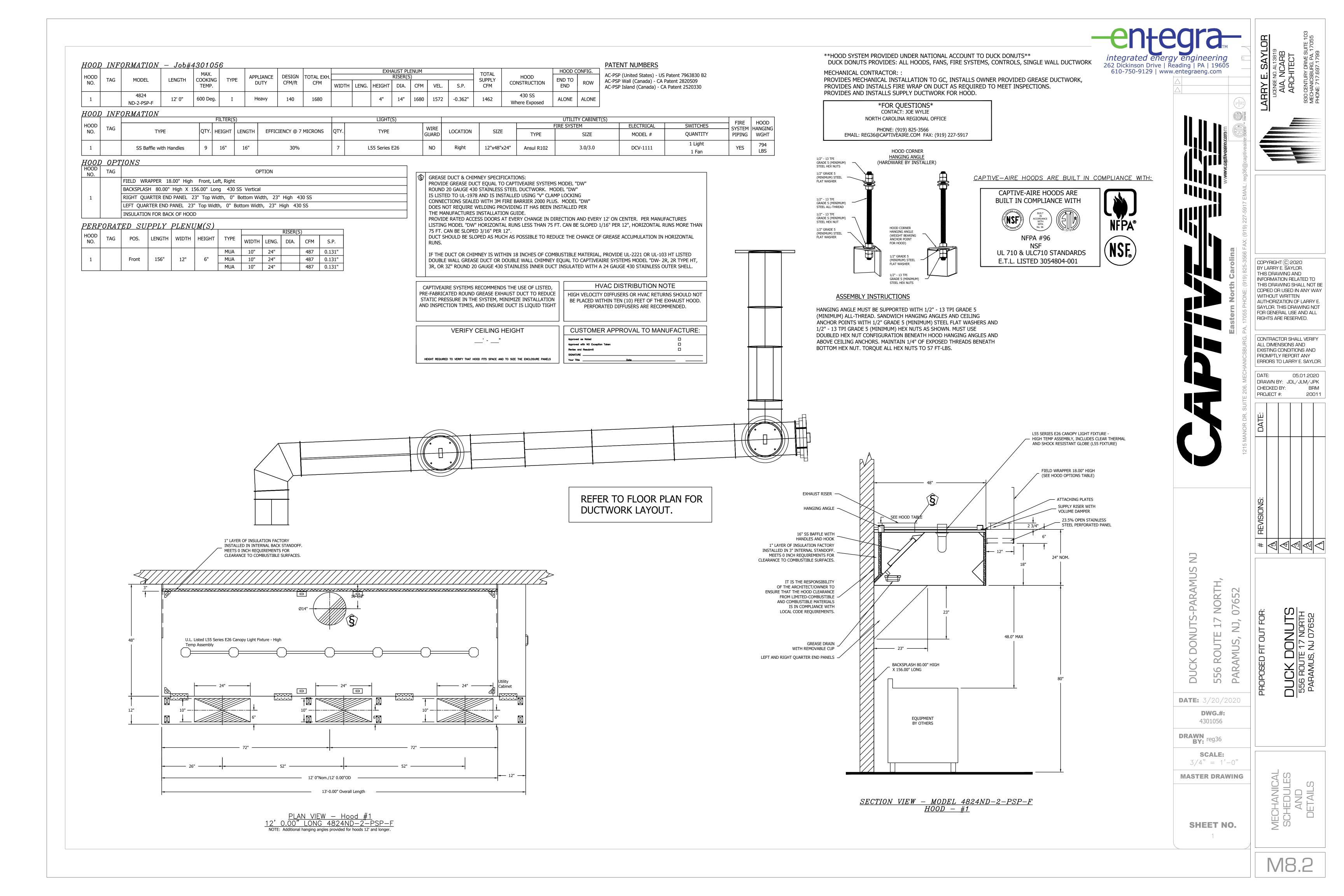
SCALE: NOT TO SCALE

COPYRIGHT (C) 2020 BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY WITHOUT WRITTEN AUTHORIZATION OF LARRY E SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

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

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

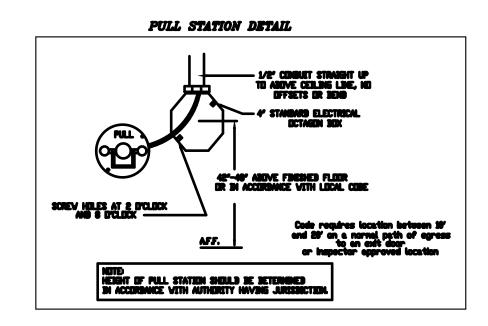




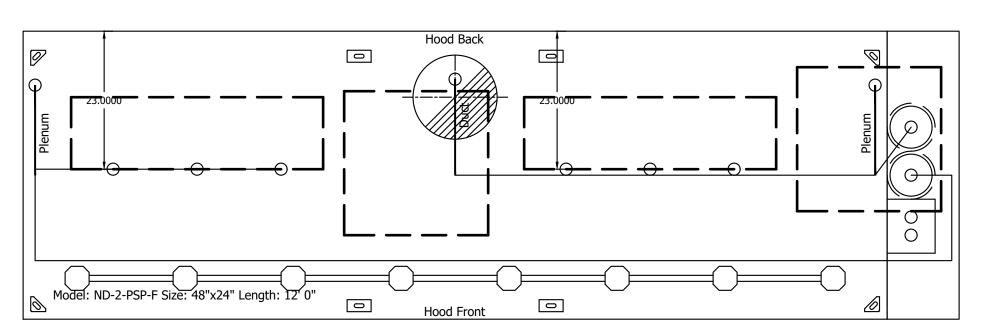
UL 300 HOOD FIRE SUPPRESSION SYSTEM

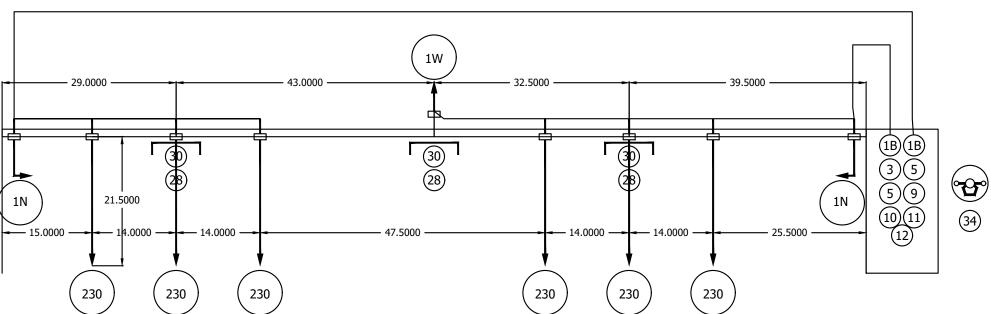
FIRE	_			INSTALLATION			
SYSTEM NO.	Tag	TYPE SIZE	SYSTEM				
1		Ansul R102	3.0/3.0 = 22 FLOW CAPACITY	Fire Cabinet			

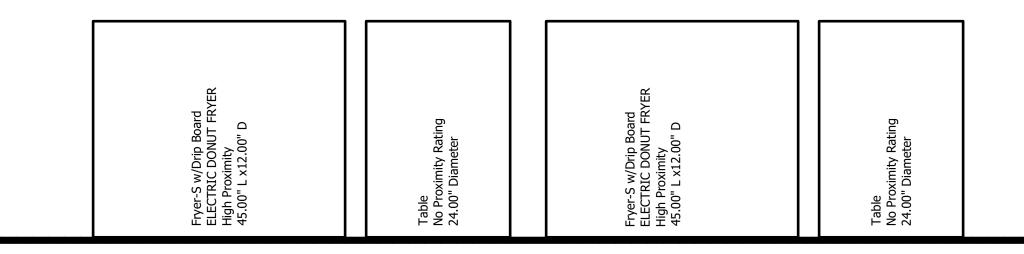
UL 300 HOOD FIRE SUPPRESSION SYSTEM-



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







CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH:

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

- FIELD PIPE DROPS AS SHOWN

- MAXIMUM 9 ELBOWS IN SUPPLY LINE.

SIZE, NOT THE OVERALL APPLIANCE SIZE.

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.

<u>LEGEND - FIRE CABINET ANSUL SYSTEM</u>

Hood # 1 Metal Blow-Off Caps included.

1.5 GALLON TANK

OEM AUTOMAN RELEASE

CARTRIDGE (101-20) CARTRIDGE (101-10)

TEST LINK

230

260

HOSE ASSEMBLY

OEM REGULATED RELEASE

CARTRIDGE (101-30) CARTRIDGE (LT-A-101-30)

DOUBLE TANK CARTRIDGÉ

DOUBLE MICROSWITCH

DUCT NOZZLE (430913)

DUCT NOZZLE (419337)

NOZZLE ASSEMBLY (419336)

NOZZLE ASSEMBLY (419333)

NOZZLE ASSEMBLY (419335)

NOZZLE ASSEMBLY (419334) NOZZLE ASSEMBLY (419338)

NOZZLE ASSEMBLY (419340)

NOZZLE ASSEMBLY (419339)

NOZZLE ASSEMBLY (419343) NOZZLE ASSEMBLY (419342)

NOZZLE ASSEMBLY (419341)

LOW TEMP FUSIBLE LINK HIGH TEMP FUSIBLE LINK

MECHANICAL GAS VALVE **ELECTRICAL GAS VALVE**

REMOTE MANUAL PULL STATION

DETECTOR BRACKET

SWIVEL ADAPTOR

OEM REGULATED ACTUATOR

ANSULEX LIQUID AGENT (3 GAL.)

ANSULEX LIQUID AGENT (1.5 GAL.)

3 GALLON TANK

SALAMANDERS, ETC.

SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS

- RELOCATÉ NOZZLEŚ IF FLÓW PATTERN IS BLOCKED BY SHELVING,

- MINIMUM 72 INCHES OF AGENT LINE FROM TANK TO FIRST NOZZLE. - IF APPLICABLE, PRE-PIPED CHARBROILER DROPS ARE SHIPPED LOOSE

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE

- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS

- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

NOZZLE DUCT PROTECTION NOZZLE APPLIANCE PROTECTION REMOTE MANUAL PULL STATION REMOVABLE STAINLESS OPTIONAL PRE-WIRED ELECTRICAL STEEL SERVICE DOOR TERMINAL BOX WITH TERMINAL STRIPS, AGENT TANK 3-PHASE CONTACTORS AND OVERLOADS (IF APPLICABLE) FAN AND LIGHT **CONTROL PANEL**

HOOD SYSTEM PROVIDED UNDER NATIONAL ACCOUNT TO DUCK DONUTS

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

PROVIDES AND INSTALLS FIRE WRAP ON DUCT AS REQUIRED TO MEET INSPECTIONS.

MECHANICAL CONTRACTOR: :

DUCK DONUTS PROVIDES: ALL HOODS, FANS, FIRE SYSTEMS, CONTROLS, SINGLE WALL DUCTWORK.

PROVIDES MECHANICAL INSTALLATION TO GC, INSTALLS OWNER PROVIDED GREASE DUCTWORK,

TYPICAL ANSUL R-102 SYSTEM LAYOUT

FIRE SYSTEM OPERATION

- 1. Kitchen hood shall be constructed and installed per NFPA 96.
- 2. 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:

OEM RELEASE/

BRACKET ASSEMBLY

- a. Mechanical gas valve (If Gas present) (installed by mechanical/plumbing contractor)
- b. Hood supply and exhaust fan (wiring by elec)
- c. Remote manual pull station (by hood fire system distr)
- d. Fire alarm system notification (by Fire alarm Contractor or electrician)
- 2. See Hood details for drawings
- 3. All exposed piping with fire suppression system shall be covered with a a chrome sleeve.4. 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.
- 5. Fire suppression system shall be in accordance with UL 300.

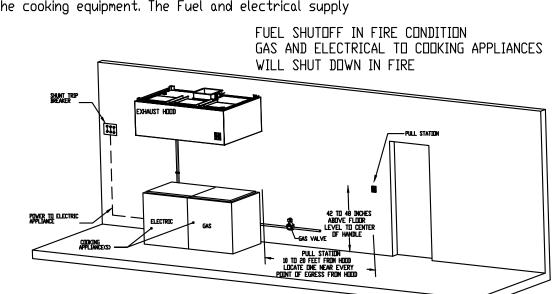
All Fire System Piping will be 3/8" schedule 40 black iron.

System Interconnection:

NC FIRE CODE 904.11.2

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.

MGV1-1/2



262 Dickinson Drive | Reading | PA | 19605 610-750-9129 | www.entegraeng.com



DONUTS-PARAMUS

556

DATE: 3/20/2020

DRAWN BY: reg36

DWG.#:

4301056

SCALE:

3/4" = 1'-0"

MASTER DRAWING

SHEET NO.

COPYRIGHT (C) 2020 BY LARRY E. SAYLOR.

THIS DRAWING AND INFORMATION RELATED TO

WITHOUT WRITTEN AUTHORIZATION OF LARRY E SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL

RIGHTS ARE RESERVED.

ALL DIMENSIONS AND

CONTRACTOR SHALL VERIFY

EXISTING CONDITIONS AND

DRAWN BY: JDL/JLM/JPK

CHECKED BY:

PROJECT #:

05.01.2020

PROMPTLY REPORT ANY ERRORS TO LARRY E. SAYLOR

THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY

M8.3

PROPOSED FIT OUT FOR:

262 Dickinson Drive | Reading | PA | 19605

610-750-9129 | www.entegraeng.com

<u>EXHA</u>	UST	<u> FAN INFORMATION - Job</u>)#43010)56									
FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	H.P.	B.H.P.	Ø	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS.)	SONE
1	KEF-1	DU85HFA	1680	0.600	1133	0.750	0.2860	3	208	2.6	532 FPM	94	11.3

\mathcal{C}	'OND	ENSER	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

i.	MUA	FAN		4301056								•	 	•	I	<u> </u>		:							
	FAN UNIT NO.	TAG	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP.	RPM	H.P.	B.H.P.	φ	VOLT	FLA	MCA	МОСР	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

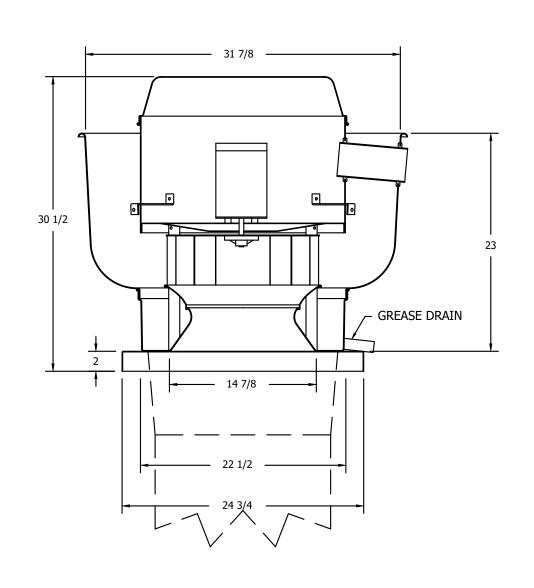
<i>GAS</i>	FIRED .	MAKE-U	JP AIR	UNIT(S)			
FAN UNIT NO.	TAG	INPUT BTUs	OUTPUT BTUs	TEMP. RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
2	KMUA-1	171626	157896	100 deg F	7 in. w.c 14 in. w.c.	Natural	92

FAN	OPTION	S
FAN UNIT NO.	TAG	OPTION (Qty Descr.)
1	KEF-1	1 - Grease Box
		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)
2	KMUA-1	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	<u>ACCESS</u>	ORIES	1					
	FAN UNIT	TAG		EXHAUST			SUPF	PLY	
	NO.	TAG	GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
Ī	1	KEF-1	YES						
	2	KMUA-1						YES	

CUF	RB AS	SEMBLIES			
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 DU85HFA - EXHAUST FAN (KEF-1)



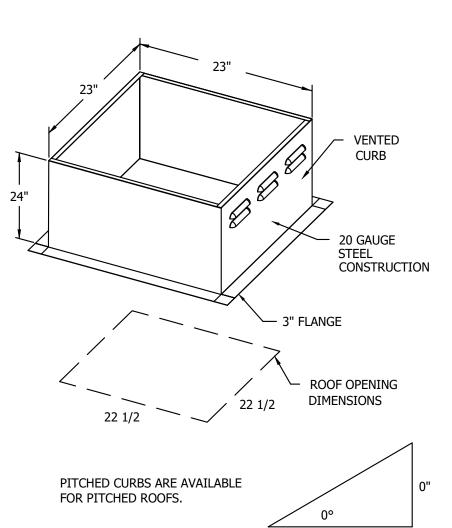
FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS) - ROOF MOUNTED FANS - RESTAURANT MODEL - UL705 AND UL762 AND ULC-S645 - 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.

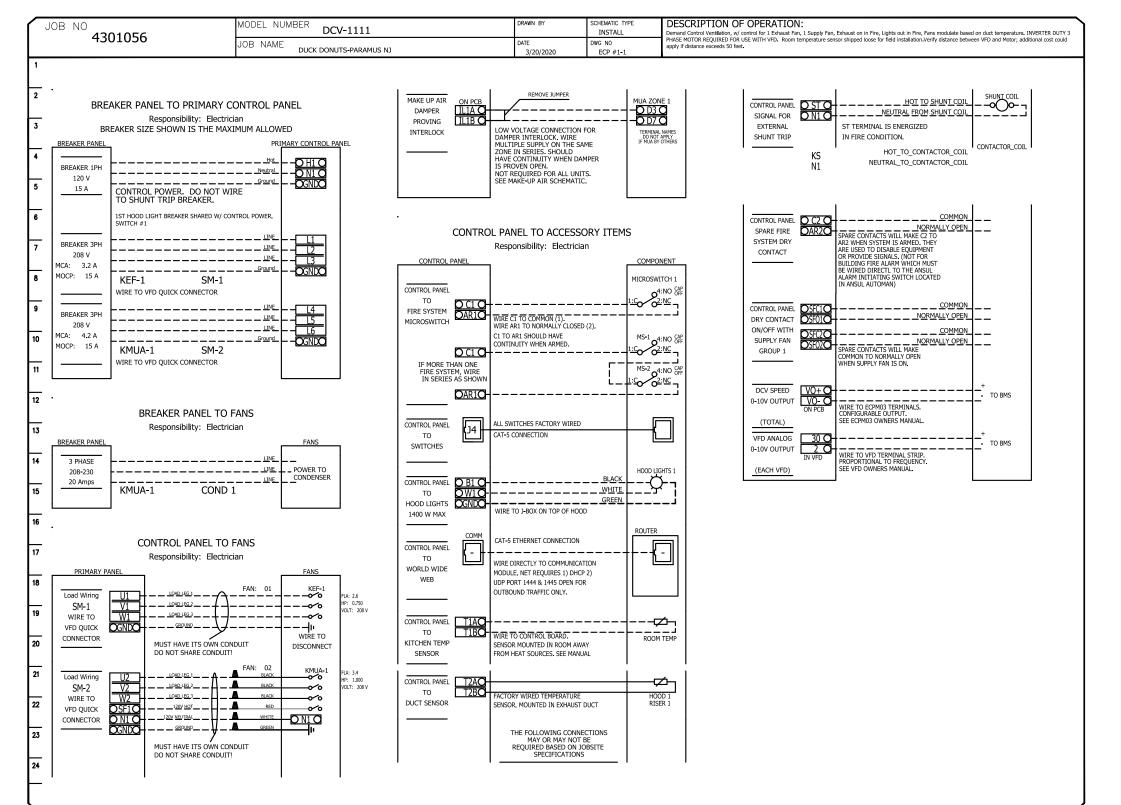
<u>OPTIONS</u> GREASE BOX.



SPECIFY PITCH:

EXAMPLE: 7/12 PITCH = 30° SLOPE

FANS CO					
	IS CONTROLLE	D			
TAG	TYPE	ф	H.P.	VOLT	T FLA
-1	Exhaust	3	0.750	208	2.6
A-1	Supply	3	1.000	208	3.4
	_				





DONUTS-PARAMUS NJ NORTH, 07652 \vdash ROUTE 556

DATE: 3/20/2020 DWG.#: 4301056

DRAWN BY: reg36

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO.

M8.4

PROPOSED FIT OUT FOR:

COPYRIGHT (C) 2020

BY LARRY E. SAYLOR.

THIS DRAWING AND INFORMATION RELATED TO THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY

WITHOUT WRITTEN

AUTHORIZATION OF LARRY E

FOR GENERAL USE AND ALL

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND

EXISTING CONDITIONS AND

DRAWN BY: JDL/JLM/JPK

05.01.2020

20011

PROMPTLY REPORT ANY ERRORS TO LARRY E. SAYLOR.

DATE:

CHECKED BY: PROJECT #:

RIGHTS ARE RESERVED.

SAYLOR. THIS DRAWING NOT

262 Dickinson Drive | Reading | PA | 19605 610-750-9129 | www.entegraeng.com Direct Fired Heater Wiring FAN #2 A1-D.250-G10-MPU - HEATER (KMUA-1) DRAWING NUMBER DF4301056-2 SHIP DATE 3/20/2020 MODEL **A1-D.250-G10-MPU** 1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 10" BLOWER 2. INTAKE HOOD WITH EZ FILTERS DROP FOR DISCONNECT CONNECTION
IS FACTORY SUPPLIED
CONNECT POWER TO THE DROP WIRE TO IL1A AND IL1B IN DCV (D3807 IN EMSPLUS) RE-DV-1 3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT 4. 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, TFB120S ACTUATOR INCLUDED 5. LOW FIRE START. ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION. Discharge Temp. Control 6. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE Cooling Thermostat and Relay 7. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC., 2.5" DIAMETER, 1/4" THREAD SIZE 8. DX COOLING INTAKE AIR THERMOSTAT AND RELAYS MOUNTED IN UNIT - SET POINT FOR THERMOSTAT SHOULD BE 85°F. DCV Wiring 9. FULL CRATING FOR COMMERCIAL HEATERS FOR SHIPPING. 10. DOWNTURN PLENUM FOR SIZE 1 COOLING COIL MODULE - REQUIRED FOR DOWN DISCHARGE COOLING COIL APPLICATIONS 11. 3 TON, SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION FOR SIZE 1 DF/EH MODULAR PACKAGED UNIT. INCLUDES CONDENSER, DX COIL, FILTER/DRYER KIT, MOCP = 10 AMPS
FOR CONTROL WIRING

WH (DCV N1) — N S 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 = 2EZ1001N 12. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. FR-01 Flame rod FSC-01 Fireye FSC PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH. SUPPLY SIDE HEATER INFORMATION: WINTER TEMPERATURE = 16°F. TEMP. RISE = 100°F. BTUs CALCULATED OFF STANDARD AIR DENSITY *NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE MA-01 Modulating amplifier 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 ON OWH ON _ MT-01 Supply motor MT-02 Damper motor OUTPUT BTUs AT ALTITUDE OF 0.0 ft. = 157896 SUGGESTED STRAIGHT DUCT SIZE IS 14" x 14" INPUT BTUs AT ALTITUDE OF 0.0 ft. = 171626 PS-01 Low Airflow Switch [9] PS-02 High Airflow Switch [9] 1 13/16"
 RE-02
 Stage 1 Heat/Cool Relay
 [11][13]

 RE-DV
 DCV Relay
 [1][5]

 RE-04
 Stage 2 Cooling Relay
 [11] [13]
 CURB OUTER WALL -DISCHARGE OPENING SW-01 Main disconnect switch [2] SW-03 Damper end limit switch [4] SW-04 40 Amp Rotary Disconnect [12-14] SW-06 Overflow Switch [12-13] **AIRFLOW** 13 7/8" COOLING COPYRIGHT (C) 2020 TS-02 High temp limit switch TS-03 Intake Air Sensor COIL BY LARRY E. SAYLOR. MODULE THIS DRAWING AND TS-05 Discharge Air Sensor [21] TS-06 Cooling Thermostat [16] INFORMATION RELATED TO THIS DRAWING SHALL NOT BE 3 9/16" -VA-01 Pilot gas valve COPIED OR USED IN ANY WAY VA-02 Main gas valve VA-03 Modulating gas valve 50 BR 2178 TR-0 WITHOUT WRITTEN SUPPLY 1HP-208V-3P-3.4FLA AUTHORIZATION OF LARRY E SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL RIGHTS ARE RESERVED. 1" MPT CONNECTION FOR FLEX CONDUIT SS PITCHED DRAIN PAN FOR FIELD -WIRING CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND PROMPTLY REPORT ANY ERRORS TO LARRY E. SAYLOR. DRAWN BY: JDL/JLM/JPK **——** 39 1/2" **——** CHECKED BY: PROJECT #: CONDENSER 1 4301056 - DUCK .. Installation Wiring DRAWING NUMBER RP4301056-2 SHIP DATE 3/20/2020 MODEL **A1-D.250-G10-MPU** LIFTING LUG — . . DIRECT FIRED MODULE AIRFLOW CONDENSER COIL 42 3/4" DISCONNECT ACCESS SERVICE AIRFLOW DISCONNECT -208/230V 3PH DOOR POWER FROM DEDICATED BREAKER **SWITCH** 29 3/4" BLOWER/MOTOR **AIRFLOW** 7 13/16" ACCESS DOOR 24" SERVICE CLEARANCE REQ. 3 3/4" 10 1/4" 10 1/4" \exists 14" EQUIPMENT CURB -PARAMUS CONDENSER 1 STRAIGHT DUCT DO NOT CONNECT CONDENSER POWER DROPS TO KITCHEN CONTROL PACKAGE STARTERS OR VFDS PER AMCA*

See above details. D3 IN HEATER TO IL1A IN DCV D7 IN HEATER TO IL1B IN DCV

NORTH, 07652 $\overline{}$

556

DATE: 3/20/2020

DRAWN reg36

DWG.#: 4301056

SCALE:

3/4" = 1'-0"

MASTER DRAWING

SHEET NO.

NOTES

05.01.2020

20011

PROPOSED FIT OUT

Typical Drain Trap Install Recommended Cooling Coil Drain Trap Configuration Clean Out

1) 1" diameter PVC Pipe only 2) Use only low profile couplings 3) Add clean out as shown

Direct Fired

Direct Fired (DF) Profile Plate Assembly Direct Fired Profile Plate Specifications: <u>Description:</u>
Direct fired burners shall have patented (US Patent No.: US6629523B2), 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.

<u>Application:</u>
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. Certifications:

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.



15050 Basic Mechanical Requirements

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
- 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

installation complete in every detail and all items necessary for a complete installation shall be

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.

- 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.

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,

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 90.1-1989 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 of labeled for use as applied to

2. Submittals

A. Submit shop drawings and product data under provisions of Division 1 and Division 15.

insulation and designed specifically for use in the insulation.

- 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 1290; commercial grade; noncombustible; minimum R-5 installed for ductwork in conditioned space, minimum R-8 for ductwork outside of the building
- 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.

Execution

- A. Verify that site conditions are ready to receive work in compliance with manufacturer
- 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
- 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
- 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 condtinuous, 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

- I. Where insulated ducts pass through openings, the full specified thickness of the insulation shall pass through he is opening. Where fire stopping material sis 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 he 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.

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.

A. Provide 1" flexible elastomeric on all interior condensate piping.

15855 Air Distribution

- 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

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.
- C. Clean and remove all dirt and debris.

B. Seal all connections airtight.

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.
- 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.

ii. Provide duct transitions, offsets and connections to dampers, coils, and other equipment in

- iii. Provide bolted construction and tie-rod reinforcement in accordance with SMACNA standards,
- 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
- 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 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
- 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 of wall in which inlets and/or outlets are to be installed.

plans (where applicable) for general locations. Unless otherwise indicated, locate units in center of

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

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. Adiusting 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 indicated.
- 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

- 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
- The power rating 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.
- 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 on 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.
- 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.
- Thoroughly clean/flush all (existing and new) hydronic piping systems with clean water. Afterwards, remove and clean or replace strainer screens.
- All HVAC systems shall be tested and balanced according to NEBB and SMACNA standards.
- Provide access to equipment and portions of building systems requiring service.
- 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 (switchboards, panels, motor control centers, variable frequency drives, transformers or starters) from the floor the structure
- 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.
- 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 breakaway in

- MECHANICAL GENERAL DUCTWORK NOTES 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.
- Changes in shape or dimension shall be made with maximum transition of 1 to 7.
- Separate galvanized sheet metal from aluminum of copper with lead or felt gaskets. Provide supplemental stiffening and supports to ducts and apparatus casings to prevent drumming, sagging and to provide a structurally sound assembly.
- Provide offsets and transitions to coordinate with other work.
- Provide ductwork and transitions to connect ductwork to equipment and coils
- Install flexible ductwork in a fully extended condition without sags and kinks.
- Install duct mounted smoke detectors in accessible locations. 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
- 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 breakaway in

ductwork.

- MECHANICAL GENERAL PIPING NOTES Install piping to allow access valves, air vents, equipment requiring access, and to provide maximum headroom.
- Provide offsets to maintain ceiling height and to coordinate with other trades.
- Install valves in horizontal piping with valve stems at or above the piping center line. Arrange piping for venting of air and drainage of entire system.

Horizontal runouts of condensate piping shall be 2" in diameter and shall be run below slab.

MECHANICAL GENERAL AUTOMATIC TEMPERATURE CONTROLS NOTES

lined ductwork, dimensions indicated on drawings shall be clear inside dimensions measure from face-of-liner to face-of-liner.

- 1. Transformers or filters for operation of automatic temperature controls from building power circuits shall be provided under division 23. 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.
- Provide supplemental stiffening and supports to ducts and apparatus casings to prevent drumming, sagging, and to provide a structurally sound assembly. 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 amperes, 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
- Where systems are served by emergency power, controls for operation of those systems shall also be served by emergency power.
- 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.
- 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

- 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.
- 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.
- 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.

COPYRIGHT(C)2020 BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY WITHOUT WRITTEN AUTHORIZATION OF LARRY E

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

DRAWN BY: JDL/JLM/JPK

05.01.2020

SAYLOR. THIS DRAWING NOT

FOR GENERAL USE AND ALL

RIGHTS ARE RESERVED.

CHECKED BY: PROJECT #: 20011

PARTIAL PLUMBING CONTRACTOR

PRESSURE INDICATOR
POST INDICATOR VALVE

PRESSURE TRANSMITTER

POLYVINYL CHLORIDE POLYVINYL COATED STEEL

QUICK DISCONNECT

RUN ABOVE CEILING **RUN ABOVE FLOOR** RUN AT CEILING RUN BELOW CEILING RUN BELOW FLOOR **RUN BELOW GRADE RUN BELOW JOIST**

REINFORCED CONCRETE PIPE

TOTAL DYNAMIC HEAD

TEMPERATURE TRANSMITTER

WITHOUT WATER CLOSET WATER CLOSET-HANDICAPPED WATER METER

TEMPERATURE INDICATOR

VIBRATION ISOLATOR VENT THROUGH ROOF

RUN IN ENCLOSURE

ROOF OVERFLOW DRAIN

PLUMBING FIXTURE IDENTIFICATION

POUNDS PER SQUARE INCH POUNDS PER SQUARE INCH GAUGE POUNDS PER SQUARE INCH ABSOLUTE

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

OUTSIDE DIMENSION OPENING OPEN SITE OFF TOP OUNCE

OD OPG OS OT OZ

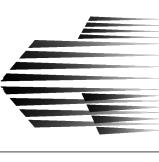
PLUMBING	FIPING DESIGNATIONS
SYMBOL	TYPE
—— (E)(NAME) ——	EXISTING PIPING TO REMAIN
(NAME)	EXISTING PIPING TO BE REMOVED
CW	DOMESTIC COLD WATER
——————————————————————————————————————	DOMESTIC HOT WATER
——————————————————————————————————————	DOMESTIC HOT WATER RECIRCULATED
SAN	SANITARY DRAIN
V	VENT
D	EQUIPMENT DRAIN
LW	LAB WASTE
LV	LAB VENT
— F —	FIRE MAIN
———— PS ————	PURE STEAM
PSC	PURE STEAM CONDENSATE
CA	COMPRESSED AIR
SP	SPRINKLER
ST	STORM WATER
——————————————————————————————————————	HIGH PRESSURE STEAM
——————————————————————————————————————	HIGH PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
LPC	LOW PRESSURE CONDENSATE
TWS	TOWER WATER SUPPLY
TWR	TOWER WATER RETURN
VAC	VACUUM
G	NATURAL GAS
PG	PROPANE GAS
DIS	DISTILLED WATER SUPPLY
DIR	DISTILLED WATER RETURN
DES	DEIONIZED WATER SUPPLY
DER	DEIONIZED WATER RETURN
WFIS	WATER FOR INJECTION SUPPLY
WFIR	WATER FOR INJECTION RETURN
——— USPS ———	USP PURIFIED WATER SUPPLY
PHWR	PROCESS HOT WATER RECIRCULATION
——————————————————————————————————————	PROCESS WASTE
PV	PROCESS VENT
——— He ———	HELIUM
—— N2 ———	NITROGEN
O2	OXYGEN
—— Н2 ———	HYDROGEN

PLUMB	ING 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
S	SOLENOID VALVE
TP	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
FS	FLOW SWITCH
Π	TEMPERATURE TRANSMITTER
PT/PS	PRESSURE TRANSMITTER OR PRESSURE SWITCH
ТН/ТІ	THERMOMETER OR TEMPERATURE INDICATOR
PI/GA	GAUGE WITH GAUGE COCK / PRESSURE INDICATOR
	BACKFLOW PREVENTOR (REDUCED ZONE)



SYMBOL	DESCRIPTION
	BACKFLOW PREVENTER (DOUBLE CHECK VALVE)
■ SA	WATER HAMMER ARRESTOR
CBV	CIRCUIT SETTING BALANCING VALVE
нв	HOSE BIBB
RD ①	ROOF DRAIN
os 🔾	OPEN SITE DRAIN
FD 🗀	FLOOR DRAIN
ADR	AREA DRAIN
co	CLEANOUT
CO	WALL CLEANOUT

SYMBOL	NG RISER DESIGNATIONS TYPE
CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
S	SANITARY STACK
V	VENT
RWC	RAIN WATER CONDUCTOR
F	FIRE
WS	WET STACK
LW	LAB WASTE STACK
LV	LAB VENT
AIR	LAB AIR
VAC	LAB VACUUM
G	NATURAL GAS
DI	DEIONIZED WATER



COPYRIGHT © 2020 BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY WITHOUT WRITTEN AUTHORIZATION OF LARRY E. SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

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





COPYRIGHT (C) 2020 THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY WITHOUT WRITTEN

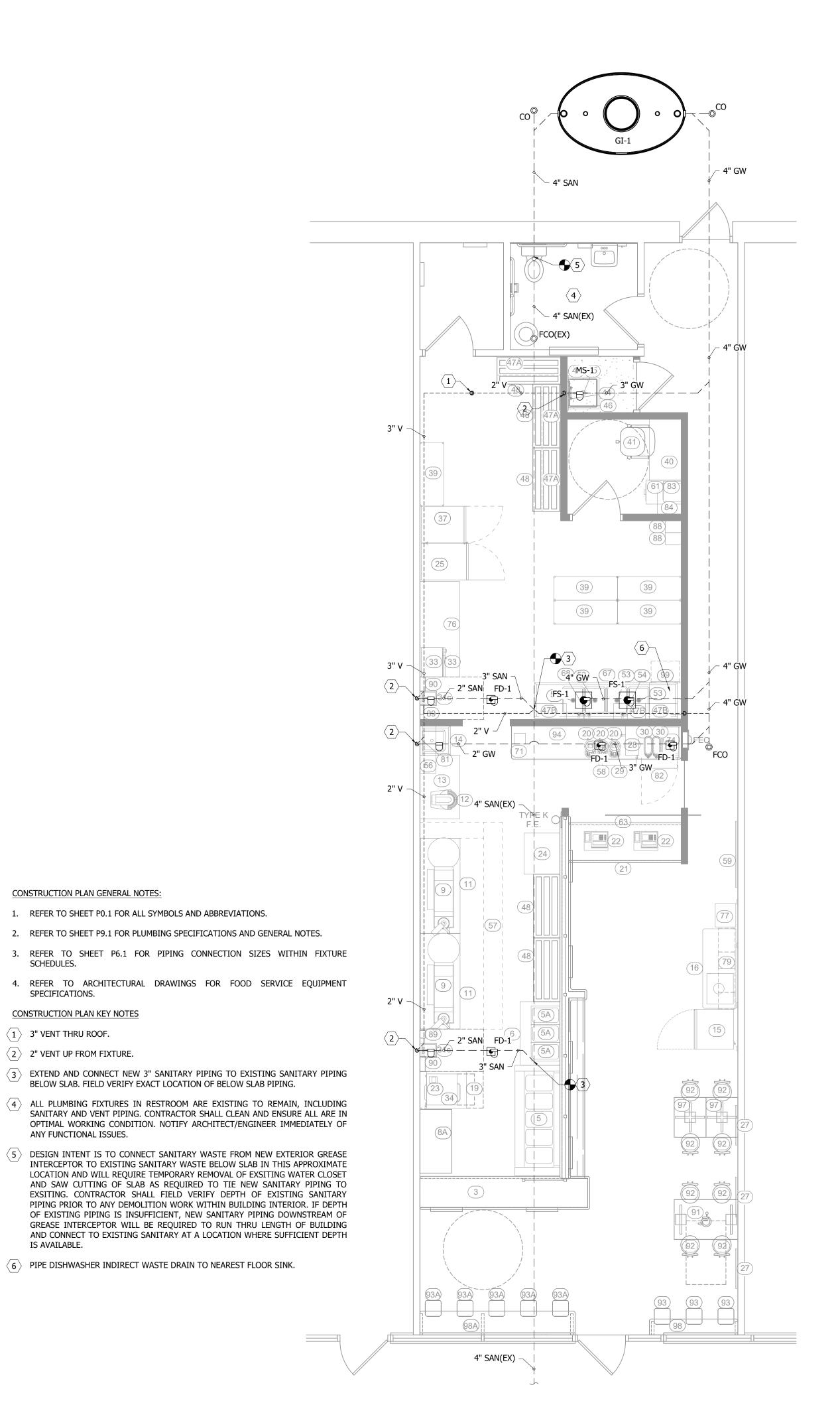
CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND PROMPTLY REPORT ANY

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

BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO AUTHORIZATION OF LARRY E. SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

ERRORS TO LARRY E. SAYLOR.

PLUMBING FLOOR PLAN - WATER & GAS



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

CW MAIN (EX)

___1-1/4" CW

3/4" CW 3/4" CW √ 3/4" HW √ 3/4" HW √

1" CW 1" HW *-*

1-1/4" CW

1" HW -

3/4" HWR

1/2" HW

_3/4" HW

1/2" CW 1/2" HW =

1/2" HWR

3/4" HWR

4. REFER TO ARCHITECTURAL DRAWINGS FOR FOOD SERVICE EQUIPMENT SPECIFICATIONS.

CONSTRUCTION PLAN KEY NOTES

- $\langle 1 \rangle$ 1" GAS FROM ROOF ABOVE. SEE SHEET P2.2 FOR CONTINUATION.
- $\langle 2 \rangle$ 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.
- \langle 4 \rangle 1/2" CW AND 1/2" HW DOWN TO FIXTURE.
- \langle 5 \rangle 3/4" CW AND 3/4" HW DOWN TO FIXTURE.
- \langle 6 \rangle 1/2" CW DOWN TO FIXTURE. PROVIDE FOOD SERVICE LISTED BACKFLOW PREVENTER, BFP-1, PRIOR TO CONNECTION WITH EQUIPMENT.
- $\langle 7 \rangle$ 1/2" HW DOWN TO FIXTURE.
- \langle 8 \rangle 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.

CONSTRUCTION PLAN GENERAL NOTES:

SPECIFICATIONS.

 $\langle 1 \rangle$ 3" VENT THRU ROOF.

IS AVAILABLE.

CONSTRUCTION PLAN KEY NOTES

 $\langle 2 \rangle$ 2" VENT UP FROM FIXTURE.

ANY FUNCTIONAL ISSUES.



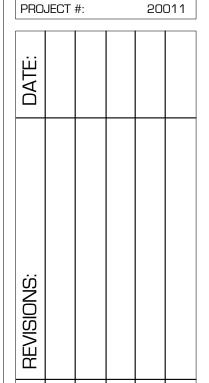
COPYRIGHT © 2020
BY LARRY E. SAYLOR.
THIS DRAWING AND
INFORMATION RELATED TO
THIS DRAWING SHALL NOT BE
COPIED OR USED IN ANY WAY

WITHOUT WRITTEN
AUTHORIZATION OF LARRY E.
SAYLOR. THIS DRAWING NOT
FOR GENERAL USE AND ALL

RIGHTS ARE RESERVED.

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



PROPOSED FIT OUT FOR:

DUCK DONUTS

556 ROUTE 17 NORTH
PARAMUS, NJ 07652

PLUMBING ROOF PLAN

P2.2

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.

NATURAL GAS PIPING GENERAL NOTES:

- 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

1" GAS @ 2 PSI

(2-1/2" GAS @ 7" W.C.)

3/4" GAS @ 2 PSI -(1-1/2" GAS @ 7" W.C.)

> MINIMUM 10'-0" FROM ANY EXHAUST VENTS OR OUTLETS

MINIMUM 10'-0" FROM ANY EXHAUST VENTS OR OUTLETS

(172 MBH)

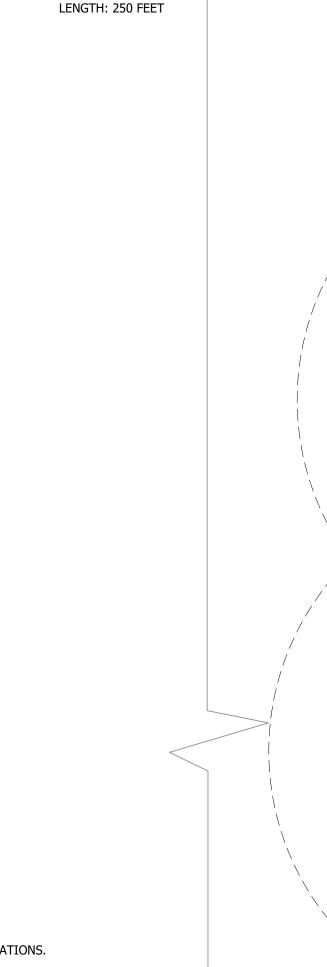
(200 MBH)

_ 1/2" GAS @ 2 PSI _ (1-1/4" GAS @ 7" W.C.)

1/2" GAS @ 2 PSI

MINIMUM 10'-0" FROM ANY OUTSIDE AIR INTAKES

(1-1/4" GAS @ 7" W.C.)

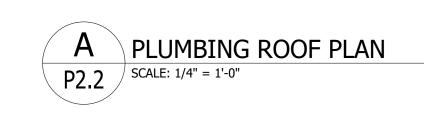


CONSTRUCTION PLAN GENERAL NOTES:

- 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

- 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.
- 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.
- 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.







COPYRIGHT © 2020 BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY WITHOUT WRITTEN AUTHORIZATION OF LARRY E. SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

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

PROPOSED FIT OUT FOR:

Materials and Finishes
ABS - ABS Plastic
AC - American Standard 'Americast'
ARE - Acid Resistant Enamel
CI - Cast Iron
CM - Cultured Marble
CP - Chrome Plated
CPB - Chrome Plated
CS - Calvanized Steel

GS - Galvanized Steel

Lucite - Lucite Acrylic MS - Molded Stone

PES - Porcelain Enameled Steel

NB - Nickel Bronze

POLY - Polyethylene
S - Steel
SM - Synthetic Marble
SS - Stainless Steel

T - Terrazzo VC - Vitreous China PC - Polished Chrome

P6.1

													PL	.UMBING F	IXTURE SO	CHEDULE														
							rank Tank	Height	oacing pliant	duired			Valve				Trin	n				Pipe Roug (i	gh -I n Sizes in.)		Hot Water	Gas	Electrical I Requiren			
е	Description	Location	Manufacturer	Product Line	Model	Size	Mater Flusl Valve / -	Mounting	Fauct Hc Center Sp ADA Com	Carrier Re Fixture (Description	Manufacturer	Model	Mounting Height	Description	Manufacturer	Model	Finish	Mounting Height	Strainer / Drain	Waste	Vent	Domestic Cold Water	Domestic Hot Water	Supply Temp (Deg F)	Load (MBH) Voltage	Voltage HP	kW MOCP	Accessories Notes	
1	Backflow Preventer	Various	Watts	-	SD-3	3/8"		-	- - -		-	-	-	-	-	-	-	-	-	-	-	-	3/8	-	-	-			-	1
1	Circulation Pump	Kitchen	Xylem	ecocirc	19-16	10 gpm @ 10 ft-hd		-			-	-	-	-	-	-	-	-	-	-	-	-	-	3/4	120	-	120/1/60 -	0.06 -	-	1
1	Floor Drain	Various	Jay R. Smith Mfg.	2000 Series	2005	6" Square	CI - F	-			-	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-			-	-
1	Floor Sink	Various	Jay R. Smith Mfg.	300 Series	325-Y03	12" Square	ARE - FR	-			-	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-			-	-
1	Grease Interceptor	Exterior	Zurn	Proceptor	GMC 1300			-	- - -		-	-	-	-	-	-	-	-	-	-	4	3	-	-	-	-			-	-
1	Mop Sink	Janitor Closet	Fiat	-	MSB2424	24"x24"	MS - F	-	- - -		-	-	-	-	Service Faucet	Fiat	830.AA	SS	36"	-	3	2	3/4	3/4	140	-			-	-
-1	Instantaneous Gas-Fired Water Heater	On Wall	Rinnai	_	RU199IN	4.5 gpm @ 90°F Δ1	г w	-			-	-	-	-	-	-	-	-	-	-	-	-	3/4	3/4	140	199	120/1/60 -	- 20	-	-

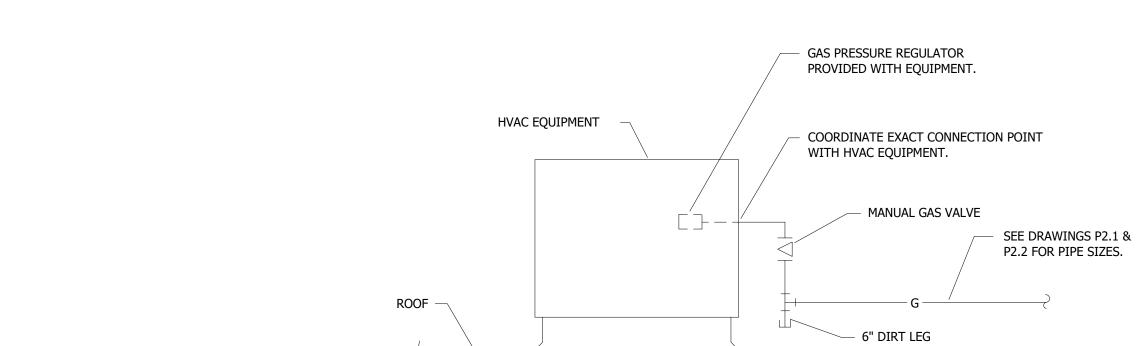
1. Provide this ASSE 1022 listed device on all food service equipment domestic water connections as noted on drawings.

Mounting:
F - Floor
FR - Floor, recessed
W - Wall
C - Counter
UC - Under Counter
SD - Sink Deck Mounting Heights:
*All heights listed are measured from the finished

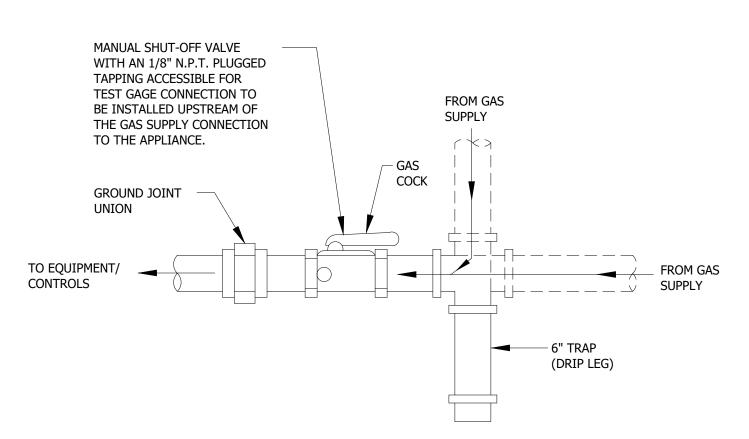
the following fixtures*
Water Closet - Top of Bowl
Urinal - Top of Urinal Lip
Lavatory - Top of Basin

Water Cooler - Top of Bubbler
Eye Wash - Top of Spray Nozzles
Sink - Top of Basin
Shower Valve - Center of Valve
Shower Head - Center of Head Washer/Ice Maker Box - Top of Box

Flush Valve - Center of Supply

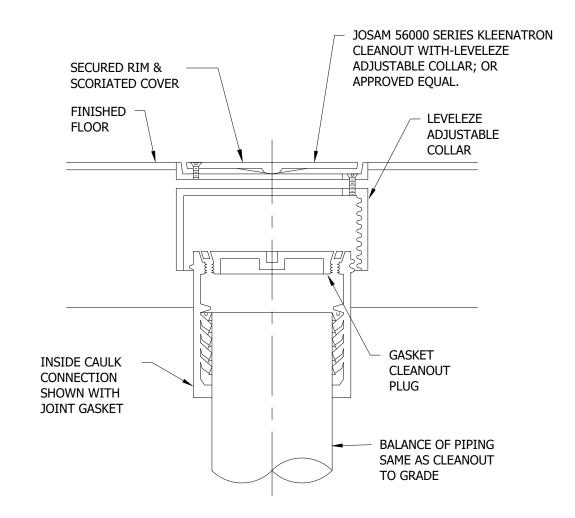


TYPICAL ROOFTOP GAS PIPING DETAIL NOT TO SCALE

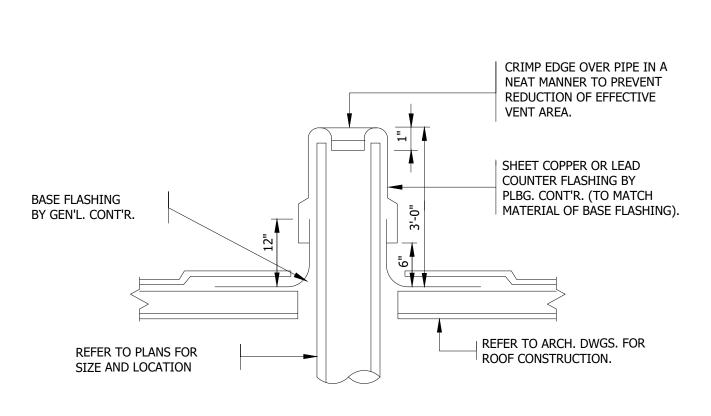


262 Dickinson Drive | Reading | PA | 19605 610-750-9129 | www.entegraeng.com

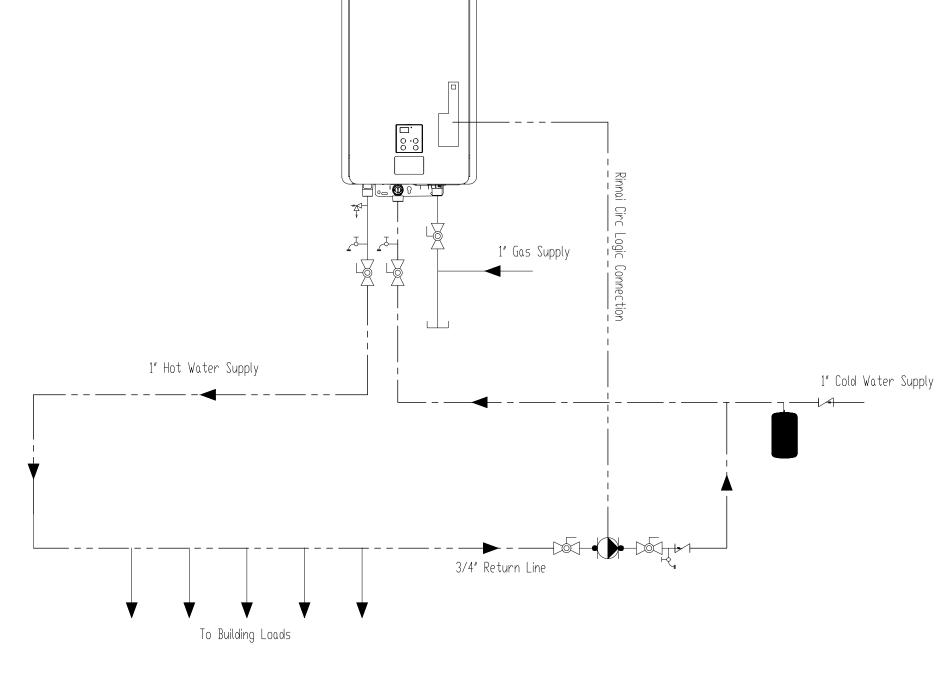
GAS CONNECTION TO EQUIPMENT DETAIL NOT TO SCALE



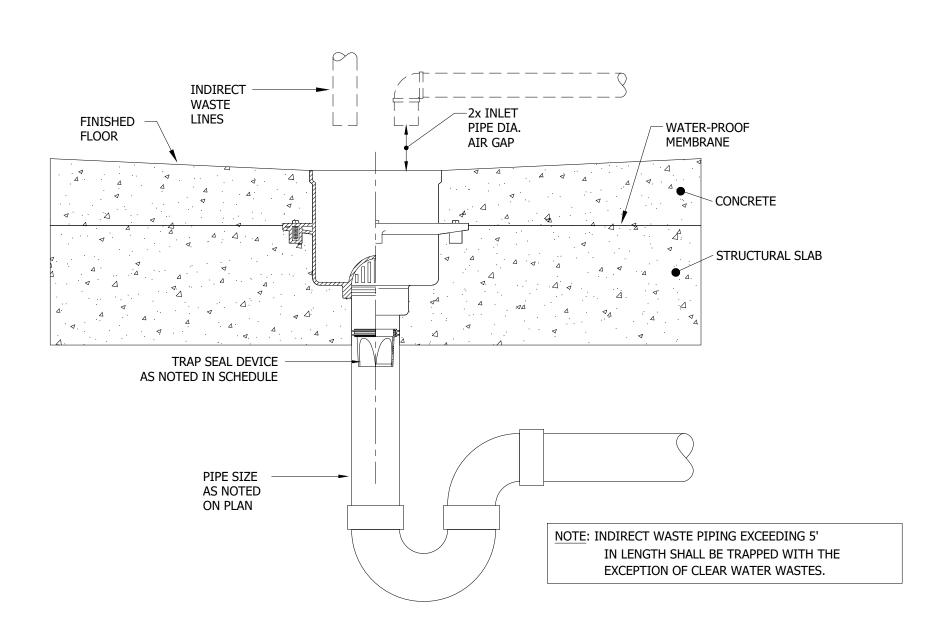
FLOOR CLEANOUT DETAIL NOT TO SCALE



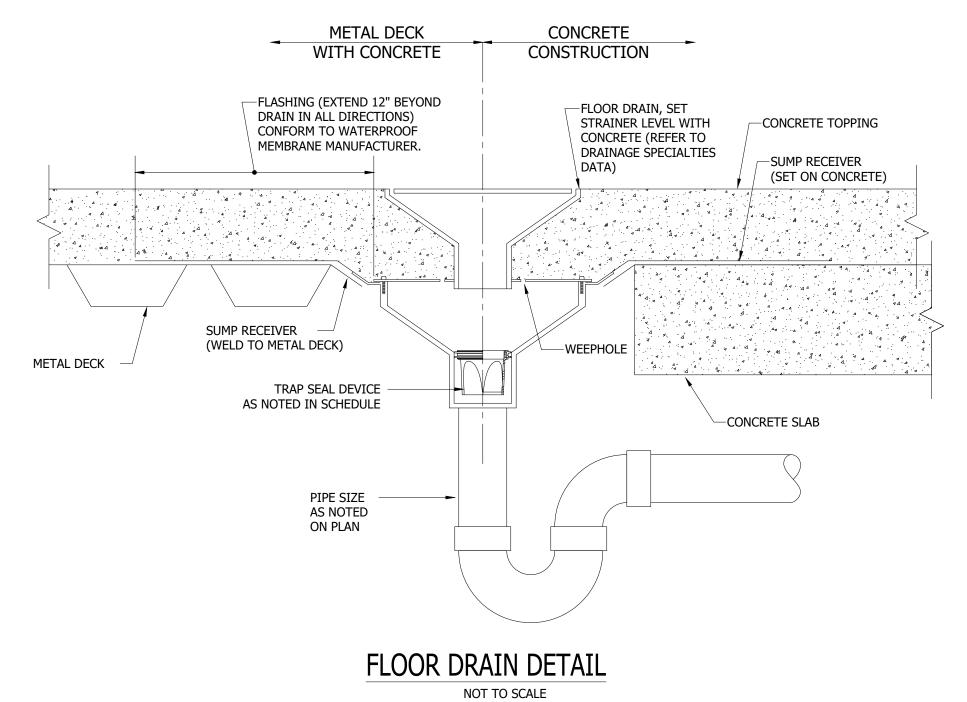
PLUMBING VENT THROUGH FLAT ROOF DETAIL NOT TO SCALE

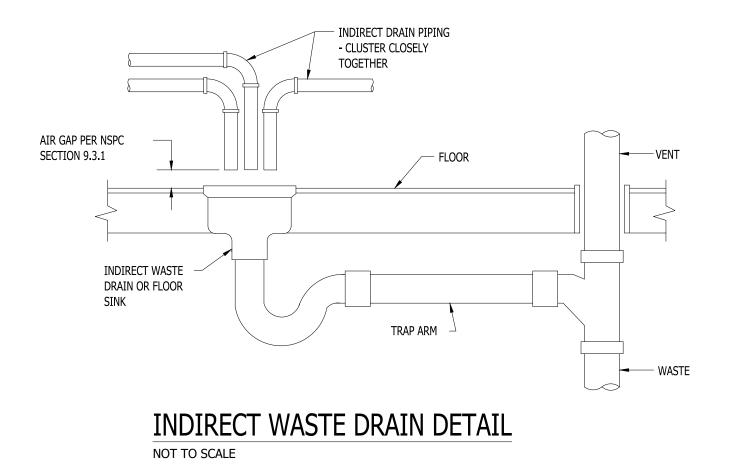


INSTANTANEOUS GAS-FIRE WATER HEATER DETAIL NOT TO SCALE



FLOOR SINK DETAIL NOT TO SCALE







COPYRIGHT (C) 2020 BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY WITHOUT WRITTEN AUTHORIZATION OF LARRY E. SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

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

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

PROPOSED FIT OUT FOR:



15400 Plumbing

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 experiences 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

- 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 A5.8.

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.
- Storm PipingA. 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.
- Have no dangerous or flammable out 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
- 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.
- 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

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

11 Domestic Water Service - Protection

- 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
- 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

- 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.
- 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
- 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.
- Provide nine 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 ¼" per foot for piping 2" and smaller and 1/8" per foot for piping
- 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.
- 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.

return air plenums. Refer to mechanical drawings for return air plenum locations.

12. Plumbing contractor shall provide trap primers or trap seal on all floor drains as per applicable code.

- 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
- 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

equipment, shall be chrome plated or stainless steel.

- 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

LAHRT E. SATLUR
LICENSE NO. AL13819
AIA, NCARB
ARCHITECT
930 CENTURY DRIVE SUITE 10
MECHANICSBURG, PA. 17055



COPYRIGHT © 2020
BY LARRY E. SAYLOR.
THIS DRAWING AND
INFORMATION RELATED TO
THIS DRAWING SHALL NOT BE
COPIED OR USED IN ANY WAY
WITHOUT WRITTEN
AUTHORIZATION OF LARRY E.

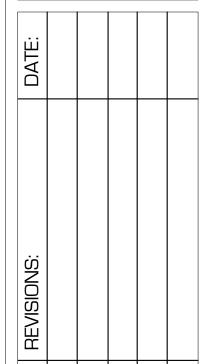
CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND PROMPTLY REPORT ANY ERRORS TO LARRY E. SAYLOR.

SAYLOR. THIS DRAWING NOT

FOR GENERAL USE AND ALL

RIGHTS ARE RESERVED.

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



UCK DONUTS

PLUMBING

P9 1

WATER MOTOR GONG

DELUGE RISER

PREACTION RISER

SPRINKLER RISER

PENDENT-RECESSED

PRIVATE HYDRANT

ONE HOSE OUTLET

PUBLIC HYDRANT

PUBLIC HYDRANT

WALL HYDRANT

TWO HOSE OUTLET

AND PUMPER CONNECTION

SIAMESE FIRE DEPT. CONN.

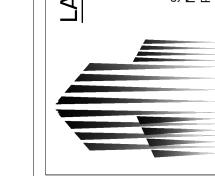
SIAMESE FIRE DEPT. CONN.

FREESTANDING SIAMESE

TWO HOSE OUTLET

TWO HOSE OUTLET

UPRIGHT



COPYRIGHT(C)2020 BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO

THIS DRAWING SHALL NOT BE

COPIED OR USED IN ANY WAY

WITHOUT WRITTEN

AUTHORIZATION OF LARRY E SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL RIGHTS ARE RESERVED. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND

PROMPTLY REPORT ANY ERRORS TO LARRY E. SAYLOR. 05.01.2020 DRAWN BY: JDL/JLM/JPK

CHECKED BY: PROJECT #: 20011

FIRE PROTECTION GENERAL NOTES

1. 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.

2. 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.

3. ALL WORK SHALL CONFORM TO ALL STATE AND LOCAL CODES, RULES AND REGULATIONS AND ORDINANCES.

4. CONTRACTOR SHALL SECURE AND PAY ALL FEES AND PERMITS PERTAINING TO THE CONTRACT.

5. 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.

6. 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.

7. CONTRACTOR SHALL SCHEDULE ALL SHUTDOWNS THAT AFFECT UTILITIES AND PORTIONS OF THE BUILDING THAT MUST REMAIN IN OPERATION WITH THE OWNER.

8. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER AND ALL OTHER CONTRACTORS.

9. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RIGGING, HANDLING AND PROTECTION OF MATERIALS.

10. CONTRACTOR SHALL PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT AND TRANSFER TO POINT OF INSTALLATION, OWNER FURNISHED ITEMS.

11. 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.

12. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORING AS IT RELATES TO HIS/HER WORK.

13. 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.

14. CONTRACTOR SHALL SUBMIT SIX (6) SETS OF SHOP DRAWINGS AND EQUIPMENT CUTS TO THE ENGINEER FOR APPROVAL PRIOR TO

15. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SUPPLY THE OWNER WITH COMPLETE SET OF AS-BUILT DRAWINGS AND

OPERATION AND MAINTENANCE MANUALS. 16. PROVIDE A WET PIPE SYSTEM IN ACCORDANCE WITH NFPA 13 TO SERVE ALL HEATED AREAS OF THE BUILDING. THE WET SPRINKLER

COPIES OF THE CALCULATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS. THE BUILDING IS MIXED CLASSIFICATION. 17. 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

SYSTEM SHALL BE HYDRAULICALLY CALCULATED TO PROVIDE THE PRESCRIBED DENSITY UNIFORMLY OVER THE MOST REMOTE AREA.

18. SPRINKLERS SHALL BE CENTERED IN SPACES AND LOCATED SYMMETRICALLY WITH LIGHTING FIXTURES AND DIFFUSERS AS SHOWN.

MOST REMOTE AREA. COPIES OF THE CALCULATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.

19. THE SPRINKLER SPACING AND LOCATIONS IN THE ENTIRE SPRINKLER SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NFPA-13.

20. 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.

21. PROVIDE A WET STAND PIPE SYSTEM IN ACCORDANCE WITH NFPA. THE STAND PIPE SYSTEM SHALL BE HYDRAULICALLY CALCULATED

22. PROVIDE INSPECTOR TEST STATIONS AT THE MOST REMOTE POINT OF THE SPRINKLER SYSTEM

23. 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.

24. THE SPRINKLER CONTRACTOR SHALL REVIEW ALL PROJECT DRAWINGS AND COORDINATE THE INSTALLATION OF THE PIPING WITH ALL OTHER TRADES FOR THE PROJECT.

25. ALL OS&Y VALVES TO HAVE TAMPER SWITCHES.

26. 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.

27. 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,

28. 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.

29. PROVIDE A WILKINS MODEL 350ADA-6" DOUBLE CHECK DETECTOR ASSEMBLY. PROVIDE TAMPER SWITCHES ON EACH VALVE, COORDINATE WIRING WITH EC.

30. LABEL ALL SPRINKLER PIPING WITH COLORED, WATERPROOF, ALL TEMPERATURE, SELF-ADHERING LABELS AND DIRECTIONAL ARROWS AS MANUFACTURED BY SETON.

31. SPRINKLER HEADS SHALL BE AS FOLLOWS:

A. HEADS IN CEILINGS IN PUBLIC AREAS: CONCEALED, WHITE COVER PLATE. HEADS IN CEILINGS IN OFFICES/MEETING: CONCEALED, WHITE COVER PLATE.

SIDEWALL HEADS IN PUBLIC AREAS: WHITE SEMI-RECESSED

SIDEWALL DRY HEADS SERVING EXTERIOR: CHROME SEMI-RECESSED

HEADS IN CEILINGS OF STAIRS/STORAGE ROOMS/STORAGE: CHROME SEMI-RECESSED

HEADS IN MECHANICAL ROOMS/UTILITY ROOMS: CHROME

FIRE PROTECTION DESIGN AND INSTALLATION NOTES

SCOPE OF WORK

1.1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR REQUIRED TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.

1.2. THE WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH NFPA 13 (LATEST EDITION), ALL CODES AND OTHER NFPA REGULRATIONS GOVERNING WORK OF THIS NATURE.

1.3. ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED EQUAL" BY THE ENGINEER OR ARCHITECT.

2.1. THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES.

SHOP DRAWINGS

3.1. SUBMIT MATERIAL LIST AND SHOP DRAWINGS FOR MAJOR EQUIPMENT TO THE ARCHITECT/ENGINEER FOR APPROVAL.

SPRINKLER PIPING

4.1. 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.

4.1.1. ASTM A53

4.1.2. ASTM A120 4.1.3. ASTM A135

4.2. PIPING MATERIAL MAY BE SCHEDULE 10 (THINWALL) PROVIDED JOINTS ARE MADE BY ROLL-GROOVE COUPLING. THREADING WILL NOT BE PERMITTED.

4.3. PIPING MATERIAL MAY BE SCHEDULE 40 WITH FLANGED, ROLL-GROOVE COUPLINGS OR THREADED JOINTS.

PIPE SUPPORTS

DEVICES.

5.1. ALL HANGERS MUST BE AN APPROVED TYPE BY NFPA 13. NO SPRINKLER PIPING IS TO BE SUPPORTED FROM ANY MECHANICAL OR ELECTRICAL

5.2. 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.

5.3. MAXIMUM DISTANCE BETWEEN PIPE SUPPORTS:

5.3.1. 12'-0" FOR 1-1/4" DIAMETER PIPE AND SMALLER 5.3.2. 15'-0" FOR 1-1/2" DIAMETER PIPE AND LARGER

6. WORKING PLANS

6.1. 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 PROFESSION ENGINEER.

7. TESTS

7.1. ACCEPTANCE AND HYDROSTATIC TESTS SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 10 OF NFPA 13.

8. MISCELLANEOUS

8.1. DO NOT SCALE THIS DRAWING FOR EXACT DIMENSIONS. VERIFY ALL FIGURES, CONDITIONS AND DIMENSIONS AT THE JOB SITE.

8.2. THE SPRINKLER PLANS ARE INTENDED TO BE DIAGRAMMATIC. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION.

GUARANTEE

9.1. 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.

CONNECT TO EXISTING POINT OF DEMOLITION EXISTING FIRE PROTECTION PIPING

PREACTION SPRINKLER PIPING

NO SPRINKLER WORK UNDER THIS CONTRACT

FIRE PROTECTION SYSTEM DESIGN NOTE:

FIRE PROTECTION SYMBOLS

GATE VALVE

VALVE IN PIT

OS&Y VALVE

BUTTERFLY VALVE

CHECK VALVE

NON INDICATING VALVE

BACKFLOW PREVENTER

BACKFLOW PREVENTER

ALARM CHECK VALVE

DRY PIPE VALVE

DRY PIPE VALVE

DELUGE VALVE

FLOW SWITCH

TAMPER SWITCH

PREACTION VALVE

INSPECTORS TEST STATION

FIRE DEPT. HOSE VALVE

(DOUBLE CHECK VALVE ASSEMBLY)

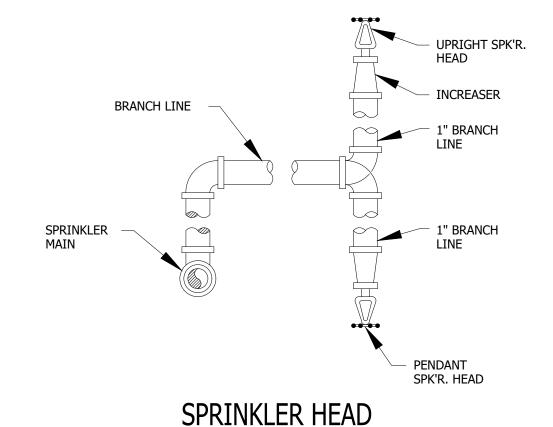
(REDUCED PRESSURE ZONE-RPZ)

(NONRISING-STEM VALVE)

POST INDICATOR VALVE

KEY-OPERATED VALVE

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.



GENERAL FIRE PROTECTION SYSTEM DATA

5. MAXIMUM BUILDING HEIGHT: XX'-XX" / X STORIES (MAXIMUM XX' ALLOWED PER 2015 IBC 504.3)

1. BUILDING OWNER: XXX

3. CONSTRUCTION: XXX

4. IBC USE GROUP: XXX

7. TYPE OF HAZARD: ORDINARY

10. PRELIMINARY AND WORKING PLANS

11. INSTALLATION SEQUENCE

IN THE FOLLOWING SEQUENCE:

3. SPRINKLER PIPING

1. DUCTWORK AND AIR HANDLERS

4. ELECTRICAL WIRING AND CONDUIT

PLANS WITH THE DUCTWORK SHOP DRAWINGS.

2. SANITARY AND DOMESTIC WATER PIPING

2. BUILDING ADDRESS: 556 ROUTE 17 NORTH

6 AREA PROTECTED BY SPRINKLER SYSTEM: XX,XXX SF

8. MAXIMUM SPRINKLER HEAD SPACING: PER NFPA 13 REQUIREMENTS

9. MAXIMUM SQUARE FOOTAGE PER SPRINKLER HEAD: PER NFPA 13 REQUIREMENTS

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.

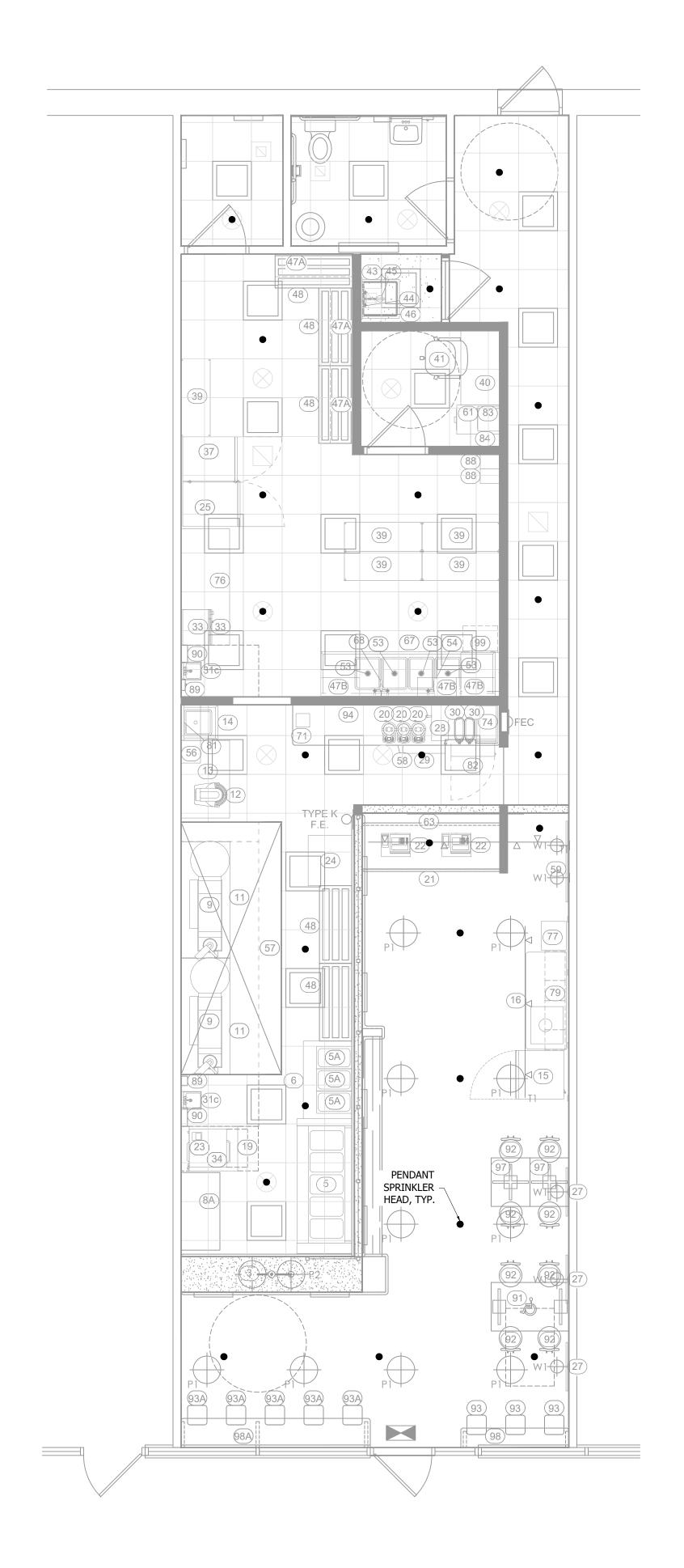
THE MECHANICAL AND ELECTRICAL SYSTEM COMPONENTS SHALL BE INSTALLED

THE SPRINKLER CONTRACTOR SHALL COORDINATE THE WORKING SPRINKLER

PARAMUS, NJ 07652

INSTALLATION DETAIL NOT TO SCALE







COPYRIGHT © 2020 BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY WITHOUT WRITTEN
AUTHORIZATION OF LARRY E. SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

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

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

ABBREVIATIONS

A or AMP	AMPERES	LRA	LOCK ROTOR AMPERES
AF	AMP FRAME	LGT	LIGHTING
AFC	ABOVE FINISHED CEILING	_	
AFF	ABOVE FINISHED FLOOR	LV	LOW VOLTAGE
AFG	ABOVE FINISHED GRADE		
AHU	AIR HANDLING UNIT	M	MAIN
A.I.C.	AMPERE INTERRUPTING CAPACITY	MAX	MAXIMUM
AM.	AMMETER AMMETER	MC	MECHANICAL CONTRACTOR
ARCH	ARCHITECT	MCB	MAIN CIRCUIT BREAKER
AS	AMMETER SWITCH	MFG	MANUFACTURER
		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 GUAGE	MV	MEDIUM VOLTAGE
		111	TIEDIOTI VOLITIGE
BFF	BELOW FINISHED FLOOR	N	NEUTRAL
BFG	BELOW FINISHED GRADE	N.C	NORMALLY CLOSED
BKR	BREAKER	NEC NEC	NATIONAL ELECTRIC CODE
B.O.D.	BASIS OF DESIGN	N.I.C.	NOT IN CONTRACT
		N.O.	NORMALLY OPEN
С	CONDUIT		
C/B	CIRCUIT BREAKER	N.T.S.	NOT TO SCALE
ĆKT	CIRCUIT	0.0	ON CENTER
CL	CENTERLINE	O.C.	ON CENTER
CLG	CEILING	OCP	OVERCURRENT PROTECTION
CPT	CONTROL POWER TRANSFORMER		
CT	CURRENT TRANSFORMER	Р	POLE
CU	COPPER	PB	PULL BOX
CU	COPPER	PC	PLUMBING CONTRACTOR
DEMO DEM	IOLITION	PF	POWER FACTOR
		PH OR ∅	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
		PV	PHOTOVOLTAIC
E OR EX	EXISTING	PVC	POLYVINYL CHLORIDE
EC	ELECTRICAL CONTRACTOR	PWR	POWER
EDH	ELECTRIC HAND DRYER	FVVK	FOWLK
EF	EXHAUST FAN	OTV	OLIANITITY/
ELEC	ELECTRICAL	QTY	QUANTITY
EM	EMERGENCY	BE6	DECEDE A CLE
EMT	ELECTRICAL METALLIC TUBING	REC	RECEPTACLE
ENCL	ENCLOSURE	RGS	RIGID GALVANIZED STEEL
E.O.	ELECTRICALLY OPERATED	RTU	ROOF TO UNIT
ETD	EXISTING TO BE DEMOLISHED		
ETR	EXISTING TO BE DEMOLISHED EXISTING TO REMAIN	SEC	SECONDARY
ETRL	EXISTING TO REMAIN EXISTING TO BE RELOCATED	SLD	SINGLE LINE DIARGAM
		SLV	SLEEVE
EWC	ELECTRIC WATER COOLER	SPEC	SPECIFICATION
_	=10=5	SPD	SURGE PROTECTION DEVICE
F	FUSED	SPDT	SINGLE POLE, DOUBLE THROW
FA	FIRE ALARM	SPST	SINGLE POLE, SINGLE THROW
FACP	FIRE ALARM CONTROL PANEL	S.T.A.	SHUNT TRIP
FCU	FAN COIL UNIT	STD	STANDARD
FLA	FULL LOAD AMPERES	STP	SHIELDED TWISTED PAIR
FLUOR	FLUORESCENT	SW	SWITCH
		SYS	SYSTEM
G	EQUIPMENT GROUND CONDUCTOR	313	SISILM
GA	GAUGE	TEI	TELEDHONE
GC	GENERAL CONTRACTOR	TEL	TELEPHONE
GFI	GROUND FAULT INTERRUPTER	TV	TELEVISION
GND	GROUND	TYP	TYPICAL
GND	GROOMB	TS	TIME SWITCH
HID	HIGH INTENSITY DISCHARGE		
H-O-A	HAND-OFF-AUTOMATIC	UH	UNIT HEATER
HP	HORSE POWER	UF	UNFUSED
пР HT	HEIGHT	UG	UNDERGROUND
ПI HV	HIGH VOLTAGE	U.L.	UNDERWRITERS LABORATORY
		UPS	UNINTERRUPTIBLE POWER SUPPLY
HVAC	HEATING, VENTILATING, AIR CONDITIONING	UTP	UNSHIELDED TWISTED PAIR
TII	THURATNATION		
ILL	ILLUMINATION	V	VOLTS
IMC	INTERMEDIATE METALLIC CONDUIT	VA	VOLT AMPERES
		VAV	VARIABLE AIR VOLUME
JB	JUNCTION BOX	VM	VOLT METER
		¥ 1°1	. OLI I ILILIX
	CIRCULAR MILS	W	WIRE
KVA	KILOVOLT-AMPERES	W	WATT
KW	KILOWATTS	WP	WEATHERPROOF
KWH	KILOWATT-HOUR	VVI	WEATHERINGOI

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

TRANSFORMER

EXPLOSION PROOF

- TS-1 DATA/TELEPHONE RACEWAYS/PATHWAYS; COORDINATE WITH THE TECHNOLOGY CABLING CONTRACTOR FOR ALL CONDUIT AND RACEWAY REQUIREMENTS FOR THE TECHNOLOGY/CABLING SYSTEMS.
- 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.
- 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

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.
- 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.
- 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.
- DISCONNECT AND REMOVE ALL SWITCHES, RECEPTACLES, ETC. FROM WALLS BEING REMOVED. ENSURE THAT ALL ADJACENT DEVICES REMAINING ARE ENERGIZED.
- 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'.
- ALL ITEMS BEING REMOVED AS SHOWN IN HEAVY DASHED LINES.
- ALL ITEMS TO REMAIN ARE SHOWN IN SOLID LIGHT LINES.

BRANCH C	CIRCUIT WIRING REQUIREMENTS						
120	OR 277 VOLT, 1¢, 2W CIRCUIT						
CIRCUIT BREAKER	MINIMUM CONDUCTOR REQUIREMENT						
20A-1P	2 #12AWG + 1 #12AWG GROUND IN ¾" CONDUI						
30A-1P	2 #10AWG + 1 #10AWG GROUND IN ¾" CONDUI						
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" CONDUI						
30A-2P	2 #10AWG + 1 #10AWG GROUND IN ¾" CONDUI						
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" CONDUI						
30A-2P	3 #10AWG + 1 #10AWG GROUND IN ¾" CONDUI						
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" CONDUI						
30A-3P	3 #10AWG + 1 #10AWG GROUND IN ¾" CONDUI						
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, 3¢, 4W CIRCUIT						
20A-3P	4 #12AWG + 1 #12AWG GROUND IN ¾" CONDUI						
30A-3P	4 #10AWG + 1 #10AWG GROUND IN ¾" CONDUI						
40A-3P	4 #8AWG + 1 #10AWG GROUND IN 3/4" CONDUIT						
50A-3P	4 #6AWG + 1 #10AWG GROUND IN 1" CONDUIT						
60A-3P	4 #6AWG + 1 #10AWG GROUND IN 1" CONDUIT						
THE FOLLOWING 120V - 65 FEET 277 V - 150 FEET IF CIRCUITS LENGT INCREASED PER TH INCREASED ACCOR	JIT WIRING IN THIS TABLE IS BASED ON CONDUIT RUNS G LENGTHS: "HS EXCEED THESE VALUES, THE WIRE SIZE SHALL BE IE VOLTAGE DROP SCHEDULE. RACEWAYS SHALL BE DINGLY. LARGE CABLES SHALL BE REDUCED IN A JUNCTION ICE TERMINATION. WIRE REDUCERS SHALL BE PROVIDED						

AT CIRCUIT BREAKER AS REQUIRED.

AS INDICATED IN THE NATIONAL ELECTRIC CODE.

IF MC CARLE IS APPROVED FOR LISE BY ENGINEER AND AHJ. THE MC CABLE

ALL AMPACITIES ARE BASED ON 75°C TEMPERATURE RATING OF CONDUCTORS

SHALL INCLUDE A FULL SIZE INSULATED GROUND CONDUCTOR. SIZE OF WIRING SHALL BE PER THE ABOVE SCHEDULE AND VOLTAGE DROP SCHEDULE.

ELECTRICAL GENERAL NOTES

- E-1 THESE GENERAL ELECTRICAL NOTES APPLY TO ALL DRAWINGS IN THE PROJECT.
- 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 HARDWIRE) WITH EQUIPMENT (MECHANICAL, APPLIANCE, OWNER PROVIDED EQUIPMENT) CUTSHEETS PRIOR TO ROUGH-IN.
- COORDINATE EXACT LOCATION AND MOUNTING HEIGHTS WITH ARCHITECTURAL DOCUMENTS PRIOR TO ROUGH-IN.
- 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.

COORDINATE ALL CEILING MOUNTED DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLANS (RCPS). 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.
- 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.
- 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
- 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.
- 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
- 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
- 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
- E-30 IF A DISCONNECT IS INSTALLED ON THE LOAD SIDE OF A VFD, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL REQUIRED CONTROL INTERLOCK
- 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, FORE 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
- E-34 ALL WIRING SHALL BE RUN CONCEALED IN WALLS AND PARTITIONS IN FINISHED SPACES OR ABOVE CEILING TILES UNLESS OTHERWISE SPECIFIED, OR
- 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.

MATERIAL AND EQUIPMENT FOR WHICH THERE IS APPROVED SHOP DRAWINGS.

- E-41 ALL COMPUTER WORKSTATIONS WILL HAVE VOICE AND DATA DEVICES. ALL ELECTRICAL CIRCUITS FEEDING VOICE AND DATA EOUIPMENT 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
- 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.



WALL MOUNTED CLOCKS OR PROGRAM BELLS

(OR 1'-0" BELOW FINISHED CEILING OF TOP UNIT)

WARNING AND SIGNALING FIXTURES/SIGNS

PANELBOARDS AND TELEPHONE CABINETS

STARTERS, CONTACTORS

SEPERATE SINKS NOT IN CASEWORK

ELECTRICAL DEVICE MOUNTING HEIGHTS

1. THE ABOVE MOUNTING HEIGHTS SHALL BE ADHERED TO UNLESS SPECIFICALLY NOTED OR

MOUNTING HEIGHTS TO CENTER OF OUTLETS UNLESS OTHERWISE NOTED. IN MASONRY

CONSTRUCTION THE ABOVE MOUNTING HEIGHTS SHALL BE USED FOR REFERENCE TO NEAREST

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

WALL MOUNTED FIRE ALARM SOUNDING DEVICE

PANEL AND FIRE ALARM CONTROL PANEL

MANUAL FIRE ALARM PULL STATION

FINISHED FLOOR

THE ABOVE MOUNTING HEIGHTS SHALL BE ADHERED TO UNLESS SPECIFICALLY NOTED OR

FIRE ALARM DEVICE MOUNTING HEIGHTS

DETAILED OTHERWISE ON THE DRAWINGS OR SPECIFICATIONS.

WALL MOUNTED SINGLE STATION 120VAC PHOTOELECTRIC SMOKE ALARM

FIRE ALARM STROBES MOUNTED AT 6'-8" OR 6" BELOW FINISHED CEILING

TOP OF FLUSH MOUNTED OR SURFACE MOUNTED FIRE ALARM ANNUNCIATOR

DATA/TELEPHONE OUTLETS

DETAILED OTHERWISE ON THE DRAWINGS OR SPECIFICATIONS.

\ ELECTRICAL DEVICE MOUNTING HEIGHTS

(WHICHEVER IS LOWER)

BLOCK OF BRICK COURSING

COUNTER AND/OR ASSOCIATED BACKSPLASH.

FINISHED FLOOR

BATTERY LIGHTING UNITS AND REMOTE WALL MIOUNTED LIGHTING UNIT

TOP OF FLUSH AND SURFACE MOUNTED ELECTRICAL LIGHTING OR POWER

TOP OF BACK-MOUNTED WALL EXIT FIXTURES (NOT MOUNTED ABOVE DOORS)

TOP OF HIGHEST ELECTRICAL SAFETY DISCONNECT SWITCHES, MAGNETIC

CENTERLINE OF OPERATING HANDLE FOR WALL MOUNTED DISCONNECT

SWITCHES AND MOTOR STARTERS; WALL MOUNTED TELEPHONE AND PAY

WALL PHONE, ELECTRICAL DEVICE LIGHTING SWITCHES, MANUAL MOTOR

ELECTRICAL RECEPTACLES IN MECHANICAL, ELECTRICAL AND ELEVATOR

ELECTRICAL RECEPTACLES, TELEPHONE OUTLETS, DATA OUTLETS,

STARTERS, SECURITY CARD, AND GFI RECEPTACLES IN TOILET ROOMS OR FOR

STATIONS (3'-6" AT HANDICAP LOCATIONS VERIFY EXACT HEIGHT PRIOR TO

9" DOWN FROM

CENTER ABOVE DOOR

OR WINDOW OPENING

CEILING

6'-6"

6'-3"

3'-8"

2'-0"

1'-6"

0'-0"

6" DOWN FROM

CEILING TO TOP

OF DETECTOR

9" BELOW

6'-8"

6'-6"

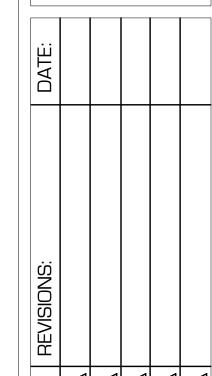
4'-0"

FINISHED CLG

COPYRIGHT(C)2020 BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY WITHOUT WRITTEN AUTHORIZATION OF LARRY E SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

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

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



		F	RECEPTACL	E SCHEDULE			
POWER SYMBOL	RECEPTACLE TYPE	NEMA TYPE	VOLTAGE	MANUFACTURER, MODEL #	REMARKS		
φ	SIMPLEX	L5-20R	125	LEGRAND, 5361W	(1)		
Ф	DUPLEX	L5-20R	125	LEGRAND, 5362W	(1)		
*	QUADRUPLEX	L5-20R	125	LEGRAND, (2) 5362W	(1)		
•	GFCI DUPLEX	L5-20R	125	LEGRAND, 2095W	(1)		
₩P	WEATHER-RESISTANT DUPLEX	L5-20R	125	LEGRAND, 2095TRWRW	(1)(3)		
φ ^{IG}	ISOLATED GROUND DUPLEX	L5-20R	125	LEGRAND, IF5362	(1)		
ФСТ	COUNTER TOP DUPLEX	L5-20R	125	LEGRAND, TR5362W	(1)		
•	TVSS DUPLEX	L5-20R	125	LEGRAND, IG5362WSP	(1)		
φ	30 AMP RECEPTACLE	L6-30R	250	LEGRAND	(1)		
(50 AMP RECEPTACLE	14-50	125/250	LEGRAND	(1)		
Ф	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)		
$\square_{\mathbb{P}}^{\boldsymbol{\smile}}$	SYSTEMS FURNITURE POWER WHIP	N/A	120	WIREMOLD, 4FFATCBK-4FFCTCBK			
•	DOWED DOLE	L5-20R	120	WIREMOLD, VS662345			
-	POWER POLE	L5-20K	120	WIREMOLD, VL662345			
				3'-0" LONG, WIREMOLD, 20GB206S			
	MULTI-OUTLET ASSEMBLY	L5-15R	120	5'-0" LONG WIREMOLD, 20GB512S			
				6'-0" LONG WIREMOLD, 20GB612S			

		SWITCH S	SCHEDULE	
SWITCH SYMBOL	SWITCH TYPE	VOLTAGE	MANUFACTURER	REMARKS
S	SINGLE POLE	120/277	LEGRAND, CSB20AC1W	
S ₃	S ₃ THREE WAY		LEGRAND, CSB20AC3W	
S ₄	S ₄ FOUR WAY		LEGRAND, CSB20AC4W	
S _{os}	S _{os} PIR OCCUPANCY SENSOR		LEGRAND, OS300SW	
S _{3os}	PIR THREE WAY OCCUPANCY SENSOR	120/277	LEGRAND, OS300S	
S_{D}	DIMMER SWITCH	120/277	LUTRON DVSTV-WH	(1) (3) (4)
S_{P}	SWITCH W/ PILOT LIGHT	120/277	LEGRAND, PS20AC1WSL	
Sĸ	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)
OS	DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR	120/277		
PC	PHOTOCELL	120/277		
DS	DAYLIGHT SENSOR	120/277	DAYLIGHT SENSOR TO CONTROL LIGHTING PER IECC	

(2) PROVIDE WITH "WHILE-IN-USE" WHEATHERPROOF BOX & COVER LEGRAND, MODEL#WIUCAGV

(1) PROVIDE WITH SHIM-LOCKS.

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.

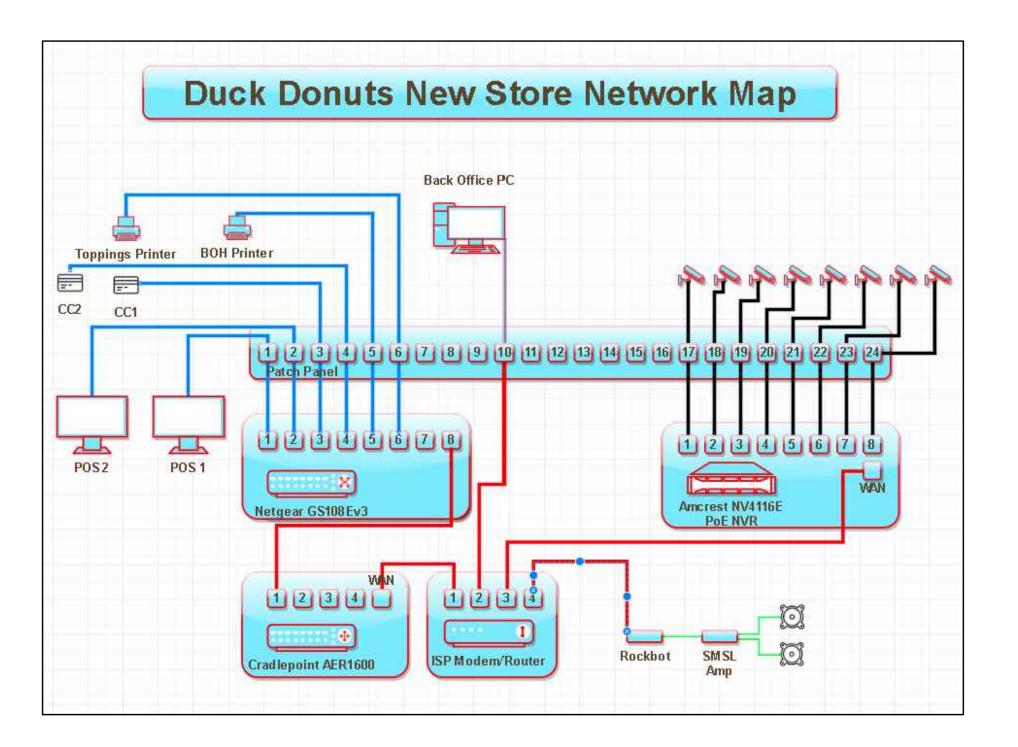
	7									
	POWER DEVICE SYMBOLS									
POWER SYMBOL	DESCRIPTION									
JB	JUNCTION BOX									
M HP, ∨, ø	MOTOR CONNECTION, HORSEPOWER, VOLTAGE, AND PHASE AS INDICATED									
30/3/NF/12	DISCONNECT SWITCH - NOMENCLATURE AS FOLLOWS - SIZE/POLES/FUSE SIZE/NEMA RATING									
FVNR/SIZE1/1	COMBINATION MOTOR STARTER - TYPE/SIZE/NEMA ENCLOSURE AS INDICATED.									

	FIRE ALARM DEVICE SYMBOLS	
FIRE ALARM SYMBOL	DESCRIPTION	REMARKS
(2)	PHOTOELECTRIC SMOKE DETECTOR	
ODD	DUCT MOUNTED SMOKE DETECTOR	
HD	HEAT DETECTOR	
F	MANUAL PULL STATION	
	FIRE ALARM SPEAKER	
	FIRE ALARM SPEAKER/STROBE	
□ф	FIRE ALARM STROBE	
FACP	FIRE ALARM CONTROL PANEL	
FAAP	FIRE ALARM ANNUNCIATOR PANEL	
FR	SUPERVISED RELAY	
FP	PRESSURE SWITCH	
FT	TAMPER SWITCH	
FF	FLOW SWITCH	
DH	DOOR HOLD	
₽ BT	BEAM DETECTOR TRANSMITTER	
⊘ _{BR}	BEAM DETECTOR RECEIVER	

	IN	FORMATION TECHN	OLOGY SCHEDULE	
IT SYMBOL	I DEVICE LYPE I MANUEACTURER I		MODEL #	REMARKS
[#]		ORTRONICS	JACK TYPE: TRACJACK, OR-TJS600 FACEPLATE: OR-40300545 THRU 0R-40300549	(1)
▼ ^(#) TELEPHONE OUTLET		ORTRONICS	JACK TYPE: TRACJACK, OR-TJS600 FACEPLATE: OR-40300545 THRU 0R-40300549	(2)
# V (#)	COMBINATION DATA/TELE OUTLET	ORTRONICS	JACK TYPE: TRACJACK, OR-TJS600 FACEPLATE: OR-40300545 THRU 0R-40300548	(1)
	SYSTEMS FURNITURE DATA WHIP	WIREMOLD	WIREMOLD, 4FFATCBK-4FFCTCBK	
	FLOOR MOUNTED DATA RACK	ORTRONICS	OR-MM10716	
(2) '(#)' TELI	INDICATES QUANTITY OF EPHONE OUTLETS.		EPLATE APPROPRIATE FOR QUANTITY OF IDE FACEPLATE APPROPRIATE FOR QUANTION ACK LAYOUT.	

			PANE	LS SCHEDULE		
ANEL SYMBOL	MOUNTING	VOLTAGE	PHASE	MANUFACTURER, TYPE	MAX AMP RATING	REMARKS
	SURFACE	208Y120	3ф	SQUARE , NQOD	MCB - 400 MLO - 600	(1)
_	SURFACE	480Y277	3ф	SQUARE D, NF	MCB - 600 MLO - 800	(1)
77772	SURFACE	240/120	1ф	SQUARE D, NQOD	MCB - 400 MLO - 600	(1)
	RECESSED	208Y120	3ф	SQUARE D, NQOD	MCB - 400 MLO - 600	(1)
_	RECESSED	480Y277	3ф	SQUARE D, NF	MCB - 600 MLO - 800	(1)
* <i>U///</i> 2*	RECESSED	240/120	1ф	SQUARE D, NQOD	MCB - 400 MLO - 600	(1)
	SURFACE	208Y120	3ф	SQUARE D, I-LINE	MCB - 800 MLO - 1200	(1)
	SURFACE	480Y277	3ф	SQUARE D, I-LINE	MCB - 800 MLO - 1200	(1)





A NETWORK WIRING DIAGRAM
E0.2 SCALE: NONE

LICENSE NO. ALT 3819
AIA, NCARB
ARCHITECT
930 CENTURY DRIVE SUITE 103
MECHANICSRI IRG. PA. 17055

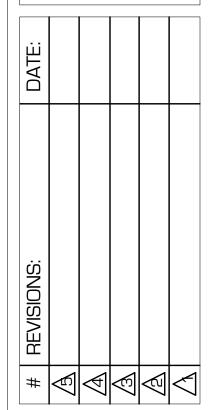


COPYRIGHT © 2020
BY LARRY E. SAYLOR.
THIS DRAWING AND
INFORMATION RELATED TO
THIS DRAWING SHALL NOT BE
COPIED OR USED IN ANY WAY
WITHOUT WRITTEN
AUTHORIZATION OF LARRY E.
SAYLOR. THIS DRAWING NOT
FOR GENERAL USE AND ALL

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

RIGHTS ARE RESERVED.

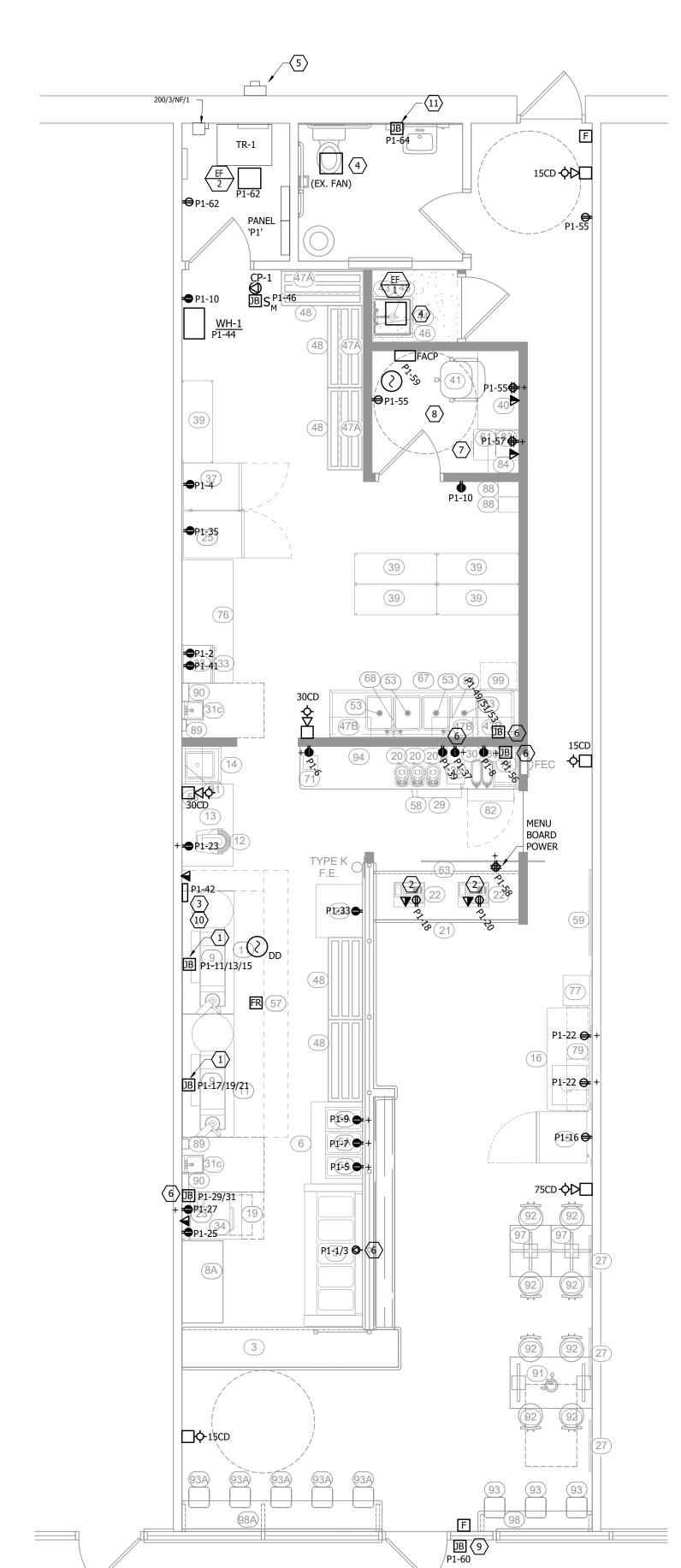
DATE: 05.01.2020
DRAWN BY: JDL/JLM/JPK
CHECKED BY: BRM
PROJECT #: 20011



OUCK DONUTS 556 ROUTE 17 NORTH PARAMUS, NJ 07652

ELECTRICAL SYMBOLS

FO 2



NEW WORK KEYED NOTES:

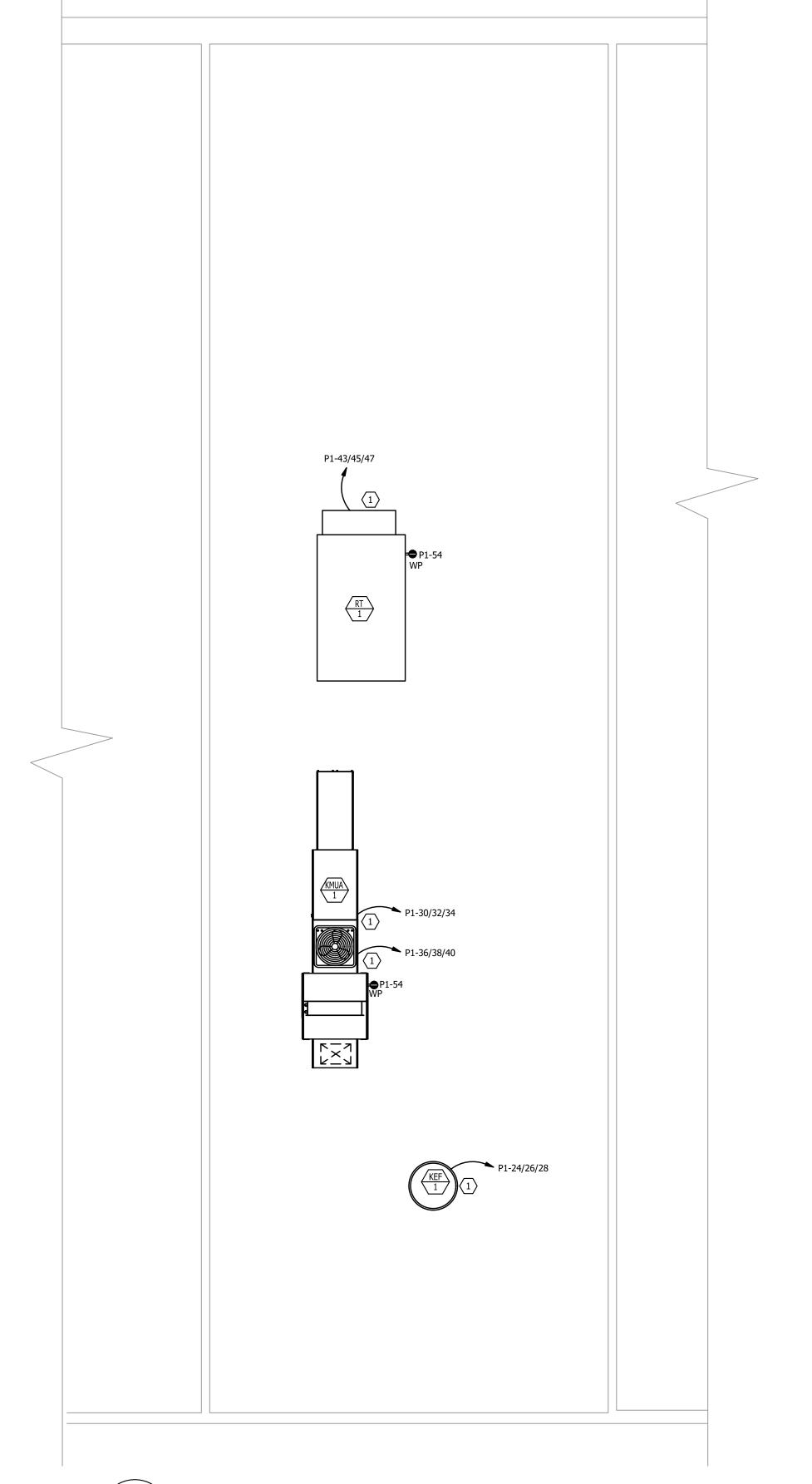
- 1 HARD WIRED CONNECTION TO DONUT MAKER. PROVIDE LOW VOLTAGE SHUNT TRIP CONNECTION TO HOOD CONTROL PANEL AS REQUIRED.
- MOUNT POWER AND DATA INSIDE SERVICE COUNTER MILLWORK.
 COORDINATE WITH MILLWORK SHOP DRAWINGS AND MANUFACTURER FOR
 INSTALLATION REQUIREMENTS.
- HOOD CONTROL PANEL. SEE WIRING DIAGRAM 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.
- 6 CONFIRM NEMA PLUG CONFIGURATION WITH KITCHEN SUPPLIER EQUIPMENT. SUBMIT ALL EQUIPMENT PLUG NON-STANDARD
- 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 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 TOPPINGS 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. CATSE
 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.
- 9 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 ELECTRICAL FIRST FLOOR PLAN - POWER E2.1 SCALE: 1/4" = 1'-0"

NEW WORK GENERAL NOTES:

PROVIDE DIGITAL 24 HOUR ASTRONOMICAL TIME CLOCK, TORK DG100A-Y OR EQUAL FOR CONTROL OF EXTERIOR LIGHTING FIXTURES. COORDINATE LOCATION OF TIMECLOCK WITH OWNER.





B ELECTRICAL PARTIAL ROOF PLAN

E2.1 SCALE: 1/4" = 1'-0"

NEW WORK KEYED NOTES:

1 POWER TO FACTORY INSTALLED QUICK CONNECT/VFD/DISCONNECT SWITCH.

ARRY E. SAYLOR
LICENSE NO. AL13819
AIA, NCARB
ARCHITECT
930 CENTURY DRIVE SUITE 10
MECHANICSBURG, PA. 17055
PHONE: 717 697 1799

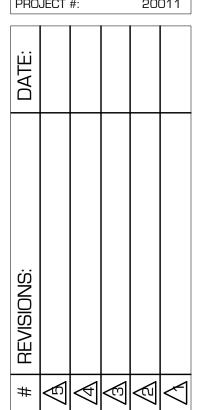


COPYRIGHT © 2020 BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO

BY LARRY E. SAYLOR.
THIS DRAWING AND
INFORMATION RELATED TO
THIS DRAWING SHALL NOT BE
COPIED OR USED IN ANY WAY
WITHOUT WRITTEN
AUTHORIZATION OF LARRY E.
SAYLOR. THIS DRAWING NOT
FOR GENERAL USE AND ALL
RIGHTS ARE RESERVED.

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

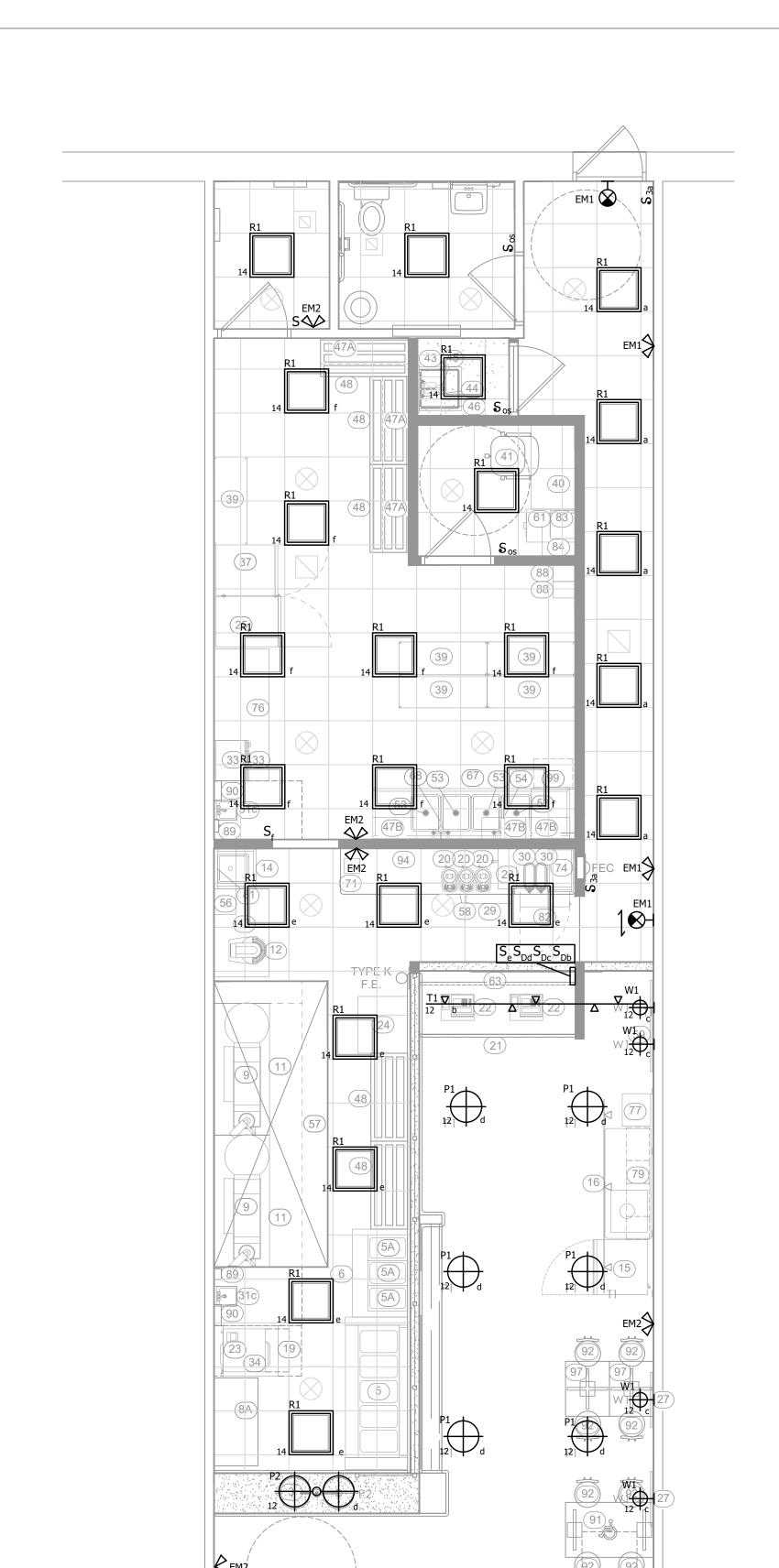


DUCK DONUTS
556 ROUTE 17 NORTH
PARAMUS, NJ 07652

POWER

F2 1





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

NEW WORK GENERAL NOTES:

ALL EMERGENCY LIGHTING AND EXIT SIGNS SHALL BE WIRED TO LOCAL ZONE UNSWITCHED 120V NORMAL CIRCUIT.

2. ALL CIRCUITS INDICATED ARE TO PANEL 'P1'.

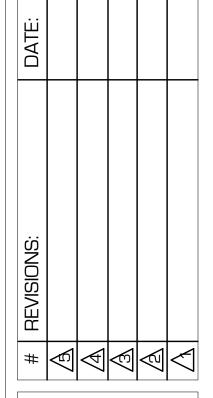


COPYRIGHT © 2020
BY LARRY E. SAYLOR.
THIS DRAWING AND
INFORMATION RELATED TO
THIS DRAWING SHALL NOT BE
COPIED OR USED IN ANY WAY WITHOUT WRITTEN
AUTHORIZATION OF LARRY E.
SAYLOR. THIS DRAWING NOT
FOR GENERAL USE AND ALL

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

RIGHTS ARE RESERVED.

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



				LIGHTING FIXTURE S	CHEDULE							
FIXTURE	FIXTURE			L	AMP			MOUNTING	FIXTURE	REMARKS		
ID	SYMBOL	MANUFACTURER	MODEL #	DESCRIPTION	LAMP LAMP QUANTITY TYPE		LAMP WATTAGE	ССТ	CRI	HOONTING	VOLTAGE	KEPANS
R1		LITELINE	EDGE 22 WH 120	2X2 LED RECESSED TROFFER	1	LED	40	3500	80	RECESSED	MVOLT	
P1	+	воск	P273-SN518-LED (48" STEM)	PENDANT FIXTURE	1	LED	10	3500	80	RECESSED	MVOLT	
P2	$\oplus \oplus$	воск	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	фі	воск	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-LSO	TWIN HEAD, ADJUSTABLE LAMP, THERMOPLASTIC, 12 VOLT, 1.5W LED LAMPS, NICKEL-CADMINUM BATTERY BACK-UP, SELF DIAGNOSTICS	-	LED	1.0	-	1	WALL	120	
EM2	⋄	LITHONIA	EML2-LED-HO	TWIN HEAD, ADJUSTABLE LAMP, THERMOPLASTIC, 12 VOLT, 1.5W LED LAMPS, NICKEL-CADMINUM 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.TL. 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".

		COPPER WIRING FEEDER SCHEDULE	
AMP RATING	FEEDER TAG	CONDUCTOR	RACEWA' SIZE
60	60Y	3 #6 AWG + 1 #6 AWG NEUTRAL + 1 #10 AWG GROUND	1"
70	70Y	3 #4 AWG + 1 # 4AWG NEUTRAL + 1 #8 AWG GROUND	1 1/4"
100	100Y	3 #1 AWG + 1 #1 AWG NEUTRAL + 1 #8 AWG GROUND	1 ½"
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 #3/0AWG + 1 #3/0AWG NEUTRAL + 1 #4AWG GROUND	2"
225	225Y	3 #4/0AWG + 1 #4/0AWG NEUTRAL + 1 #4AWG GROUND	2 ½"
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 ½"
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 ½"
1200	1200Y	3 SETS OF (3 #600 KCMIL + 1 #600 KCMIL NEUTRAL + 1 #3/0 AWG GROUND)	(3) 4"

TRANSFORMER SCHEDULE

 ${\sf AMPERAGE}$

135

VOLTAGE

480 Δ

PRIMARY OCP

150

SECONDARY OCP BONDING AND ELECTRODE

#4 AWG IN 3/4" CONDUIT

SECONDARY | SECONDARY

AMPERAGE

VOLTAGE

208Y120

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.

B.O.D. MANUFACTURER & MODEL #

SQUARE D

VOLTAGE DROP SCHEDULE							
120 VOLT							
CONDUIT/FEEDER LENGTH							
0'-1" TO 65'-0"							
65'-1" TO 120'-0"							
120'-1" TO 180'-0"							
180'-1" AND ABOVE							

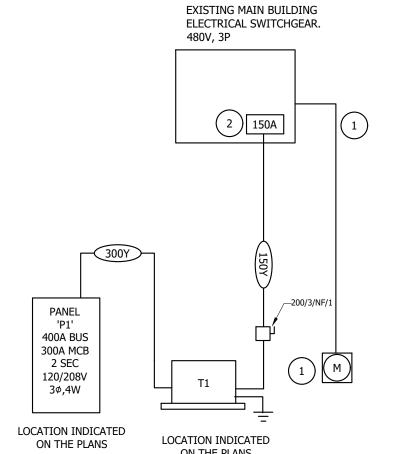
Transformer KVA

112.5

	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

SYMBOL





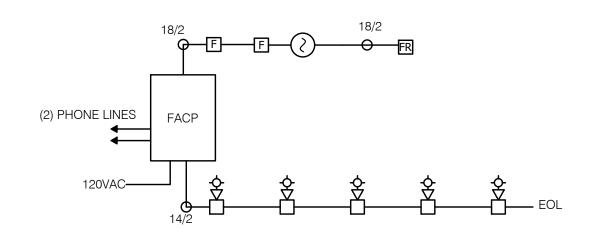
NOTES BY SYMBOLS

PROVIDE WIRING, CONDUIT, METER BASE AS REQUIRED BY UTILITY COMPANY. COORDINATE WITH BUILDING OWNER FOR ALL SHUTDOWN WORK.

LOCATION INDICATED ON THE PLANS

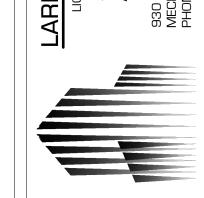
2 PROVID 150A, 3P, 480V BREAKER IN THE SPACE MADE AVAILABLE DURING DEMOLITION.





FIRE ALARM SCHEMATIC REQUIREMENTS

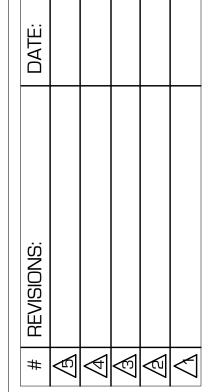
NOTE: CONFIRM ALL WIRE QUANTITIES AND SIZES WITH FIRE ALARM SYSTEM VENDOR.



COPYRIGHT (C) 2020 BY LARRY E. SAYLOR. THIS DRAWING AND INFORMATION RELATED TO THIS DRAWING SHALL NOT BE COPIED OR USED IN ANY WAY WITHOUT WRITTEN AUTHORIZATION OF LARRY E. SAYLOR. THIS DRAWING NOT FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

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

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



PROPOSED FIT OUT FOR:



PANEL	L: <u>'P1'</u> BUS	AMP: 40	00_			AMP:	S MAIN BE	REAKER	: 300 A	MCB											
MOUN	ITING: <u>SURFACE</u> PHA	SE: <u>3</u>	WIR	E: <u>4</u>	\	/OLTAGE	: <u>208Y1</u> 2	20_	AIC	C: 22,00	<u>00</u>										
		BRE	AKER	W	IRE	GND			KVA/PH	1		KVA/PH	1		GND	WI	RE	BRE	AKER		
CKT	CIRCUIT DESCRIPTION	Р	AMP	NO	SIZE	SIZE	COND	Α	В	С	Α	В	С	COND	SIZE	SIZE	NO	AMP	Р	CIRCUIT DESCRIPTION	C
1	5 WELL STEAM TABLE	2	20	,	10	10	3/4	1.8			1			3/4	12	12	2	20	1	ICING MICROWAVE	
3	3 WELL STEAM TABLE	2	30	2	10	10	3/4		1.8			1.1		3/4	12	12	2	20	1	FREEZER	
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	
7	CT WARMING UNIT	1	20	2	12	12	3/4	0.7			0.5			3/4	12	12	2	20	1	UNDERCOUNTER REFRIGERATOR	
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	
11										3.0			0.5	3/4	12	12	2	20	1	CUSTOMER SEATING LIGHTING	1
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	1
15									3.0			1.0		3/4	12	12	2	20	1	GLASS DOOR REFRIGERATOR	
17										3.0			1.0	3/4	12	12	2	20	1	POS POWER	
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	
21									3.0			0.4		3/4	12	12	2	20	1	MISC POWER	2
23	MIXER	1	15	2	12	12	3/4			0.8			0.3								2
25	UNDERCOUNTER REFRIG	1	20	2	12	12	3/4	0.3			0.3			3/4	12	12	4	15	3	KEF-1	
27	POS PRINTER	1	20	2	12	12	3/4		1.1			0.3									
29	CANDATCH OVEN		20	_	10	10	2/4			2.4			1.7								3
31	SANDWICH OVEN	2	30	2	10	10	3/4	2.4			1.7			3/4	12	12	4	20	3	KMUA-1 CONDENSER	
33	ICE CREAM FREEZER	1	20	2	12	12	3/4		0.8			1.7									
35	REACH IN REFRIGERATOR	1	20	2	12	12	3/4			0.5			0.5								1
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	
39	ICE MAKER UNDERCOUNTER	1	20	2	12	12	3/4		0.5			0.5									Ţ.
41	ICING MICROWAVE	1	20	2	12	12	3/4			1			1.4	3/4	12	12	2	15	1	KITCHEN CONTROL PANEL	
•	PROVIDE SHUNT TRIP BREAKER AND WAS REQUIRED. ALL EQUIPMENT UNDER	HOOD SH	IALL HAVE	SHUN7	ANEL		TOTALS	13.0	10.9	11.4	5.6	5.4	6.7								
	TRIP. REVIEW TO MECHANICAL DRAWI WIRING TO EQUIPMENT.	NGS FOR	CONTROL	. PANEĹ				PAN	IEL TOT	TALS	18.6	16.3	18.1								

		BREA	AKER	W	IRE	GND			KVA/PH	1		KVA/PH	ł		GND	WIRE		WIRE		BREA	KER		
CKT	CIRCUIT DESCRIPTION	Р	AMP	NO	SIZE	SIZE	COND	Α	В	С	Α	В	С	COND	SIZE	SIZE	NO	AMP	Р	CIRCUIT DESCRIPTION	СКТ		
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								20	1	SPARE	48		
49								3.5										20	1	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 RECEPT	54		
55	BACK OFFICE/CORR RECP	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			0.4	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															20	1	SPARE	66		
67	SPARE	1	20															20	1	SPARE	68		
69	SPACE ONLY																	20	1	SPARE	70		
71	SPACE ONLY																	20	1	SPARE	72		
73	SPACE ONLY																	20	1	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		

COPYRIGHT © 2020
BY LARRY E. SAYLOR.
THIS DRAWING AND
INFORMATION RELATED TO
THIS DRAWING SHALL NOT BE
COPIED OR USED IN ANY WAY
WITHOUT WRITTEN
AUTHORIZATION OF LARRY E.
SAYLOR. THIS DRAWING NOT
FOR GENERAL USE AND ALL
RIGHTS ARE RESERVED.

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

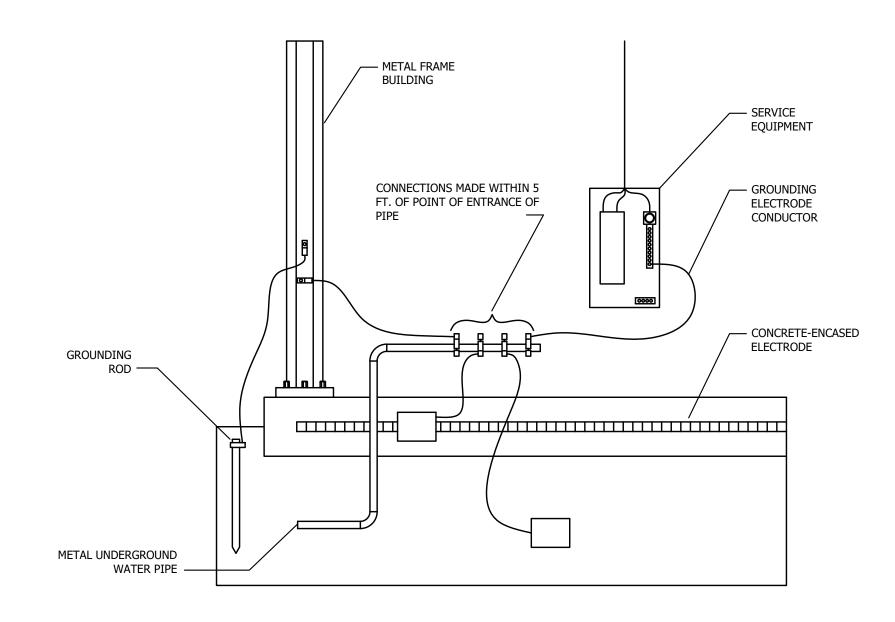
DATE: 05.01.2020 DRAWN BY: JDL/JLM/JPK CHECKED BY: BRM 20011 PROJECT #:

DATE:					
REVISIONS:					
REVIS					
#	B	V	3	<u>A</u>	\Box

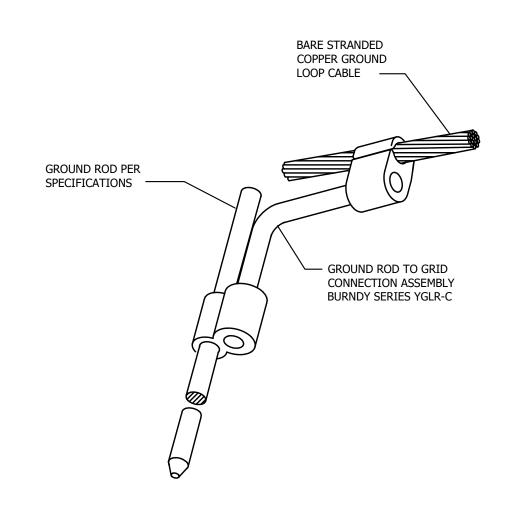
DUCK DONUTS
556 ROUTE 17 NORTH
PARAMUS, NJ 07652

PROPOSED FIT OUT FOR:





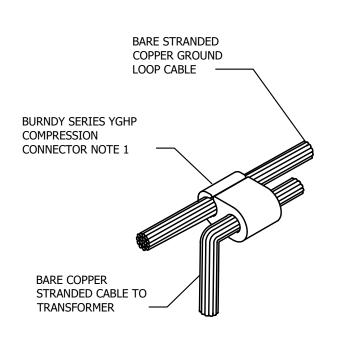
1 GROUNDING ELECTRODE DETAIL
SCALE: N.T.S.



2 TYPICAL CABLE TO GROUND ROD DETAIL
SCALE: N.T.S.

NOTES:

1. COORDINATE CONNECTOR SIZE WITH GROUND CONDUCTOR BEING CONNECTED TO.

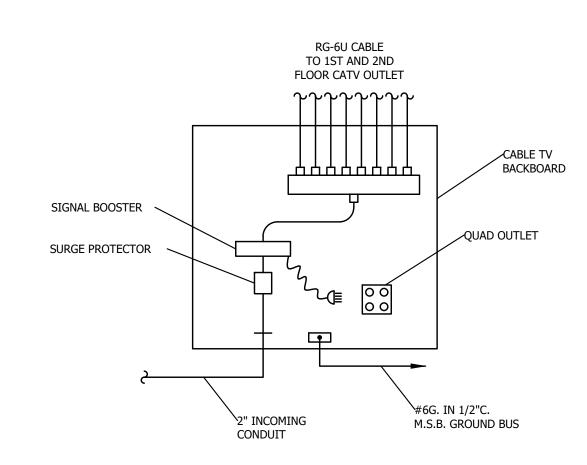


TYPICAL CABLE TO CABLE DETAIL

SCALE: N.T.S.

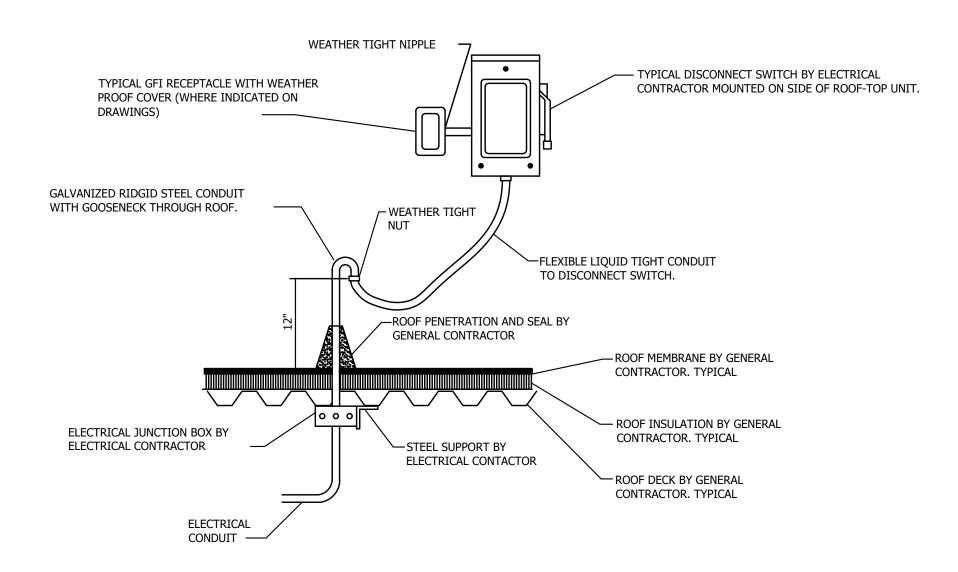
NOTES:

1. COORDINATE CONNECTOR SIZE WITH CABLES BEING CONNECTED.



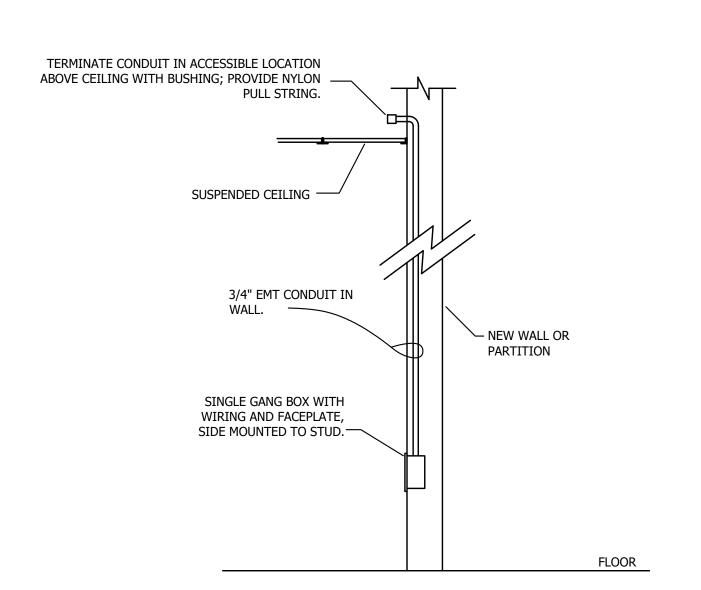
4 TYPICAL CATV RISER

SCALE: N.T.S.



5 CONDUIT PENETRATION DETAIL

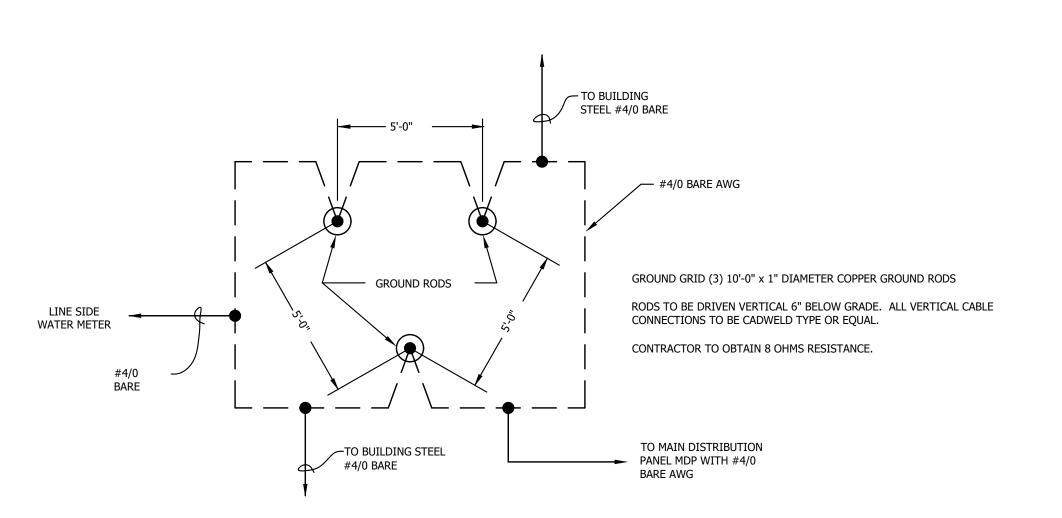
SCALE: N.T.S.



6 DATA/TELEPHONE DEVICE LOCATION MOUNTING DETAIL
SCALE: N.T.S.

NOTE:

 WIRING AND DEVICES AS SHOWN ON LOW VOLTAGE DRAWINGS. VERIFY BOX LOCATION WITH OWNER IN FIELD.



7 GROUNDING GRID DETAIL

LAKHY E. SAYLUK
LICENSE NO. AL13819
AIA, NCARB
ARCHITECT
930 CENTURY DRIVE SUITE 103
MECHANICSBURG, PA. 17055



COPYRIGHT © 2020
BY LARRY E. SAYLOR.
THIS DRAWING AND
INFORMATION RELATED TO
THIS DRAWING SHALL NOT BE
COPIED OR USED IN ANY WAY
WITHOUT WRITTEN
AUTHORIZATION OF LARRY E.

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

SAYLOR. THIS DRAWING NOT

FOR GENERAL USE AND ALL RIGHTS ARE RESERVED.

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

SEG ROUTE 17 NORTH PARAMUS, NJ 07652

> ELECTRICAL DETAILS

DRAWING SPECIFICATIONS - ELECTRICAL (DIVISION 16)

SECTION 16001 - SCOPE OF WORK

- PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND SERVICES FOR THE PROPER INSTALLATION AND OPERATION OF THE ELECTRICAL WORK AS INDICATED ON THE
- . REMOVE OR RELOCATE EXISTING ELECTRICAL EQUIPMENT AS REQUIRED BY THE
- 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

- 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
- 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.
- 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.
- 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.
- 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, ADDENDUM OR CHANGE
- BEFORE COMPLETION OF THE INSTALLATION, FURNISH THREE COPIES OF MANUALS COVERING IN DETAIL ALL REQUIRED INSTRUCTIONS FOR THE OPERATION OF THE
- 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 JIPMENT, OR CORRECT UNSATISFACTORY PERFORMANCE, WITHOUT EXPENSE TO THE OWNER. MAKE REPAIRS OR REPLACEMENTS 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 SUPSTITUTION SHALL BE PROVIDED WITHOUT EXTRA
- 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
- 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

- 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 563, ANSI C80.3 AND UL 797. 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 PRODUCES OR TRANSMITS 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 THREADLESS, 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 KEPT 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.

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 IPCEA-NEMA STANDARDS S-19-81 AND ASTM D-1352.
- 2. WIRE SIZES SHALL GENERALLY BE AS FOLLOWS:

WITH THE CIRCUIT CONDUCTORS.

- 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 SIZE NO. 14 AWG THROUGH NO. 4/0 AWG SHALL BE 600 VOLT TYPE THWN FOR DRY AND WET LOCATIONS WITH A MAXIMUM OPERATING TEMPERATURE OF
- 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
- 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 4-1/2-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 INSULTAED, THE INSULATION SHALL BE GREEN IN COLOR.

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

- 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

SECTION 16135 - ELECTRICAL BOXES AND FITTINGS

- 1. OUTLET BOXES SHALL BE CONSTRUCTED OF GALVANIZED FLAT ROLLED SHEET-STEEL OF SHAPES AND SIZES SUITABLE FOR INSTALLATION OF WIRING DEVICES. PROVIDE BOXES WITH THREADED SCREW HOLES, WITH CORROSION-RESISTANT COVER AND GROUNDING SCREWS FOR FASTENING SURFACE AND DEVICE TYPE BOX COVERS AND FOR EQUIPMENT TYPE GROUNDING. OUTLET BOX ACCESSORIES SHALL BE PROVIDED AS REQUIRED FOR EACH INSTALLATION.
- 2. JUNCTION AND PULL BOXES SHALL BE CONSTRUCTED OF GALVANIZED CODE-GAUGE SHEET STEEL WITH SCREW-ON COVERS OF TYPES, SHAPES AND SIZES TO SUIT EACH RESPECTIVE LOCATION AND INSTALLATION. BOXES SHALL BE OF RIVETED OR WELDED CONSTRUCTION AND SHALL HAVE PLAIN MACHINE SCREW ATTACHED COVERS.
- 3. ALL OUTDOOR BOXES AND WIREWAYS SHALL BE CONSTRUCTED OF PLASTIC.
- 4. CEILING BOXES FOR SUSPENDED LIGHT FIXTURES OR CEILING FANS SHALL BE CONSTRUCTED OF PHENOLIC WITH STEEL BAR HANGERS, LISTED TO SUPPORT 50 LBS (MINIMUM) AND FOR USE IN TWO HOUR FIRE-RATED CEILINGS.
- 5. BOXES FOR OUTDOOR OUTLETS SHALL BE WEATHER PROOF PLASTIC WITH IN-USE COVERS AS MANUFACTURED BY TAY-MAC OR EQUAL.

SECTION 16143 - WIRING DEVICES

- GENERAL PURPOSE DUPLEX RECEPTACLES SHALL BE RESIDENTIAL GRADE, TAMPER-RESISTANT, 2-POLE, 3-WIRE, GROUNDING TYPE, RATED 15 AMPERES, 125-VOLTS, NEMA CONFIGURATION 5-15R, HUBBELL RR15STR OR APPROVED EQUAL.
- 2. INDOOR GROUND FAULT DUPLEX RECEPTACLES SHALL BE RESIDENTIAL GRADE, TAMPER-RESISTANT, 2-POLE, 3-WIRE GROUNDING TYPE, RATED 15 AMPERES, 125 VOLTS, NEMA CONFIGURATION 5-15R, HUBBELL GFTR15, OR APPROVED EQUAL.
- OUTDOOR GROUND FAULT DUPLEX RECEPTACLES SHALL BE RESIDENTIAL GRADE, WEATHER-RESISTANT AND TAMPER-RESISTANT, 2-POLE, 3-WIRE GROUNDING TYPE, RATED 15 AMPERES, 125 VOLTS, NEMA CONFIGURATION 5-15R, HUBBELL GFR5262SG, OR
- 4. DRYER OUTLETS SHALL BE RATED 30 AMPERES, 125/250 VOLTS, NEMA CONFIGURATION 14-30R (3-WIRE GROUNDING), WITH FLUSH WALL PLATE, HUBBELL RR430 OR EQUAL.
- 5. SINGLE-POLE TOGGLE SWITCHES SHALL BE SPECIFICATION GRADE, QUIET TYPE RATED 15 AMPERES, 120 VOLTS, 60 HERTZ, HUBBELL RS115, OR APPROVED EQUAL.
- 6. THREE-WAY TOGGLE SWITCHES SHALL BE SPECIFICATION GRADE, QUIET TYPE RATED 15 AMPERES, 120 VOLTS, 60 HERTZ, HUBBELL RS315, OR APPROVED EQUAL.

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

GANGING AND CUTOUTS AS REQUIRED. WALLPLATES SHALL BE STANDARD SIZE, NYLON.

- 8. WALLPLATES SHALL BE FOR SINGLE WIRING DEVICES OF TYPES, SIZES AND WITH
- 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 WATTSTOPER 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 16145 - LIGHTING CONTROL DEVICES

UNITS WITH A SEPARATE RELAY UNIT.

- SWITCH-BOX OCCUPANCY SENSORS SHALL BE PIR TYPE WITH INTEGRAL POWER-SWITCHING CONTACTS RATED FOR 800 W AT 120-V AC, SUITABLE FOR INCANDESCENT LIGHT FIXTURES, FLUORESCENT LIGHT FIXTURES WITH MAGNETIC OR ELECTRONIC BALLASTS, OR 1/6-HP MOTORS; AND RATED FOR 1000 W AT 277-V AC. SUITABLE FOR INCANDESCENT LIGHT FIXTURES, FLUORESCENT LIGHT FIXTURES WITH MAGNETIC OR ELECTRONIC BALLASTS, OR 1/3-HP MOTORS, MINIMUM.
- A. AUTOMATIC LIGHT-LEVEL SENSOR: ADJUSTABLE FROM 2 TO 200 FC; KEEPS LIGHTING OFF WHEN SELECTED LIGHTING LEVEL IS PRESENT.
- B. FIELD SELECTABLE TO CONVERT SENSOR OPERATION FROM AUTOMATIC ON TO MANUAL ON.
- 2. INDOOR OCCUPANCY SENSORS SHALL BE WALL OR CEILING-MOUNTED, SOLID-STATE
- A. OPERATION: UNLESS OTHERWISE INDICATED, TURN LIGHTS ON WHEN COVERED AREA IS OCCUPIED AND OFF WHEN UNOCCUPIED; WITH A TIME DELAY FOR TURNING LIGHTS

OFF, ADJUSTABLE OVER A MINIMUM RANGE OF 1 TO 30 MINUTES. SET AT 15 MINUTES.

- B. SENSOR OUTPUT: CONTACTS RATED TO OPERATE THE CONNECTED RELAY, COMPLYING WITH UL 773A. SENSOR SHALL BE POWERED FROM THE RELAY UNIT.
- C. RELAY UNIT: DRY CONTACTS RATED FOR 20A BALLAST LOAD AT 120 AND 277V AC, FOR 13A TUNGSTEN AT 120V AC, AND FOR 1 HP AT 120V AC, POWER SUPPLY TO SENSOR SHALL BE 24V DC, 150-MA, CLASS 2 POWER SOURCE AS DEFINED BY NFPA 70.
- a) SENSOR: SUITABLE FOR MOUNTING IN ANY POSITION ON A STANDARD OUTLET BOX.
- b) TIME-DELAY AND SENSITIVITY ADJUSTMENTS: RECESSED AND CONCEALED BEHIND
- INDICATOR: LED, TO SHOW WHEN MOTION IS BEING DETECTED DURING TESTING AND NORMAL OPERATION OF THE SENSOR.
- F. BYPASS SWITCH: MANUAL OVERRIDE IN CASE OF SENSOR FAILURE.
- G. AUTOMATIC LIGHT-LEVEL SENSOR: ADJUSTABLE FROM 2 TO 200 FC; KEEPS LIGHTING OFF WHEN SELECTED LIGHTING LEVEL IS PRESENT.
- 3. INDOOR OCCUPANCY SENSOR SHALL BE ONE OF THE FOLLOWING TYPES AS INDICATED
- A. PIR TYPE: CEILING MOUNTING; DETECT OCCUPANCY BY SENSING A COMBINATION OF HEAT AND MOVEMENT IN AREA OF COVERAGE.
- a) DETECTOR SENSITIVITY: DETECT OCCURRENCES OF 6-INCH MINIMUM MOVEMENT OF ANY PORTION OF A HUMAN BODY THAT PRESENTS A TARGET OF AT LEAST 36 SQ. IN.
- b) DETECTION COVERAGE (ROOM): DETECT OCCUPANCY ANYWHERE IN A CIRCULAR AREA OF 1000 SQ. FT. WHEN MOUNTED ON A 96-INCH HIGH CEILING.
- c) DETECTION COVERAGE (CORRIDOR): DETECT OCCUPANCY WITHIN 90-FEET WHEN MOUNTED ON A 10-FOOT HIGH CEILING. B. ULTRASONIC TYPE: CEILING MOUNTING: DETECT OCCUPANCY BY SENSING A CHANGE
- IN PATTERN OF REFLECTED ULTRASONIC ENERGY IN AREA OF COVERAGE. a) DETECTOR SENSITIVITY: DETECT A PERSON OF AVERAGE SIZE AND WEIGHT MOVING

AT LEAST 12-INCHES IN EITHER A HORIZONTAL OR A VERTICAL MANNER AT AN

- APPROXIMATE SPEED OF 12-INCHES PER SECOND. b) DETECTION COVERAGE (SMALL ROOM): DETECT OCCUPANCY ANYWHERE WITHIN A
- CIRCULAR AREA OF 600 SQ. FT. WHEN MOUNTED ON A 96-INCH HIGH CEILING. c) DETECTION COVERAGE (STANDARD ROOM): DETECT OCCUPANCY ANYWHERE WITHIN

A CIRCULAR AREA OF 1000 SQ. FT. WHEN MOUNTED ON AN 8-FOOT HIGH CEILING.

- d) DETECTION COVERAGE (LARGE ROOM): DETECT OCCUPANCY ANYWHERE WITHIN A CIRCULAR AREA OF 2000 SQ. FT. WHEN MOUNTED ON A 96-INCH HIGH CEILING.
- e) DETECTION COVERAGE (CORRIDOR): DETECT OCCUPANCY ANYWHERE WITHIN 90-FEET WHEN MOUNTED ON A 10-FOOT HIGH CEILING IN A CORRIDOR NOT WIDER
- c. DUAL-TECHNOLOGY TYPE: CEILING MOUNTING; DETECT OCCUPANCY BY USING A COMBINATION OF PIR AND ULTRASONIC DETECTION METHODS IN AREA OF COVERAGE. PARTICULAR TECHNOLOGY OR COMBINATION OF TECHNOLOGIES THAT CONTROLS ON AND OFF FUNCTIONS SHALL BE SELECTABLE IN THE FIELD BY OPERATING CONTROLS
- a) SENSITIVITY ADJUSTMENT: SEPARATE FOR EACH SENSING TECHNOLOGY.
- b) DETECTOR SENSITIVITY: DETECT OCCURRENCES OF 6-INCH MINIMUM MOVEMENT OF ANY PORTION OF A HUMAN BODY THAT PRESENTS A TARGET OF AT LEAST 36 SQ. IN.. AND DETECT A PERSON OF AVERAGE SIZE AND WEIGHT MOVING AT LEAST 12-INCHES IN EITHER A HORIZONTAL OR A VERTICAL MANNER AT AN APPROXIMATE SPEED OF 12-INCHES PER SECOND.
- c) DETECTION COVERAGE (STANDARD ROOM): DETECT OCCUPANCY ANYWHERE WITHIN A CIRCULAR AREA OF 1000 SQ. FT. WHEN MOUNTED ON A 96-INCH HIGH CEILING.
- MULTI-POLE CONTACTORS SHALL BE ELECTRICALLY OPERATED AND ELECTRICALLY HELD, COMPLYING WITH NEMA ICS 2 AND UL 508.
- A. CURRENT RATING FOR SWITCHING: LISTING OR RATING CONSISTENT WITH TYPE OF LOAD SERVED, INCLUDING TUNGSTEN FILAMENT, INDUCTIVE, AND HIGH-INRUSH BALLAST (BALLAST WITH 15 PERCENT OR LESS TOTAL HARMONIC DISTORTION OF NORMAL LOAD CURRENT).
- B. CONTROL-COIL VOLTAGE: MATCH CONTROL POWER SOURCE.
- CONDUCTORS AND CABLES FOR LIGHTING CONTROL SYSTEM SHALL BE:
- A. POWER WIRING TO SUPPLY SIDE OF REMOTE-CONTROL POWER SOURCES: NOT SMALLER THAN NO. 12 AWG, COMPLYING WITH DIVISION 16 SECTION 16120.
- CONDUCTORS NOT SMALLER THAN NO. 22 AWG. c. CLASS 1 CONTROL CABLE: MULTICONDUCTOR CABLE WITH STRANDED COPPER

B. CLASSES 2 AND 3 CONTROL CABLE: MULTICONDUCTOR CABLE WITH STRANDED COPPER

CONDUCTORS NOT SMALLER THAN NO. 16 AWG. 6. INSTALL AND AIM SENSORS IN LOCATIONS TO ACHIEVE AT LEAST 90 PERCENT COVERAGE

OF AREAS INDICATED. DO NOT EXCEED COVERAGE LIMITS SPECIFIED IN

MANUFACTURER'S WRITTEN INSTRUCTIONS.

- 7. PERFORM THE FOLLOWING FIELD TESTS AND INSPECTIONS AND PREPARE TEST REPORTS: A. AFTER INSTALLING TIME SWITCHES AND SENSORS, AND AFTER ELECTRICAL CIRCUITRY
- HAS BEEN ENERGIZED, ADJUST AND TEST FOR COMPLIANCE WITH REQUIREMENTS. B. OPERATIONAL TEST: VERIFY ACTUATION OF EACH SENSOR AND ADJUST TIME DELAYS.

8. REMOVE AND REPLACE LIGHTING CONTROL DEVICES WHERE TEST RESULTS INDICATE

THAT THEY DO NOT COMPLY WITH SPECIFIED REQUIREMENTS.

9. OCCUPANCY ADJUSTMENTS: WHEN REQUESTED WITHIN 12 MONTHS OF DATE OF SUBSTANTIAL COMPLETION, PROVIDE ON-SITE ASSISTANCE IN ADJUSTING SENSORS TO SUIT ACTUAL OCCUPIED CONDITIONS. PROVIDE UP TO TWO VISITS TO SITE OUTSIDE NORMAL OCCUPANCY HOURS FOR THIS PURPOSE.

- 10. OUTDOOR PHOTOELECTRIC SWITCHES SHALL BE SOLID STATE, WITH SPST DRY CONTACTS RATED FOR [1800-VA TUNGSTEN OR 1000-VA INDUCTIVE], TO OPERATE CONNECTED RELAY, CONTACTOR COILS, MICROPROCESSOR INPUT, AND COMPLYING WITH UL 773A.
- A. LIGHT-LEVEL MONITORING RANGE: 1.5 TO 10 FC, WITH AN ADJUSTMENT FOR TURN-ON AND TURN-OFF LEVELS WITHIN THAT RANGE [, AND A DIRECTIONAL LENS IN FRONT OF PHOTOCELL TO PREVENT FIXED LIGHT SOURCES FROM CAUSING TURN-OFF].
- B. TIME DELAY: 15-SECOND MINIMUM, TO PREVENT FALSE OPERATION.
- c. SURGE PROTECTION: METAL-OXIDE VARISTOR TYPE, COMPLYING WITH IEEE C62.41 FOR CATEGORY A1 LOCATIONS.
- D. MOUNTING: TWIST LOCK COMPLYING WITH IEEE C136.10, WITH BASE-AND-STEM MOUNTING OR STEM-AND-SWIVEL MOUNTING ACCESSORIES AS REQUIRED TO DIRECT SENSOR TO THE NORTH SKY EXPOSURE.
- 11. DIGITAL TIME SWITCHES SHALL BE ELECTRONIC, SOLID-STATE PROGRAMMABLE UNITS WITH ALPHANUMERIC DISPLAY COMPLYING WITH UL 917.
- A. CONTACT CONFIGURATION: DPST.
- B. CONTACT RATING: 30-A INDUCTIVE OR RESISTIVE, 240-V AC
- c. PROGRAMS: 2 CHANNELS.
- a) FOR EACH CHANNEL, 8 ON-OFF SET POINTS ON A 24-HOUR SCHEDULE.
- b) CIRCUITRY: ALLOW CONNECTION OF A PHOTOELECTRIC RELAY AS SUBSTITUTE FOR ON AND OFF FUNCTION OF A PROGRAM
- D. ASTRONOMICAL TIME: ALL CHANNELS.
- E. BATTERY BACKUP: FOR SCHEDULES AND TIME CLOCK.
- F. REMOTE OVERRIDE: OVERRIDE SHUTOFF FUNCTION FOR ADJUSTABLE DURATION FOR EACH CHANNEL UP TO FOUR HOURS VIA LOW VOLTAGE WIRING.

SECTION 16170 - DISCONNECT SWITCHES

- PROVIDE SURFACE-MOUNTED, HEAVY-DUTY TYPE, SHEET-STEEL ENCLOSED SAFETY SWITCHES, OF TYPES, SIZES AND ELECTRICAL CHARACTERISTICS INDICATED. SWITCHES SHALL BE QUICK-MAKE, QUICK-BREAK TYPE CONSTRUCTED SO THAT SWITCH BLADES ARE VISIBLE IN OFF POSITION WITH DOOR OPEN. EQUIP WITH OPERATING HANDLE WHICH IS INTEGRAL PART OF ENCLOSURE BASE AND WHOSE OPERATING POSITION IS EASILY RECOGNIZABLE, AND IS PADLOCKABLE IN THE ON OR OFF POSITION. CONSTRUCT CURRENT CARRYING PARTS OF HIGH-CONDUCTIVITY COPPER, WITH SILVER-TUNGSTEN TYPE SWITCH CONTACTS AND POSITIVE PRESSURE TYPE REINFORCED FUSE CLIPS. SWITCH ENCLOSURES GENERALLY SHALL BE NEMA TYPE I AND 3R FOR RAIN-TIGHT CONSTRUCTION.
- PROVIDE FUSES FOR SAFETY SWITCHES, AS RECOMMENDED BY SWITCH MANUFACTURER, OF CLASSES, TYPES AND RATINGS NEEDED TO FULFILL ELECTRICAL REQUIREMENTS FOR
- SERVICE INDICATED. 3. FOR EACH SAFETY SWITCH ON THE LOAD SIDE OF A VARIABLE FREQUENCY DRIVE, PROVIDE A SINGLE POLE, DOUBLE THROW AUXILIARY CONTACT TO STOP THE VARIABLE FREQUENCY DRIVE WHEN THE SAFETY SWITCH IS IN THE OFF POSITION. INTERLOCK WIRING BETWEEN DISCONNECT SWITCH AND VARIABLE FREQUENCY DRIVE SHALL BE IN SEPARATE RACEWAY FROM THE MOTOR FEEDER WIRING FROM THE DRIVE.
- 4. PROVIDE A 30A, 1 POLE DISCONNECT SWITCH AT EACH FIRE ALARM AND NAC BOOSTER PANEL. SWITCH SHALL BE PAINTED RED AND LABELED "FIRE ALARM CIRCUIT"

SECTION 16190 - SUPPORTING DEVICES

THE FOLLOWING CONSTRUCTION FEATURES:

- PROVIDE SUPPORTING DEVICES OF TYPES, SIZES AND MATERIALS INDICATED, HAVING
- A. CLEVIS HANGERS SHALL BE USED FOR SUPPORTING 2" AND LARGER CONDUIT AND SHALL BE CONSTRUCTED OF GALVANIZED STEEL WITH ½" DIAMETER HOLE FOR ROUND STEEL ROD.
- B. ONE-HOLE CONDUIT STRAPS SHALL BE USED FOR SUPPORTING 3/4" TO 1-1/2" CONDUIT AND SHALL BE CONSTRUCTED OF GALVANIZED STEEL.
- c. TWO-HOLE CONDUIT STRAPS SHALL BE USED FOR SUPPORTING CONDUIT ON STEEL
- 2. PROVIDE STEEL ANCHORS OF TYPES, SIZES AND MATERIALS REQUIRED FOR THE EQUIPMENT BEING SUPPORTED.
- 3. PROVIDE CABLE SUPPORTS WITH INSULATING WEDGING PLUG FOR NON-ARMORED TYPE ELECTRICAL CABLES IN RISERS. 4. PROVIDE U-CHANNEL STRUT SYSTEM FOR SUPPORTING ELECTRICAL EQUIPMENT, 12-GAUGE HOT-DIP GALVANIZED STEEL, OF TYPES AND SIZES INDICATED AND WITH THE CONDUIT CLAMPS, CONDUIT HANGERS AND OTHER FITTINGS WHICH MATE AND MATCH
- WITH U-CHANNEL. INSTALL HANGERS, SUPPORTS, CLAMPS AND ATTACHMENTS TO SUPPORT PIPING PROPERLY FROM BUILDING STRUCTURE. ARRANGE FOR GROUPING OF PARALLEL RUNS OF HORIZONTAL CONDUITS TO BE SUPPORTED TOGETHER ON TRAPEZE TYPE HANGERS WHERE POSSIBLE. INSTALL SUPPORTS WITH SPACINGS INDICATED AND IN COMPLIANCE
- NO MINERALLAC "JIFFY" TYPE CONDUIT SUPPORTS SHALL BE INSTALLED EXPOSED BELOW 8'-0" A.F.F. USE ONE-HOLE STRAPS INSTEAD.

WITH NEC REQUIREMENTS.

- SECTION 16195 ELECTRICAL IDENTIFICATION PANELBOARDS MOTOR STARTERS AND SIMILAR ELECTRICAL ENCLOSURES SHALL BE IDENTIFIED BY NAMEPLATES SHOWING THE EQUIPMENT IDENTIFICATION NUMBER, VOLTAGE AND FEEDER OR BRANCH CIRCUIT NUMBERS (E.G. PANEL LP-1 - 208/120 VOLTS FDR 1-5). NAMEPLATES GENERALLY SHALL BE CUSTOM TWO-TONE LAMINATED PLASTIC WITH BEVELED EDGES. NAMEPLATES, UNLESS OTHERWISE INDICATED, SHALL BE WHITE
- LETTERS ON BLACK BACKGROUND. CONDUITS SHALL BE IDENTIFIED IN EACH ROOM AND 50 FOOT ON CENTERS IN OPEN AREAS BY VOLTAGE AND FEEDER NUMBER (E.G. FDR 1-5 - 208/120 VOLTS). CONDUIT MARKERS SHALL BE STANDARD PRE-PRINTED FLEXIBLE PLASTIC SHEET MATERIAL OR
- SELF-ADHERING VINYL LABELS. 3. FEEDER CONDUCTORS IN EACH PULL BOX AND IDENTIFIED WITH A PAPER TAG AS TO NUMBER, VOLTAGE AND CABLE SIZE (E.G. FDR 1-5 - 208/120 VOLTS - 4 NO. 250 MCM). BRANCH CIRCUITS SHALL BE IDENTIFIED WITH A PAPER TAG IN EACH JUNCTION AND OUTLET BOX BY PANEL AND CIRCUIT NUMBER (E.G. PNL. LP-5 - CIRC. 3).

SECTION 16470 - PANELBOARDS

PANELBOARDS SHALL BE NEMA 1 FOR SURFACE OR RECESSED MOUNTING, CIRCUIT BREAKER TYPE, IN A SINGLE WIDTH FACTORY ASSEMBLED ENCLOSURE INCLUDING BOX, INTERIOR, TRIM AND FRONT. PANELBOARDS AND ENCLOSING CABINETS SHALL CONFORM TO STANDARDS ESTABLISHED BY UNDERWRITERS' LABORATORIES, INC., AND REQUIREMENTS OF NEC AND SHALL BEAR THE UL LABEL. UNLESS OTHERWISE INDICATED,

PANELBOARDS SHALL BE MOUNTED 6 FEET TO THE TOP OF THE CABINET.

- 2. EACH PANELBOARD SHALL BE PROVIDED WITH AN INSULATED NEUTRAL BUS AND A GROUND BUS BONDED TO THE PANEL BACKBOX. NEUTRAL AND GROUND BUS SHALL BE READILY IDENTIFIED AND SHALL BE PROVIDED WITH SCREW TYPE TERMINALS, ALL BUS BARS SHALL BE ELECTRICAL GRADE COPPER. THE MAIN BUS BRACING SHALL BE EQUAL OR GREATER THAN THE INTERRUPTING CURRENT RATING CALLED FOR BY THE DRAWINGS.
- EACH PANEL SHALL BE EQUIPPED WITH A TYPEWRITTEN DIRECTORY, INDICATING PLAINLY WHAT EACH BRANCH CIRCUIT OF THE PANEL CONTROLS. THE DIRECTORY SHALL BE PLACED IN A CLEAR PLASTIC PROTECTIVE ENVELOPE AND FASTENED TO THE INSIDE OF THE DOOR.
- 4. BRANCH CIRCUIT PROTECTION DEVICES SHALL BE MOLDED CASE CIRCUIT BREAKERS WITH OUICK-MADE, OUICK-BREAK TOGGLE MECHANISM, INVERSE TIME DELAY OVERLOAD AND INSTANTANEOUS SHORT CIRCUIT PROTECTION BY MEANS OF THERMAL MAGNETIC ELEMENT. AUTOMATIC TRIPPING SHALL BE INDICATED BY A HANDLE POSITION BETWEEN THE MANUAL "OFF" AND "ON" POSITION. BREAKERS SHALL BE "BOLT-ON" INTERCHANGEABLE TYPE AND CAPABLE OF BEING OPERATED IN ANY POSITION. CIRCUIT BREAKERS SHALL BE DESIGNED TO CARRY THEIR FULL RATING CONTINUOUSLY IN AMBIENT TEMPERATURE OF 40 DEGREES C. TWO AND THREE POLE BREAKERS SHALL HAVE COMMON TRIP HANDLE. ALL LIGHTING BRANCH CIRCUIT BREAKERS SHALL BE SWITCH RATED, PANELBOARDS SHALL HAVE MAIN AND BRANCH CIRCUIT BREAKERS AS INDICATED ON THE DRAWINGS. WHERE PANELS HAVE SPACES FOR FUTURE BREAKERS, THE SPACE SHALL INCLUDE COMPLETE BUSWORK, HARDWARE, APPURTENANCES, ETC., TO ACCOMMODATE FUTURE BREAKERS.

5. PROVIDE LOCKING DEVICES FOR CIRCUIT BREAKERS WHICH ARE TO BE KEPT IN LOCKED POSITION. FOR ALL CIRCUIT BREAKERS SERVING RANGES (WHETHER CORD-AND-PLUG CONNECTED OR HARD WIRED) OR OTHER HARD WIRED APPLIANCES, PROVIDE PADLOCKING OR OTHER PROVISIONS TO LOCK THE CIRCUIT BREAKER IN THE "OFF"

SECTION 16480 - MOTOR STARTERS

- PROVIDE COMBINATION CIRCUIT BREAKER/MAGNETIC MOTOR STARTER FOR EQUIPMENT REQUIRING MANUAL AND AUTOMATIC CONTROL. STARTERS GENERALLY SHALL BE FULL VOLTAGE NON-REVERSING UNITS CONSISTING OF A [FUSED DISCONNECT] [NON-FUSIBLE DISCONNECT1 [MOTOR CIRCUIT PROTECTOR], HORSEPOWER RATED CONTACTOR AND THERMAL OVERLOAD RELAY MOUNTED IN A NEMA TYPE I COMMON ENCLOSURE. STARTER UNITS SHALL BE FURNISHED WITH EXTERNAL OPERATING HANDLE, CONTROL CIRCUIT TRANSFORMER (120V. SECONDARY), PILOT LIGHT, THERMAL OVERLOADS AND, UNLESS OTHERWISE INDICATED, A HAND-OFF-AUTOMATIC SELECTOR SWITCH. AUXILIARY CONTACTS SHALL BE PROVIDED AS REQUIRED. COMBINATION STARTERS SHALL BE ALLEN BRADLEY BULLETIN [512] [513], OR APPROVED EQUAL SUITABLE FOR THE VOLTAGE AND HORSEPOWER INDICATED ON THE DRAWINGS. STARTER UNITS SHALL BE MINIMUM NEMA
- MANUAL MOTOR STARTERS SHALL BE PROVIDED FOR EQUIPMENT REQUIRING MANUAL CONTROL ONLY. MANUAL STARTING SWITCHES GENERALLY SHALL BE FULL VOLTAGE NON-REVERSING UNITS CONSISTING OF A MOTOR RATED TOGGLE SWITCH AND THERMAI OVERLOAD RELAY MOUNTED IN A COMMON ENCLOSURE. STARTER UNITS SHALL BE FURNISHED WITH A NEON PILOT LIGHT. UNITS IN MECHANICAL AREAS OR OTHERWISE UNFINISHED AREAS SHALL HAVE A NEMA TYPE I SURFACE MOUNTED ENCLOSURE. UNITS IN FINISHED AREAS SHALL BE MOUNTED IN A RECESSED BOX WITH FLUSH COVER PLATE. MANUAL MOTOR STARTERS SHALLBE ALLEN BRADLEY BULLETIN 600 OR APPROVED EQUAL SUITABLE FOR FRACTIONAL HORSEPOWER MOTORS AT 120 VOLTS, 60 HERTZ.
- 3. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO DETERMINE THE QUANTITY AND SIZE OF MOTOR STARTERS REQUIRED IN ACCORDANCE WITH APPROVED SHOP DRAWINGS. MOTOR THERMAL OVERLOAD UNITS SHALL BE PROVIDED IN

SECTION 16515 - INTERIOR LIGHTING FIXTURES

ACCORDANCE WITH THE ACTUAL MOTOR NAMEPLATE.

- 1. LIGHTING FIXTURES SHALL BE UL LISTED AND LABELED WITH UL LISTED WIRING. WIRING SHALL BE SUITABLE FOR THE LIGHTING FIXTURE TEMPERATURE LISTING.
- 2. ALL FLUORESCENT LIGHTING FIXTURES SHALL HAVE HIGH POWER FACTOR, ENERGY CONSERVING SOLID STATE BALLASTS. EACH BALLAST SHALL BE PROVIDED WITH INTEGRAL THERMAL PROTECTION, ALL BALLASTS SHALL HAVE AN "A" SOUND RATING AND UL, CBM AND ELECTRICAL TESTING LABORATORIES CERTIFICATION. BALLASTS SHALL HAVE LESS THAN 20% TOTAL HARMONIC DISTORTION. BALLASTS SHALL BE PROGRAMMED RAPID START, EXCEPT WHERE OTHERWISE INDICATED, ALL BALLASTS. SHALL BE RATED FOR USE AT 120 OR 277 VOLTS, 60 HERTZ AS SCHEDULED. BALLASTS SHALL BE MADE BY ADVANCE, UNIVERSAL OR APPROVED EQUAL. ALL BALLASTS FOR OUTDOOR USE SHALL BE LOW TEMPERATURE TYPE (-20 DEGREES F).
- 3. FLUORESCENT LAMPS SHALL BE NOMINALLY 32 WATT T8, 4100°K, MINIMUM CRI-[75][80], UNLESS OTHERWISE NOTED IN LIGHTING FIXTURE SCHEDULE. INCANDESCENT LAMPS SHALL BE INSIDE FROSTED, REFLECTOR TYPE, OR AS OTHERWISE NOTED. LL LAMPS SHALL BE MANUFACTURED BY GENERAL ELECTRIC, OSRAM-SYLVANIA, NORTH AMERICAN PHILLIPS, OR APPROVED EQUAL.
- 4. LIGHTING FIXTURES IN SUSPENDED CEILING SHALL BE SUPPORTED DIRECTLY BY THE CEILING SUPPORT SYSTEM. PROVIDE A MINIMUM OF TWO GRID CLAMPS FOR EACH FLUORESCENT LIGHTING FIXTURE, ONE AT EACH END OF THE LIGHTING FIXTURE, UNLESS OTHERWISE REQUIRED. [PROVIDE TWO SAFETY CHAINS OR WIRES TO SUPPORT EACH LIGHTING FIXTURE FROM THE SLAB ABOVE.]

CEILING TO BE INSTALLED, AND SHALL INCLUDE PLASTER FRAMES WHERE INSTALLED IN

PLASTER CEILINGS, MOUNTING YOKES WHERE REQUIRED FOR SUPPORT FROM CEILING

RECESSED LIGHTING FIXTURES SHALL BE DESIGNED TO FIT THE MAKE AND TYPE OF

- CONSTRUCTION. AND INDEPENDENT SUPPORT FROM STRUCTURE MEMBERS WHERE THE WEIGHT OF LIGHTING FIXTURES WOULD CAUSE DEFORMATION OF THE CEILING. INDUSTRIAL OR STRIP FLUORESCENT LIGHTING FIXTURES, UNLESS INDICATED OTHERWISE, SHALL BE CHAIN SUSPENDED AND EQUIPPED WITH A PREWIRED "SJ" CORD AND 120-VOLT GROUNDED TYPE PLUG. FIXTURES SHALL BE SUPPORTED FROM A DAY-BRITE 5900 SERIES OR IDEAL 360-7300 SERIES HYDEE FIXTURE HANGER, COMPLETE
- ADJUSTMENT OF THE FIXTURES. 7. BRANCH CIRCUIT CONDUITS FOR LIGHTING FIXTURES IN SUSPENDED CEILINGS SHALL BE SUPPORTED FROM THE STRUCTURAL CEILING WITH A 1/2" FLEXIBLE METALLIC CONDUIT

WITH 120-VOLT GROUNDED RECEPTACLE, "S" HOOKS AND CORD GRIPS. HANGERS SHALL

BE MOUNTED TO A 4" ROUND OUTLET BOX AND BE THE TYPE THAT PERMITS 360 DEGREE

- CONNECTION TO THE LIGHTING FIXTURE. 8. ALL LIGHTING FIXTURES SHALL BE THOROUGHLY CLEANED TO REMOVE ALL CONSTRUCTION DUST, PAINT, CEMENT, ETC. THIS SHALL INCLUDE ALL LIGHT REFLECTING SURFACES, FRAMES AND LENSES. ANY LIGHTING FIXTURES OR PARTS OF LIGHTING FIXTURES DAMAGED BY THE CONSTRUCTION WORK SHALL BE REPLACED. ALL LAMPS SHALL BE NEW AND ANY LAMPS INSTALLED IN LIGHTING FIXTURES FOR USE
- DURING CONSTRUCTION SHALL BE REPLACED. INSTALL ALL CEILING MOUNTED FIXTURES ACCORDING TO THE ARCHITECTURAL REFLECTED CEILING PLANS. LOCATIONS ON THE ELECTRICAL DRAWINGS ARE FOR

SECTION 16721 - ADDRESSABLE FIRE ALARM SYSTEM

- PROVIDE AN ADDRESSABLE FIRE ALARM SYSTEM WITH NOTIFICATION APPLIANCES IN ALL GUEST SUITE UNITS AND PUBLIC SPACES. THE SYSTEM SHALL BE ACTIVATED BY CORRIDOR SMOKE DETECTORS. ANY DUCT SMOKE DETECTORS. SPRINKLER WATER FLOW AND MANUAL PULL STATIONS. THE SYSTEM SHALL NOT BE ACTIVATED BY
- ALL SYSTEM COMPONENTS SHALL BE UL LISTED. THE SYSTEM SHALL BE ENGINEERED BY A FACTORY AUTHORIZED DEALER. NON-ENGINEERED SYSTEMS WILL NOT BE
- SUBMIT THE FACTORY ENGINEERS SHOP DRAWINGS TO THE AUTHORITY HAVING JURISDICTION FOR PERMITTING.

MULTIPLE-STATION SMOKE ALARMS IN THE DWELLING UNITS.

- ALL SMOKE DETECTORS SHALL BE SYSTEM POWERED, PHOTOELECTRIC TYPE, ADDRESSABLE WITH DRIFT COMPENSATION AND ALARM VERIFICATION. 5. SYSTEM TYPE ADDRESSABLE PHOTOELECTRIC SMOKE DETECTORS FOR SMOKE ALARMS
- SHALL BE INSTALLED IN GUEST SUITE UNITS. PROVIDE UL LISTED AND ADA COMPLIANT NOTIFICATION APPLIANCES AS SHOWN ON THE PLANS. AUDIBLE NOTIFICATION APPLIANCES SHALL BE ADJUSTABLE, RATED FOR 90 DB MAX AT 10'. CANDELA RATINGS OF ALL STROBES ARE INDICATED ON THE PLANS. ALL NOTIFICATION APPLIANCES IN ALL GUEST SUITE UNITS AND PUBLIC SPACES SHALL BE ACTIVATED BY FLOW SWITCHES, PULL STATIONS, ELEVATOR MACHINE ROOM AND
- HOISTWAY HEAT AND SMOKE DETECTORS AND DETECTORS IN THE PUBLIC SPACES. 7. PROVIDE ADDRESSABLE INPUT MODULES FOR ALL FLOW SWITCHES AND TAMPER SWITCHES. COORDINATE REQUIREMENTS WITH THE FIRE PROTECTION CONTRACTOR.
- TAMPER SWITCHES MAY <u>NOT</u> BE WIRED NORMALLY CLOSED. 8. PROVIDE ADDRESSABLE CONTROL MODULES FOR ALL FAN SHUTDOWNS AND OTHER LIFE SAFETY FUNCTIONS SUCH AS ELEVATOR RECALL AND POWER SHUTDOWN. PROVIDE AN INTERPOSING RELAY WITH 24 VDC COIL CONTROLLED BY THE ADDRESSABLE MODULE AND POWERED BY A SUPERVISED, POWER LIMITED, BATTERY SUPPORTED ACCESSORY CIRCUIT. RELAY CONTACTS SHALL BE RATED FOR 10A INDUCTIVE AT 120 VAC (MINIMUM). RELAYS SHALL BE LOCATED WITHIN 3' OF THE
- SUBMIT BATTERY POWER CALCULATIONS AND VOLTAGE DROP CALCULATIONS WITH THE ENGINEERED SHOP DRAWINGS. PROVIDE ADDRESSABLE NAC EXTENDER PANELS AS REOUIRED TO SUPPLY ALL NAC CIRCUITS AND ACCESORY CIRCUITS. ALL NAC CIRCUITS SHALL BE LOADED TO NOT MORE THAN 80% CAPACITY.
- 11. DETECTION CIRCUITS SHALL BE MINIMUM NO. 16 AWG STRANDED COPPER CONDUCTORS INSTALLED IN 1/2" EMT. AUDIO/VISUAL ALARM CIRCUITS AND CONTROL WIRING SHALL BE MINIMUM NO. 14 AWG STRANDED COPPER CONDUCTORS INSTALLED IN ½" EMT. ALL SPLICES SHALL BE SOLDERED AND TAPED. WHERE INSTALLED IN HOLLOW DRY WALL PARTITION OR ABOVE SUSPENDED CEILING, MANUFACTURER RECOMMENDED POWER LIMITED FIRE ALARM CABLE MAY BE USED WITHOUT CONDUIT.
- THE SYSTEM SHALL BE CHECKED AND TESTED FOR PROPER OPERATION BY THE MANUFACTURER'S REPRESENTATIVE PRIOR TO FINAL ACCEPTANCE. EACH DEVICE SHALL BE OPERATED AND ADJUSTED FOR PROPER SENSITIVITY. AS PART OF THE FINAL ACCEPTANCE THE SYSTEM SHALL BE DEMONSTRATED FOR PROPER OPERATION IN THE PRESENCE OF THE OWNER'S REPRESENTATIVES.
- PROVIDE COMPLETION DOCUMENTS AS REQUIRED BY NFPA-72.

CONTROLLED DEVICE.

THE FIRE ALARM SYSTEM SHALL BE MANUFACTURED BY GENERAL ELECTRIC, NOTIFIER, SIMPLEX-GRINNELL, OR SIEMENS,

262 Dickinson Drive | Reading | PA | 19605 610-750-9129 | www.entegraeng.com

COPYRIGHT(C)2020 BY LARRY E. SAYLOR. THIS DRAWING AND

INFORMATION RELATED TO

WITHOUT WRITTEN

THIS DRAWING SHALL NOT BE

COPIED OR USED IN ANY WAY

AUTHORIZATION OF LARRY E

SAYLOR. THIS DRAWING NOT

FOR GENERAL USE AND ALL RIGHTS ARE RESERVED. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND

PROMPTLY REPORT ANY

ERRORS TO LARRY E. SAYLOR.

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

