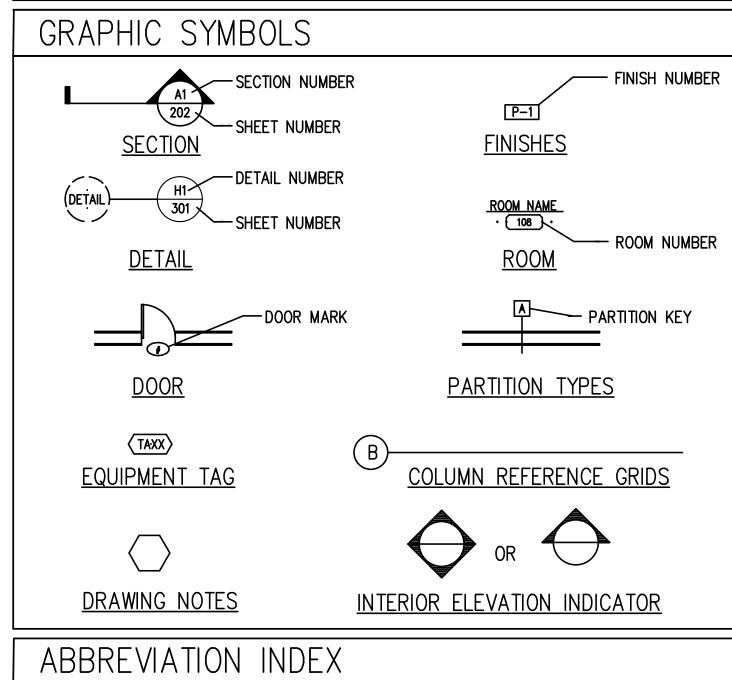
PROPOSED BUILDING CONVERSION TO CREATE A:



SCOPE OF WORK

BUILDING CONVERSION OF AN EXISTING RESTAURANT WITH DRIVE THRU TO CREATE A DUNKIN' RESTAURANT WITH DRIVE THRU. EXTERIOR BUILDING MINOR FINISH UPGRADE AND NEW SIGNAGE AND INTERIOR BUILDING CONVERSION TO INCLUDE REMOVAL OF THE EXISTING EQUIPMENT, INTERIOR NON-BEARING WALL PARTITIONS, WALL FINISHES AND PROVIDING DUNKIN' / BASKIN ROBBINS EQUIPMENT, WALL, CEILING, AND FLOOR FINISHES THROUGHOUT. SEE PLANS FOR MORE INFORMATION.



ABBR	REVIATION	INDE	Χ		
&	AND	F.D.	FLOOR DRAIN	P.S.F.	PER SQUARE FOOT
©	AT	FIN.	FINISH	P.S.I.	PER SQUARE INCH
A/C	AIR CONDITIONING	FL.	FLOOR	PTD.	PAINTED
A.D.	AREA DRAIN	F.0.	FACE OF	P.V.C.	POLY VINYL CHLORIDE
A.F.F.	ABOVE FINISH FLOOR	FT.	F00T	Q.T.	QUARRY TILE
ALUM.	ALUMINUM	FURN.	FURNITURE	QTY.	QUANTITY
ALT.	ALTERNATE	GA.	GAUGE	R.A.	DUNKIN' BRANDS
APPROX.	APPROXIMATE	GALV.	GALVANIZED	RAD.	RADIUS
BD.	BOARD	GYP. BD.	GYPSUM BOARD	REF.	REFRIGERATOR
BLDG.	BUILDING	HDWD.	HARDWOOD	REINF.	REINFORCING
BM.	BEAM	HDR.	HEADER	REV.	REVISION
BSMT.	BASEMENT	H.M.	HOLLOW METAL	REQ'D	REQUIRED
BTWN.	BETWEEN	HORIZ.	HORIZONTAL	RESIL.	RESILIENT ROOM
BOT.	BOTTOM	HGT.	HEIGHT	R.O.	ROUGH OPENING
C.L.	CENTER LINE	I.D.	INSIDE DIAMETER	SCHED.	SCHEDULE
C.T.	CERAMIC TILE	INSUL.	INSULATION	SEC.	SECTION
CLG.	CEILING	INT. JT.	INTERIOR JOINT	S.F.	SQUARE FOOT
CLOS. CM	CLOSET CONSTRUCTION MGR.	KIT.	KITCHEN	SHT.	SHEET
CMU	CONC. MASONRY UNIT	LAM.	LAMINATE	SIM.	SIMILAR
COL.	COLUMN	LAV.	LAVATORY	SPEC.	SPECIFICATION
		LT.	LIGHT	SQ.	SQUARE
COMBO	DUNKIN'/BASKIN	MAS.	MASONRY	S.S.	STAINLESS STEEL
	DUNKIN'/TOGO'S	MAX.	MAXIMUM	STD.	STANDARD
20112	TOGO'S/BASKIN	MECH.	MECHANICAL	STL.	STEEL
CONC.	CONCRETE	MTL.	METAL	STRUCT.	STRUCTURAL
CONT.	CONTINUOUS	MFR.	MANUFACTURER	SUSP.	SUSPENDED
CONST. C.S.	CONSTRUCTION CONSTRUCTION	MIN.	MINIMUM	TEL.	TELEPHONE
0.3.	SPECIFICATIONS	MISC.	MISCELLANEOUS	THK.	THICK
D.B.I.	DUNKIN' BRANDS INC.	M.O.	MASONRY OPENING	THRU	THROUGH
DEPT.	DEPARTMENT	MTD.	MOUNTED	T.O.P.	TOP OF PLATE
DTL.	DETAIL	N.I.C.	NOT IN CONTRACT	T.O.S.	TOP OF STEEL
D.F.	DRINKING FOUNTAIN	NO.	NUMBER	T.O.SL.	TOP OF SLAB
DIA.	DIAMETER	NOM.	NOMINAL	TRT.	TREATED
DIM.	DIMENSION	N.T.S.	NOT TO SCALE	TYP.	TYPICAL
DISP.	DISPENSER	0.A.	OVERALL	V.C.B.	VINYL COMPOSITION BASE
DN.	DOWN	0.C.	ON CENTER	V.C.T.	VINYL COMPOSITION TILE
DR.	DOOR	0.D.	OUTSIDE DIAMETER	VERT.	VERTICAL
D.S.	DOWN SPOUT	OPNG.	OPENING	V.I.F. V.W.C.	VERIFY IN FIELD VINYL WALL COVERING
DWG.	DRAWING	OPT.	OPTIONAL	W/	WITH
EA.	EACH	PL.	PLATE	W.C.	WATER CLOSET
EL.	ELEVATION	P.LAM.	PLASTIC LAMINATE	WD.	WOOD
ELEC.	ELECTRICAL	PLUMB.	PLUMBING	₩/O	WITHOUT
EQ.	EQUAL	PLYWD.	PLYWOOD DAID	W P.	WATERPROOFING
EQUIP.	EQUIPMENT	PR.	PAIR	WT.	WEIGHT
EXIST.	EXISTING	PROP.	PROPERTY	WWM.	WELDED WIRE MESH
EXT.	EXTERIOR				Wholi

TIDEX OF DRAWINGS TIDE SHEET/ ARCHITECTURAL DATA GSI.0 GENERAL SPECIFICATIONS-ARCHITECTURAL GSI.1 GENERAL SPECIFICATIONS-MECHANICAL, ELECTRICAL & PLUMBING SPI.0 ARCHITECTURAL SITE PLAN & BUILDING SIGNAGE DETAILS ARCHITECTURAL DI.0 DEMOLITION PLAN AI.0 PARTITION PLAN & WALL TYPES

A1.Ø	PARTITION PLAN & WALL TYPES
A1.1	FLOOR PLAN & NOTES
A1.2	ENLARGED RESTROOM PLAN
A2.Ø	REFLECTED CEILING PLAN & NOTES
A3.Ø	FINISHED FLOOR PLAN & SCHEDULE
A4.Ø	ROOF PLAN
A5.Ø	EXTERIOR ELEVATIONS
A5.1	EXTERIOR ELEVATIONS
A6.0	EXTERIOR FINISH SCHEDULE
A7.Ø	WALL SECTIONS
1.FA	WALL SECTIONS
A8.Ø	INTERIOR ELEVATIONS
A8.1	INTERIOR FINISH SCHEDULE

HVAC

HI.I HVAC OVERVIEW PLAN

H2.I HVAC PLANS AND NOTES

H3.I HVAC DETAILS

H3.2 HVAC HOOD DETAILS & SCHEDULE

H4.I HVAC SCHEDULES

H5.I GENERAL SPECIFICATIONS

EQUIPMENT PLAN & WALK-IN BOX SCHEDULE

EQUIPMENT SCHEDULE

K1.1

H6.1	HYAC SPECIFICATIONS
ELECTRICA	<u>L</u>
E1.1	ELECTRICAL OVERVIEW
≣1.2	ELECTRICAL NOTES AND DETAILS
E2.1	ELECTRICAL POWER PLAN AND DETAILS
E2.2	ELECTRICAL HYAC POWER PLAN & DETAILS
E3.1	ELECTRICAL COMMUNICATION PLAN & DETAILS
E3.2	ELECTRICAL COMMUNICATION SCHEDULES & NOTES
E4.1	ELECTRICAL LIGHTING PLAN & DETAIL
E5.1	ELECTRICAL PANEL SCHEDULE & RISER DIAGRAM
E6.1	ELECTRICAL SPECIFCATIONS
PLUMBING.	

	PLUMBING OVERVIEW
.1	PLUMBING SANITARY, WATER, & GAS PLAN
.1	PLUMBING DETAILS
.1	WATER FILTRATION SYSTEM DIAGRAM
.1	PLUMBING SCHEDULES
.1	PLUMBING SPECS & RISER DIAGRAM

SITE/BUILDING DATA

0112/001281110 871171	
OCCUPANCY:	A - ASSEMBLY - (DUNKIN SPACE) B - BUSINESS - (TENANT SPACE)
TYPE CONSTRUCTION:	EXISTING - NO CHANGE - 3B

PROPOSED BUILDING HEIGHT:	24'-6"	
PROPOSED BUILDING HEIGHT:	24°-6"	

TOTAL BUILDING AREA (GROSS)	EXISTING - NO CHANGE - +/-3,778 SQ.FT.
PROPOSED DUNKIN AREA (GROSS)	+/-3182 SQFT

PROPOSED TENANT SPACE AREA (GROSS) +/-596 SQ.FT.

<u>I. DUNKIN'</u>	
<u>occup</u>	ANT LOAD

FLOOR AREA:

OCCUPANT LOAD:		
KIT/SERVING AREA	+/-919 SF @200 SF/PER	(4)
CUSTOMER SALES AREA	+/-923 SF @15 SF/PER	(62)
TOTAL OCCUPANT LOAD		(66) OCCUPANTS
MEANS OF EGRESS:		(3)

MEANS OF EGRESS:	(3)
WIDTH OF EXITS: 36" \times 2"/OCCUPANT =	: .15" (32 INCHES MINIMUM)
NO SEATING PROPOSED	

2. TRAINING ROOM SPACE OCCUPANT LOAD:

BUSINESS AREA	+/-596 SF @100 SF/PER	(5)
TOTAL OCCUPANT LOAD		(5) OCCUPANTS

WIDTH OF EXITS:	
<u>WIDTH OF EXITS:</u> BUILDING IS NOT SPRINKLERE	2

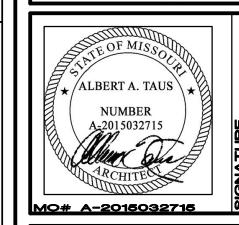
DESIGN CODES

CODES USED:	OHIO UNIFIED CONSTRUCTION CODES
BUILDING CODE	2018 INTERNATIONAL BUILDING CODE
MECHANICAL CODE	2018 INTERNATIONAL MECHANICAL CODE
PLUMBING CODE	2018 ITNERNATIONAL PLUMBING CODE
ELECTRIC CODE	2011 NATIONAL ELECTRIC CODE
FUEL / GAS CODE	2018 INTERNATIONAL FUEL GAS CODE
FIRE CODE	2018 INTERNATIONAL FIRE CODE
ACCESSIBILITY	ICC/ANSI A117.1-2009

 $36" \times 2"/OCCUPANT = .12" (32 INCHES MIN)$

ALBERT TAUS, AIA, ARCHITECTS ARCHITECTS, ASSOCIATES, ARCHITECTS (12) 698 - 2516 FAX: (215) 698 - 2516 FAX: (21

THESE PLANS ARE THE PROPERTY OF ALBERT TAUS &
ASSOCIATES, ARCHITECTS, AND ARE NOT TO BE USED
WITHOUT THE EXPRESSED WRITTEN PERMISSION OR



DOCUMENTS PREPARED FOR

DDJ21DOUGL AS, LLC

C/O: MR. H0554M 5H4HIN

109 E. HALE LAKE RD

WARRENSBURG, MO 64033

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DUNKINIANDS-[eardrinkthink]

DD Green Strategies will be selected and implemented by the Franchisee, Construction Manager and Architect during the Planning, Design and Construction of a project

The project Contractor will be required to follow all selected DD Green Strategies during Construction.

Once all Strategies are finalized and implemented, a Final DD Green Checklist will be signed and confirmed by the CM and Franchisee, allowing for final DD Green Achievement to be validated and confirmed at Substantial Completion. The DD Green Achievement will then be recognized/celebrated at the restaurant opening with presentation of the DD Green Plaque.

STEPS TO ACHIEVE DD GREEN

STEP 1 - Pre-Planning: CM, Architect and Franchisee meet during the planning stage to determine IF DD GREEN will be desired and at what level. The strategies and commitments of DD Green will be discussed and selected to achieve the level of sustainability and efficiency desired by the team.

STEP 2 - Documentation: Architect incorporates into his drawings the Strategies required by DD Green, as well as the selected Optional Strategies, for Certification. Franchisee makes preparation for the Operational components.

STEP 3 - Implementation: Architect, CM, Franchisee and Contractor ensure that all DD Green Strategies chosen at the Pre-Planning stage have been implemented during construction and prior to turnover.

STEP 4 - Turnover: CM completes checklist with Franchisee at Turnover of Construction and verifies rating of certification. CM, Architect and Franchisee sign off on Final DD Green Checklist.

STEP 5 - Notification of Certification Achievement: CM sends a copy of the checklist for Final DD Green Achievement confirmation and approval for DD Green Plaque.

STEP 6 - Plaque Ceremony: Franchisee receives plaque and letter from Dunkin' Leadership, and mounts plaque in a prominent place in the restaurant to ensure visibility and recognition.



DD Green Award Submission Form





DD GREEN ACHIEVEMENT CHECKLIST

Sha Davidan and	POSSIBLE POINTS	SCORE
Site Development		
Site Protection	Required	*
Regionally Friendly Landscaping	Required	*
Alternative Transit Options	2 Strategy Points	
Efficient Irrigation Design	2 Strategy Points	
Storm water Management	2 Strategy Points	
ECO Parking Lot	1 Strategy Point	
Cool Roof	1 Strategy Point	
Energy Efficient Frames	1 Strategy Point	
Store Efficiency		
Led Light Fixtures	Required	*
Highly Efficient HVAC Systems	Required	*
Low Flow Fixtures	Required	*
Highly Efficient Water Fixtures	2 Strategy Points	
LED Exterior Light Fixtures	2 Strategy Points	
Non Potable Water Use	2 Strategy Points	
Demand Control Ventilation	1 Strategy Point	
Variable Speed Drive for HVAC	1 Strategy Point	
Exhaust Controls	1 Strategy Point	
Effective Lighting Controls	1 Strategy Point	
Walk in Fridge Addition	1 Strategy Point	
Healthy Indoors		
ndoor Air Quality Management	Required	*
Zero-Voc Paint Use	Required	*
Recycled Material Use	2 Strategy Point	
Natural Light Intergration	2 Strategy Points	
Solar Shade Use	1 Strategy Point	
Sustainable Operations		
oustamable Operations		
Construction Waste Recycling	Required	*
Building Operations Training	Required	*
DD Green Commitment	Required	*
Building Energy Monitoring	2 Strategy Points	
Recycling Program Development	2 Strategy Points	-
Food Waste Reduction	1 Strategy Point	1
Waste Water Reduction	2 Strategy Point	
nnovation and Community		
Community Outreach	Required	*
Electric Car Charging Station	2 Strategy Points	
Renewable Energy Use	2 Strategy Points	
Exemplary Performance	1 Strategy Point	
Strategy Innovation	1 Strategy Point	
DD GREEN ACHIEVEMENT LEVELS		

Submittee Email: SXXXX PC Number: SXXXX Franchisee Name: Signatures Business Address: Bew or Remodel Site: Bignatures agree that I will be held as legally bound, obligated, and esponsible for any submission I make using the DD Breen Award Submission System as I would be by naking such submission in hardcopy form with my landwritten or typed signature as certification. Type / Sign name here Construction Manager Type / Sign name here Architect Type / Sign name here Franchisee		
Submittee Email: SXXXX Franchisee Name: SXXX Franchisee Business Name: Business Address: Business Address Addr	Name of Submittee:	1
Submittee Email: SXXXX Franchisee Name: SXXX Franchisee Business Name: Business Address: Business Address Addr	XXXX	
Construction Manager Type / Sign name here		
Franchisee Name: Franchisee Business Name: Business Address: Business Address Addres		
ranchisee Name: Rusiness Address: Rew or Remodel Site: Regignatures Regignature and Parchitect Regignature as certification.		
ranchisee Name: CXXX ranchisee Business Name: Business Address: Business Address	C Number:	
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RESPONSIBILITY MATRIX

- A. The GC is responsible for purchasing and installing, at GC's expense, everything shown or referenced in the Contract Documents, except for the Items specifically set forth below as Exceptions to the GC's Overall Responsibility. The Contract Documents, shall include the following: the plans, the specifications, the responsibility matrix, change orders, modifications to the contract, requests for information, field instructions, and any other item as set forth in the Agreement Between the Contractor and Owner. All items not indicated on the responsibility matrix are the responsibility of the GC to
- B. The GC is responsible for all permits and licenses of any nature required to construct the project or to secure a Certificate of Occupancy, except for impact fees

II. Exceptions to GC's Overall Responsibility

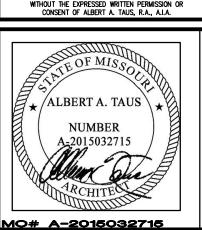
furnish and install.

and the general business license.

INISH MATE	RIALS				
CODE	MATERIAL	Furnished	MEP Rough-Ins	Install	Final Connections
	FLOOR MATERIALS				
Ft-01	FLOORTILE	GC	N/A	GC	N/A
T-01 (ALT)	FLOOR TILE	GC	N/A	GC	N/A
FT-02	QUARRY TILE	GC	N/A	GC	N/A
TB-01 COVE	FLOOR TILE BASE	GC	N/A	GC	N/A
FTB-01 CUT	FLOOR TILE BASE	GC	N/A	GC	N/A
3-01 ALT COVE	FLOOR TILE BASE	GC	N/A	GC	N/A
TB-02 COVE	FLOOR TILE BASE	GC	N/A	GC	N/A
G-01	GROUT	GC	N/A	GC	N/A
	WALL FINISH MATERIALS				
P-1	PAINT	GC	N/A	GC	N/A
P-2	PAINT	GC	N/A	GC	N/A
PL-WP	WALL PROTECTION	GC	N/A	GC	N/A
SF-1	SPECIAL FINISH	GC	N/A	GC	N/A
SF-2	SPECIAL FINISH	ĞĊ	N/A	ĞĊ	N/A
SF-3	SPECIAL FINISH	GC	N/A	GC	N/A
SF-4	SPECIAL FINISH	ĞC	N/A	GC	N/A
WD-1	WOOD VENEER LAMINATE	GC	N/A	GC	N/A
VVT-1	TILE	GC	N/A	GC	N/A
WT-2	TILE	ĞC	N/A	GC	N/A
VVT-3	TILE	ĞČ	N/A	ĞĞ	N/A
VVT-4	TILE	GC	N/A	GC	N/A
FRP-01	FIBERGLASS REINFORCED PANELS	GC	N/A	ĞĊ	N/A
RP-01 (ALT)	FIBERGLASS REINFORCED PANELS	GC	N/A	GC	N/A
G-03	GROUT	GC	N/A	GC	N/A
G-04	GROUT	GC GC	N/A	GC	N/A
G-05	GROUT	ĞĊ	N/A	ĞĊ	N/A
	- App 640000 40 C	3907.039	713947177	1-5000-10000	7.903.7947
NS44830140404013	CEILING MATERIALS	1-2-3-3-3-3-1	2000000		F2.535
CT-01	GENERAL CEILING TILE	GC	N/A	GC	N/A
CT-03	VINYL CEILING TILE	GC	N/A	GC	N/A
CT-04	CEILING GRID SYSTEM	GC	N/A	GC 0.0	N/A
ETR CG	ETRICEILING GRID	GC	N/A	GC	N/A
ETRGB	ETR GYPSUM BOARD	GC GC	N/A	GC GC	N/A N/A
P-1 P-2	PAINT PAINT	GC	N/A N/A	GC	N/A
PX-30	PAINTED GYP. BD.	GC	N/A	GC	N/A
1 74-30	PAINTED OFFE, BD.		DREEK	- 00	13(023)
	GRAPHICS		10411	Water	9,00
	INTERIOR GRAPHICS (NOT SIGNAGE)	GC	N/A	GC	N/A
	EXTERIOR/INTERIOR SIGNAGE	OWNER	GC	OWNER	GC
	EXTERIOR GRAPHICS	OWNER	N/A	OWNER	N/A
	DRIVE-THRU SIGNAGE	OWNER	GC	OWNER	GC
	DRIVE-THRU SIGNAGE STRUCTURE AND SUPPORT	OWNER	GC	OWNER	N/A
	EVENNOIGH JOINT				
	EXPANSION JOINT FLOOR EXPANSION JOINT SEALANT	GC	N/A	GC	N/A
	100 1 to 20 dec - 100 0 to 20 de 20		13513		(345)3
UMBING F	IXTURES AND RESTROOM ACCESSORIES				
ITEM#	ITEM	Furnished	MEP Rough-Ins	Install	Final Connection
i Å	GRAB BARS	GC	N/A	GC	N/A
В	TOILET TISSUE DISPENSER	GC	N/A	GC	N/A
С	COATHOOK	GC	N/A	GC	N/A
D	SOAP DISPENSER	GC	N/A	GC	N/A
E	HAND DRYER	GC	GC	GC	GC
F	MIRROR	GC	N/A	GC	N/A
G	CHEMICAL DISPENSER	GC	N/A	GC	N/A
H	WASTE RECEPTACLE	GC	N/A	GC	N/A
1	BABY CHANGING STATION	GC	N/A	GC	N/A
J	SWING-UP GRAB BAR	GC	N/A	GC	N/A
K	SANITARY NAPKIN DISPOSAL	GC	N/A	GC	N/A

			58000 NO 10 N	12 10 100	Lo orac N
NUMBER	LOCATION/ITEM	Furnished	MEP Rough-Ins	Install	Final Connections
101	ENTRY	GC	N/A	GC	N/A
102	WOMENS TOILET	GC	N/A	GC	N/A
103	MENSTOILET	GC	N/A	GC	N/A
104	OFFICE	GC	N/A	GC	N/A
105	REAR	GC	N/A	GC	N/A
	DOOR HARDWARE (SEE SCHEDULE THIS DWG)	GC	N/A	GC	N/A
HT FIXTU	I IRES (ALL TO BE PURCHASED THROUGH NATIONAL AC	COUNT VENDOR)			
TAG	DESCRIPTION	Furnished	MEP Rough-Ins	Install	Final Connections
	INTERIOR	to an income distribution of the U.			
Α	INTERIOR WALL WASH FIXTURE	GC	ĞC	GC	GC
BL	PROVIDED BY WALK-IN BOX MANUFACTURER	GC	GC	GC	GC
C	TRACK LIGHT	GC	GC	GC	GC
EBU-W	ULTRA COMPACT EMERGENCY LED	GC GC	GC	GC	GC
EBU-B		GC GC	GC	GC	GC
	ULTRA COMPACT EMERGENCY LED EXTERIOR COMBO LED REMOTE		GC	GC	
EMR	THE STATE OF THE S	GC	GC	GC	GC
WP	FLOOD LIGHT	GC			GC
EWS-1	WALL PACK	GC .	GC	GC	GC
EWS-2	WALL PACK	GC:	GC	GC	GC
EXI	COMBO EXIT LIGHT	GC	GC	GC	GC
HL	SURFACE JELLY JAR LIGHT	<u>ec</u>	GC	GC GC	GC
LED 2	EXTERIOR RECESSED LIGHT FIXTURE	GC	GC GC	GC	GC
LED 11	EXTERIOR LIGHT FIXTURE	GC GC	GC	GC	GC GC
LED 12	EXTERIOR LIGHT FIXTURE			The same of the sa	
OC	WALL MOUNTED OCCUPANCY SENSOR	GC	GC	GC	GC
P1	8' SUSPENDED LIGHT FIXTURE	GC	GC	GC	GC
P2	4' SUSPENDED LIGHT FIXTURE	GC	GC	GC	GC
P3	PENDANT CHANDELIER	GC	GC	GC	GC
PKL3	PARKING LOT LIGHTING	GC	GC	GC	GC
PKL4	PARKING LOT LIGHTING	GC	GC	GC	GC
R1	RECESSED LED LIGHT FIXTURE	GC	GC	GC	GC
LED 6	2X4 RECESSED LIGHT FIXTURE	GC.	GC	GC	GC
G	30 W LED WALL PACK	GC	GC	GC	GC
ISIC SYST	EM				
	ITEM	Furnished	MEP Rough-Ins	Install	Final Connections
	STEREO RECEIVER	ÓWNER	GC	GC	GC
	SPEAKERS	OWNER	GC	GC	GC
	SPEAKER WIRE	OWNER	GC	GC	GC

CONSTRUCTION
AS NOTED ON PLANS REVIEW



ARCHITECTURAL GENERAL NOTES

- A-ØI GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION AIA DOCUMENT A2ØI, LATEST EDITION, IS HEREBY MADE A PART OF THIS SPECIFICATION, AS IF BOUND HEREIN AND SHALL APPLY TO ALL DIVISIONS AS THOUGH COPIED IN EACH.
- A-02 CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION TO ENSURE THE SAFETY OF THE BUILDING UNTIL STRUCTURAL SYSTEM IS COMPLETED. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING SHORING, GUY WIRES OR TIE-DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED.
- A-03 GENERAL AND ALL SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR WORK SHOWN ON ALL DRAWINGS AND NOT NECESSARILY SHOWN ON THE DRAWINGS OF THEIR TRADE. IT IS RECOMMENDED THAT ALL CONTRACTORS CHECK ALL DRAWINGS FOR THEIR RESPECTIVE WORK AND VISIT THE SITE TO CHECK ALL JOB CONDITIONS.
- A-04 ALL CONTRACTORS MUST VERIFY ALL DIMENSIONS AT SITE BEFORE PROCEEDING WITH ANY WORK AND SHALL BE RESPONSIBLE FOR ANY DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS.
- A-05 ALL WORK UNDER THIS PROJECT BY ALL CONTRACTORS SHALL BE PERFORMED IN AN UP TO DATE, PROPER CONSTRUCTION LIKE MANNER IN ACCORDANCE TO THEIR RESPECTIVE TRADES, INCLUDING MANUFACTURERS SPECIFICATIONS, WHERE APPROPRIATE.
- A-06 ALL CONTRACTOR SUBSTITUTIONS OF FINISH MATERIALS MUST BE APPROVED BY THE ARCHITECT IN WRITING. GENERAL CONTRACTOR IS RESPONSIBLE FOR SUBMITTING SAMPLES AND OR CUT SHEETS, FOR NEW MATERIALS.
- A-ØT THE CONTRACTOR SHALL ENDEAVOR NOT TO DISTURB OR INTERFERE WITH ACCESS TO ADJACENT PROPERTIES BORDERING ALL SIDES OF THE PROJECT SITE. ALL PROJECT OPERATIONS SHALL BE CONFINED TO THE PROJECT SITE.
- A-08 WORK SHALL NOT COMMENCE UNTIL AN APPROVAL HAS BEEN ATTAINED FROM THE LANDLORD IF ANY, AND A BUILDING PERMIT HAS BEEN SECURED.
- A-09 ALL WORK SHALL CONFORM WITH THE LANDLORD'S/TENANT CRITERIA SUPPLIED BY THE LANDLORD IF ANY, AND MADE PART OF THE TENANT'S LEASE. GENERAL CONTRACTOR IS TO OBTAIN A COPY OF CRITERIA FROM TENANT.
- A-10 ALL WORK SHALL BE EXECUTED ACCORDING TO THE TRUE INTENT, SPIRIT AND MEANING OF PLANS AND SPECIFICATIONS. IF THE CONTRACTOR DISCOVERS ANY OMISSION, ERROR OR CONFLICT IN PLANS AND/OR SPECIFICATIONS, HE SHALL REQUEST INTERPRETATION FROM THE ARCHITECT BEFORE SIGNING THE NTRACT. OTHERWISE, THE CONTRACTOR SHALL SUPPLY, AT HIS OWN EXPENSE, THE PROPER MATERIALS AND LABOR TO MAKE GOOD ANY DAMAGE TO OR DEFECT IN HIS WORK CAUSED BY SUCH OMISSION, ERROR AND/OR CONFLICT.
- A-11 COMPLETE MASTER SET OF CONSTRUCTION DOCUMENTS, STAPLED AND CONNECTED ON A STICK, IS TO BE ON HAND AT A DESIGNATED LOCATION ON SITE AT ALL TIMES (WITHOUT EXCUSES) FOR REFERENCE USE BY THE OWNER, CONTRACTOR, SUBCONTRACTORS AND THE ARCHITECT.
- A-12 SHOP DRAWINGS SHALL BE SUBMITTED TO ARCHITECT, AND THE CLIENT'S OF ALL CONSTRUCTION, STOREFRONT, ELECTRICAL, H.V.A.C. DUCTWORK, PLUMBING, ETC. FOR APPROVAL BEFORE ERECTION INSTALLATION OR CONSTRUCTION.
- A-13 GENERAL CONTRACTOR TO PROVIDE SHOP DRAWINGS OF ALL CABINETS, COUNTERS AND FIXTURES, AS REQUIRED TO THE ARCHITECT FOR APPROVAL.
- A-14 ACTUAL (NEW OR EXISTING) BUILDING CONSTRUCTION MAY VARY SLIGHTLY (AND IT MIGHT BE NECESSARY TO CHANGE) FROM WHAT IS SHOWN ON DRAWINGS AND DISCOVERED DURING CONSTRUCTION. (GENERAL) CONTRACTOR SHALL NOTIFY ARCHITECT OR ENGINEER IMMEDIATELY IF THERE ARE ANY SUCH VARIANCES OR PROBLEMS IN THE CONDITIONS BEFORE PROCEEDING WITH THE WORK.
- A-15 ALL CONTRACTORS SHALL TAKE SUCH PROTECTIVE MEASURES AND PRECAUTIONS AS NECESSARY AND REQUIRED TO PREVENT ANY INJURY OR ACCIDENTS TO WORKMEN, RESIDENTS OR ANY PASSERS-BY. PROVIDE GUARD RAILS, FENCES, PLANKING, LIGHTING, SIGNS ETC., IN RESPECT WITH THE PARTICULAR CONDITIONS AND IN ACCORDANCE WITH 0.S.H.A. SAFETY REQUIREMENTS AND REGULATIONS.
- A-16 BARRICADES WHERE NECESSARY OR IN MALLS, ETC.: ALL STORE FRONTS MUST BE TEMPORARILY BARRICADED DURING CONSTRUCTION. THE DUST TIGHT BARRICADE MUST BE CONSTRUCTED OF 3 5/8" METAL STUDS, 16" ON CENTER WITH A MINIMUM 1/2" DRY WALL ON THE MALL SIDE OF THE PARTITION. THE EXTERIOR OF THE PARTITION MUST BE TAPED, SPACKLED, SANDED AND PAINTED WITHIN 48 HOURS OF INSTALLATION. COLOR SPECIFIED BY LANDLORD OR OWNER. THE PARTITIONS MUST HAVE PLASTIC AT THE TOP TO CONTROL DUST IF PARTITION 15 NOT FLOOR TO CEILING. THE MINIMUM BARRICADE HEIGHT 15 12 FEET. IF THE LOCATION HAS A REAR DOOR, CONTRACTORS ARE NOT PERMITTED TO CONSTRUCT A DOOR IN THE BARRICADE.
 - A) BOTTOM PLATES SHALL BE PINNED TO THE FLOOR BY NAILING INTO GROUT JOINTS.
 - B) COORDINATION THE CONTRACTOR SHALL COORDINATE THE LOCATIONS OF ALL DUST PARTITION BARRICADES WITH THE MALL MANAGEMENT OR OWNER.
- A-IT THE CONTRACTOR SHALL COORDINATE, PROVIDE AND INSTALL TEMPORARY PROTECTION FOR THE EXTERIORS AND FACADES OF ADJACENT PROPERTIES THROUGHOUT THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER/TENANT...
- A-18 CONTRACTOR SHALL PHASE EXTERIOR WINDOW, DOOR AND HARDWARE REPLACEMENTS IN A MANNER THAT, AT THE END OF EACH WORK DAY, THE PROPERTY IS ENCLOSED, SAFE AND SECURE OVERNIGHT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE WITH SUBSTANTIAL, SECURE TEMPORARY ENCLOSURES TO PROTECT PREMISES OVERNIGHT.
- A-19 NO MATERIAL SHALL BE PLACED OR ANY DISTURBANCE PERMITTED BEYOND THE PROJECT PROPERTY LINE OR RIGHT OF WAY WITHOUT THE WRITTEN PERMISSION OF THE OWNER/LANDLORD DIRECTLY INVOLVED.
- A-20 PROTECT ALL WORK-IN PROGRESS AND NEW OPENINGS WITH MOISTURE PROTECTION IN THE EVENT OR FORECAST OF RAIN. SECURE VINYL SHEETING IN-PLACE TO PROTECT PREMISES WHILE ON AND OFF SITE.
- A-21 ANY APPLIANCES, EQUIPMENT, OR MATERIALS OBVIOUSLY A PART OF THE WORK AND NECESSARY FOR ITS PROPER OPERATION, OR CONSTRUCTION, ALTHOUGH NOT SPECIFICALLY MENTIONED HEREIN, SHALL BE FURNISHED AND INSTALLED AS IF CALLED FOR IN DETAIL. CONTRACTOR SHALL SUPPLY ALL NAILERS AND GROUNDS FOR FIXTURES FITTINGS, AND EQUIPMENT AS REQUIRED.
- A-22 THE GENERAL CONTRACTOR SHALL SUBMIT A LIST OF ALL SUB- CONTRACTORS TO THE OWNER/
 TENANT AND ARCHITECT PRIOR TO CONSTRUCTION. THE OWNER/TENANT AND ARCHITECT
 RESERVES THE RIGHT TO REJECT ANY SUB-CONTRACTOR SUBMITTED BY THE GENERAL
 CONTRACTOR.
 - THE GENERAL CONTRACTOR SHALL NOT SUBSTITUTE ANY NAMED SUB CONTRACTOR WITHOUT WRITTEN PERMISSION OF THE OWNER/TENANT OR HIS ARCHITECT.
- A-23 THE CONTRACTOR UPON COMPLETION OF CONSTRUCTION, MUST PROVIDE THE OWNER/TENANT WITH A LIST OF ALL SUB-CONTRACTORS: (NAME OF COMPANY, ADDRESS AND PHONE NUMBER) ALONG WITH ANY AND ALL INSTRUCTION, BOOKLETS OR PAMPHLETS AND THE RESPECTIVE MANUFACTURER GUARANTEES OR WARRANTIES ASSOCIATES WITH ALL APPLIANCES OR EQUIPMENT.

- A-24 PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL CONTACT AND MEET WITH TENANT'S/CLIENT'S FIELD REPRESENTATIVE FOR A PRECONSTRUCTION MEETING. AT WHICH TIME, HE WILL PRESENT A LIST OF THE NAMES, ADDRESSES AND TELEPHONE NUMBERS OF THE SUB-CONTRACTORS TO BE USED ON THIS PROJECT.
- A-25 THE CONTRACTOR SHALL COORDINATE AND SEEK THE OWNER'S/ TENANT'S APPROVAL FOR MATERIAL STORAGE, DELIVERY, AND "SAFE" LOCATIONS ON-SITE FOR FINISH PRODUCTS, AND ASSUME ALL RESPONSIBILITY OF SAME.
- A-26 THE ARCHITECT/ENGINEER/CLIENT'S FIELD REPRESENTATIVE SHALL HAVE THE AUTHORITY TO REJECT ANY WORK OR CONSTRUCTION THAT IS NOT SATISFACTORY (PROPER CONSTRUCTION LIKE MANNER) OR IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS.
- A-27 ALL MATERIALS, EQUIPMENT, TOOLS, CONSTRUCTION EQUIPMENT, TEMPORARY AND PERMANENT UTILITIES (HEAT, ELECTRIC, WATER, SANITARY PLUMBING AND TELEPHONE) TRANSPORTATION, AND OTHER FACILITIES INCLUDING INSURANCE (LIABILITY, WORKMAN'S COMPENSATION, AUTOMOBILE, ETC.) NECESSARY FOR THE EXECUTION AND COMPLETION OF THE PROJECT, SHALL BE FURNISHED BY THE GENERAL AND HIS SUB-CONTRACTOR(S).
- A-28 THE EQUIPMENT SUPPLIER CONTRACTOR IS AND WILL BE RESPONSIBLE FOR THE UNLOADING AND TAKING DELIVERY OF THE EQUIPMENT. IT IS ALSO THE RESPONSIBILITY OF THE SUPPLIER TO MAKE ALL NECESSARY INSTALLATION OF THIS EQUIPMENT AND DISPOSE ALL AND ANY TRASH OR RUBBISH IN THE DUMPSTER PROVIDED BY THE GENERAL CONTRACTOR FOR THIS ERROLLECT.
- A-29 ALL CONTRACTORS SHALL BE BONDABLE, LICENSED CONTRACTORS IN THE RESPECTIVE MUNICIPALITY, POSSESSING GOOD LABOR RELATIONS AND MUST BE CAPABLE OF PERFORMING QUALITY WORKMANSHIP IN HARMONY WITH OTHER CONTRACTORS WORKING ON THIS PROJECT.
- A-30 THE GENERAL CONTRACTOR AND SUB CONTRACTOR(S) MUST PROVIDE EVIDENCE AND MAINTAIN CASUALTY, LIABILITY, BUILDER'S RISK, AUTOMOBILE TO THE OWNER/ TENANT INCLUDING WORKMAN'S COMPENSATION INSURANCE (IN AMOUNTS AGREEABLE) TO OWNER/ TENANT. THE POLICIES MUST NAME OWNER/ TENANT AND MORTGAGOR AS ADDITIONAL INSUREDS. THE POLICY MUST CONTAIN A 30-DAY TERMINATION NOTICE!
- A-31 THE OWNER/ TENANT, AT HIS DISCRETION, MAY REQUIRE THE GENERAL CONTRACTOR TO OBTAIN A PERFORMANCE AND PAYMENT BOND IN THE AMOUNT OF ONE HUNDRED PERCENT (100%) OF THE CONTRACT AMOUNT. THE COST OF THIS BOND, IF REQUIRED, WILL BE PAID BY THE OWNER/TENANT.
- A-32 CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY REMOVAL OF TRASH, RUBBISH AND SURPLUS MATERIALS RESULTING FROM CONSTRUCTION AND KEEP CONSTRUCTION SITE CLEAN.
- A-33 CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEMOLISHED MATERIALS, DEBRIS, TRASH, GARBAGE, ETC. OFF SITE IN ACCORDANCE WITH CITY AND LOCAL AUTHORITIES AND
- A-34 FINAL CLEAN-UP SHALL BE PART OF THIS PROJECT! MAKING AREA OF CONSTRUCTION, READY FOR OCCUPANCY OR USE AND OBTAINING STATEMENT OF OCCUPANCY, OR FINAL APPROVAL OF LOCAL BUILDING/HEALTH DEPARTMENT AND LABOR AND INDUSTRY OFFICIAL, PRIOR TO AREA BEING CLASSIFIED AS SUBSTANTIALLY COMPLETE.
- A-35 CONTRACTOR AT TIME OF FINAL PAYMENT OR AT "SUBSTANTIAL COMPLETION", WHICH WILL BE CONSIDERED REACHED WHEN A "STATEMENT OF OCCUPANCY" IS OBTAINED FROM THE LOCAL BUILDING/HEALTH DEPARTMENT OR LABOR AND INDUSTRY AUTHORITIES, WILL PROVIDE "RELEASE OF LIENS" FROM ALL HIS SUB CONTRACTORS AND HIMSELF LESS THE PERCENT OF RETAINAGE.
- A-36 THE GENERAL AND/OR ELECTRICAL CONTRACTOR SHALL PROVIDE NECESSARY SMOKE AND HEAT DETECTORS, ALONG WITH FIRE ALARM BELLS, FIRE EXTINGUISHERS, FIRE EXIT SIGNS AND EMERGENCY LIGHTS, PER LOCAL CODES, AS INDICATED ON CONSTRUCTION DOCUMENTS AND APPROVED BUILDING PERMIT PLANS.
- A-37 IT IS RECOMMENDED THAT ANY CONTRACTS BETWEEN THE OWNER/ TENANT AND THE GENERAL CONTRACTOR(S) BE ON STANDARD AGREEMENT A.I.A. FORMS. THE FORMS MAY BE OBTAINED AT ANY LOCAL AMERICAN INSTITUTE OF ARCHITECTS OFFICE OR AT THE OFFICE OF ALBERT TAUS & ASSOCIATES, A.I.A., ARCHITECTS.
- A-38 CONTRACTOR IS TO CONSTRUCT BUILDING IN ACCORDANCE WITH LOCAL BUILDING CODES, AND OBTAIN ALL PERMITS (BUILDING, ELECTRICAL, H.V.A.C., PLUMBING, ETC.) REQUIRED, PAYING ALL FEES, COSTS, AND CONNECTION CHARGES, (PLUMBING, SANITARY, SEWER, GAS FUEL, ELECTRICAL,
- A-39 GENERAL CONTRACTOR SHALL APPLY FOR AND PAY FOR ALL UTILITY METERS AND ALL TEMPORARY UTILITY SERVICES, AS REQUIRED.
- A-40 TELEPHONE SERVICE, WIRING AND INSTALLATION TO BE PROVIDED BY OWNER/ TENANT.

 CONTRACTOR TO COORDINATE AND ALLOW PHASING-IN OF THIS WORK WITH WORK REQUIRED

 UNDER THIS CONTRACT. SCHEDULE AND COORDINATE WITH OWNER/TENANT WELL IN ADVANCE (4

 WEEKS MIN.) OF INTERIOR FRAMING COMPLETION.
- A-41 ALL NEW GYPSUM BOARD WALLS TO BE TAPED, SPACKLED, AND SANDED VERY SMOOTH TO UNDERSIDE OF CEILING (OR JUST ABOVE NEW ACOUSTICAL DROP CEILING) AND PREPARED TO RECEIVE NEW FINISH. (FIRE TAPE AND/OR PATCH ALL NEW FIRE CODE GYPSUM BOARD WALLS ABOVE CEILING TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE.)
- A-42 ALL WALL AREAS SURROUNDING NEW PLUMBING FIXTURES TO RECEIVE MOISTURE RESISTANT GYPSUM BOARD.
- A-43 GENERAL CONTRACTOR SHALL PROVIDE ADEQUATE BLOCKING AT PARTITIONS WITH 1/2"
 PLYWOOD BACKER AT ALL SHELVING, THREE (3) COMPARTMENT SINK, T & S SPRAY BRACKET,
 POT RACK, HAND SINKS, MOP SINK FAUCETS, TIME CLOCK, GRAB BARS, LAYATORIES, HAND
 DRYERS, MIRRORS, PAPER TOWEL DISPENSERS, SOAP DISPENSERS AND OTHER ACCESSORIES,
 ETC.
- A-44 ALL 3 1/2" BATT INSULATION TO HAVE MINIMUM R-13 RATING: 6" BATT TO HAVE MINIMUM R-22 RATING: 9" BATT TO HAVE MINIMUM R-30 RATING. USE FOIL OR CRAFT FACED BATT ON EXTERIOR USES.
- A-45 ALL DOORS TO HAVE PROPER LOCKING HARDWARE, SCHLAGE "D" SERIES OR EQUAL. ALL ENTRANCE DOORS TO BE PROVIDED WITH DEAD BOLT AND THUMB LATCH DEVICE, IN ADDITION TO PANIC BAR LOCKING HARDWARE, OR PUSH BAR, PULL PLATE WHERE NECESSARY. HARDWARE TO BE CLEAR OR DARK BRONZE BRUSHED ALUMINUM OR LEVER TYPE, WITH CLEAR DARK BRONZE BRUSHED ALUMINUM HINGES, TO MATCH EXISTING.
- A-46 ALL NEW AND EXISTING EXTERIOR AND ENTRANCE DOORS TO HAVE METAL THRESHOLDS, COMPLYING WITH HANDICAPPED ACCESSIBLE REQUIREMENTS, AS APPLICABLE, INCLUDING WEATHER STRIPPING, HEAD, JAMB AND SILL, AS APPLICABLE.
- A-41 ALL EXISTING DOORS AND FRAMES REMAINING SHALL BE REPAIRED, REFURBISHED, AND MADE OPERABLE, OR REPLACED, AS NOTED AND AS NECESSARY.
- A-48 ALL NEW DOORS TO HAVE PROPER LOCKING HARDWARE. ALL EXISTING HARDWARE ON DOORS REUSING EXISTING FRAMES, TO BE REFURBISHED.
- A-49 ALL NEW AND EXISTING DOORS AND FRAMES TO HAVE (SIZED AS INDICATED) PAINTED FINISH.

 METAL EXTERIOR MAN DOORS TO BE PAINTED (WITH RUST INHIBITIVE PAINT) ALONG WITH METAL

 FRAMES, INTERIOR AND EXTERIOR FACE.
- A-50 PROVIDE NEW GLAZING AS NECESSARY IN WINDOWS AND OR DOORS THAT REMAIN WHERE PANES ARE MISSING, CRACKED, OR PAINTED.
- A-51 ALL NEW GLAZING TO MATCH EXISTING, INCLUDING FRAMING.
- A-52 ALL NEW AND EXISTING WINDOWS THROUGHOUT ARE TO BE MADE OPERABLE, (DOUBLE HUNG, HINGED, ETC.).

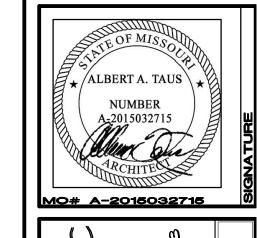
- A-53 PROVIDE NEW WINDOWS, FRAMES AND WOOD FRAMING WHERE NECESSARY OR NOTED ON DRAWINGS TO MATCH EXISTING.
- A-54 WHERE NEW WINDOWS ARE NECESSARY USE INSULATED, HIGH ENERGY COATED WINDOWS.
- A-55 CONTRACTOR TO PROVIDE PROPER CAULKING TOP AND BOTTOM OF ALL PARTITIONS, AND WALLS, INCLUDING DOORS AND WINDOWS (INTERIOR AND EXTERIOR), ESPECIALLY ALL COUNTERS AND CABINETRY, WITH APPROVED HEALTH DEPARTMENT CAULKING.
- A-56 WHERE DEMOLITION OCCURS PATCH, REPAIR, AND PAINT OR PREPARE AREA TO RECEIVE NEW FINISH, MATCHING ADJOINING SURFACES.
- A-57 ALL EXISTING ELECTRICAL, PLUMBING AND HYAC ROUGH-IN LOCATIONS ARE TO BE RE-USED, WHERE POSSIBLE. GENERAL CONTRACTOR IS TO VERIFY AND COORDINATE LOCATIONS IN THE FIELD WITH THE DESIGN DRAWINGS, WHERE APPLICABLE.
- A-58 ALL EXISTING PLUMBING, PIPING, AND RADIATORS NOT IN USE OR DAMAGED TO BE REMOVED FROM BUILDING. CAP, PER CODE, ALL ABANDONED PLUMBING LINES UNABLE TO BE REMOVED. PATCH ALL REMAINING SURFACES TO MATCH ADJOINING AREAS.
- A-59 ALL EXISTING HARDWARE, WIRING, CONDUIT, FIXTURES, DUCT WORK, ETC. NOT IN USE OR SHOWN TO BE REMOVED SHALL BE ABANDONED, AND REMOVED. SAME SHOULD BE CAPPED PER CODE IF UNABLE TO BE REMOVED. PATCH AND REPAIR REMAINING AREAS DUE TO THE ABOVE DEMO, MATCH ADJACENT SURFACES.
- A-60 GENERAL CONTRACTOR TO VERIFY ALL EQUIPMENT AND EQUIPMENT SPECIFICATIONS WITH THE OWNER/ TENANT/ ARCHITECT AND MANUFACTURER SPECIFICATION CUT SHEETS.
- A-61 ALL EXISTING EQUIPMENT NO LONGER IN USE IN BUILDING OR CONSTRUCTION AREA (I.E. HEATING, PLUMBING, AND ELECTRIC) SHALL BE REMOVED AND/OR CAPPED PER CODE UNLESS OTHERWISE NOTED.
- A-62 ALL KITCHEN AND SERVICE EQUIPMENT TO BE N.S.F. APPROVED AND INSTALLED. ALL EQUIPMENT IS TO BE INSTALLED BY THE GENERAL CONTRACTOR UNLESS OTHERWISE NOTED OR DIRECTED BY THE OWNER/ TENANT/ ARCHITECT.
- A-63 ALL FLOOR MOUNTED EQUIPMENT SHALL BE SEALED TO THE FLOOR AND WALL WITH CLEAR SILICONE, OR APPROVED HEALTH DEPARTMENT CAULK, WHERE APPLICABLE OR INSTALLED ON 6" LEGS. FILL ALL GAPS OF 3/8" OR LARGER WITH ALUMINUM ANGLES PRIOR TO SEALING WITH SILICONE TO PREVENT THE SILICONE FROM DROPPING BELOW THE SURFACE OF THE COUNTER.
- A-64 ALL CLOSETS, COAT ROOMS, DESIGNATED COAT AREA, TO BE PROVIDED WITH , UNLESS OTHERWISE NOTED, STAINLESS STEEL COAT ROD AND 3/4" X 18", (2) WOOD SHELF, FINISHED PLASTIC LAMINATE.
- A-65 ALL STYLES, COLORS, FINISHES, AND HARDWARE SHALL BE SELECTED AND HAVE APPROVAL OF THE OWNER/ TENANT/ CLIENT'S FIELD REPRESENTATIVE OR HIS ARCHITECT BEFORE INSTALLATION.
- A-66 PROVIDE NEW HANDICAPPED RESTROOMS WITH 18" X 24" MIRROR, WALL MOUNTED LIQUID SOAP DISPENSER, AND TOILET PAPER DISPENSERS. (TYPE, STYLE, AND HEIGHTS PER HANDICAPPED ACCESSIBLE CODES.)
- A-67 PROVIDE ALL HAND SINKS WITH WALL HUNG LIQUID SOAP AND STAINLESS STEEL "C-TYPE" PAPER TOWEL DISPENSERS.
- A-68 TOILET ROOM FLOOR TO BE WATERPROOF. CARRY WATERPROOF MEMBRANE UP WALL 6" AFF.
- A-69 ALL FLOOR PENETRATIONS IN THE TOILET ROOM SHALL HAVE WATERTIGHT SLEEVES.
- A-70 THIS CONTRACTOR IS TO PREPARE EXISTING AND OR NEW CONCRETE OR WOOD FLOORS ABSOLUTELY SMOOTH READY TO RECEIVE NEW OR FUTURE FLOOR FINISH (V.C.T., QUARRY, CERAMIC, ETC.) HAVING A MINIMUM CONSTRUCTION STANDARD DIFFERENTIAL TOLERANCE TO RECEIVE SAME.
- A-71 ALL EXISTING AND NEW CONSTRUCTION, WALLS, CEILING, WOODWORK, WINDOW, AND DOOR FRAMES, ETC., TO BE SANDED VERY SMOOTH WHERE NECESSARY TO RECEIVE NEW FINISH.
- A-72 ALL SURFACES INDICATED TO BE PAINTED SHALL BE PAINTED WITH (2) TWO FINISH COATS OF M.A.B. OR BENJAMIN MOORE PAINT AS SPECIFIED, OR EQUAL. ALL NEW SURFACES RECEIVING PAINT FINISH SHALL RECEIVE (1) ONE PRIMER COAT IN ADDITION TO (2) TWO FINISH COATS. COLORS TO BE SELECTED BY OWNER/ TENANT/ CLIENT'S FIELD REPRESENTATIVE OR HIS ARCHITECT. ALL METAL SURFACES TO RECEIVE PAINT FINISH USING RUST INHIBITIVE TYPE PAINT
- A-73 NEW AND EXISTING STOREFRONT GLAZING MUST COMPLY WITH ALL APPLICABLE CODES AND SAFETY GLAZING STANDARDS. REPLACE EXISTING GLAZING IF NECESSARY TO MEET ABOVE
- A-74 ALL NEW EXTERIOR MASONRY WALLS TO BE SEALED (WATERPROOFED) AND PROVIDED WITH BLOCK FILLER AND OR PAINTED PER M.A.B. MANUFACTURER SPECIFICATIONS.
- A-75 ALL STRUCTURAL LUMBER USED IN CONNECTION WITH THIS PROJECT TO BE FIRE TREATED, WHERE NECESSARY BY CODE.
- A-76 ALL LUMBER USED IN CONNECTION WITH THIS PROJECT, USED WITHIN 18" OF GRADE OR BELOW, COMING IN CONTACT WITH MOISTURE, OR IS USED FOR THE EXTERIOR, SHALL BE EXTERIOR TYPE, HIGH PRESSURE TREATED WOOD OR LUMBER.
- A-77 PROVIDE 3/4" T & G PLYWOOD SUB-FLOOR IN ALL ROOMS, AS REQUIRED, OR AS SHOWN WHERE NECESSARY.
- A-78 ALL MATERIALS, WHERE APPLICABLE, SHALL BEAR U.L. LABEL.
- A-19 CONTRACTOR TO PERMANENTLY REMOVE ALL WEEDS AND VEGETATION FROM FRONT, SIDE AND REAR YARD AND CLEAN SAME.
- A-80 ALL NEW ROOF OPENINGS AND CUTS, CLOSING OF PREVIOUS OPENINGS (TO MATCH EXISTING CONSTRUCTION) TO BE MADE BY A CERTIFIED ROOFER AND/OR LANDLORD APPROVED ROOFING CONTRACTOR KEEPING INTACT ANY ROOF WARRANTIES AND STRUCTURAL INTEGRITY OF ROOF DECK, ETC.
- A-81 CONTRACTOR IN PATCHING CONCRETE SLAB DUE TO PLUMBING OR UTILITY EXCAVATION, SHALL USE READY MIX WITH A MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I. AT 28 DAYS WITH COMPACTED FILL AND MINIMUM 4" OF GRAVEL STONE.
- A-82 SHOP DRAWINGS SHALL BE SUBMITTED TO ARCHITECT, ENGINEER, AND CLIENT'S FIELD REPRESENTATIVE OF ALL CONSTRUCTION, CARPENTRY, STRUCTURAL, STOREFRONT, H.Y.A.C., ELECTRICAL, PLUMBING, ETC. FOR APPROVAL BEFORE FABRICATION, ERECTION OR CONSTRUCTION.

END OF SECTION

RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

ALBERT TAUS, A.I.A., ARCHITECTS
ARCHITECTURE PLANNING INTERIOR DESIGN ENGINEERING
P. H. I. L. A. D. E. L. P. H. I. A. P. A. P.

ASSOCIATES, ARCHITECTS, AND ARE NOT TO BE USED
WITHOUT THE EXPRESSED WRITTEN PERMISSION OR
CONSENT OF ALBERT A. TAUS, R.A., A.I.A.



ATE 04/29/21

CALE AS NOTED

C/O: MR. HOSSAM SHAHIN

RAWN GR

KD

WARRENSBURG, MO 64

WARRENSBURG, MO 64

DOUGLAS STREET

COUGLAS STREET

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PLUMBING GENERAL NOTES

- P-01 Contractor shall furnish and install all necessary labor and materials to complete installations of the plumbing systems for the building consisting of all piping connections for sanitary wastes, vents, storm water leaders and roof drains, water supply line extensions, pipe covering and insulation, valves, traps, flashing, clean-out plugs, sleeves, hangers, supports, water closets, lavatories, service sink, grease trap and hot water heater.
- P-02 Contractor to verify all existing conditions in the field before proceeding with any work
- P-03 Any appliances or materials obviously a part of the plumbing work and necessary for its proper operation, although not specifically mentioned herein, shall be furnished and installed as if
- P-04 All work by the Contractor shall be performed in accordance with Local and National Standard Plumbing Codes. Contractor shall obtain all Permits, Inspections, Tests and Approvals necessary for construction, including payment of all fees and connection charges, as required by local or state authorities.
- P-05 Rest rooms shall be built with proper sized doors, stainless steel grab bars, equipment, fixtures, and hardware to meet all prevailing codes for handicapped accessible restroom facilities. (Number of restrooms and requirements for restrooms shall meet all governing
- P-06 Plumbing Contractor shall be responsible in checking and obtaining receipt of final dimensional drawing from the Owners/Tenant's/Client, before installation
- P-07 Plumbing Contractor shall submit three (3) copies of shop drawings to both the Owner/Tenant/Client and the Architect's Office, for review and approval of all plumbing work, at least (5) five business days prior to commencement of installation of work. Any of the work installed prior to approval of shop drawings, shall be corrected at Contractor's expense.
- P-08 It shall be the responsibility of this Contractor to verify and check all details and applicable notes for plumbing work on all of the architectural drawings, and allow for any interferences, etc.
- P-09 See all plumbing drawings for symbols, details, and notes.
- P-10 This Contractor shall take such protective measures and precautions as necessary and required to prevent any injury or accidents to workmen or any passers-by. Provide guard rails, fences, planking, lighting, signs, etc., in accordance with the particular conditions and in accordance with O.S.H.A. Safety
- P-11 All work shall be scheduled with the approval of the Owner's/ Tenant's/ Client's Construction
- P-12 This Contractor shall submit a detailed and dimensioned "As Built" reproducible drawing showing the final location of all underfloor and concealed water and sanitary sewer lines, to the Architect or Tenant/Owner/Client upon completion and acceptance of the construction area by Tenant/Owner/Client. The Architect will provide, upon request, either additional prints or sepias, to assist in the preparing of the "As Built" drawing.
- P-13 Where existing and new plumbing lines are to be kept and found to be running through Tenant/Client or Owner's space, move plumbing tight to nearest wall. General Contractor to box out with 1/2" gypsum board or 1/2" moisture resistance board, over 3 5/8" metal stud 16" O.C. to just above ceiling.
- P-14 No existing or new vents, pipes, roof drain leaders, etc. to be run exposed, box out same on the surface of all walls with 1/2" gypsum board over metal studs in all areas.
- P-15 All existing plumbing fixtures, pipe, equipment, and appurtenances not in use, shall be removed and/or reused if possible. Cap, per code, all abandoned and existing pipe and patch all surfaces, as required, to match new and existing construction.
- P-16 For extent of the work required at the exterior of building, see Site Plan Sheet.
- P-17 This Contractor shall excavate (with the saw cutting method), backfill and compact to 95 density, for all underground trenches pertaining to this work using granular or sand backfill, unless specifically noted otherwise, for interior work. Remove excavated material from site, unless noted otherwise, and, backfill with stone in paved areas and as approved or noted in unpaved areas - see Site Plan.
- P-18 This Contractor shall check and verify all invert elevations of sewer and water lines, before proceeding with work. Direction and approval in setting inverts, grades, etc., shall be obtained from Architect or Owner's/Tenant's/Client's - report any discrepancies.
- P-19 Provide 4" round sanitary line for lavatory and water closets. (typical each toilet room.)
- P-20 Provide water meter and appropriate size domestic water lines, including appropriate hot and cold water
- P-21 All piping installed per Local Code and Water Company requirements.
- P-22 Insulate where necessary, any exposed piping.
- P-23 It shall be the responsibility of this Contractor to provide for the masons (concrete) and other trades as required, all sleeves for openings or penetrations thru walls, floors, and roof, required for his work, provide exact location of drains, piping, etc. as approved by the Tenant/Client or Architect and the Owner's/ Tenant's/ Client's Construction Representative.
- P-24 All sleeves as required, shall be provided by this Contractor for any walls or floors that have not been poured - otherwise, all necessary holes shall be core-bored drilled.
- P-25 All cutting and patching pertaining to the installation of this work shall be done as required and approved by the Owner's/Tenant's/Client's Construction Representative or of the Architect.
- P-26 All plumbing pipes and fixtures shall be protected from freezing Provide insulation in walls, floors, etc. as may be indicated, or required to prevent same.
- P-27 Do not run main branch lines or place any clean outs under fixtures or equipment.
- P-28 All underground sanitary sewer lines shall be cast iron of proper size or as indicated on drawings, with a minimum size of 4" diameter. All cast iron pipes shall be standard service weight with gasketed joints (Provide an alternate price for use of plastic, where permitted by local codes).
- P-29 Minimum sanitary sewer line pitch shall be set at 1/4" per foot with each invert minimum of 1' 0" below floor unless specifically indicated or approved to the contrary by the Architect or Owner's/ Tenant's/ Client's Construction Representative. Any lines installed improperly shall be removed and replaced at Contractor's
- P-30 All waste and vent piping above floor and size of 2" and less, shall be galvanized steel Type DWV, Copper or cast iron pipe. All other pipes larger than 2" diameter shall be cast iron, unless specifically noted otherwise. (Provide an alternate price for use of plastic, where permitted by Local Codes.)
- P-31 Every horizontal soil and waste pipe shall be provided with a readily accessible clean out and where necessary by code. Provide clean outs as indicated on drawings and/or as required by Local Code, at no additional cost to Owner/Tenant/Client.
- P-33 Provide 4" round vents where necessary per codes thru roof, lead or galvanized vent flashing and counter flashing with gasket and made waterproof
- P-34 All piping to be suspended from structural members of building, as approved by Architect or Owner's/ Client's Construction Representative. For pipes 1" diameter or less, utilize either solid or split ring type hanger. All hangers at 8' - 0" O/C maximum.
- P-35 All water piping to be overhead, copper Type "L" Copper Tube (Overhead lines only allowed unless specifically indicated as below slab, in which case copper Type "X" shall be used), with sweat fitting (soldered) thru-out, except where compression fitting are necessary. Provide dielectric isolator between
- P-36 All water pipes shall be Type "L" copper tube, with wrought fittings and lead free solder.
- P-37 All water supply lines and all other piping subject to condensation shall be insulated.
- P-38 All suspended cold and water piping (including piping concealed in walls and floors, soffits, fittings, valves, etc.), shall be insulated with 1/2" Armstrong "Armaflex-II" or Rubatex R-II0-F5. Joints to be sealed with Armstrong *620 or Rumatex *373 adhesive.
- P-39 Provide shut-off valves below all fixtures (chrome type in finished areas and as directed by Owner's/Tenant's/Client's Construction Representative), at all branch lines and in rooms on exposed water line outlets. All to be in accessible location and position.
- P-40 Restroom accessories shall include one (1) roll tissue holder for each water closet, one (1) surface mounted 18" x 24" mirrored over each lavatory, one (1) liquid soap dispenser for each lavatory, all shall be furnished and installed by the Contractor meeting all prevailing handicapped accessible codes where necessary or indicated on drawings.
- P-41 Plumbing Contractor to completely connect all fixtures furnished by the Owner/Tenant/Client, or as noted.
- P-42 Final connections to all equipment furnished by Owner/Tenant/Client, shall be installed by THIS PLUMBING CONTRACTOR Specialty Sinks and all other equipment, etc., not otherwise provided for in these specifications or contract documents, shall be furnished by Owner/Tenant/Client and connected by THIS PLUMBING CONTRACTOR, see Equipment Schedule.

- P-43 Location of all fixtures and equipment as approved by Architect and Owner's/ Tenant's/ Client's Construction Representative. Failure to do so will not alleviate having to revamp as approved, at Contractor's expense.
- P-44 Plumbing Contractor shall furnish and install water service lines, as indicated or required. Verify exact size, location, and site of service entrance with Landlord/ Tenant's/Client's Construction Representative.
- P-45 This Contractor shall place some type of marker at least 36" to 42" high above the floor line, in order to denote an open or raised drain, complying with 0.5.H.A. P-46 This CONTRACTOR shall properly tag all valves with metal tags and shall submit a
- valve schedule along with a parts manual of all plumbing fixtures to Owner/Tenant/ Client upon acceptance of the premises.
- P-47 All copper piping installed through aluminum studding shall be sleeved through PVC.
- P-48 All dimensions are from finished or unfinished masonry walls, cases, or coolers. Verify dimensions prior to installation with the Owner's/Tenant's/Client's Construction
- P-49 Existing fixtures to remain, clean and repair, as required and make operable

END OF SECTION

H.Y.A.C. GENERAL NOTES

- M-01 Contractor will provide and install entire H.Y.A.C. system to the Construction area meeting the following
- M-02 This Contractor shall take such protective measures and precautions as necessary and required to prevent any injury or accidents to workmen or any passers-by. Provide guard rails, fences, planking, lighting etc., in accordance with the particular conditions and in accordance with 0.5.H.A. Safety
- M-03 Verify site dimensions and conditions prior to work
- M-04 Dimensions supersede drawings.
- M-05 Install all diffusers, registers, thermostats, cellenoid switches, etc. where shown on Architectural \$ Mechanical Plans, or as directed by Architect and necessary for a complete and operating system.
- M-06 Refer to specifications for all work required.
- M-Ø7 Grilles, registers, to be Agitair Co., T & B Co., Carnes Co., or Krueger Co. All items furnished with white finish, except where noted otherwise on drawings. Diffusers to be Model "RCTC" type with full flow dampers of size to suit ceiling panels. Supply registers to be double deflection type with adjustable opposed blade dampers. Exhaust and return registers to have 45 degree angle blades with dampers. Provide dry wall or plaster frame for all wall & ceiling registers and grilles in dry wall or plastered walls.
- M-08 Duct registers, grilles, and diffusers, shall be installed in accordance with the manufacturer's installation instructions. Supply air duct registers, grilles, and diffusers, shall have a volume adjustment.
- M-09 Any and all changes to H.Y.A.C. drawings shall be submitted in the form of shop drawings and have approval of Architect or Engineer before proceeding with any work.
- M-10 Louvers shall be extruded aluminum, horizontal line louvers, Model No. 6115, four (4) inches deep, as manufactured by Construction Specialties Co., Airolite Company, or Penn Ventilator Co., complete with bird screen. Louvers shall be furnished with KYNAR 500 coating or dark bronze duronodic color as selected by Architect.
- M-11 All thermostats shall be provided with tamper-proof covers.
- M-12 This Contractor is responsible to obtain and pay for all necessary permits and approvals, and meet all local codes pertaining to H.Y.A.C. system.
- M-13 All substitutions to be approved by Architect or Owner/ Tenant.
- M-14 This contractor to check all existing H.V.A.C. System and if necessary, repair and make operable, replace if necessary... M-15 All existing revised duct work to be extended if necessary. Relocate supply and return diffusers and
- registers using new diffusers and registers, etc. in new ceiling areas. M-16 Contractor to provide Architect or Engineer with shop drawings of roof cuts and curbing for new roof
- top and/or compressor units, and submit shop drawings for approval of duct work system before proceeding with fabrication or installation.
- This contractor shall submit as-built drawings to Architect or Owner/Tenant upon completion and acceptance of the construction area by Owner/Tenant. The Architect will provide, upon request, either additional prints or sepias, to assist in the preparation of the as-built drawing.
- M-18 Any appliances, equipment, or materials obviously a part of the H.Y.A.C. work and necessary for its proper operation, although not specifically mentioned herein, shall be furnished and installed, as if DUCTWORK
- M-19 Install all ductwork shown on drawings and include supply, return, exhaust, outside air ductwork, ductwork liner, louvers, plenums, diffusers, registers, fire dampers, supports, flexible equipment connections, double vanned duct turns, access doors, manual dampers, test holes, and caps, $\,$ testing and balancing, $\,$ fabrication and installation drawings and all accessories and appurtenances for a complete and satisfactory operating system.
- M-20 Ductwork shall be constructed in strict conformity with the methods, standards, and recommendations of the ASHRAE. Guide, SMACNA. Manual, and NBFII. Pamphlet No. 90A, and 96, latest issue.
- The design and installation of an air distribution system shall conform to accepted engineering practice. Nonmetallic ducts shall be constructed with Class Ø or Class I duct material in accordance with UL 181
- M-23 All changes in direction of ductwork to have turning vanes, or splitter dampers, whichever is
- M-24 All duct sizes given are free area inside. (I.D.) Insulation and adhesives used on this project shall have a flame spread classification of not more than 25 and a smoke developed rating of not more than 50.
- M-25 All ductwork connected to units to have flexible connections. M-26 All H.Y.A.C. ductwork shall be constructed of galvanized steel of gauges required, internally insulated.
- M-27 All joints in a duct system shall be made tight. Duct tape or joint tape may be used to seal joints.
- M-28 All flexible ductwork to run 12'-0" maximum, pulled tight, and machine banded.
- M-29 The temperature of air in flexible ducts or flexible connectors shall be less than 250 degree F. Flexible ducts and flexible connectors shall not be installed within 6 feet of a heating element.
- M-30 The balancing of this system will be critical to its performance. It is to be the H.Y.A.C. Contractor's
- M-31 All medium pressure ductwork to be hardcast or ductmate flanged to maintain 6" maximum pressure and 3" minimum pressure.
- M-32 Splitter dampers to be placed at the connections of a branch and main duct unless noted otherwise. M-33 Air distribution systems with a capacity between 2,000 (0.94m 3/s) and 15,000 CFM (1.08 m 3/s) shall be equipped with a heat detector and/or approved smoke detector, located in the return air duct.
- M-34 Upon activation, the smoke or heat detectors shall shut down the air distribution system. Air distribution systems which are part of a smoke control system may switch to smoke control mode upon activation of a
- M-35 Fire dampers to be installed according to Local, State and National Fire Codes.
- M-36 Install fire dampers in all duct risers between floors, at roof and where noted on drawings. Provide 12" x 12" hinged doors in ducts, partitions, and ceilings for access to dampers.
- M-37 Fire and smoke dampers shall be installed in all ducts as required by Local and State authorities, NBF.U. and where indicated on drawings. Fire dampers to be "Fire/Seal" Model No. 119-ML horizontal or vertical, shutter type with 160 degree F. fusible link and sleeve, 95% free area. Smoke dampers shall be motorized type. Sleeves to extend to each side of wall or floor and be supported from building. All dampers shall bear U.L. Label. Dampers shall be Ruskin Co., Air Balance, or T & B Co.
- M-38 Each fire damper to have an 8" x 12" minimum inspection door.
- M-39 All ductwork to be insulated unless otherwise specified.
- M-40 All ductwork on roof to have maximum density 2" insulation and weatherproofing.
- All supply, return, and outside air ductwork shall be internally lined with one (1) inch thick, 15 lb. density, fibrous glass insulation having a factory applied fire resistive and noneroding surface exposed to the air stream. Lining shall be rated up to 4,000 FPM velocity, U.L. approved. Duct liner shall be equal to Johns-Manville Co. "LINA-COUSTIC", Owens-Corning Co "AEROFLEX DUCT LINER", Certain-Teed/St. Gobain Co."ULTRALINER". Exposed ductwork located on roof shall be lined with two (2) inch thick liner.

- M-42 All ductwork shall be concealed above ceilings, in wall, or in furred spaces.
- M-43 Ducts shall be supported with approved hangers at intervals not exceeding 10 feet (3048 mm).
- M-44 All coils to have inspection doors for cleaning if not paneled in unit.
- M-45 All service doors for dampers to have hinges, sash locks, and gaskets, as indicated.
- M-46 Provide condensate drain lines from all air handling units to grade (grass), roof, mop receptors, or safe-waste drains complying with Norwood Borough, Local, or State Codes.
- M-47 All condensate lines to be trapped.
- M-48 All air conditioning and heating units to be level.
- M-49 Check all gas-fired units for correct type of gas, natural or propane.
- M-50 Heat pump outdoor units to have 18" minimum snow clearance.
- M-51 All roof curbs to be 12" high minimum.
- M-52 Provide pre-fab insulated aluminum curbs with cant strips for all duct penetrations thru roof and for
- Roof cuts to be constructed by Certified Roofer. Curbs for H.Y.A.C. units to be set by H.Y.A.C. Contractor, using corresponding manufacturer's RTU curbs, installed per manufacturer's specifications.
- M-54 Roof top units to be placed between joists, as shown.

M-55 Air filters shall be one/two inch thick disposable type, 30 Std. No. 52-68. Provide manometer gauge

- M-56 Provide remote control center with indicating lights for Fan ON, COOL ON, HEAT ON, (2 stages). Cloqued Filters, and separate remote thermostat (2 stage type) with vandal-proof cover. Locate control centers, time clock, and thermostats where directed, or shown on drawings. Provide safety
- controls as specified hereinafter. Provide 24 hour time clock with bypass switch for operating each unit complete with Night Stat for lower operating temperature on winter setting. (Fan to cycle with heating coil, outside air damper to remain closed.) Locate control centers and time clocks where directed by Architect.
- M-57 Units shall be Carrier Co. STRUCTURAL NOTES

located at grade.

- M-58 All roof openings to have angle iron support frame if 12" x 12" or larger. Provide Architect and
- Structural Engineer with shop drawings and have his approval before proceeding with any work M-59 Provide Pate Co. roof equipment supports for all units located on roof or concrete pads for units
- M-60 Provide Manufactures Corresponding Curb roof equipment supports for all units located on roof or concrete pads for units located at grade.
- (FUEL) GAS NOTES M-61 Install gas conversion kits before installing hanging heaters.
- M-62 H.V.A.C. Contractor to be responsible for gas piping and all installation applications with local gas
- M-63 All piping must be leak tested prior to start up.
- M-64 Gas service meter per local gas company requirements, provide 6" dirt leg and gas cock.
- M-65 Gas service, piping and meter to be installed for H.V.A.C. System, per local gas company requirement, providing 6" dirt legs and gas cocks.
- M-66 Gas pipe fittings to be of malleable steel.
- M-67 Gas meter location coordination to be H.Y.A.C. Contractor's responsibility.
- H.Y.A.C. ELECTRICAL NOTES M-68 Wire in accordance with all Local and National Electrical Codes.
- M-69 Check unit(s) for correct voltage and electric phase before installation.
- M-70 All wire to be copper, minimum *12 awg. for 15 amps and less line voltage, and minimum *18 awg. (240" diameter min.) for control wiring.
- Wiring size indicated are recommended per Section 310.16 of N.E.C., copper wire thu. 15 degree C raceway, up to 100 ft. run with 3
- M-72 Provide all necessary electric control wiring for each (H.Y.A.C.) units operation. M-73 Provide all necessary electric control wiring for kitchen exhaust hood operation.
- M-74 Provide all necessary electric control wiring for kitchen walk-in box(es).
 - EXHAUST FAN NOTES
- M-75 Provide Rest Room exhaust fans for ventilation with min 6 air changes per hour, vented to exterior with end cap, bird and insect screen.
- Note: Hood contractor to fabricate, design and install hood duct, exhaust fan, fire suppression system and fresh air inlet. Power wiring and lighting by Electrical contractor. END OF SECTION

ELECTRICAL GENERAL NOTES

- E-01 Provide minimum service as shown on construction documents, 120/208 volt/3 phase, 4 wire electrical service (Contractor to provide any additional power or electrical service necessary) to Construction Area, including 42 circuit panel (s). Verify exact location of M.D.P.
- E-02 Electrical Contractor shall visit the site and familiarize himself with all job conditions and contract drawings for possible bearing on his work
- E-03 Visit the site before bidding. Unfamiliarity with preexisting conditions will not be valid basis for additional charge.
- E-04 Prior to bidding, examine the existing building and compare conditions with the drawings. Call any discrepancies to the attention of the architect. If none are reported, contractor will comply with all code requirements regardless of drawing errors or omissions, without additional cost.
- E-05 Electrical Contractor shall provide labor and materials necessary for a complete and operating electrical system.
- E-06 Entire installation shall be in strict accordance with the National Electrical Code and all State and Local Codes having jurisdiction.
- E-Ø7 All work by the Contractor shall be performed in accordance with Local and National Electrical Codes. Contractor shall obtain all Permits, Inspections, Tests and Approvals necessary for the introduction of power and construction, including payment of all fees and connection charges, as required by local or
- E-08 Submit to the architect for comment, shop drawings of major items of equipment.
- E-09 Furnish technical manuals, instructions in operation of major equipment, and an as built drawings of the
- E-10 Verify exact locations of all equipment with the architect. Ventilation of space must comply with manufacturer's requirements
- Provide all electrical service, overhead or underground service, necessary transformer pads, panels, meter sockets, step up and step down transformers, conduit, fittings, junction boxes, and outlet boxes, as required for entire installation of electrical system. Apply for and verify arrangement, location and amount of electrical service to construction area with
- Electric Company. All devices shall be specification grade with ratings as required by load supplied and fault current as obtained from power company.
- E-14 Entire installation shall meet Local Electric Company's requirements and recommendations of equipment
- prevent any injury or accidents to workmen or any passers-by. Provide guard rails, fences, planking, lighting, signs, etc., in accordance with the particular conditions and in accordance with 0.5.14. Safety Requirements and Regulations.
- E-16 Make temporary connections as required to maintain essential services during period of construction.

This Contractor shall take such protective measures and precautions as necessary and required to

E-17 Upon completion of installation, test all systems for unwanted grounds

- E-18 All material shall bear UL label, when available
- E-19 Pay for and obtain all inspection fees and permits. Inspection to be made by the Middle Department Association Office, or similar inspection service and provide a certificate of compliance with the NE.C.
- E-20 The Electrical Contractor shall do all necessary excavation and backfilling.
- E-21 Provide necessary flashing and counter flashing where conduits, pass thru roof or exterior walls.
- E-22 E-22 POINTING WILL BE PROVIDED BY THE GENERAL CONTRACTOR. E-23 PROVIDE ALL NECESSARY SLEEVES, SUPPORTS, AND HANGERS, AS REQUIRED FOR THE ELECTRICAL INSTALLATION.
- E-24 ALL ABANDONED WIRING SHALL BE REMOVED UNLESS CONCEALED. CONCEALED WIRING SHALL BE DISCONNECTED FROM POWER SUPPLY AT SOURCE.
- E-25 EXISTING WIRING IN GOOD CONDITION MAY BE USED PROVIDED IT COMPLIES WITH THE NEC AND THE PROJECT SPECIFICATION.
- E-26 ALL FIXTURES WHICH ARE TO REMAIN OR ARE RELOCATED, SHALL BE CLEANED, REPAIRED, AND RELAMPED (AND PROVIDED WITH NEW BALLASTS). DISCOLORED DIFFUSERS SHALL BE REPLACED.
- E-27 WIRING THAT MUST REMAIN SHALL BE RELOCATED, IF NECESSARY, TO AVOID INTERFERENCE WITH STRUCTURAL
- E-29 DO WIRING FOR ALL OTHER TRADES. NOTIFY THEM OF POWER CHARACTERISTICS AND OBTAIN REQUIREMENTS FOR CIRCUITING BEFORE STARTING WORK
- E-30 PROVIDE ELECTRICAL PANELS AND TIME CLOCKS, AS SHOWN, OR AS NECESSARY.

E-31 PANEL BOARDS SHALL HAVE DIRECTORIES TYPED TO INDICATE CIRCUITS SUPPLIED.

E-32 BALANCE LOADS ON PANELS AND BETWEEN PHASES.

E-28 ALL NEW PANEL BOARDS SHALL BE I.T.E., OR APPROVED EQUAL.

- E-33 LOADS SHALL BE BALANCED AS CLOSELY AS POSSIBLE. E-34 ANY PANELS OR BREAKERS WHICH NEED REPLACING SHALL CONTAIN BOLT ON BREAKER, THIRTY (30) AMP
- E-35 PROVIDE AND INSTALL A SPARE FUSE FOR EVERY GAP. FUSES SHALL BE DUAL-ELEMENT, TYPE OF RATING SHOWN
- ON DRAWING. E-36 GROUND ENTIRE ELECTRICAL SYSTEM.

SWITCHABLE OR GREATER

- E-37 ENTIRE 6Y6TEM SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY
- E-38 POWER WIRING SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR, CONTROL WIRING WILL BE PROVIDED BY THE MECHANICAL AND PLUMBING CONTRACTOR
- E-39 PROVIDE ALL NECESSARY ELECTRIC CONTROL WIRING FOR EACH (H.Y.A.C.) UNITS OPERATION.
- E-40 PROVIDE ALL NECESSARY ELECTRIC CONTROL WIRING FOR KITCHEN EXHAUST HOOD OPERATION. E-41 PROVIDE ALL NECESSARY ELECTRIC CONTROL WIRING FOR KITCHEN WALK-IN BOX(ES).
- E-42 PROVIDE ALL NECESSARY ELECTRIC POWER WIRING FOR ALL CONSTRUCTION AREA. E-43 ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECT ROTATION OF POLY PHASE MOTORS.
- E-45 PROVIDE MOTOR DISCONNECTS WHETHER OR NOT INDICATED ON DRAWINGS.

E-44 PROVIDE DISCONNECT SWITCHES AS REQUIRED BY NATIONAL ELECTRIC CODE.

- E-46 PROVIDE GF.C.I. TYPE OUTLETS AS REQUIRED BY NATIONAL ELECTRIC CODE.
- E-47 SWITCHES SHALL BE RATED 120/217, 15 AMPS, IVORY/WHITE/GREY, BRYANT, CIRCLE, "F" LEVITON, SILENT TYPE, OR APPROVED EQUAL
- E-48 RECEPTACLES SHALL BE RATED 125V, 20 AMPS, IVORY/WHITE/GREY, BRYANT, CIRCLE, "F" LEVITON, OR APPROVED EQUAL, GROUNDING TYPE.

E-50 DEVICE PLATES SHALL BE STAINLESS STEEL. (TELEPHONE, SWITCH, RECEPTACLE, CABLE.)

- E-49 SAFETY SWITCHES TO BE I.T.E., OR APPROVED EQUAL
- E-51 PROVIDE LAMPS FOR ALL FIXTURES, NEW OR EXISTING. E-52 NEW AND EXISTING FLORESCENT FIXTURES OR T-8 LAMPS SHALL BE EQUIPPED W/CLASS "D" OR ENERGY

EFFICIENT BALLAST, (SIMKAR, KEYSTONE, OR EQUAL), FLORESCENT LAMPS SHALL BE COOL WHITE.

INCANDESCENT LAMPS SHALL BE RATED 125 VOLTS, INSIDE FROSTED, AS RECOMMENDED BY MANUFACTURER.

PROVIDE APPROPRIATE WIRING AND CIRCUITING NECESSARY.

E-53 WIRE IN ACCORDANCE WITH ALL LOCAL AND NATIONAL ELECTRICAL CODES.

E-54 CHECK ALL ELECTRICAL EQUIPMENT FOR CORRECT YOLTAGE AND ELECTRIC PHASE BEFORE INSTALLATION AND

- E-48 RECEPTACLES SHALL BE RATED 125V, 20 AMPS, IVORYJUHITE/GREY, BRYANT, CIRCLE, "F" LEVITON, OR
- E-49 SAFETY SWITCHES TO BE I.T.E., OR APPROVED EQUAL

APPROVED EQUAL, GROUNDING TYPE.

shall be copper conductor type "THWN".

- E-50 DEVICE PLATES SHALL BE STAINLESS STEEL. (TELEPHONE, SWITCH, RECEPTACLE, CABLE.)
- E-51 PROVIDE LAMPS FOR ALL FIXTURES, NEW OR EXISTING.
- E-52 NEW AND EXISTING FLORESCENT FIXTURES OR T-8 LAMPS SHALL BE EQUIPPED W/CLASS "D" OR ENERGY EFFICIENT BALLAST, (SIMKAR, KEYSTONE, OR EQUAL), FLORESCENT LAMPS SHALL BE COOL WHITE. INCANDESCENT LAMPS SHALL BE RATED 125 VOLTS, INSIDE FROSTED, AS RECOMMENDED BY MANUFACTURER.
- E-53 WIRE IN ACCORDANCE WITH ALL LOCAL AND NATIONAL ELECTRICAL CODES.
- E-54 CHECK ALL ELECTRICAL EQUIPMENT FOR CORRECT VOLTAGE AND ELECTRIC PHASE BEFORE INSTALLATION AND
- PROVIDE APPROPRIATE WIRING AND CIRCUITING NECESSARY. E-55 Wiring methods: (a) All conductors shall be copper. (b) Wiring in unfinished areas shall be in NEC approved raceways. (d) Wiring under paved areas shall be in NEC approved conduit. (d) Wiring in finished areas shall be concealed. (e) Minimum conductor size, #12. (f) Insulation for size 8 and larger shall be rated 90 degrees C., wet or
- E-56 Wire and cable, as permitted by authorities may be copper conductor, armored cable (Bx), or non-metallic, sheathed cable (Romex) w/600 volt insulation in conduit± wire and cable
- E-57 All wire to be copper, minimum #2 awg. for 15 amps and less line voltage, and minimum #8 awg. (.040" diameter min.) for control wiring.

E-58 Wiring size indicated are recommended per Section 310.16 of NEC., copper wire thm. 15

requirements where necessary when electric exterior transformer is required.

- degree C raceway, up to 100 ft. run, with 3 E-59 Any appliances, equipment, or materials obviously a part of the electrical work and necessary for its proper operation, although not specifically mentioned herein, shall be furnished and
- installed, as if called for in detail. E-60 All conduit passing thru the exterior of building, shall always be in metal conduit of sufficient size to accommodate all wiring for exterior use. Provide flashing, counter flashing caulking as necessary.
- E-61 No changes in this specification shall be made without prior written agreement. E-62 No requests for extras will be accepted after work has been performed.
- E-63 Provide incidental items such as access panels without additional charge. E-64 Contractor to provide concrete pad, concrete filled steel bollards, etc., per local Electric Co. codes and
 - Note: Hood contractor to fabricate, design and install hood duct, exhaust fan, fire suppression system and fresh air inlet. Power wiring and lighting by Electrical contractor. END OF SECTION

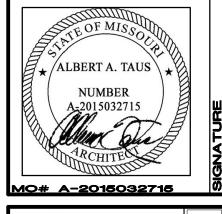
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CONSTRUCTION

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05/13/2021

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ASSOCIATES, ARCHITECTS, AND ARE NOT TO BE USE
WITHOUT THE EXPRESSED WRITTEN PERMISSION OR
CONSENT OF ALBERT A. TAUS, R.A., A.I.A.

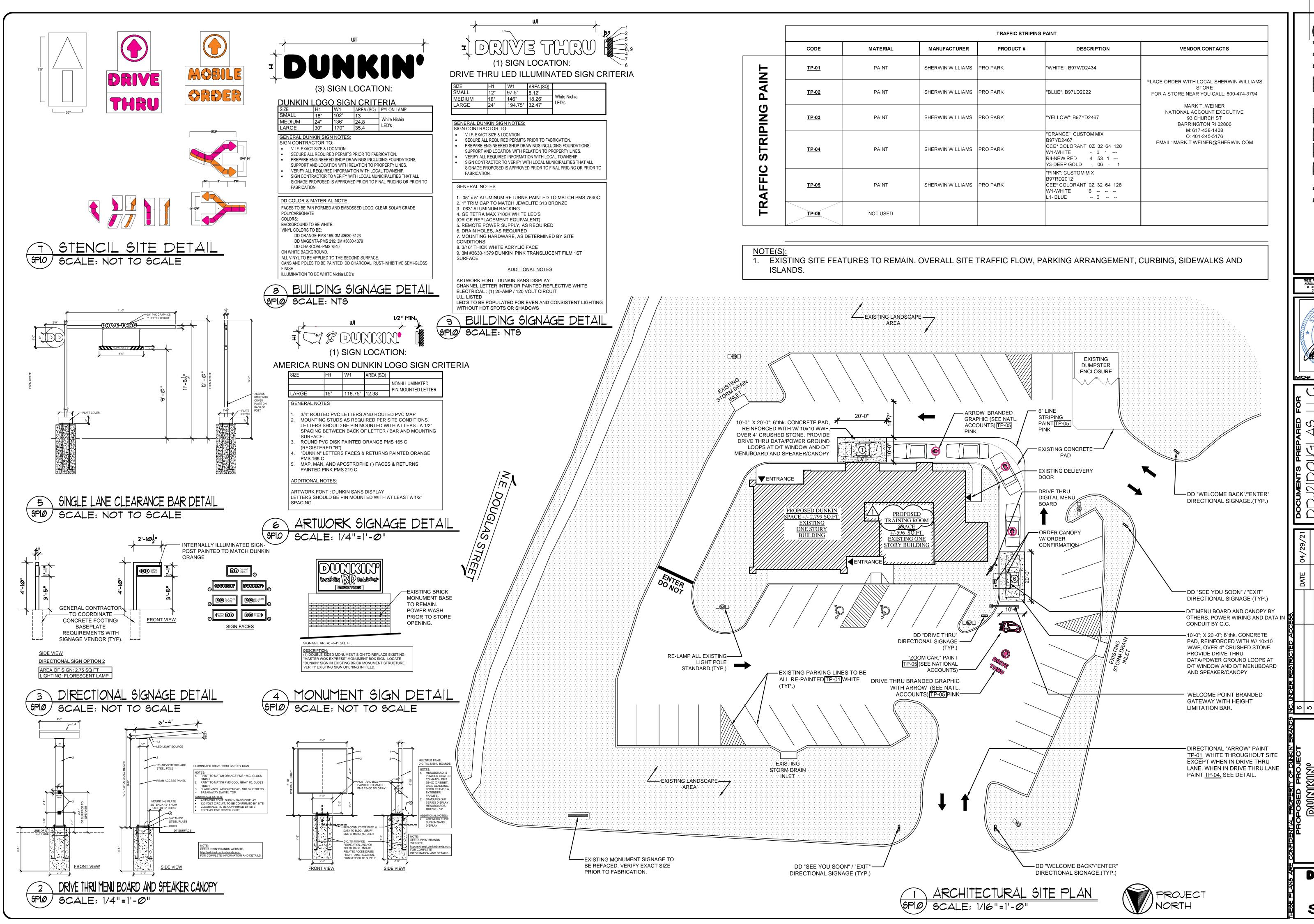


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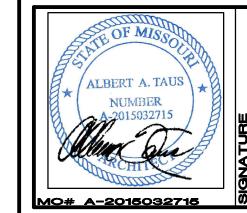


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CONSTRUCTION
AS NOTED ON PLANS REVIEW

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DOCUMENTS PREPARED FOR

DDJ21DOUGLAS, LLC

C/O: MR. H0554M 5H4HIN

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 DATE
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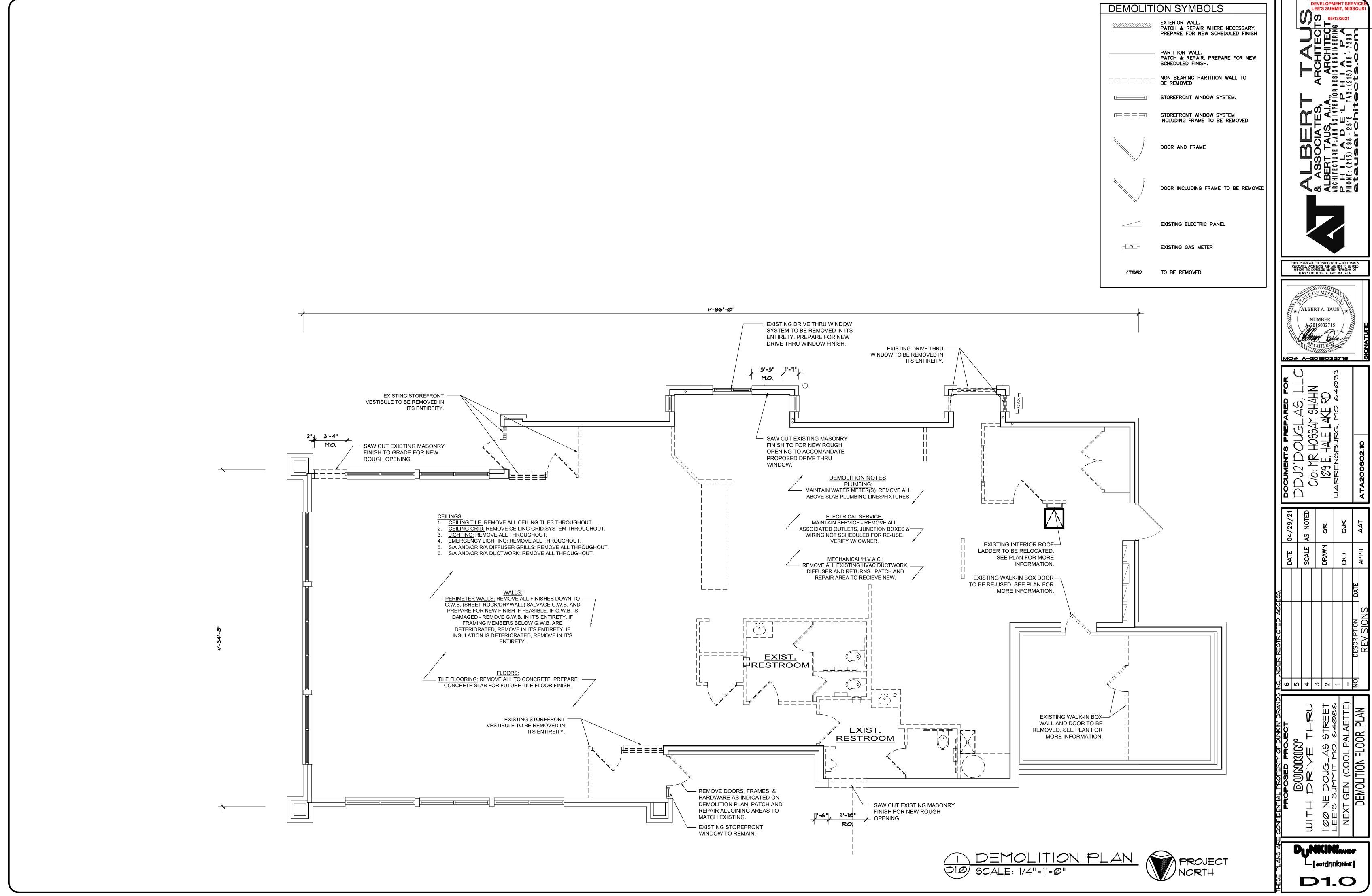
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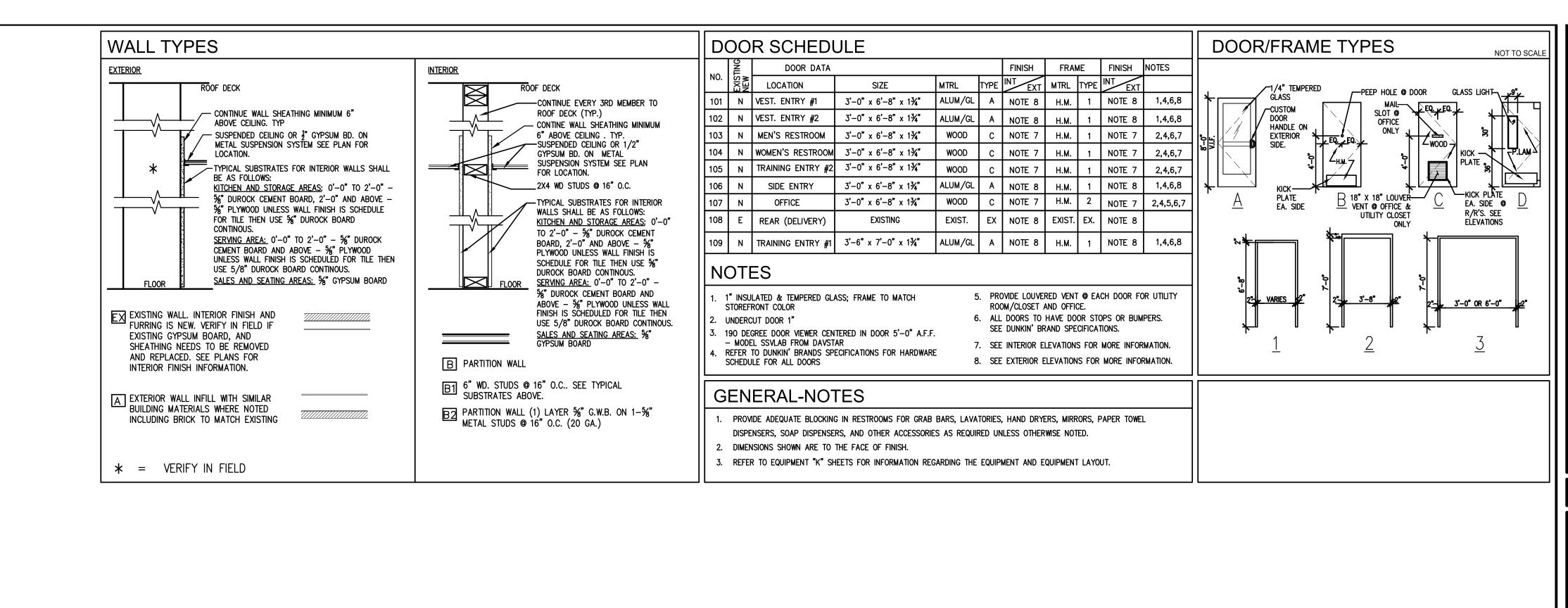
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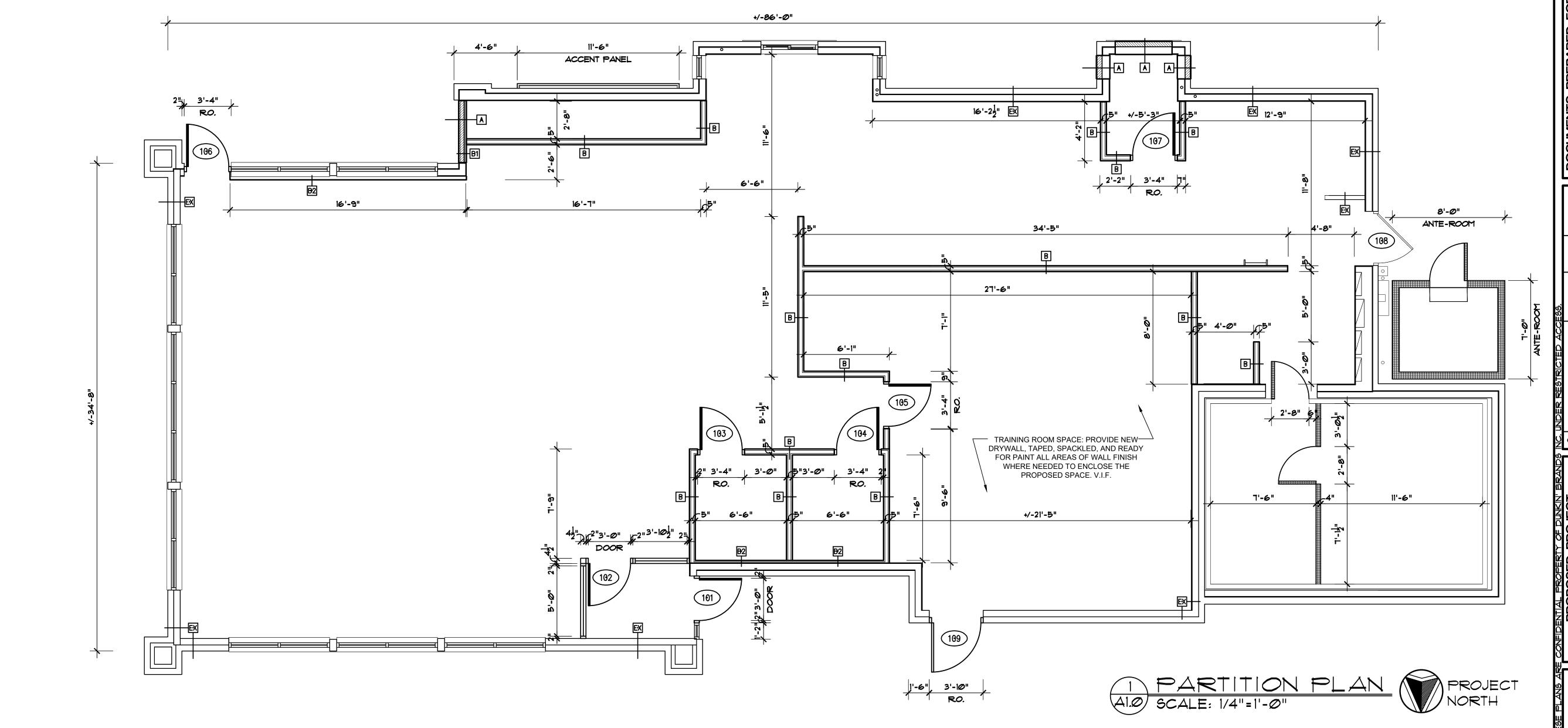
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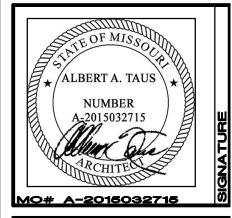




ALBERT TAUS, A.I.A., ARCHITECTS
ALBERT TAUS, A.I.A., ARCHITECTS
ARCHITECTURE PLANNING INTERIOR DESIGN ENGINEERING
PHONE: (215) 698 - 2516
FAX: (215) 698 -

RELEASE FOR

THESE PLANS ARE THE PROPERTY OF ALBERT TAUS &
ASSOCIATES, ARCHITECTS, AND ARE NOT TO BE USEL
WITHOUT THE EXPRESSED WRITTEN PERMISSION OR
CONSENT OF ALBERT A. TAUS, R.A., A.I.A.



TRICTED ACCESS.

DATE 04/29/21

SCALE AS NOTED

C/O: MR HOSSAM SHAHIN

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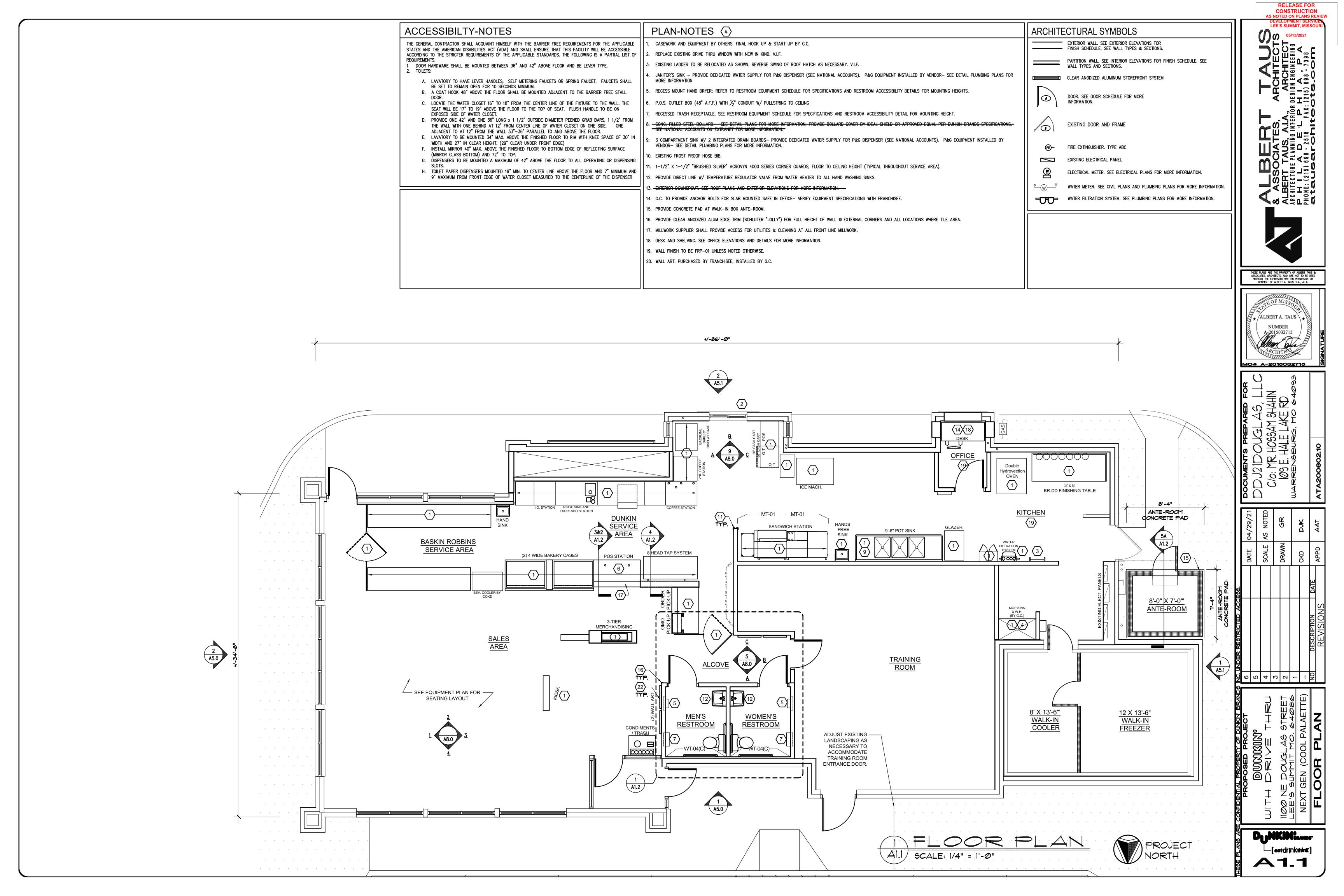
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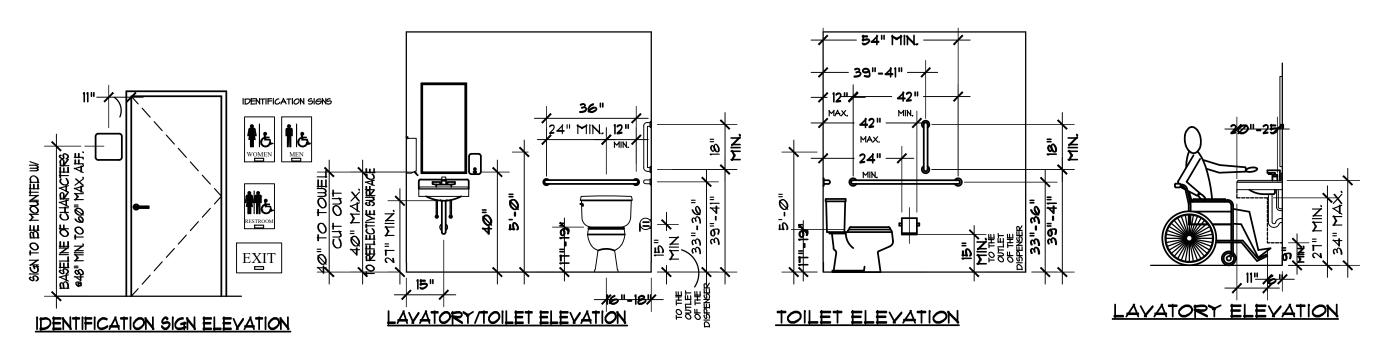
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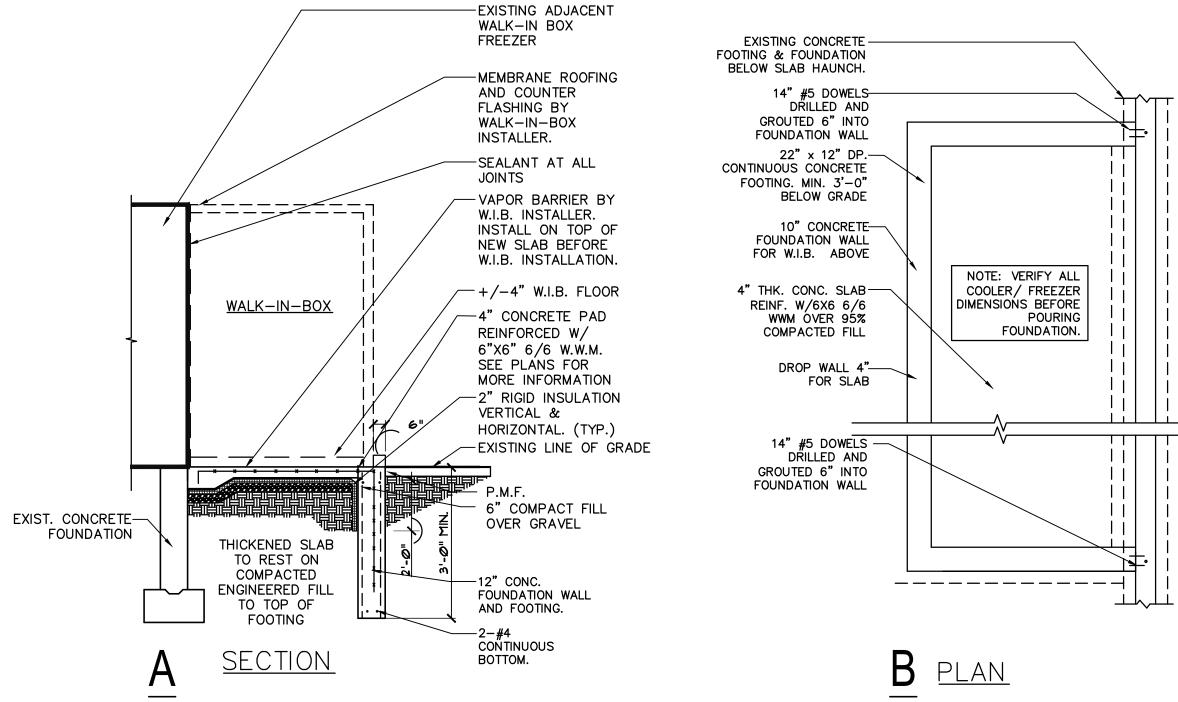
XT GEN (COOL PALAETTE)

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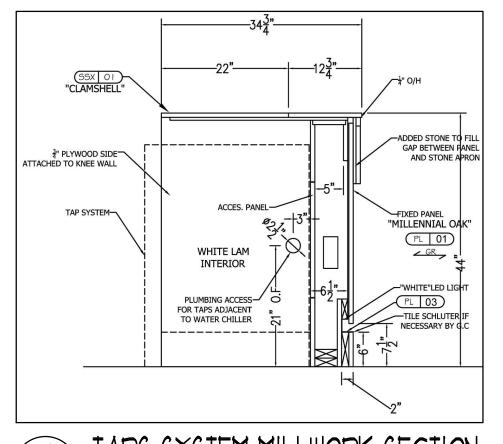




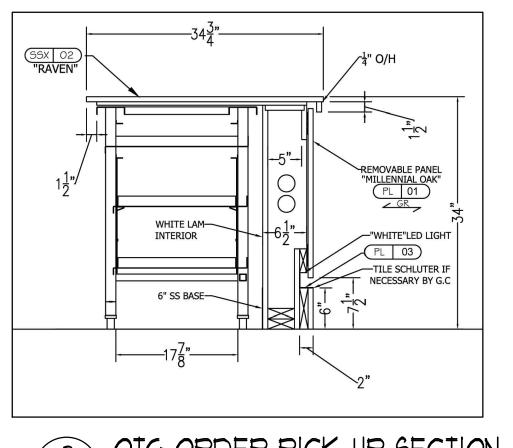
RESTROOM ACCESIBILITY DETAILS A1.2 SCALE: 1/4" = 1'-0"



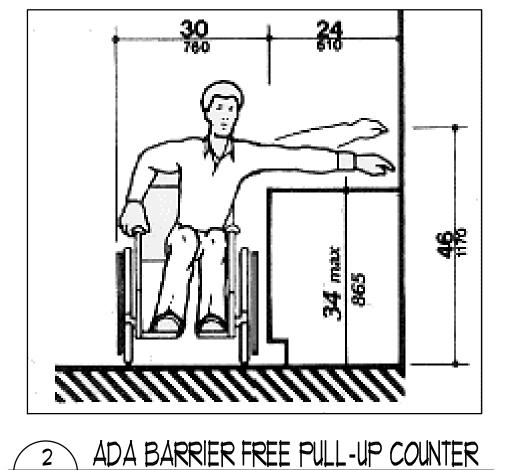
WALK-IN-BOX - PLAN SCALE: NOT TO SCALE



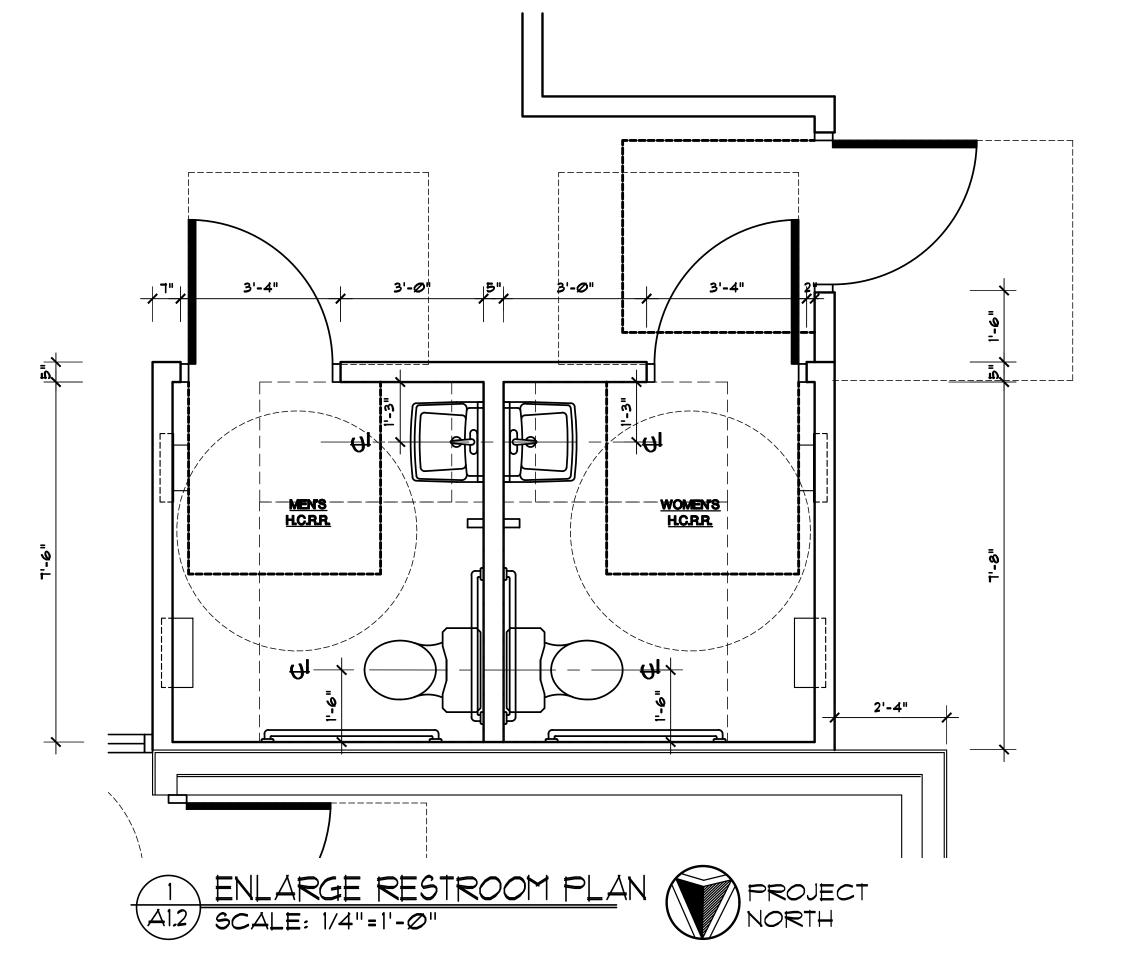
TAPS SYSTEM MILLWORK SECTION A1.2 SCALE: NOT TO SCALE

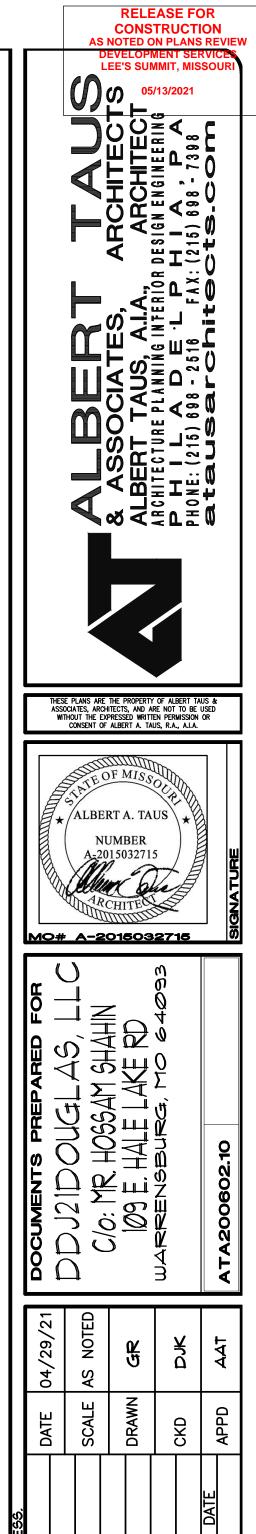


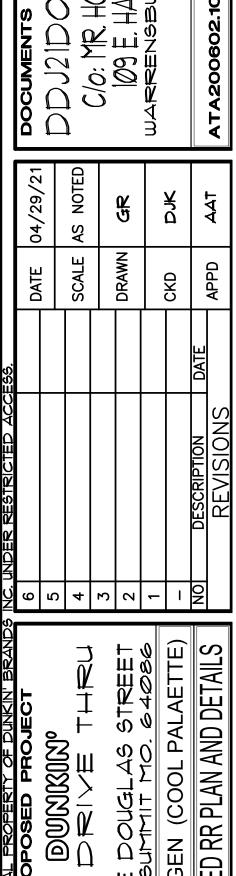
3 OTG ORDER PICK-UP SECTION A1.2 SCALE: NOT TO SCALE



ADA BARRIER FREE PULL-UP COUNTER A1.2 SCALE: NOT TO SCALE



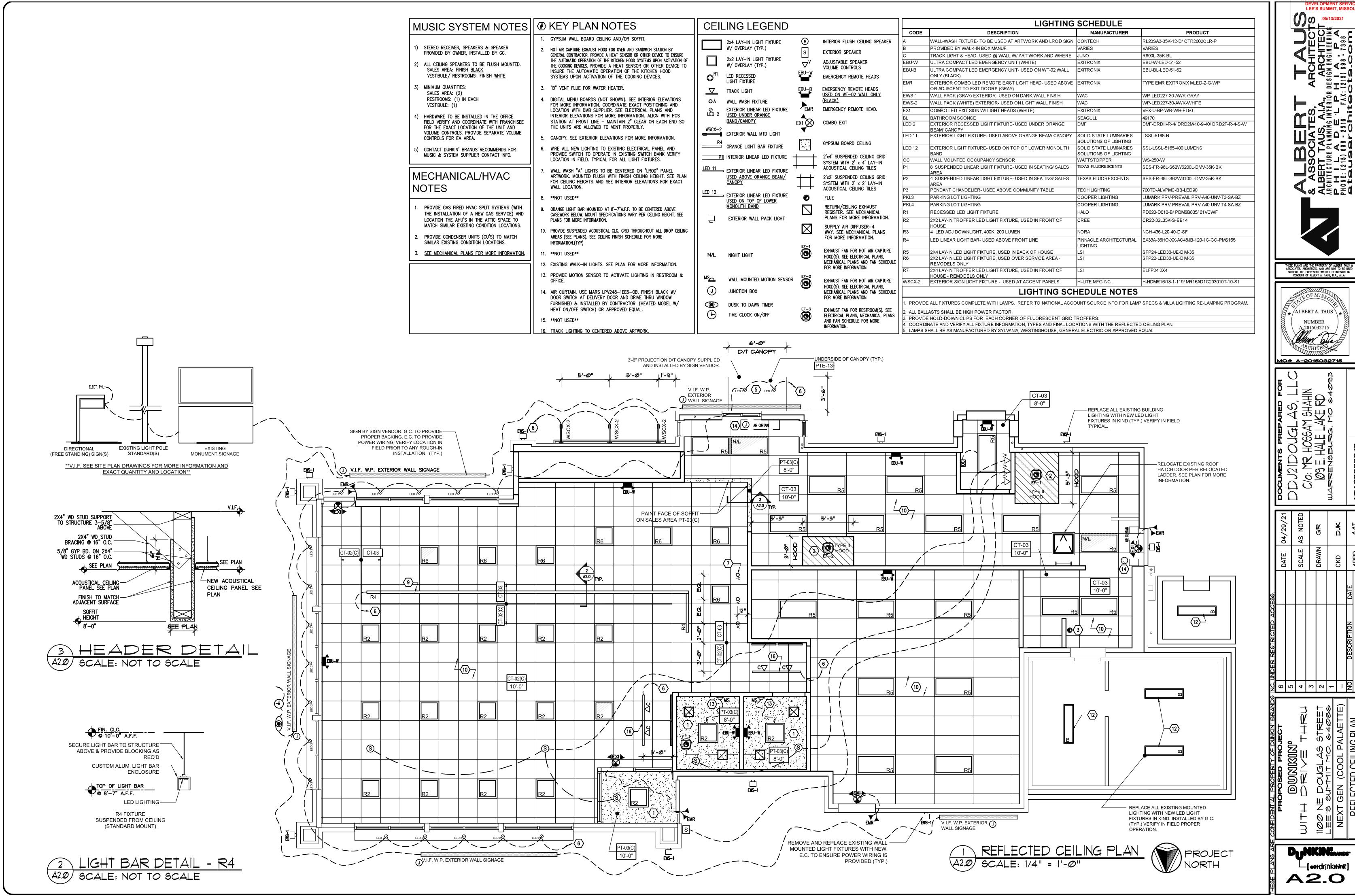




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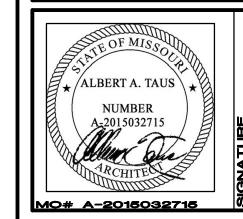
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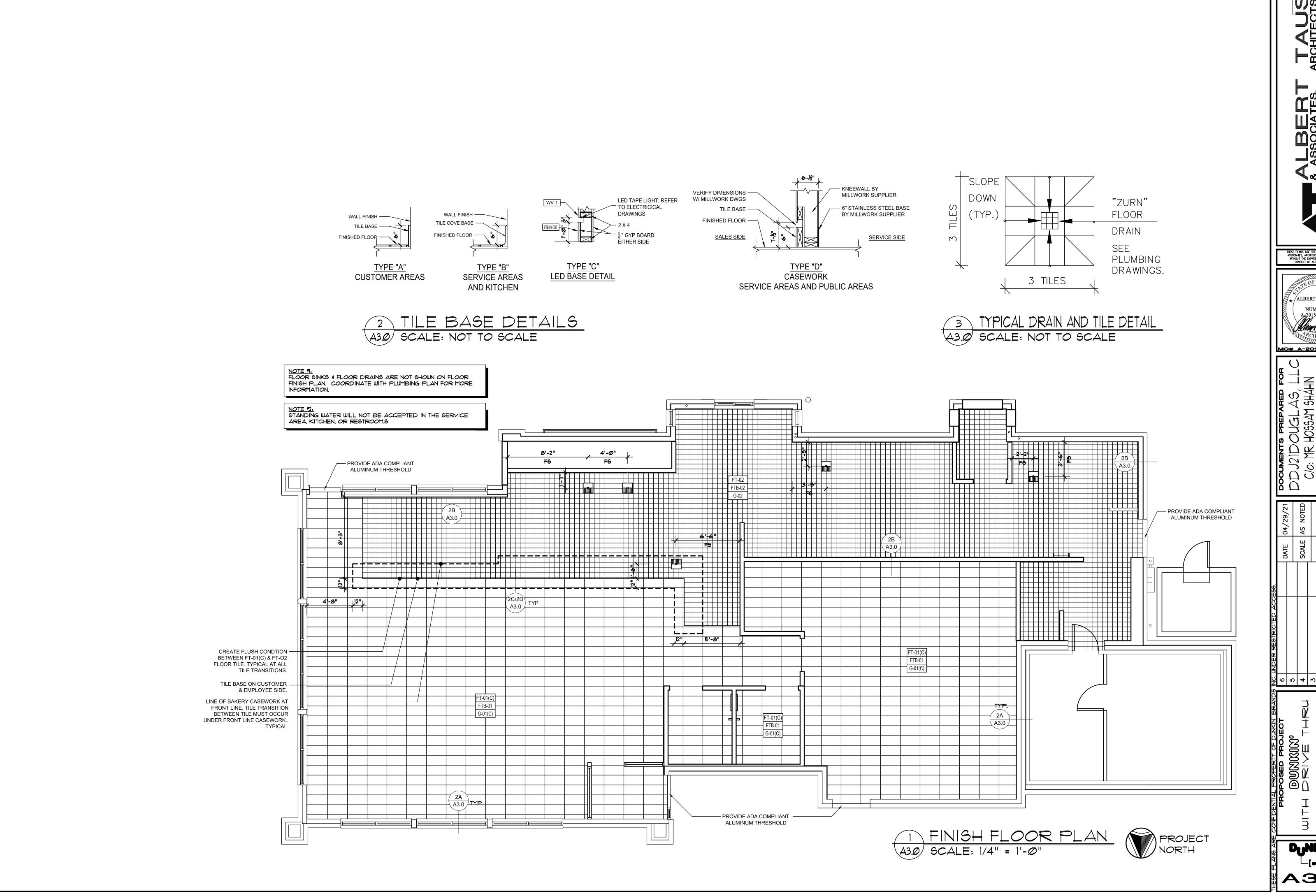
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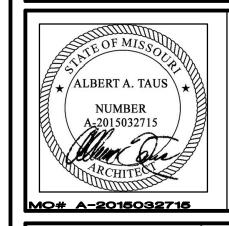
CONSTRUCTION
AS NOTED ON PLANS REVIEW

RELEASE FOR



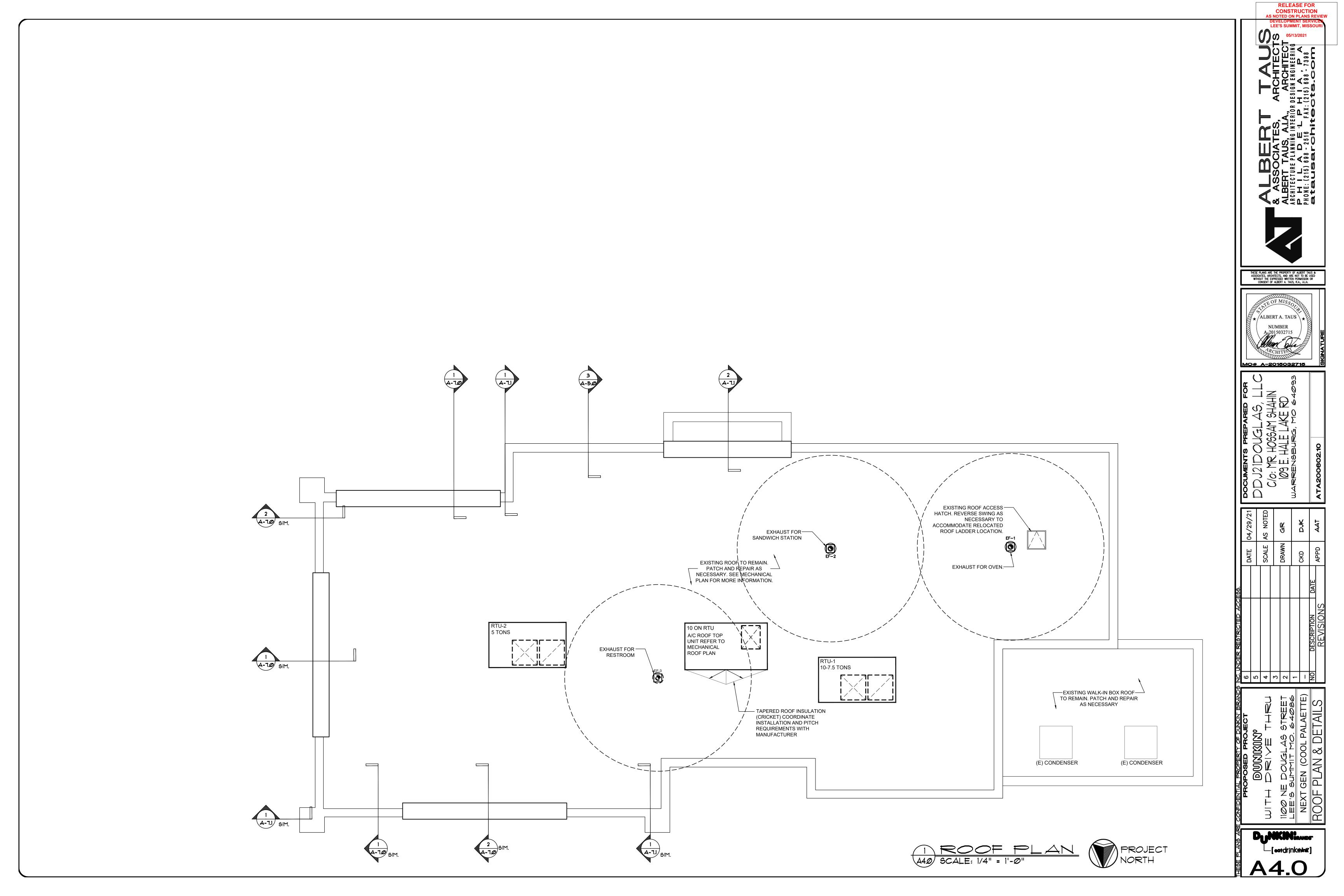


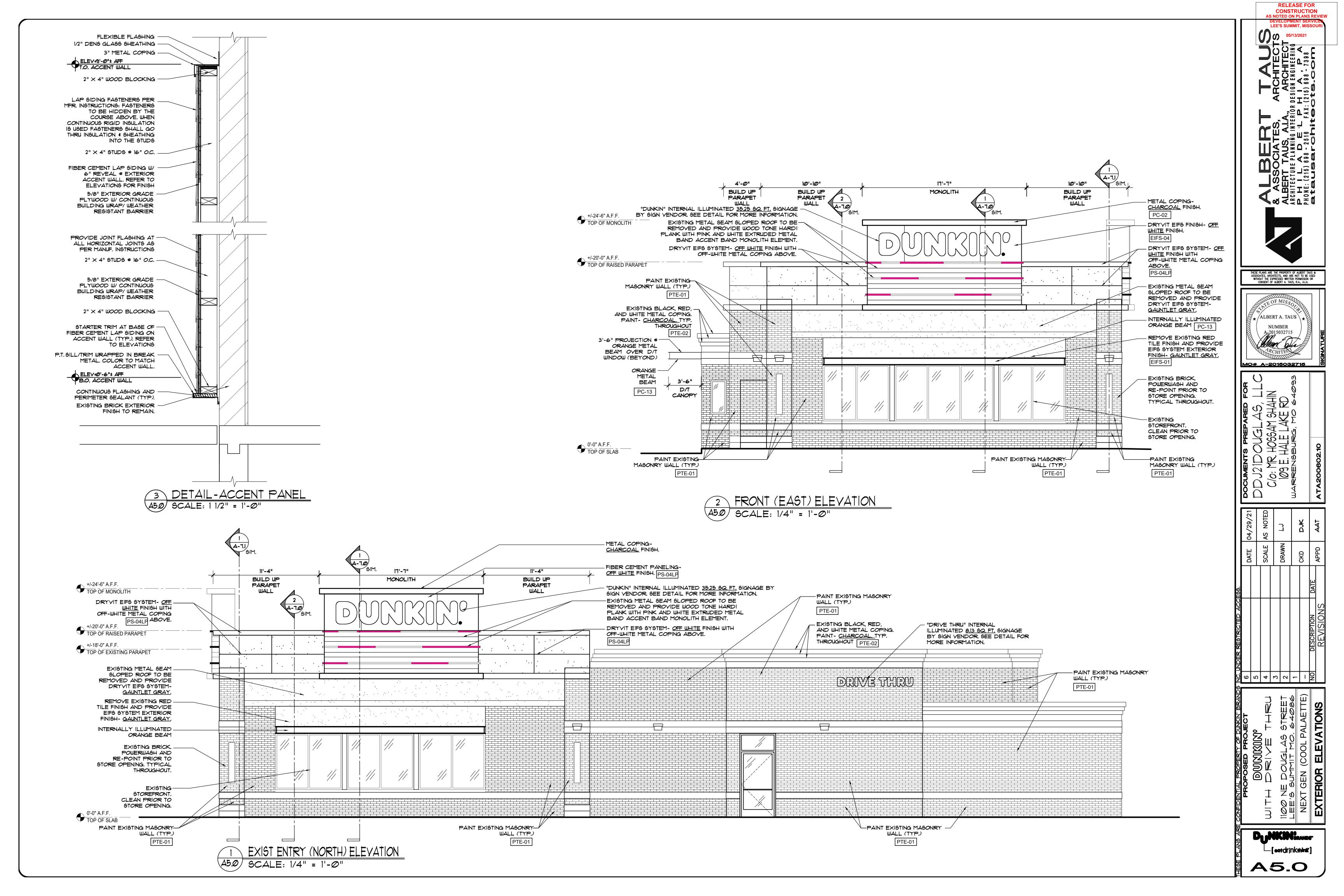
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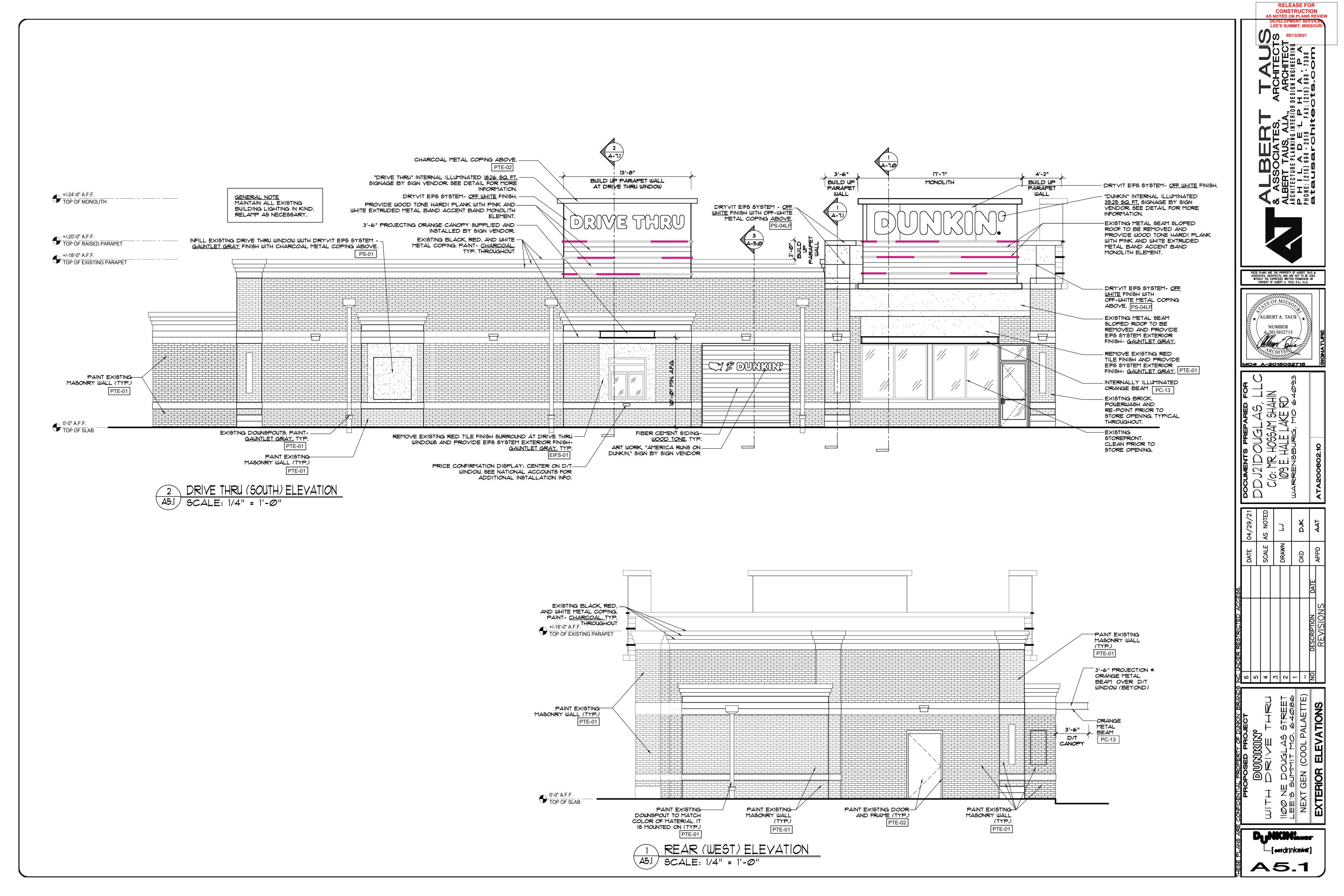


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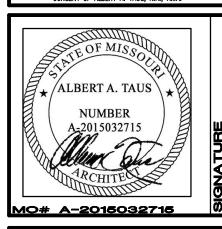






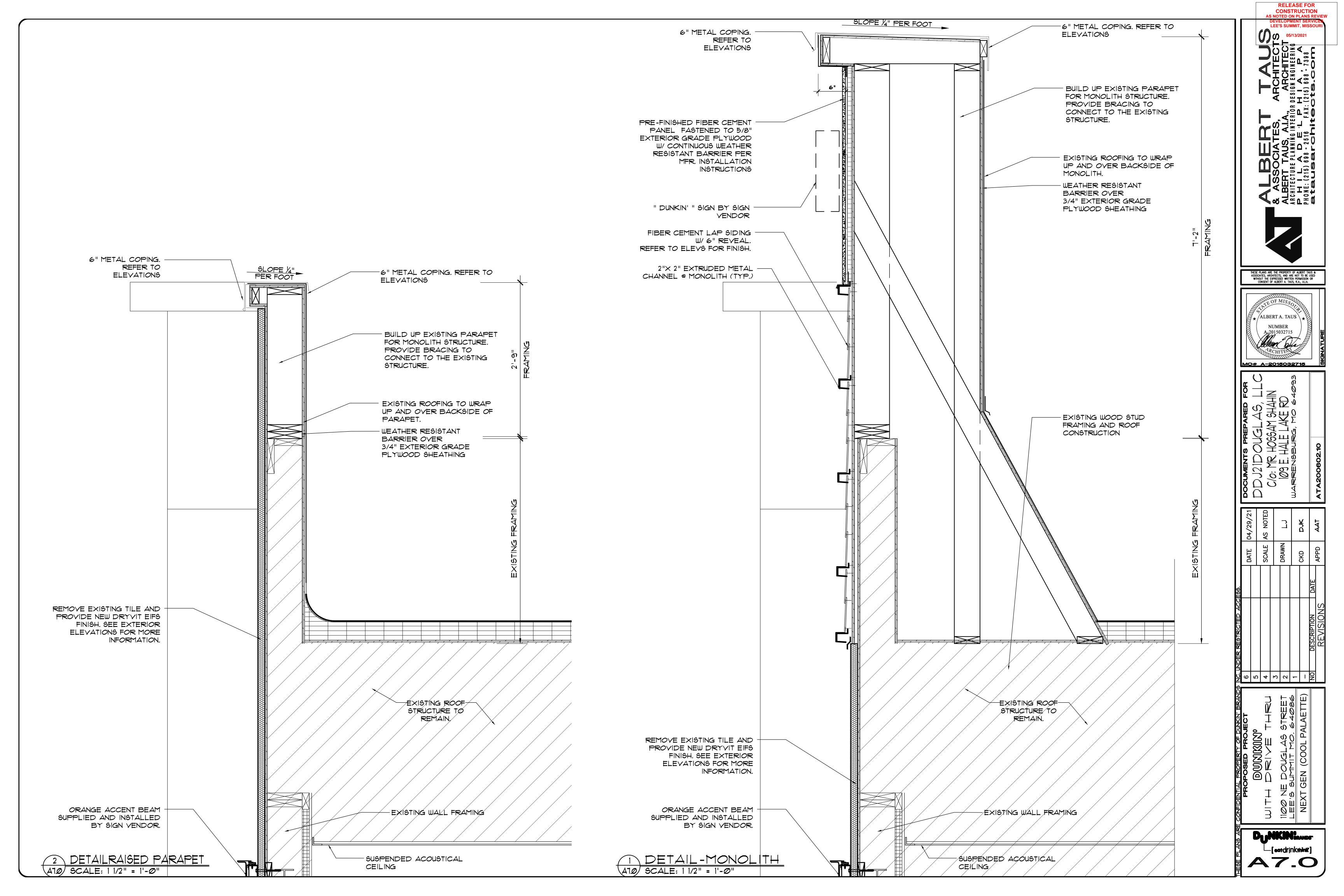
	1		EXTERIOR METAL						EXTERIOR METAL PAINTE		
CODE	MATERIAL	MANUFACTURER	PRODUCT#	DESCRIPTION / REMARKS	VENDOR CONTACTS	CODE	MATERIAL	MANUFACTURER	/	DESCRIPTION / REMARKS	VENDOR CONTACTS
	METAL	TAMLYN					PAINTED COATING	SHERWIN WILLIAMS	GRAY FINISH	SW 7019 "GAUNTLET GRAY"	PLACE ORDER WITH LOCAL
TR-01	METAL	HORACIO	EXTRUDED METAL CHANNEL USED AT TOWER ELEMENT	PINK ACCENT BAND SEE SF03 (PINK)	TAMLYN - XTREME TRIM IAN DANIELS	PC-01	PAINTED COATING	POWDER COAT	GRAY FINISH	SW 7019 "GAUNTLET GRAY"	SHERWIN WILLIAMS STORE FOR A STORE NEAR YOU CALL: 800-47
	METAL	AGI	ELEMENT		713-446-3075; idaniels@tamlyn.com OR					COLOR: MP10269 DARK SLATE FINISH	MARK T. WEINER NATIONAL ACCOUNT EXECUTIVE 93 CHURCH ST
					HORACIO'S SHEET METAL MICHAEL TAVERES		PAINTED COATING	MATTHEWS PAINT	CHARCOAL FINISH	LVS SATIN V2.0	BARRINGTON RI 02806 M: 617-438-1408 O: 401-245-5176
	METAL	TAMLYN	EXTRUDED METAL		P: 508-985-9940; mike@horacios.com OR	PC-02	PAINTED COATING	SHERWIN WILLIAMS	CHARCOAL FINISH	SW 7069 "IRON ORE"	EMAIL: MARK.T.WEINER@SHERWIN
TR-02	METAL	HORACIO	CHANNEL USED AT TOWER ELEMENT	R OFF WHITE ACCENT BAND SEE SF04 (WHITE)	AGI RANDY KERR 800-877-3810 EXT. 3248; rkerr@agi.net		PAINTED COATING	POWDER COAT	CHARCOAL FINISH	SW 7069 "IRON ORE"	
	METAL	AGI					PAINTED COATING	MATTHEWS PAINT	OFF WHITE FINISH	COLOR MATCH PMS COOL GREY 1C MAP ULTRA LOW V.O.C.	
TR-04	METAL	TAMLYN	(XOCLP34) OUTSIDE CORNER TRIM. USED AT TOWER ELEMENT	TO MATCH FIBER CEMENT LAP SIDING PS-03		PC-04	PAINTED COATING	SHERWIN WILLIAMS	OFF WHITE FINISH	SW 7063 "NEBULOUS WHITE"	
TR-05	METAL	TAMLYN	(XS516) BOTTOM "STARTER" TRIM. USED AT	T CLEAR ANODIZIED	TAMLYN - XTREME TRIM IAN DANIELS	10. No. 10. 10.					
TR-06	METAL	TAMLYN	TOWER ELEMENT (JMH34) VERTICAL TERMINATION TRIM-TYP.	FACTORY FINISH TO MATCH FIBER	713-446-3075; idaniels@tamlyn.com		PAINTED COATING	POWDER COAT	OFF WHITE FINISH	SW 7063 "NEBULOUS WHITE"	
TK-00	WEIAL	TAIVILYN	USED AT TOWER ELEMENT			PC-05	PAINTED COATING	SHERWIN WILLIAMS	MID-TONE FINISH	SW 7066 "GRAY MATTERS"	
TR-07	METAL	TAMLYN	AT TOWER ELEMENT	FACTORY FINISH TO MATCH FIBER CEMENT LAP SIDING PS-03 FINISH: FACTORY CLEAR ANODIZED			PAINTED COATING	POWDER COAT	MID-TONE FINISH	SW 7066 "GRAY MATTERS"	
TR-08	METAL	JAMES HARDIE	JH SURROUND VERTICAL TRIM	16 GA TRIM AVAILABLE IN 8'-0" LENGTHS, USED WITH JAMES HARDIE REVEAL PANELS			PAINTED COATING	SHERWIN WILLIAMS OR FACTORY FINISH	WALK-IN	SW 7069 "IRON ORE"	
TR-09	METAL	JAMES HARDIE	JH SURROUND	FINISH: FACTORY CLEAR ANODIZED 16 GA TRIM AVAILABLE IN 8'-0"		PC-09	DAINTED COATING	TO MATCH SW COLOR	 	CW 7000 HIDON ODE!	
		, <u>-</u>	HORIZONTAL TRIM	LENGTHS, USED WITH JAMES HARDIE REVEAL PANELS FINISH: FACTORY CLEAR ANODIZED	JEFF HARVEY		PAINTED COATING 5	MATCH SHERWIN WILLIAMS SW COLOR		COLOR MATCH PMS 219 C	<u> </u>
TR-10	METAL	JAMES HARDIE	JH SURROUND OUTSIDE CORNER TRIM	16 GA TRIM AVAILABLE IN 8'-0" LENGTHS, USED WITH JAMES HARDIE REVEAL PANELS	774-287-6278 JEFFERY.HARVEY@JAMESHARDIE.COM		PAINTED COATING	MATTHEWS PAINT	DD PINK FINISH	COLOR: MP79206 R161426 FINISH: LVS SATIN V1.0 OVER MP55898 WHITE BASECOAT	
				FINISH: FACTORY CLEAR ANODIZED 16 GA TRIM AVAILABLE IN 8'-0"		PC-12	PAINTED COATING	SHERWIN WILLIAMS	DD PINK FINISH	COLOR MATCH PMS 219 C	
TR-11	METAL	JAMES HARDIE	JH SURROUND J-CHANNEL TRIM	NOTE: CAN BE USED VERTICALLY &			PAINTED COATING	POWDER COAT	DD PINK FINISH	COLOR MATCH PMS 219 C	
				HORIZONTALLY @ PENETRATION OR TRANSITION W/ OTHER MATERIALS			PAINTED COATING	MATTHEWS PAINT	DD ORANGE FINISH	COLOR MATCH PMS 165C COLOR: MP797700 R161426 FINISH: LVS SATIN V1.0 OVER MP55898 WHITE	
CODE	MATERIAL	EXTEI MANUFACTURER	PRODUCT#	DESCRIPTION / REMARKS	VENDOR CONTACTS					BASECOAT Blended At: Sherwin Williams Product	
			<u></u>	COLOR: "AGED PEWTER" GUREAGE HARVIE DING OR COLOR: "PRIMED FINISH" FIELD						Finishes, Lowell MA Product: LV3 - Genesis Low VOC Satin GT1039 Orange Toner 785.97g / .19gal	
PS-01	FIBER CEMENT PANEL	JAMES HARDIE	GRAY FINISH	PAINT TO MATCH PTE-01)	PC-13	PAINTED COATING	SHERWIN WILLIAMS	DD ORANGE FINISH COLOR # 5059990	GT1511 Low VOC Gloss Clear 529.21g / 12gal GT1043 Autumn Orange 194.04g / .05gal	
				NIMENSION: 8 1/4" X 12 2 5/16" THK WITH 6 SHOING EXPOSURE COLOR: "AGED PEWTER" SURFACE: PRE-FINISHED REVEAL						GT1011 Artic White 137.20g / .02gal GR1088 Reducer 442.38g / .13gal GT1510 Low VOC Flat Clear 2157.21g /	
8-01 LP	FIBER CEMENT PANEL	JAMES HARDIE	GRAY FINISH	SURFACE: PRE-FINISHED REVEAL PANEL DIMENSION: (5/16" 42" 36") WITH COLOR MATCHED TRIMS AND COLOR MATCHED SCREWS			PAINTED COATING	POWDER COAT	DD ORANGE FINISH	.49gal COLOR MATCH PMS 165C	
				OR COLOR: "PRIMED FINISH" FIELD PAINT TO MATCH PTE-01 COLOR: "TRON GRAY - VOLCANO GRAY "	JEFF HARVEY 774-287-6278				EXTERIOR WALL F	AINT	<u> </u>
PS-02	FIBER CEMENT SIDING	JAMES HARDIE	CHARCOAL FINISH	SURFACE: HARDIE SIDING OR COLOR: "PRIMED FINISH" FIELD	JEFFERY.HARVEY@JAMESHARDIE.COM	CODE	MATERIAL	MANUFACTURER	PRODUCT #	DESCRIPTION / REMARKS	VENDOR CONTACTS
				PAINT TO MATCH RTE-02 DIMENSION: 8 1/4" K 12' X 5/16" THK WITH 6" SHOING EXPOSURE		<u>PTE-01</u>	PAINT	SHERWIN WILLIAMS	GRAY FINISH	SW 7019 "GAUNTLET GRAY" 5	PLACE ORDER WITH LOCAL SHERWIN WILLIAMS STORE
20218	FIBER CEMENT PANEL	JAMES HARDIE	CHARCOAL FINISH	COLOR:"IRON CRAY - VOLCANO GRAY" SURFACE: PRE-FINISHED REVEAD PANEL DIMENSION: (5/16**-48*X96*) WITH COLOR MATCHED TRIMS AND		PTE-02	PAINT	SHERWIN WILLIAMS		SW 7069 "IRON ORE"	FOR A STORE NEAR YOU CALL: 800-4 MARK T. WEINER
<u>S-02 LP</u>	FIBER GEWENT PANCE	JAINES HANDIE	CHARCOAL FINISH	OR COLOR: "PRIMED FINISH" FIELD		PTE-04	PAINT	SHERWIN WILLIAMS	OFF WHITE FINISH	SW 7063 "NEBULOUS WHITE"	NATIONAL. ACCOUNT EXECUTIV O: 401-245-5176 EMAIL: MARK.T.WEINER@SHERWII
				PAINT TO MATCH PTE-02 COLOR: HONE WELAZE WOOD PATTERN 5 SURFACE: WOOD PATTERN PLANK	FOR WOODTONE PRODUCTS: LAURENCE TAYLOR, WOODTONE	PTE-05	PAINT	SHERWIN WILLIAMS	MID-TONE FINISH	SW 7066 "GRAY MATTERS"	
				PATTERN 5 SURFACE: WOOD PATTERN PLANK DIMENSION 8 1/4"X 12' X 5/16" THK WITH 6" SIDDING EXPOSURE NOTE: NAILS TO MATCH WOOD FINISH	SALES REPRESENTATIVE PHONE: (604) 792-3680 CELL: (604) 798-2664	PTE-09	PAINT	SHERWIN WILLIAMS OR FACTORY FINISH		SW 7069 "IRON ORE" 5	
PS-03	FIBER CEMENT SIDING	WOODTONE	WOOD FINISH RUSTIC SERIES WOODTONE		LAURENCET@WOODTONE.COM	PTE-12	PAINT	TO MATCH SW COLOR	DD PINK	COLOR MATCH PMS 219 C MAP ULTRA LOW V.O.C.	
					WOODTONE MANAGER STRATESIC ACCOUNTS PHONE: (604) 792-3680	PTE-13	PAINT		DD ORANGE	COLOR MATCH PMS 165C MAP ULTRA LOW V.O.C.	
				COLOB."ARCTIC WHITE"	5 CELL: (604) 845-9663 TIMF@WOODTONE.COM			E	TERIOR FIBER-CEMENT CL	ADDING SYSTEMS	
98 04 I B	FIBER CEMENT PANEL	JAMES HARDIE	OFF WHITE FINISH	COLOR:"ARCTIC WHITE" SURFACE: PRE-FINISHED REVEAL PANEL DIMENSION: (5/16", 48"X96") WITH COLOR MATCHED TRIMS AND		CODE	MATERIAL	MANUFACTURER	PRODUCT #	DESCRIPTION / REMARKS	VENDOR CONTACTS
<u>PS-04 LP</u>	FIBER CEWIENT PAINEL	JAINES HARDIE	LARGE FORMAT PANEL	COLOR MATCHED SCREWS OR COLOR: "PRIMED FINISH" FIELD PAINT TO MATCH PTE-04		PP-01	FIBER-CEMENT CLADDING	NICHIHA /	GRAY FINISH TUFFBLOCK "PEWTER"	SURFACE: STANDARD Dimension: 17 7/8"H x119 5/16"L x 5/8"TH TRIM: NICHIHA MTCK-01	MATT STEPHENSON NATIONAL BRANDS MANAGER
				TO TRY SHATE		<u> </u>	TIBER SEMENT SEASSING	(EPF641F	METAL TRIM CORNER KEY 1 1/2" X 1/2" COLOR: CLEAR ANNODIZED	P: 770-789-8228 Email:dunkindonuts@nichiha.com Email:MSTEPHENSON@nichiha.co
<u>PS-05</u>	FIBER CEMENT SIDING	JAMES HARDIE	MID-TONE FINISH	SURFACE: HARDIE SIDING OR COLOR: "PRIMED FINISH" FIELD PAINT TO MATCH PTE-05 DIMENSION: 8 1/9 X 12 X 5/16" THK WITH 6" SIDING EXPOSURE					CHARCOAL FINISH	COLOR:"STEEL" SURFACE:STANDARD	Matt Stephenson Project Manager
				COLOR:"GRAY SLATE" SURFACE: PRE-FINISHED REVEAL		<u>PP-02</u>	FIBER-CEMENT CLADDING	NICHIHA	TUFFBLOCK "STEEL" EPF644F	Dimension: 17 7/8"H x119 5/16"L x 5/8"TH TRIM: NICHIHA MTCK-01 METAL TRIM CORNER KEY 1 1/2" X 1/2" COLOR: CLEAR ANNODIZED	C: 770-789-8228 Email:mstephenson@nichiha.con
S-05 LP	FIBER CEMENT PANEL	JAMES HARDIE	MID-TONE FINISH	PANEL DIMENSION (5/16"), 48"X96") WITH COLOR MATCHED TRIMS AND COLOR MATCHED SCREWS OR COLOR: "PRIMED FINISH" FIELD					OFF WHITE FINISH	COLOR: "SNOW" TEXTURE / SURFACE: HIGH GLOSS	
				PAINT TO MATCH PTE-05		<u>PP-04</u>	FIBER-CEMENT CLADDING	NICHIHA	MIRAIA SNOW - EDM1014SUS AWP 18X18 SMOOTH	DIMENSION: 17 7/8"H x 71 9/16"L x 5/8"TH TRIM: NICHIHA MTCK-SNOW METAL- TRIM, CORNER KEY 4 GLOSS PANEL	
			EXTERIOR EIF:	-s						SNOW DIMENSION TRIM: 1 1/2" X 1'-1/2"	
CODE	MATERIAL	MANUFACTURER	PRODUCT#	DESCRIPTION / REMARKS	VENDOR CONTACTS						
EIFS-01	EIFS	DRYVIT	GRAY PATTERN	DRYVIT# HDP - DUDO 38 2736 ST: MATCH SW 7019 "GAUNTLET GRAY; SANDPEBBLE FINE "CHARCOAL" EIFS; DRYVIT#DUDO		<u>PP-05</u>	FIBER-CEMENT CLADDING		MID-TONE FINISH NOT USED SEE PP-01		
	EIFS	DRYVIT	CHARCOAL PATTERN	"CHARCOAL" EIFS; DRYVIT #DUDO 312736S; MATCH SW 7069 IRON ORE; SANDPEBBLE FINE	ROBERT DAZEL						
IFS-02			CHAPCOAL	MODULAR, WITH TEXTURE: AND WIRE CUT COLOR: GRAY - SW 7019	C: 734-276-0404 BOB.DAZEL@DRYVIT.COM				TRAFFIC STRIPING	PAINT	I
	EIFS	DRYVIT	CHARCOAL BRICK PATTERN	GAUNTLET GRAY EFFECTS: IRON SPOT AND FLASHED SHAPES COORDINATE AS REQUIRED TO PROJECT SPECIFICS		CODE	MATERIAL	MANUFACTURER	PRODUCT#	DESCRIPTION	VENDOR CONTACTS
		DRYVIT	WOOD PATTERN	"WOOD" EIFS; DRYVIT # HDP – DUDO 39 2736 ST: COLOR LATTE;	ξ	<u>TP-01</u>	PAINT	SHERWIN WILLIAMS	PRO PARK	"WHITE": B97WD2434	
EIFS-02 FS-02 BR SS-03 ALT	EIFS	DIXTVII	~~~~~	SANDPEBBLE FINE "WHITE EIFS; DRWIT DUDO 40 2736 ST: MATCH SW 7063 NEBULOUS	5	TD 00	DAINT	CUEDMINIM	DBO DVDA	"BLIE": D071 D0000	PLACE ORDER WITH LOCAL SHERWIN STORE
FS-02 BR			OFF WHITE PATTERN			<u>TP-02</u>	PAINT	SHERWIN WILLIAMS	PRO PARK	"BLUE": B97LD2022	FOR A STORE NEAR YOU CALL: 800-4 MARK T. WEINER
S-03 ALT	EIFS	~~~~		WHITE; SANDPEBBLE FINE "MIDDLE GREY" EFIS; DRYVIT COLOR:		 	1			1	NATIONAL ACCOUNT EXECUTIV
S-02 BR S-03 ALT	EIFS	DRYVIT	OFF WHITE PATTERN	WHITE; SANDPEBBLE FINE		<u>TP-03</u>	PAINT	SHERWIN WILLIAMS	PRO PARK	"YELLOW": B97YD2467	93 CHURCH ST
S-02 BR S-03 ALT SIFS-04	EIFS EIFS	DRYVIT DRYVIT	OFF WHITE PATTERN MID-TONE CLADDING	WHITE; SANDPEBBLE FINE "MIDDLE GREY" EFIS; DRYVIT COLOR: #DUDO 362736S, SANDPEBBLE FINE COLOR: PINK – DUDO 33 1413 S		TP-03	PAINT	SHERWIN WILLIAMS	PRO PARK	"YELLOW": B97YD2467 "ORANGE": CUSTOM MIX B97YD2467	93 CHURCH ST BARRINGTON RI 02806 M: 617-438-1408 O: 401-245-5176
-03 ALT FS-04 FS-05	EIFS EIFS EIFS	DRYVIT DRYVIT DRYVIT	OFF WHITE PATTERN MID-TONE CLADDING PINK BAND	WHITE; SANDPEBBLE FINE "MIDDLE GREY" EFIS; DRYVIT COLOR: #DUDO 362736S, SANDPEBBLE FINE COLOR: PINK – DUDO 33 1413 S NOTE: STRATOTONE COLORANT ORANGE – DUDO 34 1413 S		TP-03	PAINT	SHERWIN WILLIAMS SHERWIN WILLIAMS		"ORANGE": CUSTOM MIX	93 CHURCH ST BARRINGTON RI 02806 M: 617-438-1408 O: 401-245-5176
02 BR 03 ALT 55-04 55-05	EIFS EIFS EIFS	DRYVIT DRYVIT DRYVIT	OFF WHITE PATTERN MID-TONE CLADDING PINK BAND	WHITE; SANDPEBBLE FINE "MIDDLE GREY" EFIS; DRYVIT COLOR: #DUDO 362736S, SANDPEBBLE FINE COLOR: PINK – DUDO 33 1413 S NOTE: STRATOTONE COLORANT ORANGE – DUDO 34 1413 S						"ORANGE": CUSTOM MIX B97YD2467 CCE* COLORANT 0Z 32 64 128 W1-WHITE - 6 1	93 CHURCH ST BARRINGTON RI 02806 M: 617-438-1408

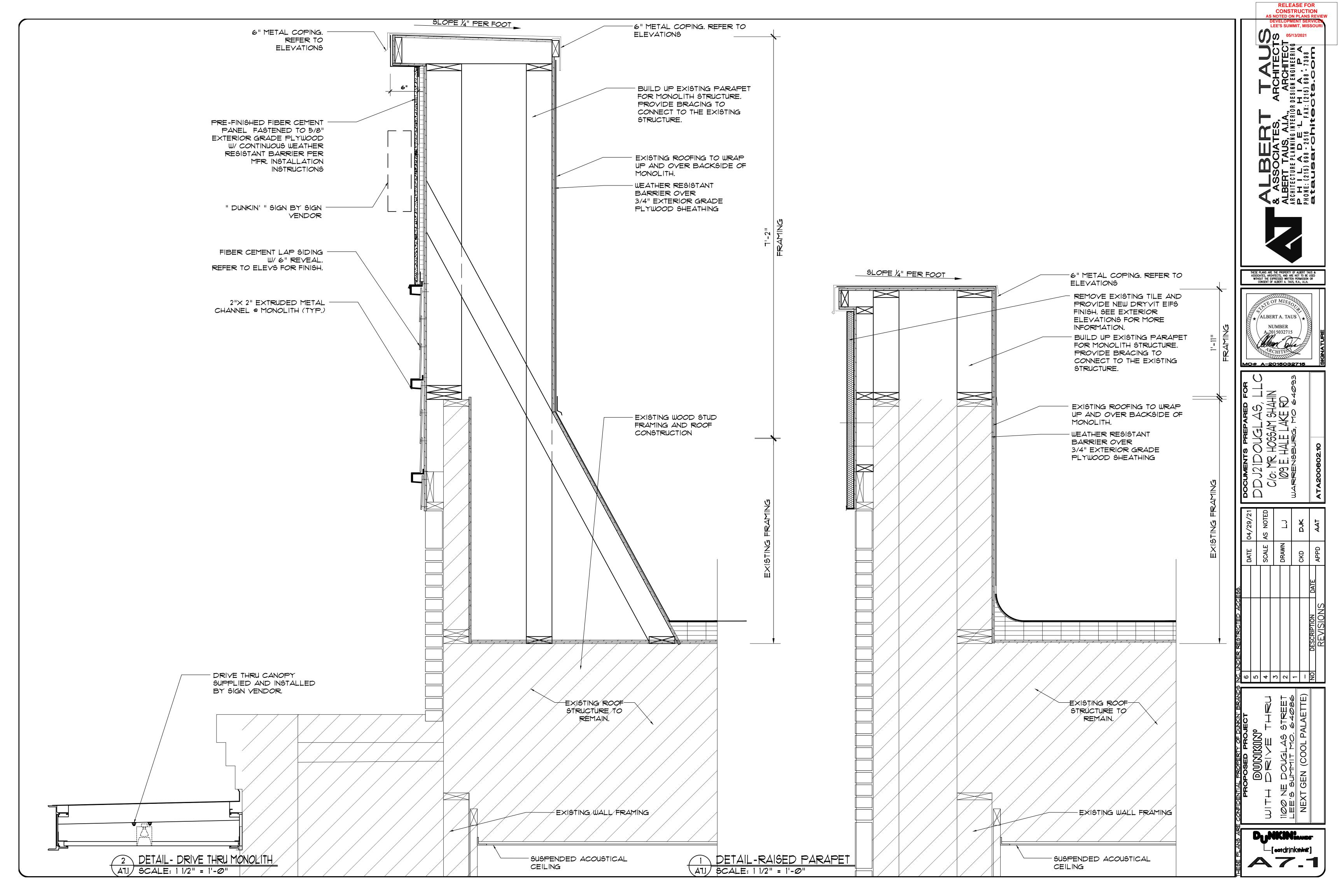
RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

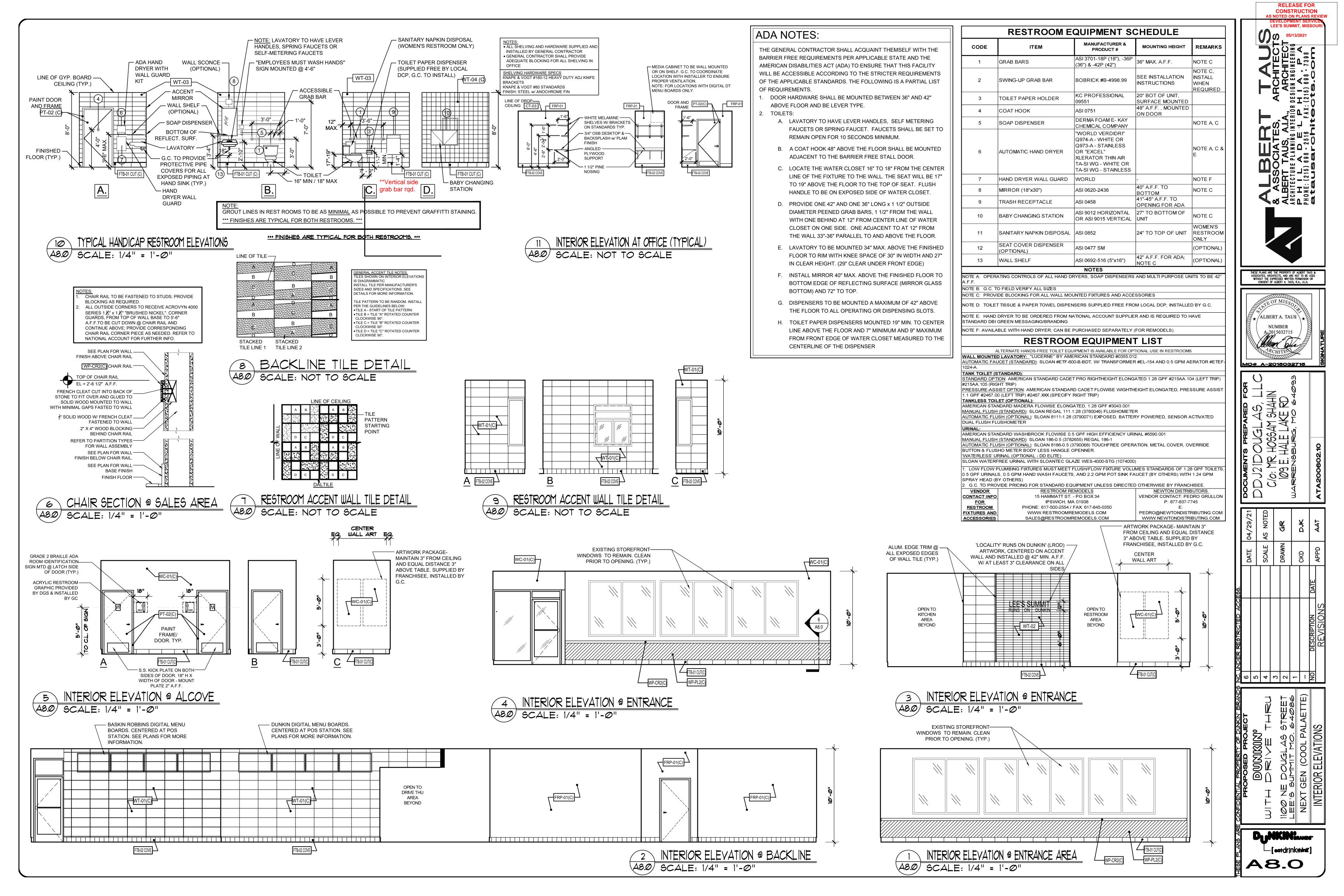


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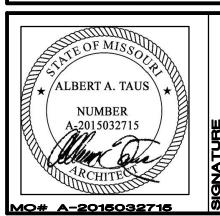




			WOOD LAMINAT	E			
CODE	MATERIAL	MANUFACTURER	PRODUCT#	DESCRIPTION / REMARKS	VENDOR CONTACTS	CODE	М
WD-01	WOOD LAMINATE		SEE MILLWORK FINISHES	OPTIONAL UPGRADE FOR COOL PALETTE ONLY			
			PL-01 (C)				
			INTERIOR WALL PA	AINT		WC-01 (C)	VINYL W
CODE	MATERIAL	MANUFACTURER	PRODUCT#	DESCRIPTION / REMARKS	VENDOR CONTACTS		
	PAINT	SHERWIN WILLIAMS	LIGHT GREY	SHEEN: "SATIN-/-EGGSHELL" -	VENDOR CONTACTS		
PT-01 (W)	PAINT	SHERWIN WILLIAMS	SW 7671 "ON THE ROCKS" SW 9088 "UTAUPEIA"	WALL / SOFFIT PAINT WHERE INDICATED WALL / SOFFIT PAINT WHERE	PLACE ORDER WITH LOCAL		
PT-02 (C)	PAINT	SHERWIN WILLIAMS	CHARCOAL	INDICATED SHEEN: FLAT FOR CEILING / SOFFIT;	PLACE ORDER WITH LOCAL SHERWIN WILLIAMS STORE FOR A STORE NEAR YOU CALL: 800-474-3794		
PT-02 (W)	PAINT	SHERWIN WILLIAMS	SW 7069 "IRON ORE" SW 6005 "FOLKSTONE"	SEMIGLOSS FOR DOORS AND FRAMES SHEEN: FLAT FOR CEILING / SOFFIT;	MARK T. WEINER		VINYL W
PT-03 (C)	PAINT	SHERWIN WILLIAMS	OFF WHITE	SEMIGLOSS FOR DOORS AND FRAMES SHEEN: FLAT FOR CEILING;	NATIONAL ACCOUNT EXECUTIVE 93 CHURCH ST BARRINGTON RI 02806	WC-01 (W)	
PT-03 (W)	PAINT	SHERWIN WILLIAMS	SW 6252 "ICE CUBE" SW 9109 "NATURAL LINEN"	SEMIGLOSS FOR DOORS AND FRAMES SHEEN: FLAT FOR CEILING;	M: 617-438-1408 O: 401-245-5176		VINYL W
	.,,,,,,		TERIOR FIBERGLASS REINF	SEMIGLOSS FOR DOORS AND FRAMES	EMAIL: MARK.T.WEINER@SHERWIN.COM		VINYLVV
CODE	MATERIAL	MANUFACTURER	PRODUCT#	DESCRIPTION / REMARKS	VENDOR CONTACTS		
			GLASBOARD		CRANE - KEMLITE COMPOSITES VENDOR CONTACT: JEFF TOLLE		
FRP-01	FIBERGLASS REINFORCED PANELS	CRANE COMPOSITES	COLOR: 48- PEARL GRAY TEXTURE: EMBOSSED (PEBBLE FINISH)	BOH/KITCHEN AREAS NOT IN PUBLIC VIEW	P: 1-800-435-0080 OR 1-815-467-8600 OR 1-815-274-9125 (DIRECT) C: 330-260-7627 SALES@CRANECOMPOSITES.COM	WC-02 (C)	(VINYL WA
FRP-01 ALT	FIBERGLASS REINFORCED PANELS	MARLITE	COLOR: P151 "LIGHT GRAY" TEXTURE: EMBOSSED (PEBBLE FINISH)	BOH/KITCHEN AREAS NOT IN PUBLIC VIEW			
FRP-03 (C)	FIBERGLASS REINFORCED PANELS	CRANE COMPOSITES		COOL PALETTE - APPROVED FOR BACK LINE WALL IN	CRANE - KEMLITE COMPOSITES VENDOR CONTACT: JEFF TOLLE		
	TANLES		4' X 10' PART # 113 DCP10 COLOR: 113DWP	NEW AND REMODEL RESTAURANTS. WARM PALETTE -	P: 1-800-435-0080 OR 1-815-467-8600 OR 1-815-274-9125 (DIRECT)		
FRP-03 (W)	FIBERGLASS REINFORCED PANELS	CRANE COMPOSITES	4' X 8' PART # 113 DWP8 OR 4' X 10' PART # 113 DWP10	APPROVED FOR BACK LINE WALL IN NEW AND REMODEL RESTAURANTS.	C: 330-260-7627 SALES@CRANECOMPOSITES.COM	MO 02 (M)	
			MILLWORK INTERIOR SOL	ID SURFACE		WC-02 (W)	(VINYL WA
CODE	MATERIAL	MANUFACTURER	PRODUCT#	DESCRIPTION / REMARKS	VENDOR CONTACTS		
			CUSTOM COLOR:	COOL PALETTE (HANDOFF,BAKERY	PROVIDED BY		
SS-01 (C)	SOLID SURFACE	LG HI-MACS	CANTON FINISH: POLISHED	AND TAPS)	MILLWORK VENDOR		
			CUSTOM COLOR:				ADVANCED
SS-01 (W)	SOLID SURFACE	LG HI-MACS	WALLOWA FINISH: POLISHED	WARM PALETTE (HANDOFF,BAKERY AND TAPS)		WC-03 (C)	
			MILLWORK LAMINA	TES			N
CODE	MATERIAL	MANUFACTURER	PRODUCT#	DESCRIPTION / REMARKS	VENDOR CONTACTS		
PL-01(C)	LAMINATE	FORMICA	5887-58 "MILLENNIUM OAK" MATTE FINISH		FORMICA FOR LOCAL DISTRIBUTOR CALL KAREN KENNEY 866-573-3512		
PL-02	LAMINATE	FORMICA	837-58 GRAPHITE MATTE FINISH				N
		WILSONART	4830K-18 SATIN STAINLESS		WILSONART FOR LOCAL DISTRIBUTOR CALL	WC-03 (W)	
PL-03	LAMINATE	an entrary for made paradicine an	ALTERNATE:		800-433-3222		
		FORMICA	M2022-99 BRUSHED ALUMINUM DECOMETAL FINISH				N
PL-04 (C)	LAMINATE	WILSONART 5	1500 60 "GRAY"				
PL-04 (W)	LAMINATE	WILSONART	D427-60 "LINEN"	WARM PALETTE OR REMODEL USE ONLY - WHEN KEEPING EXISTING 2015			
(,			MATTE FINISH	IMAGE FLOOR TILE (TAN COLOR).			N
PL-05	LAMINATE	FORMICA	459-58 BRITE WHITE MATTE FINISH	MILLIMORY TARLE TORO		WC-04	
PL-06 (C)	LAMINATE	WILSONART	4786 - 60 WHITE TIGRIS"	MILLWORK TABLE TOPS WARM PALETTE OR REMODEL USE			
PL-06 (W)	LAMINATE	WILSONART	484 -60 OESERT ZEPHYR"	ONLY - WHEN KEEPING EXISTING 2015 IMAGE FLOOR TILE (TAN COLOR).			TYPE III (W.
PL-07	LAMINATE	FORMICA	BLACK LAMINATE	MILLWORK TABLE TOPS			
PL-08	NOT USED						1
PL-09	LAMINATE	FORMICA	NJ103-3959-48 "COOL WHITE"	MILLWORK CABINETS & INTERIOR SHELF FINISHES		CODE WE PLACE	M N
						WP-PL1(W)	N
PL-10 (C)	LAMINATE	WILSONART	4857-60 "SHADOW ZEPHYR"	WAINSCOT		WP-PL2 (C)	L
			5884 "CHESTNUT	KNEE WALL WARM PALETTE OR			
PL-10 (W)	LAMINATE	FORMICA	WOODLINE" MATTE FINISH (SAME AS WP-PL2(W))	REMODEL USE ONLY - WHEN KEEPING EXISTING 2015 IMAGE FLOOR		WP-PL2(W)	L
	ı		THIN BRICK				
CODE	MATERIAL	MANUFACTURER	PRODUCT#	DESCRIPTION / REMARKS	VENDOR CONTACTS		
BR-01	NOT USED			ENDICOTT BRICK (CREATIVE		WP-CR1	
				MATERIALS PRODUCT) (WWW.ENDICOTT.COM)	CONTACT INFORMATION		
BR-02	THIN BRICK	ENDICOTT BRICK		SPEC. SN5 THIN BRICK SIZE: MODULAR - 2 ¼" X 7 5/8" X ½" THICK. INSTALLATION: USE TYPICAL TYPE S	PHONE: 800.207.2967 EXT. 3865 (DUNK) FAX: 518-452-9153		
				MORTAR TO INSTALL WITH A COLOR ADDITIVE TO MATCH THE BRICK FOR	EMAIL: DUNKINTILE@CREATIVEMATERIALSCORP.COM	WP-CR2 (C)	SOLI
	<u> </u>	1	METAL	THE GROUT.			
		1	PRODUCT#	DESCRIPTION / REMARKS	VENDOR CONTACTS		
CODE	MATERIAL	MANUFACTURER		DECCIAI TICITY REMARKS	VERBOR CONTACTO		
CODE	MATERIAL	MANUFACTURER				WP-CR2 (W)	SOLIE
CODE MT-01	MATERIAL METAL	MANUFACTURER	STAINLESS STEEL - #4 FINISH	FABRICATED ITEMS		WP-CR2 (W)	SOLIE
		MANUFACTURER	STAINLESS STEEL -	FABRICATED ITEMS		WP-CR2 (W)	SOLIE
		MANUFACTURER	STAINLESS STEEL -	FABRICATED ITEMS			SOLIE
		MANUFACTURER	STAINLESS STEEL -	FABRICATED ITEMS		WP-CR2 (W)	SOLIE
		MANUFACTURER	STAINLESS STEEL -	FABRICATED ITEMS			SOLIE
		MANUFACTURER	STAINLESS STEEL -	FABRICATED ITEMS			SOLIE

			VINYL WALL COVI	ERING			, 	T	DAL TILE PALE	TTE	T
CODE	MATERIAL	MANUFACTURER	PRODUCT#	DESCRIPTION / REMARKS	VENDOR CONTACTS	CODE	MATERIAL	MANUFACTURER	PRODUCT#	DESCRIPTION / REMARKS	VENDOR CONTACTS
		DL COUCH	DLC-122 "MINERAL" VERSA ARIES PATTERN 20 OZ TYPE II w/ AQUASAFE	0	CLEARLY STATE THAT YOUR ARE A MEMBER OF DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING. KAITLYN FEASTER - ACCOUNT MANAGER	<u>G-01 (C)</u>	GROUT	MAPEI	ULTRSCOLOR PLUS FA # 107 - IRON	CUSTOMER AREA GROUT- SEE FINISH SCHEDULE FLOOR TILE (FT) COMMENTS FOR LOCATION CUSTOMER AREA	
WC-01 (C)	TYPE II VINYL WALL COVERING		DUNKIN RIVULET 54" WIDI	ARCHITECT/G.C. TO CONFIRM FRANCHISEE PREFERENCE ON MANUFACTURER E	800.366.6839 X326 CUSTOMERSERVICE@MOMTEX.COM 5 CLEARLY STATE NATYOUR AREA MEMBER OF DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON PURCHASING MATERIAL TO RECEIVE NATIONAL	<u>G-01 (W)</u>	GROUT	LATRICRETE	# 35 - MOCHA # 540 - TRUFFLE	GROUT- SEE FINISH SCHEDULE FLOOR TILE (FT) COMMENTS FOR LOCATION CUSTOMER AREA GROUT- SEE FINISH SCHEDULE FLOOR	ALL INQUIRIES MUST MENTION THE NATIONAL ACCOUNT WITH DUNKIN BRANDS PHONE: 877-556-5728
		WOLF GORDON	GOH 31818546 COLOR NEXTGEN NEUTRA COOL PALETTE	NL	PURCHASING WATERIAL TO RECEIVE NATIONAL PRICING. FAX ORDER FORM TO :718.706.5912 OR ALFREDO.ORTIZ@WOLFGORDON.COM	<u>G-02</u>	GROUT	PRODUCTS MAPEI	ULTRSCOLOR PLUS FA #47 - CHARCOAL	TILE (FT) COMMENTS FOR LOCATION BACK OF HOUSE GROUT- SEE FINISH SCHEDULE FLOOR	EMAIL:NATIONAL.ACCOUNTS@DALTILE.COM DBI REP : PAULA TOSTI 978.835.7793 EMAIL: PAULA.TOSTI@DALTILE.COM
	TYPE II		SKETCH TEX - TEA WASH		CLEARLY STATE THAT YOUR ARE A MEMBER OF DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING.	<u>G-03</u>	GROUT	MAPEI	ULTRSCOLOR PLUS FA # 38 - AVALANCHE	BACK LINE GROUT- SEE FINISH SCHEDULE WALL	
WC-01 (W)	VINYL WALL COVERING	DL COUCH	(T2-TX-20)	ARCHITECT/G.C. TO CONFIRM —FRANCHISEE PREFERENCE ON	KAITLYN FEASTER - ACCOUNT MANAGER 800.366.6839 X326 CUSTOMERSERVICE@MOMTEX.COM5	<u>G-04</u>	GROUT	MAPEI	ULTRSCOLOR PLUS FA # 10 - BLACK	TILE (WT) COMMENTS FOR LOCATION BRICK TILE GROUT- SEE FINISH SCHEDULE FLOOR TILE (FT) OR WALL TILE (WT)	
()	TYPE II VINYL WALL COVERING	WOLF GORDON	DUNKIN RIVULET 54" WIDI GOH 31802393	MANUFACTURER	CLEARLY STATE THAT YOUR ARE A MEMBER OF DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING. FAX ORDER FORM TO :718.706.5912	<u>G-05</u>	GROUT	MAPEI	ULTRSCOLOR PLUS FA # 09 - GRAY	COMMENTS FOR LOCATION RESTROOM GROUT- SEE FINISH SCHEDULE WALL TILE (WT) COMMENTS FOR LOCATION	
					OR ALFREDO.ORTIZ@WOLFGORDON.COM CLEARLY STATE THAT YOUR ARE A MEMBER OF	FT-01 (C)	PORCELAIN TILE	DAL TILE	DB PORTFOLIO POR 12X24 FLOOR PF05 "ASH GREY STD"	COOL PALETTE - 12"X24" FRONT OF HOUSE (PUBLIC AREAS) AND RESTROOM AREA TILE -	
		DL COUCH	VERSAGAURD HALCYN TYP3 127860 "WINDWARD"		DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING. KAITLYN FEASTER - ACCOUNT MANAGER 800.366.6839 X326	FT-01 (W)	PORCELAIN TILE	DAL TILE	# PF0512241PK AFFINITY TILE - BIEGE AF02 12" X 24" / MATTE	USE W/ GROUT G-01 (C) WARM PALETTE- 12"X24" FRONT OF HOUSE (PUBLIC AREAS) AND RESTROOM AREA TILE -	
WC-02 (C)	TYPE III (VINYL WALL PROTECTION)		RAMPART 52"WIDE	ARCHITECT/G.C. TO CONFIRM FRANCHISEE PREFERENCE ON MANUFACTURER	CUSTOMERSERVICE@MOMTEX.COM 5 CLEARLY STATE THAT YOUR ARE A MEMBER OF DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON PURCHASING MATERIAL TO RECEIVE NATIONAL	FT-01 (E)	PORCELAIN TILE	DAL TILE	REMODEL KEEPING EXISTING FLOOR TILE	USE W/ GROUT G-04 2015 IMAGE TILE (TAN COLOR) MAYBE AVAILIABLE (COLOR MATCH REQUIRED) FROM DAL TILE N500	
		WOLF GORDON	WG 12691266		PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING. FAX ORDER FORM TO :718.706.5912 OR ALFREDO.ORTIZ@WOLFGORDON.COM	<u>FT-02</u>	QUARRYTILE	DAL TILE		"PUNKIN LATTE" COOL AND WARM PALETTE - 6"X6"; BACKLINE/SERVICE AREA & B.O.H. AREAS -	
		DL COUCH	VERSAGAURD PANAMA LINEN - SUGAR CANE		CLEARLY STATE THAT YOUR ARE A MEMBER OF DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING.	FT-02 (E)	QUARRYTILE	DAL TILE	# 0T03661P REMODEL KEEPING EXISTING FLOOR TILE	USE W/ GROUT G-02	
WC-02 (W)	TYPE III (VINYL WALL PROTECTION)	2200011	(TYPE III)	ARCHITECT/G.C. TO CONFIRM FRANCHISEE PREFERENCE ON	KAITLYN FEASTER - ACCOUNT MANAGER 800.366.6839 X326 CUSTOMERSERVICE@MOMTEX.COM 5 CLEARLY STATE THAT YOUR ARE A MEMBER OF	FT-03 (W)	PORCELAIN TILE	DAL TILE	SADDLE BROOK TILE - FARMHOUSE SD14 6" X 46 MATTE FINISH	WARM PALETTE - 6" X 36" TILE SEATING AREA ACCENT FLOOR TILE. USE W/ GROUT G-04	
		WOLF GORDON	RAMPART 52" WIDE GOH 31802395	MANUFACTURER	DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING. FAX ORDER FORM TO :718.706.5912				DB PORTFOLIO POR 12X24 FLOOR PF05 "ASH	COOL PALETTE - CUT 12"X24" FLOOR TILE W/ BRUSHED NICKEL SCHLUTER STRIP CAP JOLLY - ANIGB	
					OR ALFREDO.ORTIZ@WOLFGORDON.COM CLEARLY STATE THAT YOUR ARE A MEMBER OF	FTB-01 CUT (C)	PORCELAIN TILE	DAL TILE	GREY STD" # PF0512241PK	COLOR MATCH WALL TILE ALUMINUM TRIM MATTE WHITE TSDA DARK ANTHRACITE	
	ADVANCED WALL PROTECTION	DL COUCH	DLC-26519C WOOD WALL P3TEC (NATURELLE) (48" WIDE 15 YARD BOLT)	CONTRACTOR OF MANAGEMENT	DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING. KAITLYN FEASTER - ACCOUNT MANAGER 800.366.6839 X326					TSSG STONE GREY WARM PALETTE - CUT 12"X24" FLOOR TILE W/ BRUSHED NICKEL SCHLUTER STRIP CAP JOLLY-	
WC-03 (C)				WOOD WALL MUST BE INSTALLED RAILROADED. ALRTERANTE FOR WD-01	CLEARLY STATE THAT YOUR ARE A MEMBER OF DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON	FTB-01 CUT (W)	PORCELAIN TILE	DAL TILE	PORTFOLIO 12X24 FLOOR PF-03 "FANGO	ANIGB COLOR MATCH WALL TILE ALUMINUM TRIM MATTE WHITE	
	NOT USED	WOLF GORDON	SEE DL COUCH WC-03 (C)		PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING. FAX ORDER FORM TO :718.706.5912 OR ALEREDO ORTIZAWOLEGORDON COM				DB PORTFOLIO PORC -	TSDA DARK ANTHRACITE TSSG STONE GREY USE W/ GROUT G-04 COOL PALETTE -	
	NOTUSES	DI COUCH			ALFREDO.ORTIZ@WOLFGORDON.COM CLEARLY STATE THAT YOUR ARE A MEMBER OF DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING.	FTB-01 COVE (C)	PORCELAIN TILE PORCELAIN TILE	DAL TILE	6X12 COVE BASE HM05 "ASH GREY STD" # PF05P36C9TB1P2 PORTFOLIO COVE BASE	6"X12" COVED BASE TILE (OPTIONAL UPGRADE FOR FRONT OF HOUSE PUBLIC AREAS AND RESTROOMS) WARM PALETTE -	
WC-03 (W)	NOT USED	DL COUCH			KAITLYN FEASTER - ACCOUNT MANAGER 800.366.6839 X326 CUSTOMERSERVICE@MOMTEX.COM	. 12-01 COVE (W)	FONGELAIN TILE	DALTILE	PF-03 "FANGO" DB TEXTURES Q3565U	USE W/ GROUT G-04 COOL AND WARM PALETTE - 5"X 6" COVE BASE- SEE NATIONAL ACCOUNTS FOR INSIDE/OUTSIDE	
	NOT USED	WOLF GORDON			CLEARLY STATE THAT YOUR ARE A MEMBER OF DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING. FAX ORDER FORM TO:718.706.5912	FTB-02 COVE	QUARRY TILE WALL BASE	DAL TILE	0T03 "ASHEN GRAY STD" # 0T03Q3565U1P	CORNER PRODUCT NUMBERS # 0T03Q3565U1P - COVE BASE # 0T03QCL3565U1P - LEFT CORNER # 0T03QCR3565U1P - RIGHT CORNER	
					OR ALFREDO.ORTIZ@WOLFGORDON.COM CLEARLY STATE THAT YOUR ARE A MEMBER OF	ETP_02 COVECUS	DOPOEI AIN THE	ראן דיי ר	SADDLE BROOK TILE -	# 0T03QB3565U1P - INSIDER CORNER USE W/ GROUT G-02 WARM PALETTE - USE W/ 6" X 36" COVE TILE WALL BASE @ SEATING AREA	
	NOT USED	DL COUCH	SEE WOLF GORDON WC-0	14	DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING. KAITLYN FEASTER - ACCOUNT MANAGER 800.366.6839 X326	FTB-03 COVE(W)	PORCELAIN TILE	DAL TILE	FARMHOUSE SD14 6" X 36' MATTE FINISH	WALL BASE @ SEATING AREA ACCENT FLOOR TILE. USE W/ GROUT G-04 COOL PALETTE -	
WC-04			RAMPART 52" WIDE	CHARCOAL WALL ALRTERANTE FOR WT-02	CLEARLY STATE THAT YOUR ARE A MEMBER OF DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON	WT-01 (C)	PORCELAIN TILE	DAL TILE	DB DUNKIN SWITCH ACCENT 12" x 24" (backline wall)	NSTALL PER PATTERN SHOWN IN DETAIL # 5/A9.0 BACKLINE WALL TIILE - 12X24 BACKLINE WALL TIILE - USE W/ GROUT G-03	
	TYPE III (WALL PROTECTION)	WOLF GORDON	CHARCOAL GOH 31818583 TYPE III WALL PROTECTION,		PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING. FAX ORDER FORM TO :718.706.5912 OR ALFREDO.ORTIZ@WOLFGORDON.COM				# N812DD12241P2	ALUMINUM PROFILE: SCHLUTER, JOLLY, MBW MATTE WHITE HEIGHT 10 mm (3/8") A100MBW	
			WALL PROTECT						DB DUNKIN SWITCH WARN	WARM PALETTE OR REMODEL USE ONLY - WHEN KEEPING EXITING 2015 IMAGE FLOOR TILE (TAN COLOR)	
WE-PL4(C) WP-PL4(W)	MATERIAL NOT USED NOT USED	MANUFACTURER	PRODUCT#	DESCRIPTION / REMARKS	VENDOR CONTACTS	<u>WT-01 (W)</u>	PORCELAIN TILE	DAL TILE	ACCENT 12" x 24" (backline wall) # N515SA0212224P2	DETAIL # 5/A9.0 BACKLINE WALL TIILE - USE W/ GROUT G-03	
WP-PL2 (C)	LAMINATE	WILSONART	4857-60 "SHADOW ZEPHYR" MATTE FINISH	PLAM WALL PANELS 48" x 96" (GC PROVIDED ITEM - GC CAN PURCHASE FROM DUNKIN MILLWORK VENDOR)						ALUMINUM PROFILE: SCHLUTER, JOLLY, MBW MATTE WHITE HEIGHT 10 mm (3/8") A100MBW	
MD DI C	1.4400	FOR You	(SAME AS PL-10(C)) 5884 "CHESTNUT WOODLINE"	WARM PALETTE OR REMODEL USE ONLY - PLAM WALL PANELS 48" x 96"		WT-02	PORCELAIN TILE	DAL TILE		4 BRICK STYLE 6" X 24" OR "4 X 12" SP. ORDER CUT TO SIZE (WT-2) - USE W/ GROUT G-04 ALUMINUM PROFILE: SCHLUTER,	
WP-PL2 (W)	LAMINATE	FORMICA	MATTE FINISH (SAME AS PL-10(W))	GC PRÖVIDED ITEM-GC CAN PURCHASE FROM DUNKIN MILLWORK VENDOR)	CLEARLY STATE THAT YOUR ARE A MEMBER OF				DB FIELD - 6"X18" (RESTROOMS)	JOLLY, TSDA DARK ANTHRACITE HEIGHT 8 mm (5/16") A80TSDA COOL AND WARM PALETTE - RESTROOMS INSTALL IN A STACK BOND PATTERN 6"X18" - LISE W/	
WP-CR1		IMPACT SPECIALTIES	COLOR: "BRUSHED NICKEL"	SARATOGA CHAIR RAIL 3" H x 114"L x 1/2" THK; VA200 "BRUSHED NICKEL" CORNER GUARD	DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING FOR ASSISTANCE, PLEASE CONTACT CUSTOMER	<u>WT-03</u>	PORCELAIN TILE	DAL TILE	COLOR WHEEL LINEAR - ARCTIC WHITE # 0790 MATTE	BOND PATTERN 6"X18" - USE W/ GROUT G-5 ALUMINUM PROFILE: SCHLUTER, JOLLY, MBW MATTE WHITE HEIGHT 8 mm (5/16") A80MBW	
			CUSTOM COLOR: CANTON (SEE AS SS-01(C)) FINISH: POLISHED		SERVICE AT PHONE: 888-424-6287	WT-04 (C)	PORCELAIN TILE	DAL TILE	DB BLOCK PARTY 6" X 6" - 2TILE ACCENT	COOL PALETTE - INSTALL PER PATTERN SHOWN IN DETAIL # 3/A9.0 RESTROOM ACCENT 6" X 6" - USE W/ GROUT G-5	
WP-CR2 (C)	SOLID SURFACE	LG HI-MACS	FINISH: POLISHED EDGE PROFILE: REFERENCE MILLWORK DETAIL ALUMINUM PROFILE: SCHLUTER,	SOLID SURFACE CHAIR RAIL		<u>vv 1 =04 (C)</u>	FORGELAIN TILE	DAL TILE	(RESTROOMS) # N515BP01661P4	ALUMINUM PROFILE: SCHLUTER, JOLLY, TSSG STONE GREY 8 mm (5/16") A80TSSG	
			JOLLY CUSTOM COLOR: G122 BAMBOO LEAF (SEE AS SS-01 (W))						DB BLOCK PARTY 6" X 6" -	WARM PALETTE OR REMODEL USE ONLY WHEN KEEPING EXISTING 2015 IMAGE FLOOR TILE (TAN COLOR) INSTALL PER PATTERN SHOWN IN	
WP-CR2 (W)	SOLID SURFACES	LG HI-MACS	FINISH: POLISHED EDGE PROFILE: REFERENCE MILLWORK DETAIL ALUMINUM	SOLID SURFACE CHAIR RAIL		WT-04 (W)	PORCELAIN TILE	DAL TILE	2TILE ACCENT (RESTROOMS) #N515BP02661P4	INSTALL PER PATTERN SHOWN IN DETAIL # 3/A9.0 - BACKLINE WALL TIILE - RESTROOM ACCENT INSTALL IN A RANDOM PATTERN 6" X 6" - USE W/ GROUT G-5	
			PROFILE: SCHLUTER, JOLLY		CLEARLY STATE THAT YOUR ARE A MEMBER OF DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UPON					ALUMINUM PROFILE: SCHLUTER, JOLLY, TSSG STONE GREY 8 mm (5/16") A80TSSG	
WP-C1		IMPACT SPECIALTIES	COLOR: "BRUSHED NICKEL" VA-200 CORNER 72" X 11/2" X 1 1/2"	CHAIR RAIL CORNER PIECE	PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING FOR ASSISTANCE, PLEASE CONTACT CUSTOMER SERVICE AT	CODE	MATERIAL	MANUFACTURER	CEILING FINIS	DESCRIPTION / REMARKS	VENDOR CONTACTS
			ALTERNATE INTERIOR F	LOOR FINISH	PHONE: 888-424-6287	<u>CT-01</u>	ACOUSTIC CEILING TILE	ARMSTRONG	WHITE FACTORY FINISH #1732 WH (2' X 2')	WHITE, FINE FISSURED TILE WITH WHITE GRID [ARMSTRONG#7300 WH/ SIZE: 5/16"]	PLEASE CONTACT ARMSTRONG @ 1-800-442-4212.
CODE	MATERIAL	MANUFACTURER	PRODUCT#	DESCRIPTION / REMARKS	VENDOR CONTACTS	<u>CT-02</u>	CEILING TILE AND GRID SYSTEM	ARMSTRONG	BLACK FACTORY FINISH 1728 BL (2' X 2')	BLACK, FINE FISSURED-TILE AND BLACK GRID NOTE: STANDARD CLG. TILE IN PUBLIC	CLEARLY STATE THAT YOUR ARE A MEMBER OF DUNKIN' BRANDS, INC. STRATEGIC ACCOUNT UP PURCHASING MATERIAL TO RECEIVE NATIONAL PRICING.
					NEW ENGLAND COUNTY TO COUNTY	<u>CT-03</u>	VINYL FACED CLG TILE	ARMSTRONG	#870 (2' X 4')/ #868 (2' X2')	AREAS (SALES & SEATING AREA)- FOR NEW & WHITE TILE AND GRID	
AP-01	REVERB TILE	NEW ENGLAND SOUND PROOFING	TRADITIONAL SERIES	ACOUSTICAL CEILING TILE TO BE USED @ OPEN CEILING APPLICATION.	NEW ENGLAND SOUND PROOFING 40 NORFOLK AVENUE, EASTON, MA, 02375 PHONE: 781-710-1261	CODE	MATERIAL	MANUFACTURER	ALTERNATE INTERIOR F	LOOR FINISH DESCRIPTION / REMARKS	VENDOR CONTACTS
						- 3355	AND LEWAL				STONHARD EPOXY
			1	1	1	EXP-01	EPOXY FLOOR	STONHARD EPOXY	STONSHIELD HRI MEDIUM TEXTURE	APPROVED FOR BEHIND POS FRONT	SCOTT GARSTKA

RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI



A-2015032715

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1. FOR COMPLETE NATIONAL ACCOUNTS SOURCE INFORMATION, REFER TO THE DUNKIN' BRANDS NATIONAL ACCOUNT WEB SITE (http://extranet.dunkinbrands.com). TO OBTAIN A USER NAME AND PASSWORD PLEASE CONSULT YOUR LOCAL CONSTRUCTION MANAGER. 2. CONTRACTOR TO IDENTIFY ONESELF AS WORKING WITH DUNKIN' BRANDS WHEN ORDERING FROM NATIONAL ACCOUNTS.

ACOUSTICAL CEILING TILES & (ALL REGIONS ARMSTRONG WORLD INDUSTRIES VENDOR CONTACT: MAUREEN CONE P: 703-389-2701 E: MMCONE@ARMSTRONGCEILINGS.COM

WWW.ARMSTRONG.COM/CEILINGS

ACOUSTICAL PANELS NEW ENGLAND SOUND PROOFING P: 781-710-1261 WWW.NEWENGLANDSOUNDPROOFING.COM

ALLEN INDUSTRIES VENDOR CONTACT: KEITH WHITLEY P: 919-410-1234

KEITH.WHITLEY@ALLENINDUSTRIES.COM WWW.ALLENINDUSTRIES.COM

ATM SERVICES CARDTRONICS **VENDOR CONTACT: TOM SPOONER** P: 888-890-0600 X 14240 E: TSPOONER@CARDTRONICS.COM

WWW.CARDTRONICS.COM JARRETT SERVICES **VENDOR CONTECT: ERIC JOHNSTONE** P: 1-800-935-0107 X 204 E: SALES@JARRETTFORCASH.COM WWW.JARRETTFORCASH.COM

AWNING FABRICS AND VINYL

VENDOR CONTACT: KEN HUGGINS P: 714-985-6310 E: KHUGGINS@ARLON.COM WWW.ARLON.COM

BOLLARD COVERS VENDOR CONTACT: 1-800-731-1722 DENNIS KNITTEI PHONE: (313)551-2275

DKNITTEL@IDEALSHIELD.COM **BINDU ABRAHAM** PHONE: (313)551-2283 BABRAHAM@IDEALSHIELD.COM

COKE COOLERS VENDOR CONTACT: CARISSA BRUCE

P: (800) 531-2238 EXT. 3716

WWW.IDEALSHIELD.COM

COMING SOON BANNERS P: 1-855-576-6669

E: CABRUCE@COCA-COLA.COM

E: LSMNOW@WELDMEDIA.COM WWW.LSMNOW.NET/LOGIN.ASPX DRIVE THRU HEADSETS

VENDOR CONTACT: BILL MUENKEL P: 952-484-4875 E: WEMUENKEL@MMM.COM WWW.3M.COM/FOODSERVICE VENDOR CONTACT: PATRICK KELLY

C: 858-535-6042 E: PKELLY@HME.COM WWW.HME.COM DRIVE THRU TIMERS **ACRELEC** SCOTT MARENTAY

P: 412-680-3909 VENDOR CONTACT: PATRICK KELLY C: 858-535-6042 E: PKELLY@HME.COM

WWW.HME.COM

DRIVE THRU MENU BOARDS

VENDOR CONTACT: ANA DOMINGUEZ E: ADOMINGUEZ@EVERBRITE.COM WWW.EVERBRITE.COM

VENDOR CONTACT: ELIOT COHEN C: 201-528-2122 E: ECOHEN@VGS-INC.COM WWW.VGS-INC.COM HILTON DISPLAYS **VENDOR CONTACT: PRESTON SMITH** P: 865-320-6663

E: PRESTONSMITH@HILTONDISPLAYS.COM

WWW.HILTONDISPLAYS.COM PERSONA SIGNS **VENDOR CONTACT: SUSAN KOELZER** P: 605-882-2244 X 390 E: SKOELZER@PERSONASIGNS.COM

DRIVE THRU WINDOWS SALES: READY@READY-ACCESS.COM

WWW.PERSONASIGNS.COM

VENDOR CONTACT: KELLY MCGOLDRICK P: 630-876-7766 EXT. 113 E: KELLY@READY-ACCESS.COM

WWW.READY-ACCESS.COM INSIDE SALES DEPT./ORDER ENTRY SALES@QUIKSERV.COM BRANDI LAIRD JESSICA WILLIAMS

BRANDI LAIRD PHONE: 713-849-5882 TECHNICAL & PARTS SUPPORT

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NATIONAL ACCOUNTS MANAGER WADE ARNOLD 11441 BRITTMORE PARK DRIVE HOUSTON, TX 77041 PHONE: 713-849-5882 FAX: 713-849-5708

DRIVE THRU STENCIL DGS RETAIL VENDOR CONTACT: KAREN MCCUE E: KARENMCCUE@DGSRETAIL.COM P: 508-337-2990 F: 508-337-5040

PAVEMENT STENCIL COMPANY P: 800-250-5547 E: STENCILS@PAVEMENTSTENCIL.COM WWW.PAVEMENTSTENCIL.COM

WWW.DGSRETAIL.COM

ELECTRIC PANELS & BREAKERS

VILLA LIGHTING VENDOR CONTACT: DEANNA MCCLANAHAN P: 1-800-325-0963

DEANNA.MCCLANAHAN@VILLALIGHTING.COM WWW.VILLALIGHTING.COM

EPOXY FLOORING STONHARD VENDOR CONTACT: SCOTT GARSTKA

C: 413-237-9267 P: 800-854-0310 OFFICE X-5158 F: 856-321-7510 E: SGARSTKA@STONHARD.COM WWW.STONHARD.COM

EXTERIOR INSULATED FIBERGLASS SYSTEMS (EIFS)

DRYVIT SYSTEMS VENDOR CONTACT: ROBERT DAZEL P: 734-276-0404 E: BOB.DAZEL@DRYVIT.COM WWW.DRYVIT.COM

EXTRUDED METAL CHANNEL @ EXTERIOR

VENDOR CONTACT: RANDY KERR P: 800-877-3810 EXT.3248 E: RKERR@AGI.NET WWW.AGI.NET

HORACIO'S SHEET METAL VENDOR CONTACT: MICHAEL TAVARES P: 508-985-9940 F: 508-985-9965 E: MIKE@HORACIOS.COM

WWW.HORACIOS.COM TAMLYN - XTREME TRIM VENDOR CONTACT: IAN DANIELS P: 713-446-3075 E: IDANIELS@TAMLYN.COM

WWW.TAMLYN.COM FIBERGLASS REINFORCED PANELS

CRANE - KEMLITE COMPOSITES VENDOR CONTACT: JEFF TOLLE P: 1-800-435-0080 OR 1-815-467-8600 OR 1-815-274-9125 (DIRECT) C: 330-260-7627 E: SALES@CRANECOMPOSITES.COM

WWW.CRANECOMPOSITES.COM MARLITE VENDOR CONTACT: JAMIE MCEDWARD P: 800-377-1221 OR 603-924-9128 F: 330-343-4668 C: 330-260-7627

E: JMCEDWARD@MARLITE.COM

VENDOR CONTACT: JONATHAN RALYS

E: JONATHAN.RALYS@TRANE.COM

WWW.MARLITE.COM

P: 781-305-1335

F: 781-938-8912

WWW.TRANE.COM

WWW.CARRIER.COM

CARRIER CORPORATION

OFFICE PHONE: 315-432-3254

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HORACIO'S SHEET METAL P: 508-985-9940 F: 508-985-9965 E: MIKE@HORACIOS.COM

WWW.HORACIOS.COM VENDOR CONTACT:

P: 323.262.4191 X 2 E: CSR@TRIMCOHARDWARE.COM ORDER MANAGER: CAROL VAVONESE EMAIL: CAROL.J.VAVONESE@CARRIER.UTC.COM EMAIL: STRATEGICACCOUNTS2@CARRIER.UTC.COM MICHAEL HEALY DESIGNS

ACCOUNT GENERAL MANAGER: PAUL WITZ CELL PHONE: 315-317-2481 EMAIL: PAUL.WITZ@CARRIER.UTC.COM

SERVICE CONTACT: DEREK BIRDSALL CELL PHONE: 315-726-2255 EMAIL: DEREK.BIRDSALL@CARRIER.UTC.COM BUSINESS MANAGER: ROB ROHDE OFFICE PHONE: 315-432-3377 EMAIL: SCOTT.GILLISPIE@CARRIER.UTC.COM

RHEEM MANUFACTURING COMP. WWW.RHEEM.COM VENDOR CONTACT: LUKE BABEY P: 904-271-1126 E: LUKE.BABEY@RHEEM.COM

IN STORE MUSIC FRANCHISEES TO SOURCE LOCALLY

INTERIOR MENU BOARDS (STATIC) VENDOR CONTACT: ELIOT COHEN

C: 201-528-2122

E: ECOHEN@VGS-INC.COM

WWW.VGS-INC.COM

(DIGITAL)

P: 727-540-9802 TEXAS DIGITAL E: ERROL@FLORIDASEATING.COM P: 877.504.4887 OPTION 2 E: DUNKIN.TDS@NCR.COM

SYSTEMS **CAPTIVE-AIRE SYSTEMS** DAVID CRITTENDEN P: 813-435-3388 E: REG62@CAPTIVEAIRE.COM WWW.CAPTIVEAIR.COM

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KITCHEN SWING DOOR ELIASON CORPORATION **VENDOR CONTACT: JOE DUSENBERY** P: (800) 828-3655

F: (800) 828-3755 E: DOORS@ELIASONCORP.COM **LAMINATES**

FOR LOCAL DISTRIBUTOR CALL KAREN KENNEY 866-573-3512 E: K.KENNEY@FORMICA.COM REP: JEAN MARIE REMICK O: (781) 235-4165 C: (617) 217-8146 JEANMARIE.BISSON@FORMICA.COM WWW.FORMICA.COM

WILSONART FOR ORDERS CALL 800-433-3222 FOR A LOCAL DISTRIBUTOR. REPRESENTATIVE: AMY MORGENWECK P: 917.951.6524 E: MORGENA@WILSONART.COM

LIGHTING FIXTURES: INTERIOR 8 EXTERIOR VILLA LIGHTING

VENDOR CONTACT: DEANNA MCCLANAHAN

P: 1-800-325-0963 DEANNA.MCCLANAHAN@VILLALIGHTING.COM WWW.VILLALIGHTING.COM

SPECIALTY LIGHTING GROUP VENDOR CONTACT: ANUSH KAZARIAN & LORRAINE GARIGLIANO P: 508-922-0786 P: 860-767-0110 X 252 E: ANUSH.KAZARIAN@SSLIGHTING.COM OR DUNKIN@SSLIGHTING.COM

MILLWORK/EQUIPMEN CONSOLIDATOR VENDOR CONTA

WWW.SSLIGHTING.COM

P: 479-420-0298 E: HHAYDON@QUALSERVCORP.COM WWW.QUALSERVCORP.COM

VENDOR CONTACT: TOM NEMMERS P: 913-526-9816 E: TOMN@HOCKENBERGS.COM WWW.HOCKENBERGS.COM CONCEPT SERVICES VENDOR CONTACT: CHRIS PARNELL

P: 512-343-3100 E: CPARNELL@CONCEPTSERV.COM

MILLWORK FABRICATOR HOMELAND BUILDERS **VENDOR CONTACT: BRIAN RIBEIRO** P: 508-677-0401 X 221 E: BRIANR@HOMELANDBUILDERS.COM WWW.HOMELANDBUILDERS.COM

VENDOR CONTACT: MICHAEL TAVARES

NEXTGEN "D" DOOR HANDLES

OLD STYLE "D" DOOR HANDLES

VENDOR CONTACT: NATASHA DURAND P: 1-800-995-0988 CUSTOMERSERVICE@MICHAELHEALY.COM

OUTSIDE FURNITURE: (LIGHT

KEY OFFICE INTERIORS ACCOUNT MANAGER: DOUGLAS BUMSTEAD P: 857-991-1376 F: 617-439-0322

EAST COAST UBRELLAS VENDOR CONTACT: NICOLE MASON P: 910-462-2500 X 1223

VENDOR CONTACT: TAMMY LENHAM P: 305-637-6881 E: TLENHAM@TUUCI.COM

FLORIDA SEATING **VENDOR CONTACT: ERROL ROSARIO**

HJC (RAILING) VENDOR CONTACT: DAVID LIGHTFOOT P: 479-366-0642 E: DAVID. LIGHTFOOT@HJCINC.COM

PAINT SHERWIN WILLIAMS MARK T. WEINER NATIONAL ACCOUNT EXECUTIVE 93 CHURCH ST BARRINGTON RI 02806

P&G CLEANING AND SANITATION

E: D.MCDOUGAL@UNISTRUCTURES.COM

WWW.UNISTRUCTURES.COM

RADIANTORDERS.HSR@NCR.COM

PROGRAM

P: 513-983-9599

WWW.PG.COM

P: 800-474-3794 PERSONA SIGNS O: 401-245-5176 P: 605-882-2244 X 390 M: 617-438-1408 EMAIL: MARK.T.WEINER@SHERWIN.COM

SUPERIOR SIGNS PROCTOR & GAMBLE **VENDOR CONTACT: CARLA EVANS** E: EQCINCINNATI.IM@PG.COM

PIVOTING CANOPY AT DRIVE-THRU SPEAKER & CLEARANCE BAR. DT/ **ENTRANCE CANOPY & ORANGE** UNI-STRUCTURES, INC. VENDOR CONTACT: DANA MCDOUGAL C: 678.974.1773

POS (DD AND DD/BR) **VENDOR CONTACT: NANY COOPER** P: 770-299-6881 E: NANCY.COOPER@NCR.COM

PRICE CONFIRMATION DISPLAY/SCANNERS VENDOR CONTACT: NANY COOPER P: 770-299-6881 E: NANCY.COOPER@NCR.COM

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DURO-LAST ROOFING VENDOR CONTACT: JIM SCHRIBER P: 800-248-0280 X 2257 E: JSCHRIBER@DURO-LAST.COM OR: CORPORATEACCOUNTS@DURO-LAST.COM

SALES AREA, SERVICE/PREP. AREA FLOOR & WALL TILES

VENDOR CONTACT: PAULA TOSTI P: 978-835-7793 E: PAULA.TOSTI.@DALTILE.COM WWW.DALETILEPRODUCTS.COM

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SECURITY PCI COMPLIANCE/ WIFI COMCAST

ROSE VAZQUEZ P: 508-314-7545

ALLEN INDUSTRIES P: 919-410-1234

VENDOR CONTACT: SCOTT STANTON P: 207-477-2956 E: SCOTT@DASCOSIGNS.COM UMBRELLAS@EASTCOASTUMBRELLA.COM WWW.DASCO-SIGNS.COM

VENDOR CONTACT: ANA DOMINGUEZ P: 414-529-7107 E: ADOMINGUEZ@EVERBRITE.COM WWW.EVERBRITE.COM

E: JIMPRENTICE@HILTONDISPLAYS.COM

VIEWPOINT VENDOR CONTACT: JEFF KWASS P: (508)-393-8200 E: JEFF@VIEWPOINTSIGNS.COM

VENDOR CONTACT: JIM PRENTICE

WWW.HILTONDISPLAYS.COM

HILTON DISPLAYS

P: 865-347-2912

POYANT SIGNS VENDOR CONTACT: JASON FREDETTE P: 508-207-1274 E: JFREDETTE@POYANTSIGNS.COM WWW.POYANTSIGNS.COM

VENDOR CONTACT: SUSAN KOELZER E: SKOELZER@PERSONASIGNS.COM WWW.PERSONASIGNS.COM

VENDOR CONTACT: PATTI SKOGLUND P: 562-256-3158 E: PATTIA@SUPERIORSIGNS.COM WWW.SUPERIORSIGNS.COM STORE GRAPHICS

P: 508-337-2990 F: 508-337-5040 WWW.DGSRETAIL.COM

> STORE SURVEILLANCE SECURITY SOURCE/MARCH SYSTEMS VENDOR CONTACT: SHAWNA REEVES P: 800-323-7612 X 109 E: SREEVES@SECURITYSOURCE.COM/ SECURITYSOURCEORDERS @SECURITYSOURCE.COM WWW.SECURITYCOURCE.COM

SOLAR SHADER PHIFER P: 205-345-2120 E: INFO@PHIFER.COM WWW.PHIFER.COM

ROLL-A-SHADE VENDOR CONTACT: RIC BERG P: 952-245-5077 X 113 E: RIC@ROLLASHADE.COM

TANKLESS HOT WATER HEATERS

TECHNICAL SUPPORT: DESK: 1-888-746-6247

SALES@RESTROOMREMODELS.COM

TECHNICAL SUPPORT: DESK: 1-888-746-6247 ACCOUNTS

DBI_COMCAST_ORDERING@COMCAST.NET

ROSE_VAZQUEZ@COMCAST.COM SIGN MANUFACTURER

DUNKINORDERS@KEYOFFICEINTERIORS.COM KEITH.WHITLEY@ALLENINDUSTRIES.COM WWW.ALLENINDUSTRIES.COM

VENDOR CONTACT: MO KIM P: (404) 355-1355 X 206 F: (404) 355-1359

WWW.VIEWPOINTSIGNS.COM

DGS RFTAII VENDOR CONTACT: KAREN MCCUE E: KARENMCCUE@DGSRETAIL.COM

WWW.RIC@ROLLASHADE.COM

RINNAI AMERICA CORPORATION 103 INTERNATIONAL DRIVE PEACHTREE CITY, GA 30269 P: 866-383-0707

NATIONAL SALES MANAGER - CORPORATE ACCOUNTS WALLY RICHARDSON DESK: 800-621-9419 CELL: 678-848-1240 EMAIL: WRICHARDSON@RINNAI.US TANKLESS HOT WATER HEATERS

RINNAI AMERICA CORPORATION 103 INTERNATIONAL DRIVE PEACHTREE CITY, GA 30269 P: 866-383-0707

NATIONAL SALES MANAGER - CORPORATE WALLY RICHARDSON DESK: 800-621-9419

CELL: 678-848-1240 EMAIL: WRICHARDSON@RINNAI.US. THUNDER GROUP ORDER CONTACT INFORMATION: DUNKINTILE@CREATIVEMATERIALSCORP.COM THUNDER GROUP, INC.

WALK-IN BOX

P: 715-386-2323

P: 508-320-3939

P: 763-543-0136

WWW.THERMALRITE.COM

WALL COVERINGS:

APA GRAPHICS

WWW.KOLPAK.COM

WWW.NORLAKE.COM

VENDOR CONTACT: DAVID VIOLA

VENDOR CONTACT: PHIL LETVINCHUK

E: PHILL@HATCHJENNINGS.COM

VENDOR CONTACT: BECKY MURPHY

E: BECKY.MURPHY@THERMALRITE.COM

E: DAVID@VIOLAGROUP.COM

NDCP DUNKINSALES@THUNDERGROUP.COM P: 626-935-1605 780 SOUTH NOGALES STREET CITY OF INDUSTRY, CA 91748

VENDOR CONTACT: KEITH WHITLEY

DUNKINORDERS@APACOLORGRAPHICS.COM WWW.APACOLORGRAPHICS.COM **WATER QUALITY REQUIREMENTS:** WATER BOOSTER SYSTEM MCCANN'S ENGINEERING VENDOR CONTACT: ELEANOR HINSON P: 818-637-7219 E: ELEANOR.HINSON@MANITOWOC.COM WWW.MCCANNSENG.COM **WATER QUALITY:** WATER FILTRATION SYSTEM 3M FILTRATION **ORDERS & WATER TEST KITS**

3MFILTERORDERS@SBCGLOBAL.NET 3M SALES NATIONAL ACCOUNT REP DAVID RADLIFF SENIOR ACCOUNT EXECUTIVE PHONE: 518-281-7754 DPRADLIFF@MMM.COM 3M FIELD OPERATIONS

AWS DISTRIBUTING, INC.

PHONE: 800-333-2866 (CUNO)

JENNIFER BARAN

FAX: 630-836-1793

FRED ABBOTT PHONE: 508 272 6983 FHABBOTT@MMM.COM WWW.SOLUTIONS.3M.COM/WPS/PORTAL 3M/EN_US/3M-PURIFICATION-INC/3MPI-US/

WATER FILTRATION SYSTEM PENTAIR (EVERPURE)

ORDERS & WATER TEST KITS

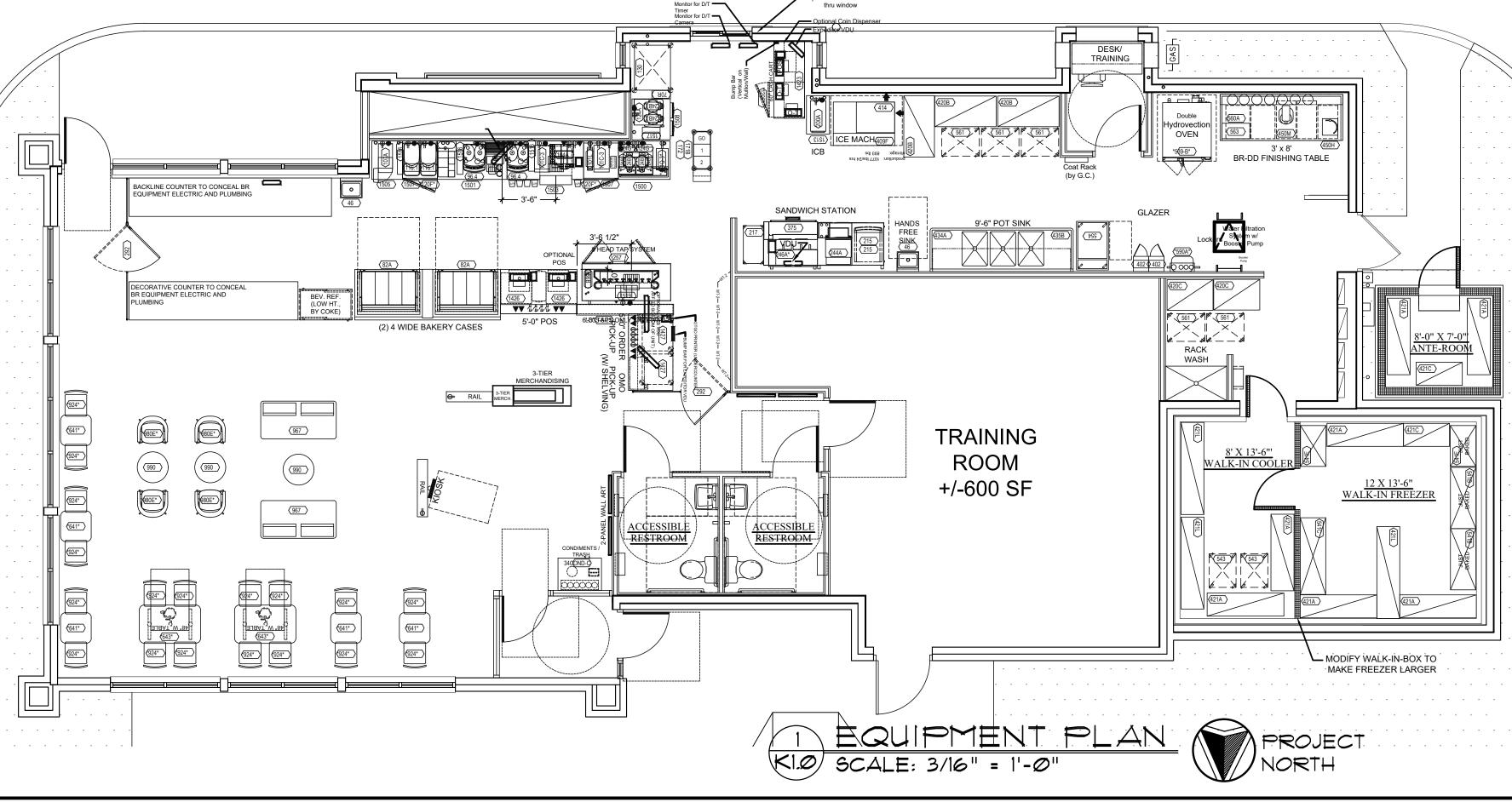
E: JOHN.HINER@PENTAIR.COM

1800-842-6193

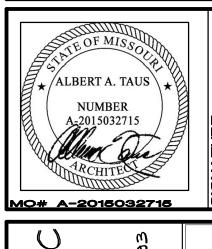
DUNKINH2OKIT@PENTAIR.COM JOHN HINER STRATEGIC ACCOUNT MANAGER PENTAIR FILTRATION SOLUTIONS PENTAIR WATER QUALITY SYSTEMS P: 201-417-5564

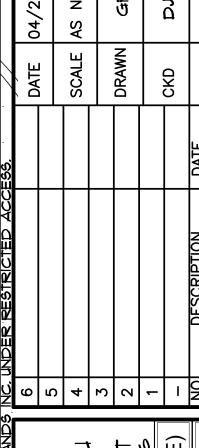
INSTALLATION WALK-IN BOX SCHEDULE NOTES EXTERIOR WALK IN BOX CEILING HT. WHERE BOX WILL BE LOCATED (IF INT.) N/A EQUIPMENT SUPPLIER TO PLACE ALL NEW EQUIPMENT Does box need to be painted? (If ext.) N/A IS MASONRY SURROUNDING THE BOX (IF EXT.) N/A GENERAL CONTRACTOR TO PLACE ALL EXISTING EQUIPMENT 8'-0" x 7'-0" x 8'-7" SEE PLAN GENERAL CONTRACTOR TO MAKE ALI MECHANICAL, PLUMBING, AND SEE PLAN ELECTRICAL CONNECTIONS FOR ALL 8"-0 x 7'-0" x 8'-7" **EQUIPMENT** PRE-ASSEMBLED REMOTE RFRIGERATION NOTES **BUILDING ROOF (1 STORY)** 0-50 FT. REFER TO DUNKIN' BRANDS MULTIBRAND EQUIPMENT SPECIFICATIONS ON DUNKIN' SINGLE PHASE (120/208)/3-PHASE (227/480) BRANDS WEB SITE, http://extranet.dunkinbrands.com, FOR COMPLETE EQUIPMENT AND UTILITY YES INFORMATION. DUNKIN' BRANDS WEB SITE NO ALWAYS TAKES PRECEDENCE OVER DRAWINGS IN INSTANCE OF CONFLICT. NO N/A N/A

OVERALL DIMENSIONS OF THE BOX *FREEZER DIMENSIONS *COOLER DIMENSIONS *ANTEROOM DIMENSIONS REFRIGERATION SYSTEM REFRIGERATION LOCATION (IF REMOTE) REFRIGERATION LINESET NEEDED (W/ REMOTE UNITS ONLY) ELECTRICAL PHASE OPTIONAL ACCESSORIES: INTERIOR RAMP AT INSIDE OF DOOR AT COOLER HURRICANE TIE DOWN SEISMIC TIE DOWN DADE COUNTY SPECS MASONRY TIES ON EXTERIOR OF BOX TO ALLOW BRICK AROUND EXT. BOX HAS THE COMPRESSOR UNIT REMOTELY LOCATED AND THE EVAPORATOR IS MOUNTED INSIDE THE WALK IN. THE SYSTEM IS PRE-WIRED AND REQUIRES A DRAIN LINE AND FLOOR DRAIN. THE AREA WHERE THE BOX WILL BE LOCATED MUST HAVE A MINIMUM HEIGHT OF 8'-9" PRE-CHARGED LINES UP TO 50' LENGTHS, AND A QUICK DISCONNECT ARE INCLUDED. NO MAXIMUM COMPARTMENT SIZE. START UP BY REFRIG. TECHNOLOGY STANDARD HEIGHT OF WALK IN BOX USING THIS REFRIGERATION IS 8'-7".









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			EQUIPMENT			•					MBING						ELECTRICA			
ITEM#	QTY -	DESCRIPTION CUSTOM STAINLESS STEEL	MANUFACTURER	MODEL#	N.S.F. E.T.L.	U.L. E.T.L.	H.W.	C.W.		DIR. II		VOLTS	PHASE	LOAD AMPS	CIRCUIT SIZE	#WIRES W/ GROUND	SUPPLIED W/ CORD & PLUG	RECEPT. SPEC	A.F.F.	REMARKS
CNTR		COUTERS SEE PLAN FOR DIMS	MILLWORK SUPPLIER											ļ						
COND		CUSTOM CONDIMENT STATION	MILLWORK SUPPLIER																	
46.1		HAND SINK WITH KNEE PADDLE, NO SPLASH GUARDS	JOHN BOOS	PBHS-W-KVMB-1PBHS-W-K\	,		1/2	1/2												
70R		TISSURE BAG AND BOX HOLDER FOR DRIVE THRU RACK	UNIVERSAL	DD-DSPN71435																
82A		BAKERY TROLLEY	MIDDLEBY FABRICATION	DD4T5WTRLY																
96.4		ESPRESSO MACHINE	SCHAERER	COFFEE ART TOUCH #15SO-PS-DD40671								208-230\	/ 1	30	30	3	30	NEMAL6-30R		
101C-3		DAIRY DISPENSER	SILVER KING	SKECD12-V3								120V	1	1.8	20	3		NEMA5-15P		
101L		PORTION CONTROLLED GRANULAR & POWDER DISPENSER	SURE SHOT	AC2-GP																
WWW.		A FOWDER DISFENSER	(188 488)	1848/848/11/11/11/11									X//////							
101Q 101Q-3		MULTI HOPPER COFFEE GRINDER	BUNN-O-MATIC	35600.0011								120V	1	11	15	2	Υ	NEMA 5-15		BUNN PROVIDED CORD INSTALLED BY GENERAL
104A		PUMP STATION	WIREFAB	WF35522																
107A		DUNKACCHINO MACHINE	BUNN-O-MATIC	29250.0003	18	197			1/2"			208-120\	/ 1	17	20	3		NEMAL14-20		BUNN PROVIDED CORD INSTALLED BY GENERAL
116		MAGNABLEND BLENDER/ISLAND OASIS	TAYLOR	SB2512-WDD					1⁄2"		ISLAND OASSIS (IO) TO BE FILTERED WATER	110V	1	5.3						
120F-1		UNDERCOUNTER REFRIGERATOR	DELFIELD	406-CA-SPL-RHH	7	SA 4769						115	1	7	15	3	Y	NEMA 5-15		RIGHT HAND HINGE
120F 120F-2		27" W/ CASTERS, RIGHT HINGE UNDERCOUNTER REFRIGERATOR	DELFIELD	406-CA-SPL-LHH	7	SA 4769						115	1	7	15	3	Y	NEMA 5-15		LEFT HAND HINGE
120F-3		27" W/ CASTERS, LEFT HINGE UNDERCOUNTER REFRIGERATOR			,	3A 4709						115	<u>'</u>	5.6	15	3	Y	NEMA 5-15		DOOR CAN BE RE-HING
		27" W/ CASTERS, LEFT HINGE	VICTORY	UR-27-SST					44.0				<u> </u>	<u> </u>						DOOR CAN BE RE-HING
124A		TWIN SH BREWER	BUNN-O-MATIC	51200.0101					1/2 "			120/ 208\	/ 1	38.5	50	4	N	NEMA L14-50		ļ
124B		1.5 GAL SH SERVER	BUNN-O-MATIC	27850.0200																
124G		TWIN HEAT STAND	BUNN-O-MATIC	27875.0201					1/2 "			120/ 208\	/ 1	16.8	20	4	N	NEMA L14-20		
130		DONUT BAKERY RACK AT DRIVE THRU 36" W X 29" D	STORAGE PRODUCTS GROUP	DD-36SLC-29-RK-C																
171B		DRIVE THRU READY TO GO MAT	TRYAD	2.1																
172		DRIVE THRU STAGING CART	METRO	DD-DT30																
200A		ICE COFFEE BREWER -	BUNN-O-MATIC	45100.01		**			1/2"		20-90 PSI MACHINE SUPPLIE	120 / 200	V 1	10.5	30	4	Y	NEMA I 14 20		6' CORD TO BE PROV
200/1		#IC3 -DBC W/ ICDD	CAMBRO	ICS100L					/2		WITH ¾" O.D. MALE FLAREF	TING120 / 200	<u> </u>	19.5	30	4	ī	NEMA L14-30		INSTALLED BY G.C.
215		TORNADO OVEN W/STONE, PEEL AND (2) TRAYS EXTENDED	TURBOCHEF	NGC-1180-1-2019								208V	1	30	30		Y	NEMA 6-30		1
217		WARRANTY INCLUDED SANDWICH STATION TABLE	STORAGE PRODUCTS GROUP	DD-16SLC-30																
244A		16"W X 30"D DUAL LANE TOASTER	HATCO	ITQ-1750-2C-DD								208V	1	23.8	20	2	20	NEMA 6-30P		
		12 BAY HOLDING UNIT											1 .	1	30	3	30			-
246A -1		33"W X 16"D X 16.5"H	CARTER HOFFMAN	MZ343S-DD		-						120V	1	15		3	N	NEMA5-15P		
257		8 TAP SYSTEM WITH GENERATOR	MICROMATIC	MDD-68G-E-DD					1/2"		"	115V	1	11.1	20	2	Y	NEMA 5-15		3 SECTION CAKE & QU.
292		36" SWING GATE	EQUIPMENT SUPPLIER	CUSTOM MILLWORK																
375		SANDWICH STATION	DUKE	APOD 94" STATION HYBRID								115V		10.4				NEMA 5-15P		
402		EMPLOYEE LOCKER	STORAGE PRODUCTS GROUP	EL/6/EB																
409E		ICE BIN	SCOTSMAN	B948S																
414		ICE MACHINE	SCOTSMAN	C1030SA-32B					3/4"	3.	4"	208-230	V 1	10	15	3	Y			
420B		SHELF 24" X 48"	METRO	2448BR																
420C		SHELF 24" X 36"	METRO	2436BR																
						+	-													-
421A		SHELF 18" X 60"	METRO	1860BR																
421C		SHELF 18" X 36"	METRO	1836BR																ļ
421L		SHELF UNITS 18" X 72"	METRO	1872BR																
424A		3 COMPARTMENT SINK	MIDDLEBY FABRICATION	VJEYARAMAN			1/2"	1/2"												
434A		3 COMPARTMENT 112" W X 34D	UNIVERSAL	WST1435E																
435A		90" SINK TRAX SHELVING 3 COMPARTMENT SINK	STORAGE PRODUCTS GROUP	WST1435E																
435B		SINK TRAX WORKSTATION 108"	STORAGE PRODUCT GROUP	WST1415E																
450M		STAND MIXER	KITCHENAID	KSM7990																
480		WALK-IN COOLER/FREEZER	NORLAKE	PER WALK-IN ORDER FORM							PROVIDE DRAIN FOR									
			BLODGETT	HV-100G DOUBLE							EVAPORATOR UNIT									
539-B		` '				1												-		
541B		DUNNAGE RACK 20"D X 48"W	LOCKWOOD	D2040-8		-														1
541C		DUNNAGE RACK 20"D X 60"W	LOCKWOOD	D2060-8																
541E		DUNNAGE RACK 20"D X 32"W	LOCKWOOD	D2032-8																
543		BAKERY PAN RACK 21"X26"	KELMAX	APRU1618-4-AT-BK-MOD																
554		GLAZERS	BELSHAW	HG18EZ-DD-34																
561		FINISHED PRODUCT RACK	STORAGE PRODUCTS GROUP	APRUE1326-5/AT/TG/BK																
563		POWER BASE	EDHARD	P-4010, P-4012, P-4015,								120V								
560A			STORAGE PRODUCTS	P-4016, P-4017, P-4020 DD-8SLCB36-OS2ES																
			GROUP EVERPURE	EV9327-73																
590A		WATER FILTRATION SYSTEM SPOON MIXER CUP HOLDER																		
886B		(TAP AND BEV INITIATION STATION)	WIREFAB	WF35897		-														ļ
1423		XXXXXX MOBILE INITIATIOR	XXXXX	XXXXXX																
1426		ICE BIN RIGHT	METRO	DD2424POS POS CART																
1427		ON THE GO GART	METRO	DD2424OTG																
1500		HVB COFFEE CART (39.5" X 30") REVERSIBLE	FRANKE	18017419																
1501		54" DUMP SINK TABLE/ESPRESSO RIGHT (54-1/2" X 30")	FRANKE	18017755																
1503		MOBILE INITIATIOR	FRANKE	18017813																
1504		ICE BIN RIGHT ICEBIN/ INITIATOR - LEFT	FRANKE	18017755																
						+														
1505		HWB CABINET (24" X 30")	FRANKE	18017716																
1507		WORKTOP RISER FOR UCR	FRANKE	18018506			ļ													
1508		TRASH/COMPOST (32" X 30")	FRANKE	18018667																
1513		MOBILE WORK TABLE	FRANKE	18018324																1
1516		LID HOLDER (1 WIDE 4 TALL)	FRANKE	18018406																
1517		CUP LID HOLDER 2X3 F/McCAFE LIDS	FRANKE	18004125																
1519		LID HOLDER 8 TAP SYSTEM	FRANKE	18017465																
		<u>(</u>								l I										

ALBERT TAUS, A.I.A., ARCHITECTURE PLANNING INTERIOR DESIGN ENGINE FINNING INTERIOR DESIGN FOR STATE STATES.

ALBERT ARCHITECTURE PLANNING INTERIOR DESIGN FOR STATES.

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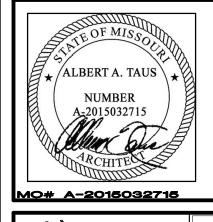
ALBERT ARCHITECTURE PLANNING INTERIOR DESIGN FOR STATES.

ALBERT TAUS, A.I.A., ARCHITECTURE PLANNING INTERIOR DESIGN FOR STATES.

ACCIOR.

PHONE: (215) 698 - 2516 FAX: (215) 698 - 2516 FA

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DOCUMENTS PREPARED FOR DOCUMENTS PREPARED FOR CLC. MR H0554M 5H4HIN 109 E. HALE LAKE RD WARRENSBURG, MO 64093

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PROPOSED PROJECT
PROPOSED PROJECT

DOUGNON

NITH DELAS STREET
LEE'S SUMMIT MO. 64086

NEXT GEN (COOL PALAETTE)

EQUIPMENT SCHEDULE

DUNKINIRANDE

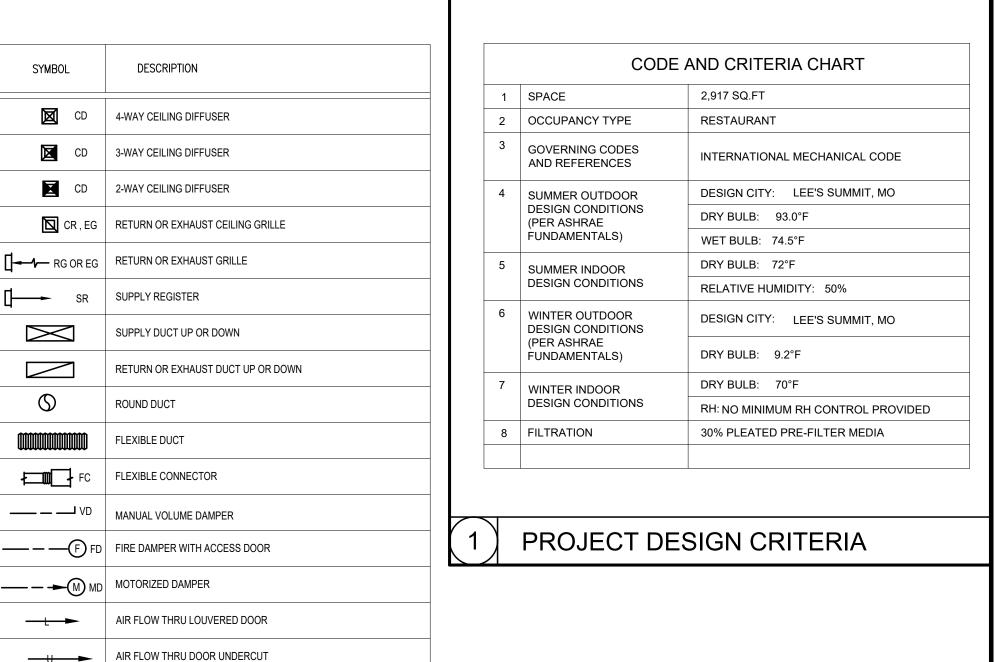
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- (1) THE HVAC CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL HVAC WORK IS PROVIDED AND INSTALLED IN STRICT COMPLIANCE WITH STATE CODE.
- (2) ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL CODES AND REGULATIONS.
- (3) REFER TO SPECIFICATIONS FORM PART FOR THE FULL PROJECT SCOPE.
- (4) THE EXACT MOUNTING HEIGHTS AND LOCATIONS OF ALL HVAC EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH ALL OTHER NEW AND EXISTING MECHANICAL, ELECTRICAL, ARCHITECTURAL AND STRUCTURAL SYSTEMS.
- (5) THE FINISH AND COLOR OF THE AIR DEVICES, AND ALL OTHER EXPOSED HVAC EQUIPMENT SHALL BE COORDINATED WITH THE OWNER.
- (6) VERIFY ALL EQUIPMENT VOLTAGES WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING FOLIDMENT
- (7) PROVIDE DISCONNECT SWITCHES FOR ALL HVAC EQUIPMENT INCLUDING WEATHERPROOF DISCONNECT AS REQUIRED.
- (8) PROVIDE PHASE LOSS PROTECTION FOR ALL POLY-PHASE MOTOR DEVICES.
- (9) THE FINAL LOCATION OF AIR DEVICES MUST BE COORDINATED WITH THE REFLECTED CEILING PLAN AND ALL OTHER NEW AND EXISTING MECHANICAL, ELECTRICAL, SPRINKLER, ARCHITECTURAL, AND STRUCTURAL SYSTEMS.
- (10) DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET STEEL IN STRICT COMPLIANCE WITH THE LATEST EDITION OF THE ASHRAE, NFPA, AND SMACNA GUIDE RECOMMENDATIONS. ALL DUCTS TO HAVE PITTSBURGH TYPE LOCK FOR LONGITUDINAL SEAMS AND DRIVE SLIP/ "S" SLIP FOR TRANSVERSE JOINTS. "DUCT-MATE" JOINT SYSTEM IS ACCEPTABLE IN LIEU OF PRIOR SEAM SYSTEMS. SIZES AS SHOWN INDICATE INSIDE CLEAR DIMENSIONS OF THE AIR PASSAGE. DUCTWORK SHALL BE FULLY INSULATED AS PER SPECIFICATIONS.
- (11) DUCT SIZES MUST BE VERIFIED FOR CLEARANCES AT THE JOB SITE PRIOR TO FABRICATION. DIMENSIONS MAY BE CHANGED TO ACCOMMODATE CONSTRUCTION AS LONG AS EFFECTIVE CROSS-SECTIONAL AREA IS MAINTAINED. DUCT TRANSITIONS SHALL BE CONSTRUCTED WITH A SLOPE OF 1" TO 4". ALL DEVIATIONS FROM ORIGINAL CONTRACT DRAWINGS SHALL BE REVIEWED BY ENGINEER DURING THE SHOP DRAWING PROCESS.
- (12) PROVIDE ELBOWS OR TEES WITH TURNING VANES FOR ALL CHANGES OF DUCT DIRECTION. PROVIDE SPLITTER DAMPERS WITH LOCKING QUADRANTS IN ALL TEES.
- (13) PROVIDE MANUAL BALANCING DAMPERS AS REQUIRED TO PROPERLY BALANCE EACH INDIVIDUAL AIR DISTRIBUTION SYSTEM. IF THE LOCATION OF THE BALANCING DAMPER IS NOT DEFINED ON THE DRAWINGS, THE FOLLOWING MINIMUM STANDARDS SHALL GOVERN. ALL SUPPLY, RETURN, AND EXHAUST MAIN BRANCHES FROM TRUNKS, EACH SPLIT, AND ALL SUB-BRANCHES FROM MAINS SHALL INCORPORATE BALANCING DAMPERS.
- (14) PROVIDE FLEXIBLE CONNECTIONS AT ALL DUCT CONNECTIONS TO VIBRATING EQUIPMENT. THESE CONNECTIONS SHALL BE INSTALLED IN CLOSE PROXIMITY TO SUCH EQUIPMENT.
- (15) FLEXIBLE DUCT DIAMETER SHALL MATCH THE NECK SIZE OF THE DIFFUSER TO WHICH IT CONNECTS, UNLESS NOTED OTHERWISE. TOTAL LENGTH OF FLEXIBLE DUCT RUN SHALL NOT EXCEED 5'-0". EXTEND SHEETMETAL DUCT WITHIN 5'-0" OF THE AIR DEVICE FOR COMPLIANCE. FLEXIBLE DUCTWORK IS NOT PERMITTED FOR USE IN ANY PARTS OF THE RETURN OR EXHAUST AIR SYSTEMS. FLEXIBLE DUCTWORK SHALL NOT PASS THROUGH FIRE RATED CONSTRUCTION.

- (16) FLEXIBLE DUCTWORK MUST BE INSTALLED WITH SUPERIOR WORKMANSHIP MAINTAINING FULL CROSS SECTIONAL AREA THROUGHOUT. SUPPORT FROM STRUCTURE AT 24" INTERVALS TO ENSURE FULL CROSS SECTIONAL AREA FOR MAXIMUM AIR FLOW. USE FLEXIBLE DUCT ONLY AT LINEAR DIFFUSERS.
- (17) PROVIDE FIRE DAMPERS WITH RATED ACCESS DOORS AT ALL DUCT PENETRATIONS THROUGH FIRE RATED WALLS, SMOKE AND FIRE STOPPING, SHAFTS, FLOORS, RATED CEILINGS AND PARTITIONS AS REQUIRED TO MAINTAIN ARCHITECTURAL FIRE RATINGS. REFER TO THE ARCHITECTURAL PLANS AND SPECIFICATIONS FOR LOCATIONS AND FIRE RATING REQUIREMENTS.
- (18) ALL ACCESS DOORS REQUIRED IN GENERAL CONSTRUCTION ARE TO BE PROVIDED AND INSTALLED BY THE GENERAL CONTRACTOR. ACCESS DOORS ARE INTENTIONALLY NOT SHOWN ON DRAWINGS PENDING FINAL SHOP DRAWING LAYOUT REQUIREMENTS SINCE ONE ACCESS DOOR MAY SERVICE MULTIPLE TRADES. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO IDENTIFY SIZE, TYPE AND LOCATION OF SUCH DOORS FOR PROPER ACCESS TO ALL CONCEALED EQUIPMENT REQUIRED ACCESS.
- THIS CONTRACTOR SHALL IDENTIFY THESE REQUIREMENTS ON A COORDINATED SHOP DRAWING PRIOR TO SYSTEM FABRICATION AND INSTALLATION. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THE QUANTITY, SIZE AND LOCATION OF SUM TOTAL OF ALL ACCESS DOORS WHICH ADEQUATELY SERVICE ALL TRADES.
- (19) ALL WALL AND ROOF OPENINGS 12" X 12" OR LARGER ARE TO BE EQUIPPED WITH BURGLAR BARS USING 5/8" DIAMETER RODS RUNNING 6" ON CENTER IN BOTH DIRECTIONS, AND WELDED AT ALL INTERSECTING POINTS. SECURE THE PERIMETER FRAME ASSEMBLY TO THE WALL OR ROOF FRAMED ASSEMBLY.
- (20) IT IS THE RESPONSIBILITY OF THE HVAC CONTRACTOR TO PREPARE A COMPLETE SUBMISSION DEPICTING A TOTALLY ENGINEERED COOKING EQUIPMENT VENTILATION SYSTEM BASED UPON THE FINAL APPROVED AND PURCHASED EQUIPMENT AND ACTUAL FIELD CONDITION STATIC PRESSURES. THIS SHALL INCLUDE BUT NOT BE LIMITED TO HOODS, DUCTWORK, GREASE FILTERS AND EXHAUST/SUPPLY FANS FUNCTIONING COLLECTIVELY AS A COMPLETE SYSTEM DELIVERING THE SPECIFIED DESIGN CRITERIA.
- (21) ALL CEILING MOUNTED EQUIPMENT MUST BE SUPPORTED DIRECTLY FROM BUILDING STRUCTURE WITH COMBINATION SPRING AND NEOPRENE- IN-SHEAR HANGERS AND ROD. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED TO ADEQUATELY SUPPORT THE LOAD.
- (22) FIELD ADJUST THE DIRECTION OF SUPPLY AIR, SO THAT DIFFUSERS DO NOT BLOW INTO SOFFITS, CURTAIN WALLS, REFRIGERATED FIXTURES OR EXHAUST HOODS.
- (23) ALL EXTERIOR HVAC EQUIPMENT SHALL BE INSTALLED SUFFICIENTLY AWAY FROM EDGE OF BUILDING. IN ADDITION, ADEQUATE CLEARANCES SHALL BE PROVIDED FOR CLEANING AND MAINTENANCE REQUIREMENTS. THE FINAL LOCATION OF ALL EXTERIOR UNITS MUST ALSO COMPLY WITH ALL OSHA SAFETY REQUIREMENTS.
- (24) EXHAUST FLUES THAT PENETRATE THE EXTERIOR WALL OF THE BUILDING SHALL TERMINATE WITH A WEATHERPROOF VENT CAP AND BE SEAL WEATHER TIGHT.
- (25) GUARANTEE ALL HVAC WORK AND EQUIPMENT FOR A PERIOD OF ONE YEAR FROM DATE OF STORE OPENING. DURING THE ONE YEAR PERIOD, SERVICE SHALL BE PROVIDED TWENTY-FOUR HOURS PER DAY SEVEN DAYS PER WEEK AND SHALL INCLUDE ALL SERVICE CALLS, PARTS, LABOR AND MAINTENANCE AT NO ADDITIONAL COST TO THE OWNER OR TENANT. ALL FILTERS SHALL BE CHANGED ONCE PER MONTH. IN ADDITION, ALL COMPRESSORS SHALL CARRY A FIVE YEAR WARRANTY FROM THE MANUFACTURER.

- (26) ALL HVAC SYSTEMS SHALL RUN ABOVE THE EXISTING HUNG CEILING OF THE RATED FLOOR/CEILING ASSEMBLY. PROVIDE FIRE STOPPING, FIRE DAMPERS AND RATED AIR DEVICES AT ALL PENETRATIONS TO MAINTAIN THE REQUIRED RATING OF THE EXISTING FLOOR/CEILING ASSEMBLY.
- (27) DISPOSE OF ALL MATERIALS AS DIRECTED BY AN BURGER MAKER REPRESENTATIVE.
- (28) DO NOT SCALE FROM THESE DRAWINGS.
- (29) SYSTEM BALANCE SHALL BE PERFORMED IN STRICT COMPLIANCE WITH ALL APPLICABLE CODES, REGULATIONS, PLANS AND WRITTEN SPECIFICATION.
- (30) HVAC CONTRACTOR MUST VISIT THE SITE TO CAREFULLY EXAMINE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS PRIOR TO BIDDING. SUBMISSION OF A PROPOSAL WILL BE CONSIDERED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN PERFORMED. LATER CLAIMS FOR EXTRA LABOR OR MATERIALS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED NOT BE RECOGNIZED.
- (31) ALL ROOFTOP EQUIPMENT SHALL BE PAINTED. THE COLOR MUST BE COORDINATED WITH THE ARCHITECT PRIOR TO ORDERING EQUIPMENT.
- (32) PROVIDE 120V SMOKE DETECTORS WITH AUXILIARY CONTACTS. UPON ACTIVATION, THE SMOKE DETECTORS SHALL SHUT DOWN THE AIR DISTRIBUTION SYSTEMS AND ACTIVATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL AT A CONSTANTLY ATTENDED LOCATION VIA SPRINKLER/FIRE ALARM PANEL. SMOKE DETECTORS MUST BE COMPATIBLE WITH THE INSTALLED FIRE ALARM SYSTEM.

	/	AIR BA	LANCE	SCHED	ULE	
TAG	SUPPLY AIR	OUTSIDE AIR	RETURN AIR	EXHAUST AIR	BLDG. PRESSURE	% OUTSIDE AIR
RTU-1	3000 CFM	600 CFM	2400 CFM		+ 600 CFM	20
RTU-2	2000 CFM	400 CFM	1600 CFM		+ 400 CFM	20
RTU-4	4000 CFM	800 CFM	3400 CFM		+ 800 CFM	20
EF-1				450 CFM	- 450 CFM	
EF-2				525 CFM	- 525 CFM	
EF-3				300 CFM	- 300 CFM	
TOTAL	10000 CFM	1800 CFM	7400 CFM	1275 CFM	- 525 CFM	



	FLEXIBLE CONNECTION
	DUCT MOUNTED COIL
	ELBOW WITH DOUBLE THICKNESS TURNING VANES
<u> </u>	45° BOOT TAKE-OFF W/ VOLUME DAMPER
4	BELLMOUTH TAKE-OFF W/ VOLUME DAMPER
	NOTE: NOT ALL SYMBOLS LISTED ABOVE ARE NECESSARILY USED ON THIS PROJECT.

GENERAL NOTES

DESCRIPTION DESCRIPTION EER AFF ABOVE FINISHED FLOOR **ENERGY EFFICIENCY RATIO** AFG EXHAUST FAN ABOVE FINISHED GRADE BLDG BUILDING EXHAUST GRILLE BOD **BOTTOM OF DUCT** ELECTRIC HEATER **BOTTOM REGISTER** EQUIP **EQUIPMENT** ESP BIRD SCREEN EXTERNAL STATIC PRESSURE BTU BRITISH THERMAL UNIT EWB ENTERING WET BULB FLEXIBLE CONNECTION CD CEILING DIFFUSER CFM FIRE DAMPER WITH ACCESS DOOR CUBIC FEET PER MINUTE FD CLG FULL LOAD AMPS CEILING FEET PER MINUTE CO COMPANY GENERAL CONTRACTOR COMPR COMPRESSOR COND GPM GALLONS PER MINUTE CONDENSATE CONTR HOOD CONTRACTOR CEILING REGISTER HVAC CONTRACTOR CR HC HORSEPOWER CU CONDENSING UNIT DRY BULB DB **HEATING & VENTILATING** HEATING, VENTILATING, AND AIR HVAC DN DOWN

MCA

MD, M

LEAVING AIR TEMPERATURE

THOUSAND BTU PER HOUR

MECHANICAL CONTRACTOR

MINIMUM CIRCUIT AMPS

MOTORIZED DAMPER

SYMBOL	DESCRIPTION
MOD	MOTOR OPERATED DAMPER
MU	MAKE UP AIR UNIT
OA	OUTSIDE AIR
OPNG	OPENING
PC	PLUMBING CONTRACTOR
RA	RETURN AIR
RC	REFRIGERATION CONTRACTOR
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RLA	RUNNING LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER
SA	SUPPLY AIR
SD	DUCT SMOKE DETECTOR
SDD	SMOKE DAMPER WITH ACCESS DOOR
SE	SMOKE EXHAUST
SF	SUPPLY FAN
SQ. FT.	SQUARE FEET
SR	SUPPLY REGISTER
TG	TRANSFER GRILLE
TYP	TYPICAL
VD	VOLUME DAMPER
WB	WET BULB

NOTE:

NOT ALL ABBREVIATIONS LISTED ABOVE
ARE NECESSARILY USED ON THIS PROJECT.

VENTILATION SCHEDULES

SYMBOLS LEGEND

12"NK

THERMOSTAT

DRY BULB SENSOR

HUMIDITY SENSOR

SMOKE DETECTOR

FAN CONTROL SWITCH

FLEXIBLE CONNECTION

NECK SIZES IN DUCT SPLIT

DUCTWORK W/INTERNAL LINING

ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE CONSTRUCTION CODE AND OTHER NATIONAL AND STATE CODES INCLUDING:

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

SHOULD CONFLICT BETWEEN CODES OR REFERENCES AND THE CONTRACT DRAWINGS OR SPECIFICATIONS BE OBSERVED BY THE CONTRACTOR, THE CODE OR REFERENCE SHALL BE REFERRED TO THE ENGINEER AND A WRITTEN OPINION BY THE ENGINEER SHALL BE OBTAINED.

GOVERNING CODES & REFERENCES:

2018 INTERNATIONAL BUILDING CODE. 2018 INTERNATIONAL MECHANICAL CODE. 2018 INTERNATIONAL FIRE CODE. 2018 INTERNATIONAL PLUMBING CODE.

7) CODES AND REGULATIONS INFORMATION

DWG#	DRAWING TITLE
H1.1	HVAC OVERVIEW PLAN
H2.1	HVAC PLANS & NOTES
H3.1	HVAC DETAILS
H3.2	HVAC HOOD DETAILS
H4.1	HVAC SCHEDULES
H5.1	GENERAL SPECIFICATIONS
H6.1	HVAC SPECIFICATIONS

8 DRAWING INDEX

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/ALBERT A. TAUS \

NUMBER

RELEASE FOR CONSTRUCTION

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OVERVIEW PLAN

SCALE:NONE

5 MECHANICAL ABBREVIATIONS

DRAWING(S)

EXHAUST AIR

ENTERING AIR TEMPERATURE

ELECTRICAL CONTRACTOR

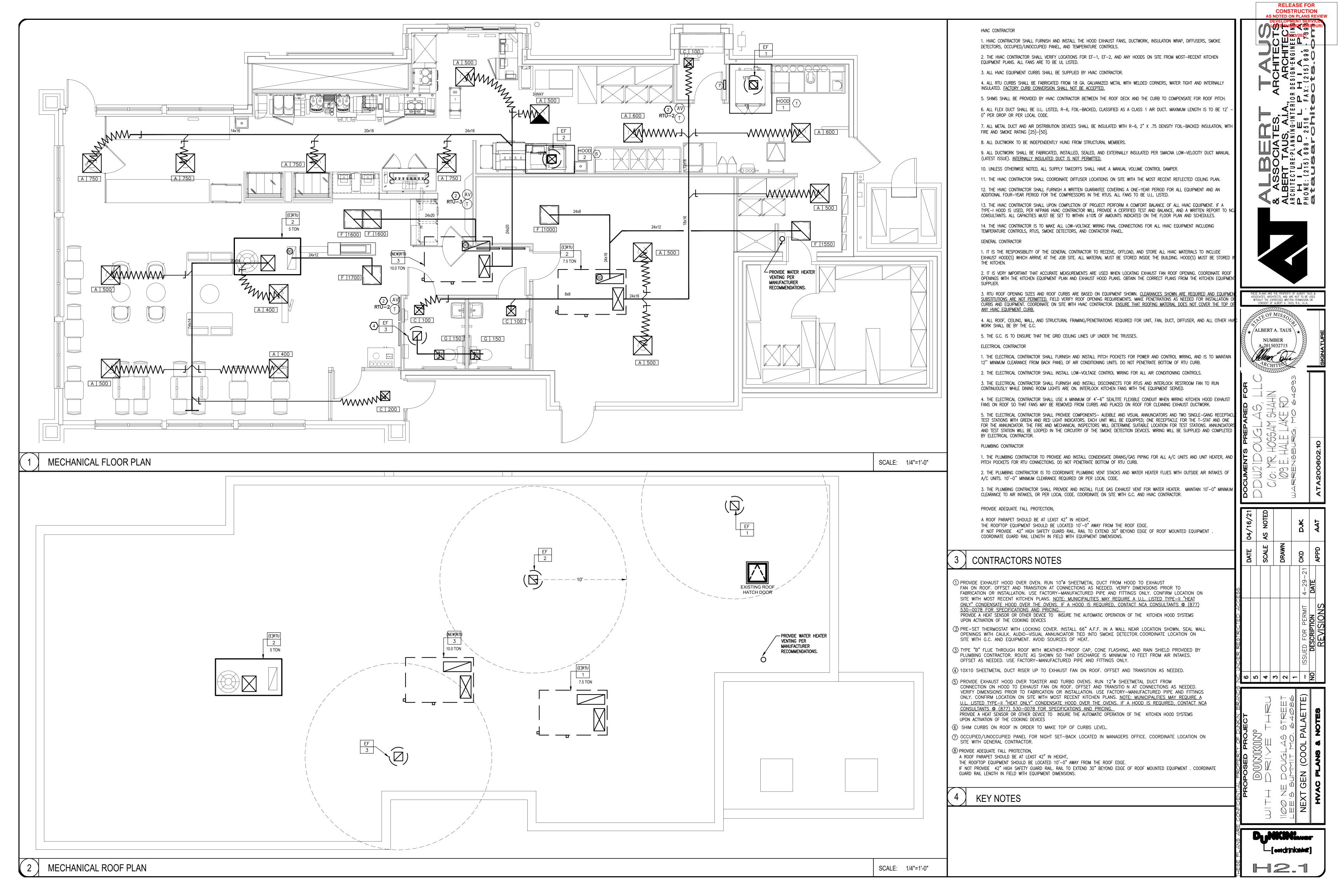
ENTERING DRY BULB

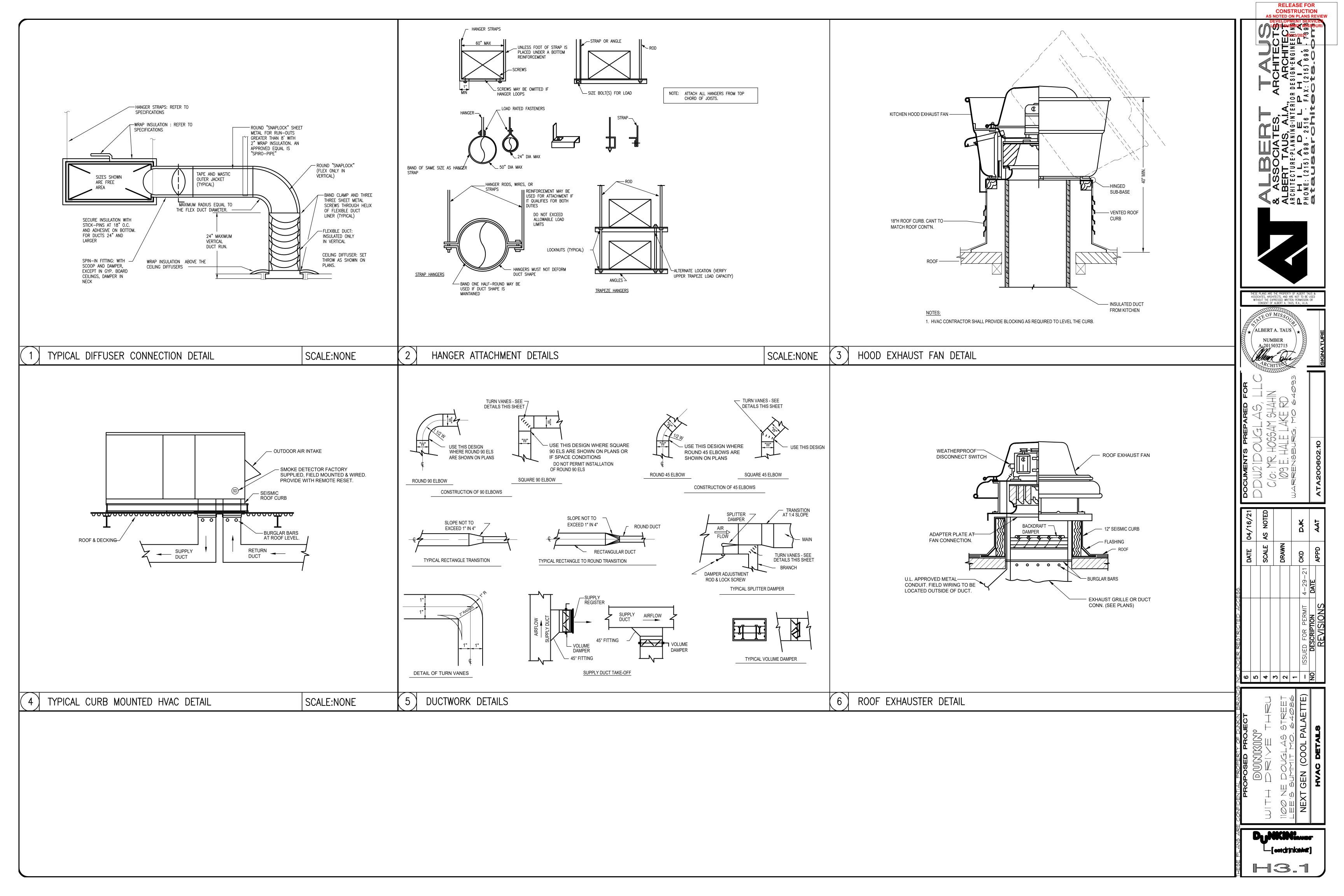
DWG(S)

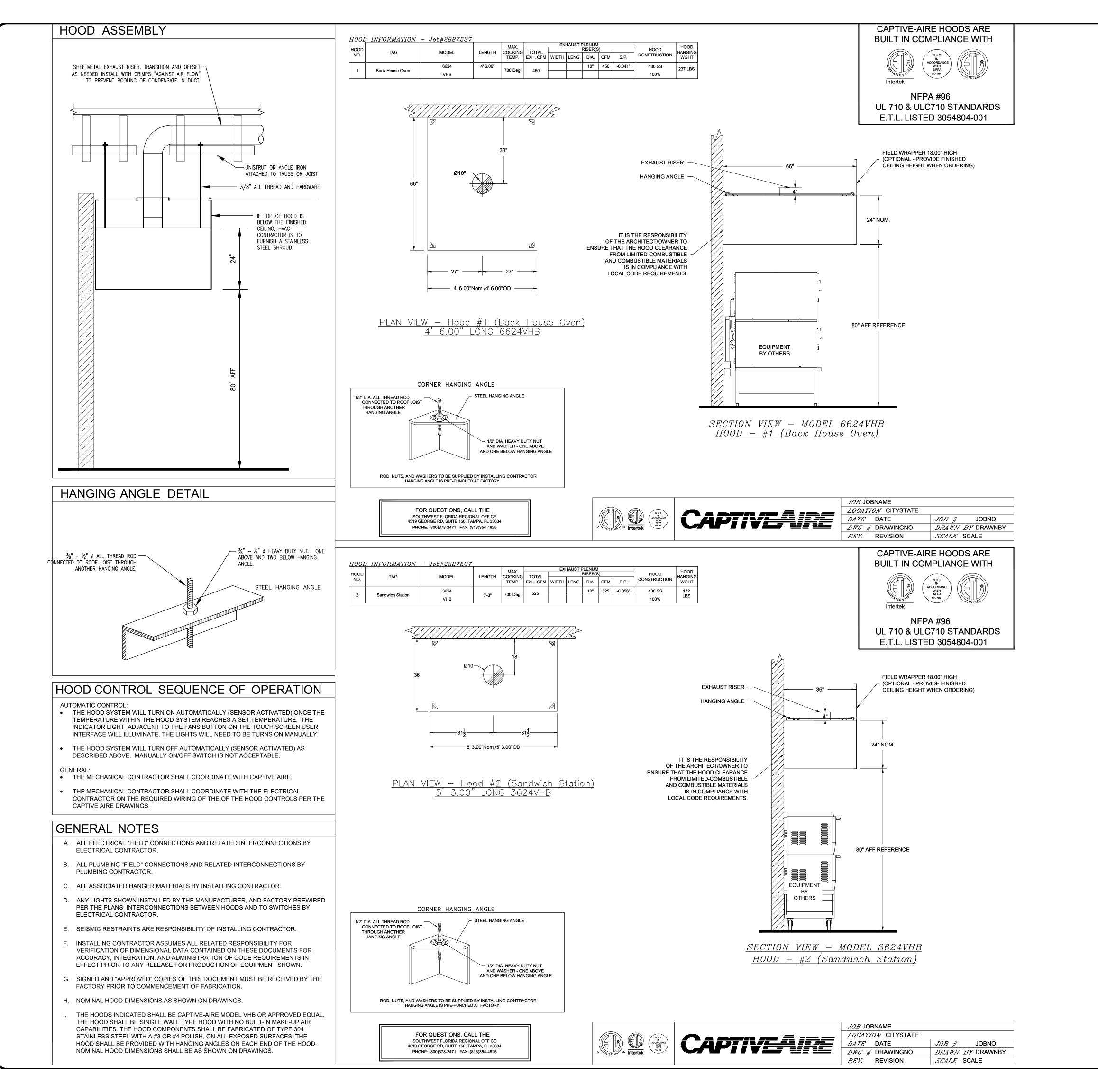
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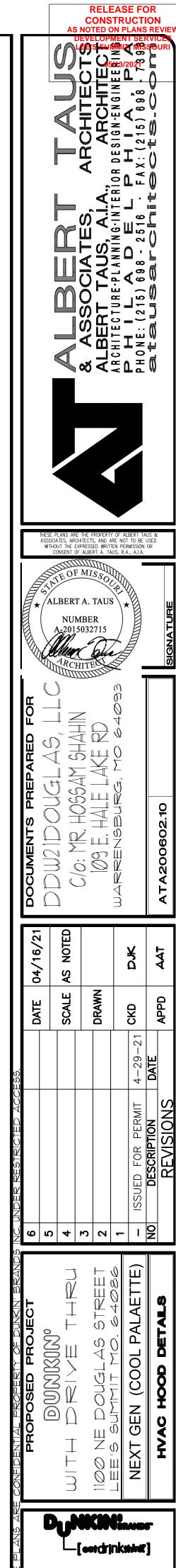
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EDB









DIFFUSER & GRILLE SCHEDULE

EF-2 UNIT NUMBER EF-1 EF-3 AREA SERVED MINI RACK OVEN TOASTER/TURBOS RESTROOMS MANUFACTURER CAPTIVE-AIRE CAPTIVE-AIRE CAPTIVE-AIRE MODEL DU33HFA DU12HFA DR08HFA 525 300 STATIC PRESSURE 0.75" 0.75" 0.50" FAN HORSEPOWER 0.25 0.25 80.0 DIRECT DIRECT DIRECT 1313 1398 1266 ELECTRICAL REQUIREMENT, V/PHASE/HZ 120/1/60 120/1/60 120/1/60 19.5X19.5X12 19.5X19.5X12 NCA CURB LXWXH @ FLANGE ACCESSORIES A,B,D,E,H,I,J,K,LA,B,D,H,E,I,J,K,LA,B,C,D,E,G,H,K,L G. INTERLOCK WITH DINING ROOM LIGHTS NOTES/ACCESSORIES A. ALUMINIZED BIRDSCREEN

I. INTERLOCK WITH EQUIPMENT SERVED

J. REFER TO KITCHEN BALANCE SCHEDULE

B. SAFETY DISCONNECT SWITCH

C. GRAVITY BACKDRAFT DAMPER

2 EXHAUST FAN SCHEDULE

D. AMCA SEAL & U.L. CERTIFIED

E. SPEED CONTROL

H. 12" HIGH PREFABRICATED ROOF CURB

K. ENSURE 10' - 0" MINIMUM CLEARANCE FROM AIR INTAKES

L. COORDINATE WITH MANUFACTURER FOR FINAL SELECTION

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW

ALBERT A. TAUS NUMBER

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SYM.	SIZE	TYPE	DUCT SIZE	MODEL#	FINISH	BOOT SIZE	OPENING SIZE
Α	24X24	SUPPLY 4 WAY	12"Ø	NCA12	WHITE	12"Ø	T-BAR
В	24X24	SUPPLY 3 WAY	12"Ø	NCA12	WHITE	12"Ø	T-BAR
E**	12X12	SUPPLY 4 WAY	6"Ø	RH-1	WHITE	12X12	SIZE + 1/4"
F	24X24	RETURN	18"Ø	RH-6	WHITE	22X22	T-BAR
G	12X12	EXHAUST	12"Ø	RH-6	WHITE	22X22	T-BAR
J	12X12	EXHAUST	6"Ø	RH-1	WHITE	12X12	SIZE + 1/4"
SR	20X8	SUPPLY	-	4004P	-	20x8	DUCT MOUNTED
RR	36X12	RETURN	-	RH	-	36X12	DUCT MOUNTED

ALL DIFFUSERS SHALL BE MANUFACTURED BY METALAIRE AND 100% ALUMINUM CONSTRUCTION

* PROVIDE WITH OPPOSED-BLADE DAMPER AND DUAL DEFLECTION BLADES

** PROVIDE WITH OPPOSED-BLADE DAMPER

HVAC UNIT SCHEDULE

(TON)

10

12. PROGRAMMABLE THERMOSTAT W/ NIGHT SETBACK AND REMOTE SENSORS FOR EACH UNIT 13. PROVIDE UNIT WITH HOT GAS REHEAT AND ASSOCIATED CONTROLS AND SENSORS FOR DEHUMIDIFICATION CONTROL.

10. UNIT SHALL BE RATED AT 95 DEGREE FAHRENHEIT AMBIENT. 11. REFRIGERANT R-410A

8. FACTORY MOUNTED 24V SMOKE DETECTOR IN RETURN PLENUM. PROVIDE W/REMOTE RESET. 9. ELECTRICAL CONNECTION TO BE SINGLE POINT AND TO BE THROUGH THE BOTTOM OF THE UNIT. PROVIDE FUSED DISCONNECT SWITCH.

7. MAXIMUM AIR VELOCITY THRU COOLING SHALL NOT EXCEED 500 FEET PER MINUTE.

6. CONTRACTOR TO ENSURE THAT OUTDOOR AIR INTAKES ARE A MINIMUM OF 10'-0" AWAY FROM ANY EXHAUST FAN DISCHARGE, PLUMBING VENT OR OTHER CONTAMINANT SOURCE.

5. UNITS SHALL BE COMPLETE WITH SIDE OUTLET DRAIN AND ACCESS DOORS.

4. STATIC PRESSURE INDICATED ABOVE IS THE EXTERNAL STATIC PRESSURE WHICH EXCLUDES ANY PRESSURE DROPS WITHIN THE UNIT.

2. UNIT SHALL BE BOTTOM DISCHARGE. 3. UNIT TO BE A COMPLETE PACKAGE INCLUDING ALL CONTROLS.

NOTES: ACCESSORIES: SELECTION IS BASED ON CARRIER. 1. POWER DISCONNECT SWITCH.

HEATING INTERLOCKED GAS SUPPLY OUTDOOR ESP MOTOR NET TOTAL SENS WITH WEIGHT NOMINALTONS NUMBER COIL EAT COIL LAT STAGES EER SOURCE INPUT OUTPUT LAT STAGES MCA MOCP (CFM) REHEAT (IN.WC) (BHP) (MBH) DB/WB (°F) DB/WB (°F) (MBH) (MBH) (AMP) YHC120 YES 4000 2.62 106.6 86.7 T-STAT DINNING AREA R-410A 800 80/67 60.26/58.39 12.4 NATURAL GAS 250 200 116.5 208/3 1800 44 60

2. HINGED ACCESS DOORS.

4. DIFF ENTHALPY ECONOMIZER.

7. OUTDOOR AIR INTAKE HOOD.

GRAVITY RELIEF DAMPERS.

11. HIGH PRESSURE CUT-OUT.

5. MOTORIZED OUTDOOR AIR DAMPERS.

10. PROVIDE SPACE TEMPERATURE SENSORS

12. SEISMIC CURB SLOPED TO MATCH ROOF. REFER

TO ARCHITECTURAL DRAWINGS FOR ROOF SLOPE.

CONVENIENCE OUTLET.

6. 2" PLEATED AIR FILTER.

AIR FLOW SWITCH

NEW ROOFTOP UNIT SCHEDULE

15000.01 GENERAL

A. The requirements included under this part are supplementary to those contained in the respective Plumbing, Sprinkler, Heating, Ventilating, Air Conditioning and Electrical Specifications and form a part of these individual specifications.

15000.02 DEFINITIONS

A. Contractor's attention is called to "Definitions" in General Conditions. In addition, the terms "provide" and/or "furnish" shall be understood to include supplying, placing, and/or installing, connecting, and delivering for use, for purpose intended.

B. The word "Contractor" and the term "This Contractor" are hereby interpreted to mean the individual, co-partnership firm or corporation to whom the contracts for the Plumbing, Sprinkler, Heating Ventilating, Air Conditioning and Electrical installation has been awarded.

15000.03 PERMITS AND CERTIFICATES

A. Contractor shall secure and pay for all licenses, permits and inspection fees required by local agencies and/or other agencies having jurisdiction for the performance of his part of the work. Contractor, by submitting his bid, agrees to furnish any additional labor or material required in order to comply with all local and other agencies having jurisdiction at no additional cost. Contractor shall obtain certificates of inspections and approval from all authorities having jurisdiction and forward copies of same to Architect for completion of files prior to final acceptance of work.

15000.04 CODES, RULES AND REGULATIONS

A. Contractor must fully acquaint himself with and abide by all laws, rules and regulations of all authorities having jurisdiction and as required to furnish all materials and perform all work under this Contract in strict accordance with such laws, rules and regulations.

B. Contractor shall procure all necessary permits and licenses to carry out his work and pay for all lawful fees therefore. He shall also give the proper persons all requisites or desired notices relating to the work.

C. Rules and regulations shall be complied with as set forth in the latest edition of the following works, including any supplements thereto, that may be in effect.

- 1. National Electrical Code
- 2. STATE Building Code, Mechanical Code and Plumbing Code
- 3. National Fire Protection Association4. All applicable regulations of the Utility Companies
- 5. All applicable State and Local Codes

15000.05 DRAWINGS AND SPECIFICATIONS

A. Accompanying drawings show in diagrammatic form the desired arrangement and principal apparatus, piping, ductwork, wiring, etc., and shall be followed as closely as possible, but proper judgment must be exercised during installation to secure maximum headroom and space conditions throughout, to obtain a neat arrangement of piping, ductwork and equipment, and to overcome local difficulties and interference of structural or other prevailing conditions where

B. If Contractor deviates from drawings unnecessarily, he shall furnish, at his own expense, any additional labor and materials which may be necessary to correct the work.

C. Exact locations and arrangements of all parts shall be determined as work progresses — the work in all details being subject to approval of Architect, whom decision on all points in question shall be final and binding upon the Contractor.

D. Contractor shall note that all service connections may not be shown in true position. Each bidder is cautioned to verify same with field conditions.

15000.06 RECORD DRAWINGS

A. During construction, Contractor shall keep an accurate record of all deviations between work as shown on drawings and that which is actually installed.

Particular attention is directed to invert elevations, location of underground lines, change orders, etc.

B. Upon completion of the job, Contractor shall deliver to the Architect a complete set of drawings prepared upon Mylar reproducibles, showing all changes and revisions, including all change orders, bulletins and supplementary drawings to the original design. Preparation of record drawings shall be carried on by Contractor, at his own expense, as job progresses. Record drawings shall be submitted and approved before final payment for completed work will be made.

15000.07 INSURANCES

A. In addition to insurance requirements called for in the General Conditions and Supplementary General Conditions, the following insurance shall be included as part of the Contract:

B. Indemnification: The Contractor hereby agrees to hold harmless, indemnify and defend the Tenant, the Owner's agent, Architect, the Consulting Mechanical—Electrical Engineer, and the Owner's employees while acting within the scope of their duties from and against any and all liability, claims, damages, and cost of defense arising out of the Contractor's performance of the work described herein, but not including the sole negligence of the Owner, his agents or employees. The Contractor will require and any all Subcontractors to conform with the provisions of this clause prior to commencing any work and agrees to insure this clause in conformity with other insurance clauses specified

15000.08 SUBSTITUTIONS

A. When a product or materials is specified by name, such specification establishes the standard type and quality considered most satisfactory for a particular purpose and the proposal shall be based thereon so that all bid under the same conditions. Where more than one product manufacturer is specified, the first named product is that product on which the design concept has been based. If additional products are named as approved manufacturers, or the term "approved equal" is stated, such work is construed to mean such products are considered equal in quality. Contractor, however, shall assume any and all additional costs necessary, in his or other trades required by utilization of such product, equipment or accessories.

B. Product or material of another manufacturer of the same type, and which meets the requirements, may be submitted for consideration as a substitute under the following conditions:

1. Request for substitutions must be submitted to the Architect and Owner in writing at least ten (10) days prior to the date set for the receipt of bids.

Substitute items must be accompanied by full descriptive and technical data.
 Bidders will be notified only if the proposed substitutes will be approved by the Architect and Owner prior to the

receipt of bids.

4. No changes or substitutions allowed unless approved as outlined.

5. Contractor assumes the costs necessary for revisions in his and other trades due to proposed substitutions.

15000.09 SHOP DRAWINGS AND COST BREAKDOWN

A. Refer to General Conditions.

B. Number of copies, diagrams, schedules, etc., submitted must bear stamp of approval of Contractor as evidence that he has checked them, otherwise, they will be returned for checking and resubmitting.

C. No material or equipment shall be ordered or installed before approval has been obtained. Any material or equipment installed without approval may be ordered removed and replaced with approved products at the Subcontractor's expense.

D. Catalog data for equipment approved by the Engineer does not, in any case, supersede the Engineer's Contract Documents. The approval of the Engineer shall not relieve the Contractor from responsibility for deviations from drawings or specifications, unless he has in writing called the Engineer's attention to such deviations at the time of submission, nor shall it relieve him from responsibility for errors of any sort in the items submitted. The Contractor shall check the work described by the catalog data with the Engineer's Contract Documents for deviations and errors.

E. It shall be the responsibility of the Contractor to ensure that the items to be furnished fit the space available. He shall make necessary field measurements to ascertain space requirements, including those for connections, and shall order such sizes and shapes of equipment that the final installations shall suit the true intent and meaning of the drawing specifications.

F. Corrections or comments made on the shop drawings during the review period do not relieve Contractor from compliance with requirements of the drawings and specifications. This check is only for review of general conformance with the information given in the Contract Documents.

The Contractor is responsible for confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work and that of all other trades; and performing his work

G. Prepare and submit shop drawings, manufacturer's drawings and/or samples of all equipment, material, and accessories specified. Sections, elevations, names, sizes, catalog numbers, dimensions, materials, capacities, performance, and any details necessary for complete clarity shall be included. All dimensions and mountings shall be verified at the job site.

H. Where equipment requiring different arrangement or connections from those shown is approved, it shall be the Contractor's responsibility to install the equipment to operate properly and in harmony with the intent of the drawings and specifications, and to make all changes in work required by the different arrangement of connections. All changes shall be made at no increase in the contract amount or at additional cost to the other trades or Owner.

I. Shop drawing submittals covering several pieces of types of equipment (i.e. panelboards, lighting fixtures, temperature controls, plumbing fixtures, etc. will be treated as a unit and the entire submission will be approved or disapproved. Individual types or sections will not be acted upon separately.

15000.10 MATERIAL AND LABOR

A. All materials shall be new and of the best quality of their respective kinds; workmanship shall be in all respects of the highest grade; and all construction shall be done according to the best practice of the trade.

15000.11 STORAGE OF MATERIAL, TOOLS, ETC.

A. All work necessary to deliver, store and protect materials and equipment shall be done by Contractor and he shall provide sufficient sheds for safe storage. Location of sheds shall be as directed by the Architect or Tenant field

15000.12 CUTTING AND PATCHING

A. The Contractor, or any of his Subcontractors, who requires an opening, chase or other provision for his work in the construction shall furnish full information of size and location, by drawings or in writing, to the General Construction Contractor, and in ample time for such provision to be made.

B. Should information not be sufficient, or should such information be delayed (for any reason whatsoever), the Contractor requiring such opening, chase, etc., shall coordinate the services of the General Contractor to provide for all cutting and patching to accommodate his work, and this Contractor shall bear all costs in connection thereto.

C. All floors, walls, ceilings etc., must be core—drilled and saw—cut. Particular attention must be given to the structural conditions. All cuts and drillings shall be approved by the Structural Engineer before performing such work.

D. All required patching, other than provided by the General Contractor, shall be done by the skilled trade normally associated with the type of finish and materials to be cut and patched. The Contractor shall employ the proper tradesmen necessary to perform all patching. This work shall match adjacent construction and finish as approved by

E. The General Contractor will build into his work, sleeves for any and all items furnished and set by the Contractor.

F. Openings, chases, cutting of trusses, girders or similar structural items shall be absolutely avoided and the Contractor who provides, builds or does such work shall be held responsible for changes and for damage and repairs resulting from failure to observe this provision.

G. All drilling and patching for expansion bolts, hangers and other supports shall be done by the Contractor subject to approval of the Architect.

H. It is the responsibility of each contractor to accurately mark areas within the existing slab or structure which require cutting or core drilling. Prior to commencing this work, these areas must be visually inspected and x—rayed to determine the presence any existing mechanical, electrical, architectural and structural systems. If any systems have been identified and located precautionary measures must be taken to prevent any damage to these existing systems. If in the course of cutting and drilling these systems become damaged, it shall be the responsibility of the respective contractor to pay for all repairs and be liable for all related expenses.

15000.13 OFFSETS, TRANSITIONS, AND CHANGES IN DIRECTION

A. Offsets, transitions and changes in direction of pipes, ducts, and electrical raceways shall be made as required to maintain proper headroom and pitch of sloping lines whether or not indicated on drawings. Contractor shall install all these offsets, transitions and changes in direction at no additional cost.

15000.14 ESCUTCHEONS AND SLEEVES

A. The Contractor shall provide escutcheons on pipes and conduits wherever they pass through floors, ceilings, walls or

B. Escutcheons for pipes passing through outside walls shall be solid cast brass, flat type, secured to pipe with a set screw.

C. Escutcheons for pipes passing through floors shall be split— hinged, cast brass, chromium—plated type, designed to fit on one end and cover sleeve projecting through floor on other end.

D. Escutcheons for pipes passing through interior walls, partitions and ceilings in finished areas shall be split—hinged, cast brass, chromium—plated type. Mechanical rooms, etc., shall not require escutcheons.

E. Where piping and conduit passes through interior masonry walls or partitions, concrete beams, etc., furnish and install sleeves (minimum 16 gauge steel) for passage of pipes.

15000.15 MOTORS

1. Insulated piping (as hereinafter specified) shall be run continuous through the sleeves.

2. Sleeves shall allow for full expansion of piping systems.

3. Where sleeves are installed after erection of masonry walls, masonry shall be core—drilled to receive sleeve. After sleeve has been located and set, opening between masonry and sleeve shall be grouted. If concrete has been core—drilled, sleeves may be eliminated.

4. All floor sleeves shall extend a minimum of 2 inches above finished floor.

5. All sleeves or openings shall be sealed tight with an approved fire barrier method as manufactured by 3—M; Dow—Corning, or approved equal.

F. Where waterproof or airtight sleeves are required, such as exterior walls (above or below grade), mechanical equipment room walls and floors, etc., provide sealing bushings.

1. For membrane conditions provide suitable membrane clamp adapters or fittings.

2. Sealing bushes shall be Link—Seal manufactured by Thunderline Corp., or equal Types FSK—CSM as manufactured by O.Z. Electrical Manufacturing Corp.

G. Where fire—rated and/or smoke partitions sleeves are required, and at all floor penetrations, and at walls, as shown on the architectural drawings, provide Pyro—Pac rated seals manufactured by Thunderline Corp., or equal as manufactured by Pipe Shields, Inc.

15000.16 EXISTING CONDUITS, SEWERS, PIPES, ETC.

A. Do everything necessary to protect, support, and sustain all sewers, water or gas pipes, service pipes, electric lines, power, telephone or telegraph poles, conduits, and other fixtures laid across or along the site of the work.

permanent split capacitor start and run type with built—in overload protection. The Architect, as well as the company or corporation owning said pipes, poles, or conduits, shall be notified of same before any such fixtures are

If any sewer, gas or water pipes, service pipes, electric lines, power, telephone or telegraph poles, conduits or other fixtures are damaged, they shall be repaired by the authorities having control of same. Costs for such repairs shall be borne by the respective Contractor causing this extra work.

B. Should it become necessary to change the position of temporarily remove any electric conduits, water pipes, gas pipes, or other pipes or wires so as to permit the use of a particular method of construction, or to clear the structure being built, the Contractor shall notify the Architect of the location and circumstances and working procedures shall be stopped, if necessary, to remove and/or relocate such pipes and wires after consultation with the Owner and/or Architect. The cost of changes or temporary removal shall be borne by the respective Contractor.

15000.17 SEISMIC RESTRAINTS - SUPPORTS AND FASTENINGS

A. It shall be this Contractor's responsibility to ensure that the entire installation conforms with the Seismic Restraint requirements in accordance with STATE Code, based on the Specific Seismic Zone, SMACNA Guidelines for Seismic Restraints of mechanical systems, all Local Codes, and NFPA-13 and 14 (for fire protection systems). If necessary, this Contractor shall employ services of a qualified and licensed Seismic Restraint Engineer. The cost of the entire seismic restraint design and installation shall be included in the primary contract price.

B. Support and fastening of all mechanical and electrical equipment including lighting fixtures shall be furnished by this Contractor. All equipment hung from overhead construction shall have the equipment weight distributed through the application of angle or channeled iron supports, to be approved as necessary, substantially fastened to the load bearing point of the structural support system. This arrangement must be approved by the Architect and Structural Engineer prior to commencement of construction

Any wall mounted equipment which cannot be supported from architectural or structural materials shall have its own dependent support system furnished by this Contractor.

Proposed installation method shall be as approved by Architect.

15000.18 DAMAGED WORK

A. Each Contractor shall protect and leave in perfect condition all materials, apparatus, fittings, fixtures, and trim in the scope of his Contract. Should any items be damaged or broken, or workmanship disturbed, no matter by whom such damage is caused, the work shall be corrected and damaged items replaced with new materials at no additional cost to the Owner. Any work which needs redoing because of damage shall be done by the skilled trade which originally performed such work.

B. Neither the Owner nor the Architect and/or Consulting Engineer shall be involved in the settling of any dispute between the Contractors relative to the extent and cause of damage to work or materials.

15000.19 ACCESS DOORS

A. Access doors shall be furnished by respective Contractors, set and installed by General Construction Contractor.

Access doors shall be provided for valves, cleanouts, dampers, gauges, shock chambers, pull boxes, electrical devices, and adjustment of apparatus, where necessary and required, in portions of building where equipment is concealed (ceilings, walls, floors).

B. Access doors shall be angle frame, cold rolled steel, shaped to provide a recess on four (4) sides to contain door and confine surface.

C. Access doors to be similar to Milcor as manufactured by Inland Steel Products Co., Style K for plastered wall and ceilings, Style DW for drywall, Style M for masonry and tile walls, Style AT for tile ceiling areas. A minimum size of 12"X12" access door shall be furnished. Larger sizes shall be furnished if the nature of inspection or service requires same (example — hung ceiling—mounted cabinet heater). Provide fire—rated doors where required in rated walls and ceilings.

D. Where hung ceilings consist of concealed spline—type ceiling tiles, such tiles in which equipment, valves, dampers, gauges, etc., all as described in subparagraph above, shall be identified with aluminum markers.

E. Where hung ceilings utilize an exposed grid lay—in type, such lay—in ceiling will act as access door but be identified with aluminum markers.

15000.20 IDENTIFICATION

A. Identification shall be in accordance with "Scheme for Identification of Piping System ANSI A13.1" and OSHA safety color regulation.

B. Markers shall be snap—on type as manufactured by Seton Nameplate Corp., New Haven, Conn. (Setmark System), Bunting Stamp Co. Inc., Pittsburgh, P.A. or approved equal. Markers shall completely encircle the pipe with a substantial overlap. No adhesive shall be used. They shall be manufactured of U.L. approved, self—extinguishing plastic. When the pipe including insulation (if any) is larger than six (6) inches diameter and larger, markers shall be strap—on type.

C. Provide identification for all piping and ductwork.

D. All piping (concealed or exposed) shall be stenciled with the service, size of pipes, and directional arrow of flow at the supply side of all junctions, valves, etc., and at intervals of twenty (20) feet on horizontal runs of pipe. Stenciling shall be black, except where finished coat is black, in which case aluminum shall be used. Stencil lettering shall be 1" in height. Marking pen lettering will not be accepted.

E. Sample of Stenciling: A sample of the stenciling information and arrangement is as follows: > Service Pipe Size Direction

> Heating Hot Water Supply (HWS) 2" Directional Arrow

> Cold Water (CW) 2" Directional Arrow 15000.21 FOUNDATIONS

A. Concrete foundations shall be provided for all apparatus and machinery including, but not limited to, motors, fan equipment, boilers, pumps, compressors. Foundations shall extend at least 6" above the floors. Foundations shall be of 3,000 psi concrete. Anchor bolts and washers shall be furnished and built into the foundation with proper sized sleeves. Foundations shall be finished with beveled edges.

Foundations of compressors shall be isolated from concrete slab with corkboard of equivalent insulation devices which will preclude noise from being communicated to other parts of building beyond the room in which machinery is located. Concrete work shall conform to the same requirements as those included under Section "Concrete Work."

15000.22 NAMEPLATES

A. Provide lamacoid or approved equal nameplates on disconnect switches, motor starters, toggle switches, push button stations, PE, EP switches, and all other equipment and control devices (including pumps, fans and panelboards).

B. Sample of nameplates and schedule of locations shall be submitted for approval prior to fabrication and installation.

15000.23 PAINTING

A. Materials for painting shall be standard brands of ready—mixed paints approved by the Architect. All surfaces to be painted, whether covered or not, shall be done after testing, and prior to covering. All surfaces shall be free of dirt, rust. or other extraneous matter.

B. Related Work not in Contract: Finished painting of all exposed work, piping, electrical equipment, iron work, etc., unless specified below, is not in this Contract.

C. Piping: Piping to be painted — Before covering is applied to piping which is concealed, all ferrous pipe, fittings and hangers furnished and installed under this Contract shall be applied with one (1) coat of asphaltum or other approved heat and moisture—resistant paint.

D. Exposed pipe threads in bare or insulated piping shall be thoroughly cleaned and painted with two (2) coats of

E. Ductwork: Inside of all ducts for a satisfactory distance behind registers and grilles shall be painted with two (2) coats of flat black.

F. Metal surfaces of all equipment supplied without factory prime coat shall be thoroughly cleaned and painted with two (2) coats of rust—proof primer ready for finish coat.

H. All exposed ferrous metal shall be prime coated in accordance with Section 15000.23 Painting.

15000.24 DRIP PANS

A. Drip pans shall be installed under horizontal water pipes where pipe joints occur within two (2) feet, in a horizontal direction of electrical equipment and panels. Pans shall be not less than 1-1/2" deep, suitably reinforced, and rigidly supported. Drains 1/2" in size shall be run to nearest slop sink or floor drain. Material shall be of galvanized steel, sizes as approved. No piping shall be installed above electrical equipment unless specifically indicated on the

15000.25 MANUFACTURER'S REPRESENTATIVE

A. Each Contractor shall provide, at appropriate time or as directed by Architect/Engineer the services of a competent factory—trained Engineer of the particular manufacturer of equipment or item involved, so as to inspect, adjust, and place in proper operating condition any and all items of manufacturer. No additional compensation shall be allowed to Contractor for such services.

15000.26 MANUFACTURER'S INSTRUCTIONS

A. Each Contractor shall provide for each item of equipment of apparatus furnished, a complete set of printed instructions obtained from manufacturer covering operation, care, lubrication, cleaning, servicing, adjusting, etc., together with particular special safety instructions. Instruct Owner's representative who will operate equipment in all such details.

15000.27 MANUFACTURER'S DIRECTION

A. Manufacturer's directions shall be followed in all case where manufacturer furnishes directions covering points not shown in drawings and specifications.

15000.28 OPERATING MAINTENANCE AND INSTRUCTION DATA

A. Data: Submit to the Architect/Engineer for approval prior to acceptance of the installation, complete and at one time. Partial or separate data will not be accepted. Data shall consist of the following minimum submissions

1. Valve Directory: Indicating valve locations and functions for each numbered valve. Submit four (4) copies. Plumbing, Heating and Sprinkler Directories shall be separate listings.

2. Operating and Maintenance Instructions: Typewritten step—by—step operating and maintenance instructions, catalogs, data and prints covering, pumps, air conditioning equipment, automatic temperature controls, all plumbing equipment, plumbing fixtures (all accessories), electrical equipment, electrical systems, sprinkler systems.

3. The following shall also be included in these manuals: Automatic control wiring diagrams.

4. Furnish to the Owner one (1) frame chart under laminated clear plastic of each of the above; hang in Equipment Room, or as directed by Owner. Provide grommets for mounting on wall.

B. Maintenance Schedule: A list of each item of equipment requiring maintenance showing the exact type of bearing of every component of each item of equipment and the month of the year when each item of equipment should be inspected or serviced.

C. Binders: Three (3) complete sets of the above data in loose—leaf ring—type binders with permanent covers with permanent identification on back for Owner's use.

Plumbing, Sprinkler, Heating, Ventilating, Air Conditioning and Electrical data shall be in separate binders.

D. Instructions: Contractor shall instruct a representative of the Owner as to the operation of all systems. The instructions shall include the operation of the Heating, Ventilating and Air Conditioning System, Temperature Controls, Plumbing Systems, Sprinkler Systems, and Electrical Systems. Contractor shall go over the entire work with the Owner's representative showing him all locations of control valves, motors, etc., instructing him on how to lubricate, how to disconnect motors, etc.

E. Responsibility for HVAC Controls: HVAC Contractor shall bear full responsibility for proper installation and operation of all HVAC controls. He shall bear all expenses which arise due to any changes or additional (including affected work of other trades) necessary for the operation of those controls as required.

15000.29 CLEANING

A. Each Contractor shall keep the work area and its surroundings in an orderly and clean condition and shall, periodically, or when so directed by the Architect/Engineer and Owner clean up and remove from the premises all rubbish resulting from his work.

B. Before acceptance, Contractor shall thoroughly clean all fixtures, machines,, apparatus, or piping of dust, stains

grease, oil paint, etc., to satisfaction of the Architect and Tenant.

Chrome—plated parts to piping shall be polished clean in an accepted manner. Marred or scratched sections or units

shall be replaced with new materials.

15000.30 FINAL APPROVAL

A. Upon written approval notification by the respective Contractor that his work is completed and ready for acceptance, inspections and tests shall be performed by the Contractor as directed by, and in the presence of the Architect/Engineer. Upon failure to comply with the Contract Requirements, the respective Contractor shall at once remedy all defects and shortcomings, and perform any additional required tests at his expense.

15000.31 GUARANTEE

A. Contractor shall guarantee in writing all labor and materials for a period of one (1) year from date of substantial completion, which guarantee shall include an agreement to repair and make good or replace at his own expense any and all defects which may appear in his work, equipment, apparatus, or materials during that period, which arise from defective workmanship, imperfect or inferior materials. Repair or replacement shall mean materials erected in place.

B. When special guarantees covering installation, operation, or performance of any systems or appliances furnished under Mechanical and Electrical Contracts are herein required, full responsibility for fulfillment of such guarantees must be assumed by the Contractor, who shall obtain written guarantees in triplicate from any and all Subcontractors — two (2) copies to be filed with the Architect/Engineer before final acceptance.

15000.32 ADDITIONAL SECTIONS

A. Refer to individual sections of plumbing, heating, ventilating and air conditioning, sprinkler and electrical for all or any alternate bid proposals.

END OF GENERAL SPECIFICATIONS

ALBERT TAUS, A.I.A., ARCHITECTURE-PLANNING-INTERIOR DESIGN-ENGINEER PHONE: (215) 698 - 2516 - FAX: (215) 698 - 7

RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW

THESE PLANS ARE THE PROPERTY OF ALBERT TAUS
ASSOCIATES, ARCHITECTS, AND ARE NOT TO BE USE
WITHOUT THE EXPRESSED WRITTEN PERMISSION OR
CONSENT OF ALBERT A. TAUS, R.A., A.I.A.

ALBERT A. TAUS

NUMBER

A-2015032715

DOCUMENTS PREPARED FOR

DDW21DOUGL AS, LLC

C/O: MR. H055AM SHAHIN

109 E. HALE LAKE RD

WARRENSBURG, MO 64093

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HVAC SPECIFICATIONS

15700.01 GENERAL

- A. Provisions of the General Conditions and Supplementary General Conditions, whether attached hereto or not, shall govern all work under
- this Section B. All work covered under the following HVAC specifications and contract drawings is to be provided and installed by and is to be the responsibility of the HVAC Contractor, here in referred to as the Contractor.
- C. Where manufacturers' names, catalog numbers, or trade names appear in the specifications, it is not the intent to restrict or eliminate competition, but merely to establish quality of material required. Where the words "or approved equal" appear the "equal" item must conform to the requirements of the specifications and must be submitted with complete information to the Engineer for approval. It is important to note that all costs of additional work required of other trades caused by a substitution of equipment and/or materials shall be borne by the Contractor.
- D. For further details of the installation requirements, refer to the Fixture Plans. Floor Plans, Plumbing Plans, Electric Plans, Air Conditioning, Heating and Ventilation Plans, manufacturer's installation instructions and all applicable codes and ordinances.
- E. The Contractor shall furnish and install all required components and accessories necessary to facilitate a complete installation, including all labor required to complete the installation and perform the service covered by this specification. The Contractor is responsible for unloading, assembling, and installing all HVAC equipment and related items unless otherwise specified.
- F. The Contractor shall familiarize himself with the project and shall cooperate with other Contractors doing work in the building. If any conflict, interference or discrepancies come to the attention of the Contractor, he shall notify the Architect immediately, before proceeding any further the installation.
- G. No additional payment over and above the contract price will be made unless the Contractor receives a written order by the Tenant or his Representative for the additional work.
- H. Prior to submitting the proposals, the Contractor shall examine all drawings, specifications, and other available estimating data, and shall become fully informed as to the extent and character of the work required, and it's relation to the other work in this project. No consideration will be given for any alleged misunderstanding of the materials to be furnished or work to be done; it shall be clearly understood that the submission of a proposal indicates a complete understanding of and agreement to all the items and conditions specified herein, or indicated on the drawings.
- I. Plans and specifications are complementary to each other, any discrepancies indicated on different drawings, or between drawings and specifications, or between drawings and actual field conditions, or errors shown on either drawings or specifications shall be promptly brought to the attention of Architect for decision prior to bid submission.

15700.02 DESIGN CONDITIONS

A. Outdoor design conditions are to conform to values for the specific location as outlined in ASHRAE Handbook Fundamentals Volume, listed in Appendix A, from columns of 97-1/2 percent values for heating and 2-1/2 percent values for cooling.

15700.03 SCOPE OF WORK

- A. The Contractor shall furnish all labor, materials, equipment, rigging, appliances, tools and accessories required to provide, install, connect, and test the complete heating, ventilating and air conditioning system and associated equipment in accordance with these specifications and the
- B. The HVAC Contractor shall give all necessary notices, obtain all permits and pay all taxes, fees and other costs in connection with his work. The Contractor shall file all necessary approvals of all departments having jurisdiction, and obtain all required certificates of inspection for his work and deliver same to the architect before request for acceptance and final payment for the work. The Contractor shall include in his scope of work. without extra cost to the Owner, all labor, materials, services, apparatus, drawings (in addition to contract drawings and documents), in order to comply with all applicable codes, laws, ordinances, rules and regulations.
- All materials furnished and all work installed shall be in strict accordance with the requirements of the Tenant and all applicable codes and regulations, including but not limited to the latest applicable editions of the ASHRAE Guide and Data Book, UL, ASME, NEMA, IBR, AMCA, NEC, NFPA,IEEE,OSHA,SMACNA,INTERNATIONAL Mechanical Code, and Building Code
- In addition, the Contractor shall be responsible to ensure that all HVAC work is provided and installed in strict accordance with STATE Seismic Requirement.
- Refer to related Mechanical Specifications, Section 15160. Scope of work shall include, but not be limited to:
- * Exhaust Fans
- * Air Devices including diffusers, registers and grilles * System Test and Balance
- * Warranty for One Year

15700.04 CONTRACT DRAWINGS

- A. The drawings are intended to show the general arrangement and the extent of the work to be done, however, the exact location and arrangement of all parts shall be determined as the work progresses.
- B. The locations of all ducts and equipment as shown on the plans are approximately correct, but they are subject to such modifications as may be necessary at the time of installation to meet any conditions. Such changes shall be immediately reviewed with the Architect and instituted by this Contractor without extra cost.
- C. The locations of all parts and equipment shall be coordinated with the work of all other trades prior to submitting shop drawings for fabrication and equipment purchase approvals.

15700.05 SHOP DRAWING REVIEWS AND APPROVALS

- A. All detailed equipment cuts, shop drawings, substitutions, changes, etc. must be submitted to Architect, and Owner Representative for final review and approval prior to purchasing, fabricating or installing any portion of the HVAC contract.
- B. Shop drawings must show all HVAC components with ductwork drawn in double line, at a scale of 1/4" = 1'-0". These drawings must be fully detailed, dimensioned and coordinated, indicating all other trades and disciplines.
- C. Furnish to the Architect for review, six(6) copies of such equipment submittals and setting drawings or diagrams as may be required for the proper execution of the work. Provide one(1) set of reproducible sepias and two(2) sets of blueprints for all sheet metal work to Architect for use in review process
- D. Contractors may make necessary adjustments to suit conditions and in order to comply with the guarantee of performance of the systems. Approvals must be obtained from the Architect before proceeding with the installation changes.
- E. Approvals must also be obtained from local and state authorities, insurance underwriters, or other agencies having jurisdiction.
- F. All wiring diagrams of thermostats, dampers, interlocks etc. shall be included on shop drawings or if submitted separately, six copies shall be provided prior to any installation of the HVAC contract.
- G. Contractor is to submit accurate as built mylar sepia shop drawings reflecting all changes to Architect and any Owner Representative prior to request for final payment.

15700.06 DETAILS OF EQUIPMENT

A. Submit for approval six(6) copies of the manufacturer's detailed certified dimensional drawings of all equipment.

15700.07 SUBSTITUTIONS

- A. As noted on the plans and described on the schedules, substitutions must satisfy all requirements and must be approved by the Architect.
- 15700.08 MATERIALS AND LABOR A. All materials shall be new and must meet the standards as stipulated in the latest edition of ASHRAE Guide and Data Book.
- B. Good workmanship and labor shall be performed by qualified mechanics and must comply with ASHRAE Standards.

15700.09 ORDINANCES, SERVICES, PERMITS AND FEES

- A. As required for the proper installation, all work shall be provided by the Contractor in full accordance with the requirements of all local, state and national bureaus, board of fire underwriters and authorities having iurisdiction, without additional expense to the Owner.
- B. Contractor shall pay for and obtain all necessary permits prior to work
- C. Contractor shall prepare, at his expense, any and all shop drawings as required to obtain permits and approvals

These documents shall be signed and sealed by a duly licensed engineer as required by the authorities having jurisdiction.

- 15700.10 CHASES, CUTTING, PATCHING, ETC. A. All chases, roof openings, cutting and patching shall be the responsibility of the General Contractor. It is the responsibility of the Contractor to furnish full information regarding size and locations, and details of all required openings, chases or other provisions for this work to the General
- B. Should any cutting and patching be necessary as a result of failure to furnish such information in a timely manner, it will then be done by the General Contractor at the expense of the Contractor.

15700.11 TEMPORARY LIGHT AND POWER

- A. The Electrical Contractor arranges for, installs and maintains temporary light and power as described in the Electrical Specifications.
- B. It will be the duty of the Contractor to acquaint himself with the limitations of this service by the Electrical Contractor, and to plan his work accordingly.

15700.12 TEMPORARY HEAT

- A. Temporary heat for construction purposes and for drying out the building shall be provided when ordered by the General Contractor and costs thereof will be the responsibility of the General Contractor.
- B. Refer to the General Conditions wherein temporary heat is provided by the General Contractor at his expense.
- C. The use of the permanent heating system for temporary heat is at the direction and expense of the General Contractor and shall not obligate the Tenants in any manner whatever.

15700.13 ELECTRICAL WORK

- A. The Electrical Contractor shall furnish all labor and materials for power wiring and connections of all equipment and controls. The Contractor shall provide control components and wiring diagrams for all HVAC equipment to Electrical Contractor as required. The Electrical Contractor shall provide and install all control wiring, and the Contractor shall supervise its installation when requested.
- B. The delivery of all control components shall be scheduled so as not to delay the project. The Contractor shall receive a signed, dated receipt of all items delivered to Electrical Contractor.
- C. Disconnect switches where required, will be furnished by the HVAC Contractor unless specifically noted to be supplied by the Electrical
- D. HVAC Contractor shall provide all motor starters as follows: Motors 1/2 HP and larger shall be provided with combination unfused line switch and cross—the—line magnetic starters with start—stop push buttons and pilot lights unless automatic control is required. In this case, starters are to be provided with H.O.A. selector switch and control transformer.
- All motors below 1/2 HP which are not automatically controlled shall be provided with manually operated starters. All starters shall be built and rated in accordance with NEMA and AIEE standards.
- All starters to include thermal overload relays and heaters properly sized to protect motor. All poly-phase motors shall be provided with phase
- new equipment. F. The Contractor shall provide all smoke detectors for emergency shutdown

E. The Contractor to verify all electrical power on job site prior to ordering

- to comply to the latest state & NFPA 90A codes.
- A. All control devices shall be clearly labeled with plastic name plates with numbers and letters no less than 3/8" in height. A framed permanent operating wiring diagram shall be located near each system so that
- operation of that system is readily available at all times. Internal wiring diagram of individual relays, shall all be located in their respective boxes. 15700.15 SCHEDULING REQUIREMENTS

- A. The Contractor shall perform his work in the building when and as directed, and generally in accordance with the sequence of construction and operation of the building, so as to cause the least possible inconvenience and disturbance to the other trades. Owner and occupants.
- B. Consult with the General Contractor for sequence of construction prior to submitting bid. Some or all of this work may be performed in phases or on Bid shall include all such premium time costs and shall eliminate any subsequent requests for extra compensation.

15700.16 COORDINATION

- A. All work shall be coordinated with the structural, mechanical, electrical, plumbing, architectural, fire protection and lighting drawings applying to this project prior to submitting shop drawings for fabrication approval.
- B. It is the responsibility of the Contractor to coordinate with all involved parties and prepare a shop drawing which will accurately locate and dimension all required roof openings, curbs and support platforms based upon approved equipment submittals.
- C. All diffusers and ceiling returns shall be coordinated with lighting, speakers, sprinkler heads, etc. in field with Owner and Architect.

- A. The Contractor shall be responsible for the rigging, hoisting and fastening into place all equipment under this contract and shall coordinate with the General Contractor regarding the location of all equipment within, outside and on top of the building to insure proper access, safety and protection of people and building systems.
- B. Where equipment must be moved over the roof, the Contractor shall be responsible for reinforcing and protecting the roof structure as required to avoid overloading. Such situations must be approved by the Architect and Structural Engineer prior to moving equipment.

15700.18 ROOF PROTECTION

A. When working on the finished roof, the Contractor must provide plywood sheets to protect roofing, and must take all precautions to avoid damaging the roof. No openings shall be cut in the roof after the roofing has been completed unless they are installed by the Roofing Contractor, paid for by the Contractor and coordinated with the General Contractor.

15700.19 BURGLAR BARS

A. All wall or roof openings 12"x12" or larger are to be equipped with burglar bars. Burglar bars are to be 5/8" round steel rods 6" on center in both directions, welded at all intersecting points. Burglar bars are to be welded in 1-1/2" x 1/4" frame welded to duct, opening, louver, etc. The Contractor must submit details for approval, during the shop drawing review.

15700,20 FLASHING & CURBS

- A. All ducts passing through the roof shall be fitted with insulated curbs, flashing collars, rings or similar devices to provide weathertight
- B. Provide pre-fab curbs around all roof openings and flashings to make watertight openings. Include pitch collars around all openings which do not have curbs. All curbs to set on roof steel, not decking and all equipment
- to be set level. The Contractors shall provide tapered curbs as required. C. Flashings and curb work shall all be installed in coordination with the work of the Roofing and General Contractors. 15700.21 FIRE RATED CONSTRUCTION
- A. It is the responsibility of the Contractor to verify from the architectural plans, areas in the building which have been designated as having a fire rating and provide and install the necessary fire dampers with access doors. If any discrepancy exists between the indicated and required fire damper requirements, the Contractor shall notify the Architect prior to bid date
- B. The Contractor must provide all fire rated, dampers, diffusers, grilles, registers, fire links, etc., in order to comply with all applicable codes for fire rated construction, even if not explicitly shown on drawings.

15700.22 TEST & INSPECTIONS

- A. The Contractor shall perform tests and inspections to the complete duct
- B. The Contractor shall make all necessary adjustments and corrections to the heating, ventilating and air conditioning systems for the purpose of equalizing the flow of air. Any dampers, deflectors or diffusers necessary to bring about this adjustment, whether specifically shown and specified or not, shall be provided by the Contractor.
- C. Equipment and systems which normally operate during certain seasons of the year shall be tested during the appropriate season. Tests shall be performed on individual equipment, systems, and their respective controls
- D. Whenever the equipment or system under test is interrelated with, and depends upon the operation of other equipment, systems and controls for proper operation, the latter shall be operated simultaneously with the equipment or system being tested.
- E. Air Leakage Test The complete air handling systems, all ventilating exhaust systems, including all conventional supply and return ductwork shall be tested. Leakage shall not exceed 5% of rated CFM at rated pressure. All the air leaks found shall be corrected within acceptable
- F. The Contractor shall demonstrate that all equipment and apparatus fulfills the requirements of the specifications.
- G. All work provided under the contract shall operate without any objectionable noise or vibration. Should operation of any one or more of the systems produce noise or vibration, which is in the opinion of the Architect objectionable, the Contractor shall at his own expense make changes in equipment, etc., and do all work necessary to eliminate the objectionable noise or vibration.

15700.23 OPERATING INSTRUCTIONS

- A. Three copies of the operating instructions, sequence of operations and control diagrams for the heating, ventilating and air conditionina system shall be given to the Owner, together with maintenance scheduling and
- B. Store operators shall be fully instructed in the proper and economical operation of the systems.

15700.24 OPERATIONS

- A. For the first three days after the store opening, the HVAC Contractor shall have competent mechanical personnel present to guarantee proper operation of all equipment.
- B. The Contractor shall include and guarantee full maintenance and emergency call service for one year after acceptance of the installation. This shall include inspection and service at least once per month, plus the replacement of all defective parts of improper workmanship to insure continuous operating of all systems as per these specifications.
- C. Maintenance shall include the monthly changing of filters for the first year. 15700.25 BALANCING
- A. NEBB certified Balancing Contractor must be a company which is independent of the Contractor and be approved for use by the Architect prior to balancing the system.
- B. Balance the heating and cooling systems to provide uniform temperatures in all heated or cooled areas and rooms.
- C. Balance new air systems to quantities indicated and furnish to Owner a report indicating fan performance, diffuser, register and grille sizes, locations, CFM values, DX coil bypass values, outside air CFM quantities, motor HP, rated AMP, actual AMP, rated voltage, actual voltage etc..
- D. The Contractor shall submit balance report prior to final acceptance.

15700.26 WARRANTY

- A. The Contractor shall warranty in writing all materials and workmanship for the period of one(1) year from date of final acceptance by Owner. This shall include an agreement to repair and make good or replace at no cost to Tenant any and all defects of his work, equipment, apparatus, or materials during that period, which arise from incorrect workmanship, imperfect or inferior materials, or defective equipment. This warranty shall include replacement of all parts or basic components as required including labor.
- B. All new compressors to be provided with a total of five(5) years warranty period, labor and parts for first year, and parts for remaining four(4) years.
- C. When special guarantees covering installation, operation or performance of any systems or appliances furnished under the HVAC Contract are herein required, the full responsibility for fulfillment of such guarantees must be assumed by the HVAC Contractor, who shall obtain written guarantees in triplicate from any and all Subcontractors with two(2) copies to be filed with the Architect prior to final acceptance.
- D. Certain equipment have been specified with stainless steel heat exchangers. If approved alternates or a design change on the specified eauipment renders this option unavailable then an equivalent warranty shall be purchased with the standard heat exchanger.

15700.27 FINAL APPROVAL

A. Upon written approval notification by the Contractor that his work is completed and ready for acceptance, all required inspections and tests shall be performed by the Contractor as directed by, and in the presence of the Architect. If failure to comply with the Contract Requirements are discovered, the HVAC Contractor shall at once remedy all defects and shortcomings and perform any additional required tests at

15700.28 FILTER CHANGES

- A. HVAC Contractor must not operate any HVAC units without filters installed during construction sequence.
- B. Filters must be changed two(2) weeks prior to final balancing of the
- C. For all HVAC systems, filters must be changed one(1) month after store opening and then once every month until the end of the first year. Refer to operations section 15700.24 for detailed maintenance of all HVAC systems.

15700.29 MISCELLANEOUS

- A. The Contractor shall be responsible for removing all of his debris. B. The Contractor shall field verify project requirements, and existing conditions prior to bid submission.
- C. The Contractor shall provide sufficient fireproof tarpaulins, and cover all equipment in work area with same during work operations.
- D. Do not scale from the drawings; follow written dimensions where given and field verify all dimensions where necessary.
- E. Refer to contract drawings for general HVAC notes.

15700.30 SHEET METAL WORK

- A. Furnish and install all sheet metal ductwork, plenums, goosenecks, and all items of metal work as necessary to complete the various air conditioning, ventilating and heating systems of the building so they are ready for satisfactory operation. While the installation should adhere to the plans and specifications as much as possible, the Contractor shall be entitled to modify the runs and sizes of the ductwork and to make offsets, where necessary to accommodate building conditions, only after receipt of written approval from the Architect. All such changes or offsets shall be in the "as-built" drawings submitted at the end of the job.
- B. Ductwork shall be constructed according to the "Equipment Handbook" published by ASHRAE and "HVAC Duct Construction Standards" published
- C. Sheet metal gauges, transverse joints, longitudinal seams and intermediate reinforcing must be in conformance with SMACNA standards as follows: 1) Low pressure ducts per SMACNA table 2" w.g.
- 2) Medium pressure ducts per SMACNA table 4" w.g. 3) High pressure ducts per SMACNA table 6" w.g.
- D. All rectangular ductwork shall be constructed of galvanized steel of U.S.

standard sheet metal gauge unless noted otherwise on the drawings.

- E. All changes in direction, horizontal or vertical, shall be shaped to permit the easiest possible air flow, using centerline radius of 1-1/2 x width. For all cases where 90 degree square elbows are used, approved double thickness turning vanes shall be used. HVAC Contractor to submit details
- F. All exposed single wall round ductwork shall be constructed of galvanized sheet metal with 1" acoustical lining.
- G. All ductwork shall be built with approved joints and seams smooth on the inside with laps made in the direction of the air flow and no flanges projecting into the air stream. Outside seams and joints should be as near to air tight as possible with a neat finish. The Contractor to caulk all joints which are not mechanically tight.
- H. Volume dampers as shown on drawings and as required for proper operation, shall be installed in the various branches for use in balancina the system. Volume dampers shall be of multi-opposed blade construction for all ducts over 12" in depth. All volume dampers to be of the locking quadrant type with approved locking devices mounted outside of the duct
- I. Fire Dampers Where ductwork pierces fire rated walls, shafts, stopping or floors type B, UL listed fire dampers should be installed. Fire dampers shall be as manufactured by Air Balance, Inc., Ruskin, or approved equal. Refer to the drawings for specific installation requirements.
- J. Access doors shall be provided in the sheet metal ductwork where required for inspection, automatic control dampers, fire dampers, filters, or any other apparatus concealed behind sheet metal work. Access doors in insulated duct shall be double panel and insulated. All access doors to be secured with heavy duty window type latches, complete with gaskets and
- K. All ductwork to be located above the hung ceiling space unless
- L. All supply return, and exhaust ductwork shall be hung from the top of structural members.

15700.31 FLEXIBLE CONNECTIONS

otherwise noted.

in an accessible place.

A. The intake and discharge collars of all in-line fans, air conditioning units and heaters shall be provided with approved flexible connections to eliminate vibration in the duct work. Use 10 oz. double woven canvas connections and install in close proximity to the HVAC equipment.

15700.32 DUCT INSULATION

- A. On all concealed supply and return ductwork, furnish and install Owens Corning foil faced, fiberalass ductwrap with an installed insulating value of K-5. Insulation shall be attached to sheet metal ducts by means of wire, bands or similar fastening. All joints and gaps in the applied insulation shall be filled with mastic to a thickness of the applied insulation. This shall apply to
- B. Insulation shall be cut slightly longer than circumference of duct to ensure full thickness at corners. Insulation shall be adhered to duct with fire resistant adhesive, Foster 81—99 or approved equal, applied to duct in 4" wide brush strips, on 12" centers. Insulation shall be further secured with loops of #12 width gauge galvanized steel wire on 12" centers.

C. Duct insulation shall have a vapor barrier facing type FSK (.001 aluminum

all heating and cooling ducts, unless otherwise noted on the plans.

foil, alass scrim. Kraft) laminate, applied over the insulation. All joints shall be sealed with 2" side vapor barrier tape sealed with Foster 81-99 or equal. D. All exposed ductwork shall be internally lined. Furnish and install not less than

surface faces air stream. Furthermore, install 2" wide sheet metal nosing

I" ultra liner with a thermal efficiency of (.24). Apply to metal with adhesive and

further secure with welded pins and speed washers 12" o.c. Ensure that imprinted

on leading edges of liner to prevent the liner from being picked up by air flow.

(1 and 4) year warranty.

assembly shall be isolated from unit.

15700.33 CONDENSATE CONNECTIONS A. The Contractor to supply and install trapped condensate drips and drains to Splash blocks on roof for all roof-top equipment. Splash blocks to be

provided by the Contractor and installed by Roofing Contractor.

15700.34 AIR CONDITIONING AND HEATING UNITS.

- A. Furnish and install "packaged type" equipment as shown on the Schedules. Equipment to be as manufactured by Trane, Carrier or approved equal. Refer to the drawing for the unit specifications. All refrigeration system components shall be completely factory assembled and shipped fully charged on a common base. All units to be factory tested, completely wired, weather proofed for rooftop use, provided with filters and of capacities as shown on the
- B. Compressors shall be accessible hermetic type, except for units under 15 H.P., with crank case heater, oil sight glass and oil charge connection. Compressors are to be spring isolator mounted. Compressors to have 5
- C. Evaporator coil shall be constructed of seamless copper tubing with rippled and corrugated aluminum fins. Coil to be fed by thermal expansion valve and orifice type distributor. D. Supply fan to be forward curve, centrifugal design, statically and dynamically balanced for quiet operation. Bearings to be self aligning, lubricatable ball type with extended lubrication lines. Complete fan
- E. Provide differential enthalpy controlled economizers with barometric relief when specified on schedules.
- F. Refrigeration cycles must be such that at 40 deg.F. ambient or above, when thermostats call for cooling, the compressor will start and remain in operation until the thermostat is satisfied. Provide two stages control of cooling with two circuit cooling coil when specified on schedules.
- G. Filters shall be 1" Fiberglass Farr—Air throwaway or approved equal with media contained in a rigid frame having supporting mesh across both entering and leaving faces of the media. Refer to schedules for any special

- H. All controls to be factory wired and enclosed in a weatherproof cabinet. Furnish as standard all motor starters and fusing for single point connection with control transformer, high pressure cut out and fan cycling head pressure control, low pressure cut out, single pump down, freezestat, oil pressure switch, and thermostats with automatic summer winter changeover.
- I. Refrigeration piping shall be completely factory installed. Each circuit to have filter and sight glass, moisture indicator, and solenoid valve for 15 ton
- J. All conditioned sections shall be insulated with 1- inch foil faced glass fiber.
- K. Roof curbs shall be provided for all units unless structural platform above roof is provided. Curb to be minimum of 14 inches in height 12 gauge continuous galvanized steel. Provide gaskets for mounting between unit base and curb. Curb to set directly on roof steel with required adjustments for roof pitch to provide a level unit when set. Refer to Section 15160 for Seismic Restraint
- requirements. L. See HVAC drawings for exact unit specifications.

15700.35 SUPPORTS

A. All supports and hangers for equipment to be installed under this Contract, shall be provided by the Contractor.

Where excessive loading requires proper distribution of the weight, proper supports must be provided, subject to the Architect's approval. All supports shall be of structural steel.

- B. No supporting members may be laid upon the completed roofing. If additional unpredicted supports are required, then they must be installed in accordance with the requirements of the Bonding Company at the expense of the Contractor.
- C. Check roof-top supports which are provided by others, and make adjustments as required for the provided equipment. Verify all dimensions of supports and openings with Architect and General Contractor based upon approved submittals.
- D. Interior units must be hung from the roof steel and the top chord only of steel joists using proper vibration isolators.
- E. All roof openings shall be fitted with round steel bars placed 6" on centers. both ways and welded to this roof construction for burglar protections. See architectural and structural drawings for details of construction. See Section 15700.19 for further details.

15700.36 EXHAUST FANS

- A. Furnish and install where shown on the plans, Penn, Greenheck, Jenn Air or equal exhaust fans of type and size as indicated. Fans shall be equipped with housings weatherstripped for wall mounting or with a base for roof mounting and flashing.
- B. All fans shall be equipped with the accessories as outlined on the drawings and schedules.
- C. Roof openings, if not provided in the structural framing, must be cut and framed by the Contractor.

15700.37 AIR DEVICES

- A. Provide where shown on drawings and indicated on schedules, all diffusers, grilles and registers of sizes indicated. All diffusers, grilles and registers shall be manufactured by Anemostat, Barber Colman, Carnes,
- Titus, Tuttle and Baily or Agitair. B. Supply registers shall be adjustable, double deflection type with opposed
- blade dampers. C. Return grilles and registers shall be fixed single deflection type with

including motors, compressors, air conditioning units, etc.

15700.38 VIBRATION ELIMINATORS A. Approved vibration eliminators shall be provided for all vibrating equipment

opposed blade dampers.

- 15700.39 CONTROLS A. Miscellaneous Controls — Provide smoke detectors and all necessary switches, sensors and relays to ensure a complete and operable system, in compliance with all code requirements.
- B. Refer to HVAC drawings for controls to be provided for remaining and miscellaneous HVAC equipment.

END OF HVAC SPECIFICATION

RELEASE FOR CONSTRUCTION S NOTED ON PLANS REVIEW

ALBERT A. TAUS NUMBER A=2015032715 Mur Que

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DIVISION 16 - ELECTRICAL SPECIFICATIONS

PART 1. GENERAL PROVISIONS

- 1. SCOPE: PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT IN ACCORDANCE WITH THESE SPECIFICATIONS, AND THE ACCOMPANYING DRAWINGS TO PROVIDE A COMPLETE AND PROPERLY OPERATING ELECTRICAL SYSTEM FOR THE
- 1.A. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL OF THE FOLLOWING MATERIAL AND EQUIPMENT UNDER THIS DIVISION OF THE SPECIFICATIONS. UNLESS NOTED OTHERWISE: PANEL BOARDS; LIGHTING FIXTURES, INCLUDING POLES AND POLE BASES; LAMPS RACEWAYS; 600 VOLT WIRE AND CABLE: WIRING DEVICES: DEVICE PLATES: DEVICE, PULL, AND JUNCTION BOXES; SAFETY SWITCHES MOTOR STARTERS; LIGHTING CONTROLS; CIRCUIT BREAKERS; FUSES; TIME BLOCKS; EQUIPMENT IDENTIFICATION (NAMEPLATES AND DIRECTORIES); WIRE AND CABLE TERMINATIONS: CONNECTIONS TO INDIVIDUAL UNITS OF EQUIPMENT FOR THE WALK-IN
- 1.B. THE FOLLOWING MATERIAL AND EQUIPMENT WILL BE FURNISHED AND/OR INSTALLED BY OTHERS, OR UNDER OTHER DIVISIONS OF THE SPECIFICATION, UNLESS NOTED OTHERWISE: LOW VOLTAGE (24 VOLT) WIRE AND CABLE, COMMUNICATION DEVICES, SECURITY EQUIPMENT, POINT OF SALES (POS) EQUIPMENT.

FREEZERS AND COOLERS; AND TEMPORARY POWER.

- GENERAL REQUIREMENTS: ALL WORK SHALL BE PERFORMED BY SKILLED LICENSED ELECTRICIANS IN ACCORDANCE WITH THE BEST PRACTICES OF THE TRADE MEETING THE REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, APPLICABLE FEDERAL STATE AND LOCAL CODES, AND THE REQUIREMENTS OF THE ELECTRICAL UTILITY COMPANY FURNISHING THE SERVICES. ALL NECESSARY CONSTRUCTION PERMITS AND CERTIFICATIONS OF INSPECTION SHALL BE PURCHASED AND OBTAINED UNDER THIS CONTRACT.
 - 2.A. COORDINATION: ALL OUTLETS MUST BE ACCURATELY LOCATED, PARTICULARLY APPLIANCE OUTLETS WHICH SHALL BE LOCATED FROM THE DIMENSIONS GIVEN ON THE DRAWING AND FIELD VERIFIED. REVIEW THE ARCHITECTURAL, PLUMBING AND HEATING AND VENTILATION PLANS IN ORDER TO COORDINATE THIS WORK WITH OTHER TRADES, AND COOPERATE WITH THEM IN THE ENTIRE INSTALLATION.
- 3. SERVICE VOLTAGE: THESE DRAWINGS ARE FOR A METERED, UNDERGROUND BUILDING SERVICE OF 120/208 VOLT, THREE PHASE, FOUR WIRE, 60 HERTZ. ALL KITCHEN AND AIR CONDITIONING EQUIPMENT HAS BEEN DESIGNED AND PURCHASED FOR USE OF THIS ELECTRICAL SYSTEM. THE CONTRACTOR SHALL CONTACT THE ELECTRICAL UTILITY AND VERIFY ALL OF THE ABOVE SERVICE CHARACTERISTICS, AND THE AVAILABLE FAULT CURRENT.
- SERVICE EQUIPMENT: THE SERVICE SHALL BE LOCATED AS SHOWN ON THE SITE PLAN. OR AS INDICATED IN THE INSTRUCTIONS TO BIDDERS. UTILITY POLES, PADS FOR UTILITY TRANSFORMERS. CURRENT TRANSFORMER ENCLOSURES, METERING EQUIPMENT, SERVICE MASTS. AND OTHER RELATED MATERIALS AND EQUIPMENT SHALL BE APPROVED, FURNISHED, AND INSTALLED AS REQUIRED. INCLUDE THE COST OF ALL THE ABOVE ITEMS, SERVICE CONNECTIONS, AND METER CHARGES IN THE BASE BID. MAIN SERVICE SWITCHES AND CURRENT TRANSFORMER CABINETS SHALL BE INCLUDED IN THE BASE BID. UNIESS NOTED OTHERWISE. A MAIN SERVICE SWITCH WITH CURRENT LIMITING FUSES MAY BE USED WHEN THE AVAILABLE FAULT CURRENT (AFC) IS EXCESSIVE, IN ORDER TO USE STOCK PANELBOARDS, WITH 10K OR 22K AIC RATINGS.

PART II. MATERIALS

- 1. MATERIALS: ALL MATERIAL SHALL BE NEW AND OF QUALITY INDICATED BY THE SPECIFIED BRAND NAMES. SUBSTITUTIONS OF MATERIAL OF EQUAL QUALITY BY OTHER MAJOR MANUFACTURES OF COMMERCIAL EQUIPMENT MAY BE ACCEPTABLE PROVIDED A LIST OF SUCH SUBSTITUTIONS IS APPROVED IN WRITING BY ARCHITECTURE AND ENGINEERING DEPARTMENT. THE CONTRACTOR SHALL SUBMIT A SUBSTITUTION LIST IN TRIPLICATE AT LEAST FIVE DAYS PRIOR TO THE BID OPENING.
 - 1.A. PANELBOARDS: PANELBOARDS SHALL BE BOLT-IN CIRCUIT BREAKER TYPE, AS SHOWN ON THE PLANS. PANELS SHALL BE OF PANELBOARD CONSTRUCTION, 20 INCHES WIDE (MINIMUM), 5-3/4" TO 6-1/2" DEEP, UL LISTED, AND MEET UL 67, UL 50, AND FEDERAL SPECIFICATION W-P-115B AS TYPE 1, CLASS 1, WITH BOLT-ON CIRCUIT BREAKERS, COPPER BUS BARS, NEUTRAL BUS, GROUND BUS, AND A HINGED LOCKABLE DOOR. CABINETS SHALL BE CODE GAUGE, GALVANIZED STEEL, MOUNTED AS SHOWN. PROVIDE TYPEWRITTEN CIRCUIT DIRECTORIES WITH CLEAR PLASTIC PROTECTORS IN ALL PANELS. ALL WIRES SHALL BE TAGGED WITH PANEL AND CIRCUIT NUMBERS. PANEL "MP" SHALL BE UL LISTED AND LABELED AS SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT. APPROVED MANUFACTURES OF PANELS ARE SQUARE D/TELEMECHANIQUE, CULTER-HAMMER, GENERAL ELECTRIC, WESTINGHOUSE, CHALLENGER, AND SIEMENS (I-T-E).
 - 1.B. LIGHTING FIXTURES: ALL LIGHTING SHALL BE UL LISTED, COMMERCIAL QUALITY. REFER TO NATIONAL ACCOUNT SCHEDULE.
 - 1.C. LAMPS: ALL NEW FLUORESCENT LAMPS (F40T8) SHALL BE COOL WHITE, OR COLOR IMPROVED COOL WHITE, WITH A 4100 DEGREE K COLOR TEMPERATURE, 2950 MIN INITIAL LUMENS, 20,000 HOURS RATED LIFE, AND 62 MIN CRI, UNLESS NOTED OTHERWISE.
 - 1.D. WIRING DEVICES: ALL WIRING DEVICES SHALL BE UL LISTED, COMMERCIAL SPECIFICATION GRADE. SWITCHES SHALL BE RATED 20 AMPS AT 120/277 VOLTS, AC. STANDARD RECEPTACLES SHALL BE 20 AMP, DUPLEX, GROUNDING TYPE, IN NEMA CONFIGURATIONS, UNLESS NOTED OTHERWISE SWITCHES IN THE SAME LOCATION SHALL BE GANGED BEHIND A SINGLE PLATE. DEVICES PLATES IN THE KITCHEN AREA SHALL BE METAL, ALUMINUM OR STAINLESS STEEL. DEVICE PLATES IN THE

- DINING AREA SHALL BE THERMOPLASTIC PLASTIC (NYLON) OR METAL, COLOR AS APPROVED BY THE ARCHITECT OR OWNER. APPROVED MANUFACTURES OF SWITCHES AND RECEPTACLES ARE HUBBELL, ARROW HART, BRYANT, LEVITON, PASS & SEYMOUR, GENERAL ELECTRIC, SLATER, OR EQUAL
- 1.D.A. SWITCHES: 1.D.A.A. SINGLE POLE: HUBBELL HBL1221-I, OR EQUAL. 1.D.A.B. THREE WAY: HUBBELL HBL1223-I, OR
- 1.D.B. RECEPTACLES 1.D.B.A. NEMA 5-20R: HUBBELL 5362I, OR

EQUAL.

- 1.D.B.B. NE,A 5-20R-IG: HUBBELL IG-5362, OR EQUAL.
- 1.D.B.C. NEMA 5-20R-IG/SS: HUBBELL IG-5362-OS, OR EQUAL. 1.D.B.D. NEMA 5-20R-GFCI: HUBBELL
- GF5362-I, OR EQUAL 1.D.B.E. NEMA 6-20R: HUBBELL 5462-I, OR 1.D.B.F. OTHERS: COMMERCIAL OR INDUSTRIAL
- 1.D.C. WP PLATES: WEATHERPROOF COVERS ARE PERMITTED UNDER NEC ARTICLE

GRADE, UL LISTED, FEDERAL

SPECIFICATION WC596F.

2. NATIONAL ACCOUNT: REFER TO NATIONAL ACCOUNT DIRECTORY. THE FOLLOWING EQUIPMENT MAY BE AVAILABLE: MAIN SERVICE PANELBOARD WITH BREAKERS INSTALLED. LIGHTING AND DISTRIBUTION PANELBOARDS WITH BREAKERS INSTALLED, ROOF-TOP DISCONNECTS FOR HVAC UNITS AND KITCHEN HOOD FANS, LIGHTING CONTRACTOR PANEL, AND SHUNT TRIP SYSTEMS (IF REQUIRED PER LOCAL CODE).

406.8(B)(I)

- EXCAVATIONS: PERFORM ALL NECESSARY EXCAVATING AND BACK-FILLING REQUIRED FOR THIS INSTALLATION. ALL EXCAVATIONS BELOW THE BOTTOM OF FOOTINGS SHALL BE BACKFILLED WITH 3,000 PSI CONCRETE. WHERE DITCHES ARE CUT FOR OUTSIDE RUNS OF CONDUIT, REPLACE AND TAMP THE EARTH IN 12" LAYERS AND LEAVE THE GROUND LEVEL AND EQUAL TO ITS ORIGINAL CONDITION.
- CONDUIT AND FITTINGS: CONDUIT PERMITTED: (A) RIGID GALVANIZED STEEL (RGS), (B) EMT, (C) PVC, AND (D) ENT. TYPES UTILIZED SHALL BE RUN ONLY AS PERMITTED PER CODE. ALL WIRING SHALL BE RUN IN CONDUIT. CONDUIT PLACED IN CONCRETE OR RUN UNDERGROUND SHALL BE RIGID GALVANIZED CONDUIT OR PVC. IF PVC IS USED, ALL ELBOWS, SWEEPS AND STUB-UPS SHALL BE RGS. CONDUIT EXPOSED OR RUN IN MASONRY WALLS ABOVE GRADE MAY BE PVC OR EMT WHERE ALLOWED BY LOCAL CODES. IF EMT IS NOT PERMITTED, RIGID SCREWED GALVANIZED PIPE CONDUIT AND FITTINGS SHALL BE USED. IF SHIELDING CABLE IS REQUIRED FOR CONTROL CIRCUITRY, IT SHALL BE TAN, GRAY OR ANY NEUTRAL COLOR OTHER THAN THAT AS SPECIFIED FOR POWER DISTRIBUTION. NO CONDUIT SMALLER THAN 3/4" SHALL BE INSTALLED EXPECT FOR TWO-WIRE SWITCH LEGS. ALL CONDUIT BENDS SHALL BE FREE FROM DENTS AND KINKS, ALL CONDUITS SHALL BE ELECTRICAL CONTINUOUS FROM THE SERVICE EQUIPMENT TO ALL OUTLETS, AND SHALL BE SECURED TO ALL METAL BOXES WITH ONE LOCK NUT OUTSIDE, AND ONE INSIDE THE BOX WITH A REINFORCED BAKELITE BUSHING IF PVC, OR ENT, IS USED, THEN APPROPRIATE SIZED, ELECTRICALLY CONTINUOUS, BOND WIRES SHALL BE RUN FROM THE SERVICE EQUIPMENT TO ALL OUTLETS, AND SHALL BE SECURED TO EACH WIRING DEVICE PER THE NATIONAL ELECTRICAL CODE. WHERE CONNECTIONS ARE TO BE MADE BETWEEN CONDUIT TERMINATIONS AND MOTORS, EQUIPMENT, OR APPARATUS NECESSITATING FLEXIBLE CONNECTIONS, APPROVED FLEXIBLE CONDUIT SHALL BE USED. OUTDOOR CONNECTIONS TO FANS, HVAC UNITS, OR ROTATING EQUIPMENT SHALL BE MADE WITH HELICAL WOUND, LIQUIDTIGHT, FLEXIBLE STEEL CONDUIT. EXPOSED CONDUIT SHALL BE SUITABLY SUPPORTED AT INTERVALS NOT TO EXCEED FIVE (5) FEET. DURING CONSTRUCTION, CONDUIT SHALL BE KEPT FREE OF ALL FOREIGN MATTER BY USE OF CAPPED BUSHING ON ALL TURNED UP ENDS. PAPER OR WOOD PLUGS ARE NOT ACCEPTABLE FOR THIS PURPOSE.
- WIRE AND CABLES: ALL WIRE AND CABLES SHALL BE UNDERWRITERS LABORATORIES' LISTED. AND LABELED. AND CONFORM WITH APPLICABLE STANDARDS OF UL (44, AND 83), NEMA (WC-5, AND WC-7), IPCEA (S-61-402, AND S-66-524), FEDERAL SPECIFICATIONS (J-C-30A(1)), AND HH-I-595C). ANSI, AND OTHER APPLICABLE INDUSTRY STANDARDS. CONNECTORS AND LUGS SHALL MEET UL PUBLICATION 486. ALL BRANCH CIRCUIT WIRING SHALL BE 600 VOLT, COPPER 75 DEGREE C (MIN), TYPE THHN/THWN WITH A MINIMUM SIZE OF #12 AWG, UNLESS NOTED OTHERWISE. WIRE SIZE OF #8 AWG AND LARGER SHALL BE STRANDED. SERVICE AND FEEDER CABLES SHALL BE 600 VOLT, STRANDED COPPER, 75 DEGREE C (MIN), TPE XHHW. ALL CIRCUITS SHALL HAVE A SEPARATE GROUND CONDUCTOR. PROVIDE GREEN-INSULATED GROUND WIRE IN ALL RACEWAYS, CABLE ASSEMBLIES, AND WHERE NOTED. SIZE EQUIPMENT GROUNDS PER TABLE 250-122 OF THE NATIONAL CODE. INSULATION COLOR CODES SHALL BE BLACK, RED, AND BLUE (PHASE), WHITE (NEUTRAL), AND GREEN (GROUND).
- 5.A. ALL WIRING SHALL BE INSTALLED IN CONDUIT, EXPECT WHERE SPECIFICALLY SHOWN ON THE DRAWINGS. NON-METALLIC SHEATHED (TYPE NM) CABLE IS NOT PERMITTED.
- 5.B. ALL BRANCH CIRCUIT, COMMUNICATION, SIGNALING, AND CONTROL WIRING TO KITCHEN, FIRE PROTECTION AND OTHER EQUIPMENT SHALL BE ROUTED ABOVE THE CEILING. VERIFY WHETHER OR NOT THE SPACE ABOVE THE CEILING IS USED AS A SPACE FOR RETURN AIR FOR THE ENVIRONMENTAL AIR SYSTEM. IF IT IS USED FOR RETURN AIR, PROVIDE APPROVED RACEWAYS FOR ALL OVERHEAD WIRING PER NEC ARTICLE 300-22(B). IF IT IS NOT "OTHER SPACE USED FOR ENVIRONMENTAL AIR". APPROVED LOW VOLTAGE CABLES MEETING THE REQUIREMENTS OF NEC ARTICLES 725 AND 760 MA BE RUN WITHOUT RACEWAYS, UNO. ALL SAFETY CONTROL WIRING FOR FIRE PROTECTION SYSTEMS, SHUNT TRIPS. ETC. SHALL BE RUN IN A RACEWAY IN ACCORDANCE WITH NEC ARTICLES 725.25 AND 725.28.

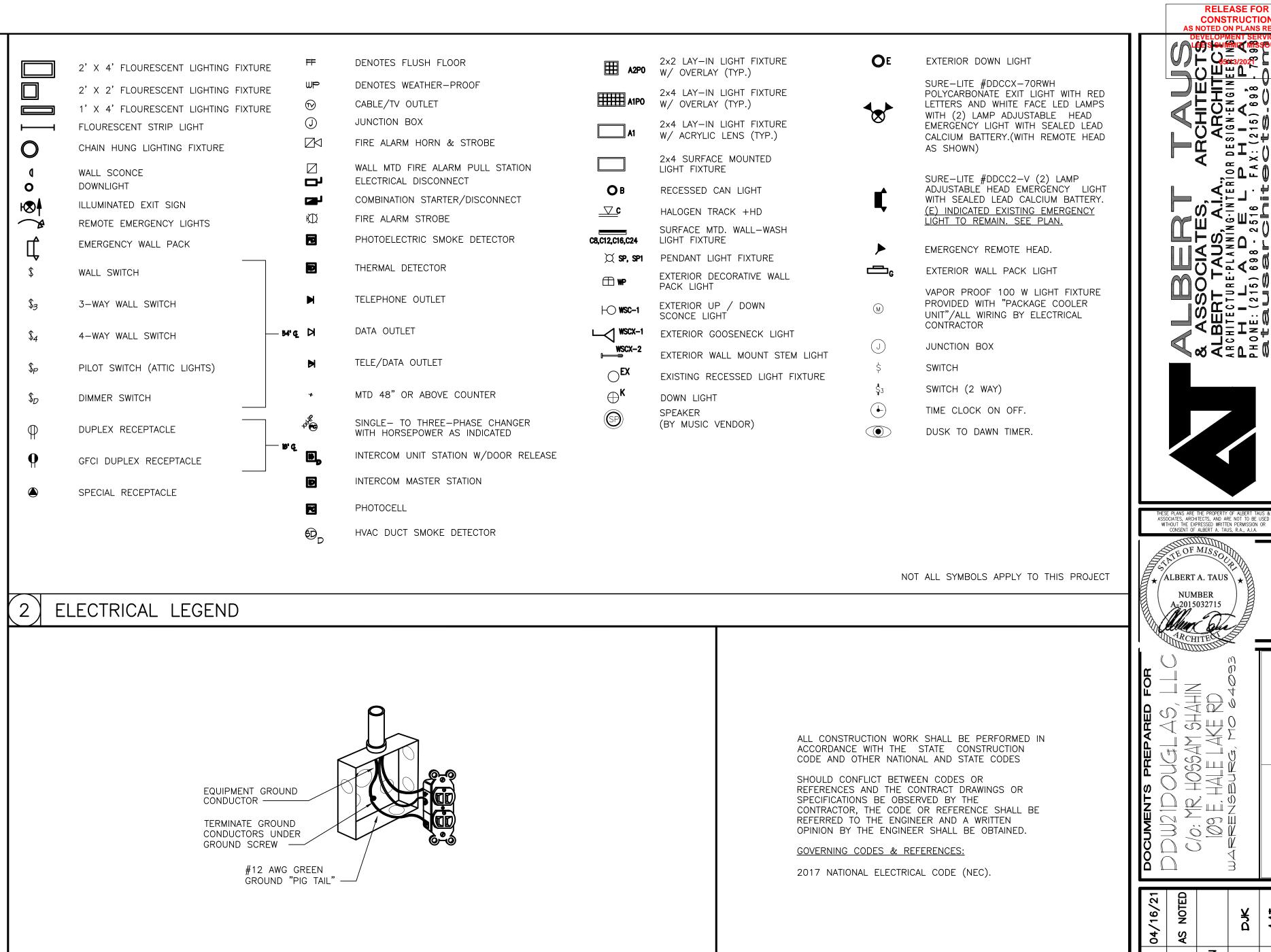
- SITE LIGHTING: THE G.C. WILL FURNISH THE SITE LIGHTING PACKAGE, AS REQUIRED FOR THE SPECIFIC LOCATION. UNDER THIS SPECIFICATION SECTION, PROVIDE 1" RIGID GALVANIZED STEEL ELECTRICAL CONDUIT, AND THE REQUIRED WIRING FROM THE PANEL TO THE POLE SET FIXTURES AND PILES ON CONCRETE BASED AS PROVIDED UNDER SPECIFICATION SECTION 3A: CONCRETE GROUND/BOND ALL SITE LIGHTING FIXTURES/POLES PER THE NEC. THE BRANCH CIRCUIT CONDUCTORS SHALL BE INCREASED FROM #10 AWG TO #8 AWG IF THE HORIZONTAL DISTANCE FROM THE PANEL TO THE POLE IS GREATER THAN EIGHTY (80) FEET. ALL SITE LIGHTING SHALL BE CONTROLLED THROUGH THE LIGHTING CONTROL SYSTEM SHOWN ON THE DRAWINGS. REFER TO THE SITE PLAN FOR QUANTITY AND LOCATION OF ALL SITE LIGHTING. SET FIXTURES AS SPECIFIED, AND AIM AFTER DARK FOR UNIFORM LIGHT DISTRIBUTION.
- 7. SIGNAGE LIGHTING: PROVIDE A 1" RIGID GALVANIZED STEEL ELECTRICAL CONDUIT, AND WIRING, FROM THE PANEL TO ALL ILLUMINATED SIGNS AS SHOWN ON THE LIGHTING AND SITE PLANS. GROUND/BOND EACH SIGN. SIGNS WILL BE FURNISHED AND INSTALLED BY THE OWNER, OR UNDER A SEPARATE CONTRACT, UNO. POWER AND WIRING SHALL BE FURNISHED AND INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS.
- 8.A. FURNISH AND INSTALL ALL POWER WIRING AND CONDUIT AS INDICATED ON THE DRAWINGS FOR ROOF-TOP HVAC EQUIPMENT, KITCHEN HOOD FANS, AND WALK-IN FREEZER AND COOLER EQUIPMENT. DISCONNECT SWITCHES, AVAILABLE FROM THE NATIONAL ACCOUNT, SHALL BE FURNISHED AND INSTALLED FOR EACH UNIT OF HVAC EQUIPMENT AND FOR KITCHEN EQUIPMENT WITHOUT A CORD AND PLUG. BEFORE ENERGIZING ANY EQUIPMENT. VERIFY THAT THE CORRECT POWER SUPPLY VOLTAGE, AMPACITY, AND PHASING HAS BEEN PROVIDED A THE LOAD SIDE OF THE DISCONNECT.
- 8.B. FURNISH AND INSTALL THE LIGHTING CONTRACTOR PANEL, AND ALL ASSOCIATED POWER WIRING, AS INDICATED. THE LIGHTING CONTRACTOR PANEL IS CUSTOM BUILT, AND AVAILABLE FROM THE NATIONAL ACCOUNT.
- 9. EMPTY CONDUIT: LEAVE A #12 AWG PULL WIRE IN ALL EMPTY CONDUITS.
- 10. BOXES AND WIREWAYS: ALL JUNCTION BOXES, PULL BOXES, WIREWAYS, ETC, SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- EQUIPMENT IDENTIFICATION: PROVIDE NAMEPLATES FOR ALL PANELBOARDS, CONTROLS, AND OTHER ELECTRICAL EQUIPMENT. EQUIPMENT VISIBLE TO THE PUBLIC SHALL BE IDENTIFIED WITH ENGRAVED LAMINATED NAMEPLATES ATTACHED WITH STAINLESS STEEL FASTENERS. ELECTRICAL EQUIPMENT NOT VISIBLE TO THE PUBLIC MAY BE NEATLY IDENTIFIED WITH BLACK PERMANENT MARKERS.

PART III: EXECUTION

OTHER WRING:

- TESTS: MAKE ALL TESTS NECESSARY TO ENSURE THAT THE ENTIRE INSTALLATION IS FREE FROM IMPROPER GROUNDS. AND FROM SHORTED AND/OR OPEN CONDUCTORS, VOLTAGE, CURRENT, AND ROTATION TESTS SHALL BE MADE BEFORE ANY MOTORS ARE PLACED IN OPERATION. ALL LOADS SHALL BE BALANCED ACROSS PHASES. CHECK TO SEE THAT ALL LIGHTS WORK, AND ARE CONTROLLED BY SWITCHES INDICATED ON DRAWINGS OR CIRCUIT BREAKERS SO INDICATED ON PANEL SCHEDULE.
- GUARANTEE: FURNISH A GUARANTEE IN WRITING TO THE OWNER THAT ALL WORK EXECUTED UNDER THIS SECTION IS FREE FROM DEFECTS OF MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE. IN ADDITION, DURING THE TERM OF THIS GUARANTEE, THE REPAIR AND/OR REPLACEMENT OF ANY DEFECTIVE WORK, AND ALL RESULTING DAMAGE SHALL BE MADE AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 3. TEMPORARY POWER: AT THE PROJECT SITE, PROVIDE A 100 AMP, 120/208 VOLT, SINGLE PHASE, SERVICE WITH POWER OUTLETS ADEQUATE FOR TEMPORARY CONSTRUCTION POWER. TEMPORARY LIGHTING SHALL BE MAINTAINED IN ALL AREAS OF THE BUILDING UNTIL PERMANENT POWER SOURCES HAVE BEEN ENERGIZED. TEMPORARY SERVICE SHALL BE PROVIDED UNDER SECTION 1A OF THESE SPECIFICATIONS.
- 4. CLEAN-UP: LEAVE THE ELECTRICAL PORTION OF THE WORK IN A CLEAN AND FINISHED CONDITION.
- 5. SHOP DRAWINGS: PROVIDE SHOP DRAWINGS FOR THE FOLLOWING ITEMS: PANELBOARDS, LIGHTING FIXTURES.
- 6. AS-BULT DRAWINGS: MAINTAIN AS-BUILT DRAWINGS. UPDATED DAILY DURING CONSTRUCTION, AND PRESENT THE OWNER WITH ONE SET UPON COMPLETION. PROVIDE THE OWNER'S PERSONNEL WITH ON-SITE INSTRUCTION IN THE OPERATION AND MAINTENANCE OF THE COMPLETED ELECTRICAL SYSTEM.

THE END.





CODES AND REGULATION INFORMATION

DRAWING TITLE

ELECTRICAL OVERVIEW

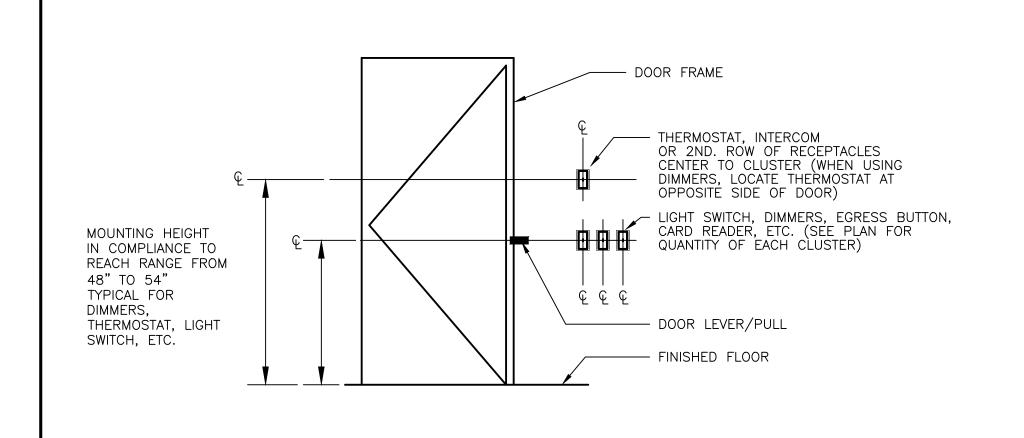
ELECTRICAL NOTES & DETAILS

ELECTRICAL POWER PLAN & DETAILS

ELECTRICAL HVAC POWER PLAN & DETAILS

DWG #

E1.1



ELECTRICAL COMMUNICATION PLAN & DETAILS ELECTRICAL COMMUNICATION SCHEDULES & NOTES ELECTRICAL LIGHTING PLAN & DETAILS ELECTRICAL PANEL SCHEDULES & RISER DIAGRAM ELECTRICAL SPECIFICATIONS

TYPICAL LOCATION FOR LIGHT SWITCHES

DRAWING INDEX

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RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW

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GENERAL REQUIREMENTS FOR ELECTRICAL WORK

- 1. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE AND INSPECT THE PREMISES IN ORDER TO FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS WHICH MAY IN ANY WAY AFFECT THE INSTALLATION OF THE WORK SPECIFIED HEREIN. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CONTRACTOR'S FAILURE TO COMPLY HEREWITH.
- COORDINATE WORK WITH ALL OTHER TRADES AFFECTING, OR EFFECTED BY, WORK OF THIS SECTION, COOPERATE WITH SUCH TRADES TO ASSURE THE STEADY PROGRESS OF ALL WORK UNDER THIS CONTRACT.
- 3. ALL WORK SHALL COMPLY WITH APPLICABLE CODES, ORDINANCES RULES REGULATION, AND LAWS OF LOCAL, MUNICIPAL OR STATE AUTHORITIES HAVING JURISDICTION.
- 4. PROCURE AND PAY ALL PERMITS, INSPECTION FEES AND LICENSES REQUIRED FOR WORK UNDER THIS SECTION.
- 5. ALL EQUIPMENT AND MATERIALS INSTALLED ON THIS PROJECT AS WELL AS THE COMPLETE ELECTRICAL INSTALLATION SHALL COMPLY WITH ALL THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) WHEREVER THEY MAY APPLY.
- THE ELECTRICAL CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR LAYING OUT HIS WORK AND FOR ANY DAMAGED CAUSED TO THE OWNER OR OTHER CONTRACTORS BY IMPROPER LOCATION OR EXECUTION CARRYING OUT HIS WORK.
- 7. THE ELECTRICAL CONTRACTOR SHALL SCHEDULE HIS WORK TO AS RAPIDLY AS POSSIBLE IN COOPERATION WITH OTHER PROCEED TRADES AND IN SUCH MANNER AS TO NOT INTERFERE WITH OTHER WORK. THE CONTRACTOR SHALL COOPERATE WITH OTHER TRADES IN ORDER TO HAVE ALL PIPES, CONDUIT, ETC. INSTALLED TO THE BEST ADVANTAGE.
- 8. THESE SPECIFICATION COVER THE FURNISHING OF MATERIALS, TOOLS, EQUIPMENT, TRANSPORTATION, SERVICES, SCAFFOLDING, SUPERVISION, LABOR, AND OTHER ITEMS WHICH MAY NOT BE MENTIONED, BUT ARE NECESSARY FOR THE FABRICATION, INSTALLATION, OR APPLICATION AND COMPLETION TO THE ELECTRICAL WORK AS SHOWN ON THE DRAWING AND SPECIFIED HEREIN.
- 9. CORE DRILLING THROUGH FLOOR, WHERE REQUIRED FOR ROUTING OF CONDUIT, SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR, SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. COORDINATE ALL CORE DRILLING WITH THE OWNER.
- 10. BEFORE ENERGIZING AND FACTORY FABRICATED EQUIPMENT, INSPECT EACH UNIT IN DETAIL. BOLTS AND CONNECTIONS SHALL BE TIGHT (TORQUE TIGHT WHERE REQUIRED) PER MANUFACTURES SPECIFICATIONS. COMPONENTS SHALL BE ALIGNED AND THE EQUIPMENT SHALL BE PLACED IN A SAFE OPERATIONAL CONDITION.
- 11. THE COMPLETE ELECTRICAL SYSTEM SHALL BE SAFE OF GROUNDS AND SHORT CIRCUITS AND SHALL OPERATE SATISFACTORILY UNDER FULL LOAD CONDITIONS WITHOUT EXCESSIVE HEATING AT ANY POINT IN THE SYSTEM.
- 12. EACH MOTOR SHALL BE TESTED TO INSURE ROTATION IN THE PROPER DIRECTION FOR ITS RESPECTIVE LOAD. PRIOR TO ROTATIONAL TEST, CHECK ALL MOTOR BEARINGS FOR PROPER LUBRICATION AS PER MANUFACTURERS REQUIREMENTS.
- 13. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER AND HAVE WRITTEN APPROVAL PRIOR TO ANY SHUT DOWN THAT IS REQUIRED TO COMPLETE THE WORK.
- 14. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG. FOR POWER AND #14. FOR CONTROL UNLESS OTHERWISE NOTED.
- 15. ALL CONDUITS IN SLABS SHALL BE GALVANIZED RIGID STEEL, MINIMUM 3/4" CONDUIT. ALL ABOVE GRADE INTERIOR CONDUITS SHALL BE EMT, MINIMUM 3/4" CONDUIT.
- 16. E.C. SHALL FIRE STOP ALL PENETRATIONS AROUND CONDUIT.
- 17. ALL CONNECTIONS TO MOTORS SHALL BE FLEXIBLE, LIQUID TIGHT, METAL CONDUIT.
- 18. ALL DISCONNECT SWITCHES, STARTERS, PUSH BUTTONS AND ENCLOSURES SHALL BE UL LISTED AND SHALL BE NEMA 1, UNLESS OTHERWISE NOTED.
- 19. ALL EXPOSED POWER, CONTROL AND MONITORING CABLES IN CEILING AND ACCESS FLOOR SHALL BE PLENUM RATED PER N.E.C.
- 20. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES IN THE FIELD.
- 21. CONTRACTOR SHALL FOLLOW OWNER'S SAFETY RULES & SHALL BROOM CLEAN DAILY. ALL DEBRIS SHALL BE REMOVED FROM THE BUILDING AND GROUNDS.
- 22. NO COMBUSTIBLE MATERIAL WILL BE PERMITTED IN UNDER FLOOR OR CEILING PLENUMS.
- 23. CONTRACTOR TO SUBMIT SPECIFIC REQUIREMENTS OF ALL EQUIPMENT WHICH DIFFERS FROM THE BASE DESIGN FOR APPROVAL TO THE ENGINEER PRIOR TO START OF WORK.
- 24. COORDINATE THE LOCATION AND SIZE OF EACH PULL BOX IN THE FIELD. PULL BOXES TO BE SIZED IN ACCORDANCE WITH N.E.C.
- 25. E.C. SHALL PROVIDE AND INSTALL A NEW UPDATED TYPEWRITTEN PANEL DIRECTORY IN ANY PANEL THAT THE E.C. HAS CHANGED. DELETED OR ADDED CIRCUITS IN. ONE COPY OF EACH DIRECTORY SHALL BE GIVEN TO THE BUILDING MANAGER.
- 26. CONDUITS ARE SHOWN DIAGRAMMATICALLY, EXACT LOCATIONS TO BE DETERMINED IN THE FIELD TO AVOID ANY CONFLICT WITH EXISTING CONDITIONS.
- 27. ALL EXISTING ELECTRICAL EQUIPMENT & CONDUITS SHALL REMAIN UNLESS OTHERWISE NOTED.
- 28. WHERE 120V, 20A CIRCUIT HOME RUNS ARE 100 FEET OR MORE, MINIMUM #10 WIRE SHALL BE USED.
- 29. ALL CONDUITS INSIDE THE BUILDING SHALL BE EMT AND ALL CONDUITS SHALL HAVE COMPRESSION FITTINGS.
- 30. COORDINATE ALL WORK WITH ARCHITECT, TENANT AND LANDLORD REPRESENTATIVE.
- 31. COORDINATE EXACT SCOPE OF WORK WITH ARCHITECT AND TENANT DESIGN CRITERIA PRIOR TO BID.
- 32. COORDINATE WITH CLIENT/OWNER REGARDING FIRE ALARM REQUIREMENT.

GENERAL DEMOLITION NOTES

- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL DEMOLITION WORK FOR THIS PROJECT WHETHER OR NOT SPECIFICALLY INDICATED ON THIS OR OTHER DEMOLITION PLANS. THIS WORK SHALL INCLUDE BUT IS NOT LIMITED TO THE DISCONNECTION, REMOVAL AND DISPOSAL OF LIGHTING FIXTURES, PANEL BOARDS, DISCONNECT SWITCHES, RECEPTACLES, JUNCTION BOXES, CABLE, LIGHT SWITCHES, CONDUIT, ELECTRICAL SERVICES ETC. PER SCOPE OF WORK OF THIS PROJECT.
- EXISTING CONDITIONS, EQUIPMENT, MATERIALS & SIZES ARE SHOWN FOR REFERENCE ONLY. VERIFY EXISTING CONDITIONS & BRING ANY DISCREPANCIES TO THE ARCHITECT ATTENTION IN WRITING PRIOR TO BID SUBMISSION.
- ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL EQUIPMENT AFFECTED BY THE REMOVAL OF ALL MECHANICAL EQUIPMENT. REMOVE WIRE BACK TO SOURCE AND LEAVE IN SAFE CONDITION.
- ELECTRICAL CONTRACTOR SHALL PROVIDE AND MAINTAIN AND CONNECTIONS/DISCONNECTION'S AS NEEDED TO INSURE ADEQUATE SAFETY AND PROTECTION OF ALL PERSONS, EQUIPMENT AND
- WHERE CIRCUITS ARE BEING ABANDONED, E.C. IS RESPONSIBLE FOR
- DISCONNECT. RELOCATE OR REMOVE ELECTRICAL EQUIPMENT AS NOTED & AS REQUIRED BY CHANGES IN CONSTRUCTION.
- DISPOSE OF ALL MATERIALS AS DIRECTED BY ARCHITECT REPRESENTATIVE.

PULLING ALL WIRING BACK TO SOURCE.

- WHERE FLOOR SLAB IS TO BE OUT OR CHASED, THE ELECTRICAL CONTRACTOR IS TO OBTAIN THE APPROVAL OF THE BUILDING, STRUCTURAL ENGINEERS & ARCHITECT IN WRITING PRIOR TO INSTALLATION.
- CONTRACTOR IS TO EXERCISE EXTREME CAUTION WHEN CUTTING SLAB TO AVOID DAMAGE TO ANY EXISTING CONDUITS THAT MAY BE CONCEALED IN OR BENEATH THE SLAB.
- 10. ALL EQUIPMENT OF VALUE SHALL BE REMOVED CAREFULLY AND ARE TO BE RETURNED TO THE OWNER UPON REQUEST. FIXTURES SHALL BE EITHER REUSED OR NEGOTIATED FOR RESALE OR CREDIT.
- 11. PROVIDE AS NECESSARY TEMPORARY LIGHTING AND ELECTRICAL FEEDS TO ANY REQUIRED FOR UNINTERRUPTED TRADING TEMPORARY CONNECTIONS FOR RELOCATED EQUIPMENT DURING CONSTRUCTION.
- 12. DISCONNECT & RELOCATE ANY ELECTRICAL LINES & REPAIR PULLBOXES THAT MAY BE DISTURBED DURING THIS RENOVATION.

POWER PLAN NOTES:

SHOWN THIS SHEET.

- REFER TO FOOD SERVICE DRAWING K1 FOR TAG LOCATIONS NOT
- REFER TO HVAC DRAWING M1 FOR EXACT LOCATIONS FOR MECHANICAL HVAC EQUIPMENT.

NAMEPLATE. LIQUID TIGHT FLEX CONNECTION.

- 3. 3 PHASE 30 AMP NEMA 3R FUSED DISCONNECT ON WALK-IN CONDENSER. UNIT LOCATED ON ROOF. FUSE PER EQUIPMENT
- MAKE FINAL POWER CONNECTION TO WALK-IN COOLER EVAPORATOR. PROVIDE MOTOR SWITCH IN CAST BOX.
- MAKE FINAL POWER CONNECTION TO WALK—IN FREEZER, FREEZER EVAPORATOR, DEFROSTER, HEAT TAPE AND DOOR HEATER.
- 6. PROVIDE LOCAL 3 PHASE 60 AMP 3R NON-FUSED DISCONNECT SW. ON A/C/ RTU'S LOCATED ON ROOF EQUIPMENT NAMEPLATE. PROVIDE LIQUID TIGHT FLEX CONNECTION TO UNIT.
- PROVIDE GFCI PROTECTED 5-20R DUPLEX RECEPTACLE. INSTALLED IN WP BOX WITH WP COVER AT RTU. (TYPICAL).
- PROVIDE 120V WIRING TO DUCT MOUNTED SMOKE DETECTORS AND REMOTE TEST/INDICATORS. FOR EXACT LOCATIONS OF DUCT DETECTORS, REMOTE INDICATORS AND TEST SW'S. (SEE HVAC PLAN).
- 9. E.C. SHALL INSTALL AND WIRE RELAY CONTROL PANEL PACKAGE FOR HOOD EXHAUST FANS EF-1 AND EF-2. PROVIDE POWER AND INTERLOCK CONTROL WIRING FOR HP1-F CONTROL PANEL AND HOOD FIRE SUPPRESSION SYSTEM. SEE HOOD FAN CONTROL INTERLOCK WIRING DIAGRAM. SHEET M2. MOUNT STARTERS AND CONTROLS ON WALL.
- 10. "ON/OFF" SELECTOR SWITCH AND PILOT LIGHT IN NEMA 4X STAINLESS STEEL ENCLOSURE MOUNTED ON THE FACE OF THE HOOD. PROVIDE BY HOOD MFR.
- 11. PROVIDE 2 PHASE 30 AMPS NEMA 3R FUSED DISCONNECT SWITCH AND L.T. FLEX CONNECTION TO ROOF MTD ICE MAKER CONDENSER UNIT, FUSE SIZE PER MFG'S NAMEPLATE DATA.
- 12. PROVIDE CEILING OUTLET WITH ISOLATED GROUND RECEPTACLES SUPPORTED FROM BUILDING STRUCTURE FOR VIDEO MONITOR/PRINTER AND OR HEADSET. VERIFY EXACT REQUIREMENTS AND LOCATION.
- 13. PROVIDE 3/4" X 18" H X 24" W PLYWOOD TELEPHONE BOARD PAINTED WITH 2 COATS OF "LISTED" FIRE RETARDANT LIGHT GRAY COLOR PAINT. AT 96" A.F.F. PROVIDE QUAD RECEPTACLE ADJACENT TO BOARD. PROVIDE # 6 CU, GROUND TO SERVICE ENTRANCE GROUND, SEE DETAIL ARCHITECTURAL ELEVATIONS.
- 14. PROVIDE CEILING DROPS FOR PRODUCTION COUNTER BRANCH CIRCUITS TO CEILING MOUNTED J-BOXES TO SERVE ALL ELECTRICAL
- 15. PRODUCTION COUNTER ELECTRICAL POWER CIRCUITS: REFER TO PANEL SCHEDULE FOR CIRCUIT NO'S. REFER TO EQUIPMENT SUPPLIER SHOP DRAWINGS FOR EXACT LOCATIONS AND TYPE OF CONNECTIONS FOR EQUIPMENT AND HEAT LIGHTS IN/OR ON PRODUCTION COUNTER.
- 16. BRANCH CIRCUIT(S) CONTINUED TO ADDITIONAL OUTLETS, HOMERUN SHOWN FOR CLARITY ONLY.
- 17. OUTLET AND CONNECTION FOR SECURITY CAMERA. VERIFY EXACT LOCATIONS AND TYPE CONNECTIONS FOR INDOOR AND OUTDOOR CAMERAS WITH G.C..
- 18. ROUTE ALL CONDUIT ROOF PENETRATIONS THRU (WITH-IN) ROOF CURBS FOR THE EQUIPMENT. REFER TO MECHANICAL PLANS FOR CURB DETAILS. (TYPICAL).
- 19. PROVIDE 1" CONDUIT TO 6" ABOVE CEILING
- 20. HOOD ANSUL FIRE SUPPRESSION SYSTEM.
- 21. MAKE FINAL CONNECTION TO EQUIPMENT.
- 22. 30 AMP, 120V, 3W RECEPTACLE (NEMA 5-30R).

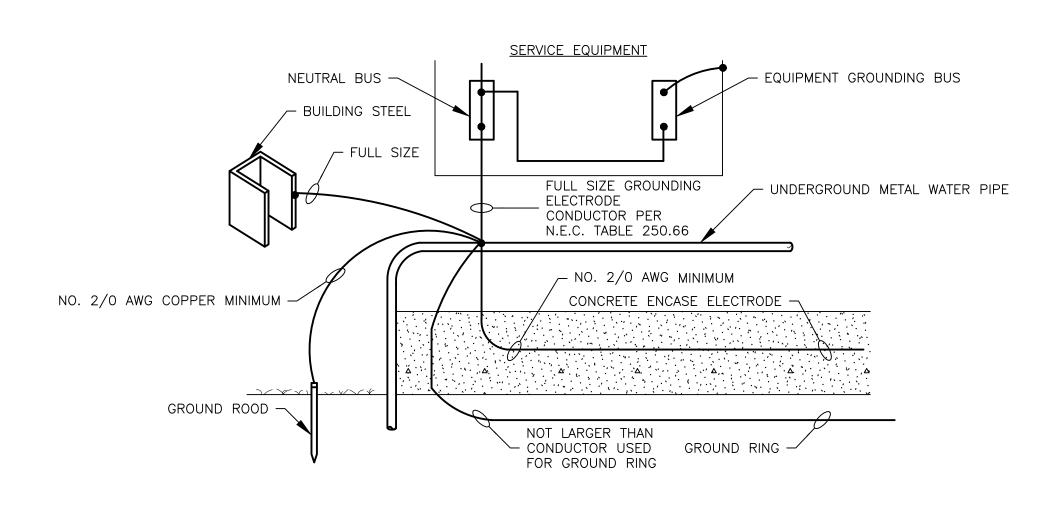
ELECTRICAL NOTES:

- 1. ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF AUTHORITY HAVING JURISDICTION AND ALL APPLICABLE CODES AND REGULATIONS.
- RECEPTACLES ARE TO BE INSTALLED THROUGHOUT AS REQUIRED BY CODE. IN ADDITION TO THOSE CALLED FOR IN THE ARCHITECTURAL PLAN AND THOSE NEEDED FOR SPECIFIC EQUIPMENT SHOWN IN THE
- COORDINATE ALL ELECTRICAL SERVICE INSTALLATION REQUIREMENTS WITH LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION.
- 4. CONDUIT SHALL BE ROUTED AS HIGH AS POSSIBLE AND PARALLEL TO WALLS. CONDUIT PENETRATION THRU WALLS BE MADE PERPENDICULAR TO THE SURFACE OF THE WALL. SEAL AROUND OPENINGS WITH AN APPROVED FIRESTOPPING MATERIAL WHERE CONDUITS PENETRATE FIRE-RATED WALLS.
- COORDINATE THE EXACT LOCATION AND POWER REQUIREMENTS OF MECHANICAL & PLUMBING EQUIPMENT WITH THEIR RESPECTIVE
- 6. INSTALL ELECTRICAL DISCONNECTING MEANS AND FINAL POWER TERMINATIONS FOR MECHANICAL AND PLUMBING EQUIPMENT AS REQUIRED BY THE EQUIPMENT MANUFACTURER. SOME MECHANICAL EQUIPMENT HAS BEEN SPECIFIED WITH INTEGRAL ELECTRICAL DISCONNECTING MEANS AND WEATHERPROOF, GFI CONVENIENCE RECEPTACLES. CONFIRM THAT THE EQUIPMENT HAS BEEN PROPERLY MANUFACTURED AS SUCH AND PROVIDE FINAL CONNECTIONS AS REQUIRED.
- THIS ELECTRICAL PLAN IS INTENDED TO SHOW SCHEMATIC EQUIPMENT CONNECTION LOCATIONS AND THEIR RESPECTIVE WIRING REQUIREMENTS. THE ELECTRICAL CONTRACTOR SHALL FIELD VERIFY ACTUAL CONNECTION REQUIREMENTS FOR EACH PIECE OF EQUIPMENT AND FURNISH AND INSTALL ANY ADDITIONAL OUTLETS, JUNCTION BOXES, DISCONNECT SWITCHES, CONDUIT AND WIRING AS REQUIRED FOR A COMPLETE AND OPERATIONAL INSTALLATION AS REQUIRED BY CODE AND BY THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- REFER TO THE ELECTRICAL SINGLE-LINE RISER DIAGRAM AND PANEL SCHEDULES FOR ADDITIONAL INFORMATION INCLUDING CONDUCTOR QUANTITIES AND SIZES, OVERCURRENT PROTECTION SIZES, ETC.
- 9. EXACT LOCATIONS AND MOUNTING HEIGHT OF ALL RECEPTACLES & LIGHTING SHALL BE COORDINATED WITH THE ARCHITECT AND OWNER PRIOR TO INSTALLATION.
- 10. SEE DIAGRAMS FOR TYPICAL OUTLET LAYOUTS AT SPECIFIC EQUIPMENT LOCATIONS. THESE ARE IN ADDITION TO OUTLETS REQUIRED BY CODE.
- 11. PROVIDE "GFI" FEATURES FOR ALL RECEPTACLES IN KITCHEN, SERVICE AREA AND BATHROOMS.
- 12. ALL RECEPTACLES WITHIN 6 FEET OF A SINK AND A SOURCE OF WATER SHALL BE GROUND FAULT CIRCUIT INTERRUPTER (GFCI) PROTECTED.
- 13. COORDINATE POWER & DATA REQUIREMENTS FOR SPECIFIC EQUIPMENT WITH MANUFACTURER'S RECOMMENDATIONS PER OWNER SUPPLIED INFORMATION SHEETS.
- 14. PROVIDE TELEVISION CABLE AND TELEPHONE AND DATA LINES (CAT6). COORDINATE EXACT LOCATION WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.
- 15. ALL EXTERIOR RECEPTACLES SHALL BE GROUND FAULT CIRCUIT INTERRUPTER (GFCI) PROTECTED AND HOUSED IN A WEATHERPROOF ENCLOSURE.
- 16. E.C. TO WIRE EMERGENCY FIXTURE AHEAD OF LOCAL SWITCH.
- 17. EQUIPMENT LOCATED UNDER THE HOOD, SHALL BE WIRED TO SHUNT TRIP BREAK IN PANEL.
- 18. IF LIGHT FIXTURE IS TO BE SUBMITTED IT MUST BE SUBMITTED TO THE LOCAL TOWNSHIP FOR REVIEW AND APPROVAL PRIOR TO ANY CHANGES FROM THE APPROVAL
- 19. BRANCH CIRCUIT CONDUCTORS SHALL NOT BE SMALLER THAN NO. 12 AWG AND WHERE BRANCH CIRCUIT CONDUCTOR RUNS FROM THE SOURCE OR PANEL TO THE LAST DEVICE IN THE BRANCH CIRCUIT EXCEEDS 100 FEET IN LENGTH, THE CIRCUIT CONDUCTORS SHALL BE SIZED NO. 10 AWG MINIMUM AND FOR THE ENTIRE LENGTH OF THE CIRCUIT. FOR RUNS OVER 200 FEET IN LENGTH, THE CONDUCTORS SHALL BE SIZED NO 8. AWG. MINIMUM AND FOR THE ENTIRE LENGTH OF THE CIRCUIT. THE ABOVE APPLIES TO 120 VOLT BRACH CIRCUITS ONLY.

GENERAL DEMOLITION NOTES

POWER PLAN NOTES

ELECTRICAL NOTES



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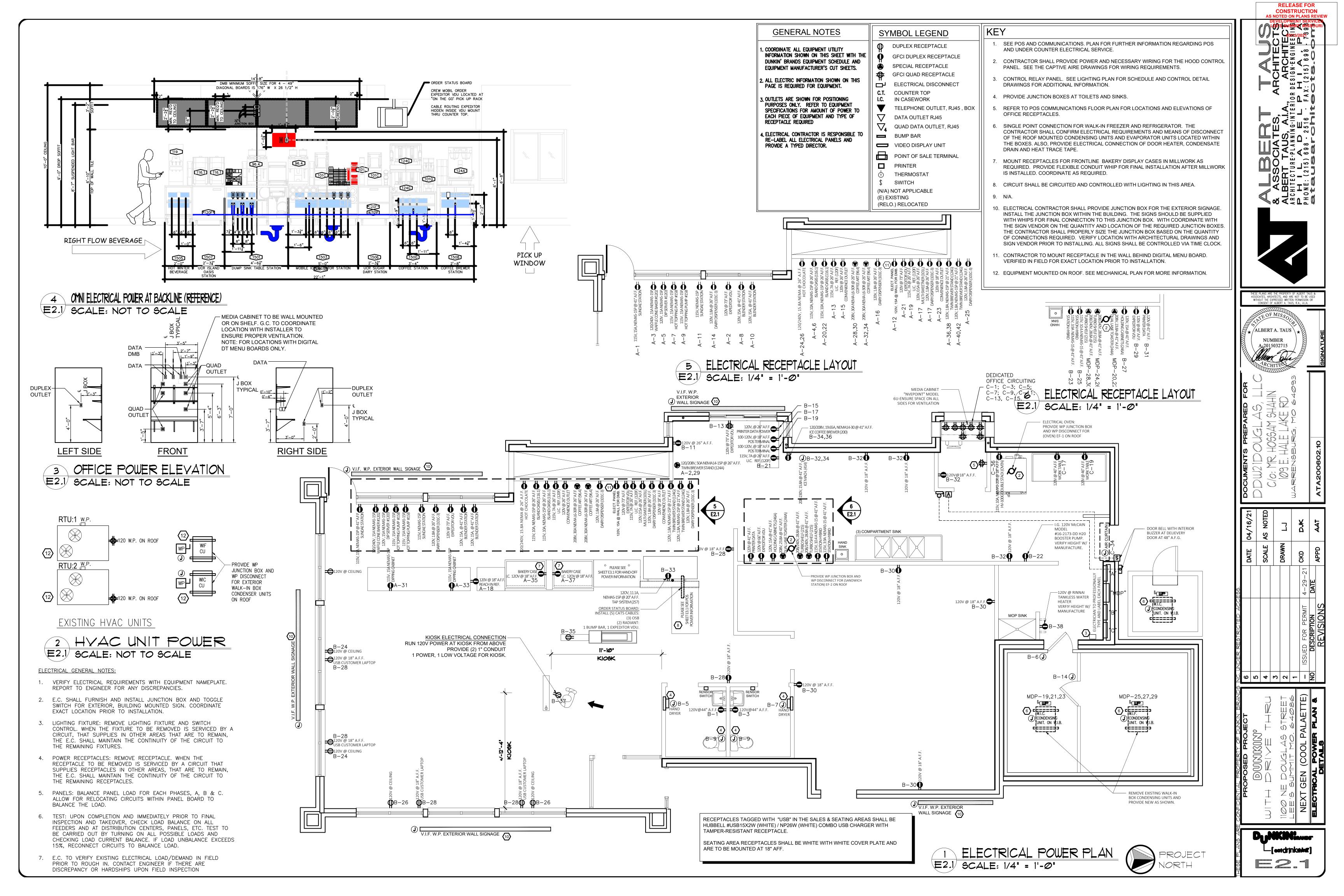
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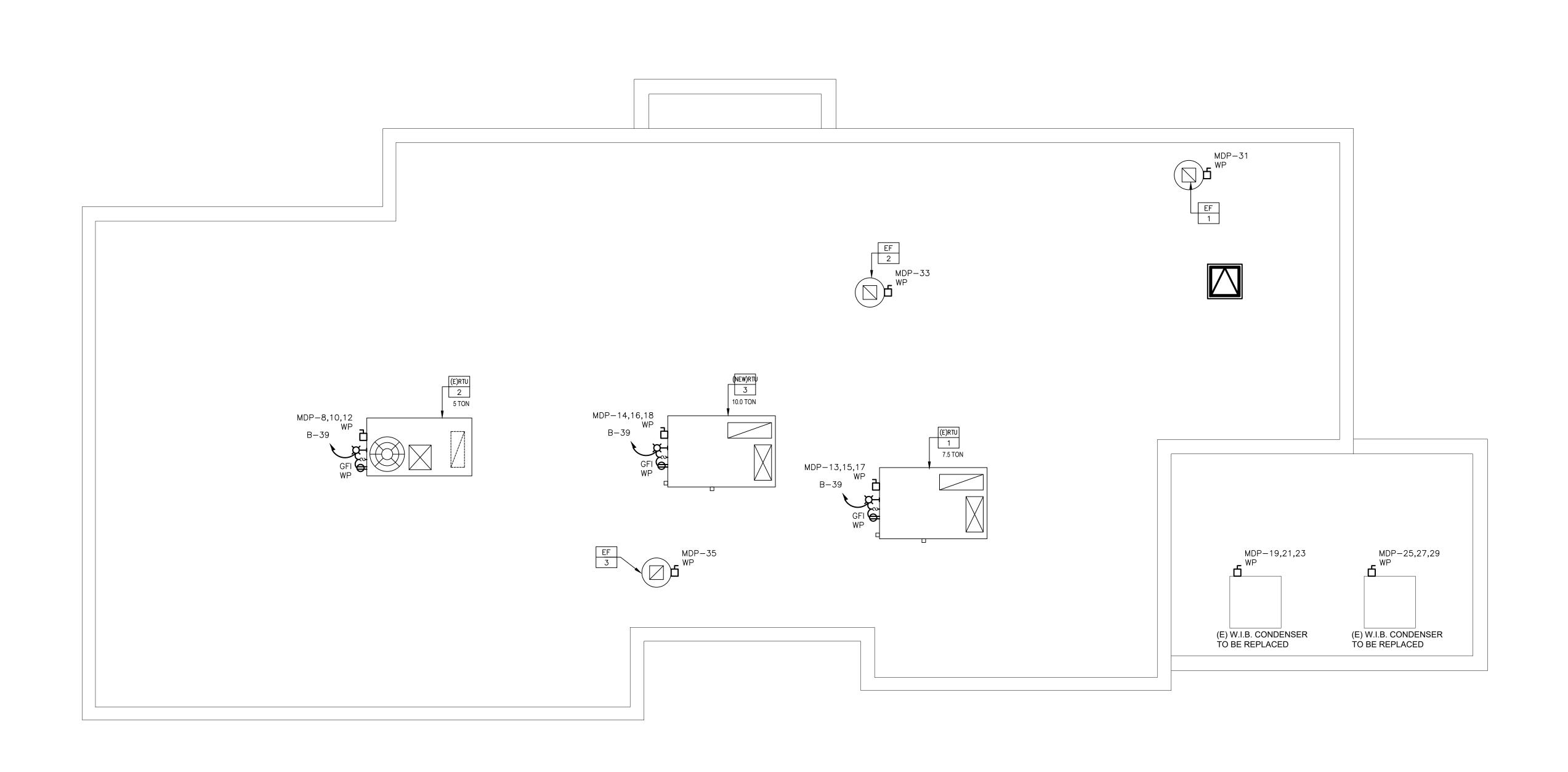
RELEASE FOR CONSTRUCTION

SERVICE ENTRANCE GROUNDING DETAIL

GENERAL ELECTRICAL NOTES

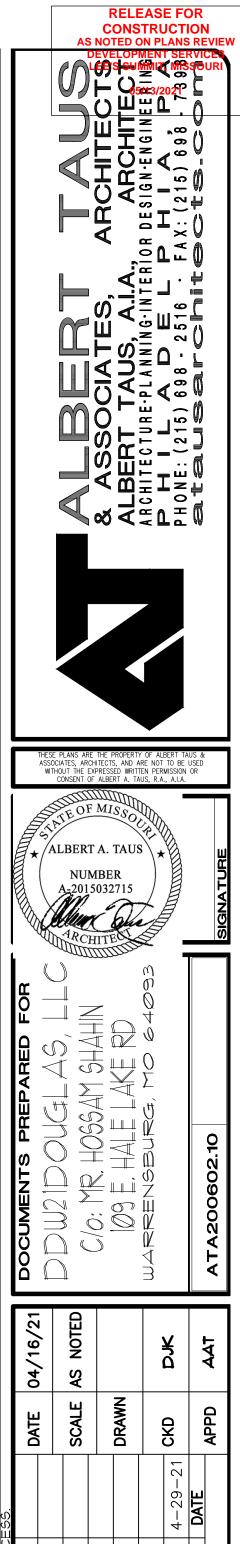
SCALE: NONE





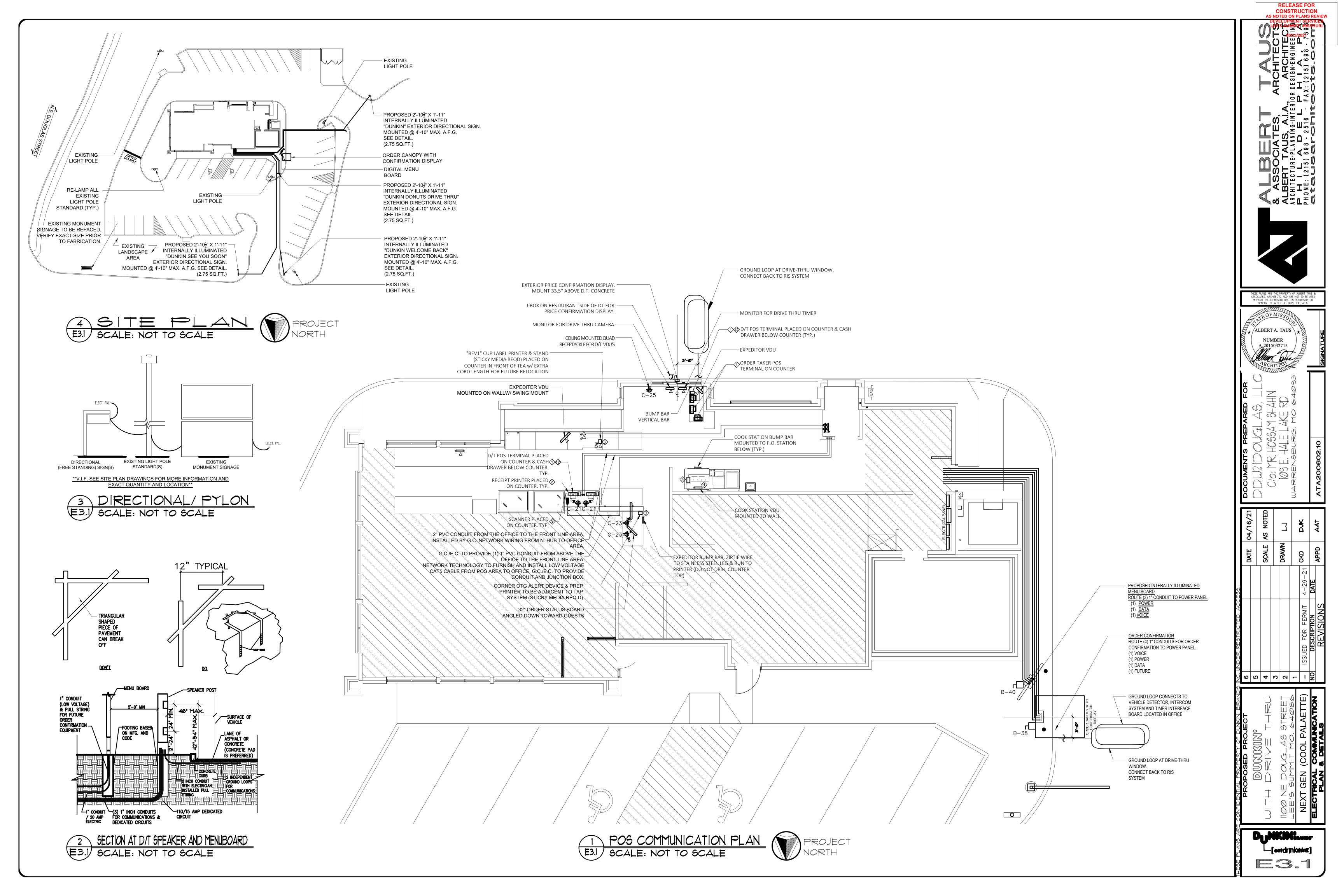






DATE 04/16/21		SCALE AS NOTED			1	Z Y	4	44
DATE		SCALE		DRAWN		CKD		APPD
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										-
#>	QTY	DESCRIPTION	LOCATION	VOLTS	LOA AMPS	CB	TRANS FORMER	LOVO TERM	REMARKS	
	POS	S EQUIPMENT				•	•			
1	4	POINT OF SALES TERMINAL (POS)	(2) FRONT COUNTER (1) D/T (1) D/T OT	100-120V	2.0	20A/1P	NO	RJ45	SHARES CIRCUIT WITH POS ITEMS 2 & 12	
2	3	RECEIPT PRINTER	(2) FRONT COUNTER (1) D/T	100-240V	2.0	20A/1P	YES	RJ45	SHARE CIRCUIT WITH POS ITEMS 1 & 12	
3	5	PREP PRINTER	(1) COFF.STATION (1) BEVERAGE STATION (2) SANDWICH (1) OTGO PRINTER	24/34V	1.2	20A/1P	YES	RJ45		
4	4	VDU	(1) BEVERAGE STA (1) SANDWICH	100-240V	1.5	20A/1P	NO	N/A	SHARES CIRCUIT	
5	4	VDU CONTROLLER (PC BASED)	(1) EXPEDITER @ D/T (1) EXPEDITER @ HAND OFF	100-120V	1.0	20A/1P	YES	RJ45		
6	1	POS NETWORK HUB/ SWITCH	POS COFFEE FRONT CHASE	100-120V	0.5	20A/1P	YES	RJ45	SHARES CIRCUIT WITH POS ITEMS 1, 2 & 12	
7	1	PC SITE CONTROLLER EXTERNAL	OFFICE	100-120V	4.0	20A/1P	NO	RJ45		$\dashv \parallel$
7a	1	PC SITE CONTROLLER INTERNAL	OFFICE	100-120V	4.0	20A/1P	NO	RJ45		
8	1	PRINTER/FAX/COPIER (BOH)	OFFICE	100-120V	8.2	20A/1P	NO	N/A		
9	3	SCANNER	(2) FRONT COUNTER (1) D/T				NO	RJ45	CONNECTED TO POS UNITS	
10	3	PRICE CONFIRMATION DISPLAY	MOUNT OUTSIDE @ D/T WINDOW & BEHIND FRONT POS UNITS				NO	RJ45	CONNECTED TO D/T POS UNIT	
11	0	NOT USED								
12	3	CASH DRAWER	UNDER CTR @ FRONT & D/T	N/A	N/A		NO	RJ45	SHARES CIRCUIT WITH POS ITEMS 1 & 2	
13	0	NOT USED		N/A	N/A		NO	RJ45	VERIFY ALL ELECT & POS REQTS w/ MANUF	
14	3	PAYMENT TERMINAL	(2) FRONT COUNTER (1) D/T	100-240V	0.5	20A/1P	NO	RJ45	VERIFY ALL ELECT & POS REQTS w/ MANUF	
14a	3	VERIFONE SWITCH	(2) FRONT COUNTER (1) D/T						CONNECTED TO POS (1)	
30	1	ORDER STATUS BOARD	(1) FRONT COUNTER						VERIFY ALL ELECT & POS REQTS w/ MANUF	
		T	OTHER COMMUNICATION DE		1 1/4		1 110	D 0000	[
15	1	DRIVE THROUGH (DT) TIMER CONSOLE	OFFICE	120V	N/A		NO NO	RS232	MUST BE WITHIN 60FT OF DISPLAY	
16	1	DT TIMER VDU DISPLAY	PHONE & DATA LINES	LOW VOLT	N/A		NO			
18		SPARE	Г	LOWINGLE	NI/A		N/A	D.145		
	0	SPARE	OFFICE	LOW VOLT	N/A		N/A	RJ45		
19A	0	FAX LINE	OFFICE OFFICE	LOW VOLT	N/A N/A		N/A	RJ45	FAX LINE FOR OFFICE	
20	1	PHONE LINE	OFFICE	LOW VOLT	N/A N/A		N/A N/A	RJ45	FAX LINE FOR OFFICE	
21	0	NOT USED	OI I IUE	LOW VOLI	IN/A		IN/A	RJ45	PHONE LINE FOR OFFICE	
23	1	HIGH SPEED INTERNET LINE (MNS)	OFFICE	LOW VOLT	N/A		N/A	RJ45	FOR SITE CONTROLLER & BOH PC	
24	1	SYSTEM SECURITY DVR	SECURITY SYSTEM	LOW VOLT	N/A		N/A	RJ45 RJ45	PLUGS INTO ROUTER PORT#2	
 25	8	DIGITAL MENU BOARD	OFFICE/SERVICE AREA	LOW VOLT	N/A		N/A	RJ45	PLUGS INTO ROUTER PORT#4	
 26	1	WIFI	OFFICE	LOW VOLT	N/A		N/A	RJ45	PLUGS INTO ROUTER PORT#5	
26a	0	SECONDARY WIFI ACCESS POINT (OPT)	OFFICE	LOW VOLT	N/A		N/A	RJ45	PLUGS INTO ROUTER	
27	1	OTT VOIP (PHONE)	OFFICE	LOW VOLT	N/A		N/A	RJ45	PLUGS INTO ROUTER	

			MUSIC SYSTEM				
28	1	MUSIC PLAYER	OFFICE				
29	0	NOT USED					
			WORKSTATION			•	
31	1	MANAGER'S WORKSTATION	OFFICE				
32	0	MANAGER'S WORKSTATION (OPT)					
			FIREWALL			·	
33	1	FIREWALL	OFFICE	LOW VOLT	N/A	N/A	R
34	1	BROADBAND MODEM	OFFICE	LOW VOLT	N/A	N/A	R
35		TEMPORARY WIRELESS BROADBAND DIAL-UP DATA SOLUTION	OFFICE				
36		NOT USED					
37		NOT USED					
			SWITCHES	•		·	
38	1	SWITCH	OFFICE				
39	1	DD UTILITY SWITCH (OPT)	OFFICE				
40	1	DVR NETWORK SWITCH	OFFICE				
41	1	DIGITAL MENU BOARD SWITCH	OFFICE				
42	1	KIOSK SWITCH	OFFICE				
			MENU BOARD				
45	4	INT DIGITAL MENU BOARDS					
46	2	EXT DIGITAL MENU BOARDS	EXTERIOR DRIVE THRU				
47	0	DRIVE PREVIEW BOARD	EXTERIOR DRIVE THRU				
48	1	ORDER COMFIRMATION BOARD	EXTERIOR DRIVE THRU				
49	0	NOT USED					
GC PC	WER/D	L MENU BOARD TATA RESPONSIBILITY RUN DEDICATED CONDUIT FRO					

- FASCIA AT CENTERLINE OF POS TO OFFICE
- VENDOR POWER/DATA RESPONSIBILITY CUT HOLE IN MENU BOARD FASCIA FOR POWER/DATA STACK
- IN STALL POWER/DATA STACK IN FASCIA RUN ELECTRICAL CONDUCTOR WIRE FROM MENU BOARD FASCIA TO
- ELECTRICAL PANEL MAKE FINAL ELECTRICAL CONNECTION AT POWER/ DATA STACK
- MAKE FINAL ELECTRICAL CONNECTION TO CIRCUIT AT POWER PANEL RUN CAT-5E CABLES AND TERMINATE ENDS AT MENU BOARD FASCIA POWER/DATA STACK AND IN OFFICE
- IOR TO BIDDING OR PERFORMING WORK GC TO COORDINATE WITH AUTHORITY HAVING JURISDICTION (AHU). J MAY REQUIRE FULL WIRE PREP BY EC. GC TO ALERT CM, F'EE AND DMB INSTALLER IF EC MUST PERFORM ELECTRICAL INSTALL WORK.

GENERAL NOTES

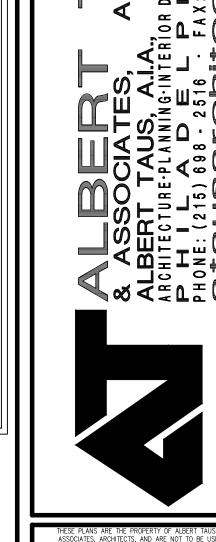
- A. REFER TO HTTP://EXTRANET.DUNKINBRANDS.COM FOR A LISTING OF APPROVED POS VENDORS BY CONCEPT.
- B. FINAL POS DRAWINGS NEED TO BE PROVIDED TO POS VENDOR THAT IS SELECTED.
- C. POS VENDORS REQUIRE DEDICATED ISOLATED GROUNDED (DIG) OUTLETS ON A 20 AMP CIRCUIT DEDICATED ONLY TO POS EQUIPMENT. 60HZ, 120+/-10%. ALL POS TERMINALS AND VIDEO DISPLAY DEVICES REQUIRE A DUPLEX OUTLET. THE BACK OFFICE CONTROLLER REQUIRES A QUAD OUTLET. THE NETWORK SWITCH REQUIRES A DUPLEX. IF FEDERAL, STATE, AND LOCAL WIRING CODES DO NOT MEET THIS REQUIREMENT, CONTACT THE POS VENDOR FOR INFORMATION ON ADDITIONAL EQUIPMENT THAT CAN BE PURCHASED TO MEET THIS REQUIREMENT. IF THIS REQUIREMENT IS NOT MET, THE POS SYSTEM WARRANTY IS INVALID.
- D. ALL POWER INDICATED ON THIS PLAN MUST HAVE A THIRD WIRE, ISOLATED GROUND, AND BE TERMINATED WITHIN (4) FEET OF THE DEVICE.
- E. IG-5362 RECEPTACLES MUST BE USED FOR ALL POS UNITS. VDU UNITS AND SITE CONTROLLER UNIT (IN OFFICE). LABEL RECEPTACLES "POS ONLY"
- F. ALL LOW VOLTAGE WIRE SHALL BE CATEGORY 5e UNLESS OTHER WISE INDICATED.
- G. ALL LOW VOLTAGE CABLE TERMINATIONS SHALL BE BY THE ELECTRICAL CONTRACOR
- H. LOW VOLTAGE CABLE RUN IN 1½" CONDUIT FOR POS EQUIPMENT ONLY, AND MUST BE TERMINATED WITH RJ45 JACKS. ALL POS EQUIPMENT LINES TERMINATE AT THE FRONT COUNTER CHASE.
- I. A 12" MINIMUM SEPARATION MUST BE MAINTAINED BETWEEN LOW VOLTAGE WIRES AND POWER WIRING (TO AVOID ELECTRICAL INTERFERENCE).
- J. BRAND REQUIREMENTS DICTATE THAT A MINIMUM OF THREE CONDUITS BE USED FOR DATA LINES BETWEEN THE OFFICE AND OTHER PARTS OF THE STORE- ONE CONDUIT IS TO BE DEDICATED TO POS WIRING, ONE FOR DIGITAL MENUBOARD DATA LINES, AND ANOTHER FOR NON-POS ITEMS (I.E. SECURITY CAMERAS, DT TIMERS, HEAD SET WIRING
- K. EXACT # OF RECEPTACLES ON OFFICE MUST BE COORDINATED ON A PROJECT-BY-PROJECT BASIS IN TERMS OF EQUIPMENT LOCATED IN THE OFFICE
- L. ALL CEILING MOUNTED VDU'S TO BE SUSPENDED FROM UNISTRUT BY THREADED ROD W/ WHITE PVC SLEEVE. CONNECT UNISTRUT TO ROOF STRUCTURE. VDU BY POS VENDOR; UNITSTRUT & THREADED ROD BY G.C. UNISTRUT TO SUPPORT MINIMUM 50 LB. WEIGHT
- M. VDU MOUNTING HEIGHTS (TO BOTTOM OF MONITOR) ARE AS FOLLOWS:
- a. SANDWICH STATION 68" A.F.F. b. DRIVE THRU - 61" A.F.F.
- N. DIGITAL MENUBOARD PREP WIRING:
- a. PROVIDE BOX, PLATE AND 1" DIA. CONDUIT FROM FROM (2) QUAD DATA OUTLETS IN MENUBOARD SOFFIT TO (2) QUAD DATA OUTLETS IN OFFICE WALL. EITHER (A) PROVIDE PULL STRING IN EACH CONDUIT (CAT 5 CABLING AND FINAL DATA CONNECTIONS BY DMB VENDOR), OR (B) PROVIDE ALL CAT 5 CABLING AND FINAL CONNECTIONS TO DATA PLATES/BOXES- COORD. W/ F'EE

KIOSK NOTES

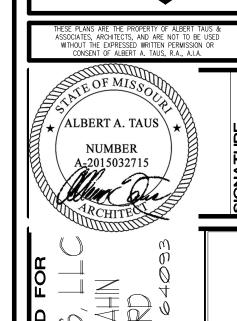
- G.C. TO PROVIDE A POWER / POS STUB UP FROM FLOOR OR A UNISTRUT RAIL SUSPENDED FROM ROOF STRUCTURE @ 10'-6" A.F.F. FOR ELECTRICAL/DATA CONNECTIONS AT ORDER KIOSKS.
- 20A CIRCUIT & (3) CAT-6 DATA CABLES EA - ALL WIRING & FINAL LOC'Ns TBD IN FIELD w/ FRANCHISEE & MANUF REQUIREMENTS.
- PROVIDE WIRING FROM KIOSK TO FRONT LINE POS AREA FOR "REMOTE ASSISTANCE" w/ LIGHT AT POS UNIT -CONFIRM ALL REQUIREMENTS w/ MANUF.

CONDUIT NOTES

- DMB: PROVIDE (8) CAT 5 WIRE PULLS FROM (2) QUAD DATA OUTLETS IN MENU BOARD SOFFIT TO (2) QUAD DATA OUTLETS IN OFFICE WALL
- 2 CONDUITS MIN SHALL BE USED BETWEEN OFFICE & OTHER PARTS OF THE STORE 1 CONDUIT FOR POS WIRING ONLY 1 CONDUIT FOR NON-POS ITEMS

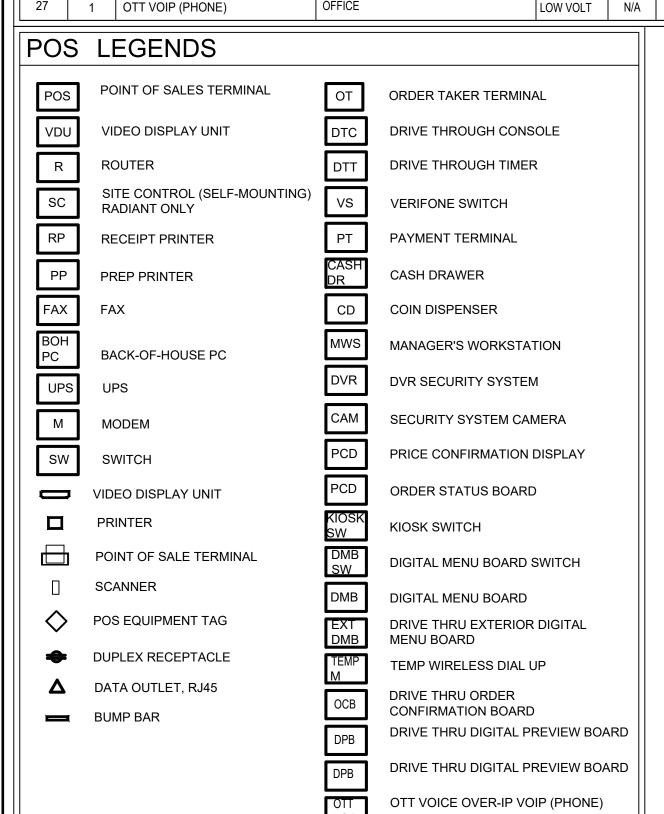


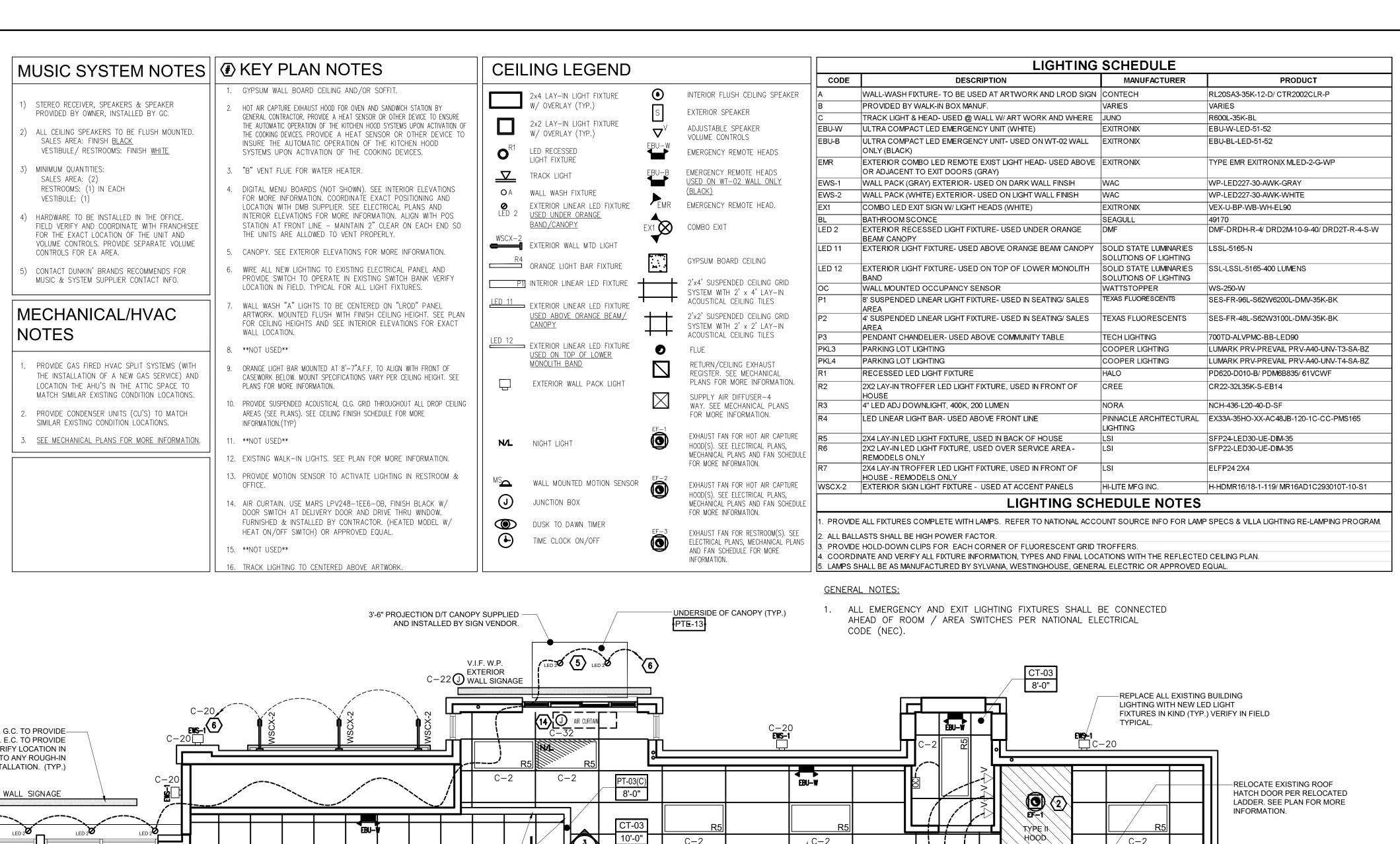
RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW



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RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW

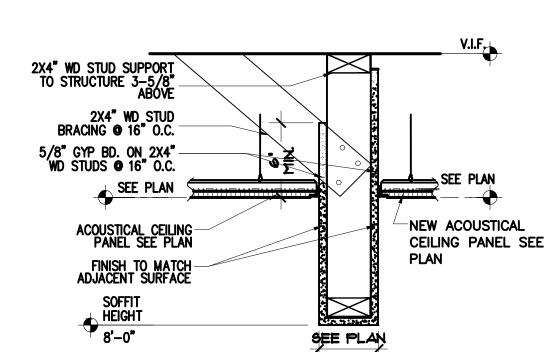
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EXISTING LIGHT POLE

STANDARD(S)

**V.I.F. SEE SITE PLAN DRAWINGS FOR MORE INFORMATION AND

EXACT QUANTITY AND LOCATION**

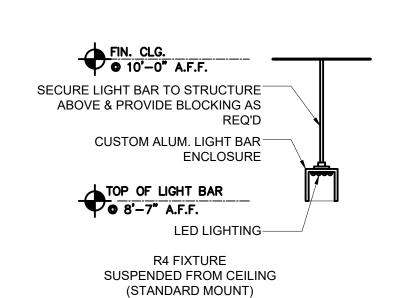
DIRECTIONAL

(FREE STANDING) SIGN(S)

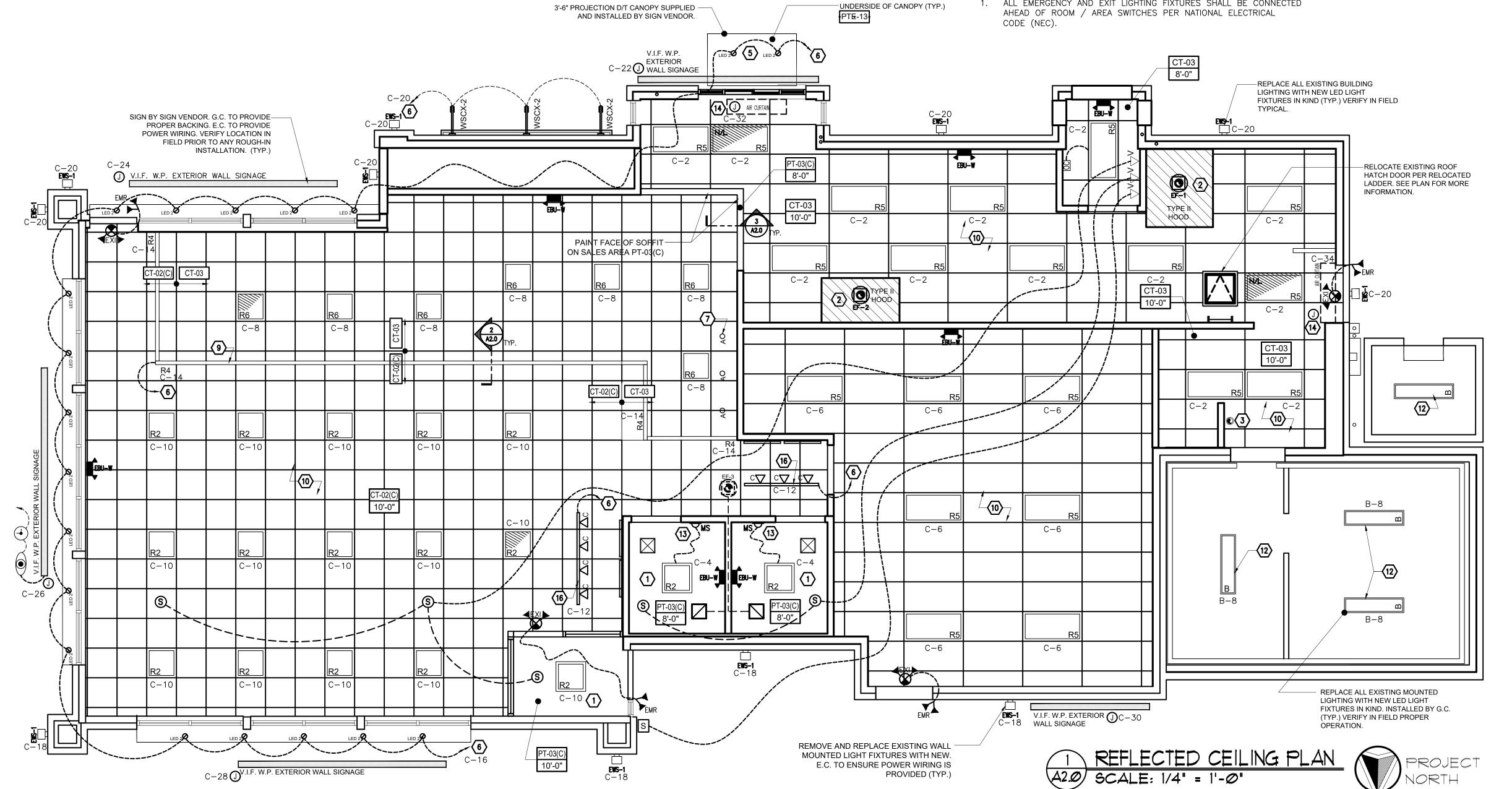
EXISTING

MONUMENT SIGNAGE

HEADER DETAIL



LIGHT BAR DETAIL - R4 A2.0 SCALE: NOT TO SCALE



PROVIDED (TYP.)

RATING: 120/208V, 3 PH, 4W, 600A CB						PAI	NEL: N	MDP							F
CKT. DESCRIPTION	WIRE & CONDUIT SIZE	POLE	LOAD VA	BKR. AMP	CIR. NO	A	PHASE B	С	CIR. NO	BKR.	LOAD VA	POLE	WIRE & CONDUIT SIZE	CKT. DESCRIPTION	
			18,822		1	29,710			2		10,888				SUN
PANEL "A"	4#4/0+1#4G; 3"C	3	21,239	200	3		32,971		4	200	11,732	3	4#4/0+1#4G; 3"C		WAF
			22,298		5			31,718	6		9,420				DIP S
			11,820		7	14,604			8		2,784				НОТ
PANEL "C"	4#4/0+1#4G; 3"C	3	12,820	200	9		15,604		10	45	2,784	3	3#6+1#10G; 1 1/4"C		НОТ
			10,500		11			13,284	12		2,784				SUN
			3,955		13	8,179			14		4,224				U.C.
RTU-1	3#6+1#10G; 1 1/4"C	3	3,955	50	15		8,179		16	60	4,224	3	3#4+1#8G; 1 1/4"C		CON
			3,955		17			8,179	18		4,224				MUL
			2,040		19	4,536			20	30	2,496	2	3#8+1#10G; 1"C	DUAL LANE	U.C.
COOLER COMPRESSOR	3#8+1#10G; 1"C	3	2,040	30	21		4,536		22		2,496	_	0110-111100, 1	20/12 2/11/1	EXP
			2,040		23			5,035	24	30	2,995	2	3#8+1#10G; 1"C	TU	CON
			2,040		25	5,035			26		2,995				DAIF
FREEZER COMPRESSOR	3#8+1#10G; 1"C	3	2,040	30	27		5,035		28	30	2,995	2	3#8+1#10G; 1"C	TL	. Twi
			2,040		29			5,035	30		2,995				
EF-1	2#12+1#12G; 3/4"C	1	1,000	20	31	2,841			32	30	1,841	2	3#8+1#10G; 1"C		DIPP
EF-2	2#12+1#12G; 3/4"C	1	1,000	20	33		2,841		34		1,841				DIPP
EF-3	2#12+1#12G; 3/4"C	1	1,000	20	35			1,000	36						BAK
SPARE					37	0			38						BAK
SPARE					39		0		40						SPAI
SPARE					41			0	42				<u>_</u> _		SPAI
MOUNTING: SURFACE				тот. тот.	CONN.	64,906	69,166 198,323	64,251	VA VA			LICUTII	DE NG LOAD	MAND FACTOR 125%	мои
PNL. SHORT CIR. RATING: 65 KAIC				TOT.	CONN.		198,323	1	KVA				TACLE & MISCELLANEOUS	70%	PNL.
THE STORT SIK RATING, 55 RAIS				TOT.	DEM		168	1	KVA			HVACI		100%	1 142
PANEL NOTES:				TOT.			466	1	Amp	at	208 V		EN LOAD	70%	PAN
1. PANEL SHORT CIRCUIT RATING SHALL MA	TCH OR EXCEED AVAILABLE S	SHORT-C	RCUIT CU			ILITY SER	VICE.	•	•	_		PLUMB		100%	1. PA
2. FIELD VERIFIES ALL EQUIPMENT WITH MA		ALLED B	REAKERS	AND FE	EDERS.										2. FIE
3. FIELD VERIFIES EXACT EQUIPMENT WITH (3. FII
4. PROVIDE AND INSTALL AS PER NEC CODE	•														4. PR

RATING: 120/208V, 3 PH, 4W, 200A CB						PA	NEL:	В							
CKT. DESCRIPTION	WIRE & CONDUIT SIZE	POLE	LOAD VA	BKR.	CIR. NO	A	PHASE B	С	CIR. NO	BKR.	LOAD VA	POLE	WIRE & CONDUIT SIZE	скт.	DESCRIPTION
ESTROOM RECEPTACLE	2#12+1#12G; 3/4"C	1	500	20	1	740			2	20	240	1	2#12+1#12G; 3/4"C		COOLER AIR VE
ESTROOM RECEPTACLE	2#12+1#12G; 3/4"C	1	500	20	3		740		4	20	240	1	2#12+1#12G; 3/4"C		COOLER AIR VE
ESTROOM EHD	2#10+1#10G; 3/4"C	1	1,300	20	5			1,900	6	20	600	1	2#12+1#12G; 3/4"C		COOLER HEAT TRA
ESTROOM EHD	2#10+1#10G; 3/4"C	1	1,300	20	7	1,900			8	20	600	1	2#12+1#12G; 3/4"C		COOLER/FREEZER LIG
ESTROOM J-BOX	2#12+1#12G; 3/4"C	1	1,300	20	9		1,540		10	20	240	1	2#12+1#12G; 3/4"C		FREEZER AIR VE
ONVENIENCE OUTLET	2#12+1#12G; 3/4"C	1	500	20	11			740	12	20	240	1	2#12+1#12G; 3/4"C		FREEZER AIR VE
KPEDITOR VDU	2#12+1#12G; 3/4"C	1	500	20	13	1,100			14	20	600	1	2#12+1#12G; 3/4"C		FREEZER HEAT TRA
RINTER DATA POWER	2#12+1#12G; 3/4"C	1	500	20	15		1,000		16	20	500	1	2#12+1#12G; 3/4"C		CONDENSATE DR
OS TERMINAL	2#12+1#12G; 3/4"C	1	500	20	17			1,500	18	20	1,000	1	2#12+1#12G; 3/4"C		BELL SYST
OS TERMINAL	2#12+1#12G; 3/4"C	1	500	20	19	1,500			20	20	1,000	1	2#12+1#12G; 3/4"C		BUG LIG
C. REF	2#12+1#12G; 3/4"C	1	840	20	21		1,840		22	20	1,000	1	2#12+1#12G; 3/4"C		BOOSTER PU
TATION HYBRID	2#12+1#12G; 3/4"C	1	480	20	23			1,480	24	20	1,000	1	2#12+1#12G; 3/4"C		CEILING RECEPTAC
TATION HYBRID	2#12+1#12G; 3/4"C	1	1,248	20	25	2,248			26	20	1,000	1	2#12+1#12G; 3/4"C		CEILING RECEPTAC
OLDING CABINETS	2#10+1#10G; 3/4"C	1	1,800	30	27		2,700		28	20	900	1	2#12+1#12G; 3/4"C		SEATING RECEPTAC
XPEDITOR VDU	2#12+1#12G; 3/4"C	1	500	20	29			1,220	30	20	720	1	2#12+1#12G; 3/4"C	TR	RAINING RM RECEPTAC
RINTER DATA POWER	2#12+1#12G; 3/4"C	1	500	20	31	1,400			32	20	900	1	2#12+1#12G; 3/4"C		KITCHEN RECEPTAC
AP SYSTEM	2#12+1#12G; 3/4"C	1	1,332	20	33		3,412		34	20	2,080		240 - 44400 - 4110		IOE COFFEE DREW
ITCHEN RECEPTACLE	2#12+1#12G; 3/4"C	1	500	20	35			2,580	36	30	2,080	2	3#8+1#10G; 1"C		ICE COFFEE BREW
IOSK	2#12+1#12G; 3/4"C	1	1,000	20	37	2,000			38	20	1,000	1	2#12+1#12G; 3/4"C	TA	NKLESS WATER HEAT
OOFTOP RECEPTACLE	2#12+1#12G; 3/4"C	1	500	20	39		500		40						SPA
PARE					41			0	42						SPA
	•			тот.	CONN.	10,888	11,732	9,420	VA		•		DE	MAND FACTOR	
OUNTING: SURFACE				TOT.	CONN.		32,040	1	VA				NG LOAD	125%	
IL. SHORT CIR. RATING: 65 KAIC				тот.	CONN.		32		KVA				TACLE & MISCELLANEOUS	70%	
NEL NOTES								4		١.					
									Amp	_ at	208 V				
PANEL NOTES: 1. PANEL SHORT CIRCUIT RATING SHALL MA 2. FIELD VERIFIES ALL EQUIPMENT WITH MA 3. FIELD VERIFIES EXACT EQUIPMENT WITH 4. PROVIDE AND INSTALL AS PER NEC CODE	NUFACTURER PRIOR TO INSTA OWNER.			TOT. TOT. IRRENT	DEM DEM FROM UTI	ILITY SER\	23 65		KVA KVA Amp	at	208 V	HVAC I	.OAD :N LOAD	100% 70% 100%	

RATING: 120/208V, 3 PH, 4W, 200A CB						P	ANEL:	: A						
CKT. DESCRIPTION	WIRE & CONDUIT SIZE	POLE	LOAD VA	BKR. AMP	CIR. NO	A	PHASE B	С	CIR. NO	BKR. AMP	LOAD VA	POLE	WIRE & CONDUIT SIZE	CKT. DESCRIPTION
SUNDAE STATION	2#12+1#12G; 3/4"C	1	1,800	20	1	2,300			2	20	500	1	2#12+1#12G; 3/4"C	EXPEDITOR VDL
WAFFLE CONE BAKER	2#12+1#12G; 3/4"C	1	1,800	20	3		2,840		4		1,040		0.440 - 4.4400 - 0.4410	IOLAND CACI
DIP SERVER	2#12+1#12G; 3/4"C	1	1,800	20	5			2,840	6	20	1,040	2	3#12+1#12G; 3/4"C	ISLAND OASIS
HOT TOPPING PUMP	2#12+1#12G; 3/4"C	1	1,800	20	7	3,600			8	20	1,800	1	2#12+1#12G; 3/4"C	BLENDER STATION
HOT TOPPING PUMP	2#12+1#12G; 3/4"C	1	1,800	20	9		3,600		10	20	1,800	1	2#12+1#12G; 3/4"C	BLENDER STATION
SUNDAE STATION	2#12+1#12G; 3/4"C	1	1,800	20	11			3,600	12	20	1,800	1	2#12+1#12G; 3/4"C	ELECTRICAL MENUBOARD
U.C. REF	2#12+1#12G; 3/4"C	1	840	20	13	1,056			14	20	216	1	2#12+1#12G; 3/4"C	DAIRY DISPENSER
CONVENIENCE OUTLET	2#12+1#12G; 3/4"C	1	500	20	15		716	1 + + +	16	20	216	1	2#12+1#12G; 3/4"C	DAIRY DISPENSER
MULTI-SWEETNER/DAIRY DISPEN.	2#12+1#12G; 3/4"C	1	1,080	20	17			1,920	18	20	840	1	2#12+1#12G; 3/4"C	REACH IN REF
U.C. REF	2#12+1#12G; 3/4"C	1	840	20	19	1,880			20		1,040			101 111 0 101
EXPEDITOR VDU	2#12+1#12G; 3/4"C	1	500	20	21		1,540		22	20	1,040	2	3#12+1#12G; 3/4"C	ISLAND OASIS
CONVENIENCE OUTLET	2#12+1#12G; 3/4"C	1	500	20	23			2,143	24		1,643			
DAIRY DISPEN.	2#12+1#12G; 3/4"C	1	500	20	25	2,143			26	20	1,643	2	3#12+1#12G; 3/4"C	HOT CHOCOLATE
			4,004		27		6,500		28		2,496			
TWIN BREWER STAND	3#6+1#10G; 1 1/4"C	2	4,004	50	29			6,500	30	30	2,496	2	3#8+1#10G; 1"C	COFFEE ART
DIPPING CABINET	2#12+1#12G; 3/4"C	1	1,800	20	31	4,296			32		2,496		0.110 - 4.1140 - 4110	005555 405
DIPPING CABINET	2#12+1#12G; 3/4"C	1	1,800	20	33		4,296		34	30	2,496	2	3#8+1#10G; 1"C	COFFEE ART
BAKERY CASE	2#12+1#12G; 3/4"C	1	1,800	20	35	+ + +		3,547	36		1,747		0.1140 4.11400 014110	THE PRESENT
BAKERY CASE	2#12+1#12G; 3/4"C	1	1,800	20	37	3,547			38	20	1,747	2	3#12+1#12G; 3/4"C	TWIN BREWER
SPARE			ĺ		39		1,747		40		1,747			
SPARE					41			1,747	42	20	1,747	2	3#12+1#12G; 3/4"C	TWIN BREWER
				тот.	CONN.	18,822	21,239	22,298	VA		1		DEI	MAND FACTOR
MOUNTING: SURFACE				TOT.	CONN.		62,359		VA			LIGHTII	IG LOAD	125%
PNL. SHORT CIR. RATING: 65 KAIC				TOT.			62	1	KVA				TACLE & MISCELLANEOUS	70%
				TOT.	DEM		44	4	KVA	١.		HVAC L		100%
PANEL NOTES:	TOU OD EVOEED AVAILABLE O	HODE	L CUIT OU	TOT.	DEM	ILITY CED	121		Amp	at	208 V		N LOAD	70%
1. PANEL SHORT CIRCUIT RATING SHALL MA 2. FIELD VERIFIES ALL EQUIPMENT WITH MAR						ILITY SER	VICE.					PLUMB	ING	100%
3. FIELD VERIFIES EXACT EQUIPMENT WITH O	OWNER.													

RATING: 120/208V, 3 PH, 4W, 200A CB						P	ANEL	: C						
CKT. DESCRIPTION	WIRE & CONDUIT SIZE	POLE	LOAD VA	BKR. AMP	CIR. NO	Α	PHASE B	С	CIR. NO	BKR.	LOAD VA	POLE	WIRE & CONDUIT SIZE	CKT. DESCRIPTION
COMM RECEPTACLE	2#12+1#12G; 3/4"C	1	720	20	1	1,720			2	20	1,000	1	2#12+1#12G; 3/4"C	KITCHEN LIGHT
COMM RECEPTACLE	2#12+1#12G; 3/4"C	1	720	20	3		1,720		4	20	1,000	1	2#12+1#12G; 3/4"C	BATHROOM LIGHT
COMM RECEPTACLE	2#12+1#12G; 3/4"C	1	500	20	5			1,500	6	20	1,000	1	2#12+1#12G; 3/4"C	KITCHEN LIGHT
COMM RECEPTACLE	2#12+1#12G; 3/4"C	1	500	20	7	1,500			8	20	1,000	1	2#12+1#12G; 3/4"C	COUNTER LIGHT
COMM RECEPTACLE	2#12+1#12G; 3/4"C	1	500	20	9		1,500		10	20	1,000	1	2#12+1#12G; 3/4"C	SEATING LIGHT
COMM RECEPTACLE	2#12+1#12G; 3/4"C	1	500	20	11			1,500	12	20	1,000	1	2#12+1#12G; 3/4"C	TRACK LIGHT
COMM RECEPTACLE	2#12+1#12G; 3/4"C	1	500	20	13	1,500			14	20	1,000	1	2#12+1#12G; 3/4"C	TRACK LIGHT
COMM RECEPTACLE	2#12+1#12G; 3/4"C	1	500	20	15		1,500		16	20	1,000	1	2#10+1#10G; 3/4"C	OUTDOOR LIGHT
VORK TABLE	2#12+1#12G; 3/4"C	1	500	20	17			1,000	18	20	500	1	2#10+1#10G; 3/4"C	OUTDOOR LIGHT
VORK TABLE	2#12+1#12G; 3/4"C	1	500	20	19	1,000			20	20	500	1	2#10+1#10G; 3/4"C	OUTDOOR LIGHT
COMM RECEPTACLE	2#12+1#12G; 3/4"C	1	500	20	21		1,700		22	20	1,200	1	2#10+1#10G; 3/4"C	SIGN
COMM RECEPTACLE	2#12+1#12G; 3/4"C	1	500	20	23			1,700	24	20	1,200	1	2#10+1#10G; 3/4"C	SIGN
COMM RECEPTACLE	2#12+1#12G; 3/4"C	1	500	20	25	1,700			26	20	1,200	1	2#10+1#10G; 3/4"C	SIGN
IGHT POLE	2#10+1#10G; 3/4"C	1	800	20	27		2,000		28	20	1,200	1	2#10+1#10G; 3/4"C	SIGN
IGHT POLE	2#10+1#10G; 3/4"C	1	800	20	29			2,000	30	20	1,200	1	2#10+1#10G; 3/4"C	SIGN
IGHT POLE	2#10+1#10G; 3/4"C	1	800	20	31	1,800			32	20	1,000	1	2#12+1#12G; 3/4"C	AIR CURTAIN
IGHT POLE	2#10+1#10G; 3/4"C	1	800	20	33		1,800		34	20	1,000	1	2#12+1#12G; 3/4"C	AIR CURTAIN
IGHT POLE	2#10+1#10G; 3/4"C	1	800	20	35			2,000	36	20	1,200	1	2#12+1#12G; 3/4"C	DOUBLE STACK OVEN
MONUMENT SIGN	2#10+1#10G; 3/4"C	1	800	20	37	1,800			38	20	1,000	1	2#10+1#10G; 3/4"C	SPEAKER TOWER
DIRECTIONAL SIGN	2#10+1#10G; 3/4"C	1	800	20	39		1,800		40	20	1,000	1	2#10+1#10G; 3/4"C	DRIVE THRU MENUBOARD
DIRECTIONAL SIGN	2#10+1#10G; 3/4"C	1	800	20	41			800	42				·	SPARE
DIRECTIONAL SIGN	2#10+1#10G; 3/4"C	1	800	20	43	800			44					SPARE
DIRECTIONAL SIGN	2#10+1#10G; 3/4"C	1	800	20	45		800		46					SPARE
SPARE					47			0	48					SPARE
SPARE					49	0			50					SPARE
SPARE					51		0		52					SPARE
SPARE					53			0	54					SPARE
SPARE					55	0			56					SPARE
SPARE					57		0		58					SPARE
SPARE					59			0	60					SPARE
				тот.	CONN.	11,820	12,820	10,500	VA		•		DE	MAND FACTOR
IOUNTING: SURFACE				TOT.	CONN.		35,140		VA			LIGHTI	NG LOAD	125%
PNL. SHORT CIR. RATING: 65 KAIC				TOT.	CONN.		35	_	KVA				TACLE & MISCELLANEOUS	70%
				TOT.	DEM		38	4	KVA	l .		HVAC I		100%
PANEL NOTES:				TOT.	DEM		107		Amp	_ at	208 V		N LOAD	70%
. PANEL SHORT CIRCUIT RATING SHALL MA . FIELD VERIFIES ALL EQUIPMENT WITH MA . FIELD VERIFIES EXACT EQUIPMENT WITH (NUFACTURER PRIOR TO INSTA					ILITY SER	VICE.					PLUMB	ING	100%

4. PROVIDE AND INSTALL AS PER NEC CODE.

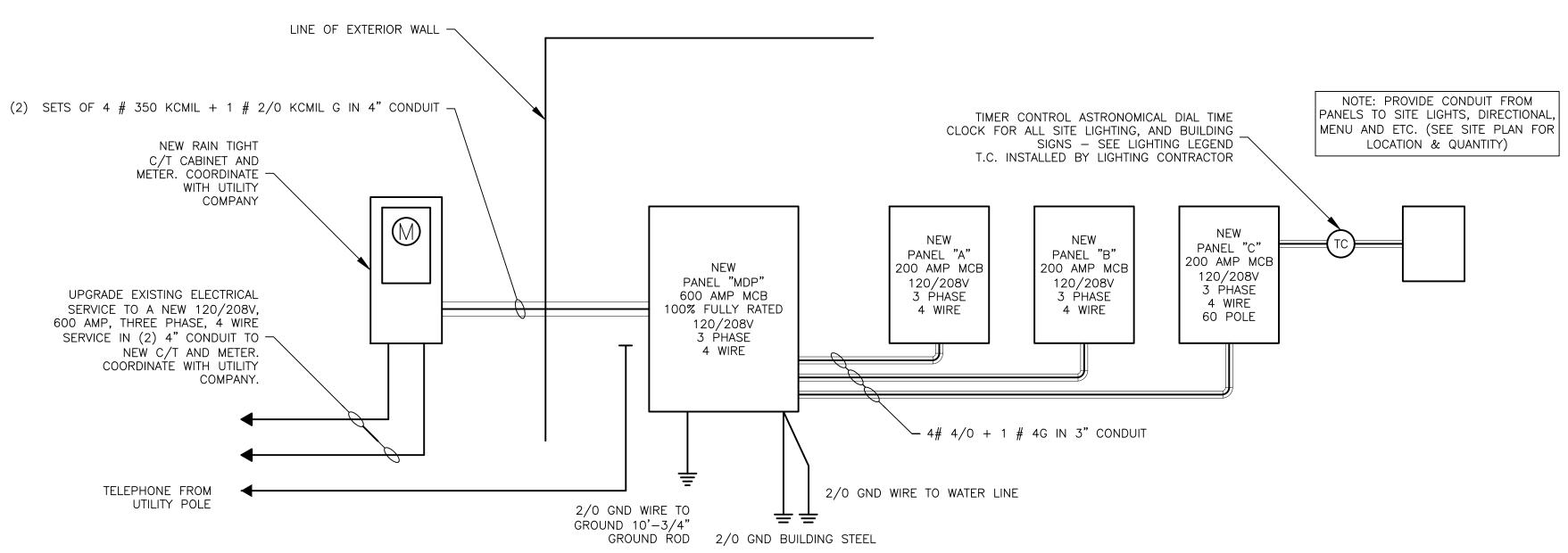
1) ELECTRICAL PANEL SCHEDULES

ELECTRICAL RISER DIAGRAM NOTES

- 1. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING SWITCHBOARD LOCATION PRIOR TO SUBMIT ELECTRICAL BID.
- 2. ALL NEW CIRCUIT BREAKERS BEING INSTALLED IN EXISTING SWITCHBOARD AND PANELBOARDS SHALL MATCH THE CHARACTERISTICS IN ALL RESPECTS OF THE EXISTING CIRCUIT BREAKERS.
- 3. THE ELECTRICAL CONTRACTOR SHALL REVIEW AND COORDINATE HIS WORK WITH ALL EQUIPMENT OF OTHER TRADES INDICATED ON THE DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL OVER CURRENT PROTECTION TO MEET THE ACTUAL NAMEPLATE REQUIREMENTS OF ALL MECHANICAL EQUIPMENT AND OTHER DEVICES. THE ELECTRICAL CONTRACTOR SHALL ASSIST IN THE INSTALLATION OF MECHANICAL EQUIPMENT AS REQUIRED BY LOCAL WORK RULES.
- 4. ELECTRICAL CONTRACTOR MUST INFORM FACILITY MAINTENANCE BEFORE PROCEEDING WITH ANY ELECTRICAL "HOT" WORK ON TIE-INS.
- 5. ALL WORK SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE, O.S.H.A. LATEST EDITIONS, AND ALL APPLICABLE LOCAL CODES.
- 6. COORDINATE EXACT LOCATION OF ALL FIXTURES AND OUTLETS WITH ARCHITECT DRAWINGS AND EQUIPMENT SUPPLIER'S RECOMMENDATIONS. REVIEW LOCATION OF ALL RACEWAYS WITH ARCHITECT/OWNER.
- 7. PROVIDE ALL GROUNDING AS REQUIRED BY N.E.C. OR ANY LOCAL CODES.
- 8. CONTRACTOR SHALL VISIT SITE TO FAMILIARIZE HIM WITH ALL CONDITIONS OF AREA.
- 9. CONTRACTOR SHALL PROVIDE TEMPORARY POWER AND LIGHT DURING COURSE OF CONSTRUCTION. POWER CONSUMED SHALL BE PAID FOR BY THE OWNER.
- 10. ALL WIRING INSTALLED UNDER THIS CONTRACT, PRIOR TO TURNING THE WORK AS A COMPLETE UNIT, SHALL BE TESTED FOR PROPER CONNECTIONS, SHORT CIRCUITS AND GROUNDS.
- 11. ALL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY ARCHITECT/OWNER.
- 12. COORDINATE INTERRUPTING CAPACITY OF ELECTRICAL PANELS AND ALL BREAKERS WITH UTILITY COMPANY. PROVIDE TYPE WRITTEN DIRECTORIES FOR ALL PANELS PER CIRCUIT USAGE.
- 13. CONTRACTOR SHALL DO CUTTING, DRILLING AND PATCHING TO A LIKE CONDITION, AS APPROVED BY ARCHITECT FOR INSTALLATION OF HIS WORK. PROVIDE FIREPROOFING COMPOUND ON ALL CONDUITS PASSING THROUGH FIRE RATED PARTITIONS.

- 14. CONTRACTOR TO REMOVE AND REINSTALL ALL CEILING TILES AS REQUIRED FOR THE INSTALLATION OF HIS WORK. REPLACE ALL CEILING TILES BROKEN DURING REMOVAL.
- 15. DURING CONSTRUCTION, CONTRACTOR SHALL REMOVE ALL DEBRIS AND STORE AT LOCATION AS DIRECTED BY OWNER. NO ITEMS SHALL BE LEFT AS TO CAUSE HAZARD DURING WORKING HOURS. COORDINATE WITH OWNER AREAS THAT WORK CAN BE DONE IN.
- 16. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATE ALL EXISTING PANEL LOCATIONS. IF THE EXISTING PANEL IS TO REMAIN & RENAME AS SHOWN ON FLOOR PLAN. ELECTRICAL CONTRACTOR SHALL FURNISH & INSTALL NEW CIRCUIT BREAKERS AS REQUIRED. NEW BREAKERS MUST MATCH EXISTING PANELS CHARACTERISTIC.
- 17. PROVIDE AND INSTALL AS PER N.E.C. CODE/PROVIDE AND INSTALL AS PER UTILITY COMPANY.
- 18. PROVIDE ALTERNATE PRICE FOR NEW ELECTRICAL EQUIPMENT.
- 19. CONTRACTOR HAS OPTION TO REUSE EXISTING PANEL IF IT IS IN COMPLIANCE WITH N.E.C. CODE.
- 20. REMOVE UNUSED EXISTING PANELS AND UNUSED WIRING AS PER N.E.C. CODE.
- 21. DURING THE CONSTRUCTION AND PRIOR TO INSTALLATION LICENSED ELECTRICIAN WILL SUBMIT ACTUAL LOAD FOR EACH PHASE EXISTING MDP AND KAIC RATING TO ELECTRICAL INSPECTOR AND ENGINEER FOR REVIEW AND APPROVAL. NEW PANELS WILL BE PURCHASED BASED UPON ACTUAL KAIC RATING REQUIREMENT.
- 22. PANELS: BALANCE PANEL LOAD FOR EACH PHASES, A, B & C. ALLOW FOR RELOCATING CIRCUITS WITHIN PANEL BOARD TO BALANCE THE LOAD.
- 23. TEST: UPON COMPLETION AND IMMEDIATELY PRIOR TO FINAL INSPECTION AND TAKEOVER, CHECK LOAD BALANCE ON ALL FEEDERS AND AT DISTRIBUTION CENTERS, PANELS, ETC. TEST TO BE CARRIED OUT BY TURNING ON ALL POSSIBLE LOADS AND CHECKING LOAD CURRENT BALANCE. IF LOAD UNBALANCE EXCEEDS 15%, RECONNECT CIRCUITS TO BALANCE LOAD.
- 24. E.C. TO VERIFY EXISTING ELECTRICAL LOAD/DEMAND IN FIELD PRIOR TO ROUGH IN. CONTACT ENGINEER IF THERE ARE DISCREPANCY OR HARDSHIPS UPON FIELD INSPECTION
- 25. ELECTRICAL SERVICE OF 400 AMPS AND ABOVE, PROVIDE C/T CABINET.

ALL WORK SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE, O.S.H.A. LATEST EDITIONS, AND ALL APPLICABLE LOCAL CODES



PROPOSED PROJECT

PROPOSED PROJECT

PROPOSED PROJECT

BUILD NOTE DOUGLAS STREET

LEE'S SUMMIT MO. & 40086

NO DESCRIPTION

BIECTRICAL SCHEDULES & NOTE DOUGLAS ATT ATAZO

REVISIONS

NO DESCRIPTION

REVISIONS

PATEBRIA

PROPOSED PROJECT ACCESS.

DATE 04/16/21

DOCUM

C/0:

DOCUM

DOC

CONSTRUCTION

2 ELECTRICAL RISER DIAGRAM

SCALE: NONE

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[condrinkmint]

16100.02 DRAWINGS AND SPECIFICATIONS

A. Drawings and specifications are complementary to each other and what is called for by one shall be as if called for by both.

B. Electrical drawings are diagrammatic and indicate general design, layout, and arrangement of equipment and various systems. However, being diagrammatic the drawings do not necessarily show all details such as junction boxes, pull boxes, conduit runs or sizes, wiring, etc. necessary for a complete and operable system C. Do not scale drawings for dimensions.

D. All dimensions and measurements shall be taken from architectural drawings and actual equipment to be furnished. The exact locations of apparatus, fixtures, equipment, conduits, outlets, receptacles, lighting fixtures, etc. shall be ascertained from the OWNER representative in the field, and the work shall be laid out accordingly. The CONTRACTOR shall verify and be responsible for all measurements taken in the field. Should the CONTRACTOR fail to ascertain the above locations, the work shall be changed at his own expense when so ordered

E. OWNER reserves the right to make minor changes in the location of conduit and equipment up to the time of installation, without additional cost. F. Study and review all contract documents including drawings and specifications for architectural, structural, mechanical, and other portions of the work to avert

G. Should conflicts arise which require changes in the contract documents, notify OWNER. Secure written approval and agreement on necessary adjustments before the bidding.

possible installation conflicts. Adjust electrical work to conform to all

H. Discrepancies between drawings, between drawings and specifications, or between drawings and actual field conditions, or errors on either drawings or specifications shall be promptly brought to the attention of Architect and OWNER for a decision before the specific bidding.

16100.03 EXAMINATION OF PROJECT SITE

conditions indicated therein.

A. Prior to bidding examine the site carefully and be fully familiar with existing conditions and be fully informed of all utility, state and local requirements and

16100.04 EXISTING CONDUITS, PIPES, EQUIPMENT, ETC.

A. (Refer to General Specifications for additional requirements). Existing conduits, pipes, utility lines, tanks, equipment or other constructions are not in general indicated on drawings. Locate such obstructions prior to start of work and plan work so as to route and locate all new work to avoid these obstructions. Repair or replace existing installations where damaged during the course of construction.

16100.05 PERMITS, FEES, TAXES AND ROYALTIES

A. Arrange and pay for all necessary permits, fees, taxes, and royalties in connection with electrical work.

16100.06 CODES AND REGULATIONS

A. Comply with the latest applicable requirements of the NEC, NESC, OSHA, the NFPA, and the local Electrical Inspection Authority who shall have final jurisdiction. Comply also with all requirements of local utility and telephone

B. Report to the engineer prior to submitting bids, any part or portion of the electrical design which does not conform to the requirements of the applicable local or state codes or requirements of local utility or telephone companies. otherwise be held responsible to provide installation which will comply with these

C. Applicable codes and ordinances and local interpretations are to take precedence when they conflict with or are more stringent than the electrical design. Drawings and specifications take precedence where design is more stringent than codes and ordinances.

16100.07 STANDARDS

A. Materials and installation shall also conform to latest standards and practices of the Institute of Electrical and Electronic Engineers (IEEE), the National Electrical Manufacturers Association (NEMA), Insulated Power Cable Engineers Association (IPCEA), American National Standards Institute (ANSI) American Society of Testing Materials (ASTM), and the National Bureau of Standards.

B. The foregoing rules, standards, and regulations shall not relieve the contractor from furnishing and installing higher grades of materials and workmanship which are specified herein or indicated on drawings.

16100.08 PROGRESS OF WORK

A. Schedule the progress of work so as to conform to the schedule of the work of other trades. Complete the entire electrical installation in accordance with schedules as determined for the general completion of the entire building. Cooperate with all other trades so that the installation of all electrical outlets may be properly coordinated and located.

B. Carefully check the location of outlet boxes after the installation of materials and equipment by other trades. Any cost resulting from defective or ill-timed work performed under this division of the specifications shall be borne by this contractor under this section.

16100.09 PRODUCT DATA AND SUBMITTALS

A. Furnish product data and submittals for review by Architect and OWNER prior to installation.

B. Furnish detailed and dimensioned product data, submittals, and shop drawings for all electrical distribution equipment, lighting fixtures and lamps, special equipment, special systems, and special apparatus which are to be provided for installation in this work.

C. Include catalog cuts, dimensional and operating data, wiring diagrams for special systems, and such other data as may be required by Architect Contractor shall review these submittals prior to submission for review. Do not order equipment prior to review of Architect and OWNER. Submit samples of equipment when so requested by Architect and OWNER.

16100.10 MINOR DEVIATIONS AND CHANGES

A. Furnish and install entire electrical installations as designed and in accordance with contract drawings and specifications. Minor deviations necessitated by field conditions or equipment being supplied may be made upon approval of Architect and OWNER. Changes in design and installation shall be done in the manner provided for in the GENERAL CONDITIONS.

16100.11 CUTTING AND REPAIRING

A. Provide all cutting, patching, channeling, core drilling, etc., in building structure necessary for electrical work. Locate holes to be drilled, outlets, etc., coordinate work with all other trades on the job, and make arrangements for necessary openings and chases. Seal all holes cut for wiring runs.

B. No cutting, channeling, core drilling, etc., shall be done without prior approval of the architect. Make necessary repairs to finished building where patching or refinishing is necessary due to electric work. Actual work involved in these repairs shall be done by skilled craftsmen in the trades involved.

16100.12 MATERIALS

A. Furnish and install all material, equipment, and devices which are new, first quality, bear the listed label of the Underwriters Laboratories, Inc. and which are accepted by Architect and OWNER for installation in this project.

B. Replace, in a manner accepted by Architect and OWNER, and pay for all equipment or materials damaged in the course of installation or testing

C. Basic bid shall include manufacturers and catalog numbers as shown in these specifications or on the drawings with NO EQUALS unless specifically indicated. Specified materials, equipment, and devices shall be furnished and installed under the contract unless changed by mutual agreement between contractor and

D. Where several manufacturers are indicated for material equipment or devices, contractor shall have the choice of manufacturers listed, but must indicate which is to be used. Equipment of other manufacturers which is equal to or superior than that specified may be proposed in accordance with the General Specification Manufacturers and catalog numbers shown in these specifications or on the drawings followed by OR EQUAL are intended as a guide to quality.

E. Substitute equipment of other manufacturers which is equivalent to or superior than that specified may be proposed. However, such substitutions must be accepted in writing by Architect and OWNER prior to bidding. If substitutions are not requested or granted, the specified materials and equipment must be installed. The decision of OWNER regarding substitutions shall be final.

F. It shall be the electrical contractors responsibility under this section of the specification to notify all related trades of the accepted substitutions and to assume full responsibility for all costs caused as a result of the substitution. prior to start of work, submit to Architect and OWNER a complete list of tupes, materials, and equipment and manufacturers of these items which are to be furnished for this work.

G. Copper wire must be used. Aluminum wire will not be accepted. H. Equipment and materials must comply with the requirements of the Utility

Company, and where required shall be submitted to them for their approval

16100.13 PROJECT RECORD DOCUMENTS

A. Hold one set of electrical drawings and specifications on job site and keep up to date with project record data and revisions. Do not use this set for construction. Locate all underground runs including service entrances and feeders, and circuits exterior to building. Upon completion of work, furnish OWNER with one set of marked up mylar sepias of the electrical drawings

showing project record installation. 16100.14 OPERATING INSTRUCTIONS AND MANUALS

A. At completion of project provide the OWNER with two sets of written instructions and manuals including manufacturers certificates of warranty, shop drawings, wiring diagrams, and parts lists of all systems and equipment installed Bind separately in 3-ring binders with hard covers. Indicate to OWNER location and operation of distribution equipment and panel boards. Provide direct instruction to OWNER's representative for operation and maintenance of special

16100.15 GUARANTEE

A. Furnish to OWNER a formal quarantee covering entire electrical system including equipment provided by Others and installed by electrical Contractor, to be free from defective materials and workmanship for a period of one year after date of acceptance of installation by OWNER. During this period provide all labor and new materials where required to repair or replace all defects to the satisfaction of OWNER at no additional cost.

16100.16 FINAL ACCEPTANCE AND WORK CLOSE-OUT

16100.18 DELIVERY AND STORAGE OF MATERIALS

A. Contractor shall inspect the entire electrical installation to assure that all work is completed and all systems are completely operational before calling for a final acceptance of the work. All certificates including acceptance of local inspection authority must be presented at that time. 16100.17 BASIC MATERIALS AND METHODS

A. Furnish and install the basic materials, equipment, and devices for the electrical installation as indicated on the drawings and specified herein.

A. Make own provisions for the delivery and safe storage of materials and equipment. Make arrangements for introduction into the building of equipment too large to pass through finished openings. Arrange to have materials delivered to the job at such stages of the work as will expedite the work as a whole. Mark materials and store in such a manner as to be easily checked or

B. Store all materials and equipment out of the weather and mechanically protect from damage, theft, and vandalism.

C. Where materials are indicated to be furnished by others for installation by the electrical contractor, make a complete and careful check of all materials delivered and furnish a receipt acknowledging acceptance, assume full responsibility for the safe-keeping of same until such time as the completed installation has been accepted.

16100.19 CLEANING AND PAINTING

A. In general, except where specified otherwise herein, finish painting of conduits, boxes, poles, and equipment where specified to be done in field, shall be done by other trades under another section of the specifications. Protect electrical apparatus, cabinets, boxes, and all other equipment normally furnished on the job with factory applied finish, either painted or galvanized, during storage and installation. Clean all electrical equipment, such as lighting fixtures, lamps, switchboards, panelboards, transformers, etc., of construction dirt, drill chips, debris, dust, paint smears, etc., before completion of work. Clean or touch-up and repaint all scars, blemishes, rust spots, etc., to original state of

16100.20 TRENCHING AND BACK FILL

A. Provide all trenching and back filling required for electrical work.

16100.21 SCOPE OF WORK

A. Work under this Contract comprises the providing of all labor, material, equipment, transportation, scaffolding, rigging, tools and related items and subcontract work for a complete operating electrical system and includes but is

Removals, alterations, relocations and connections to existing systems Гетрогагу liqht and power. Cutting and patching. Shop drawings. Testing and adjustments

Cleaning and painting. Low Voltage Feeders Light and Power Distribution Panels.

Motor Branch Circuit Wiring. Liahtina Branch Circuit Wiring Connections to Equipment Furnished by Others. Lighting Fixtures and Lamps. Receiving, handling, setting and connecting all motors, motor driven

Emergency electric systems, equipment and lighting,

equipment and controls specified to be provided by the Owner. Miscellaneous Signal and Control Systems. Plumbing and heating, ventilation and air conditioning wiring, including

B. Items mentioned in the above schedule are listed for the purpose of describing basic specification contents and shall not be construed as relieving the Contractor from executing any work described throughout the specification or indicated on drawings because of its detailed omission in this schedule.

16100.22 SHOP DRAWINGS AND MANUFACTURER'S SUPERVISION REGUIRED

A. Provide shop drawings for the following prior to fabrication, including all accessories and manufacturer's supervision where indicated: Electrical Panels Lighting Fixtures and Lamps

16100.23 GROUNDING

A. Provide all electrical system arounding in accordance with the NEC and any state and local code requirements even if not shown on the drawings. Include additional grounding conductors in non-metallic race ways even though the drawings show only circuit and/or neutral conductors.

B. Receptacles which do not have their mounting yokes connected to receptacle grounding point shall be grounded with a green insulated grounding jumper connected to outlet box. Provide a separate ground conductor with branch circuit wiring when indicated on drawings or when required by Code.

C. Provide additional grounding where shown on the drawings. D. Ground cables shall be continuous without joints or splices throughout its length. If bare ground conductors are run through metallic conduit, they shall be securely bonded to each conduit at the entrance and exit. All connections to equipment or conduit shall be made with approved type of solderless connector, and same shall be thoroughly cleaned and bright before connection is made so as to insure a good metal contact. Connections which will be inaccessible after completion of project shall be made by the Cadweld or Thermo Weld process. E. Grounding connections: Utilize Burndy "Thermoweld" process for all

cable-to-cable, cable-to-steel, and cable-to-ground rod connections. F. Where a grounding electrode is not available, a 3/4" diameter by 10'-0" long copperweld driven ground rod shall be provided for ground connections. This electrode shall have a resistance to ground not exceeding limits as set by State and Local Codes.

6. When the maximum resistance to ground specified above cannot be achieved, the Contractor shall increase the length and quantity of ground rods to achieve this resistance required. Where increased quantity and length of ground rods do not produce the maximum specified resistance, soil treatment around ground rods shall be provided.

16100.24 WIRING-GENERAL

A. All branch circuit wiring run within the building and not exposed to moisture, shall be installed in electrical-metallic tubing; Ármored cable "AC" is permitted in concealed walls, partitions, & lights to the extent allowed by code.

B. All branch circuit wiring run outside of the building and exposed to moisture shall be installed in rigid intermediate galvanized conduit and run concealed in new construction, but exposed on existing construction.

C. All wiring for low tension, controls, communications and all other systems shall be in raceway specified for branch circuits unless specifically noted in other

D. All feeder wiring run within the building shall be installed in electrical-metallic tubing. Exceptions are noted on the drawings. Aluminum conduit shall not be installed in concrete containing chloride additives.

E. Flexible metal conduit with approved type fittings may be used in limited lengths of connections to motors and recessed fixtures where it is necessary to provide flexible connections. It may also be used where structural members preclude the use of electrical metallic tubing or conduits.

F. Liquid tight flexible metal conduit in lengths of 3' or less with approved type fittings shall be used for connections to vibrating equipment, motors, and other outlets where wiring will be exposed to weather, moisture or vibrations. 6. Rigid nonmetallic conduit shall not be allowed in structural slabs unless

approved by the Structural Engineers. H. Install raceways from box to box or terminations as shown on the drawings or as required to effect circuiting described with circuit numbers adjacent to equipment. Grouping home runs or combining wires in common raceways will be allowed, with a maximum of four single pole branch circuits in a raceway. Increase wire sizes and raceways where required to avoid loss of ampacity as

required by National Electrical Code. I. Provide 'OZ' or equal conduit seals for all raceways, wires or cables passing through toundations, floors, walls, or tootings.

J. All underground wiring and raceways located outside of building shall be a minimum of 24" below finished grade except wiring over 600 volts which shall be 30" below finished grade unless noted otherwise.

K. Exposed wiring within building shall be in E.M.T. with compression fittings. Concealed wiring in walls, partitions and ceilings may be MC for #10 wire and smaller (where allowed by code) and E.M.T. for #8 wire and larger.

L. Wiring in slab shall be rigid qalvanized steel or underfloor duct. Short final connections to vibrating equipment shall be Sealtite. M. All wiring shall be copper. Aluminum is not acceptable.

16100,25 CONDUITS AND RACENAYS

A. All conduits shall be 3/4" minimum trade size diameter unless specified B. All rigid steel conduits shall have threads painted with Thomas and Betts

copper shield where conduit is exposed to weather or dampness. C. Raceways shall be capped with bushings during construction and swabbed clean before drawing in wire.

D. Conduits shall be cut square and reamed and all terminals shall be made up

E. Rigid conduit system shall be made up with threaded fittings and couplings. F. Exposed raceways shall run parallel to or at right angles to surfaces wired over and shall be provided with fittings or standard manufactured elbows. 6. Supports on all raceways shall run parallel to or at right angles to surfaces wired over and shall be spaced at a maximum of 10'. Supports on raceways larger than 2" shall be spaced at a maximum of 6'.

H. Fastenings shall be lead shields, rawl plugs, wood screws, lag bolts, beam clamps or toggle bolts. No wooden plugs will be permitted. No nails will be

1. Conduits and hangers shall be installed in a manner not to interfere with the work of other trades. This shall include trapeze hangers to straddle ducts, pipes or other obstructions where necessary. No perforated strap iron will be permitted.

J. Provide a conduit expansion fitting wherever run crosses an expansion joint in the structure and where conduit is attached to separate structures. Expansion fitting shall be "OZ" type "AX", Thomas and Betts, Steel City or approved equal. K. Riqid IMC Conduit shall be "ETP Uni-Swivel" or approved equal. L. Riqid heavy-wall galvanized conduit shall be Republic, National, Triangle, or

approved equal. M. Rigid aluminum conduit shall be Alco, Reynolds, Kaiser or approved equal. N. Rigid non-metallic conduit shall be polyvinyl chloride Schedule 40 heavy wall

made by Carlon or approved equal. O. Surface metal raceway shall be Wiremold, Kindorf or approved equal. P. Flexible metallic conduit shall be Anaconda, Columbia, General Cable or National. Liquid-tight type shall be Anaconda, Columbia or American Flexible Conduit Company. Q. Riqid conduit bushings shall be impact resistant plastic insulating type as made by Thomas & Betts, Appleton, Steel City or approved equal.

R. Electrical-metallic tubing shall be Republic, ETP, National or approved equal with screw-type fittings. 5. All steel conduits in direct contact with earth shall be painted with two (2) coats of black asphalt prior to installation. T. Provide a continuous red plastic strip I'-O" above top of all underground

гасемаць. U. Conduit supports and hangers shall be galvanized by Steel City, Kindorf, or equal.

Thomas and Betts.

hinged and screwed type.

A. Outlet boxes for ceiling fixtures shall be 4" octagonal galvanized steel boxes not less than 1 1/2" deep provided with 3/8" galvanized malleable iron fixture stud.

B. Outlet boxes set in concrete slabs for ceiling fixtures shall be 4" octagonal galvanized steel boxes of sufficient depth to have conduit entering from the sides clear of reinforcing steel. Box shall have 3/8" galvanized malleable iron fixture stud

C. Concealed outlet boxes for wall brackets, switches and receptacles shall be 4" square galvanized steel boxes 1 1/2" deep with raised plaster covers of sufficient depth to accommodate wall surface material.

D. Exposed outlet boxes in dry locations for switches and receptacles shall be 4" square aglyanized steel boxes not less than 1 1/2" deep with raised covers with rounded corners. If rounded corner covers cannot be provided in proper number of gangs, boxes shall be Wiremold or cast F.S. boxes so that corners of flat plates or covers do not project over box edge.

E. Exposed outlet boxes in damp locations or where exposed to weather shall be case galvanized steel with plates or covers.

F. Outlet boxes for switches and receptacles in tile or other hollow masonry construction shall be 3 1/2" deep galvanized changeable switch boxes. Through-the-wall boxes shall not be used.

G. Concealed outlet boxes shall have all unused knockouts closed with snap- in blanks. Exposed outlet boxes, except cast type with screw plugs, shall have no snap-in blanks or holes. Exposed boxes shall be replaced, if necessary, to achieve this result.

H. Pressed steel boxes shall be Steel City, Raco, Appleton, General Electric, or

I. Cast boxes shall be Crouse Hinds, Pyle-National or General Electric. J. All outlet boxes shall be of approved size for the number of wires to be accommodated according to NEC requirements.

16100.27 PULL OR JUNCTION BOXES AND WIRING TROUGHS

A. Furnish and install pull or junction boxes where indicated or where necessary to facilitate pulling of conductors. All boxes shall be sized according to NEC

B. Boxes shall be formed of hot dipped galvanized sheet steel except where specified otherwise C. Boxes installed in wet areas or where exposed to weather shall be cast

aluminum with cast bolted covers D. Provide wiring troughs where indicated or where necessary to neatly interconnect safety switches, starters, relays, controls, etc. Troughs shall be Square D, or approved equa

E. All covers on boxes and troughs shall be screw cover type, or combination

16100,28 WIRES AND CABLES - 600 VOLT INSULATION

noted. Wires to be sized for appropriate voltage drop.

the protective device protecting the wire or cable.

A. Wiring shall be type THMN or THM unless otherwise noted below or on the drawings; for conductors larger than #6 AMG, type XHHM will also be accepted. B. MC cable shall be UL labeled type "MC" two, three, or four conductor type

C. Cables in high temperature areas shall have an insulation type suitable for the temperature cables used in spaces for environmental air shall conform with applicable NEC requirements

D. All wire and cable conductors shall be copper with insulation rated 600 volts. Conductors #10 and smaller shall be solid; larger conductors shall be

F. Fixture wires shall be not less than #14 AWG type SFF-2 and flexible cords shall be not less than #14 type S.

E. Branch circuits for power and lighting shall be not less than #12 AWG or as

G. Control wiring shall be not less than #14 AMG, unless otherwise noted. H. Color coding shall be used throughout the system using black, red and blue

or phase wires. White for arounded neutral wires and areen for eavin grounding conductors. Electrical Contractor shall comply with applicable of the 1. Where wire or cable is installed in areas with an ambient temperature in excess of 86 degrees F, its current carrying capacity shall be decreased in

accordance with the NEC. The wire and cable sizes shall be increased to obtain

a current carrying capacity equal to or greater than the trip or fuse rating of

J. Copper conductor wires and cables shall be as manufactured by Anaconda, General Cable, General Electric, Hatfield Wire and Cable Company, Phelps-Dodge, Essex or Kerite.

16100.29 WIRE SPLICING AND TERMINATING OF 600 VOLT CONDUCTORS

A. Splices of wires up to 3 #8 conductors shall be made with pressure tupe connectors. Wire nuts or screw caps will not be permitted. Splices above this size shall be made with approved mechanical connectors, Scotchfill and Scotch

B. Splices in cables #6 gauge and larger shall be made with cast sleeve type connectors with set screws, Scotchfill and Scotch #88 vinyl tape.

pressed copper lugs. Two bolt lugs shall be used if necessary to obtain sufficient contact surface of 200 amperes per square inch capacity, to maintain rigidity in terminating large cables.

C. Copper conductor terminations shall be made with mechanical, set screw,

D. Small wire splices shall be made with Thomas and Betts Wire nuts or approved equal connectors. E. Large wire splices shall be made with "OZ" type XW and "OZ" type XTP, or

approved equal connectors. F. Terminal lugs shall be pressed copper screw lugs as made by Mac or equal.

16100.30 WIRING DEVICES AND PLATES

A. Provide at every indicated outlet the proper devices and plates as specified herein or on the drawings. Where more than one device is indicated in one location, they shall be ganged together in one box and under one plate as

B. Wall plates finish to be selected by OWNER.

C. Devices listed are to establish type, color, operation and capacity.

Manufacturers shall be Hubbell, Pass and Seymour, or Arrow Hart. 16100.31 MIRING IN CONNECTION WITH OTHER TRADES AND OWNER'S EQUIPMENT

A. The Mechanical Contractors or OWNER will provide motor drives. Motorized equipment (except control motors), electric heaters and electric controls attached to pipes and/or equipment shall be installed by the Mechanical Contractor who provides this item. All remote buttons, relays, control cabinets, control motors, starters, TMCC, etc. and other electrical equipment not shown or specified to be supplied by the Electrical Contractor shall be turned over to the Electrical Contractor for installation

B. The plans and specifications as prepared for bidding purposes indicate the work to be done, but are not detailed shop drawings and details of connections will not be available until shop drawings and other pertinent data is supplied by the Mechanical Contractors and Manufacturers of equipment. In submitting a bid, the Electrical Contractor quarantees he has performed similar work and is familiar with the type and scope of work to be done, as all electrical work required to properly operate this equipment, line connections, control connections, installation of starters, remote starting buttons, control motors, relays, wiring interconnections and all associated work shall be provided by the Electrical Contractor.

C. This Contractor shall carefully review the plans and specifications of the other trades, (Kitchen Equipment Contractors), (Heating, Ventilating, Air Conditioning Contractors) and (Plumbing Contractors), and other equipment requiring electrical connections, as all electrical work required for the operation of this equipment not specified as being furnished by others shall be

the responsibility of this Contractor. D. Detailed wiring diagrams, instructions and shop drawings of equipment will be provided to this Contractor by other trades, or by OWNER.

E. Should operation faults be found in the interconnecting of mechanical and electrical equipment, the fault when determined shall be attributed to the Contractor responsible for same. In the event of dispute, the Engineer shall make the final decision as to responsibility for correction. Improper wiring diagrams or shop drawings shall not be the responsibility of the Electrical

F. For the nature and extent of control wiring involved, refer to drawings and specifications of other trades, and review the equipment to be provided by OWNER. Any control wiring diagrams shown are for estimating purposes only and must be verified by shop drawings before proceeding with the installation. G. Motor starters, manual and magnetic, and starter control buttons or switches

Drawings and installed by this Contractor. H. This Contractor shall receive, place and connect Owner's equipment requiring electrical connections, unless specified otherwise.

shall be provided by (other) contractors except as noted on the Electrical

I. This Contractor shall furnish all disconnect switches for motors and equipment as required by Code. Lock-out type buttons shall not be permitted. Provide fused disconnect switches wherever manufacturer requires them.

A. Provide fixtures as shown on the fixture schedule and described below. The fixtures shall be supplied complete with lamps and any auxiliary devices necessary for their function. Fixtures shall be securely fastened to the ceiling structure as well as the outlet box where necessary to maintain proper

B. This Contractor shall provide all stems, rods, supports, hang straight swivels channel or angle iron bracing, etc., of the proper length and size as required to install fixtures in a neat and secure manner in their proper positions. Regular fixture stem and canopy sets shall be used in all cases unless specified otherwise. A minimum of one stem or support shall be furnished for each four (4') feet of fixture chassis except where the chassis is manufactured in eight (8') foot sections, in which case a stem or support may be placed at eight (8') foot intervals. Provide clips for lay-in fixtures in accordance with Article 410-16C of

D. All ballasts for fluorescent fixtures shall be ETL and UL listed, shall be electronic, high frequency, high light output, unless specified otherwise and shall be equipped with an internal, thermal protection system. Ballasts shall be Class P in accordance with UL requirements. Provide low temperature (-20 DEG. C) ballasts in all HID and fluorescent fixtures mounted outside of building, unless specified otherwise. Ballasts shall be Advance with less than 20% total harmonic distortion (THD). Indicate ballasts as specified on drawings.

E. Ballast shall have the following minimum sound ratings:

Trigger Start Preheat Circline Rapid Start - 430 ma High Output - 800 ma Power Groove - 1500 ma

F. Fixtures shall be designed and applied such that the ballast/fixture combination with all units in place in the room or space shall have an inaudible

6. Fixture/Ballast combination shall be designed to limit maximum ballast case temperature to 90 degrees C. H. Lighting fixtures shall conform to Articles 410 and 300-22 of the NEC.

1. This Contractor shall verify final types of ceiling construction for each fixture and shall provide plaster frames, special supports or bracing as required for the particular ceiling

J. This provision shall supersede and take precedence over any type mounting

detailed on the drawings, or the drawing schedules, or further delineated in

requiring a complete and operating fixture unit with all such intended

these specifications. No additional compensation will be allowed for failure to observe this provision. K.. Fixture catalog numbers may be shown for four (4') foot or other modular sections. This represents the series type required, not necessarily the correct length. The plans show the actual length of units or runs required. Fixture catalog numbers or partial numbers for accessories are to be interpreted as

accessories, including mounting, quards, lenses, supports, plaster frames, bodies, L. Where lenses, enclosures or other parts of lighting fixtures are specified as

"acrylic," it shall be 100 % virgin acrylic. M. All lighting fixtures, lamps, and lenses shall be cleaned free of dust, dirt,

grease, smudges, and loose labels or debris. N. Where fixture canopies are to be mounted on exposed outlet boxes, the boxes shall be Miremold fixture boxes of proper size to prevent canopies overhanging the box edges. Where the wiring system is conduit or cable, the proper Wiremold adapter shall be provided at the box to make the transition.

16100.33 WIRING FOR STORE FIXTURES AND EGUIPMENT

A. Furnish and install circuits, feeders, and outlets specified herein. Completely connect and leave cases, store fixtures, and equipment in proper operating condition. A general description of such work follows; however, any omission of details will not relieve the contractor of the responsibility of completely connecting the various items. It shall be the duty of the contractor to familiarize

himself with details involved by actual examination of equipment and fixtures. B. Cases and checkout stands are subject to some relocations, and all dimensions and locations indicated shall be verified with representative of Owner before actual installation. Type of junction box outlet to be provided for each piece of equipment and case shall be determined by the type of fixtures or cases to be installed. Verify location of all electrical requirements with Owner immediately prior to rough-in. Connect wiring between adjacent cases, store fixtures, equipment of all items in each line-up, etc. for complete wiring.

16100.34 WIRING FOR BUILDING MECHANICAL EGUIPMENT AND SYSTEMS

A. Furnish and install all material, equipment, devices, wiring, and connections for mechanical equipment as indicated on drawings and specified herein. In addition, furnish and install all other basic materials, equipment and devices in accordance with other sections of this division of the specification which are applicable to the installation of this equipment.

B. Furnish and install circuits, outlets, feeders, (disconnect switches, and thermal

PLUMBING, HEATING, VENTILATING, AND AIR CONDITIONING

overload switches), and make all connections to motors and controls for building mechanical equipment such as plumbing, heating, ventilating, and air conditioning equipment as indicated on drawings and herein specified and in accordance with the following SCHEDULE OF WIRING. Refer also to drawings and specifications for HVAC, refrigeration, and plumbing. Provide 120 volt weatherproof receptacle outlet within 25 feet of all heating and air conditioning units located outdoors. Provide UL listed wet location HPS fixture with quard and switch at all unit locations Provide disconnect switches complete with fusetrons of class of fuses as indicated on drawings, or circuit breakers in panelboard where so indicated on drawings, for all feeder circuits to motors. Provide thermal overload switches with relays in each phase conductor for running protection of fractional horsepower motors unless motors are furnished with built-in thermal protection in which case a togale switch shall be installed as a disconnect device. C. Provide disconnect switches or motor rated togale switches to disconnect main line current for all motors where out of sight, per N.E.C., from main disconnect device and controller. Provide rain tight switches for units located

on roof or where exposed to the weather.

D. Provide outlet on separate circuit for control voltage in mechanical rooms. Install and connect magnetic starters.

E. Provide all starters unless otherwise noted or when they are furnished as

F. Include disconnect switches for all equipment, where they are required by Code, also cutoff switches for all equipment which is automátically controlled from remote points such as unit heaters.

H. Furnish and install circuits, feeders, and make all connections to motors and motor controls for exhaust fans in locations indicated. Where exhaust fans are switched with lights, provide a TMO- Pole toggle switch. Disconnect switches are factory installed in rain tight enclosure for units on roof or where exposed to the weather. Where exhaust fans are not interlocked with other mechanical equipment, install and connect two-speed switches, magnetic starters, push-button stations, thermostats, or other control devices furnished bu others. Where exhaust fans are interlocked with other mechanical equipment, provide interlock wiring and final connections.

16100.35 FINAL TESTS

A. This Contractor shall, upon completion of the work, make all tests and adjustments under the direction of the Engineer to demonstrate that all equipment and wiring under this contract will function satisfactorily in the manner

B. Electrical wiring and equipment shall be free of electrical short circuits and unintentional grounds

C. Insulation resistance on all conductors shall not be less than those required

D. All equipment shall be free of mechanical and electrical defects and shall

the Owner's supply, if connected and available at the time of the test.

perform as designed or intended. E. This Contractor shall furnish qualified personnel, supplies and equipment to make all tests as may be required. Current and fuel consumption shall be from

16100.36 SAFETY AND DISCONNECT SWITCHES

A. Base named Manufacturer - Square D

B. Provide all safety switches as shown on the drawings and/or required by the NEC for motor and electric heat equipment disconnection.

general use snap switch provided all Code provisions are met. D. All motor disconnect switches shall be properly sized for the horsepower ratings using time delay fuses where indicated on the drawings.

E. All units in finished areas or where wiring is concealed shall be flush mounted.

A. Provide Tork photo cell #2100 for 120V service. Switch shall be single pole,

C. For stationery motors smaller than 1/2 HP, the disconnect switch may be a

F. All disconnect switches shall be lockable in the "ON" or "OFF" position. 16100.37 PHOTO CELLS

single throw rated for 1000 volt amperes mercury vapor or fluorescent load.

16100.38 MOLDED CASE CIRCUIT BREAKERS

A. Based named Manufacturer - Square D. B. Circuit breakers shall be of the molded case bolted in type consisting of the number of poles and ampere ratings as noted on the drawings. C. Circuit breakers shall be of the indicating type providing "ON," "OFF," and

handle shall assume a position between "ON" and "OFF" positions. D. Breakers shall be of the quick-make quick- break type with inverse time characteristics secured through the use of a bi-metallic and a magnetic tripping

"TRIPPED" positions of the operating handle. When the breaker is TRIPPED, the

E. Two and three pole breakers shall be the common trip tupe. Handle extensions providing common manual operation will not be acceptable. F. Circuit breakers with 225 ampere or larger frame sizes shall have

G. Provide locking tabs on all circuit breakers serving emergency lighting, fire alarm system, sound system, security systems, and other emergency or critical H. Where the required circuit breaker frame amps is not listed at the minimum

interrupting capacity, a listed circuit breaker with a higher interrupting capacity shall be used. 1. Where a circuit breaker is serving an air conditioning unit with multiple motors,

breaker shall be "HACR" type. 16100.39 LIGHTING AND POWER PANELS

interchangeable trips.

A. Base named Manufacturer - Square D B. The lighting panelboards shall be of the dead front, automatic molded case

circuit breaker type. C. Cabinets shall be code gauge with minimum 4" side, top, and bottom gutters and a minimum of 20" wide. Provide subfeed lugs and a minimum of 8" top, bottom and side autters for feeder taps within panelboards and when feeders are installed in side gutters. New panels shall be recessed in all areas, except utility & machine room.

treated, primed surface. Include door and directory Frame, combination lock and latch with two milled-type keys. Lock shall be flush with face of panel trim. Front shall be furnished with concealed adjustable trim clamps so that trim will fit flush and square. All panels shall be keyed alike. Doors shall be provided for access to contactors, time clocks, relays, etc. E. Special fronts and trims embracing two or more panels located side by side shall be provided as shown on the drawings so that tops, bottoms, and doors

line up in a horizontal direction for a neat and uniform appearance. Boxes shall

be made correspondingly larger where required to meet this provision.

D. When indicated, a separate gutter compartment of the required size shall be

provided for these feeder taps and the sub-feed lugs shall not be provided.

Front and trim shall be sheet steel with ANSI 61 light arou finish over a cleaned.

F. The panels shall be factory assembled complete with breakers. Any circuit breaker shall be capable of replacement without disturbing any other breaker, the main bus bars or branch wire connectors. The panels shall be capable of having branch circuits added without additional machining, drilling, or tapping. Branch circuits shall be sequenced phased on the main bus bars and the main bus carrying capacity shall be determined on a basis of not more than 750

amperes per square inch of cross sectional area for aluminum buses. G. The panels shall be arranged for (3) phase, (4) wire, 277/480 volt or (3) phase, (4) wire, 120/208 volt service as required.

H. Circuit breakers shall be as specified in "Molded Case Circuit Breaker"

section of the specifications.

connected and spare circuits.

1. Minimum interrupting capacity to be coordinated with local utility companies so as to interrupt the available fault current. J.. All panels shall be provided with a complete type written directory of all

K. In addition to any spare conduits shown, provide (1) 3/4" empty conduit for each 4 spare circuits or fraction thereof from all panels recessed in walls or partitions to the huna ceilina immediately adjacent, or just below. Terminate conduits in bushings in hung ceilings or flush mounted junction boxes 6" high by 12" long at the finished ceiling where hung ceilings do not exist. L. Circuit numbers on the drawings are for identification only and do not indicate the position in the panelboard. Connect the circuits near the top of panel and the more heavily loaded circuits near the bottom. Balance all circuits evenly

between phases so feeder wires carry approximately equal current. Rebalance

M. The panels shall be located and sized as indicated on prints and connected as shown on the riser diagram. All panels must be recessed in finished areas. Panels must be set plumb with tops at one level, approximately 7'-6" to top

N. All new panels shall have fully rated copper bus bars.

16100.40 TEMPORARY LIGHT AND POWER A. The Electrical Contractor shall provide, maintain, and operate a suitable

temporary electric distribution system for light and power.

B. All necessary materials, i.e., panelboards, switches, fuses, cables, receptacle outlets, supports and over current protection including ground fault circuit interrupters, 20 amp. single-phase receptacles, 30 amp single-phase outlets, and all other accessories required for the temporary distribution system shall be provided by the Electrical Contractor.

C. All necessary labor and materials required for the installation and maintenance and subsequent removal of the temporary distribution system including all fuses and lamps shall be provided by the Electrical Contractor.

D. All necessary sleeves, and supports, as may be required for the temporary distribution system shall be provided by Electrical Contractor. E. Minimum temporary lighting within all portions of the building shall be based

minimum lamping requirements shall be provided by the Electrical Contractor: I. All wiring, outlets, and lamps as required shall be provided to create proper

upon a lighting intensity of five (25) foot candles throughout. Properly quarded

left hand threaded lamps for meeting OSHA requirements and the following

adequate lighting in stairs, corridors, and passages. 2. For security reasons lighting in stairs, corridors, and passages shall remain energized constantly, 24 hours of each day.

3. The Electrical Contractor shall maintain higher lighting intensities, as necessary, in areas where concrete finishing and work of similar nature is in progress, at no additional cost to the Contractor.

for electrically operated small tools shall be based on a minimum of 0.50 watts per square foot. All power outlets shall be properly grounded conforming to NEC and rules and regulations prescribed by OSHA, as well as all other agencies having jurisdiction within locale. When such codes, or regulations, are inconsistent, the more stringent shall prevail. G. Electrical Contractor shall furnish and install feeders and lighting/power

distribution centers of sufficient capacity for the requirements of the entire

F. Minimum temporary power within all buildings provided by Electrical Contractor

space, with sufficient number of outlets at such convenient locations so that grounded extension cords of not over 100 feet in length will reach all work areas requiring temporary power or light.

H. Feeders and branch circuits shall be extended to keep pace with I. Any subcontractor requiring temporary power in excess of the type and

capacity specified herein shall provide the same at his expense.

K. Electrical Contractor shall provide and maintain a central facility conforming to OSHA requirements, for the use of the Construction Manager and his subcontractors to test cord sets for continuity.

L. Electrical Contractor shall be responsible for obtaining all wiring permits

J. No subcontractor shall allow, provide, or make available for use by any

employees, any apparatus, equipment or cord sets not meeting OSHA

required; prior to, as well as during construction, and adjust the temporary wiring system as needed to accommodate the construction of new building elements such as walls, ceiling, architectural work, etc. M. Electrical Contractor shall maintain the temporary light and power system until its use is no longer required as determined by the Construction Manager. Electrical Contractor shall keep the system in good repair and shall promptly replace burned-out, defective, missing or broken lamps. Permanent fixtures may be used for temporary lighting when specifically approved by the Construction Manager. All lamps used for temporary lighting purposes in permanent fixtures

shall be replaced with new unused lamps immediately prior to final acceptance of the permanent system. N. Electrical Contractor shall alter and relocate temporary wiring as required when such interferes with construction as determined by the Construction Manager. Upon notification the Electrical Contractor shall disconnect and

completely remove the temporary electrical system or portions thereof in a neat workmanlike manner without cost to the Tenant. O. Electrical Contractor shall not disrupt electric power whether temporary or permanent during normal working hours. Any switching, splicing, or other work performed by the Electrical Contractor, necessitating an interruption of power shall be performed during hours other than which temporary light and power are required, as set forth herein, and the cost thereof shall be borne entirely by the

P. Electrical Contractor shall provide 208V/3 phase 60 amp. welding outlets for this Project as required 16100.41 SERVICE ENTRANCE PANEL BOARDS FURNISH AND INSTALL CIRCUIT BREAKER TYPE PANEL BOARDS AS INDICATED IN THE PANEL

BOARD SCHEDULES WITH BREAKERS OF FRAME AND TRIP RATINGS AS SHOWN ON THE

SKIRT AND CAP FROM BOTTOM OF PANEL TO FLOOR AND FROM TOP OF PANEL TO

SCHEDULES. WHERE PANEL BOARDS ARE SURFACE MOUNTED, IN FINISHED AREAS, PROVIDE

Electrical Contractor.

OF CONDUCTOR SPECIFIED.

CIRCUIT BREAKERS SHALL BE QUICK-MAKE, THERMAL-MAGNETIC, TRIP INDICATING AND HAVE COMMON TRIP ON ALL MULTIPLE BREAKERS, TRIP INDICATION SHALL BE CLEARLY SHOWN BY THE BREAKER HANDLE TAKING POSITION BETWEEN "ON" AND "OFF" WHEN THE BREAKER IS TRIPPED AND BY INDICATION, THE INDICATION SHALL CONSIST OF A HIGHLY VISIBLE RED TRIPPED CIRCUIT INDICATOR. CONNECTION TO THE BUS SHALL BE BOLT-ON. BUS BAR CONNECTIONS TO THE BRANCH CIRCUIT SHALL BE "PHASE SEQUENCE" TYPE.

SINGLE POLE BREAKERS ARE INDIVIDUALLY CONNECTED TO EACH OF THE THREE(3) DIFFERENT PHASES IN SUCH A MANNER THAT TWO(2) OR THREE(3) POLE BREAKERS CAN BE INSTALLED AT ANY LOCATION, ALL CURRENT CARRYING PARTS OF THE BUS ASSEMBLY SHALL BE COPPER. MAINS RATINGS SHALL BE AS SHOWN IN THE PANEL BOARD SCHEDULE OR ON TERMINALS FOR FEEDER CONDUCTORS TO THE PANELBOARD MAINS AND NEUTRAL SHALL BE

UL LISTED AS SUITABLE FOR THE TYPE OF CONDUCTOR SPECIFIED. TERMINALS FOR BRANCH

CIRCUIT WIRING BOTH BREAKER AND NEUTRAL, SHALL BE UL LISTED AS SUITABLE FOR TYPE

THREE(3) PHASE, FOUR(4) WIRE BUSSING SHALL BE SUCH THAT ANY THREE(3) ADJACENT

ALL ELECTRICAL PANELBOARDS SHALL BE OF THE RECESSED OR SURFACE MOUNTED TYPE, AS PER THE DRAWINGS. IF FLUSH MOUNTED, IT SHALL BE SET INTO WALL AND ALL CONDUIT SHALL BE FLUSH INTO WALL. IN GENERAL, ALL EXISTING CONDUIT WIRING, ETC. WHICH ARE NOT SCHEDULED FOR REUSE. SHALL BE REMOVED, CAPPED AND FINISHED OFF IN A WORKMANLIKE MANNER TO PROVIDE ACCEPTABLE APPEARANCE. COORDINATE ROUGH-IN WORK WITH OTHER TRADES, IF PANEL BOARD IS RECESSED MOUNTED. THE PANELBOARD BUS ASSEMBLY SHALL BE ENCLOSED IN A STEEL CABINET. THE SIZE OF

STANDARDS AND UL STANDARD FOR PANEL BOARDS. THE BOX SHALL BE FABRICATED FROM

GALVANIZED STEEL OR EQUIVALENT RUST RESISTANT STEEL, FRONTS SHALL INCLUDE DOORS

AND HAVE FLUSH, CYLINDER TUMBLER-TYPE LOCKS WITH CATCHES AND SPRING LOADED

FRONT OF THE DOOR, FRONT SHALL HAVE ADJUSTABLE INDICATING TRIM CLAMPS WHICH

SHALL BE COMPLETELY CONCEALED WHEN THE DOORS ARE CLOSED. DOORS SHALL BE

WITH DOOR IN THE LOCKED POSITION, A CIRCUIT DIRECTORY FRAME AND CARD WITH A

THAN THE INTEGRATED EQUIPMENT RATING, 5.8 PANEL BOARDS SHALL BE LISTED BY

END OF ELECTRICAL SPECIFICATIONS

MOUNTED WITH COMPLETELY CONCEALED STEEL HINGES. FRONTS SHALL NOT BE REMOVABLE

STAINLESS STEEL DOOR PULLS. THE FLUSH LOCK SHALL NOT PROTRUDE BEYOND THE

THE WIRING GUTTERS AND GAUGE OF STEEL SHALL BE IN ACCORDANCE WITH NEMA

CLEAR PLASTIC COVERING SHALL BE PROVIDED ON THE INSIDE OF THE DOOR. THE DIRECTORY CARD SHALL PROVIDE A SPACE AT LEAST 5" HIGH x 3" WIDE AND SHALL E TYPE WRITTEN TO IDENTIFY ALL EQUIPMENT TO AS-BUILT CONDITIONS AT COMPLETION OF JOB. FRONTS SHALL BE OF CODE GAUGE STEEL. PANEL BOARDS SHALL HAVE A SHORT CIRCUIT CURRENT RATING EQUAL TO OR GREATER

'D' TYPE NOOD BOLT ON TYPE OR APPROVED EQUAL. NEW CIRCUIT BREAKERS BEING INSTALLED IN EXISTING PANELBOARDS OR SWITCHGEAR SHALL BE OF THE SAME MANUFACTURER AND KAIC RATING AS THE EXISTING BREAKERS. 5.10 ALL RELOCATED EQUIPMENT SHALL BE PROPERLY MOUNTED. ALL DEFECTIVE PARTS SHALL BE

UNDERWRITERS LABORATORIES AND BEAR THE UL LABEL. PANELBOARDS SHALL BE SQUARE

mo_~

CONSTRUCTION

 $\overline{\ }$ ALBERT A. TAUS $\overline{\ }$ NUMBER A=2015032715

ELECTRICAL SPECIFICATIONS

- 1. DO NOT SCALE FROM THESE DRAWINGS.
- DO NOT MAKE ANY CHANGES OR SUBSTITUTIONS WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE ARCHITECT OR ENGINEER.
- 3. ALL INDICATED WORK SHALL BE PERFORMED BY THE PLUMBING CONTRACTOR UNLESS OTHERWISE NOTED.
- REFER TO THE WRITTEN SPECIFICATIONS IN CONJUNCTION WITH THE PLANS FOR FULL PROJECT SCOPE.
- IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW THESE PLANS AND SPECIFICATIONS, AS WELL AS THE RELATED HVAC, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWING TO BECOME FAMILIAR WITH THE FULL PROJECT SCOPE. IN ADDITION, THIS CONTRACTOR MUST COORDINATE WITH A TENANT REPRESENTATIVE TO FULLY UNDERSTAND ALL REQUIREMENTS WHICH MAY NOT BE SPECIFIED HEREIN AND WHICH THE TENANT MAY CONSIDER PART OF THIS CONTRACT. DURING THE COURSE OF CONSTRUCTION COORDINATION AND ACTUAL CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO WORK CLOSELY WITH ALL ACCOMPANYING CONTRACTORS AND TRADESMEN IN ORDER TO ENSURE A SMOOTH RUNNING AND CAREFULLY COORDINATED INSTALLATION.
- ANY DISCREPANCIES OR INADEQUACIES WITHIN THESE BID DOCUMENTS OR BETWEEN THESE BID DOCUMENTS AND THE RELATED HVAC, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS. OR BETWEEN THESE BID DOCUMENTS AND FIELD CONDITIONS MUST BE BROUGHT TO THE ATTENTION OF THE TENANT, ARCHITECT AND ENGINEER PRIOR TO BID SUBMISSION.
- 7. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS INCLUDING BUT NOT LIMITED TO NATIONAL, CITY, STATE, LOCAL CODES AND ORDINANCES WHICH MAY BE IN EFFECT. ALL PLUMBING MATERIALS, INSTALLATION PROCEDURES AND SYSTEM LAYOUTS SHALL BE APPROVED BY ALL APPLICABLE CODE ENFORCEMENT AUTHORITIES HAVING JURISDICTION. AND IT SHALL BE THE PLUMBING CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FOR THIS INSTALLATION.
- THE PLUMBING CONTRACTOR MUST VISIT THE SITE AND NOTE ALL EXISTING CONDITIONS AS WELL AS ALL CONDITIONS TO BE MET, PRIOR TO BID SUBMISSION. LACK OF A THOROUGH UNDERSTANDING OF THE PROJECT SCOPE AND CONDITIONS SHALL NOT CONSTITUTE AN EXCUSE FOR ERRORS OR OMISSIONS, NOR FOR A REQUEST FOR EXTRA COMPENSATION.
- 9. IT IS CRITICAL THAT THE PLUMBING CONTRACTOR FIELD VERIFIES ALL EXISTING INVERTS PRIOR TO BID SUBMISSION. IF ANY CONFLICTS EXIST BETWEEN THE NEW PLUMBING SYSTEMS AND THE EXISTING SITE LEVEL SYSTEMS, THEY SHOULD BE BROUGHT TO THE ATTENTION OF AN OWNER'S REPRESENTATIVE AND THE ENGINEER PRIOR TO BID SUBMISSION. EXTRA COMPENSATION WILL NOT BE ALLOWED FOR ANY EXTRA WORK WHICH RESULTS FROM AN INABILITY TO MEET THE INVERTS OF THE EXISTING SITE LEVEL PIPING SYSTEMS.

- 10. THE PLUMBING CONTRACTOR SHALL PROVIDE A COMPLETE SET OF RECORD "AS-BUILT" DRAWINGS INDICATING THE PRECISE LOCATION OF ALL SYSTEMS, EQUIPMENT CONCEALED OR EMBEDDED PIPING, PIPING CONNECTIONS AND ACCESS DOORS. THESE DRAWINGS SHALL ALSO INCLUDE ALL CHANGES AND DEVIATIONS FROM BID DOCUMENTS.
- 11. RUN ALL DOMESTIC WATER, WASTE, VENT AND GAS PIPING AS HIGH AS POSSIBLE THROUGHOUT ENTIRE BUILDING. INSTALL LONG RUNS OF PIPING WITHIN STEEL (JOIST) SPACE AND OTHER PIPING TIGHT TO BOTTOM OF STEEL. COORDINATE AND VERIFY WITH OTHER CONTRACTORS AS NOT TO INTERFERE WITH DUCTWORK, FIRE PROTECTION PIPING, LIGHTING SYSTEMS, ETC.
- 12. ALL EXPOSED HORIZONTAL AND VERTICAL PIPING SHALL BE INSTALLED IN A NEAT ARRANGEMENT IN LOCATIONS WHICH ARE THE MOST INCONSPICUOUS. VERTICAL DROPS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND THEIR FINAL LOCATIONS SHALL BE COORDINATED AND RUN WITHIN CHASES, WALLS, SOFFITS WITH OTHER MECHANICAL / ELECTRICAL FEEDS. ALL SUCH LOCATIONS ARE TO BE REVIEWED WITH A TENANT REPRESENTATIVE AND ARCHITECT PRIOR TO INSTALLATION.
- 13. FINAL CONNECTIONS TO ALL GAS FIRED APPLIANCES TO BE BY THE PLUMBING CONTRACTOR, REGARDLESS OF WHO PROVIDES APPLIANCE. THIS SHALL INCLUDE BUT NOT BE LIMITED TO HVAC EQUIPMENT, COOKING EQUIPMENT, EMERGENCY GENERATORS AND DOMESTIC HOT WATER HEATERS. EACH PIECE OF EQUIPMENT SHALL BE PROVIDED WITH A DIRT LEG, LUBRICATED PLUG VALVE, UNION AND GAS SHUT-OFF VALVE.
- 14. ALL PLUMBING FIXTURES / APPLIANCES SHALL HAVE THEIR OWN INDEPENDANT SHUT-OFF VALVES, INSTALLED IN AN EASILY ACCESSIBLE AND CONVENIENT LOCATION.
- 15. ALL DOMESTIC WATER BRANCH LINES SHALL HAVE THEIR OWN RESPECTIVE SHUT-OFF VALVES.
- 16. DOMESTIC HOT WATER HEATER TEMPERATURE / PRESSURE RELIEF VALVES SHALL BE PIPED FULL SIZE TO THE NEAREST APPROVED STANDPIPE OR FLOOR DRAIN. THIS REQUIREMENT SHALL BE APPLICABLE TO ALL DOMESTIC WATER HEATERS EXCEPT INSTANTANEOUS WATER HEATERS.
- 17. ALL HANDSINKS SHALL HAVE IN-LINE WATER TEMPERING VALVES INSTALLED SO AS TO BE EASILY ACCESSIBLE. THESE TEMPERING VALVES SHALL BE SET TO DELIVER HOT WATER AT 105° F.
- 18. ALL PLUMBING VENT LINES NOTED AS "V. UP" OR "VENT UP" SHALL BE CONNECTED TO THE NEAREST APPROVED "V.T.R." OR "VENT THRU ROOF."
- 19. WHERE APPLICABLE, DO NOT RUN VENTS THROUGH ROOF AT PRE-FINISH METAL ROOFING SYSTEMS, INSTEAD DIVERT VENT PIPING TO RUN UP THROUGH FLAT MEMBRANE ROOF. VENTS THROUGH ROOF SHALL NOT BE VISIBLE TO STORE CLIENTELE. VENTS THROUGH ROOF SHALL TERMINATE A MINIMUM OF 10'-0" FROM ALL FRESH AIR INTAKES, COORDINATE EXACT LOCATION WITH MECHANICAL DRAWING.
- 20. THE PLUMBING CONTRACTOR SHALL RUN OUT ALL BUILDING DRAINAGE AND WASTE LINES AND MAKE ALL CONNECTIONS TO SITE SYSTEMS AS INDICATED ON BID DOCUMENTS.

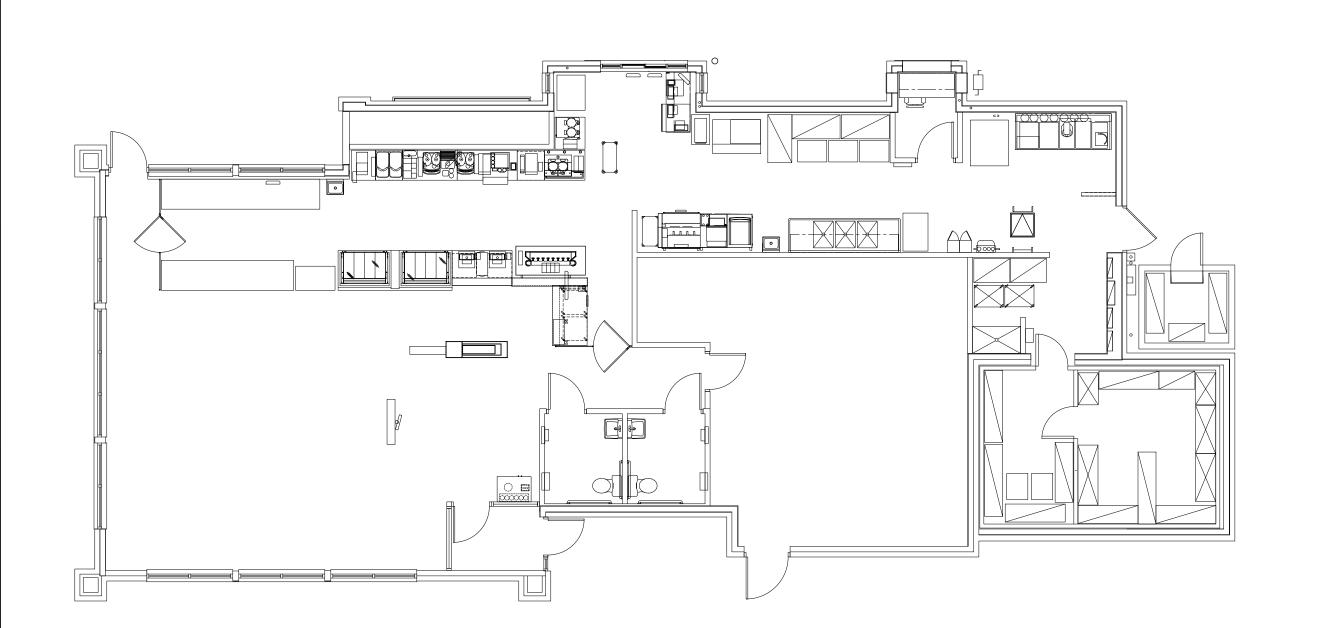
- 21. ALL REFRIGERATED CASES AND WALK-IN REFRIGERATION / FREEZER COIL CONDENSATE PIPING SHALL BE PIPED TO HUB DRAINS AND/OR STANDPIPES BY THE PLUMBING CONTRACTOR. CONDENSATE PIPING SHALL BE COPPER. ALL AIR HANDLER UNIT CONDENSATE PIPING SHALL ALSO BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.
- 22. PRIOR TO INSTALLING SYSTEMS, THE PLUMBING CONTRACTOR SHALL MEET WITH A TENANT'S REPRESENTATIVE TO FIELD VERIFY THE EXACT LOCATION OF ALL PROPOSED EQUIPMENT WHICH MAY NOT BE CLEARLY INDICATED ON THE DRAWINGS.
- 23. THE PLUMBING CONTRACTOR SHALL COORDINATE THE ENTIRE UNDERGROUND PLUMBING PIPING SYSTEM LOCATIONS AND INVERTS WITH THE REFRIGERATION TRENCHING, INCLUDING PITS AND PULL BOXES AS WELL AS ALL OTHER UNDERGROUND SYSTEMS.
- 24. COORDINATE ALL APPLIANCE / FIXTURE SCHEDULE I.D. NUMBERS WITH THE ARCHITECTURAL DRAWINGS FOR THE EXACT QUANITY AND LOCATIONS.
- 25. ALL FOOD PREPERATION EQUIPMENT WITH DIRECT CONNECTIONS TO THE DOMESTIC WATER SYSTEM SHALL BE EQUIPPED WITH WATTS, No.7 DUAL CHECK VALVE TYPE BACKFLOW PREVENTION DEVICE.
- 26. THE PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL WASH DOWN FAUCET (WDF) EQUIPPED WITH INTEGRAL VACUUM BREAKER BENEATH ALL COMPARTMENT SINKS.
- 27. ALL FLOOR DRAINS IN KITCHENS, MECHANICAL ROOM AND TOILET ROOMS SHALL BE EQUIPPED WITH AUTOMATIC TRAP PRIMERS.

DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
SANITARY PIPING	s	EXISTING FLOOR CLEAN OUT	(•)
WASTE PIPING	———— W————	WALL CLEAN OUT	•
VENT PIPING		HORIZONTAL CLEAN OUT	_
NATURAL GAS	G	P TRAP	8 U
COLD WATER		PIPE DOWN, DROP & RISE	— ⇒
HOT WATER		PIPE UP	<u> </u>
GREASE WASTE	SN	HOSE BIBB ELEV.	т,,
CONDENSATE DRAIN		HOSE BIBB PLAN	
SANITARY PIPING	EX.SAN	WASH DOWN FAUCET / HOSE BIBB	-
FLOOR SINK	\boxtimes	GATE VALVE	H
EXISTING FLOOR SINK		CHECK VALVE	Ν
FLOOR DRAIN	0	SOLENOID VALVE	Ä
EXISTING FLOOR DRAIN		PRESS. RED. VALVE	Ř
FLOOR CLEAN OUT	⊙	GAS COCK	₹
FILTERED WATER	——— FW ———	GREASE INTERCEPTOR	
		FLOW ARROW	•
		WATER FILTER	T

SYMBOLS LEGEND

GENERAL PLUMBING NOTES

		1	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
AFF	ABOVE FINISHED FLOOR	FW	FILTERED WATER
AFG	ABOVE FINISHED GRADE	G	GAS
ASSY	ASSEMBLY	GI	GREASE INTERCEPTOR
BFF	BELOW FINISHED FLOOR	НВ	HOSE BIBB
BFG	BELOW FINISHED GRADE	HS	HAND SINK
?	CENTER LINE	HW	HOT WATER
CLG	CEILING	MS	MOP SINK
СО	CLEAN OUT	ос	ON CENTER
COMP	COMPARTMENT	PC	PLUMBING CONTRACTOR
CW	COLD WATER	S	SANITARY
DN	DOWN	SPR	SPRINKLER
DOM	DOMESTIC WATER	SF	SQUARE FEET
DW	DISH WASHER	SP	STAND PIPE
DWH	DOMESTIC WATER HEATER	SS	STAINLESS STEEL
EWH	ELECTRIC WATER HEATER	TP	TRAP PRIMER
EWC	ELECTRIC WATER COOLER	TYP	TYPICAL
FAI	FRESH AIR INTAKE	U/C	UNDER COUNTER
FC0	FLOOR CLEAN OUT	V	VENT
FD	FLOOR DRAIN	VIF	VERIFY IN FIELD
FFD	FUNNEL FLOOR DRAIN	w	WASTE
FP	FROST PROOF	WF	WATER FILTER
FPWH	FROST PROOF WALL HYDRANT	WP	WEATHERPROOF
FS	FLOOR SINK	wco	WALL CLEAN OUT



ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE CONSTRUCTION CODE AND OTHER NATIONAL AND STATE CODES INCLUDING:

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

SHOULD CONFLICT BETWEEN CODES OR REFERENCES AND THE CONTRACT DRAWINGS OR SPECIFICATIONS BE OBSERVED BY THE CONTRACTOR, THE CODE OR REFERENCE SHALL BE REFERRED TO THE ENGINEER AND A WRITTEN OPINION BY THE ENGINEER SHALL BE OBTAINED.

GOVERNING CODES & REFERENCES:

2018 INTERNATIONAL BUILDING CODE. 2018 INTERNATIONAL MECHANICAL CODE. 2018 INTERNATIONAL FIRE CODE. 2018 INTERNATIONAL PLUMBING CODE.

CODES AND REGULATIONS INFORMATION

DWG #	DRAWING TITLE
P1.1	PLUMBING OVERVIEW
P2.1	PLUMBING PLANS
P3.1	PLUMBING DETAILS
P4.1	REVERSE OSMOSIS SYSTEM
P5.1	PLUMBING SCHEDULES
P6.1	PLUMBING SPECS. & RISER DIAGRAM

DRAWING INDEX

-[eatdrinkthint]

ABBREVIATION LEGEND

KEY PLAN

SCALE:NONE

/ALBERT A. TAUS \

NUMBER

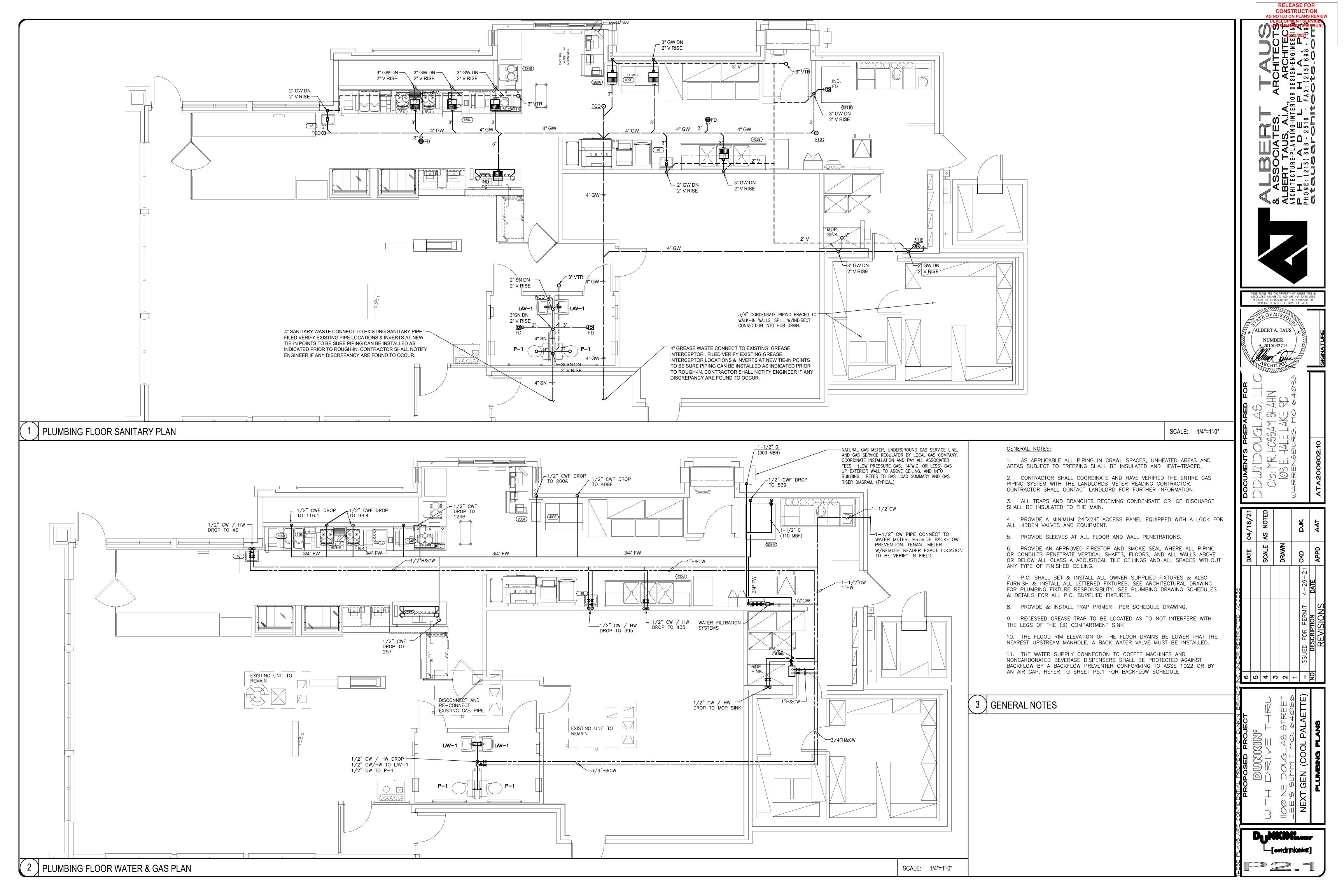
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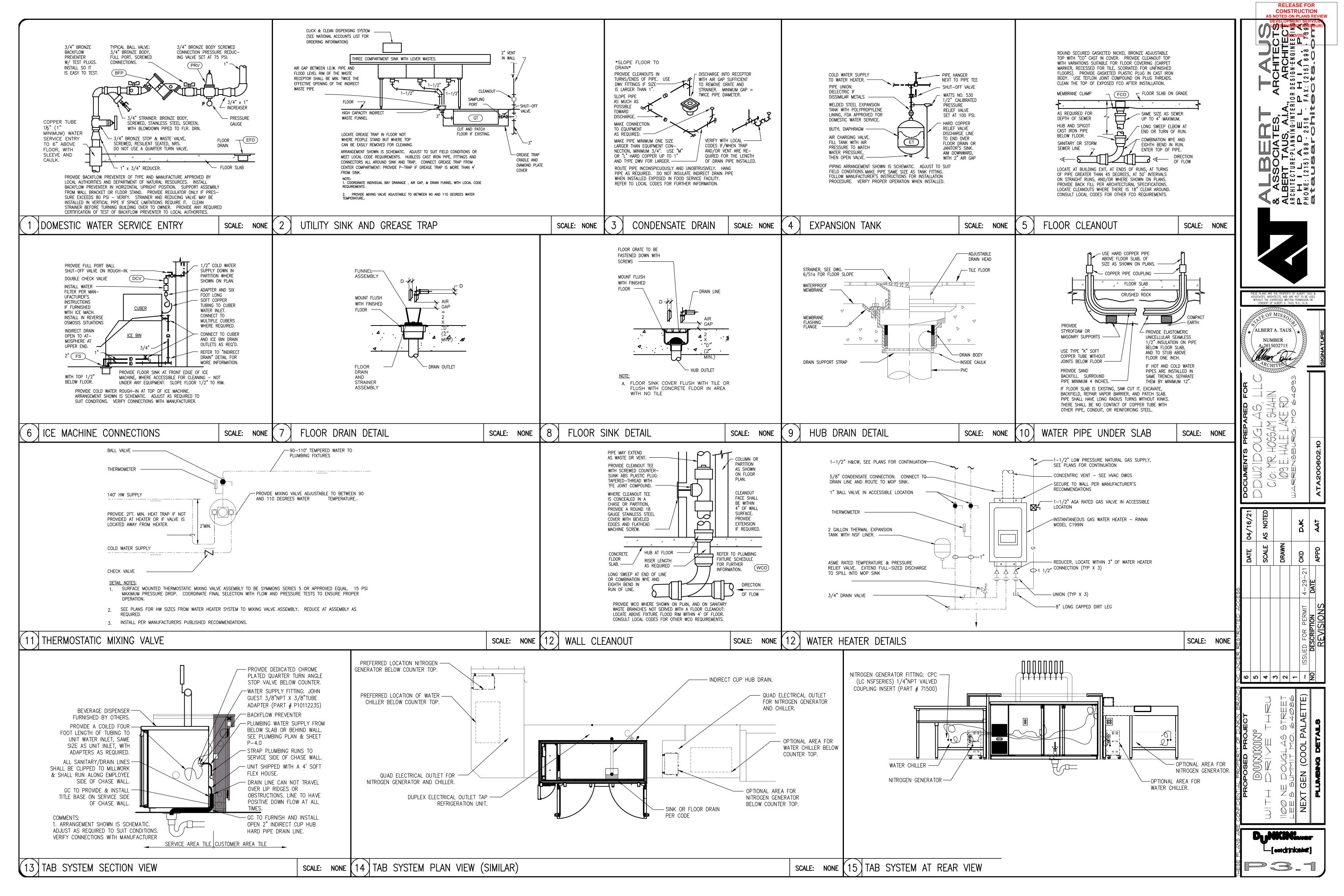
RELEASE FOR **CONSTRUCTION** AS NOTED ON PLANS REVIEW

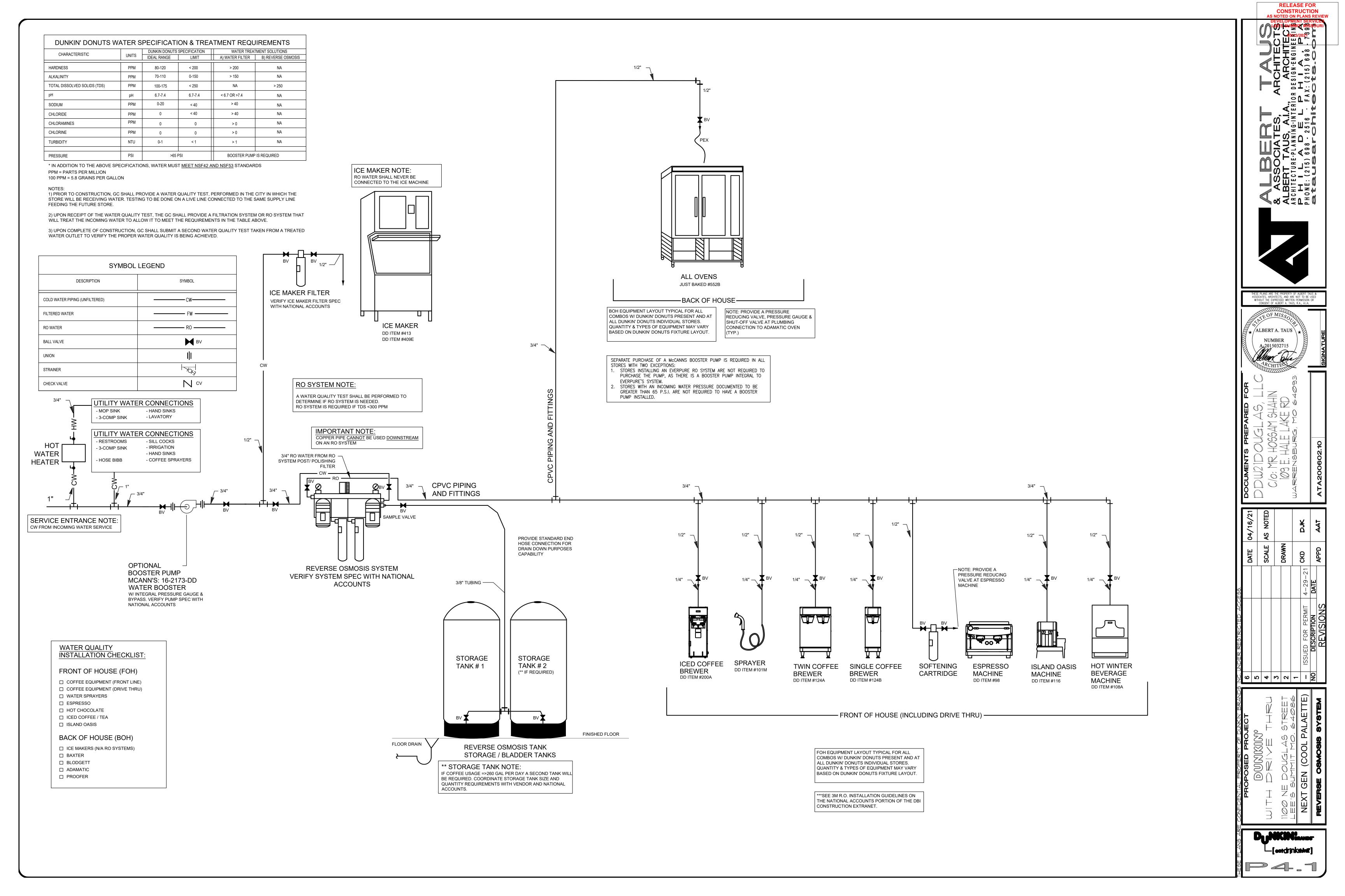
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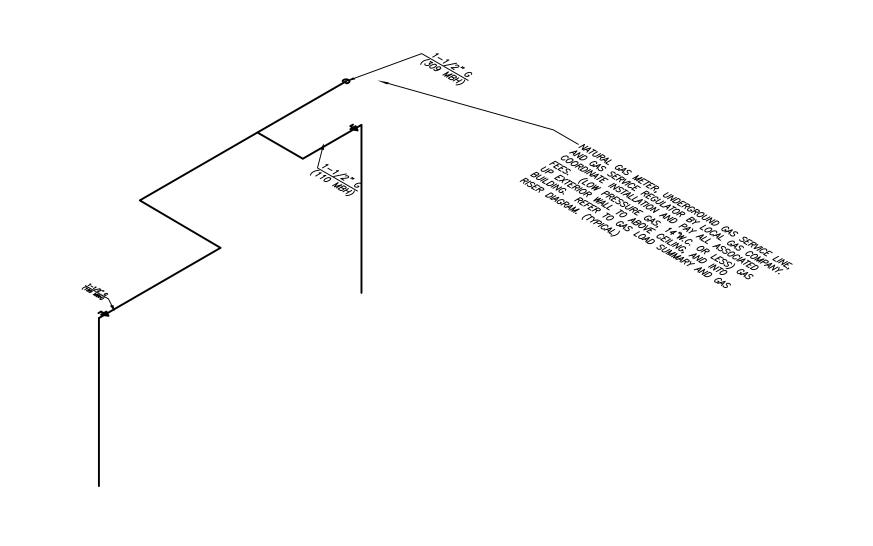
		МІ	ECHAN	IICAL	SERVI	CE CO	NNECT	TION	
ITEM	DESCRIPTION		VATER		WASTE		GAS		
	10"W V 74"D HAND CINIV / 10" CDL ACH CHADDC 6. DD		HW.	F.W.	DIR.	IND.		BTU.	
41	18"W X 34"D HAND SINK w/ 12" SPLASH GUARDS & DD GREEN FAUCET - SEE PLUMB DWGS	1/2"	1/2"		•	_		-	
45	18"W X 34"D DUMP SINK w/ 12" SPLASH GUARDS		1/2"		•	_		_	
98	ESPRESSO MACHINE (BARISTA)		_	1/2"		-			
108A-1	HOT WINTER BEVERAGE MACHINE	-	_	1/2"		_			
108A* 108A-2	HOT WINTER BEVERAGE MACHINE	_	_	_		_			
116	MAGNABLEND BLENDER / ISLAND OASIS		_	1/2"		-			
124A	TWIN SH BREWER	_	_	1/2"					
124E	SINGLE SH BREWER	-	_	1/2"					
200A	ICED COFFEE BREWER IC3-DD			1/2"					
203A	ICE CADDY			-	•	-			
257	8 TAP SYSTEM WITH GENERATOR	-	_	1/2"					
259	DISHWASHER	5/8"	_	_	_	•			
395	HAND SINK w/ SIDE SPLASHES & DD GREEN FAUCET SEE PLUMBING DRAWINGS	1/2"	1/2"		•				
1504	ICE BIN 1375 LB CAPACITY	-	_			•			
413	PRODIGY ICE MAKER UP TO 1077 LBS PRODUCTION/24 HRS.	_	_	1/2"					
435B	108" SINK TRAX SHELVING WORKSTATION.	1/2"	1/2"			•			
539-B	GAS CONVECTION OVEN	_	_	3/4"		•			110 GAS INPUT
P-1	WATER CLOSET	1/2"	1/2"		•				ADA COMPLIANT
LAV-1	LAVATORY	1/2"	1/2"			•			ADA COMPLIANT — PROVIDE TEMPERED WATER

TAG	TYPE	SERVING	MANUFACTURER	MODEL #	OUTLET	ACCESSORIES
FD	FLOOR DRAIN	TOILETS/KITCHEN	ZURN	Z-415 "B" STRAINER	3"	1,4
TD-1	TRENCH DRAIN	KITCHEN	ZURN	Z-895-KC	3"	1
FS-1	FLOOR SINK	COMP SINKS	WATTS	FS-850	3"	1,3
WCO	WALL CLEAN OUT					
FCO	CLEAN OUT		ZURN	ZS-1400	3"	5
TP	TRAP PRIMER		ZURN	ZS-1022		6
(1) SÉDI	 CCESSORIES: MENT BUCKET (2) VANI COVER AND SCREW (6)					

PLUMBING EQUIPMENT SCHEDULE

TAG	DWH-1
SERVICING	RESTAURANT
MANUFACTURER	COMMERCIAL RINNAI TANKLESS
MODEL No.	C199IN -COMMERCIAL MCC-91 CONTROLLER
TYPE	TANKLESS
MBH / KW INPUT	199 MBH
VOLTAGE / PHASE /AMPS	120/1/6.2
NOTES / ACCESSORIES	1 THRU 9
CUT-OFFS (4) CATHODIC P	OVED (2) ASME TEMP. & PRESS. RELIEF VALVE (3) HIGH TEMPERATURE & LOW WATER ROTEC— TION (5) AUTOMATIC CONTROLS W/ ENERGY CUTOFF (6). DRAIN VALVE (7) PC TO PROVIDE AND INSTALL INCLUDING ALL NECESSARY VALVES, ETC.

(4) WATER HEATER SCHEDULE



FIXTURE	BACKFLOW PREVENTION DEVICE
INCOMING DOMESTIC WATER SERVICE	WATTS 009 REDUCED PRESSORE ZONE ASSEMBLY
HAND WASHING SINKS / LAVATORIES	AIR GAP
WATER CLOSET	FLUSH VALVE FURNISHED WITH AN INTEGRAL VACUUM BREAKER
HAND WASHING SINKS / LAVATORIES	AIR GAP
SERVICE / MOP SINK	FAUCET FURNISHED WITH AN INTEGRAL VACUUM BREAKER
COMPARTMENT SINKS	FAUCET FURNISHED WITH AN INTEGRAL VACUUM BREAKER
CARBONATED BEVERAGE MACHINES	SD3
BEVERAGE DISPENSING MACHINES	SD3
WALL HYDRANTS, HOSE BIBB, WASH DOWN FAUCET	FURNISHED WITH AN INTEGRAL VACUUM BREAKER
TRAP PRIMER	FURNISHED WITH INTEGRAL BACKFLOW PREVENTER AND VACUUM BREAKER PORT.
NOTES	

1. CONTRACTOR SHALL FURNISH AND INSTALL BACKFLOW PREVENTION DEVICES AT THE EQUIPMENT LISTED ABOVE.

2. DEVICES LISTED ARE MANUFACTURED BY WATTS REGULATOR COMPANY. CONTRACTOR MAY SUBMIT AN EQUAL FROM ANOTHER MANUFACTURER FOR REVIEW.

3. CONTRACTOR TO VERIFY REQUIREMENTS WITH LOCAL AUTHORITIES HAVING JURISDICTION.

4. BACKFLOW PREVENTERS LISTED ABOVE ARE THE MINIMUM ACCEPTABLE BACKFLOW REQUIREMENTS. PROVIDE ADDITIONAL BACKFLOW PREVENTER DEVICES AS REQUIRED BY ANY OTHER LOCAL AND STATE AGENCIES HAVING JURISDICTION.

TAG	DESCRIPTION	MBH INPUT
DWH-1	DOMESTIC WATER HEATER	199
539-B	RACK OVEN	110

(6)GAS LOAD

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RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW

(5) BACKFLOW PREVENTER SCHEDULE

DRAIN SCHEDULE

PLUMBING SPECIFICATION
DIVISION 15 — MECHANICAL
SECTION 15100 — PLUMBING
15100.01 GENERAL

A. PROVISIONS OF THE GENERAL CONDITIONS AND SUPPLEMENTARY GENERAL CONDITIONS FOR MECHANICAL AND ELECTRICAL CONTRACTS, WHETHER ATTACHED HERETO OR NOT, SHALL GOVERN ALL WORK UNDER THIS SECTION.

A. THE DRAWINGS SHOW THE GENERAL ARRANGEMENT AND EXTENT OF THE WORK TO BE DONE. EXACT LOCATION AND ARRANGEMENT OF ALL PARTS SHALL BE DETERMINED AS THE WORK PROGRESSES.

B. PLANS ARE SUBJECT TO SUCH MODIFICATIONS AS MAY BE NECESSARY AT THE TIME OF INSTALLATION IN ORDER TO MEET CONSTRUCTION CONDITIONS. ANY ADJUSTMENTS SHALL BE MADE BY THE PLUMBING CONTRACTOR WITHOUT EXTRA CHARGE AFTER OBTAINING APPROVALS.

15100.03 SCOPE OF THE WORK

A. FURNISH, INSTALL, TEST AND WARRANTY A COMPLETELY OPERABLE PLUMBING SYSTEM AS INDICATED ON THE DRAWINGS, DESCRIBED HEREIN, OR AS OTHERWISE REQUIRED.

A. CITY WATER SHALL BE BROUGHT TO THE SPACE WHERE SHOWN ON THE DRAWINGS. PROVIDE WATER METER IN ACCORDANCE WITH THE WATER DEPARTMENT'S RULES AND REGULATIONS.

PROVIDE AND INSTALL REDUCED PRESSURE ZONE DEVICE (RPZ) OR ANY OTHER BACKFLOW PREVENTION DEVICE IN ACCORDANCE WITH THE REQUIREMENTS/REGULATIONS OF THE LOCAL

PROVIDE ALL NECESSARY INFORMATION AND OBTAIN APPROVALS AND PERMITS FOR THE INSTALLATION OF THE RP7

RUN CERTIFIED FLOW TEST AS REQUIRED BY NFPA 13, APPENDIX B TO DETERMINE THE ADEQUACY OF WATER PRESSURE. PRIOR TO BID, COORDINATE WITH ARCHITECT/ IF RESIDUAL PRESSURE IS LOWER THAN THE DESIGN PRESSURE SPECIFIED ON DRAWINGS. PROVIDE ALTERNATE PRICE FOR PRESSURE BOOSTER SYSTEM IF REQUIRED.

B. PIPE SIZES AS INDICATED ON THE DRAWING ARE MINIMUM SIZES ACCEPTABLE

C. SHOCK ABSORBERS AND SHUT-OFF VALVES ARE TO BE PROVIDED AT EACH FIXTURE, OR GROUP OF FIXTURES.

D. VALVES SHALL BE INSTALLED AT EACH RISER, EACH BRANCH TO EQUIPMENT, AT FIXTURES NOT EQUIPPED WITH STOP VALVES AND WHERE SHOWN ON DRAWINGS.

E. ALL DOMESTIC WATER PIPING SHALL BE THOROUGHLY TREATED AND STERILIZED WITH A LIQUID CHARDING SOLUTION OF DIFFERENCE OF THE PIPE CASE PLACED IN THE UNCERTAINT SIZE IN AMOUNTS TO

E. ALL DOMESTIC WATER PIPING SHALL BE THOROUGHLY TREATED AND STERILIZED WITH A LIQUID CHLORINE SOLUTION OR DIRECT CHLORINE GAS PLACED IN THE UPSTREAM SIDE IN AMOUNTS TO GIVE A DOSAGE OF 250 PPM CHLORINE CALCULATED OR THE VOLUME OF WATER THE PIPING WILL CONTAIN, OR AS DIRECTED BY THE LOCAL HEALTH AUTHORITIES. A RESIDUAL OF 5 PPM SHALL BE PRODUCED IN ALL PARTS OF THE LINE AFTER A PERIOD OF TWENTY—FOUR HOURS. AFTER STERILIZING, FLUSH ALL LINES THOROUGHLY.

2. SANITARY, INDIRECT WASTE AND STORM SEWERS

A. SANITARY, INDIRECT WASTE AND STORM SEWERS SHALL BE PROVIDED AS SHOWN ON DRAWING

B. VERIFY ALL INVERTS OF SITE LEVEL GREASE INTERCEPTOR (IF PROVIDED) AND SEWER LINE PRIOR TO BID SUBMISSION. IF ANY CONFLICTS EXIST BETWEEN THE NEW EQUIPMENT/PLUMBING SYSTEM AND SITE LEVEL SYSTEMS THEY SHALL BE BROUGHT TO THE ATTENTION OF A TENANT REPRESENTATIVE AND THE ARCHITECT/ PRIOR TO BID. PROVIDE ALTERNATE PRICE FOR SEWAGE EJECTOR OR SUMP PUMP SYSTEM THAT MAY BE NECESSARY.

C. ALL SANITARY OR WASTE LINES BELOW FLOOR SHALL BE 3" MINIMUM. SANITARY LINE LEAVING BUILDING SHALL BE AS INDICATED ON DRAWING. ALL UNDERGROUND PIPING IN UNHEATED AREAS SHALL BE INSTALLED 3'-0" BELOW FINISHED FLOOR (BELOW FREEZE LINE).

RISERS EXPOSED TO FREEZING TEMPERATURES SHALL BE HEAT TRACED AND INSULATED ENTIRELY, AND TO A POINT 3'-0" BELOW FLOOR.

D. PROVIDE A COMPLETE VENT SYSTEM AS SHOWN ON DRAWING. ALL VENTS THROUGH ROOF (VTR) SHALL BE 3" MINIMUM OR LARGER AS MAY BE REQUIRED BY LOCAL CODE. THEY SHALL TERMINATE 24" MINIMUM ABOVE ROOF LINE.

E. OFFSET VENTS, AS REQUIRED, SO V.T.R. IS MINIMUM OF 4'-0" FROM EDGE OF BUILDING.

3. <u>GAS</u>
A. GAS MAIN SHALL BE BROUGHT TO TENANT'S SPACE, WHERE SHOWN ON DRAWING; ROUGH-IN FOR ALL REQURIEMENTS AND MAKE FINAL CONNECTIONS. PROVIDE PROPER IDENTIFICATION OF

B. THE ENTIRE GAS PIPING SYSTEM SHALL BE INSTALLED IN COMPLIANCE WITH NFPA 54 AND ALL LOCAL CODES AND ORDINANCES.

C. PROVIDE DRIP LEGS AND CAPS FOR MOISTRUE REMOVAL. PROVIDE UNIONS AND

LUBRICATED PLUG VALVES TO ALL EQUIPMENT USING GAS.

D. ALL GAS PIPING 4" AND SMALLER INSTALLED ON THE ROOF (IF ROOF INSTALLATION IS ACCEPTABLE BY LOCAL AUTHORITIES) SHALL BE GALVANIZED WELDED OR SEAMLESS STEEL PIPE (ASTM A53: ASTM 120).

E. ALL CUSTOMARY EQUIPMENT AND DEVICES NECESSARY FOR PROPER AND CONVENIENT OPERATION OF THE VARIOUS SYSTEMS, WHETHER SPECIFICALLY MENTIONED OR NOT, SHALL BE FURNISHED AND INSTALLED AS PART OF THIS WORK.

F. ALL ADDITIONAL PLUMBING WORK, AS SPECIFIED IN THE FOLLOWING SECTIONS OR AS SHOWN ON THE DRAWINGS, INCLUDING BUT NOT LIMITED TO, ROUGHING AND FINAL CONNECTIONS TO SINKS AND EQUIPMENT FURNISHED BY TENANT.

15100.04 WORK NOT INCLUDED

A. EXTERIOR STORM DRAINAGE SYSTEM, CATCH BASINS AND MANHOLES FARTHER THAN 5'-0" BEYOND BUILDING OR EDGE OF SIDEWALK.

B. EXTERIOR SANITARY SEWERS, MANHOLES, SEPTIC SYSTEMS AND GREASE INTERCEPTORS DESIGNATED AS SITE LEVEL SYSTEMS "BY OTHERS."

C. EXTERIOR WATER DESIGNATED AS SITE LEVEL WATER MAIN "BY OTHERS."

D. EXTERIOR SPRINKLER MAIN, AND INTERIOR SPRINKLER RISER AND BUILDING DISTRIBUTION SYSTEM.

E. TEMPORARY WATER AND DRAINAGE UNDER GENERAL CONDITIONS.

F. PAINTING, EXCEPT FOR GENERAL TOUCH-UP OF FACTORY FINISHED EQUIPMENT.
G. TOILET ROOM ACCESSORIES.

15100.05 PIPING, VALVES, HANGERS AND SUPPORTS, AND SPECIALTIES

A. GENERAL

ALL PIPING IN FINISHED AREAS SHALL BE CONCEALED. <u>EXPOSED PIPING ACCEPTABLE ONLY</u>

WHERE ABSOLUTELY NECESSARY.

A. UNLESS OTHERWISE INDICATED, INSTALL ALL PIPING PARALLEL OR AT RIGHT ANGLES WITH

BEAMS, WALLS, CEILINGS, OR OTHER BUILDING LINES. PIPES SHALL BE STRAIGHT, TRUE, AND F TO LINE. INSTALL ALL EXPOSED PIPE WORK AS CLOSE AS PRACTICAL TO WALLS, COLUMNS, CEILINGS OR OVERHEAD CONSTRUCTION TO PROVIDE MAXIMUM HEAD ROOM AND MINIMUM INTERFERENCE WITH USABLE BUILDING SPACE.

B. INSTALL ALL PIPING TO PERMIT EASY DRAINING. ADJUST HANGERS AND SUPPORTS TO ELIMINATE SAG POCKETS. PROVIDE HOSE END DRAIN VALVES AT ALL LOW POINTS TO PERMIT DRAINING OF THE ENTIRE DOMESTIC WATER SYSTEM.

C. INSTALL PIPING TO PERMIT EXPANSION AND CONTRACTION WITHOUT UNDUE STRESS, PARTICULARLY AT FLASHINGS AND EQUIPMENT.

D. ALL COPPER LINES UNDER CONCRETE FLOOR SHALL BE CONTINUOUS AND SHALL BE COVERED WITH SAND SO THAT LINES WILL NOT BECOME EMBEDDED IN THE CONCRETE.

2. WASTE LINES 3" AND SMALLER SHALL PITCH NOT LESS THAN 1/4" TO THE FOOT. LARGER PIPE SHALL PITCH NOT LESS THAN 1/8" TO THE FOOT. CHANGES IN DIRECTION SHALL BE MADE WITH EIGHT BENDS OR LONG SWEEP QUARTER BENDS. MINIMUM SIZE UNDERGROUND LINES TO BE 3" OR LARGER AS REQUIRED BY LOCAL CODE. RUN OTHER LINES LEVEL UNLESS OTHERWISE NOTED.

3. A CLEANOUT SHALL BE INSTALLED AT THE BASE OF ALL STACKS AND AT EVERY CHANGE OF DIRECTION GREATER THAN 45 DEGREES. CLEANOUTS SHALL BE INSTALLED NOT MORE THAN FIFTY FEET (50') APART IN HORIZONTAL DRAINAGE LINES OF FOUR INCH (4") NOMINAL DIAMETER OR LESS, AND NOT MORE THAN ONE HUNDRED FEET (100') APART FOR LARGER PIPES.

A. CLEANOUTS SHALL BE THE SAME SIZE AS THE PIPE THEY SERVE, EXCEPT THEY NEED NOT

BE LARGER THAN SIX INCHES (6").

4. ALL PIPE PASSING THROUGH WALLS, FLOORS OR CEILING IN FINISHED ROOM SHALL BE FITTED WITH STEEL OR BRASS ESCUTCHEONS WITH SET SCREW. WHERE SURFACE IS TO RECEIVE A PAINT FINISH, THE ESCUTCHEONS SHALL BE NICKEL OR CHROMIUM PLATED. WHERE PIPING IS INSULATED,

THE ESCUTCHEONS SHALL BE OUTSIDE THE INSULATION.

A. PROVIDE AND INSTALL PIPE SLEEVES WHEREVER PIPES PENETRATE MASONRY OR CONCRETE. CUT SLEEVES FROM STEEL PIPE LARGE ENOUGH TO PASS INSULATED PIPE, AT LEAST TWO (2) SIZES LARGER THAN LINE SIZE. CAULK GAPS AROUND PIPE. EXTEND SLEEVES

COMPLÉTELY THROUGH WALLS OR FLOORS.

5. INCLUDE ALL NECESSARY ANCHORS, BRACES, GUIDES, MISCELLANEOUS STEEL, WALL BRACKETS, RISER CLAMPS, BEAM CLAMPS, CONCRETE INSERTS, ROLLERS AND SADDLES REQUIRED FOR A PROPER INSTALLATION. SUPPORT ALL RISERS AT BASE.

A. INCLUDE SUPPORT SLEEVES WHERE INSULATION IS CONTINUOUS THROUGH HANGERS. USE 16 GAUGE SHEET STEEL, 2 PIPE DIAMTERS LONG, 120 DEGREES SUPPORT.

B. DO NOT HANG OR SUPPORT PIPING FROM ROOF DECK.

C. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE ENTIRE INSTALLATION CONFORMS WITH THE SEISMIC RESTRAINT REQUIREMENTS IN ACCORDANCE WITH BOCA 1987—90 SECTION 1113.0, BASED ON THE SPECIFIC SEISMIC ZONE, SMACA GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS, ALL STATE AND LOCAL CODES, AND NFPA—13 AND 14 (FOR FIRE PROTECTION SYSTEMS). IF NECESSARY, THIS CONTRACTOR SHALL EMPLOY SERVICES OF A QUALIFIED AND LICENSED SEISMIC RESTRAINT ENGINEER. THE COST OF THE ENTIRE SEISMIC RESTRAINT DESIGN AND INSTALLATION SHALL BE INCLUDED IN THE PRIMARY CONTRACT PRICE.

B. ALL PIPING SHALL BE FURNISHED PER FOLLOWING SCHEDULES: (SEE SECTION 15200 FOR PIPING, VALVES, ETC., IN SPRINKLER SYSTEM).

SERVICE SIZE PIPE FITTINGS UNIONS & FLANGES JOINTS UNDERGROUND SEWERS, DRAINS AND VENTS INSIDE BUILDING TO 5'-0" OUTSIDE 3" AND LARGER SERVICE WEIGHT CAST IRON ASTM A74; C1SP1 301. WASTE AND VENT (ABOVE GRADE) ALL SERVICE WEIGHT CAST IRON ASTM A74; C1SP1 301 DOMESTIC COLD WATER OUTSIDE BUILDING (BELOW GRADE) ALL COPPER TUBE SEAMLESS TYPE "K" OR "L" SOFT TEMPER ASTM B75 ASTM B88 ASTM 251 ASTM B306 CAST BRONZE SOLDER JOINT PRESSURE FITTINGS — SOLDERED TO SUITE THE PIPE ASTM B32 DOMESTIC COLD WATER AND HOT WATER INSIDE BUILDING (BELOW GRADE) ALL COPPER TUBE SEAMLESS TYPE "K" ASTM B75 ASTM B88 ASTM B251 NO FITTINGS ALLOWED BELOW GRADE DOMESTIC COLD WATER AND HOT WATER INSIDE (ABOVE GRADE) 3" & SMALLER COPPER TUBE SEAMLESS TYPE "L" HARD TEMPER ASTM B-88 COPPER ASA B16.22 CAST BRONZE #150 B16.18 OR WROUGHT CONNECT TO STEEL OR IRON WITH DIELECTRIC ADAPTORS. SWEAT ENDS UNION,

ANTIMONY BRASS GROUND JOINT. SOLDERED 95-5 TIN (LEAD CONTENT CERTIFIED LESS THAN 0.2%) ASTM B32

GAS PIPING (ABOVE GRADE) 4" AND UNDER BLACK STEEL SCH. 40 WELDED OR SEAMLESS ASTM A120 150# BLACK MALLEABLE IRON SCREWED ANSI B16.3 BUSHINGS PROHIBITED DART #0832 UNIONS THREADED ANSI/ASME B1.20.1 GAS PIPING (ABOVE GRADE) 5" AND LARGER BLACK STEEL SCHED. 40 ASTM A120 BUTT WELDED FORGED STEEL BUTT WELDED SCHED. 40 ANSI B16.9 150# FORGED STEEL, FLAT FACED, WELDNECK TYPE FLANGES ANSI B16.5 BUTT WELDED

C. VALVES

1. VALVES SHALL BE AS MANUFACTURED BY CRANE, NIBCO OR GRINNNELL. VALVES SHALL BE BRONZE, SCREWED, GATE PATTERN, FOR 175# W.W.P.

2. SOLDERED OR SWEAT TYPE VALVES SHALL BE BRONZE WITH COPPER TO COPPER FOR TYPE

"L" AND "K" COPPER TUBING FOR 150 # W.W.P.

3. VALVES SHALL BE INSTALLED AHEAD OF EACH GROUP OF FIXTURES, ON BOTH SIDES OF ALL WATER METERS, ON ALL SUPPLY LINES AND CONNECTIONS FOR EACH FIXTURE.

D. PIPE HANGERS AND SUPPORTS

HORIZONTAL PIPING SHALL BE SUPPORTED AT SUFFICIENTLY CLOSE INTERVALS TO KEEP IT IN ALIGNMENT AND PREVENT SAGGING.

A. COPPER TUBING SHALL BE SUPPORTED AT APPROXIMATELY 6'-0'' INTERVALS FOR PIPING 1-1/2'' INCHES AND SMALLER.

B. PLASTIC PIPING SHALL BE SUPPORTED AT NOT MORE THAN 4'-0"

VERTICAL PIPING SHALL BE SECURED AT SUFFICIENTLY CLOSE INTERVALS TO KEEP PIPE IN ALIGNMENT AND CARRY THE WEIGHT OF PIPE AND CONTENTS.

3. GAS PIPING IN BUILDINGS SHALL BE SUPPORTED WITH PIPE HOOKS, METAL PIPE STRAPS, BANDS OR HANGERS SUITABLE FOR THE SIZE OF PIPING AND OF ADEQUATE ST RENGTH AND QUALITY, AND LOCATED AT PROPER INTERVALS SO THAT THE PIPING CANNOT BE MOVED ACCIDENTALLY FROM THE INSTALLED POSITION. GAS PIPING SHALL NOT BE SUPPORTED BY OTHER

VERTICAL GAS PIPING SHALL BE SUPPORTED AT EVERY FLOOR LEVEL. SPACING OF SUPPORTS IN HORIZONTAL GAS PIPING INSTALLATIONS SHALL NOT BE GREATER THAN THE FOLLOWING:

SIZE IN PIPE (IN) SPACING (FT) 1/2 - 6'-0" 3/4 - 8'-0"

1-1/4 OR LARGER 10'-0"

E. PRESSURE GAUGES

WEKSLER INSTRUMENTS CORPORATION "REGAL" BA1 SERIES, 3-1/2" DIAL, RANGE: 1 TO 60 LBS. ACCEPTABLE ALTERNATE MANUFACTURERS ARE ASHCROFT OR U.S. GAUGE.

F. THERMOMETERS

1. WEKSLER INSTRUMENTS CORPORATION TYPE 3, WITH BRASS THERMO—WELL, RANGE 30 DEGREES TO 240 DEGREES F. ACCEPTABLE ALTERNATE MANUFACTURERS ARE ASHCROFT OR U.S. GAUGE.

5100.06 INSULATION

CLEAN AND DRY SURFACES TO BE INSULATED.
 STAGGER AND TIGHTLY BUTT JOINTS.
 INSULATE PIPES ONLY AFTER "TESTS".

3. INSULATE PIPES ONLY AFTER TESTS.

4. INSULATE PIPE FITTINGS TO SAME THICKNESS AS ADJACENT PIPE INSULATION. FITTINGS SHALL BE COVERED WITH WOVEN GLASS FABRIC OR PREMOLDED P.V.C. SNAP—ON COVERS.

5. RUN INSULATION CONTINUOUS THROUGH HANGERS.

INSULATION SHALL BE ONE PIECE TYPE, SELF-SEALING LAP WITH FACTORY APPLIED UNIVERSAL
JACKET AND SHALL HAVE A THERMAL RESISTANCE OF 4.0 TO 4.6.
 DOMESTIC COLD WATER; 1/2" THICK.
 DOMESTIC HOT WATER; 1" THICK.
 INSULATION SHALL BE OWENS-CORNING, MANVILLE, CERTAIN-TEED, PPG INDUSTRIES CAREY

CO. OR ARMSTRONG HEAVY DENSITY SECTIONAL TYPE.

C. ALL DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED AS ABOVE, 1/2" THICK.

D. ALL HORIZONTAL STORM DRAINS ABOVE CEILINGS, AND ALL VERTICAL STORM LEADERS, SHALL BE

INSULATED AS ABOVE, 1" THICK.

E. ALL SANITARY, INDIRECT WASTE AND WATER DISTRIBUTION PIPING IN AREAS EXPOSED TO FREEZING TEMPERATURES SHALL BE HEAT TRACED AND INSULATED AS REQUIRED. HEAT TRACE AND INSULATION GUIDE BY RAYCHEM OR EQUAL.

15100.07 FLOOR DRAINS AND ROOF DRAINS

A. <u>F.D. #1</u>: JOSAM #30003-6A, IN TOILET ROOMS AND GENERAL DRAINS.

B. <u>ALTERNATES:</u> WADE, ZURN OR J.R. SMITH OF EQUAL TYPE.

C. <u>RD:</u> PROVIDE ROOF DRAINS J.R. SMITH OR EQUAL, HAVING: OVERFLOW DRAINAGE, HIGH DENSITY POLYETHYLENE DOME, DEBRIS GUARD SLOTS, BAYONET LOCKING DEVICE, RUST RESISTANT BOLTS, COMBINED FLASHING CLAMP AND GRAVEL STOP, SEEPAGE OPENINGS, EXTENSION W/GASKET, TAPPED BOSSES, SMOOTH SUMP, UNDERDECK CLAMP BOSSES, SUMP RECEIVER AND UNDER DECK CLAMPS.

15100.08 PENETRATIONS

A. ALL PENETRATIONS THROUGH THE DEPARTMENT SHALL BE PROTECTED IN

A. ALL PENETRATIONS THROUGH THE FLOOR—CEILING ASSEMBLY LEADING TO ANOTHER FIRE DEPARTMENT SHALL BE PROTECTED IN ACCORDANCE WITH 6-2.3.6.1* AND 6-2.3.6.2* OF NFPA 101 LIFE SAFETY CODE AND ANY OTHER LOCAL CODE IN EFFECT. CONSULT ARCHITECT AND LOCAL FIRE MARSHAL FOR DETAILS.

15100.09 CLEANOUTS

A. <u>FOR GENERAL USE</u>: POLISHED BRONZE TOP AND BRASS C.O. PLUG. JOSAM 56010-12-2; WADE, ZURN OR J.R. SMITH OF EQUAL TYPE.

B. <u>FOR TILED FLOORS</u>: POLISHED BRONZE TOP AND BRASS C.O. PLUG. JOSAM 56010-12-2;

WADE, ZURN OR J.R. SMITH OF EQUAL TYPE.

C. ROUND ACCESS COVER AND SCREW : STAINLESS STEEL JOSAM 58600; WADE, ZURN OR J.R. SMITH OF EQUAL TYPE.

15100.10 PLUMBING FIXTURES

A. FURNISH AND INSTALL PLUMBING FIXTURES AND EQUIPMENT OF DESIGN AND QUALITY AS SHOWN ON THE PLANS OR AS SPECIFIED HEREIN, COMPLETE WITH ALL TRAPS AND FITTINGS. ALL TOILET FIXTURES SHALL BE WHITE ENAMEL OR CHINA AND ALL EXPOSED TRIM SHALL BE CHROME. PROVIDE HANGER BRACKETS AND SUPPORTS AS NEEDED FOR THE PROPER INSTALLATION OR

B. REFER TO THE FOLLOWING SPECIFICATION AND THE DRAWINGS FOR EXTENT OF CONTRACTOR'S RESPONSIBILITY REGARDING THE FURNISHING OF FIXTURES; HOWEVER, ALL FIXTURES MUST BE ASSEMBLED, INSTALLED, ROUGHED—IN AND CONNECTED BY THIS CONTRACTOR, EXCEPT AS EXPRESSLY NOTED ON THE P LANS AS "BY OTHERS".

15100.11 WATER HEATERS

RECLAIM DEVICES PROVIDED BY OTHERS.

A. PROVIDE DOMESTIC WATER HEATERS AND ACCESSORIES AS SCHEDULED AND DETAILED ON THE DRAWINGS.

B. PROVIDE ALL PIPING AND ACCESSORIES TO CONNECT DOMESTIC HOT WATER SYSTEM TO HEAT

15100.13 DETAILS OF EQUIPMENT/SHOP DRAWINGS

A. THE CONTRACTOR SHALL PROMPTLY SUBMIT MINIMUM OF SIX (6) COPIES OF ALL SHOP DRAWINGS AND SCHEDULES TO THE ARCHITECTS. THE ARCHITECT'S APPROVAL OF SUCH DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR DEVIATIONS FROM PLANS OR SPECIFICATIONS.

B. CHECKING OF SHOP DRAWINGS IS ONLY FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS TO BE CONFIRMED AND CORRELATED AT THE JOB SITE (NOT FOR INFORMATION THAT PERTAINS SOLELY TO THE FABRICATION PROCESSES OR TO TECHNIQUES OF CONSTRUCTION), AND FOR COORDINATION OF THE WORK BY ALL TRADES.

C. NO SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECTS UNTIL THEY HAVE FIRST BEEN CHECKED AND APPROVED BY THE CONTRACTOR.

D. APPROVALS FROM ARCHITECT MUST BE OBTAINED PRIOR TO COMMENCING WORK.

E. THE FOLLOWING ITEMS SHALL BE SUBMITTED:

1. INSULATION
2. ALL DRAINS

2. ALL DRAWINS
3. VALVES
4. ALL ITEMS CONSIDERED PLUMBING FIXTURES AND ACCESSORIES UNLESS INDICATED "N.I.C."
ON THE DRAWINGS.

15100.14 SUBSTITUTIONS

A. WHERE MANUFACTURER'S NAMES, CATALOG NUMBERS, OR TRADE NAMES APPEAR IN THE DRAWINGS AND SPECIFICATIONS, IT IS NOT THE INTENT TO RESTRICT OR ELIMINATE COMPETITION, BUT MERELY TO ESTABLISH THE QUALITY OR MATERIAL REQUIRED.

B. PRIOR TO BID SUBMISSION, ANY PROPOSED SUBSTITUTIONS WHICH ARE INTENDED MUST CONFORM WITH THE REQUIREMENTS OF THE SPECIFICATIONS. THESE SUBSTITUTIONS MUST BE SUBMITTED, WITH COMPLETE INFORMATION, TO THE ARCHITECT FOR APPROVAL.

15100.15 GUARANTEES

A. THE PLUMBING CONTRACTOR SHALL BE HELD RESPONSIBLE FOR PROPER INSTALLATION OF ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL AND STATE BUREAUS AND AUTHORITIES HAVING JURISDICTION WITHOUT ADDITIONAL EXPENSE OF THE OWNER.

B. CHANGES OR ADDITIONS TO THE PLUMBING WORK SHOWN ON THE PLANS AS MAY BE REQUIRED IN ORDER TO ACHIEVE COMPLETE COMPLIANCE WITH THE CODES SHALL BE PART OF

C. SECURE AND PAY FOR ALL APPLICATIONS, PERMITS AND LICENSING AS MAY BE REQUIRED BY GOVERNMENTAL AGENCIES FOR THE PERFORMANCE OF WORK UNDER THIS DIVISION. THIS REQUIREMENT SHALL NOT INCLUDE THE BUILDING PERMIT, WHICH SHALL BE OBTAINED AND PAID FOR BY THE OWNER.

15100.16 TESTS, INSPECTIONS, AND APPROVAL

A. MAKE SUCH TESTS OF THIS WORK AS ARE REQUIRED BY THE PLUMBING CODE OF THE AUTHORITIES HAVING JURISDICTION. ANY LEAKS, DEFECTS, OR DEFICIENCIES SHALL BE IMMEDIATELY REPAIRED OR MADE GOOD, AND TEST SHALL BE REPEATED UNTIL THE TEST REQUIREMENTS ARE FULLY COMPLIED WITH.

B. A CERTIFICATE OF COMPLETION AND ACCEPTANCE FROM LOCAL AUTHORITIES SHALL BE OBTAINED BY THE PLUMBING CONTRACTOR UPON COMPLETION OF ALL WORK PERFORMED UNDER THIS CONTRACT, AND SUCH CERTIFICATES SHALL BE THEN GIVEN TO THE OWNERS.

FIRE PROTECTION AND SPRINKLER SYSTEM SPECIFICATION DIVISION 15 - MECHANICAL SECTION 15200 - FIRE PROTECTION AND SPRINKLER SYSTEM

B. ALL AREAS WILL BE SPRINKLERED WITH WET-PIPE SYSTEMS.

15200.01 GENERAL
A. PROVISIONS OF THE GENERAL CONDITIONS AND SUPPLEMENTARY GENERAL
CONDITIONS, WHETHER ATTACHED HERETO OR NOT, SHALL GOVERN ALL
WORK UNDER THIS SECTION.

A. IT IS THE INTENT OF THESE SPECIFICATIONS, FOR THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE WET PIPE SPRINKLER PROTECTION SYSTEMS FOR THE DEMISED SPACE INCLUDING: VALVES, RISERS, AND ALARMS AS REQUIRED. THIS SYSTEM SHALL BE A MODIFICATION TO THE EXISTING BUILDING SPRINKLER SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FULL DESIGN ASPECT OF THE SPRINKLER SYSTEM.

C. ALL UNHEATED SPACES WITHIN THE BUILDING SHALL BE PROTECTED WITH A DRY PIPE SYSTEM. THIS CONTRACTOR SHALL COMPLY WITH NFPA 13 5-2 DRY PIPE SYSTEMS. NOT MORE THAN 750 GAL SYSTEM SHALL BE CONTROLLED BY ONE DRY-PIPE VALVE.

THE DRY-PIPE VALVE AND SUPPLY PIPE SHALL BE PROTECTED AGAINST FREEZING AND MECHANICAL INJURY. HEAT TAPE SHALL NOT BE USED IN LIEU OF PERMANENTLY INSTALLED TYPE SOURCE OF HEAT. CONTRACTOR SHALL PROVIDE AN APPROVED AIR COMPRESSOR CAPABLE OF RESTORING NORMAL AIR PRESSURE IN THE SYSTEM AUTOMATICALLY.

THE DRY—PIPE SYSTEM SHALL BE PROVIDED WITH ALL THE ALARM SYSTEMS REQUIRED BY CODE.

D. SYSTEMS SHALL BE DESIGNED AND INSTALLED IN STRICT COMPLIANCE WITH NFPA STANDARD NO. 13.

E. ALL ELECTRICAL REQUIREMENTS FOR FIRE PROTECTION AND SPRINKLER SYSTEM ARE TO BE INCLUDED AS PART OF THIS CONTRACTOR'S RESPONSIBILITY. THIS CONTRACTOR SHALL SUB—CONTRACT FOR ALL WIRING AND RELATED COMPONENT REQUIREMENTS WITH SEPARATE ELECTRICAL CONTRACTOR. ALARM WIRING REQUIREMENTS FOR THE FIRE PROTECTION AND ALARM SYSTEM ARE TO BE INCLUDED IN THIS WORK.

15200.03 DESIGN CONSIDERATIONS

A. THE ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION INCLUDING BUT NOT LIMITED TO, THE CONSTRUCTION CODE IN JURISDICTION, THE LATEST NATIONAL FIRE PROTECTION ASSOCIATION STANDARD NO. 13, OWNER'S INSURANCE UNDERWRITERS.

B. THE SYSTEM SHALL BE HYDRAULICALLY CALCULATED IN ACCORDANCE WITH CHAPTER 7 NFPA 13, DENSITIES SHALL BE AS DIRECTED BY THE INSURANCE UNDERWRITER(S). SPRINKLER PLANS AND CALCULATIONS ARE TO BE PROVIDED TO THE INSURANCE CARRIER FOR APPROVAL PRIOR TO FABRICATION.

15200.04 SHOP DRAWINGS

A. DETAILED DRAWINGS AND CALCULATIONS OF THE SPRINKLER SYSTEM(S), AND SHOP DRAWINGS OF EQUIPMENT, STAMPED AND APPROVED BY AUTHORITIES HAVING JURISDICTION, INCLUDING FIRE MARSHAL AND INSURANCE UNDERWRITERS, ARE REQUIRED FOR THIS WORK. DRAWINGS AND CALCULATIONS, IF REQUIRED, SHALL BE PREPARED, SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER, SHALL COMPLY WITH NFPA 13, CHAPTER 1—9: "WORKING PLANS."

B. INDICATE ALL DUCTWORK, LIGHTS AND OTHER OBSTRUCTIONS ON SHOP DRAWINGS TO SHOW PROPER INSTALLATION OF ALL SPRINKLER WORK.

C. SUBMIT SUFFICIENT COPIES OF ALL DETAILED SHOP DRAWINGS TO ALL GOVERNING AUTHORITIES AND INSURANCE UNDERWRITERS TO ALLOW A FINAL SUBMITTAL TO TENANT OF SIX(6) COMPLETE SETS BEARING ALL APPROVAL STAMPS.

D. NO WORK SHALL BE INSTALLED UNTIL SHOP DRAWINGS, AS DESCRIBED ABOVE, HAVE BEEN REVIEWED AND APPROVED BY OWNER.

15200.05 WORKMANSHIP AND INSTALLATION

A. ALL SPRINKLER WORK MUST BE DONE BY A QUALIFIED SPRINKLER

CONTRACTOR, APPROVED BY THE INSURANCE CARRIER.

B. FURNISH ALL MATERIALS, LABOR, TOOLS, EQUIPMENT AND SUPERVISION REQUIRED FOR THE INSTALLATION OF COMPLETE SYSTEMS AND ALL NECESSARY PIPING, SPRINKLER HEADS, TEST CONNECTIONS, VALVES, DRAINS AND SPRINKLER ALARMS, FLOW SWITCHES, HORNS OR GONGS, DETECTOR CHECK VALVES, SIAMESE FIRE DEPARTMENT CONNECTIONS, PRESSURE GAUGES, AND OTHER REQUIRED COMPONENTS.

C. THE SPRINKLER CONTRACTOR SHALL PROVIDE ALL INTERIOR PIPING, VALVES EQUIPMENT ETC., INCLUDING APPROPRIATE TRANSITION FITTINGS TO ACCOMMODATE CHANGE OF PIPING MATERIAL.

D. ALL SPRINKLER PIPING SHALL BE CONCEALED IN ALL FINISHED AREAS, AVOIDING INTERFERENCE WITH LIGHTS, DUCTS, PIPES, ETC.. BALANCE MAY BE RUN EXPOSED.

E. CUTTING AND NOTCHING OF JOISTS IS NOT ACCEPTABLE.

F. SPRINKLER PIPING SHALL BE INSTALLED AT MAXIMUM HEIGHT ABOVE FLOOR IN ALL LOCATIONS THROUGHOUT ENTIRE BUILDING, UNLESS OTHERWISE SHOWN.
G. DO NOT HANG OR SUPPORT PIPE FROM ROOF DECK.

H. WHEN WELDED AND SEAMLESS STEEL PIPE LISTED IN TABLE 3-1.1.1 OF NFPA 13 IS USED AND JOINED BY WELDING AS REFERENCED IN 3-7.2 (NFPA 13) OR BY ROLL GROOVED PIPE AND COUPLINGS AS REFERENCED IN 3-7.3 (NFPA 13), THE MINIMUM NOMINAL WALL THICKNESS FOR PRESSURES UP TO 300 PSI SHALL BE IN ACCORDANCE WITH SCHEDULE 10 FOR SIZES UP TO 5 IN., 0.134 IN FOR 6 IN., AND 0.188 IN. FOR 8 AND 10 IN. PIPE. WHEN STEEL PIPE (TABLE 3-111) IS USED AND JOINED BY THREADED FITTINGS REFERENCED IN 3-7.1 (NFPA 13) OR BY COUPLINGS USED WITH PIPE HAVING CUT GROOVES, THE MINIMUM WALL THICKNESS SHALL BE IN ACCORDANCE WITH SCHEDULE 40 FOR SIZES LESS THAN 8 IN. I. ALL INTERIOR PIPING AND FITTINGS TO BE OF TYPE AS RECOMMENDED BY THE INSURANCE UNDERWRITER. ALL MATERIALS SHALL BE NEW, OF THE BEST QUALITY, AND WITH THE SAME BRAND OR MANUFACTURER USED FOR EACH CLASS OF MATERIAL, ALL VALVES SHALL BE U.L. LISTED AND

J. ALL NEW SPRINKLER HEADS SHALL BE INSTALLED IN THE CENTER OF THE TILE.

5200.06 SPRINKLER HEADS

A. HEADS IN CUSTOMER AREAS SHALL BE OF CONCEALED TYPE WITH COVER PLATES IN FINISH COLOR AS DETERMINED BY ARCHITECT. HEADS IN FINISHED AREA, AND THEIR ESCUTCHEONS, SHALL BE CHROME PLATED. HEADS IN OTHER AREAS TO BE NATURAL BRASS FINISH. ESCUTCHEONS SHALL HAVE 2" TO 3" ADJUSTABLE DEPTH, 3-1/4" DIAMETER COVERAGE.

B. SPRINKLER HEADS IN CUSTOMER AREA AND OFFICE AREA SHALL BE RATED AT 165 DEGREES F. SPRINKLER HEADS IN STORAGE AREA SHALL BE 212 DEGREES F. RATED HEADS.

C. MAXIMUM COVERAGE FOR EACH CHROME PENDANT SPRINKLER HEAD SHALL NOT EXCEED 130 SQ. FT.

D. A UNIFORM RECTANGULAR PATTERN OF SPRINKLER HEADS SHALL BE MAINTAINED WHEREVER POSSIBLE.

F. ADJACENT TO SUPERVISORY PANEL OR AS DIRECTED, LOCATE STEEL CABINETS CONTAINING TWELVE(12) SPARE CHROME PLATED PENDANT HEADS, TWELVE(12) SPARE NATURAL FINISH UPRIGHT HEADS, AND SIX(6) OTHER TYPE SPRINKLER HEADS (IF INSTALLED).

E. INSTALL DEFLECTOR PLATES ON HEADS WHICH ARE LOCATED ADJACENT TO ELECTRICAL EQUIPMENT, TO DIRECT

PROVIDE ONE(1) SPRINKLER WRENCH FOR EACH SIZE AND TYPE OF HEAD.
 SPRINKLERS LOCATED 7'-6" OR LESS FROM FLOOR TO BE PROTECTED WITH APPROVED GUARDS.

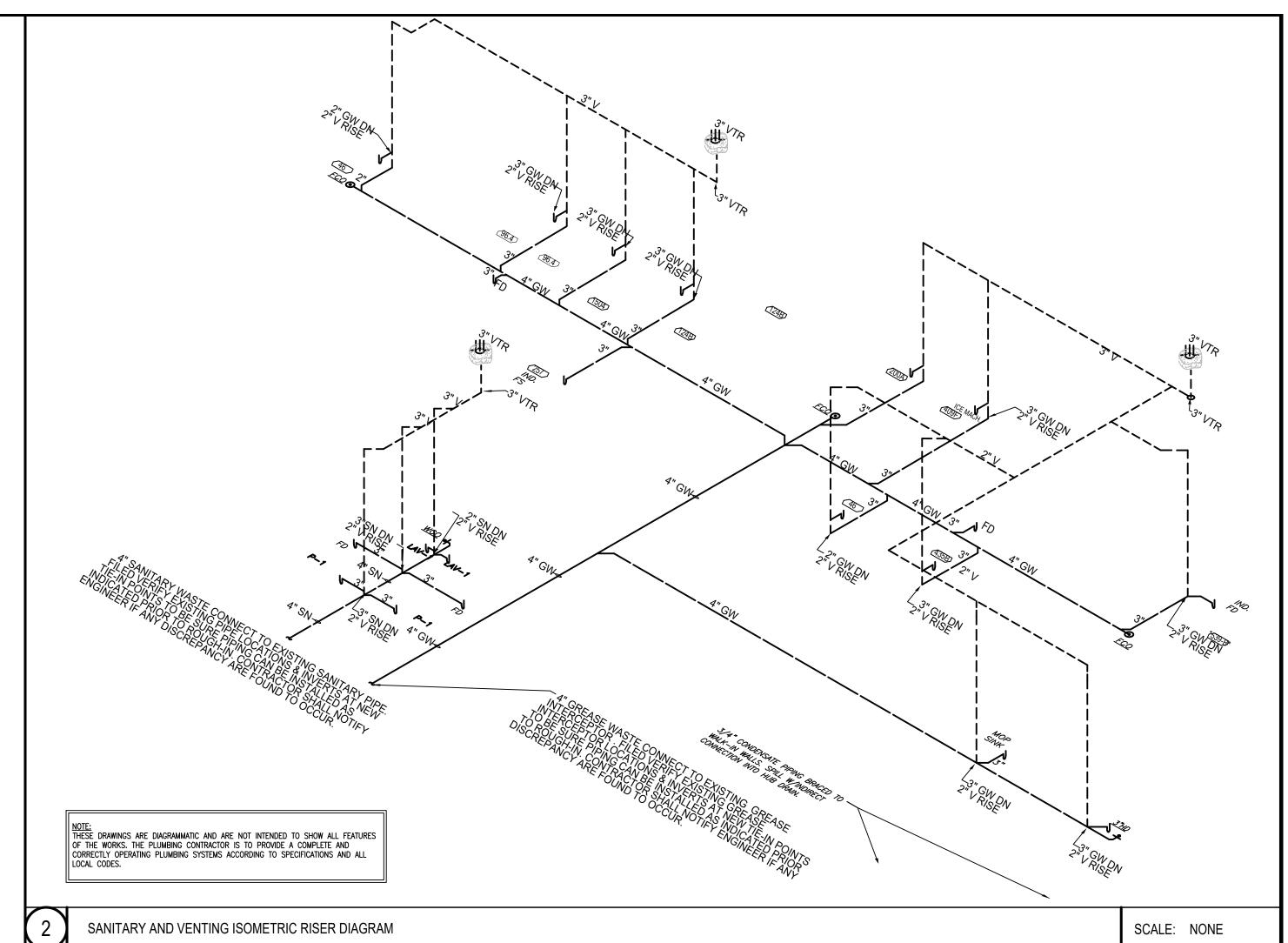
A. WHEN COMPLETED, THE ENTIRE PIPING SYSTEM SHALL BE TESTED AS REQUIRED BY THE RULES AND REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION, AND MUST BE FREE OF LEAKS AND OTHER DEFECTS.

B. SPRINKLER CONTRACTOR MUST SUBMIT CERTIFICATION FROM THE INSURANCE CARRIER AND ANY OTHER AGENCIES HAVING JURISDICTION, INDICATING THAT THE SYSTEMS ARE APPROVED AS INSTALLED.

A. ALL EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE(1) YEAR AFTER ACCEPTANCE BY THE OWNER AND ARCHITECT, AGAINST DEFECTIVE MATERIALS AND LABOR AND IMPROPER DESIGN.

END OF FIRE PROTECTION AND SPRINKLER SYSTEM SPECIFICATION

END OF PLUMBING SPECIFICATIONS



CONSTRUCTION

HI.

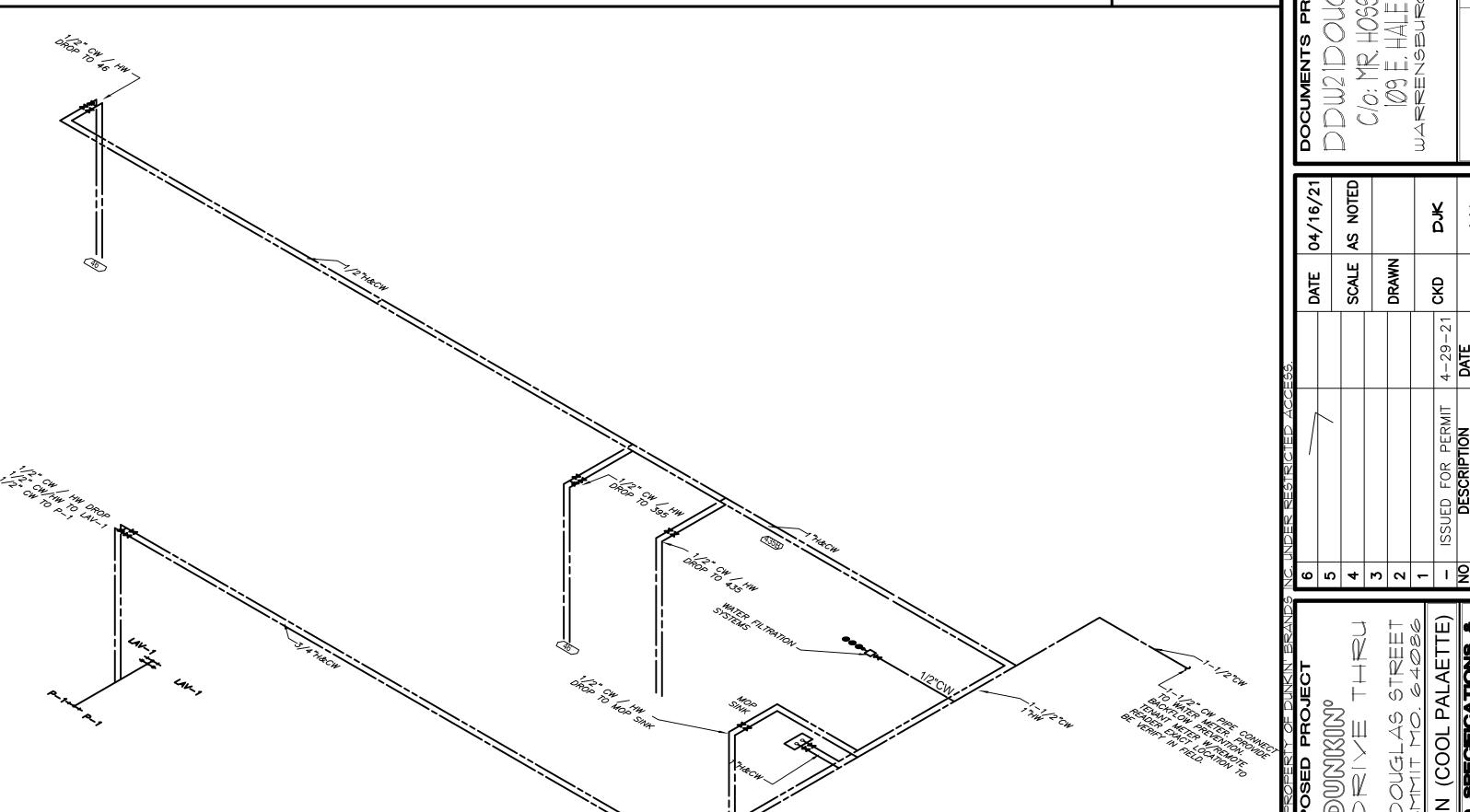
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SCALE: NONE



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THESE DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW ALL

FEATURES OF THE WORKS. THE PLUMBING CONTRACTOR IS TO PROVIDE A COMPLETE AND CORRECTLY OPERATING PLUMBING SYSTEMS ACCORDING TO

SPECIFICATIONS AND ALL LOCAL CODES.