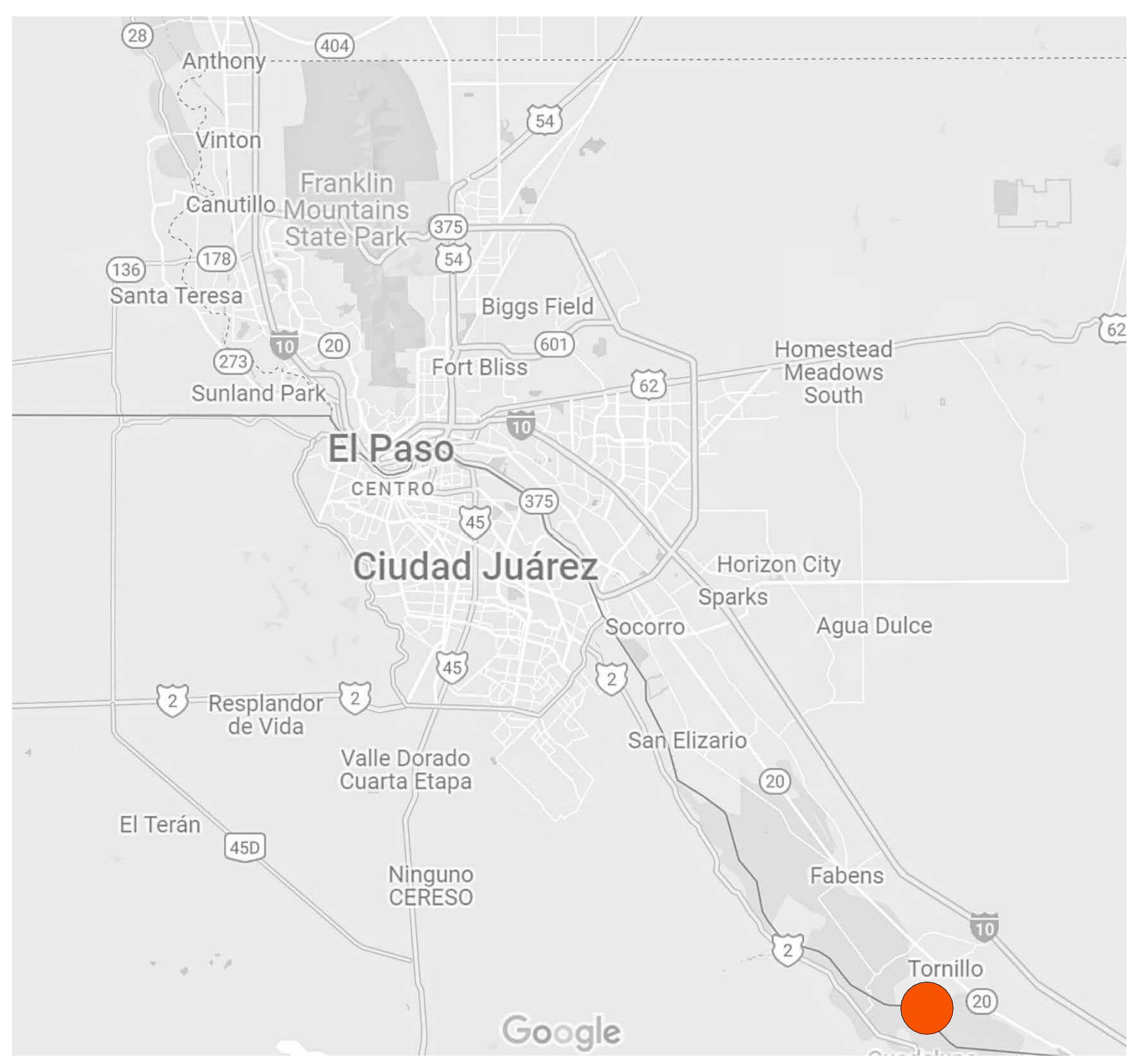
GYM TO CAFETERIA CONVERSION

300 OIL MILL DR.
TORNILLO, TEXAS 79853

PROJECT NUMBER: 2022-16

SHEET INDEX:

SITE LOCATION:



VICINITY MAP:

SCOPE OF WORK:

RENOVATION OF THE ANCILLARY SPACES OF AN EXISTING GYM INTO A COMMERCIAL KITCHEN TO ASSIST THE TORNILLO INDEPENDENT SCHOOL DISTRICT WITH THE CONVERSION OF THIS BUILDING INTO A CAFETERIA. THE AREA BEING RENOVATED IS APPROXIMATELY 4,608 SF.

MATRIX OF RESPONSIBILITIES:

DESCRIPTION	RESPONSIBILITY
DATA CABLING CONDUITS & ROUTES	GENERAL CONTRACTOR
DATA CABLING & TERMINATIONS	GENERAL CONTRACTOR
FURNITURE	OWNER PROVIDED | OWNER INSTALLED
KITCHEN EQUIPMENT	REFER TO KITCHEN SCHEDULE
SECURITY | SURVEILLANCE SYSTEMS	OWNER PROVIDED | OWNER INSTALLED
SIGNAGE	GC PROVIDED | GC INSTALLED

DESIGN TEAM:

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Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

DRAWN BY: PJ | AL
PROJECT NO: 2022-16
ISSUED: NOVEMBER 1, 2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:
COVER SHEET

CONSTRUCTION DOCUMENTS

G000

ABBREVIATIONS

A LABEL	CLASS A DOOR	ECU	EVAPORATIVE COOLING UNIT	MAINT	MAINTENANCE	SIM	SIMILAR
A/C	AIR CONDITIONER	EF	EXTERIOR FINISH	MATL	MATERIAL	SKLT	SKYLIGHT
A/E	ARCHITECT / ENGINEER	EFS	EXTERIOR FINISH SYSTEM	MAX	MAXIMUM	SLD WDW	SLIDING WINDOW
AAP	ALARM ANNUNCIATOR PANEL	EGB	EXTERIOR GYPSUM BOARD	MBR	MASTER BEDROOM	SND	SANITARY NAPKIN DISPENSER
ABC	AGGREGATE BASE COURSE	EGSB	EXTERIOR GYPSUM SHEATHING	MC	MEDICINE CABINET	SP	STAND PIPE
ABC	ABOVE		BOARD	MECH	MECHANICAL	SPEC	SPECIFICATIONS
AC	ASBESTOS CEMENT,	EH	ELECTRIC HEATER	MED	MEDICAL	SPKLR	SPRINKLER
ASPHALTIC		EHD	ELECTRIC HAND DRYER	MEMB	MEMBRANE	SPKR	SPEAKER
	CONCRETE	EIFS	EXTERIOR INSULATION AND	MEZZ	MEZZANINE	SQ	SQUARE
ACC	ACCESSIBLE		FINISH SYSTEM	MFR	MANUFACTURER	SS	SERVICE SINK
ACP	ASPHALTIC CONCRETE	EL	ELEVATOR	MH	MANHOLE	STA	STATION
PAVING		ELECT	ELECTRIC	MIN	MINIMUM, MINUTE	STC	SOUND TRANSMISSION CLASS
ACST	ACOUSTICAL	ELEV	ELEVATION	MIRR	MIRROR	STD	STANDARD
ACT	ACOUSTICAL CEILING TILE	EMER	EMERGENCY	MISC	MISCELLANEOUS	STO	STORAGE
AD	AREA DRAIN	EMS	ENERGY MANAGEMENT SYSTEM	ML	METAL LATH	STR	STAIRS
ADDL	ADDITIONAL	ENCL	ENCLOSURE	MLDG	MOULDING	STRUC	STRUCTURAL
ADDM	ADDENDUM	ENG	ENGINEER	MLWK	MILLWORK	SUH	SUSPENDED UNIT HEATER
ADH	ADHESIVE	ENTR	ENTRANCE	MO	MASONRY OPENING	SV	SHEET VINYL
ADJ	ADJACENT	EPS	EXPANDED POLYSTYRENE	MRB	MARBLE BASE	SWBD	SWITCH BOARD
AFF	ABOVE FINISH FLOOR		BOARD (INSULATION)	MS	MOP SINK	SYM	SYMBOL
AFG	ABOVE FINISH GRADE	EQ	EQUAL	MT	MOUNTED	SYS	SYSTEM
AGGR	AGGREGATE	EQUIP	EQUIPMENT	MTL	METAL		
AHU	AIR HANDLING UNIT	ERD	EXISTING ROOF DRAIN	MULL	MULLION	T	TREAD
ALT	ALTERNATE	EST	ESTIMATED	MVBL	MOVABLE	T&G	TONGUE AND GROOVE
ALUM	ALUMINUM	EVAP	EVAPORATIVE			T/S	TUB / SHOWER
ANOD	ANODIZE	EWC	ELECTRIC WATER COOLER	N	NORTH	TB	TOWEL BAR
ANT	ANTENNA	EWH	ELECTRIC WATER HEATER	NA	NOT APPLICABLE	TC	TERRACOTTA
AP	ACCESS PANEL	EWS	EYE WASH STATION	NAT	NATURAL	TCA	TELEPHONE CONTROL PANEL
APPROX	APPROXIMATE	EXC	EXCAVATE	NIC	NOT IN CONTRACT	TD	TOWEL DISPENSER, TRENCH
ARCH	ARCHITECT	EXIST	EXISTING	NO	NUMBER		DRAIN
ASC	ABOVE SUSPENDED CEILING	EXP	EXPOSED	NOM	NOMINAL	TEL	TELEPHONE
ASPH	ASPHALT	EXT	EXTERIOR	NR	NOISE REDUCTION	TEMP	TEMPERATURE
ASSY	ASSEMBLY			NRC	NOISE REDUCTION COEFFICIENT	TER	TERRAZZO
ATM	AUTOMATIC TELLER	FA	FIRE ALARM	NTS	NOT TO SCALE	TFA	TO FLOOR ABOVE
MACHINE		FAAP	FIRE ALARM ANUNCIATOR PANEL			TFB	TO FLOOR BELOW
AUTO	AUTOMATIC	FACP	FIRE ALARM CONTROL PANEL	OA	OVERALL	THD	THREAD
AV	AUDIO VISUAL	FAS	FASCIA	OC	ON CENTER	THK	THICKNESS
AVE	AVENUE	FB	FIRE BLANKET	OD	OUTSIDE DIAMETER	THRES	THRESHOLD
		FCO	FLOOR CLEANOUT	OF	OWNER FURNISHED	THRU	THROUGH
B LABEL	CLASS B DOOR	FD	FLOOR DRAIN	OFD	OVERFLOW DRAIN	TK BD	TACK BOARD
BALC	BALCONY	FDC	FIRE DEPARTMENT CONNECTION	OFF	OFFICE	TMPD GL	TEMPERED GLASS
BB	BULLETIN BOARD	FE	FIRE EXTINGUISHER	OH	OPPOSITE HAND	TN	TRUE NORTH
BD	BOARD	FEC	FIRE EXTINGUISHER CABINET	OP	OPENING	TOB	TOP OF BEAM
BDRY	BOUNDARY	FF	FINISH FLOOR	OPP	OPPOSITE	TOC	TOP OF CURB
BEV	BEVEL	FFE	FINISH FLOOR ELEVATION	OSB	ORIENTED STRAND BOARD	TOF	TOP OF FOOTING
BITU	BITUMINOUS	FH	FIRE HYDRANT			TOJ	TOP OF JOIST
BJT	BED JOINT	FHC	FIRE HOSE CABINET	PA	PUBLIC ADDRESS	TOM	TOP OF MASONRY
BLDG	BUILDING	FIN	FINISH	PAR	PARALLEL	TOP	TOP OF PARAPET
BLVD	BOULEVARD	FIXT	FIXTURE	PB	PULL BOX	TOPO	TOPOGRAPHY
BLW	BELOW	FLASH	FLASHING	PBD	PARTICLE BOARD	TOW	TOP OF WALL
BM	BENCH MARK,	FLR	FLOOR	PCF	POUNDS PER CUBIC FOOT	TPD	TOILET PAPER DISPENSER
BOT	BOTTOM	FLUOR	FLUOURESCENT	PED	PEDESTAL	TPH	TOILET PAPER HOLDER
BR	BEDROOM	FP	FIREPROOFING	PERF	PERFORATED	TR	TOWEL RACK
BRG	BEARING	FR	FIRE RESISTANT	PREFAB	PREFABRICATED	TRANS	TRANSOM
BRZ	BRONZE	FAST	FASTENER	PER	PERIMETER	TS	TUBE STEEL
BTWN	BETWEEN	FT	FOOT	PFE	PORTABLE FIRE EXTINGUISHER	TSH	TOWEL SHELF
BUR	BUILT-UP ROOFING	FTG	FOOTING	PG	PRESSURE GAUGE	TSTAT	THERMOSTAT
		FURN	FURNACE	PLAM	PLASTIC LAMINATE	TV	TELEVISION
C	CELSIUS	FUT	FUTURE	PLYWD	PLYWOOD	TYP	TYPICAL
C LABEL	CLASS C DOOR			PNL	PANEL		
CAB	CABINET	G	NATURAL GAS	PR	PIPE RAIL	UC	UNDERCUT
CAD	COMPUTER AIDED DRAFTING	GA	GAUGE	PREFIN	PREFINISHED	UGND	UNDERGROUND
CAT	CATALOG	GALV	GALVANIZED	PRKG	PARKING	UH	UNIT HEATER
CATV	COMMUNITY ANTENNA	GB	GRAB BAR	PSF	POUNDS PER SQUARE FOOT	UL	UNDERWRITERS LABORATORIES
	TELEVISION	GC	GENERAL CONTRACTOR	PSI	POUNDS PER SQUARE INCH	UNFIN	UNFINISHED
CCTV	CLOSE CIRCUIT TELEVISION	GCO	GROUND CLEAN OUT	PT	PRESSURE TREATED	UNIV	UNIVERSAL
CEM	CEMENT	GL	GLASS	PTD	PAPER TOWEL DISPENSER	UNO	UNLESS NOTED OTHERWISE
CF	CONCRATOR FURNISHED	GLU LAM	GLUED LAMINATED WOOD	PTN	PARTITION	UTIL	UTILITY
CFE	CONTRACTOR FURNISHED	GLZ	GLAZING	PTR	PAPER TOWEL RECEPTACLE		
	EQUIPMENT	GT	GREASE TRAP	PVG	PAVING	VAC	VACUUM
CFLG	COUNTERFLASHING	GYM	GYMNASIUM			VAN	VANITY
CG	CORNER GUARD	GYP	GYPSUM	QT	QUARRY TILE	VAP PRF	VAPOR PROOF
CH BD	CHALK BOARD			QTB	QUARRY TILE BASE	VAR	VARIES
CI	CAST IRON	HAZ	HAZARD	QTF	QUARRY TILE FLOOR	VB	VINYLBASE
CIR	CIRCLE	HB	HOSE BIB	QTY	QUANTITY	VCT	VINYL COMPOSITION TILE
CIRC	CIRCUMFERENCE	HC	HANDCAP, HOLLOW CORE			VEH	VEHICLE
CK	CAULK	HD	HAND DRYER, HEAD	R	RADIUS	VENT	VENTILATION
CL	CENTER LINE	HDBD	HARD BOARD	RB	RESILIENT BASE	VERT	VERTICAL
CLG	CEILING	HDR	HEADER	RH	ROBE HOOK	VEST	VESTIBULE
CLO	CLOSET	HDW	HARDWARE	RCP	REFLECTED CEILING PLAN	VID	VIDEO
CLRM	CLASSROOM	HM	HLLOW METAL	RCTP	RECEPTION	VNR	VENEER
CM	CENTIMETERS	HORIZ	HORIZONTAL	RD	ROOF DRAIN	VOL	VOLUME
CMU	CONCRETE MASONRY UNIT	HS	HAND SINK	REBAR	REINFORCING STEEL BARS	VOLT	VOLTAGE
COL	COLUMN	HT	HEIGHT	REF	REFERENCE	VR	VAPOR RETARDER
COMB	COMBINATION	HVAC	HEATING, VENTILATING, AND AIR	REFL	REFLECTED	VRFY	VERIFY
COMM	COMMUNICATION		CONDITIONING	REFR	REFRIGERATOR	VTR	VENT THROUGH ROOF
COMP	COMPONENT			REG	REGISTER	VWC	VINYL WALL COVERING
COMPT	COMPARTMENT	I/O	INPUT / OUTPUT	REINF	REINFORCED		
CONC	CONCRETE	ID	INSIDE DIAMETER,	REM	REMOVABLE	W	WEST
CONSTR	CONSTRUCTION		IDENTIFICATION	REQD	REQUIRED	W/	WITH
CONT	CONTINUOUS	IIC	IMPACT INSULATION CLASS	RESIL	RESILIENT	W/O	WITHOUT
CONTR	CONTRACTOR	IN	INCH(ES)	REST	RESTROOM	W/W	WALL TO WALL
CORR	CORRIDOR	INCL	INCLUDE	REV	REVISION	WB	WOOD BASE
CPT	CARPET	INFO	INFORMATION	RFG	ROOFING	WBL	WOOD BLOCKING
CR	CONTROL ROOM	INSUL	INSULATION	RH	RIGHT HAND	WC	WATER CLOSET
CT	CERAMIC TILE	INT	INTERIOR	RHR	RIGHT HAND REVERSE	WCL	WALL CLEAN OUT
CTB	CERAMIC TILE BASE	INTERCOM	INTERCOMMUNICATIONS	RL	ROOF LEADER	WD	WOOD
CTR	CENTER	INV	INVERT	RM	ROOM	WDW	WINDOW
CU	CUBIC			RO	ROUGH OPENING	WFAB	WALL FABRIC
		JAN	JANITOR	ROW	RIGHT OF WAY	WGL	WIRED GLASS
D	DRAIN	JBOX	JUNCTION BOX	RT	RIGHT	WH	WATER HEATER
D LABEL	CLASS D DOOR			RTU	ROOF TOP UNIT	WHSE	WAREHOUSE
dB	DECIBEL	K	KILO, THOUSAND	RV	ROOF VENT	WLD	WELDED
DBL	DOUBLE	KIT	KITCHEN			WM	WATER METER
DEG	DEGREE	KO	KNOCK OUT	S	SOUTH	WP	WATER PROOFING
DEMO	DEMOLITION	KPL	KICK PLATE	SB	SPLASH BLOCK	WSCT	WAINSCOT
DEPT	DEPARTMENT			SC	SOLID CORE	WSL	WEATHER SEAL
DF	DRINKING FOUNTAIN	L	LITER	SCHED	SCHEDULE	WT	WEIGHT
DIA	DIAMETER	LAB	LABORATORY	SCHEM	SCHEMATIC	WU	WINDOW UNIT
DIAG	DIAGONAL	LAD	LADDER	SCP	SCUPPER	WWF	WELDED WIRE FABRIC
DIM	DIMENSION	LAM	LAMINATED	SCR	SHOWER CURTAIN ROD	WWM	WELDED WIRE MESH
DISP	DISPENSER	LDR	LEADER	SCRN	SCREEN		
DIV	DIVISION	LH	LEFT HAND	SCWD	SOLID CORE WOOD DOOR	X BRACE	CROSS
DL	DEAD LOAD	LHR	LEFT HAND REVERSE	SD	SMOKE DETECTOR	XL	EXTRA LARGE
DMPF	DAMP PROOFING	LIB	LIBRARY	SECT	SECTION	XPS	EXTRUDED POLYSTYRENE BOARD
DN	DOWN	LL	LIVE LOAD	SF	SQUARE FOOT		
DR	DOOR	LNG	LIQUID NATURAL GAS	SH	SINGLE HUNG	YCO	YARD CLEANOUT
DS	DOWNSPOUT	LPT	LOW POINT	SHFT	SHAFT	YD	YARD
		LVR	LOUVER	SHLVS	SHELVES	YH	YARD HYDRANT
DTL	DETAIL	LWC	LIGHT WEIGHT CONCRETE	SHR	SHOWER	YR	YEAR
DW	DISHWASHER			SHT	SHEET		
DWG(S)	DRAWING(S)E	M	METER	SHTHG	SHEATHING		
EAST		MACH	MACHINE				
E LABEL	CLASS E DOOR						
EA	EACH						

GENERAL NOTES

PRE-CONSTRUCTION

1. CONTRACTOR SHALL SCHEDULE AND CONDUCT A PRE-DEMOLITION MEETING WITH THE OWNER AND THE ARCHITECT PRIOR TO PROCEEDING WITH DEMOLITION IN EACH AREA.
2. CONTRACTOR SHALL BE PREPARED FOR AND PARTICIPATE IN WEEKLY OWNER / ARCHITECT / CONTRACTOR MEETING IF REQUESTED.
3. CONTRACTOR SHALL RECORD MEETING MINUTES AND DISTRIBUTE TO ALL ATTENDEES WITHIN THREE WORKING DAYS. TOPICS TO INCLUDE, BUT NOT LIMITED TO SCHEDULE, PHASING, VERIFICATION OF EXISTING UTILITIES AND POWER OUTAGES.
4. IT IS HIGHLY RECOMMENDED THAT THE CONTRACTOR VISITS THE SITE PRIOR TO BID TO FAMILIARIZE THEM SELVES TO ALL EXISTING CONDITIONS.
5. ALL QUESTIONS AND CLARIFICATIONS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO SUBMITTAL OF BIDS.

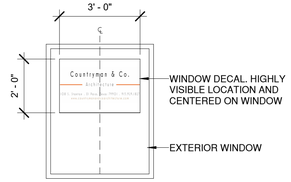
DRAWINGS

1. VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH WORK, ANY CONFLICT AND / OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
2. WHERE DIMENSIONAL OR DETAIL DISCREPANCIES EXIT BETWEEN THE PLANS AND SECTIONS AND DETAILS, THESE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH WORK.
3. ALL ELECTRICAL AND MECHANICAL FIXTURES EXPOSED TO VIEW SHALL BE LOCATED AS INDICATED ON THE ARCHITECTURAL DRAWINGS. IN CASE OF CONFLICT, VERIFY WITH THE ARCHITECT BEFORE PROCEEDING WITH WORK.
4. FOR INTERIOR WALL ASSEMBLIES REFER TO PARTITION TYPES ON DRAWINGS.
5. FOR ASSEMBLY LOCATION REFER TO FLOOR PLANS, FOR CEILING ASSEMBLIES REFER TO RCP DETAILS. REFER TO REFLECTED CEILING PLAN FOR ASSEMBLY LOCATIONS.
6. WHERE REQUIRED, FURR-OUT PARTITIONS TO ACCOMMODATE PIPING AND CONDUITS LARGER OR DEEPER THAN THE PARTITIONS THICKNESS INDICATED, FURRING AROUND PIPE / CONDUIT OR FURRING OUT OF ENTIRE PARTITION TO BE DETERMINED BY THE ARCHITECT TO BE ACCEPTABLE.
7. ALL GYPSUM BOARD WALL SHALL BE 5/8 F.C. OR TYPE "X" FIRE RATED.

PROJECT SIGN

1. PROJECT SIGN SHALL BE PROVIDED AND INSTALLED PRIOR TO BEGINNING WORK.
2. RENOVATIONS AND TENANT IMPROVEMENTS:
   24"x36" WINDOW DECAL PLACED IN HIGHLY VISIBLE LOCATION.
3. NEW CONSTRUCTION:
   4'x8' PLYWOOD CONSTRUCTION SIGN WITH GRAPHICS ADHERED TO THE FRONT, 4'x8' IN SIZE. MOUNTED ON POSTS, WITH A HEIGHT TO TOP OF SIGN OF 10'.
4. PROJECT SIGN GRAPHICS SHALL BE AS ILLUSTRATED BELOW.

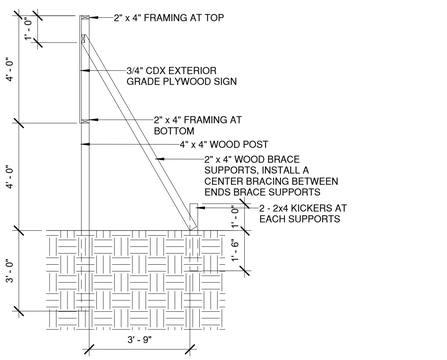
RENOVATION



PROJECT SIGN - WINDOW DECAL

NEW CONSTRUCTION

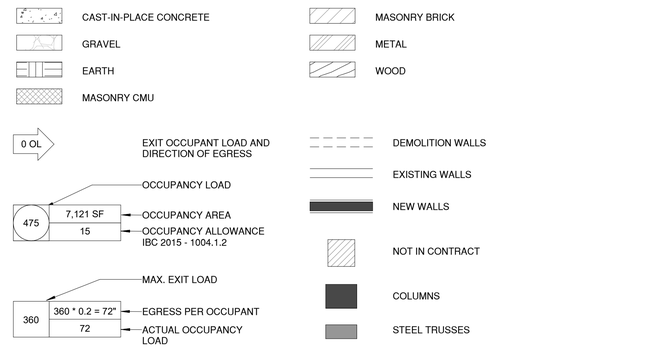
PROJECT SIGN - ELEVATION



PROJECT SIGN - BRACING

NOTE:
1. CHECK FOR UNDERGROUND UTILITIES AND IRRIGATION SYSTEM PRIOR TO DIGGING POST HOLES
2. ALL LUMBER SHALL BE PRESSURE TREATED (PAINTED)
3. LOCATE PROJECT SIGN 30 DEGREES FROM STREET LANE, TOWARDS INCOMING TRAFFIC, CENTERED WITHIN 10 FT OF THE FRONT BOUNDARY LINE

SYMBOLS



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G001

ACCESSIBILITY STANDARDS

ACCESSIBLE ROUTE

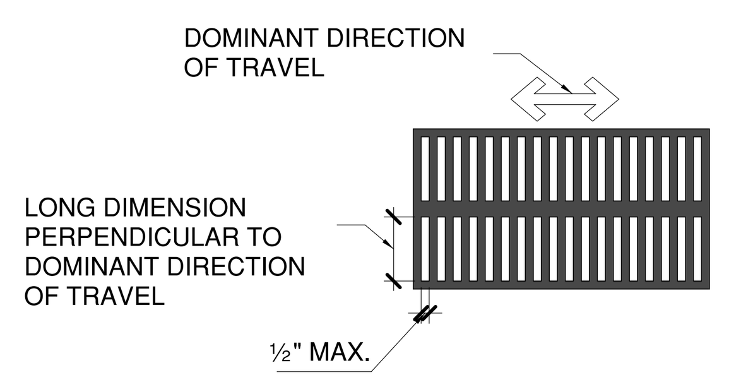


FIGURE 302.3 - ELONGATED OPENINGS IN FLOOR OR GROUND SURFACES

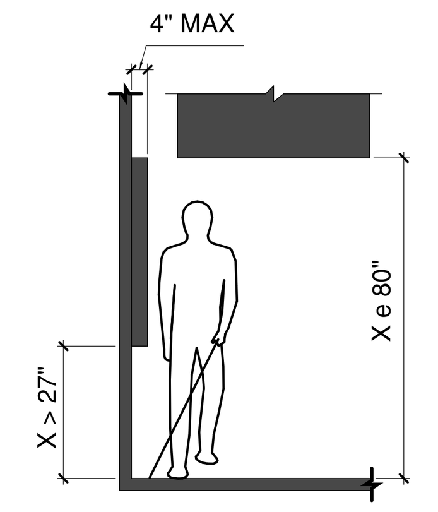


FIGURE 307.2 - LIMITS OF PROTRUDING OBJECTS

FIGURE 303.2 - VERTICAL CHANGE IN LEVEL

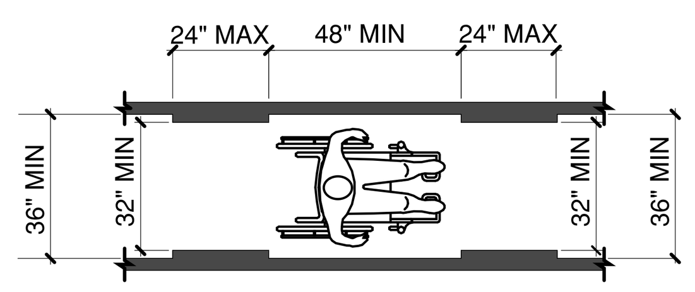


FIGURE 403.5.1 - CLEAR WIDTH OF AN ACCESSIBLE ROUTE

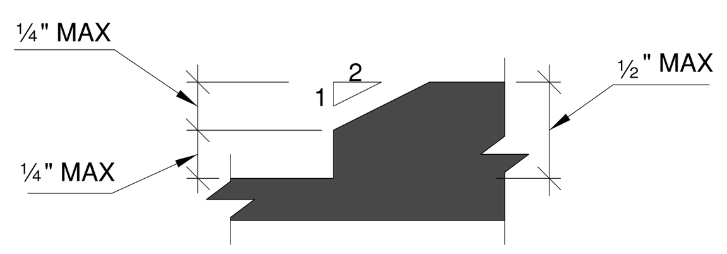


FIGURE 303.3 - BEVELED CHANGE IN LEVEL

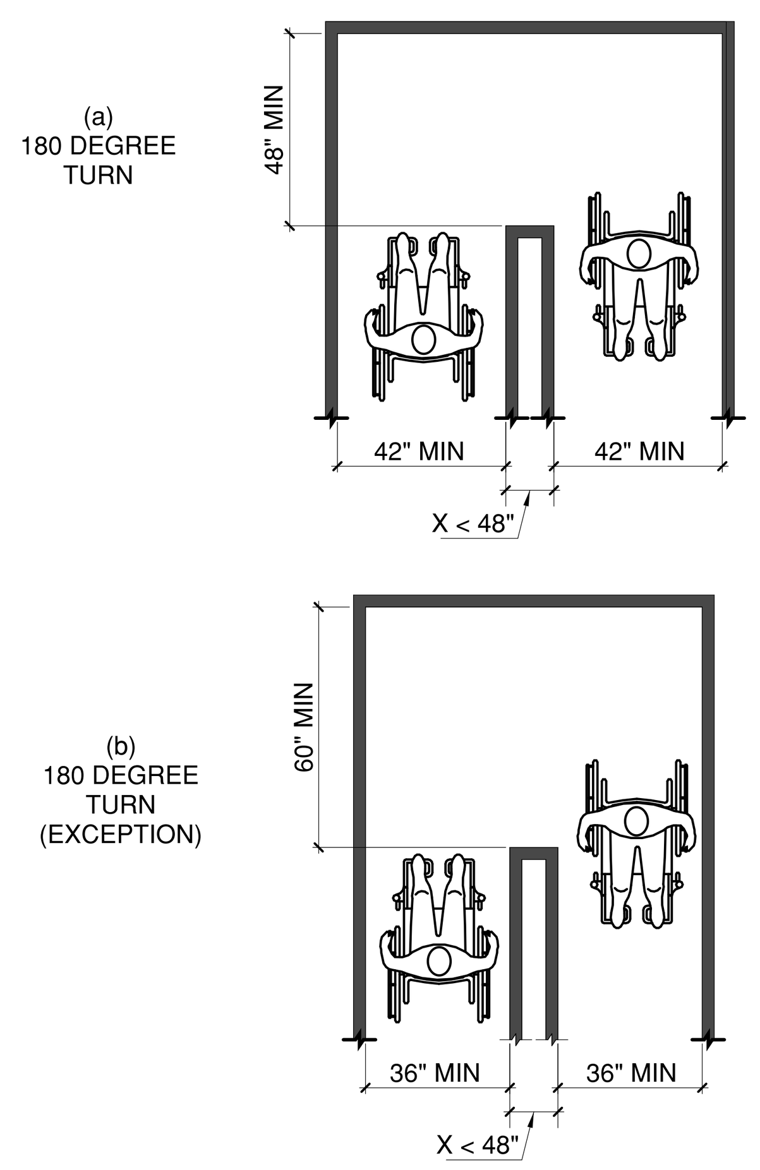


FIGURE 403.5.2 - CLEAR WIDTH AT TURN

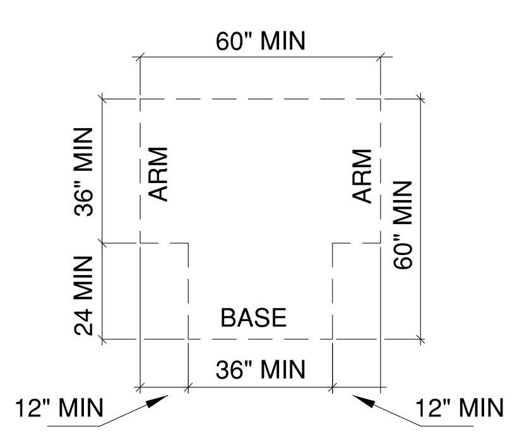


FIGURE 304.3.2 - T-SHAPED TURNING SPACE

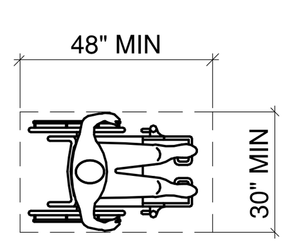


FIGURE 305.3 - CLEAR FLOOR OR GROUND SPACE

REACH CLEARANCES

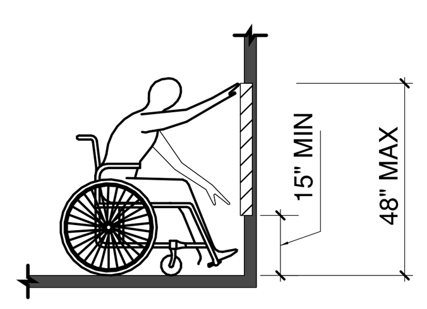


FIGURE 308.2.1 - UNOBSTRUCTED FORWARD REACH

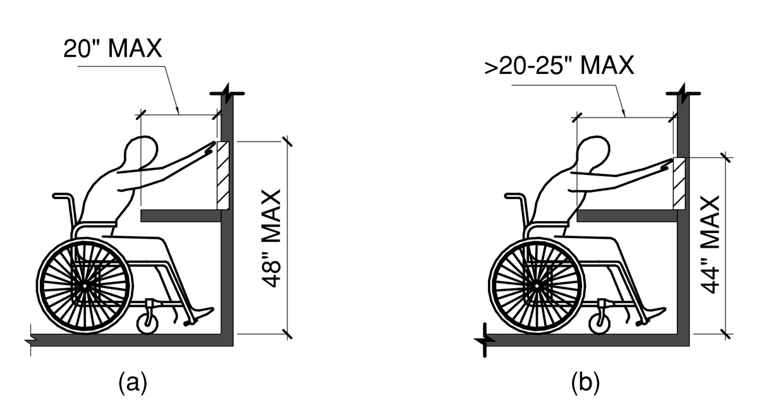


FIGURE 308.2.2 - OBSTRUCTED HIGH FORWARD REACH

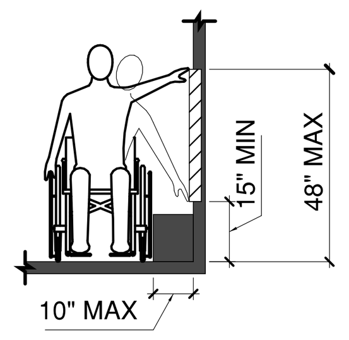


FIGURE 308.3.1 - UNOBSTRUCTED SIDE REACH

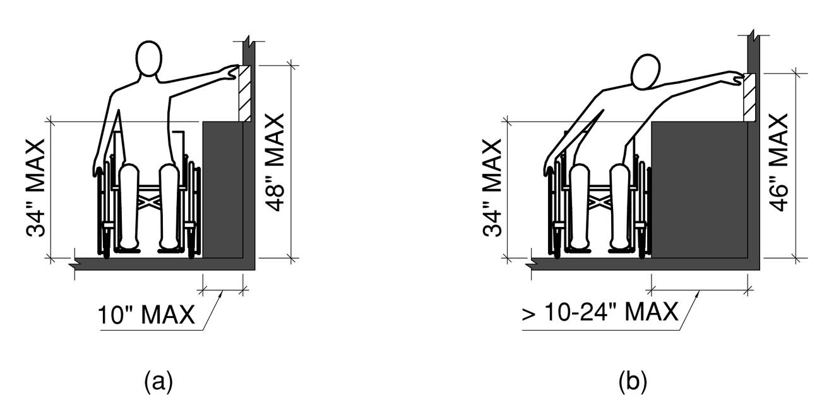


FIGURE 308.3.2 - OBSTRUCTED HIGH SIDE REACH

DOOR CLEARANCES

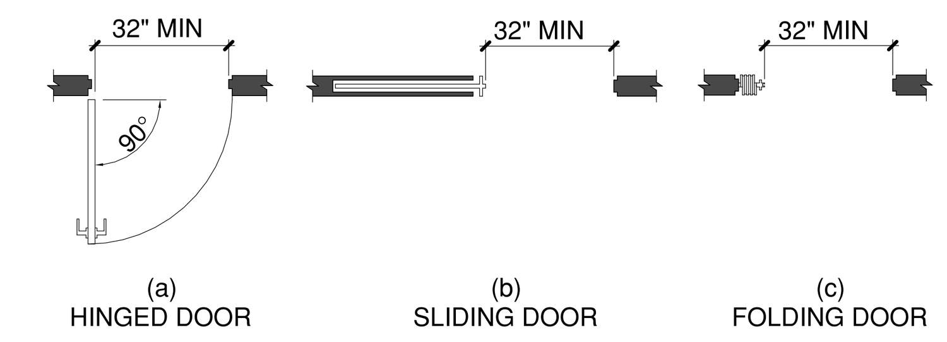
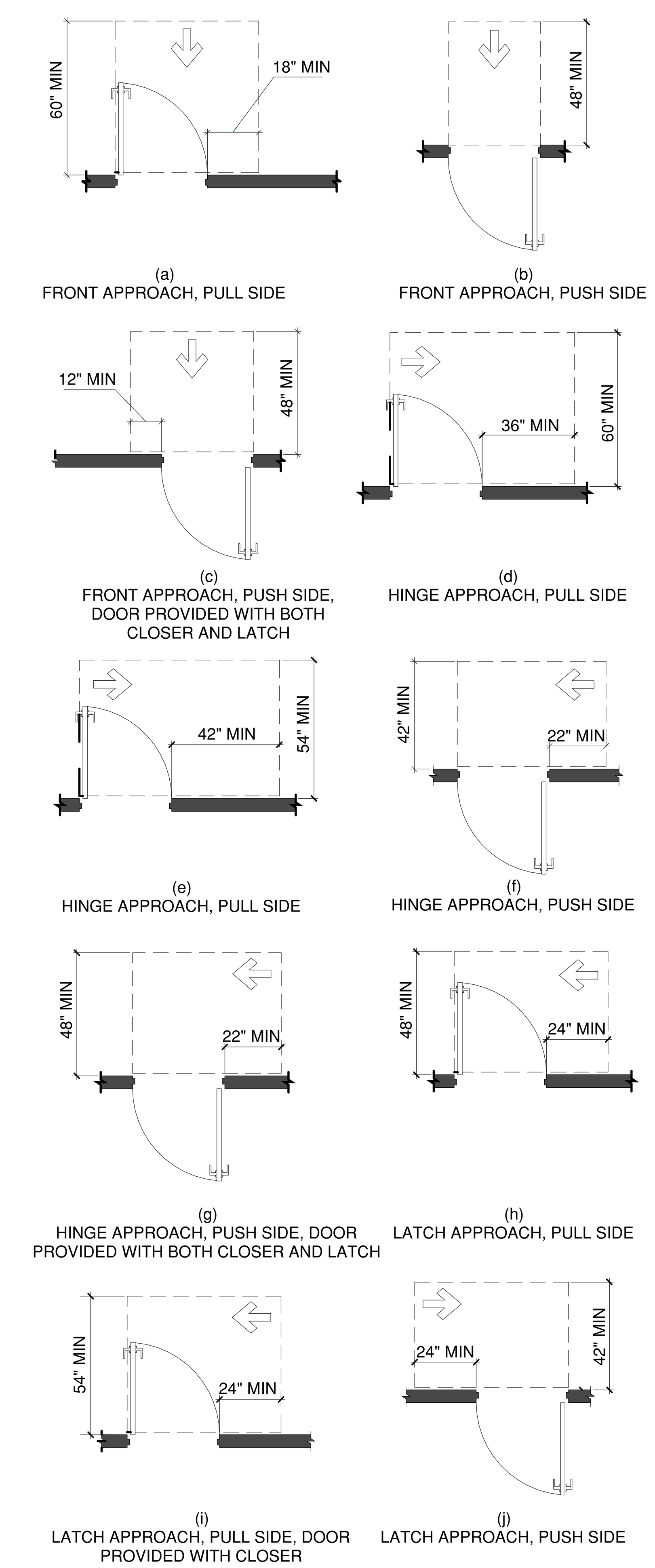


FIGURE 404.2.3 - CLEAR WIDTH OF DOORWAYS



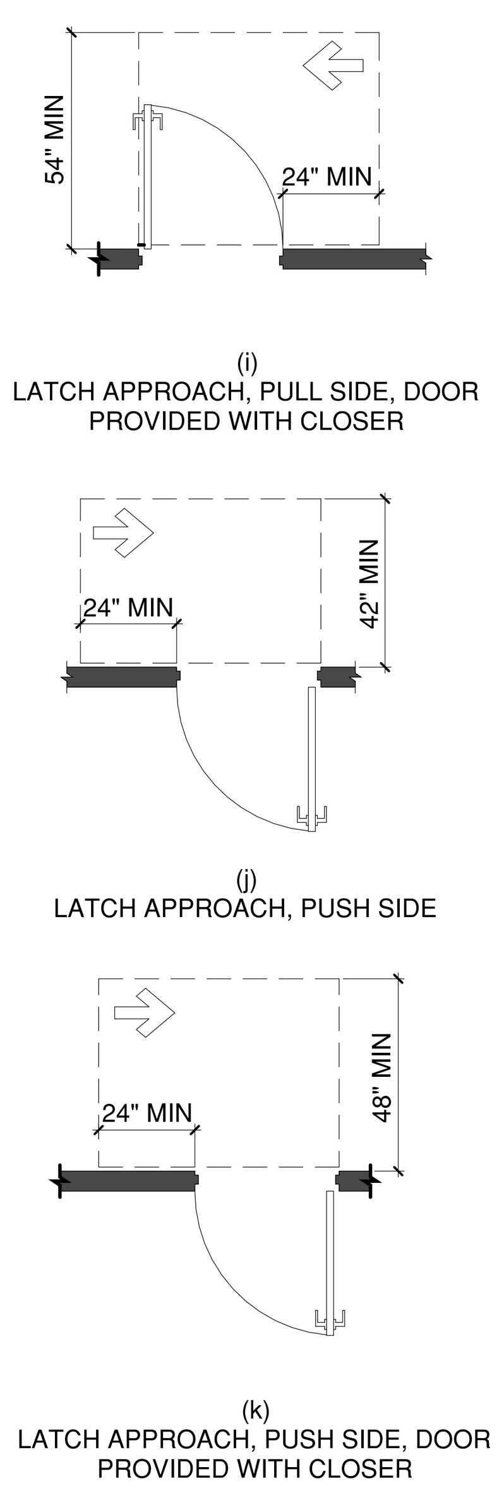


FIGURE 404.2.4.1 - MANEUVERING CLEARANCE AT SWINGING DOORS AND GATES

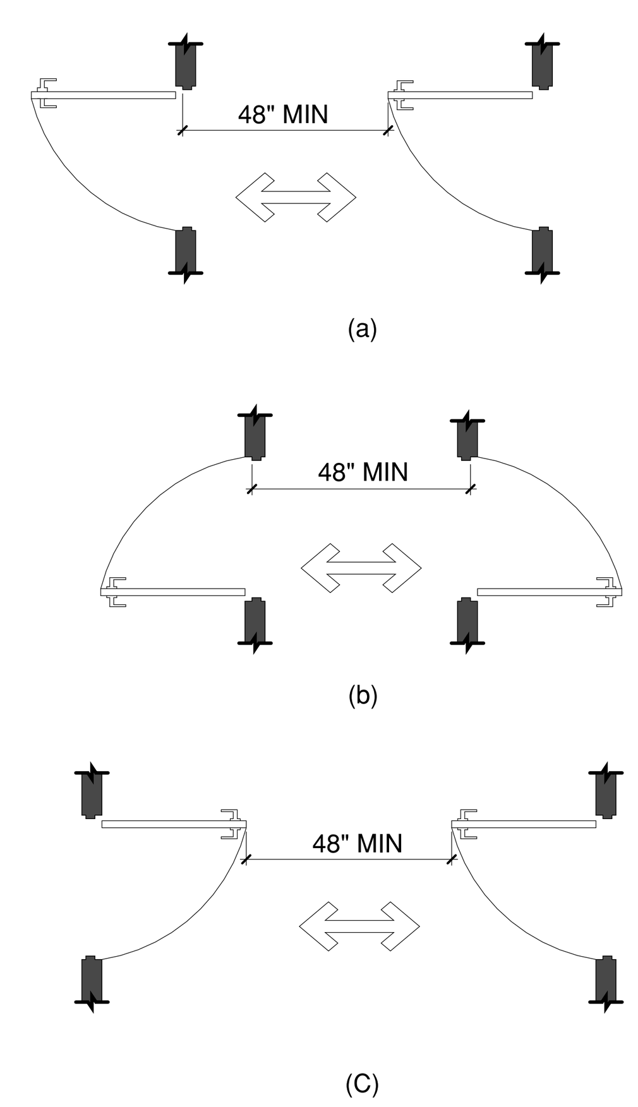
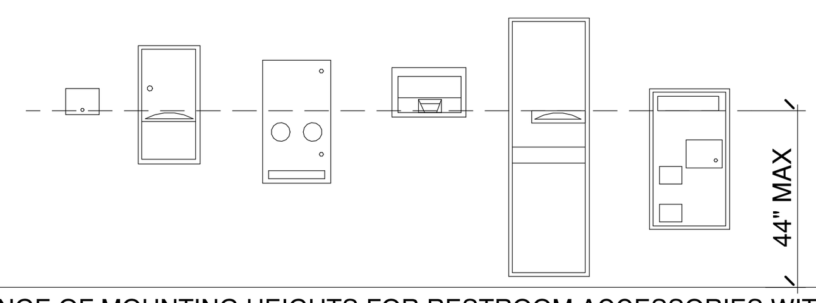


FIGURE 404.2.6 - DOORS IN SERIES AND GATES IN SERIES

RESTROOMS

ACCESSORIES

NOTE: NO OBJECT, ACCESSORY, OR OTHER ARCHITECTURAL OR PERMANENTLY INSTALLED FIXTURE MAY PROTRUDE MORE THAN 4" FROM THE FACE OF THE WALL



UPPER RANGE OF MOUNTING HEIGHTS FOR RESTROOM ACCESSORIES WITH OPERABLE PARTS

CLEARANCES

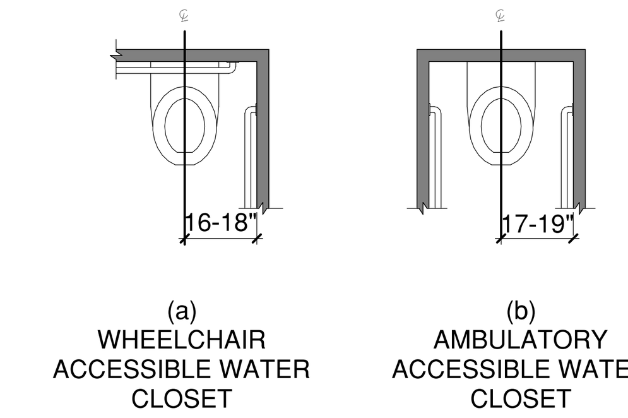


FIGURE 604.2 - WATER CLOSET LOCATION

NOTE: FLUSH VALVE MUST BE ON TRANSFER SIDE

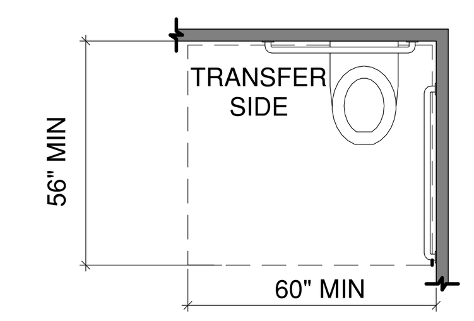


FIGURE 604.3.1 - CLEARANCE AT WATER CLOSETS

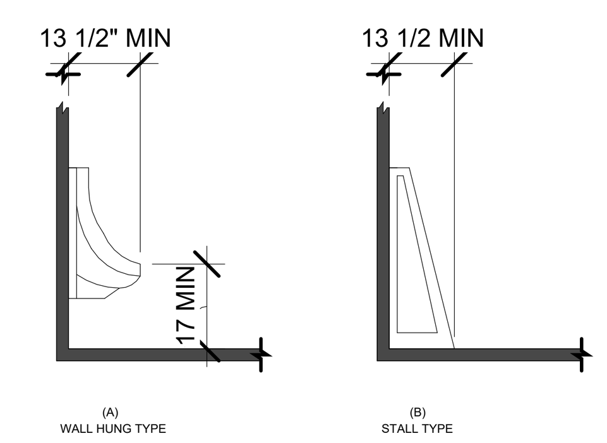


FIGURE 605 - HEIGHT AND DEPTH OF URINALS

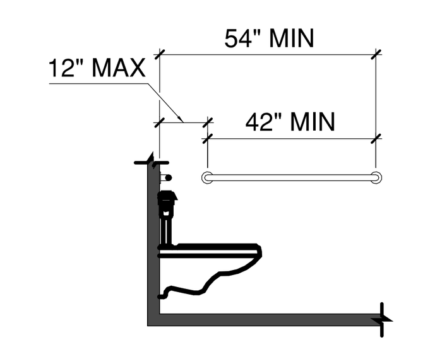
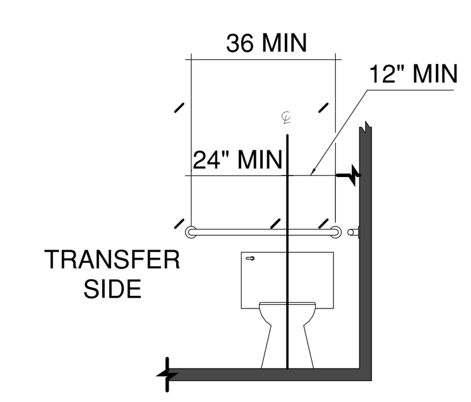
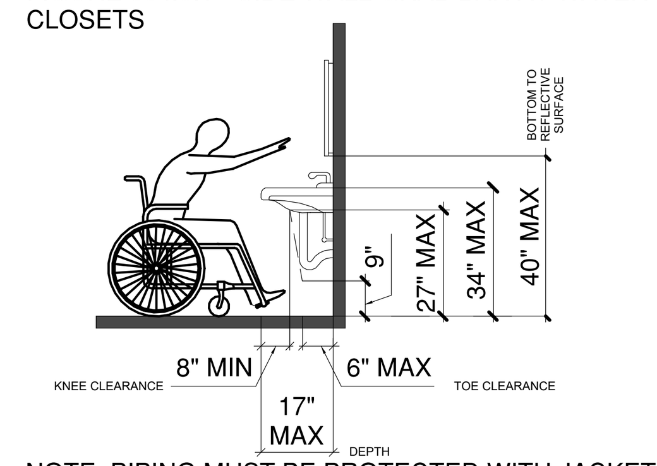


FIGURE 604.5.1 - SIDE WALL GRAB BAR AT WATER CLOSETS



NOTE: FLUSH VALVE MUST BE ON TRANSFER SIDE

FIGURE 604.5.2 - REAR WALL GRAB BAR AT WATER CLOSET



NOTE: PIPING MUST BE PROTECTED WITH JACKETING

606 - LAVATORY CLEARANCES

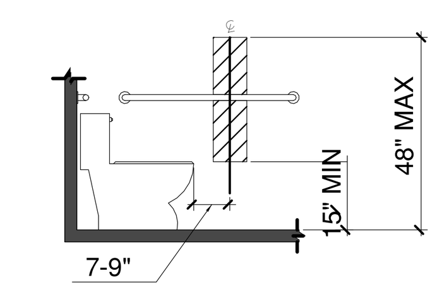


FIGURE 604.7 - DISPENSER OUTLET LOCATION

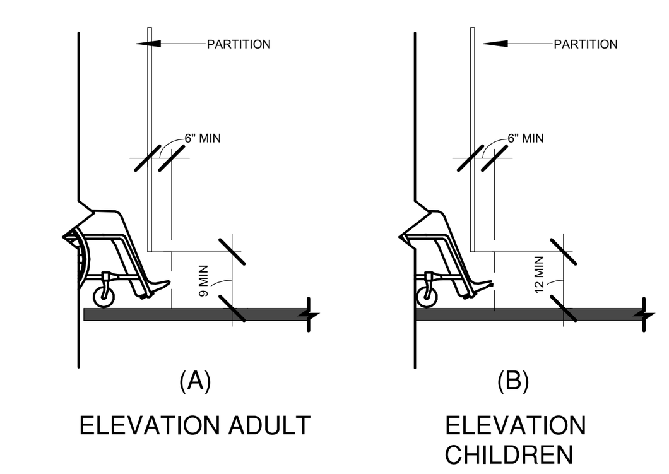
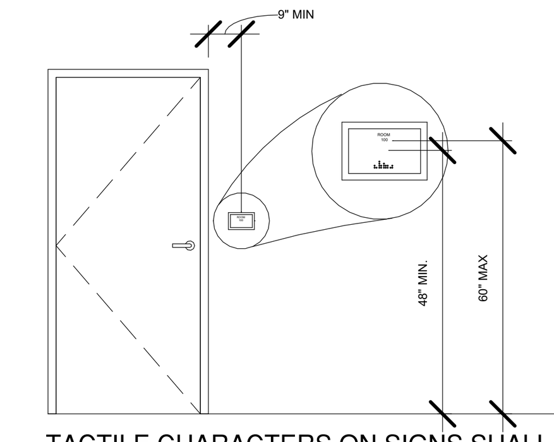


FIGURE 604.8.1.4 WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT TOE CLEARANCE

SIGNAGE



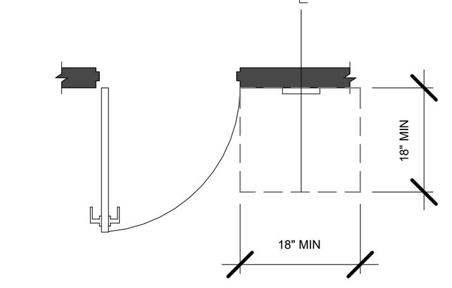
SIGN LOCATED ALONGSIDE THE DOOR LATCH SIDE.

DOUBLE DOORS WITH ONE ACTIVE LEAF, SIGNS LOCATED ON INACTIVE LEAF.

DOUBLE DOORS WITH TWO ACTIVE LEAFS, SIGN LOCATED TO THE RIGHT SIDE

TACTILE CHARACTERS ON SIGNS SHALL BE LOCATED 48 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF LOWEST TACTILE CHARACTER AND 60 INCHES MAXIMUM MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE CHARACTER.

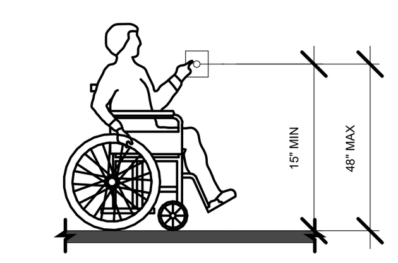
FIGURE 703 - HEIGHT OF TACTILE CHARACTERS ABOVE FINISH FLOOR OR GROUND



SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18 INCHES MINIMUM BY 18 MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION.

FIGURE 703.4.2 LOCATION OF TACTILE SIGNS AT DOORS

CALL BUTTONS - PUSH TO EXIT BUTTON



407.2.1 CALL CONTROLS. WHERE CALL BUTTONS OR KEYPADS ARE PROVIDED, THEY SHALL COMPLY WITH 407.2.1 AND 309.4. CALL BUTTONS SHALL BE RAISED OR FLUSH.
407.2.1.1 HEIGHT. CALL BUTTONS AND KEYPADS SHALL BE LOCATED WITHIN ONE OF THE REAH RANGES SPECIFIED IN 308, MEASURED TO THE CENTERLINE OF THE HIGHEST OPERABLE PART.
407.2.1.2 SIZE. CALL BUTTONS SHALL BE 3/4 INCH MINIMUN IN THE SMALLEST DIMENSION.
407.2.1.3 CLEAR FLOOR OR GROUND SPACE. A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 SHALL BE PROVIDED AT CALL CONTROLS.

Countryman & Co.
Architecture

108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

DRAWN BY: AL
PROJECT NO: 2022-16
ISSUED: NOVEMBER 1, 2022

REVISION SCHEDULE:

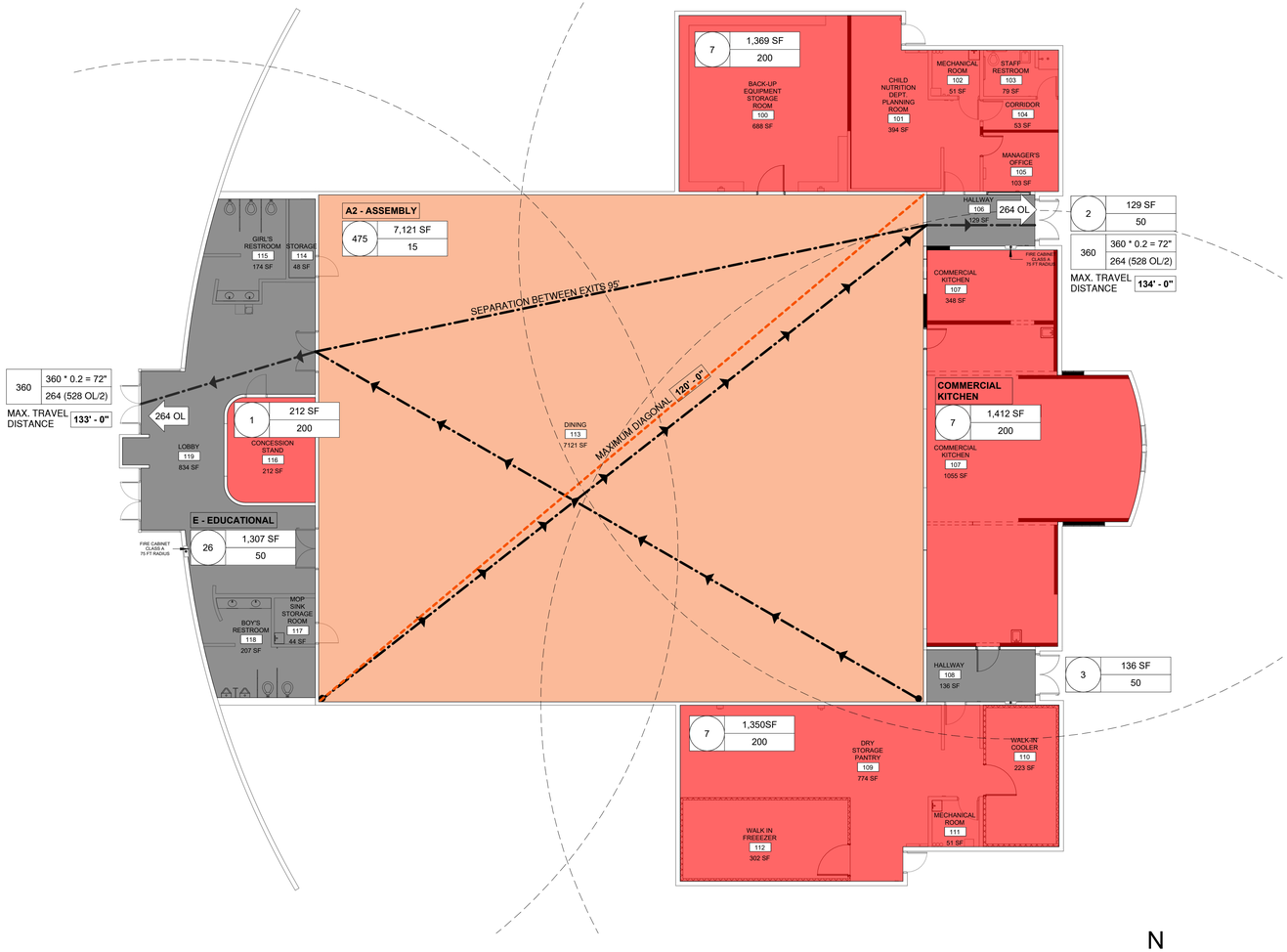
NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION
300 OIL MILL DR. | TORNILLO, TX 79853
SHEET TITLE:
ACCESSIBILITY STANDARDS

CONSTRUCTION DOCUMENTS

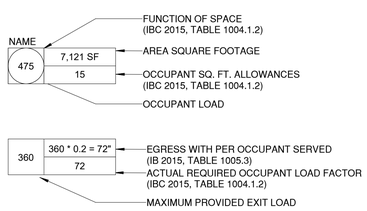
G002

REGISTERED ARCHITECT JENNIFER COUNTRYMAN 21140 STATE OF TEXAS

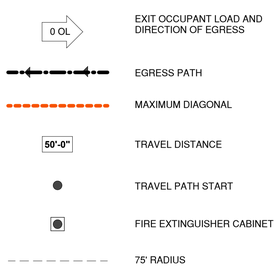


01 BUILDING CODE ANALYSIS
3/32" = 1'-0"

LIFE SAFETY LEGENDS



FUNCTION OF SPACE (IBC 2015, TABLE 1004.1.2)
AREA SQUARE FOOTAGE
OCCUPANT SQ. FT. ALLOWANCES (IBC 2015, TABLE 1004.1.2)
OCCUPANT LOAD
EGRESS WITH PER OCCUPANT SERVED (IB 2015, TABLE 1005.3)
ACTUAL REQUIRED OCCUPANT LOAD FACTOR (IBC 2015, TABLE 1004.1.2)
MAXIMUM PROVIDED EXIT LOAD



EXIT OCCUPANT LOAD AND DIRECTION OF EGRESS
EGRESS PATH
MAXIMUM DIAGONAL
TRAVEL DISTANCE
TRAVEL PATH START
FIRE EXTINGUISHER CABINET
75' RADIUS

BUILDING CODE ANALYSIS

CODE	DATA
CLASSIFICATION OF WORK:	EXISTING BUILDING, LEVEL 3 RENOVATION
CODE ORDINANCES:	INTERNATIONAL BUILDING CODE (IBC), 2015 INTERNATIONAL EXISTING BUILDING CODE (IEBC), 2015 INTERNATIONAL FIRE CODE (IFC), 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2015 INTERNATIONAL MECHANICAL CODE (IMC), 2015 INTERNATIONAL PLUMBING CODE (IBC), 2015 NATIONAL ELECTRIC CODE (NEC), 2015 TEXAS ACCESSIBILITY STANDARDS (TAS), 2012
ADDRESS:	TORNILLO MIDDLE SCHOOL 300 OIL MILL DR. TORNILLO, TEXAS 79853
ARCHITECT:	COUNTRYMAN & CO. 108 S. STANTON ST. | THIRD FLOOR EL PASO, TX 79901 CT: JENNIFER COUNTRYMAN, AIA PH: 915.929.1827 EMAIL: JENNIFER@COUNTRYMANANDCOARCHITECTURE.COM
OWNER:	TORNILLO INDEPENDENT SCHOOL DISTRICT 19200 COBB AVE. | TORNILLO, TEXAS 79853 CT: RENE ESTRADA, DIRECTOR OF FACILITIES AND TRANSPORTATION PH: 915.497.4203 EMAIL: EstradaRe@tisd.us
SCOPE OF WORK:	LEVEL 3 RENOVATION CONVERSION OF A PORTION OF THE EXISTING GYM TO A COMMERCIAL KITCHEN
OCCUPANCY USE:	GROUP A-2 - ASSEMBLY (IBC 303.3 USES INTENDED FOR FOOD AND/OR DRINK CONSUMPTION) GROUP E - EDUCATIONAL (IBC 305.1 USES INTENDED FOR EDUCATIONAL PURPOSES THROUGH THE 12TH GRADE.)
TOTAL BUILDING SF:	13,036 SF (100%)
RENOVATION SF:	4,608 SF (35%)
CONSTRUCTION TYPE:	TYPE II-B
FOOD SERVICE:	YES
MIN. NUMBER OF EXITINGS PER OCCUPANCY LOAD (IBC 2015):	OCCUPANCY LOAD 1 TO 500, MIN. NO. OF EXISTS REQ: 2 NUMBER OF EXITS PROVIDED: 4
AUTOMATIC FIRE SPRINKLER SYSTEM (IBC 903.2.1.2, 2015):	E - EDUCATIONAL: REQUIRED A2- ASSEMBLY: REQUIRED
FIRE ALARM (IBC 907.2, 2015):	E-EDUCATION: REQUIRED A2 - ASSEMBLY: REQUIRED
TABS NO.	_____

CODE	DATA	
GENERAL BUILDING REQ.	FUNCTION:	E - EDUCATIONAL
	ALLOWABLE HEIGHT (IB 504.3):	55 FT
	ALLOWABLE N. STORIES (IB 504.4):	2 STORIES
	ALLOWABLE AREA (IBC 506.2):	14,500 SF
	FUNCTION:	A-2 ASSEMBLY
	ALLOWABLE HEIGHT (IB 504.3):	55 FT
	ALLOWABLE N. STORIES (IB 504.4):	2 STORIES
	ALLOWABLE AREA (IBC 506.2):	9,500 SF
TOTAL OCCUPANCY LOAD:	FUNCTION:	COMMERCIAL KITCHEN
	AREA:	4,343 SF
	OCCUPANCY LOAD (IBC1004.1.2):	4,343 SF / 200 = 22 OL
	FUNCTION:	A-2 ASSEMBLY
	AREA:	7,121 SF
	OCCUPANCY LOAD (IBC1004.1.2):	7,121 SF / 15 = 475 OL
	FUNCTION:	E - EDUCATIONAL
	AREA:	1,572 SF
	OCCUPANCY LOAD (IBC1004.1.2):	1,572 SF / 50 = 31 OL
	TOTAL OCCUPANCY:	528 OL
SEPARATION OCCUPANCIES (IBC 508.4):	NO SEPARATION REQUIREMENT	
MEANS OF EGRESS (IBC 1005.1):		
STAIRCASES	NOT APPLICABLE	
OTHER MEANS	528 * 0.2	
	528 * 0.2 = 106" / 36" = THREE 36" EXITS REQUIRED	
	PROVIDED: 288" (4 - 72" EXITS PROVIDED)	
EXIT TRAVEL DISTANCE (IBC 1017.2):		
EDUCATION OCC. W/ SPRINKLERS	250 FT	
A-2 ASSEMBLY W/ SPRINKLERS	250 FT	
MIN. NO PLUMBING FIXTURES (IBC 2902.1)		
WATER CLOSETS	E: 1 PER 50	31 OCCUPANTS = 1 REQUIRED
	A2: FEMALE 1 PER 75 MALE 1 PER 75	238 OCCUPANTS = 3 REQUIRED | 3 PROVIDED 237 OCCUPANTS = 3 REQUIRED | 4 PROVIDED
	7 WATER CLOSET REQUIRED | 8 PROVIDED	
LAVATORIES	E: 1 PER 50	31 OCCUPANTS = 1 REQUIRED
	A2: 1 PER 200	475 OCCUPANTS = 2 REQUIRED
	3 LAVATORIES REQUIRED | 5 PROVIDED	
DRINKING FOUNTAINS	E: 1 PER 200	31 OCCUPANTS = 1 REQUIRED
	A-2: 1 PER 500	475 OCCUPANTS = 1 REQUIRED
	2 DRINKING FOUNTAINS REQUIRED | 1 DRINKING FOUNTAIN PROVIDED AND 1 WATER FILLER PROVIDED	
SERVICE SINK	E: 1 SERVICE SINK REQUIRED A-2: 1 SERVICE SINK REQUIRED	
	2 SERVICE SINKS REQUIRED | 3 PROVIDED	

Countryman & Co.
Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

DRAWN BY: PJ | AL
PROJECT NO: 2022-16
ISSUED: NOVEMBER 1, 2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

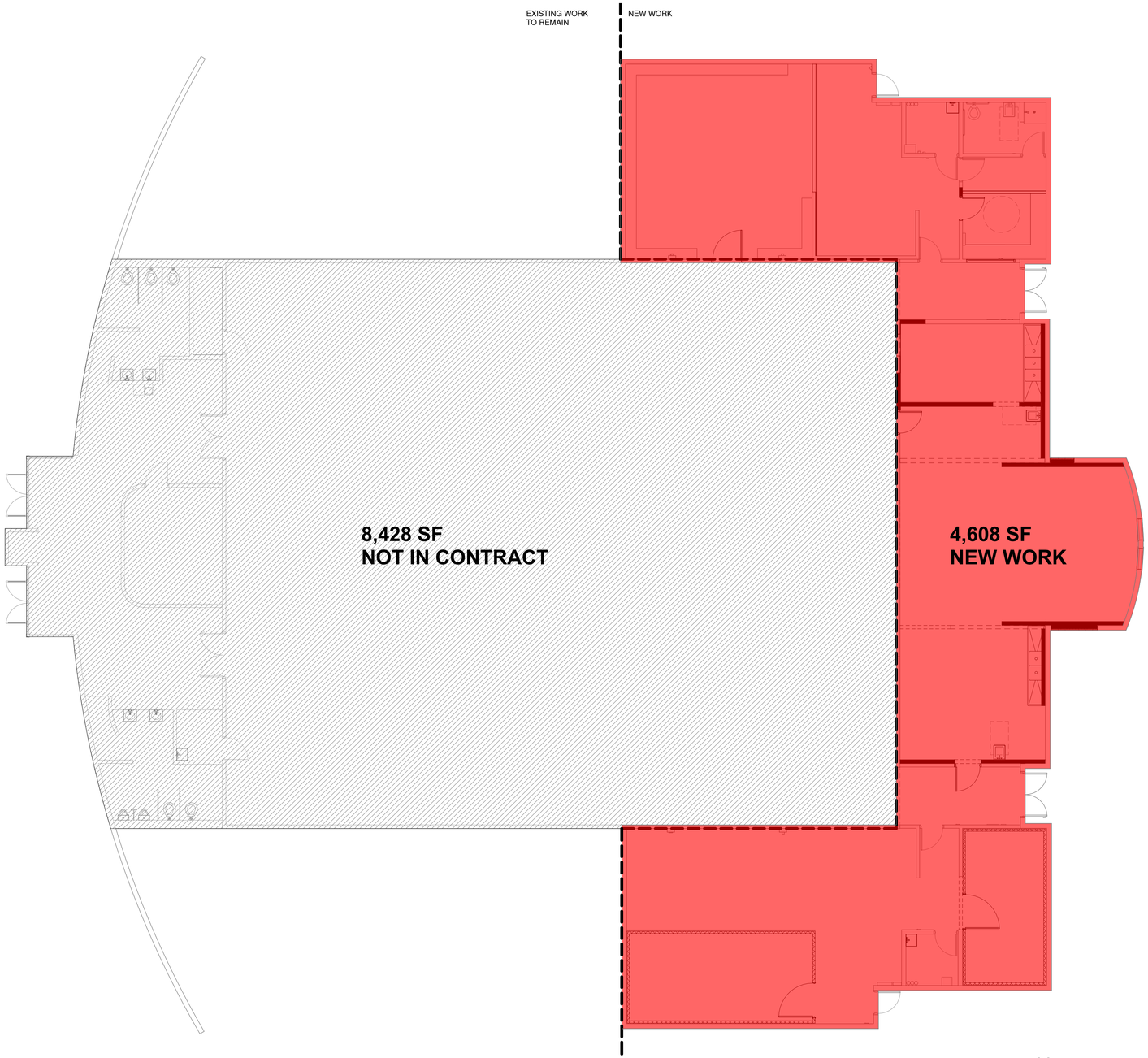
TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION

300 OIL MILL DR. | TORNILLO, TX 79853

CONSTRUCTION DOCUMENTS

SHEET TITLE:
BUILDING CODE ANALYSIS

G003



01 REFERENCE FLOOR PLAN
1/8" = 1'-0"

Countryman & Co.
Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

DRAWN BY: AL
PROJECT NO: 2022-16
ISSUED: NOVEMBER 1, 2022

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NO.	DATE	DESCRIPTION

REGISTERED ARCHITECT
JENNIFER COUNTRYMAN
21140
STATE OF TEXAS

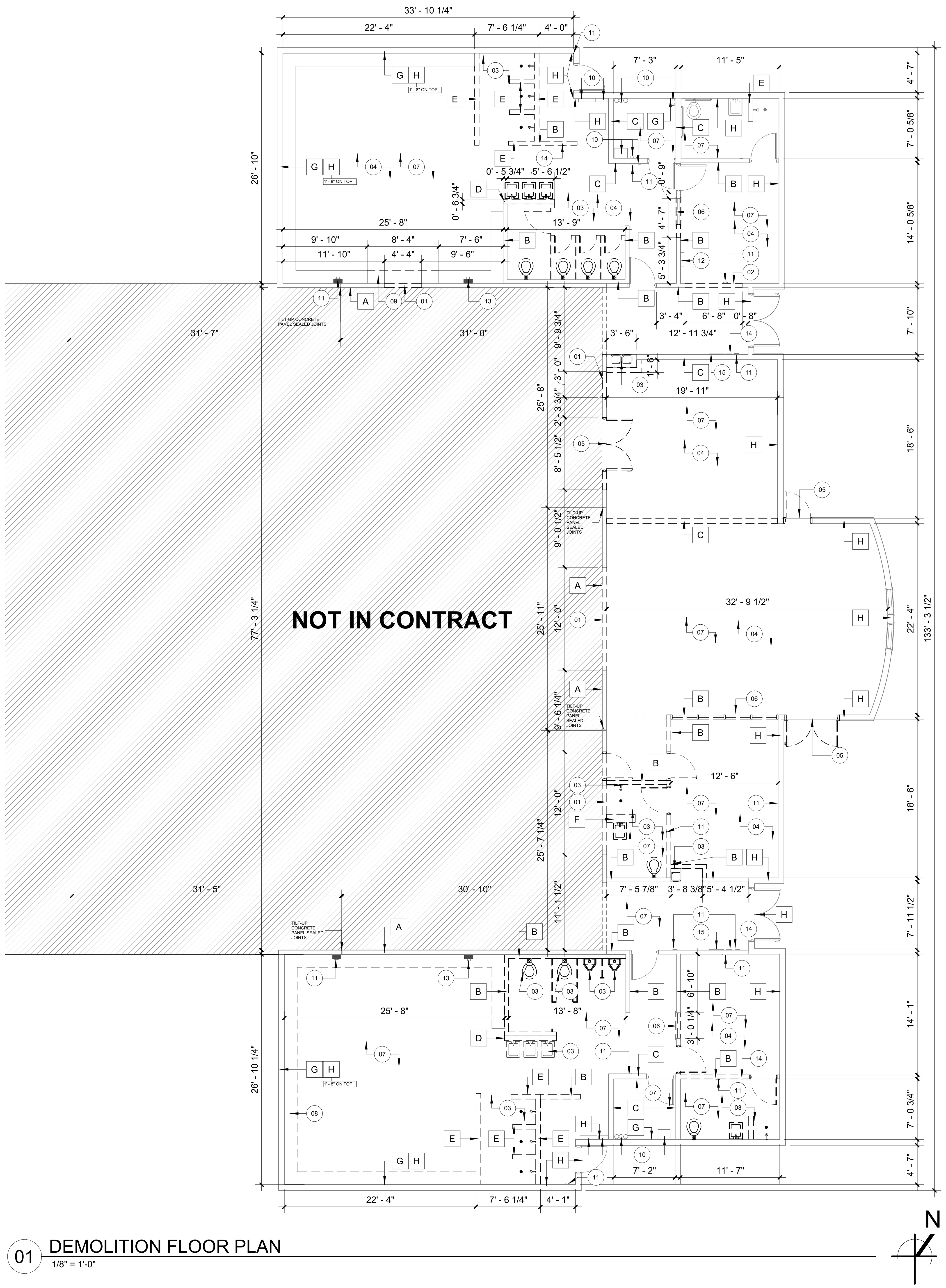
TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION

300 OIL MILL DR. | TORNILLO, TX 79853

CONSTRUCTION DOCUMENTS

AR100

SHEET TITLE:
REFERENCE FLOOR PLAN



01 DEMOLITION FLOOR PLAN
1/8" = 1'-0"

PRESUMED WALL TYPES

Type	Name	Description
A	EXTERIOR | INTERIOR WALL	6" TILT-UP WALL (CONCRETE PANEL JOINTS ARE SHOWN IN FLOOR PLAN)
B	INTERIOR PARTITION WALL	6"x8"x8" PAINTED CMU
C	INTERIOR PARTITION	6"x8"x8" PAINTED CMU WITH 1 9/16" THICK OF 8"x16" GROUND FACE CAP BLOCK
D	INTERIOR PARTITION	7" METAL STUD FURR-OUT WALL ATTACHED TO A 6x8x8 CMU WALL
E	INTERIOR PARTITION	6"x8"x8" CMU WITH 1" TILE ATTACHED. LOCATED JUST IN SHOWERS.
F	INTERIOR PARTITION	6"x8"x8" TWO ROWS OF CMU AND 1" TILE ATTACHED. LOCATED JUST IN SHOWERS.
G	EXTERIOR WALL	6"X8"X16" CMU WITH EIFS SYSTEM
H	EXTERIOR WALL	6"x8"X8" CMU WITH EIFS SYSTEM

DEMOLITION NOTES

NO.	ITEM DESCRIPTION
01	DEMOLISH AS NEEDED TO ACHIEVE NEW OPENINGS FOR NEW DOORS PLACEMENT. REFER TO DOOR SCHEDULE AND STRUCTURAL DRAWINGS
02	DEMOLISH AS NEEDED TO ACHIEVE NEW OPENINGS FOR NEW WINDOWS PLACEMENT. REFER TO DOOR SCHEDULE AND STRUCTURAL DRAWINGS
03	REMOVE EXISTING PLUMBING FIXTURES. REFER TO PLUMBING DRAWINGS.
04	ALL FURNITURE IS TO BE REMOVED PRIOR TO CONSTRUCTION COMMENCEMENT AND RETURNED TO OWNER, OR DISPOSED OF, AT THEIR DIRECTION.
05	REMOVE EXISTING DOOR AND FRAME. PREPARE FOR NEW WORK AND REFER TO NEW DRAWINGS FOR INFILL OR OPENING SPECIFICATIONS.
06	REMOVE EXISTING WINDOW AND FRAME. PREPARE FOR NEW WORK AND REFER TO NEW DRAWINGS FOR INFILL OR OPENING SPECIFICATIONS.
07	REMOVE EXISTING FLOOR FINISHES AND VINYL WALL BASE. PREPARE FOR NEW WORK AND REFER TO FINISH SCHEDULES.
08	DEMOLISH CONCRETE PLATFORM AND PREPARE FOR NEW FINISH FLOOR. REFER TO FINISH SCHEDULE.
09	CAREFULLY CUT PORTION OF CONCRETE PLATFORM FOR NEW ENTRANCE. PREPARE FOR NEW FINISH FLOOR. REFER TO FINISH SCHEDULE.
10	MEP INFRASTRUCTURE TO REMAIN. REFER TO MEP DRAWINGS FOR MORE INFORMATION.
11	FIRE ALARM DEVICES TO BE RELOCATED AS NEEDED THROUGHOUT PROJECT. REFER TO ELECTRICAL DRAWINGS.
12	ELECTRONIC SECURITY PANEL TO REMAIN.
13	ELECTRICAL EQUIPMENT. REFER TO MEP DRAWINGS
14	THERMOSTAT. REFER TO MEP DRAWINGS.
15	FIRE EXTINGUISHER CABINET TO REMAIN.

CAUTION : LOAD-BEARING, STRUCTURAL ELEMENTS ARE SHOWN TO BE DEMOLISHED. REFER TO THE STRUCTURAL DRAWINGS. COMPLY WITH THE STRUCTURAL ENGINEER'S DIRECTIVES.

Countryman & Co.
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108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

DRAWN BY: PJ | AL
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ISSUED: NOVEMBER 1, 2022

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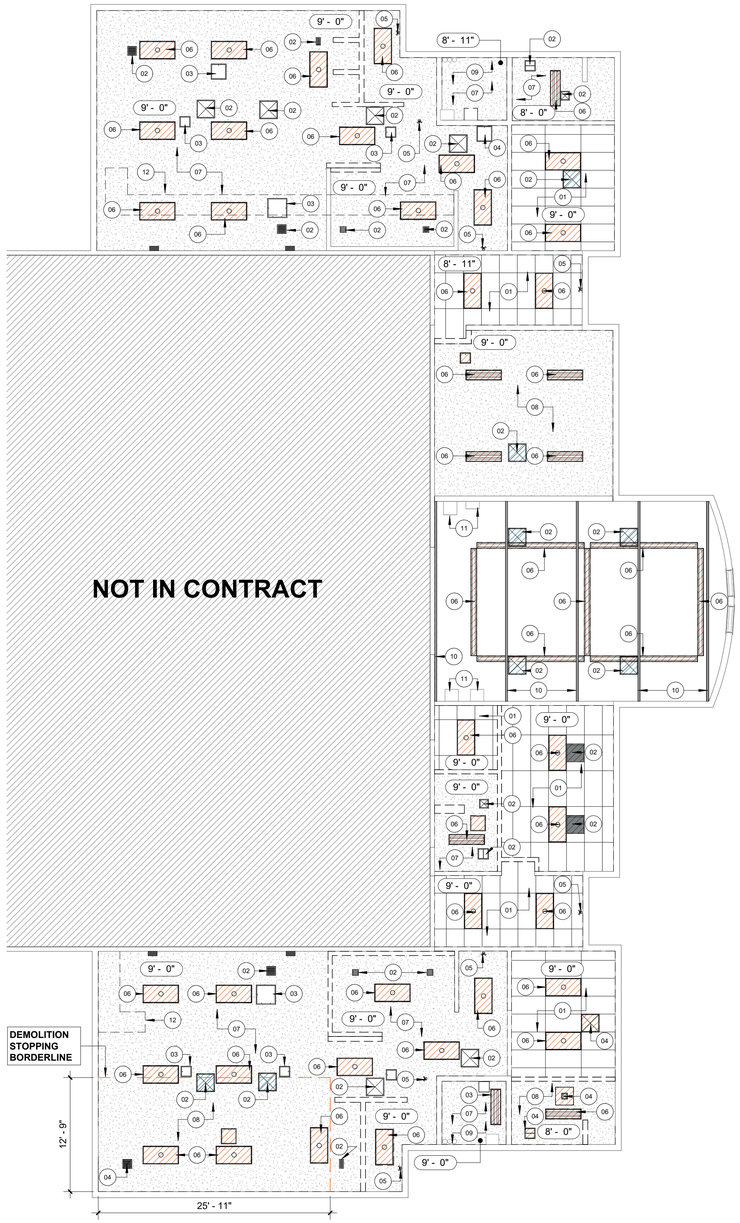
TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION
300 OIL MILL DR. | TORNILLO, TX 79853

CONSTRUCTION DOCUMENTS

SHEET TITLE:
DEMOLITION FLOOR PLAN & PRESUMED WALL TYPES

AD100



01 DEMOLITION REFLECTED CEILING PLAN
1/8" = 1'-0"

N

DEMOLITION NOTES

NO.	ITEM DESCRIPTION
01	REMOVE ALL EXISTING LAY-IN CEILING, AND ACOUSTICAL GRID. COORDINATE WITH NEW WORK. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS.
02	MECHANICAL SUPPLIES AND MISCELLANEOUS ITEMS TO REMAIN AND TO BE ADJUSTED IF NECESSARY TO ALIGN WITH NEW LAY-IN CEILING. REFER TO MECHANICAL DRAWINGS.
03	CEILING ACCESS DOOR TO REMAIN ON EXISTING GYP. BOARD TO REMAIN.
04	REMOVE ALL MECHANICAL AND MISCELLANEOUS ITEMS AT COOLER | FREEZER LOCATIONS. COORDINATE WITH NEW DRAWINGS.
05	REMOVE ALL CEILING MOUNTED EXIT SIGNS AND EMERGENCY LIGHTS. COORDINATE WITH NEW WORK. REFER TO ELECTRICAL DRAWINGS
06	CAREFULLY REMOVE ALL LIGHT FIXTURES AND MISCELLANEOUS ITEMS, AND PREPARE FOR NEW WORK. PATCH AND REPAIR AS NEEDED ON EXISTING GYP., TO REMAIN. REFER TO ELECTRICAL DRAWINGS.
07	EXISTING GYP. BOARD AND SUPPORT TO REMAIN. PATCH, PAINT AND REPAIR IF NECESSARY. MATCH EXISTING CEILING TECTURE.
08	REMOVE GYP. BOARD CEILING, COORDINATE WITH NEW WORK. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS.
09	MEP INFRASTRUCTURE TO REMAIN. REFER TO MEP DRAWINGS FOR MORE INFORMATION.
10	STEEL TRUSSES TO REMAIN.
11	VERTICAL DUCTWORK TO REMAIN.
12	CAREFULLY SAW CUT GYP. BOARD CEILING TO INSTALL NEW RETURN DUCTWORK. REFER TO MECHANICAL DRAWINGS. PATCH, PAINT AND REPAIR AS NEED TO MATCH EXISTING CEILING TEXTURE.

LEGEND

- TO BE ADJUSTED
- TO BE REMOVED
- TO REMAIN

REGISTERED ARCHITECT
JENNIFER COUNTRYMAN
21140
STATE OF TEXAS

Countryman & Co.
Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: AL
PROJECT NO: 2022-16
ISSUED: NOVEMBER 1, 2022

REVISION SCHEDULE:

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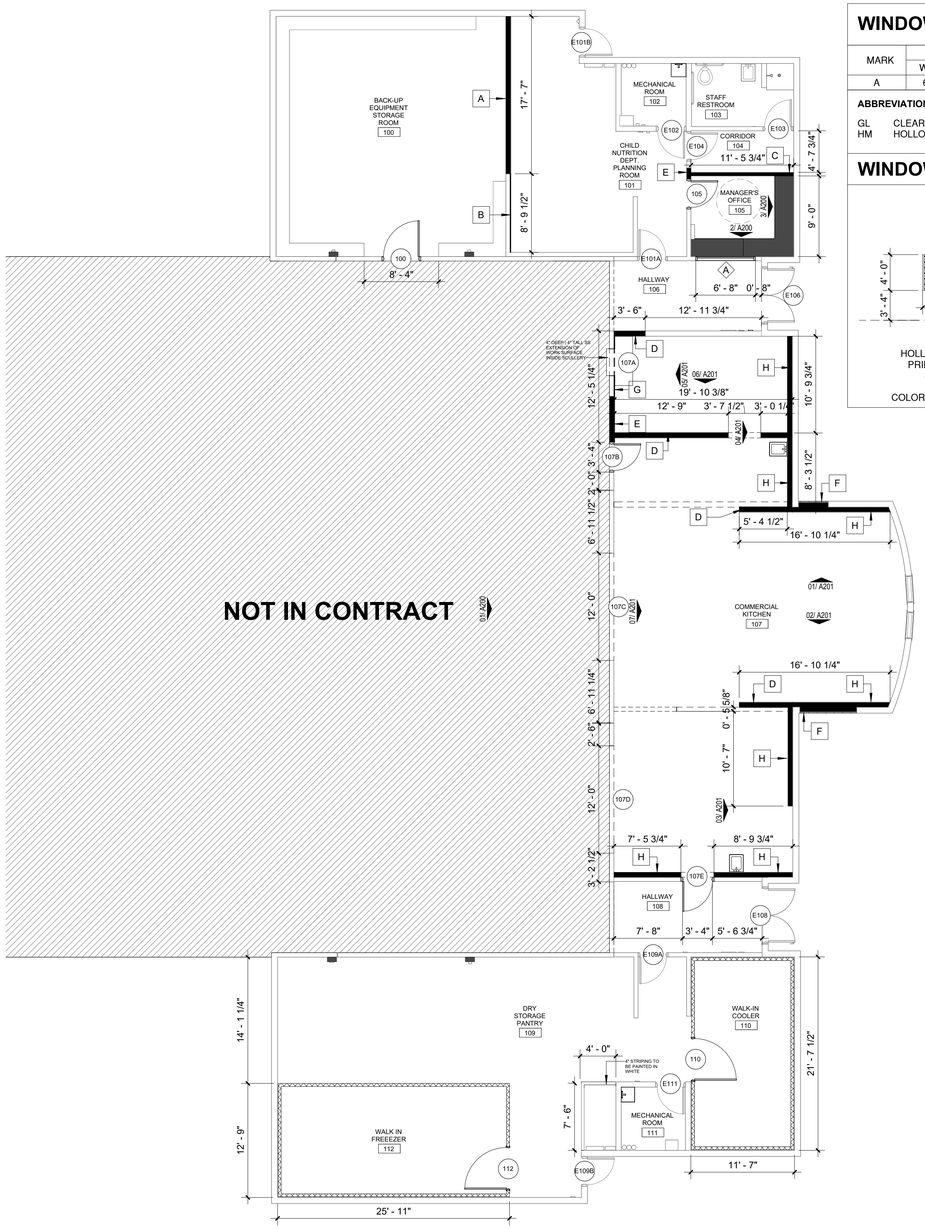
TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION

300 OIL MILL DR. | TORNILLO, TX 79853

CONSTRUCTION DOCUMENTS

AD120

SHEET TITLE:
DEMOLITION REFLECTED CEILING PLAN



NOT IN CONTRACT 01/A200

01 1ST. FLOOR - NEW WORK PLAN
1/8" = 1'-0"

N

WINDOW SCHEDULE

MARK	SIZE		TYPE	FRAME MATERIAL	GLAZING	FIRE RATING	DETAIL				NOTES
	WIDTH	HEIGHT					HEAD	JAMB	SILL	MULLION	
A	6' - 8"	4' - 0"	01	HM	GL	-	01/101	-	01/101	-	2

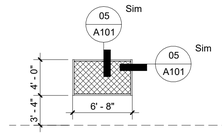
ABBREVIATION / MATERIAL LEGEND

GL CLEAR GLAZE
HM HOLLOW METAL

GENERAL NOTES:

1. FIELD VERIFY EXISTING WINDOW OPENING
2. REFER TO STRUCTURAL DRAWINGS FOR NEW OPENING DETAILS.

WINDOW TYPES



"01"
HOLLOW METAL FRAME
PRIME AND PAINTED
SINGLE PANE
WIRE GLASS
COLOR: MATCH WALL BASE

DOOR SCHEDULE

MARK	TYPE	SIZE			DOOR MATERIAL	DOOR GLASS	FRAME MATERIAL	FRAME			HDW. SET	FIRE RATING	DOOR REMARKS
		W	H	THK				HEAD	JAMB	THRES.			
100	A	4' - 0"	7' - 0"	1 3/4"	HM	-	HM	06/A101	06/A101		SET-01	-	1
E101A	EXIST	-	-	-	EXIST	-	EXIST	-	-	EXIST	SET-01	-	1, 3
E101B	EXIST	-	-	-	EXIST	-	EXIST	-	-	EXIST	-	-	1, 3
E102	EXIST	-	-	-	EXIST	-	EXIST	-	-	EXIST	-	-	1, 3
E103	EXIST	-	-	-	EXIST	-	EXIST	-	-	EXIST	-	-	1, 3
E104	EXIST	-	-	-	EXIST	EXIST	EXIST	-	-	EXIST	-	-	1, 3
105	B	3' - 0"	7' - 0"	1 3/4"	HM	-	HM	06/A101	06/A101	-	SET-01	-	1
E106	EXIST	-	-	-	EXIST	EXIST	EXIST	-	-	EXIST	-	-	1, 3
107A	D	3' - 0"	4' - 6"	1 3/4"	-	-	-	03/A101	04/A101	-	-	-	-
107B	B	3' - 0"	7' - 0"	1 3/4"	HM	-	HM	06/A101	06/A101	-	SET-01	-	1
107C	E	12' - 0"	11' - 3"	-	-	-	-	01/A101	04/A101	-	-	-	-
107D	F	12' - 0"	9' - 0"	-	-	-	-	02/A101	04/A101	-	-	-	-
107E	C	3' - 8"	7' - 0"	1 3/4"	HM	-	HM	06/A101	06/A101	-	SET-01	-	1
E108	EXIST	-	-	-	EXIST	-	EXIST	-	-	EXIST	-	-	3
E109A	EXIST	-	-	-	EXIST	-	EXIST	-	-	EXIST	-	-	3
E109B	EXIST	-	-	-	EXIST	-	EXIST	-	-	EXIST	-	-	3
110	-	-	-	-	-	-	-	-	-	-	-	-	5
E111	EXIST	-	-	-	EXIST	-	EXIST	-	-	EXIST	-	-	3
112	-	-	-	-	-	-	-	-	-	-	-	-	5

DOOR REMARKS

GENERAL NOTES:

A. ALL DOORS NOTED ON "DOOR SCHEDULE" SHALL HAVE LEVER HANDLES AND ALL HARDWARE TO MEET ADA REQUIREMENTS, UNLESS OTHERWISE SCHEDULED.
B. DOOR MARKED WITH "EXIST" ARE EXISTING DOORS TO REMAIN.
C. ALL GLAZING DOORS AND WINDOWS, SHALL BE CLEANED.
D. LOCKING DEVICES ON REQUIRED EXIT DOORS SHALL NOT REQUIRED THE USE OF A KEY, OR SPECIAL KNOWLEDGE OR EFFORT FOR OPERATION FROM THE EGRESS SIDE OF THE DOOR, EXCEPT AS SPECIFICALLY PERMITTED BY SECTION 1008.1.9 (2010FBC).

HARDWARE SET

SET - 01

3 STANDARD HINGES	MCKINNY, MPB79 4-1/2" * 4-1/2" US10B
SURFACE CLOSER	DORMA 38616 AF86P VC 690
DOOR HANDLE	FALCON B101S GRADE 2 LEVER SET
DEADBOLT	KWIKSET SINGLE CYLINDER DEADBOLT WITH SMARTKEY MODEL:660-26DSV1
KICK PLATE	ROCKWOOD #K1050 12""34"
WALL DOOR STOP	ROCKWOOD $477 US26D
DOOR SILENCER	ROCKWOOD #608 SILENCER

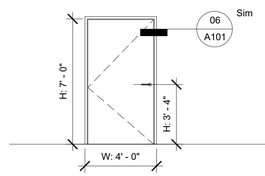
REMARKS KEY NOTES:

1. PRIME AND PAINT HOLLOW METAL FRAMES. COLOR TO MATCH WALL BASE. AT EXTERIOR, MATCH EXISTING.
3. VERIFY PROPER OPERATION, PATCH, REPAIR, AND PAINT TO MATCH BASE. ON EXTERIOR SIDES OF DOORS, MATCH EXISITNG DOORS.
5. DOOR TO BE INSTALLED BY COOLER | FREEZER MANUFACTURER

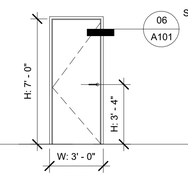
ABBREVIATION / MATERIAL LEGEND

HM HOLLOW METAL
SC SOLID CORE, WOOD
GL CLEAR GLAZE
RB OIL RUBBED BRONZED

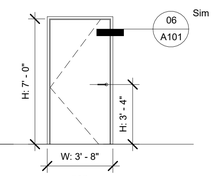
DOOR TYPES



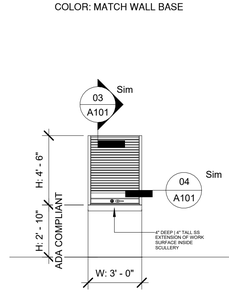
"A"
HOLLOW METAL DOOR
HOLLOW METAL FRAME
NON FIRE RATED
HONEY COMB CORE
COLOR: MATCH WALL BASE



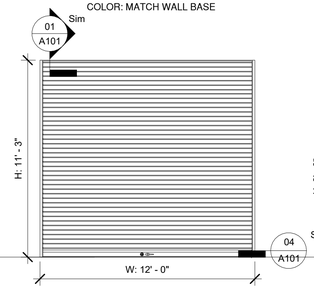
"B"
HOLLOW METAL DOOR
HOLLOW METAL FRAME
NON FIRE RATED
HONEY COMB CORE
COLOR: MATCH WALL BASE



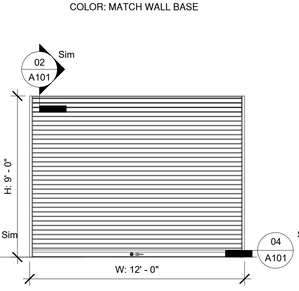
"C"
HOLLOW METAL DOOR
HOLLOW METAL FRAME
NON FIRE RATED
HONEY COMB CORE
COLOR: MATCH WALL BASE



"D"
MOBILFLEX ROLL-SHUTTER OPAQUE
STEEL ROLLING CLOSURE
ELECTRICAL
www.mobilflex.com
OR APPROVED EQUAL



"E"
MOBILFLEX ROLL-SHUTTER OPAQUE
STEEL ROLLING CLOSURE
ELECTRICAL
www.mobilflex.com
OR APPROVED EQUAL



"F"
MOBILFLEX ROLL-SHUTTER OPAQUE
STEEL ROLLING CLOSURE
ELECTRICAL
www.mobilflex.com
OR APPROVED EQUAL

REGISTERED ARCHITECT
JENNIFER COUNTRYMAN
21140
STATE OF TEXAS

Countryman & Co.
Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: PJ | AL
PROJECT NO: 2022-16
ISSUED: NOVEMBER 1, 2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION

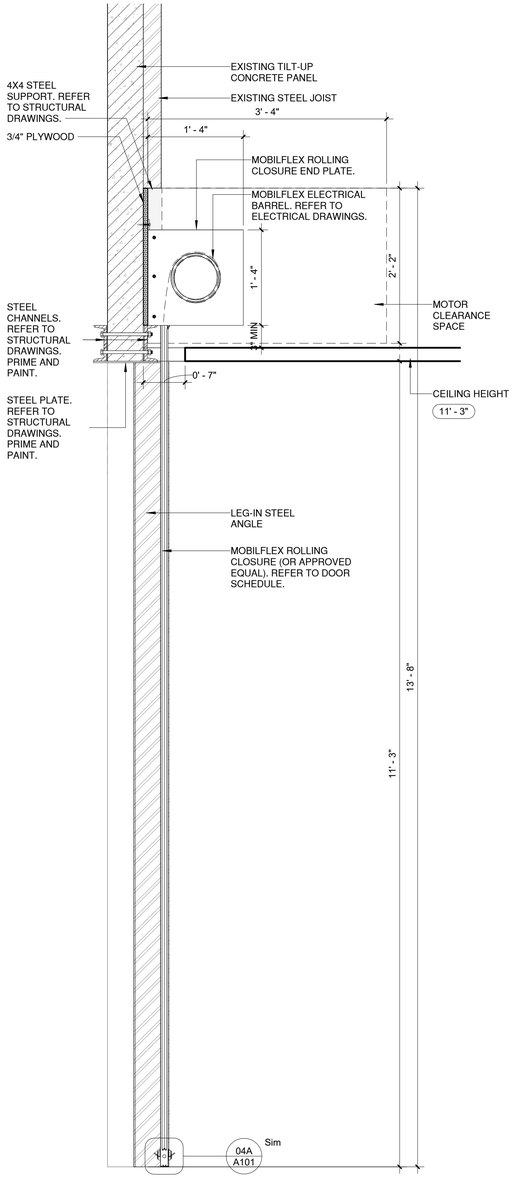
300 OIL MILL DR. | TORNILLO, TX 79853

CONSTRUCTION DOCUMENTS

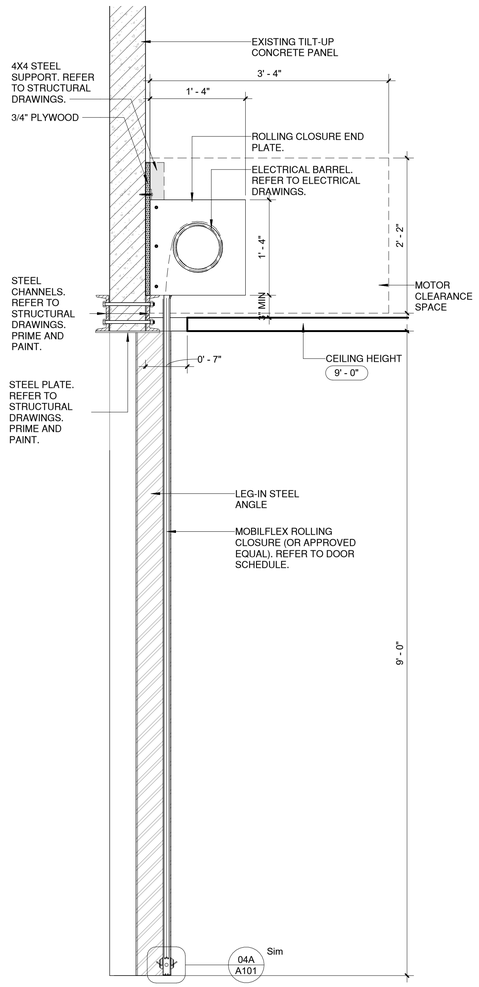
SHEET TITLE:

FLOOR PLAN, DOOR & WINDOW SCHEDULE

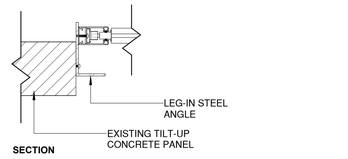
A100

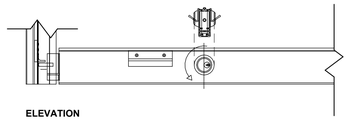


01 DOOR DETAIL - ROLLING CLOSURE - 11' - 3" OPENING
1" = 1'-0"

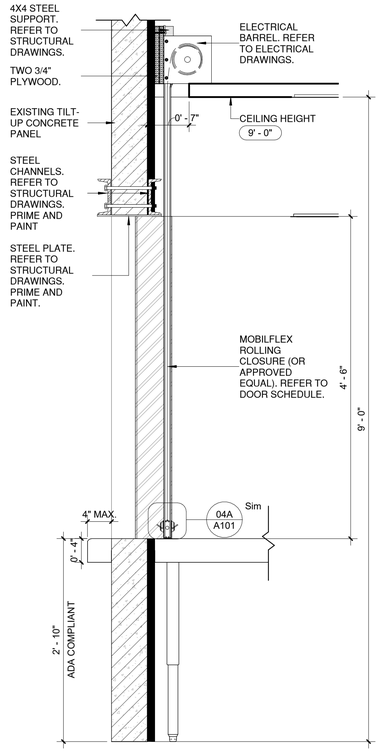


02 DOOR DETAIL - ROLLING CLOSURE - 9' - 0" OPENING
1" = 1'-0"





04A DOOR DETAIL - ROLLING CLOSURE - JAMB
1 1/2" = 1'-0"



04B DOOR DETAIL - ROLLING CLOSURE - LOCK
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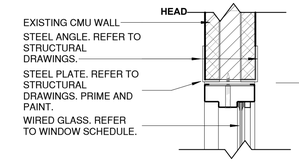

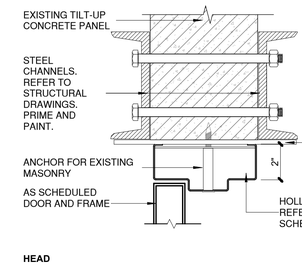

05 WINDOW DETAIL - HOLLOW METAL FRAME
1 1/2" = 1'-0"

06 DOOR DETAIL - HOLLOW METAL FRAME
3" = 1'-0"

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REGISTERED ARCHITECT
JENNIFER COUNTRYMAN
21140
STATE OF TEXAS

DRAWN BY: PJ
PROJECT NO: 2022-16
ISSUED: NOVEMBER 1, 2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

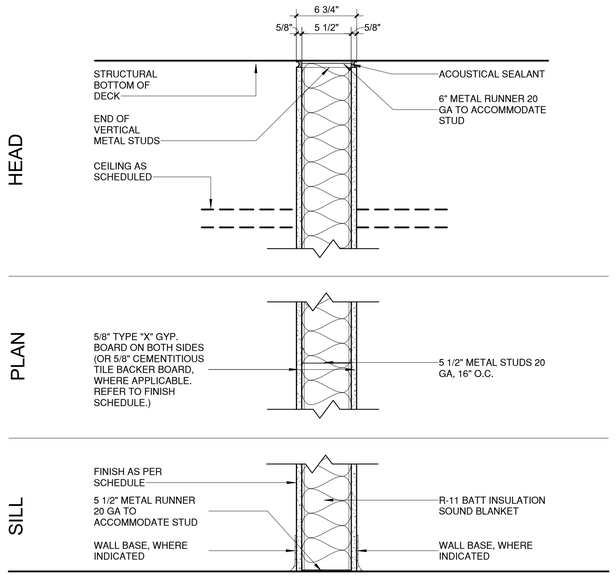
TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:
DOOR & WINDOW DETAILS

CONSTRUCTION DOCUMENTS

A101

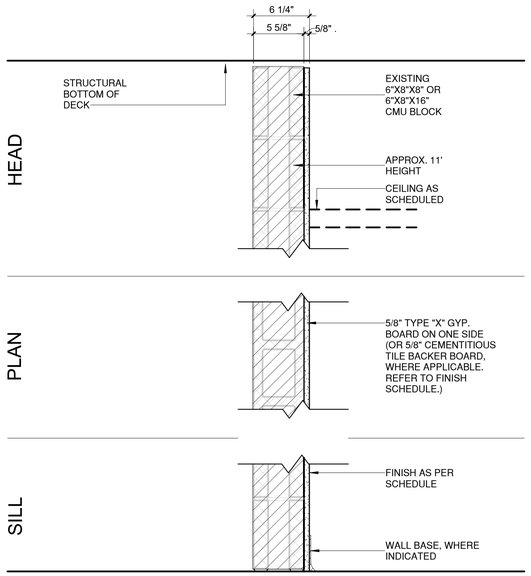
A NEW INTERIOR PARTITION WALL



NOTE: ALL EXPOSED GYPSUM BOARD WALLS & CEILING TO BE FINISHED TO LEVEL 4 PLASTER, ADJOINING AREAS FINISHED TO MATCH.

ALL GYPSUM WALL ON THE INTERIOR OF THIS BUILDING SHALL BE PATCHED, FINISHED TO A LEVEL 4 PLASTER FINISH, PRIMED, AND PAINTED WITH NOT LESS THAN TWO COATS OF PAINT.

B NEW INTERIOR PARTITION WALL



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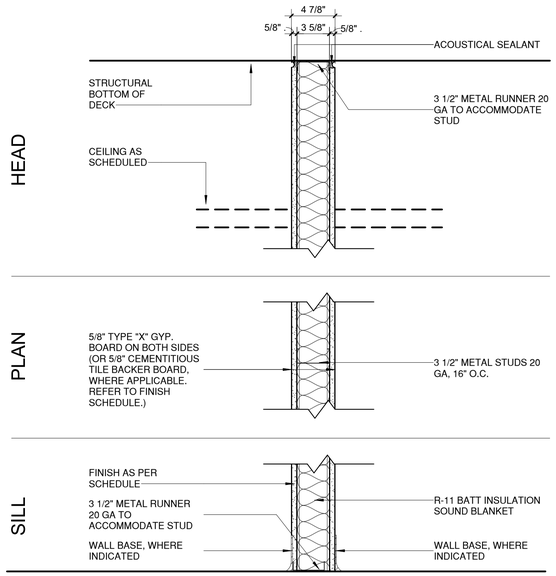
C NEW INTERIOR PARTITION WALL



NOTE: ALL EXPOSED GYPSUM BOARD WALLS & CEILING TO BE FINISHED TO LEVEL 4 PLASTER, ADJOINING AREAS FINISHED TO MATCH.

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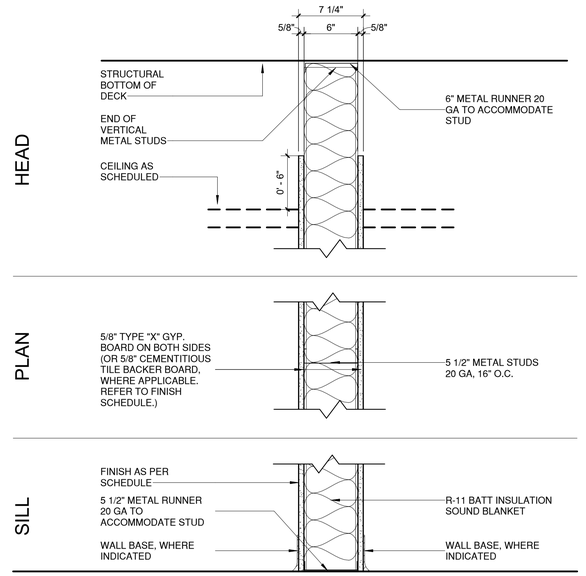
D NEW INTERIOR PARTITION WALL



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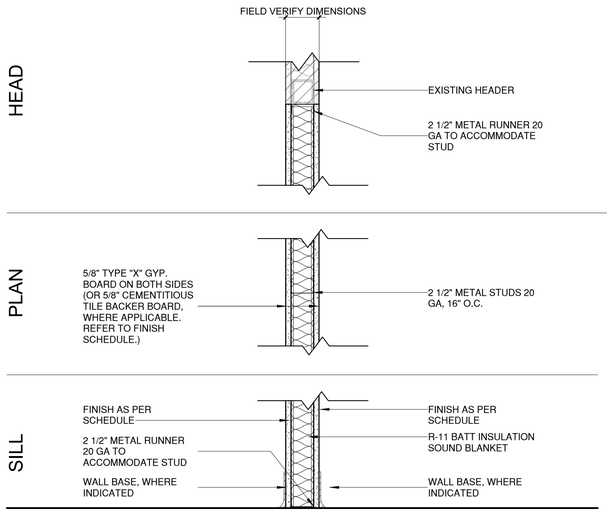
E NEW INTERIOR PARTITION - DOOR AND WINDOW FILL



NOTE: ALL EXPOSED GYPSUM BOARD WALLS & CEILING TO BE FINISHED TO LEVEL 4 PLASTER, ADJOINING AREAS FINISHED TO MATCH.

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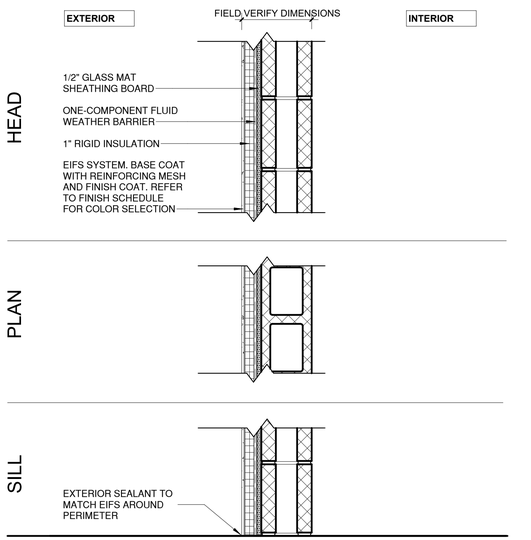
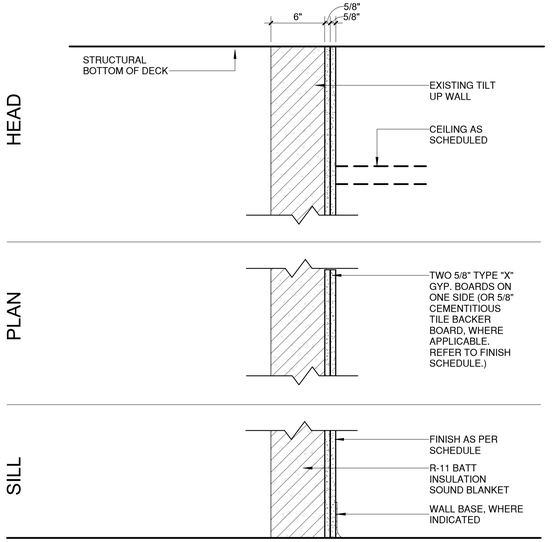
NOTE: WIDTH CAN BE ADJUSTED IN THE FIELD TO THE DEPTH OF THE EXITING WALLS

F NEW EXTERIOR WALL - DOOR FILL



NOTE: WIDTH CAN BE ADJUSTED IN THE FIELD TO THE DEPTH OF THE EXITING WALLS

G INTERIOR PARTITION WALL



NOTE: ALL EXPOSED GYPSUM BOARD WALLS & CEILING TO BE FINISHED TO LEVEL 4 PLASTER, ADJOINING AREAS FINISHED TO MATCH.

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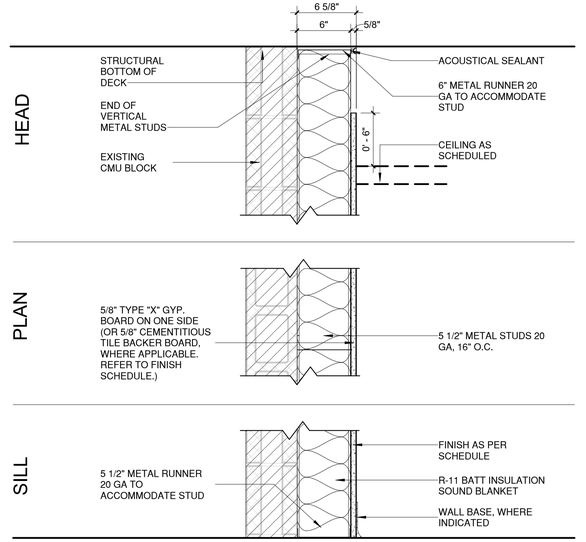
H NEW INTERIOR PARTITION WALL



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Countryman & Co.
Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: AL
PROJECT NO: 2022-16
ISSUED: NOVEMBER 1, 2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

REGISTERED ARCHITECT JENNIFER COUNTRYMAN 21140 STATE OF TEXAS

TORNILLO INDEPENDENT SCHOOL DISTRICT GYM TO CAFETERIA CONVERSION

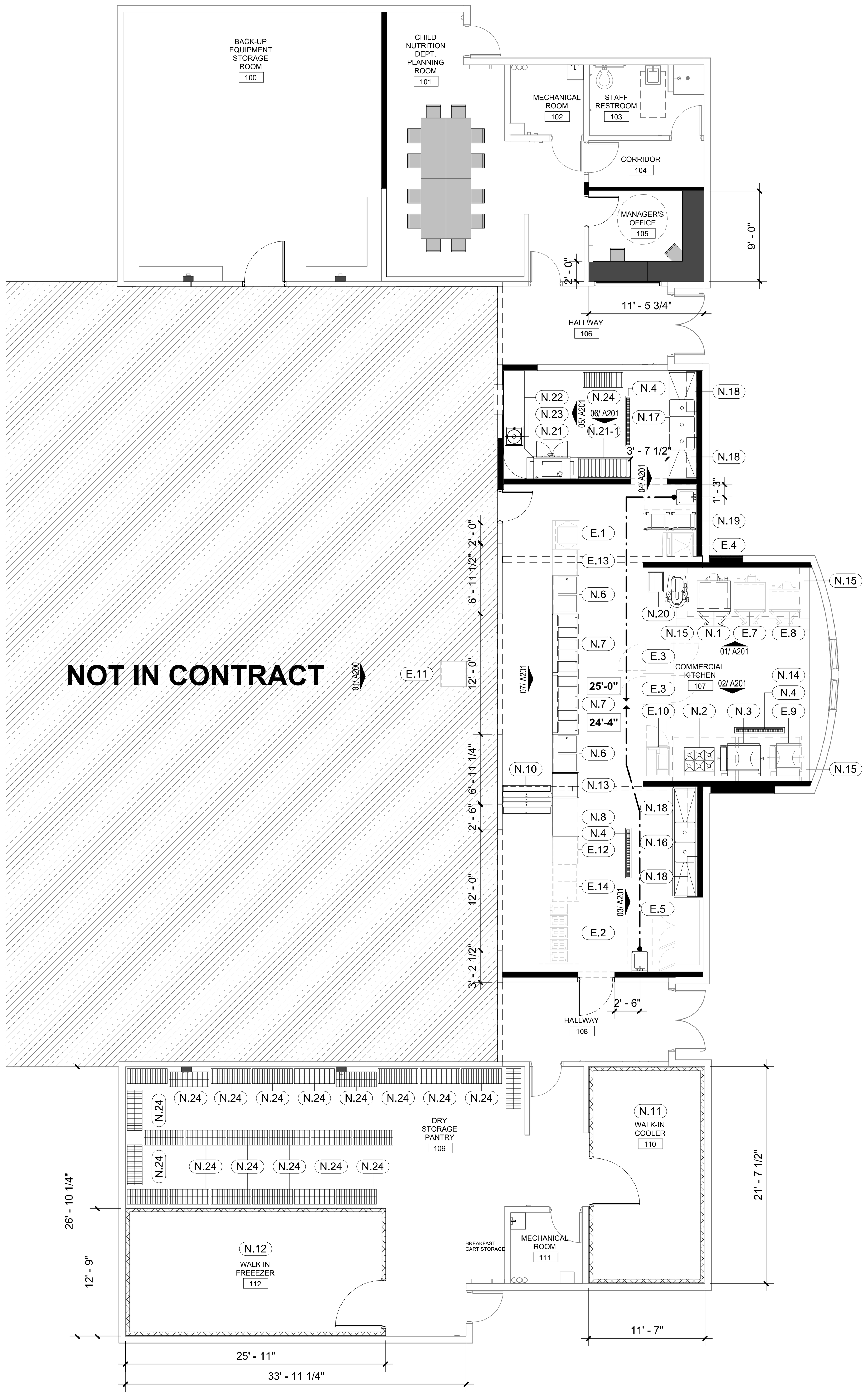
300 OIL MILL DR. | TORNILLO, TX 79853

CONSTRUCTION DOCUMENTS

SHEET TITLE:

WALL TYPES

A102



01 KITCHEN EQUIPMENT PLAN
1/8" = 1'-0"

NEW EQUIPMENT SCHEDULE

NO.	QTY.	SYMBOL	IMAGE	SIZE	DESCRIPTION	MANUFACTURER | MODEL NO.	PROVIDER | INSTALLER
ELECTRIFIED AND | OR PLUMBED EQUIPMENT							
0				˘ * 9 ˘ &	)#5 %108'%6+10 18'0	87.%#0 ^ 8%˘˘)&	190'4 ^)%
0				ˆ * ˘ 9 &	56#0&#4& 18'0 ˘ $740'45 2412#0'	87.%#0 ^ ˘5Ä˘$2	190'4 ^)%
0				* ˆ 9 · &	)#5 6+.6+0) 5-+..'6 $4#+5+0) 2#0	41)0 ^ $2/Ä)#	190'4 ^)%
0					(.114 6417)* 4'('4 61 '0)+0''4		)% ^)%
0					':*#756 *11& 4'('4 61 '0)+0''4		)% ^)%
0 ˘. 0 ˘4				˘ * 9 &	5'48+0) %1706'4 %1.& (11&	&7-' ^ 6%/Ä 2)Ä0˘	190'4 ^)%
0 ˘. 0 ˘4				˘ * ˘ 9 &	5'48+0) %1706'4 *16 (11&	&7-' ^ 6'*(Ä˘ 2)	190'4 ^)%
0 ˆ				˘ * ˘ 9 &	5'48+0) %1706'4 76+.+6;	&7-' ^ 656Ä ˘2)	190'4 ^)%
0 ˙	016 75'&			˘ * 9 &	%#5* 4')+56'4 56#0&	&7-' ^ 6%5Ä 2)	190'4 ^)%
0				˘ * ˆ 9 &	/+.- %11.'4	$'8'4#)' #+4 ^ 56(ˆ*%Ä Ä9Ä	190'4 ^)%
0					9#.-Ä+0 %11.'4		)% ^)%
0					9#.-Ä+0 (4''<'4		)% ^)%
0				9 &	6#$.'		190'4 ^)%
0					%7561/ 56#+0.'55 56''. 6#$.'		)% ^)%
0				˘ 9 ˘· ˘ & ˘ ˆ *	37#465 /+:'4	81..4#6* ^ /+:	190'4 ^)%
0 ˘					%7561/ %1/2#46/'06 5+0- 9+6* 56#+0.'55 56''. &4#+0 $1#4&5	%7561/ '37+2/'06	)% ^)%
0 ˘					%7561/ %1/2#46/'06 5+0-	%7561/ '37+2/'06	)% ^)%
0 ˆ				& ˆ .	9#.. /1706'& 5*'.(	#&8#0%' 6#$%15Ä Ä ˆ	190'4 ^)%
0 ˙				9 ˘ . ˘· *	2#0 #.7/+07/ 2#0 4#%- %#56'45 -6+	9#0)'4ž5 64#&+0) +0% ^ 2#04#%-	190'4 ^ 190'4
0				9 ˆ & ˆ *	#.7/+07/ &700#)' 4#%-	).1$#. +0&7564+'#. ^	190'4 ^ 190'4
0 0 Ä					4#%- %108';14 &+5*9#5*+0) /#%*+0' 4Ä. 41..'4 %108';14 6#$.'	%*#/2+10 ^ &4 ˆ8 2* %*#/2+10 4%6˘ 6#$.'	)% ^)%
0					%7561/ 56#+0.'55 56''. 6#$.'	%7561/ '37+2/'06	)% ^)%
0				9 ˘ ˘ .	5%4#2 %1..'%614	5#.8#,14 ^ 5˙	190'4 ^)%
0				ˆ & ˆ .	'21:; 5*'.(9+6* .1%-+0) 9*''.5		190'4 ^ 190'4

EXISTING EQUIPMENT SCHEDULE

NO.	QTY.	SYMBOL	IMAGE	SIZE	DESCRIPTION	MANUFACTURER | MODEL NO.	PROVIDER | INSTALLER
ELECTRIFIED AND | OR PLUMBED EQUIPMENT							
'				˘ 9 &	4'(4+)'4#614 5'.(Ä5'48+% %#5' /+.- %11.'4	1#5+5 ^ %1 4	':+56+0) ^)%
'				˘ . ˆ &	$+/ 9#4/'4	&7-' ^ '2 Ä	':+56+0) ^)%
'				9 ˘ ˘ ˆ &	41..Ä6*47 51.+& &17$.' &1145 *'#6'& %#$+0'6	647' ^ 6) *46Ä 5Ä 5	':+56+0) ^)%
'				9 &	+%' 5614#)' $+0 +%' /#-'4	5%165/#0 ^ $ 2	':+56+0) ^)%
'				˘ˆ ˆ . · &	51.+& &114 4'(4+)'4#614	647' ^ 6Ä˘	':+56+0) ^)%
' ˘	016 75'&						':+56+0)
' ˘				ˆ 9 ˘ ˆ &	)#5 %108'%6+10 18'0	+/2'4+#.	':+56+0) ^)%
' ˆ				ˆ 9 ˘ ˘ ˆ &	)#5 %108'%6+10 18'0	$.1&)'66 ^ &()Ä	':+56+0) ^)%
' ˙				ˆ 9 · &	$4#+5+0) 2#0	)41'0 '%.+25' ^ /Ä)	':+56+0) ^)%
'				˘ 9 ˘ ˆ &	*'#6'& *1.&+0) %#$+0'6	/%%#.. ^ Ä*2	':+56+0) ^)%
'				9 &	4')+56'4 56#0&		
'				9 &	6#$.'		
'				9 &	6#$.'		
'				˘ * 9 &	5'48+0) %1706'4 %1.& (11&	&7-' ^ 6%/Ä 2)Ä0˘	':+56+0) ^)%

LEGEND

(white box)	EQUIPMENT REFER TO KITCHEN EQUIPMENT SCHEDULE
(light gray box)	FURNITURE OWNER PROVIDED | OWNER INSTALLED
(dark box)	MILLWORK CONTRACTOR PROVIDED | CONTRACTOR INSTALLED

Countryman & Co.
Architecture
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TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: PJ | AL
PROJECT NO: 2022-16
ISSUED: NOVEMBER 1, 2022

REVISION SCHEDULE:

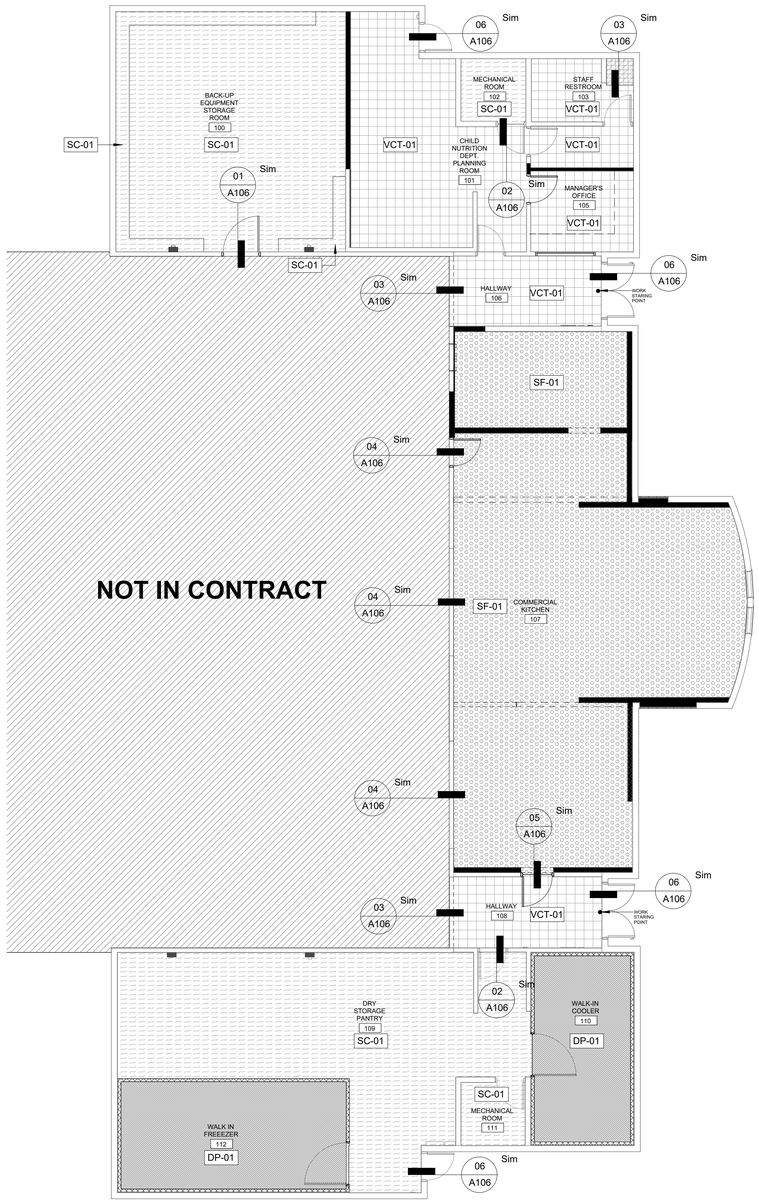
NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:
KITCHEN EQUIPMENT PLAN AND SCHEDULE

CONSTRUCTION DOCUMENTS

A103



01 FLOOR FINISHES PLAN
1/8" = 1'-0"

FINISH SCHEDULE

ITEM	DESCRIPTION	MAKE | MODEL	DIMENSIONS	VENDOR	IMAGE	LEGEND	NOTES
FLOOR FINISHES							
SF-01	SAFETY FLOORING	MFR: ALTRO FLOORING COLLECTION:ALTRO CLASSIC 25 COLOR: QUARRY RED X2560R11	ROLLS: 6' - 7" * 49' | 2m * 15m THICKNESS: 3.0mm | .12"	www.altrofloors.com			
	COVE BASE		4" OR 6" H				
	ALTRO CAP STRIP C4	TRANSITION DETAIL, RIGID H SHAPED VINYL TRANSITION CAP WITH 8mm SHELF TO BE USED BETWEEN FLASH COVED SHEET FLOORING AND FIBERGLASS REINFORCED PANELS	0.31" W x 1.75" H	www.altrofloors.com			
	ALTRO COVER FORMER	COVER FORMER (COVE STICKS)	0.75" W x 0.75" H	www.altrofloors.com			
VCT-01	VINYL COMPOSITION TILE	MANUFACTURER: ARMSTRONG COLLECTION: PREMIUM EXCELON CROWN TEXTURE COLOR: SMOKEY BROWN 5C868	12" * 12" *1/8"				
SC-01	POLISHED AND SEALED CONCRETE		0" * 0"				
DP-01	ALUMINUM DIAMOND PLATE. BY COLD STORAGE UNIT SUPPLIER.			BY MANUFACTURER			
	EXISTING TILE TO REMAIN.						

FINISH SCHEDULE NOTES

1. ALL FINISHES TO BE APPROVED BY OWNER.
2. ALL FINISHES TO BE INSTALLED AS PER THE MANUFACTURER'S INSTRUCTIONS, TO INCLUDE FLOOR PREP.

REGISTERED ARCHITECT JENNIFER COUNTRYMAN 21140 STATE OF TEXAS

Countryman & Co.
Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

DRAWN BY: AL | PJ
PROJECT NO: 2022-16
ISSUED: NOVEMBER 1, 2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION

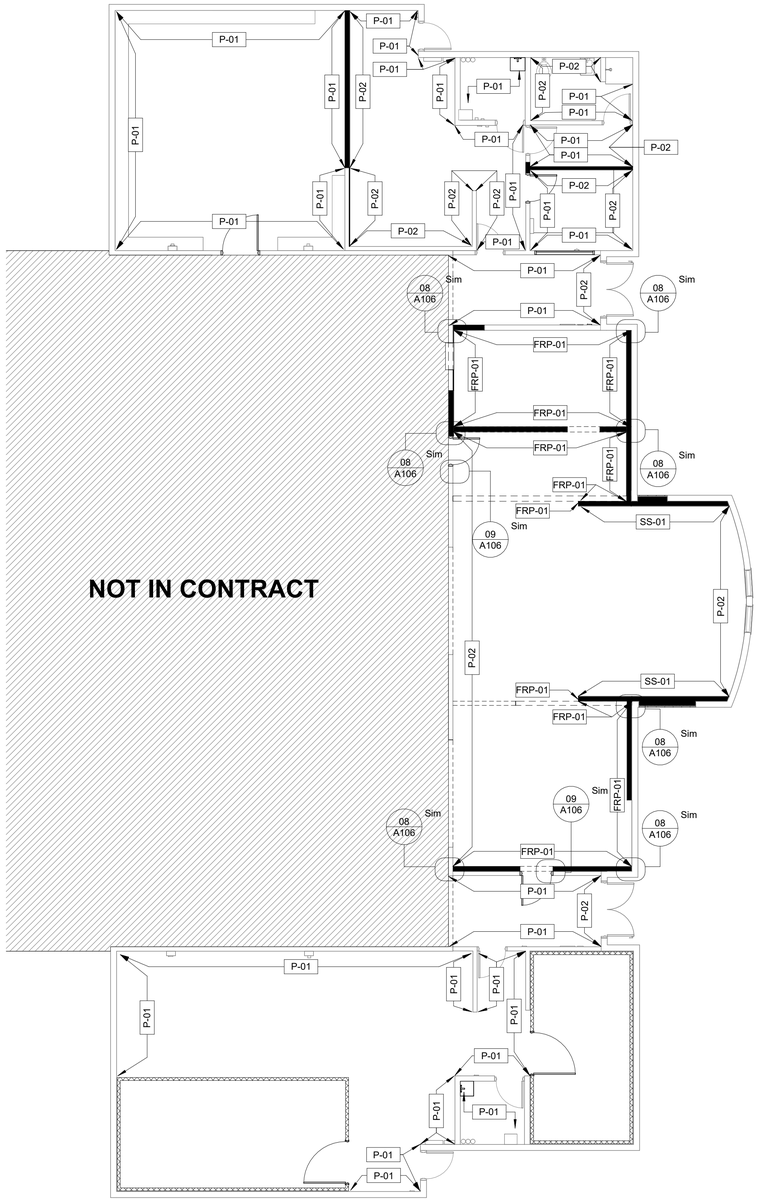
300 OIL MILL DR. | TORNILLO, TX 79853

CONSTRUCTION DOCUMENTS

A104

SHEET TITLE:

FLOOR FINISHES



01 WALL FINISHES PLAN
1/8" = 1'-0"

FINISH SCHEDULE

ITEM	DESCRIPTION	MAKE | MODEL	DIMENSIONS	VENDOR	LEGEND	NOTES
WALL FINISHES						
P - 01	FIELD COLOR	MFR: SHERWIN WILLIAMS COLOR: AGREEABLE GRAY SW 7029		www.sherwin-williams.com		2
	TRADITIONAL VINYL WALL BASE	MFR: TARKETT MODEL: TRADITIONAL WALL BASE TA4 COLOR: GATEWAY WG	4" H	www.commercial.tarkett.com		
P - 02	ACCENT COLOR	MFR: SHERWIN WILLIAMS COLOR: KEYSTONE GRAY SW 7504		www.sherwin-williams.com		2
	TRADITIONAL VINYL WALL BASE	MFR: TARKETT MODEL: TRADITIONAL WALL BASE TA4 COLOR: GATEWAY WG	4" H	www.commercial.tarkett.com		
FRP-01	FIBERGLASS REINFORCED PANELS					
SS-01	STAINLESS STEEL					

FINISH SCHEDULE NOTES

1. ALL FINISHES TO BE APPROVED BY OWNER.
2. TWO PAINTING COATS TO BE APPLIED, MINIMUM.
3. ALL PAINTINGS AND COATINGS APPLIED SHALL BE APPROPRIATE FOR THE SUBSTRATE, AND SHALL BE APPLIED AS PER THE MANUFACTURER'S INSTRUCTIONS.

Countryman & Co.
Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

REGISTERED ARCHITECT
CONNIER COUNTRYMAN
21140
STATE OF TEXAS

DRAWN BY: AL | PJ
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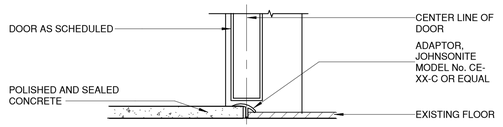
TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION

300 OIL MILL DR. | TORNILLO, TX 79853

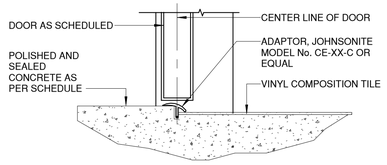
CONSTRUCTION DOCUMENTS

A105

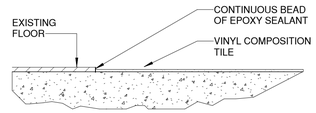
SHEET TITLE:
WALL FINISHES



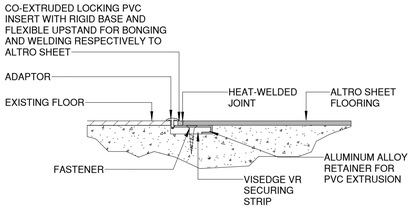
01 FLOOR TRANSITION DETAIL - EXISITING TO SC-01
3" = 1'-0"



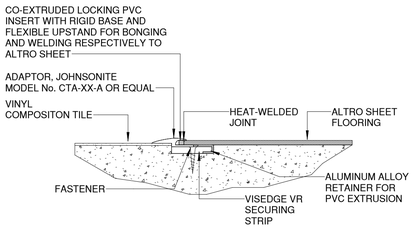
02 FLOOR TRANSITION - SC-01 TO VCT
3" = 1'-0"



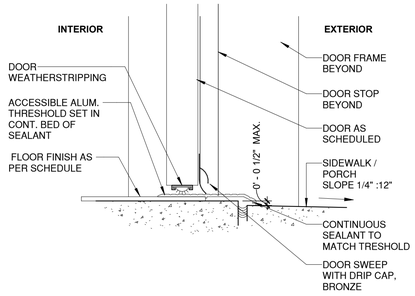
03 FLOOR TRANSITION - EXISITING TO VCT
3" = 1'-0"



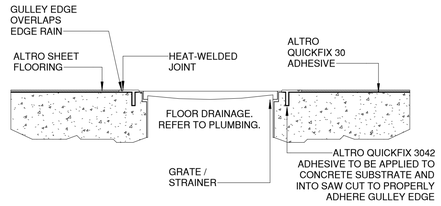
04 FLOOR TRANSITION - EXISTING TO SAFETY FLOORING
3" = 1'-0"



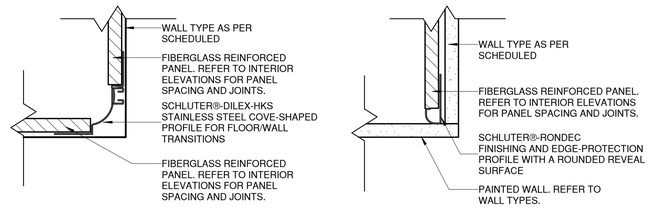
05 FLOOR TRANSITION - VCT TO SAFETY FLOORING
3" = 1'-0"



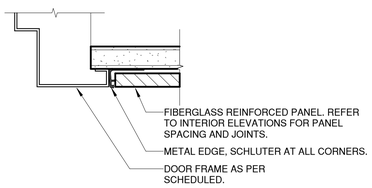
06 THRESHOLD DETAIL
3" = 1'-0"



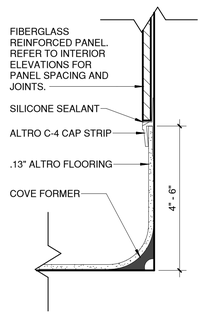
07 ALTRO FLOORING DETAIL - DRAINAGE
3" = 1'-0"



08 FIBERGLASS REINFORCED PANEL - CORNERS DETAIL
6" = 1'-0"



09 FIBERGLASS REINFORCED PANEL - DOOR DETAIL
6" = 1'-0"



10 COVE BASE DETAIL
6" = 1'-0"

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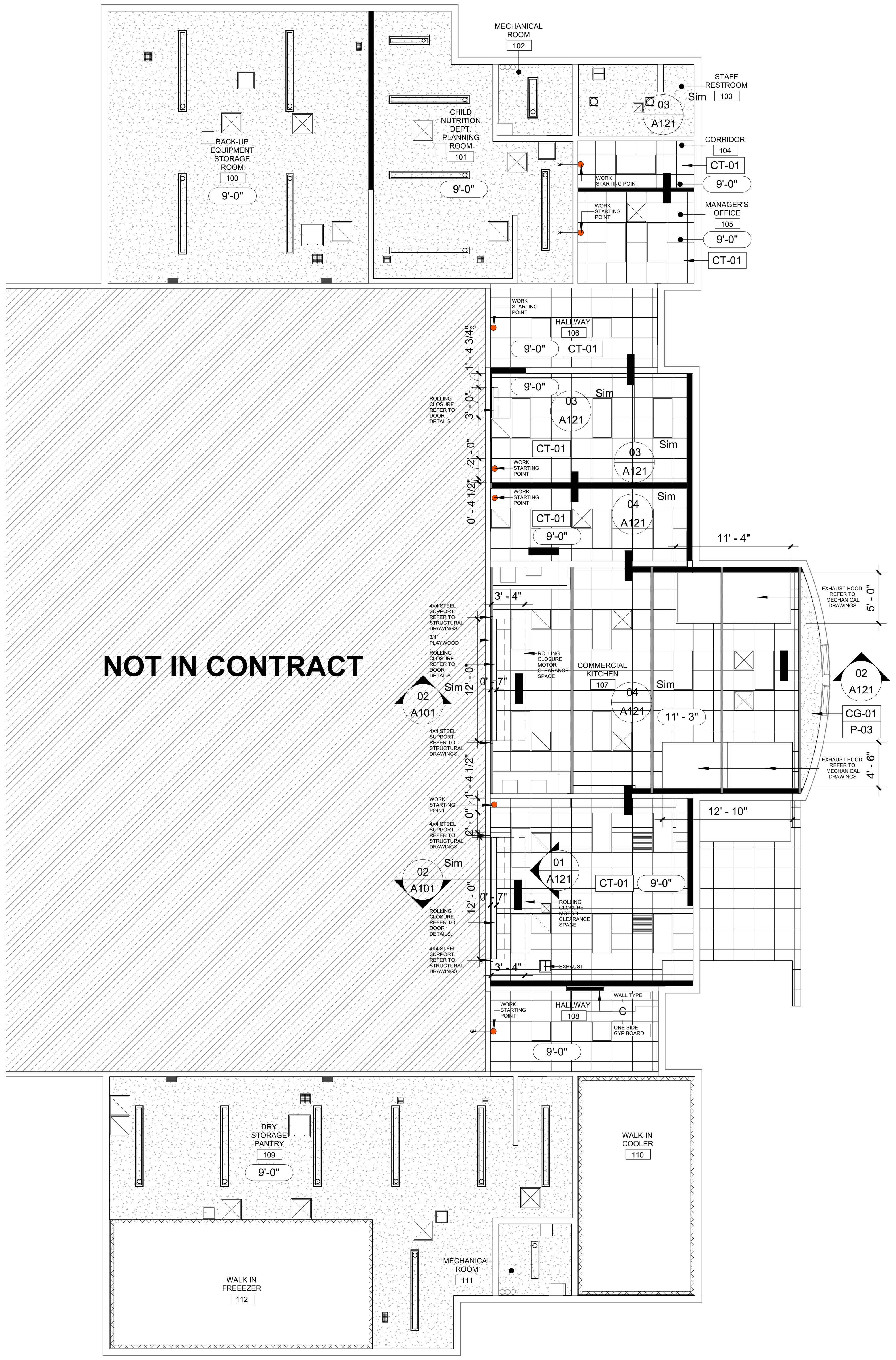
TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION

300 OIL MILL DR. | TORNILLO, TX 79853

CONSTRUCTION DOCUMENTS

SHEET TITLE:
FINISHES DETAILS

A106



01 REFLECTED CEILING PLAN

1/8" = 1'-0"

REFLECTED CEILING FINISH SCHEDULE

ITEM	DESCRIPTION	MAKE | MODEL	DIMENSIONS	VENDOR	LEGEND	NOTES
CEILING FINISHES						
CT-01	LAY-IN CEILING	MANUFACTURER: ARMSTRONG MODEL: KITCHEN ZONE	2' x 2'	----		
CG-01	GYP.BD. CEILING	TEXTURE: SMOOTH | LEVEL 4 FINISH: PRIMED AND PAINTED				
P-03	CEILING PAINT	MFR: SHERWIN WILLIAMS COLOR: GREEK VILLA SW 7551				
LIGHT FIXTURES - REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION						
	LAY- IN LED PANEL	LED	2' X 2'	----		
	LAY- IN LED PANEL	LED	2' X 4'	----		
CEILING SUPPLIES - REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR MORE INFORMATION						
	SUPPLY AIR GRILL	----	----	----		
	RETURN AIR GRILL	----	----	----		
	EXHAUST FAN	----	----	----		
	ACCESS DOOR	----	----	----		
		----	----	----		
		----	----	----		
			----	----		

CEILING NOTES

1. WORK SHALL FULLY COMPLY WITH GOVERNING CODES, ORDINANCES, RESTRICTIONS, AND NATIONAL ELECTRIC CODE. TAKE ALL NECESSARY SAFETY MEASURES AND COMPLY WITH LOCAL BUILDING DEPARTMENT REQUIREMENTS FOR PUBLIC PROTECTION (BARRICADES, SIGNS, DUST BARRIERS, ETC.
2. GENERAL CONTRACTOR TO CONFIRM HEIGHTS AND COORDINATE WITH EXISTING CONDITIONS. NOTIFY OWNER AND ARCHITECT IF SPECIFIED HEIGHT CANNOT BE ACHIEVED
3. CEILING HEIGHTS ARE TO FINISHES SURFACE. GYPSUM BOARD OR CEILING TILE, AS APPLICABLE.
4. GYPSUM BOARD CEILINGS AND SOFFIT TO HAVE A SMOOTH FINISH UNLESS NOTED OTHERWISE.
5. PAINT HVAC GRILLES TO MATCH ADJACENT CEILING FINISH AND EXISTING TO REMAIN GRILLES.
6. GENERAL CONTRACTOR SHALL MAKE SURE NEW GRILLS OR ADJUSTED GRILLS LOCATIONS DO NOT INTERFERE WITH ANY OTHER CEILING FIXTURES. NOTIFY OWNER AND ARCHITECT IF SPECIFIED LOCATIONS CANNOT BE ACHIEVED .
7. ADJUST EXISTING GRILLES TO MATCH NEW LAY-IN CEILING GRID.
8. THE SUSPENDED TILE CEILING PANELS IN KITCHEN AREAS ARE WASHABLE.
9. REFERENCE MECHANICAL AND ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION AND COORDINATION OF SYSTEMS NOT SHOWN ON THIS PLAN.

Countryman & Co.
Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

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TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION

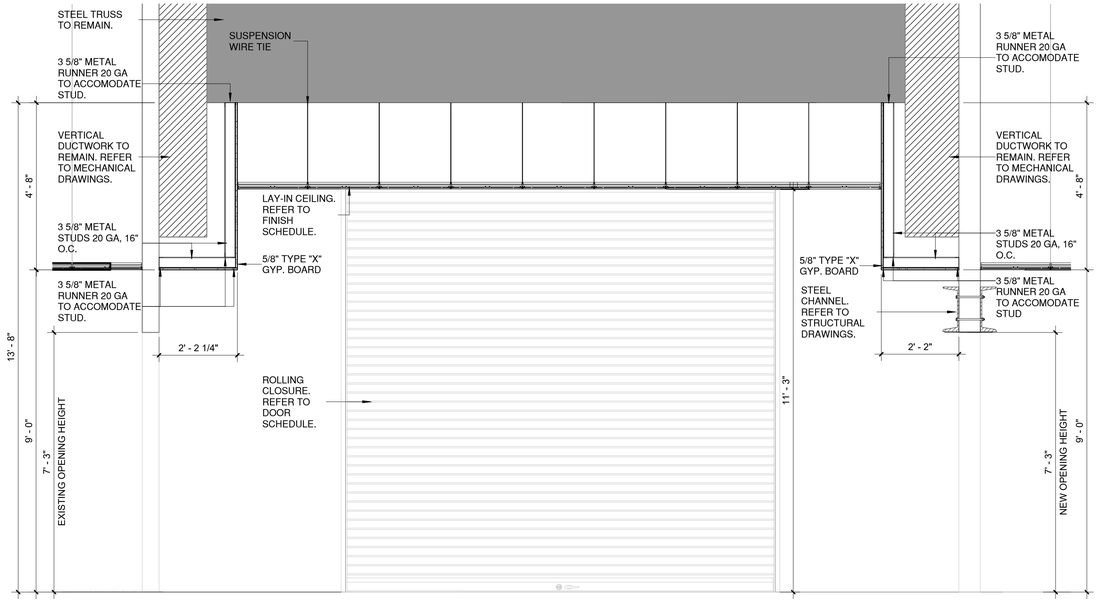
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

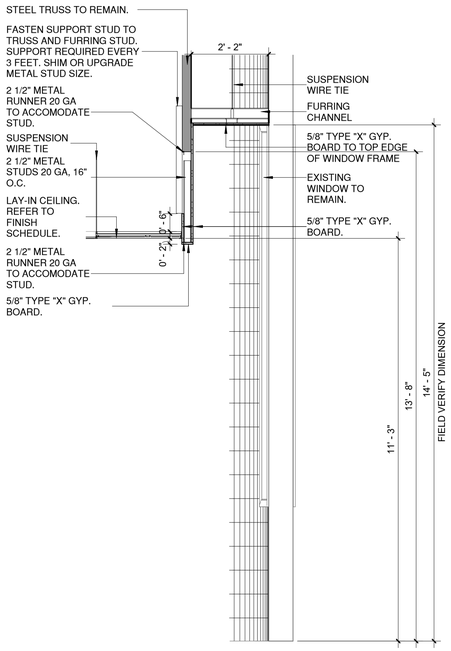
REFLECTED CEILING PLAN

CONSTRUCTION DOCUMENTS

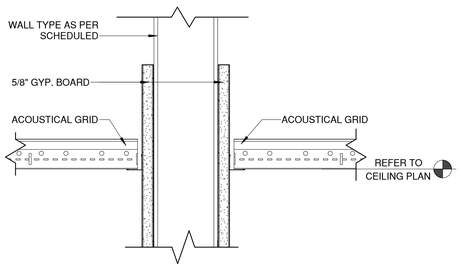
A120



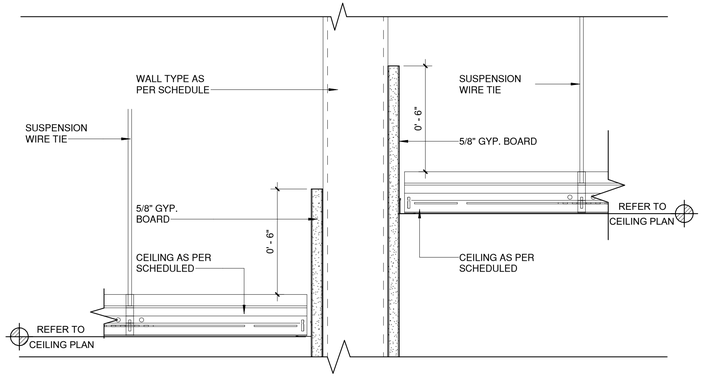
01 CEILING TRANSITION - VERTICAL DUCTWORK CHASE
1/2" = 1'-0"



02 CEILING TRANSITION - GYP. BOARD
1/2" = 1'-0"



03 CEILING TRANSITION DETAIL - LAY-IN CEILING - EQUAL HEIGHTS
3" = 1'-0"



04 CEILING TRANSITION DETAIL - LAY-IN CEILING - CHANGE IN HEIGHTS
3" = 1'-0"

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REGISTERED ARCHITECT JENNIFER COUNTRYMAN 21140 STATE OF TEXAS

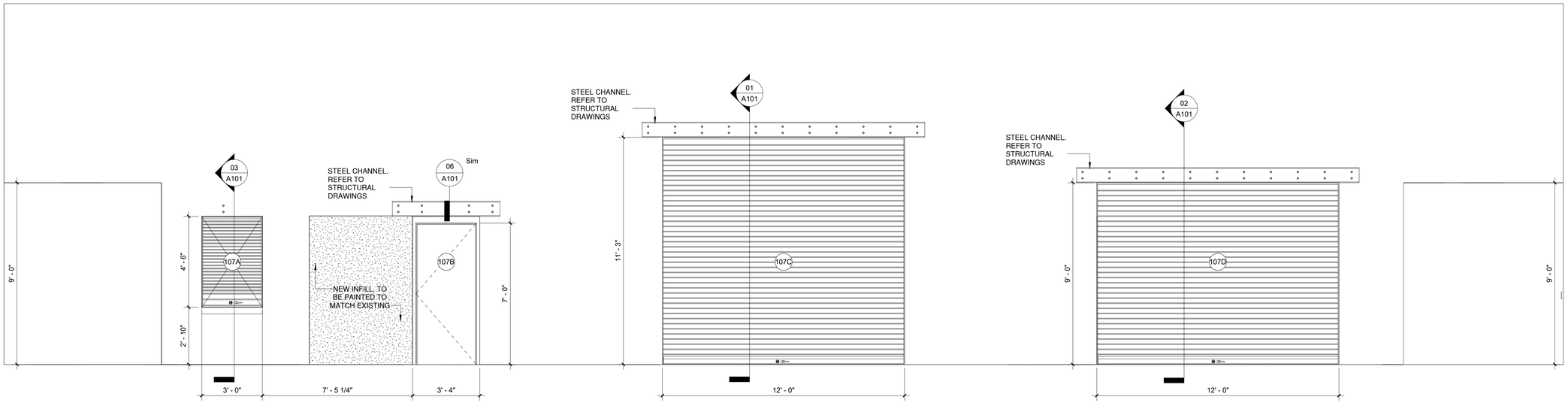
TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION

300 OIL MILL DR. | TORNILLO, TX 79853

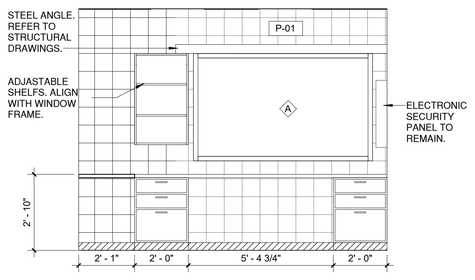
CONSTRUCTION DOCUMENTS

A121

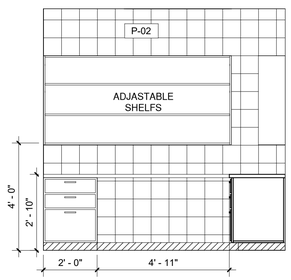
SHEET TITLE:
CEILING TRANSITION DETAILS



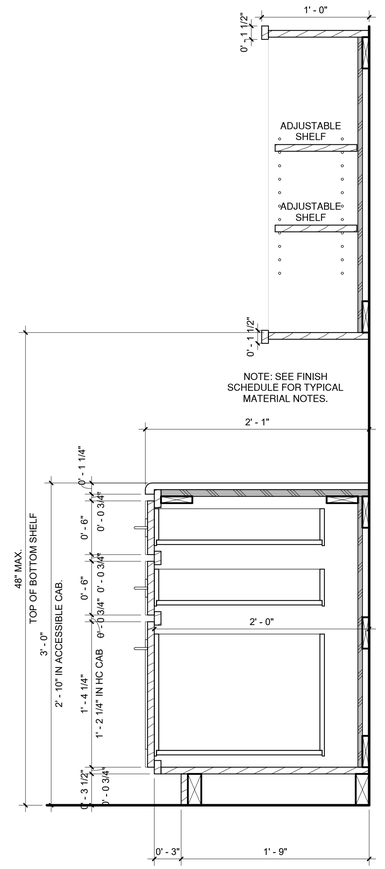
01 INTERIOR ELEVATION - NEW OPENINGS
3/8" = 1'-0"



02 INTERIOR ELEVATION - MANAGER'S OFFICE A
3/8" = 1'-0"



03 INTERIOR ELEVATION - MANAGER'S OFFICE B
3/8" = 1'-0"



04 CABINET W/ DRAWERS DETAIL
1 1/2" = 1'-0"

REGISTERED ARCHITECT JENNIFER COUNTRYMAN 21140 STATE OF TEXAS

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Architecture
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TORNILLO INDEPENDENT SCHOOL DISTRICT

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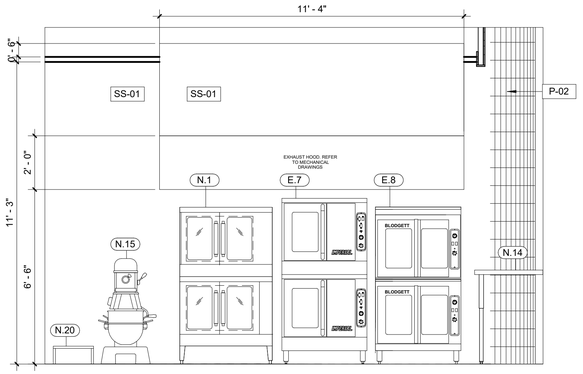
TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION
300 OIL MILL DR. | TORNILLO, TX 79853

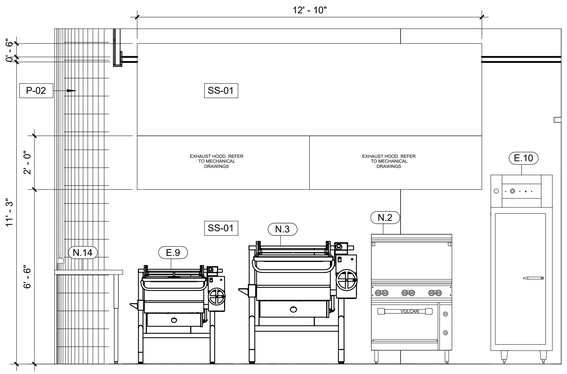
CONSTRUCTION DOCUMENTS

SHEET TITLE:
INTERIOR ELEVATIONS & MILLWORK DETAILS

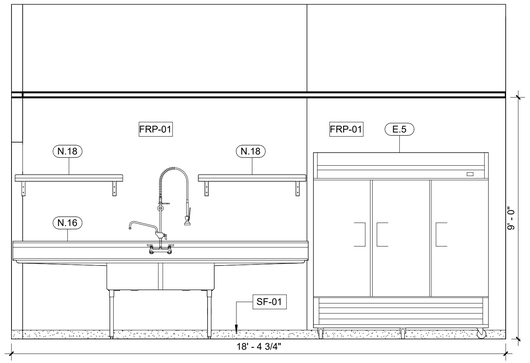
A200



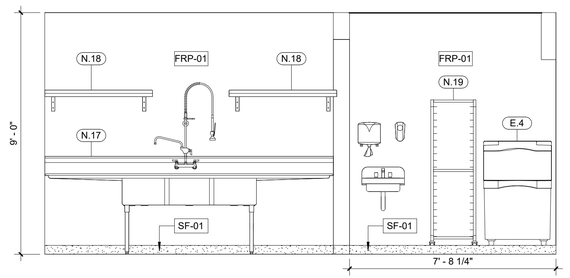
01 KITCHEN ELEVATION A
3/8" = 1'-0"



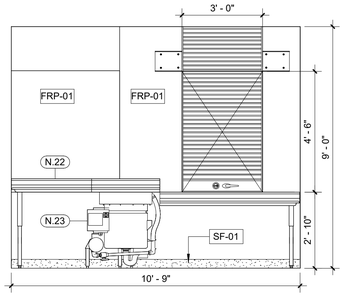
02 KITCHEN ELEVATION B
3/8" = 1'-0"



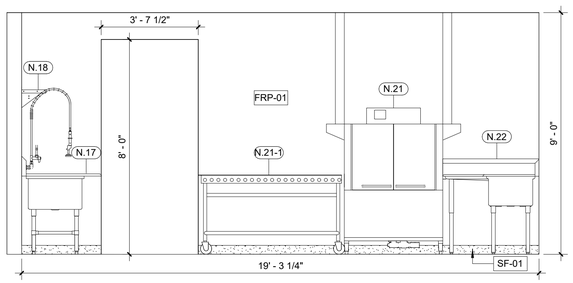
03 KITCHEN ELEVATION C
3/8" = 1'-0"



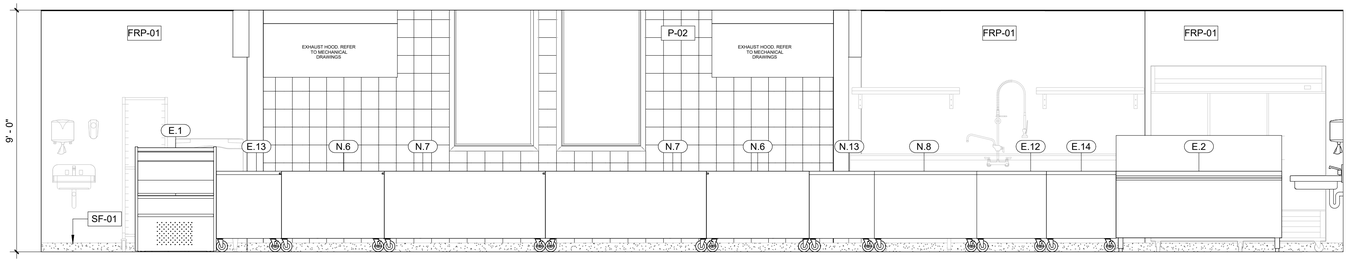
04 KITCHEN ELEVATION D
3/8" = 1'-0"



05 KITCHEN ELEVATION E
3/8" = 1'-0"



06 KITCHEN ELEVATION F
3/8" = 1'-0"



07 KITCHEN ELEVATION G
3/8" = 1'-0"

FINISH SCHEDULE

ITEM	DESCRIPTION	MAKE | MODEL	DIMENSIONS	VENDOR	LEGEND	NOTES
WALL FINISHES						
P - 01	FIELD COLOR	MFR: SHERWIN WILLIAMS COLOR: AGREEABLE GRAY SW 7029		www.sherwin-williams.com		2
	TRADITIONAL VINYL WALL BASE	MFR: TARKETT MODEL: TRADITIONAL WALL BASE TA4 COLOR: GATEWAY WG	4" H	www.commercial.tarkett.com		
P - 02	ACCENT COLOR	MFR: SHERWIN WILLIAMS COLOR: KEYSTONE GRAY SW 7504		www.sherwin-williams.com		2
	TRADITIONAL VINYL WALL BASE	MFR: TARKETT MODEL: TRADITIONAL WALL BASE TA4 COLOR: GATEWAY WG	4" H	www.commercial.tarkett.com		
FRP-01	FIBERGLASS REINFORCED PANELS					
SS-01	STAINLESS STEEL					

FINISH SCHEDULE NOTES

1. ALL FINISHES TO BE APPROVED BY OWNER.
2. TWO PAINTING COATS TO BE APPLIED, MINIMUM.
3. ALL PAINTINGS AND COATINGS APPLIED SHALL BE APPROPRIATE FOR THE SUBSTRATE, AND SHALL BE APPLIED AS PER THE MANUFACTURER'S INSTRUCTIONS.

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300 OIL MILL DR. | TORNILLO, TX 79853

CONSTRUCTION DOCUMENTS

SHEET TITLE:

KITCHEN INTERIOR ELEVATIONS

A201

GENERAL STRUCTURAL NOTES

GENERAL

1. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE STRUCTURAL ENGINEERS IN THIS OR SIMILAR LOCALITIES. THEY ASSUME THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKERS WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
2. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, LAGGING, SHORING, BRACING, FORM-WORK, ETC. AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. CONSTRUCTION MATERIALS SHALL BE UNIFORMLY SPREAD OUT SUCH THAT DESIGN LIVE LOAD PER SQUARE FOOT AS NOTED HEREIN IS NOT EXCEEDED.
3. DESIGN OF ITEMS NOT PART OF THE PRIMARY STRUCTURAL SYSTEM (SUCH AS EXTERIOR PAVING, RAILINGS, NON-STRUCTURAL WALLS) AND PREFABRICATED STRUCTURAL ITEMS (SUCH AS FLOOR, ROOF TRUSSES) SHALL BE PROVIDED BY OTHERS UNLESS SPECIFICALLY NOTED ON THESE DRAWINGS. .
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS AND RESOLVE ANY DISCREPANCIES WITH THE ARCHITECT PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.
5. TYPICAL DETAILS AND NOTES SHALL APPLY, THOUGH NOT NECESSARILY INDICATED AT A SPECIFIC LOCATION ON PLANS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT. DETAILS MAY SHOW ONLY ONE SIDE OF CONNECTION OR MAY OMIT INFORMATION FOR CLARITY.
6. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
7. ALL INSPECTIONS REQUIRED BY THE BUILDING CODES, JURISDICTION, OR THESE PLANS SHALL BE PROVIDED BY AN INDEPENDENT INSPECTION COMPANY OR THE BUILDING DEPARTMENT. SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE AN INSPECTION.

BASIS FOR DESIGN

BUILDING CODES:	IBC 2015 ASCE 7-10 AISC 14TH EDITION
LIVE LOADS:	ROOF = 20 PSF
WIND LOADS:	120 MPH EXPOSURE B COEFFICIENT (GCpi) = 0.18
SNOW LOADS:	GROUND SNOW LOAD = 5 PSF
SEISMIC LOADS:	EQUIVALENT LATERAL FORCE PROCEDURE SEISMIC DESIGN CATEGORY = C SITE CLASS D S_S = 0.360 S_1 = 0.108 S_{DS} = 0.363 S_{D1} = 0.017
RISK CATEGORY:	CATEGORY III SEISMIC IMPORTANCE FACTOR = 1.25

CONCRETE

1. ALL CONCRETE CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ACI 318 AND ACI 301.
2. MIN. 28 DAY COMPRESSIVE STRENGTH, f'c, AND LARGEST NOMINAL AGGREGATE SIZE SHALL BE AS NOTED BELOW. MAX. WATER/CEMENT RATIO FOR CONCRETE IN CONTACT WITH SOIL SHALL BE 0.45.
3. CONCRETE MIXES SHALL BE DESIGNED BY A CERTIFIED LABORATORY, STAMPED BY AN APPROPRIATELY LICENSED SPECIALTY ENGINEER, AND APPROVED BY THE ENGINEER OF RECORD. MIX DESIGNS SHALL INCLUDE THE PROJECT NAME AND INDICATE THEIR USE WITHIN THE STRUCTURE. MIX DESIGNS SHALL BE PROPORTIONED TO MINIMIZE SHRINKAGE AND HAVE PROVEN SHRINKAGE CHARACTERISTICS OF 0. 05% OR LESS BASED ON TESTING PER ASTM C157.
4. IF USED, EARLY STRENGTH CONCRETE SHALL BE PROPORTIONED TO DEVELOP THE 28 DAY COMPRESSIVE STRENGTH AT THE AGE REQUIRED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT TEST DATA FOR REVIEW BY THE ENGINEER OF RECORD TO SUBSTANTIATE THE CONCRETE STRENGTH AT THE REQUIRED AGE.
5. ALL CONCRETE SHALL BE NORMAL WEIGHT OF 145 POUNDS PER CUBIC FOOT USING HARD ROCK AGGREGATES CONFORMING TO ASTM C33 U.N.O. WHERE LIGHTWEIGHT CONCRETE IS SPECIFIED, CONCRETE SHALL BE 110 POUNDS PER CUBIC FOOT USING AGGREGATES CONFORMING TO ASTM C330.
6. MAX. SLUMP SHALL BE 5 INCHES (EXCEPTION: WHERE ADMIXTURES/PLASTICIZERS HAVE BEEN INCLUDED IN MIX DESIGN TO IMPROVE WORKABILITY, SLUMP LIMIT SHALL BE BASED ON ADMIXTURE MFR.'S RECOMMENDATIONS). MIX WATER SHALL BE CLEAN AND POTABLE.
7. PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE II CEMENT MAY BE USED. CEMENT SHALL BE TYPE V WITH POZZOLAN WHERE CONCRETE IS IN CONTACT WITH SOIL CONTAINING VERY SEVERE SULFATE EXPOSURE.
8. WATER SOLUBLE CHLORIDE ION CONCENTRATIONS IN CONCRETE SHALL BE LIMITED PER ACI 318, SECTION 4.3, EXPOSURE CLASS "C1".
9. CONCRETE MIXING, PLACEMENT AND QUALITY SHALL BE PER ACI 318. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED. UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED 5 FEET.
10. PROTECT CONCRETE FROM DAMAGE OR REDUCED STRENGTH DUE TO COLD OR HOT WEATHER IN ACCORDANCE WITH ACI 305 AND 306. CONTRACTOR SHALL TAKE SPECIAL CURING PRECAUTIONS TO MINIMIZE SHRINKAGE CRACKING OF CONCRETE SLABS.
11. ALL ITEMS TO BE CAST IN CONCRETE SUCH AS REINFORCEMENT, DOWELS, BOLTS, ANCHORS, SLEEVES, ETC., SHALL BE SECURELY POSITIONED IN THE FORMS.
12. FLY ASH MAY BE USED IN CONCRETE, SUBJECT TO APPROVAL BY THE ARCHITECT, PROVIDED THE FOLLOWING CONDITIONS ARE MET:
    A. FLY ASH SHALL COMPLY 8.1. WITH ASTM C618.
    B. CEMENT CONTENT SHALL BE REDUCED A MINIMUM OF 15 PERCENT UP TO A MAXIMUM OF 25 PERCENT WHEN COMPARED TO AN EQUIVALENT CONCRETE MIX DESIGN WITHOUT FLY ASH. FLY ASH CONTENT SHALL NOT COMPRISE MORE THAN 35 PERCENT OF THE TOTAL CEMENTITIOUS CONTENT. THE WATER-CEMENT RATIO SHALL BE CALCULATED BASED ON THE TOTAL CEMENTITIOUS MATERIAL IN THE MIX.
    C. CLASS F FLY ASH SHALL BE USED IN SULFATE RESISTANT CONCRETE WITH f'c EQUAL TO OR GREATER THAN 4000 PSI. CLASS C FLY ASH MAY BE USED ELSEWHERE.

CONCRETE PORTIONING

LOCATION IN STRUCTURE	STRENGTH	LARGEST AGGREGATE SIZE	
FOOTINGS & SLAB	3000 PSI	3/4" MIN	1 1/2" MAX

STRUCTURAL STEEL

1. ALL STRUCTURAL AND MISC. STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC 303.
2. ASTM A6 HOT-ROLLED SHAPES WITH FLANGE THICKNESS EXCEEDING 2" SHALL BE SUPPLIED WITH CHARPY V-NOTCH TESTING IN ACCORDANCE WITH ASTM A6, SUPPLEMENTARY REQUIREMENT S30. IMPACT TESTS SHALL MEET A MINIMUM AVERAGE TOUGHNESS OF 20 FT-LB AT 70 °F. SPLICES, WELD ACCESS HOLES, COMPATIBLE WELDING PROCEDURES, WELDING PREHEAT REQUIREMENTS, AND THERMAL CUT SURFACE PREPARATION AND INSPECTION SHALL BE MADE IN ACCORDANCE WITH SECTIONS J1.5, J1.6, J2.7, AND M2.2 OF AISC 360. WELD TABS AND BACKING AT SPLICES SHALL BE REMOVED AND THE SURFACES GROUND SMOOTH.
3. SHEAR CONNECTORS (SUCH AS HEADED STEEL STUDS, STEEL BARS, OR STEEL LUGS), REINFORCING BARS, DEFORMED ANCHORS, OR THREADED STUDS SHALL NOT BE ATTACHED TO THE TOP FLANGES OF BEAMS, JOISTS, OR BEAM ATTACHMENTS SO THAT THEY PROJECT VERTICALLY FROM OR HORIZONTALLY ACROSS THE TOP FLANGE OF THE MEMBER UNTIL AFTER THE METAL DECKING, OR OTHER WALKING/WORKING SURFACE, HAS BEEN INSTALLED.
4. STRUCTURAL STEEL MEMBERS SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES U.N.O:

SHAPE	STANDARD	Fy
ROLLED WIDE FLANGE SECTIONS	ASTM A992	50 KSI
OTHER STANDARD STEEL SHAPES AND ROLLED SECTIONS	ASTM A36	36 KSI
BARS AND PLATES	ASTM A36	36 KSI
PIPES	ASTM A53, GRADE B	36 KSI
HOLLOW STRUT. SECTIONS (RECT.)	ASTM A500, GRADE B	46 KSI
HOLLOW STRUCT. SECTIONS (ROUND)	ASTM A500, GRADE B	42 KSI

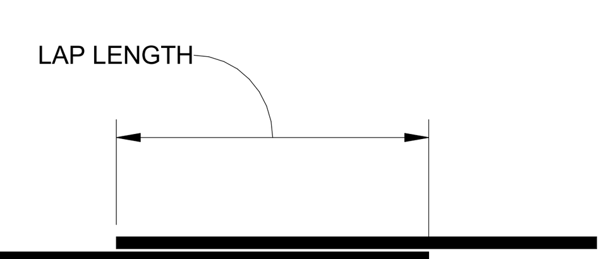
REINFORCING STEEL

1. REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 318 AND CRSI'S MANUAL OF STANDARD PRACTICE.
2. REINFORCING STEEL SHALL CONFORM TO ASTM A615 OR ASTM A706 (A706 REQUIRED FOR ALL REINFORCING TO BE WELDED) AND SHALL BE GRADE 60 (fy = 60 KSI) DEFORMED BARS U.N.O. REINFORCING IN SLABS ON GRADE MAY BE GRADE 40 (fy = 40 KSI) DEFORMED BARS FOR ALL BARS #4 AND SMALLER U.N.O. ON PLANS OR DETAILS.
3. WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ASTM A185. LAPS IN WELDED WIRE FABRIC SHALL BE MADE SUCH THAT THE OVERLAP, MEASURED BETWEEN OUTERMOST CROSS WIRE OF EACH FABRIC SHEET, IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2 INCHES.
4. FIBER REINFORCING MAY BE USED WHERE SPECIFICALLY NOTED ON PLANS AND SHALL BE FIBERMESH 650 BY PROPEX CONCRETE SYSTEMS OR TUF-STRAND SF BY EUCLID CHEMICAL COMPANY OR APPROVED EQUAL. FIBERS SHALL COMPLY WITH ASTM C 1116 TYPE III, SECTION 4.1.3, AND SHALL BE MIXED WITH CONCRETE AND PLACED PER MFR. RECOMMENDATIONS AT A MINIMUM OF 3.0 LB/CUBIC YARD U.N.O.
5. RECTANGULAR PLATE DOWELS AND SMOOTH ROUND DOWELS USED AT CONTROL AND CONSTRUCTION JOINTS IN SLABS ON GRADE SHALL CONFORM TO ASTM A36. REFER TO TYPICAL CONTROL JOINTS IN SLAB ON GRADE DETAIL FOR SIZE, PLACEMENT, SPACING, ETC. RECTANGULAR PLATE DOWELS SHALL BE BY PNA CONSTRUCTION TECHNOLOGIES (800-542-0214) OR OTHER MFR. APPROVED BY ENGINEER. INSTALL ALL PLATE DOWEL BASKET ASSEMBLIES PER MFR.'S RECOMMENDATIONS.
6. LAP SPLICES OF REINFORCING STEEL SHALL CONFORM TO TYPICAL REBAR LAP SCHEDULE U.N.O. NO TACK WELDING OF REINFORCING BARS ALLOWED. AT WALLS AND FOOTINGS, PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZ. BARS AT ALL CORNERS AND INTERSECTIONS U.N.O. VERT. WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES. SPLICE TOP BARS AT CENTER LINE OF SPAN AND BOTTOM BARS AT THE SUPPORT IN SPANDRELS, BEAMS, GRADE BEAMS, ETC., U.N.O. ON PLANS OR DETAILS.
7. MECHANICAL SPLICE COUPLERS SHALL HAVE CURRENT ICC APPROVAL AND SHALL BE CAPABLE OF DEVELOPING 125% OF THE SPLICED BAR'S YIELD STRENGTH.
8. ALL REINFORCING SHALL BE BENT COLD. BARS SHALL NOT BE UN-BENT AND RE-BENT. FIELD BENDING OF REBAR SHALL NOT BE ALLOWED UNLESS SPECIFICALLY NOTED.
9. REINFORCING BAR SPACINGS SHOWN ON PLANS ARE MAX. ON CENTER DIMENSIONS. DOWEL ALL VERT. REINFORCING TO FOUNDATION. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE. MIN. CLEAR SPACING BETWEEN PARALLEL REINFORCEMENT SHALL BE THE LARGER OF 1-1/2 TIMES NOMINAL BAR DIA. OR 1-1/3 TIMES MAX. AGGREGATE SIZE OR 1-1/2", CLEAR SPACING LIMITATION APPLIES ALSO TO CLEAR DISTANCE BETWEEN A CONTACT LAP SPLICE AND ADJACENT SPLICES OR BARS.

REINFORCING STEEL COVER REQUIREMENTS

EXPOSURE CONDITION	COVER
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
EXPOSED TO EARTH OR WEATHER	
NO. 5 BARS AND SMALLER	1 1/2"
NO. 6 BARS AND LARGER	2"
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	
STRUCTURAL SLABS, WALLS, JOISTS	
NO. 11 BARS AND SMALLER	3/4"
NO. 14 BARS AND LARGER	1 1/2"
BEAMS AND COLUMNS	1 1/2"

BAR SIZE	CONCRETE			
	MINIMUM CLEAR COVER (INCHES)	MINIMUM CLEAR SPACING (INCHES)	TOP BAR LAP LENGTH (INCHES)	OTHER BARS LAP LENGTH (INCHES)
#3	3/4	1 1/2	19	16
#4	1	2	25	19
#5	1 1/4	2 1/2	31	24
#6	1 1/2	3	37	29
#7	1 3/4	3 1/2	54	41
#8	2	4	61	47
#9	2 1/2	4 3/4	69	53



1 REINFORCEMENT LAP LENGTHS
1 1/2" = 1'-0"

STRUCTURAL QUALITY ASSURANCE

TEST OF SOILS

	CONTINUOUS SPECIAL INSPECTION	PERIODIC INSPECTION
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	
5. PIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.		X

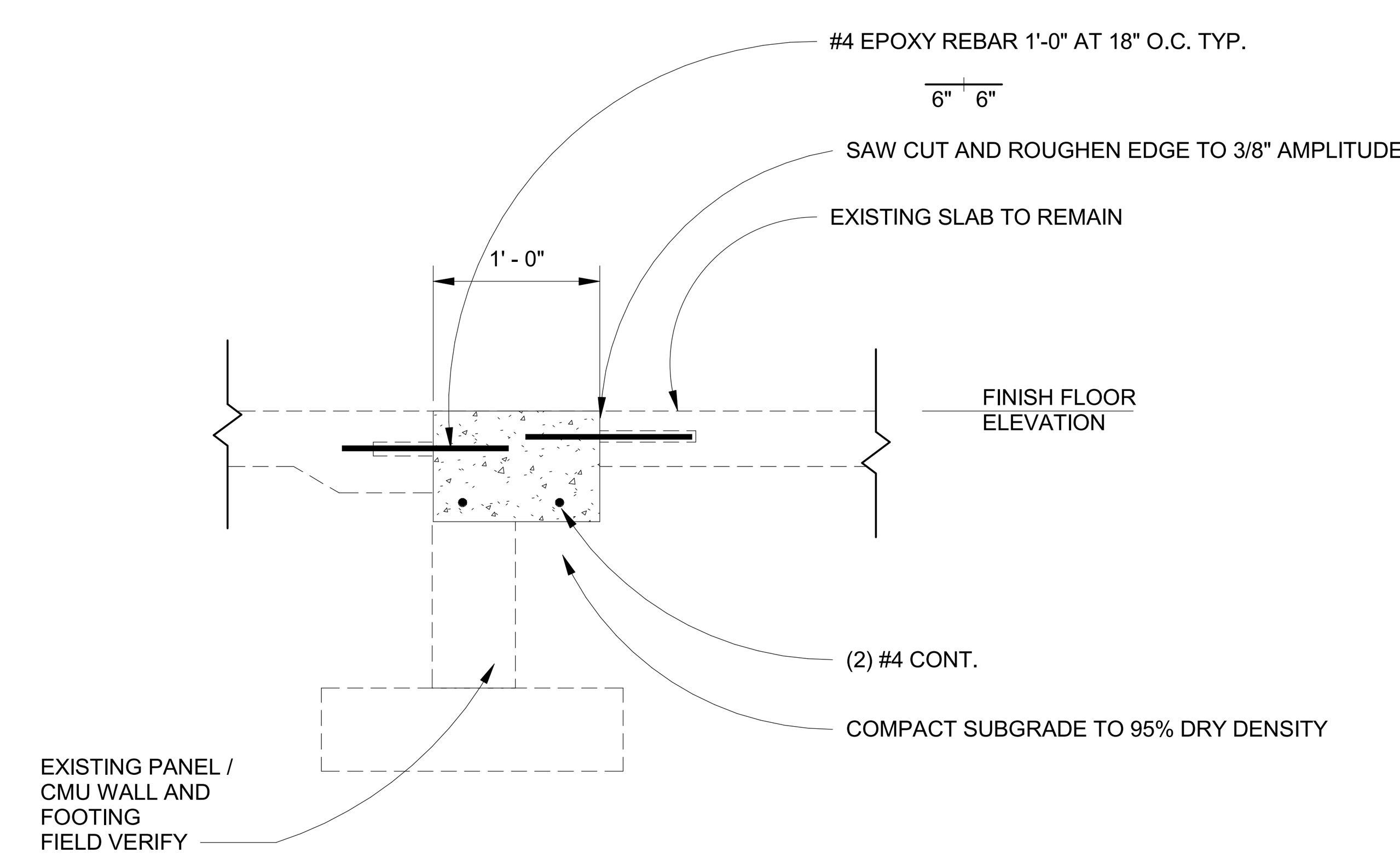
CONCRETE CONSTRUCTION

	CONTINUOUS SPECIAL INSPECTION	PERIODIC INSPECTION
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.		X
2. INSPECT ANCHORS CAST IN CONCRETE.		X
3. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONRETE MEMEBERS.		X
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	N/A	
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED ABOVE.		X
4. VERIFY USE OF REQUIRED DESIGN MIX.		X
5. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.		X
6. INSPECT CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES		X
7. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X
8. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		X

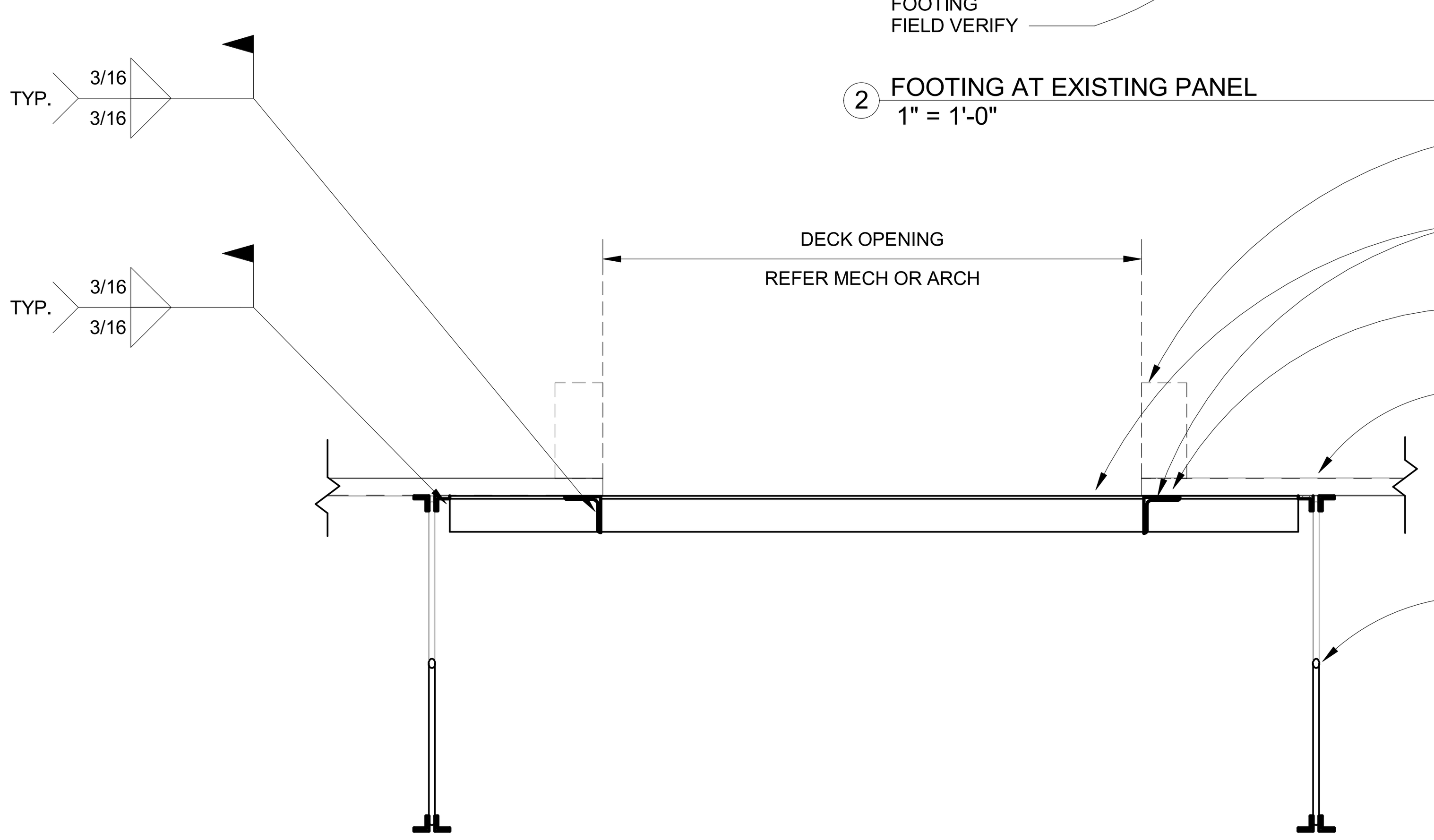
* REFERENCE IBC TABLE 1705.3 FOR ACI STANDARDS

SUBMITTALS

1. SHOP DRAWINGS OR REPORTS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD PRIOR TO FABRICATION OR CONSTRUCTION
    - CONCRETE MIX DESIGN
    - CONCRETE REIFORCEMENT LAYOUT
    - STRUCTURAL STEEL JOIST REINFORCEMENT
    - STRUCTURAL STEEL FRAMING
    - POST INSTALLED ANCHORS
2. CONTRACTOR SHALL REVIEW AND STAMP SHOP DRAWINGS PRIOR TO SUBMITTING. CONTRACTOR'S REVIEW SHALL CHECK FOR COMPLETENESS/COMPLIANCE WITH CONTRACT DOCUMENTS.
3. SHOP DRAWINGS ARE REVIEWED BY THE ENGINEER ONLY FOR GENERAL COMPLIANCE WITH THE STRUCTURAL DRAWINGS. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR. SHOP DRAWINGS DO NOT SUPERSEDE OR REPLACE THE CONTRACT DRAWINGS OR SPECIFICATIONS. CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DRAWINGS AND/OR SPECIFICATIONS WILL NOT BE ACCEPTED VIA SHOP DRAWING REVIEW. ALL SUCH MODIFICATIONS SHALL BE SUBMITTED SEPARATELY FOR ENGINEER'S REVIEW.
4. DEFERRED SUBMITTALS SHALL INCLUDE CALCULATIONS AND DRAWINGS PREPARED AND STAMPED BY AN APPROPRIATELY LICENSED ENGINEER (SPECIALTY ENGINEER) SHOWING LOCATION AND MAGNITUDE OF LOADS, CONFIGURATION AND SIZE OF MEMBERS, AND COMPATIBILITY OF SUBMITTAL ITEM WITH THE PRIMARY STRUCTURAL SYSTEM.
5. THE PURPOSE OF THE ENGINEER'S REVIEW OF DEFERRED SUBMITTALS SHALL BE LIMITED TO DETERMINING THAT THE DRAWINGS AND CALCULATIONS HAVE BEEN PROPERLY SEALED, THAT THE LOAD CRITERIA IS IN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE REFERENCED BUILDING CODE, THAT CONNECTIONS TO THE PRIMARY STRUCTURE ARE COMPATIBLE WITH THE PRIMARY DESIGN, AND THAT THE PRIMARY STRUCTURE IS CAPABLE OF SUPPORTING THE IMPOSED LOADS.
6. ENGINEER WILL RELY UPON THE SPECIALTY ENGINEER'S SEAL AS CERTIFICATION THAT THE ITEMS DESIGNED BY THE SPECIALTY ENGINEER COMPLY WITH THE CRITERIA SET FORTH IN THE CONTRACT DOCUMENTS AND APPLICABLE CODES AND STANDARDS. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ADEQUACY OF DESIGNS PROVIDED BY OTHERS.
7. FOR ALL SUBMITTALS, ANY CORRECTIONS NOTED WILL BE MARKED ON ONE (1) COPY SET ONLY AND RETURNED. ADDITIONAL COPIES OF ANY SUBMITTAL WILL BE RETURNED UNMARKED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPRODUCING ENGINEER'S CORRECTIONS ON ADDITIONAL COPIES REQ'D. ONE COPY SET MAY BE RETAINED FOR THE ENGINEER'S RECORDS. ALLOW FIVE (5) TO TEN (10) WORKING DAYS FOR THE ENGINEER'S REVIEW.
8. REFER TO APPLICABLE GENERAL STRUCTURAL NOTES SECTIONS FOR FURTHER REQUIREMENTS SPECIFIC TO INDIVIDUAL SUBMITTALS.



2 FOOTING AT EXISTING PANEL
1" = 1'-0"



3 TYPICAL ROOF FRAME AT JOISTS
1" = 1'-0"

STATE OF TEXAS
Isaac H. Harder
138862
LICENSED PROFESSIONAL ENGINEER
10/26/2022

HARDER
STRUCTURAL ENGINEERING
108 S Stanton St
El Paso, TX 79901
915 787 0622
TBPELS Firm Number: 22328
PROJECT NUMBER:2022-16

Countryman & Co.
Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY:	IHH
PROJECT NO:	2022-16
ISSUED:	OCTOBER 26, 2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION

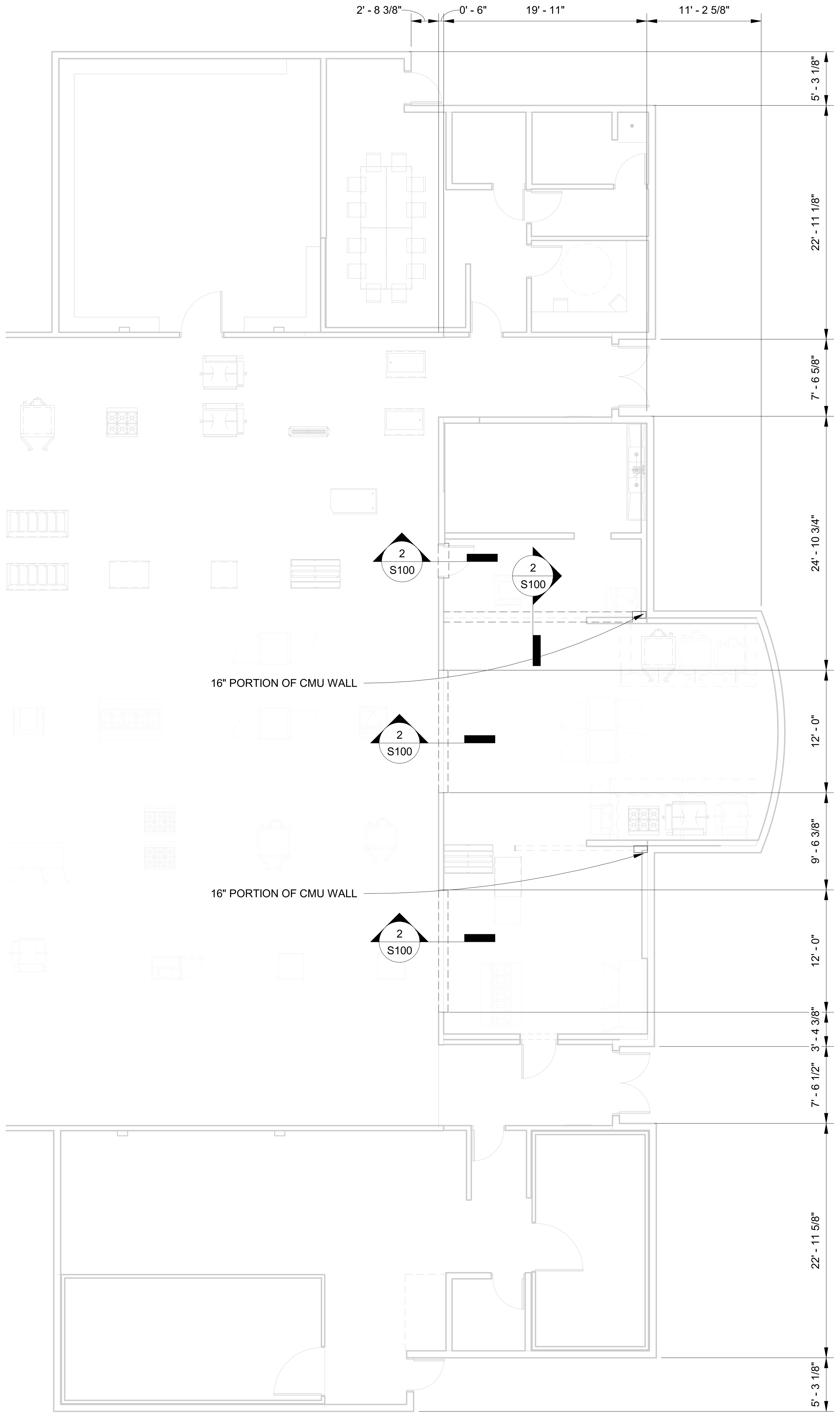
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

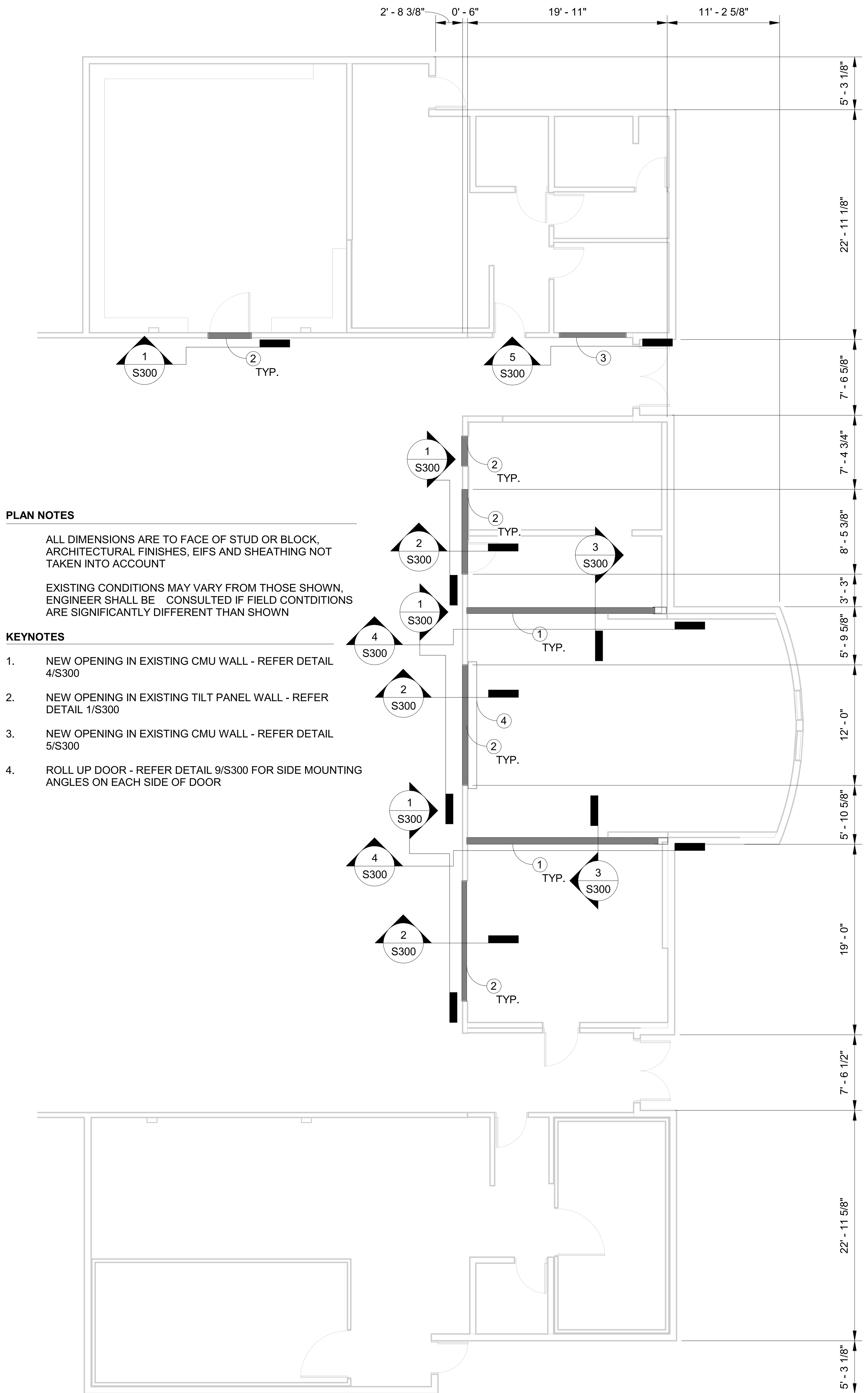
STRUCTURAL NOTES

100% CONSTRUCTION DOCUMENTS

S100



1 FOUNDATION PLAN
1/8" = 1'-0"



PLAN NOTES

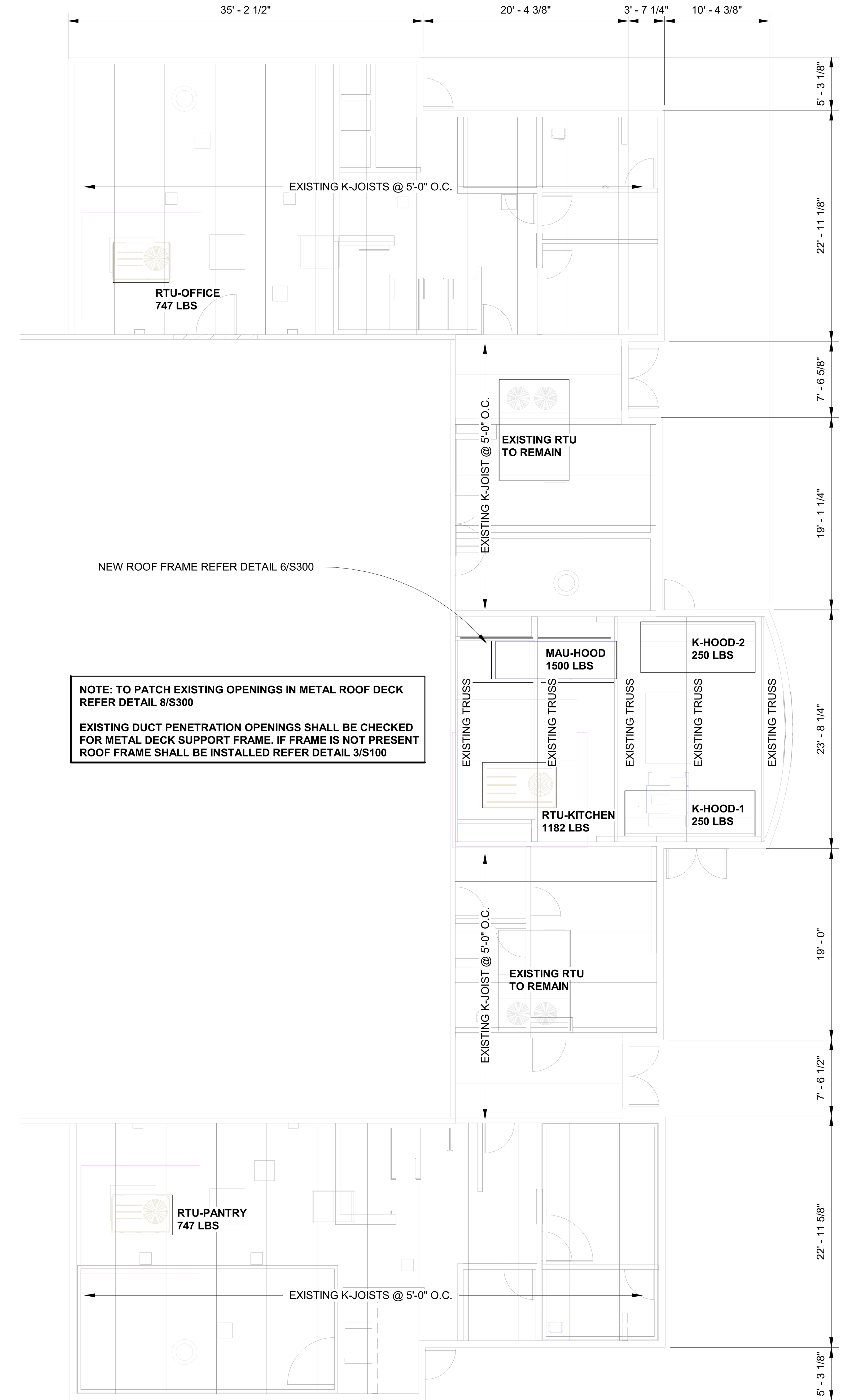
ALL DIMENSIONS ARE TO FACE OF STUD OR BLOCK, ARCHITECTURAL FINISHES, EIFS AND SHEATHING NOT TAKEN INTO ACCOUNT

EXISTING CONDITIONS MAY VARY FROM THOSE SHOWN, ENGINEER SHALL BE CONSULTED IF FIELD CONTDITIONS ARE SIGNIFICANTLY DIFFERENT THAN SHOWN

KEYNOTES

1. NEW OPENING IN EXISTING CMU WALL - REFER DETAIL 4/S300
2. NEW OPENING IN EXISTING TILT PANEL WALL - REFER DETAIL 1/S300
3. NEW OPENING IN EXISTING CMU WALL - REFER DETAIL 5/S300
4. ROLL UP DOOR - REFER DETAIL 9/S300 FOR SIDE MOUNTING ANGLES ON EACH SIDE OF DOOR

2 WALL OPENING PLAN
1/8" = 1'-0"



3 ROOF FRAMING
1/8" = 1'-0"

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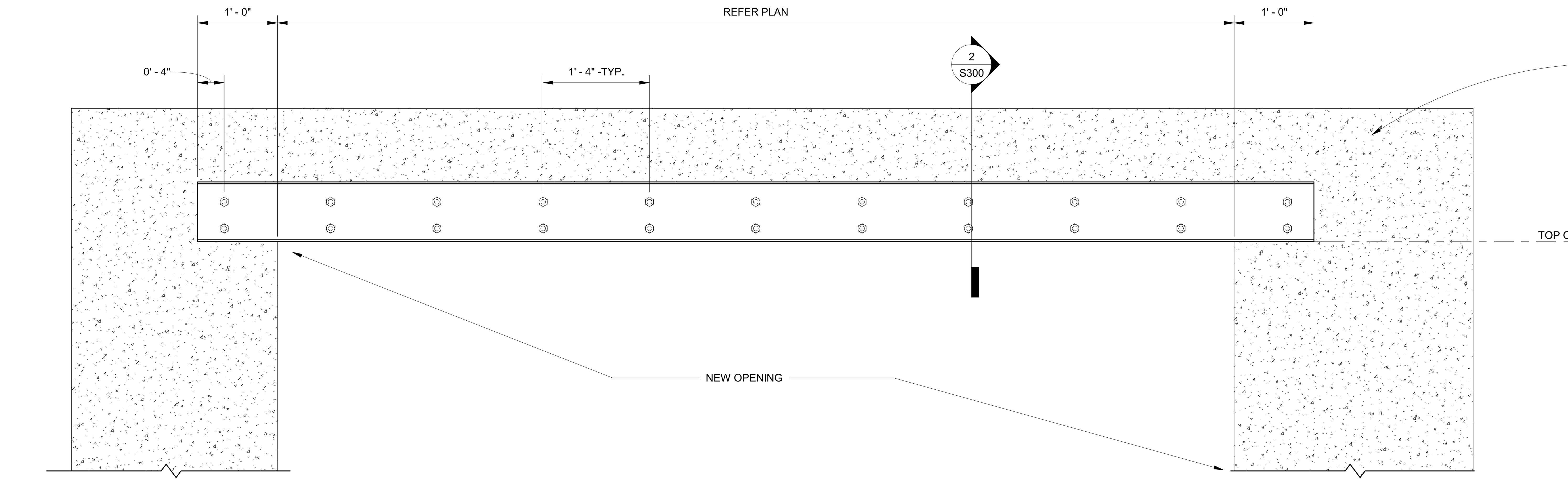
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

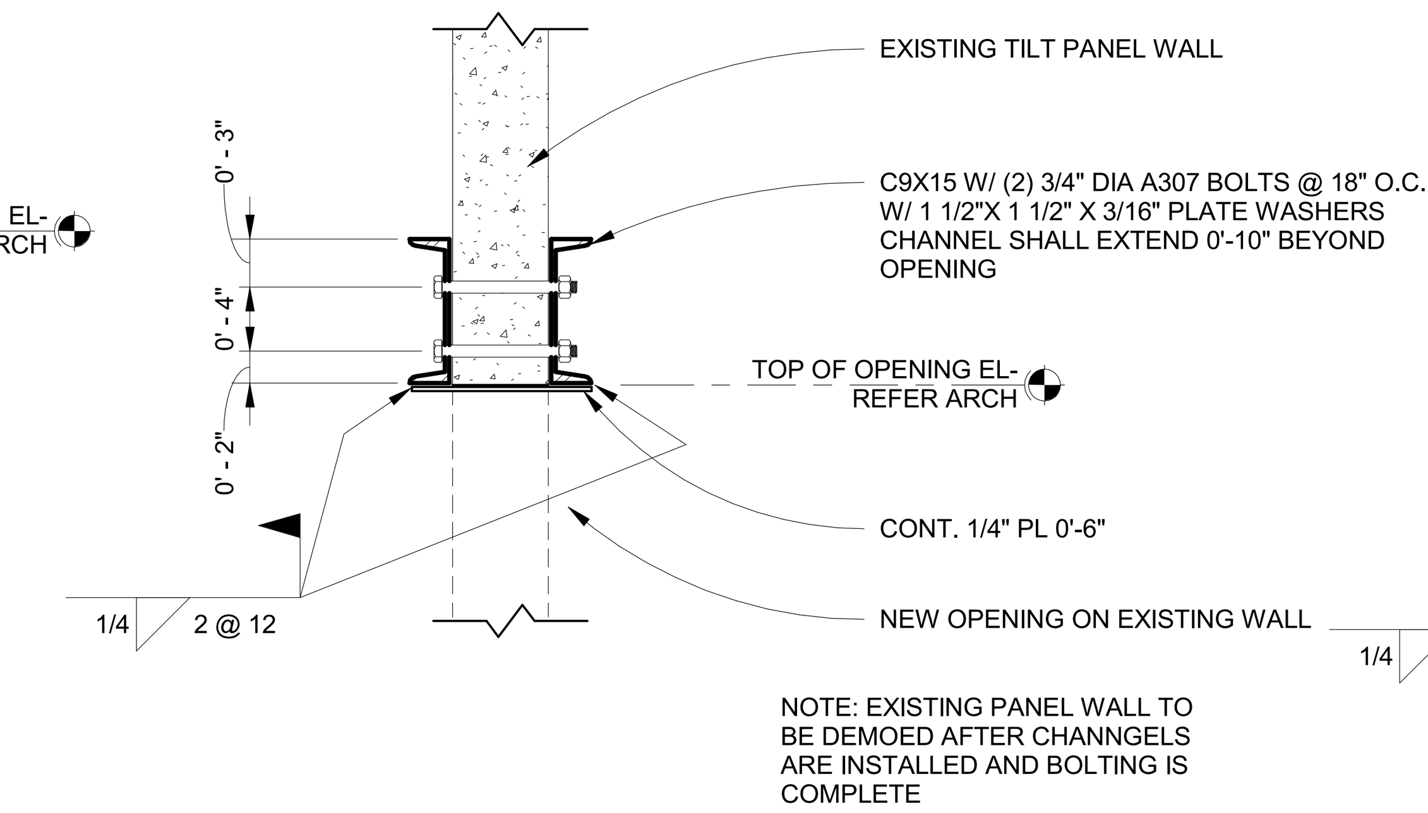
PLAN VIEW

100% CONSTRUCTION DOCUMENTS

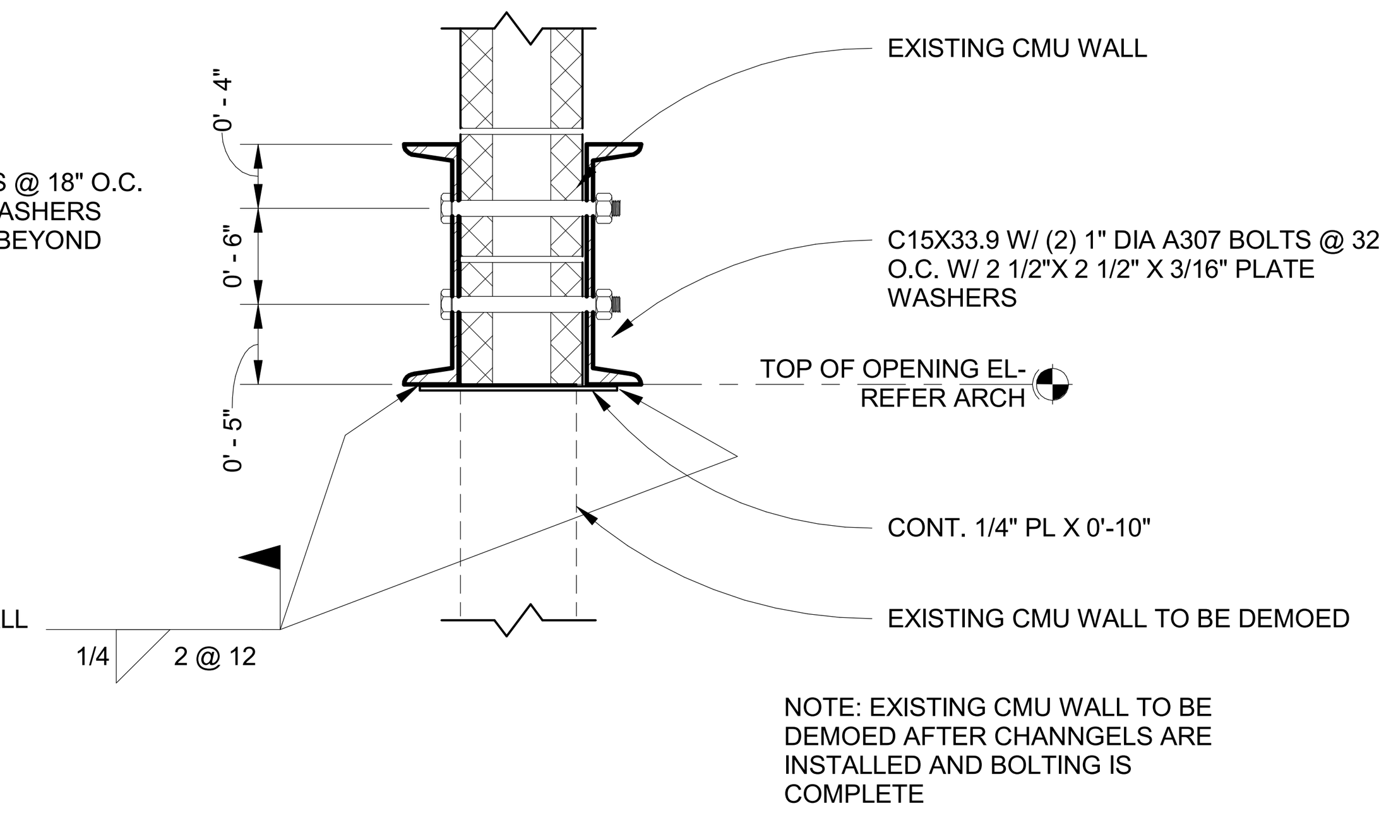
S200



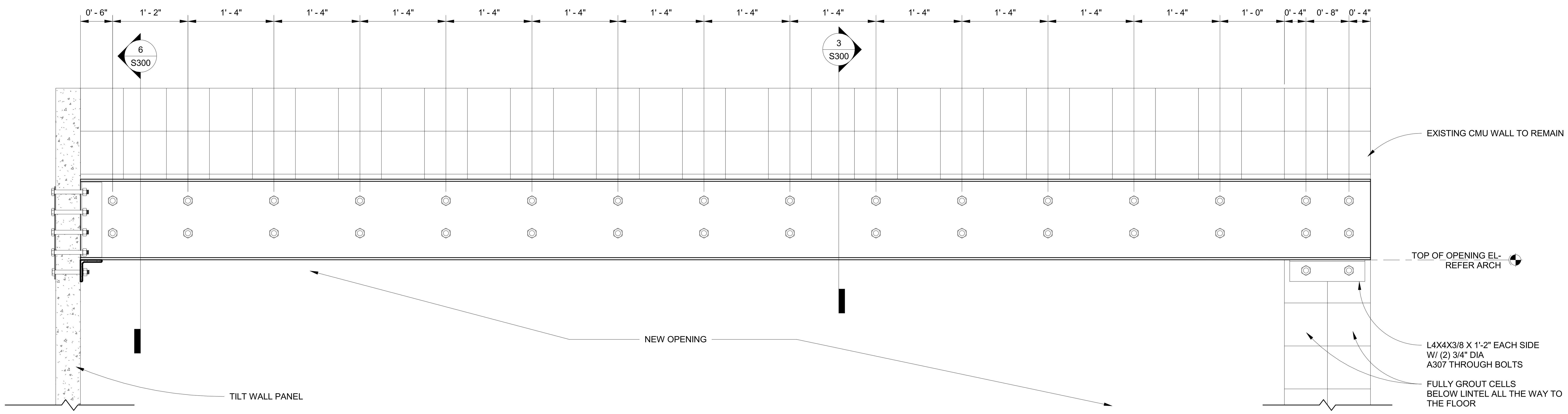
1 NEW OPENING IN TILT PANEL ELEVATION
1" = 1'-0"



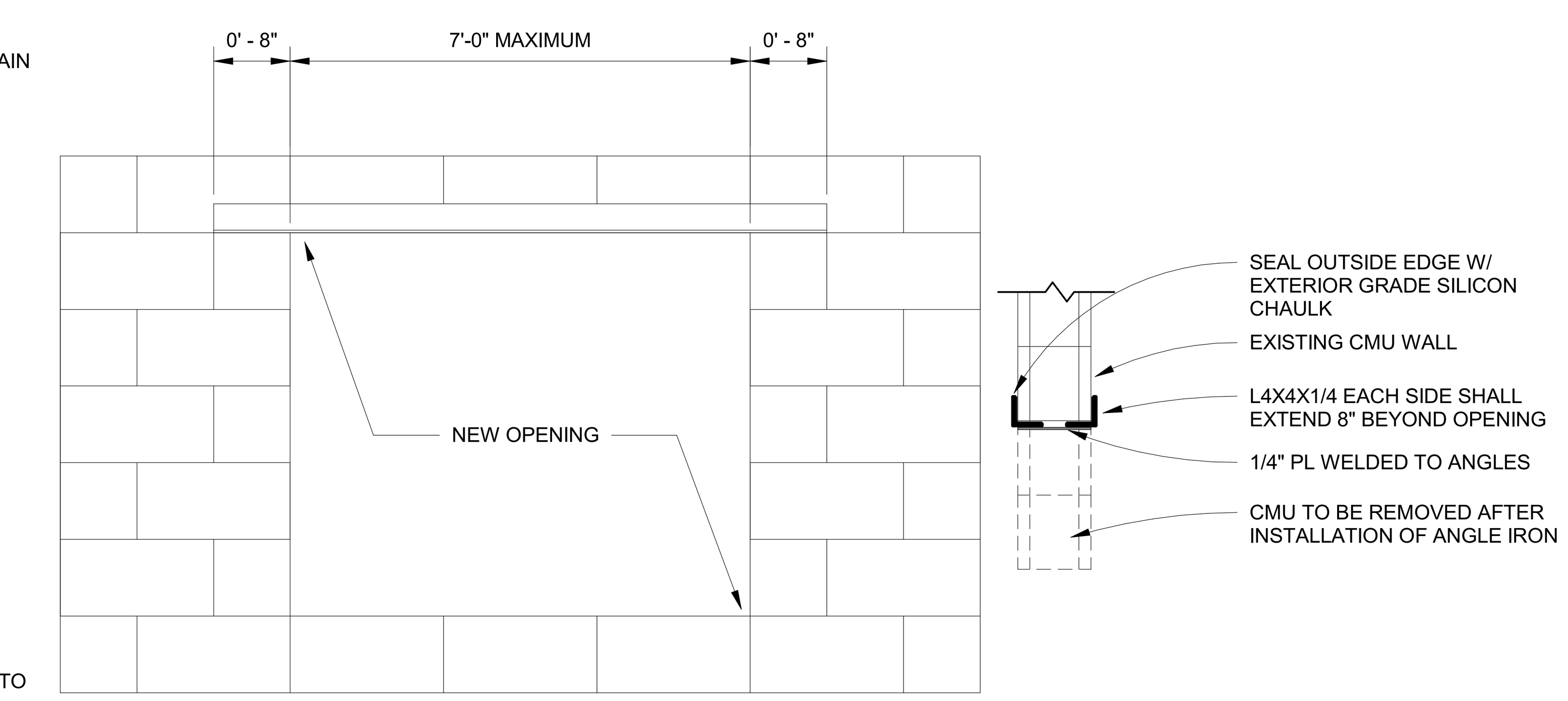
2 NEW OPENING IN TILT PANEL
1" = 1'-0"



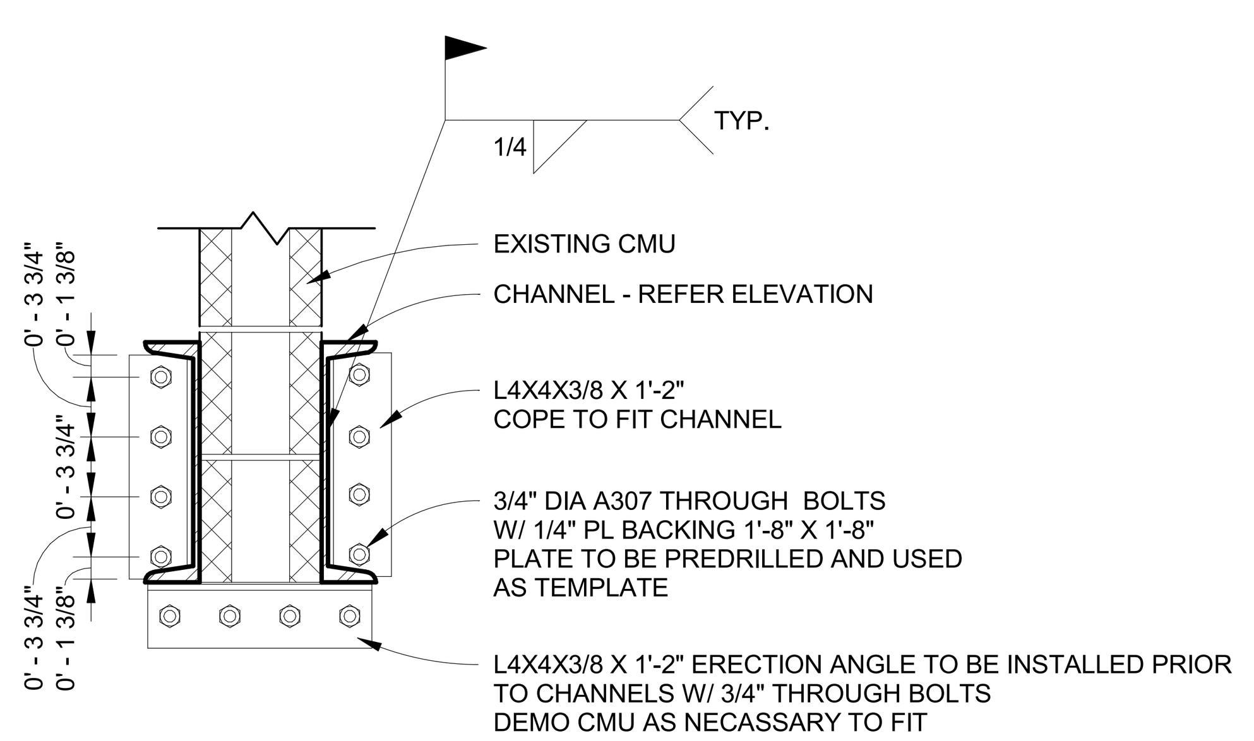
3 NEW OPENING IN CMU
1" = 1'-0"



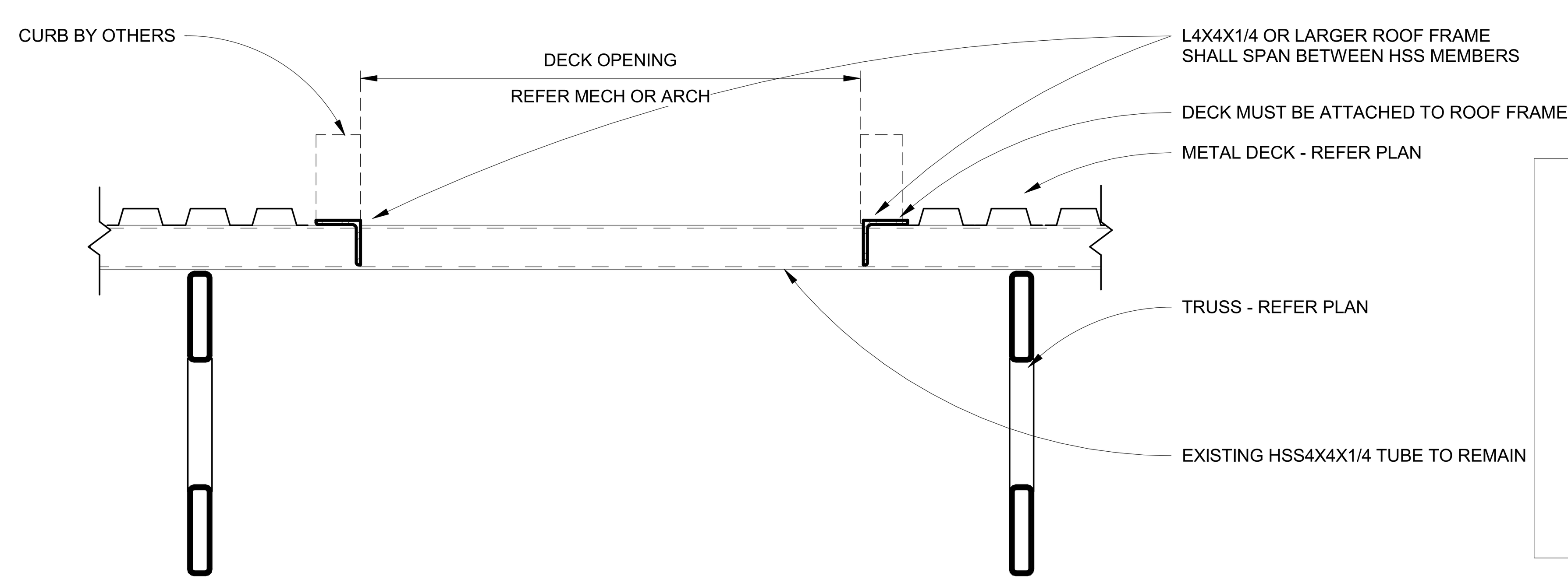
4 NEW OPENING IN CMU WALL ELEVATION
1" = 1'-0"



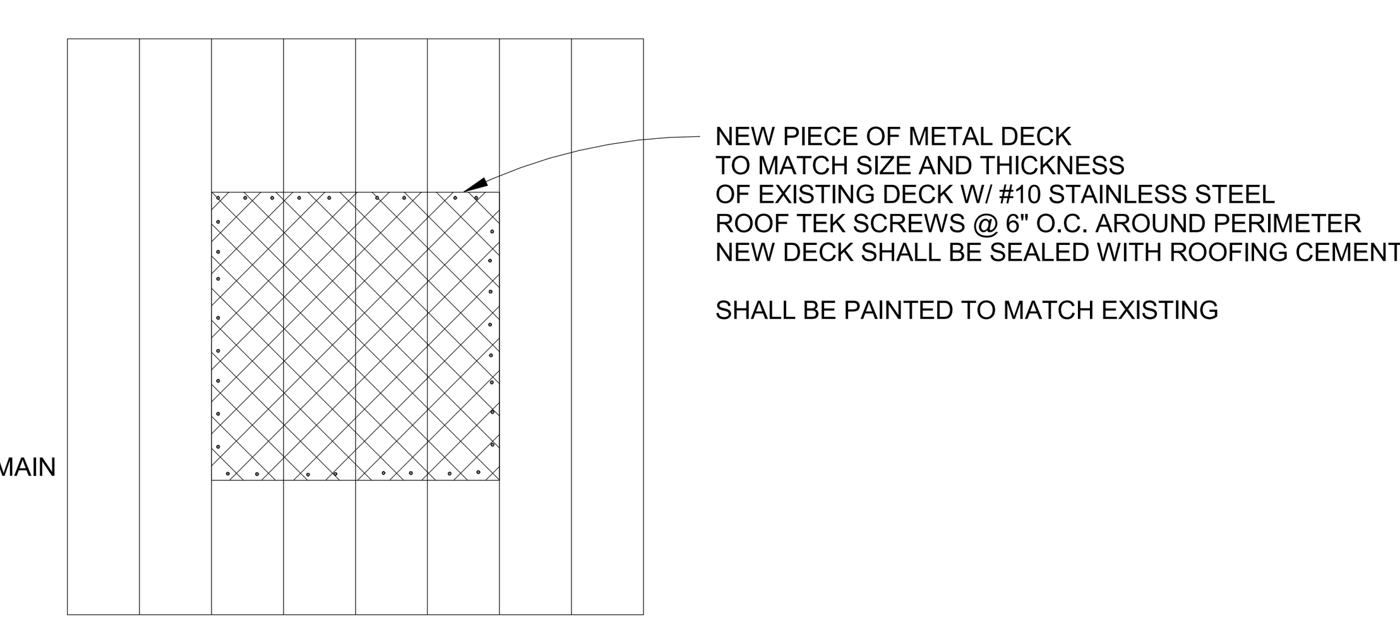
5 NEW OPENING IN CMU 7FT MAX
3/4" = 1'-0"



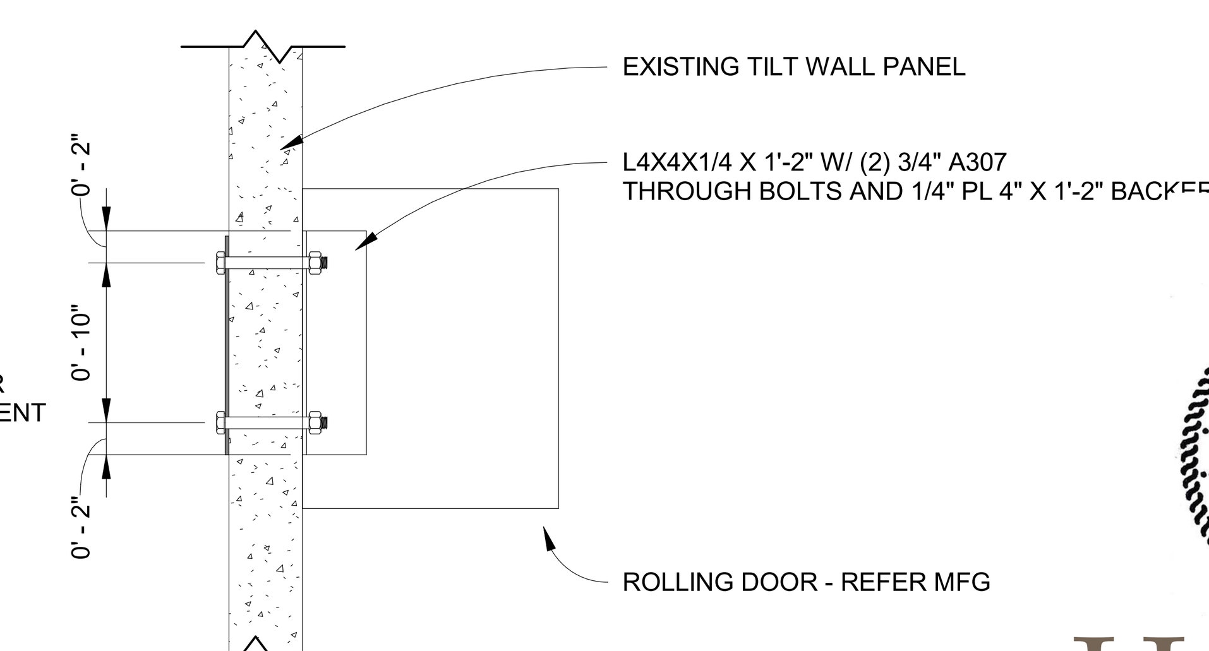
6 CHANNEL TO CMU ATTACHMENT
1" = 1'-0"



7 TYPICAL ROOF FRAME AT TRUSSES
1" = 1'-0"



8 DECK PATCH
3/4" = 1'-0"



9 ROLLING DOOR ATTACHMENT
1" = 1'-0"

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TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: IHH
PROJECT NO: 2022-16
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REVISION SCHEDULE:

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TORNILLO INDEPENDENT SCHOOL DISTRICT
GYM TO CAFETERIA CONVERSION
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:
DETAILS

100% CONSTRUCTION DOCUMENTS

S300

HVAC GENERAL NOTES

1. CONTRACTOR SHALL CAREFULLY REVIEW THESE PLANS, AS WELL AS OTHER RELATED TRADES (INCLUDING ARCHITECTURAL, CIVIL, STRUCTURAL, AND ELECTRICAL) PRIOR TO BID TO INSURE ACCURATE UNDERSTANDING OF EXACT SCOPE OF WORK. ANY ITEMS REQUIRING CLARIFICATION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER IN SUFFICIENT TIME TO BE INCORPORATED INTO THE BID.
2. CONTRACTOR SHALL VERIFY ALL EQUIPMENT MODEL NUMBERS, CAPACITIES, SIZES, VOLTAGES AND ALL OTHER SCHEDULED INFORMATION WITH ALL OTHER APPLICABLE TRADES AND WITH THE MANUFACTURERS PRIOR TO INSTALLATION.
3. THESE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE ALL NECESSARY OFFSETS OF DUCTWORK AND PIPING. THE CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT IN SUCH A WAY AS TO CONFORM TO THE SPACE AVAILABLE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. ALL INSTALLATIONS SHALL BE CONSISTENT WITH NORMALLY ACCEPTABLE INDUSTRY STANDARDS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES OR CONFLICTS THAT COSTS. THIS NOTIFICATION SHALL BE MADE PRIOR TO THE INSTALLATION OF THE ITEMS CONCERNED.
4. NEW AND/OR EXISTING EQUIPMENT INDICATED ON THIS DRAWING IS SHOWN IN APPROXIMATE POSITION(S). CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING EQUIPMENT LOCATIONS, P.O.C.'S AND STRUCTURAL MEMBERS PRIOR TO INSTALLATION. IN ALL CASES, ADEQUATE ACCESS (PER MANUFACTURERS RECOMMENDATIONS AND CODE COMPLIANCE) FOR MAINTENANCE AND REPLACEMENT OF EQUIPMENT SHALL BE PROVIDED.
5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, COUNTY, STATE AND FEDERAL CODES, RULES AND REGULATIONS. NOTHING SHOWN IN THE PLANS IS INTENDED TO INDICATE THAT THE INSTALLATION OR CONNECTIONS OF ANY ITEM OR DEVICE SHOULD BE DONE CONTRARY TO MANUFACTURERS INSTRUCTIONS AND ALL APPLICABLE CODES AND REGULATIONS THE CONTRACTOR IS RESPONSIBLE TO INSURE THAT THE INSTALLATION AND CONNECTIONS OF ALL ITEMS AND DEVICES CONFORM'S TO MANUFACTURERS INSTRUCTIONS AND TO ALL APPLICABLE CODES AND REGULATIONS.
6. SUBSTITUTIONS: 10 WORKING DAYS PRIOR APPROVAL REQUIRED AS INDICATED UNDER THE GENERAL AND/OR SUPPLEMENTAL CONDITIONS OF THESE SPECIFICATIONS. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ELECTRICAL, MECHANICAL AND CHANGES TO THE STRUCTURE WHEN USING A PRODUCT OTHER THAN THE SPECIFIED PRODUCT. AS BUILT DRAWING CHANGES ARE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
7. PROVIDE LONG RADIUS ELBOWS WITH OUT VANES, MANUAL BALANCING DAMPERS WITH 2" STANDOFF ON ALL BRANCH SUPPLY AND OUTSIDE AIR DUCTS.
8. DUCT SIZES SHOWN ARE "CLEAR INSIDE" DIMENSIONS. SNAPLOCK DUCTWORK AND FITTINGS NOT ALLOWED.
9. ALL DUCTWORK AND FITTINGS SHALL BE 24 GAUGE MINIMUM INSTALLED AND FABRICATED IN ACCORDANCE WITH "ASHRAE GUIDELINES AND SMACNA STANDARDS." FOR DUCT SIZE 18" WIDE AND LARGER PROVIDE DUCTMATE 25.
10. SEAL ALL DUCT JOINTS WITH A U.L. LISTED HIGH PRESSURE DUCT SEALER DUCTMATE FIBERSEAL.
11. INSULATE ALL SUPPLY AND RETURN DUCTWORK ABOVE THE CEILING WITH R-6 INSTALLED DUCTWRAP. LABEL SUPPLY AND RETURN DUCT SYSTEM WITH THE NAME OF THE AIR CONDITIONING UNIT SOURCE.
12. EXACT PLACEMENT OF DIFFUSERS AND REGISTERS SHALL BE COORDINATED WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS PRIOR TO THE INSTALLATION. CONNECT DIFFUSER WITH A 5' SECTION MAXIMUM OF THERMAFLEX COMMERCIAL GRADE MODEL M-KE UL LISTED 181 DUCT WITH 2" INSULATION R-8. RESIDENTIAL FLEXIBLE DUCTWORK NOT ALLOWED.
13. ALL HVAC EQUIPMENT, MATERIAL, AND ALL CONNECTIONS THERETO SHALL BE INSTALLED COMPLETE PER MANUFACTURERS INSTRUCTIONS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL SYSTEM.
14. CONTRACTOR AND ARCHITECT TO VERIFY SENSOR LOCATIONS. ALL TEMPERATURE SENSORS TO BE MOUNTED 48" A.F.F. IF DDC BMS SYSTEM IS IN PLACE. CONTRACTOR ADVISED THAT ALL HALLWAYS AND GYM SENSORS (IF APPLICABLE) SHALL BE S.S PLATE FLUSH WITH NO LCD DISPLAY AND WITH A RECESSED OVERRIDE BUTTON.
15. ALL SUPPLY AND RETURN DUCTS MUST DROP BETWEEN ROOF JOISTS (VERIFY BEFORE SETTING UNITS).
16. ALL MECHANICAL WORK MUST BE COORDINATED WITH ARCHITECT AND ELECTRICIAN BEFORE INSTALLATION.
17. KEEP ALL FLUES AND EXHAUST CAPS A MINIMUM OF 10' AWAY OR 3' ABOVE ALL FRESH AIR INTAKES ON A/C UNITS AND ALL VERTICAL PORTIONS OF BUILDING OR PLUMBING VENTS PER INTERNATION MECHANICAL CODE.
18. CONTRACTOR TO PROVIDE AND INSTALL ALL ROOF TOP UNITS ON A MICROMETL (OR EQUAL) 14" KNOCKDOWN ADJUSTABLE PITCH FACTORY ROOF CURB. INSULATE CURB PERIMETER WALLS IN THE FIELD WITH 1" RIGID INSULATION.
19. MECHANICAL CONTRACTOR TO INSTALL NEW FILTERS IN ALL A/C UNITS AT TURN OVER.
20. ALL METAL FLUES AND/OR CHIMNEYS FROM FOSSIL FUEL FIRED EQUIPMENT MOUNTED INSIDE THE BUILDING SHALL BE OF DOUBLE WALL CONSTRUCTION TYPE B. TERMINATE WITH HIGH WIND A.G.A VENT CAPS.
21. SIZE PROPANE ORIFICES FOR 4000' ELEVATION.
22. ALL A/C UNITS SHALL BE INSTALLED WITH A 2" COMMERCIAL GRADE DUCTMATE-PROFLEX DUCT FLEX CONNECTOR.
23. PROVIDE BACK DRAFT DAMPERS AND BIRD SCREENS IN ALL EXHAUST SYSTEMS.
24. MECHANICAL CONTRACTOR SHALL PROVIDE FIRE DAMPERS WHERE REQUIRED BY CODE AND AT DUCTS PENETRATING RATED ASSEMBLIES. MECHANICAL CONTRACTOR SHALL INSTALL DAMPERS IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE EACH DAMPER WITH AN 18"X18" DUCTMATE SANDWICH ACCESS DOOR.
25. ILLUSTRATIONS SHOWN ARE MEANT TO BE USED AS A GENERAL GUIDE ONLY AND ARE NOT INTENDED TO INCLUDE ALL DETAILS FOR ANY SPECIFIC INSTALLATION. ALL INSTALLATIONS MUST COMPLY WITH ALL APPLICABLE CODES AND ITS CONTRACTORS RESPONSIBILITY TO PROVIDE THE OWNER WITH A FULLY FUNCTIONAL HVAC SYSTEM.
26. SENSORS SHALL BE CALIBRATED DURING TEST AND BALANCE AND SHALL BE DOCUMENTED IN THE REPORT.
27. CONTRACTOR SHALL PROVIDE A 24X24" GASKETED AIR TIGHT CEILING ACCESS DOORS FOR FIRE DAMPERS, VAV BOXES, FAN COILS LOCATED ABOVE HARD CEILINGS AND 12X12" ACCESS DOOR FOR PLUMBING ACCESSORIES AND VOLUME DAMPERS.
28. CONTRACTOR SHALL PATCH AND PAINT TO MATCH EXISTING CEILINGS, WALLS AND FLOORS THAT WERE OPENED AS PART OF THIS WORK.CONTRACTOR SHALL PROVIDE A PRELIMINARY TAB REPORT THAT SHALL BE REVIEWED BY THE ENGINEER, BEFORE OF SUBSTANTIAL COMPLETION FOR THE PROJECT.
29. START UP OF MAJOR EQUIPMENT SHALL BE PROVIDED BY A FACTORY AUTHORIZED AGENT. FIELD REPORTS AND STAR UP CHECK LIST SHALL BE SUBMITTED TO OWNER BY THE START UP AGENT THROUGH THE ENGINEERS PRIOR TO WALK THRU AS A PART OF THE EQUIPMENT CHECK LIST PROCEDURE.
30. WARRANTIES CANNOT BEGIN UNTIL THE DATE OF FINAL ACCEPTANCE HAS BEEN ESTABLISHED.
31. GENERAL CONTRACTOR SHALL ENGAGE AN NEEB, AABC OR TABB CERTIFIED TEST AND BALANCE COMPANY, PROVIDE A PRELIMINARY TAB REPORT THAT SHALL BE REVIEWED BY THE ENGINEER, OWNER AND ARCHITECT BEFORE PROJECT SUBSTANTIAL COMPLETION.

MECHANICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	ROOF MOUNTED AIR CONDITIONING UNIT.		FLEXIBLE DUCTWORK.
			SUPPLY RIGID DUCTWORK.
	SINGLE INLET EVAPORATIVE COOLER.		RETURN RIGID DUCT TRANSITION.
			SUPPLY AIR DUCT ROOF PENETRATION
	DOUBLE INLET EVAPORATIVE COOLER.		RETURN DUCT ROOF PENETRATION.
			EXHAUST RIGID DUCT DOWN.
	CEILING EXHAUST FAN.		EXHAUST DUCT ROOF PENETRATION
	ROOF MOUNTED EXHAUST FAN.		SIDEWALL SUPPLY AIR OUTLET
			SIDEWALL RETURN OR EXHAUST AIR OUTLET
	DIRECT DRIVE IN-LINE EXHAUST FAN.		CEILING DIFFUSER WITH FLEXIBLE DUCT
	BELT DRIVEN IN-LINE EXHAUST FAN.		HARD CONNECTED CEILING DIFFUSER
	LOW PROFILE DIRECT DRIVE FAN COIL UNIT.		CEILING RETURN OR EXHAUST GRILLE.
	ROOF MOUNTED MAKE-UP AIR UNIT.		LONG RADIUS ELBOW WITH OUT VANES.
VD	VOLUME DAMPER.	D	DRAIN LINE
SDR	SMOKE DAMPER.	CD	CONDENSATE DRAIN
AD	ACCESS DOOR.	RL	REFRIGERANT LIQUID LINE
	NEW TO EXISTING CONNECTION	RS	REFRIGERANT SUCTION LINE
ACU-1	EQUIPMENT DESIGNATION	CHWS	CHILLED WATER SUPPLY LINE
Ⓣ	THERMOSTAT.	CHWR	CHILLED WATER RETURN LINE
Ⓗ	HUMDISTAT.	HWS	HOT WATER SUPPLY LINE
Ⓢ	ROOM TEMPERATURE SENSOR.	HWR	HOT WATER RETURN LINE
Ⓒ	EXHAUST FAN CONTROL SWITCH.	CWS	CONDENSER WATER SUPPLY LINE
		CWR	CONDENSER WATER RETURN LINE

DIFFUSER AND GRILLE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER AND MODEL NO.	THROW PATTERN	FACE MODULE	MAX NC	MAX SP	REMARKS
A	TWISTER STAMPED CEILING SWIRL DIFFUSER	NAILOR TWR	SWIRL	24X24	20	0.1"	24"X24" STAMPED FACE MODULE. LAY-IN FRAME. ROUND NECK. STEEL CONSTRUCTION. STANDARD WHITE BAKED ENAMEL FINISH. STEEL RADIAL SLIDING BLADE DAMPER WITH SCREWDRIVER ADJUSTMENT. THERMAFLEX FLEXFLOW ELBOW. THERMAFLEX S.S. SNAPLOCK CLAMP.
B	FIXED PERFORATED DOWNBLAST DIFFUSER	NAILOR UNI-PD	4-WAY	24X24	20	0.1"	24"X24" PERFORATED FACE 3/8" HOLE MODULE. LAY-IN FRAME. ROUND NECK. STEEL CONSTRUCTION. STANDARD WHITE BAKED ENAMEL FINISH.STEEL RADIAL SLIDING BLADE DAMPER WITH SCREWDRIVER ADJUSTMENT. THERMAFLEX FLEXFLOW ELBOW. THERMAFLEX S.S. SNAPLOCK CLAMP.
C	LAY-IN RETURN EGGCRATE GRILLE	NAILOR 61 EC-0-L-AW-CB	RETURN	24X24	20	0.1"	24"X24" FACE MODULE WITH A LAY-IN FRAME. STEEL CONSTRUCTION. 1/2"X1/2"X1" CORE. STEEL OPPOSED BLADE DAMPER. STANDARD WHITE ENAMEL FINISH.
D	SURFACE MTD. RETURN EGGCRATE GRILLE	NAILOR 61 EC 0 24X24 -S-AW-CB	RETURN	24X24	20	0.1"	SURFACE MOUNTED FRAME. STEEL CONSTRUCTION. 1/2"X1/2"X1" CORE. STEEL OPPOSED BLADE DAMPER. STANDARD WHITE ENAMEL FINISH.
E	HEAVY DUTY RETURN GRILLE	NAILOR 5130H-HD	RETURN	SEE PLAN	20	0.1"	1" WIDE FACE BORDER, CONCEALED MOUNTING. ALUMINUM CONSTRUCTION. FIXED FRONT BARS ON 1/2" CENTERS IN 30 DEGREE DEFLECTION. ALUMINUM OPPOSED BLADE DAMPER THROUGH THE FACE OF REGISTER OPERATOR.

PACKAGED RTU SCHEDULE

Unit Tags		RTU-OFFICE	RTU-PANTRY	RTU-KITCHEN
Quantity		1	1	1
Model Number		YSC036G3	YSC036G3	YSC092H3
Extra	Design Airflow (cfm)	1200	1200	2400
	Design ESP (in H2O)	1	1	1
	Unit function	DX cooling, gas heat	DX cooling, gas heat	DX cooling, gas heat
	Unit efficiency	Standard efficiency	Standard efficiency	Standard efficiency
	Tonnage	3 Ton (036)	3 Ton (036)	7.5 Ton Dual compressor
	Airflow Application	Downflow	Downflow	Downflow
	Height (ft)	3.41	3.41	3.91
	Width (ft)	3.69	3.69	4.44
	Length (ft)	5.82	5.82	7.39
	Max. unit operating weight (lb)	747	747	1182
	EER @ AHRI Conditions (EER)	12	12	11.2
	SEER/IEER	14	14	12.7
	Component SP (in H2O)	0.1	0.1	0.11
	Total Static Pressure (in H2O)	1.1	1.1	1.11
	Evaporator rows (Each)	2	2	3
	Evaporator fin spacing (Per Foot)	192	192	192
	Evaporator face area (sq ft)	6.98	6.98	12.36
	Evaporator face velocity (ft/min)	172	172	194
	Cooling Entering DB (F)	80	80	80
	Cooling Entering WB (F)	62	62	62
	Ent Air Relative Humidity (%)			38.12
	Ambient Temp (F)	105	105	105
	Evap Coil Leaving Air Temp (DB) (F)	52.39	52.39	50.2
	Evap Coil Leaving Air Temp (WB) (F)	52.26	52.26	50.2
	Cooling Leaving Unit DB (F)	55.56	55.56	51.51
	Cooling Leaving Unit WB (F)	53.48	53.48	50.73
	Net Total Capacity (MBh)	29.2	29.2	74.59
	Net Sensible Capacity (MBh)	29.1	29.1	66.49
	Net Sensible Heat Ratio (Number)	1	1	0.89
	Refrig charge (HFC-410A) - ckt 1 (lb)	3.2	3.2	3.8
	Refrig charge (HFC-410A) - ckt 2 (lb)			3.6

Unit Tags		RTU-OFFICE	RTU-PANTRY	RTU-KITCHEN
Extra	Saturated Discharge Temp Circuit 1 (F)	123.48	123.48	125.3
	Saturated Suction Temp Circuit 1 (F)	44.25	44.25	45.9
	Saturated Discharge Temp Circuit 2 (F)			126.48
	Saturated Suction Temp Circuit 2 (F)			45.59
	Heating capacity	Low gas heat	Low gas heat	Low gas heat
	Input Heating Capacity (MBh)	67.2	67.2	100.8
	Output Heating Capacity (MBh)	54.43	54.43	81.65
	Output Heating Cap. w/Fan (MBh)	55.98	55.98	84.7
	Heating EAT (F)	64	64	64
	Heating LAT (F)	114.2	114.2	101.8
	Heating Delta T (F)	50.2	50.2	37.8
	Heating Type	Gas Heat	Gas Heat	Gas Heat
	Heating Stages	2	2	1
	Voltage	208-230/60/3	208-230/60/3	208-230/60/3
	Indoor mtr operating power (bhp)	0.51	0.51	0.94
	Indoor RPM (rpm)	1061	1061	800
	Indoor Motor Power (kW)	0.38	0.38	0.7
	Supply Motor Horsepower (hp)	0.75	0.75	1
	Max Available ESP (in H2O)	1.15	1.15	
	Outdoor Motor Power (kW)			0.66
	Compressor Power (kW)	2.85	2.85	7.74
	System Power (kW)	3.86	3.86	9.09
	Compressor 1 RLA (A)	10.4	10.4	14.5
	Compressor 2 RLA (A)	0	0	14
	Condenser fan FLA (A)	1.1	1.1	3.3
	MCA (A)	20	20	39
	MOP (A)	30	30	50
Notes		1, 2, 3, 4, 5, 7, 8	1, 2, 3, 4, 5, 7, 8	1, 2, 3, 4, 6, 7, 8

NOTES:
1. PROVIDE 14" ADJUSTABLE PITCH FACTORY INSULATED ROOF CURB.
2. PROVIDE WITH ELECTROMECHANICAL CONTROLS.
3. PROVIDE DRY-BULB ECONOMIZER WITH POWER EXHAUST.
4. PROGRAMMABLE THERMOSTAT WITH DIGITAL DISPLAY.
5. PROVIDE WITH MERV 8 FILTER.
6. PROVIDE WITH FACTORY HAIL GUARD.
7. PROVIDE FACTORY INSTALLED DISCONNECT SWITCH.
8. PROVIDE WITH THROUGH THE BASE ELECTRICAL ACCESS.

Countryman & Co.
Architecture
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DRAWN BY: AEG
PROJECT NO: 2022-16
ISSUED: 10/24/2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

Project Status

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

MECHANICAL SCHEDULES, LEGEND GEN. NOTES

M-100

Universal Single Width Fan

MARK INFORMATION		FAN INFORMATION						MOTOR INFORMATION					
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	EF-KHOOD 1	USF-24	5,215	1.607	978	1.95	486	2	208/60/3	TF	1725	1	7.5

*NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2020. Actual motor FLA may vary for sizing thermal overload, consult factory"

EF-KHOOD 1 : SELECTED OPTIONS AND ACCESSORIES
Finish - Coated
Coating - Permatector, Concrete Gray-RAL 7023, Fan and Attached Accessories
Switch - NEMA-3R, Toggle, For Indoor or Outdoor Use, Ship Separate
Direct Mount Isolators, Isolator-Spring, Restrained, 2 Inch, Indoor / Outdoor Use, Base Coating - N/A
Rotation - CW
Bearings - L(10) Life of 80k Hours
Discharge Position - UB
UL/cUL-762 Outdoor - Power Vent. for Restaurant Exhaust Appliances
Polished Steel Shaft
Access Door - Bolted
Equipment Supports (Qty:2), GESI-64-4-G8, No Coating
Drain Connection - 1" Pipe Thread w/Plug
Inlet Connection, Punched with Companion Flange
Outlet Connection, Slip Fit
Weatherhood - Steel
Heat Slinger
Shaft Seal - High Temp
Grease Trap with Absorbent Material, Shipped Loose

FIRE SYSTEM INFORMATION

MARK	MODEL	LOCATION	FLOW POINTS		SUPPLY LINE	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
			HOODS	PCU			
KH-FIRE SUP	ANSUL R-102 WET CHEMICAL	CABINET – RIGHT END OF K-HOOD 1	30 UTILIZED 33 AVAILABLE		CONTINUOUS	FUSIBLE LINK	K-HOOD 1 SECTION 1 K-HOOD 1 SECTION 2 K-HOOD-2 SECTION 1

FIRE SYSTEM OPTIONS AND ACCESSORIES

- FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
- CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
- METAL BLOW-OFF CAPS - INCLUDED
- GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 2", (ANSUL) - PART# ANSULMECHSHUTOFFVALVE200
- HOOD SUPPRESSION TANK - INCLUDED - 9 GAL. - [(3) 3.0 TANK(S)]
- REMOTE PULL STATION - STANDARD - FIELD INSTALLATION AT SINGLE POINT OF EGRESS
- BILINGUAL EMERGENCY LABEL - QUANTITY 1 - INCULDED - DISTRIBUTOR INSTALLED

Direct Drive Upblast Centrifugal Roof Exhaust Fan

MARK INFORMATION		FAN INFORMATION						MOTOR INFORMATION					
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	EF-DISH	CUE-090-VG	600	0.514	1,725	0.1	34	0.167	115/60/1	TN	1725	1	4.4

*NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2020. Actual motor FLA may vary for sizing thermal overload, consult factory"

EF-DISH : SELECTED OPTIONS AND ACCESSORIES
Standard Curb Cap Size - 19 Square
UL/cUL 705 Listed - "Power Ventilators"
Switch, NEMA-1, Toggle, Shipped with Unit
Foam Curb Seal (Factory Applied)
Damper Shipped Loose, BD-100-PB-10X10, Gravity Operated, Not Coated
Composite Wheel Material
Controlled With a Switch

CONTROL INFORMATION

MARK	ELECTRICAL CONTROL PACKAGE		USER INTERFACE		FANS CONTROLLED										
	MODEL	LOCATION	TYPE	LOCATION	FAN #	TYPE	FAN	FAN MARK	ZONE	CFM	MOTOR HP	MOTOR VOLT	CYCLE	MOTOR PHASE	MOTOR STARTER IN PANEL	VFD IN PANEL
KH-CONTROLS	GKC-CV-S-11-3-1-0	SHIP LOOSE ENCLOSURE	FULL COLOR TOUCHSCREEN	SHIP LOOSE	1	EXHAUST	E1	EF-KHOOD 1	1	5215	2	208	60	3	NO	YES
					2	SUPPLY	S1	MAU-HOOD	1	4694	5	208	60	3	NO	NO

CONTROL FEATURES

- HOOD LIGHT CONTROL
- TEMP SENSORS (FACTORY INSTALLED) - QTY. 3
- DRY FIRE CONTACTS - QTY. 2
- LIGHTS OFF DURING FIRE
- EXHAUST MAX DURING FIRE
- SUPPLY OFF DURING FIRE
- HIGH TEMPERATURE ALARM
- FAN PROVING - SUPPLY ONLY
- GAS RESET
- VFD(S) IN CONTROL PANEL PROVIDED FOR BALANCING

HOOD INFORMATION

HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.)			HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST					SUPPLY		TOTAL WEIGHT LBS.	SECTION LOCATION
			LENGTH	WIDTH	HEIGHT			TOTAL CFM	COLLAR(S)				MUA CFM	AC CFM		
									WIDTH	LENGTH	DIA.	CFM	S.P.			
1	K-HOOD 1	GXEW-77-S	77	54	24	4;430 SS WHERE EXPOSED	HEAVY	1589	10	15		1589	0.607	1342		230.82	LEFT
2	K-HOOD 1	GXEW-77-S	77	54	24	4;430 SS WHERE EXPOSED	4;HEAVY	1393	10	13		1393	0.538	1342		4;227.67	RIGHT

HOOD INFORMATION

HOOD NO.	MARK	LIGHTING DETAILS			GREASE FILTRATION DETAILS			UTILITY CABINET(S)				
		FIXTURE TYPE BULB / LAMP INFO	QTY	FOOT CANDLES	TYPE / MODEL MATERIAL	QTY	SIZE (IN.) L	SIZE (IN.) H	LOCATION	FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	CONTROLS MODEL	CONTROLS INTERFACE
1	K-HOOD 1	INCANDESCENT (GLOBE) 100W A19 (BULBS NOT INCL.)	4	46.91	X-TRACTOR STAINLESS STEEL	1	16	20	LEFT				
						3	20						
2	K-HOOD 1	INCANDESCENT (GLOBE) 100W A19 (BULBS NOT INCL.)	4	46.91	X-TRACTOR STAINLESS STEEL	1	16	20	RIGHT	ANSUL R102	9		
						3	20						

SUPPLY PLENUM INFORMATION

HOOD NO.	MARK	POS.	TYPE	SIZE (IN.)			INSULATED	DAMPER(S)	LED LIGHT(S)		TOTAL CFM	COLLARS								
				L	W	H			SUPPLIED	QTY		TYPE	MOUNTING	QTY	W	L	DIA.	CFM	S.P.	VEL.
1	K-HOOD 1	FRONT	ASP	89	18	4	NO	YES	NO		1342	MUA	FACTORY	2	16	30		671	0.15	201
2	K-HOOD 1	FRONT	ASP	89	18	4	NO	YES	NO		1342	MUA	FACTORY	2	16	30		671	0.15	201

HOOD OPTIONS

- UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #MH11726
- BACK INTEGRAL AIR SPACE - 3 IN WIDE
- 12 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED
- FACTORY MOUNTED EXHAUST COLLAR(S)
- FILTER REMOVAL TOOL INCLUDED - QTY 1
- BACKSPLASH 78.00 IN HIGH 178.00 IN LONG
- PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
- STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH

HOOD INFORMATION

HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.)			HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST					SUPPLY		TOTAL WEIGHT LBS.	SECTION LOCATION
			LENGTH	WIDTH	HEIGHT			TOTAL CFM	COLLAR(S)				MUA CFM	AC CFM		
									WIDTH	LENGTH	DIA.	CFM	S.P.			
1	K-HOOD-2	GXEW-136-S	136	60	24	4;430 SS WHERE EXPOSED	4;HEAVY	2233	10	21		2233	0.483	2010		4;376.499	SINGLE

HOOD INFORMATION

HOOD NO.	MARK	LIGHTING DETAILS			GREASE FILTRATION DETAILS			UTILITY CABINET(S)				
		FIXTURE TYPE BULB / LAMP INFO	QTY	FOOT CANDLES	TYPE / MODEL MATERIAL	QTY	SIZE (IN.) L	SIZE (IN.) H	LOCATION	FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	CONTROLS MODEL	CONTROLS INTERFACE
1	K-HOOD-2	INCANDESCENT (GLOBE) 100W A19 (BULBS NOT INCL.)	6	50.7	X-TRACTOR STAINLESS STEEL	6	16	20	LEFT				
						2	20		RIGHT	ANSUL R102	9		

SUPPLY PLENUM INFORMATION

HOOD NO.	MARK	POS.	TYPE	SIZE (IN.)			INSULATED	DAMPER(S)	LED LIGHT(S)		TOTAL CFM	COLLARS								
				L	W	H			SUPPLIED	QTY		TYPE	MOUNTING	QTY	W	L	DIA.	CFM	S.P.	VEL.
1	K-HOOD-2	FRONT	ASP	80	14	4	NO	YES	NO		1005	MUA	FACTORY	2	12	28		503	0.1	216
1	K-HOOD-2	FRONT	ASP	80	14	4	NO	YES	NO		1005	MUA	FACTORY	2	12	28		503	0.1	216

HOOD OPTIONS

- UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #MH11726
- BACK INTEGRAL AIR SPACE - 3 IN WIDE
- 12 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED
- FACTORY MOUNTED EXHAUST COLLAR(S)
- FILTER REMOVAL TOOL INCLUDED - QTY 1
- BACKSPLASH 78.00 IN HIGH 160.00 IN LONG
- PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
- STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH

Countryman & Co.
Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

AEG
2431 E. YANDELL DR. EL PASO TEXAS, 79903 P.915.219.4901 F. 915.219.5298
WWW.AEGELPASO.COM TEXAS ENGINEERING FIRM F-11396

DRAWN BY: AEG
PROJECT NO: 2022-16
ISSUED: 10/24/2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

MECHANICAL SCHEDULES, LEGEND, GEN. NOTES

Project Status

M-101

EQUIPMENT SCHEDULE

Tempered Make-Up Air Unit

Mark: MAU-HOOD

Qty	Greenheck Model	Volume	External SP	Total SP	FRPM	Operating Power	Weight
1	DGX-112-H22	4,700 CFM	0.93 in. wg	2.268 in. wg	1412	3.89 hp	1,555 lb

Motor Information							
Size	V/C/P	Enclosure	Motor with Shaft Grounding	Motor RPM	Windings	MCA	MOP
5 hp	208/60/3	ODP	No	1725	1	22.8	35

Heating										
Type	Gas Type	Temperature			Energy			Connection Gas	Building Gas Pressure	Control Access
		Winter DB	Max Δ	Max LAT	Input	Output	Efficiency			
Direct Gas	Natural	22.6 F	42.4 F	65.0 F	202.4 MBH	186.2 MBH	92%	3/4"	1/2 PSI	11a

Cooling						
Cooling Type	Cooling Media	Summer Bulb		Filters	Cooling Control	Required Flow**
		Dry	Wet			
Evaporative	GLASdek	100.6 F	70.3 F	2in. Aluminum Mesh	Recirculating Pump	NA

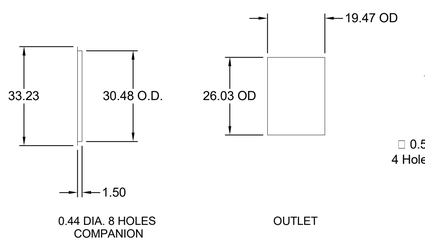
***Required flow and inlet pressure are for supply line sizing only. They do not represent water usage during normal operation. Consult factory for actual water usage.*

Outlet Sound Power By Octave Band								LwA	dBA	Sones
62.5	125	250	500	1000	2000	4000	8000			
96.9	*83.4*	*83.3*	*85.3*	*85.5*	*83.1*	*82.7*	*76.6*	*90.4*	*79.4*	*35.4*

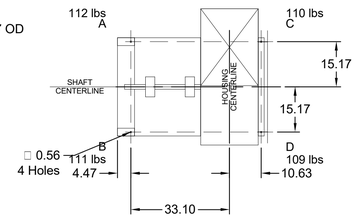
- *LwA - A weighted sound power level based on ANSI S1.4*
- *dBA - A weighted sound pressure level base on 11.1 dB attenuation per octabe band at 5.0 ft.*
- *Noise Criteria (NC) based on an average attenuation of 11.5 dB per octabe band at 5.0 ft.*

OPTIONS AND ACCESSORIES

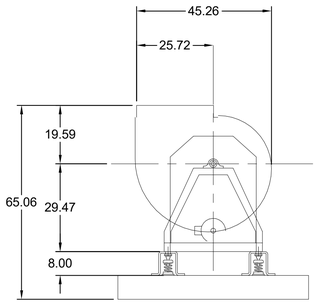
Air Flow Arrangement: Outdoor Air Only
Filter Section: MERV8, 20x20x2 - (6)
Damper: Inlet
Outdoor Air Intake Position: End
Discharge Position: End
Coating: Galvanized
Insulation: Double Wall - Tempering On
Supply Fan Control: VFD
VFD Control: Constant Volume
Hinged Access
Access Side: Right-Hand
Control Center
Freeze Protection
Heat Inlet Air Sensor
Cool Inlet Air Sensor
Dirty Filter Switch
Unit Controls: Terminal Strip
Temperature Control: Discharge
Direct Gas Options/Accessories
Approvals: ETL
FM Compliant



CONNECTIONS



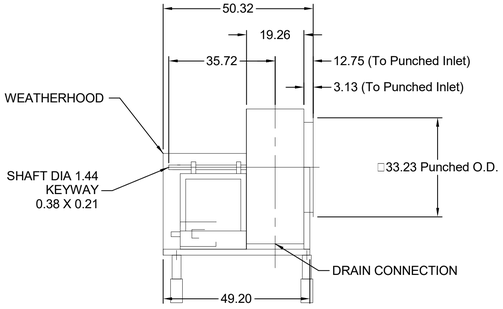
FAN FOOTPRINT



SIDE VIEW

**SIDE VIEW IS VIEWED FROM DRIVE SIDE*

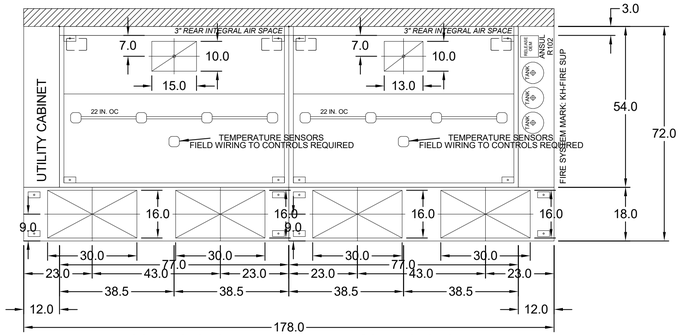
**FANS ARE SUBJECT TO ±.125 INCH TOLERANCE*
**DUE TO CONTINUAL IMPROVEMENTS DIMENSIONS MAY CHANGE*



END VIEW

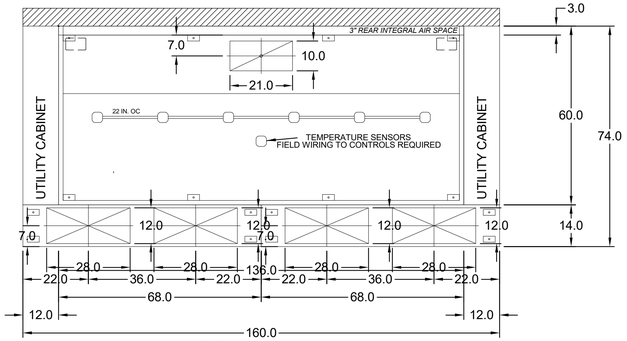
EF-KHOOD1 SCHEMATIC

2 / M-102 N.T.S



MARK: K-HOOD 1 - SECTION 1
PLAN VIEW

MARK: K-HOOD 1 - SECTION 2
PLAN VIEW



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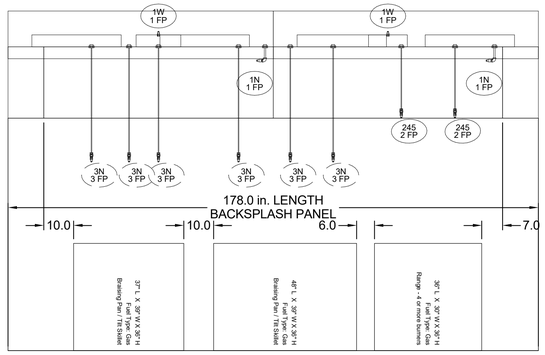
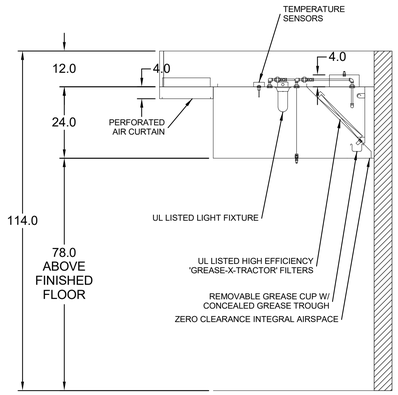
PLAN VIEW

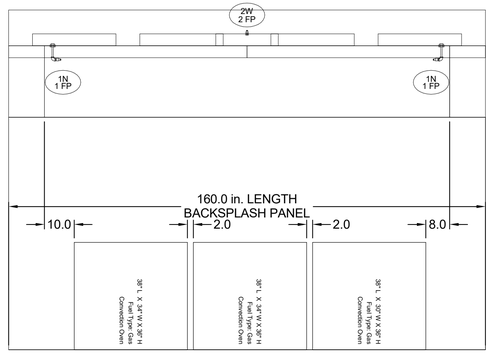


MARK: K-HOOD 1 - SECTION 1
ELEVATION VIEW

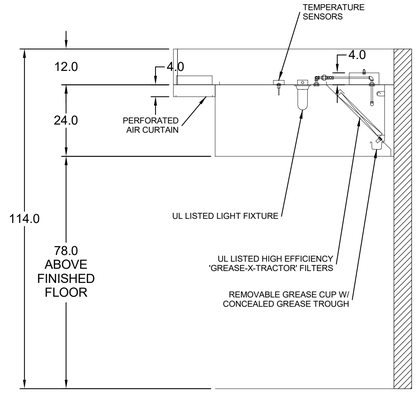
MARK: K-HOOD 1 - SECTION 2
ELEVATION VIEW



MARK: K-HOOD 1 (LAST HOOD IN ROW)
SECTION VIEW



MARK: K-HOOD-2 - SECTION 1
ELEVATION VIEW



MARK: K-HOOD-2
SECTION VIEW

K-HOOD 1 & 2 SCHEMATICS

3 / M-102 N.T.S

Countryman & Co.
Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

AEG
2431 E. YANDELL DR. EL PASO TEXAS, 79903 P.915.219.4901 F. 915.219.5298
WWW.AEGELPASO.COM TEXAS ENGINEERING FIRM F-11396

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Jorge A. Silva
89142
LICENSED
PROFESSIONAL
ENGINEER

TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: AEG
PROJECT NO: 2022-16
ISSUED: 10/24/2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED.

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

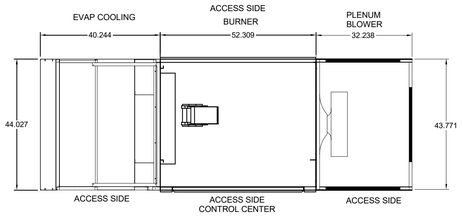
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

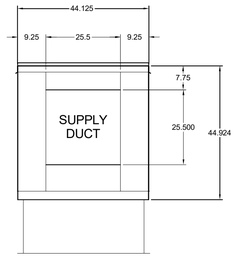
MECHANICAL SCHEDULES & SCHEMATICS

Project Status

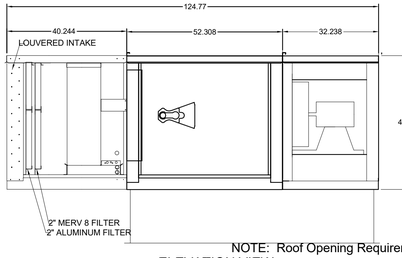
M-102



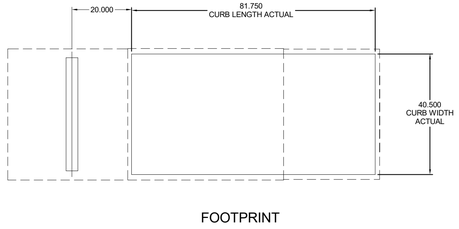
PLAN VIEW



END VIEW



ELEVATION VIEW



FOOTPRINT

NOTE: Roof Opening Requirements:

Minimum Roof Opening: The minimum roof opening size is the illustrated duct diameter plus 0.25 in. on all sides.
For example: If the duct size is 14 x 14 in. square, the minimum roof opening size is 14.5 x 14.5 in. square.

Maximum Roof Opening: There must be a minimum perimeter of 1.75 in. between the roof opening and the roof curb.
For example: If the roof curb is 75 x 30 in. square, the maximum roof opening is 71.5 x 26.5 in. inches square.

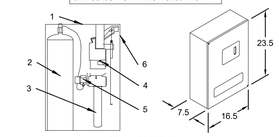
NOTE: The weatherhood and filter sections of the make-up air unit are not supported by the curb. This is by design, in order to help alleviate water infiltration issues.

1 M-103 MAU-HOOD SCHEMATICS N.T.S

ANSUL R102 (WET CHEMICAL) FIRE PROTECTION SYSTEM - MODEL FSSC

CONTROL PANEL

1. STAINLESS STEEL ENCLOSURE
2. AGENT STORAGE TANK
3. EXPELLENT GAS CARTRIDGE
4. ANSUL AUTOMAN RELEASE
5. REGULATOR
6. KNOCKOUT FOR WIRING MICROSWITCH

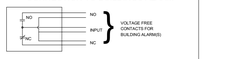


NOT TO SCALE

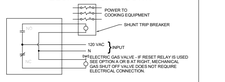
WIRING DIAGRAMS W/DPDT MICRO SWITCH

DPDT SWITCHES PROVIDED BY MANUFACTURER MAY BE WIRED PER TYPICAL EXAMPLES SHOWN. VERIFY WITH LOCAL CODES AND EQUIPMENT SUPPLIED AS THE CONNECTION NEEDED FOR YOUR INSTALLATION.

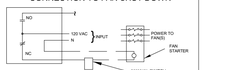
CONNECTION TO BUILDINGS ALARM



CONNECTION TO COOKING EQUIPMENT SHUT DOWN



CONNECTION TO FAN SHUT DOWN



DO NOT SHUT DOWN EXHAUST FANS WITH THIS METHOD OF WIRING, IF PROHIBITED BY LOCAL CODES.

NOTES:

WET CHEMICAL FIRE PROTECTION SYSTEM TO BE ANSUL R-102, DESIGNED IN COMPLIANCE WITH UL 300 REQUIREMENTS.
-VERIFICATION OF ALL COOKING EQUIPMENT MAKE, MODEL AND LOCATION REQUIRED FOR ALL FIRE PROTECTION SYSTEMS.
-ALL FIRE SYSTEM PIPING IS STANDARDLY TO THE RIGHT END OF THE HOOD UNLESS A WALL IS LOCATED ON THE RIGHT END.
-ANSUL AUTOMAN RELEASE TO BE LOCATED WITHIN 60" OF HOOD.

THE BASIC FIRE SYSTEM WILL INCLUDE THE FOLLOWING:
-GAS SHUT-OFF VALVE, IF REQUIRED, TO BE SUPPLIED BY MANUFACTURER (UP TO 2" DIAMETER AS STANDARD), AND INSTALLED BY A LICENSED PLUMBER.
-MICRO SWITCH TO BE SUPPLIED BY MANUFACTURER FOR CONNECTION TO, BUT NOT LIMITED TO, BUILDING ALARM SYSTEM(S), EXHAUST AND SUPPLY FANS AND ELECTRICAL POWER TO HOOD LIGHTS. FIELD WIRING AND CONNECTIONS TO BE PERFORMED BY A LICENSED ELECTRICIAN.

THE BASIC FIRE SYSTEM DOES NOT INCLUDE THE FOLLOWING:
-FULL DUMP TEST OTHER THAN WHT IS SPECIFIED PER THE INSTALLATION MANUAL, OR TO SATISFY A STATE OR LOCAL CODE. PERMIT AND TESTING FEES ARE NOT INCLUDED UNLESS NOTED UNDER THE EQUIPMENT SCHEDULE FOR THE FIRE SYSTEM.
-MORE THEN TWO TRIPS TO THE JOBSITE OR SPECIAL TRANSPORTATION, OR OVERNIGHT LODGING REQUIREMENTS IN REMOTE AREAS. NORMAL TRAVEL DISTANCE IS FIRST 50 MI. (80.5 KM) FROM OFFICE.
- SPECIAL CLASSES OR ADDITIONAL LABOR FOR ACCESS TO SECURITY SENSITIVE AREAS.
-INSTALLATION OF GAS SHUT-OFF VALVE.
-SPECIAL DRAWINGS REQUIRED TO SATISFY STATE OR LOCAL CODE. PLAN EXAMINATION FEES, PE OR FS APPROVAL STAMP.
-UNION LABOR, GOVERNMENT LABOR, OR PREVAILING WAGES REQUIRED FOR FINAL FIELD HOOK-UP.
-ANY AND ALL ELECTRICAL COMPONENTS/CONNECTIONS REQUIRED TO SHUT DOWN FANS, SHUT OFF DEVICE FOR ELECTRIC COOKING EQUIPMENT (SHUNT TRIP BREAKER), OR ACTIVATE AN ALARM SYSTEM, ETC.
-ANY DISMANTLING OR REASSEMBLY REQUIRED TO GAIN ACCESS TO THE FIRE SUPPRESSION PIPING LOCATED ON THE TOP OF THE HOOD.
-ROUGH-IN HIDDEN CONDUIT FOR REMOTE PULL STATION OR GAS VALVE (FLUSH MOUNTED PULL STATION).
-INSTALLATION OF MORE THAN (1) REMOTE PULL STATIONS OR DISTANCES GREATER THAN 20 FT (6.1M.)
-PARTS OR LABOR REQUIRED TO CORRECT PIPING DUE TO COOKING EQUIPMENT CHANGES OR DEVIATION FROM PLANS. OR ANY CHARGES FOR MISSING OR ADDITIONAL PARTS OTHER THEN THOSE INDICATED ON THE FIRE SUPPRESSION DETAIL.

NOTES:
1. ——— DENOTES FIELD INSTALLATION.
2. - - - - - DENOTES FACTORY INSTALLATION.
3. DO NOT USE BLACK WIRE ON SNAP-ACTION SWITCH IN NORMAL INSTALLATION. BLACK WIRE TO BE USED ONLY FOR EXTRANEOUS ALARM, LIGHT CIRCUITS, ETC.

3 M-103 KH-FIRE SUP DETAILS N.T.S

TRANE

Job Name: Tornillo Middle School Kitchen Upgrades
Prepared For:
Unit Tag: RTU-KITCHEN
Quantity: 1

Trane Precedent Gas/Electric Packaged Rooftop

Unit Overview - YSC092H3

Application	Unit Size	Supply Fan		External Dimensions (in.)			Operating Weight		EER	IEER/SEER	Elevation
		Airflow	External Static Pressure	Height	Width	Length	Minimum	Maximum			
DX cooling, gas heat	7.5 Ton Dual compressor	2400 cfm	1.000 in H2O	3.91 ft	4.44 ft	7.39 ft	847.0 lb	1182.0 lb	11.2 EER	12.70	4000.00 ft

Unit Features

Fresh Air Selection	Econ-dry bulb 0-100% w/ bar relief 3ph
Condenser coil protection	Std condenser coil w/hail guard

Unit Electrical

Voltage/phase/hertz	208-230/60/3
MCA	39.00 A
MOP	50.00 A

Controls

Unit Controls	Electro mechanical controls

Cooling Section

Entering Dry Bulb	80.00 F	Capacity	
Entering Wet Bulb	62.00 F	Gross Total	77.64 MBh
Ambient Temp	105.00 F	Gross Sensible	69.54 MBh
Leaving Coil Dry Bulb	50.20 F	Net Total	74.59 MBh
Leaving Coil Wet Bulb	50.20 F	Net Sensible	66.49 MBh
Leaving Unit Dry Bulb	51.51 F	Fan Motor Heat	3.05 MBh
Leaving Unit Wet Bulb	50.73 F	Refrig Charge-circuit 1	3.8 lb
Refrigeration System Options		Refrig Charge-circuit 2	3.6 lb
Leaving Dew Point	50.21 F		

Heating Section

Heat Type	Gas Heat
Heating Stages	1
Output Heating Capacity	81.65 MBh
Output Heating Capacity with Fan	84.70 MBh
Heating EAT	64.00 F
Heating LAT	101.80 F
Heating Temp Rise	37.80 F

Fan Section

Indoor Fan Data		Outdoor Fan Data	
Type	FC Centrifugal	Type	Propeller
Drive Type	Belt	Fan Quantity	1
Evap Fan FLA	3.30 A	Drive Type	Direct
Indoor Fan Performance		Outdoor Fan Performance	
Airflow	2400 cfm	Outdoor Motor Power	0.66 kW
Design ESP	1.000 in H2O	Condenser Fan FLA	3.30 A
Component SP	0.110 in H2O		
Total SP	1.110 in H2O		
Supply Motor Horsepower	1.000 hp		
Indoor Motor Operating Power	0.94 bhp		
Indoor Motor Power	0.70 kW		
Indoor RPM	800 rpm		

Compressor Section

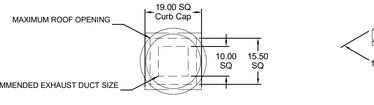
Power	7.74 kW
Circuit 1 RLA	14.50 A
Circuit 2 RLA	14.00 A

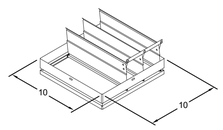
Accessories

Roof curb	yes
Thermostat	3H/2C programmable touchscreen
LP conversion kit	yes

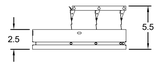
2022/10/18 11:10:06 Page 1 of 2

4 M-103 RTU-KITCHEN SUBMITTAL N.T.S

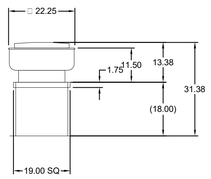




DAMPER

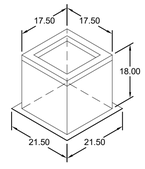


TYP. SECTION VIEW



DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB. CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.



2 M-103 DISHWASHER EXHAUST FAN SCHEMATICS N.T.S

TRANE

Job Name: Tornillo Middle School Kitchen Upgrades
Prepared For:
Unit Tag: RTU-OFFICE
Quantity: 1

Trane Precedent Gas/Electric Packaged Rooftop

Unit Overview - YSC036G3

Application	Unit Size	Supply Fan		External Dimensions (in.)			Operating Weight		EER	IEER/SEER	Elevation
		Airflow	External Static Pressure	Height	Width	Length	Minimum	Maximum			
DX cooling, gas heat	3 Ton (036)	1200 cfm	1.000 in H2O	3.41 ft	3.69 ft	5.82 ft	472.0 lb	747.0 lb	12.0 EER	14.00	4000.00 ft

Unit Features

Fresh Air Selection	Econ-dry bulb 0-100% w/ bar relief 3ph
Hinged Service Access/Filters	Std panel/2 in pltd filters MERV 8

Unit Electrical

Voltage/phase/hertz	208-230/60/3
MCA	20.00 A
MOP	30.00 A

Controls

Unit Controls	Electro mechanical controls

Cooling Section

Entering Dry Bulb	80.00 F	Capacity	
Entering Wet Bulb	62.00 F	Gross Total	31.17 MBh
Ambient Temp	105.00 F	Gross Sensible	31.07 MBh
Leaving Coil Dry Bulb	52.26 F	Net Total	29.20 MBh
Leaving Coil Wet Bulb	52.26 F	Net Sensible	29.10 MBh
Leaving Unit Dry Bulb	55.56 F	Fan Motor Heat	1.97 MBh
Leaving Unit Wet Bulb	53.48 F	Refrig Charge-circuit 1	3.2 lb
Refrigeration System Options			
Leaving Dew Point	52.18 F		

Heating Section

Heat Type	Gas Heat
Heating Stages	2
Output Heating Capacity	54.43 MBh
Output Heating Capacity with Fan	55.98 MBh
Heating EAT	64.00 F
Heating LAT	114.20 F
Heating Temp Rise	50.20 F

Fan Section

Indoor Fan Data		Outdoor Fan Data	
Type	FC Centrifugal	Type	Propeller
Drive Type	Direct	Fan Quantity	1
Evap Fan FLA	5.70 A	Drive Type	Direct
Indoor Fan Performance		Outdoor Fan Performance	
Airflow	1200 cfm	Condenser Fan FLA	1.10 A
Design ESP	1.000 in H2O		
Component SP	0.100 in H2O		
Total SP	1.100 in H2O		
Supply Motor Horsepower	0.750 hp		
Indoor Motor Operating Power	0.51 bhp		
Indoor Motor Power	0.38 kW		
Indoor RPM	1061 rpm		

Compressor Section

Power	2.85 kW
Circuit 1 RLA	10.40 A
Circuit 2 RLA	0.00 A

Accessories

Roof curb	yes
Thermostat	3H/2C programmable touchscreen
LP conversion kit	yes

2022/10/18 11:10:05 Page 1 of 2

5 M-103 RTU-OFFICE SUBMITTAL N.T.S

TRANE

Job Name: Tornillo Middle School Kitchen Upgrades
Prepared For:
Unit Tag: RTU-PANTRY
Quantity: 1

Trane Precedent Gas/Electric Packaged Rooftop

Unit Overview - YSC036G3

Application	Unit Size	Supply Fan		External Dimensions (in.)			Operating Weight		EER	IEER/SEER	Elevation
		Airflow	External Static Pressure	Height	Width	Length	Minimum	Maximum			
DX cooling, gas heat	3 Ton (036)	1200 cfm	1.000 in H2O	3.41 ft	3.69 ft	5.82 ft	472.0 lb	747.0 lb	12.0 EER	14.00	4000.00 ft

Unit Features

Fresh Air Selection	Econ-dry bulb 0-100% w/ bar relief 3ph
Hinged Service Access/Filters	Std panel/2 in pltd filters MERV 8

Unit Electrical

Voltage/phase/hertz	208-230/60/3
MCA	20.00 A
MOP	30.00 A

Controls

Unit Controls	Electro mechanical controls

Cooling Section

Entering Dry Bulb	80.00 F	Capacity	
Entering Wet Bulb	62.00 F	Gross Total	31.17 MBh
Ambient Temp	105.00 F	Gross Sensible	31.07 MBh
Leaving Coil Dry Bulb	52.39 F	Net Total	29.20 MBh
Leaving Coil Wet Bulb	52.26 F	Net Sensible	29.10 MBh
Leaving Unit Dry Bulb	55.56 F	Fan Motor Heat	1.97 MBh
Leaving Unit Wet Bulb	53.48 F	Refrig Charge-circuit 1	3.2 lb
Refrigeration System Options			
Leaving Dew Point	52.18 F		

Heating Section

Heat Type	Gas Heat
Heating Stages	2
Output Heating Capacity	54.43 MBh
Output Heating Capacity with Fan	55.98 MBh
Heating EAT	64.00 F
Heating LAT	114.20 F
Heating Temp Rise	50.20 F

Fan Section

Indoor Fan Data		Outdoor Fan Data	
Type	FC Centrifugal	Type	Propeller
Drive Type	Direct	Fan Quantity	1
Evap Fan FLA	5.70 A	Drive Type	Direct
Indoor Fan Performance		Outdoor Fan Performance	
Airflow	1200 cfm	Condenser Fan FLA	1.10 A
Design ESP	1.000 in H2O		
Component SP	0.100 in H2O		
Total SP	1.100 in H2O		
Supply Motor Horsepower	0.750 hp		
Indoor Motor Operating Power	0.51 bhp		
Indoor Motor Power	0.38 kW		
Indoor RPM	1061 rpm		

Compressor Section

Power	2.85 kW
Circuit 1 RLA	10.40 A
Circuit 2 RLA	0.00 A

Accessories

Roof curb	yes
Thermostat	3H/2C programmable touchscreen
LP conversion kit	yes

2022/10/18 11:10:06 Page 1 of 2

6 M-103 RTU-PANTRY SUBMITTAL N.T.S

COMcheck Software Version 4.1.5.3

Mechanical Compliance Certificate

Project Information

Energy Code:	2015 IECC
Project Title:	TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION
Location:	El Paso, Texas
Climate Zone:	3b
Project Type:	Alteration

Construction Site:
300 OIL MILL DR.
TORNILLO, TX 79853

Owner/Agent:
TORNILLO INDEPENDENT SCHOOL DISTRICT

Designer/Contractor:
JORGE SILVA
AEG MECHANICAL ENGINEERS
2431 E YANDELL DR
EL PASO, TX 79903
9152194901
JSILVA@AEGELPASO.COM

Mechanical Systems List

Quantity — System Type & Description

1 RTU-OFFICE (Single Zone):
Heating: 1 each - Central Furnace, Propane, Capacity = 47 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 30 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: High Efficiency Equipment
Proposed Efficiency = 14.00 SEER, Required Efficiency: 14.00 SEER
Fan System: None

1 RTU-PANTRY (Single Zone):
Heating: 1 each - Central Furnace, Propane, Capacity = 47 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 30 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: High Efficiency Equipment
Proposed Efficiency = 14.00 SEER, Required Efficiency: 14.00 SEER
Fan System: None

1 RTU-KITCHEN (Single Zone):
Heating: 1 each - Central Furnace, Propane, Capacity = 69 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 66 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: High Efficiency Equipment
Proposed Efficiency = 12.70 EER, Required Efficiency: 12.65 EER
Fan System: None

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.5.3 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

JORGE A. SILVA - PE — Name - Title
Signature — 10/25/22 — Date

Project Title: TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION
Data filename: P:\2022\22226 Tornillo HS Gym to Kitchen Conversion_Design\Documents\Comcheck Report\TORNILLO CAFETERIA CONVERSION.cck
Report date: 10/25/22
Page 1 of 10

7 M-103 COMCHECK REPORT N.T.S

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DRAWN BY: AEG
PROJECT NO: 2022-16
ISSUED: 10/24/2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

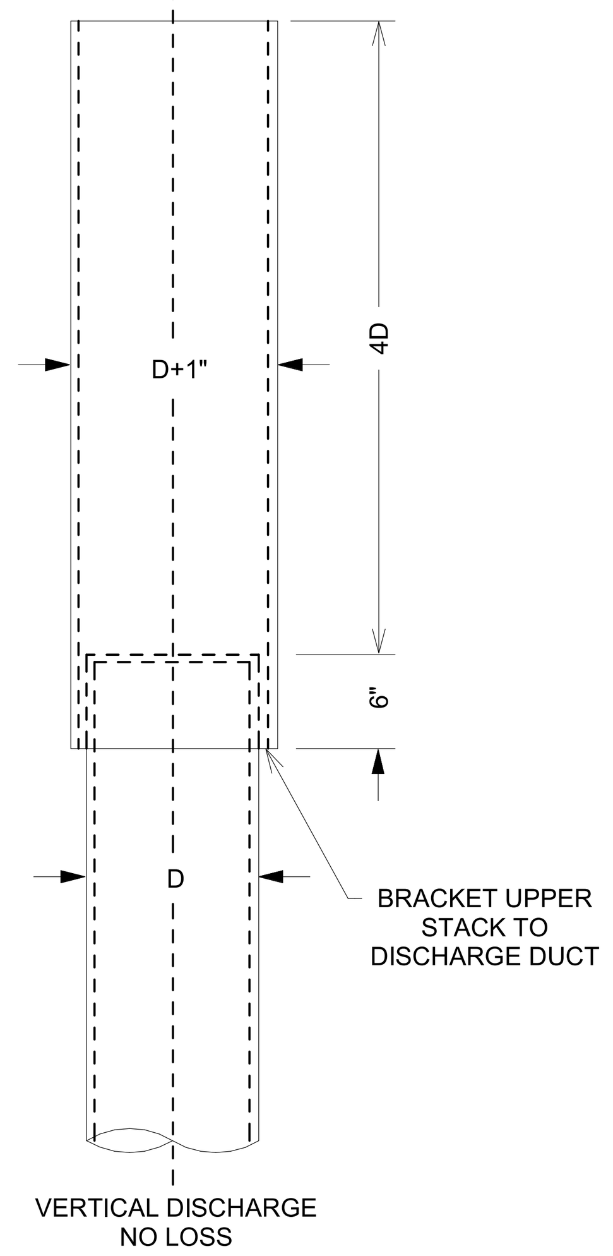
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

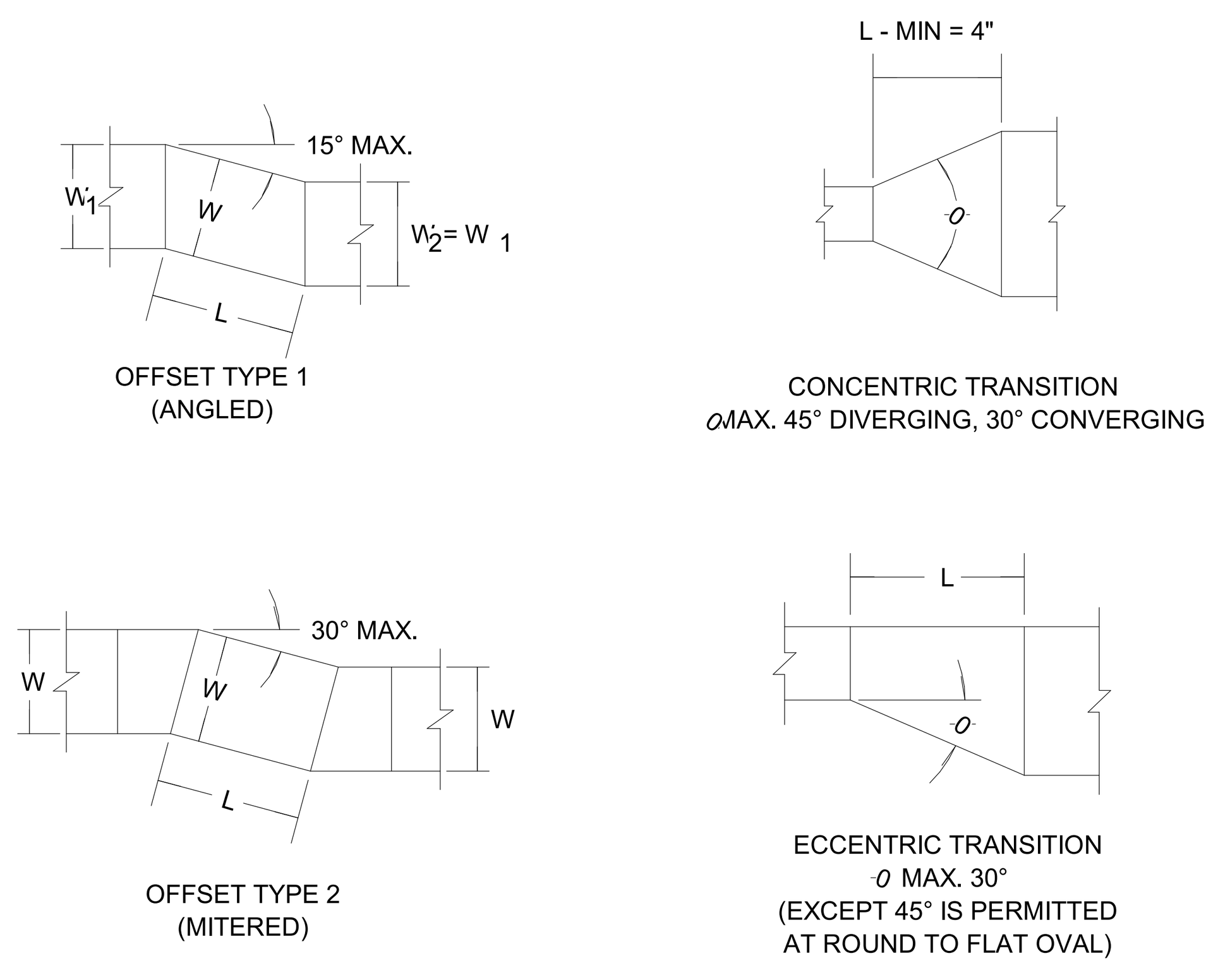
MECHANICAL SCHEDULES & SCHEMATICS

Project Status

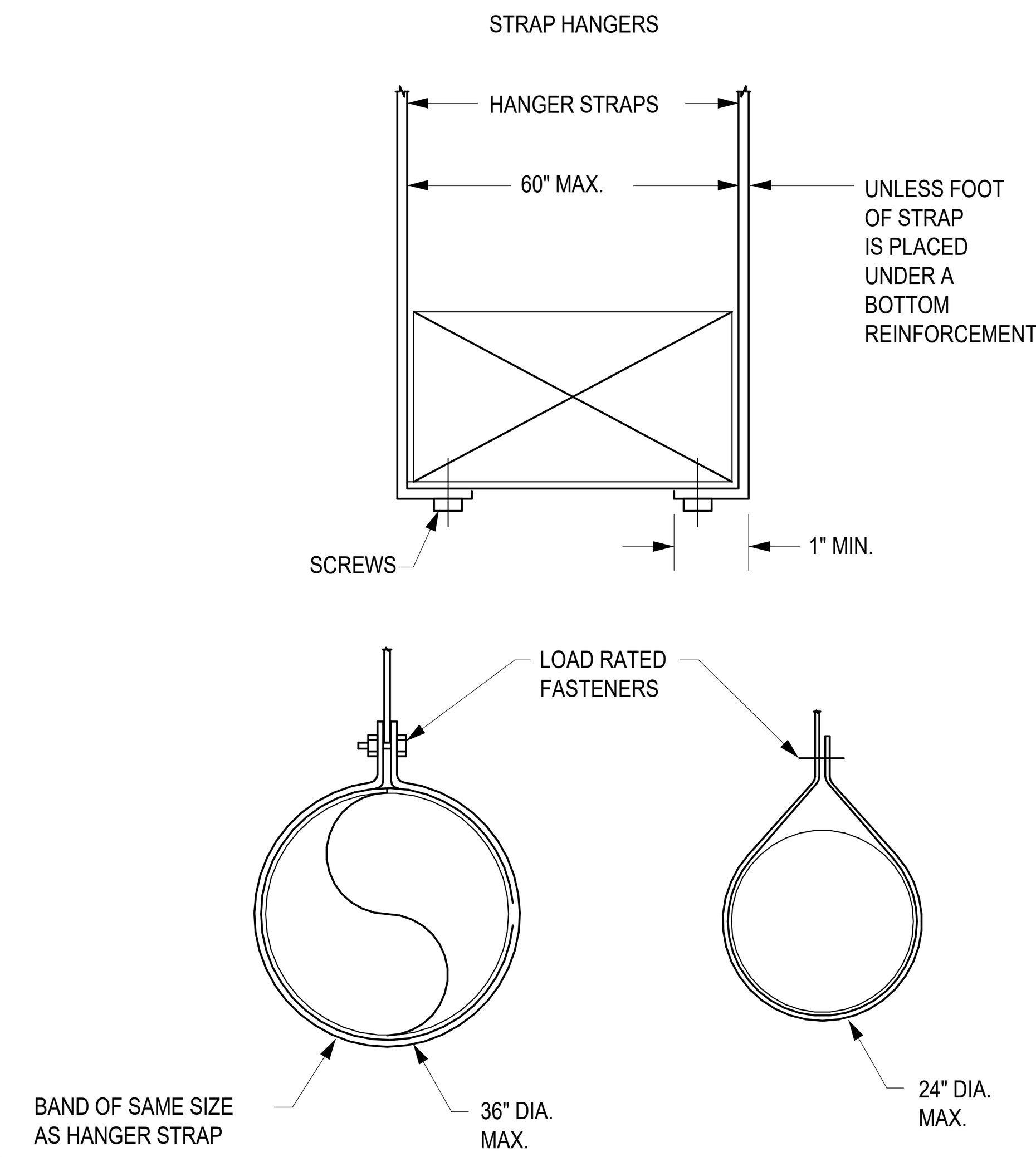
M-103



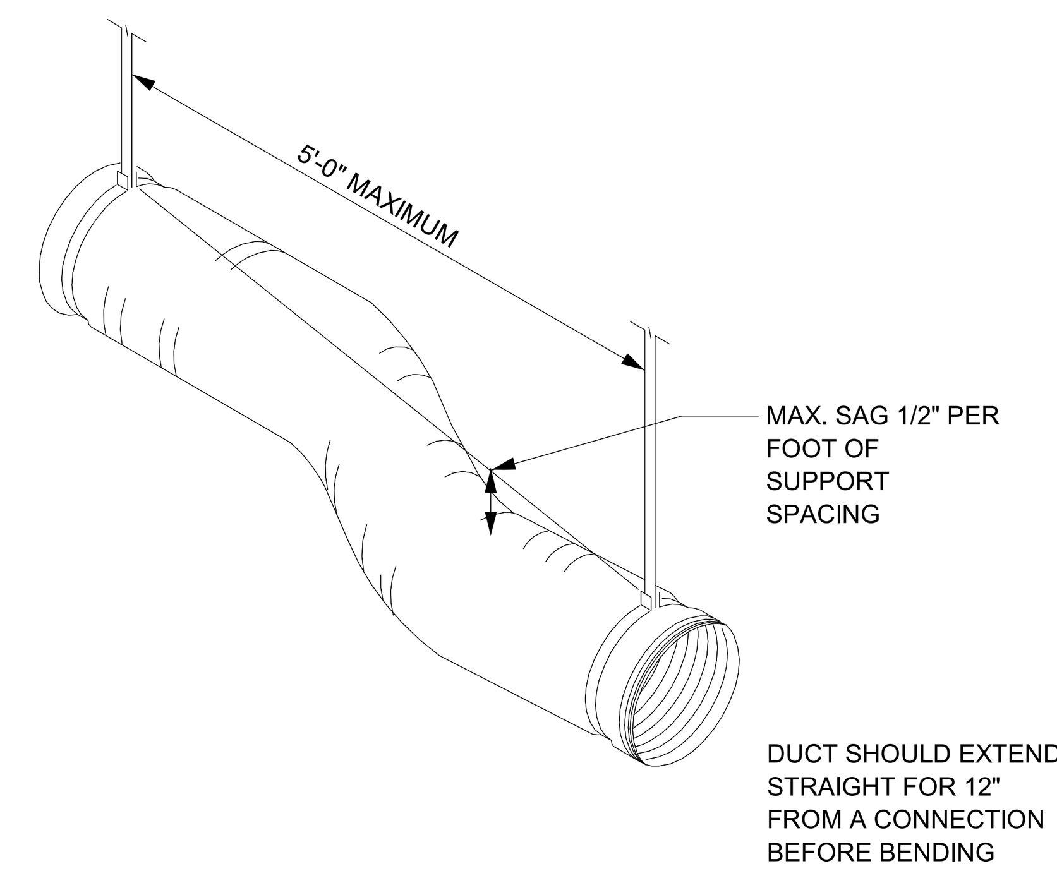
1 M-104 **ZERO PRESSURE VENT STACK**
N.T.S



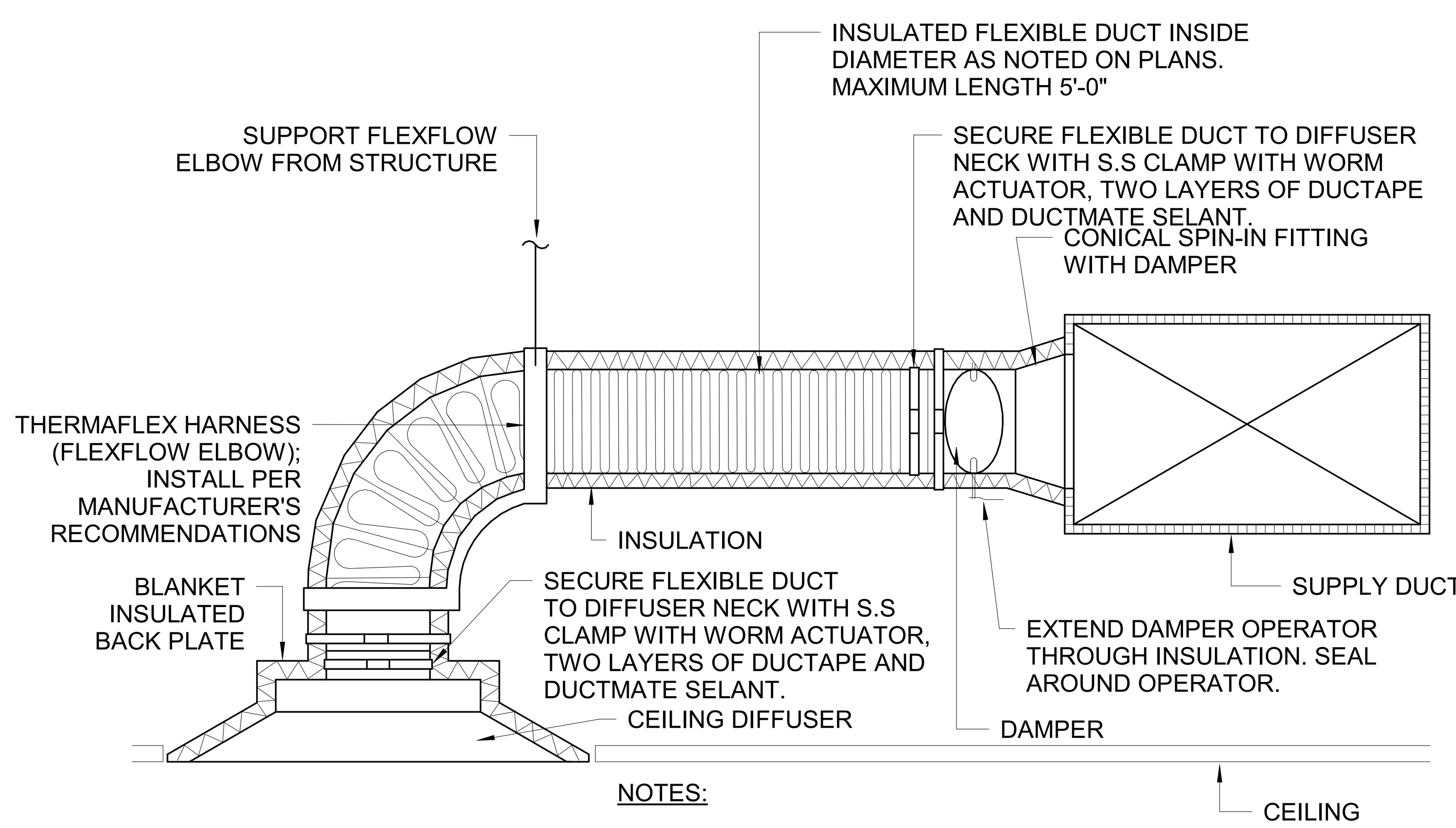
2 M-104 **OFFSETS AND TRANSITIONS**
N.T.S



3 M-104 **LOWER HANGER ATTACHMENTS**
N.T.S



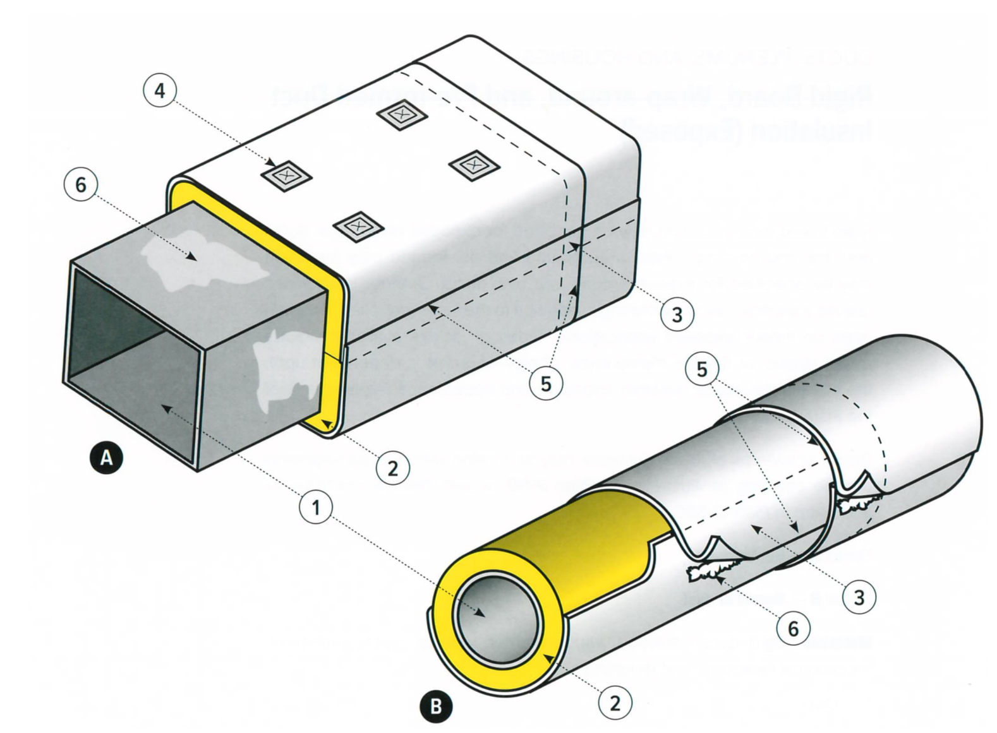
5 M-104 **FLEXIBLE DUCT SUPPORT**
N.T.S



NOTES:

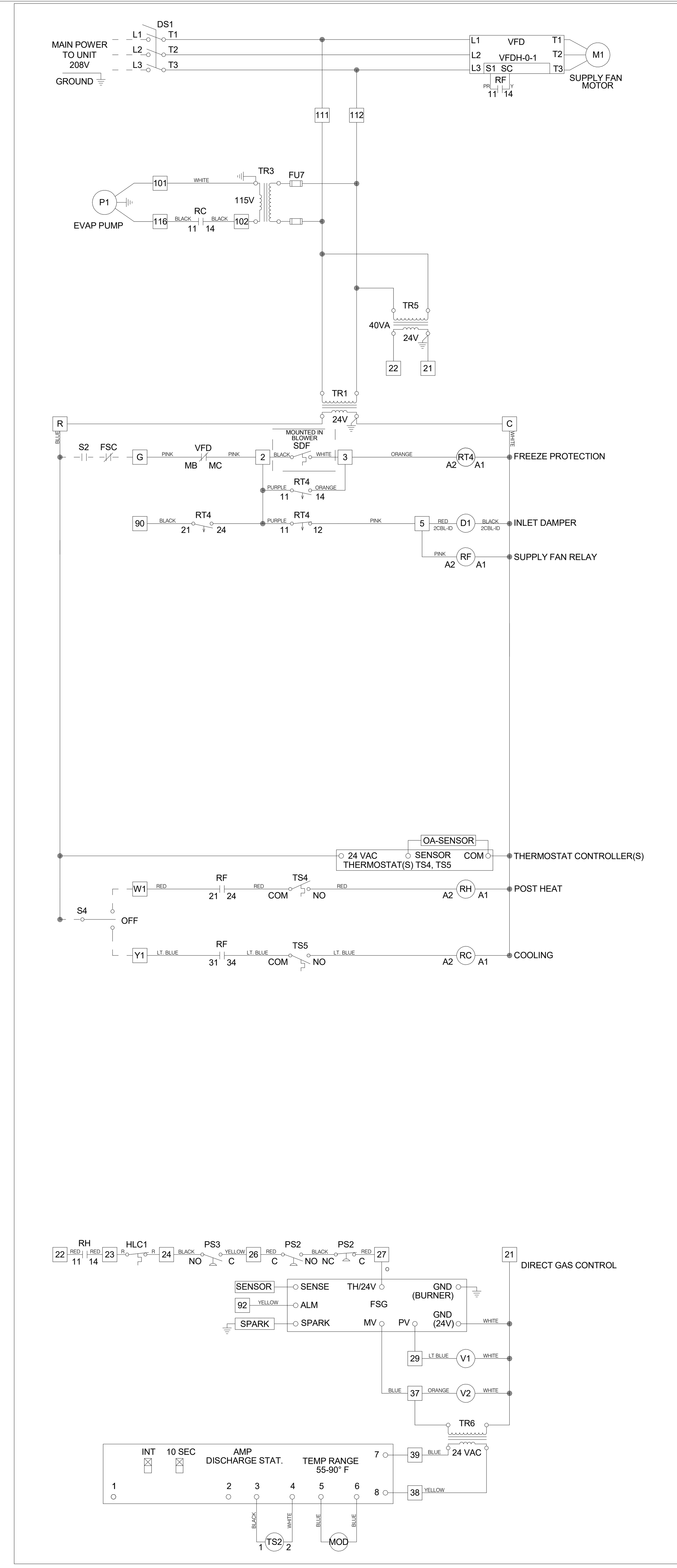
1. SEAL ALL JOINTS PER SPECIFICATIONS.
2. FLEX DUCT SAG LIMITED TO 1/2" PER FOOT.
3. MAX 30° OFFSET ALLOWED IN FLEX DUCT ROUTING.

4 M-104 **CEILING DIFFUSER CONNECTION DETAIL**
N.T.S



Hot and cold air ducts may be insulated using flexible fibrous blanket insulation. Applications generally require no additional finish beyond the factory-applied vapor-retarder jacket.
Detail A - Rectangular.
Detail B - Round or oval.
Materials: Flexible blanket of glass or mineral fiber insulation, vapor-retarder tape or mastic, adhesive and mechanical fasteners. Follow manufacturers' recommended stretch-out schedule to avoid compression of the insulation to achieve required installed "R-values". (See table below.)
1. Duct.
2. Insulation.
3. Lap.
4. Mechanical fasteners.
5. Vapor-retarder tape or mastic.
6. Adhesive (optional).
Duct Wrap Stretch-outs:

6 M-104 **FLEXIBLE FIBROUS BLANKET DUCT INSULATION**
N.T.S



GREENHECK
Building Value in Air.

Wiring Diagram Code:
GD61B402B011A71NM24

CAUTION
UNIT SHALL BE GROUNDED IN ACCORDANCE WITH N.E.C.
POWER MUST BE OFF WHILE SERVICING.

NOTES
USE COPPER CONDUCTORS ONLY
60° C FOR TERMINALS RATED LESS THAN 100 AMPS.
75° C FOR TERMINALS RATED 100 AMPS OR MORE.
FIELD CONTROL WIRING RESISTANCE SHOULD NOT EXCEED 0.75 OHM.
FIELD WIRED
FACTORY SUPPLIED AND WIRED

WIRE COLOR CODE

BK BLACK	BL BLUE	BR BROWN
GY GRAY	LT BL LIGHT BLUE	O ORANGE
PK PINK	PR PURPLE	R RED
W WHITE	Y YELLOW	

LEGEND
AMP AMPLIFIER
D1 INLET DAMPER
DS1 MAIN DISCONNECT SWITCH
FSC FIRE SYSTEM CONTACT
FSG FLAME SAFE GUARD
FU# FUSE
HLC HIGH LIMIT CONTROL
M# MOTOR
MOD MODULATING VALVE
P# EVAP PUMP
PS1 DIRTY FILTER SWITCH
PS2 AIR PROVING SWITCH
PS3 LOW GAS PRESSURE SWITCH
RC COOL RELAY
RF SUPPLY FAN RELAY
RF1 FAN ENABLE RELAY
RH HEAT RELAY
RT4 FREEZE PROTECTION TIMER
SWITCH 1 and 4 DOWN - 2 and 3 UP / DIAL SET TO 4
S2 FAN SWITCH
S4 HEAT AND COOL SWITCH
SDF SENSOR DISCHARGE - FREEZE
SG SPARK GENERATOR
ST# MOTOR STARTER
TR# TRANSFORMER
TS2 DISCHARGE AIR SENSOR
TS4 INLET AIR SENSOR - HEAT
JUMPER = HEAT : DIFFERENTIAL = 2
TS5 INLET AIR SENSOR - COOL
DIFFERENTIAL = 2 : OFFSET = 10
V1 PILOT VALVE
V2 MAIN VALVE
VFD VARIABLE FREQUENCY DRIVE

USER INTERFACE CONNECTIONS:
USER TO VERIFY THAT TR1 CAN HANDLE THE VA LOAD OF INDICATOR DEVICES.
DIRTY FILTER INDICATOR SHOWN AS 24V POWER FROM UNIT.
PS1 SUPPLY DIRTY FILTER SWITCH NC C NO

Wiring Template: M24 DOC NUMBER: ---- REV: ----

54 M-104 **MAU-HOOD CONTROLS**
N.T.S

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DRAWN BY: AEG
PROJECT NO: 2022-16
ISSUED: 10/24/2022
REVISION SCHEDULE:

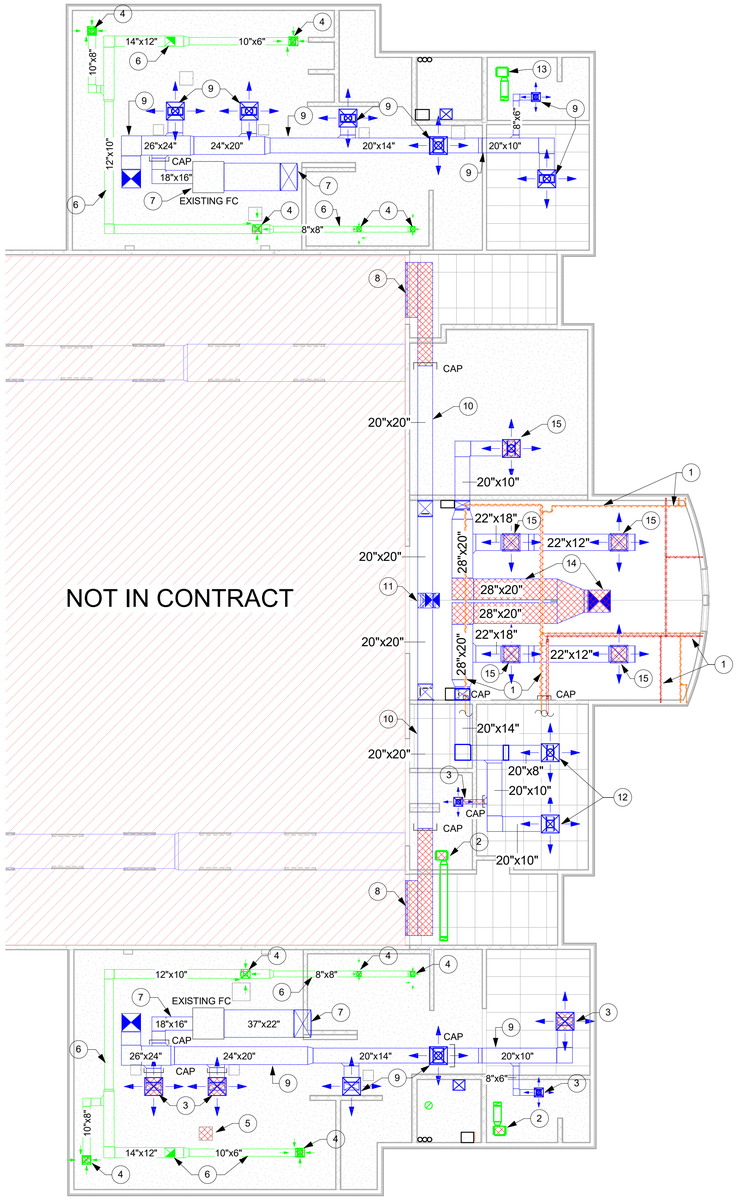
NO	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION
300 OIL MILL DR. | TORNILLO, TX 79853

Project Status

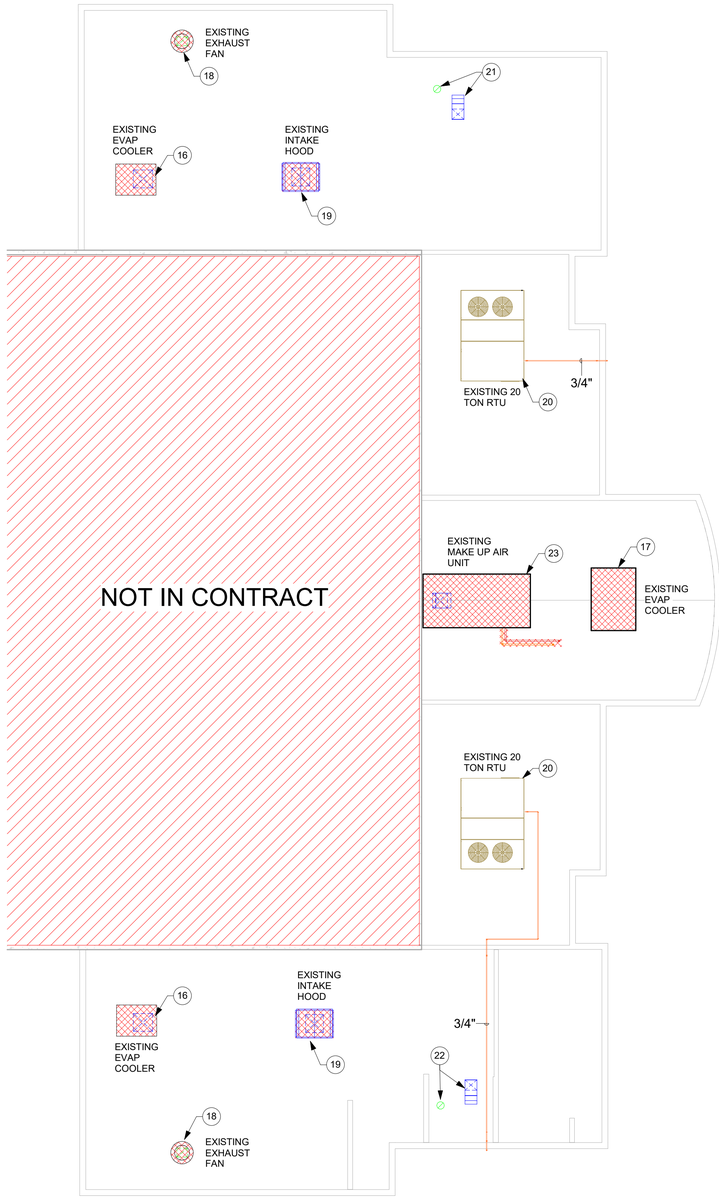
SHEET TITLE:
MECHANICAL SCHEDULES & SCHEMATICS

M-104



1 M-200 1/8" = 1'-0"

1ST LEVEL MECHANICAL DEMOLITION PLAN



2 M-200 1/8" = 1'-0"

ROOF MECHANICAL DEMOLITION PLAN

KEYED NOTES

1. EXISTING HYDRONIC PIPING SHALL BE REMOVED FROM SITE AND CAPPED BACK TO THE WALL. RISERS TO FIN TUBE HEATERS INSIDE CMU WALL SHALL BE ABANDONED IN PLACE.
2. EXISTING EXHAUST FAN SHALL BE REMOVED FROM SITE AND SALVAGED TO THE OWNER. ASSOCIATED DUCT SHALL BE ABANDONED IN PLACE.
3. EXISTING CEILING DIFFUSER SHALL BE REMOVED FROM SITE AND SALVAGED TO THE OWNER. PATCH CEILING AS REQUIRED TO MATCH EXISTING.
4. EXISTING EXHAUST GRILLE SHALL BE REMOVED FROM SITE AND SALVAGED TO THE OWNER. PATCH CEILING AS REQUIRED TO MATCH EXISTING.
5. CEILING ACCESS DOOR SHALL BE REMOVED FROM SITE AND SALVAGED TO OWNER. PATCH CEILING AS REQUIRED TO MATCH EXISTING.
6. EXISTING EXHAUST DUCT SHALL BE ABANDONED IN PLACE.
7. EXISTING FAN COIL UNIT AND ASSOCIATED DUCTWORK SHALL BE ABANDONED IN PLACE. FAN COIL SUPPLY DUCTWORK SHALL BE CAPPED BACK TO MAIN DUCT.
8. CAP DUCT AND SEAL AIR TIGHT. EXISTING SIDEWALL SUPPLY GRILLES SHALL BE REMOVED FROM SITE. PATCH WALL AS REQUIRED TO MATCH EXISTING.
9. EXISTING SUPPLY DUCT AND DIFFUSERS SHALL REMAIN UNDISTURBED TO SERVE NEW RTU.
10. EXISTING MAKE UP AIR UNIT SUPPLY DUCT SHALL REMAIN TO SERVE NEW KITCHEN-RTU AS RETURN DUCT.
11. EXISTING ROOF PENETRATION SHALL REMAIN TO SERVE NEW KITCHEN-RTU RETURN RISER.
12. EXISTING SUPPLY DIFFUSER SHALL REMAIN. RE-ARRANGE DIFFUSER TO MATCH NEW CEILING.
13. EXISTING EXHAUST FAN SHALL REMAIN UNDISTURBED.
14. EXISTING SUPPLY DUCT SHALL BE REMOVED FROM SITE. ROOF PENETRATION SHALL REMAIN TO SERVE NEW MAKE UP AIR UNIT SUPPLY DUCT.
15. SUPPLY DUCT SHALL REMAIN. DIFFUSERS AND RISER CONNECTIONS TO DUCT SHALL BE REMOVED.
16. EXISTING EVAPORATOR COOLER SHALL BE REMOVED FROM SITE AND SALVAGED TO OWNER. ROOF PENETRATION AND DUCTWORK SHALL BE REUSED FOR NEW RTU.
17. EXISTING EVAPORATOR COOLER SHALL BE REMOVED FROM SITE AND SALVAGED TO OWNER. ROOF PENETRATION AND DUCTWORK SHALL BE REUSED FOR NEW MAKE UP AIR UNIT SERVING KITCHEN.
18. EXISTING EXHAUST FAN SHALL BE REMOVED FROM SITE AND SALVAGED TO OWNER. ROOF CURB SHALL REMAIN. SEAL AND COVER ROOF CURB OPENING.
19. EXISTING INTAKE HOOD SHALL BE REMOVED FROM SITE AND SALVAGED TO OWNER. ROOF CURB SHALL REMAIN. SEAL AND COVER ROOF CURB OPENING.
20. EXISTING RTU SHALL REMAIN UNDISTURBED.
21. EXISTING BOILER INTAKE AND FLUE VENT SHALL BE ABANDONED IN PLACE.
22. EXISTING BOILER INTAKE AND FLUE VENT SHALL BE REUSED BY NEW WATER HEATER.
23. EXISTING MAKE UP AIR UNIT SHALL BE REMOVED FROM SITE AND SALVAGED TO THE OWNER. SUPPLY DUCT AND ROOF PENETRATION SHALL REMAIN TO SERVE NEW KITCHEN RTU RETURN. ASSOCIATED HYDRONIC PIPING SHALL BE REMOVED, PATCH PIPING PENETRATIONS ON ROOF AS REQUIRED TO MATCH EXISTING.

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Jorge A. Silva 89142 LICENSED PROFESSIONAL ENGINEER

TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: AEG
PROJECT NO: 2022-16
ISSUED: 10/24/2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

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TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

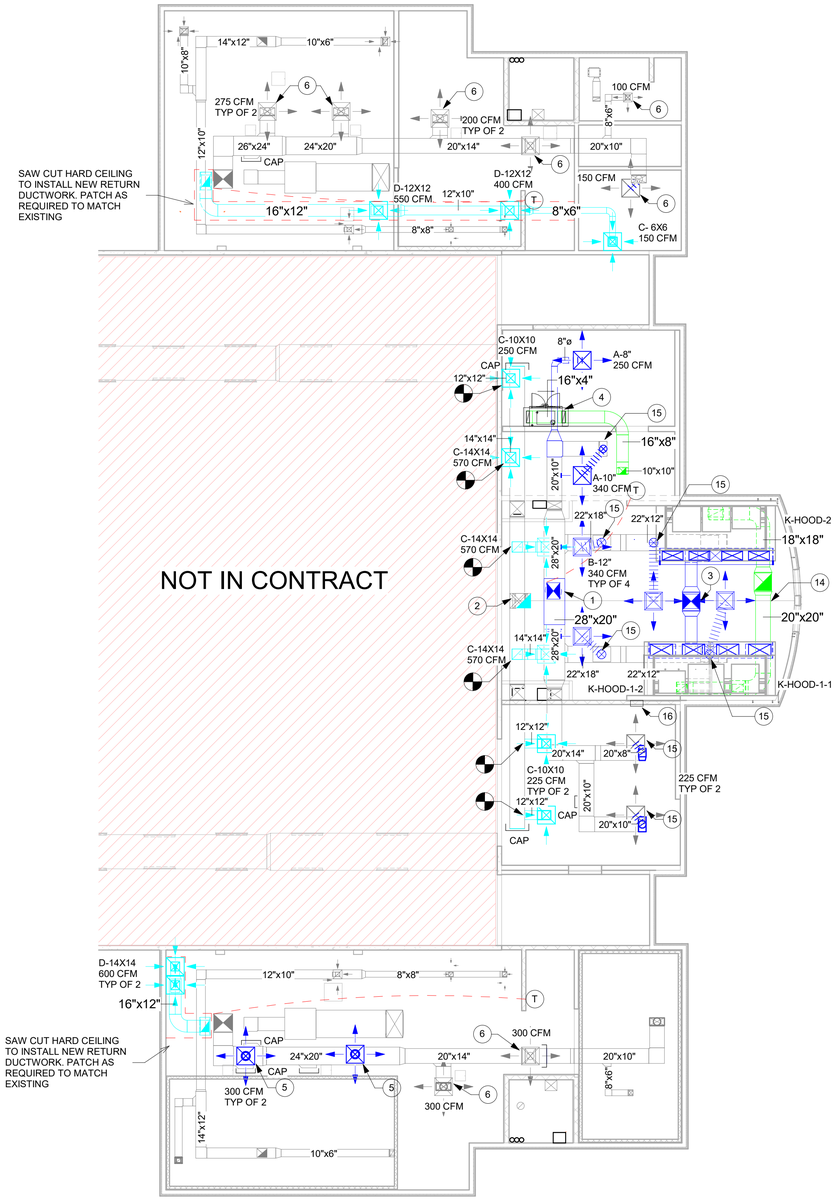
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

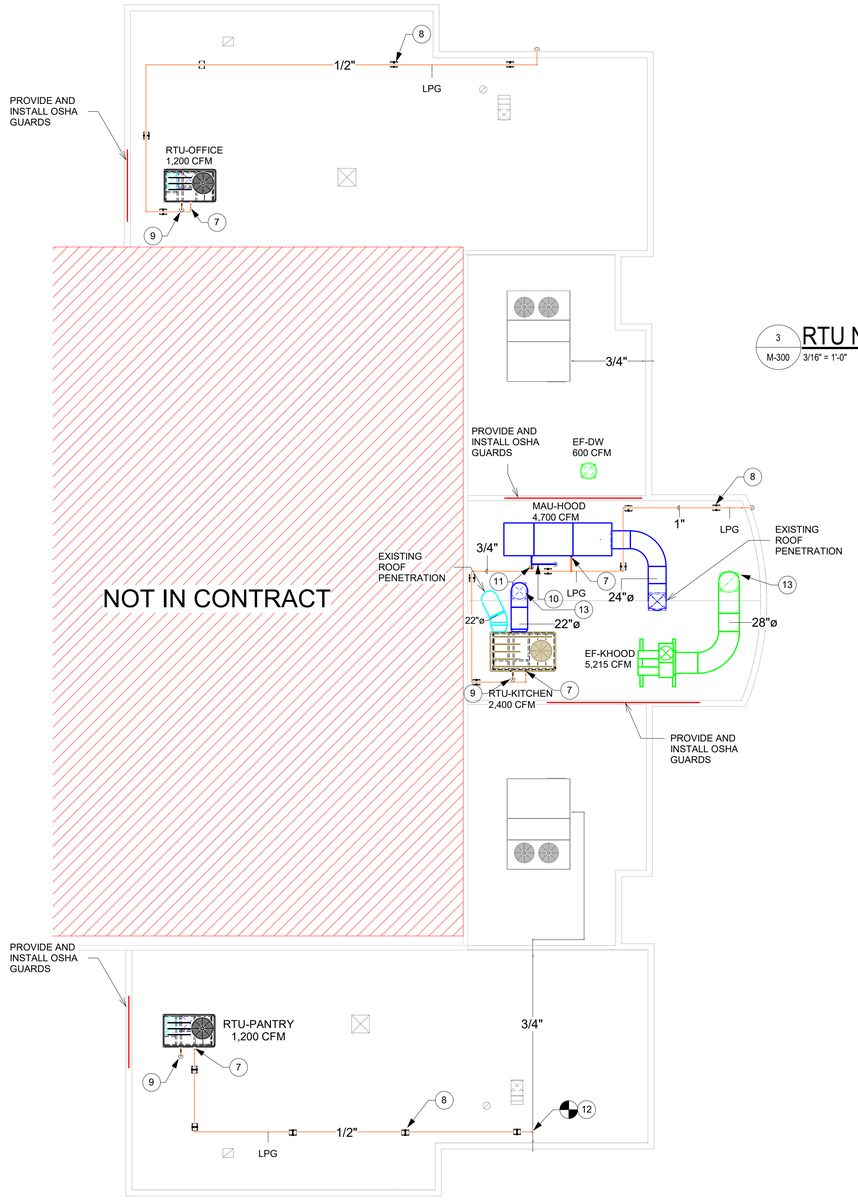
MECHANICAL DEMOLITION PLAN

Project Status

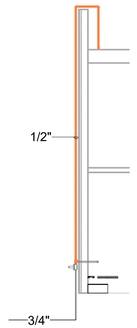
M-200



1 M-300 1ST LEVEL MECHANICAL IMPROVEMENT PLAN
1/8" = 1'-0"



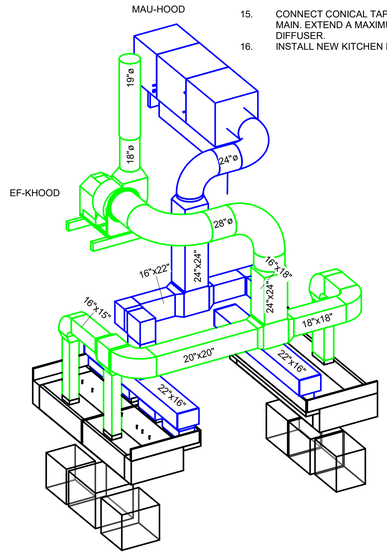
2 M-300 ROOF MECHANICAL IMPROVEMENT PLAN
1/8" = 1'-0"



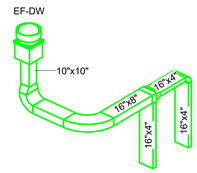
3 M-300 RTU NEW GAS LINE CONNECTION
3/16" = 1'-0"

KEYED NOTES

1. CONNECT TWO EXISTING SUPPLY DUCTS WITH SAME SIZE 28X20 DUCT.
2. RE USE EXISTING 20X20 DUCT FOR RTU-KITCHEN RETURN. USE SAME ROOF PENETRATION FOR RISER.
3. RE USE EXISTING ROOF PENETRATION FOR NEW MAKE UP AIR UNIT.
4. CONNECT NEW EF-DISH DUCTWORK TO DISHWASHER VENT STACKS.
5. RELOCATE EXISTING DIFFUSERS UNDER SUPPLY DUCT. PROVIDE NEW 10" CONICAL TAP AND FLEXIBLE DUCT. BALANCE TO REQUIRED AIRFLOW.
6. BALANCE SUPPLY DIFFUSERS TO LISTED AIRFLOW. ADJUST AS NECESSARY TO FIT NEW CEILING.
7. PROVIDE AND INSTALL UNION AND DIRT LEG PRIOR TO MAKING CONNECTION TO GAS FIRED APPLIANCE.
8. PROVIDE AND INSTALL ADJUSTABLE ROLLER NON PENETRATING PIPE SUPPORT SIMILAR TO MAPA AT 8' O.C.
9. 3/4" CONDENSATE DRAIN LINE GOES DOWN THROUGH THE ROOF. FOR CONTINUATION SEE WASTE AND VENT PLAN. PROVIDE LINE WITH P-TRAPS AS INDICATED ON SCHEMATIC PLANS.
10. 1/2" COLD WATER LINE DOWN THROUGH THE ROOF, FOR CONTINUATION REFER TO HOT AND COLD WATER PLAN. CONNECT LINE TO MAKE UP AIR UNIT EVAPORATIVE MODULE. PROVIDE ISOLATION BALL VALVE. REFER TO EVAPORATIVE COOLER WATER SUPPLY/DRAIN SCHEMATIC.
11. 3/4" DRAIN LINE FROM EVAPORATIVE COOLER GOES DOWN TROUGH THE ROOF, FOR CONTINUATION SEE WASTE AND VENT PLAN.
12. CONNECT NEW GAS LINE SERVING RTU TO EXISTING 3/4" GAS LINE ON ROOF.
13. EXTEND DUCT UP THRU THE ROOF. WEATHERPROOF AS PER ROOFING MANUFACTURERS RECOMMENDATIONS.
14. DUCT TO HOOD JOINT SHALL COMPLY WITH IMC CODE 506.3.2.2. PROVIDE TWO LAYERS OF 3M FIRE DUCTWRAP FROM HOOD DUCT COLLAR TO BOTTOM OF ROOF DECK. SLOPE DUCTWORK 1/4" TOWARDS HOOD AS PER 2015 IMC AND PROVIDE 16X16 ACCESS DOOR AT BOTTOM OF EXHAUST PLENUM.
15. CONNECT CONICAL TAP AND FLEXIBLE DUCT TO EXISTING SUPPLY MAIN. EXTEND A MAXIMUM OF 5' FLEX DUCT TO SERVE NEW SUPPLY DIFFUSER.
16. INSTALL NEW KITCHEN HOOD CONTROL PANEL 5' A.F.F.



4 M-300 KITCHEN HOODS ISOMETRIC VIEW
N.T.S



5 M-300 DISHWASHER EF ISOMETRIC VIEW
N.T.S

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DRAWN BY: AEG
PROJECT NO: 2022-16
ISSUED: 10/24/2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

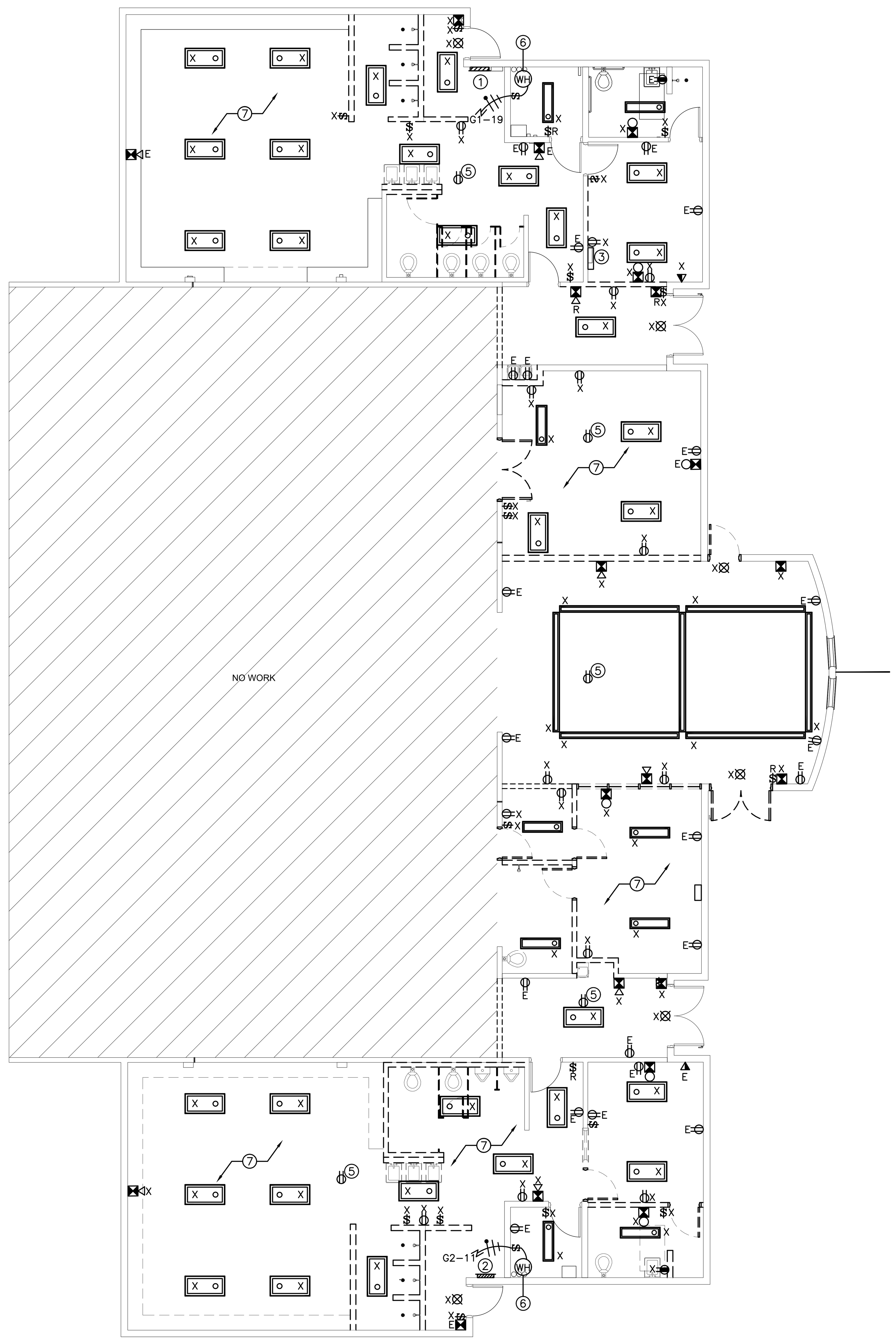
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

MECHANICAL IMPROVEMENT PLAN

Project Status

M-300



01 ELECTRICAL DEMOLITION PLAN
1/8" = 1'-0"

N

KEYED NOTES:

1. APPROXIMATE LOCATION OF EXISTING 225A 120/208V, 3 PH, 4 WIRE PANELBOARD 'G1' TO BE REPLACED WITH NEW 225A, 120/208V, 3PH 4 WIRE PANELBOARD 'G1' SEE NEW PANEL SCHEDULE ON SHEET E4.0.
2. APPROXIMATE LOCATION OF EXISTING 225A 277/480V, 3 PH, 4 WIRE PANELBOARD 'G2' TO BE REPLACED WITH NEW 225A, 120/208V, 3PH 4 WIRE PANELBOARD 'G2' SEE NEW PANEL SCHEDULE ON SHEET E4.0.
3. APPROXIMATE LOCATION OF SECURITY CABINET TO REMAIN.
4. APPROXIMATE LOCATION OF EXISTING FIRE ALARM CONTROL PANEL ON GYM ELECTRICAL ROOM
5. EXISTING ROOF GFI, WP ROOF TOP OUTLETS TO REMAIN.
6. EXISTING WATER HEATER AND ASSOCIATED EQUIPMENT TO BE REPLACED WITH NEW. CONTRACTOR TO RE-USE EXISTING CIRCUIT AS NOTED. MAKE CONNECTIONS AS NECESARY.
7. ALL EXISTING FIXTURES TO BE REMOVED. CONTRACTOR TO MAINTAIN EXISTING LIGHT CIRCUIT FOR NEW FIXTURES.

ELECTRICAL DEMOLITION SYMBOL LEGEND

SYMBOL	DESCRIPTION
X	EXISTING FLUORESCENT FIXTURE TO BE REMOVED.
X	EXISTING EXIT LIGHT FIXTURE TO BE REMOVED.
X	EXISTING EMERGENCY LIGHT FIXTURE TO BE REMOVED.
$X	EXISTING SINGLE POLE WALL SWITCH TO BE REMOVED.
$3X	EXISTING THREE-WAY WALL SWITCH TO BE REMOVED.
JX	EXISTING JUNCTION BOX TO BE REMOVED.
E	EXISTING DUPLEX OUTLET. NO WORK REQUIRED.
X	EXISTING DUPLEX OUTLET TO BE REMOVED.
X	EXISTING QUADRUPLEX RECEPTACLE TO BE REMOVED.
E	EXISTING DATA/TEL. SYSTEM OUTLET. NO WORK REQUIRED.
X	EXISTING DATA/TEL. SYSTEM OUTLET TO BE REMOVED.
R	RELOCATED QUADRUPLEX RECEPTACLE, CONNECT TO EXISTING CIRCUIT
SE	EXISTING SPEAKER TO REMAIN, EXTEND EXISTING P.A. ZONE AS REQUIRED
SX	EXISTING SPEAKER TO BE REMOVED.
X S	EXISTING F.A. SMOKE DETECTOR TO BE REMOVED EXTEND EXISTING ZONE AS REQUIRED.
R	EXISTING F.A. HORN/STROBE TO BE RELOCATED, EXTEND EXISTING F.A. ZONE AS REQUIRED.
X	EXISTING F.A. HORN/STROBE TO BE REMOVED.
R	EXISTING F.A. PULLSTATION TO BE RELOCATED, EXTEND EXISTING F.A. ZONE AS REQUIRED
X	EXISTING F.A. PULLSTATION TO BE REMOVED.
FACP	EXISTING FIRE ALARM CONTROL PANEL
	DISCONNECT, TO BE NEMA 3R IF INSTALLED OUTDOORS.
	EXISTING PANELBOARD TO REMAIN. NO WORK REQUIRED UNLESS NOTED.

DEMOLITION GENERAL NOTES:

A. CONTRACTOR MUST VISIT SITE BEFORE BIDDING ON THIS PROJECT. VERIFY ALL DEVICES BEING REMOVED ONLY IN THE AREAS THAT ARE TO BE RENOVATED. CONTRACTOR MUST COORDINATE WITH ARCHITECTURAL PLANS AND OWNER FOR EXTEND OF DEMOLITION.

B. CONTRACTOR TO REMOVE ALL ELECTRICAL DEVICES ASSOCIATED WITH MECHANICAL EQUIPMENT BEING REMOVED. COORDINATE WITH MECHANICAL PLANS FOR EXTENT OF HVAC DEMOLITION. REMOVE CONDUIT AND CONDUCTORS BACK TO SOURCE AND UPDATE PANEL DIRECTORY AS REQUIRED.

C. CONTRACTOR TO MAINTAIN CIRCUIT CONTINUITY FOR ALL DEVICES OUT OF DEMOLITION WORK. CONTRACTOR TO PROVIDE AND INSTALL ALL NECESSARY MATERIALS TO MAINTAIN CIRCUIT CONTINUITY FOR REMAINING DEVICES. PROVIDE TYPED CIRCUIT DIRECTORY WITH ALL UPDATED CIRCUITING.

D. CONTRACTOR IS TO DISPOSE ALL MATERIALS ACCORDING TO LOCAL, STATE, AND FEDERAL REGULATIONS.

E. EXISTING LIGHTING CIRCUITS TO REMAIN FOR REUSE. CONTRACTOR TO EXTEND EXISTING CONDUIT AND CIRCUITS AS NECESSARY TO RECONNECT RELOCATED LIGHT FIXTURES, OR NEW LIGHT FIXTURES.

F. CONTRACTOR MUST COORDINATE WITH ARCHITECTURAL PLANS FOR EXTENT OF DEMOLITION TO AVOID CONFLICTS WITH THE NEW WORK.

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Architecture
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TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: A.P/A.E/E.E
PROJECT NO: 2022-16
ISSUED: SEPTEMBER 30, 2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

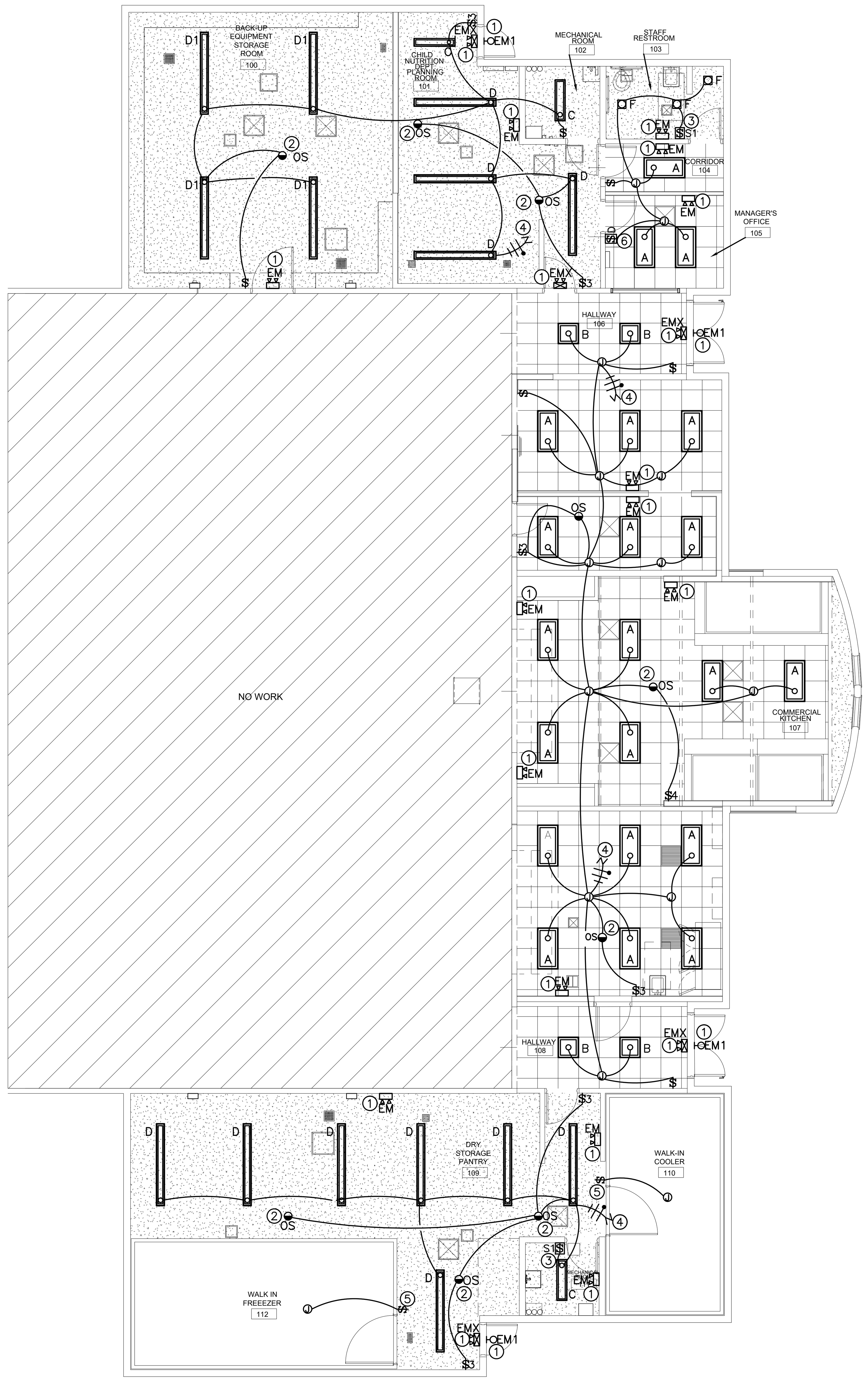
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

ELECTRICAL DEMOLITION PLAN

SCHEMATIC DESIGN

ED1.0



01 POWER PLAN
1/8" = 1'-0"

KEYED NOTES:

1. ALL EXIT SIGNS, EMERGENCY LIGHTS, OR BATTERY BACKUPS MUST BE CONNECTED TO THE UN-SWITCHED HOT CONDUCTOR SERVING THIS AREA.
2. PROVIDE AND INSTALL CEILING MOUNTED, DUAL TECHNOLOGY, LINE VOLTAGE, OCCUPANCY SENSOR WATTSTOPER MODEL DT-355 OR EQUAL APPROVED BY ENGINEER. PROGRAM SENSOR FOR AUTO-OFF FUNCTION ONLY. AUTO-OFF FUNCTION TO BE SET TO TURN OFF ALL LIGHTS IN THIS ROOM AFTER 15 MIN OF NO MOTION SENSING. SEE DETAIL 1/E2.0.
3. PROVIDE AND INSTALL WALL MOUNTED, DUAL TECHNOLOGY, LINE VOLTAGE, OCCUPANCY SENSOR WATTSTOPPER MODEL DSW-301 OR EQUAL APPROVED BY ENGINEER, PROGRAM SENSOR FOR AUTO-ON/AUTO-OFF FUNCTION. AUTO-OFF FUNCTION TO BE SET TO TURN OFF ALL LIGHT SIN THIS ROOM AFTER 15 MIN. OF NO MOTION SENSING. SEE DETAIL 2/E2.0.
4. CONTRACTOR TO CONNECT NEW LIGHT FIXTURE TO EXISTING CIRCUIT MAINTAINED DURING DEMOLITION. EXTEND EXISTING CIRCUIT AND CONDUIT AS NECESSARY TO MAKE RECONNECTIONS.
5. PROVIDE AND INSTALL SWITCH FOR WALK-IN COOLER/FREEZER LIGHT. CONTRACTOR TO MAKE CONNECTIONS TO EXISTING LIGHTING CIRCUIT SERVING THIS AREA.
6. PROVIDE AND INSTALL WALL MOUNTED OCCUPANCY DIMMING SENSOR DUAL TECHNOLOGY WATTSTOPPER DW-311 OR EQUAL. SENSOR TO BE SET FOR AUTO-ON/AUTO-OFF FUNCTION. AUTO-ON FUNCTION TO BE SET TO TURN ON ONLY 50% OF EACH LIGHT FIXTURE. AUTO-OFF FUNCTION TO BE SET TO TURN OFF LIGHTS AFTER 15 MIN. OF NO MOTION SENSING. REFER TO DETAIL 3/E2.0.

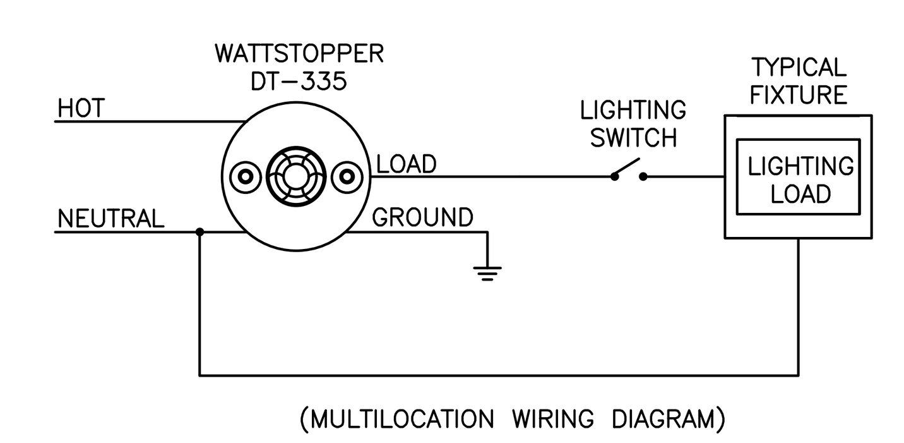
FIXTURE SCHEDULE

TYPE	DESCRIPTION & MFR. CAT. No.	LAMPS & WATTS	MOUNTING	NOTES
A	METALUMEN TC5-2L35K-24-PCB24-W-L2	30W LED	RECESSED GRID CEILING	
B	METALUMEN TC5-2L35K-22-PCB24-W-L2	25W LED	RECESSED GRID CEILING	
C	WILLIAMS LIGHTING 75S-4-L50-840-DIM-UNV	34W LED	SURFACE	
D	WILLIAMS LIGHTING 75S-8-L60-840-DIM-UNV	35W LED	SURFACE	
D1	WILLIAMS LIGHTING 75S-8-L100-840-DIM-UNV	65W LED	SURFACE	
F	WILLIAMS LIGHTING 6DS-L20-835-DIM-UNV-L-W-OF-WH	22W LED	SURFACE	
EM1	CHLORIDE PLACEMBZ	LED INCLUDED	WALL	
EMX	CHLORIDE VERWEM	LED INCLUDED	WALL/CEILING	
X1	CHLORIDE VERW	LED INCLUDED	WALL/CEILING	

LIGHTING CONTROLS LEGEND

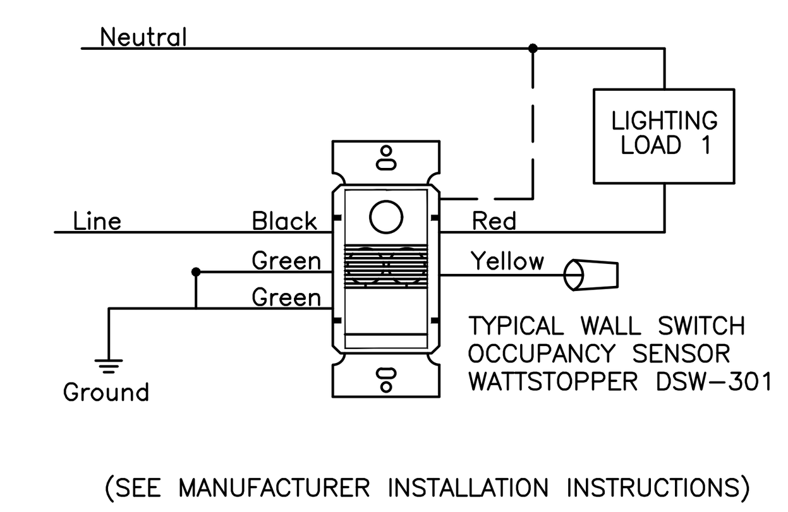
DEVICE	MODEL	DESCRIPTION
S1	DSW-301 OR EQUAL	WATTSTOPPER SENSOR WALL SWITCH DUAL TECHNOLOGY, SELF POWERED, ONE SWITCH, 48" TO TOP OF BOX
OS	DT-355 OR EQUAL	WATTSTOPPER CEILING MOUNTED DUAL-TECHNOLOGY, 1000 SQ FT, LINE VOLTAGE
D	DIMMER SWITCH LUTRON DIVA DVSTV-I, 48" TO TOP OF BOX	

NOTES:
1. All sensor locations are approximate, refer to manufacturers installation instructions prior to installation.
2. Ultrasonic ceiling mount sensors should be located a minimum of six feet from HVAC supply/return vents.
3. Contractor is responsible for: proper sensitivity & time delay settings (for non-adaptive products), recommended placement, and field verification of circuits with in respect to power placement.
4. Sensors mounted over the door must be placed one foot inside the threshold.
5. Contractor is responsible for ensuring that the sensor bill of materials complies with the sensor design and layout specifications.
6. Contractor is responsible for installing equipment in compliance with local code.
7. All sensors to be set to turn off lighting after 15 minutes of no motion sensing.
8. Wall mounted occupancy sensors must not be installed behind doors.
9. Contractor may connect low voltage system in daisy chain to minimize LV cable runs.
10. Dimmer switches must be installed in individual boxes.
11. Dimmer switches must be light fixture compatible. Verify compatibility with light fixture manufacturers.



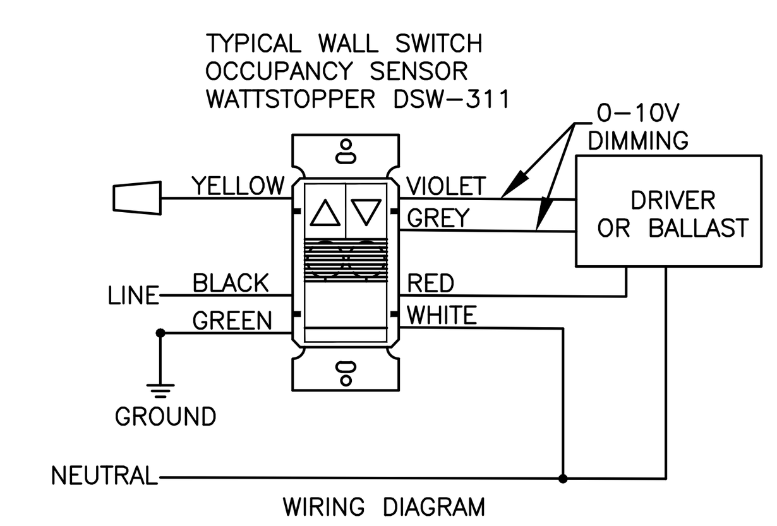
(MULTILOCATION WIRING DIAGRAM)

1 E2.0 CEILING MOUNTED SENSOR WIRING DIAGRAM — OC1 — NTS



(SEE MANUFACTURER INSTALLATION INSTRUCTIONS)

2 E2.0 WALL MOUNTED SENSOR WIRING DIAGRAM — S1 — NTS



3 E2.0 SENSOR DIMMER WIRING DIAGRAM — D — NTS

FELIX A. PADILLA 56294 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS 10/25/22

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TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: A.P/A.E/E.E
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NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

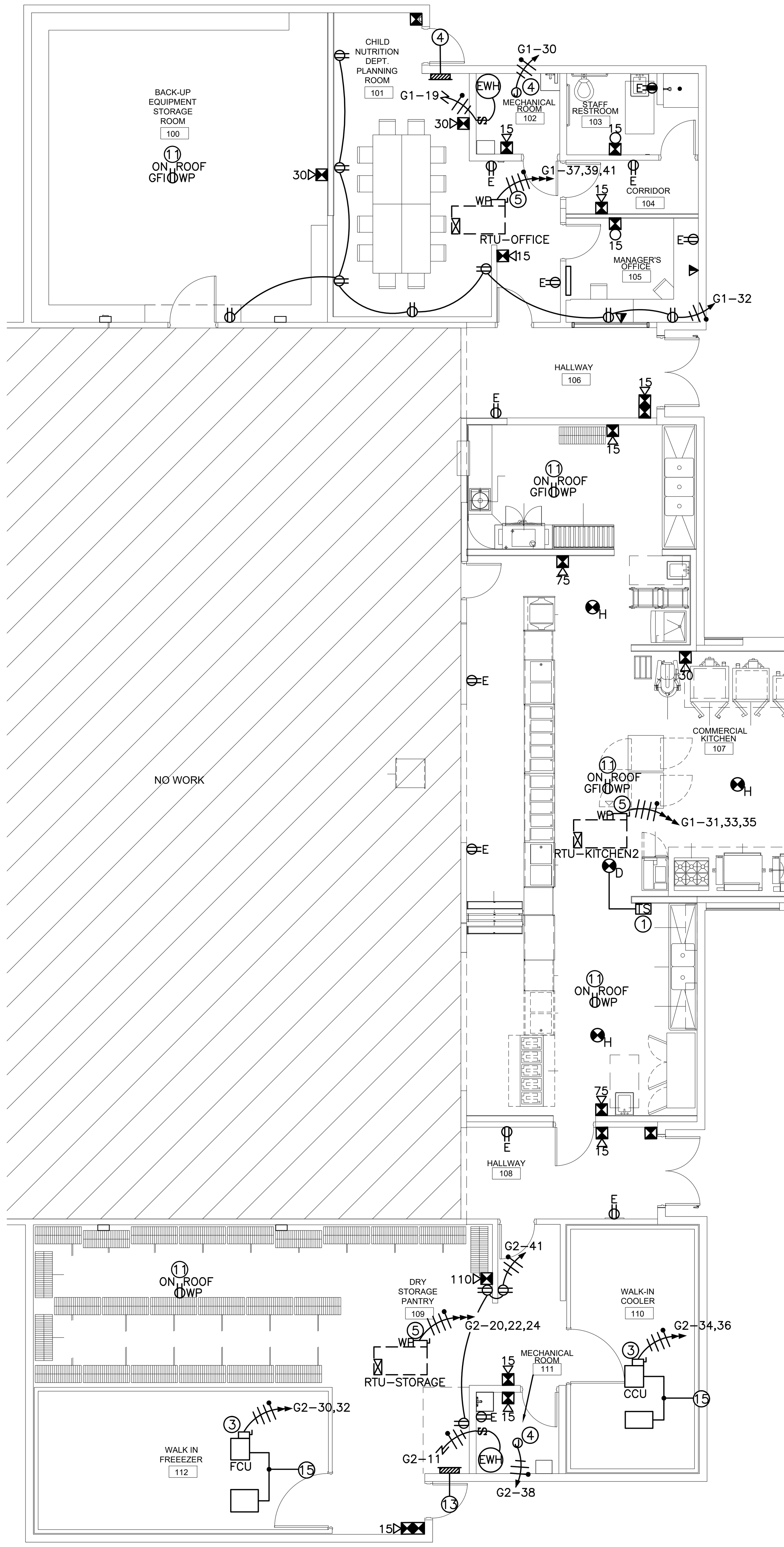
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

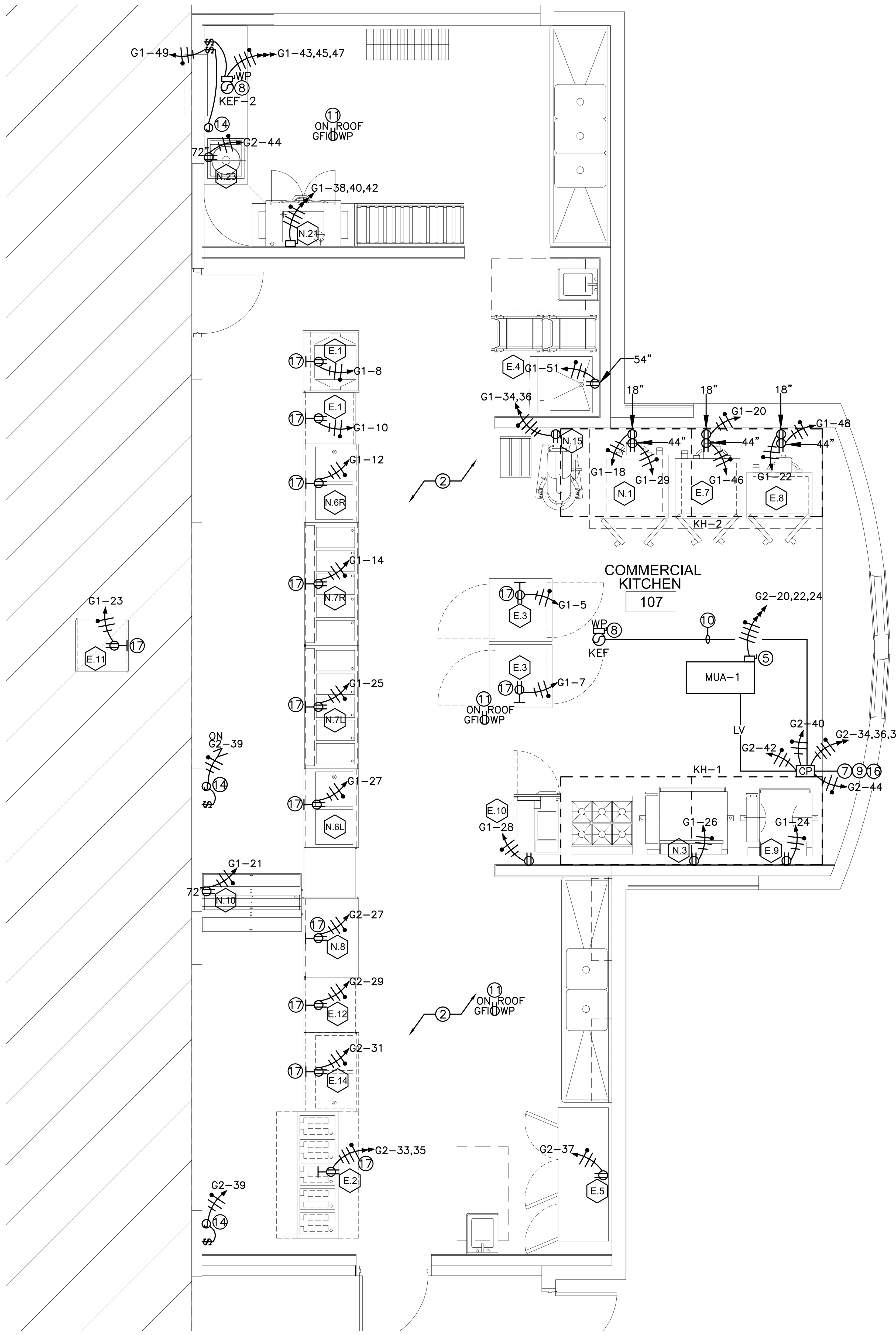
LIGHTING PLAN

SCHEMATIC DESIGN

E2.0



01 POWER PLAN
1/8" = 1'-0"



02 ENLARGED KITCHEN POWER PLAN
1/4" = 1'-0"

KEYED NOTES:

1. PROVIDE AND INSTALL J-BOX AT 44" A.F.F. FOR DUCT SMOKE DETECTOR TEST SWITCH. COORDINATE WITH MECHANICAL PLANS FOR EXACT LOCATION AND INTERCONNECTION REQUIREMENTS. MAKE CONNECTIONS TO EXISTING FIRE ALARM CONTROL PANEL.
2. ALL 120V, RECEPTACLES IN KITCHEN TO BE MOUNTED AT 24" A.F.F. AND BE GFI RATED.
3. MAKE CONNECTIONS TO SELF CONTAINED WALK-IN COOLER OF FREEZER CONDENSERS. COORDINATE WITH WALK-IN INSTALLER AND OWNER FOR EXACT LOCATION AND REQUIREMENTS BEFORE DOING ANY WORK.
4. PROVIDE AND INSTALL J-BOX ABOVE ACCESSIBLE CEILING FOR POWER TO RE-CIRCULATING PUMP. PROVIDE SWITCH FOR DISCONNECTING MEANS. CONTRACTOR TO VERIFY EXACT LOCATION AND INTERCONNECTION REQUIREMENTS BETWEEN NEW WATER HEATER AND RECIRCULATING PUMP WITH MECHANICAL BEFORE DOING ANY WORK.
5. PROVIDE AND INSTALL A 60A, 208V, 3PH, 4 WIRE, HD TYPE 3R DISCONNECT FOR CONNECTIONS TO MAKE UP AIR UNIT. CONTRACTOR TO USE A 1" WATER TIGHT FLEXIBLE CONDUIT WITH 3-#6 THWN. CU. CONDRS. AND 1-#10 CU. GND.
6. PROVIDE AND INSTALL A 30A, 208V, 3PH, 4 WIRE, HD TYPE 3R DISCONNECT FOR CONNECTIONS TO MAKE UP AIR UNIT. CONTRACTOR TO USE A 1/2" WATER TIGHT FLEXIBLE CONDUIT WITH 3-#10 THWN. CU. CONDRS. AND 1-#10 CU. GND.
7. PROVIDE 120V, POWER TO KITCHEN HOOD CONTROL PANEL. COORDINATE EXACT LOCATION AND INTERCONNECTION REQUIREMENTS WITH MECHANICAL PLANS AND HOOD MANUFACTURER BEFORE DOING ANY WORK. HOOD EXHAUST FAN AND MAKE UP AIR UNIT TO BE WIRED THRU HOOD CONTROL PANEL. MAKE CONNECTIONS TO ALL NECESSARY ACCESSORY ITEMS AS REQUIRED. CONTROL PANEL COMES WITH ANSUL EMERGENCY SHUT-OFF. CONNECT HOOD CONTROL PANEL TO FIRE ALARM SYSTEM. SEE DETAIL 1/E5.0 AND 2/E5.0. ON SHEET E5.0.
8. PROVIDE AND INSTALL A 30A, 240V, 3 POLE, TYPE 3R, HD, NON-FUSED DISCONNECT ON EXHAUST FAN. EXHAUST FAN HOME RUN CIRCUIT TO BE RUN THROUGH HOOD CONTROL PANEL. VERIFY EXACT LOCATION AND INTERCONNECTION REQUIREMENTS WITH MECHANICAL PLANS BEFORE DOING ANY WORK.
9. MAKE CONNECTIONS TO GAS SOLENOID VALVE FROM HOOD CONTROL AS NECESSARY. COORDINATE WITH MECHANICAL PLANS AND KITCHEN HOOD INSTALLER FOR EXACT LOCATION AND WIRING REQUIREMENTS.
10. MAKE CONNECTIONS TO KEF USING A 1/2" CONDUIT WITH 3-#12 THWN CU. CONDRS. AND 1-#12 CU. GND. FROM HOOD CONTROL PANEL TO EXHAUST FAN.
11. APPROXIMATE LOCATION OF EXISTING ROOF OUTLET ENSURE THAT A ROOF MOUNTED RECEPTACLE IS WITHIN 25' OF ANY ELECTRICAL EQUIPMENT ON ROOF. (ON EXISTING CIRCUIT G1-16).
12. APPROXIMATE LOCATION OF EXISTING 225A 120/208V, 3 PH, 4 WIRE PANELBOARD 'G1' TO BE REPLACED WITH NEW 225A, 120/208V, 3PH 4 WIRE PANELBOARD 'G1' SEE NEW PANEL SCHEDULE ON SHEET E4.0.
13. APPROXIMATE LOCATION OF EXISTING 225A 277/480V, 3 PH, 4 WIRE PANELBOARD 'G2' TO BE REPLACED WITH NEW 225A, 120/208V, 3PH 4 WIRE PANELBOARD 'G2' SEE NEW PANEL SCHEDULE ON SHEET E4.0.
14. APPROXIMATE LOCATION OF J-BOX MOUNTED WITH MOTOR ENCLOSURE WITH POWER AS SHOWN. CONTRACTOR TO MAKE CONNECTIONS TO ROLLING DOOR AND ACCOMPANYING SWITCH FOR CONTROL.
15. MAKE CONNECTIONS TO WALK IN FREEZER/COOLER AS NECESSARY. EVAPORATOR TO BE FED FROM CONDENSOR. PROVIDE A 1/2" CONDUIT WITH 5-#12 CU. CONDRS. AND 1-#12 CU. GND. FOR POWER AND CONTROL WIRING BETWEEN CONDENSOR AND EVAPORATOR. VERIFY EXACT LOCATION AND INTERCONNECTIONS REQUIREMENTS WITH MANUFACTURER BEFORE DOING ANY WORK.
16. PROVIDE AND INSTALL A 1/2" CONDUIT FROM HOOD CONTROL PANEL TO ANSUL SYSTEM FOR FUTURE CONTROL WIRING PROVIDED AND INSTALLED BY ANSUL SYSTEM INSTALLER. WIRE CONTROL PANEL SO EXHAUST FANS TURN 'ON' AND MUA TURNS 'OFF' WHEN ANSUL SYSTEM IS ACTIVATED.
17. CONTRACTOR TO STUBB-UP GFI RECEPTACLE ON WA WATERPROOF PEDESTAL BOX. SEE DETAIL 1/E4.0 ON SHEET E4.0.

KITCHEN EQUIPMENT SCHEDULE (00)

ITEM #	ITEM	VOLT.	PHASE	AMPS WATTS HP	ELECTRICAL A.F.F. (IN)
N.1	CONVECTION OVEN GAS	120V	1	7.7A	18"
N.3	TILTING SKILLET BRAISING PAN	115V	1	5A	18"
N.6L	SERVING COUNTER, COLD FOOD	120V	1	5.5A	18"
N.7L	HOT FOOD SERVING COUNTER	120V	1	1A	18"
N.8	SERVING COUNTER, UTILITY	120V	1	3.8A	18"
N.6R	SERVING COUNTER, COLD FOOD	120V	1	5.5A	18"
N.7R	HOT FOOD SERVING COUNTER	120V	1	3A	18"
N.10	MILK COOLER	120V	1	3.3A	44"
N.11	WALK IN COOLER	120V	1	3.3A	--
N.12	WALK IN FREEZER	208V	1	2 HP	--
N.15	FLOOR MIXER	208V	1	16A	44"
N.21	DISHWASHING MACHINE	208V	3	3.3A	44"
N.23	SCRAP COLLECTOR	120V	1	11A	18"
E.1	REFRIGERATOR SELF SERVICE CASE	120V	1	5A	18"
E.2	5 BIN WARMER	208V	1	22A	18"
E.3	SOLID DOOR HEATED CABINET	120V	1	8A	72"
E.4	ICE MAKER	120V	1	15A	54"
E.5	3 SOLID DOOR REFRIGERATOR	120V	1	9.6A	72"
E.7	GAS CONVECTION OVEN	120V	1	6A	18"
E.8	GAS CONVECTION OVEN DOUBLE	120V	1	9A	18"
E.9	ECLIPSE BRAISING PAN	120V	1	5A	18"
E.10	HEATED HOLDING CABINET	120V	1	6A	18"
E.11	SERVING COUNTER, COLD FOOD	120V	1	3A	18"

* NOTE: THE EQUIPMENT INFORMATION ILLUSTRATED IN EQUIPMENT SCHEDULE WAS PROVIDED FOR DESIGN PURPOSES CONTRACTOR MUST COORDINATE WITH EQUIPMENT INSTALLER FOR EXACT LOCATION AND REQUIREMENTS OF ALL EQUIPMENT BEFORE DOING ANY WORK. VERIFY ALL EQUIPMENT ELECTRICAL REQUIREMENTS BEFORE DOING ANY WORK.

GENERAL NOTES:

A. CONTRACTOR MUST COORDINATE WITH KITCHEN EQUIPMENT INSTALLER FOR EXACT LOCATION AND HEIGHT OF EQUIPMENT RECEPTACLES BEFORE DOING ANY WORK.

B. CONTRACTOR SHALL ADJUST RECEPTACLES LOCATION AND HEIGHT AS NECESSARY TO AVOID CONFLICTS WITH EQUIPMENT. ALL RECEPTACLES MUST BE ACCESSIBLE.

C. ALL 120V, 20A RECEPTACLES INSTALLED IN KITCHEN AND MUST BE PROTECTED WITH A GFCI CIRCUIT BREAKER.

STATE OF TEXAS
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TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: A.P/A.E/E.E
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NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

POWER PLAN

SCHEMATIC DESIGN

E3.0

NEW PANELBOARD SCHEDULE

PANELBOARD "G1": 120/208V, 3 PHASE, 4 WIRE, 225 AMP. PANEL
RECESSED MOUNTED, CU BUS, CU NEUTRAL BAR, DOOR-IN-DOOR 200A MAIN C.B.

KEY	LOAD SERVED	CKT. NO.	BREAKER AMPS, POLE	PHASE A B C	BREAKER AMPS, POLE	CKT. NO.	LOAD SERVED	KEY
	EXISTING GIRLS LOCKER LIGHTS	1	20/1	A	100/3	2	EC-5 208V, 3PH 20HP, 60 FLA	
	EXISTING STORAGE LIGHTS	3	20/1	B		4		
	SOLID DOOR	5	20/1	C		6		
	HEATED CABINET	7	20/1	A	20/1	8	REFRIGERATOR SELF SERVICE CASE (1)	E.1
N.1	GAS CONVECTION OVEN	9	20/1	B	20/1	10	REFRIGERATOR SELF SERVICE CASE (1)	E.1
	EXISTING EWH MOTOR	11	20/1	C	20/1	12	SERVING COUNTER, COLD FOOD (1)	N.6R
	EXISTING COACH OUTLETS	13	20/1	A	20/1	14	HOT FOOD SERVING COUNTER (1)	N.7R
	EXISTING EWC	15	20/1	B	20/1	16	EXISTING ROOF OUTLETS	
	EXISTING GYM OUTLETS	17	20/1	C	20/1	18	CONVECTION OVEN GAS (1)	N.1
	EXISTING STORAGE OUTLETS	19	20/1	A	20/1	20	GAS CONVECTION OVEN (1)	E.7
N.10	MILK COOLER (1)	21	20/1	B	20/1	22	GAS CONVECTION OVEN DOUBLE (1)	E.8
N.1	GAS CONVECTION OVEN (1)	23	20/1	C	20/1	24	ECLIPSE BRAISING PAN (1)	E.9
N.7L	HOT FOOD SERVING COUNTER (1)	25	20/1	A	20/1	26	TILTING SKILLET BRAISING PAN (1)	N.3
N.6L	SERVING COUNTER, COLD FOOD (1)	27	20/1	B	20/1	28	HEATED HOLDING CABINET (1)	E.10
N.1	CONVECTION OVEN GAS (1)	29	20/1	C	20/1	30	RECIRCULATION PUMP	
	RTU-KITCHEN 208V, 3PH 4 WIRE.	31	50/3	A	20/1	32	PLANNING RM 101 OUTLETS	
		33		B	30/2	34	FLOOR MIXER	N.15
		35		C		36		
	RTU-OFFICE 208V, 3PH	37	30/3	A	30/3	38	DISHWASHING MACHINE	E.21
		39		B		40		
		41		C		42		
	DISHWASHER HOOD EXHAUST 208V, 3PH	43	25/3	A	20/1	44	SCRAP COLLECTOR (1)	N.23
		45		B	20/1	46	GAS CONVECTION OVEN (1)	E.7
		47		C	20/1	48	GAS CONVECTION DOUBLE (1)	E.8
	ROLL UP DOOR	49	20/1	A	--	50	SPACE	
E.4	ICE MAKER (1)	51	20/1	B	--	52	SPACE	
	SPACE	53	--	C	--	54	SPACE	

(1) PROVIDE AND INSTALL A NEW 20A, 1 POLE, GROUND FAULT INTERCEPT CIRCUIT BREAKER

PANELBOARD 'G1' LOAD CALCULATIONS

	LOAD (VA)
KITCHEN EQUIPMENT PER NEC 220.36 @ 65%	11,500
EXISTING LOAD ESTIMATED	16,400
RTU	12,600
AC1	5,037
OUTLETS	4,900
TOTAL	50,450

I = 50,450 VA/ (208V)(1.73) = 140A AMPS
225 AMP, 120/208V, 3 PH., 4W, PANEL 'G1' FED FROM A 200A 3PH, 4W, DISC. 'G1' FUSED AT 200A EXISTING 2" CONDUIT WITH 4-3/0 THWN CU. CONDRS. 1-#6 CU. CONDR. FOR EQUIPMENT GND. TO REMAIN.

NEW PANELBOARD SCHEDULE

PANELBOARD "G2": 120/208V, 3 PHASE, 4 WIRE, 225 AMP. PANEL
RECESSED MOUNTED, CU BUS, CU NEUTRAL BAR, DOOR-IN-DOOR, 200A MAIN C.B.

KEY	LOAD SERVED	CKT. NO.	BREAKER AMPS, POLE	PHASE A B C	BREAKER AMPS, POLE	CKT. NO.	LOAD SERVED
	EXISTING BOYS LOCKER LIGHTS	1	20/1	A	100/3	2	EXISTING EC-5 208V, 3PH 20HP, 60 FLA
	EXISTING TRAINER'S LIGHTS	3	20/1	B		4	
	EXISTING WEIGHT ROOM LIGHTS	5	20/1	C		6	
	EXISTING WEIGHT ROOM LIGHTS	7	20/1	A	40/3	8	EXISTING MUA-1 208V, 3PH 10HP, 31 FLA
	SPACE	9	--	B		10	
	SPACE	11	--	C		12	
	EXISTING TRAINERS'S OUTLETS	13	20/1	A	30/3	14	RTU STORAGE 208V, 3PH
	EXISTING COACH 119 OUTLETS	15	20/1	B		16	
	EXISTING LOCKERS 125 OUTLETS	17	20/1	C		18	
	EXISTING EWH MOTOR	19	20/1	A	30/3	20	MUA-1 14 FLA 208V, 3PH
	EXISTING WEIGHT RM. OUTLETS	21	20/1	B		22	
	EXISTING WEIGHT RM. OUTLETS	23	20/1	C		24	
	EXISTING EWC	25	20/1	A	--	26	SPACE
N.8	SERVING COUNTER, UTILITY OUTLET (1)	27	20/1	B	--	28	SPACE
	KITCHEN OUTLET (1)	29	20/1	C	30/2	30	FREEZER CONDENSOR 208V, 1PH
E.6	SERVING COUNTER, COLD FOOD (1)	31	20/1	A		32	
E.2	5 BIN WARMER	33	25/2	B	30/3	34	KEF HOOD EXHAUST 208V, 3PH
		35		C		36	
E.5	3 SOLID DOOR REFRIGERATOR	37	20/1	A		38	
	ROLL UP DOOR	39	20/1	B	20/1	40	KITCHEN CONTROL PANEL
	STORAGE OUTLETS	41	20/1	C	20/1	42	HOOD LIGHTS
	SPACE	43	--	A	20/1	44	ELECTRIC GAS VALVE
	SPACE	45	--	B	--	46	SPACE
	SPACE	47	--	C	--	48	SPACE
	SPACE	49	--	A	--	50	SPACE
	SPACE	51	--	B	--	52	SPACE
	SPACE	53	--	C	--	54	SPACE

(1) PROVIDE AND INSTALL A NEW 20A, 1 POLE, GROUND FAULT INTERCEPT CIRCUIT BREAKER

PANELBOARD 'G2' LOAD CALCULATIONS

	LOAD (VA)
KITCHEN EQUIPMENT PER NEC 220.36 @ 65%	5,400
EXISTING LOAD ESTIMATED	21,800
MUA-1	7,900
EXHAUST	4,000
(2) CONDENSORS	7,670
TOTAL	46,770

I = 46,770VA/ (208V)(1.73) = 130 AMPS
225 AMP, 120/208V, 3 PH., 4W, PANEL 'G2' FED FROM A 200A 3PH, 4W, DISC. 'G2' FUSED AT 200A EXISTING 2" CONDUIT WITH 4-3/0 THWN CU. CONDRS. 1-#6 CU. CONDR. FOR GND. TO REMAIN.

GENERAL NOTES:

A. ELECTRICAL INSTALLATION MUST FOLLOW ALL NATIONAL AND LOCAL ELECTRICAL CODES. INSTALLATION MUST CONFORM TO THE LOCAL POWER COMPANY'S SPECIFICATIONS.

B. ELECTRICAL CONTRACTOR MUST COORDINATE AND VERIFY WITH MECHANICAL AND PLUMBING CONTRACTOR THE LOCATION AND ELECTRICAL REQUIREMENTS TO ALL A/C EQUIPMENT, MOTORS, PUMPS, T-STATS., INTERLOCKING WIRING, ETC.

C. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION AND SHALL BE LISTED BY THE U.L.

D. ELECTRICAL CONTRACTOR MUST COORDINATE ALL POWER SERVICE ON THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR ALL FEES FOR TEMPORARY SERVICE.

E. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL PERMIT AND INSPECTION FEES REQUIRED BY THE GOVERNING BODIES.

F. ELECTRICAL CONTRACTOR MUST COMPLY WITH THE LATEST A.D.A. REQUIREMENTS.

G. MINIMUM SIZE CONDUCTORS SHALL BE #12 THW CU. UNLESS NOTED OR SIZED BY CODE.

H. ALL WIRING MUST BE IN CONDUIT, INCLUDING ALL L.V. WIRING. THIN WALL CONDUIT (EMT) CAN BE INSTALLED CONCEALED ABOVE CEILING, IN FURRED WALLS, AND WALLS EXCEPT WHERE THOSE WALLS ARE GROUTED SOLID. USE FLEX CONDUIT FOR MOTORS AND LIGHTING FIXTURES. USE WATER TIGHT FLEX CONDUIT FOR WATER HEATERS, DISPOSALS, EXTERIOR CONNECTIONS, ETC. BOND ACCORDING TO CODE.

H. FIXTURES. USE WATER TIGHT FLEX CONDUIT FOR WATER HEATERS DISPOSALS, EXTERIOR CONNECTIONS, ETC. BOND ACCORDING TO CODE.

I. VERIFY LOCATIONS OF ALL ELECTRICAL EQUIPMENT WITH OTHER TRADES TO AVOID CONFLICTS AND INTERFERENCES.

J. ELECTRICAL CONTRACTOR MUST VISIT SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS BEFORE BIDDING ON THIS PROJECT.

K. ELECTRICAL DEVICE INSTALLATION SHALL COMPLY WITH ACCESSIBILITY CODES ADOPTED IN CITY OF EL PASO.

L. FEEDER, BRANCH CIRCUIT DESIGN, AND INSTALLATION SHALL COMPLY WITH THE LATEST ADOPTED CITY OF EL PASO ELECTRICAL CODE 18.16 AND NFPA 70 (NEC).

M. ALL ELECTRICAL EQUIPMENT IN FIRE RATED ASSEMBLIES MUST BE INSTALLED SO THAT FIRE RATING IS NOT COMPROMISED. ELECTRICAL CONTRACTOR MUST INSTALL FIRE-STOPPING SEALS AND MATERIALS AS NECESSARY ON ALL PENETRATIONS MADE ON ALL FIRE RATED ASSEMBLIES TO MATCH FIRE RATING.

N. BRANCH CIRCUIT NUMBERS ARE TO BE WRITTEN WITH BLACK INK MARKERS ON ALL COVERS OF ALL JUNCTION BOXES LOCATED ABOVE CEILING. MARKINGS MUST INDICATE THE PANEL AND CIRCUIT NUMBER OF CIRCUITS IN THAT BOX.

O. MC CABLE IS NOT ALLOWED FOR ELECTRICAL INSTALLATIONS EXCEPT FOR LIGHT FIXTURE WHIPS.

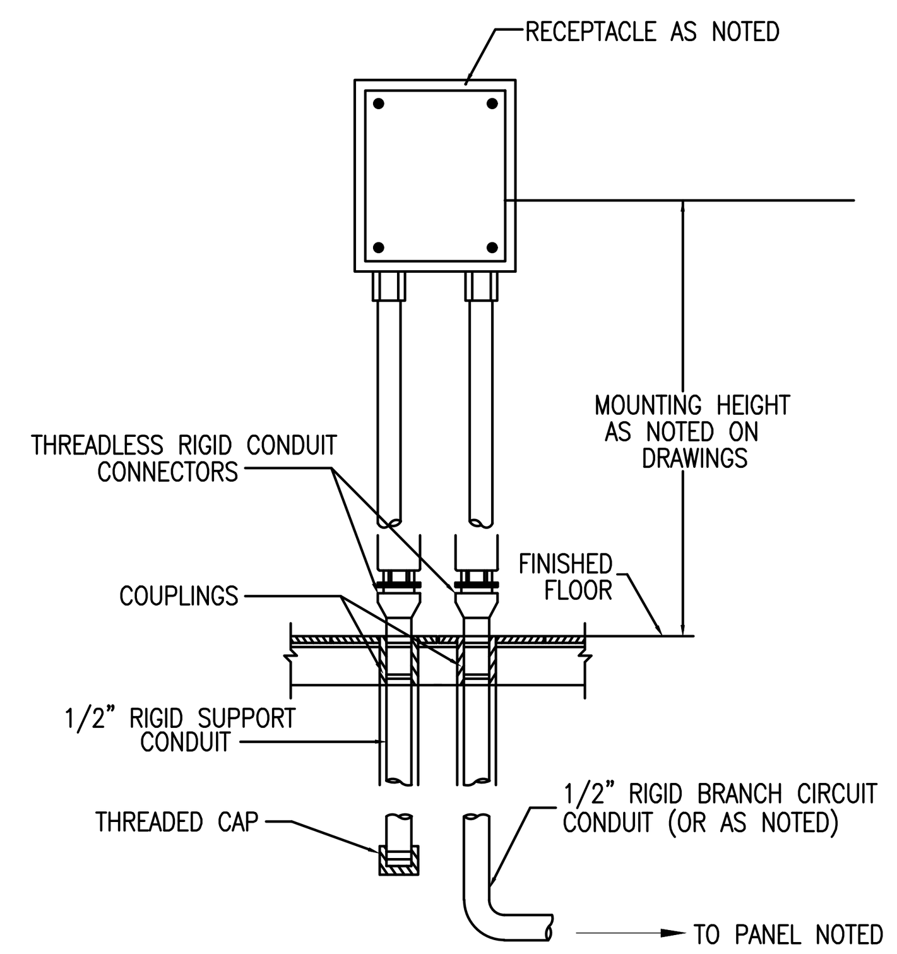
N. ALL ELECTRICAL DEVICE COVER PLATES SHALL BE PROVIDED WITH A ADHESIVE PERMANENT VINYL PRINTED LABEL INDICATING PANEL NAME AND CIRCUIT NUMBER. I.E. 'X'-'XX' WHERE "X" IS THE PANEL NAME AND 'XX' IS THE CIRCUIT NUMBER.

O. ALL 15A & 20A, 125 AND 250-VOLT NON-LOCKING TYPE RECEPTACLES MUST BE LISTED TAMPER-RESISTANT RECEPTACLES TO COMPLY WITH NEC ART 406.12.

P. ALL GFIC RECEPTACLES MUST BE INSTALLED IN A READILY ACCESSIBLE LOCATION TO COMPLY WITH NEC ART 210.8.

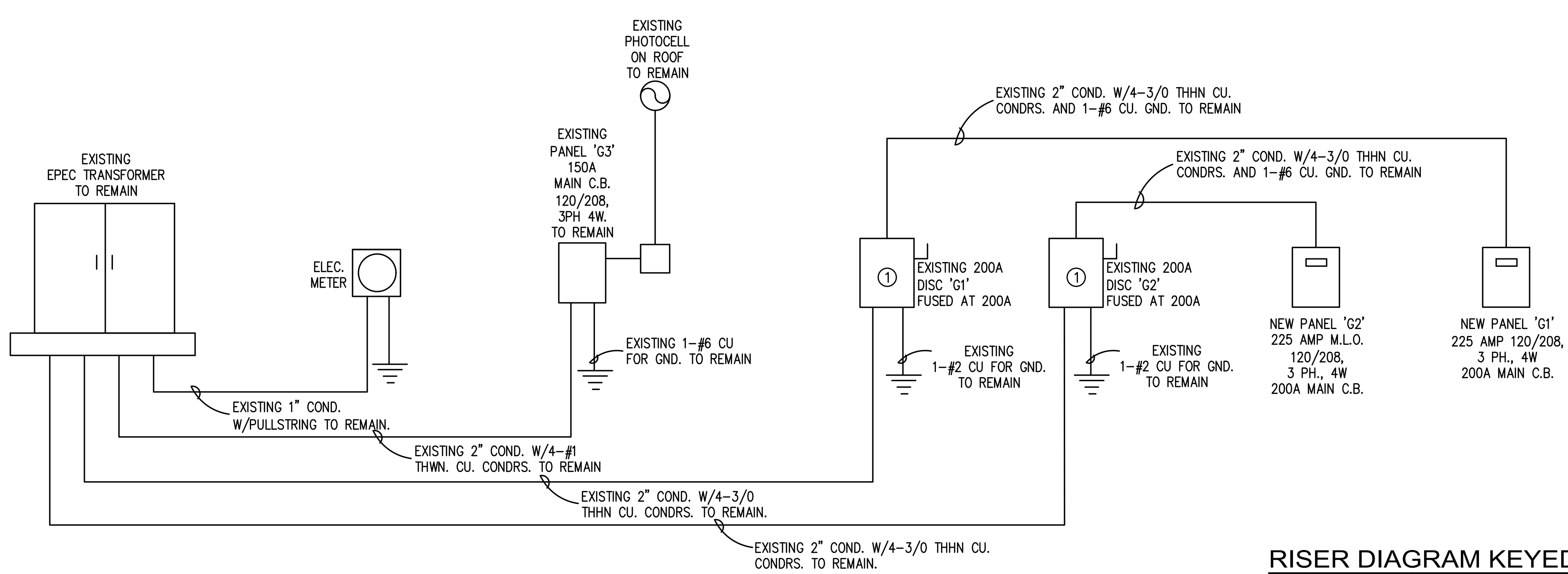
ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
"A"	LED FIXTURE, LETTER DENOTES TYPE
"A" a	LED FIXTURE, UPPERCASE LETTER DENOTES FIXTURE TYPE, LOWERCASE LETTER DENOTES WHICH SWITCH IS CONTROLLING FIXTURE.
B	2X2 LED FIXTURE, UPPERCASE LETTER DENOTES FIXTURE TYPE.
"G"	WALL MOUNTED FIXTURE, LETTER DENOTES TYPE
"G"	CEILING MOUNTED FIXTURE, LETTER DENOTES TYPE
"X1"	EXIT LIGHT FIXTURE, CONNECT TO UNSWITCHED HOT CONDUCTOR.
"G"	RECESSED FIXTURE, LETTER DENOTES TYPE
"EM"	EMERGENCY LIGHTS FIXTURE, CONNECT TO UNSWITCHED HOT CONDUCTOR.
"EMX"	COMBINATION EXIT/EMERGENCY LIGHT FIXTURE, CONNECT TO UNSWITCHED HOT CONDUCTOR.
EF	EXHAUST FAN, SEE MECHANICAL PLANS
2	KEYED NOTE SYMBOL-ELECTRICAL
—E UG—	ELECTRICAL UNDERGROUND CIRCUIT, 2'-0" MINIMUM BELOW GRADE.
—LV—	LOW VOLTAGE WIRING CIRCUIT
WP	WEATHERPROOF
AFF	ABOVE FINISHED FLOOR
———	BRANCH CIRCUIT IN WALLS OR CEILING.
------	BRANCH CIRCUIT UNDER FLOOR.
$	SINGLE POLE WALL SWITCH, 44" TO CENTER OF BOX. UNLESS OTHERWISE NOTED.
$3	THREE-WAY WALL SWITCH, 44" TO CENTER OF BOX UNLESS OTHERWISE NOTED.
$4	FOUR-WAY WALL SWITCH, 44" TO CENTER OF BOX. UNLESS OTHERWISE NOTED.
	4" SQ. DEEP BOX WITH SINGLE DEVICE PLASTER RING FOR DATA/TEL. SYSTEM OUTLET AT 18" AFF TO CENTER UNLESS OTHERWISE NOTED. INSTALL 1" COND. WITH BUSHING AND PULL-STRING. STUB-OUT CONDUIT ABOVE NEAREST ACCESSIBLE LAY-IN CEILING.
J	JUNCTION BOX
C	CONTROLS FOR EXHAUST FANS IN MECHANICAL
J	JUNCTION BOX INSTALLED ABOVE THE CEILING WITH FLEXIBLE CONDUIT CONNECTION TO LAY-IN FIXTURES. MAXIMUM 6'-0" LENGTH OF CONDUIT WITH REQUIRED CONDUCTORS ALONG WITH GREEN WIRE GROUND.
	DUPLEX OUTLET, 18" A.F.F. TO CENTER OF BOX, UNLESS OTHERWISE NOTED
GFI	GROUND FAULT CIRCUIT INTERRUPTING DUPLEX RECEPTACLE, 18" A.F.F., TO CENTER, UNLESS OTHERWISE NOTED
	RECEPTACLE, 125/250VAC - 30A. NEMA 6-30R, 18" A.F.F, TO CENTER UNLESS OTHERWISE NOTED
	QUADRUPLEX RECEPTACLE, 125VAC-20A, NEMA 5-20R, 18" A.F.F., TO CENTER UNLESS OTHERWISE NOTED
	STUBB-UP RECEPTACLE . SEE DETAIL 1/E4.0.
T	4" SQ. BOX WITH SINGLE DEVICE PLASTER RING AT 44" A.F.F TO CENTER OF BOX FOR THERMOSTAT. THERMOSTAT PROVIDED BY MECHANICAL CONTRACTOR
	NEW PANEL BOARD. SEE PANEL SCHEDULE FOR CHARACTERISTICS.
	EXISTING PANEL BOARD TO REMAIN. NO WORK REQUIRED UNLESS NOTED.
	DISCONNECT, TO BE NEMA 3R IF INSTALLED OUTDOORS.
	MOTOR CONTROLLER, SIZE AND POLES FOR MOTOR FURNISHED.
T	TRANSFORMER AS NOTED



1 E4.0 DETAIL-WATERPROOF PEDESTAL BOX ASSEMBLY

NTS



ELECTRICAL RISER DIAGRAM

NTS

RISER DIAGRAM KEYED NOTES:

1. EXISTING 150A FUSES TO BE REPLACED WITH NEW 200A FUSES.
2. CONTRACTOR TO REPLACE EXISTING 225A, 120/208V. 3PH, 4WIRE, PANEL WITH NEW 225A, 120/208V, 3PH, 4WIRE, PANELBOARD WITH A 200A MAIN C.B.

FELIX A. PADILLA 56294 REGISTERED PROFESSIONAL ENGINEER 10/25/22

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TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: A.P/A.E/E.E
PROJECT NO: 2022-16
ISSUED: SEPTEMBER 30, 2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

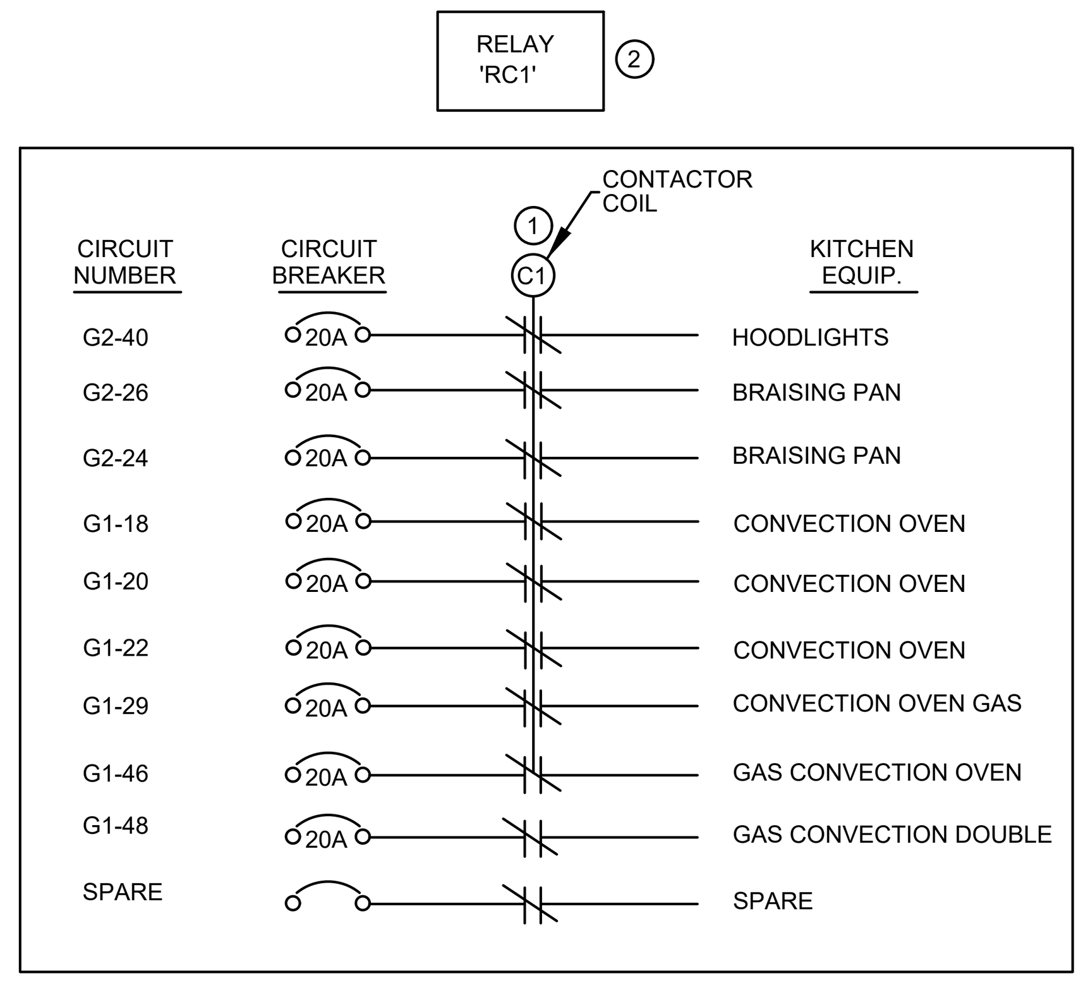
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

RISER DIAGRAM

SCHEMATIC DESIGN

E4.0

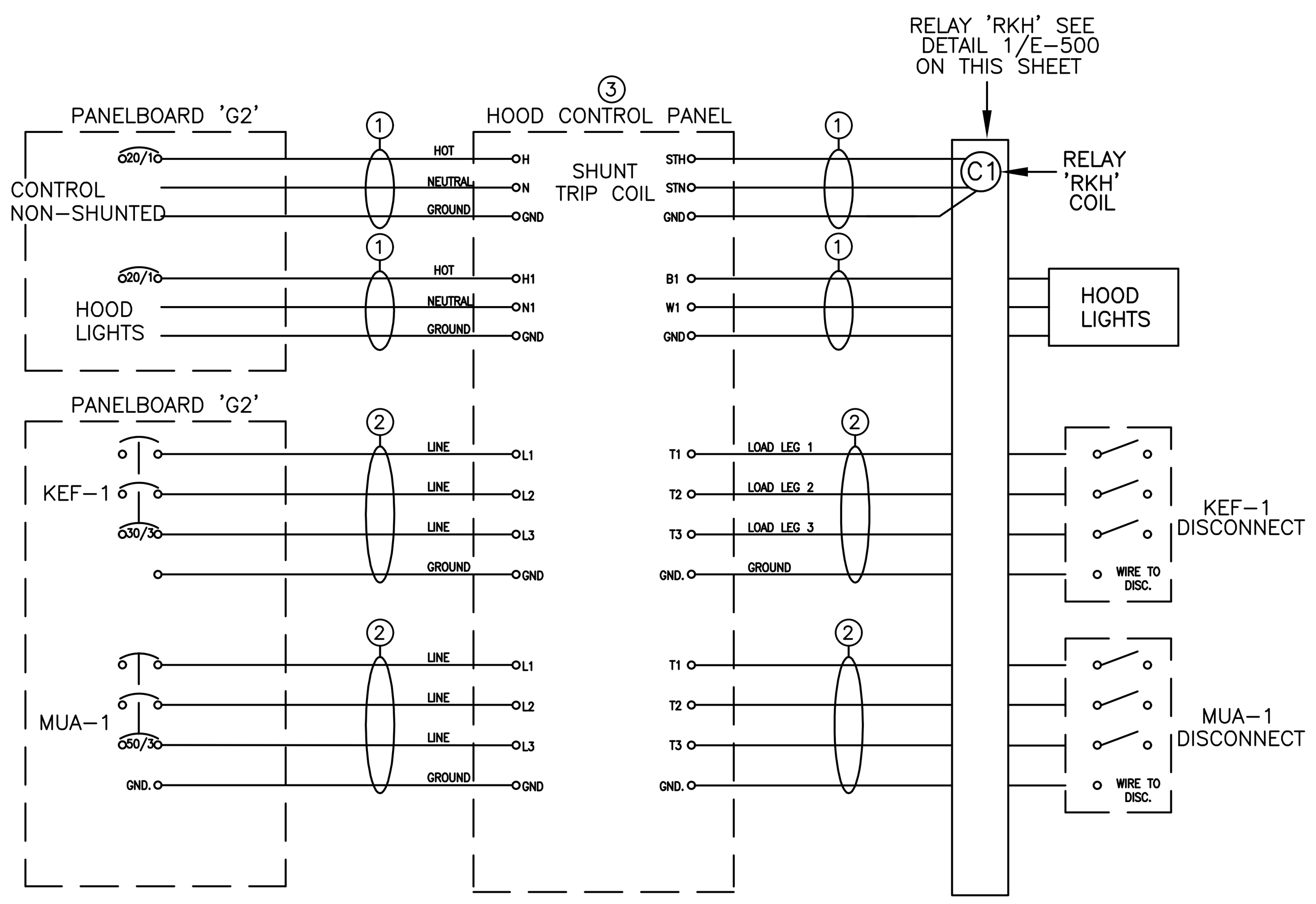


CONTRACTOR 'C1' WIRING DIAGRAM KEYED NOTES:

1. CONTACTOR 'C1', ELECTRICALLY HELD, 10 POLE, 50 AMPS, 24 VOLT RATING, NEMA 1 ENCLOSURE. LABEL 'RKH' WITH ENGRAVED NAMEPLATE ATTACHED WITH SCREWS, INTERCONNECT TO FIRE SUPPRESSION SYSETEM. INSTALL ABOVE PANEL 'K' AND ABOVE CEILING IN KITCHEN.
2. PROVIDE AND INSTALL A NEMA 1 RATED ENCLOSURE WITH ENGRAVED NAMEPLATE ATTACHED WITH SCREWS LABLED 'RKH'. PROVIDE A (TEN) 10 POLE, ELECTRICALLY HELD, 50 AMPS, 600 VOLT RATING CONTACTOR FOR EMERGENCY SHUT DOWN OF DEVICES. INTERCONNECT RELAY 'RKH' WITH THE FIRE SUPPRESSION SYSTEM, SO WHEN FIRE SUPPRESSION SYSTEM IS ACTIVATED RELAYS SHALL SHUT DOWN ALL CIRCUITS UNDER KITCHEN HOOD, MAKE ALL CONNECTIONS AS REQUIRED.

1 / E5.0 CONTACTOR 'C1' WIRING DIAGRAM

N.T.S.



KITCHEN HOOD CONTROL PANEL KEYED NOTES:

1. 1/2" CONDUIT WITH 2-#12 THHN. CU. CONDRS. AND 1-#12 CU. GND.
2. 3/4" CONDUIT WITH 3-#8 THWN. CU. CONDRS. AND 1-#10 CU. GND.
3. CONTRACTOR MUST COORDINATE WITH MECHANICAL PLANS, KITCHEN HOOD DRAWINGS, AND KITCHEN HOOD INSTALLER FOR EXACT WIRING REQUIREMENTS BEFORE DOING ANY WORK. CONTRACTOR MUST MAKE CONNECTIONS TO ALL HOOD ACCESSORY ITEMS FROM CONTROL PANEL.

2 / E5.0 KITCHEN HOOD CONTROL PANEL

NTS

NOTE: KITCHEN HOOD CONTROL WIRING CONNECTION IS FOR REFERENCE AND GENERAL REQUIREMENTS ONLY. CONTRACTOR MUST COORDINATE WITH KITCHEN HOOD INSTALLER/MANUFACTURER FOR EXACT INTERCONNECTION REQUIREMENTS BEFORE DOING ANY WORK. CONTRACTOR MUST ENSURE A FULLY FUNCTIONAL KITCHEN HOOD AND FIRE SUPPRESSION SYSTEM. CONNECT FIRE SUPPRESSION SYSTEM TO THE FIRE ALARM SYSTEM.

F.A. LEGEND

15	STROBE, NUMBER DENOTES 'cd' RATING
15	HORN/STROBE, NUMBER DENOTES 'cd' RATING
	PULL STATION WITH STOPPER
S	SMOKE DETECTOR
H	HEAT DETECTOR
D	DUCT/SMOKE DETECTOR WITH REMOTE INDICATOR
FARA	FIRE ALARM REMOTE ENUNCIATOR
FACP	FIRE ALARM CONTROL PANEL WITH DIGITAL NOTIFIER
TS	DUCT SMOKE DETECTOR TEST SWITCH

F.A. NOTES

A. FIRE ALARM INSTALLER TO INSTALL SYSTEM TO MEET ALL NATIONAL AND LOCAL FIRE CODES. INSTALLER TO SUBMIT TO ARCHITECT "AS BUILT"

B. FIRE ALARM INSTALLER TO COORDINATE AND CONNECT SMOKE DETECTION SYSTEM TO A/C DUCT SYSTEM.

C. FIRE ALARM INSTALLER CAN SUBSTITUTE FIRE ALARM FIXTURES FOR OTHERS OF EQUAL PERFORMANCE.

D. F.A. INSTALLER MUST BE CERTIFIED BY THE STATE AND SUBMIT ALL REQUIRED PLANS AND DRAWINGS, F.A. SYSTEM CALCULATIONS AND ALL APPLICABLE SUBMITTALS TO THE GOVERNING AUTHORITIES TO OBTAIN A PERMIT.

E. THE F.A. INSTALLER MUST BID ON A COMPLETE F.A. SYSTEM THAT COMFORMS TO ALL APPLICABLE CODES.

F. FIRE ALARM PANEL MUST HAVE PHONE DIALER AND BE CONNECTED TO PHONE SYSTEM.

G. F.A. INSTALLER MUST VISIT SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS BEFORE BIDDING ON THIS PROJECT.

H. CONTRACTOR MUST VISIT SITE BEFORE BIDDING ON THIS PROJECT AND ALLOWED FOR ANY MODIFICATIONS OR ADDITIONS NEEDED TO BE DONE ON THE EXISTING FIRE ALARM PANEL TO ACCOMMODATE ALL NEW DEVICES IN THE NEW ADDITION. CONTRACTOR TO DETERMINE IF NEW FIRE ALARM CONTROL PANEL IS NEEDED AND INSTALL A FIRE ALARM CONTROL PANEL IF NEEDED. CONTRACTOR MUST MAKE ALL FINAL CONNECTION AND TEST THE SYSTEM IN THE PRESENCE OF SCHOOL PERSONNEL OR ENGINEER.

GENERAL NOTES:

A. ELECTRICAL INSTALLATION MUST FOLLOW ALL NATIONAL AND LOCAL ELECTRICAL CODES. INSTALLATION MUST CONFORM TO THE LOCAL POWER COMPANY'S SPECIFICATIONS.

B. ELECTRICAL CONTRACTOR MUST COORDINATE AND VERIFY WITH MECHANICAL AND PLUMBING CONTRACTOR THE LOCATION AND ELECTRICAL REQUIREMENTS TO ALL A/C EQUIPMENT, MOTORS, PUMPS, T-STATS., INTERLOCKING WIRING, ETC.

C. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION AND SHALL BE LISTED BY THE U.L.

D. ELECTRICAL CONTRACTOR MUST COORDINATE ALL POWER SERVICE ON THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR ALL FEES FOR TEMPORARY SERVICE.

E. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL PERMIT AND INSPECTION FEES REQUIRED BY THE GOVERNING BODIES.

F. ELECTRICAL CONTRACTOR MUST COMPLY WITH THE LATEST A.D.A. REQUIREMENTS.

G. MINIMUM SIZE CONDUCTORS SHALL BE #12 THW CU. UNLESS NOTED OR SIZED BY CODE.

H. ALL WIRING MUST BE IN CONDUIT, INCLUDING ALL L.V. WIRING. THIN WALL CONDUIT (EMT) CAN BE INSTALLED CONCEALED ABOVE CEILING, IN FURRED WALLS, AND WALLS EXCEPT WHERE THOSE WALLS ARE GROUTED SOLID. USE FLEX CONDUIT FOR MOTORS AND LIGHTING FIXTURES. USE WATER TIGHT FLEX CONDUIT FOR WATER HEATERS, DISPOSALS, EXTERIOR CONNECTIONS, ETC. BOND ACCORDING TO CODE.

I. VERIFY LOCATIONS OF ALL ELECTRICAL EQUIPMENT WITH OTHER TRADES TO AVOID CONFLICTS AND INTERFERENCES.

J. CONTRACTOR TO INSTALL A PLYWOOD TELEPHONE BOARD. SEE SPECIAL SYSTEMS PLAN FOR REQUIREMENTS.

K. CONTRACTOR TO COORDINATE NEW SERVICE WITH OWNER AND LOCAL UTILITY AS SOON AS CONTRACT IS LET.

L. CONTRACTOR MUST VISIT SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS BEFORE BIDDING ON THIS PROJECT.

M. ALL ELECTRICAL EQUIPMENT IN FIRE RATED ASSEMBLIES MUST BE INSTALLED SO THAT FIRE RATING IS NOT COMPROMISED. ELECTRICAL CONTRACTOR MUST INSTALL FIRE-STOPPING SEALS AND MATERIALS AS NECESSARY ON ALL PENETRATIONS MADE ON ALL FIRE RATED ASSEMBLIES TO MATCH FIRE RATING.

N. BRANCH CIRCUIT NUMBERS ARE TO BE WRITTEN WITH BLACK INK MARKERS ON ALL COVERS OF ALL JUNCTION BOXES LOCATED ABOVE CEILING. MARKINGS MUST INDICATE THE PANEL AND CIRCUIT NUMBER OF CIRCUITS IN THAT BOX.

O. MC CABLE IS NOT ALLOWED FOR ELECTRICAL INSTALLATIONS EXCEPT FOR LIGHT FIXTURE WHIPS.

STATE OF TEXAS
FELIX A. PADILLA
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REGISTERED PROFESSIONAL ENGINEER
10/25/22

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TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: A.P/A.E/E.E
PROJECT NO: 2022-16
ISSUED: SEPTEMBER 30, 2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

ELECTRICAL DETAILS

SCHEMATIC DESIGN

PLUMBING GENERAL NOTES

1. COMPLY WITH ALL LOCAL, COUNTY, STATE, AND FEDERAL CODES, ORDINANCES, RULES AND REGULATIONS.
2. COMPLY WITH ALL REQUIREMENTS OF THE SERVING AGENCIES, PAY ALL COSTS REQUIRED FOR METER INSTALLATIONS, SEWER TAPS, ETC.
3. COMPLY WITH ALL REFERENCED COMMERCIAL STANDARDS, RULES, SPECIFICATIONS, ETC.
4. WATER PIPING ABOVE GROUND USE TYPE "L" HARD DRAWN COPPER.
   WATER PIPING BELOW BUILDING SLAB USE TYPE "K" HARD DRAWN COPPER PIPE AND FITTINGS
5. WATER PIPING 5' BEYOND BUILDING 4" AND LARGER USE AWWA C900 CLASS 150 PIPE
   WATER PIPING 5' BEYOND BUILDING 3.0" AND SMALLER USE TYPE "K" HARD DRAWN COPPER
6. ALL WATER PIPING USED FOR DRINKING PURPOSES SHALL BE SOLDER WITH LEAD-FREE.
7. WASTE AND VENT PIPING BELOW AND ABOVE GRADE USE SOLID CORE SCHEDULE 40 PVC.
8. INDOOR/OUTDOOR CONDENSATE PIPING SHALL BE TYPE "L" COPPER.
9. ALL ABOVE GRADE GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL. GAS PIPING BELOW GRADE SHALL HAVE A PROTECTIVE COATING (EX. X-TRU-COAT). POLYETHYLENE PIPING BELOW GRADE AND 5' BEYOND BUILDING IS PERMITTED.
10. INSTALL DIELECTRIC FITTING BETWEEN FERROUS AND NON-FERROUS MATERIALS.
11. RELIEF DRAIN PIPING FOR WATER HEATERS TO BE RUN TO APPROVED RECEPTACLES.
12. CONTRACTOR TO VERIFY LOCATION OF EXISTING WATER AND SEWER MAINS AND POINTS OF CONNECTION.
13. CONTRACTOR TO INSTALL SHUT-OFF VALVES ON EACH WATER SUPPLY AT EACH PLUMBING FIXTURE AND ALL EQUIPMENT.
14. INSTALL WALL CLEANOUTS AT EACH LAVATORY, URINAL, SINK AND WATER COOLER.
15. INSULATE ALL HOT AND COLD WATER PIPING WITH 1" FIBERGLASS INSULATION FOR PIPES UP 1-1/2" IN DIAMETER. INSULATE WITH 2" FIBERGLASS FOR PIPES OVER 1-1/2".
16. ALL PIPING EXPOSED TO WEATHER SHALL BE PAINTED AND COATED WITH AN APPROVED PROTECTIVE COATING FOR CORROSION CONTROL.
17. ALL PIPING IS TO BE HUNG AND ANCHORED BY APPROVED MEANS AND INTERVALS AS PER APPLICABLE CODE.
18. CONTRACTOR IS TO VERIFY THAT FALL OF THE SEWER LINE WILL MEET INVERT AT POINT OF CONNECTION BEFORE INSTALLING PIPING.
19. INSULATE CONDENSATE LINES ABOVE GRADE WITH 1" FIBERGLASS INSULATION.
20. ALL UNDERGROUND WATER LINES TO BE BURIED BELOW FROSTLINE, MIN. 24" OR GREATER, AS DICTATED BY LOCAL CODES.
21. ALL INDIRECT WASTE LINES TO BE AIR GAPPED OVER FLOOR SINKS AND FLOOR DRAINS.
22. ALL WATER HEATERS SHALL COMPLY WITH ASHRAE 90.1 STANDARD LATEST EDITION. AND THE CURRENT TEXAS LOW NOX STANDARDS.
23. BUILDING SHALL HAVE AN APPROVED BACKFLOW PREVENTION DEVICE OF REDUCED PRESSURE TYPE (E.P.A. AND COUNTY APPROVED).
24. EXPOSED HOT WATER AND DRAIN PIPING LOCATED BENEATH HANDICAPPED ACCESSIBLE LAVATORIES SHALL BE INSULATED, AS SPECIFIED.
25. WATER METER, BACKFLOW PREVENTERS AND MASTER SHUT-OFF VALVES MOUNTED INSIDE VALVE OR YARD BOXES SHALL BE AND COVERED WITH ALUMINUM JACKET INSULATION TO PREVENT FREEZING.
26. FIRE SEAL ALL PENETRATIONS OF RATED WALLS PER APPLICABLE U.L. RATED SYSTEM.

PLUMBING SYMBOL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
EF	EXISTING FIRE PROTECTION	VTR	VENT THRU ROOF
F	FIRE PROTECTION	DGCO	DOUBLE GRADE CLEANOUT
	DOMESTIC COLD WATER LINE	GCO	GRADE CLEANOUT
	DOMESTIC HOT WATER LINE		CHECK VALVE
	HOT WATER SUPPLY		PLUG VALVE
	VENT PIPING		BALANCING VALVE WITH MEMORY STOP
EV	EXISTING VENT		
	NEW SANITARY SEWER LINE		RELIEF VALVE
ES	EXISTING SOIL LINE		PRESSURE REDUCING VALVE
G	NEW GAS LINE		BUTTERFLY VALVE
EG	EXISTING GAS LINE		NEEDLE VALVE
D	DRAIN LINE		BALL VALVE
CD	CONDENSATE DRAIN		STRAINER
	KEYED NOTES		UNION
FCO	FLOOR CLEANOUT		FLANGED CONNECTION
WCO	WALL CLEANOUT		THERMOMETER
	NEW TO EXISTING CONNECTION		GAUGE
RDL	ROOF DRAIN LEADER		REDUCER
OFL	OVER FLOW LEADER		VALVE IN RISE
OFD	OVERFLOW DRAIN		PIPE ELBOW DOWN

MINIMUM PIPE MATERIAL SCHEDULE

SERVICE TYPE	LOCATION	MATERIAL REQUIRED	COMMENTS
SANITARY WASTE, VENT	BELOW GRADE 5'-0" OUTSIDE BUILDING FOOTPRINT	SCHEDULE 40 PVC W/ SOLVENT WELDED JOINTS	SEE MATERIAL SUBSTITUTION NOTES
	BELOW GRADE WITHIN 5'-0" BUILDING FOOTPRINT	SCHEDULE 40 PVC W/ SOLVENT WELDED JOINTS	SEE MATERIAL SUBSTITUTION NOTES
	ABOVE GRADE WITHIN BUILDING	SCHEDULE 40 PVC W/ SOLVENT WELDED JOINTS.	SEE MATERIAL SUBSTITUTION NOTES
	EXPOSED DRAINS WITHIN MECHANICAL ROOMS AND KITCHENS	HARD DRAWN TYPE "K" COPPER. KITCHEN LINES SHALL BE PAINTED SILVER	
DOMESTIC WATER FOR COLD HOT AND CIRCULATION	BELOW GRADE OUTSIDE BUILDING FOOTPRINT	COPPER TYPE "K" HARD DRAWN	
	BELOW GRADE INSIDE BUILDING FOOTPRINT	COPPER TUBING TYPE "K" SOFT DRAWN	NO JOINTS BELOW SLAB
	ABOVE GRADE/SLAB WITHIN BUILDING	COPPER TYPE "L" HARD DRAWN	
HYDRONIC PIPING	THROUGH OUT SYSTEM	COPPER TYPE "L"	PRO PRESS FITTINGS
CONDENSATE & EVAPORATIVE COOLER DRAINS	THROUGH OUT SYSTEM	SCHEDULE 40 PVC W/ SOLVENT WELDED JOINTS INSULATED WITH 1" FIBERGLASS INSULATION	SIMILAR TO WATER APPLICATIONS

PIPE MATERIAL SUBSTITUTION NOTES:

NOTE: ALL PVC PIPE SHALL BE SOLID CORE, NO EXCEPTIONS.

SUBSTITUTIONS NOTICE:

INSTALLATION OF MATERIALS OTHER THAN THOSE LISTED ABOVE SHALL NOT BE ALLOWED UNLESS APPROVED BY THIS OFFICE IN WRITING AND WHEN PERMITTED BY LOCAL AUTHORITIES.

INSULATION REQUIREMENTS:

ALL COLD WATER AND CONDENSATE PIPING INSTALLED WITHIN BUILDING SHELL SHALL BE INSULATED WITH A MINIMUM 1" FIBERGLASS THICKNESS. ALL DOMESTIC HOT WATER PIPING SHALL BE INSULATED WITH 1" THICK MATERIAL RATED AT 0.24 BTUH / INCH / SQ.FT./ DEG. F TO MEET OR EXCEED ENERGY CONSERVATION CODE. APPROVED INSULATION MATERIALS SHALL BE: SLEEVED FIBERGLASS MATERIAL SEALED VAPOR TIGHT IN ACCORDANCE TO APPROVED INDUSTRY STANDARDS AND PRACTICES. SEE SPECIFICATIONS FOR OTHER APPROVED MATERIAL TYPES. THIS SCHEDULE IS PROVIDED AS MINIMUM INSULATION REQUIREMENTS ONLY AND SPECIFICATIONS SHALL SUPERSEDE THIS SCHEDULE WHERE SPECIFICATIONS CALL FOR GREATER INSULATION MATERIALS AND/OR INSTALLATION METHODS.

FS-1

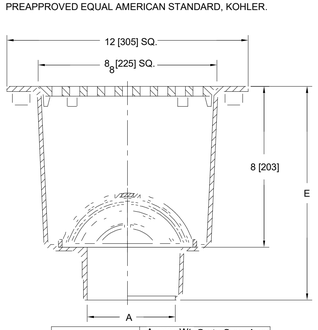
MANUFACTURER AND MODEL NO.: ZURN ZN-1901-2-P

DESCRIPTION: FLOOR SINK WITH TRAP PRIMER. 12X12X8 DEEP CAST IRON BODY. ABS ANTI-SPLASH INTERIOR BOTTOM DOME STRAINER. WHITE

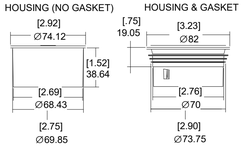
ACCESSORIES: PROVIDE WITH HALF GRATE. SURE SEAL P-TRAP COVER MODEL SS3009V.

PREAPPROVED EQUAL AMERICAN STANDARD, KOHLER.

ROUGH-IN REQUIREMENTS			
DRAIN	VENT	COLD	HOT
3"	2"	1/2"	-



SURE SEAL



A- Pipe Size In.	Approx Wt. Grate Open Area	
	Lbs. [kg]	Sq. In. [cm²]
2-3-4 [51-76-102]	34 [15]	31 [200]

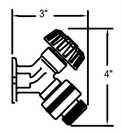
HB-1

MANUFACTURER AND MODEL NO.: WOODFORD 24P — PREAPPROVED EQUAL WATTS, ZURN, JAY R. SMITH.

DESCRIPTION: HOSE BIBB-ANTI-SHIPON

ACCESSORIES: 3/4" INLET. STANDARD CHROME FINISH. VACUUM BREAKER. EPDM PACKING. STANDARD "O" SIZE WASHER VALVE SEAT. LOOSE KEY HANDLE

ROUGH-IN REQUIREMENTS			
DRAIN	VENT	COLD	HOT
-	-	3/4"	-



GI-1

MANUFACTURER AND MODEL NO.: SCHIER GB-250

DESCRIPTION: GREASE INTERCEPTOR

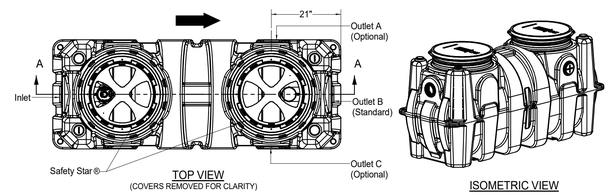
ACCESSORIES: INTEGRAL EXTENSION COLLAR TO FINISHED GRADE. PROVIDE WITH ACCESS COVER SAFETY STAR RESTRICTOR.

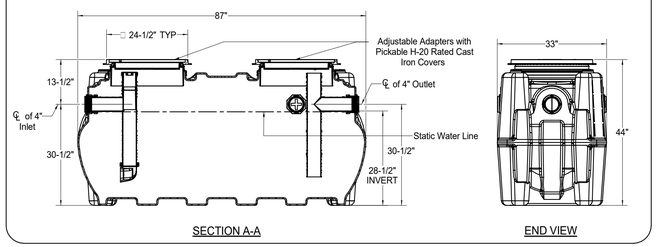
ROUGH IN REQUIREMENTS	
INLET	OUTLET
4"	4"

PRE APPROVED EQUAL ZURN, GREENTURTLE

SPECIFICATIONS

Notes:
1. 4" FPT inlet/outlet with 4" plain end adapters, single inlet and triple outlet.
2. Unit weight - w/ cast iron covers: 376 lbs. (For wet weight add 2,310 lbs.)
3. Maximum operating temperature: 150º F continuous
4. Capacities - Liquid: 277 gal.; Grease: 1,895 lbs. (260 gal.) @100GPM Grease: 1,196 lbs. (164 gal.) @200GPM Solids: 69 gal.
5. This unit does not require flow control for 100 GPM applications. Built-in flow control is provided for 200 GPM applications. For series installations, only install flow control on the first unit in the series if necessary.
6. For gravity drainage applications only.
7. Do not use for pressure applications.
8. Cover placement allows full access to tank for proper maintenance.
9. Vent not required unless per local code.
10. Engineered inlet and outlet diffusers with inspection ports are removable to inspect / clean piping.
11. Integral air relief / Anti-siphon / Sampling access.
12. Adjustable cover adapters provide up to 4" of additional height.
13. Designed for below-grade, above-grade, indoor or outdoor installations.
14. Safety Star®, access restrictor built into each cover adapter, prevents accidental entry to tanks (450 lb rating).





HANGER SPACING SCHEDULE

PIPING MATERIAL	MAXIMUM HORIZONTAL SPACING (feet)	MAXIMUM VERTICAL SPACING (feet)
Acrylonitrile butadiene styrene (ABS) pipe	4	10b
Aluminum tubing	10	15
Brass pipe	10	10
Cast-iron pipe	5a	15
Chlorinated polyvinyl chloride (CPVC) pipe and tubing, 1" and smaller	3	10b
Chlorinated polyvinyl chloride (CPVC) pipe and tubing, 1-1/4" and larger	4	10b
Copper or copper-alloy pipe	12	10
Copper or copper-alloy tubing, 1-1/4 -inch diameter and smaller	6	10
Copper or copper-alloy tubing, 1-1/2 -inch diameter and larger	10	10
Cross-linked polyethylene (PEX) pipe	2.67 (32 inches)	10b
Cross-linked polyethylene/ aluminum/cross-linked polyethylene (PEX-AL-PEX) pipe	2.67 (32 inches)	4
Lead pipe	Continuous	4
Polyethylene/aluminum/ polyethylene (PE-AL-PE) pipe	2.67 (32 inches)	4
Polyethylene of raised temperature (PE-RT) pipe	2.67 (32 inches)	10b
Polypropylene (PP) pipe or tubing 1 inch and smaller	2.67 (32 inches)	10b
Polypropylene (PP) pipe or tubing, 1-1/4 inches and larger	4	10b
Polyvinyl chloride (PVC) pipe	4	10b
Stainless steel drainage systems	10	10b
Steel pipe	12	15

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

a. The maximum horizontal spacing of cast-iron pipe hangers shall be increased to 10 feet where 10-foot lengths of pipe are installed.

b. For sizes 2 inches and smaller, a guide shall be installed midway between required vertical supports. Such guides shall prevent pipe movement in a direction perpendicular to the axis of the pipe.

MINIMUM PIPE INSULATION THICKNESS SCHEDULE

FLUID OPERATING TEMPERATURE RANGE AND USAGE (%%143F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (inches)				
	Conductivity Btu · in./(h · ft2 · F)b	Mean Rating Temperature, F	<1	1 TO < 1-1/2	1-1/2" TO < 4	1 TO < 8	≤ 8
> 350	0.32 – 0.34	250	4.5	5.0	5.0	5.0	5.0
251 – 350	0.29 – 0.32	200	3.0	4.0	4.5	4.5	4.5
201 – 250	0.27 – 0.30	150	2.5	2.5	2.5	3.0	3.0
141 – 200	0.25 – 0.29	125	1.5	1.5	2.0	2.0	2.0
105 – 140	0.21 – 0.28	100	1.0	1.0	1.5	1.5	1.5
40 – 60	0.21 – 0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20 – 0.26	50	0.5	1.0	1.0	1.0	1.5

For SI: 1 inch = 25.4 mm, °C = [(°F) - 32]/1.8.

a. For piping smaller than 1-1/2 inches and located in partitions within conditioned spaces, reduction of these thicknesses by 1 inch shall be permitted (before thickness adjustment required in footnote b) but not to a thickness less than 1 inch.

b. For insulation outside the stated conductivity range, the minimum thickness (T) shall be determined as follows:

$T = r(t + t/r)(K/k - 1$

where:

T = minimum insulation thickness,
r = actual outside radius of pipe,
t = insulation thickness listed in the table for applicable fluid temperature and pipe size,
K = conductivity of alternate material at mean rating temperature indicated for the applicable fluid temperature (Btu · in/h · ft2 · °F) and
k = the upper value of the conductivity range listed in the table for the applicable fluid temperature.

c. For direct-buried heating and hot water system piping, reduction of these thicknesses by 1-1/2 inches (38 mm) shall be permitted (before thickness adjustment required in footnote b but not to thicknesses less than 1 inch (25 mm).

Countryman & Co.
Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

AEG
2431 E. YANDELL DR. EL PASO TEXAS, 79903 P.915.219.4901 F. 915.219.5298
WWW.AEGELPASO.COM TEXAS ENGINEERING FIRM F-11396

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JORGE A. SILVA 89142 LICENSED PROFESSIONAL ENGINEER

TORNILLO INDEPENDENT SCHOOL DISTRICT

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DRAWN BY: AEG
PROJECT NO: 2022-16
ISSUED: 10/24/2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

PLUMBING LEGEND, GENERAL NOTES & SCHEDULES

Project Status

P-100

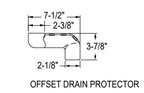
L-1

MANUFACTURER AND MODEL NO. ZURN : Z5368.531.4.87.59.6 — PREAPPROVED EQUAL AMERICAN STANDARD, KOHLER.

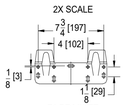
DESCRIPTION: VITREOUS CHINA WALL HUNG LAVATORY

ACCESSORIES: FIXTURE: Z5368 20"X18" WALL HUNG LAVATORY, ZURN Z831B4-ICT XL FREE POLISHED CHROME PLATED CAST BRASS FAUCET, Z8746-PC; OFFSET WHEELCHAIR GRID DRAIN, Z8711-PC 1-1/4" X1-1/2" CAST BRASS SWIVEL P-TRAP WITH CLEANOUT, ZURN Z1/8823LR-8862-12PC; SUPPLY KIT LAVATORY, Z8946-3-NT ADA COMBINATION TRAP AND SUPPLY WRAP PROTECTOR KIT. ZURN CONCEALED ARM WALL CARRIER Z1231.

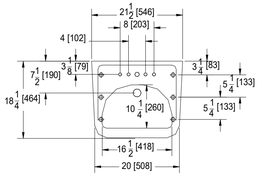
ROUGH-IN REQUIREMENTS			
DRAIN	VENT	COLD	HOT
2"	1-1/2"	1/2"	1/2"

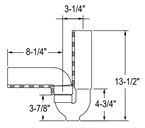


OFFSET DRAIN PROTECTOR

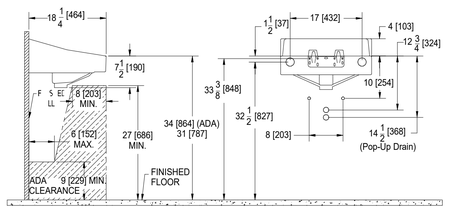


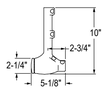
Z1 BRACKET



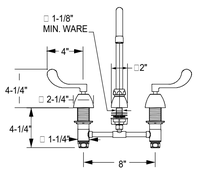


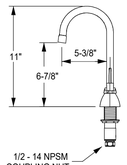
TRAP PROTECTOR

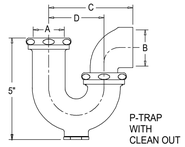




SUPPLY STOP PROTECTOR

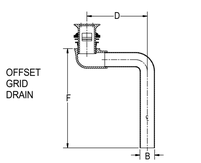




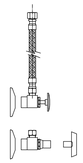


P-TRAP WITH CLEAN OUT

PRODUCT NUMBER	A OUTLET	B OUTLET	DIMENSIONS C	DIMENSIONS D	MASTER CARTON	WEIGHT CARTON
Z8711-PC	1-1/4"	1-1/2"	4-1/2"	3"	15	27



OFFSET GRID DRAIN



PRODUCT NUMBER	A OUTLET	DIMENSIONS D	DIMENSIONS F	MASTER CARTON	WEIGHT CARTON
Z8746-PC	1-1/4	5-1/8	8-3/4	24	40

PRODUCT NUMBER	CONNECTIONS	EXT.	MASTER CARTON	WEIGHT CARTON LR	WEIGHT CARTON LRLK
ZH8823LR-8862-12-PC	1/2"IPS X 1/2" OD	-	25	30	-

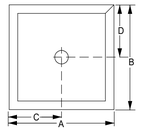
MS-1

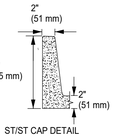
MANUFACTURER AND MODEL NO. FIAT TSB100 — PREAPPROVED EQUAL AMERICAN STANDARD, KOHLER.

DESCRIPTION: MOP SINK-24"X24" TERRAZO 12" DEPTH. TAN TERRAZO SURFACE GRONDED AND POLISH.

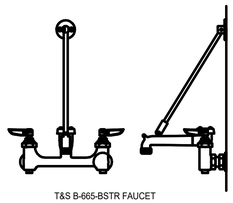
ACCESSORIES: T&S B-665-BSTR FAUCET, B-0653 HOSE AND BRACKET. B-0653 MOP HANGER WITH STAINLESS STEEL CAPS ON ALL CURBS. INTEGRAL TILTING FLANGES. STAINLESS STEEL STRAINER # 1453 BB.

ROUGH-IN REQUIREMENTS			
DRAIN	VENT	COLD	HOT
3"	2"	3/4"	3/4"



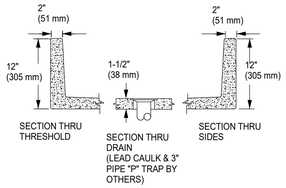


ST/ST CAP DETAIL


T&S B-665-BSTR FAUCET

SERIES TSB100
WITH STAINLESS STEEL CAPS ON ALL CURBS

MODEL	SIZE	A	B	C	D
TSB100	24"X24"X12"	24	24	12	12
TSB300	32"X32"X12"	32	32	16	16
TSB500	36""X36"X12"	36	36	18	18
TSB700	36"X24"X12"	36	24	18	12



SECTION THRU THRESHOLD

SECTION THRU DRAIN (LEAD CAULK & 3" PIPE "P" TRAP BY OTHERS)

SECTION THRU SIDES

SERIES TSB200
WITH PLAIN CURBS

MODEL	SIZE	A	B	C	D
TSB200	24"X24"X12"	24	24	12	12
TSB400	32"X32"X12"	32	32	16	16
TSB600	36""X36"X12"	36	36	18	18
TSB800	36"X24"X12"	36	24	18	12

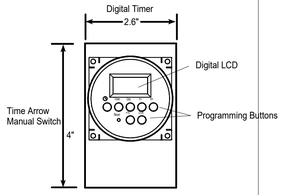
RP-1

MANUFACTURER AND MODEL NO. TACO IL112 — PREAPPROVED EQUAL B & G. ARMSTRONG, PACO.

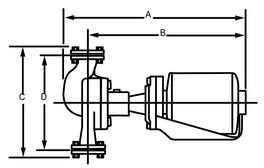
DESCRIPTION: RECIRCULATING PUMP

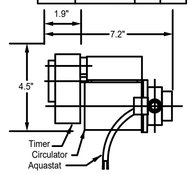
ACCESSORIES: CAPACITY OF 5 GPM AT 20 FT OF HEAD. CONTROLLED WITH AN AQUASTAT AND TIMER. 3/4" FLANGE COMPANION.

ROUGH-IN REQUIREMENTS			
DRAIN	VENT	COLD	HOT
-	-	-	3/4"
ELECTRICAL REQUIREMENTS			
V/PH	HP	RPM	RATING
120/60	1/3	3450	125 PSI 240 F



Model	Item	Lbs.	Kg
265-3	Digital Timer	.75	.35
563-2	Aquastat	.25	.11





Assembled Timer/Aquastat

MODEL NUMBER	FLANGE SIZE	MOTOR(2) (115V/60 HZ/ 1PH) HP	MOTOR(2) (115V/60 HZ/ 1PH) RPM	MAXIMUM TEMP.(3)	PRESSURE RATING	DIMENSIONS A IN.	DIMENSIONS A MM	DIMENSIONS B IN.	DIMENSIONS B MM	DIMENSIONS C IN.	DIMENSIONS C MM	DIMENSIONS D IN.	DIMENSIONS D MM	APPROX. SHIPPING WEIGHT LBS.	APPROX. SHIPPING WEIGHT KG
112	3/4", 1" 1-1/4", 1-1/2"	1/3	3450	240 ° F	125 PSI	16-1/2	419.1	14-1/2	368.3	7-7/8	200	6 3/8	161.9	28	12.7

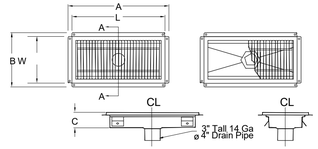
TD-1

MANUFACTURER AND MODEL NO. ADVANCE TABCO FTG-1248

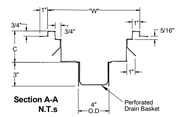
DESCRIPTION: 48" LONG WASTE RECEPTACLE

ACCESSORIES: FTG SERIES GRATING

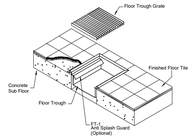
ROUGH IN REQUIREMENTS	
DRAIN	VENT
4"	2"



PLUMBING ROUGH-IN



DIMENSIONS				
L	W	A	B	C
48"	12"	50"	14"	4"



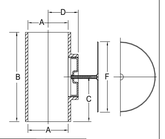
WCO

MANUFACTURER AND MODEL NO. ZURN Z-1446 — PREAPPROVED EQUAL WATTS, JAY R. SMITH, WADE.

DESCRIPTION: WALL CLEANOUT WITH ROUND ACCESS COVER.

ACCESSORIES: DURA-COATED CAST IRON BODY WITH POLISHED STAINLESS STEEL COVER. VANDAL PROOF SCREWS. BRASS PLUG.

ROUGH-IN REQUIREMENTS			
DRAIN	VENT	COLD	HOT
2" TO 4"	-	-	-



DIMENSIONS IN INCHES										APPROX. WT. LBS.
A PIPE SIZE	NH B	NH C	NH D	NH F	B	C	D	F		
2	6-3/8	3-3/16	1-3/4	5	10	4-1/2	2-3/4	5	9	
3	7-3/4	3-7/8	2-1/2	5	12	5-3/4	3	5	16	
4	8-7/8	4-7/16	3	7	12	5-3/4	3-1/2	7	18	
5	-	-	-	-	13	6-1/4	4	7	24	
6	12-1/2	6-1/4	4-5/16	9	14	6-3/4	4-1/2	9	38	
8	-	-	-	-	17	8-1/4	5-1/2	11	53	

WHA

PREAPPROVED EQUAL PPP, JAY R. SMITH

MANUFACTURER AND MODEL NO. ZURN Z-1250 XL

DESCRIPTION: WATER HAMMER ARRESTOR.

ACCESSORIES: LEAD FREE. COPPER TUBE TYPE L. LOW LEAD BRASS TAIL PIECE AND PISTON. BUNA NITRILE O-RING

ROUGH-IN REQUIREMENTS			
DRAIN	VENT	COLD	HOT
-	-	1/2"	1/2"

SIZE	PDI SIZE	MNPT THREAD in	MNPT THREAD mm	DIMENSIONS A in	DIMENSIONS A mm	DIMENSIONS B in	DIMENSIONS B mm	AIR CHAMBER VOLUME	FIXTURE UNIT CAPACITY
1250XL-A	A	1/2	15	5-1/4	133	1-1/8	29	3.5 CUBIC IN.	1-11

Countryman & Co.
Architecture

108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

AEG
2431 E. YANDELL DR. EL PASO TEXAS, 79903 P.915.219.4901 F. 915.219.5298
WWW.AEGELPASO.COM TEXAS ENGINEERING FIRM F-11396

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TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: AEG
PROJECT NO: 2022-16
ISSUED: 10/24/2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

C:\REVIT LOCAL\Tornillo School Cafeteria Conversion 22_aguilar@aegtexas.com.rvt
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Project Status

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

PLUMBING SCHEDULES & SCHEMATIC

P-101

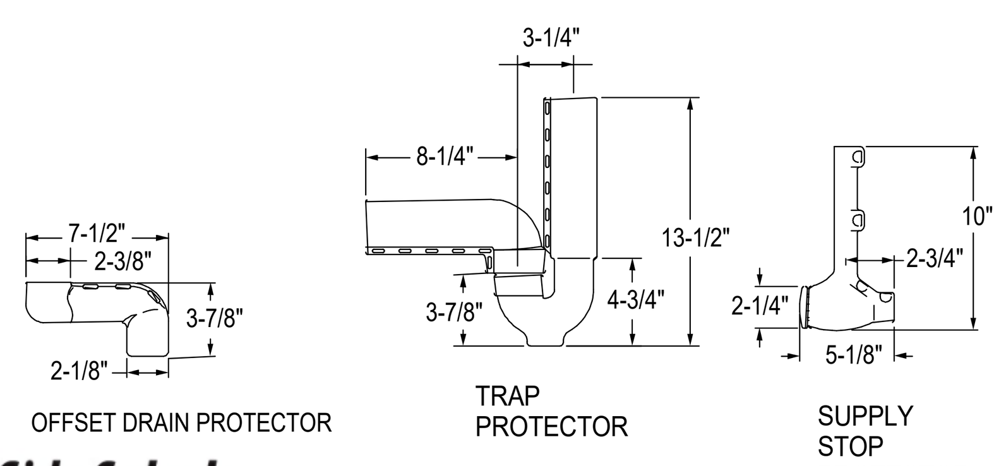
S-1

MANUFACTURER AND MODEL NO.: BK RESOURCES - OR APPROVED EQUAL 14X10 HAND SINK (INT DIMENSION) — PREAPPROVED EQUAL JUST, ELKAY, ADVANCED TABCO

DESCRIPTION: WALL MOUNTED SINGLE COMP SINK WITH SIDE SPLASHES. GOOSENECK FAUCET.

ACCESSORIES: BKF-W-3G-G FAUCET. STRAINER, CENTER DRAIN LOCATION. QUARTER TURN ANGLE STOPS. STAINLESS STEEL FLEXIBLE HOSE CONNECTORS 1/2" X 3/8" ZURN Z8946-3-NT COMBINATION KIT ONE TRAP, TWO SUPPLY STOPS.

ROUGH-IN REQUIREMENTS			
DRAIN	VENT	COLD	HOT
2"	1-1/2"	1/2"	1/2"



BK RESOURCES

14" x 10" Hand Sinks w/ Side Splash

Stainless Steel Hand Sinks

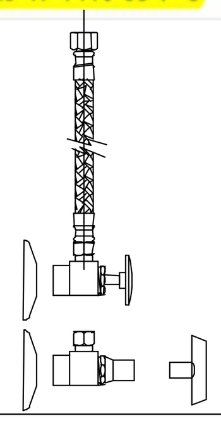
Certifications: NSF

Features:
- Wall Mounting Hardware Included
- Drain Included
- Accommodates 4" O.C. Faucets
- Marine Edge

Material:
- T-304 Stainless Steel

Options:
- Upgraded Faucets
- Other Plumbing Accessories - Call For Details

Part Number	Unit Size (w x d)	Bowl Dim. (l x w x d)	Faucet / Spout Mounting	Side Splash	Included Faucet	Drain Size	Product Weight (lbs)
BKHS-W-1410-SS	17" x 15 1/2"	14" x 10" x 5"	4" O.C. Splash	Dual	-	1 7/8"	12.50
BKHS-W-1410-RS	17" x 15 1/2"	14" x 10" x 5"	4" O.C. Splash	Right	-	1 7/8"	11.00
BKHS-W-1410-LS	17" x 15 1/2"	14" x 10" x 5"	4" O.C. Splash	Left	-	1 7/8"	11.00
BKHS-W-1410-SS-P-G	17" x 15 1/2"	14" x 10" x 5"	4" O.C. Splash	Dual	BKF-W-3G-G	1 7/8"	13.30



PRODUCT NUMBER	CONNECTIONS	EXT.	MASTER CARTON	
			LR	LRLK
ZH8820LRLK-8860-12-PC	3/8"IPS X 3/8" OD	-	25	- 32

S-2

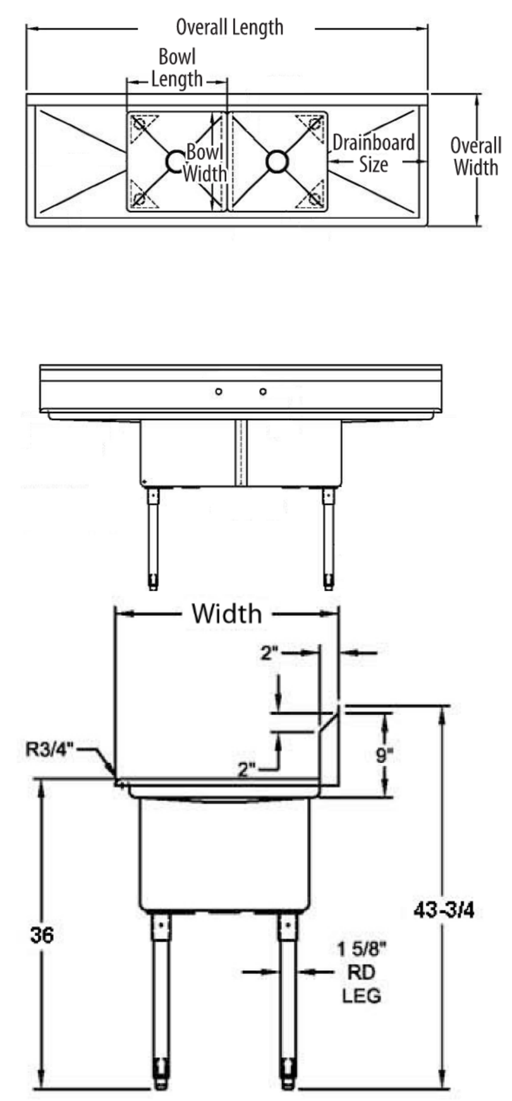
MANUFACTURER AND MODEL NO.: BK RESOURCES BKS-2-24-14-24TS — PREAPPROVED EQUAL JUST, ELKAY, ADVANCED TABCO

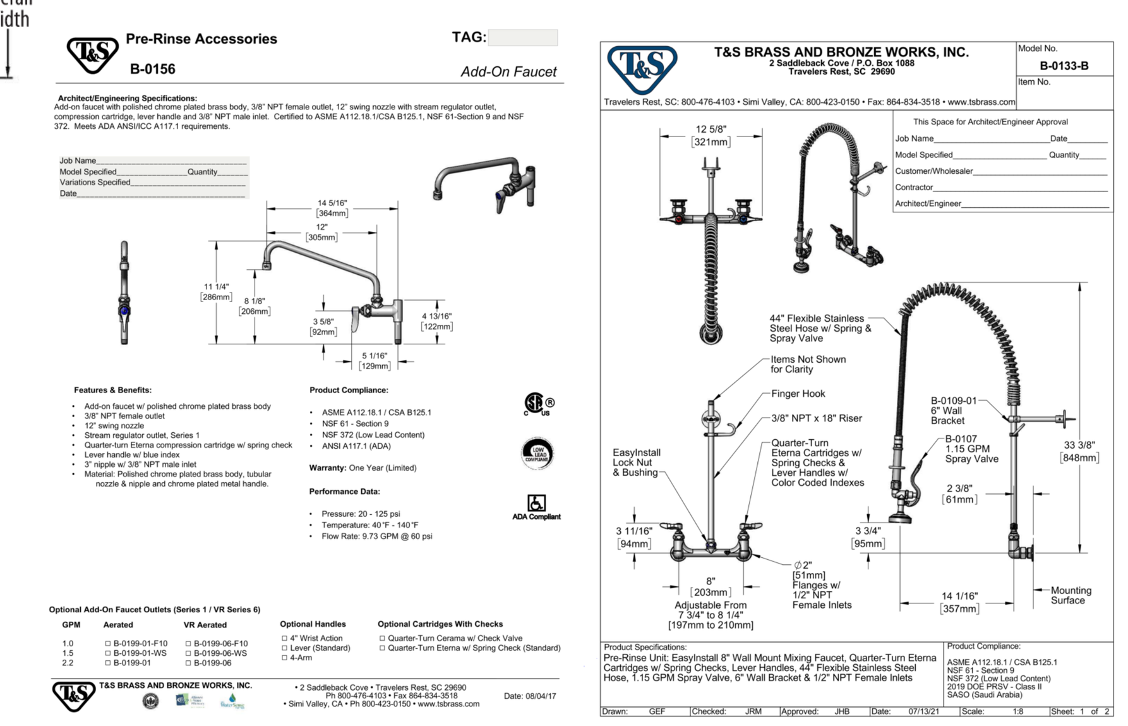
DESCRIPTION: 2 COMPARTMENT SINK. 18 GAUGE TYPE 304 NICKEL BEARING STAINLESS STEEL, LEFT AND RIGHT DRAIN BOARD.

ACCESSORIES: PRE RINSE UNITS AND FAUCETS MODEL T&S B-0133-B AND B-0156 ADD ON FAUCET , THREE NICKLE PLATED CAST TWIST LEVER BASKET STRAINER WITH MATCHING BASKET. PROVIDE WITH COMBO DRAIN LINE THAT WILL DISCHARGE INDIRECTLY OVER FLOOR SINK . PROVIDE QUARTER TURN LEAD FREE HEAVY DUTY ANGLE STOPS AND FLEXIBLE HOSE LINES.

ROUGH-IN REQUIREMENTS			
DRAIN	VENT	COLD	HOT
2"	1-1/2"	3/4"	3/4"

PART NUMBER	UNITX SIZE (l x w)	BOWL DIM. (l x w x d)	SETS OF HOLES	DRAINBOARD SIZE	LEGS	PRODUCT WEIGHT (lbs)
BKS-2-24-14-24TS	96" X 29-13/16"	24"X24"X14"	1	(2) - 24"	STAINLESS STEEL W/BRACING	105





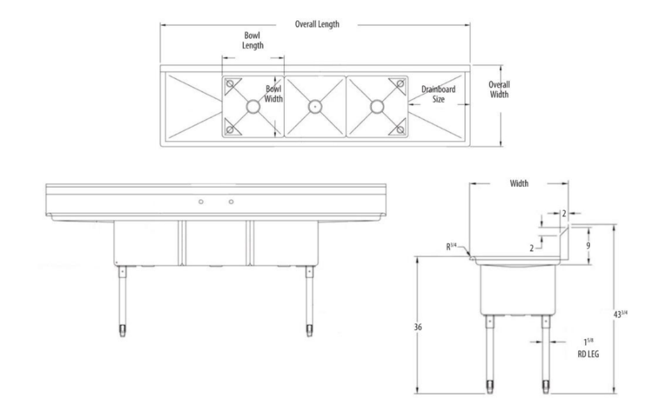
S-3

MANUFACTURER AND MODEL NO.: BK RESOURCES BKS-3-1620-14-18TS — PREAPPROVED EQUAL JUST, ELKAY, ADVANCED TABCO

DESCRIPTION: 3 COMPARTMENT SINK. 18 GAUGE TYPE 304 NICKEL BEARING STAINLESS STEEL, LEFT AND RIGHT DRAIN BOARD.

ACCESSORIES: PRE RINSE UNITS AND FAUCETS MODEL T&S B-0133-B AND B-0156 ADD ON FAUCET , THREE NICKLE PLATED CAST TWIST LEVER BASKET STRAINER WITH MATCHING BASKET. PROVIDE WITH COMBO DRAIN LINE THAT WILL DISCHARGE INDIRECTLY OVER FLOOR SINK . PROVIDE QUARTER TURN LEAD FREE HEAVY DUTY ANGLE STOPS AND FLEXIBLE HOSE LINES.

ROUGH-IN REQUIREMENTS			
DRAIN	VENT	COLD	HOT
2"	1-1/2"	3/4"	3/4"



BK RESOURCES

Three Compartment - Double Drainboard

Stainless Steel Compartment Sinks

Shown as: Model #s ending in S

Certifications: NSF

Features:
- 1/4" Pitched Drainboards To Ensure Proper Drainage
- 1 1/2" Rounded Front and Side Edges
- Accommodates 8" On Center Faucets
- Drains Included
- 9" Backsplash

Material:
- T-304 18 ga. Stainless Steel Deck & Bowls
- 1 1/4" Galvanized Legs
- Adjustable High Impact Corrosion Resistant Feet

Model #s ending with "S":
- T-304 18 ga. Stainless Steel Deck & Bowls
- Stainless Steel Legs
- Stainless Steel End Bracing
- Adjustable Stainless Steel over Plastic Bullet Feet

Options:
- Pre-Rinse Units & Faucets
- Lever Drains
- Upgraded Bullet Feet
- Slant Rack Shelf (BK-SSH)
- End Splash (BKS-RES)
- S/S Basket Drain (BKDR-4-304)

Part Number	Unit Size (l x w)	Bowl Dim. (l x w x d)	Sets of Faucet Holes	Drainboard Size	Legs	Product Weight (lbs)
BKS-3-1416-12-12T	66" x 21 13/16"	14" x 16" x 12"	1	(2) - 12"	Galvanized	59.00
BKS-3-1416-12-12TS	66" x 21 12/16"	14" x 16" x 12"	1	(2) - 12"	Stainless Steel w/ End Bracing	68.00
BKS-3-15-14-15T	75" x 20 13/16"	15" x 15" x 14"	1	(2) - 15"	Galvanized	67.00
BKS-3-15-14-15TS	75" x 20 13/16"	15" x 15" x 14"	1	(2) - 15"	Stainless Steel w/ End Bracing	76.50
BKS-3-1620-12-18T	84" x 25" 13/16"	16" x 20" x 12"	1	(2) - 18"	Galvanized	85.00
BKS-3-1620-12-18TS	84" x 25 13/16"	16" x 20" x 12"	1	(2) - 18"	Stainless Steel w/ End Bracing	94.00
BKS-3-1620-14-18T	84" x 25" 13/16"	16" x 20" x 14"	1	(2) - 18"	Galvanized	90.00
BKS-3-1620-14-18TS	84" x 25" 13/16"	16" x 20" x 14"	1	(2) - 18"	Stainless Steel w/ End Bracing	99.00

WH-1

MANUFACTURER AND MODEL NO.: AO SMIT BTH-400 Mxi

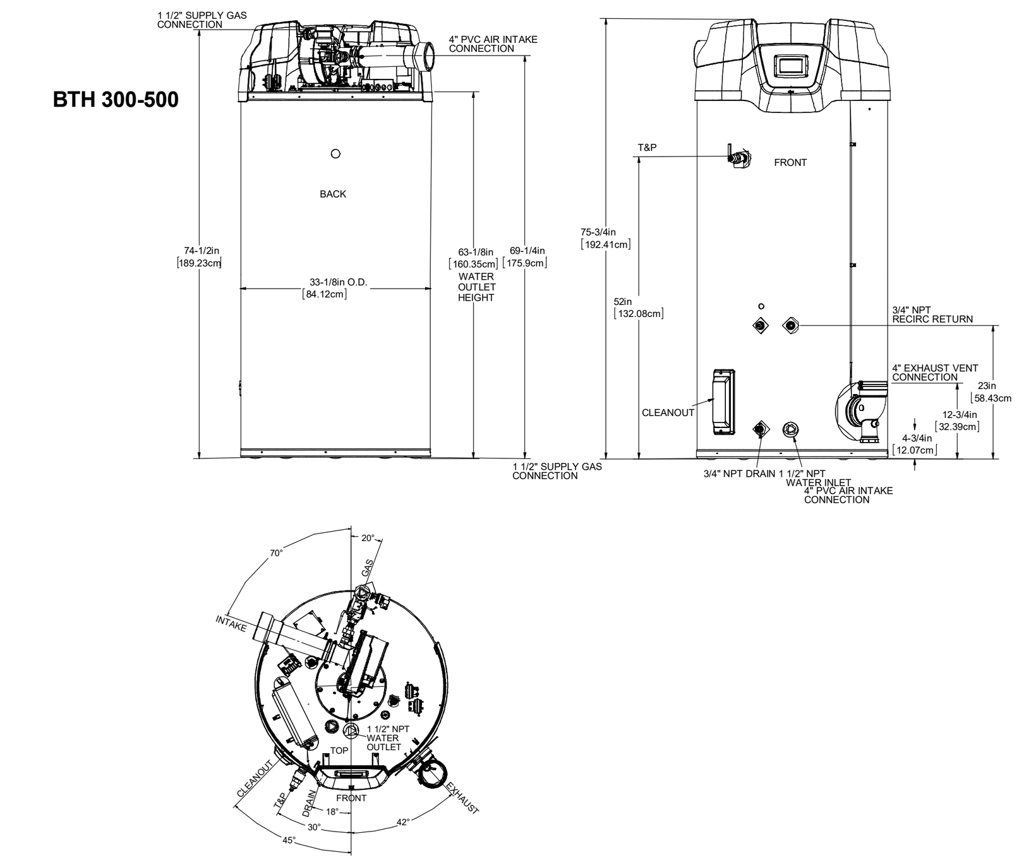
DESCRIPTION: 119 GALLON CAPACITY GAS FIRED WATER HEATER

ACCESSORIES: 399,900 BTUH INPUT, FACTORY INSTALLED POWER CORD. CONCENTRIC VENT KIT NEUTRALIZER KIT 3/4" T&P RELIEF VALVE PROVIDE WITH PIPE COVER ISOLATION VALVE KITS 2 GALLON ZURN EXPANSION TANK.

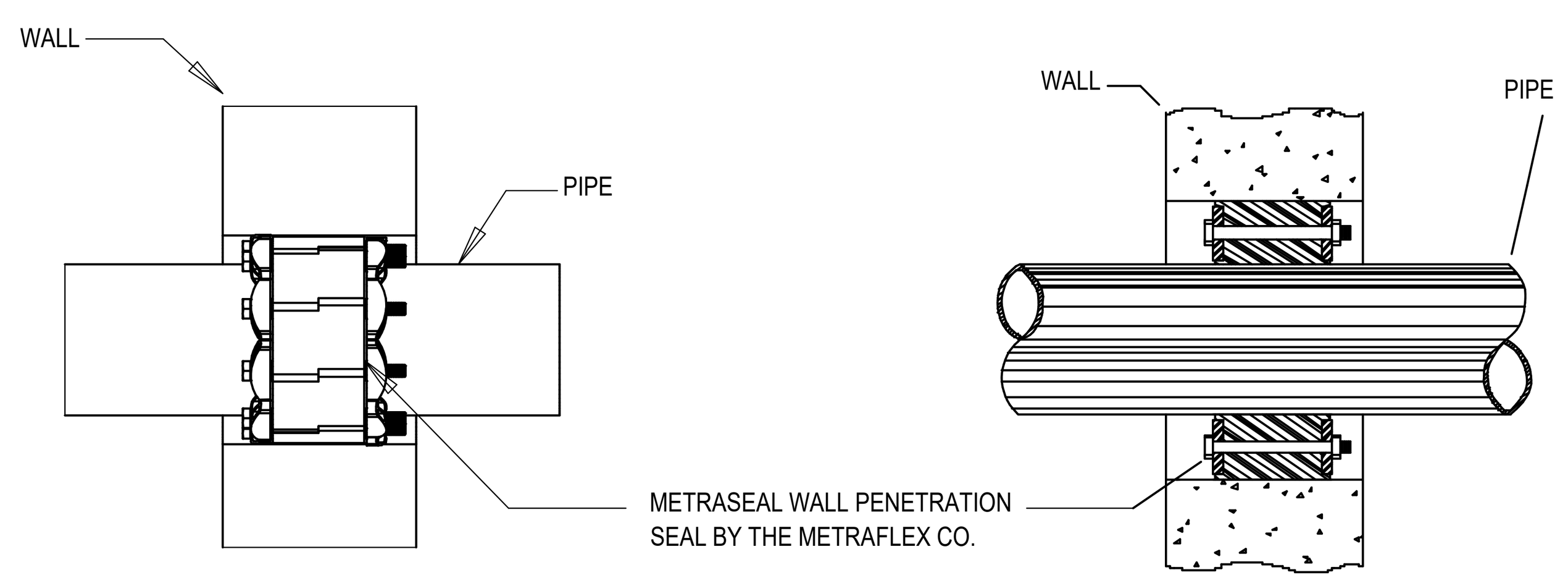
ROUGH IN REQUIREMENTS		
COLD	HOT	DRAIN
1-1/2"	1-1/2"	3/4"

ELECTRICAL		
V	F	A
120 V	60 Hz	5.0 A

BTH 300-500



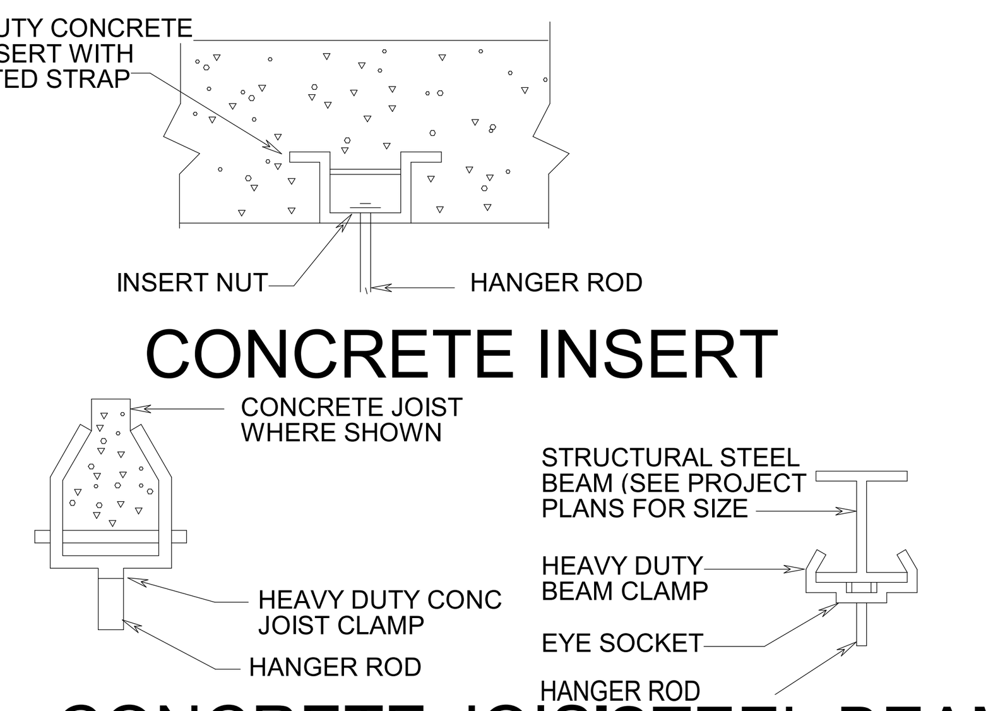
Model Number	Approx. Capacity		Dimensions A	B	C	D	E	F	G	H	I	J	lb/kg	Approx. Shipping Weight Std	Approx. Shipping Weight ASME
BTH-400(A)	Gallons	119	75 3/4	52	33 1/8	4 3/4	4 3/4	63 1/8	12 3/4	69 1/4	74 1/2	23	lb	855	855
	Liters	450.96	192.41	132.08	84.12	12.07	12.07	160.35	32.39	175.9	189.23	58.43	kg	387	387

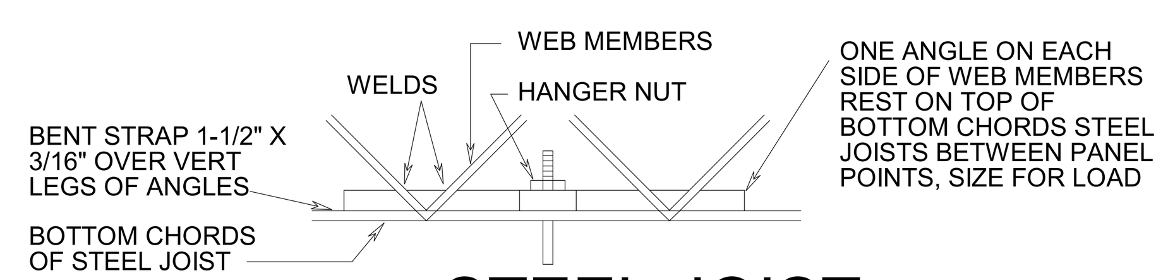


TYPE	SEAL MATERIAL	PRESSURE PLATES	BOLTS & NUTS	TEMPERATURE RANGE (ºF)	APPLICATIONS*
E	EPDM Black	GLASS REINFORCED PLASTIC	STEEL zinc dichoromate	-40 to +250	Suitable for most applications in water, both above ground and direct burial. Provides electrical insulation where cathodic protection is required.
ES	EPDM Black	GLASS REINFORCED PLASTIC	STAINLESS STEEL (18-8)	-40 to +250	Suitable for environments where the corrosion resistance of stainless steel hardware is required.
P	NITRILE	GLASS REINFORCED PLASTIC	STEEL zinc dichoromate	-40 to +210	Resistant to most hydrocarbons, oil, gas, jet fuel, and many solvents.
PS	NITRILE	GLASS REINFORCED PLASTIC	STAINLESS STEEL (18-8)	-40 to +210	Same as above but with corrosion resistance of stainless steel hardware.
HT	Silicone	STEEL ZINC DICHOROMATE	STEEL zinc dichoromate	-40 to +400	High temperature applications.

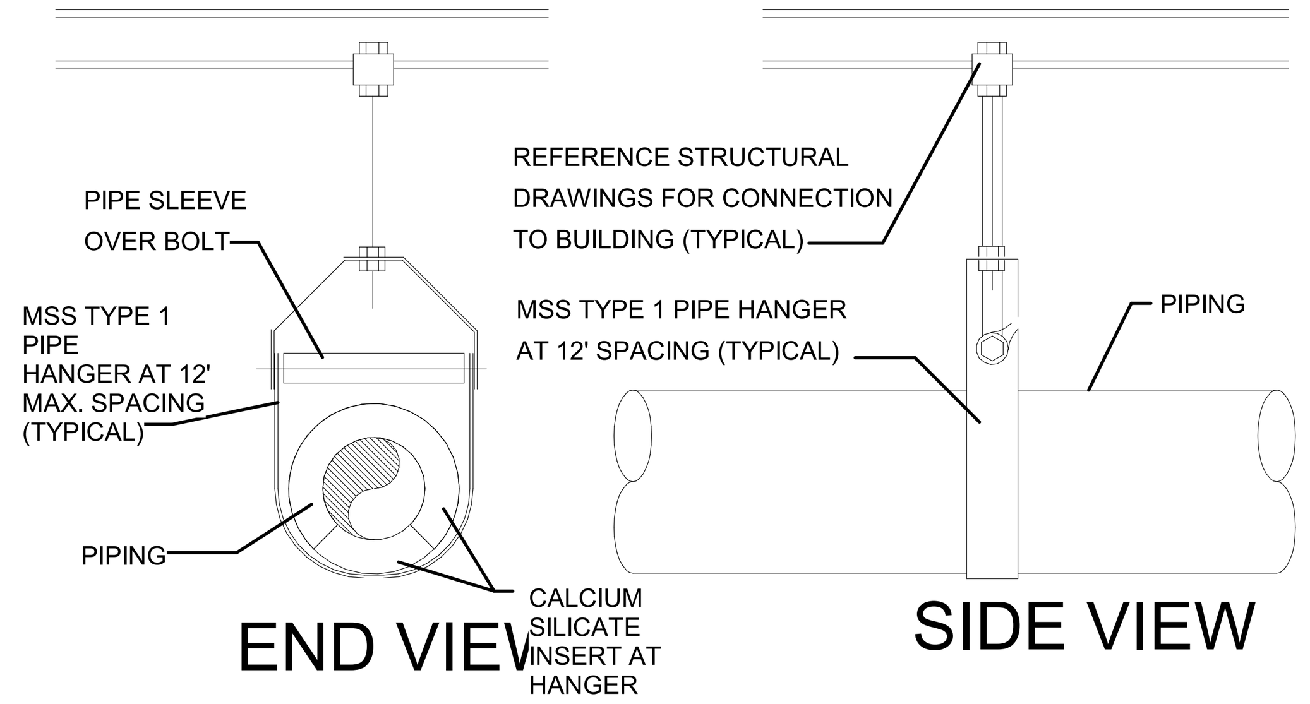
1 P-102 PIPE THRU EXTERIOR WALL-METRAFLEX
N.T.S

HANGER ROD SCHEDULE			
PIPE SIZE	ROD SIZE	PIPE SIZE	ROD SIZE
UP TO 2"	3/8" DIA	4" THRU 6"	5/8" DIA.
2-1/2" TO 3"	1/2" DIA	6" THRU 12"	7/8" DIA.

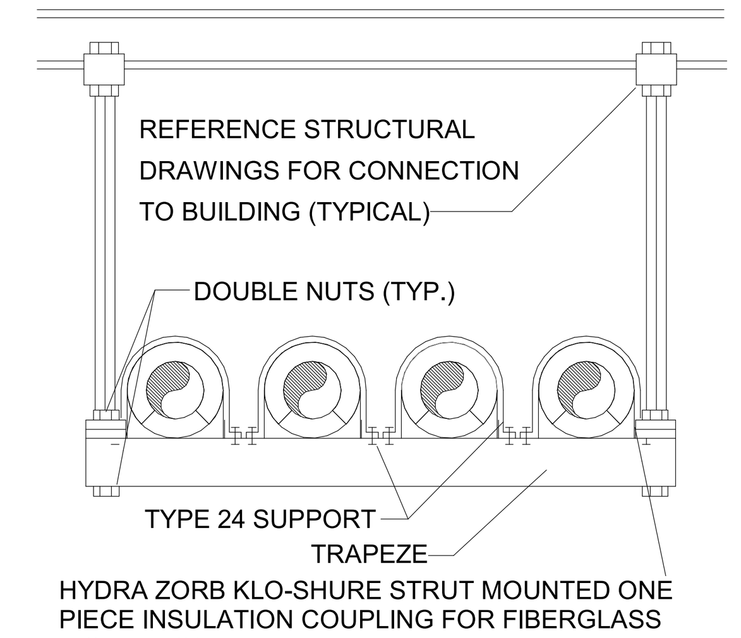




ANCHOR TYPES - WHEN NOT SPECIFIED BY STRUCTURAL

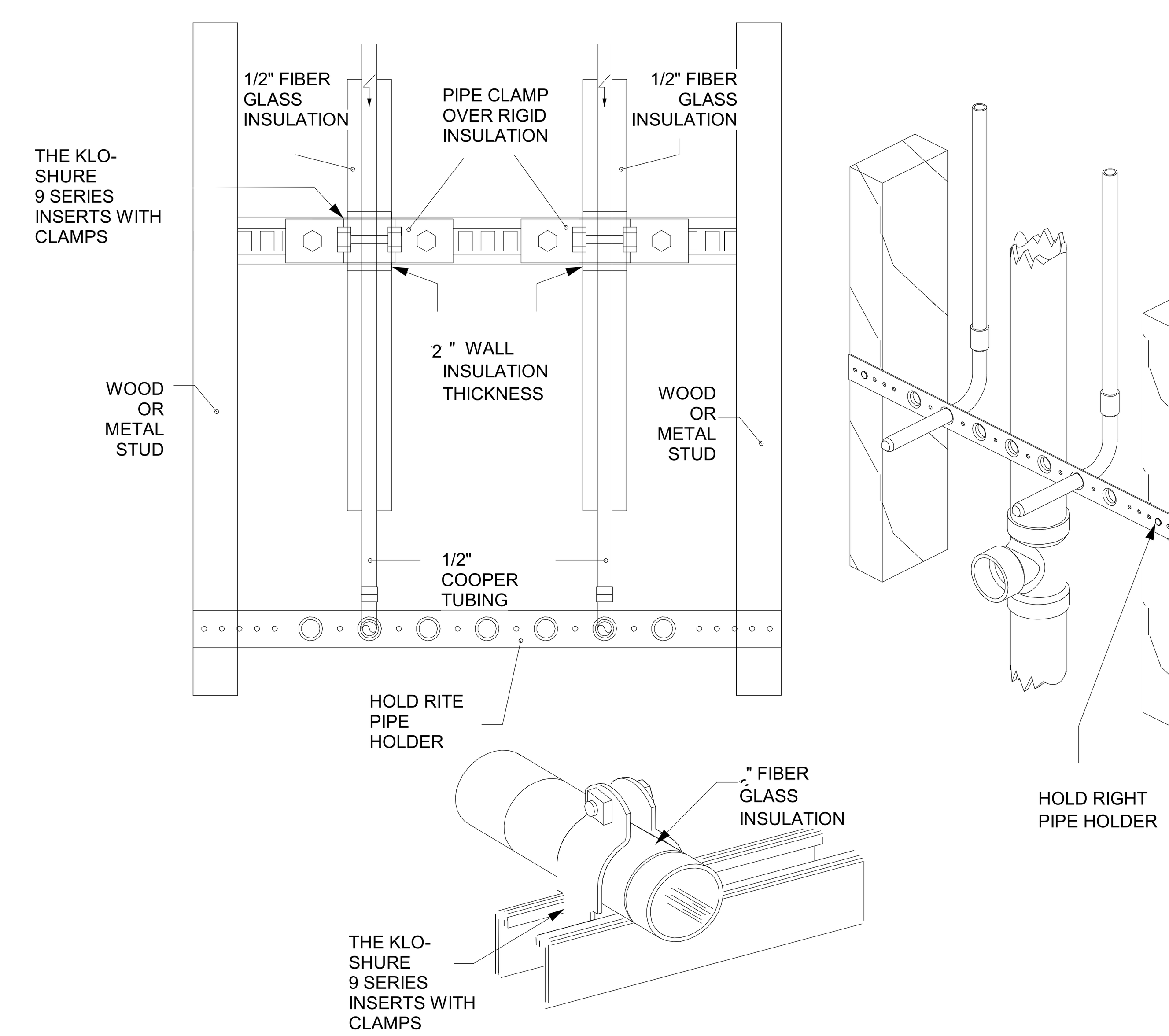


INDIVIDUAL PIPE SUPPORT



MULTIPLE TRAPEZE PIPE SUPPORT

2 P-102 PIPE HANGER SCHEMATICS
N.T.S



3 P-102 LAVATORY PIPING WALL SUPPORT SCHEMATIC
N.T.S

Countryman & Co.
Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

AEG
2431 E. YANDELL DR. EL PASO TEXAS, 79903 P.915.219.4901 F. 915.219.5298
WWW.AEGELPASO.COM TEXAS ENGINEERING FIRM F-11396

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JORGE A. SILVA 89142

TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: AEG
PROJECT NO: 2022-16
ISSUED: 10/24/2022

REVISION SCHEDULE:

NO	DATE	DESCRIPTION

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

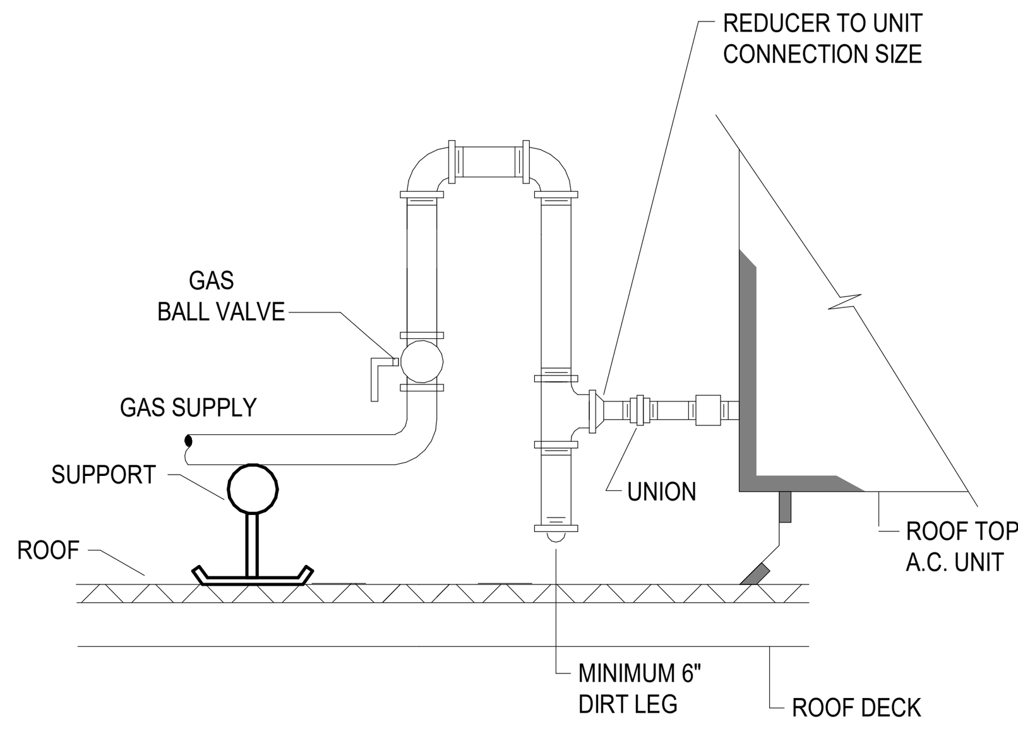
300 OIL MILL DR. | TORNILLO, TX 79853

Project Status

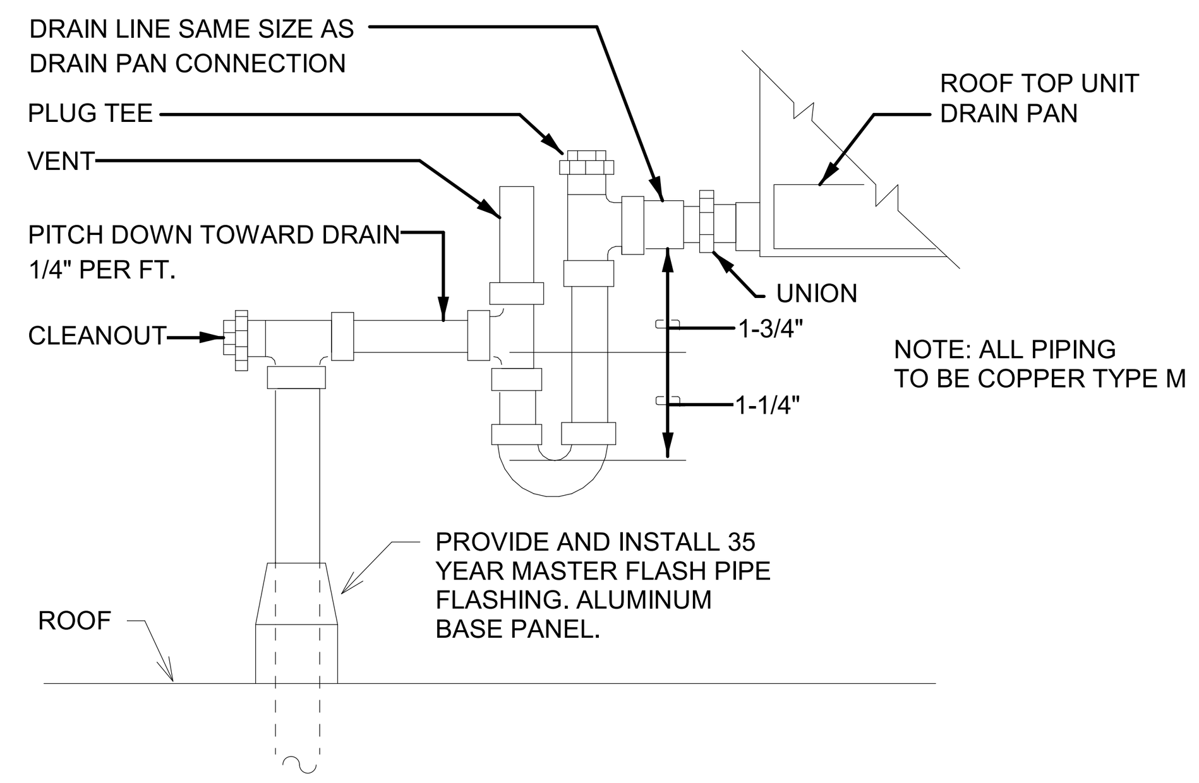
SHEET TITLE:

PLUMBING SCHEDULES & SCHEMATIC

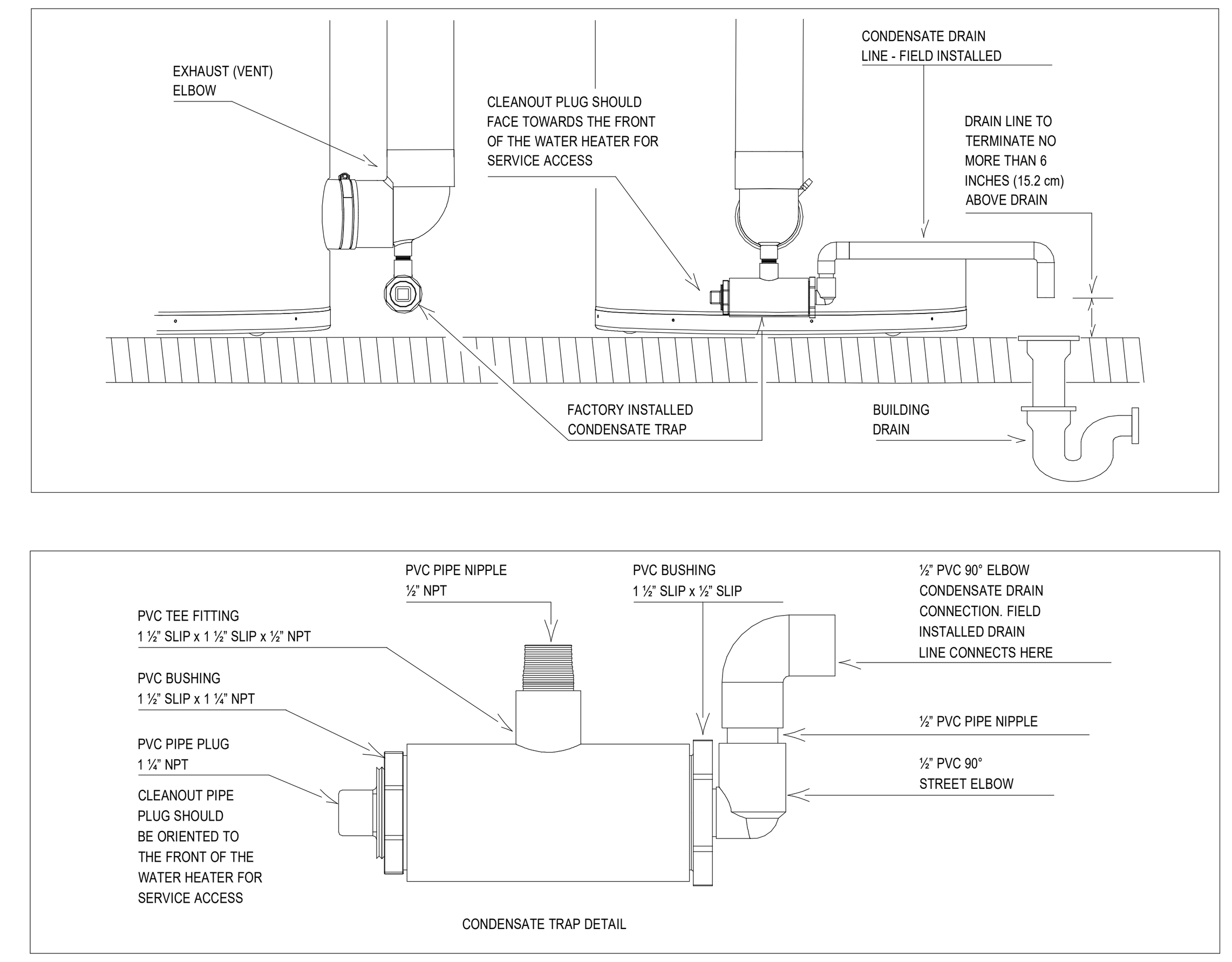
P-102



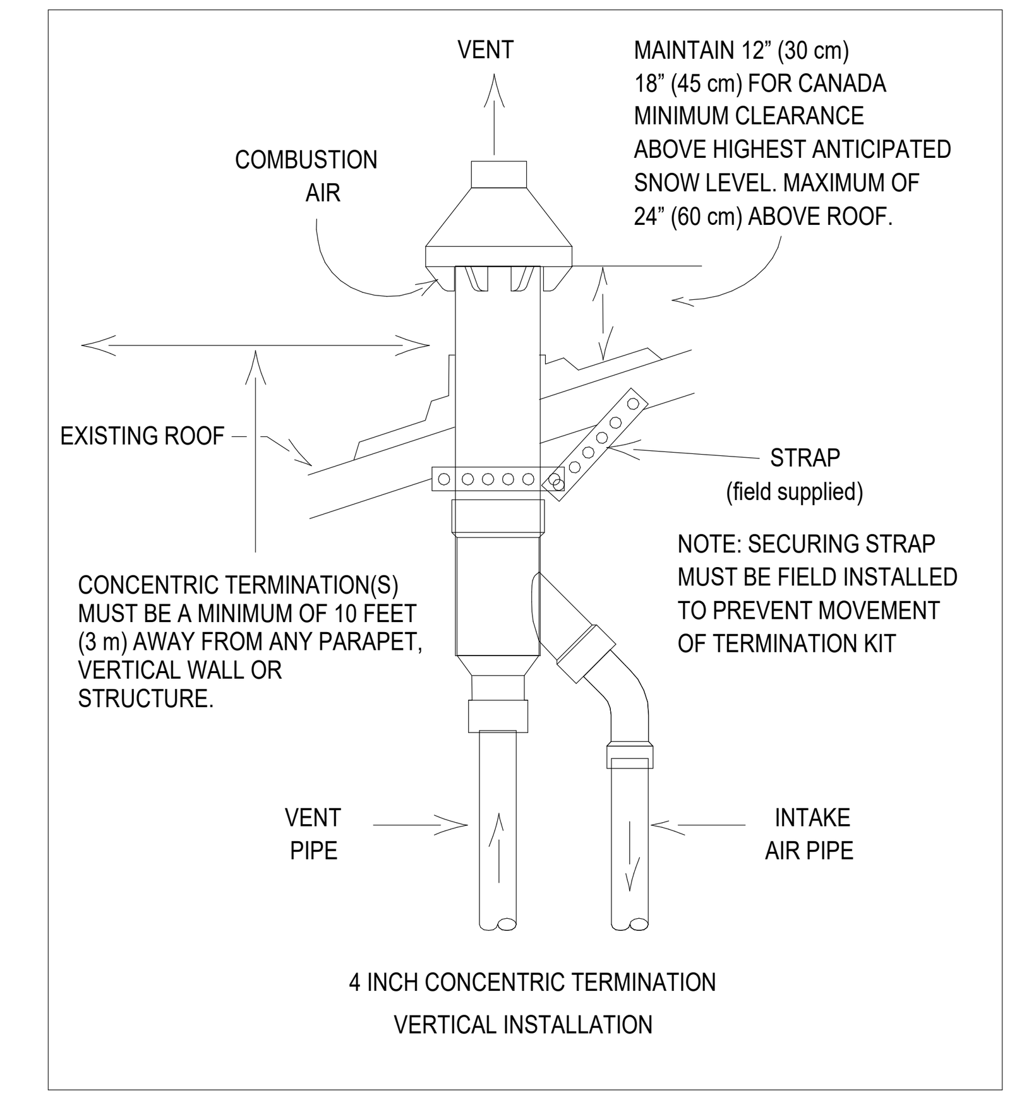
1 P-103 ROOF GAS PIPE SUPPORT & CONNECTION SCHEMATIC
N.T.S



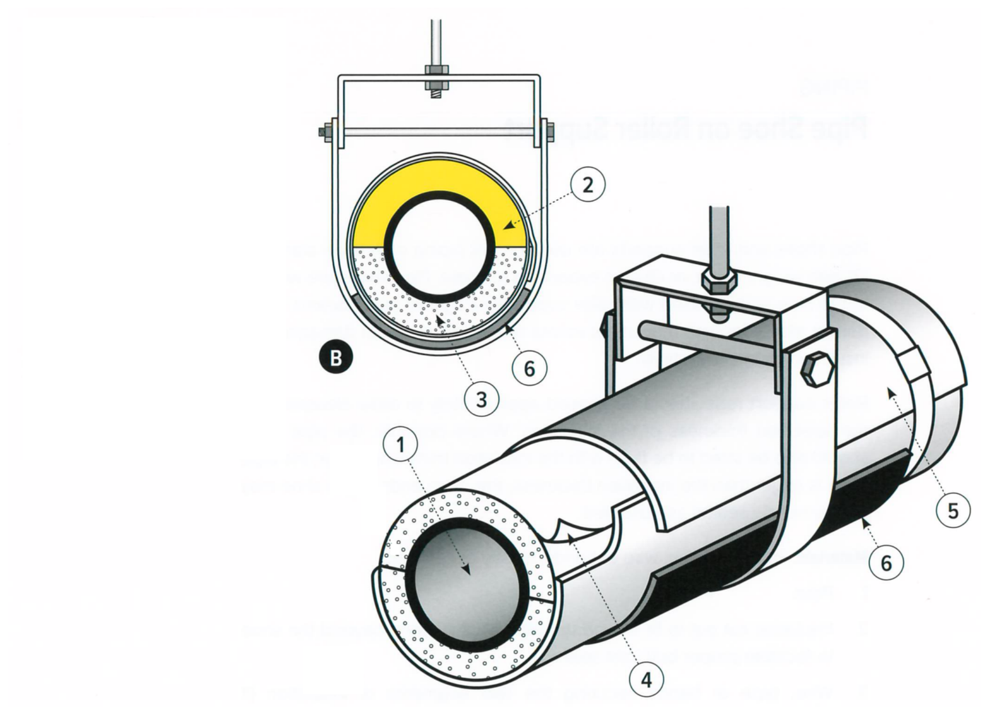
2 P-103 CONDENSATE DRAIN TRAP SCHEMATIC
N.T.S



3 P-103 CONDENSATE KIT INSTALLATION SCHEMATIC
N.T.S



4 P-103 CONCENTRIC TERMINATION VERTICAL INSTALLATION SCHEMATIC.
N.T.S

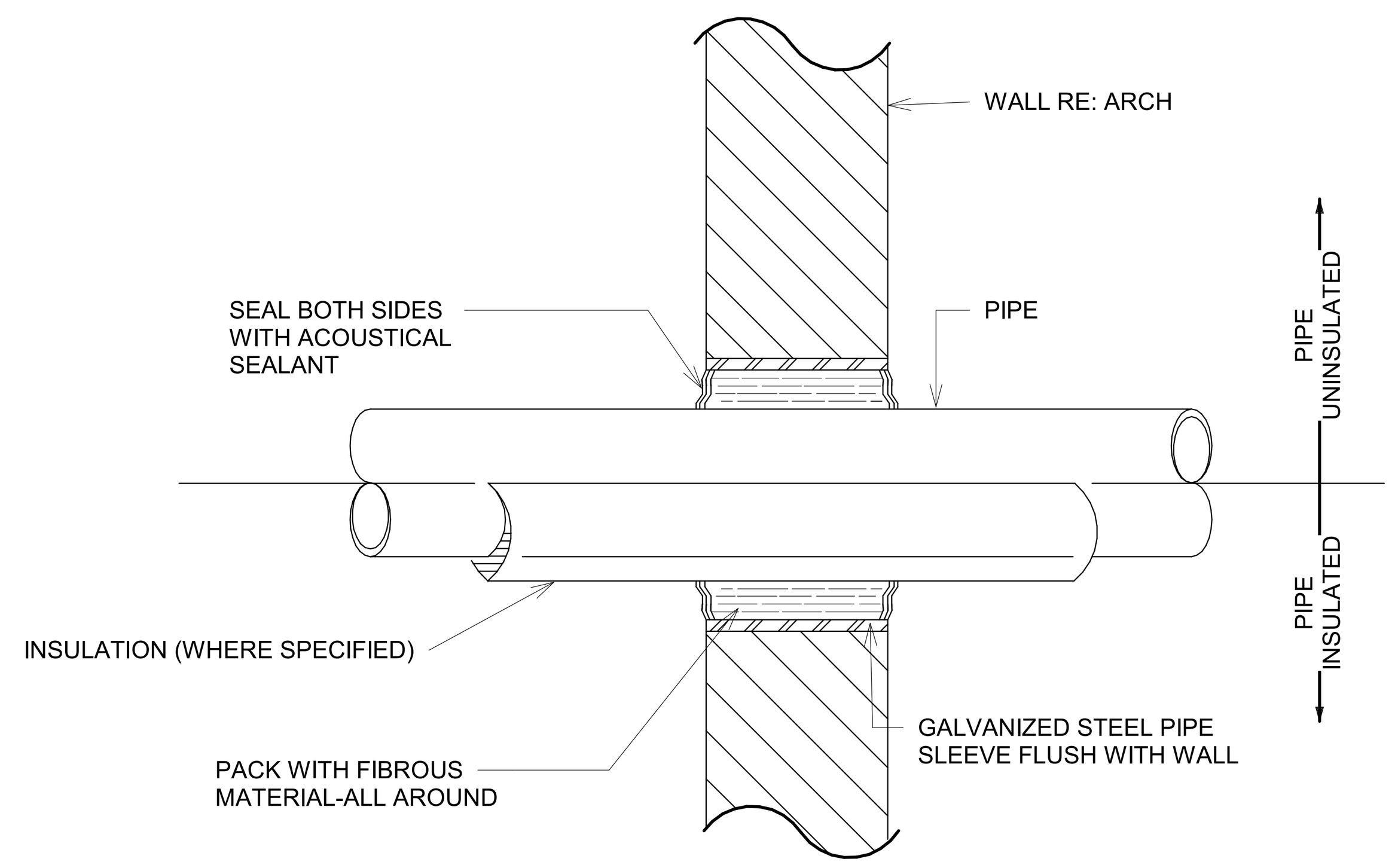


Hot and cold piping insulated with a low density pipe insulation often requires an insert of high density insulation at points of support to prevent the weight of the pipe from crushing the insulation. These inserts may be any one of the high density insulations used for high temperature installations such as calcium silicate and perlite, or anyone of the various cellular and foam insulations used on cold applications.
Clevis hangers should be sized appropriately to al low clearance for the specified thickness of insulation.
Shields mayor may not be supplied by the insulation contractor.
The illustration shows application methods using inserts on cold piping. The use of these inserts is also applicable on hot piping.

Detail B - 1800 high density insulation insert.

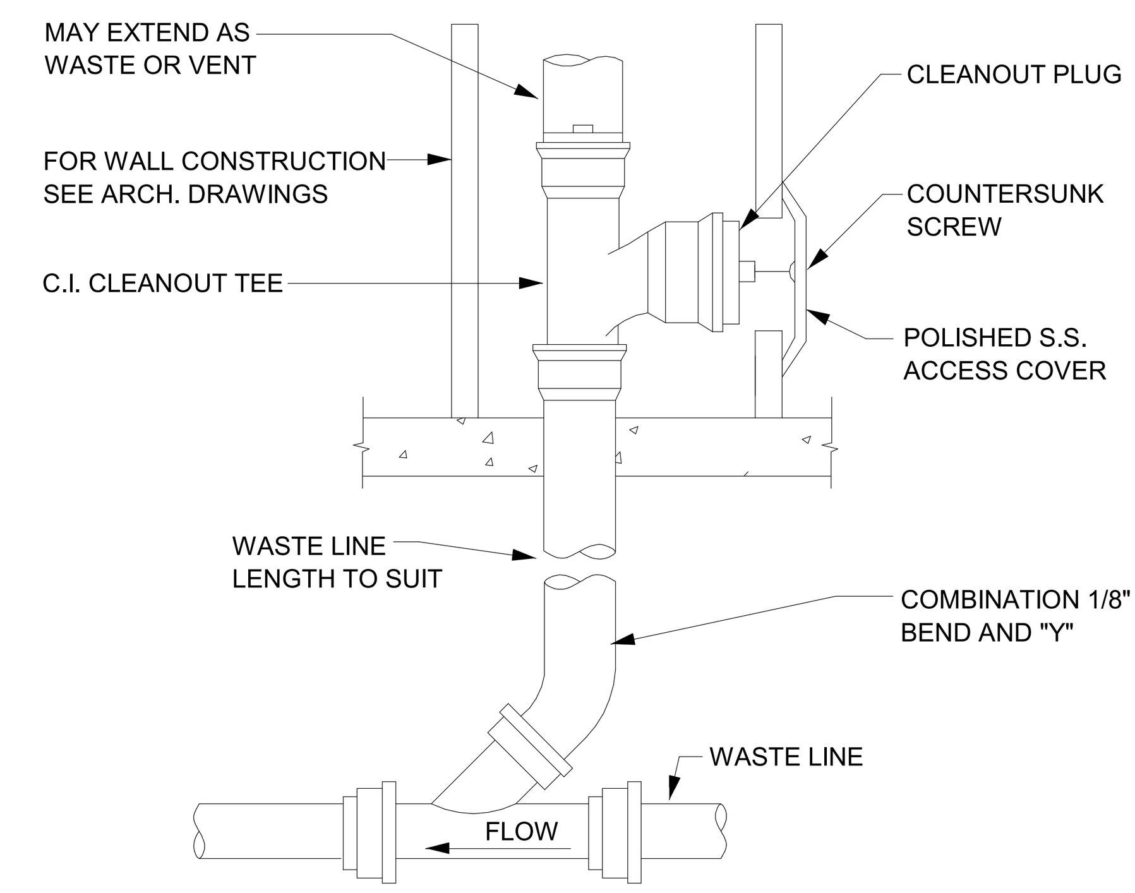
Materials: High density pipe insulation section and shield.
1. Pipe.
2. Insulation (type specified).
3. High density insulation insert.
4. Factory-applied vapor-retarder jacket securing two insulation sections together (cold application).
5. Jacketing (field-applied metal shown).
6. Metal shield.
7. For low temperature applications the insert should be embedded in a vapor retarder mastic.

5 P-103 CLEVIS HANGER- HIGH DENSITY INSERTS SCHEMATIC
N.T.S

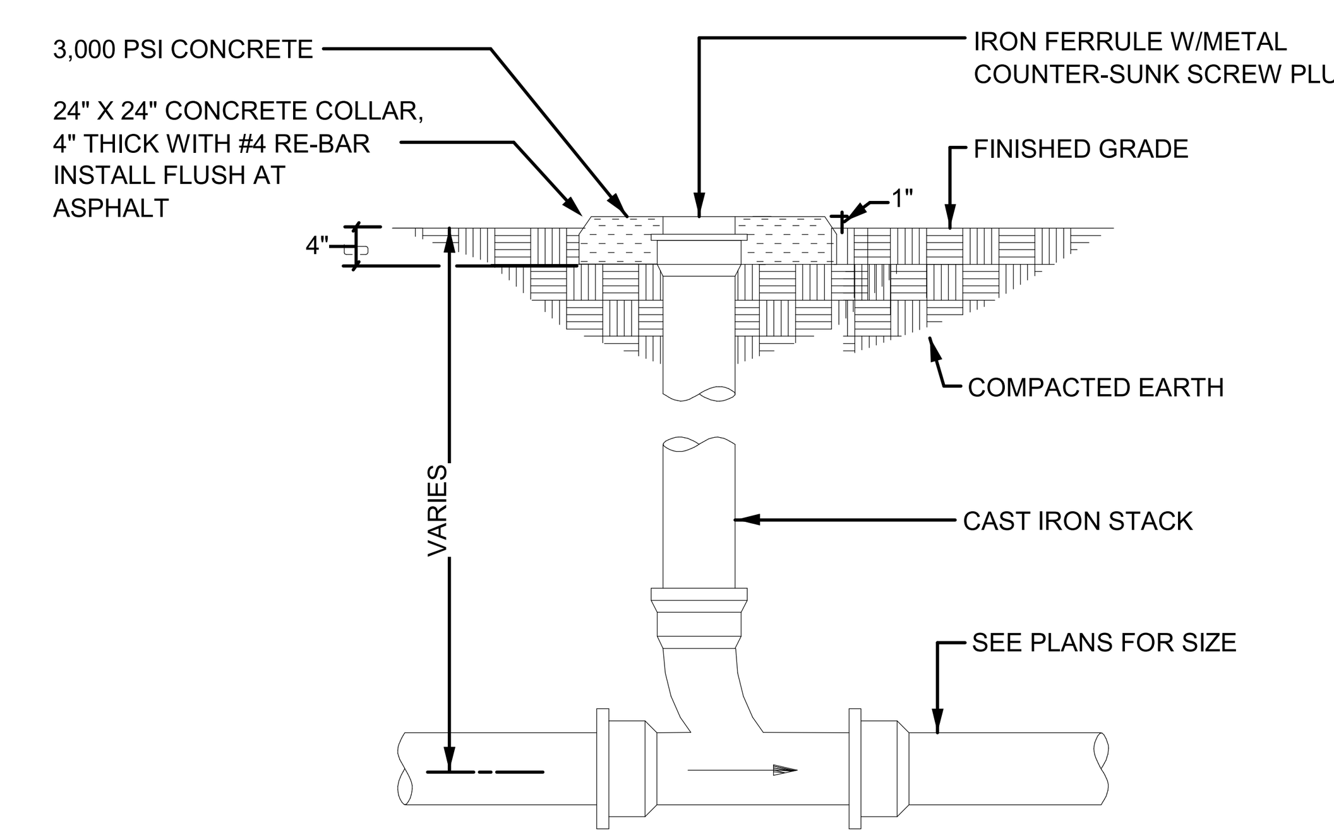


NOTES:
1. WHERE PIPING IS EXPOSED TO VIEW PROVIDE WITH ESCUTCHEON.

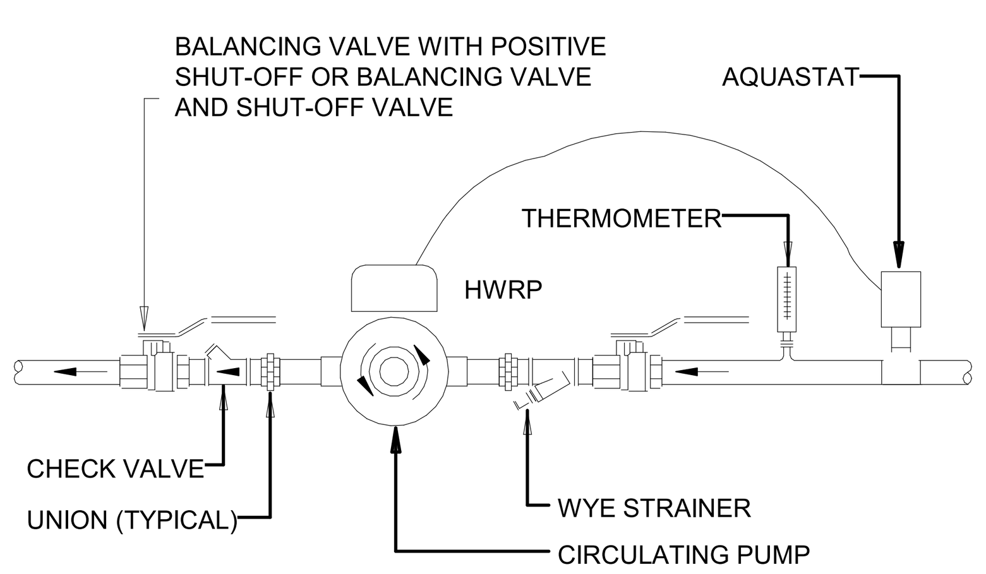
6 P-103 DETAIL - PIPE PENETRATION THRU NON-RATED WALL
N.T.S



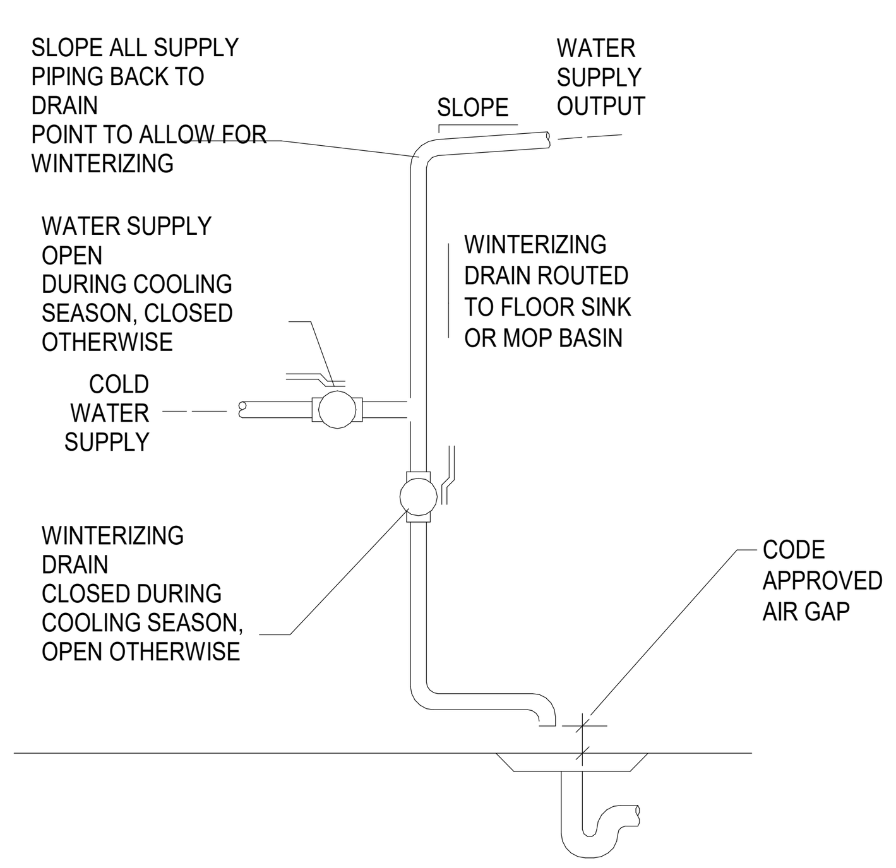
7 P-103 WALL CLEANOUT SCHEMATIC
N.T.S



8 P-103 CLEANOUT TO GRADE DETAIL
N.T.S



9 P-103 RECIRCULATING HOT WATER PUMP SCHEMATIC
N.T.S



10 P-103 EVAPORATIVE COOLER WATER SUPPLY / DRAIN SCHEMATIC.
N.T.S

Countryman & Co.
Architecture
108 SOUTH STANTON . THIRD FLOOR . EL PASO, TEXAS 79901 915.929.1827

AEG
2431 E. YANDELL DR. EL PASO TEXAS, 79903 P.915.219.4901 F. 915.219.5298
WWW.AEGELPASO.COM TEXAS ENGINEERING FIRM F-11396

TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: Author
PROJECT NO: 2022-16
ISSUED: 10/24/2022

REVISION SCHEDULE:

NO	DATE	DESCRIPTION

Project Status

TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

PLUMBING SCHEDULES & SCHEMATICS

P-103

SPECIFICATIONS

Notes:

1. 4" FPT inlet/outlet with 4" plain end adapters, single inlet and triple outlet.
2. Unit weight - w/ cast iron covers: 376 lbs. (For wet weight add 2,310 lbs.)
3. Maximum operating temperature: 150º F continuous
4. Capacities - Liquid: 277 gal.;
   Grease: 1,895 lbs. (260 gal.) @100GPM
   Grease: 1,196 lbs. (164 gal.) @200GPM
   Solids: 69 gal.
5. This unit does not require flow control for 100 GPM applications. Built-in flow control is provided for 200 GPM applications. For series installations, only install flow control on the first unit in the series if necessary.
6. For gravity drainage applications only.
7. Do not use for pressure applications.
8. Cover placement allows full access to tank for proper maintenance.
9. Vent not required unless per local code.
10. Engineered inlet and outlet diffusers with inspection ports are removable to inspect / clean piping.
11. Integral air relief / Anti-siphon / Sampling access.
12. Adjustable cover adapters provide up to 4" of additional height.
13. Designed for below-grade, above-grade, indoor or outdoor installations.
14. Safety Star®, access restrictor built into each cover adapter, prevents accidental entry to tanks
    (450 lb rating).

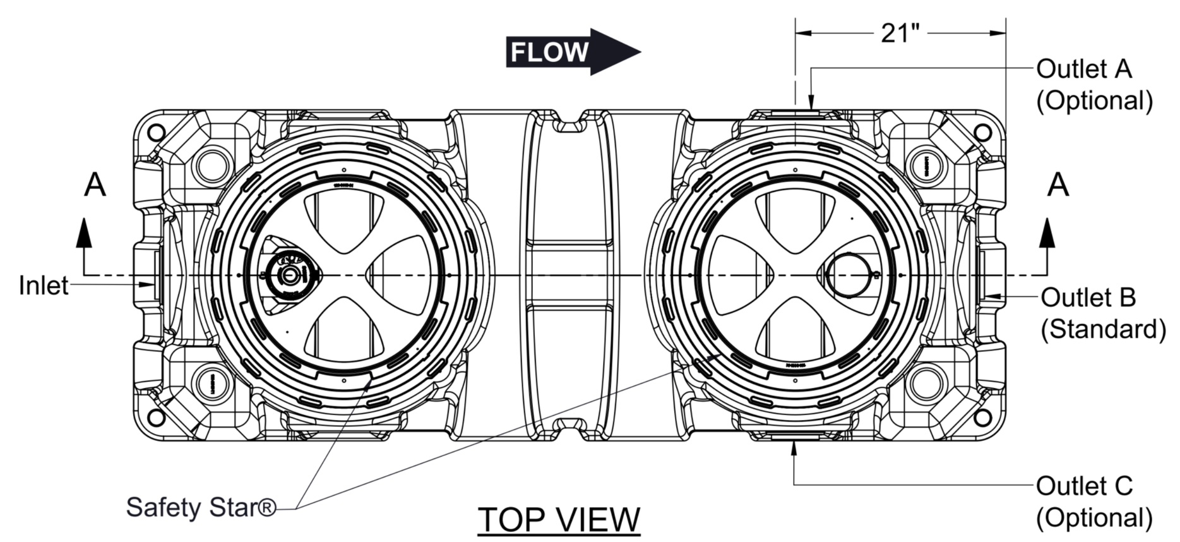
ENGINEER SPECIFICATION GUIDE

Schier Great Basin™ grease interceptor model # GB-250 shall be lifetime guaranteed and made in USA of seamless, rotationally-molded polyethylene with minimum 3/8" uniform wall thickness. Interceptor shall be furnished for above or below-grade installation with adjustable cover adapters, Safety Star® access restrictor built into each cover adapter, built-in flow control (for 200 GPM only) and three outlet options. Interceptor shall be certified to ASME A112.14.3 (Type D for 100 GPM, type C for 200 GPM) and CSA B481.1. Interceptor flow rate shall be 100 GPM or 200 GPM. Interceptor grease capacity shall be 1,895 lbs. @ 100 GPM or 1,196 lbs. @ 200 GPM. Cover shall provide water/gas-tight seal and have minimum 16,000 lbs. load capacity.

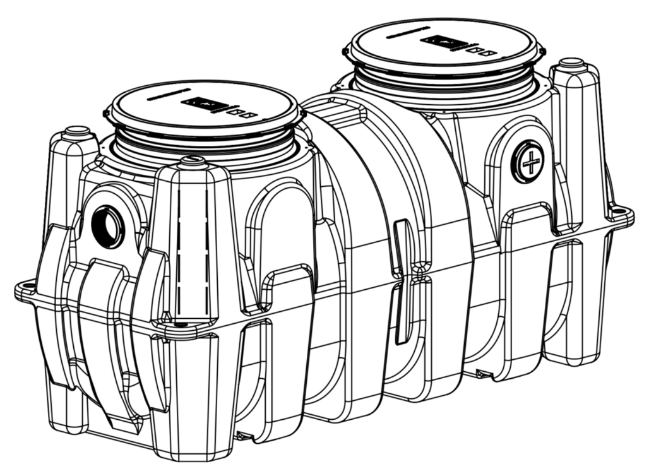
CERTIFIED PERFORMANCE

Great Basin™ hydromechanical grease interceptors are third party performance-tested and listed by IAPMO to ASME #A112.14.3 and CSA B481.1 grease interceptor standards and greatly exceed requirements for grease separation and storage. They are compliant to the Uniform Plumbing Code and the International Plumbing Code.

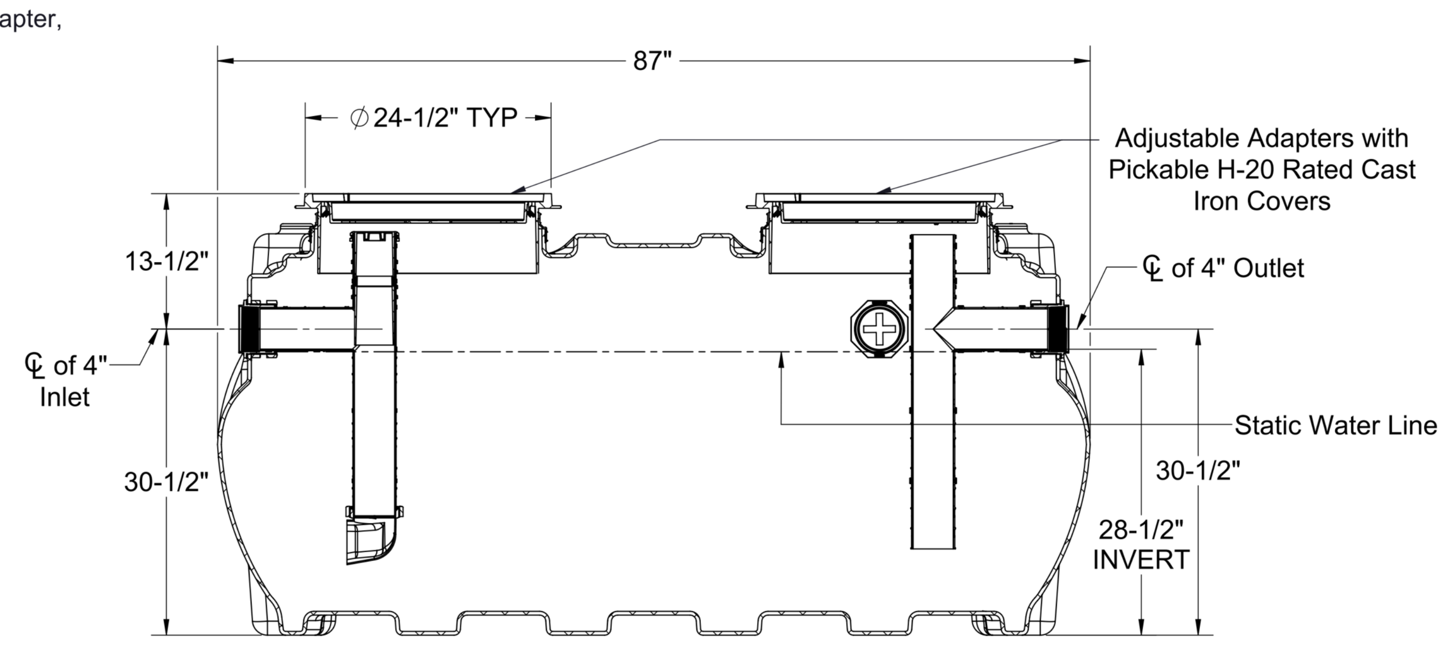
Type D certification does not require a flow control



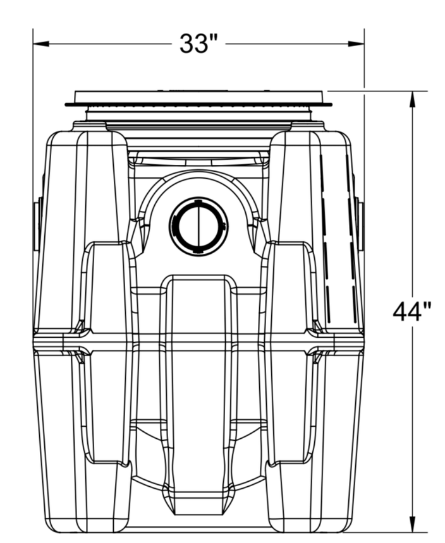
TOP VIEW
(COVERS REMOVED FOR CLARITY)



ISOMETRIC VIEW



SECTION A-A



END VIEW

SPECIFICATION SHEET

MODEL NUMBER:	PART NUMBER: 4055-007-02	SCHIER
GB-250	DESCRIPTION: GB-250 GREASE INTERCEPTOR 100 GPM / 200 GPM, 4" INLET/OUTLET, H-20 RATED CAST IRON COVERS	6455 Woodland Dr Shawnee, KS 66218 Tel: 913-951-3300 Fax: 913-951-3399 schierproducts.com
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SCHIER PRODUCTS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SCHIER PRODUCTS IS PROHIBITED.	DWG BY: C.SINCLAIR DATE: 5/4/2022 REV: - ECO: -	

GREASE INTERCEPTOR CALCULATIONS

Reference No. 44570 — Project Name: Tornillo HS Kitchen

Step 1: Flow rate to grease interceptor

Fixture flow rate: (cu in / 231) = gal x 0.75 / 2 min = 2 min flow rate

NAME	TYPE	DIMENSIONS	QTY	CU IN	FLOW RATE
hand sink	Hand Sink	10" x 14" x 5"	2	1,400	2.26 GPM
ice machine	Ice Machine (with drain)	N/A	1	N/A	0.5 GPM
mop sink	Mop Basin	24" x 24" x 10"	1	5,760	9.35 GPM
pre-rinse	Pre-Rinse Sink One Bowl	20" x 20" x 5"	1	2,000	3.25 GPM
three comp sink	3 Compartment Sink	21" x 21" x 14" (3)	1	18,522	30 GPM
Trench drains	Floor Drain	N/A	4	N/A	N/A
Two Comp Sink	2 Compartment Sink	21" x 21" x 14" (2)	1	12,348	20 GPM
warming table	Warming Table (with drain)	N/A	1	N/A	0.5 GPM
Total					**65.86 GPM**

Step 2: Grease Production

Servings per day x Grease production value x Days between pump-outs = Grease output

Number of meals served per day: 400
Grease production value: 0.0455 lbs per serving (Cafeteria - Full Serve: High / Flatware)
Days between pump-outs: 90 days

400 x 0.0455 x 90 = 1638 lbs of FOG

SCHIER MODEL	
GB-250	**Description:** Polyethylene Grease Interceptor **Dimensions:** Length: 87", Width: 33", Height: 44" **Flow Rates/Grease Capacities:** 100 GPM / 1895.0 lbs **Liquid Capacity:** 277 gal

1 / P-104 **GREASE INTERCEPTOR SUBMITTAL**
N.T.S

AOSmith Innovation has a name.

A. O. Smith
Phone: 1.866.362.9898
www.hotwater.com

Pro-Size Selection Report

October 22, 2022

Project Information

Project #:
Project Name:
Location:
Engineer:
Contractor:
Prepared for:
Prepared by:

Selected Product

BTH-400 Mxi

Cyclone® Mxi Modulating

# Heaters:	1	Heater Recovery:	575 USGPH @ 80 °F Rise
Model Number:	BTH-400 Mxi	1st Hour Delivery:	658 USGPH
Heater Storage (ea):	119 USG	3 Hour Average:	603 USGPH
Input (ea):	399,900 Btu/hr	Est. Storage Recovery:	12 min
New External Tanks:	0	% Of Demand:	110%
Tank Capacity (ea):	0 USG		
Total Usable Storage:	83 USG		

This model is iCOMM COMPATIBLE. iCOMM For info call: 1-888-WATER02

Model Number	Hi Cube Trailer Load Factor	Gallon Capacity	Recovery Capacity GPH 100 Degree Rise	Input BTU/HR	Height	Diameter	Approx. Shipping Weight (lbs.)
BTH-400 Mxi	3.33	119	460	399,900	75.75	33.12	825

- Standard and Low profile concentric vent available
- Vents with PVC, CPVC polypropylene and AL-29-4C Stainless steel
- Venting distances of up to 120' on all models
- Meets or exceed the thermal efficiency and /or standby loss requirements of the U.S. Department of Energy and current edition of ASHRAE/IESNA 90.1
- Meets NSF requirement's (no leg kit needed)
- Up to 98% Thermal Efficiency
- Down-Fired Low-NOx Powered-Burner Design
- Fully Submerged, Spiral-Shaped Condensing Heat Exchanger
- Complies with SCAQMD Rule 1146.2
- Sidewall and Vertical power vent and direct Vent Options
- Space-Saving Design, with Zero Clearance to Combustibles

Application Loads

Summary

Peak Demand: 600 USGPH — Temperature Rise: 80 °F

Application Settings

Type:	Food Service / Restaurant		
Building Use:	Not Specified	Cold Water Temp:	60 °F
Peak Demand Period:	1.00 Hours	Stored Water Temp:	140 °F
Equipment:	Water Heaters Only (no external storage)	Approx. Storage:	25%
		# Storage Tanks:	Not Specified
Fuel Type:	Natural Gas	Existing Storage:	None
Location:	Indoor		

The A. O. Smith Pro-Size sizing program is a tool that can be used to estimate water heater requirements for many common applications. Pro-Size is intended to assist in selecting water heaters or boilers that best meet the specific job requirements. It is the sole responsibility of the system designer to select the correct products needed for the specific application. A. O. Smith reserves the right to make changes to Pro-Size without notice.

Page 1 of 2

October 22, 2022

LoNOx:	Required
UltrasLowNOx:	Not Required
ASME:	Not Required
# Heaters:	Not Specified
Altitude:	Less than 2000 ft

Load Data

Meals Served:	400 Per Day
Vegetable Sinks:	1
Single Pot Sink:	0
Double Pot Sink:	1
Triple Pot Sink:	1
Pre-scraper (open type):	1
Pre-flush (hand operated):	0
Pre-flush (closed type):	0
Recirculating Pre-flush:	0
Bar Sink:	0
Lavatories:	3
Mop/Slop Sink:	2
Dishwasher - Model 1:	1 @ 100 USGPH (140 °F)
Dishwasher - Model 2:	0 @ 0 USGPH (140 °F)
Pot Washer - Model 1:	0 @ 0 USGPH (180 °F)
Pot Washer - Model 2:	0 @ 0 USGPH (180 °F)
Additional Load:	0 USGPH
Design Oversize:	0%

The A. O. Smith Pro-Size sizing program is a tool that can be used to estimate water heater requirements for many common applications. Pro-Size is intended to assist in selecting water heaters or boilers that best meet the specific job requirements. It is the sole responsibility of the system designer to select the correct products needed for the specific application. A. O. Smith reserves the right to make changes to Pro-Size without notice.

Page 2 of 2

2 / P-104 **WATER HEATER SUBMITTAL**
N.T.S

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STATE OF TEXAS — JORGE A. SILVA C. — 89142 — LICENSED PROFESSIONAL ENGINEER

TORNILLO INDEPENDENT SCHOOL DISTRICT

DRAWN BY: Author
PROJECT NO: 2022-16
ISSUED: 10/24/2022

REVISION SCHEDULE:

NO.	DATE	DESCRIPTION

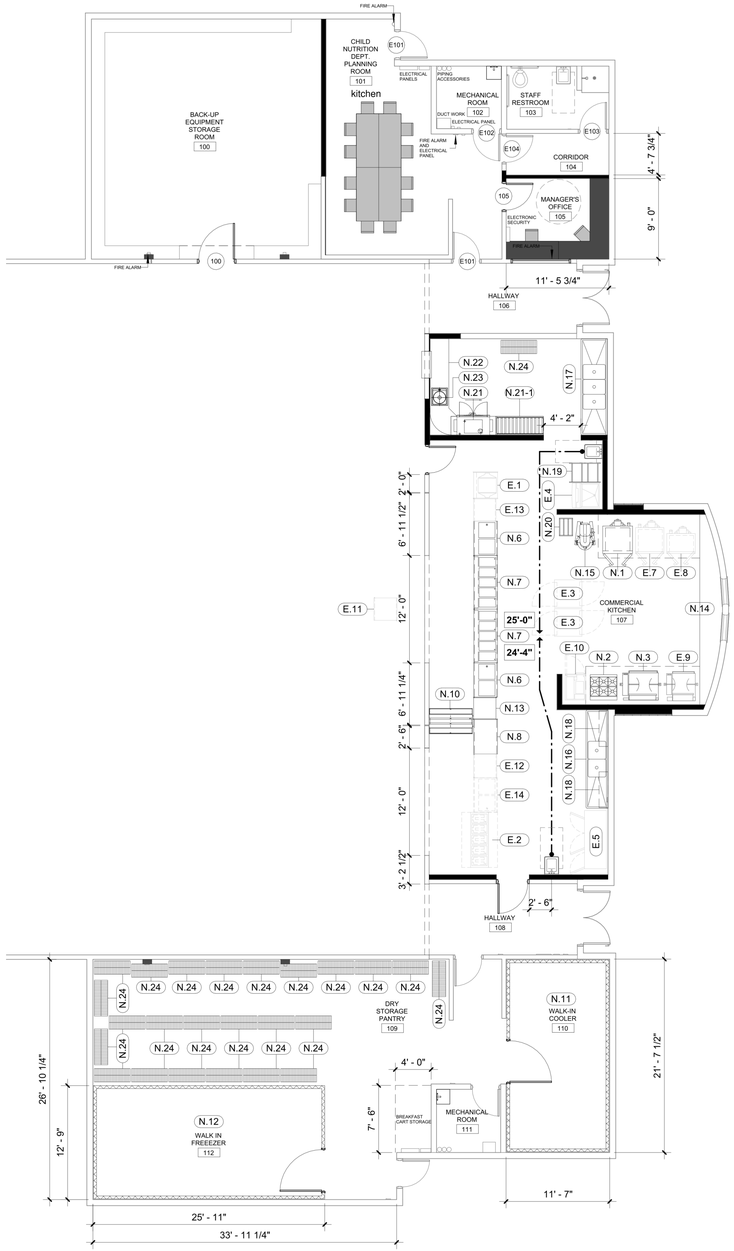
TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

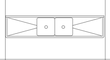
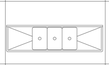
PLUMBING SCHEDULES & SCHEMATICS

Project Status



01 KITCHEN EQUIPMENT PLAN
1/8" = 1'-0"

NEW EQUIPMENT SCHEDULE

NO.	QTY.	SYMBOL	IMAGE	SIZE	DESCRIPTION	MANUFACTURER | MODEL NO.	PROVIDER | INSTALLER
ELECTRIFIED AND | OR PLUMBED EQUIPMENT							
N.1	1			70" H * 40" W * 46 1/4" D	GAS CONVECTION OVEN	VULCAN | VC66GD	OWNER | GC
N.2	1			58" H * 36" W * 34" D	STANDARD OVEN 6 BURNERS PROPANE	VULVAN | 36S-6BP	OWNER | GC
N.3	1			43 1/2 " H * 48 W * 39 1/4" D	GAS TILTING SKILLET BRAISING PAN	GROEN | BPM-40GA	OWNER | GC
N.4					FLOOR TROUGH REFER TO ENGINEER		GC | GC
N.5					EXHAUST HOOD REFER TO ENGINEER		GC | GC
N.6L N.6R	2			36" H * 32" W * 32" D	SERVING COUNTER, COLD FOOD	DUKE | TCM-32PG-N7	OWNER | GC
N.7L N.7R	2			36" H * 72" W * 32" D	SERVING COUNTER, HOT FOOD	DUKE | TEHF-74PG	OWNER | GC
N.8	1			36" H * 46" W * 32" D	SERVING COUNTER, UTILITY	DUKE | TST-46PG	OWNER | GC
N.9	NOT USED			36" H * 30" W * 32" D	CASH REGISTER STAND	DUKE | TCS-30PG	OWNER | GC
N.10	1			47 3/4" H * 58" W * 34" D	MILK COOLER	BEVERAGE AIR | STF58HC-1-W-02	OWNER | GC
N.11	1				WALK-IN COOLER		GC | GC
N.12	1				WALK-IN FREEZER		GC | GC
N.13	1			30" W * 30" D	TABLE		OWNER | GC
N.14	1				CUSTOM STAINLESS STEEL TABLE		GC | GC
N.15	1			26 1/2" W * 26 9/16" D * 47 1/8" H	40 QUARTS MIXER	VOLLRATH | MIX1040	OWNER | GC
N.16	1				CUSTOM 2 COMPARTMENT SINK WITH STAINLESS STEEL DRAIN BOARDS	CUSTOM EQUIPMENT	GC | GC
N.17	1				CUSTOM 3 COMPARTMENT SINK	CUSTOM EQUIPMENT	GC | GC
N.18	2			12" D * 48" L	WALL MOUNTED SHELF	ADVANCE TABCO.| WS-12-48	OWNER | GC
N.19	2			20 1/4" W * 26 1/2" L * 69" H	20 PAN ALUMINUM PAN RACK WA CASTERS KTI	KLINGER'S TRADING, INC.| PANRACK20	OWNER | OWNER
N.20	1			24" W * 18" D * 8" H	ALUMINUM DUNNAGE RACK	GLOBAL INDUSTRIAL| 799142	OWNER | OWNER
N.21 N.21-1	1 1				RACK CONVEYOR DISHWASHING MACHINE (R-L) ROLLER CONVEYOR TABLE	CHAMPION| 44 DR CHAMPION| RCT64 TABLE	GC | GC
N.22	1				CUSTOM STAINLESS STEEL TABLE	CUSTOM EQUIPMENT	GC | GC
N.23	1			24 1/2" W * 26 13/16" L	SCRAP COLLECTOR	SALVAJOR | S914	OWNER | GC
N.24	25			18" D * 48" L	EPOXY SHELF WITH LOCKING WHEELS		OWNER | OWNER

EXISTING EQUIPMENT SCHEDULE

NO.	QTY.	SYMBOL	IMAGE	SIZE	DESCRIPTION	MANUFACTURER | MODEL NO.	PROVIDER | INSTALLER
ELECTRIFIED AND | OR PLUMBED EQUIPMENT							
E.1	1			36 1/4" W * 33" D	REFRIGERATOR SELF-SERVICE CASE (MILK COOLER	OASIS | CO34R	EXISTING | GC
E.2	1			74" L * 48" D	5 BIM WARMER	DUKE | EP305-25	EXISTING | GC
E.3	2			35" W * 36 7/8" D	ROLL-THRU SOLID DOUBLE DOORS HEATED CABINET	TRUE | TG1HRT-1S-1S	EXISTING | GC
E.4	1			33" W * 37" D	ICE STORAGE BIN	SCOTSMAN | B530P	EXISTING | GC
E.5	1			78 1/8" L * 29 1/2" D	3 SOLID DOOR REFRIGERATOR	TRUE | T-72	EXISTING | GC
E.6	NOT USED						EXISTING
E.7	1			38" W * 44 7/8" D	GAS CONVECTION OVEN	IMPERIAL	EXISTING | GC
E.8	1			38 1/4" W * 36 7/8" D	GAS CONVECTION OVEN	BLODGETT | DFG-200	EXISTING | GC
E.9	1			38 1/2" W * 39 1/4" D	BRAISING PAN	GROEN ECLIPSE | M-30G	EXISTING | GC
E.10	1			27 1/2" W * 34 7/8" D	HEATED HOLDING CABINET	MCCALL | 4020-HP	EXISTING | GC
E.11	1			30" W * 31" D	REGISTER STAND		
E.12	1			32" W * 31" D	TABLE		
E.13	1			30" W * 30" D	TABLE		
E.14	1			36" H * 32" W * 32" D	SERVING COUNTER, COLD FOOD	DUKE | TCM-32PG-N7	EXISTING | GC

LEGEND

EQUIPMENT
REFER TO KITCHEN EQUIPMENT SCHEDULE

FURNITURE
OWNER PROVIDED | OWNER INSTALLED

MILLWORK
CONTRACTOR PROVIDED | CONTRACTOR INSTALLED

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TORNILLO INDEPENDENT SCHOOL DISTRICT CAFETERIA CONVERSION

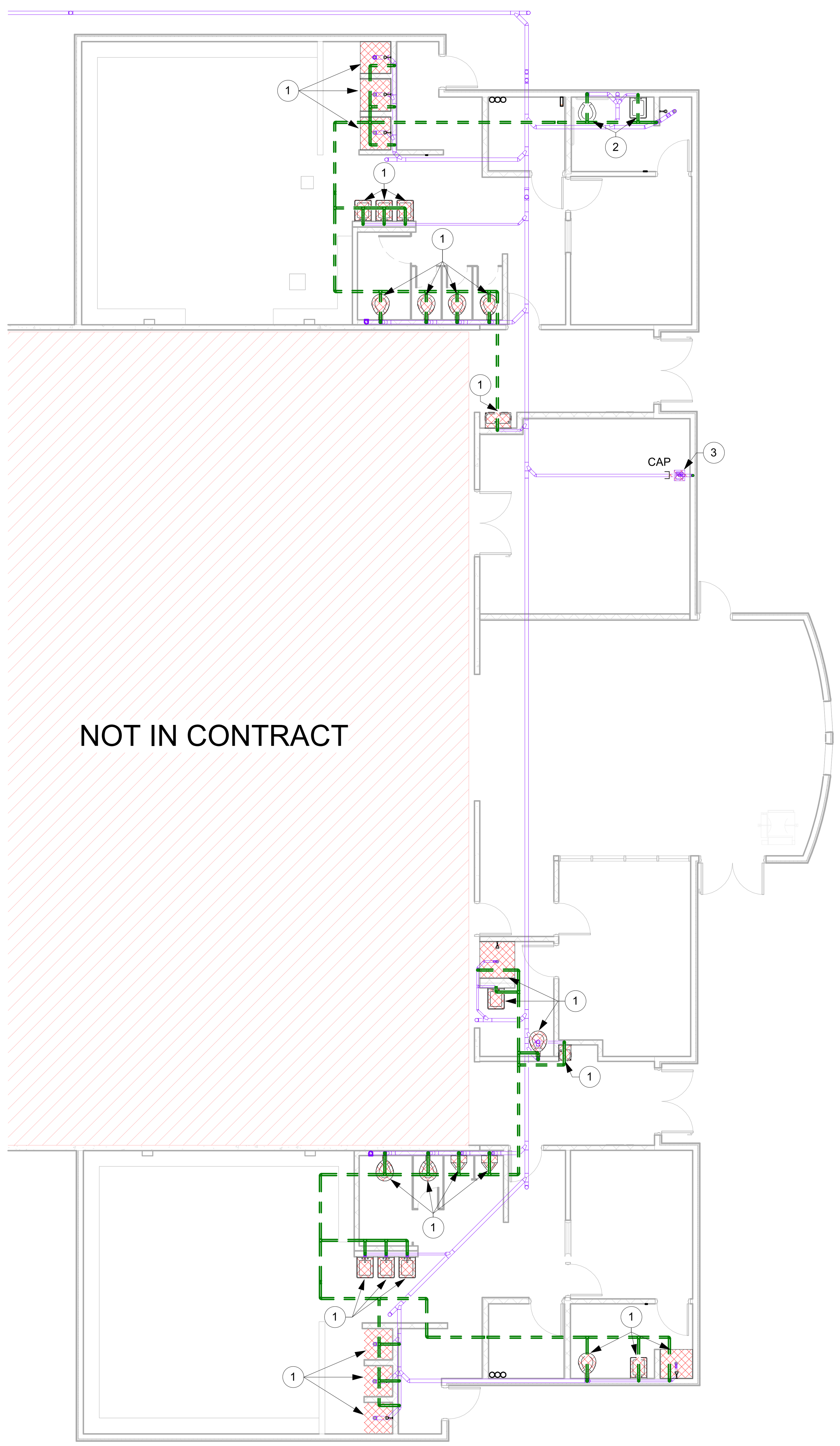
300 OIL MILL DR. | TORNILLO, TX 79853

SHEET TITLE:

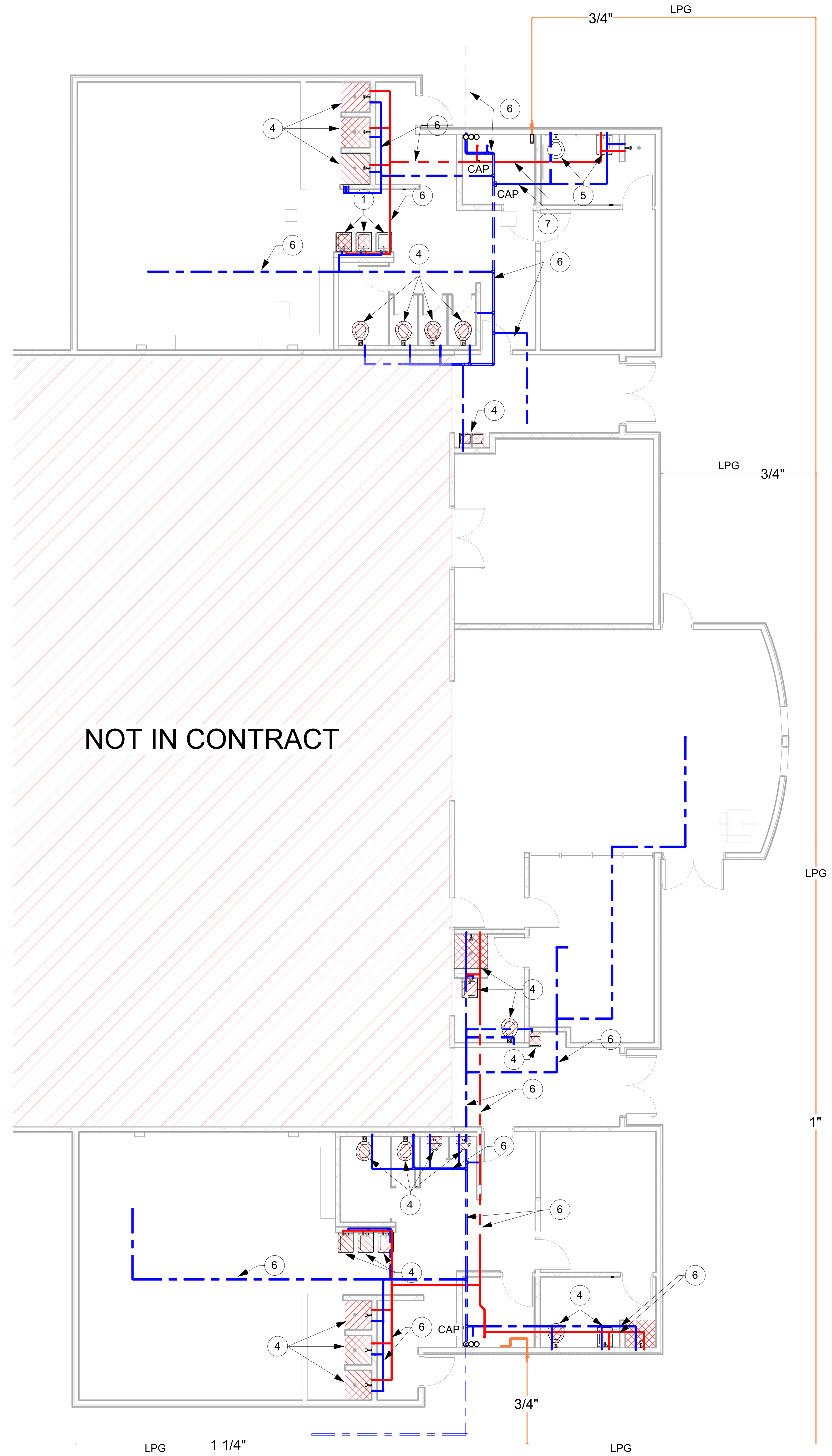
PLUMBING SCHEDULES & SCHEMATICS

Project Status

P-105



1 P-200 **1ST LEVEL WASTE & VENT PLUMBING DEMOLITION PLAN**
1/8" = 1'-0"



2 P-200 **HOT & COLD WATER PLUMBING DEMOLITION PLAN**
1/8" = 1'-0"

KEYED NOTES

1. HOT AND COLD WATER, SEWER AND VENT LINES ASSOCIATED WITH PLUMBING FIXUTRE SHALL BE REMOVED AND CAPPED BACK TO MAIN. PATCH WALL AS REQUIRED TO MATCH EXISTING.
2. EXISTING FIXTURE UNIT SHALL REMAIN UNDISTRUBED.
3. EXISTING FLOOR SINK SHALL BE REMOVED FROM SITE. NEW FLOOR SINK SHALL BE INSTALLED IN THE SAME PLACE. ASSOCIATED SEWER LINE SHALL BE CAPPED BACK TO ALLOW SPACE FOR NEW SEWER LINE.
4. PLUMBING FIXTURES SHALL BE REMOVED FROM SITE. HOT AND COLD WATER, SEWER AND VENT LINES ASSOCIATED WITH PLUMBING FIXTURE SHALL BE CAPPED BACK TO WALL AND BE ABANDONED IN PLACE.
5. EXISTING FIXTURE UNIT SHALL REMAIN UNDISTURBED.
6. EXISTING DOMESTIC WATER LINE SHALL BE ABANDONED IN PLACE.
7. PIPE SEGMENT SHALL BE REMOVED AND CAPPED BACK TO MAIN. REMAINDER OF PIPING SERVING RESTROOM SHALL REMAIN AND SERVE AS POINT OF CONNECTION FOR NEW DOMESTIC WATER PIPING.

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STATE OF TEXAS
JORGE A. SILVA C.
89142
PROFESSIONAL LICENSED ENGINEER

TORNILLO INDEPENDENT SCHOOL DISTRICT

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SHEET TITLE:

PLUMBING DEMOLITION PLAN

Project Status

P-200

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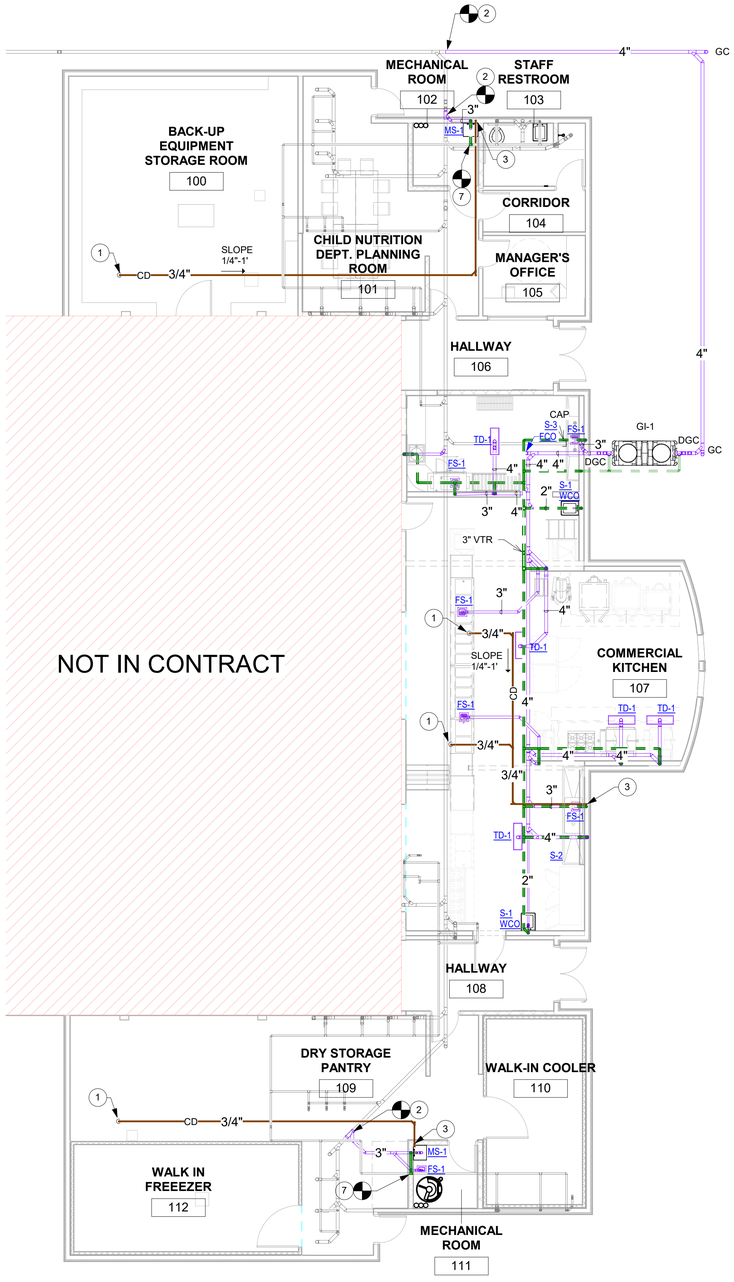
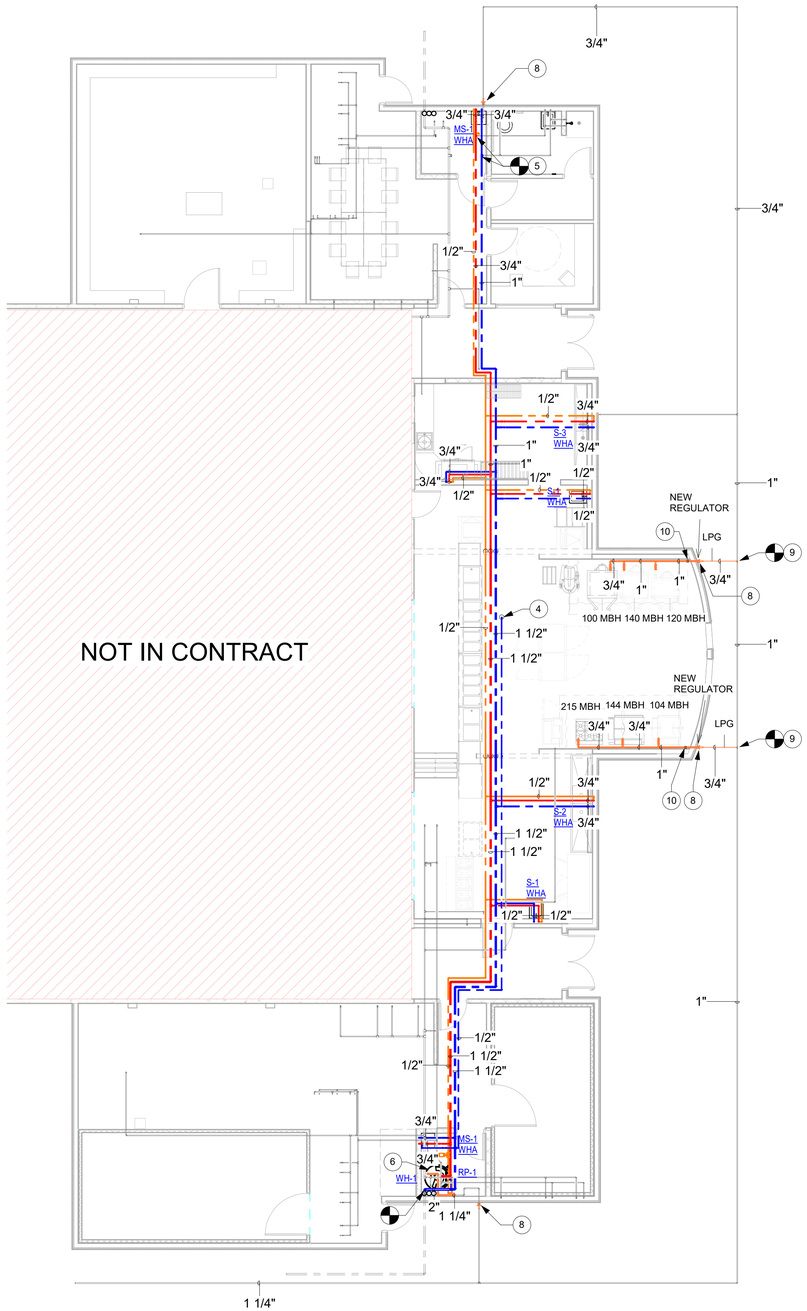


1 P-300 1ST LEVEL WASTE & VENT PLUMBING IMPROVEMENT PLAN
1/8" = 1'-0"



2 P-300 1ST LEVEL HOT & COLD WATER PLUMBING IMPROVEMENT PLAN
1/8" = 1'-0"

ALL NEW ND EXISTING GAS PIPING SHALL BE TESTED PER 2015 IFGC.

KEYED NOTES

1. 3/4" CONDENSATE DRAIN LINE DOWN FROM ROOF TOP UNIT. INSULATE ALL PIPING AS SPECIFIED.
2. CONNECT NEW SEWER LINE TO EXISTING SEWER MAIN.
3. EXTEND CONDENSATE DRAIN LINE OVER MOP SINK. TERMINATE 1".
4. DOMESTIC WATER PIPE GOES UP TO MAKE UP AIR UNIT EVAPORATIVE MODULE. REFER TO EVAPORATIVE COOLER WATER SUPPLY/DRAIN SCHEMATIC.
5. CONNECT NEW WATER PIPING TO EXISTING WATER PIPING SERVING RESTROOM PLUMBING FIXTURES.
6. EXTEND (2) 4" SCH 40 PVC PIPES FROM NEW WATER HEATER AND CONNECT TO CONCENTRIC AO SMITH VENT KIT. REFER TO SCHEMATIC PLANS FRO MORE INFORMATION. ALIGN VENT THROUGH EXISTING ROOF PENETRATION.
7. CONNECT VENT SERVING NEW FIXTURES TO EXISTING VENT PIPING.
8. PROVIDE AND INSTALL NEW LPG REGULAR CAPABLE OF HANDLING LISTED PEAK LOAD DEMAND AT A DISCHARGE PRESSURE OF 14" W.C.
9. CONNECT NEW P.E. GAS LINE TO EXISTING GAS MAIN.
10. CONTRACTOR SHALL INSTALL NEW GAS SOLENOID VALVE, INTERLOCK WITH ANSUL/KITCHEN VENTILATION SYSTEM.

GAS LOAD DEMAND CALCULATION

MARK	DESCRIPTION	MBH
N-1	CONVECTION OVEN	100
N-2	RANGE / OVEN	215
N-3	TILTING SKILLET	144
E-7	DOUBLE OVEN	160
E-8	DOUBLE OVEN	120
E-9	TILTING SKILLET	104
RTU-OFFICE	PACKAGED ROOF TOP	67.2
RTU-PSNTRY	PACKAGED ROOF TOP	67.2
RTU-KITCHEN	PACKAGED ROOF TOP	100.8
WH-1	WATER HEATER	399

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PLUMBING IMPROVEMENT PLAN

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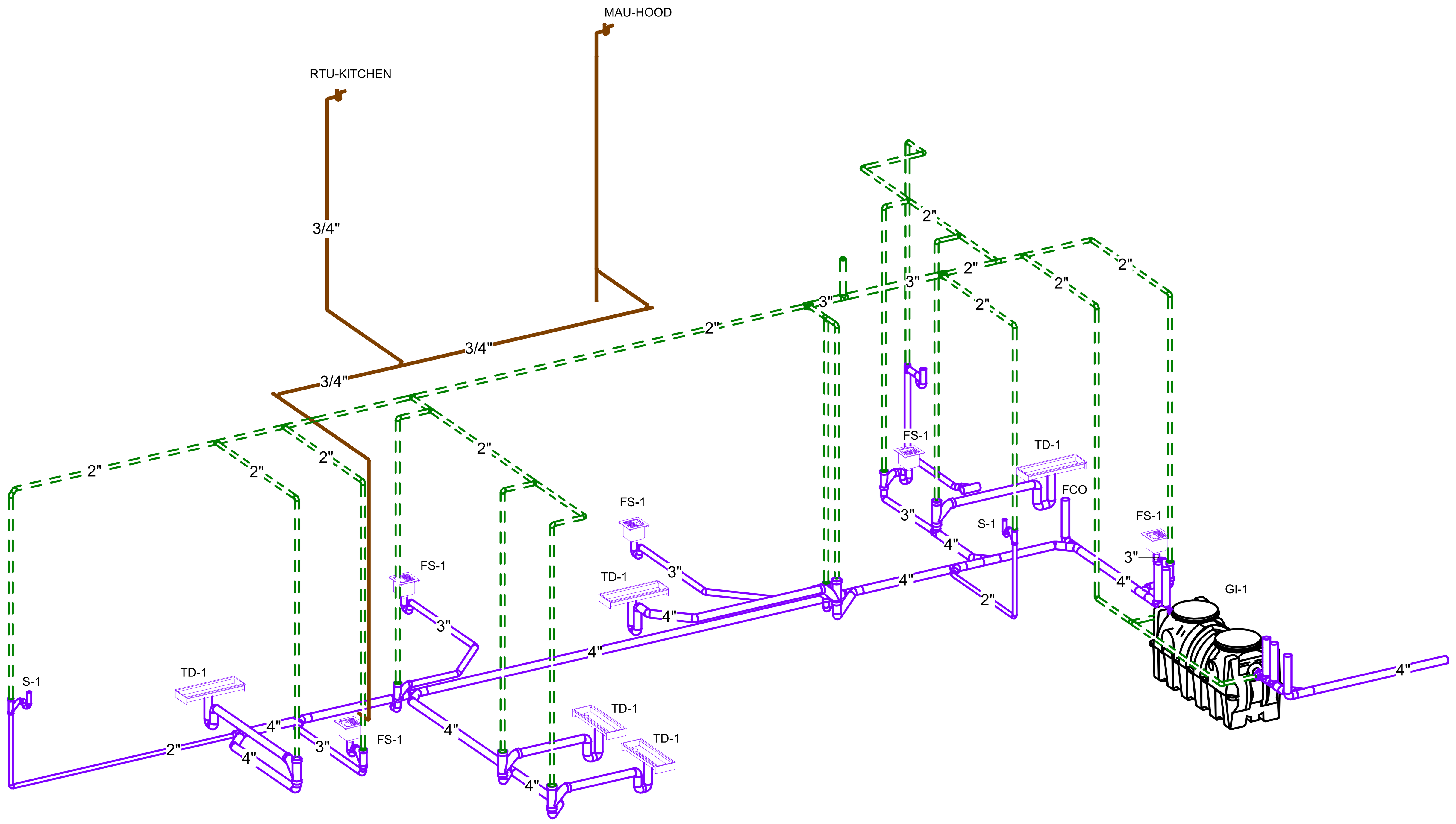
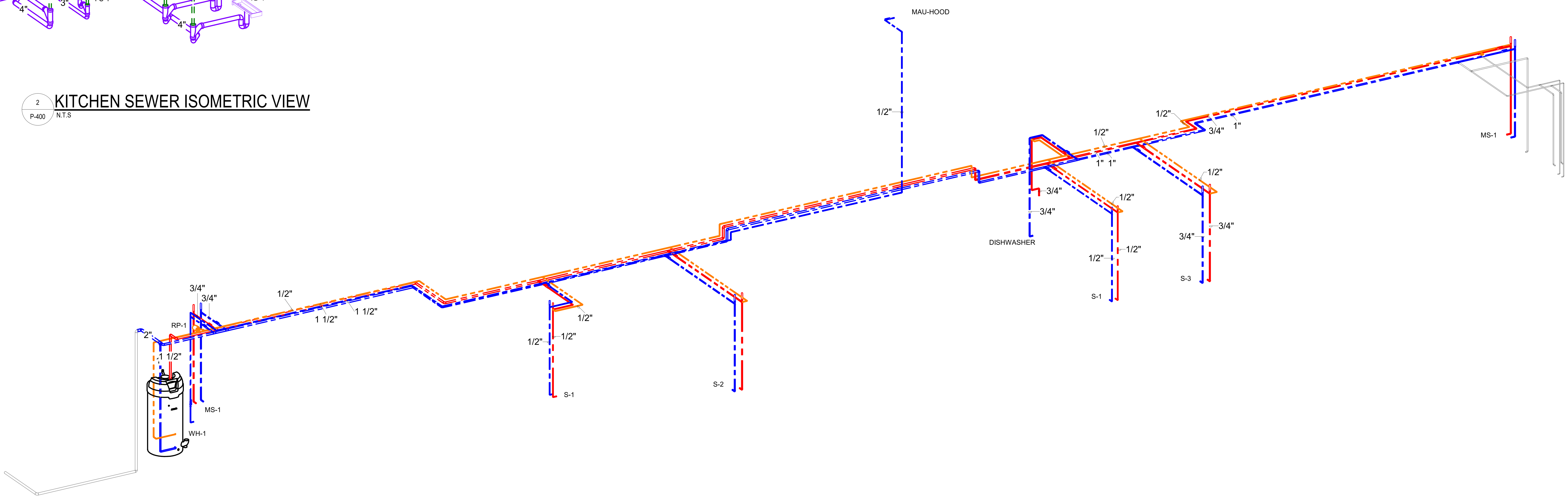


2 P-400 KITCHEN SEWER ISOMETRIC VIEW
N.T.S



1 P-400 KITCHEN HOT & COLD WATER ISOMETRIC VIEW
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STATE OF TEXAS JORGE A. SILVA 89142 LICENSED PROFESSIONAL ENGINEER

TORNILLO INDEPENDENT SCHOOL DISTRICT

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SHEET TITLE:
PLUMBING ISOMETRIC VIEWS

P-400