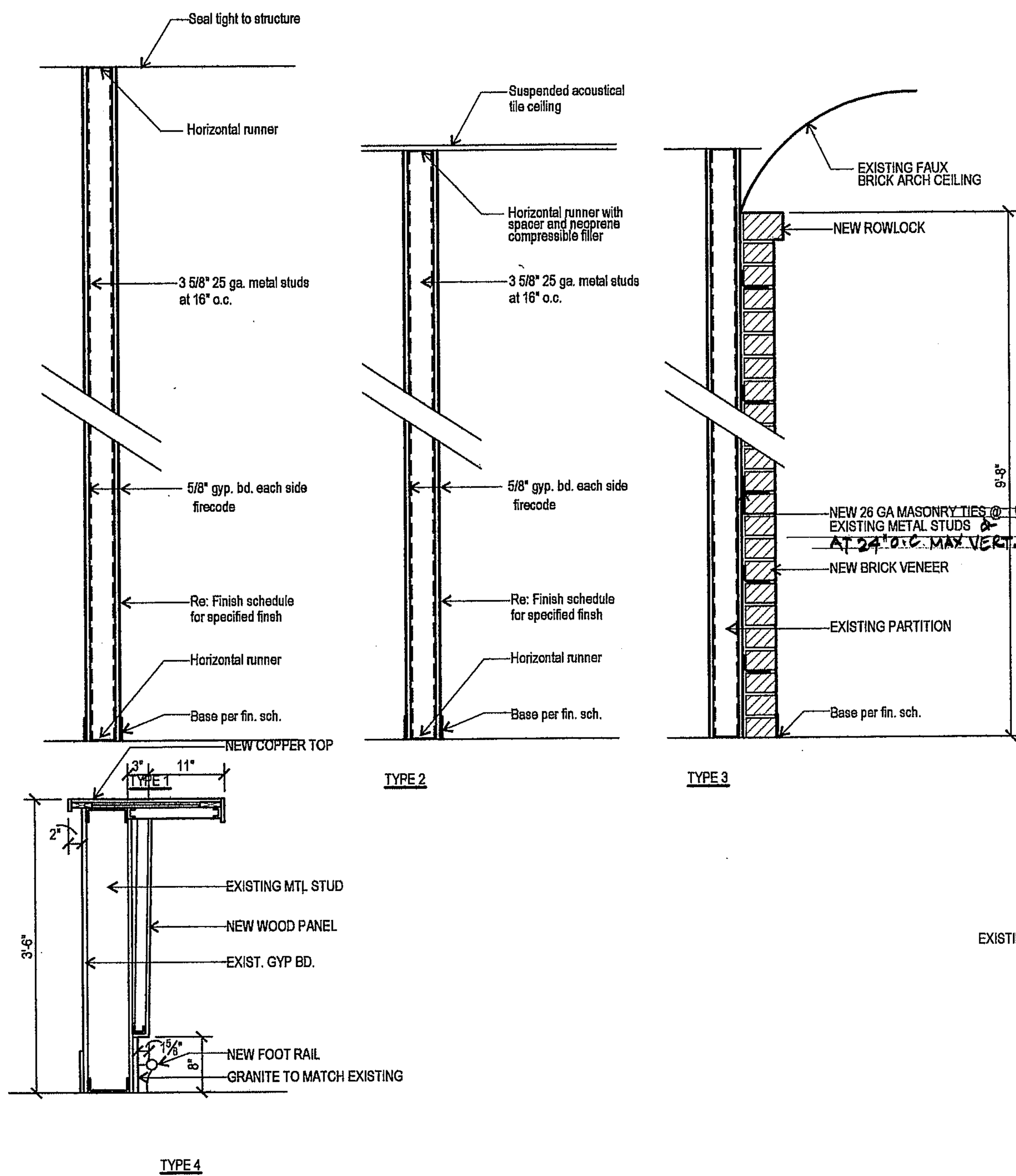
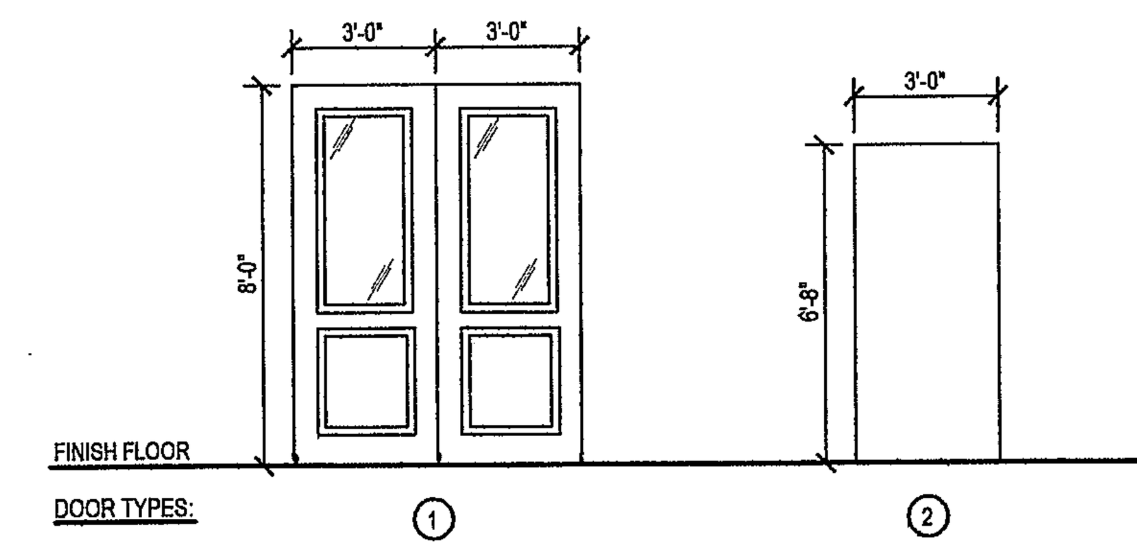


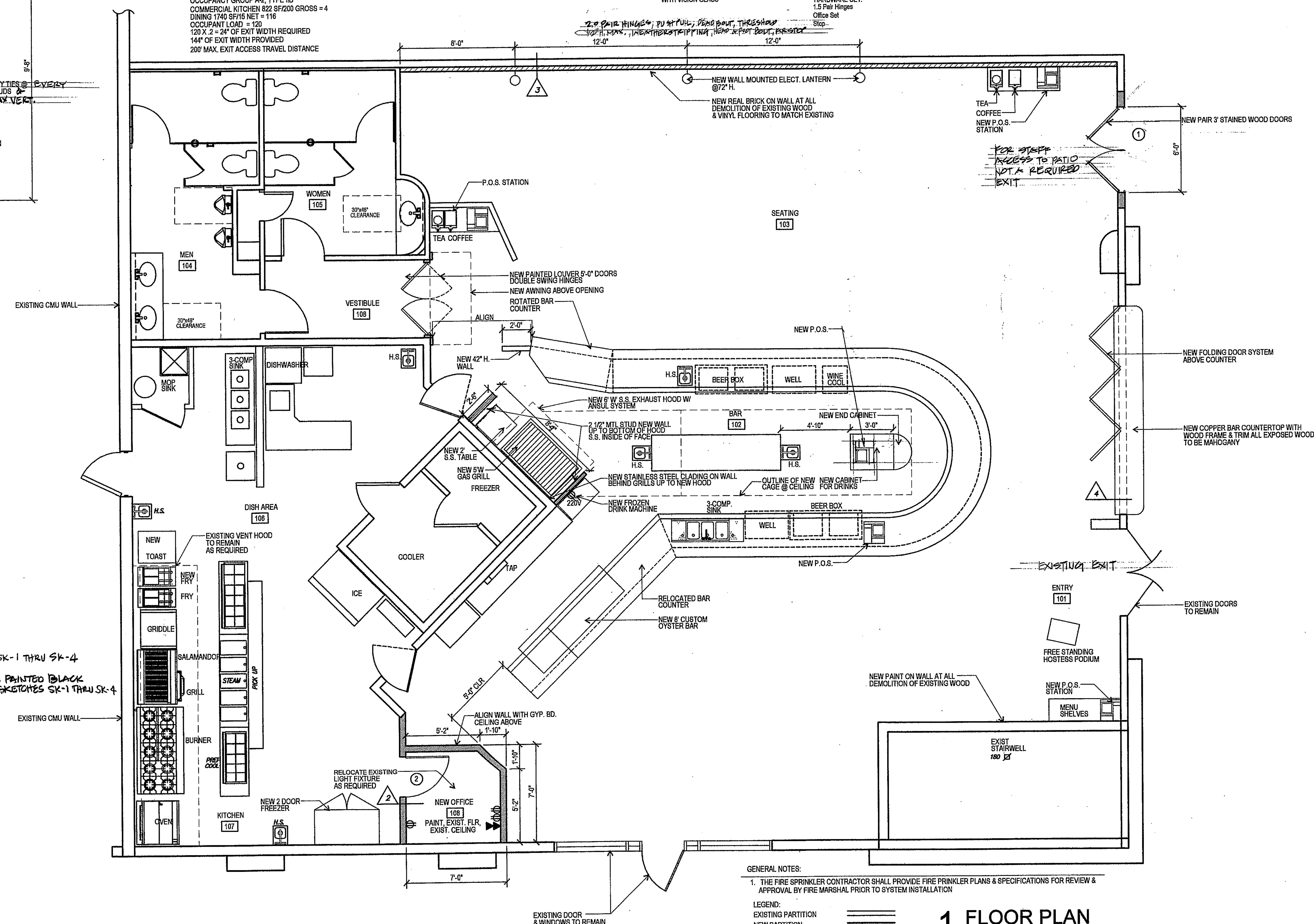
NOTES:

1. ALL WORK TO COMPLY WITH THE 2003 INTERNATIONAL BUILDING CODE AND IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, CODES AND ORDINANCES
2. PROVIDE FIRE EXTINGUISHERS PER FIRE MARSHALL & NFPA 10
3. CONTRACTOR TO VISIT JOBSITE AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BID
4. CONTRACTOR TO VERIFY ALL FINISHES WITH OWNER.
5. ARCHITECT NOT RESPONSIBLE FOR EXISTING BUILDING SHELL/ENVELOPE/MECHANICAL/ELECTRICAL/PLUMBING.
6. ALL NEW MECHANICAL, ELECTRICAL AND PLUMBING BY OTHERS, NOT IN ARCHITECT'S SCOPE OF SERVICES.
7. NOT USED
8. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY POWER REQUIRED FOR CONSTRUCTION
9. ALL MILLWORK SHALL CONFORM TO THE QUALITY STANDARDS OF THE AWI
10. ALL WORK TO COMPLY WITH THE ADA AND THE STATE OF TEXAS ACCESSIBILITY STANDARDS
11. ALL NEW INTERIOR STUDS TO BE SPACED 16" O.C.

CODE DATE:

2003 INTERNATIONAL BUILDING CODE
OCCUPANCY GROUP A-2, TYPE IIB
COMMERCIAL KITCHEN 822 SF/200 GROSS = 4
DINING 1740 SF/15 NET = 116
OCCUPANT LOAD = 120
120 X .2 = 24" OF EXIT WIDTH REQUIRED
144" OF EXIT WIDTH PROVIDED
200' MAX. EXIT ACCESS TRAVEL DISTANCE



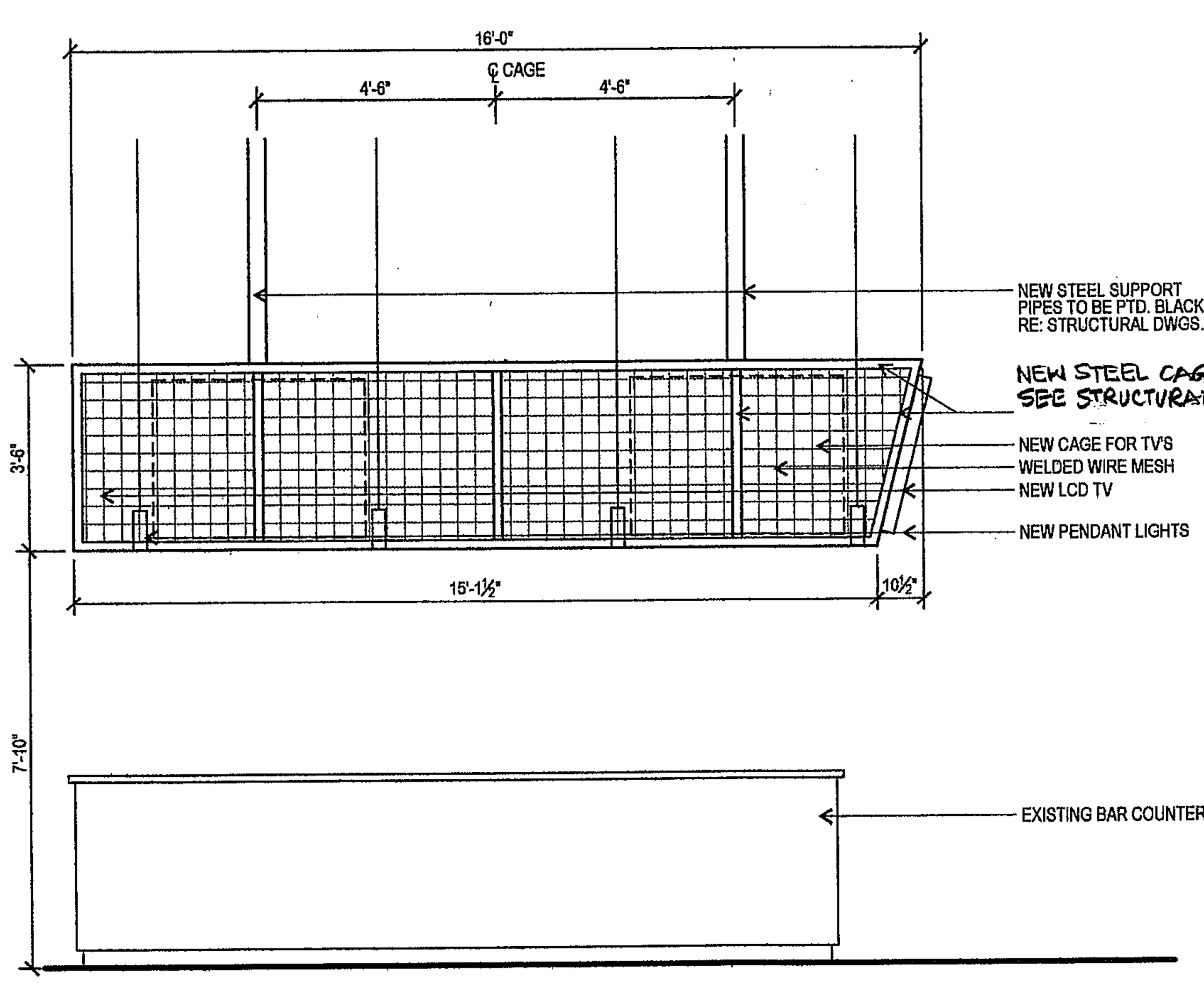


GENERAL NOTES:

1. THE FIRE SPRINKLER CONTRACTOR SHALL PROVIDE FIRE PRINKLER PLANS & SPECIFICATIONS FOR REVIEW & APPROVAL BY FIRE MARSHAL PRIOR TO SYSTEM INSTALLATION

LEGEND:
- EXISTING PARTITION
- NEW PARTITION
- NEW BRICK
- DUPLEX RECEPTACLE
- DATA/TELEPHONE OUTLET

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



2 BAR ELEVATION
3/8"=1'-0"

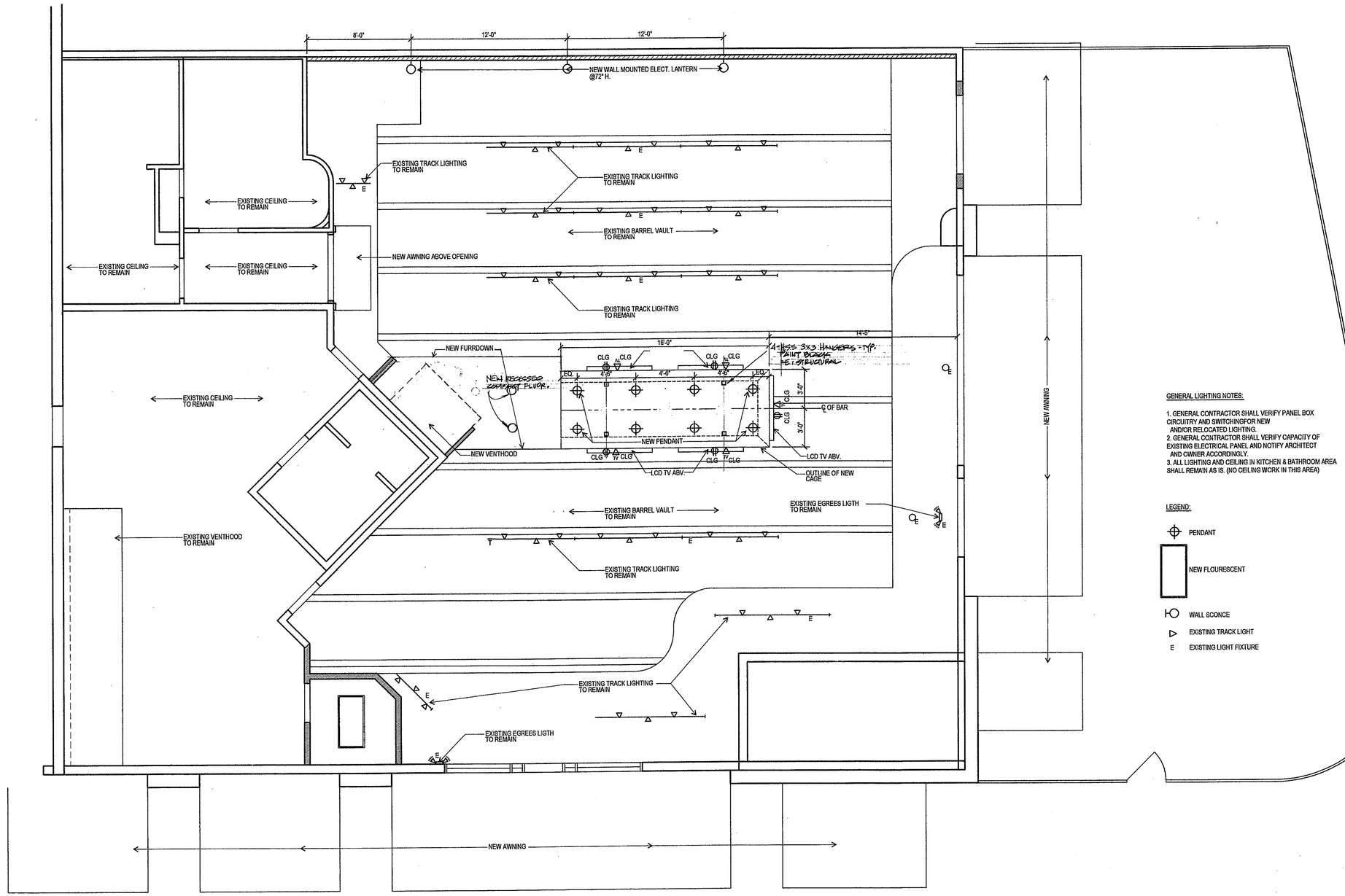
JOB NUMBER: 1007
DATE: 05/05/10
REVISIONS:

Interior Alterations to:
ROUXPOUR RESTAURANT
Sugar Land Town Square
2298 Texas Dr.
Sugar Land, Texas

JIM LAWLESS, AIA
Architects & Planners
4610 Sweetwater Blvd
Suite 200-C
Sugar Land, Texas 77479
(281) 240-6101

REGISTERED ARCHITECT JAMES R. LAWLESS 10987 STATE OF TEXAS 5/18/10

DRAWING:
A-2



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

GENERAL LIGHTING NOTES:

1. GENERAL CONTRACTOR SHALL VERIFY PANEL BOX CIRCUITRY AND SWITCHINGFOR NEW AND/OR RELOCATED LIGHTING.
2. GENERAL CONTRACTOR SHALL VERIFY CAPACITY OF EXISTING ELECTRICAL PANEL AND NOTIFY ARCHITECT AND OWNER ACCORDINGLY.
3. ALL LIGHTING AND CEILING IN KITCHEN & BATHROOM AREA SHALL REMAIN AS IS. (NO CEILING WORK IN THIS AREA)

LEGEND:

- PENDANT
- NEW FLOURESCENT
- WALL SCONCE
- EXISTING TRACK LIGHT
- E EXISTING LIGHT FIXTURE

JOB NUMBER :
1007

DATE :
05/05/10

REVISIONS :

Interior Alterations to:
ROUXPOUR RESTAURANT
Sugar Land Town Square
2298 Texas Dr.
Sugar Land, Texas

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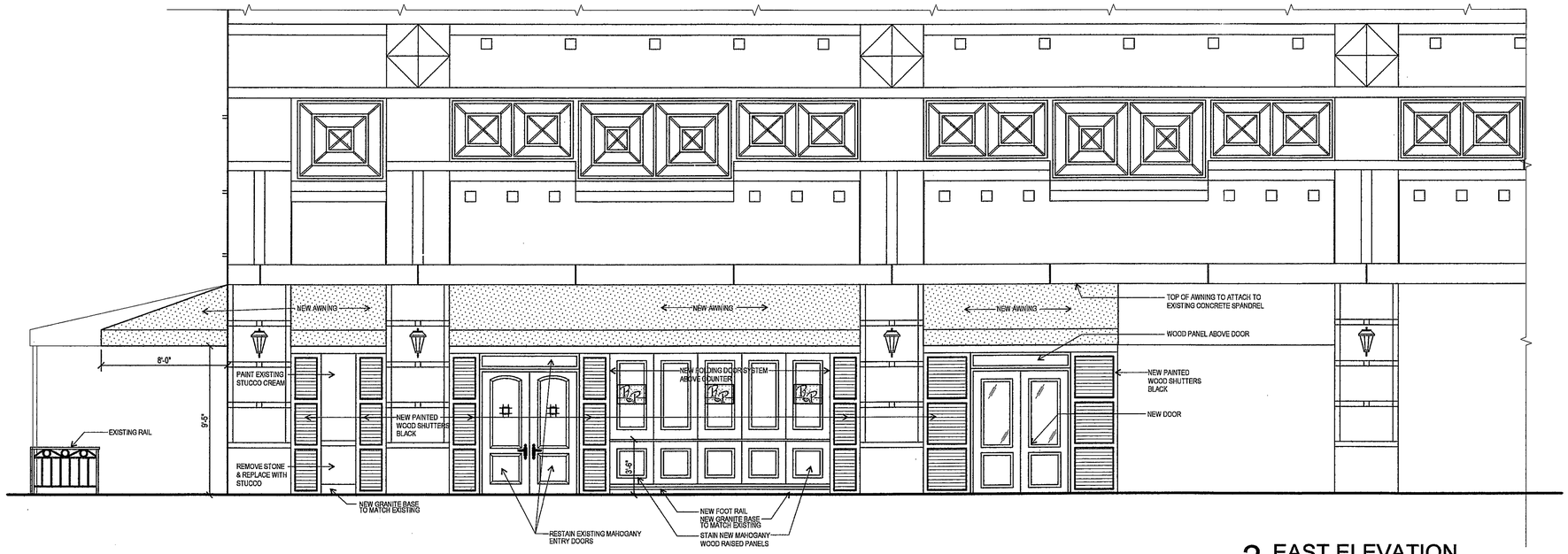
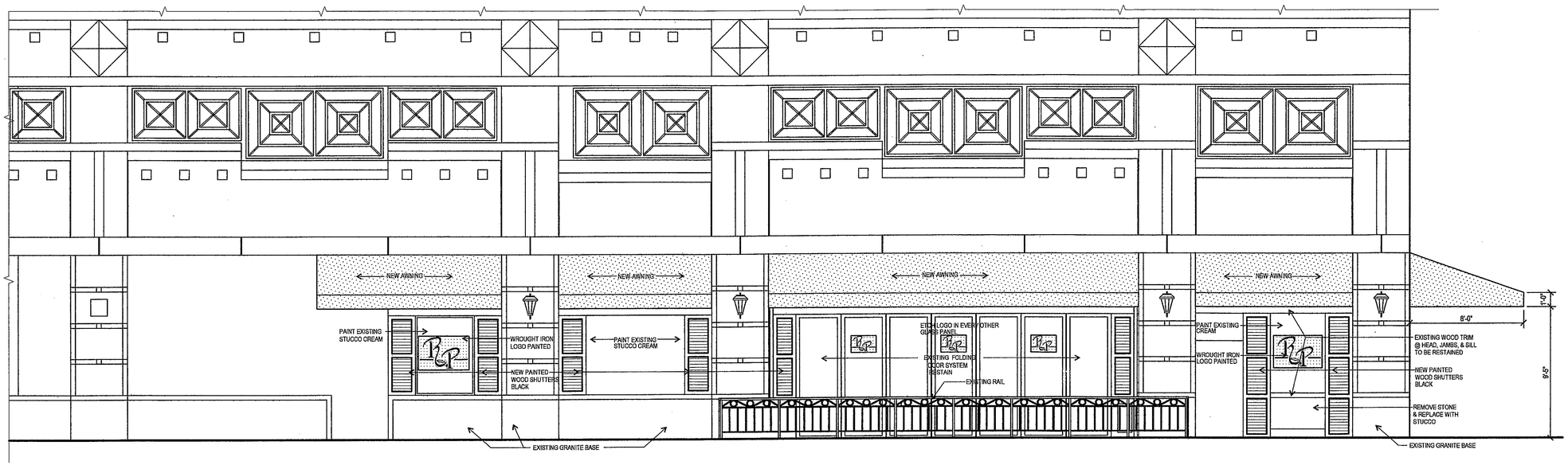
77479
(281) 240-6101

REGISTERED ARCHITECT
JAMES R. LAWLESS
10981
STATE OF TEXAS
5/6/10

DRAWING :
A-3



2 EAST ELEVATION
1/4"=1'-0"



1 SOUTH ELEVATION
1/4"=1'-0"

JOB NUMBER :
1007

DATE :
05/05/10

REVISIONS :

Interior Alterations to:
ROUXPOUR RESTAURANT
Sugar Land Town Square
2298 Texas Dr.
Sugar Land, Texas

JIM LAWLESS, AIA
Architects & Planners
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77479
(281) 240-6101

REGISTERED ARCHITECT
JAMES R. LAWLESS
No. 10981
STATE OF TEXAS
5.18.10

DRAWING :

A-4

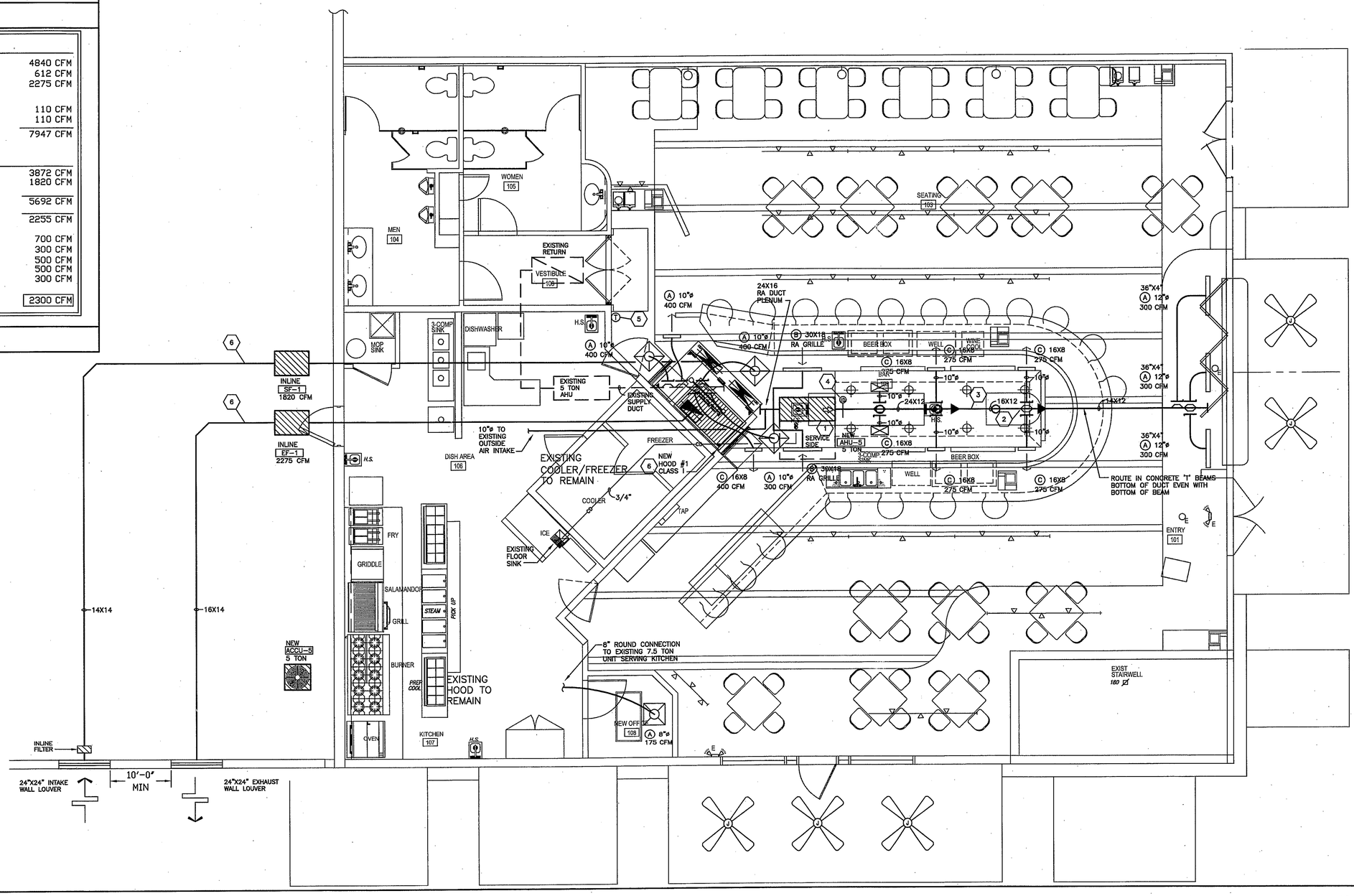
1. AHU UNIT SUPPLY AIR AND RETURN AIR DUCT. COORDINATE ROUTING WITH STRUCTURE. PROVIDE DRAW-THRU TYPE P-TRAP. REFER TO CONDENSATE DRAIN DETAIL PROVIDE CLEAN OUT AT EACH CHANGE OF DIRECTION IN CONDENSATE DRAIN LINE. MECHANICAL CONTRACTOR TO ROUTE PIPING IN CEILING INSULATE DRAIN LINES IN CAVITY. ROUTE CONDENSATE DRAIN LINE TO DISCHARGE INTO FLOOR SINK AS PER PLAN CONDENSATE DRAIN LINE TO BE SLOPE A MINIMUM OF 1/4" PER FOOT
2. SPIN-IN VOLUME AIR DAMPER. TYPICAL FOR SUPPLY AIR. REFER TO DETAIL.
3. SUSPEND SUPPLY TRUNK FROM STRUCTURE. REFER TO DETAILS
4. PROVIDE IONIZATION DETECTOR MOUNTED IN SUPPLY AIR PLENUM. UPON DETECTION OF SMOKE UNIT SHALL BE SHUT DOWN.
5. PROVIDE AND INSTALL PROGRAMABLE THERMOSTAT. REFER TO MECHANICAL SPECIFICATIONS.
6. KITCHEN HOOD EXHAUST DUCT AND SUPPLY DUCT UP TO FANS. REFER TO KITCHEN VENDOR DRAWINGS FOR DUCT SIZES AND FAN SIZES WITH HOOD CALCULATIONS. ALL KITCHEN HOOD DUCTS AND FANS AND KICTHEN HOOD TO BE PROVIDED AND INSTALLED BY KITCHEN EQUIPMENT VENDOR/CONTRACTOR. KITCHEN GREASE HOOD EXHAUST FANS TO HAVE A "GREASEPTOR" GREASE COLLECTION SYSTEM INSTALLED TO CATCH GREASE FROM FAN.

3 MECHANICAL KEYED NOTES

HOOD - EXHAUST FAN NO.	RATED VOLUME
EXISTING CLASS I HOOD	4840 CFM
EXISTING CLASS II HOOD	612 CFM
NEW EF-1 HOOD #1 CLASS I	2275 CFM
EXISTING TOILET EXHAUST FAN	110 CFM
EXISTING TOILET EXHAUST FAN	110 CFM
TOTAL EXHAUST	7947 CFM

HOOD - SUPPLY FAN NO.	RATED VOLUME
EXISTING COOKING HOOD SUPPLY FAN	3872 CFM
SF-1 (80% of COOKING HOOD)	1820 CFM
TOTAL SUPPLY	5692 CFM
NET LOSS - TEMPERED	2255 CFM
Make up air EXISTING AHU-1 (10.0 TON)	700 CFM
Make up air EXISTING AHU-2 (5.0 TON)	300 CFM
Make up air EXISTING AHU-3 (7.5 TON)	500 CFM
Make up air EXISTING AHU-4 (7.5 TON)	500 CFM
NEW Make up air NEW AHU-5 (5 TON)	300 CFM
MAKE-UP AIR THRU-AHU'S	2300 CFM

2 VENTILATION CALCULATION



1 FLOOR PLAN - MECHANICAL

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

JOB NUMBER: 10093
DATE: 5-18-10
REVISIONS: -

Interior Alterations to:
ROUXPOUR RESTAURANT
Sugar Land Town Square
2298 Texas Dr. Sugar Land, Texas

JIM LAWLESS AIA
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Sugar Land, Texas
77479
(281) 240-6101

STATE OF TEXAS
H.M. McLEOD JR.
REGISTERED PROFESSIONAL ENGINEER

THIS SEAL WAS AUTHORIZED THIS DATE: 05/18/2010

PROJECT #10-093
H.M. McLEOD, P.E.
4727 MEMEN ST. SUITE B
HOUSTON, TEXAS 77027
OFFICE: (713) 961-2622
FAX: (713) 961-5591
CELL: (713) 505-1546
Firm Registration:
H. M. McLeod, P.E. #F-5670

DRAWING:
MECHANICAL FLOOR PLAN
M-1

LENNOX INDUSTRIES INC

AIR HANDLING UNIT A/C & FURNACE EQUIPMENT SCHEDULE

Unit No.	Nominal Cooling Cap. (Tons)	Manuf.	Model	Orientation	Matched Outdoor Unit	Supply Air			Outside Air	Cooling Design Conditions			Cooling Performance					DX Cooling Efficiency		Heating Performance			Electrical Data			Net Wt	Remarks
						Flow (CFM)	ESP (in. WC)	Blower Motor (hp)	Min. Flow (CFM)	Outdoor D.B (°F)	Mixed D.B. (°F)	Mixed W.B. (°F)	System Total (BTUH)	System Sensible (BTUH)	System Moist Rem (lb/hr)	Coil Discharge D.B (°F)	Coil Discharge W.B (°F)	(S)EER	IPLV	Type	Model**	System Input (BTUH)	Voltage	MCA	Max Fuse	(lbs)	
AHU-5	5	Lennox	CB29M-65-G	Horizontal	ACCU-5	2100	0.4	0.75	0	96	80	67	58605	45014	13	58.1	57.2	10.6	0	Electric	ECB29-15	51180	460-3-60	25	30	181	n/a

LENNOX INDUSTRIES INC

CONDENSING UNIT EQUIPMENT SCHEDULE

Unit No.	Nominal Cooling Cap. (Tons)	Manuf.	Model	Matched Indoor Unit	Cooling Design Conditions			Cooling Performance						Electrical Data			Net Wt	Remarks
					Outdoor D.B (°F)	Mixed D.B (°F)	Mixed W.B. (°F)	System Total (BTUH)	System Sensible (BTUH)	System Moist Rem (lb/hr)	Coil Discharge D.B (°F)	Coil Discharge W.B (°F)	DX Cooling Efficiency (S)EER	DX Cooling Efficiency IPLV	Voltage	MCA	Max Fuse	(lbs)	
ACCU-5	5	Lennox	HS29-060-10G	AHU-5	96	80	67.0	58605.0	45014	13	58.1	57.2	10.6	0.0	460-3-60	10.2	15.0	207	n/a

7 AC UNIT SCHEDULE

BRANCH DUCT SIZE CHART

DUCT SIZE	CFM RANGE
6" DIA.	0 – 80 CFM
8" DIA.	85 – 175 CFM
10" DIA.	180 – 320 CFM
12" DIA.	325 – 550 CFM
14" DIA.	555 – 825 CFM
16" DIA.	830 – 1200 CFM

CEILING DIFFUSER NECK CHART

NECK SIZE	CFM RANGE
6" DIA.	0 – 80 CFM
8" DIA.	85 – 175 CFM
10" DIA.	180 – 320 CFM
12" DIA.	325 – 550 CFM
14" DIA.	555 – 825 CFM
16" DIA.	830 – 1200 CFM

AIR DEVICE SCHEDULE

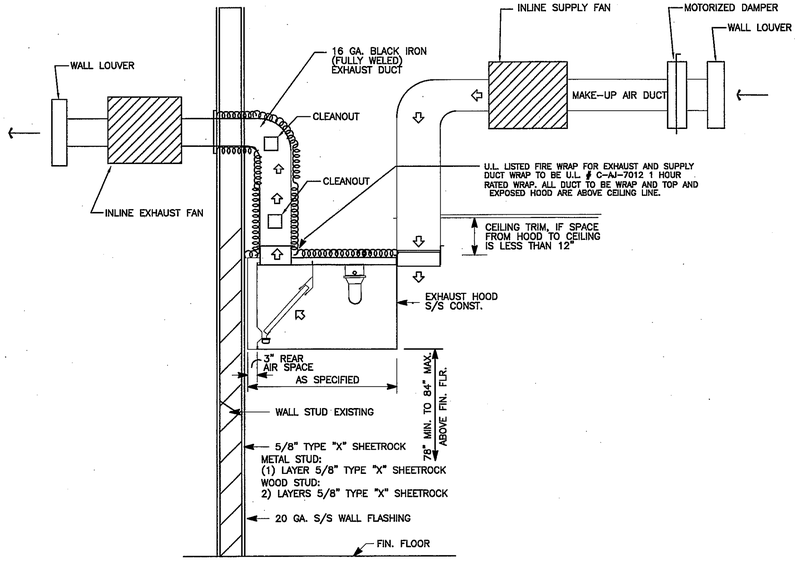
TYPE	MFG.	MODEL	APPL.	MOUNTING	DESCRIPTION
A	METALAIRE	7600-6	SUPPLY	24"x24"grid/GYPBOARD	PERFORATED Aluminized steel, stamped louvered face diffuser Adjustable air direction.
B	METALAIRE	4002R-5	RETURN	24"X24"grid/GYPBOARD	Aluminum, fixed blade bar type return air grille.
C	METALAIRE	V4004D	SUPPLY	SURFACE DUCT/GYPBOARD	Sidewall diffuser, adjustable double deflexion, w/ opposed blade damper (OBD)
D	METALAIRE	3100 SA-2	SUPPLY	24" ROUND SURFACE	NECK SIZE PER PLAN – Steel two position adjustable.
E	NAILER INDUSTRIES	5104	SUPPLY	SURFACE GYPBOARD	45° 2 slots diffuser, adjustable double deflexion, w/ opposed blade damper (OBD)

NOTES: ** NECK SIZE AND CFM AS NOTED ON FLOOR PLAN DRAWINGS.
** ALL GRILLES TO BE PAINTED TO MATCH ARCHITECTURAL SPECIFICATIONS. PROVIDE GRILLE WITH FINISH TO ACCEPT ENAMAL PAINT.

TOILET EXHAUST FAN

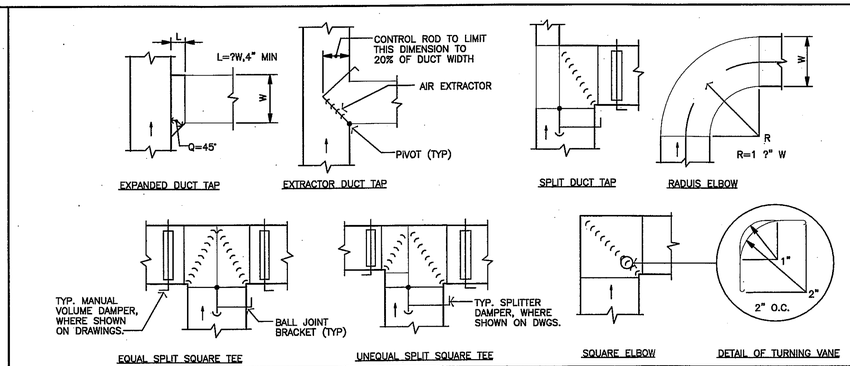
DESIGNATION	MFG.	MODEL	CFM	HP	VOLTAGE	SP.	NOTES
TEF-1	BROAN	L200	110	FRAC.	120 v. 1 ph.	0.5	6" RND. DISCHARGE W/ BACK DRAFT DAMPER ROUTE 6" RND DUCT TO ROOF CAP
TEF-2	BROAN	L200	110	FRAC.	120 v. 1 ph.	0.5	6" RND. DISCHARGE W/ BACK DRAFT DAMPER ROUTE 6" RND DUCT TO ROOF CAP

6 AIR DEVICE SCHEDULE



VERIFY WITH KITCHEN HOOD VENDOR

5 GREASE EXHAUST HOOD SECTION



4 TYPICAL DUCT FITTINGS DETAIL

1. ALL WORK TO MEET WITH LOCAL CITY AMENDMENTS AND UNIFORM MECHANICAL BUILDING CODE REQUIREMENTS, OR INTERNATIONAL CODE.
2. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
3. VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS WITH ARCHITECTURAL PLANS.
4. MECHANICAL CONTRACTOR TO VERIFY EXACT PLACEMENT OF SUPPLY & RETURN AIR DEVICES WITH REFLECTED CEILING LIGHTING LOCATIONS AND ARCHITECTURAL DRAWINGS FOR STRUCTURE TYPE.
5. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONAL INFORMATION. IF THERE IS A CONFLICT WITH THE PLAN DIMENSIONS OR AN EXISTING FIELD CONTRACT ARCHITECT.
6. COORDINATE ALL WORK WITH EACH SUB CONTRACTOR AND GENERAL CONTRACTOR AND GENERAL CONTRACTOR CONTRACTOR (STRUCTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING) PRIOR TO INSTALLATION AND CONNECTION OF EQUIPMENT.
7. MEASURE TO CENTER OF THE GRILLE LOCATIONS TO DETERMINE DISTANCES. GRILLES SHALL BE LOCATED WHERE SHOWN ON THE PLAN. GENERAL CONTRACTOR SHALL FRAME TO ACCOMMODATE.
8. INSTALL BACKDRAFT DAMPER AND ACCESS DOOR AT KITCHEN HOOD EXHAUST PLENUM.
9. KITCHEN HOOD ARE FURNISHED AND INSTALLED BY KITCHEN EQUIPMENT SUPPLIER. EXHAUST FANS AND MAKE-UP AIR FANS AND ROOF CURBS ARE FURNISHED BY KITCHEN VENDOR AND INSTALLED BY CONTRACTOR. CONTRACTOR IS TO PROVIDE DUCTS AND MAKE OPERATIONAL.

3 GENERAL NOTES

ABV	ABOVE	EWH	ELECTRIC WATER HEATER	NK	NECK
AFF	ABOVE FINISHED FLOOR	FDV	FIRE DEPARTMENT VALVE	OA	OUTSIDE AIR
AHU	AIR HANDLING UNIT	FHC	FIRE HOSE CABINET	OBD	OPPOSED BLADE DAMPER
ARCH	ARCHITECTURAL	FHR	FIRE HOSE RACK	PSI	POUNDS PER SQUARE INCH
BOD	BOTTOM OF DUCT	FCO	FLOOR CLEANOUT	PRV	PRESSURE REDUCING VALVE
BLDG	BUILDING	GALV	GALVANIZED	RA	RETURN AIR
CI	CAST IRON	GAL	GALLONS	RCP	REINFORCED CONCRETE PIPE
℄	CENTER LINE	GPH	GALLONS PER HOUR	RD	ROOF DRAIN
CO	CLEANOUT	GPM	GALLONS PER MINUTE	SA	SUPPLY AIR
COG	CLEANOUT AT GRADE	HW	HOT WATER	SF	SUPPLY FAN
CONC	CONCRETE	IE	INVERT ELEVATION	SP	STATIC PRESSURE
CONN	CONNECTION	KW	KILOWATTS	SPEC	SPECIFICATIONS
CONT	CONTINUATION	LAV	LAVATORY	SS	STAINLESS STEEL
CW	DOMESTIC COLD WATER	MAX	MAXIMUM	TYP	TYPICAL
DN	DOWN	MECH	MECHANICAL	UH	UNIT HEATER
DIA	DIAMETER	MIN	MINIMUM	VTR	VENT THRU ROOF
DWG	DRAWING	MVD	MANUAL VOLUME DAMPER	WC	WATER CLOSET
ELEC	ELECTRICAL	MTD	MOUNTED	WCO	WALL CLEANOUT
EF	EXHAUST FAN	NIC	NOT IN CONTRACT		

2 GENERAL ABBREVIATIONS

1. Furnish and install a complete and workable HVAC system per the plans and specifications. Comply with the latest edition of the Uniform Mechanical Code and the Uniform Building Code as it applies with modifications by the governing city to obtain all permits and pay all fees. Materials shall be new and undamaged. Equipment shall be UL LIST & APPROVED by the authority having jurisdiction over such equipment and shall be warranted for a period of one year from the date of final acceptance. Guarntee HVAC compressors in air conditioning equipment for a period of five years from the date of final acceptance.
2. Coordinate work with other trades and with job site conditions before installing and/or fabricating mechanical equipment. Visit the job site prior to bid date and becoming equintined with existing conditions to determine the extent of mechanical work which shall be required to complete the job. No allowance and/or compensation will be made for failure to understand the scope of work required.
3. The plans attempt to show the desired locations of mechanical equipment and materials and to coordinate them with other trades; however, reasonable revisions and/or changes to the location of equipment and/or materials may be required and shall be made to avoid conflicts with other building trades and existing job site conditions at no additional cost.
4. Supply and return air ducts shall be rigid fiberglass high density duct board, fabricated and installed by SMACNA & ASHRAE Standards.
5. Mount all equipment for wind loads and mounting heights per local codes. This shall be verified with structural engineer by HVAC contractor and to be a part of mechanical contractor's bid. Wind load to be min. 80 MPH
6. Furnish and install fire dampers in supply & return air ducts penetrating the space at the rated ceiling and or wall.
7. Verify the finial locations of thermostats with the Architect and/or owner prior to installation. Mount to meet A.D.A. mounting requirements. Should conflicts exist between HVAC and Architectural documents, the Architectural documents shall govern.
8. Furnish and install the equipment as shown. Coordinate the size and location for new openings and/or penetrations required. Secure necessary rough-in data, templates, roof curbs, etc. required to complete the work in a timely fashion to facilitate proper installations. Cut required openings or penetrations, install the appropriate framing devices and restore the existing construction to its original condition.
9. Install full line size primary condensate drain lines from air handling unit/equipment to approved receptor. (Soil stack, or floor drain, hud drain, or floor sink). Install full size auxiliary drain pans (galvanized metal pans) below each air handing unit/equipment and route full size auxiliary drain line to discharge over the plumbing fixture as indicated on plans.
10. Furnish and install all control devices including (but not limited to thermostats, relays, interlocking devices and other necessary control items required to provide a complete and workable system. Control wiring exposed outside the building shall be installed in emt conduit.
11. Furnished and install the following materials:

A. DUCTWORK: ALL SUPPLY DUCT WORK TO BE R-6 RATED
ALL RETURN DUCT WORK TO BE R-5 RATED

1. Flexible duct shall be class 1 and UL #181 listed with 1-1/2" fiberglass blanket, 0.1 perm rated polyethylene inner jacket, and 0.1 perm rated reinforced metalized film outer jacket. duct shall be flexmaster type #31 or "approved equal. secure duct to rigid collars with adjustable stainless steel clamping bands. Tape and sealed joint airtight with UL listed duct tape with acrylic based adhesive (latex based adhesive is not acceptable) per the manufacture's recommendations. Suspend ductwork from structure above using minimum 18 GA. 1" wide galvanized sheet metal hanger straps (not to exceed 4'-0") or hangers as allowed by SMACNA standard (whichever is more stringent). Provide sheet metal saddles at hanger straps.
2. Rigid round ductwork shall be galvanized sheet metal, externally y insulated with 1 1/2# density fiberglass, fabricated and installed per SMACNA standards. Tape and seal joints airtight with UL listed duct tape with acrylic based adhesive (latex based adhesive is not acceptable) per the manufacture's recommendations. Suspend ductwork from structure using minimum 18 GA. 1" wide galvanized sheet metal hanger straps (not to exceed 4'-0" O.C.) or with hangers allowed by SMACNA standards (whichever is more stringent) provide sheet metal saddles at hanger straps.
3. Rectangular supply and return ductwork shall be 1-1/2" fiberglass ductboard, Toughguard as manufactured by CERTAINTEED fiberglass or "approved equal". All ductwork, and the installation thereof, shall adhere to the latest edition of SMACNA requirements. DuctBoard shall UL 181 listed class 1 and shall be sealed and supported in the following manner.
   a. At longitudinal and circumferential joints must be stable with outward flaring, 1/2" (minimum) staples 2" O.C.
   b. Wipe surface where tape is to be applied with a clean cloth. (if surface has grease or oil saturate cloth with approved solvent prior to wiping).
   c. Rub tape (hard cast, typ #AM-401, no exceptions) firmly in place immediately after application, using a "squeegee" or similar tool.
   d. Ductwork shall be suspended for the structure above using 20 gauge (minimum) galvanized steil hanger straps and saddles, spaced not to exceed 4'-0" O.C. Duct dimensions shown on the drawings are net clear internal dimensions and allowance must be made for duct insulation.
   e. Refer to floor plan drawings for round insulated duct locations. All duct above suspended and/or gypboard (furrdown) ceiling to be duct board. verify with owner for ALTERNATE pricing for external insulated metal duct.
4. The balance of the supply air and return duct shall be E1 475 fiberglass in accordance with SMACNA. SMACNA approved tape shall be provided for the closure systems.
5. Spin-in fittings shall be factory fabricated, and include an extractor scoop and a balancing damper with locking quadrant and handle. Note that balancing for the type "A" ceiling diffusers shall be at the spin-in fitting.

B. PIPING
1. Condensate drain lines shall be schedule 40 PVC or type "L" copper pipe. Provide unistrut pipe clamps at pipe supports as required (not to exceed 8 feet O.C.). Provide dielectric separation between all dissimilar materials.

C. AIR DEVICES:
1. Air Devices: REFER TO SCHEDULE. Coordinate air device requirements with project owner.

D. INSULATION:
1. Insulate refrigerant suction piping with 1" armaflex "AP-2000" insulation. Seall all joints airtight with armstrong #520 vapor barrier adhesive and two coats of armstrong finish (each coat shall be a different color to insure 100% coverage) per the manufacture's recomm recommendations. Provide 16 gauge galvanized sheetmetal support saddle at each hanger or support. In addition, all lines exposed outside the building shall have a 16 mil aluminum jacket, sealed watertight with GE silicon sealer.
2. Insulate condensate drain lines with 1/2" armaflex "AP-2000" insulation. Seal joints airtight with armstrong #520 vapor barrier adhesive and two coats of armstrong finish as per the manufacture's recommendations. Provide 16 gauge galvanized sheet metal support saddle at each hanger or support.

E. MISCELLANEOUS ITEMS:
1. Fire dampers: Ruskinq type IBD2, style "B". UL labeled with 165 degree fusible link, rated for 1-1/2 hours per UL standard 555 with blades entirely out of the airstream. Install per city's local McAllen mechanical code.
2. Filters shall be provide din the air handling units. The factory filters shall be used during construction and a new set of 1" min. replaceable media. Metal filler frame filters shall be provided in the units just prior to est end balance.
3. The air handling units shall be provided with smoke detectors in accordance with applicable codes. (in supply and return air plenums)

12. Contractor shall furnish shop drawings for NEW exhaust fans, and air devices. and air handlers, and hvac condensing units, and controls.
13. HVAC contractor shall verify and coordinate with the electrical contractor HVAC unit voltage requirements and confirm it with the equipment mfr.

CONTROLS
1. ROOM THERMOSTATS SHALL BE PROVIDED FOR EACH NEW UNIT & EXISTING UNIT. THERMOSTATS SHALL BE MOUNTED TO A.D.A. HEIGHT REQUIREMENTS. WITH THE CONTROL WIRES CONCEALED IN WALL. THERMOSTATS SHALL BE PROGRAMMABLE (SELECT MODEL # TO SUIT APPLICATION) OR EQUAL AS FURNISHED BY THE A/C UNIT MANUFACTURER. PROVIDE WITH HONEYWELL LOCKING GUARD # TG508 (2) KEYS. THE KEYS SHALL BE ENGRAVED BAKELITE TAG ATTACHED, WITH "THERMOSTATS" NOTED ON THE TAG, AND BE TURNED OVER TO THE TENANT/MANAGER AT START-UP.
2. THE ROOF TOP UNITS SHALL BE PROVIDED WITH SMOKE DETECTORS IN ACCORDANCE WITH APPLICABLE CODES. (IN SUPPLY AIR PLENUMS)

1 MECHANICAL SPECIFICATIONS

JOB NUMBER: 10093
DATE: 5-18-10
REVISIONS: -

Interior Alterations to:
ROUXPOUR RESTAURANT
Sugar Land Town Square
2298 Texas Dr. Sugar Land, Texas

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(281) 240-6101

STATE OF TEXAS
H.M. McLEOD JR.
117484
REGISTERED
PROFESSIONAL ENGINEER

THIS SEAL WAS AUTHORIZED
THIS DATED 05/18/2010

PROJECT #10-093
H.M. McLEOD, P.E.
4727 MEMPHIS ST. SUITE B
HOUSTON, TEXAS 77027
OFFICE: (713) 961-2699
FAX: (713) 961-5621
CELL: (713) 806-1646
Firm Registration:
H. M. McLeod, P.E. #F-5679

DRAWING:
MECHANICAL DETAILS
M-2

SUPPLY AIR DUCT UP TO HVAC UNIT. SIZE PER PLANS.

RETURN AIR DUCT UP TO HVAC UNIT. SIZE PER PLANS.

EXHAUST AIR DUCT UP TO FAN UNIT. SIZE PER PLANS.

HVAC UNIT CONDENSATE DRAIN LINE WITH END OF LINE CLEANOUT

P-TRAP FOR HVAC UNIT. VERIFY TYPE WITH DETAIL.

GAS FLUE RISER. VERIFY SIZE WITH PLANS.

SPIN-IN AIR TAP WITH MANUAL BALANCE DAMPER

SPIN-IN DUCT TAP WITH MANUAL BALANCE DAMPER. TAP MADE TO BOTTOM OF SUPPLY AIR TRUNK

SPIN-IN DUCT TAP WITH MANUAL BALANCE DAMPER. TAP MADE TO BOTTOM OF RETURN AIR TRUNK

SUPPLY AIR GRILLE. REFER TO AIR DEVICE SCHEDULE

RETURN AIR GRILLE. REFER TO AIR DEVICE SCHEDULE

EXHAUST GRILLE. REFER TO AIR DEVICE SCHEDULE

VOLUME AIR DAMPER

THERMOSTAT

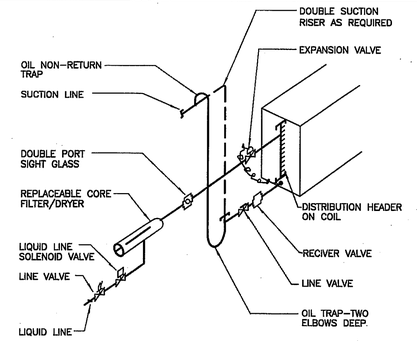
20x16 DUCT DIMENSION, CLEAR INSIDE

NEW DUCTWORK WITH TRANSITION

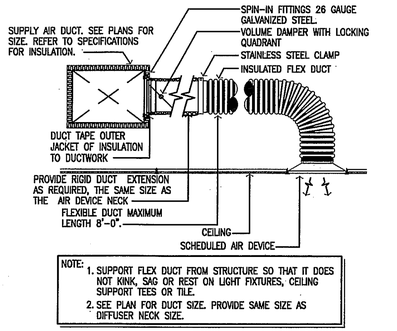
12"ø NECK, AIR DEVICE TYPE 'A', AIR VOLUME - 500 CFM

IONIZATION DETECTOR IN RETURN AND SUPPLY AIR DUCTS INTERLOCK WITH AIR HANDLER TO SHUT DOWN UNIT UPON DETECTION OF SMOKE AND INTERLOCK WITH EMERGENCY LIGHTING

4 MECHANICAL SYMBOLS

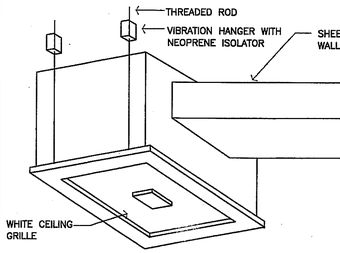


7 REFRIGERANT PIPING DETAIL



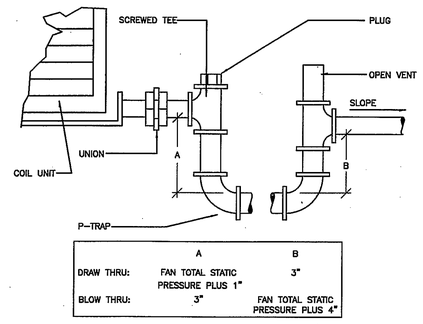
NOTE:
1. SUPPORT FLEX DUCT FROM STRUCTURE SO THAT IT DOES NOT KINK, SAG OR REST ON LIGHT FIXTURES, CEILING SUPPORT TEES OR TILE.
2. SEE PLAN FOR DUCT SIZE. PROVIDE SAME SIZE AS DIFFUSER NECK SIZE.

3 AIR DIFFUSER CONNECTION



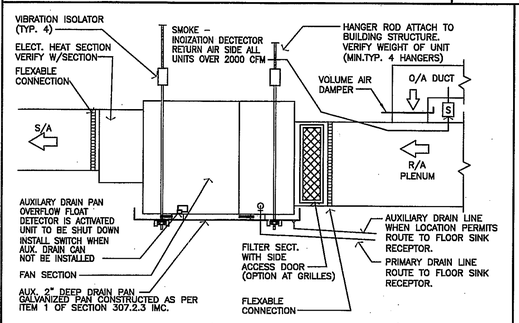
NOTES :
1. PROVIDE BACKDRAFT DAMPER WITH BIRDSCREEN.
2. FLASH AND SEAL WALL OR ROOF CAP
3. PROVIDE INTERNAL ISOLATION AND SOUND INSULATION.
4. SUPPORT FAN FROM STRUCTURE.

6 CABINET CEILING FAN

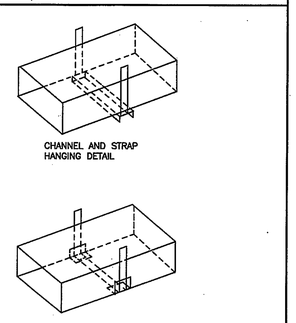


	A	B
DRAW THRU:	FAN TOTAL STATIC PRESSURE PLUS 1"	3"
BLOW THRU:	3"	FAN TOTAL STATIC PRESSURE PLUS 4"

2 ROOF TOP UNIT CONDENSATE DRAIN



5 HORIZONTAL AIR HANDLER DETAIL



1 DUCT SUSPENSION DETAILS

8 CODE COMPLIANCE

SUPPLEMENTARY NOTES RELATIVE TO HVAC COMPLIANCE WITH THE CURRENT ENERGY CODE

(1) EACH COOLING & HEATING SYSTEM SHALL HAVE AT LEAST ONE SOLID-STATE PROGRAMMABLE THERMOSTAT THAT CAN START AND STOP THE SYSTEM UNDER DIFFERENT TIME SCHEDULES FOR SEVEN DIFFERENT DAY TYPES PER WEEK, ARE CAPABLE OF RETAINING PROGRAMMING AND TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST 10 HOURS AND INCLUDE AN ACCESSIBLE MANUAL OVERRIDE OR EQUIVALENT FUNCTION THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO TWO HOURS. HVAC CONTROL SYSTEMS SHALL BE TESTED TO ENSURE THAT CONTROL ELEMENTS ARE CALIBRATED, ADJUSTED, AND IN PROPER WORKING CONDITION. HVAC SYSTEMS SHALL HAVE THE OFF-HOUR CONTROLS REQUIRED BY THE CURRENT LOCAL ENERGY COMPLIANCE CODE. HEATING SYSTEMS SHALL BE EQUIPPED WITH CONTROLS THAT HAVE THE CAPABILITY TO AUTOMATICALLY RESTART AND TEMPORARILY OPERATE THE SYSTEM AS REQUIRED TO MAINTAIN ZONE TEMPERATURES ABOVE A HEATING SET POINT ADJUSTABLE DOWN TO 55F OR LOWER. COOLING SYSTEMS SHALL BE EQUIPPED WITH CONTROLS THAT HAVE THE CAPABILITY TO AUTOMATICALLY RESTART AND TEMPORARILY OPERATE THE SYSTEM AS REQUIRED TO MAINTAIN ZONE TEMPERATURES BELOW A COOLING SET POINT ADJUSTABLE UP TO 85F OR HIGHER OR TO PREVENT HIGH SPACE HUMIDITY LEVELS.

(2) EACH SYSTEM SHALL MEET THE MINIMUM EFFICIENCY REQUIREMENTS PER THE CURRENT ENERGY CONSERVATION CODE.

(3) EACH AIR DEVICE OR THE BRANCH DUCT TO THAT AIR DEVICE SHALL BE EQUIPPED WITH A MANUAL DAMPER TO FACILITATE AIR BALANCING.

(4) CONDENSATE SHALL BE DISCHARGED TO AN APPROVED PLUMBING FIXTURE OR DISPOSAL AREA.

(5) THERMAL INSULATION FOR BOTH REFRIGERANT AND CHILLED WATER PIPING AND DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT ENERGY CONSERVATION CODE.

(6) IF AREA OF CONSTRUCTION IS 5,000 SF OR MORE, CONDITIONED SPACES ARE TO BE AIR BALANCED PER AABC OR NEBB STDS.

(7) IF THE CONDITIONED AREA IS 50,000 SF OR MORE, AFTER CONSTRUCTION, THE HVAC IS TO BE COMMISSIONED, AND A COMMISSIONING STATEMENT IS TO BE ISSUED AND SIGNED BY EITHER THE ARCHITECT OR ENGINEER OF RECORD.

(8) WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE, RECORD DRAWINGS OF THE ACTUAL INSTALLATION SHALL BE PROVIDED TO THE BUILDING OWNER OR A DESIGNATED REPRESENTATIVE. RECORD DRAWINGS SHALL INCLUDE AS A MINIMUM THE LOCATION AND PERFORMANCE DATA ON EACH PIECE OF EQUIPMENT, GENERAL CONFIGURATION OF THE DUCT AND PIPE DISTRIBUTION SYSTEM, INCLUDING SIZES, AND THE TERMINAL AIR OR WATER DESIGN FLOW RATES. ALSO TO BE PROVIDED WITHIN 90 DAYS ARE OPERATING AND MAINTENANCE MANUALS INCLUDING AT A MINIMUM SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, OPERATION MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED. ALSO INCLUDED SHALL BE NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY, HVAC CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS. DESIRED OR FIELD-DETERMINED SET POINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS, AT CONTROL DEVICES, OR FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS. ALSO TO BE INCLUDED IS A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING SUGGESTED SET POINTS.

(9) BOTH OUTDOOR AIR SUPPLY AND EXHAUST SYSTEMS SHALL BE EQUIPPED WITH MOTORIZED DAMPERS THAT WILL AUTOMATICALLY SHUT

IN USE. SUCH DAMPERS SHALL HAVE A MINIMUM LEAKAGE RATE OF 0.3 CFM PER SQ. FT. VENTILATION OUTDOOR AIR DAMPERS SHALL BE CAPABLE OF AUTOMATICALLY SHUTTING OFF DURING PREOCCUPANCY BUILDING WARM-UP, COOL-DOWN, AND SETBACK, EXCEPT WHEN VENTILATION MUST BE SUPPLIED TO MEET CODE REQUIREMENTS (EXCEPTIONS: GRAVITY DAMPERS ARE ACCEPTABLE IN EXHAUST SYSTEMS FOR BLDGS. LESS THAN 3-STORIES AND FOR ANY HEIGHT; GRAVITY DAMPERS ARE ACCEPTABLE FOR O/A OR EXHAUST OF 300 CFM OR LESS; AND WHERE PROHIBITED BY CODE)

(10) EACH SYSTEM SHALL OPERATE WITH THE SET POINTS BETWEEN 70 AND 90 DEGREES. PROGRAMMABLE THERMOSTAT TO PROVIDE OWNERS PRESET TIMES AND TEMPERATURE OF OPERATING COOLING AND HEATING SYSTEMS

JOB NUMBER: 10093
DATE: 5-18-10
REVISIONS: -

Interior Alterations to:
ROUXPOUR RESTAURANT
Sugar Land Town Square
2298 Texas Dr. Sugar Land, Texas

JIM LAWLESS, AIA
Architecture & Planning
4610 Sweetwater Blvd
Suite 200-C
Sugar Land, Texas
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STATE OF TEXAS
H.M. McLEOD JR.
REGISTERED
PROFESSIONAL ENGINEER

THIS SEAL WAS AUTHORIZED THIS DATE 05/18/2010

PROJECT #10-093
H.M. McLEOD, P.E.
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Firm Registration:
H. M. McLeod, P.E. #F-3879

DRAWING:
MECHANICAL DETAILS
M-3

HOOD INFORMATION

HOOD NO.	MODEL	LENGTH	MAX. COOKING TEMP.	EXHAUST PLENUM						SUPPLY PLENUM						HOOD CONSTRUCTION	HOOD CONFIG.	
				TOTAL EXH. CFM	RISER(S)					TOTAL SUP. CFM	RISER(S)						END TO END	ROW
					WIDTH	LENG.	DIA.	CFM	S.P.		WIDTH	LENG.	DIA.	CFM	S.P.			
1	4824 ND-2-PSP-F	7' 0.00"	600 Deg.	2275	10"	21"		2275	-0.607"	1820						430 SS Where Exposed	ALONE	ALONE

HOOD INFORMATION

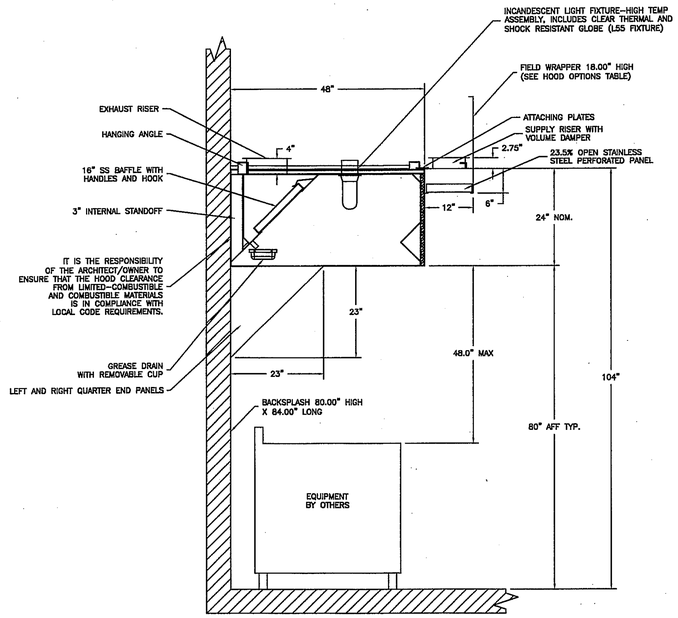
HOOD NO.	FILTER(S)				LIGHT(S)			UTILITY CABINET(S)						FIRE SYSTEM PIPING	HOOD HANGING WGHT
	TYPE	QTY.	HEIGHT	LENGTH	QTY.	TYPE	WIRE GUARD	LOCATION	FIRE SYSTEM		ELECTRICAL	SWITCHES			
									TYPE	SIZE	MODEL #	QUANTITY	LOCATION		
1	SS Baffle with Handles	4	16"	16"	2	Incandescent Light Fixt	NO							YES	384 LBS
		1	16"	20"											

HOOD OPTIONS

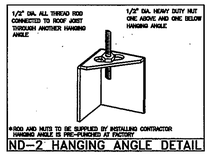
HOOD NO.	OPTION
1	FIELD WRAPPER 18.00" High Front, Left, Right
	BACKSPLASH 80.00" High X 84.00" Long 430 SS
	LEFT QUARTER END PANEL 23" Top Width, 0" Bottom Width, 23" High 430 SS
	RIGHT QUARTER END PANEL 23" Top Width, 0" Bottom Width, 23" High 430 SS

PERFORATED SUPPLY PLENUM(S)

HOOD NO.	POS.	LENGTH	WIDTH	HEIGHT	RISER(S)				
					WIDTH	LENG.	DIA.	CFM	S.P.
1	Front	84"	12"	6"	8"	26"		910	0.171"
					8"	26"		910	0.171"



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

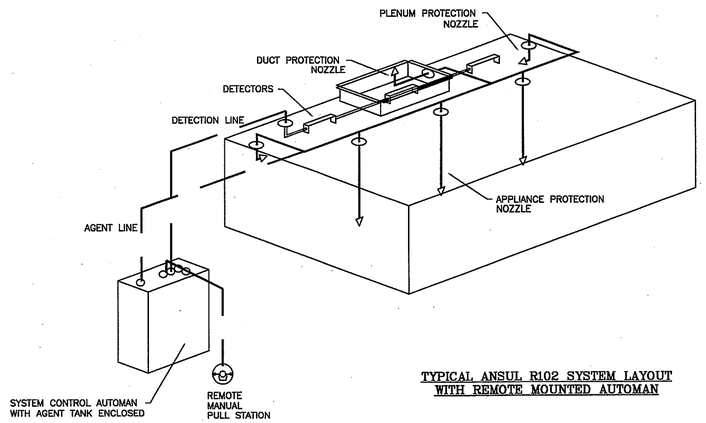


ND-2 HANGING ANGLE DETAIL

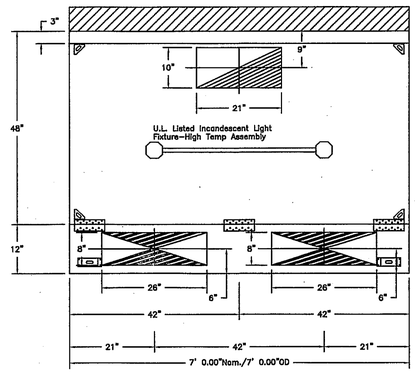
CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH

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

ETL LISTING DESCRIPTION BLOCK
THE CAPTIVE AIRE MODEL
ND HAS BEEN E.T.L.
TESTED, LISTED, AND
APPROVED TO EXHAUST
A MINIMUM OF 150/200/250 CFM
PER LINEAR FOOT OVER
450/600/700 DEGREE COOKING
EQUIPMENT, RESPECTIVELY.



TYPICAL ANSUL R102 SYSTEM LAYOUT WITH REMOTE MOUNTED AUTOMAN



PLAN VIEW – Hood #1
7' 0.00" LONG 4824ND-2-PSP-F

REVISIONS

	DESCRIPTION	DATE
△		
△		
△		
△		

CAPTIVE-AIRE
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2626 South Loop West, Suite 620, Houston, TX. 77054 PHONE: (713) 839-9944 FAX: (713) 839-9945 EMAIL: rep46@captiveaire.com
www.captiveaire.com

Rouxpour Restaurant

DATE: 5/13/2010
DWG.#: 1150786
DRAWN BY: GAF
SCALE: 1/16
MASTER DRAWING

SHEET NO. 1

JOB NUMBER: 10093
DATE: 5-18-10
REVISIONS: -

Interior Alterations to:
ROUXPOUR RESTAURANT
Sugar Land Town Square
2298 Texas Dr. *Sugar Land, Texas*

JIM LAWLESS AIA
Architects & planners
4610 Sweetwater Blvd
Suite 200-C
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(281) 240-8101

STATE OF TEXAS
H.M. McLEOD
79400
REGISTERED PROFESSIONAL ENGINEER

THIS SEAL WAS AUTHORIZED
THIS DATE 05/18/2010

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Firm Registration:
H. M. McLeod, P.E. #F-3679

DRAWING:
KITCHEN HOOD DETAILS
M-4

1 HOOD DETAIL

EXHAUST FAN INFORMATION

FAN UNIT NO.	FAN UNIT MODEL #	MODEL	TAG	CFM	S.P.	RPM	H.P.	ø	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS.)
1	BI16CARM EF-1	BI16CARM		2275	2.500	1620	3.000	3	208	9.5	1416 FPM	274.80

HEATER/MUA FAN INFORMATION

FAN UNIT NO.	FAN UNIT MODEL #	BLOWER	HOUSING	TAG	CFM	S.P.	RPM	H.P.	ø	VOLT	FLA	WEIGHT (LBS.)
2	INLINE1-G10 SF-1	G10	INLINE.1		1820	1.000	1108	1.500	3	208	4.7	207.04

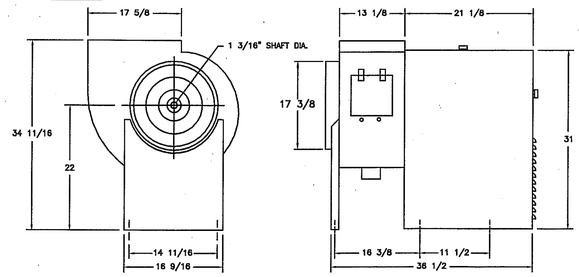
FAN OPTIONS

FAN UNIT NO.	OPTION (Qty. – Descr.)
1	1 – Exhaust Fan Grease Cup (Utility Set)
	1 – Rubber Vibration Isolators for BI Utility Sets (set of 6)
2	1 – Vibration Isolation Ceiling Hangers for INLINE fans (set of

FAN ACCESSORIES

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

FAN #1 BI16CARM – EXHAUST FAN

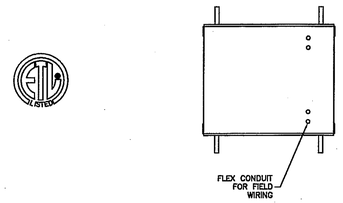


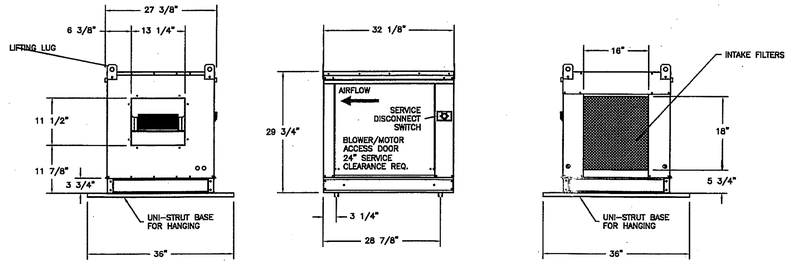
FEATURES:
- FULL AMCA CLASS 1 OPERATION
- VENTED MOTOR COVER FOR WEATHER PROTECTION
- UL762 LISTED FOR RESTAURANT DUTY
- UPBLAST DISCHARGE DIRECTS AIR AWAY FROM FLOOR
- CONTINUOUSLY WELDED HOUSING
- CLEANOUT DOOR WITH LATCHES PROVIDE EASY ACCESS WITHOUT TOOLS
- 2" GREASE DRAIN WILL NOT CLOG

OPTIONS

EXHAUST FAN GREASE CUP (UTILITY SET)
RUBBER VIBRATION ISOLATORS FOR BI UTILITY SETS (SET OF 6)

FAN #2 INLINE1-G10 – SUPPLY FAN
1. INLINE SUPPLY UNIT W/ 10" BLOWER IN SIZE #1 HOUSING
2. SIDE DISCHARGE – AIR FLOW RIGHT –> LEFT
3. VIBRATION ISOLATION CEILING HANGERS FOR INDOOR UN-TEMPERED FANS (SET OF 4).





1 HOOD DETAIL

REVISIONS

	DESCRIPTION	DATE:
1		
2		
3		
4		

CAPTIVE AIRE
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Rouxpour Restaurant

DATE: 5/13/2010

DWG.#: 1150786

DRAWN BY: GAF

SCALE: 1/16

MASTER DRAWING

SHEET NO. 2

JOB NUMBER: 10093

DATE: 5-18-10

REVISIONS: -

Interior Alterations to:

ROUXPOUR RESTAURANT

Sugar Land Town Square

2298 Texas Dr. Sugar Land, Texas

JIM LAWLESS, AIA
Architecture & Planning
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DRAWING:

KITCHEN HOOD DETAILS

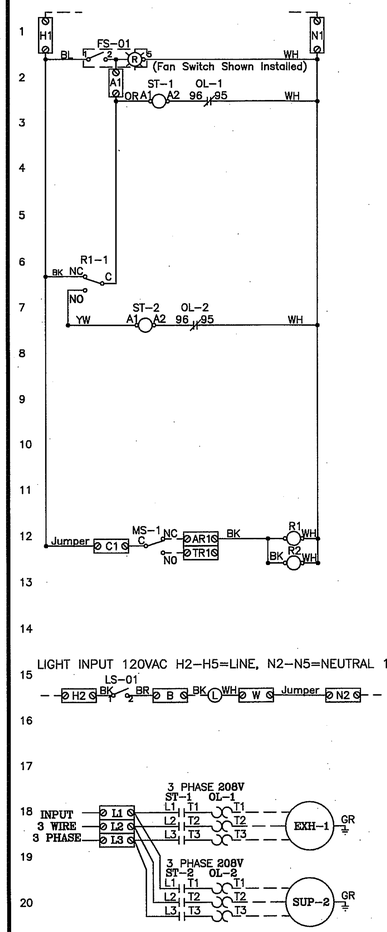
M-5

ELECTRICAL PACKAGES

NO.	TAG	PACKAGE #	LOCATION	SWITCHES		ROOFTOP STARTERS	OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY			TYPE	ø	H.P.	VOLT	FLA
1		31111002	Wall Mount In SS Box	SS Wall Mount Box	1 Light 1 Fan		Exhaust in Fire	Exhaust	3	3.000	208	9.5
								Supply	3	1.500	208	4.7

ELECTRICAL PREWIRE PACKAGE	JOB NAME *Rouxpour Restaurant #1150786*	DATE *5/13/2010*
DRAWING NUMBER *31111002*	JOB NUMBER *1150786*	DRAWN BY

CONTROL INPUT 120VAC H1=LINE, N1=NEUTRAL 15A BKR – DO NOT WIRE TO SHUNT TRIP BREAKER



LIGHT INPUT 120VAC H2–H5=LINE, N2–N5=NEUTRAL 15A BKR (MAX 1400W PER CIRCUIT)

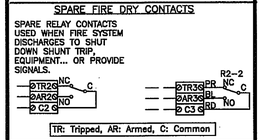
3 Phase, W/ 1 Exhaust Fan, 1 Supply Fan, Exhaust in Fire

COMPONENT PARTS LIST

LABEL	DESCRIPTION
C–x	Contactor
ST–x	Starter
OL–x	Overload
FS–xx	Fan Switch (Lighted)
LS–xx	Light Switch
HL	Hood Light(s)
MS–x	MicroSwitch (Ansul/PyroChem)
Rx	Relay DPDT – 34.110.0146.0 + Socket

SPARE FIRE DRY CONTACTS

SPARE RELAY CONTACTS USED WHEN FIRE SYSTEM DISCHARGES TO SHUT DOWN SHUNT TRIP, EQUIPMENT... OR PROVIDE SIGNALS.



TR: Tripped, AR: Armed, C: Common

Rx RELAY SOCKET STYLE "CLION"

C–RD	NO	4	3
NO–BL	NC	2	1
NC–PR	COIL	8	7
	COM	6	5

MS–x MicroSwitch
C–RD
NO–BK
NC–BR

Motor Type	PH	Volt	HP	FLA	BREAKER
Exh–1 Exh	3	208	3	9.5	20 Amp
Sup–2 Sup	3	208	1.5	4.7	–– Amp

NOTES

– – – DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

WIRE COLOR

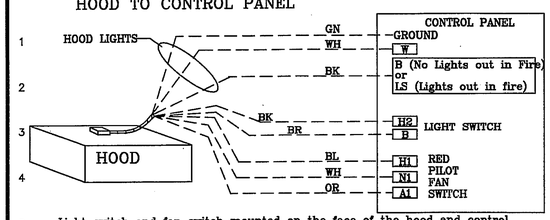
BK – BLACK	YW – YELLOW
BL – BLUE	GY – GRAY
BR – BROWN	PR – PURPLE
OR – ORANGE	OR/BL – ORANGE/BLUE (STRIPE)
RD – RED	BL/RD – BLUE/RED (STRIPE)
WH – WHITE	RD/GN – RED/GREEN (STRIPE)

DRAWING SHOWN DE–ENERGIZED
NOTE: IF WALL MOUNT PREWIRE, OR FIELD INSTALLED FIRE SYSTEM MICROSWITCH, THE TERMINALS SHOWING FACTORY WIRING MUST BE FIELD WIRED.

12 x 18 x 6 Box

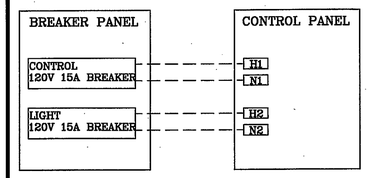
CONTROL PANEL INSTALLATION	JOB NAME *Rouxpour Restaurant #1150786*	DATE *5/13/2010*
DRAWING NUMBER *31111002*	JOB NUMBER *1150786*	DRAWN BY

HOOD TO CONTROL PANEL

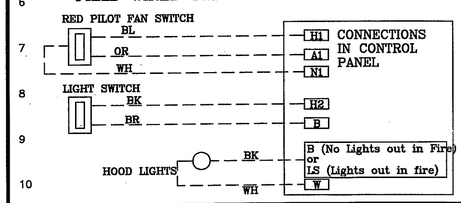


Light switch and fan switch mounted on the face of the hood and control panel mounted separately then field wire to the control panel as shown.

POWER FEED FOR CONTROLS AND LIGHTING

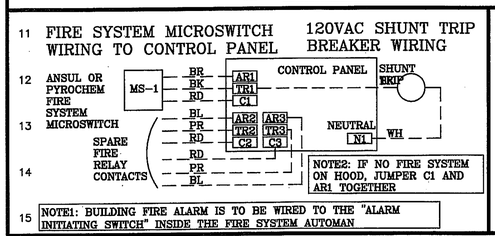


FIELD WIRED SWITCHES TO CONTROL PANEL



FIRE SYSTEM MICROSWITCH WIRING TO CONTROL PANEL

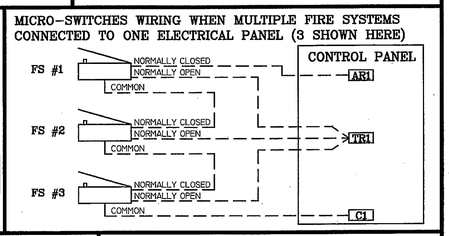
120VAC SHUNT TRIP BREAKER WIRING



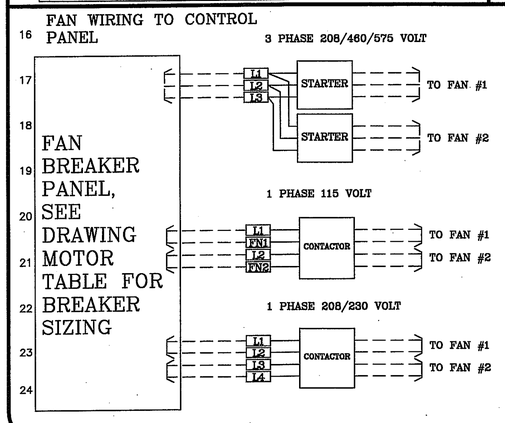
NOTE2: IF NO FIRE SYSTEM ON HOOD, JUMPER C1 AND AR1 TOGETHER

NOTE1: BUILDING FIRE ALARM IS TO BE WIRED TO THE "ALARM INITIATING SWITCH" INSIDE THE FIRE SYSTEM AUTOMAN

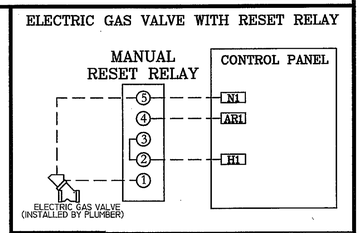
MICRO–SWITCHES WIRING WHEN MULTIPLE FIRE SYSTEMS CONNECTED TO ONE ELECTRICAL PANEL (3 SHOWN HERE)



FAN WIRING TO CONTROL PANEL



ELECTRIC GAS VALVE WITH RESET RELAY



NOTES

– – – DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

WIRE COLOR

BK – BLACK	YW – YELLOW
BL – BLUE	GY – GRAY
BR – BROWN	PR – PURPLE
OR – ORANGE	OR/BL – ORANGE/BLUE (STRIPE)
RD – RED	BL/RD – BLUE/RED (STRIPE)
WH – WHITE	RD/GN – RED/GREEN (STRIPE)
GN – GREEN	

1 HOOD DETAIL

REVISIONS

	DESCRIPTION	DATE:
△		
△		
△		
△		

CAPTIVEAIRE
HOUSTON OFFICE
2626 South Loop West, Suite 620, Houston, TX. 77054 PHONE: (713) 839-9944 FAX: (713) 839-9945 EMAIL: reg46@captiveaire.com
www.captiveaire.com

Rouxpour Restaurant

DATE: 5/13/2010
DWG.#: 1150786
DRAWN BY: GAF
SCALE: 1/16
MASTER DRAWING

SHEET NO. 3

JOB NUMBER: 10093
DATE: 5–18–10
REVISIONS: –

Interior Alterations to:
ROUXPOUR RESTAURANT
Sugar Land Town Square
2298 Texas Dr.
Sugar Land, Texas

JIM LAWLESS, AIA
Architects & Planners
4610 Sweetwater Blvd.
Suite 200-C
Sugar Land, Texas
77479
(281) 240-6101

STATE OF TEXAS
H.M. McLEOD JR.
REGISTERED
PROFESSIONAL ENGINEER

THIS SEAL WAS AUTHORIZED THIS DATE 05/18/2010

PROJECT #10-093
H.M. McLEOD, P.E.
4727 MERWIN ST. SUITE B
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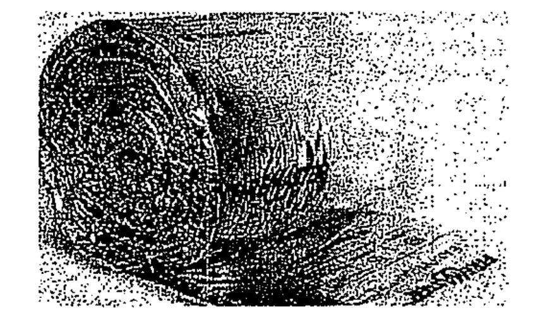
Firm Registration:
H. M. McLeod, P.E. #F-3679

DRAWING:
KITCHEN HOOD DETAILS
M–6

Thermal Ceramics
Insulating Our World
FIREMASTER

FastWrap® XL
Commercial Kitchen Grease Duct Enclosure System
Air Ventilation Duct Enclosure System



Product Data & Installation Guide

1. Product Description
FireMaster® FastWrap XL is a flexible blanket composed of high temperature fibers classified for applications to 2192°F (1200°C) and fully encapsulated in a durable glass fiber reinforced foil facing for easy handling and installation. FastWrap XL is UL Classified and ULC Listed in various systems for 1 and 2 hour fire resistive enclosure protection, reduced clearance for kitchen exhaust ducts, electrical circuit protection, and as a component in various UL firestop designs for fire resistance rated floors, ceilings, and walls. The core fibers in FastWrap XL are manufactured using Thermal Ceramics patented Superwool® fiber which is an alkaline-earth silicate wool with low biopersistence and therefore increased safety for installers. FastWrap XL is under UL's Follow-Up Service Program to ensure the consistent quality essential to this life-safety application.

Product Features
- Zero clearance to combustibles at any location
- Thin and Lightweight at 1-1/2" (38mm) thick, 6 pcf (96 kg/m³) density
- Contours easily to complex duct designs
- Optimized installation with inside layer butt joints on grease duct enclosures per ASTM E 2336
- Fully foil encapsulated for fast and clean installation
- Completely inorganic and non-combustible
- Contains 2192°F (1200°C) rated fibers for added safety margin
- Wide variety of through penetration firestop systems
- Resistant to mold growth
- Good sound absorption

2. Applications
- 1 and 2 hour enclosure and firestop system for kitchen exhaust ducts
- Zero clearance from enclosure to combustibles for kitchen exhaust ducts
- 1 and 2 hour enclosure and firestop system for hazardous exhaust ducts, pressurization ducts, clothes dryer exhaust ducts, trash and linen chutes, and other fire rated HVAC ducts
- 1 hour circuit integrity protection for cable trays and steel conduits
- Engineered solutions and tested systems for fire protection of structural steel beams and columns, and storage vessels per ASTM E119, ISO 834, and UL1709

3. Physical Characteristics

Product	Unit	Size	Units/ Ctn.	Wt./ Ctn.
FastWrap XL	Roll	1-1/2" x 24" x 25'	1	37.5 lbs.
FastWrap XL	Roll	1-1/2" x 48" x 25'	1	75 lbs.
FastWrap XL Collar	Roll	1-1/2" x 6" x 25'	4	37.5 lbs.
Color	White blanket with silver foil encapsulation			

4. Performance Specifications

Reference Standard	Standard No.	Performance
Grease Duct Enclosure System	ASTM E2336	Pass
Section 16.1 - Non-Combustibility	ASTM E136	Pass
Section 16.2-Fire Resistance (wall)	ASTM E119	Pass
Section 16.3 - Durability Test	ASTM C518	Pass
Section 16.4 - Internal Fire Test	ASTM E2336	Pass
Section 16.5 - Fire Engulfment (duct)	ASTM E814/E119	Pass
ULC Grease Duct Test Protocol		Pass
Grease Duct Clearances	UL 1978	Pass
Air Ventilation Duct Enclosure	ISO 6944	Pass
Surface Burning Characteristics		
Flame Spread (foil/blanket)	ASTM E84	5/0
Smoke Developed (foil/blanket)	ASTM E84	10/0
Thermal Resistance (R-value @ 70°F)	ASTM C518	7.3 per layer
Mold Growth (75% -95% humidity)	ASTM D6329	Resistant

5. Listings/Building Code Reports

Listed Uses	Agency	Listing	Layers
Grease Duct Enclosure per ASTM E2336 and AC101	UL	G18	2
	ICC-ES	ESR 2213	
Grease Duct Insulation per ULC Grease Duct Insulation Test Protocol	ULC	FRD 4, 7	2
Grease Duct Insulation (2003 IMC)	OPL	TC/BI 120-01	1
Through Penetration FireStop System per ASTM E814, UL 1479	UL	See Figure 2	1 or 2
	ULC		
Ventilation Duct Enclosure System per ISO 6944-1985	UL	HNLJ.V1, 2, 3, 4, 11, 12, 19	1
	ULC	FRD 3, 5, 6, 18	
Electrical Circuit Protective System	UL	FHIT.5	2

against the hollow steel tubes to seal the access cover plate to the duct.

2) **Field Insulated DuctMate Access Doors (Figure 3)** – DuctMate Ultimate and F2 doors are approved for use with FastWrap XL, and shall be installed according to DuctMate Industries installation instructions. A 16 gage (1.4mm) outer cover plate is required, which is 6" (152mm) larger in width and length than the DuctMate door, and which has holes drilled to match the threaded rods on the DuctMate door. Four 12 gage (3mm) insulation pins are welded to this outer cover plate, and three layers of FastWrap XL are impaled and fastened using minimum 1-1/2" (38mm) insulation clips. The insulation layer adjacent to the DuctMate door is cut to the size of the door and each successive layer has an overlap of 1-1/2" (38mm) over the adjacent layer. It is essential that the first and second layer fit tightly against the surrounding wrap with no through openings. All edges of insulation blanket must be sealed with minimum 3" (75mm) wide aluminum foil tape. The insulated cover plate is installed over the Ductmate threaded rods, and held tight against the duct with wing nuts and washers.

3) **FireMaster Factory Built Access Doors (Figure 3)** – FireMaster doors are tested per ASTM E2336 and are intended for use in two layer installations. FireMaster access doors come complete and ready for installation with a DuctMate® F2 access door, cut-out template, an outside cover plate with proper signage, an as tested FastWrap XL insulation package, and installation instructions.

F. Through Penetration Firestop System (Figure 2) - When the duct penetrates a fire rated assembly an approved fire stop system must be employed. Figure 2 provides a complete list of UL / ULC firestop design listings which can be found in the Certifications Directory at www.ul.com for US systems and www.ulc.ca for Canadian systems. Prior to installing any firestop system the surfaces of all openings and penetrating items must be clean and dry. The FastWrap XL core blanket (or mineral wool where allowed by the firestop design listing) must be compressed into the annular space. The packing material must be recessed a minimum depth from the surface of the concrete or gypsum assembly. The recessed opening must be filled with a minimum thickness of an approved firestop sealant. The packing material type and compression, minimum recess (typically 1/4" (6mm)), and approved firestop sealant and thickness (typically 1/4" (6mm)) shall be as specified in an approved UL / ULC firestop design listing. When there is not sufficient annular space around the duct to run the FastWrap XL enclosure system continuous through the fire rated assembly, the enclosure may terminate above and below the floor/ceiling assembly or on either side of a wall assembly as shown in Figure 2. When this method is used, the FastWrap XL must be mechanically attached on either side of the fire rated assembly using one of the attachment methods described in Section D, spaced a maximum of 1-1/2" (38mm) from the fire rated assembly.

G. Support Hanger Systems
1) **Grease ducts:** Trapeze support hangers shall be spaced on maximum 60 in. (1500 mm) centers. Hanger rods or straps shall be anchored with steel drop in or wedge expansion type masonary anchors. No additional protection is required for hangers and supports meeting the requirements of the Table below.

Hanger Cross Secton	Maximum Perimeter, in (mm)	Trapeze Support (or equivalent Yield Strength), in (mm)
1 in x 16 gage strap (25 mm x 1.5 gage strap)	96 (2438)	
14 in (6 mm) threaded rod	56 (1422)	2 (51) x 2 (51) x 18 (3) in angle
38 in (10 mm) threaded rod	148 (3769)	2 (51) x 2 (51) x 18 (3) in angle
12 in (12.7 mm) threaded rod	232 (5892)	2 (51) x 2 (51) x 14 (6) in angle

2) **HVAC ducts:** Trapeze support hangers shall be spaced on maximum 60 in. (1500 mm) centers. Hanger rods or straps shall be anchored with steel drop in or wedge expansion type masonary anchors. No additional protection is required for hangers and supports meeting the requirements of the Table below.

Hanger Cross Secton	Maximum Perimeter, in (mm)	Trapeze Support (or equivalent Yield Strength), in (mm)
1 in x 16 gage strap (25 mm x 1.5 gage strap)	120 (3048)	
14 in (6 mm) threaded rod	72 (1828)	1¼ (38) x 1¼ (38) x 316 (5) angle
38 in (10 mm) threaded rod	184 (4673)	1¼ (38) x 1¼ (38) x 316 (5) angle
12 in (12.7 mm) threaded rod	292 (7416)	2 (51) x 2 (51) x 14 (6) angle
58 in (15.8 mm) threaded rod	512 (13000)	3 (76) x 3 (76) x 38 (10) angle

8. Maintenance and Repair
No maintenance is required when installed in accordance with Thermal Ceramics installation instructions. If damage is limited to the foil facing, aluminum foil tape can be used to repair the foil facing. If an area of blanket is found to be damaged the following procedure must be incorporated. If the damaged area is larger than 8" (203mm) x 8" (203mm) the entire wrap section must be removed and replaced according to Thermal Ceramics installation instructions. If the damaged area is small (less than 8" (203mm) x 8" (203mm)), the damaged area must be cut away and replaced with a new section 1" (25mm) larger in length and width than the cut out are, such that the new section can be compressed tightly into the cut out area. All cut edges of the new section must be taped and sealed wth aluminum foil tape. The new section must be held in place with either pinning or banding per Thermal Ceramics installation instructions.

9. Limitations
Thermal Ceramics FastWrap XL shall be installed in accordance with these installation instructions. The integrity of FastWrap XL systems is limited to the quality of the installation.

*For personal protective equipment recommendations see the MSDS.

FireMaster® FastWrap® XL
Commercial Kitchen Grease Duct Enclosure System
Air Ventilation Duct Enclosure System
Through Penetration Firestop Systems

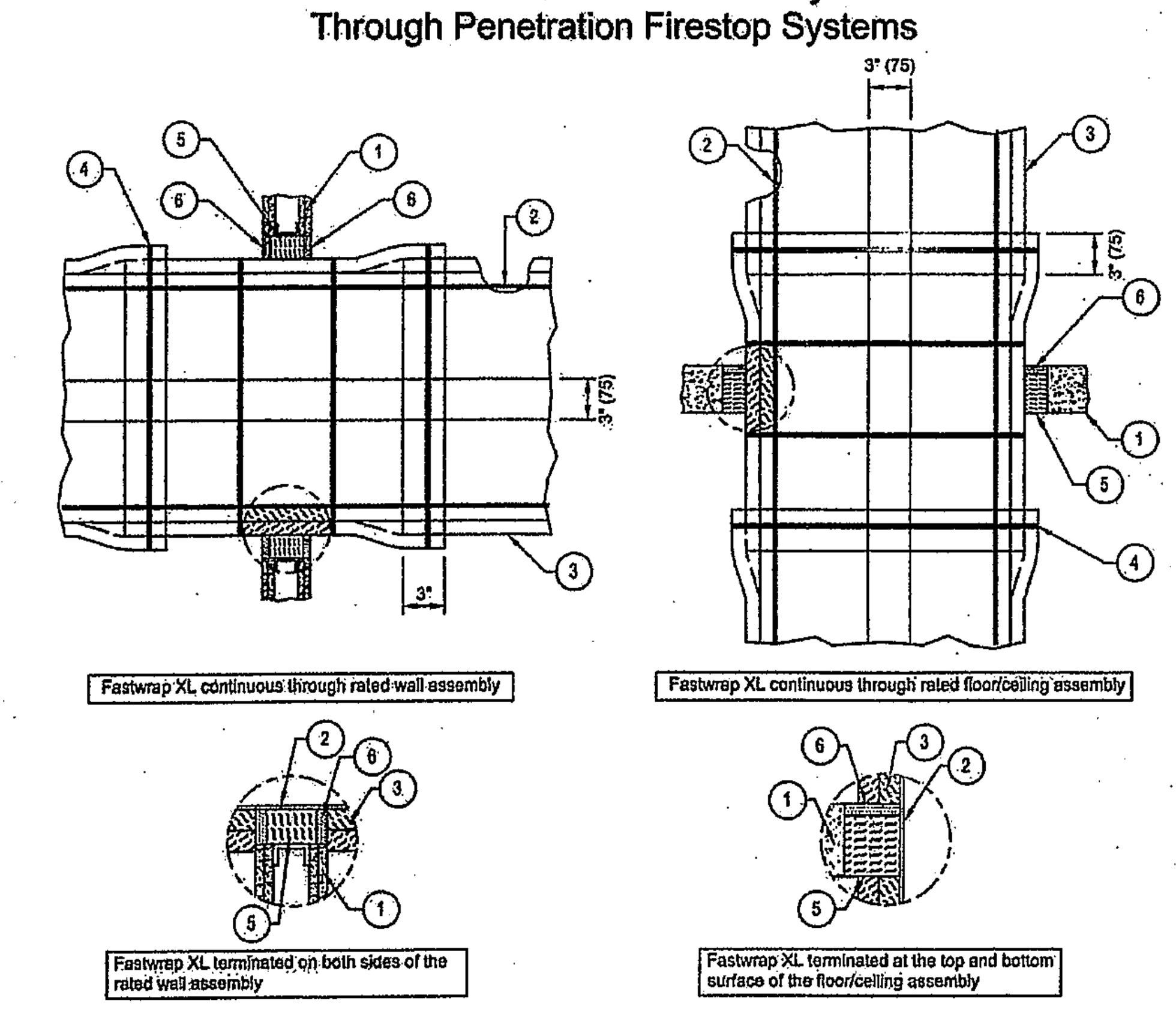


FIGURE 2	
1	Rated Floor/ceiling or wall assembly
2	Duct
3	Two Layers of FireMaster FastWrap XL for Grease Duct Enclosures One Layer of FireMaster FastWrap XL for Air Ventilation Duct Enclosures
4	Steel banding minimum 1/2" (13) wide by 0.015" (1.5) thick or pinning
5	FireMaster FastWrap XL (packing material)
6	Approved through-penetration firestop sealant

The integrity of Firemaster duct systems is limited to the quality of the installation.

Firestop Designs Per ASTM E814 / UL 1479		
UL Listings		ULC Listings
C-AJ-1562	C-AJ-7004	FRD 3
C-AJ-7012	C-AJ-7014	FRD 4
C-AJ-7019	C-AJ-7021	FRD 5
C-AJ-7047	C-AJ-7095	FRD 6
C-AJ-7098	C-AJ-7119	FRD 7
F-A-1093	F-A-1094	FRD 18
F-A-3048	F-C-7036	
F-C-7037	W-L-7009	
W-L-7121	W-L-7145	
W-J-7086		

FMXL003-2

FireMaster® FastWrap® XL
TYPICAL INSULATION PIN LAYOUT
FOR DUCT SPANS > 24" (610) WIDE
To Prevent Blanket Sag

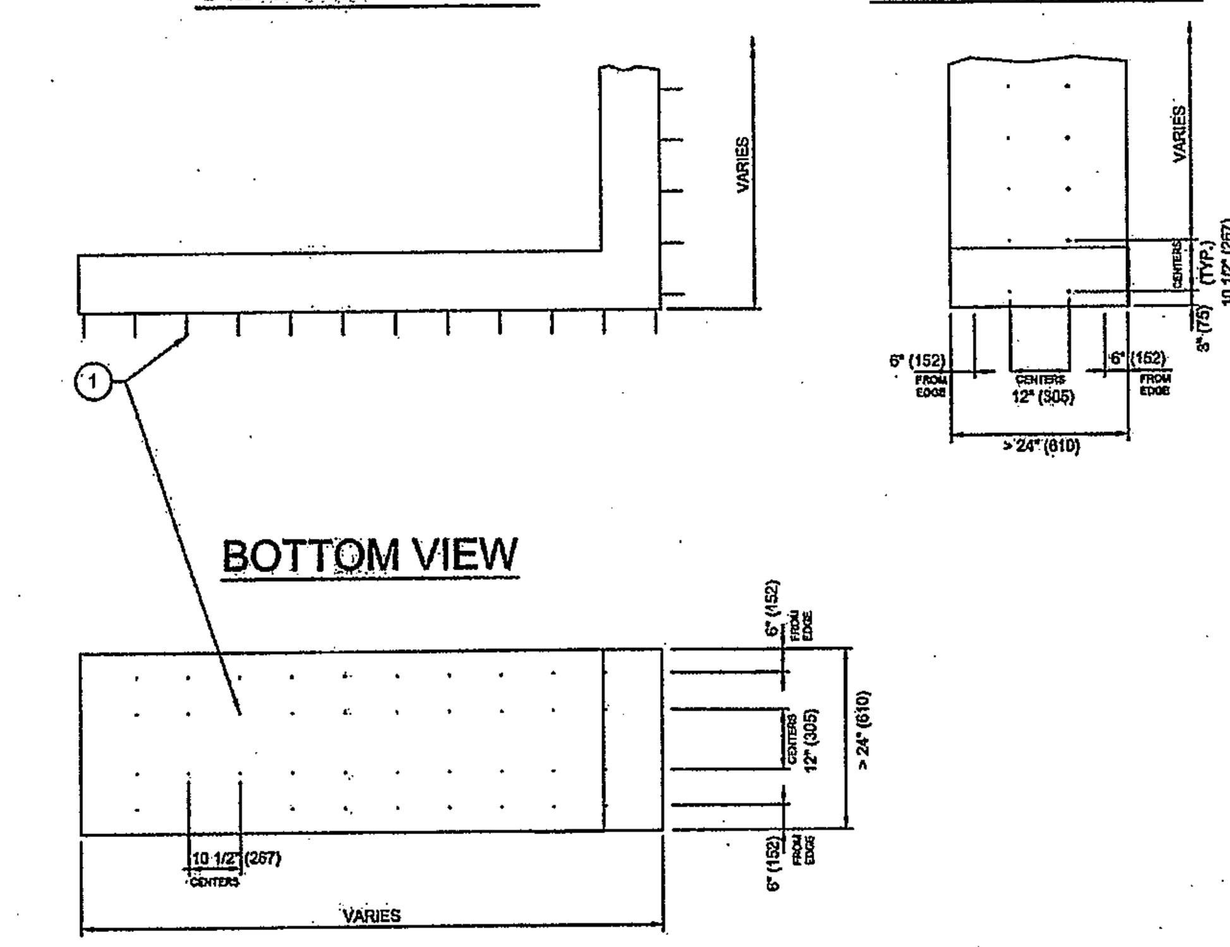


FIGURE 4	
1	Minimum 12 gage (3) steel insulation pins

The integrity of Firemaster duct systems is limited to the quality of the installation.

FMXL004-2

6. Storage
FastWrap XL must be stored in a dry warehouse environment on pallets. Pallets should not be stacked.

7. Installation
FastWrap XL shall be installed by a qualified contractor in accordance with manufacturer's instructions and design listings. See figures 1 to 5 for complete details.

<u>Materials and Equipment</u>
- FastWrap XL blanket
- Aluminum foil tape
- Glass filament reinforced tape (optional)
- Carbon steel or stainless steel banding material, minimum 1/2" (13mm) wide, minimum 0.015" (0.4mm) thick, with steel banding clips
- Hand banding tensioner and crimping tool
- Minimum 12 gage (3mm) steel insulation pins; steel speed clips, minimum 1-1/2" (38mm) square or 1-1/2" (38mm) diameter, or equivalent sized cup-head pins;
- Capacitor discharge stud gun
- FireMaster F2-HT-XL3 Prefabricated Door or Field Fabricated Door Hardware
- An approved firestop sealant

<u>General</u>
To minimize waste, FastWrap XL blanket should be rolled out tautly before measuring. Cut edges of the blanket shall be taped with aluminum foil tape to prevent exposed edges of the insulation absorbing grease and moisture in the event of a compromised grease duct joint. Overlaps are used to block heat transfer in the event of duct deformation resulting from thermal expansion. Filament tape is suggested to temporarily hold the blanket in place until steel banding or pinning is installed to permantely secure the blanket.

A. First Layer / Single Layer Installation
1) **Butt Joint for ASTM E2336 compliant grease duct enclosure (Figure 1)** - The first layer of FastWrap XL is cut to completely wrap around the perimeter of the duct with enough excess to provide a tight butt joint where the blanket ends meet. The joints of adjacent blankets are firmly butted against each other.
2) **Overlaps required for ISO 6944 compliant single layer air ventilation duct enclosure and two layer grease duct enclosures installed in Canada (Figure 1)** - The layer of FastWrap XL applied directly to the duct is cut to completely wrap around the perimeter of the duct with enough excess to overlap itself by a minimum of 3" (75mm). The joints of adjacent blankets must overlap each other by a minimum 3" (75mm).

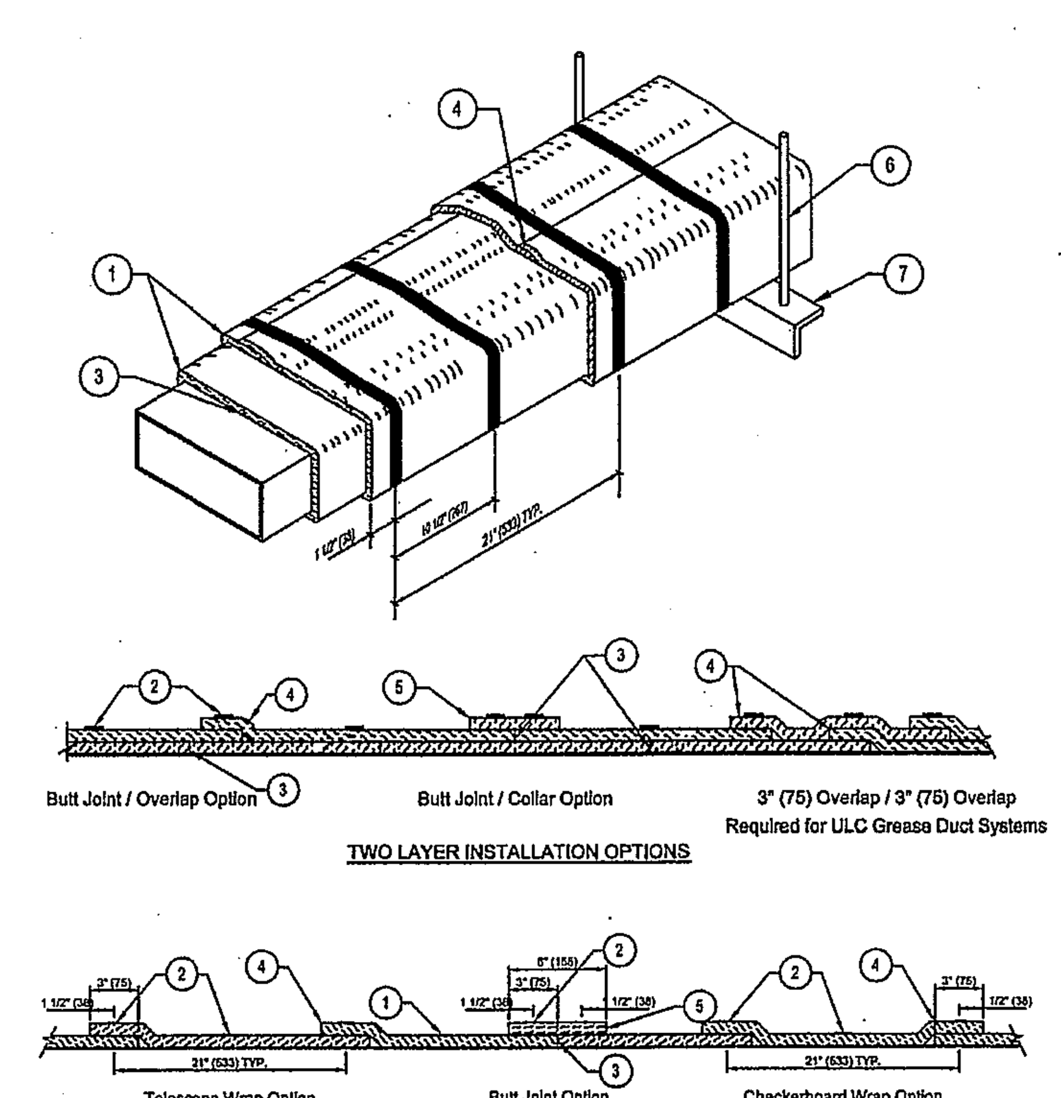
B. Second Layer Where Required – (Figure 1)
The second layer of FastWrap XL is cut to completely wrap around the perimeter of the first layer, with enough excess to overlap itself not less than 3" (75mm). Joints in the second layer should be staggered a minimum of 6" (60mm) from joints on the inner layer. Adjacent blankets on the second layer must overlap each other by not less than 3" (75mm). As an alternative to overlaps on adjacent blankets installed on the second layer, adjacent blankets can be tightly butt jointed and wrapped with a 6" (152mm) wide FastWrap XL collar centered over the butt joint.

C. 2 & 3 Sided Wrap Installation (Figure 5)
When space does not allow for a complete wrap applied to the duct on all four sides, the FastWrap XL is approved for 2 or 3 sided installations with mechanical attachment to a rated concrete or CMU assembly. The FastWrap XL is installed on the 2 or 3 sides of the duct as described in one of the installation methods described in sections A or B with the starting edge of the blanket attached to the concrete or CMU assembly and then wrapped around the duct until the other end can be attached to the other concrete or CMU assembly, thus encapsulating the duct with insulation around all accessible sides. The blanket is to flange out onto the concrete or CMU assembly. It shall be secured to the adjoining assembly with min 3/16" (5mm) diameter, 4" (102mm) long concrete anchors, footed to a minimum 1-1/2" (38mm) wide x 3/16" (5mm) thick steel strip/strap with pre-drilled holes spaced a maximum 10" (254mm) on center. The steel strip is to be placed around the entire perimeter of the duct in the exposure area. The FastWrap XL insulation wrap is secured to the duct with minimum 1/2" (13mm) wide steel banding 10-1/2" (270mm) centers. The ends of the banding are to loop into and around the steel strips/straps that foot the blanket to the concrete floor or wall, and tightened down.

D. Mechanical Attachment Methods for Insulation Wrap
1) **Banding (Figure 1)** - Minimum 1/2" (13mm) wide carbon steel or stainless steel banding, 0.015" (0.4mm) thick, is placed around the entire perimeter of the insulated duct on maximum 10-1/2" (270mm) centers and1-1/2" (38mm) from each blanket edge or 1-1/2" (38mm) from each collar edge when using the butt joint and collar method. When banding, filament tape can be used to temporarily hold the blanket in place until the banding is applied. The banding is placed around the blanket and tightened to firmly hold the FastWrap XL in place against the duct, but not cause any cutting or damage to the blanket.
2) **Pinning (Figure 4)** - If the pin pattern shown in Figure 4 is used on all faces of the duct, then 12 Gage (0.4mm) insulation pins may be used in lieu of steel banding. To prevent blanket sag, 12 Gage (0.4mm) pins installed as shown in Figure 4 are required in addition to banding on the bottom of horizontal ducts where the bottom dimension is larger than 24" (610mm), or on one side of vertical ducts where one dimension is larger than 24" (610mm). Pins that extend beyond the outer blanket layer shall be turned down or the excessive length cut off to prevent sharp edges. Shoot through pins (cup head pins) may be used in conjunction with steel banding to prevent blanket sag.

E. Field Fabricated Access Doors
1) **Field Fabricated Access Doors (Figure 3)** - Each access door assembly has four threaded rods 1/4 inch (6mm) in diameter and 5" (127mm) in length, with one welded to each corner of the door opening. Hollow steel tubes, 4-1/2" (114mm) long are installed outside the access cover plate and over the threaded rods. Four 12 gage (3mm) and 4-1/2" (114mm) long steel insulation pins are welded to the access cover plate to allow for installation of the three layers of FastWrap XL. One layer of FastWrap XL is cut to approximately the same size as the access panel, and impaled over the insulation pins on the panel. A second layer of FastWrap XL is cut so as to overlap the first layer a minimum of 1-1/2" (38mm). It is essential that the first and second layer fit tightly against the surrounding wrap with no through openings. The third and outside layer should be cut to overlap the second insulation layer by a minimum of 1-1/2" (38mm). Minimum 1-1/2" (38mm) round or square insulation clips are installed on the insulation pins to secure the three layers of insulation to the access cover plate. All cut edges of the insulation shall be taped with minimum 3" (75mm) wide aluminum foil tape. Wing nuts and washers are installed on the four threaded rods, and tightened

FireMaster® FastWrap® XL
Grease and HVAC Duct Enclosure System
1 or 2 Hour Shaft Alternative / Zero Clearance to Combustibles



LEGEND	
1	Two Layers of FireMaster FastWrap XL Blanket for Grease Duct Enclosures One Layer of FireMaster FastWrap XL Blanket for Air Ventilation Duct Enclosures
2	Steel banding minimum 1/2" (13) wide by 0.015" (0.4) thick.
3	Tight butt joints on inner layer (ULC Grease Duct requires 3" (75) overlap)
4	Min. 3" (75) overlap on perimeter and between adjacent blanket on outside layer
5	Optional 6" FireMaster FastWrap XL collar
6	Hangers - size dependent weight of assembly (see datasheet Section G)
7	Trapeze Supports - size dependent on weight of assembly (see datasheet Section G)

The integrity of Firemaster duct systems is limited to the quality of the installation.

FMXL001-4

FireMaster® FastWrap® XL
Access Door Systems
Commercial Kitchen Grease Duct Enclosure System

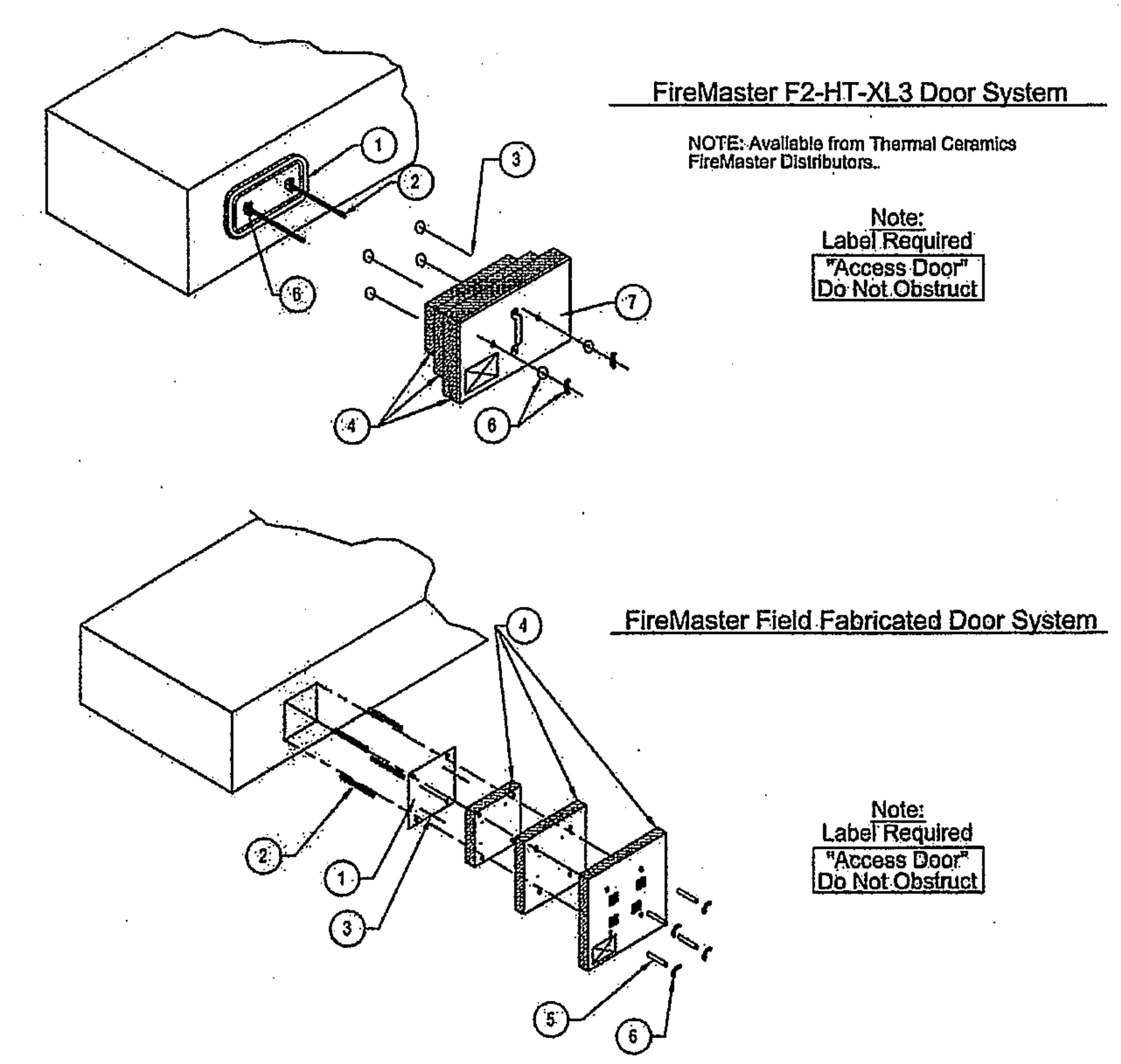
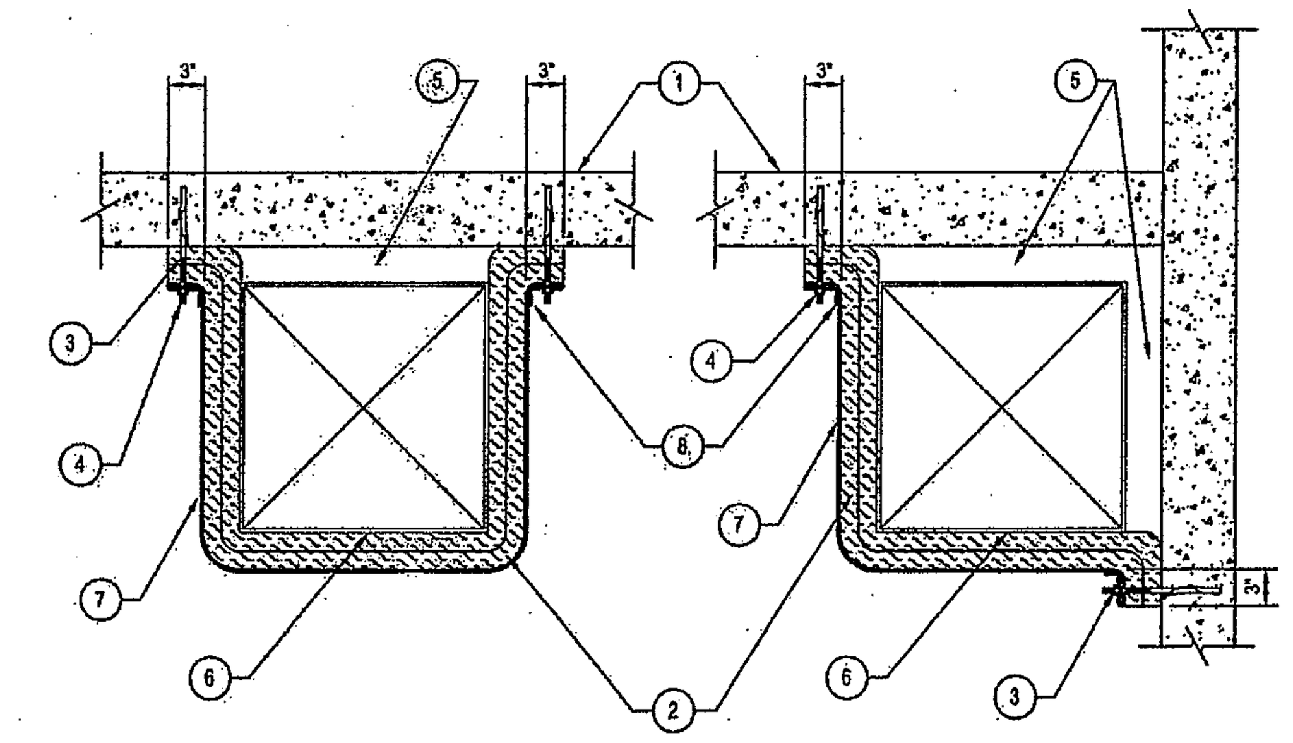


FIGURE 3	
1	DuctMate F2-HT Access Door for 16 Gage (1.5) Field Fabricated Access Door.
2	All Thread Rods.
3	Installation Pins with Speed Clips.
4	Three Layers of FireMaster FastWrap XL Blanket with Minimum 1" (25) Overlaps and All Edges Sealed with Aluminum Tape.
5	Spool Pieces for Threaded Rods
6	Wing Nuts and Washers
7	16 Gage (1.5) Outer Cover Plate Labeled "ACCESS DOOR - DO NOT OBSTRUCT"

The integrity of Firemaster duct systems is limited to the quality of the installation.

FMXL002-3

FireMaster® FastWrap® XL
Commercial Kitchen Grease Duct Enclosure System
Air Ventilation Duct Enclosure System
1 Or 2 Hour Shaft Alternative / Zero Clearance to Combustibles
2 and 3 Sided Wrap Detail for Attaching to Walls and/or Ceilings



Note: Ducts must be independently supported per code

FIGURE 5	
1	1 or 2 Hour Rated Concrete floor, ceiling, or wall
2	Two layers of FireMaster FastWrap XL for Grease Duct Enclosures One layer of FireMaster FastWrap XL for Air Ventilation Duct Enclosures
3	Concrete fastener system
4	3/16" (5) thick x 2" (50) -3" (75) wide bar stock perforated 12" (305) o.c.
5	8" (203) maximum Air Gap
6	Duct
7	Steel banding min. 1/2" (13) wide by 0.015" (0.4) thick.
8	Banding clip

The integrity of Firemaster duct systems is limited to the quality of the installation.

FMXL005-2

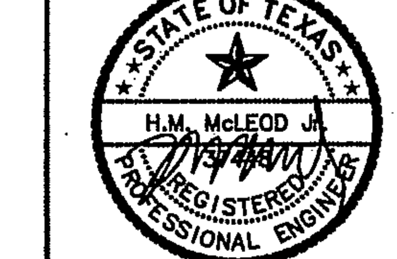
714-235/01.10

MECHANICAL OR HOOD CONTRACTOR TO INSTALL A MINIMUM OF TWO LAYERS OF ONE HOUR WRAP AS SPEC'D.

JOB NUMBER: 10093
DATE: 5-18-10
REVISIONS: -

Interior Alterations to:
ROUXPOUR RESTAURANT
Sugar Land Town Square
2298 Texas Dr. Sugar Land, Texas

JIM LAWLESS AIA
Architects & Planners
4610 Sweetwater Blvd Suite 200-C
Sugar Land, Texas 77479
(281) 240-610



THIS SEAL WAS AUTHORIZED THIS DATE 05/18/2010

PROJECT #10-093
H.M. McLEOD, P.E.
4727 MERWIN ST. SUITE B
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FAX: (713) 961-5691
CELL: (713) 806-1646
Firm Registration:
H. M. McLeod, P.E. #F-3679

DRAWING:
KITCHEN HOOD DETAILS
M-7

FIXTURES AS SPEC. OR EQUAL. ALL FIXTUES TO BE APPROVED BY OWNER/TENANT PRIOR TO INSTALLATION.

TYPE	MFG. AND CATALOG NO. DESCRIPTIONS MOUNTING LAMP (QTY., VOLTS REMARKS WATT AND TYPE)
A	LIGHTOLIER MODEL SPS2GRAVB332-120-03-G3 2X4 3 LAMP LAY IN TROFFER, WITH ACRYLIC LENS, ELECTRONIC BALLAST AND TRIPLE GASKET DUAL BALLAST FOR DUAL SWITCHING 3-F32T8 120/277V
B	RECESSED CAN LIGHT TWIN 32 WATT FLUOR. 120 VOLT WITH PROTECTIVE LENS COVER.
C	PENDANT MOUNTED DECORATIVE BAR LIGHT SINGLE LAMP 60 WATT MAX. 120 VOLT.
D	DECORATIVE WALL SCONCE SINGLE LAMP 60 WATT MAX. 120 VOLT.
FA	52" 5 BLADE BLACK CEILING FAN MIN. 10 YEAR WARRANTY. EMERSON 'BUILDER' #CF700. 120 VOLTS SUITABLE FOR WET LOCATION
EG	WALL MOUNTED EMERGENCY/EGRESS LIGHTING FIXTURE. 'SURE-LITE' PROVIDER MODEL WITH FULLY ADJUSTABLE HEADS. 120/277 VOLT. CONNECTION 'UL' LISTED. SELF CONTAINED 6volt TUNGSTEN LAMPS W/SEALED LEAD CALCIUM BATTERY. W/BATTERY BACK UP 90 MIN. BATTERY.
EX	EMERGENCY EXIT LIGHT FIXTURE 'SURE-LITE' PRECEPTOR SERIES L.E.D. EMITTING. MODEL # 12FAC-WW-P PENDANT MOUNTED 120/277 volt CONNECTION WITH RED LED. W/BATTERY BAK UP. 90 MIN. BATTERY.

2 LIGHTING FIXTURE SCHEDULE

1. MOUNT ALL SWITCH DEVICES IN ACCORDANCE TO STATE OF TEXAS A.D.A. MOUNTING HEIGHT STANDARDS. REFER TO DETAIL ON THIS SHEET. MOTION SWITCHES TO BE UTILIZED FOR PUBLIC LIGHTING
2. LIGHTING FIXTURE FASTEN TO STRUCTURE. COORDINATE EXACT LOCATION WITH ARCHITECTURAL REFLECTED CEILING PLAN. REFER TO LIGHTING FIXTURE SCHEDULE ON THIS SHEET FOR TYPE.
3. ROUTE SWITCHING TO EXISTING DIMMER PANEL. VERIFY LOCATION WITH OWNER.
4. BATTERY BACK-UP EXIT LIGHT MOUNTED FROM CEILING, OR 12" ABOVE DOOR WAY.PROVIDE WITH DIRECTIONAL ARROWS. REFER TO LIGHTING FIXTURE SCHEDULE ON THIS SHEET.
5. MOUNT EGRESS EMERGENCY LIGHT FIXTURE AT 6" BELOW CEILING TILE OR 6" ABOVE EXIT LIGHT. PROVIDE CONSTANT 120 VOLT POWER. RE: TO FIXTURE SCHEDULE.
6. ROUTE 3# 12 AWG IN 1/2" CONDUIT TO EXISTING 277 VOLT 20 AMP LIGHTING BRANCH CIRCUIT SERVING LOCATION MAXIMUM 16 AMP CONSTANT POWER CONNECTION

3 LIGHTING KEYED NOTES

ALL LIGHTING FIXTURES IN KITCHEN AND ALL OTHER LIGHTING CONTROLLED BY MOTION SWITCH.

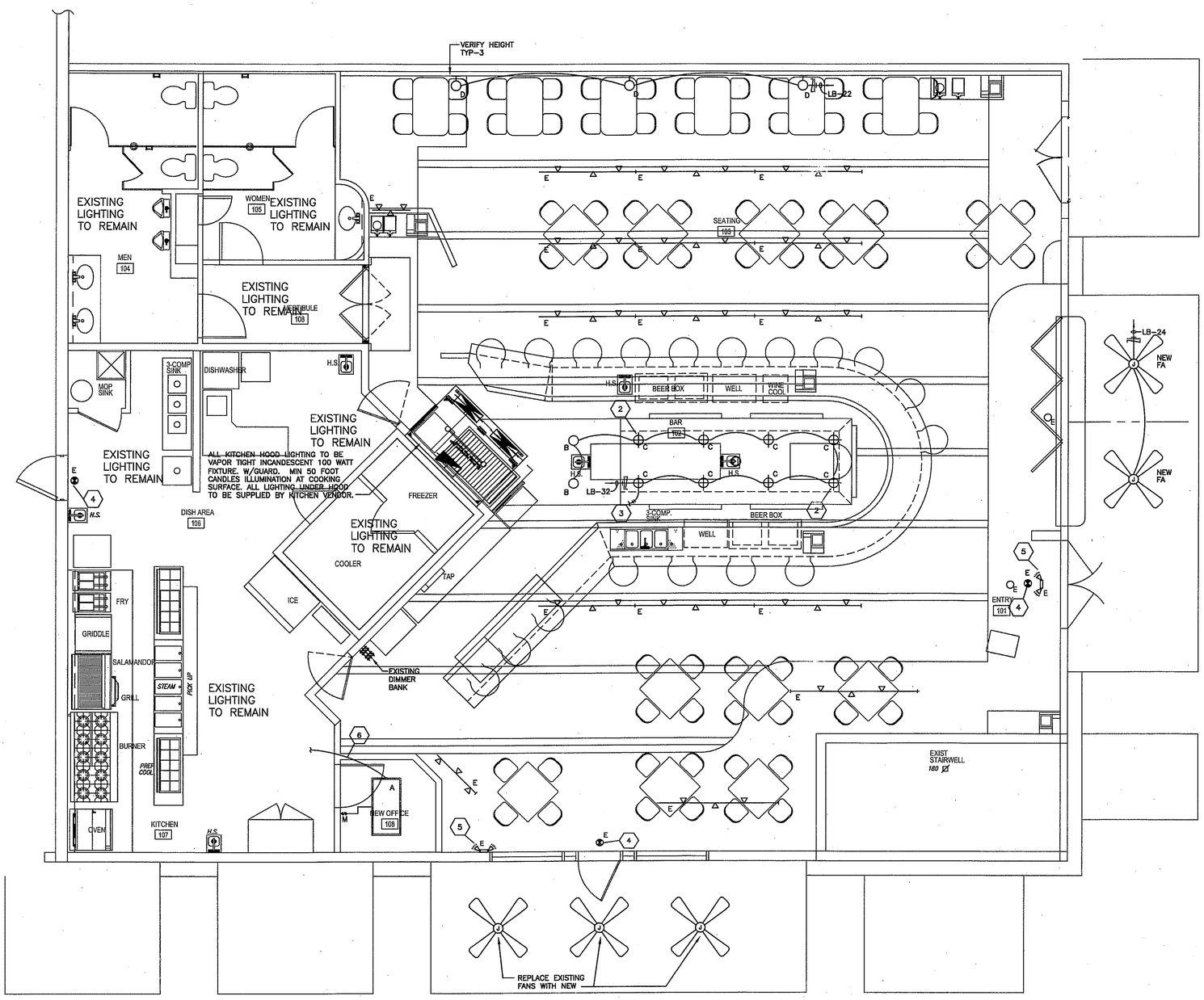
COORDINATE ALL LIGHTING LOCATION WITH OWNER. VERIFY LIGHT SWITCH LOCATION AND TYPE OF CONTROLS.

CONTRACTOR TO FIELD VERIFY ALL DINING ROOM LIGHT & CEILING FAN FIXTURES WITH OWNER.

REFER TO ARCHITECTURAL DRAWINGS FOR DEMINSIONED REFLECTED CEILING PLAN.

ALL EMERGENCY LIGHT FIXTURES EX & EG TO BE ROUTE TO CONSTANT POWER BRANCH CIRCUIT. COORDINATE ALL RECEPTACLE LOCATIONS WITH OWNER. VERIFY CONTROLS OF RECPTACLES.

4 SHEET NOTES



1 FLOOR PLAN - LIGHTING

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

JOB NUMBER: 10093
DATE: 5-18-10
REVISIONS: -

Interior Alterations to:
ROUXPOUR RESTAURANT
Sugar Land Town Square
2298 Texas Dr. Sugar Land, Texas

JIM LAWLESS, AIA
Architects & Planners
4610 Sweetwater Blvd.
Suite 400-C
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77479
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STATE OF TEXAS
H.M. McLEOD JR.
REGISTERED PROFESSIONAL ENGINEER
THIS SEAL WAS AUTHORIZED
THIS DATE 05/18/2010

PROJECT #10-093
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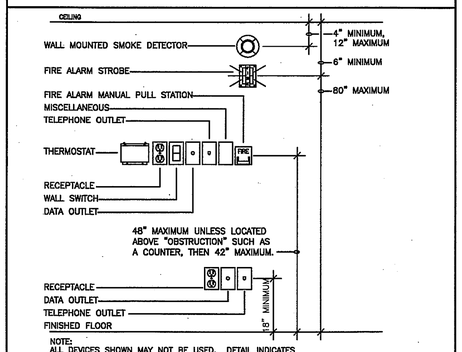
DRAWING:
LIGHTING FLOOR PLAN
E-1



4 A.D.A. DEVICE MOUNTING

ALL KITCHEN + BAR RECEPTACLES TO TO BE GFCI OR PROTECTED BY A GFCI CIRCUIT BREAKER.

VERIFY MOUNTING HEIGHT AND CONNECTION TYPE FOR ALL KITCHEN EQUIPMENT WITH OWNER AND KITCHEN VENDOR.

HEAT TRACE IN COOLER TO BE GROUND FAULT PROTECTED (GFI) CIRCUIT BREAKER

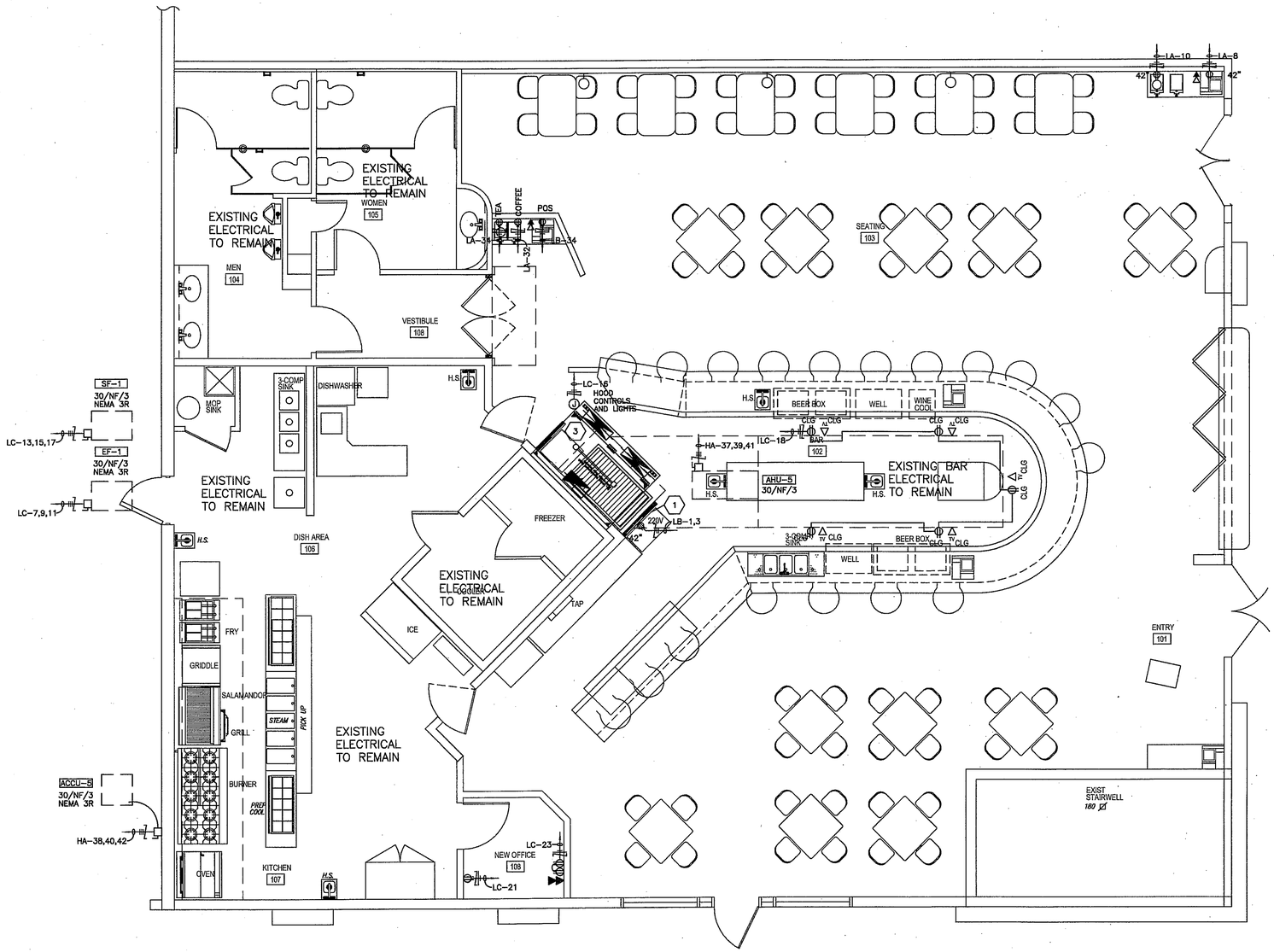
TELECOMMUNICATIONS AND CABLE TV TO BE COORDINATED WITH LOCAL COMPANIES.

ALARM SYSTEM REQUIREMENTS TO BE VERIFIED WITH OWNER. FIRE ALARM SYSTEM BY OTHERS.

3 GENERAL NOTES

1. PROVIDE SHUNT TRIP BREAKER FOR UNDER HOOD EQUIPMENT. COORDINATE ALL ELECTRICAL CONNECTION TO EQUIPMENT AS PER OWNER SUPPLIER SPEC SHEETS.
2. PROVIDE ELECTRICAL CONNECTIONS TO KITCHEN HOOD FANS. VERIFY WITH KITCHEN VENDOR.
3. PROVIDE 120 VOLT FOR HOOD LIGHTS. COORDINATE WITH KITCHEN VENDOR. REFER TO ELECTRICAL DETAIL SHEET.

2 POWER PLAN KEYED NOTES



1 FLOOR PLAN - POWER

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

JOB NUMBER: 10093
DATE: 5-18-10
REVISIONS: -

Interior Alterations to:

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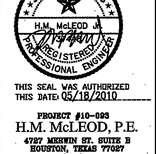

THIS SEAL WAS AUTHORIZED THIS DATE 05/18/2010

PROJECT #10-093

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DRAWING:

ELEC. POWER FLOOR PLAN

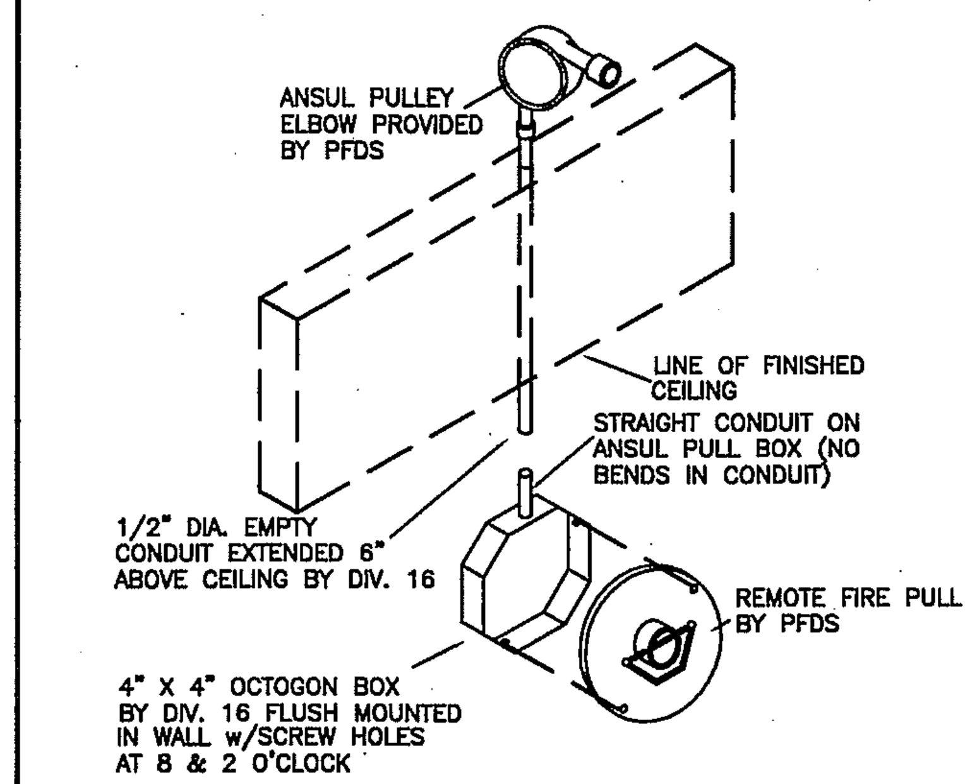
E-2

1. Electrical contractor (E.C.) shall obtain and pay for all permits, certificates, etc., as required.
2. E.C. shall deliver certificate of final inspection to Developer/Owner before applying for final payment.
3. Consult with other contractors furnishing equipment to verify loads and secure location of outlets, junction boxes, etc..
4. Furnish and install disconnect switches, starters, and associated wiring as required for exhaust fans and air conditioning equipment.
5. Main power wiring and final connections to all new HVAC equipment (excluding thermostat and thermostat wiring) and smoke detector by E.C..
6. Minimum wire size shall be #12 awg except control wiring as noted. All wire shall be copper type THWN or THHN.
7. Do not make changes or substitutions without approval of Architect and/or engineer.
8. All work shall be guaranteed for a period of (1) one year from date of final acceptance.
9. All electrical systems shall be completely and effectively grounded as required in Article 250 of the National Electrical Code.
10. When called for, service entrance shall be installed per the National Electrical Code and the local utility.
11. Verify mechanical equipment locations prior to the routing of conduit and feeders.
12. Verify ceiling construction and general contractor before installing light fixtures.
13. Low voltage cable to run loose in joist space secured neatly to structure. E.C. shall provide 3/4" conduit stubs and junction boxes from point of use to roof joists.
14. All 120 volt circuits over 75 feet in length shall be #10 awg.
15. Floor box/receptacles to be GFI rated and Nema 3R rated.
16. E.C. shall provide temporary lighting and power during the demolition and construction phases.
17. See architectural plan(s) for additional notes.
18. All electrical work shall be in accordance with the latest edition of the National Electrical Code and all codes having local jurisdiction.
19. Verify mechanical equipment over current protection requirements with the equipment manufacturer prior to connection.
20. E.C. shall verify all light fixture location dimensions with Architectural fixtures plans.
21. See panel schedules for circuit breaker, wire, and conduit requirements.
22. No Aluminium wiring/cable allowed in construction.
23. All exit, emergency, and night lights shall be on a non-switched breaker or connected ahead of the switch as per plans.
24. All switchgear and panels to have copper bus. Equipment by Square 'D' ITE, General Electric, Siemens or Westinghouse.
25. All lighting fixtures shall be provided by the E.C. per the lighting fixture schedule.
26. All NEW BX cable allowed in construction to be securely fasten to structure. NO BX PENETRATION THRU FLOORS MUST BE RIGID CONDUIT.
27. All power panels must be labeled with engraved plastic name plates and to have type written directory after construction is complete.
28. All circuit breakers to be SQUARE-D SIEMENS, GE, or CUTLER HAMMER (to match existing) and must be switch duty type. Use one manufacture only.
29. Provide and install separate ground bus in existing panel for I.G. receptacles in new construction. NO EXCEPTIONS.

7 SPECIFICATIONS

- FLUORESCENT LIGHTING FIXTURE
- FLUORESCENT FIXTURE FOR NIGHT LIGHTING
- LIGHTING FIXTURE
- EXIT SIGNS
- TELEPHONE OUTLET: SINGLE GANG BOX W/ COVER PLATE IN WALL WITH 3/4" C ROUTED TO CEILING SPACE.
- PANEL BOARD
- NEW METER BY LIGHT COMPANY
- DATA OUTLET: SINGLE GANG BOX W/ COVER PLATE IN WALL WITH 3/4" C ROUTED TO CEILING SPACE
- JUNCTION BOX (HEIGHT NOTED ON PLAN)
- DUPLEX RECEPTACLE
- 220 VOLT RECEPTACLE. COORDINATE WITH EQUIPMENT
- DOUBLE DUPLEX RECEPTACLE
- ISOLATED GROUND RECEPTACLE
- GROUND FAULT INTERRUPT RECEPTACLE (GFI)
- $ WALL SWITCH
- $3 THREE-WAY WALL SWITCH
- 600 WALL BOX DIMMER, NUMBER = RATING IN WATTS
- $P WALL SWITCH WITH PILOT LIGHT – WIRE FOR 'ON' POSITION
- FUSIBLE DISCONNECT
- $m MANUAL MOTOR STARTER
- GROUND
- 100/80/3 DEVICE RATING/FUSE SIZE/NUMBER OF POLES
- SIZE 2 NEMA STARTER SIZE
- 1H-4,6,8 PANELBOARD 1H, CIRCUIT NUMBERS 4,6,8
- BRANCH CIRCUIT HOMERUN WITH GROUND WIRE (GROUND WIRE TO BE ROUTED FROM PANELBOARD TO LAST WIRING DEVICE ON BRANCH CIRCUIT)
- 4 REFER TO KEYED NOTE 4
- NEMA CONFIGURATION RECEPTACLE COORDINATE TYPE WITH EQUIPMENT TO BE CONNECTED.
- T THERMOSTAT MOUNTED TO MEET A.D.A REQ.
- ID IONIZATION DETECTOR IN RETURN AND SUPPLY AIR DUCTS INTERLOCK WITH AIR HANDLER TO SHUT DOWN UNIT UPON DETECTION OF SMOKE INTERLOCK WITH EMERGENCY LIGHTING.
- ELECTRICAL DISCONNECT. REFER TO RISER FOR SIZE

5 ELECTRICAL SYMBOLS



4 REMOTE FIRE PULL STATION

DEVICE	RATING	REFERENCE
DUPLEX CONVENIENCE RECEPTACLE	20A/120V	P&S 5362-W HUBBELL 5362-WHI
SINGLE OUTLET RECEPTACLE	20A/120V	P&S 5361-W HUBBELL 5361-WHI
GFI DUPLEX RECEPTACLE	20A/120V	P&S 2091-F-W HUBBELL GF5362-WHI
ISOLATED GROUND RECEPTACLE	20A/120V	P&S IG5362 HUBBELL IG5362
ISOLATED GROUND SINGLE RECEPTACLE	20A/120V	P&S IG5361 HUBBELL IG5361
WEATHERPROOF RECEPTACLE	20A/120V	P&S 5362 HUBBELL 5362
DUPLEX EQUIPMENT RECEPTACLE	30A/120V	P&S 5920 HUBBELL 9308
SWITCH, SPST	20A/120V	P&S 20AC1-W HUBBELL 1221-WHI
SWITCH, 3 WAY	20A/120V	P&S 20AC3-W HUBBELL 1223-WHI
SWITCH, DIMMER	SIZE ON PLAN 120V	P&S RP-1-W
SWITCH, MOTOR	30A/120V	P&S 30AC2-HP HUBBELL 3031-IA
ALL SWITCHES, DIMMERS, GENERAL RECEPTACLES AND ALL RECEPTACLE COVER PLATES AS WELL AS SWITCH & DIMMER COVER PLATES TO BE WHITE.		

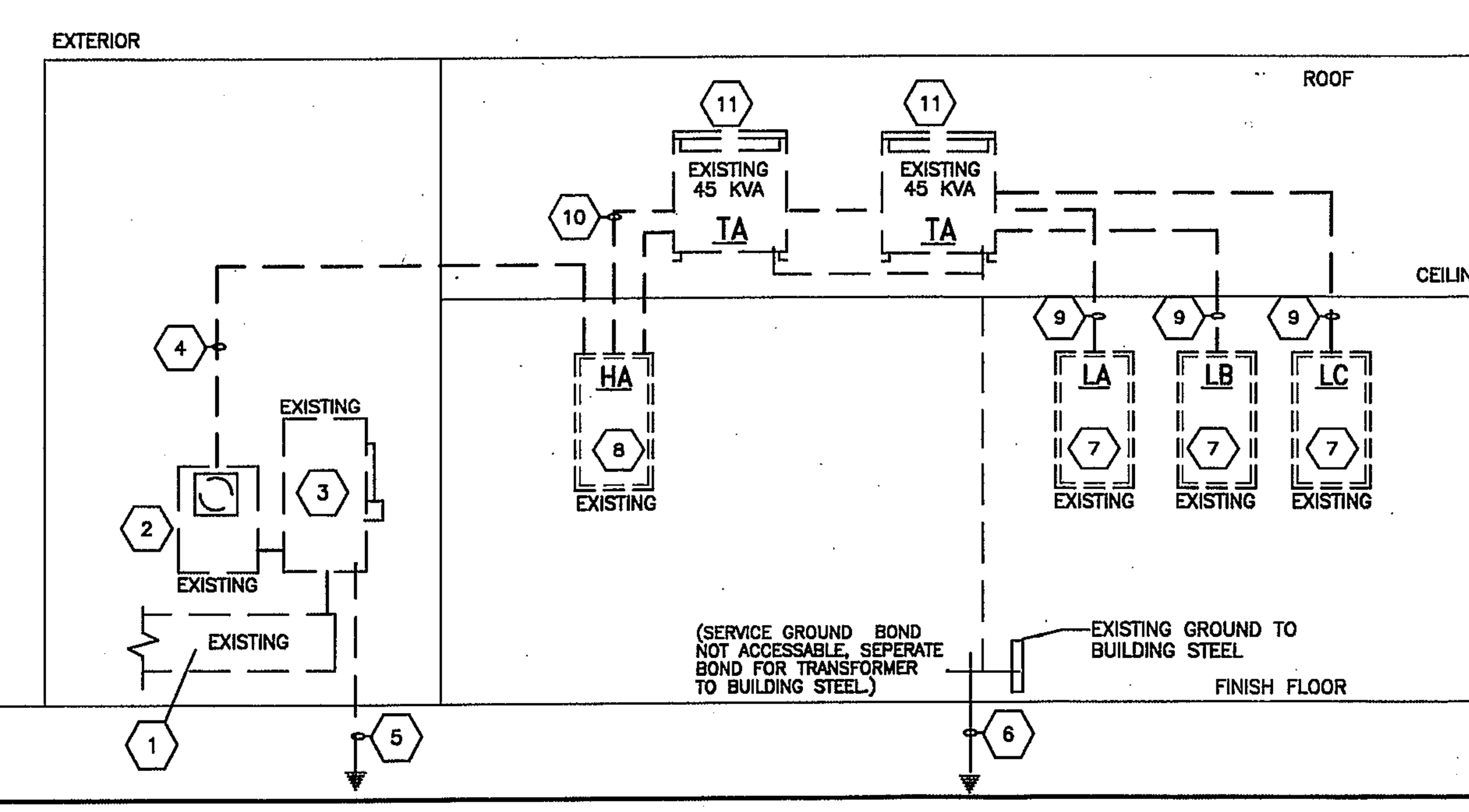
3 ELECTRICAL DEVICES

NOTE:
1. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL STRUCTURAL SUPPORTS, BRACING AND UNISTRUT (HOT DIPPED GALVANIZED) NECESSARY TO ATTACH PANELS, METERS, WEATHERHEAD AND EQUIPMENT TO BUILDING WALL. ALL SUCH STRUCTURAL SHALL BE LOCATED AS REQUIRED ON BUILDING.
2. ALL ELECTRICAL EQUIPMENT CABINETS TO HAVE SAFETY EARTH ELECTRODE SYSTEM GROUND WITH 2AL-CU RATED CLAMPS OR CADWELDED CONNECTIONS. ALL ELECTRICAL EQUIPMENT CABINETS TO BE GROUNDED TOGETHER.

ELECTRICAL CONTRACTOR: COORDINATE ROUTING OF ELECTRICAL SERVICE WITH LOCAL LIGHTING & POWER PRIOR TO CONSTRUCTION.

KEYED NOTES:

1. EXISTING 1200 AMP WIREWAY 480/277 VOLT 3 PHASE 4 WIRE.
2. EXISTING METER/CT ASYMBLY AS PER RELIANT ENERGY SERVICE STANDARDS.
3. EXISTING 400 AMP 3 PHASE FUSED DISCONNECT – 400/300/3 480 VOLT.
4. EXISTING 4 – #350 KCMIL IN 3" CONDUIT
5. EXISTING #2 AWG IN 1/2" CONDUIT ROUTED TO GROUND ROD. 5/8" COPPER 10 FT. IN LENGTH.
6. EXISTING BOND TO BUILDING STEEL. #4 AWG.
7. REFER TO PANEL SCHEDULES ON SHEET E-4.
8. REFER TO PANEL HA SCHEDULE ON SHEET E-4.
9. REFER TO TRANSFORMER SCHEDULE FOR FEEDER AND CONDUIT SIZES
10. REFER TO PANEL SCHEDULE HA FOR FEEDER & CONDUIT SIZE.
11. REFER TO TRANSFORMER SCHEDULE. SUSPEND ABOVE CEILING.



6 ELECTRICAL RISER DIAGRAM

AFF	ABOVE FINISHED FLOOR	DWG	DRAWING	MTD	MOUNTED
AHU	AIR HANDLING UNIT	ELEC	ELECTRICAL	NIC	NOT IN CONTRACT
ARCH	ARCHITECTURAL	EF	EXHAUST FAN	NK	NECK
BOD	BOTTOM OF DUCT	EWH	ELECTRIC WATER HEATER	OA	OUTSIDE AIR
BLDG	BUILDING	FDV	FIRE DEPARTMENT VALVE	OBD	OPPOSED BLADE DAMPER
CI	CAST IRON	FCO	FLOOR CLEANOUT	PSI	POUNDS PER SQUARE INCH
℄	CENTER LINE	GALV	GALVANIZED	PRV	PRESSURE REDUCING VALVE
CO	CLEANOUT	HW	HOT WATER	RA	RETURN AIR
COG	CLEANOUT AT GRADE	IE	INVERT ELEVATION	RD	ROOF DRAIN
CONC	CONCRETE	KW	KILOWATTS	SA	SUPPLY AIR
CONN	CONNECTION	LAV	LAVATORY	SF	SUPPLY FAN
CONT	CONTINUATION	MAX	MAXIMUM	SP	STATIC PRESSURE
CW	DOMESTIC COLD WATER	MECH	MECHANICAL	SPEC	SPECIFICATIONS
DN	DOWN	MIN	MINIMUM	TYP	TYPICAL
DIA	DIAMETER	MVD	MANUAL VOLUME DAMPER		

2 GENERAL ABBREVIATIONS

ELECTRICAL NOTES

THE FOLLOWING WORK IS TO BE PERFORMED BY THE ELECTRICAL CONTRACTOR:

- ROUGHING-IN AND FINAL CONNECTIONS OF ELECTRICAL SYSTEMS TO FOODSERVICE EQUIPMENT.
- COMMUNICATION SYSTEMS, CLOCKS AND STAFF TIME CLOCKS IN FOODSERVICE AREA.
- CONDUIT AND WIRING FROM DISPOSER SWITCH TO TIME DELAY, MAGNETIC STARTER, MOTOR AND SOLENOID VALVES: ALL BELOW COUNTER TOP.
- WALL SWITCH FOR LIGHT FIXTURES IN EXHAUST HOODS.
- WALL SWITCH FOR FAN MOTOR FOR EXHAUST HOOD'S SYSTEM.
- WIRING TO AND INSTALLATION OF ACCESSORIES (IF ANY) WHICH ARE FURNISHED STANDARD WITH FOODSERVICE EQUIPMENT.
- EMERGENCY LIGHTING AND/OR POWER SYSTEMS.
- ALL DISCONNECT SWITCHES AS REQUIRED. (NEMA 4, WATERPROOF SUGGESTED).
- SPECIAL NOTE: ANSUL FIRE SUPPRESSION SYSTEM IS TO BE CONNECTED TO CORRESPONDING SHUNT TRIP BREAKERS FOR SHUT DOWN OF COOKING EQUIPMENT BELOW VENTILATOR DURING FIRE – IN ADDITION, THE SUPPRESSION SYSTEM SHALL BE REQUIRED TO BE INTERCONNECTED WITH MECHANICAL GAS SHUT OFF DURING FIRE.

*** DIVISION 16 TO PROVIDE [' EMPTY CONDUIT FROM OCTOGONAL JB IN WALL AT 54' AFF UP THRU WALL TO 6' ABOVE CEILING AND EXIT WALL – FOR FIRE SYSTEM REMOTE PULL.

1 KITCHEN ELECTRICAL NOTES

JOB NUMBER: 10093
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STATE OF TEXAS
H.M. McLEOD JR.
REGISTERED PROFESSIONAL ENGINEER

THIS SEAL WAS AUTHORIZED THIS DATE: 05/18/2010

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H. M. McLeod, P.E. #F-3679

DRAWING:
ELECTRICAL DETAILS
E-3

EXISTING TRANSFORMER SCHEDULE

PERCENT NEUTRAL	TRANSFORMER NAME	SERVES	MOUNTING	KVA	PRIMARY VOLTAGE	SECONDARY VOLTAGE		SECONDARY DEVICE TYPE	AMPS	POLE	TEMP F	SECONDARY CONDUCTORS SETS	PHASE	NEU	GND	CONDUIT	GROUND ELECTRODE	WIRE SIZE MULTIPLIER
100%	TA	LA	SUSPENDED	45	480	208	Y/120	MCB	150	3	86	1	#1/0	#1/0	#10	1"	#6	100%
100%	TB	LB	SUSPENDED	45	480	208	Y/120	MCB	125	3	86	1	#1	#1	#10	1"	#6	100%
100%	TB	LC						MCB	60	3	86	1	#8	#8	#10	1"	#8	100%

LOAD ANALYSIS SERVICE

AREA IN SQUARE FEET
480 VOLT P-P
277 VOLT P-N
3 PHASE
4 WIRE

DESCRIPTION	LOAD CON. (KVA)	NEC (KVA)	PHASE A (AMPS)	PHASE B (AMPS)	PHASE C (AMPS)	NEUTRAL (AMPS)	REMARKS ON NEC CALCULATION
ELECTRIC HEAT	145.5	145.5	175.0	175.0	175.0	175.0	100% of CONNECTED
A/C REFRIGERATION	76.7	0.0	0.0	0.0	0.0	0.0	LESS THAN HEAT
MISCELLANEOUS MOTORS	11.0	11.0	13.2	13.2	13.2	0.0	100% of CONNECTED
WATER HEATING	2.0	2.0	2.4	2.4	2.4	2.4	100% of CONNECTED
OUTDOOR LIGHTING	2.0	2.5	3.0	3.0	3.0	3.0	125% of CONNECTED
INDOOR LIGHTING	6.8	8.5	10.2	10.2	10.2	10.2	125% of the LARGER of CONNECTED OR TABLE 220-3(b)
RECEPTACLES	15.5	12.8	15.3	15.3	15.3	15.3	NEC TABLE 220-13
EXISTING DEMAND	0.0	0.0	0.0	0.0	0.0	0.0	NOT APPLICABLE
MISCELLANEOUS CONTINUOUS	0.5	0.6	0.7	0.7	0.7	0.7	125% of CONNECTED
MISCELLANEOUS NON-CONTINUOUS	3.0	3.0	3.6	3.6	3.6	3.6	100% of CONNECTED
KITCHEN EQUIPMENT	41.3	26.9	32.3	32.3	32.3	32.3	65% of CONNECTED
25% LARGEST MOTOR	5.2	5.2	6.2	6.2	6.2	0.0	25% of LARGEST MOTOR ADDED
*** TOTALS ***	309.4	217.9	262.0	262.0	262.0	242.6	
*** CAPACITY ***			300.0	300.0	300.0	300.0	
*** SPARE CAPACITY ***			38.0	38.0	38.0	57.4	

EXISTING LA
LIGHTING PANELBOARD

REMARKS
1. "E" EXISTING BRANCH CIRCUITS TO REMAIN. VERIFY AMP LOAD
2. ELECTRICAL CONTRACTOR TO VERIFY ALL NEW LOADS WITH EXISTING PANEL LOAD NOT TO EXCEED RATING OF PANEL NOR FEEDER SIZE.
3. HVAC EQUIPMENT TO BE PROTECTED W/ HACR TYPE CIRCUIT BREAKERS
4. "NEW" NEW BRANCH CIRCUIT AND CB AS REQUIRED.

150 AMP MCB — 225 AMP BUS
208 VOLT P-P — RECESSED MTD.
120 VOLT P-N — NEMA 1R
3 PHASE — BOLT-IN CBS
4 WIRE — CU. BUS
10000 AIC SYMMETRICAL — GRND BUS

C PH (AMP)	B PH (AMP)	A PH (AMP)	N (AMP)	LOAD (VA)	TYPE	DESCRIPTION	WIRE	CKT BKR AMP /P	NO	NO	CKT BKR AMP /P	WIRE	DESCRIPTION	TYPE	LOAD (VA)	N (AMP)	A PH (AMP)	B PH (AMP)	C PH (AMP)
		10.0	10.0	1200	KT	E - EPRESSO	#12	20 /1	1	2	20 /1	#12	E - TRACK LIGHTS	LT	880	7.3	7.3		
	10.0		10.0	1200	KT	E - EPRESSO	#12	20 /1	3	4	20 /1	#12	E - COVE LIGHTS	LT	600	5.0		5.0	
6.0		0.0	6.0	720	KT	E - BAR RECPT.	#12	20 /1	5	6	20 /1	#12	E - RECPT.	RP	480	4.0	0.0		4.0
	0.0	4.0	4.0	480	LT	E - CEILING RECPT.	#12	20 /1	7	8	20 /1	#12	NEW POS	RP	480	4.0	4.0	0.0	
	7.3	0.0	7.3	880	LT	E - COVE LIGHTS	#12	20 /1	9	10	20 /1	#12	NEW KITCHEN	KT	720	6.0	0.0	6.0	
6.3	0.0		6.3	760	LT	E - LIGHTING	#12	20 /1	11	12	20 /1	#12	E - REST ROOM LIGHTS	LT	600	5.0		0.0	5.0
		4.0	4.0	480	RP	E - RECPT.	#12	20 /1	13	14	20 /1	#12	E - COVE LIGHTS	LT	600	5.0	5.0		
	4.0		4.0	480	RP	E - LOW VOLTAGE	#12	20 /1	15	16	20 /1	#12	E - COVE LIGHTS	LT	600	5.0		5.0	
9.8		0.0	9.8	1180	RP	E - TRACK LIGHTS	#12	20 /1	17	18	20 /1	#12	E - BAR RECPT	KT	720	6.0	0.0		6.0
	0.0	6.0	6.0	720	RP	E - RECPT.	#12	20 /1	19	20	20 /1	#12	E - BAG-N-BOX	KT	480	4.0	4.0	0.0	
	6.0	0.0	6.0	720	RP	E - RECPT.	#12	20 /1	21	22	20 /1	#12	E - BAR RECPT	KT	720	6.0	0.0	6.0	
6.0	0.0		6.0	720	RP	E - RECPT.	#12	20 /1	23	24	20 /1	#12	E - BOTTLE COOLER	KT	960	8.0		0.0	8.0
		6.0	6.0	720	RP	E - RECPT.	#12	20 /1	25	26	20 /1	#12	E - BAR RECPT.	KT	720	6.0	6.0		
	6.0		6.0	720	RP	E - RECPT.	#12	20 /1	27	28	20 /1	#12	E - MUG FROSTER	KT	1200	10.0		10.0	
6.0		0.0	6.0	720	RP	E - RECPT.	#12	20 /1	29	30	20 /1	#12	E - POS	RP	480	4.0	0.0		4.0
	0.0	7.0	7.0	840	KT	E - WINE COOLER	#12	20 /1	31	32	20 /1	#12	NEW COFFEE	KT	1200	10.0	10.0	0.0	
	8.0	0.0	8.0	960	KT	E - BOTTLE COOLER	#12	20 /1	33	34	20 /1	#12	NEW TEA	KT	1200	10.0	0.0	10.0	
6.0	0.0		6.0	720	KT	E - BAR RECPT.	#12	20 /1	35	36	20 /2	#12	E - MARGARITA MACHINE	KT	1664	0.0		0.0	8.0
		12.0	12.0	1440	KT	E - TEA BREWER	#12	20 /1	37	38		---		KT	0	0.0	8.0		
	12.0		12.0	1440	KT	E - COFFEE BREWER	#12	20 /1	39	40	20 /2	#12	E - ICE MACHINE	KT	2496	0.0		12.0	
6.0		0.0	6.0	720	KT	E - BAR RECPT.	#12	20 /1	41	42		---		KT	0	0.0	0.0		12.0

CONNECTED LOADS

C PH (AMP)	B PH (AMP)	A PH (AMP)	N (AMP)	LOAD (VA)	TYPE	DESCRIPTION
0.0	0.0	0.0	0.0	0	HT	ELECTRIC HEAT
0.0	0.0	0.0	0.0	0	AC	A/C REFRIGERATION
0.0	0.0	0.0	0.0	0	MM	MISC. MOTORS
0.0	0.0	0.0	0.0	0	WH	WATER HEATING
0.0	0.0	0.0	0.0	0	OL	OUTDOOR LIGHTING
11.3	17.3	16.3	17.3	5400	LT	INDOOR LIGHTING
29.8	16.0	20.0	29.8	7900	RP	RECEPTACLES
0.0	0.0	0.0	0.0	0	EX	EXISTING DEMAND
0.0	0.0	0.0	0.0	0	MC	MISC. CONTINUOUS
0.0	0.0	0.0	0.0	0	MN	MISC. NON-CONTINU'S
52.0	74.0	57.0	62.0	21320	KT	KITCHEN EQUIPMENT
0.0	0.0	0.0	0.0	0	SF	SUB-FEED
93.1	107.3	93.3	95.3	34620		*** TOTAL ***
0.0	0.0	0.0		0		LARGEST MOTOR

NEC COMPUTED LOADS 0

NEC FCTR	DESCRIPTION 0	TYPE 0	LOAD (VA)	N (AMP)	A PH (AMP)	B PH (AMP)	C PH (AMP)
0.00	ELECTRIC HEAT	HT	0	0.0	0.0	0.0	0.0
1.00	A/C REFRIGERATION	AC	0	0.0	0.0	0.0	0.0
1.00	MISC. MOTORS	MM	0	0.0	0.0	0.0	0.0
1.00	WATER HEATING	WH	0	0.0	0.0	0.0	0.0
1.25	OUTDOOR LIGHTING	OL	0	0.0	0.0	0.0	0.0
1.25	INDOOR LIGHTING	LT	6750	21.7	20.4	21.7	14.2
220-13	RECEPTACLES	RP	7900	29.8	20.0	16.0	29.8
1.25	EXISTING DEMAND	EX	0	0.0	0.0	0.0	0.0
1.25	MISC. CONTINUOUS	MC	0	0.0	0.0	0.0	0.0
1.00	MISC. NON-CONTINU'S	MN	0	0.0	0.0	0.0	0.0
0.65	KITCHEN EQUIPMENT	KT	13858	40.3	37.0	48.1	33.8
1.00	SUB-FEED	SF	0	0.0	0.0	0.0	0.0
	FEED-THRU		0	0.0	0.0	0.0	0.0
0.25	LARGEST MOTOR	0	0	0.0	0.0	0.0	0.0
	*** TOTAL ***		28508	77.9	77.4	85.7	77.8

EXISTING HA
LIGHTING PANELBOARD

REMARKS
1. "E" EXISTING BRANCH CIRCUITS TO REMAIN. VERIFY AMP LOAD
2. ELECTRICAL CONTRACTOR TO VERIFY ALL NEW LOADS WITH EXISTING PANEL LOAD NOT TO EXCEED RATING OF PANEL NOR FEEDER SIZE.
3. HVAC EQUIPMENT TO BE PROTECTED W/ HACR TYPE CIRCUIT BREAKERS
4. "NEW" NEW BRANCH CIRCUIT AND CB AS REQUIRED.

400 AMP MLO — 400 AMP BUS
480 VOLT P-P — RECESSED MTD.
277 VOLT P-N — NEMA 1R
3 PHASE — BOLT-IN CBS
4 WIRE — CU. BUS
22000 AIC SYMMETRICAL — GRND BUS

C PH (AMP)	B PH (AMP)	A PH (AMP)	N (AMP)	LOAD (VA)	TYPE	DESCRIPTION	WIRE	CKT BKR AMP /P	NO	NO	CKT BKR AMP /P	WIRE	DESCRIPTION	TYPE	LOAD (VA)	N (AMP)	A PH (AMP)	B PH (AMP)	C PH (AMP)
		27.0	0.0	22446.72	HT	E - AHU-1	#10	30 /3	1	2	40 /3	#8	ACCU-1	AC	20784	0.0	25.0		
	27.0		0.0	0	HT		---		3	4		---		AC	0	0.0		25.0	
27.0		0.0	0.0	0	HT		---		5	6		---		AC	0	0.0	0.0		25.0
	0.0	25.0	0.0	20784	HT	E - AHU-2	#10	30 /3	7	8	20 /3	#12	ACCU-2	AC	12470.4	0.0	15.0	0.0	
	25.0	0.0	0.0	0	HT		---		9	10		---		AC	0	0.0	0.0	15.0	
25.0	0.0		0.0	0	HT		---		11	12		---		AC	0	0.0		0.0	15.0
		49.0	0.0	40736.64	HT	E - AHU-3	#6	50 /3	13	14	30 /3	#10	ACCU-3	AC	17458.56	0.0	21.0		
	49.0		0.0	0	HT		---		15	16		---		AC	0	0.0		21.0	
49.0		0.0	0.0	0	HT		---		17	18		---		AC	0	0.0	0.0		21.0
	0.0	49.0	0.0	40736.64	HT	E - AHU-4	#6	50 /3	19	20	30 /3	#10	ACCU-4	AC	17458.56	0.0	21.0	0.0	
	49.0	0.0	0.0	0	HT		---		21	22		---		AC	0	0.0	0.0	21.0	
49.0	0.0		0.0	0	HT		---		23	24		---		AC	0	0.0		0.0	21.0
		54.1	0.0	45000	SF	E - TRANSFORMER TA	#4	70 /3	25	26	/3	---	SPACE ONLY		0	0.0	0.0		
	54.1		0.0	0	SF		---		27	28		---			0	0.0		0.0	
54.1		0.0	0.0	0	SF		---		29	30		---			0	0.0	0.0		0.0
	0.0	0.0	0.0	0	LT	E - KITCHEN LIGHTS	---	/1	31	32	70 /3	#4	TRANSFORMER TB	SF	45000	0.0	54.1	0.0	
	0.0	0.0	0.0	0		SPACE ONLY	---	/1	33	34		---		SF	0	0.0	0.0	54.1	
0.0	0.0		0.0	0		SPACE ONLY	---	/1	35	36		---		SF	0	0.0		0.0	54.1
		25.0	0.0	20784	HT	NEW AHU-5	#10	30 /3	37	38	20 /3	#12	ACCU-5	AC	8479.872	0.0	10.2		
	25.0		0.0	0	HT		---		39	40		---		AC	0	0.0		10.2	
25.0		0.0	0.0	0	HT				41	42		---		AC	0	0.0	0.0		10.2

CONNECTED LOADS

C PH (AMP)	B PH (AMP)	A PH (AMP)	N (AMP)	LOAD (VA)	TYPE	DESCRIPTION
175.0	175.0	175.0	0.0	145488	HT	ELECTRIC HEAT
92.2	92.2	92.2	0.0	76651	AC	A/C REFRIGERATION
0.0	0.0	0.0	0.0	0	MM	MISC. MOTORS
0.0	0.0	0.0	0.0	0	WH	WATER HEATING
0.0	0.0	0.0	0.0	0	OL	OUTDOOR LIGHTING
0.0	0.0	0.0	0.0	0	LT	INDOOR LIGHTING
0.0	0.0	0.0	0.0	0	RP	RECEPTACLES
0.0	0.0	0.0	0.0	0	EX	EXISTING DEMAND
0.0	0.0	0.0	0.0	0	MC	MISC. CONTINUOUS
0.0	0.0	0.0	0.0	0	MN	MISC. NON-CONTINU'S
0.0	0.0	0.0	0.0	0	KT	KITCHEN EQUIPMENT
108.3	108.3	108.3	0.0	90000	SF	SUB-FEED
375.4	375.4	375.4	0.0	312139		*** TOTAL ***
25.0	25.0	25.0		20784		LARGEST MOTOR

NEC COMPUTED LOADS 0

NEC FCTR	DESCRIPTION 0	TYPE 0	LOAD (VA)	N (AMP)	A PH (AMP)	B PH (AMP)	C PH (AMP)
1.00	ELECTRIC HEAT	HT	145488	0.0	175.0	175.0	175.0
0.00	A/C REFRIGERATION	AC	0	0.0	0.0	0.0	0.0
1.00	MISC. MOTORS	MM	0	0.0	0.0	0.0	0.0
1.00	WATER HEATING	WH	0	0.0	0.0	0.0	0.0
1.25	OUTDOOR LIGHTING	OL	0	0.0	0.0	0.0	0.0
1.25	INDOOR LIGHTING	LT	0	0.0	0.0	0.0	0.0
220-13	RECEPTACLES	RP	0	0.0	0.0	0.0	0.0
1.25	EXISTING DEMAND	EX	0	0.0	0.0	0.0	0.0
1.25	MISC. CONTINUOUS	MC	0	0.0	0.0	0.0	0.0
1.00	MISC. NON-CONTINU'S	MN	0	0.0	0.0	0.0	0.0
0.65	KITCHEN EQUIPMENT	KT	0	0.0	0.0	0.0	0.0
1.00	SUB-FEED	SF	90000	0.0	108.3	108.3	108.3
	FEED-THRU		0	0.0	0.0	0.0	0.0
0.25	LARGEST MOTOR	0	5196	0.0	6.2	6.2	6.2
	*** TOTAL ***		240684	0.0	289.5	289.5	289.5

EXISTING LB
LIGHTING PANELBOARD

REMARKS
1. "E" EXISTING BRANCH CIRCUITS TO REMAIN. VERIFY AMP LOAD
2. ELECTRICAL CONTRACTOR TO VERIFY ALL NEW LOADS WITH EXISTING PANEL LOAD NOT TO EXCEED RATING OF PANEL NOR FEEDER SIZE.
3. HVAC EQUIPMENT TO BE PROTECTED W/ HACR TYPE CIRCUIT BREAKERS
4. "NEW" NEW BRANCH CIRCUIT AND CB AS REQUIRED.

125 AMP MCB — 225 AMP BUS
208 VOLT P-P — RECESSED MTD.
120 VOLT P-N — NEMA 1R
3 PHASE — BOLT-IN CBS
4 WIRE — CU. BUS
10000 AIC SYMMETRICAL — GRND BUS

C PH (AMP)	B PH (AMP)	A PH (AMP)	N (AMP)	LOAD (VA)	TYPE	DESCRIPTION	WIRE	CKT BKR AMP /P	NO	NO	CKT BKR AMP /P	WIRE	DESCRIPTION	TYPE	LOAD (VA)	N (AMP)	A PH (AMP)	B PH (AMP)	C PH (AMP)
		12.0	0.0	2496	KT	NEW MARGARITA	#12	20 /2	1	2	20 /1	#12	E - HOOD CONTROLS	MN	480	4.0	4.0		
	12.0		0.0	0	KT		---		3	4	20 /1	#12	E - ANSAL	MC	480	4.0		4.0	
8.0		0.0	8.0	960	KT	E - DISHWASHER	#12	20 /1	5	6	20 /1	#12	E - WATER HEATER	WH	2000	16.7	0.0		16.7
	0.0	8.0	8.0	960	KT	E - KITCHEN RECPT.	#12	20 /1	7	8	20 /3	#12	E - DISHHOOD	MM	1400	0.0	3.9	0.0	
	8.0	0.0	8.0	960	KT	E - KITCHEN RECPT.	#12	20 /1	9	10		---		MM	0	0.0	0.0	3.9	
8.0	0.0		8.0	960	KT	E - KITCHEN RECPT.	#12	20 /1	11	12		---		MM	0	0.0		0.0	3.9
		8.0	8.0	960	KT	E - KITCHEN RECPT.	#12	20 /1	13	14	30 /2	#6	E - 220 V RECPT.	MN	2496	0.0	12.0		
	12.5		12.5	1500	KT	E - MICROWAVE	#10	25 /1	15	16		---		MN	0	0.0		12.0	
12.5		0.0	12.5	1500	KT	E - MICROWAVE	#10	25 /1	17	18	20 /1	#10	E - HEAT LAMPS	KT	1000	8.3	0.0		8.3
	0.0	8.0	8.0	960	KT	E - PREP COOLER	#12	20 /1	19	20	20 /1	#12	E - HEAT LAMPS	KT	1000	8.3	8.3	0.0	
	4.0	0.0	4.0	480	RP	E - PRINTERS	#12	20 /1	21	22	20 /1	#12	NEW WALL SCONCE	LT	210	1.7	0.0	1.7	
4.0	0.0		4.0	480	RP	E - PRINTERS	#12	20 /1	23	24	20 /1	#12	NEW EXT. CEILING FANS	MM	600	5.0		0.0	5.0
		8.0	8.0	960	KT	E - HOT WELLS	#12	20 /1	25	26	30 /3	#10	E - COOLER COMP.		265KR7550236021	0.0	7.4		
	8.0		8.0	960	KT	E - PREP COOLER	#12	20 /1	27	28		---		KT	0	0.0		7.4	
4.0		0.0	4.0	480	KT	E - COOLER FAN	#12	20 /1	29	30		---		KT	0	0.0	0.0		7.4
	0.0	2.0	2.0	240	KT	E - COOLER LIGHTS	#12	20 /1	31	32	20 /1	#12	NEW BAR LIGHTS	LT	400	3.3	3.3	0.0	
	8.3	0.0	8.3	1000	OL	E - SIGNAGE	#12	20 /1	33	34	20 /1	#12	NEW POS	RP	480	4.0	0.0	4.0	
8.3	0.0		8.3	1000	OL	E - SIGNAGE	#12	20 /1	35	36	20 /1	#12	E - KITCHEN GFI	KT	720	6.0		0.0	6.0
		6.7	6.7	800	LT	E - TRACK LIGHTS	#12	20 /1	37	38	20 /1	#12	E - TV RECPT.	RP	720	6.0	6.0		
	4.5		4.5	540	RP	E - RECPT.	#12	20 /1	39	40	20 /1	#12	E - KITCHEN GFI	KT	720	6.0		6.0	
6.0		0.0	6.0	720	RP	E - PECPT.	#12	20 /1	41	42	20 /1	#12	E - GENERAL RECPT.	RP	480	4.0	0.0		4.0

CONNECTED LOADS

C PH (AMP)	B PH (AMP)	A PH (AMP)	N (AMP)	LOAD (VA)	TYPE	DESCRIPTION
0.0	0.0	0.0	0.0	0	HT	ELECTRIC HEAT
0.0	0.0	0.0	0.0	0	AC	A/C REFRIGERATION
8.9	3.9	3.9	5.0	2000	MM	MISC. MOTORS
16.7	0.0	0.0	16.7	2000	WH	WATER HEATING
8.3	8.3	0.0	8.3	2000	OL	OUTDOOR LIGHTING
0.0	1.7	10.0	10.0	1410	LT	INDOOR LIGHTING
14.0	12.5	6.0	14.0	3900	RP	RECEPTACLES
0.0	0.0	0.0	0.0	0	EX	EXISTING DEMAND
0.0	4.0	0.0	4.0	480	MC	MISC. CONTINUOUS
0.0	12.0	16.0	4.0	2976	MN	MISC. NON-CONTINU'S
54.2	53.8	61.7	46.8	19990	KT	KITCHEN EQUIPMENT
0.0	0.0	0.0	0.0	0	SF	SUB-FEED
102.0	96.3	97.5	90.8	34756		*** TOTAL ***
5.0	3.9	3.9		1400		LARGEST MOTOR

NEC COMPUTED LOADS 0

NEC FCTR	DESCRIPTION 0	TYPE 0	LOAD (VA)	N (AMP)	A PH (AMP)	B PH (AMP)	C PH (AMP)
0.00	ELECTRIC HEAT	HT	0	0.0	0.0	0.0	0.0
1.00	A/C REFRIGERATION	AC	0	0.0	0.0	0.0	0.0
1.00	MISC. MOTORS	MM	2000	5.0	3.9	3.9	8.9
1.00	WATER HEATING	WH	2000	16.7	0.0	0.0	16.7
1.25	OUTDOOR LIGHTING	OL	2500	10.4	0.0	10.4	10.4
1.25	INDOOR LIGHTING	LT	1763	12.5	12.5	2.2	0.0
220-13	RECEPTACLES	RP	3900	14.0	6.0	12.5	14.0
1.25	EXISTING DEMAND	EX	0	0.0	0.0	0.0	0.0
1.25	MISC. CONTINUOUS	MC	600	5.0	0.0	5.0	0.0
1.00	MISC. NON-CONTINU'S	MN	2976	4.0	16.0	12.0	0.0
0.65	KITCHEN EQUIPMENT	KT	12994	30.4	40.1	35.0	35.2
1.00	SUB-FEED	SF	0	0.0	0.0	0.0	0.0
	FEED-THRU		0	0.0	0.0	0.0	0.0
0.25	LARGEST MOTOR	0	350	0.0	1.0	1.0	1.2
	*** TOTAL ***		29082	77.7	79.4	81.9	86.4

EXISTING LC
LIGHTING PANELBOARD

REMARKS
1. "E" EXISTING BRANCH CIRCUITS TO REMAIN. VERIFY AMP LOAD
2. ELECTRICAL CONTRACTOR TO VERIFY ALL NEW LOADS WITH EXISTING PANEL LOAD NOT TO EXCEED RATING OF PANEL NOR FEEDER SIZE.
3. HVAC EQUIPMENT TO BE PROTECTED W/ HACR TYPE CIRCUIT BREAKERS
4. "NEW" NEW BRANCH CIRCUIT AND CB AS REQUIRED.

60 AMP MCB — 125 AMP BUS
208 VOLT P-P — RECESSED MTD.
120 VOLT P-N — NEMA 1R
3 PHASE — BOLT-IN CBS
4 WIRE — CU. BUS
10000 AIC SYMMETRICAL — GRND BUS

C PH (AMP)	B PH (AMP)	A PH (AMP)	N (AMP)	LOAD (VA)	TYPE	DESCRIPTION	WIRE	CKT BKR AMP /P	NO	NO	CKT BKR AMP /P	WIRE	DESCRIPTION	TYPE	LOAD (VA)	N (AMP)	A PH (AMP)	B PH (AMP)	C PH (AMP)
		4.7	0.0	693.2032	MM	E - EF HOOD FAN	#12	20 /3	1	2	20 /3	#12	E - SF HOOD FAN	MM	2161.536	0.0	6.0		
	4.7		0.0	0	MM		---		3	4		---		MM	0	0.0		6.0	
4.7		0.0	0.0	0	MM		---		5	6		---		MM	0	0.0	0.0		6.0
	0.0	9.5	0.0	3422.432	MM	NEW EF-1 HOOD FAN	#12	20 /3	7	8	20 /1	---	SPARE		0	0.0	0.0	0.0	
	9.5	0.0	0.0	0	MM		---		9	10	20 /1	#12	E - RECPT.	RP	480	4.0	0.0	4.0	
9.5	0.0		0.0	0	MM		---		11	12	20 /1	#12	E - RECPT.	RP	480	4.0		0.0	4.0
		4.7	0.0	693.2032	MM	NEW SF-1 HOOD FAN	#12	20 /3	13	14	20 /1	#10	E - RECPT.	RP	480	4.0	4.0		
	4.7		0.0	0	MM		---		15	16	20 /1	#12	NEW HOOD CONTROLS	RP	480	4.0		4.0	
4.7		0.0	0.0	0	MM		---		17	18	20 /1	#10	NEW - BAR TVS	RP	720	6.0	0.0		6.0
	0.0	0.0	0.0	0		shun trip space	---	/1	19	20	60 /3	#4	MAIN CB	SF	0	0.0	0.0	0.0	
	4.5	0.0	4.5	540	RP	NEW OFFICE RECPT.	#12	20 /1	21	22		---		SF	0	0.0	0.0	0.0	
4.5	0.0		4.5	540	RP	NEW OFFICE RECPT.	#12	20 /1	23	24		---		SF	0	0.0		0.0	0.0

CONNECTED LOADS

C PH (AMP)	B PH (AMP)	A PH (AMP)	N (AMP)	LOAD (VA)	TYPE	DESCRIPTION
0.0	0.0	0.0	0.0	0	HT	ELECTRIC HEAT
0.0	0.0	0.0	0.0	0	AC	A/C REFRIGERATION
24.9	24.9	24.9	0.0	8970	MM	MISC. MOTORS
0.0	0.0	0.0	0.0	0	WH	WATER HEATING
0.0	0.0	0.0	0.0	0	OL	OUTDOOR LIGHTING
0.0	0.0	0.0	0.0	0	LT	INDOOR LIGHTING
14.5	12.5	4.0	14.5	3720	RP	RECEPTACLES
0.0	0.0	0.0	0.0	0	EX	EXISTING DEMAND
0.0	0.0	0.0	0.0	0	MC	MISC. CONTINUOUS
0.0	0.0	0.0	0.0	0	MN	MISC. NON-CONTINU'S
0.0	0.0	0.0	0.0	0	KT	KITCHEN EQUIPMENT
0.0	0.0	0.0	0.0	0	SF	SUB-FEED
39.4	37.4	28.9	14.5	12690		*** TOTAL ***
9.5	9.5	9.5		3422		LARGEST MOTOR

NEC COMPUTED LOADS 0

NEC FCTR	DESCRIPTION 0	TYPE 0	LOAD (VA)	N (AMP)	A PH (AMP)	B PH (AMP)	C PH (AMP)
0.00	ELECTRIC HEAT	HT	0	0.0	0.0	0.0	0.0
1.00	A/C REFRIGERATION	AC	0	0.0	0.0	0.0	0.0
1.00	MISC. MOTORS	MM	8970	0.0	24.9	24.9	24.9
1.00	WATER HEATING	WH	0	0.0	0.0	0.0	0.0
1.25	OUTDOOR LIGHTING	OL	0	0.0	0.0	0.0	0.0
1.25	INDOOR LIGHTING	LT	0	0.0	0.0	0.0	0.0
220-13	RECEPTACLES	RP	3720	14.5	4.0	12.5	14.5
1.25	EXISTING DEMAND	EX	0	0.0	0.0	0.0	0.0
1.25	MISC. CONTINUOUS	MC	0	0.0	0.0	0.0	0.0
1.00	MISC. NON-CONTINU'S	MN	0	0.0	0.0	0.0	0.0
0.65	KITCHEN EQUIPMENT	KT	0	0.0	0.0	0.0	0.0
1.00	SUB-FEED	SF	0	0.0	0.0	0.0	0.0
	FEED-THRU		0	0.0	0.0	0.0	0.0
0.25	LARGEST MOTOR	0	856	0.0	2.4	2.4	2.4
	*** TOTAL ***		13546	14.5	31.3	39.8	41.8

JOB NUMBER: 10093
DATE: 5-18-10
REVISIONS: -

Interior Alterations to:
ROUXPOUR RESTAURANT
Sugar Land Town Square
2298 Texas Dr. Sugar Land, Texas

JIM LAWLESS, AIA
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STATE OF TEXAS
H.M. McLEOD JR.
REGISTERED PROFESSIONAL ENGINEER

THIS SEAL WAS AUTHORIZED
THIS DATE: 05/18/2010

PROJECT #10-093
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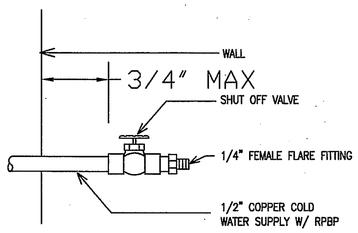
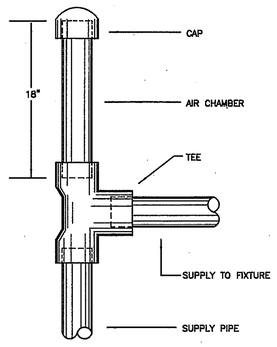
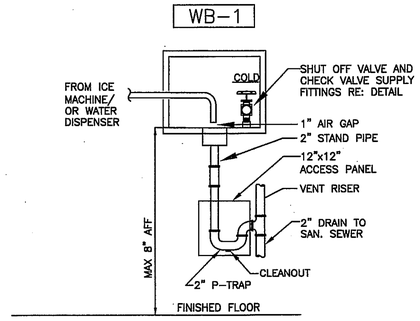
DRAWING:
ELECTRICAL SCHEDULES
E-4



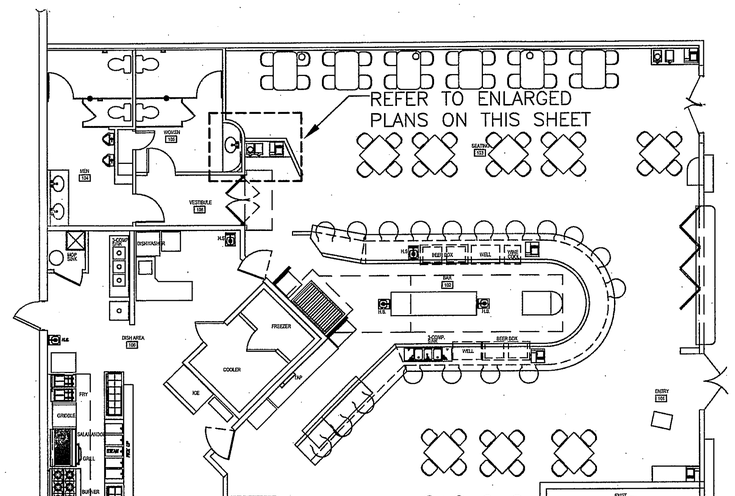
15 SHUT OFF VALVE FOR 1/4" WATER LINES

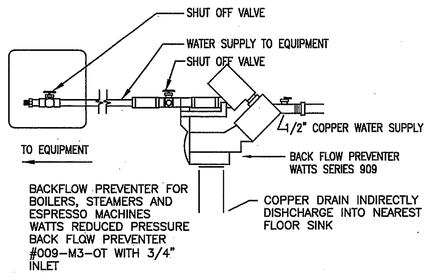


11 AIR CHAMBER DETAIL



9 ICE MACHINE DISCHARGE BOX





14 BACKFLOW PREVENTER SODA/COFFEE/ICE

1. ALL WORK TO MEET LOCAL CITY BUILDING CODE REQUIREMENTS.
2. PLUMBING CONTRACTOR TO MEET ALL REQUIREMENTS OF THE INTERNATIONAL PLUMBING CODE 2003 EDITION.
3. ALL MATERIALS TO BE OF COMMERCIAL QUALITY AND INSTALLATION TO BE WARRANTED BE PLUMBING CONTRACTOR.
4. ALL ACCESSIBLE REQUIREMENTS TO MEET STATE A.D.A. AND CITY REQUIREMENTS
5. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS.
6. CONDENSATE PIPING FOR AIR HANDLERS TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
7. PLUMBING CONTRACTOR (P.C.) TO MAKE FINIAL CONNECTIONS TO OWNER SUPPLIED EQUIPMENT AND KITCHEN EQUIPMENT. VERIFY WITH KITCHEN VENDOR PRIOR TO FINIAL CONNECTION AND PLUMBING PIPING ROUGH-IN CONNECTIONS.
8. PERMITS AND INSPECTIONS, FIELD CHANGES OR MODIFICATIONS TO THIS DOCUMENT MUST COMPLY WITH LOCAL CODES.
9. P.C. IS RESPONSIBLE TO FIELD VERIFY ALL EXISTING CONDITIONS (PIPE SIZE, LOCATION ETC...) PRIOR TO CONSTRUCTION. THIS DOCUMENT HAS BEEN PREPARED FROM EXISTING BUILDING WORKING DRAWINGS & MAY NOT REFLECT EXACT AS BUILT CONDITIONS EXISTING.

13 GENERAL NOTES

—SAN—	SOIL OR WASTE PIPING ABOVE GRADE
—SAN—	SOIL OR WASTE PIPING BELOW GRADE
— —	VENT PIPING
—CW—	COLD WATER PIPING
—HW—	HOT WATER PIPING
	BLOCK VALVE, SHUTOFF VALVE
	PIPING DOWN
	CAP ON END OF PIPE
(E)	EXISTING
	CLEANOUT
	FLOOR CLEANOUT
	BRANCH CONNECTION OUT OF SIDE
	ASME TEMPERATURE & PRESSURE RELIEF VALVE
	VACUUM BREAKER
4	REFER TO KEYED NOTE 4

12 PLUMBING SYMBOLS

PLUMBING SPECIFICATIONS

WATER PIPING NOTES:

1. WATER PIPING SHALL BE TYPE "L" COPPER, WITH 95-5 SILVER SOLDERED JOINTS.
2. INSULATE ALL HOT & CW WATER PIPING WITH RIGID FIBERGLASS OR FLEXIBLE FOAM INSULATION (ARMAFLEX). FLEXIBLE FOAM INSULATION SHALL NOT BE SPLIT, AND SHALL BE TAPED AT THE BUTT JOINTS. SUPPLY DROPS IN WALLS DO NOT NEED INSULATION.
   HOT WATER - REQUIRED INSULATION:
   1-1/4" PIPE & SMALLER WRAP W/ 1" INSULATION
   1-1/2" PIPE & LARGER WRAP W/ 2" INSULATION
3. PROVIDE EACH FIXTURE WITH STOPS AND SUPPLIES. EXPOSED STOPS SHALL BE CHROME PLATED WITH LOOSE KEY.
4. PROVIDE WATER HAMMER PROTECTION AT EACH FIXTURE, OR GROUP OF SIMILAR FIXTURES.
5. PROVIDE VACUUM BREAKERS AS REQUIRED BY UNIFORMED PLUMBING CODE.
6. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS. PRIMERS SHALL BE LOCATED IN A SERVICEABLE LOCATION.

SANITARY PIPING NOTES:

1. SANITARY, WASTE AND VENT PIPING SHALL BE CAST IRON UNLESS PROHIBITED BY THE LOCAL CODES.
2. ROOF PENETRATIONS SHALL BE WITH LEAD PIPE ROOF JACKS. COORDINATE ROOF SYSTEM WITH GENERAL CONTRACTOR AND VERIFY WITH ARCHITECTURAL DRAWINGS. CONTRACTOR TO MINIMIZE ROOF PENETRATIONS.
3. SLOPE OF SANITARY AND WASTE PIPING SHALL BE 1/4" PER FOOT MINIMUM FOR 3" PIPE AND MINIMUM OF 1/8" SLOPE FOR 4" PIPE.
4. EXPOSED WASTE DRAINS, IN TOILETS, SHALL BE CHROME PLATED BRASS, WITH MATCHING STOPS AND ESCUTCHEONS.

GENERAL NOTE TO CONTRACTOR

1. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH UNIFORM PLUMBING CODE AND INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
2. THIS CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK AND CONDUIT. SHOULD A CONFLICT OCCUR THIS CONTRACTOR SHALL NOTIFY THE ARCHITECT/ ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
3. ALL COUNTER MOUNTED LAVATORIES TO HAVE INSULATION ON ALL EXPOSED PIPES PER A.D.A. REQUIREMENTS.
4. ALL MATERIALS TO BE NEW & OF COMMERCIAL QUALITY AND INSTALLATION TO BE WARRANTED BY PLUMBING CONTRACTOR.
5. PLUMBING CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

WATER SAVING STANDARDS:

THE WATER SAVING PERFORMANCE STANDARDS FOR A PLUMBING FIXTURE ARE THOSE ESTABLISHED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), CURRENT REVISION, OR THE FOLLOWING STANDARDS, WHICHEVER ARE THE MORE RESTRICTIVE.

(1) THE MAXIMUM FLOW FROM A SINK OR LAVATORY FAUCET OR A FAUCET AERATOR SHALL NOT EXCEED 2.20 GALLONS OF WATER PER MINUTE AT A PRESSURE OF 60 POUNDS PER SQUARE INCH WHEN TESTED IN ACCORDANCE WITH ANSI TESTING PROCEDURES.

(2) THE MAXIMUM VOLUME OF WATER PER FLUSH FROM A TOILET SHALL NOT EXCEED AN AVERAGE OF 1.60 GALLONS WHEN TESTED IN ACCORDANCE WITH ANSI TESTING PROCEDURES.

PLUMBING MATERIAL LIST:

MINIMUM STANDARDS

(1) ALL UNDER GROUND WATER PIPING TO BE COPPER TYPE "K" WITH NO CONNECTIONS BELOW GRADE.

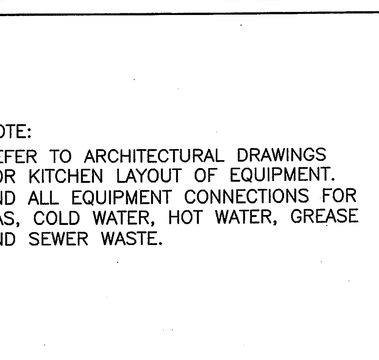
(2) ALL SANITARY SEWER PIPING AND VENTING TO BE CAST IRON. ALL CONNECTIONS TO BE CAST IRON. REFER TO PLUMBING SPECIFICATIONS.

(3) ALL WATER PIPING ABOVE GRADE TO BE TYPE 'L' COPPER WITH COPPER FITTINGS.

(4) ALL VALVES TO BE IN-LINE GATE VALVES. SIZE ACCORDING TO WATER LINE SIZE.

(5) ALL WATER CLOSETS, URINALS & LAVATORIES SHALL BE VITREOUS CHINA WITH WATER SAVER TYPE.

10 SPECIFICATIONS



8 WALL CLEAN-OUT DETAIL

MARK	DESCRIPTION	PIPE SIZES C.W.	H.W.	SAN.	NOTE TO P.C.
WB-1	CLOTHES WASHER CONNECTION RECESSED BOX. SPECIALTY PRODUCTS #OB-405-T. REFER TO DETAIL	1/2"	—	—	RE: DETAIL
WCO	WALL MOUNTED CLEANOUT, "ZURN" Z-1441 WITH SMOOTH ACCESS COVER	—	—	2",3",4"	

NOTES:
1. APPROVED MANUFACTURERS ARE AS FOLLOWS:
   FIXTURES = ELJER, AMERICAN STANDARD, KOHLER, CRANE
   STAINLESS STEEL SINKS = ELKAY
   FLOOR DRAIN/TRAP = J.R. SMITH, JOSAM
   WATER HEATER = A.O. SMITH, RHEEM, STATE
2. VERIFY CONNECTION TO OWNER FURNISHED EQUIPMENT. PLUMBING CONTRACTOR TO MAKE ALL FINAL CONNECTIONS.
3. PLUMBING CONTRACTOR TO SUPPLY ALTERNATE FIXTURES FOR ALL SPEC EQUIPMENT. COORDINATE TYPE AND STYLE REQUIRED WITH OWNER/TENANT PRIOR TO INSTALLATION.
4. COORDINATE ALL LOCATIONS AND FIXTURE TYPES WITH ARCHITECT VERIFY PRIOR TO INSTALLATION.
5. COORDINATE ALL LOCATIONS OF TOILET HANDLES WITH PROPER SIDE OF TANK FOR ADA ACCESSIBLITY.

7 PLUMBING FIXTURES SCHEDULE

NOTE:
REFER TO ARCHITECTURAL DRAWINGS FOR KITCHEN LAYOUT OF EQUIPMENT. AND ALL EQUIPMENT CONNECTIONS FOR GAS, COLD WATER, HOT WATER, GREASE AND SEWER WASTE.

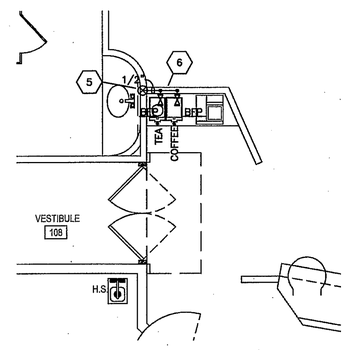
6 SHEET NOTE

5 OVERALL PLAN - PLUMBING

SCALE: 1/8" = 1'-0"

1. CONDENSATE PIPING FOR AIR HANDLERS TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
2. ALL HAND LAV.S AND THREE COMPARTMENT SINKS TO BE SUPPLIED AND INSTALLED BY KITCHEN VENDOR PLUMBING CONTRACTOR TO MAKE FINAL CONNECTIONS. REFER TO KITCHEN DRAWINGS FOR SIZES OF EQUIPMENT AND CONNECTION SIZES.
3. ALL INDIRECT WASTE LINES TO BE FASTEN TO ADJACENT WALL. SLOPE LINE FROM EQUIPMENT TO FLOOR SINK. TURN DISCHARGE PIPE DOWN INTO FLOOR SINK WITH A 1" AIR GAP BETWEEN PIPING AND FLOOR SINK.
4. PLUMBING CONTRACTOR TO DO A SMOKE TEST AND SEAL ALL VENT PIPE LEAKING IN EXISTING WALLS, CEILING, AND CHASES. P.C. TO PERFORM SMOKE TEST WITH GENERAL CONTRACTOR PRESENT.

4 GENERAL NOTES

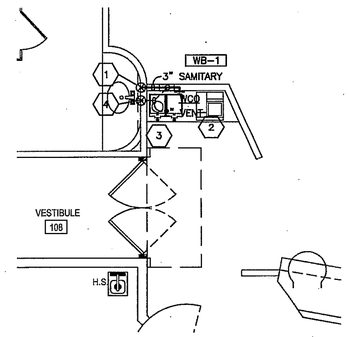


2 ENLARGED PLAN - WATER

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

1. COORDINATE LOCATION OF EXISTING SANITARY SEWER LINE WITH EXISTING CONDITIONS. FIELD VERIFY LOCATION. CONNECT NEW SANITARY SEWER PIPING WITH EXISTING LAV PIPE
2. 2" VENT IN HALF WALL FROM WASHER BOX
3. REFER TO PLUMBING FIXTURE SCHEDULE FOR FIXTURE TYPES AND PLUMBING CONNECTION. TYPICAL.
4. CONNECT NEW VENT TO EXISTING VENT LINE @ SINK
5. CONNECT NEW COLD WATER TO EXISTING WATER LOCATED IN THIS AREA. PROVIDE NEW GATE VALVE AS REQUIRED FOR WATER CONTROL.
6. SPLIT TO SERVE KITCHEN EQUIPMENT COFFEE & TEA MACHINE. REFER TO K.V. DRAWINGS. PROVIDE WITH BACKFLOW PREVENTOR & GATE VALVE.

3 KEYED NOTES



1 ENLARGED PLAN - SANITARY

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

JOB NUMBER: 10093
DATE: 5-18-10
REVISIONS: -

Interior Alterations to:
ROUX POUR RESTAURANT

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STATE OF TEXAS
H.M. McLEOD JR.
REGISTERED PROFESSIONAL ENGINEER

THIS SEAL WAS AUTH
THIS DATE 05/18/2

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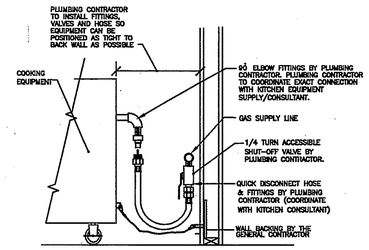
Firm Registra
H. M. McLeod, P.E.

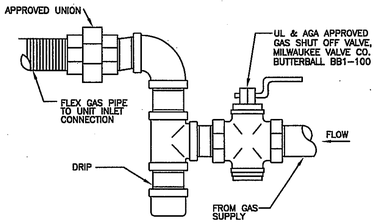
DRAWING:
SEWER P
FLOOR P
P-1

REFER TO ARCHITECTURAL DRAWINGS FOR KITCHEN LAYOUT OF EQUIPMENT.

REFER TO GAS RISER FOR GAS PIPING SIZES.



4 GAS CONNECTION AT KITCHEN EQUIP.



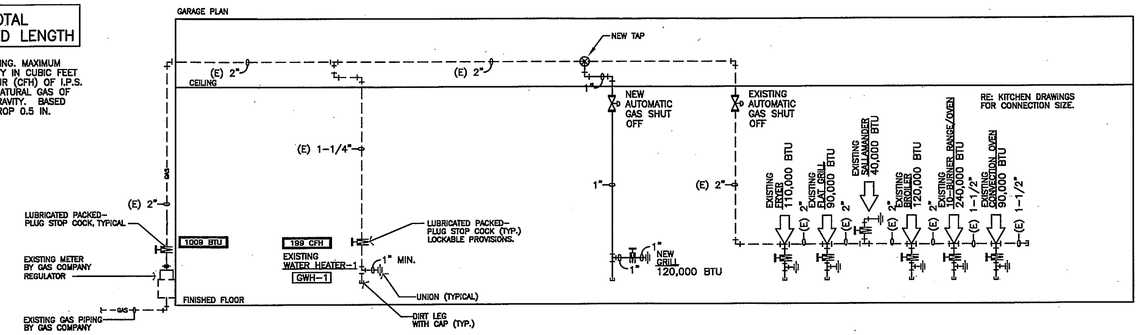
3 TYP. GAS CONNECTION AT WATER HEATER AND ROOF TOP UNITS

1. EXISTING GAS METER AS PER LOCAL GAS COMPANY. CENTER POINT ENERGY. VERIFY EXACT LOCATION WITH GAS COMPNAY.
2. DROP GAS PIPING DOWN TO BELOW KITCHEN HOOD. GAS SHUT OFF VALVE INSTALLED IN PIPE. RE: TO KITCHEN HOOD DRAWINGS.
3. REFER TO KICTHEN VENDOR DRAWINGS FOR GAS CONNECTION LOCATION AND SIZE. CONNECTION TO EQUIPMENT TO BE QUICK DISCONNECT.
4. REFER TO DETAIL FOR GAS EQUIPMENT CONNECTION. W/ FLEX CONNECTION, REFER TO DETAIL.
5. EXISTING GAS SERVICE ROUTED THROUGH WALL ABOVE CEILING FOR GAS CONNECTION TO KITCHEN EQUIPMENT. SLEEVE PIPE THROUGH WALL.
6. CONNECT NEW GAS PIPING TO EXISTING 2" GAS LINE. VERIFY TAP WITH EXISTING LOCATION

2 GAS KEYED NOTES

90 FT. TOTAL DEVELOPED LENGTH

SIZE OF GAS PIPING. MAXIMUM DELIVERY CAPACITY IN CUBIC FEET OF GAS PER HOUR (CFH) OF I.P.S. PIPE CARRYING NATURAL GAS OF 0.65 SPECIFIC GRAVITY. BASED ON PRESSURE DROP 0.5 IN. WATER COLUMN.



1 ROOF/FLOOR PLAN - PLUMBING GAS

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

JOB NUMBER: 10093

DATE: 5-18-10

REVISIONS: -

Interior Alterations to:

ROUXPOUR RESTAURANT

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THIS SEAL WAS AUTH
THIS DATED 05/18/20

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H. M. McLeod, P.E.

DRAWING:

GAS PIP
FLOOR P

P-2

4.2 SPACE ALLOWANCES AND REACH RANGES

TAS SECTIONS 4.2.1 – WHEELCHAIR PASSAGE WIDTH

A. The minimum clear width for single wheelchair passage shall be 32" at a point and 36" continuously

TAS SECTIONS 4.2.2 – WIDTH FOR WHEELCHAIR PASSING

A. The minimum clear width for two wheelchairs to pass is 60"

TAS SECTIONS 4.2.4.1 – SIZE AND APPROACH

A. Minimum clear floor space for a wheelchair and occupant shall be 30" wide x 48" long. Clear floor space shall be centered on the element it serves.

4.3 ACCESSIBLE ROUTE

TAS SECTIONS 4.3.2 – LOCATION

A. At least one accessible route shall be provided from public transportation stops, accessible parking and loading zones, and public streets or sidewalks to the accessible building entrance.

TAS SECTIONS 4.3.3 – WIDTH

A. The minimum clear width of an accessible route shall be 36" except at doors.

TAS SECTIONS 4.3.4 – PASSING SPACE

A. If an accessible route is less than 60" in width, then passing spaces of at least 60"x60" shall be provided at 200' max. spacing.

TAS SECTIONS 4.3.5 – HEAD ROOM

A. Accessible routes shall have 80" min. clear head room.

TAS SECTIONS 4.3.7 – SLOPE

A. Running slope shall not exceed 1:20. (If slope exceeds 1:20, refer to section 4.8)

B. Cross slope shall not exceed 1:50

4.4 PROTRUDING OBJECTS (REF. DET. 5.2 & 5.3)

TAS SECTIONS 4.4.1 – GENERAL

A. Objects projecting from walls (for example, telephones) with their leading edges between 27"-80" above the finished floor shall protrude no more than 4" into walks, halls, corridors, passageways, or aisles. Objects mounted with their leading edges at or below 27" above the finished floor may protrude any amount. Free-standing objects mounted on posts or pylons may overhang 12" maximum from 27"-80" above the ground or finished floor. Protruding objects shall not reduce the clear width of an accessible route or maneuvering space.

4.5 GROUND AND FLOOR SURFACES (REF. DET. 5.1)

TAS SECTIONS 4.5.2 – CHANGES IN LEVEL

A. Changes in level up to 1/4" may be verticle and without edge treatment

B. Changes in level between 1/4" and 1/2" shall be beveled with a slope no greater than 1:2.

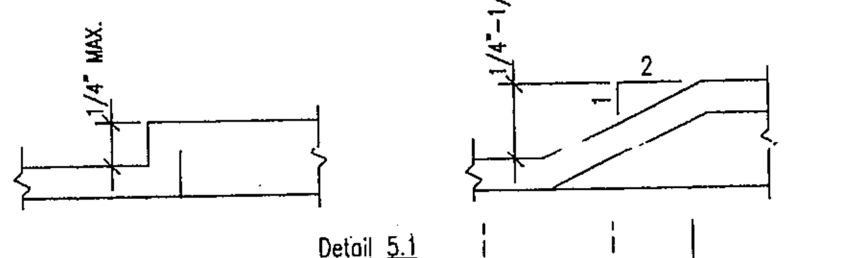
TAS SECTIONS 4.5.3 – CARPET

A. Carpet provided on a floor surface shall be securely attached; have a firm pad or backing, or no pad; and have a level loop, textured loop, level cut pile, or level cut/uncut pile texture. Maximum pile thickness shall be 1/2". Exposed edges of carpet shall be fastened to floor surfaces and have trim along the exposed edges.

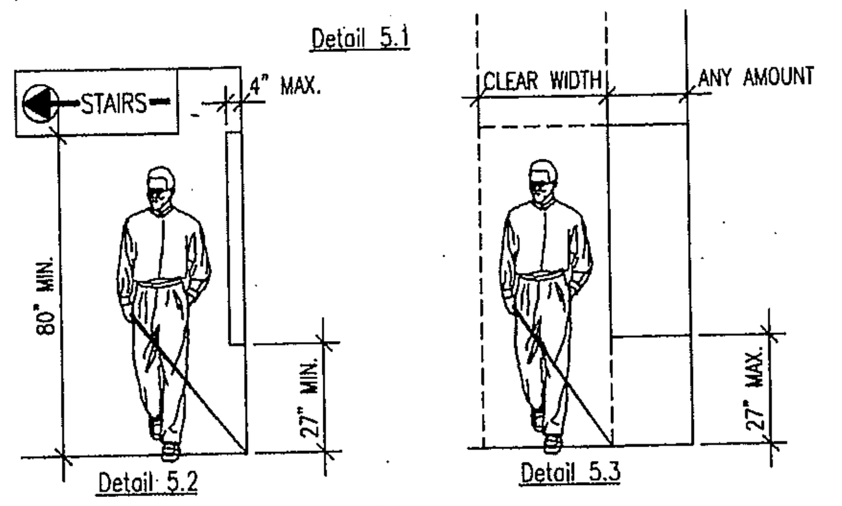
TAS SECTIONS 4.5.4 – GRATINGS

A. If gratings are located in walking surfaces or along accessible routes, then they shall have spaces no greater than 1/2" wide in one direction.

B. If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel.



Detail 5.1



Detail 5.2 Detail 5.3

4.6 PARKING AND PASSENGER LOADING ZONES

TAS SECTIONS 4.6.3 – PARKING SPACES

A. Accessible parking shall be at least 96" wide.

B. Parking access aisles shall be 60" wide. Van accessible access aisles shall be 96" wide.

C. Surface slope shall not exceed 1:50 in all directions

TAS SECTIONS 4.6.4 – SIGNAGE

A. Characters and symbols on such signs shall be located 60" minimum above the ground.

B. Signage located within an accessible route shall be located 80" min. above the walking surface.

TAS SECTIONS 4.6.5 – VERTICAL CLEARANCE

A. Provide minimum verticle clearance of 114" at accessible passenger loading zones and along at least one vehicle access route from site entrances and exits.

TAS SECTIONS 4.6.6 – PASSENGER LOADING ZONE

A. Passenger loading zones shall provide an access aisle at least 60" wide and 20 ft long adjacent and parallel to the vehicle pull-up space. If there are curbs between the access aisle and the vehicle pull-up space, then a curb ramp complying with 4.7 shall be provided. Vehicle standing spaces and access aisles shall be level with surface slopes not exceeding 1:50 in all directions.

4.7 CURB RAMPS

TAS SECTIONS 4.7.2 – SLOPE (REFERENCE DETAIL 3.1)

A. Slopes of curb ramps shall comply with 4.8.2.

B. Maximum slopes of adjoining gutters, road surface immediately adjacent to the curb ramp, or accessible route shall not exceed 1:20.

TAS SECTIONS 4.7.3 – WIDTH (REFERENCE DETAIL 3.1)

A. The minimum width of a curb ramp shall be 36", exclusive of flared sides.

TAS SECTIONS 4.7.5 – SIDES OF CURB RAMPS (REFERENCE DETAIL 3.1)

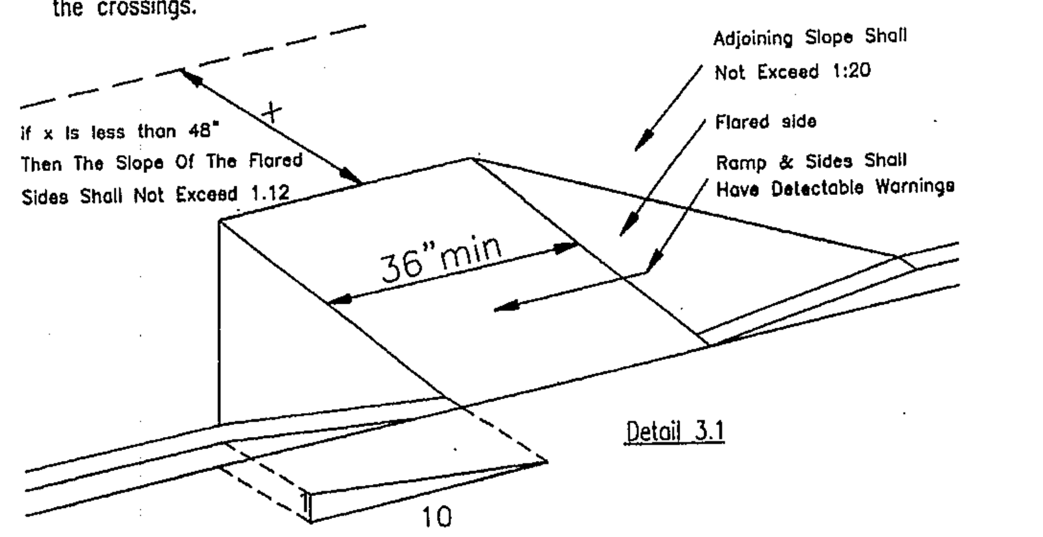
A. If a curb ramp is located where pedestrians must walk across the ramp or where it is not protected by handrails or guardrails, it shall have flared sides; the maximum slope of the flare shall be 1:10

TAS SECTIONS 4.7.10 – DIAGONAL CURB RAMPS

A. If diagonal curb ramps have returned curbs or other well-defined edges, such edges shall be parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have 48" minimum clear space. If diagonal curb ramps are provided at marked crossings, the 48" clear space shall be within the markings. If diagonal curb ramps have flared sides, they shall also have at least a 24" long segment of straight curb located on each side of the curb ramp and within the marked crossing.

TAS SECTIONS 4.7.11 – ISLANDS

A. Any raised islands in crossings shall be cut through level with the street or curb ramps at both sides and a level area at least 48" long between the curb ramps in the part of the island intersected by the crossings.



Detail 3.1

4.8 RAMPS

TAS SECTIONS 4.8.1 – GENERAL

A. Any part of an accessible route with a slope greater than 1:20 shall be considered a ramp and shall comply with 4.8

TAS SECTIONS 4.8.2 – SLOPE AND RISE

A. The least possible slope shall be used for any ramp. The maximum slope of a ramp in new construction shall be 1:12. The maximum rise for any run shall be 30".

TAS SECTIONS 4.8.3 – CLEAR WIDTH

A. The minimum clear width of a ramp 30 ft or less in length shall be 36". Ramps more than 30 ft. in length shall have a minimum clear width of 44".

TAS SECTION 4.8.4 – LANDINGS

A. Level landings required at top and bottom of each run, with the following features:

1. Minimum Width: Equal to width of ramp
2. Length: Minumum 60" clear

TAS SECTION 4.8.5 – HANDRAILS

A. Height: 34-38" above ramp surface

B. The clear space between the handrail and the wall shall be 1-1/2".

TAS SECTIONS 4.8.7 – EDGE PROTECTION

A. Ramps and landings with drop offs shall have curbs, walls, railings, or projecting surfaces that prevent slipping off the ramp. Curbs shall be a minimum of 2" high.

4.9 STAIRS

TAS SECTIONS 4.9.2 – TREADS AND RISERS

A. All steps on a flight of stairs shall have uniform riser heights and tread widths

1. Minimum tread depth shall be 11", measured from riser to riser (not including nosing)
2. Open risers are not permitted

TAS SECTION 4.9.4 – HANDRAILS

A. Non-continuous handrails shall extend 12" beyond the top riser and 12" plus the width of one tread beyond the bottom riser. At the top, the extension shall be parallel to the floor. At the bottom, the handrail shall continue to slope for a distance of one tread width (11"); the remaining extension shall be horizontal.

B. Height: 34" – 38", measured from the stair nosing.

4.10 ELEVATORS

TAS SECTIONS 4.10.3 – HALL CALL BUTTONS

A. Shall be centered 42" above floor

TAS SECTIONS 4.10.4 – HALL LANTERNS

A. Visible signals shall have the following features:

1. Fixtures shall be mounted with centerline at least 72" above the lobby floor
2. Visual elements shall be at least 2-1/2" in the smallest dimension

TAS SECTIONS 4.10.5 – RAISED AND BRAILLE CHARACTERS ON HOISTWAY ENTRANCES

A. All elevator hoistway entrances shall have raised and Braille floor no. designations provided on both jambs. Centerline of the characters shall be 60" above the floor. Characters shall be 2" high.

TAS SECTIONS 4.10.6 – DOOR PROTECTIVE AND REOPENING DEVICE

A. Elevator doors shall open and close automatically. They shall be provided with a reopening device that will stop and reopen a car door and hoistway door automatically if the door becomes obstructed by an object or person.

TAS SECTIONS 4.10.12 – CAR CONTROLS

A. All floor buttons shall be:

1. All control buttons shall be at least 3/4" in their smallest dim. They shall be flush or raised.
2. All control buttons shall be designated by Braille and by raised standard alphabet characters for letters, arabic characters for numerals. The call button for the main entry floor shall be designated by a raised star at the left of the floor designation.
3. Maximum 54" above floor where side approach is provided
4. Maximum 48" where forward approach is provided

B. Emergency Controls:

1. Shall have centerlines 35" minimum above floor
2. Shall be grouped at bottom of panel

4.11 PLATFORM LIFTS

TAS SECTIONS 4.11.2, 4.27.3 – OTHER REQUIREMENTS CONTROLS AND OPERATING SYSTEMS

A. Heights permitted:

Controls and operating mechanisms shall be located for either a forward or side approach from any direction of travel. They shall be located 28" min. and 48" maximum above the floor. They shall be operable with one hand. There shall be at least one handrail complying with 4.26. Wheelstops and guardrails shall be provided where necessary.

4.13 DOORS

TAS SECTION 4.13.4 – DOUBLE – LEAF DOORWAYS

A. Doorways with two independently operated leaves shall have at least one leaf that meets the requirements in 4.13.5 and 4.13.6.

TAS SECTIONS 4.13.5 – CLEAR WIDTH

A. Doorways shall provide a clear opening of 32" minimum, with the door open 90°.

1. Clear opening shall be measured between the face of the door and stop.
2. Openings more than 24" in depth shall provide a clear opening of 36" minimum.

Exception: Doors not requiring full user passage, such as shallow closets, shall have a clear opening of 20" minimum.

TAS SECTION 4.13.6 – MANEUVERING CLEARANCES AT DOORS

A. Provide level and clear maueuvering area at doors as follows:
Front approach pull side – 18" min. beside strike edge
Front approach push side – 0" beside strike edge
12" if door has both a closer and a latch
Hinge side approach pull side – 60" min. width; 36" min. beside strike edge
Hinge side approach push side – 42" min. width
48" min. width if door has both a closer and latch
Latch side approach pull side – 48" min. width and 24" min. beside strike edge
54" min. width if door has closer
Latch side approach push side – 42" min. width and 24" min. beside strike edge
48" min. width if door has closer

TAS SECTION 4.13.8 – THRESHOLDS AT DOORWAYS

A. Maximum threshold height: 1/2" (3/4" at exterior sliding doors). Raised thresholds and floor level changes shall be beveled with a slope no greater than 1:2.

TAS SECTION 4.13.9 – DOOR HARDWARE

A. Handles, pulls, latches, locks, and other operating devices shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist to operate.

1. Lever-operated mechanisms, push-type mechanisms, and U shaped handles are acceptable designs.
2. When sliding doors are fully open; operating hardware shall be exposed and usable from both sides.
3. Hardware required for passage shall be mounted no higher than 48" above finished floor.

TAS SECTION 4.13.10 – DOOR CLOSERS

A. If a door has a closer, then the sweep period of the closer shall be adjusted so that from an open position of 70', the door will take at least 3 seconds to move to a point 3" from the latch, measured to the leading edge of the door.

TAS SECTION 4.13.11 – DOOR OPENING FORCE

A. The maximum force for pushing or pulling open a door shall be as follows:

1. Fire doors shall have the minimum opening force allowable by the appropriate administrative authority.
2. Other doors
   a. Exterior hinged doors: no requirement.
   b. Interior hinged doors: 5.0 lbf.
   c. Sliding or folding doors: 5.0 lbf.

These forces do not apply to the force required to retract latch bolts or disengage other devices that may hold the door in a closed position.

4.15 DRINKING FOUNTAINS

TAS SECTION 4.15.2 – SPOUT HEIGHT (REFERENCE DETAIL 11.1)

A. Spouts shall be no higher than 36", measured from the floor or ground surface to the spout outlet.

TAS SECTION 4.15.3 – SPOUT LOCATION

A. Spouts shall be located at the front of the unit and shall direct the water flow in a trajectory that is parallel or nearly parallel to the front of the unit.

1. The spout shall provide a flow of water at least 4" high.
2. If the fountain has a round or oval bowl, the spout must be positioned so the flow of water is within 3" of the front edge of the fountain.

TAS SECTION 4.15.4 – CONTROLS

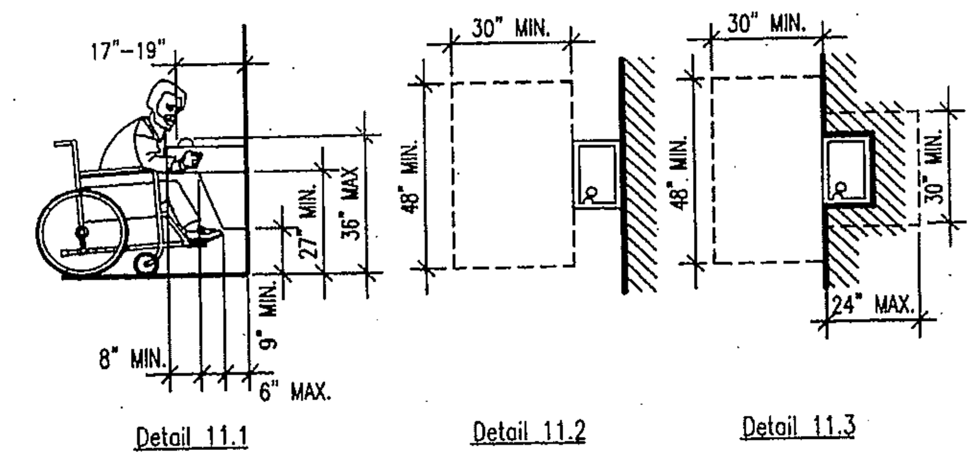
A. Unit controls shall be front mounted or side mounted near the front edge.

TAS SECTION 4.15.5 – CLEARANCES (REFERENCE DETAIL 11.1)

A. Wall and post mounted cantilever fountains shall have clear knee space as follows:

1. Minimum 27" high (from apron bottom to floor) minimum 30" wide, and 17" – 19" deep.
2. A minimum 30" by 48" clear floor space allowing a forward approach to the unit shall be provided.

B. Free standing or built-in units not having a clear knee space shall have a minimum 30" by 48" clear floor space allowing a parallel approach to the unit.



Detail 11.1 Detail 11.2 Detail 11.3

4.16 WATER CLOSETS

TAS SECTION 4.16.2 – CLEAR FLOOR SPACE

A. Clear floor space for water closets not in stalls shall be provided as follows:
Front approach – 48" min. wide x 66" min. long
Side approach – 56" min. to front of toilet x 48" min. wide
Both approach – 60" min. wide x 56" min. long

TAS SECTION 4.16.3 – HEIGHT (REFERENCE DETAIL 12.1.1)

A. The height to the top of the toilet seat shall be 17" – 19" above floor.

1. Seats shall not be sprung to return to a lifted position.

TAS SECTIONS 4.16.4, 4.26 – GRAB BARS (REFERENCE DETAILS 12.1.1 AND 12.1.2)

A. For water closets not located in toilet stalls, the following grab bars shall be provided, 33" – 36" above the finish floor:

1. Side wall: 42" long minimum, 12" from back wall.
2. Back wall: 36" long minimum, 12" minimum each side of water closet centerline.

Refer to 4.26 Grab Bars for size and structural elements.

TAS SECTIONS 4.16.5, 4.27.4 – FLUSH CONTROLS (REFERENCE DETAIL 12.1.2)

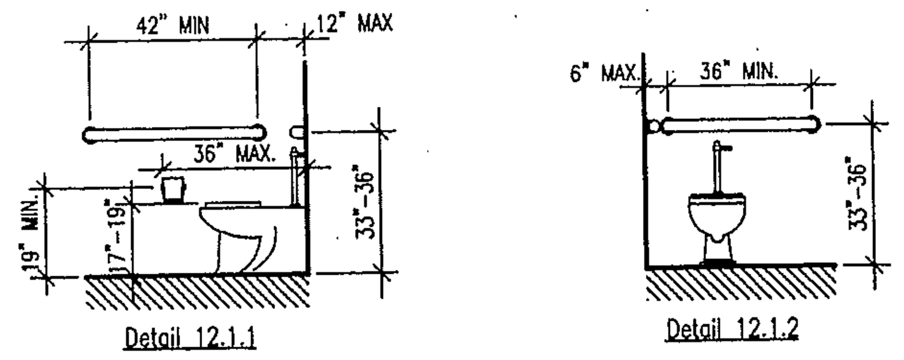
A. Controls shall be 44" maximum above the finish floor.

1. Controls for flush valves shall be mounted on the wide side of toilet areas.
2. Controls shall be hand operated or automatic.
3. Controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.
4. The force required to activate controls shall be no greater than 5lbf.

TAS SECTION 4.16.6 – DISPENSERS (REFERENCE DETAIL 12.1.1)

A. Toilet paper dispensers shall be installed on the side wall, a minimum 19" above the floor, and a maximum 36" from the rear wall.

1. Dispensers that control delivery or do not permit continuous paper flow shall not be used.



Detail 12.1.1 Detail 12.1.2

4.17 TOILET STALLS

TAS SECTION 4.22.4 – WHERE APPLICABLE

A. If toilet stalls are provided in a toilet room or bathroom, then at least one shall be a "standard" accessible toilet stall (for wheelchair users) complying with this section.

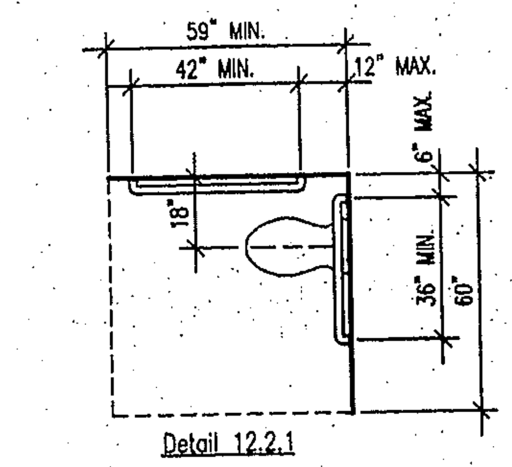
B. If 6 or more toilet stalls are provided in a toilet room or bathroom in addition to the 'standard' accessible stall required; an additional 'alternate A' accessible stall 36" wide (for ambulatory persons with disabilities) complying with this section shall be provided.

C. Alterations/Existing Conditions: In alteration work. where provision of a 'standard' accessible stall is technically infeasible, or where plumbing code requirements prevent combining existing stalls to provide space, either 'alternate' stall (A or B) complying with this section may be provided in lieu of the standard stall.

TAS SECTION 4.17.3 – SIZE AND ARRANGEMENT (REFERENCE DETAIL 12.2.1)

A. Toilet stalls may be arranged to provide either a left or a right handed approach. Accessible toilet stalls shall have the following dimensions:

1. 'Standard' Accessible Stall
   60" minimum width.
   59" minimum depth, with floor mounted water closet
   56" minimum depth, with wall mounted water closet
   Door: outward swinging (if door swings into stall, depth shall be increased by 36"
2. 'Alternate A' Accessible Stall (required when more than 6 stalls provided, permitted in lieu of standard stall in certain alterations)
   36" minimum width.
   69" minimum depth, with floor mounted water closet.
   66" minimum depth with wall mounted water closet
   Door: outward swinging.
3. 'Alternate B' Accessible Stall (permitted in lieu of standard stall only in certain alterations)
   48" minimum width.
   54" minimum depth.
   Door : outward swinging.



Detail 12.2.1

TAS SECTION 4.17.4 – TOE CLEARANCES

A. In 'Standard' accessible stalls, the front partition and at least one side partition shall provide a toe clearance of at least 9" above the floor.

B. If the depth of the stall is greater than 60", the toe clearance is not required.

TAS SECTION 4.17.5 – DOORS

A. Toilet stall doors, including hardware, shall comply with ELEMENT 10: DOORS

B. If toilet stall approach is from the latch side of the stall door, clearance between the door side of the stall and any obstruction shall be 42" minimum. (This is an exception from typical door maneuvering clearances)

TAS SECTION 4.17.6 – GRAB BARS (REFERENCE DETAILS 12.1.1, 12.1.2, AND 12.2.1)

A. Grab Bars mounted 33" – 36" above the floor, shall be provided as follows:

1. 'Standard' Accessible Stall: One 40" side wall grab bar (on near wall) and one rear wall grab bar.
2. 'Alternate A' Accessible Stall: 42" side wall grab bar each side.
3. 'Alternate B' Accessible stall: One 42" side wall grab bar (on near wall), one rear wall grab bar.
4. Side Wall Grab Bar: Minimum length as indicated, mounted 12" maximum off rear wall.
5. Rear Wall Grab Bar: Minimum length 36", 12" minimum each side of water closet centerline.

Refer to 4.26 Grab Bars for size and structural requirements.

4.18 URINALS

TAS SECTION 4.18.2 – HEIGHT (REFERENCE DETAIL 12.3.1)

A. Urinals shall be stall-type or wallhung with a tapered, elongated rim at 17" maximum above the finished floor.
The rim shall extend a minimum of 14" from the wall.

TAS SECTION 4.18.3 – CLEAR FLOOR SPACE (REFERENCE DETAIL 12.3.2)

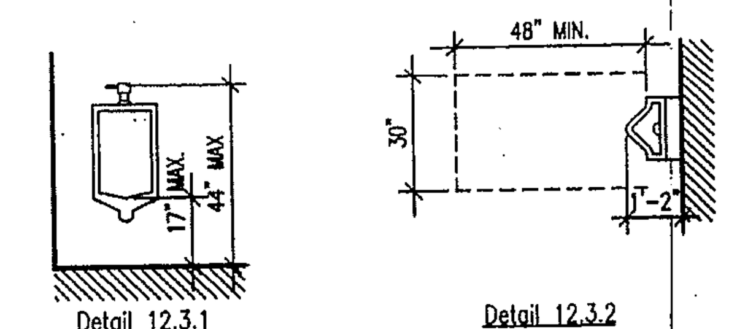
A. A clear floor space 30" wide by 48" deep minimum shall be provided in front of urinal to allow frontal approach.

1. This space shall adjoin or overlap an accessible route.
2. Urinal shield that do not extend beyond the front edge of the urinal rim may be provided with 29" clearance between them.
3. Urinals installed in alcoves deeper than 24" require a maneuvering area of at least 36" minimum wide.

TAS SECTION 4.18.4 – FLUSH CONTROLS (REFERENCE DETAIL 12.3.1)

A. Controls shall be 44" maximum above the finished floor.

1. Controls shall be hand operated or automatic.
2. Controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.
3. The force required to activate controls shall be no greater than 5 lfb.



Detail 12.3.1 Detail 12.3.2

4.19 LAVATORIES & MIRRORS

TAS SECTION 4.19.2 – HEIGHT & CLEARANCES (REFERENCE DETAIL 12.5.1 AND 12.5.2)

A. Lavatories shall be mounted with the rim or counter surface no higher than 34" above the finished floor.

1. Lavatories shall extend 17" minimum from the wall.
2. Clearance of 29" minimum shall be provided from the finished floor to bottom of apron.
3. Knee clearance of 27" minimum shall extend 8" minimum under the edge of the lavatory.
4. Toe clearance of 9" minimum shall be provided for the full depth of the lavatory.

TAS SECTION 4.19.4 – EXPOSED PIPES AND SURFACES

A. Hot water and drain pipes under lavatories shall be insulated or otherwise configured to protect against contact.

B. There shall be no sharp or abrasive surfaces under lavatories.

TAS SECTIONS 4.19.5, 4.27.4 – FAUCETS

A. Controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.

B. The force required to activate controls shall be no greater than 5 lbf.

C. Lever-operated, push-type, and electronically controlled mechanisms are examples of acceptable designs.

D. If self-closing valves are used the faucet shall remain open for at least 10 seconds.

TAS SECTION 4.19.6 – MIRRORS (REFERENCE DETAIL 12.5.1)

A. Mirrors shall be mounted with the bottom edge of the reflecting surface 40" maximum above the finished floor.

TAS - GUIDELINES

ACCESSIBILITY GUIDELINES (TAS)

JOB NUMBER

DATE:

REVISIONS

DRAWING

TAS Detail

4.20 BATHTUBS

TAS SECTION 4.20.2 – FLOOR SPACE

A. Clear floor space shall be provided in front of bathtubs as follows:
30" wide x 60" long beside the bathtub for side approach
48" wide x 60" long beside the bathtub for front approach

with seat at head of tub – 30" wide x 75" long beside tub

TAS SECTION 4.20.3 – SEAT

A. An in-tub seat or a seat at the head end of the tub shall be provided. Seats shall be mounted securely and shall not slip during use.

TAS SECTIONS 4.20.4 – GRAB BARS

A. Heights permitted:

1. With in Tub Seat:
Control wall: 24" long minimum, from outside wall, 33–36" above floor
Back wall: 2 bars, 24" long minimum, 12" maximum from foot end, 24" maximum from head end; one 33–36" above floor, one 9" above the tub
Head wall: 12" minimum, from outside wall, 33–36" above floor

2. With Seat at Head of Tub:
Control wall: 24" long minimum, from outside wall, 33–36" above floor
Back wall: 2 bars, 48" long minimum, 12" maximum from foot end, 15" maximum from head end; one 33–36" above floor, one 9" above the tub
Head wall: none

TAS SECTION 4.20.6 – SHOWER UNIT

A. A shower spray unit with a hose at least 60" long shall be provided.

4.21 SHOWER STALLS

TAS SECTION 4.21.2 – SIZE AND CLEARANCES

A. Shower stalls shall be either 36"x36" clear inside dimension or 30" min. x 60" min. clear inside dimension.

TAS SECTIONS 4.21.3 – SEAT

A. Seat is required in 36"x 36" stalls, and shall have the following features:

1. Shall be 17"–19" above bathroom floor
2. Shall extend the full depth of the stall
3. Shall be located on the wall opposite control wall
4. Maximum space between wall and seat edge shall be 1–1/2"
5. Shall project 16" maximum into stall width, except at the rear 15" maximum of the stall, where the seat may project 23"

TAS SECTIONS 4.21.4 – GRAB BARS

A. Grab bars shall be mounted 33–36" above floor

TAS SECTIONS 4.21.5 – CONTROLS

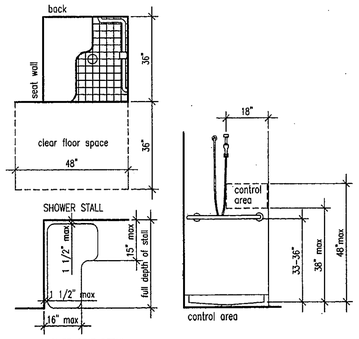
A. All shower controls shall be located 38" minimum and 48" maximum above the floor

TAS SECTION 4.21.6 – SHOWER UNIT

A. A shower spray unit with a hose at least 60" long that can be used both as a fixed shower head and as a hand held shower shall be provided. The mounting device shall comply with the requirements for Forward Reach.

TAS SECTIONS 4.21.7 – CURBS

A. If provided, curbs on transfer showers shall be no higher than 1/2" roll-in showers shall not have curbs



SHOWER SEAT DETAIL

4.22 TOILET ROOMS

TAS SECTIONS 4.22.2 – DOORS

A. All doors to accessible toilet rooms shall comply with 4.13. Doors shall not swing into clear floor space required for any fixture. Clear floor turning space may overlap door swings.

TAS SECTIONS 4.22.3 – CLEAR FLOOR SPACE

A. The accessible fixtures and controls required in 4.22.4, 4.22.5, 4.22.6 4.22.7 shall be on an accessible route. An unobstructed turning space complying with 4.2.3 shall be provided within an accessible toilet room. The clear floor space at fixtures and controls, the accessible route, and the turning space may overlap, however; the only turning space provided shall not be located within a stall.

TAS SECTIONS 4.22.4 – WATER CLOSETS

A. If toilet stalls are provided, then at least one shall be a standard toilet stall complying with 4.17; where 6 or more stalls are provided in addition to the stall complying with 4.17.3, at least one stall 36" wide with an outward swinging, self-closing door and parallel grab bars shall be provided. Water closets in such stalls shall comply with 4.16.

TAS SECTIONS 4.22.5 – URINALS

A. If urinals are provided, then at least one shall comply with 4.18.

TAS SECTIONS 4.22.6 – LAVATORIES AND MIRRORS

A. If lavatories and mirrors are provided, then at least one of each shall comply with 4.19. Accessible lavatories and mirrors shall not be located within toilet stalls unless other accessible lavatories and mirrors are provided in the toilet room.

TAS SECTIONS 4.22.7 – CONTROLS AND DISPENSERS

A. If controls, dispencers, receptacles, or other equipment are provided, then at least one of each shall be on an accessible route and shall comply with 4.27 – (Controls & Operating Mechanisms).

4.23 – BATHROOMS, BATHING FACILITIES, AND SHOWER ROOMS

TAS SECTION 4.23.8 – BATHING AND SHOWER FACILITIES

A. If tubs and showers are provided, then at least one accessible tub that complies with 4.20 or at least one accessible shower that complies with 4.21 shall be provided

4.24 – SINKS

TAS SECTION 4.24.2 – HEIGHT (REFERENCE DETAIL 12.5.1)

A. Sinks shall be mounted with the rim or counter surface no higher than 34" above the finished floor.

TAS SECTIONS 4.24.3 – KNEE CLEARANCE (REFERENCE DETAIL 12.5.1)

A. Knee clearance of 27" high minimum, 30" wide minimum, and 19" deep minimum shall be provided underneath sinks.

TAS SECTION 4.24.4 – DEPTH

A. Each sink shall be a maximum of 6–1/2" deep.

TAS SECTION 4.24.6 – EXPOSED PIPES AND SURFACES

A. Hot water and drain pipes under sinks shall be insulated or otherwise configured to protext against contact.

B. There shall be no sharp or abrasive surfaces under sinks.

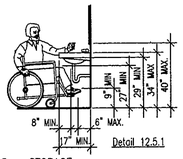
TAS SECTION 4.24.7, 4.27.4 – FAUCETS

A. Controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.

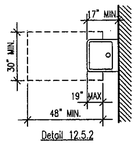
B. The force required to activate controls shall be no greater than 5 lbf.

C. Lever–operated, push–type, and electronically controlled mechanisms are examples of acceptable designs.

D. If self–closing valves are used the faucet shall remain open for at least 10 seconds.



Detail 12.5.1



Detail 12.5.2

4.25 – STORAGE

TAS SECTION 4.25.1 – DEPTH (REFERENCE DETAIL 14.1)

A. Storage areas may be 36" in depth or less. If more than 36" in depth then area must allow 60" diameter of clear floor space for turning.

TAS SECTION 4.25.2 – CLEAR FLOOR SPACE: (REFERENCE DETAIL 14.2)

TAS SECTION 4.25.3 – HEIGHT (REFERENCE DETAIL 14.3 AND 14.4)

A. Where a forward reach is required, accessible storage spaces shall be 48" maximum and 15" minimum above the floor. If the forward reach is over an obstruction (with knee space equal to or greater than reach distance) 20"–25" deep, the maximum height shall be 44"; if the obstruction is less than 20", maximum height shall be 48".

B. Where a side reach is provided, accessible storage spaces shall be 54" maximum and 9" minimum above the floor. Maximum height shall be 46" for side reach over an obstruction 34" maximum high and 24" maximum deep.

C. Clothes rods or shelves shall be a maximum 54" above floor where a side reach is required.

D. Where the distance from the wheelchair to the clothes rod or shelf exceeds 10" (as at closets with inaccessible doors) the following criteria shall be met:

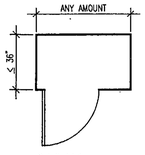
1. Shelves: Reach: 21" maximum; height: 48" maximum, 9" minimum.

2. Clothes rods: reach 21" maximum; height: 48" maximum.

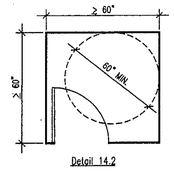
TAS SECTIONS 4.25.4, 4.27.4 – HARDWARE

A. Hardware for accessible storage facilities shall be operable with one hand and shall not require tight grasping, pinching, or tisting of the wrist.

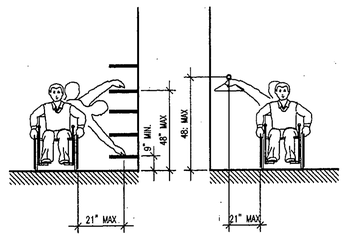
B. The force required to activate the hardware shall be no greater than 5 lbf



Detail 14.1



Detail 14.2



Detail 14.3

Detail 14.4

4.26 – GRAB BARS

TAS SECTION 4.26.2 – SIZE AND SPACING

A. Diameter or width of gripping surface shall be 1–1/4" to 1–1/2", or the shape shall provide an equivalent gripping surface.

1. The space between grab bars and adjacent walls shall be 1–1/2"

TAS SECTION 4.26.3 – STRUCTURAL STRENGTH

A. Grab bars and mounting devices shall meet the following requirements:

1. Bending stress induced by maximum bending moment from application of 250 lbf shall be less than allowable stress for material used.

2. Shear stress induced by application of 250 lbf shall be less than allowable shear stress for material used. If connection between grab bar and mounting bracket is considered to be fully restrained, then direct and torsional shear stresses shall be totaled for the combined shear stress, which shall not exceed the allowable shear stress.

3. Shear force induced in a fastener or mounting device from application of 250 lbf shall be less than allowable lateral load of either the fastener or mounting device or the supporting structure, whichever is the smaller allowable load.

4. Tensile force induced in a fastener by a direct tension force of 250 lbf plus the maximum moment from the application of 250 lbf shall be less than the allowable withdrawal load between the fastener and the supporting structure.

5. Grab bars shall not rotate within their fittings.

TAS SECTION 4.26.4 – ELIMINATING HAZARDS

A. Grab bars and adjacent wall surfaces shall be free of sharp or abrasive surfaces.

B. Edges shall have a radius of 1/8" minimum.

4.27 – CONTROLS AND OPERATING MECHANISMSS

TAS SECTION 4.27.3 – HEIGHT (refer to detail 16.3)

A. Front approach – 48" max. to 15" min.
B. Side approach – 54" max. to 9" min., except per below.
C. Electrical & communication system recepticals shall be mounted no less than 15" above the floor.

4.28 – ALARMS

TAS SECTION 4.28.1 – GENERAL

A. When required, visual alarms shall be provided in each of the following areas, as a minimum: restrooms and any other general usage areas (e.g., meeting rooms), hallways, lobbies, and any other area for common use.

TAS SECTION 4.28.2 – AUDIBLE ALARMS

A. If provided, audible alarms shall produce a sound that exceeds the prevailing equivalent sound level in the room or space by at least 15 dba or exceeds any maximum sound level with a duration of 60 seconds by 5 dba, whichever is louder.

B. Sound levels for alarm signals shall not exceed 120 dba.

TAS SECTION 4.28.3 – VISUAL ALARMS

A. Visual alarm signal appliances shall be integrated into the building or facility alarm system. If single station audible alarms are provided then single station visual alarm signals shall be provided.

Visual Alarm appliances shall have the following features:

1. The lamp shall be a xenon strobe type or equilavent.

2. The color shall be clear or nominal white (i.e. unfiltered or clear filtered white light).

3. The maximum pulse duration shall be two–tenths of one second with a maximum duty cycle of 40%. (The pulse duration is defined as the time interval between initial and final points of 10% of max signal)

4. The intensity shall be a minimum of 75 candela.

5. The flash rate shall be a minimum of 1 Hz and a maximum of 3 Hz

6. The appliance shall be placed 80" above the highest floor level within the space or 6" below the ceiling, whichever is lower.

7. In general, no place in any room or space shall be more than 50' from the signal (measured in a horizontal plane).

a. In large rooms and spaces exceeding 100' across, without obstructions 6' above the finished floor, such as auditoriums, devices may be place around the perimeter, spaced a maximum 100' apart, in lieu of suspending appliances from the ceiling.

8. No place in common corridors or hallways shall be more than 50' from the signal.

4.30 – SIGNAGE

TAS SECTIONS 4.1.2(7), 4.1.3(16)(a) – WHERE APPLICABLE

A. Signs which designate permanent rooms and spaces shall comply with the requirements listed below for:

1. Raised and Braille Characters, and Pictograms

2. Finish and Contrast

Mounting Location and Height

TAS SECTIONS 4.1.2(7), 4.1.3(16)(b) – WHERE APPLICABLE

A. Signs which provide direction to, or information about, functional spaces of the building shall comply with the requirements listed below for:

1. Character Proportion

2. Character Height

3. Finish and Contrast

Exception: Building directories, menus, and all other signs which are temporary are not required to comply.

TAS SECTION 4.1.2(7) – WHERE APPLICABLE

A. Element and spaces of accessible facilities which shall be identified by the International Symbol of Accessibility are:

1. Parking spaces designated as reserved for persons with disabilities.

2. Accessible passenger loading zones.

3. Accessible entrances when not all are accessible (inaccessible entrances shall have directional signage to indicate route to nearest accessible entrance).

4. Accessible toilet and bathing facilities when not all are accessible.

TAS SECTION 4.30.2 – CHARACTER PROPORTION (REFERENCE DETAIL 16.2)

A. Letters and numbers on signs shall have a width–to–height ratio between 3:5 and 1:1, and a stroke–width–to–height ratio between 1:5 and 1:10.

TAS SECTION 4.30.3 – OVERHEAD SIGNS

A. Characters and numbers on overhead signs shall be sized according to the viewing distance from which they are to be read.

1. For signs higher than 80" above the finished floor, character size shall be 3" minimum.

2. The minimum height is measured using an upper case X.

3. Lower case letters are permitted.

TAS SECTION 4.30.4 – RAISED AND BRAILLE CHARCTERS AND PICTOGRAMS

A. Letter and numerals shall be raised 1/32", upper case, sans serif and shall be accompanied by grade 2 Braille.

1. Raised character height: 5/8" minimum, 2" high maximum

2. Pictograms shall be accompanied by the equivalent verbal description placed directly below the pictogram.

3. The border dimension of the pictogram shall be 6" minimum

TAS SECTION 4.30.5 – FINISH AND CONTRAST

A. The character and background of the signs shall be eggshell, matte, or other non–glare finish. Charcters and symbols shall contrast with their bachground (either light characters on a dark background or dark characters on a light background).

TAS SECTION 4.30.6 – MOUNTING LOCATION AND HEIGHT (REFERENCE DETAIL 16.3)

A. Where permanent identification is provided for rooms and spaces, signs shall be installed on the wall adjacent to the latch side of the door.

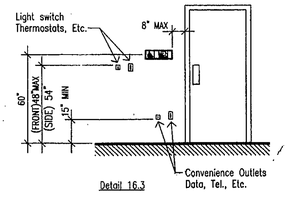
B. Where there is no wall space to the latch side of the door, including at double–leaf doors, signs shall be placed on the nearest adjacent wall.

C. Mounting height shall be 60" above the finished floor to the centerline of the sign.

D. Mounting location for such signage shall be so that a person may approach within 3" of signage without encountering protruding objects or standing within the swing of a door.


International Symbol of Accessibilty
Detail 16.1

Letter & numbers on signs shall have a width to height ratio of between 3:5 & 1:1 and a stroke – width to height ratio between 1:5 & 1:10. Letters and numbers shall be raised 1/32", upper case, sans serif or simple serif type and shall be accompanied with grade 2 Braille, rasied characters shall be at least 5/8" high, but no higher than 2".
Detail 16.2



Detail 16.3

4.31 – PUBLIC TELEPHONES

TAS SECTION 4.1.3(17)(a) – WHERE APPLICABLE

A. If public pay telephones, public closed circuit telephones, or other public telephones if provided, then they shall comply with this section in the quantities below:

1. If one or more single unit of a type of public telephone is provided on a floor, then at least one of those phones shall comply with this section.

2. If one bank (defined as two or more adjacent public telephones, often installed as a unit) of a type of telephone is provided on a floor, then at least one of the telephones at the bank shall comply with this section.

3. If two or more banks of a type of public telephone are provided on a floor, then at least one telephone per bank shall comply with this section. The accessible unit may be installed as a single unit in proximity (either visible or with signage) to the bank. At least one public telephone per floor shall meet the requirements for a forward reach telephone.

Additional public telephones may be installed at any height.

Unless otherwise specified, accessible telephones may be either forward or side reach telephones.

TAS SECTION 4.1.3(17)(b) – WHERE APPLICABLE

A. All telephones required to be accessible shall be equipped with a volume control.

B. In addition, 25%, but never less than one, of all other public telephones provided shall be equipped with a volume control and shall be dispersed all type of telephones, including closed ciruit telephones, throughout the building or facility.

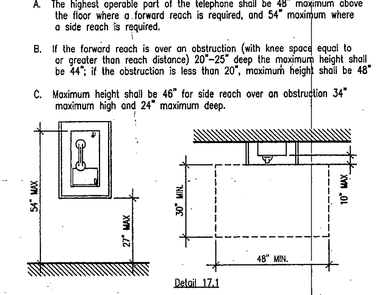
C. Signage displaying the International Symbol of Access for Hearing Loss shall be provided at each telephone equipped with a volume control.

TAS SECTION 51.3 – MOUNTING HEIGHT (REFERENCE DETAIL 17.1)

A. The highest operable part of the telephone shall be 48" maximum above the floor where a forward reach is required, and 54" maximum where a side reach is required.

B. If the forward reach is over an obstruction (with knee space equal to or greater than reach distance) 20"–25" deep the maximum height shall be 44"; if the obstruction is less than 20", maximum height shall be 48"

C. Maximum height shall be 46" for side reach over an obstruction 34" maximum high and 24" maximum deep.



Detail 17.1

4.32 – SEATING AND TABLES

TAS SECTION 4.32.2 – SEATING

A. If seating spaces for people in wheelchairs are provided at fixed tables or counters, clear floor space of 30" x 48" shall be provided. Floor space shall not overlap required knee space by more than 19"

TAS SECTION 4.32.3 – KNEE SPACE

B. If seating for people in wheelchairs is provided at fixed tables or counters, knee space at least 27" high, 30" wide and 19" deep shall be provided.

TAS SECTION 4.32.4 – HEIGHT OF TABLES OR COUNTER

C. The tops of accessible tables and counters shall be 28" minimum, and 34" maximum, above the finished floor.

4.34 – AUTOMATIC TELLER MACHINES

TAS SECTIONS 4.34.2 – CLEAR FLOOR SPACE

A. Floor space shall comply with 4.2.4 to allow a forward, parallel approach or both.

TAS SECTIONS 4.34.3 – REACH RANGES

A. Forward approach only: controls within forward approach specified in 4.2.5.

B. Parallel approach: controls within unobstructed reach range from clear floor space at protrusion of teller machine surround per table as follows:

Reach Depth	Maximum Height	Reach Depth	Maximum Height	Reach Depth	Maximum Height
in inches	in inches	in inches	in inches	in inches	in inches
10 or less	54	15	51	20	48 1/2
11	53 1/2	16	50 1/2	21	47 1/2
12	53	17	50	22	47
13	52 1/2	18	49 1/2	23	46 1/2
14	51 1/2	19	49	24	46

Note : above does not apply to drive up machines.

4.35 DRESSING AND FITTING ROOMS

TAS SECTIONS 4.35.4 – BENCH

A. Every accessible dressing room shall have a 24"x 48" bench fixed to the wall along the larger dimension. The bench shall be mounted 17" to 19" above the finish floor.

TAS SECTIONS 4.35.5 – MIRROR

A. A full–length mirror, measuring at least 18" wide by 54" high, shall be mounted in a position affording a view to a person on the bench as well as to a person in a standing position.

ACCESSIBILITY GUIDELINES (TAS)

JOB NUMBER
DATE
REVISIONS

DRAWING
TAS Detail