Micro Market

5010 W CALLE TORIM
TUCSON, AZ 85757
Pascua Yaqui Tribe

ABBREVIATIONS LEGEND1

A	
@	AT
A/C	AIR CONDITION(ING) (ED)
A/C UNIT	AIR CONDITIONING UNIT
AB	ANCHOR BOLT
ABBVR	ABBREVIATION
ACC	ACCESSIBLE
ACCU	AIR COOLED CONDENSING UNIT
ACI	AMERICAN CONCRETE INSTITUTE
ACOUS INSUL	ACOUSTICAL INSULATION
ACOUS PNL	ACOUSTICAL PANEL
ACST	ACOUSTIC
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADDL	ADDITIONAL
ADDM	ADDENDUM
ADH	ADHESIVE
ADJ	ADJUSTABLE, ADJACENT
AE	ARCHITECT/ ENGINEER
AFF	ABOVE FINISHED FLOOR
AGGR	AGGREGATE
AHJ	AUTHORITIY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANNODIZED
APC	ACOUSTICAL PANEL CEILING
ARCH	ARCHITECT(URAL)
ASL	ABOVE STRUCTURAL LEVEL
AWT	ACOUSTICAL WALL TREATMENT
B	
B BD	BASE BOARD
B/B	BACK-TO-BACK
BAT	BATTEN
BD	BOARD
BDRM	BEDROOM
BITUM	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BM	BENCHMARK, BEAM
BOT	BOTTOM
BRG	BEARING
BRZ	BRONZE
BSMT	BASEMENT
BTWN	BETWEEN
BUR	BUILT-UP ROOFING
BW	BOTH WAYS
C	
CAB	CABINET
CB	CARRIAGE BOLT, CATCH BASIN
CCTV	CLOSED-CIRCUIT TELEVISION
CD	CONSTRUCTION DOCUMENTS, CONTRACT DOCUMENTS
CEM	CEMENT
CERT	CERTIFY, CERTIFICATE, CERTIFICATION
CF/CI	CONRACTOR FURNISHED/ CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED
CG	CORNER GUARD
CH	COAT HOOK
CHBD	CHALK BOARD
CHEM	CHEMICAL
CI	CAST IRON
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT, CONSTRUCTION JOINT
CL	CENTER LINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CLRM	CLASSROOM
CMU	CONCRETE MASONRY UNIT
CNR	CORNER
CNTR	COUNTER
COL	COLUMN
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECT(ION)
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRCT(OR)
COORD	COORDINATE, COORDINATION
CORR	CORRIDOR
CPT	CARPET
CSK	COUNTERSINK
CSWK	CASEWORK
CT	CERAMIC TILE
CTR	CENTER
CTRL	CONTROL
CU	CUBIC

ABBREVIATIONS LEGEND1

CUH	CABINET UNIT HEATER
CUST	CUSTODIAL
CW	COLD WATER, CASEMENT WINDOW
D	
CONT	CONTINUOUS
CONTR	CONTRCT(OR)
COORD	COORDINATE, COORDINATION
CORR	CORRIDOR
CPT	CARPET
CSK	COUNTERSINK
CSWK	CASEWORK
CT	CERAMIC TILE
CTR	CENTER
CTRL	CONTROL
CU	CUBIC
CUH	CABINET UNIT HEATER
CUST	CUSTODIAL
CW	COLD WATER, CASEMENT WINDOW
D	DEEP, DEPTH
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DH	DOUBLE HUNG
DIA or Ø	DIAMETER
DIFF	DIFFERENCE
DIM	DIMENSION
DIR	DIRECTION
DISP	DISPENSER
DIST	DISTANCE
DIV	DIVIDE, DIVISION
DL	DEAD LOAD
DMPF	DAMPPROOFING
DMPR	DAMPER
DN	DOWN
DO	DITTO
DOC	DOCUMENT
DOZ	DOZEN
DR	DOOR
DS	DOWNSPOUT
DSGN	DESIGN
DT	DRAIN TILE
DW	DISH WASHER
DWG	DRAWING
E	
E	EAST
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	EACH FACE
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC(AL)
ELEM	ELEMENTARY
ELEV	ELEVATOR
ENAM	ENAMEL
ENCL	ENCLOSURE
ENGR	ENGINEER
ENVIR	ENVIRONMENT
EOS	EDGE OF SLAB
EP	ELECTRIC PANEL
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EPS	EXPANDED POLYSTYRENE BOARD
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ETC	ET CETERA
ETR	EXISTING TO REMAIN
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXC	EXCAVATE
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPAND, EXPANSION
EXT	EXTERIOR
F	
F/F	FACE-TO-FACE
FA	FIRE ALARM
FAAP	FIRA ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FIN	FINISH
FIXT	FIXTURE
FLOUR	FLOURESCENT
FLR	FLOOR
FNDN	FOUNDATION

ABBREVIATIONS LEGEND1

FO	FINISHED OPENING
FRJS	FIRE RESISTIVE JOINT SYSTEM
FRP	FIBERGLASS REINFORCED PLASTIC
FRTW	FIRE RETARDANT TREATED WOOD
FT	FOOT, FEET
FTG	FOOTING
FURN	FURNITURE
FW	FIRE WALL
FWC	FABRIC WALL COVERING
G	
GA	GAGE
GAL	GALLON
GALV	GALVANIZED
GALV STL	GALVANIZED STEEL
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GEN	GENERAL, GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFRC	GLASS FIBER RINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GL	GLASS, GROUND LEVEL
GL BLK	GLASS BLOCK
GLU LAM	GLUED LAMINATED BEAM
GLZ	GLAZING
GWT	GLAZED WALL TILE
GYM	GYMNASIUM
GYP	GYPSUM
GYP BD	GYPSUM BOARD
GYP PLAS	GYPSUM PLASTER
H	
HB	HOSE BIBB
HC	HANDICAP, HOLLOW CORE
HCP	HANDICAPPED
HD	HEAVY DUTY
HDW	HARDWARE
HDWD	HARDWOOD
HM	HOLLOW METAL
HO	HOLD OPEN
HORIZ	HORIZON
HR	HOUR
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HW	HOT WATER
HYD	HYDRANT
I	
ID	INSIDE DIAMETER
IN	INCHES
INCAND	INCANDESCENT
INCL	INCLUDE
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
INTERM	INTERMEDIATE
J	
JAN	JANITOR
JAN CLO	JANITOR CLOSET
JNT	JOINT
JR	JUNIOR
JST	JOIST
K	
KD	KNOCK DOWN
KIP	1000 POUNDS
KIT	KITCHEN
KO	KNOCK OUT
KPL	KICK PLATE
L	
L	LITER, ANGLE
LAB	LABORATORY
LAM	LAMINATE(D)
LAV	LAVATORY
LBL	LABEL
LBS	POUND
LD	LOAD
LF	LINEAR FEET
LH	LATENT HEAT, LEFT HAND
LIB	LIBRARY
LIN	LINEAR
LKR	LOCKER
LKR RM	LOCKER ROOM
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LT	LINOLEUM TILE, LIGHT
LTG	LIGHTING

ABBREVIATIONS LEGEND1

M	
MACH	MATCHLINE
MACH RM	MACHINE ROOM
MAHOG	MAHOGANY
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MB or MKR BD	MARKERBOARD
MC	MECHANICAL CONTRACTOR
MDF	MEDIUM DENSITY FIBERBAORD
MDO	MEDIUM DENSITY OVERLAY
ME	MATCH EXISTING
MECH	MECHANICAL
MECH RM	MECHANICAL ROOM
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MILIMETER
MO	MASONRY OPENING
MOD BIT	MODIFIED BITUMEN
MTD	MOUNTED
MTL	METAL, MATERIAL
MULL	MULLION
N	
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO or #	NUMBER
NOM	NOMINAL
NORM	NORMAL
NTS	NOT TO SCALE
O	
O/A	OVERALL
O/O	OUT TO OUT
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF/ OI	OWNER FURNISHED/ OWNER INSTALLED
OF/CI	OWNER FURNISEHD/ CONTRACTOR INSTALLED
OFF	OFFICE
OH	OVERHANG
OH DR	OVERHEAD DOOR
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL, OPTIMUM
P	
PA	PUBLIC ADDRESS
PAR	PARALLEL
PART	PARTIAL
PAT	PATTERN
PC	PLUMBING CONTRACTOR
PERF	PERFORATED
PERIM	PERIMETER
PL	PLATE, PROPERTY LINE
PL GL	PLATE GLASS
PLAM	PLASTIC LAMINATE
PLAS	PLASTER, PLASTIC
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
POL	POLISHED
POLY	POLYETHYLENE (PLASTIC)
PORC	PORCELAIN
PORT	PORTABLE
POS	POSITIVE
PR	PAIR
PRCST	PRECAST
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PRELIM	PRELIMINARY
PRKG	PARKING
PROJ	PROJECT
PROP	PROPERTY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST TENSIONED
PTD	PAPER TOWER DISPENSER
PTN	PARTITION
PVC	POLYVINYL CHLORIDE (PLASTIC)
PWR	POWER
Q	
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
R	
R	RISER, RADIUS, HEAT RESISTANCE
RA	RETURN AIR
RAD	RADIATOR
RB	RUBBER BASE, RESILIENT BASE
RC	ROOFING CONTRACTOR
RCP	REFLECTED CEILING PLAN

ABBREVIATIONS LEGEND1

RD	ROOF DRAIN
REC	RECESSED
REC RM	RECREATION ROOM
REF	REFRIGERATOR
REG	REGISTER, REGULATION
REINF	REINFORCE
REQD	REQUIRED
RESIL	RESILIENT
REV	REVISION
RFG	ROOFING
RFI	REQUEST FOR INFORMATION
RFP	REQUEST FOR PROPOSAL
RH	RIGHT HAND, ROOF HATCH
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RTF	RUBBER TILE FLOOR
RTU	ROOF TOP UNIT
RV	ROOF VENT
RW	RESCUE WINDOW
RWB	RUBBER WALL BASE
S	
S	SOUTH
SAB	SOUND ATTENUATION BATTS
SAN	SANITARY
SC	SOLID CORE, SHADING COEFFICIENT
SCHED	SCHEDULE
SD	SOAP DISPENSER
SECT	SECTION
SF	SQUARE FOOT, SAFETY FACTOR
SGT	STRUCTURAL GLAZED TILE
SHR	SHOWER
SHT	SHEET
SIM	SIMILAR
SND	SANITARY NAPKIN DISPENSER
SOG	SLAB ON GRADE
SPC	SUSPENDED SPLASTER CEILING
SPEC	SPECIFICATION(S)
SPKR	SPEAKER
SQ	SQUARE
SST	STAINLESS STEEL
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STOR	STORAGE
STRM	STOREROOM
STRUCT	STRUCTURAL
SUB	UBSTITUTE
SUB FL	SUBFLOOR
SUSP	SUSPENDED
SUSP CLG	SUSPENDED CEILING
SV	SAFETY VALVE, SHEET VINYL
SWBD	SWITCHBOARD
SY	SQUARE YARD
SYM	SYMBOL
SYS	SYSTEM
T	
T	TREAD
T & B	TOP AND BOTTOM
T & G	TONGUE AND GROOVE
TB	THROUGH BOLT, TOWEL BAR
TECH	TECHNICAL, TECHNOLOGY
TEL	TELEPHONE
TEMP	TEMPORARY, TEMPERATURE
TERR	TERRAZZO
THERM	THERMAL
THK	THICKNESS
THRU	THROUGH
TK BD	TACK BOARD
TMPD	TEMPERED
TMPD GL	TEMPERED GLASS
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING, TOP OF FLOOR, TOP OF FRAME
TOM	TOP OF MASONRY
TOPO	TOPOGRAPHY
TOS	TOP OF STEEL
TPD	TOILET PAPER DISPENSER
TV	TELEVISION
TYP	TYPICAL
U	
U	HEAT TRANSFER COEFFICIENT
UC	UNDERCUT
UGND	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
UNFIN	UNFINISH(ED)
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
UV	UNIT VENTILATOR

ABBREVIATIONS LEGEND1

V	
V	VOLT
VAR	VARIES, VARIATION
VB	VINYL BASE
VCT	VINYL COMPOSITE TILE
VENT	VENTILATION
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VOC	VOLATILE ORGANIC COMPOUND
VOL	VOLUME
VR	VAPOR RETARDER
VUH	VERTICAL UNIT HEATER
VWC	VERTICAL WALL COVERING
W	
W	WATT, WEST
W/	WITH
W/O	WITHOUT
W/W	WALL TO WALL
WB	WOOD BASE
WC	WALL COVERING, WATER CLOSET
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE
WH	WATER HEATER, WALL HUNG
WI	WROUGHT IRON
WM	WIRE MESH
WP	WATER PROOFING, WEATHERPROOF
WR	WATER REPELENT, WEATHER RESISTANT
WSCT	WAINSCOT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
X	
X	BY
Y	
Y	YD

SHEET INDEX

GENERAL

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G103	ACCESSIBILITY DETAILS
G104	ACCESSIBILITY DETAILS
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GN1	GENERAL NOTES SHEET
SP1	SITE PLAN SHEET
DR1	DRAINAGE SHEET
GR1	GRADING SHEET
GR2	GRADING SHEET
GR3	GRADING SHEET
GR4	STAKING SHEET
GR5	STAKING SHEET
DT1	DETAIL SHEET
DT2	DETAIL SHEET
DT3	DETAIL SHEET
UT1	UTILITY PLAN SHEET

LANDSCAPE

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A405	PERFORATED SCREEN
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A902	SITE DETAILS
A903	FRAMING DETAILS
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A911	ROOF DETAILS
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S1.3	TYPICAL DETAIL
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S5.2	FRAMING DETAILS

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FS-4.5	MECHANICAL SPECIFICATIONS
FS-4.6	MECHANICAL SPECIFICATIONS
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FS-6.2	WALK IN SPECIFICATIONS
FS-6.3	WALK IN SPECIFICATIONS

ALTERNATES:
1. ALT#1 - TRASH ENCLOSURE
2. ALT#2 - FOOD SERVICE EQUIPMENT

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DEFERRED SUBMITTALS BY CONTRACTOR:
1. FIRE SUPPRESSION
2. FIRE ALARM

PROVIDE COSTS FOR DEFERRED ENGINEERING SERVICES AS REQUIRED TO COMPLETE THIS SCOPE.

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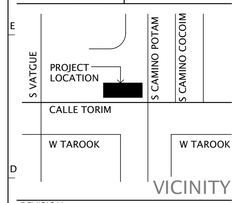
SEAL

REGISTERED ARCHITECT
CERTIFICATE NO. 45961
CARLOS ANTONIO MURRIETA
Date Signed 01/20/25
ARIZONA, U.S.A.

OWNER INFORMATION
Pascua Yaqui Tribe

PROJECT
7490 S CAMINO DE OESTE
TUCSON, AZ 85757
Micro Market
5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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SHEET TITLE

TITLE SHEET

DATE 01.20.2025

SHEET **G100**

PROJECT TITLE:
CHEPA'S MARKET - PASCUA YAQUI TRIBE MICRO-MARKET

ADDRESS:
5010 W CALLE TORIM TUCSON, AZ 85757

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7490 S CAMINO DE OESTE
TUCSON, AZ 85757

PARCEL NUMBER:
210-44-1380

PROJECT DESCRIPTION:
THE MICRO-MARKET IS A 12,400 LIVABLE SF BUILDING IN A 58,815 SF LOT THAT COMBINES THE USE OF CMU AND METAL STUD WALLS, WITH A MAIN METAL FRAMING AND ROOF STRUCTURE. STANDING SEAM METAL ROOF OVER THE MAIN MARKET AREA AND TPO MEMBRANE ROOFING OVER THE OTHER AREAS.
PROJECT PROGRAM INCLUDES:
A MAIN CIRCULAR VESTIBULE OVER THE EAST SIDE, AND A DEMONSTRATION KITCHEN ROOM (VOCATIONAL SPACE) WITH ACCESS TO A PATIO ON THE WEST SIDE, BOTH PROTECTED WITH A CIRCULAR-SHAPED PERFORATED METAL SCREEN. INSIDE THE MARKET THERE'S A GRAB-AND-GO AREA WITH ITS OWN COMMERCIAL KITCHEN FOCUSED ON HEALTHY FOOD, LOCAL PRODUCTS WILL BE DISPLAYED AT THE MAIN SPACE WITH NATURAL DAYLIGHT COMING FROM NORTH AND SOUTH ORIENTATIONS. MOST OF THE SERVICE AREAS, WITH EXCEPTION OF THE JANITOR'S ROOM, LIKE RESTROOMS, MECHANICAL, ELECTRICAL, STORAGE, OFFICE, AND IT, ARE LOCATED ALONG THE NORTH SIDE OF THE BUILDING.
AN UNCOVERED ONE-WAY PARKING LOT WITH THIRTY FIVE PARKING SPACES SITS OVER THE EAST SIDE OF THE PROPERTY (SEVEN OF THEM ALONG "W CALLE TORIM"), INCLUDING A TRASH ENCLOSURE FOR TWO TRASH BINS.

LEGAL DESCRIPTION:
PASCUA YAQUI HOUSING AZ 40-1 LOT 50 BLK 40

APPLICABLE CODES:
2018 INTERNATIONAL BUILDING CODE (IBC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL PLUMBING CODE (IPC)
2018 INTERNATIONAL FIRE CODE (IFC)
2017 NATIONAL ELECTRICAL CODE (NEC)
2009 ICC A117.1 ACCESIBLE AND USABLE BUILDING FACILITIES

WITH ALL CITY OF TUCSON CODE AMENDMENTS, ORD. #11590

BUILDING GENERALS:

LOT SIZE:	58,815 SF
EXISTING ZONING:	RH
BUILDING SF:	12,400 SF
BUILDING HEIGHT:	24'-11"
BUILDING LEVELS:	1-STORY
CONSTRUCTION TYPE:	V-B
OCCUPANCY CLASSIFICATION:	M
FIRE SPRINKLERS:	YES
FIRE ALARM:	YES

ALLOWABLE BLDG. HEIGHT AND AREA:
PER TABLE 504.3
MAX. ALLOWABLE BUILDING HEIGHT: 60'-0"
PER TABLE 504.4
MAX. ALLOWABLE BUILDING HEIGHT: 2-STORIES
PER TABLE 506.2
MAX. ALLOWABLE BUILDING AREA: 36,000 SF

AREA INCREASE CALCULATION:
ALLOWABLE AREA CALCULATION: GROUP M:
BUILDING CURRENT AREA IS UNDER THE MAXIMUM ALLOWABLE, NO AREA INCREASE CALCULATION REQUIRED.

FIRE RESIST. RATING REQUIRIMENTS FOR BUILDING ELEMENTS (HOURS):
PER TABLE 601 - FOR CONSTRUCTION TYPE V-B:
STRUCTURAL FRAME:
- 0-HOUR RATING

BEARING WALLS:
- EXTERIOR: 0-HOUR RATING
- INTERIOR: 0-HOUR RATING

EXTERIOR NONBEARING WALLS AND PARTITIONS: PER TABLE 602
- EXTERIOR: NON-BEARING WALL AND PARTITIONS:
- EXTERIOR WALLS WITH FIRE SEPARATION DISTANCE X > 30' = 0-HR
- EXTERIOR WALLS WITH FIRE SEPARATION DISTANCE 10' > X > 30' = 1-HR
- EXTERIOR WALLS WITH FIRE SEPARATION DISTANCE 5' > X > 10': 1-HR
- EXTERIOR WALLS WITH FIRE SEPARATION DISTANCE X < 5': 2-HR

INTERIOR NONBEARING WALLS AND PARTITIONS: PER TABLE 601
- INTERIOR: 0-HOUR RATING
- FLOOR CONSTR. (INCLUDING SUPPORT BEAMS AND JOISTS): 0-HR
- ROOF CONSTR. (INCLUDING SUPPORT BEAMS AND JOISTS): 0-HR

INCIDENTAL USES
PER TABLE 509
ROOMS WITH BOILERS: NO SEPARATION IF FIRE SPRINKLER PROVIDED

MAX. AREA OF EXT. WALL OPENINGS:
PER TABLE 705.8

FIRE SEPARATION DISTANCE:	GREATER THAN 30 FEET ON ALL SIDES
UNPROTECTED, SPRINKLERED:	NOT REQUIRED
PROTECTED OPENINGS:	NOT REQUIRED

INTERIOR AND CEILING FINISH REQUIREMENT:
SECTION 803.1.2 AND TABLE 803.13
GROUP M, SPRINKLERED

INT. EXIT STAIRWAYS, RAMPS AND EXIT PASSAGEWAYS:	CLASS B
FLAME SPREAD INDEX:	26-75
SMOKE DEVELOPMENT INDEX:	0-450
CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS:	CLASS C
FLAME SPREAD INDEX:	76-200
SMOKE DEVELOPED INDEX:	0-450
ROOMS AND ENCLOSED SPACES:	CLASS C
FLAME SPREAD INDEX:	76-200
SMOKE DEVELOPED INDEX:	0-450

AUTOMATIC SPRINKLER SYSTEMS:
PER TABLE 903.2
BUILDING EXCEEDS 12,000 GSF. AN AUTOMATIC SPRINKLER SYSTEM IS REQUIRED AND BE PROVIDED FOR THIS BUILDING

OCCUPANT LOAD
PER TABLE 1004.5
SEE OCCUPANCY SCHEDULE ON THIS SHEET.

EGRESS WIDTH PER OCCUPANT SERVED:
PER SECTION 1005.3.2
(INCHES PER OCCUPANT FOR A OCCUPANCY)
OTHER EGRESS COMPONENTS 0.15

EXIT ACCESS TRAVEL DISTANCE:
PER TABLE 1016.2
M OCC. WITH SPRINKLER SYSTEM: 250 FT MAX.
ALL TRAVEL DISTANCES UNDER THE MAXIMUM PERMITTED

MIN. ROOF COVERING CLASSIFICATION
PER TABLE 1505.1
TYPE V-B CONSTRUCTION
MIN. ROOF COVERING CLASSIFICATION: CLASS C

PLUMBING FIXTURE CALCULATIONS
PER CHAPTER 29
SEE PLUMBING FIXTURE CALCULATION ON THIS SHEET.

OCCUPANT LOAD & EGRESS DATA BY SPACE

ROOM NUMBER	ROOM NAME	FLOOR AREA	USE ID	OCCUPANT LOAD FACTOR	OCCUPANT LOAD	OCCUPANT ADD'L	OCCUPANT TOTAL	NUMBER OF EXITS REQUIRED	NUMBER OF EXITS PROVIDED
LEVEL 1									
100	MAIN VESTIBULE	1,138 SF	zh	30	38	0	38	1	2
101	CART STORAGE	192 SF	zi	300	1	0	1	1	1
102	GRAB N GO	345 SF	zh	30	14	0	14	1	2
103	CUSTOMER SERVICE	95 SF	p	150	1	0	1	1	1
104	MARKET	4,723 SF	zh	30	158	0	158	2	2
105	DELI	167 SF	zh	30	6	0	6	1	1
106	PREP-KITCHEN	884 SF	zb	200	5	0	5	1	1
107	WALK-IN FRIDGE	162 SF		0	0	0	0		
108	WALK-IN COOLER	73 SF		0	0	0	0		
109	OFFICE	131 SF	p	150	1	0	1	1	1
110	R.R.	65 SF		0	0	0	0		
111	IT	106 SF	a	300	1	0	1	1	1
112	RECEIVING AND STORAGE	1,254 SF	zi	300	5	0	5	1	1
113	WALK-IN FREEZER	103 SF		0	0	0	0	1	1
114	WALK-IN REFRIGERATOR	302 SF		0	0	0	0	1	1
115	ELECTRICAL ROOM	103 SF	a	300	1	0	1	1	1
116	MECH. ROOM	71 SF	a	300	1	0	1	1	1
117	STORAGE	232 SF	a	300	1	0	1	1	1
118	VESTIBULE	288 SF	zh	30	10	0	10	1	1
119	W.R.R.	231 SF		0	0	0	0		
120	M.R.R.	233 SF		0	0	0	0		
121	JANITOR	116 SF	a	300	1	0	1	1	1
122	DEMONSTRATION KITCHEN	945 SF	u	50	19	0	19	1	2
123	PATIO	641 SF	u	50	14	0	14	1	2
TOTAL		12,600 SF			277				

USE ID	OCCUPANCY USE
	(none)
a	ACCESORY STORAGE AREAS, MECHANICAL EQUPMENT ROOM
p	BUSINESS AREAS
u	EDUCATIONAL_SHOPS and OTHER VOCATIONAL ROOM AREAS
zb	KITCHEN, COMMERCIAL
zh	MERCANTILE_BASEMENT and GRADE FLOOR AREAS
zi	MERCANTILE_STORAGE, STOCK, SHIPPING AREAS

IECC 2018 COMPLIANCE BY PRESCRIPTIVE METHOD ZONE: 2B PIMA COUNTY
PER TABLE C402.1.3
OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS, R-VALUE METHOD[a, i]

CLIMATE ZONE: 2	
	ROOFS
INSULATION ENTIRELY ABOVE ROOF DECK	R-25ci
	WALLS, ABOVE GRADE
MASS[a]	R-5.7ci[b]
METAL FRAMED	R-13 + R-5ci
	SLAB-ON-GRADE FLOORS
UNHEATED SLABS	NR
	OPAQUE DOORS
NONSWINGING	R-4.75

a. "Mass walls" shall be in accordance with Section C402.2.2.
b. R-5.7ci is allowed to be substituted with concrete block walls complying with ASTM C90, ungrouted or partially grouted at 32 inches or less on center vertically and 48 inches or less on center horizontally, with ungrouted cores filled with materials having a maximum thermal conductivity of 0.44 Btu-in/h-f2 °F.

BUILDING ENVELOPE FENESTRATION MAXIMUM U-FACTOR AND SHGC REQUIREMENTS
PER TABLE C402.4

CLIMATE ZONE: 2		
VERTICAL FENESTRATION		
U-FACTOR		
FIXED FENESTRATION	0.50	
ENTRANCE DOORS	0.83	
SHGC		
ORIENTATION[a]	SEW	N
PF ≥ 0.5	0.40	0.40

PLUMBING FIXTURE CALCULATIONS
PER CHAPTER 29, TABLE 2902.1

PLUMBING FIXTURES IN RESTROOMS									
WATER CLOSETS						LAVATORIES			
MALE				FEMALE		MALE		FEMALE	
		URINAL SUB							
REQ'D	PRV'D	MAX SUB	PRV'D	REQ'D	PRV'D	REQ'D	PRV'D	REQ'D	PRV'D
1	2	1	2	1	5	1	4	1	4

WATER CLOSETS - BASED ON OCCUPANT LOAD

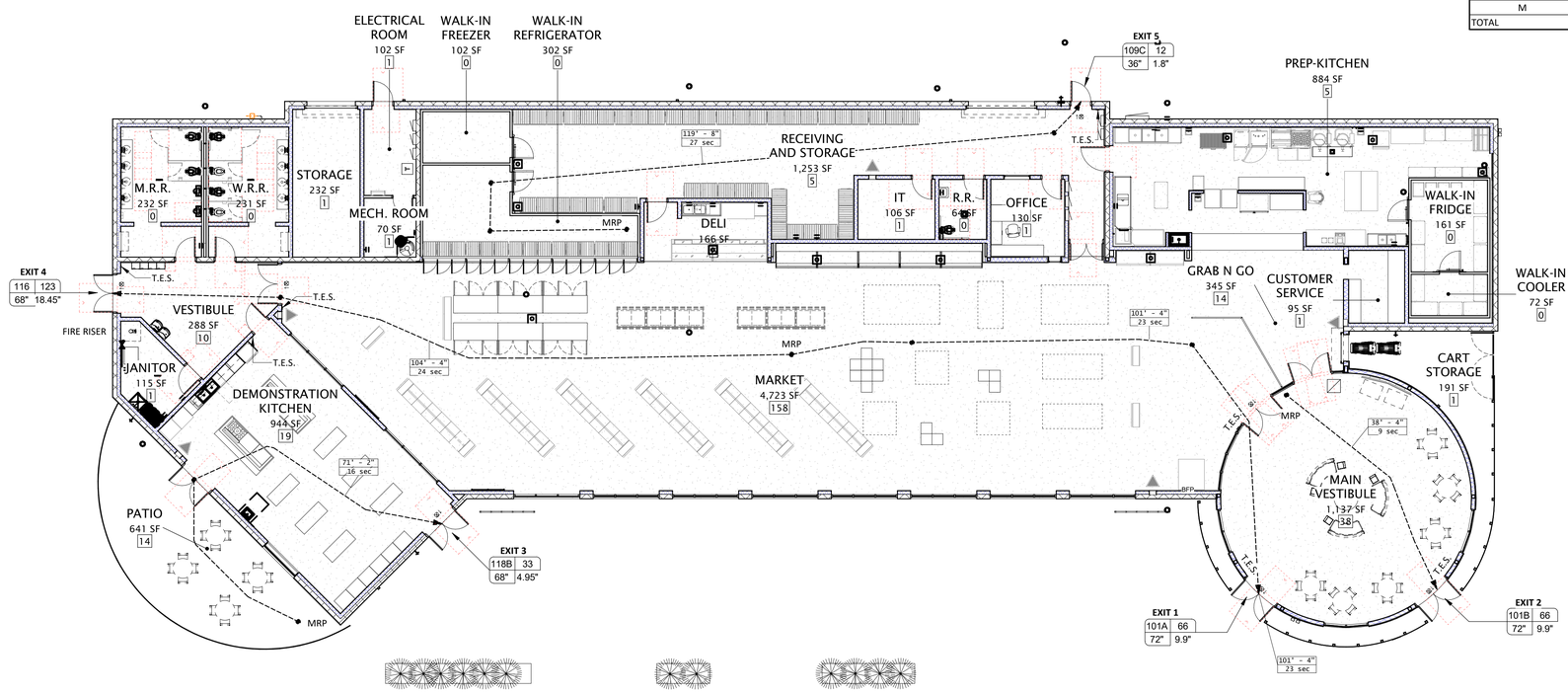
OCCUPANCY GROUP	OCC LOAD	MALE		FEMALE		MAX URINAL SUBSTITUTION	
		RAW	RND'D	RAW	RND'D	RAW	RND'D
M	277	0.28		0.28		0.14	
TOTAL		0.28	1	0.28	1	0.14	1

LAVATORIES - BASED ON OCCUPANT LOAD

OOCCUPANCY GROUP	OCC LOAD	MALE		FEMALE	
		RAW	RND'D	RAW	RND'D
M	277	0.19		0.19	
TOTAL		0.19	1	0.19	1

DRINKING FOUNTAINS

OOCCUPANCY GROUP	OCC LOAD	FIXTURE COUNT		BOTLE FILLER SUBSTITUTION	
		RAW	RND'D	RAW	RND'D
M	277	0.28		0.14	
TOTAL		0.28	1	0.14	0



EGRESS PLAN LEVEL

3/32" = 1'-0"

LEGEND OF SYMBOLS:

---------	COMMON PATH OF TRAVEL/TOTAL TRAVEL DISTANCE
0	ROOM OCCUPANT LOAD. -PER TABLE 1004.1.1 AND BASED ON ACTUAL ROOM USE, SEE OCCUPANT LOAD TABLE THIS SHEET.

NOTE:
TRAVEL DISTANCE INDICATED ARE FROM MOST REMOTE POINT TO EXIT DOOR THRU PATH INDICATED, TOTAL TRAVEL DISTANCE INCLUDE THE COMMON PATH OF TRAVEL DISTANCE.

T.E.S.	TACTILE EXIT SIGN LOCATED AT 60" ABOVE THE FINISH FLOOR TO THE CENTER OF THE SIGN.
18" 60" 12" 48"	MANEUVERING SPACE REQUIREMENTS AT EACH DOOR PER ICC/ANSI A117.1 SET STANDARD ACCESSIBILITY DETAILS SHEET
△	PARTIALLY RECESSED 5 LBS ABC FIRE EXTINGUISHER (2-A, 10B:C) IN CABINET
MRP	MOST REMOTE POINT.
	EXIT SIGN, SEE ELECTRICAL DRAWINGS
D# OCC / DW RW	D# = DOOR NUMBER DW = DOOR WIDTH, SEE DOOR SCHED. RW = REQUIRED DOOR WIDTH OCC = OCCUPANT LOAD AT DOOR
X' - X" / X sec	TRAVEL DISTANCE, FEET & INCHES TIME, IN SECONDS

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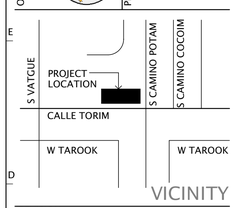
SEAL

REGISTERED ARCHITECT CERTIFICATE NO. 45961 CARLOS ANTONIO MURRIETA DATE SIGNED 01/20/2025 ARIZONA, U.S.A.

OWNER INFORMATION
Pascua Yaqui Tribe
7490 S CAMINO DE OESTE TUCSON, AZ 85757

PROJECT
Micro Market
5010 W CALLE TORIM TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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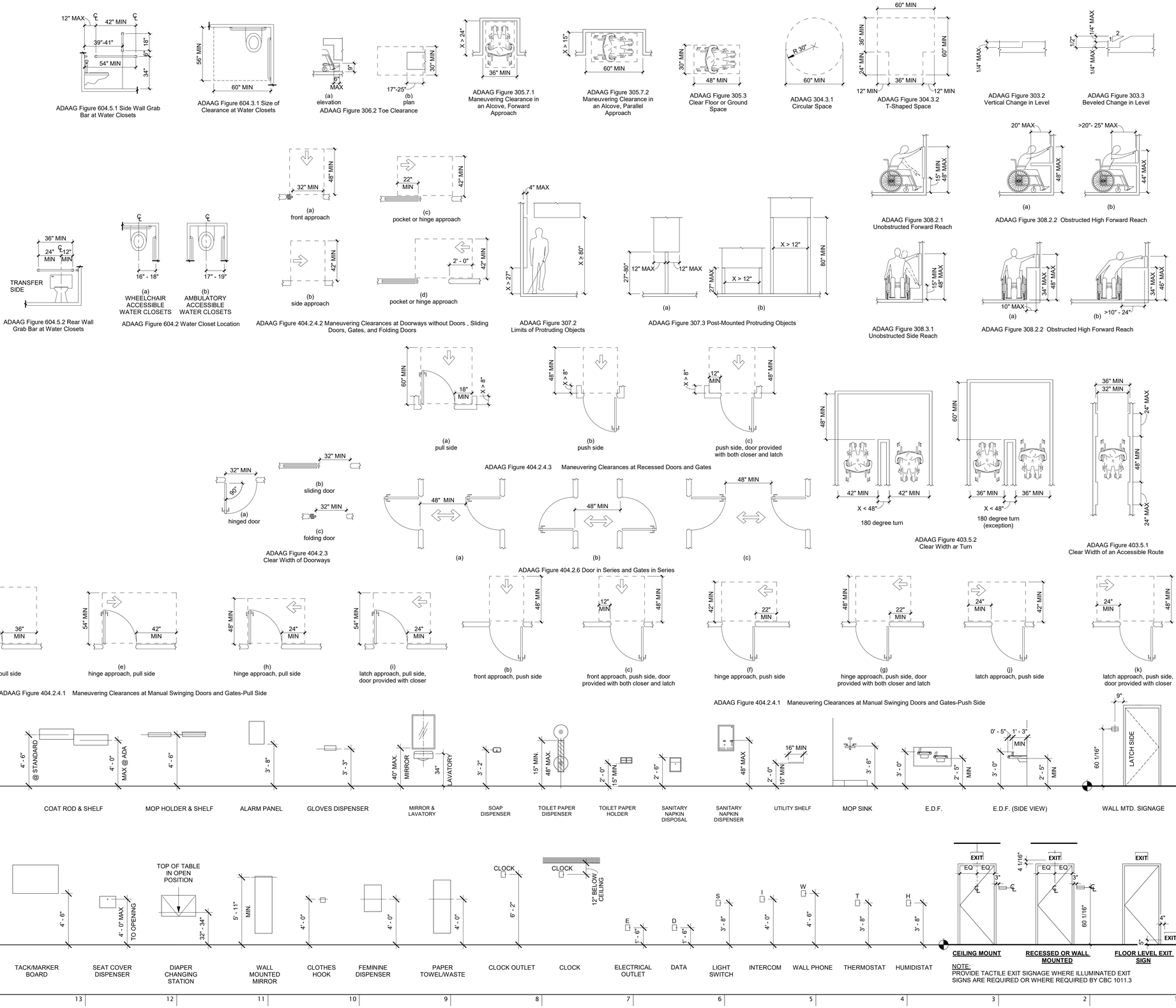
SHEET TITLE
CODE SHEET

DATE 01.20.2025
SHEET **G102**



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CERTIFICATE NO. 45961
CARLOS ANTONIO MURRIETA
DATE SIGNED 12-06-2024
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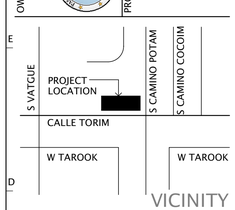

REVISION

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PROJECT NO. 23C-001

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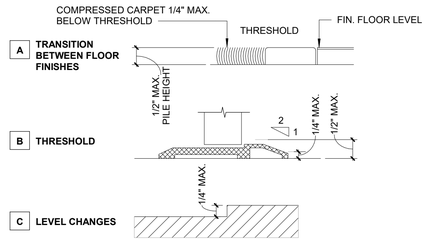
SHEET TITLE

ACCESSIBILITY DETAILS

DATE 01.20.2025

SHEET

G103



NOTE:

1. 1/2" MAXIMUM TOTAL HEIGHT WITH 1/4" MAXIMUM VERTICAL CHANGE AT EDGE.
2. 1 : 2 SLOPED BEVEL REQUIRED IF LEVEL CHANGE IS OVER 1/4" VERTICAL LEVEL CHANGE.
3. 1/4" MAXIMUM VERTICAL LEVEL CHANGE.

ADA THRESHOLD REQUIREMENTS 3

1/4" = 1'-0"

NOTE:
SIGNAGE MUST IDENTIFY THE STAIR, INDICATE THE FLOOR LEVEL OF LANDING, WHERE THE STAIRWELL TERMINATES AT THE TOP AND BOTTOM, AND IDENTIFY AND SHOW THE DIRECTION OF THE EXIT DISCHARGE.

EXIT STAIR SIGNAGE 8

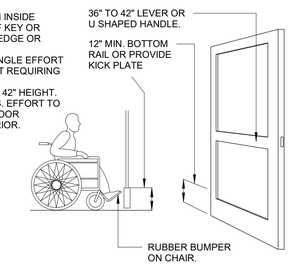
1/4" = 1'-0"

NOTE:

1. MINIMUM 10" HIGH SMOOTH SURFACE AT DOOR BOTTOM, EITHER ATTACHED PANEL OR BOTTOM RAIL.

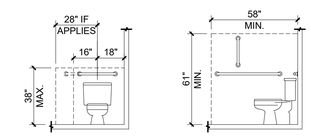
HARDWARE:

2. OPENABLE FROM INSIDE WITHOUT USE OF KEY OR SPECIAL KNOWLEDGE OR EFFORT.
3. OPENABLE BY SINGLE EFFORT LEVER-TYPE (NOT REQUIRING GRASPING).
4. MOUNTED 36" TO 42" HEIGHT.
5. MAXIMUM 8.5 LBS. EFFORT TO OPERATE EXIT DOOR 5 LBS. FOR INTERIOR.



ADA DOOR REQUIREMENTS 6

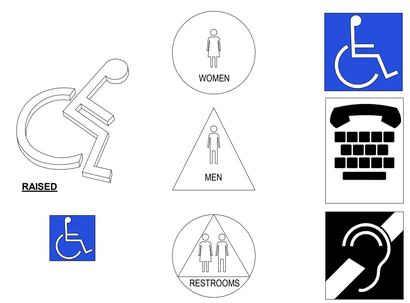
1/4" = 1'-0"



Side Wall Grab Bar Reinforcement for Water Closets

ADA WC BAR REINFORCING 2

1/4" = 1'-0"



LETTERS AND NUMBERS:

1. WIDHT TO HEIGHT RATIO BETWWN 3 : 5 AND 1 : 1.
2. STROKE WIDTH TO HEIGHT BETWEEN 1 : 5 AND 1 : 10.
3. CONTRAST CHARACTERS AND SYMBOLS WITH BACKGROUND.
4. SANS SERIF CHARACTERS.

SIGNS / PICTOGRAMS:

1. PICTOGRAMS / PICTORIAL SYMBOLS SIGNS SHALL BE ACCOMPANIED BY THE CQUIVALENT VERBAK DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM. THE BORDER DIMENSION SHALL BE 6" MIN. HEIGHT.
2. CHARACTERS AT BACKGROUNDS SHALL BE OF NON-GLARE CONTRASTING COLORS.
3. SIGNS / PICTOGRAMS SHALL BE INSTALLED ON THE WALL ADJACENT TO DOOR LEADING TO THE ROOM OR SPACE THEY DESCRIBE AND AT 60" A.F.F. TO SIGN CENTERLINE AND WHERE A PERSON MAY APPROACH WITHIN 3" OF SIGNAGE WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE DOOR SWING AREA.
4. VERTICAL CLEARANCE AT SUSPENDED SIGNS WITH MINIMUM HEADROOM OF 80" REQUIRE MINIMUM 3" CHARACTER HEIGHT MEASURED BY USING UPPERCASE "X" CHARACTERS AND NUMBERS SHALL BE SIZED ACCORDING TO VIEWING DISTANCE FROM WICH READ LOWER CASE CHARACTERS PERMITED.

SIGN LOCATIONS:

1. ALL ACCESSIBLE ENTRANCES IDENTIFIED WITH MINIMUM OF ONE STANDARD SIGN.
2. ADDITIONAL DIRECTIONAL SIGNS ALONG ACCESSIBLE PATH OF TRAVEL REQUIRED.
3. BUILDINGS REMODELED TO PROVIDE ACCESSIBLE SANITARY FACILITIES FOR PUBLIC USE SHALL HAVE INFORMATION POSTED IN THE LOBBY AS PART OF THE

INTERNATIONAL SYMBOL OF ACCESSIBILITY:

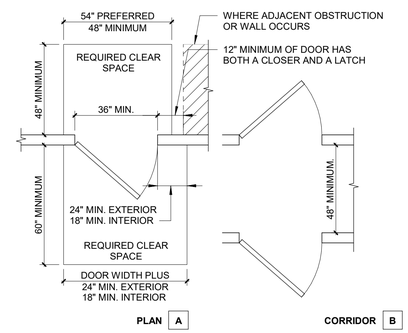
1. STANDARD USED TO IDENTIFY ACCESSIBLE FACILITIES.
2. WITHE FIGURE ON BLUE BACKGROUND, COLOR 15090 ON FEDERAL STANDARD 595A.
3. WHEN ENFORCING AGENCIES DETERMINES, IF APPROPRIATE, SPECIAL DESIGNS AND COLORS MAY BE APPROVED.

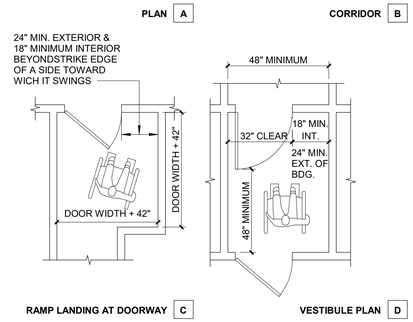
BRAILE:

1. USE CONTRASTED GRADE 2 BRAILE DOTS TO BE 0.1 INCH ON CENTER IN EACH CELL.
2. 0.2 INCH SPACE BETWEEN CELLS.
3. DOTS RAISED MINIMUM 0.025 INCH ABOVE BACKGROUND.

ADA SIGNS & PICTOGRAMS 9

1/4" = 1'-0"



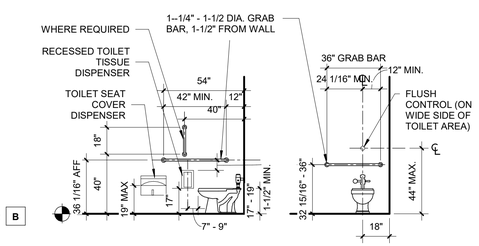


NOTE:

1. CLEAR SPACES MUST BE LEVEL TO PREVENT WHEEL CHAIRS FROM ROLLING WHEN THE OCCUPANT RELEASES THE WHEEL GRIPS TO REACH FOR THE DOOR. 1/4" PER FOOT IS ALLOWED FOR DRAINAGE.
2. WHERE DOORS OPEN ONTO, BUT NOT INTO A CORRIDOR, THE REQUIRED LEVEL AREA BEYOND THE DOORS MAY BE A MINIMUM OF 48". FOR ADDITIONAL INFORMATION, SEE APPLICABLE NOTES, TYPICAL ACCESSIBILITY NOTES SHEET.

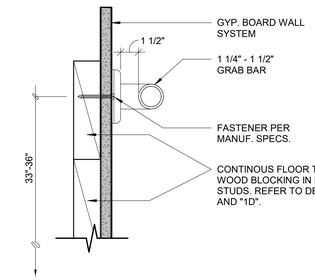
ADA CLEARANCES @ DOORS 7

1/4" = 1'-0"



ACC. TOILET FIXTURES 5

1/4" = 1'-0"

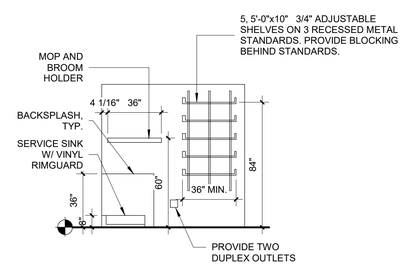


BLOCKING NOTES:

1. BENDING STRESS IN A GRAB BAR INDUCED BY THE MAXIMUM BENDING
MOMENT FROM THE APPLICATION OF 250 LB-FT SHALL BE LESS THAN THE ALLOWABLE STRESS FOR THE MATERIAL OF THE GRAB BAR.
2. SHEAR STRESS INDUCED IN A GRAB BAR BY THE APPLICATION OF 250
LB-FT SHALL BE LESS THAN THE ALLOWABLE SHEAR STRESS FOR THE
MATERIAL OF THE GRAB BAR.
3. IF THE CONNECTION BETWEEN THE GRAB BAR AND ITS MOUNTING BRACKET OR OTHER SUPPORT IS CONSIDERED TO BE FULLY RESTRAINED, THEN DIRECT AND TORSIONAL SHEAR STRESSES SHALL BE TOTALED FOR THE COMBINED SHEAR STRESS, WHICH SHALL NOT EXCEED THE ALLOWABLE SHEAR STRESS.
4. SHEAR FORCE INDUCED IN A FASTENER OR MOUNTING DEVICE FROM
THE APPLICATION OF 250 LB-FT SHALL BE LESS THAN THE ALLOWABLE
LATERAL LOAD OF EITHER THE FASTENER OR MOUNTING DEVICE OR THE SUPPORTING STRUCTURE, WHICHEVER IS THE SMALLER ALLOWABLE LOAD.
5. TENSILE FORCE INDUCED IN A FASTENER BY A DIRECT TENSION FORCE
OF 250 LB-FT PLUS THE MAXIMUM MOMENT FROM THE APPLICATION OF 250 LB-FT SHALL BE LESS THAN THE ALLOWABLE WITHDRAWAL LOAD BETWEEN THE FASTENER AND THE SUPPORTING STRUCTURE.
6. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.

ADA GRAB BAR BLOCKING DETAIL 1

3" = 1'-0"



CUSTODIAL CLOSETS 4

1/4" = 1'-0"

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SEAL

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Pascua Yaqui Tribe

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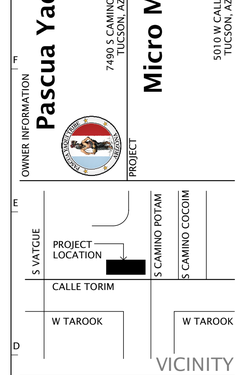
5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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SHEET TITLE

ACCESSIBILITY DETAILS

DATE 01.20.2025

SHEET **G104**

PROJECT GENERAL NOTES:

1. CONTRACTOR TO COORDINATE WITH OWNER ALL DAMAGED EXISTING CONDITIONS PRIOR TO START OF WORK.
2. CONTRACTOR SHALL VERIFY AND COORDINATE ALL EXISTING CONDITIONS AND DIMENSIONS AT JOB SITE FOR COMPARISON WITH DRAWINGS AND SPECIFICATIONS PRIOR TO START OF AND DURING CONSTRUCTION. IF ANY DISCREPANCIES, INCONSISTENCIES OR OMISSIONS ARE FOUND, THE ARCHITECT SHALL BE NOTIFIED IN WRITING FOR CLARIFICATION PRIOR TO PROCEEDING WITH WORK.
3. DO NOT SCALEDRAWINGS. CONTRACTOR SHALL RELY ON WRITTEN DIMENSIONS AS GIVEN. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT FOR CLARIFICATIONS. ALL DIMENSIONS SHALL BE VERIFIED BY CONTRACTOR AND COORDINATED WITH ALL OF THE WORK OF ALL TRADES, IF DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING FOR CLARIFICATION BEFORE THE COMMENCEMENT OF RESUMPTION WORK.
4. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONARY MEASUREMENTS TO PROTECT THE PUBLIC FROM ADJACENT CONSTRUCTION AND PROPERTIES FROM DAMAGE DUE TO THE CONSTRUCTION.
5. LEGAL EXITS SHALL NOT BE BLOCKED AT ANY TIME.
6. "EXIT" SIGN SHALL BE INSTALLED WHERE REQUIRED. LOCATE AS SHOWN ON DRAWINGS AND AS DIRECTED BY ARCHITECT AND BUILDING INSPECTORS IN FIELD.
7. LOCATE FIRE EXTINGUISHER AS SHOWN ON DRAWINGS, AS SPECIFIED AND AS DIRECTED BY THE FIRE MARSHALL OR LOCAL TRIBE FIRE CHIEF AS APPLICABLE.
8. ACCESSIBILITY: THE FACILITY SHOWN ON THESE DRAWINGS WAS DESIGNED TO THE BEST OF OUR KNOWLEDGE AND INFORMATION, IN ACCORDANCE WITH THE AMERICAN WITH DISABILITIES ACT AND ACCESSIBILITY STANDARDS.
9. WORK SHALL COMPLY WITH APPLICABLE CODES AND ORDINANCES.
10. WHEN WORK NOT SPECIALLY CALLED OUT, OR IF WORK IS REQUIRED TO COMPLETE THE PROJECT, OR INDIVIDUAL PORTIONS OF THE PROJECT, IT SHALL BE PROVIDED AND SHALL BE OF THE BEST MATERIALS AND WORKMANSHIP.
11. THE OWNER MAY UTILIZE SEPARATE CONTRACTORS (I.E. SPECIAL SYSTEMS, ETC.) DURING THE COURSE OF THE CONSTRUCTION. THE CONTRACTOR, AS A COURTESY TO THE OWNER, IS TO COMMUNICATE AND COORDINATE WORK SCHEDULES WITH THE OWNER'S SEPARATE CONTRACTORS TO INSURE NON-CONFLICT WORK AND SCHEDULES.
12. DETAILS ARE TYPICAL OR SIMILAR THROUGHOUT, SUBJECT TO MODIFICATION FOR SPECIFIC CONDITIONS.
13. WRAP ALL EXPOSED WASTE AND HOT WATER PIPING WITH AN APPROVED THERMAL INSULATION, TRUEBO, PLUMBEREX, OR EQUAL.
14. ALL WOOD IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE.
15. PAINT ALL EXPOSED MATERIALS ON THE PROJECT BY SPECIFICATION REQUIREMENTS U.N.O. COORDINATE WITH ARCHITECT FOR ANY UNCLEAR CONDITION.
16. FINAL CLEANUP AND DISPOSAL: REMOVE DEBRIS, RUBBISH AND WASTE MATERIAL FROM THE SITE TO A LAWFUL DISPOSAL AREA AND PAY ALL HAULING AND DUMPING COSTS. CONFORM TO PERTAINING FEDERAL STATE AND LOCAL LAWS, REGULATIONS AND ORDERS UPON COMPLETION OF WORK. ALL CONSTRUCTIONS AREAS SHALL BE LEFT VACUUM-CLEAN AND FREE FROM DEBRIS. CLEAN ALL DUST, DIRT, STAINS, AND MARKS, PAINT, SPOTS, DROPPINGS, AND OTHER BLEMISHES.

SOUND TRANSMISSION GUIDELINES AND PARTITION NOTES:

1. WALL GYPSUM BOARD PARTITIONS SURROUNDING RESTROOMS, CORRIDORS, SHAFTS, BETWEEN RESTROOMS AND WHEREVER ACOUSTIC INSULATION IS CALLED FOR, TO BE PERIMETER SEALED. AT THE HEAD AND SILL ONE CONTINUOUS CAULKED ON EACH SIDE TO FILL THE GAP BETWEEN THE GYPSUM BOARD AND THE FLOOR AND CEILING. AT VERTICAL INTERSECTIONS, ONE CAULK BEAD SHALL BE RUN UNDER THE VERTICAL WOOD STUD AND ONE CAULK BEAD ON EACH SIDE TO FILL THE GAP WHERE THE GYPSUM BOARD MEETS A COLUMN OR PARTITION ELEMENT, NO GAPS OR VOIDS ARE PERMITTED.
2. GYPSUM BOARD SURFACE OR DRYWALL PARTITIONS ADJACENT TO WET OR HUMID AREAS, I.E. TOILETS, KITCHEN, AND BATHS, SHALL BE CONSTRUCTED WITH WATER RESISTANT (WR) GYPSUM BOARD ON ALL DRYWALL SURFACES, AT ROOM, WALL IMMEDIATELY ADJACENT TO BATHTUB AND INTEND TO BE FINISHED WITH CERAMIC TILE SHALL BE CONSTRUCTED WITH WATER RESISTANT (WR) GYPSUM BOARD FROM TUB RIM TO CEILING.
3. ALL INSULATION MATERIALS INCLUDING FACINGS, SUCH AS VAPOR BARRIERS OR BREATHER PAPERS INSTALLED WITHIN CEILING ASSEMBLIES, ROOF/CEILING ASSEMBLIES, WALLS OR ATTICS, SHALL HAVE A FLAME SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DENSITY NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH THE IBC.
4. IN SOUND INSULATED ASSEMBLIES, COVER THE EXTERIOR OF OUTLET BOXES WITH AN APPROVED RESILIENT TAPE PRIOR TO MOUNTING, PLACE RESILIENT PAD (MINIMUM OF 1/16" THICK) BETWEEN MOUNTING BRACKET AND THE STRUCTURAL SUPPORT, TAPE CABLE AND CONDUIT CONNECTION TO BOX UNTIL AIRTIGHT. FLEXIBLE CONDUIT AND CABLE NEED NO INSULATION EXCEPT AT THE POINT OF PENETRATION WHERE AN AIRTIGHT SEAL MUST BE MADE RIGID, NMT AND EMT CONDUIT AND BOXES SHALL BE INSTALLED WITH APPROVED RESILIENT MATERIALS AND FASTENERS AT SUPPORTS AND SEALED AIRTIGHT AT PENETRATIONS. OUTLET BOXES SHALL BE LIMITED TO A MAXIMUM DIMENSIONS OF 6", AND IF LOCATED ON OPPOSITE SURFACES, MUCH OFFSET 24" OR MORE AND BE SEALED AS IN ABOVE DIRECTIONS. OUTLET BOXES IN FLOOR/ CEILING ASSEMBLIES ARE PERMITTED IF TREATED AS REQUIRED FOR BOXES IN WALL ASSEMBLIES.

EQUIPMENT INSTALLATION NOTES:

1. VERIFY THAT NEW WORK WILL ADEQUATELY FIT IN THE SPACE PROVIDED. MAINTAIN ALL MANUFACTURER'S RECOMMENDED AND CODE REQUIRED CLEARANCES ALL AROUND EQUIPMENT.

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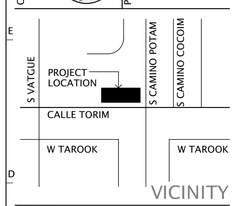
SEAL

OWNER INFORMATION
Pascua Yaqui Tribe
7490 S CAMINO DE OESTE
TUCSON, AZ 85757

PROJECT
Micro Market
5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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SHEET TITLE

GENERAL NOTES

DATE 01.20.2025

SHEET **G105**

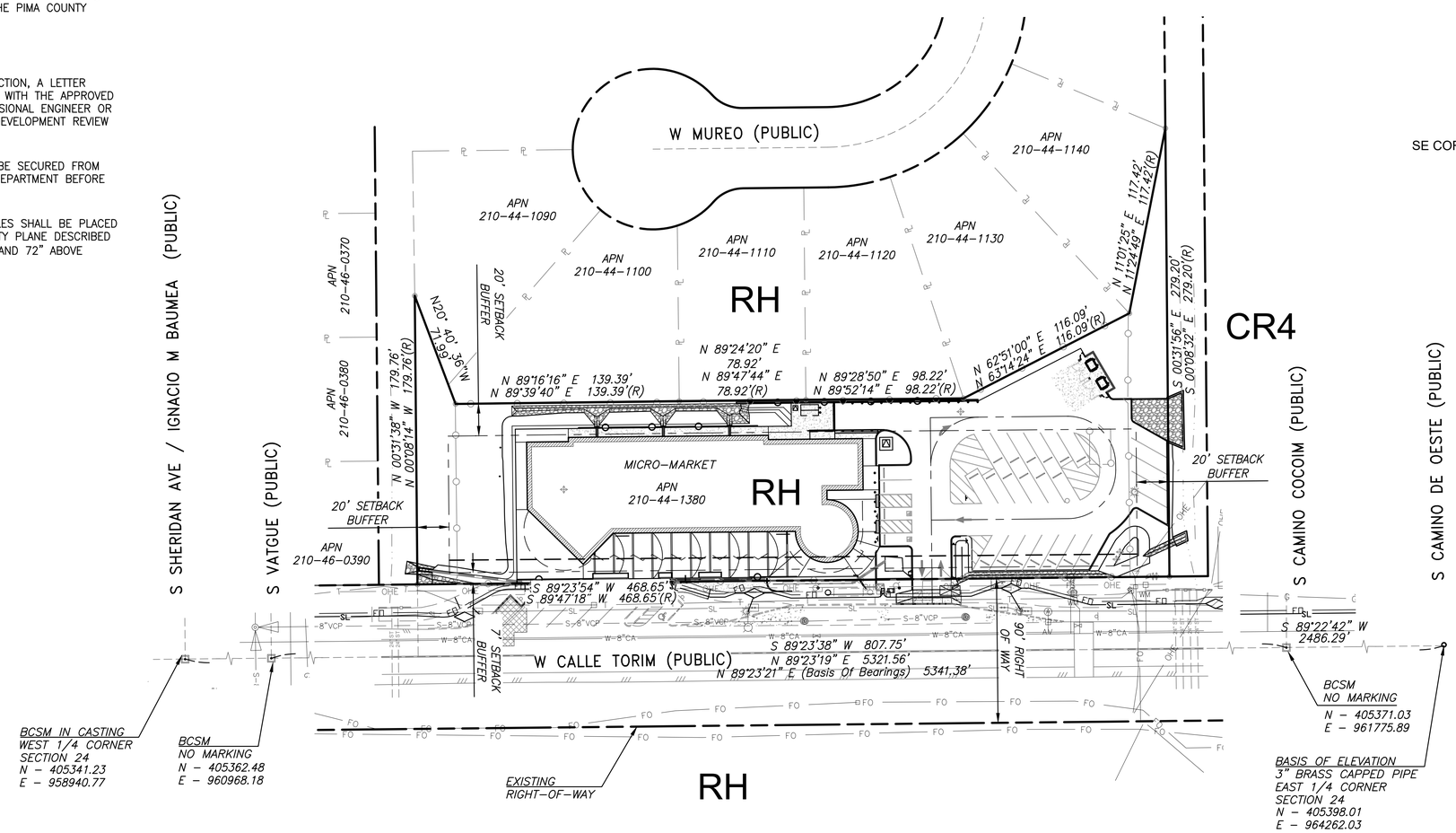
SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
MICRO-MARKET

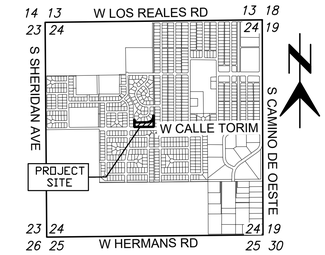
GENERAL NOTES:

1. THE GROSS AREA OF DEVELOPMENT IS 1.349 ACRES.
2. ASSESSORS TAX PARCEL NO. 210–44–1380.
3. THE WATER COMPANY THAT WILL SERVE THIS DEVELOPMENT IS TUCSON WATER.
4. ON–SITE SANITARY SEWERS WILL BE PRIVATE AND WILL BE CONSTRUCTED, OPERATED AND MAINTAINED ON A PRIVATE BASIS, AND IN ACCORDANCE WITH AN APPROVED OPERATION AND MAINTENANCE PLAN, IF REQUIRED. THE LOCATION AND METHOD OF CONNECTION TO AN EXISTING PUBLIC SANITARY SEWER IS SUBJECT TO REVIEW AND APPROVAL BY THE PIMA COUNTY WASTEWATER MANAGEMENT DEPARTMENT.

PERMITTING NOTES:

1. PRIOR TO THE REQUEST FOR FINAL INSPECTION, A LETTER CERTIFYING COMPLETION IN CONFORMANCE WITH THE APPROVED PLANS, SEALED BY A REGISTERED PROFESSIONAL ENGINEER OR ARCHITECT MUST BE SUBMITTED TO THE DEVELOPMENT REVIEW DIVISION.
2. A PROJECT CONSTRUCTION PERMIT MUST BE SECURED FROM PIMA COUNTY WASTEWATER MANAGEMENT DEPARTMENT BEFORE BEGINNING ANY WORK ON THIS PROJECT.
3. MATERIALS WITHIN SIGHT VISIBILITY TRIANGLES SHALL BE PLACED SO AS NOT TO INTERFERE WITH A VISIBILITY PLANE DESCRIBED BY TWO HORIZONTAL LINES LOCATED 30" AND 72" ABOVE FINISHED GRADE OF THE ROADWAY.





LOCATION MAP

SCALE: 3" = 1 MILE
SE CORNER OF N/W 1/4 OF SECTION 24, T 15 S, R 12 E
PIMA COUNTY, ARIZONA

OWNER/DEVELOPER

PASCUA YAQUI TRIBE,
7474 S CAMINO DE OESTE,
TUCSON, AZ. 85757
ATTN: IAN GEITNER

ARCHITECT

MERGE ARCHITECTURAL GROUP,
CONTACT: CARLOS A. MURRIETA
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ENGINEER

SOLIS ENGINEERING CO,
239 N. CHURCH AVENUE,
TUCSON, AZ. 85701
ATTN: RICARDO SOLIS, PE

HYDROLOGIST

CMG DRAINAGE ENGINEERING, INC.,
3555 N MOUNTAIN AVENUE,
TUCSON, AZ. 85719
ATTN: JERALD L. CURLESS, PE

SURVEYOR (BOUNDARY & TOPOGRAPHY)

ALTA ARIZONA SURVEY–ENGINEERING–GEOTECH
2025 W RUTHRAUFF ROAD, SUITE 125
TUCSON, AZ. 85710
ATTN: PATRICIA GAJDA, RLS

SHEET INDEX

SHEET NO.	SHEET NAME	DESCRIPTION
1	CV1	COVER SHEET
2	GN1	GENERAL NOTES SHEET
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4	DR1	DRAINAGE SHEET
5–7	GR1–GR3	GRADING SHEETS
8–9	GR4–GR5	STAKING SHEETS
10–12	DT1–DT3	DETAIL SHEETS
13	UT1	UTILITY PLAN SHEET

LEGAL DESCRIPTION:

ALL PARTS OF LOT 50 (PARCEL NUMBER 210–44–1380), BLOCK 40 OF "PASCUA YAQUI HOUSING AZ 40–1" RECORDED IN BOOK 64 OF MAPS & PLATS AT PAGE 78 LOCATED IN THE NORTHWEST QUARTER OF SECTION 24, TOWNSHIP 15 SOUTH, RANGE 12 EAST, GILA AND SALT RIVER MERIDIAN, PIMA COUNTY, ARIZONA

PROJECT ADDRESS: 5010 W CALLE TORIM TUCSON, AZ 85757

BASIS OF CONTROL:

BASIS OF BEARINGS:

BASIS OF BEARING WAS NORTH 89°23'21" EAST BETWEEN THE PIMA ASSOCIATION OF GOVERNMENTS GEODETIC CONTROL POINTS "TP21" AND "HP02" THE ARIZONA STATE PLANE COORDINATES WERE SCALED TO CREATE A MODIFIED COORDINATE SYSTEM AT GROUND VALUES. THE INVERSE OF THE COMBINED GRID FACTOR 0.99985667320 (1/X=1.000143289) WAS APPLIED TO POINT "HP02" TO PRODUCE THE FINAL GROUND COORDINATES.

BASIS OF ELEVATIONS:

BASIS OF ELEVATION WAS 2576.76(NAVD88) ACCORDING TO THE PIMA ASSOCIATION OF GOVERNMENTS GEODETIC CONTROL POINT "HP02" DESCRIBED AS A 3" BLM BRASS CAPPED PIPE MONUMENTING THE EAST 1/4 CORNER OF SECTION 24.

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 BLUE STAKE, INC.
Call 811 or click Arizona811.com

No.	Revision Description	Engineer	Date

SOLIS Engineering Co.
239 N. Church Ave.
Tucson, Arizona 85747 (520) 207–0742

SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
MICRO-MARKET
COVER SHEET

Job Number	P001012023
Design	BSH
Drafting	BSH
Checked	RPS
Appr.	RPS
Date	09–09–24

Sheet Description
CV1
COVER SHEET
Sheet 1 of 13

J:\Projects\P001012023_PYT_Wick (Andrek)\CAD\Sheet Files\CV01.dwg Jun 20, 2025 By:ian
XREFS: PCT01BD 0101TB 0101BM 0101Sanitary 0101Water 0101Grading 0101Utility 0101Title 0101HT
THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY SOLIS ENGINEERING CO. SHALL BE WITHOUT LIABILITY TO SOLIS ENGINEERING CO.

GENERAL CONSTRUCTION NOTES

1. ALL EQUIPMENT / MATERIALS AND CONSTRUCTION SHALL MEET OR EXCEED THE REQUIREMENTS CONTAINED IN THE CURRENT PIMA ASSOCIATION OF GOVERNMENTS (PAG) STANDARD SPECIFICATIONS AND STANDARD DETAILS FOR PUBLIC IMPROVEMENTS, THE SPECIAL PROVISIONS, THE SUPPLEMENTAL SPECIFICATIONS AND THE APPROVED PLANS.

2. OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND RESOLVED BEFORE PROCEEDING WITH THE WORK.

3. THE CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS AND DIMENSIONS BEFORE STARTING WORK. SHOULD CONDITIONS EXIST WHICH ARE CONTRARY TO THOSE SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH THE WORK.

4. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES WITH THE APPROPRIATE ORGANIZATIONS. CONTACT "AZ811" AT 1-800-782-5348 TWO FULL WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION (SATURDAYS AND SUNDAYS ARE NOT CONSIDERED WORKING DAYS.)

5. ENGINEER MAKES NO WARRANTY THAT UTILITIES SHOWN ARE COMPLETE, CORRECT, OR COMPRISE OF IN-SERVICE OR ABANDONED UTILITIES. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL UTILITY LOCATIONS BY APPROVED METHODS AS DETERMINED BY UTILITY. CONTRACTOR SHALL MAKE NOTE BY REDLINE FOR ANY LOCATIONS NOT SHOWN CORRECT ON THE PLANS. CONTRACTOR SHALL NOTIFY ENGINEER OR ARCHITECT OF ANY DISCREPANCIES BETWEEN SITE CONDITIONS AND THE PLANS.

6. EXISTING TOPOGRAPHIC CONDITIONS SHOWN ON PLAN SHEETS REFLECT CONDITIONS AS OF JUNE 2023 AS SURVEYED BY ALTA ARIZONA. THE EXISTING TOPOGRAPHY AS DELINEATED ON THESE DRAWINGS SHALL BE UTILIZED AS THE BASIS FOR ALL EARTHWORK COMPUTATIONS. SAID TOPOGRAPHY SHALL BE PRESUMED TO BE ACCEPTABLE TO ALL INTERESTED PARTIES UNLESS A DEVIATION SO DETERMINED SHALL BE TRANSMITTED TO ALL PARTIES.

7. A GEOTECHNICAL ENGINEERING REPORT WAS PROVIDED FOR THE CHEPA'S MICRO-MARKET BY ATEK ENGINEERING CONSULTANTS. REPORT NO. 230057 WAS PREPARED ON 06-13-2023. EARTHWORK AND PAVEMENT STRUCTURE SHALL CONFORM TO THE RECOMMENDATIONS CONTAINED IN THE REPORT.

8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE ARIZONA REGISTERED LAND SURVEYOR PROVIDING THE CONSTRUCTION LAYOUT TO VERIFY THE BENCHMARKS AND COMPARE THE SITE CONDITIONS WITH THE PLANS. SHOULD ANY BENCHMARKS, GRADE, OR DESIGN INDICATED ON THE PLANS BE SUSPECT, THE CONTRACTOR OR LAND SURVEYOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OBSERVED. THE ENGINEER SHALL BE NOTIFIED OF SAID BENCHMARK, GRADE, OR DESIGN PROBLEM AT LEAST 72 HOURS BEFORE CONSTRUCTION IS SCHEDULED TO BEGIN IN THE AFFECTED AREA.

9. REMOVAL OF ALL CACTI AND NATIVE PLANTS SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE "ARIZONA NATIVE PLANT LAW" A.R.S, CHAPTER 7.

10. CONTRACTOR SHALL ADJUST BOTH EXISTING AND NEW WATER VALVE, BOX COVERS, WATER METER BOXES, SANITARY SEWER MANHOLE AND CLEANOUT RING AND COVERS, TELEPHONE, COMMUNICATIONS, AND ELECTRIC MANHOLE RING AND COVERS TO THE NEW FINISHED GRADE.

11. THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE WHEN REQUIRING THE SERVICES OF THE ENGINEER OR ANY OTHER PERSON PROPERLY AUTHORIZED FOR SUCH PURPOSE FOR LAYING OUT ANY PORTION OF THE WORK. CONTRACTOR SHALL DIG ALL STAKE HOLES NECESSARY TO GIVE LINE AND LEVELS.

12. THE CONTRACTOR SHALL PRESERVE ALL STAKES SET FOR THE LINES, LEVELS OR MEASUREMENTS OF THE WORK IN THEIR PROPER PLACES UNTIL AUTHORIZED TO REMOVE THEM BY THE ENGINEER. ANY EXPENSES INCURRED IN REPLACING ANY STAKES WHICH THE CONTRACTOR OR HIS SUBCONTRACTORS MAY HAVE FAILED TO PRESERVE SHALL BE CHARGED TO THE CONTRACTOR.

13. UNLESS OTHERWISE NOTED, DIMENSIONS ARE TO CENTERLINE OF PROPERTY LINE, FACE OF CURB, AND OUTSIDE FACE OF BUILDING.

14. ALL NON ADA PARKING LOT STRIPING SHALL BE 4-INCH WIDE WHITE PAINT. ALL CROSS HATCHING SHALL BE AT A 45 DEGREE ANGLE TO PARKING STALLS MARKING WIDTH OF 6-INCHES, SPACED 4.5-FT APART, EDGE STRIPE TO EDGE STRIPE. AT ADA SPACES, STRIPING SHALL BE 6" IN WIDTH.

15. ALL PRIVATE SIGNS SHOWN OR NOT SHOWN ON THE PLANS, SHALL BE RELOCATED BY CONTRACTOR. COORDINATE WITH PROPERTY OWNER FOR NEW LOCATION. COST FOR COMPLETE-IN-PLACE RELOCATIONS AND ANY NEW FOUNDATIONS OR POSTS ARE CONSIDERED TO BE INCLUDED IN THE COST OF THIS WORK.

16. THE CONTRACTOR SHALL INSTALL ADA ACCESSIBLE PARKING SIGN (AZDOT R7-8AZ) SIZE: 12"X18", FLAT SHEET ALUMINUM. INSTALL SIGN TO A 2"X2" SQUARE TUBE POST AND FOUNDATION AS SHOWN IN PCDOT/COT SIGNING AND MARKING STANDARDS SHEET 4.1, MOUNT 7-FT (BOTTOM OF SIGN).

17. WHERE NEW PAVEMENT ABUTS EXISTING PAVEMENT, CONTRACTOR SHALL SAWCUT NEAT LINE ALONG EXISTING ASPHALT CONCRETE PAVEMENT, APPLY TACK COAT ALONG EDGE, AND MATCH GRADE TO EXISTING PAVEMENT.

18. ALL SAW CUTTING IS CONSIDERED INCIDENTAL TO AND INCLUDED IN OTHER CONTRACT ITEMS.

19. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY, UTILITIES, AND EXISTING IMPROVEMENTS, INCLUDING POSITIVE CONTROL OF EARTH SPILLAGE, CONSTRUCTION WATER, AND RUNOFF WATERS.

20. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FURNISH, HAUL AND APPLY ALL WATER REQUIRED FOR COMPACTION AND FOR THE CONTROL OF DUST FROM CONSTRUCTION ACTIVITY.

21. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY, DURING THE COURSE OF THE PROJECT. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

22. THE CONTRACTOR SHALL INSTALL RIPRAP WITH A D50=6 INCHES AND GRADATION PER PLANS, 12" DEPTH WITH MIRAFI 180N NONWOVEN GEOTEXTILE FABRIC (OR APPROVED EQUAL) AT ALL LOCATIONS, AND A MINIMUM 2-FT DEEP RIP-RAP TOE DOWN AT THE BASE OF ALL RIP-RAP SLOPES.

23. PRIOR TO CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL ESTABLISH PROPER WORK AREA CONTROL BY USING TEMPORARY PROTECTIVE FENCING TO ESTABLISH A SAFE PERIMETER AROUND THE CONSTRUCTION SITE AS NEEDED. TEMPORARY FENCING SHALL BE INSTALLED TO CREATE A DISTINCT SEPARATION FROM THE PUBLIC AND TO ENABLE SAFE FOOT TRAFFIC FOR PEDESTRIANS NEAR THE CONSTRUCTION SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADA ACCESS DURING CONSTRUCTION.

24. THE CONTRACTOR SHALL DETERMINE IF THE ARCHITECT PLANS REQUIRE SIDEWALK SCUPPERS NOT SHOWN ON THE ENGINEERING PLANS. THE CONTRACTOR IS TO USE THE LOCATION SHOWN ON ARCHITECT PLANS AND INSTALL PAG STANDARD DETAIL SIDEWALK SCUPPER 204 (TYPE 1) AT A MINIMUM.

GENERAL PIMA COUNTY NOTES

1. ALL CONSTRUCTION AND TEST METHODS SHALL BE IN CONFORMANCE WITH THE PAG STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC IMPROVEMENTS (MOST CURRENT - SEE PAG WEBSITE) UNLESS MODIFIED HEREIN.

2. AGGREGATE BASE COURSE SHALL CONFORM TO PAG SECTION 303.

3. ASPHALTIC CONCRETE SHALL CONFORM TO PAG SECTION 406, PAG 2 MIX, PG 70-10.

4. PORTLAND CEMENT CONCRETE SHALL COMPLY WITH PAG SECTION 1006, CLASS S 3,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS, UNLESS OTHERWISE SPECIFIED.

5. ALL WORK SHALL CONFORM TO THE PIMA COUNTY GRADING ORDINANCE, CHAPTER 18.81 OF PIMA COUNTY ZONING CODE.

6. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIVE REGULATIONS.

7. CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED BY GOVERNMENTAL AGENCIES.

8. A COPY OF THE APPROVED PLANS SHALL BE KEPT IN AN EASILY ACCESSIBLE LOCATION ON SITE AT ALL TIMES DURING CONSTRUCTION.

9. IF UNANTICIPATED CONDITIONS ARE ENCOUNTERED DURING THE COURSE OF CONSTRUCTION AND ARE BEYOND THE SCOPE OF THE DESIGN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER. THE ENGINEER SHALL SUBMIT THE NECESSARY REVISED OR SUPPLEMENTAL PLANS FOR REVIEW AND APPROVAL BY THE PASCUA YAQUI TRIBE.

10. UPON COMMENCEMENT OF WORK, TRAFFIC CONTROL DEVICES SHALL BE POSTED AND MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME AS THE WORK IS COMPLETED. ALL WARNING SIGNS, BARRICADES, ETC. SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES ADOPTED BY THE STATE OF ARIZONA PURSUANT TO A.R.S. 28-650.

11. A REGISTERED ENGINEER OR ARCHITECT MUST CERTIFY THAT THIS PROJECT WAS CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED PLANS.

12. PROTECTIVE FENCING, IF SHOWN IN THE LANDSCAPE OR PLANT SALVAGE PLANS, MUST BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES.

13. ALL STREET SIGNING SHALL BE DESIGNED AND INSTALLED ACCORDING TO CURRENT PIMA COUNTY STANDARDS, THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE PCDOT/COT SIGNING MANUAL.

14. A RIGHT-OF-WAY USE PERMIT IS REQUIRED FOR CONSTRUCTION WITHIN PUBLIC RIGHTS OF WAY AND PUBLIC DRAINAGE WAYS.

15. THERE IS NO REGULATED RIPARIAN HABITAT ON THE PROJECT SITE.

PAVEMENT MARKING NOTES

1. ALL EQUIPMENT / MATERIALS AND CONSTRUCTION SHALL MEET OR EXCEED THE REQUIREMENTS CONTAINED IN THE CURRENT PIMA ASSOCIATION OF GOVERNMENTS (PAG) STANDARD SPECIFICATIONS AND STANDARD DETAILS FOR PUBLIC IMPROVEMENTS, THE SPECIAL PROVISIONS, THE SUPPLEMENTAL SPECIFICATIONS AND THE APPROVED PLANS. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN COMPLIANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE LATEST EDITION OF THE PIMA COUNTY/CITY OF TUCSON (PC/COT) SIGNING & PAVEMENT MARKING DESIGN MANUAL AND APPLICABLE AMENDMENTS.

2. THE PAVEMENT MARKING CONTRACTOR SHALL CONTACT THE ENGINEER AT LEAST 3 WORKING DAYS IN ADVANCE OF ANY PAVEMENT MARKING LAYOUT AND INSTALLATION TO SCHEDULE INSPECTION AND APPROVAL OF PAVEMENT MARKINGS.

3. UPON APPROVAL OF THE PAVEMENT MARKING LAYOUT, THE ENGINEER WILL ISSUE WRITTEN AUTHORIZATION TO THE CONTRACTOR TO PROCEED WITH INSTALLING ALL PAVEMENT MARKINGS.

4. THE PAVEMENT MARKING DRAWINGS ARE SCHEMATIC ONLY. THE CONTRACTOR SHALL FOLLOW ALL DIMENSIONS, APPLICABLE MARKING DETAILS, AND SPECIFIED PIMA COUNTY STANDARDS WHEN INSTALLING PAVEMENT STRIPING, SYMBOLS, LEGENDS, AND MARKERS.

5. PAINTED LAYOUT STRIPING SHALL BE 15 MIL (0.015") THICK, WATER BASED PAINT PLACED ON THE FINAL PAVEMENT SURFACE. PAINT SHALL HAVE TWO (2) APPLICATIONS FOR A FINAL THICKNESS OF 30MIL. PAINTED LAYOUT STRIPING SHALL BE INSTALLED WITHIN FIVE (5) WORKING DAYS OF THE FINAL PAVEMENT SURFACE BEING COMPLETED.

6. PAINTED SYMBOLS AND LEGENDS SHALL BE APPLIED AT THE SAME TIME AS THE PAINTED STRIPING, WITH THE EXCEPTION OF BIKE LANE SYMBOLS AND WORDS (SUCH AS STOP, AHEAD, ONLY, ETC.).

SIGNING NOTES

1. ALL NEW SIGNS SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE LATEST EDITION OF THE PIMA COUNTY/CITY OF TUCSON SIGNING & PAVEMENT MARKING DESIGN MANUAL, THE PAG STANDARD SPECIFICATIONS, THE PIMA COUNTY SUPPLEMENTAL SPECIFICATIONS, ANY REQUIRED SPECIAL PROVISIONS, AND THESE PLANS.

2. SIGNS MAY BE MODIFIED, AND LOCATIONS ADJUSTED, TO FIT CONDITIONS AT THE DISCRETION OF THE TRAFFIC ENGINEER.

3. ALL PERFORATED POSTS SHALL BE INSTALLED IN A CONCRETE FOUNDATION, UNLESS OTHERWISE DIRECTED BY THE TRAFFIC ENGINEER.

4. ALL SIGN STATION LOCATIONS ARE APPROXIMATE, THE CONTRACTOR SHALL VERIFY ACTUAL SIGN LOCATIONS WITH THE TRAFFIC ENGINEER PRIOR TO THE INSTALLATION OF ANY SIGNS.

5. ALL SIGNS SHALL HAVE TYPE XI SHEETING OR AN EQUIVALENT. ALL GROUND MOUNTED SIGNS SHALL HAVE AN ANTI-GRAFFITI COATING APPLIED TO SIGN FACE, 3M #1160 FILM OR EQUIVALENT.

6. A 3"X2" PRESSURE SENSITIVE, UV RESISTANT LABEL INDICATING THE SIGN MANUFACTURER'S NAME AND DATE OF MANUFACTURE SHALL BE PLACED IN THE UPPER RIGHT CORNER OF THE BACK OF ALL SIGNS, EXCEPT FOR STREET NAME SIGNS, AT THE TIME OF INSTALLATION.

7. ALL NEW SIGNS SHALL HAVE 0.080 GAUGE, RADIUS CORNER, ALUMINUM BACKING UNLESS OTHERWISE NOTED.

RIPRAP GRADATION NOTES

DUMPED RIPRAP GRADATION (D50=6")	
SIZE (IN)	PERCENT FINER
12"	100 - 90
9"	85 - 70
6"	50 - 30
4"	15 - 5
2"	5 - 0

GROUTED RIP-RAP GRADATION TABLE	
SIZE (IN)	PERCENT FINER
9"	100
7"	50
5"	0

DUMPED RIPRAP SHALL BE PLACED OVER VERY HIGH SURVIVABILITY FABRIC, NON-WOVEN GEOTEXTILE FABRIC - 12 OZ. / SY MIN. WT. (ADOT SECTION 1014-4.03).

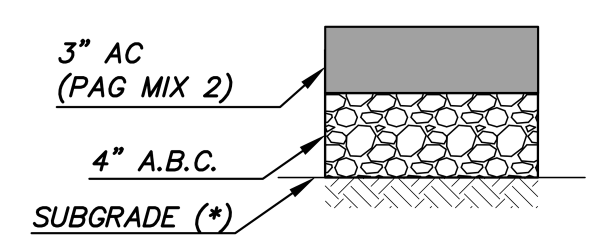
UNLESS OTHERWISE NOTED, RIPRAP SHALL BE INSTALLED IN ACCORDANCE WITH PAG SECTION 913.

ANGULAR ROCK RIP-RAP SURFACING: ANGULAR ROCK FOR LANDSCAPE SURFACING AND/OR RIP RAP SHALL BE NATIVE SURFACE ROCK THAT HAS BEEN SCREENED TO PROVIDE A RANGE OF ROCK SIZES RANGING FROM 4" TO 10" IN DIAMETER. THE MATERIAL COLOR BE COMPOSED OF TWO COLORS: 75% "APACHE BROWN AND 25% "KINO BLUE" AS SUPPLIED BY KALAMAZOO MATERIALS, OR APPROVED EQUAL. THE TWO COLORS OF ROCK MATERIAL SHALL BE BLENDED ON-SITE TO PROVIDE AN EQUAL DISTRIBUTION OF COLORS THROUGH THE RAP RAP SURFACING AREAS. THE ROCK SHALL BE FREE FROM SOIL, SOIL CLUMPS, DEBRIS, AND OTHER EXTRANEOUS MATERIALS. EXCEPT AS MAY BE APPROVED BY THE OWNER'S REPRESENTATIVE, ALL MATERIAL USED ON THE PROJECT SHALL BE FROM THE SAME SOURCE AND SHALL MATCH THE APPROVED SAMPLE.

LEGEND

EXISTING / PROPOSED

ROADWAY CENTERLINE
BUILDING SETBACK
EASEMENT LINE
RIGHT-OF-WAY
DEVELOPMENT BOUNDARY
WATER (W)
SEWER (S)
GAS LINE (G)
OVERHEAD ELECTRIC (OHE)
UNDERGROUND ELECTRIC (UGE)
UNDERGROUND COMM (COMM)
MSR BUILDING SETBACK
100 YR. FLOOD PLAIN LIMITS
EROSION HAZARD SETBACK (EHS)
SIGNS
STREET / PARKING LIGHTS
SURVEY MONUMENTS
POLE DOWN GUY
SEWER MANHOLE (MH)
SEWER CLEANOUT (CO)
WATER VALVE (WV)
FIRE HYDRANT (FH)
WATER METER (WM)
GAS METER (GM)
TRANSFORMER
POWER/UTILITY POLE (PP)
WATER FLOW DIRECTION
KEY NOTES (#)
SPOT ELEVATION (#)
PAVEMENT
CONCRETE
RIPRAP
DRAINAGE CONCENTRATION POINT
FND 1- 1/2" CAPPED PIPE
LOCAL BENCHMARK
FND RIGHT OF WAY MARKER



TOTAL THICKNESS = 7"

PAVEMENT SECTION NO. 1

PREPARE SUBSTRATE PER THE GEOTECHNICAL REPORT.

ABBREVIATIONS

APPROX	APPROXIMATE
BLDG	BUILDING
BOC	BACK OF CURB
BOT	BOTTOM
BSN	BOTTOM STAIR NOSE
℄	CENTER LINE
CONC	CONCRETE
DEP CURB	DEPRESSED CURB
DIA	DIAMETER
DIM	DIMENSION
EA	EACH
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
EXIST	EXISTING
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FL	FINISHED FLOW LINE
FOC	FACE OF CURB
FOW	FACE OF WALL
FT	FOOT/FEET
GV	GATE VALVE
GR	GRADE
HCAP	HANDICAP
HT	HEIGHT
HORIZ	HORIZONTAL
LF	LINEAR FOOT
LOC	LOCATION
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
MISC	MISCELLANEOUS
NO./#	NUMBER
NTS	NOT TO SCALE
P	TOP OF PAVEMENT
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
R	RADIUS
REQD	REQUIRED
RT	RIGHT
SHT	SHEET
SQ	SQUARE
SW	SIDEWALK
TC	TOP OF CURB
TF	TOP OF FOOTER
TH	THICKNESS
TOC	TOP OF CONCRETE
TP	TOP OF PLAZA
TSN	TOP STAIR NOSE
TW	TOP OF WALL
TYP	TYPICAL

APPROX. EARTHWORK TABLE			
CUT	FILL	NET	GRADED AREA
136 CY	2060 CY	1924 CY	52,490 SF

THE EARTHWORK QUANTITIES SHOWN IN THE TABLE ABOVE ARE NEAT LINE QUANTITIES. THEY DO NOT ACCOUNT FOR ANY SHRINK/SWELL OF MATERIAL, RIP-RAP EXCAVATION, OR ANY OTHER MISCELLANEOUS EXCAVATION OR OVEREXCAVATION WORK, AND THEY DO NOT CONSTITUTE FINAL IN-FIELD QUANTITIES. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, ALL EXCESS FILL MATERIAL SHALL BE HAULED OFF SITE TO A LOCATION IDENTIFIED BY THE PYT.

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No.	Revision Description	Engineer	Date

SOLIS Engineering Co.
239 N. Church Ave.
Tucson, Arizona 85747 (520) 207-0742

SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
MICRO-MARKET
GENERAL NOTES SHEET

Registered Professional Engineer (Civil), Certificate No. 43315, RICARDO P. SOLIS, Date Signed 09/09/24, ARIZONA, U.S.A.

Job Number	P001012023
Design	BSH
Drafting	BSH
Checked	RPS
Appr.	RPS
Date	09-09-24

Sheet Description
GN1
GENERAL NOTES
Sheet 2 of 13

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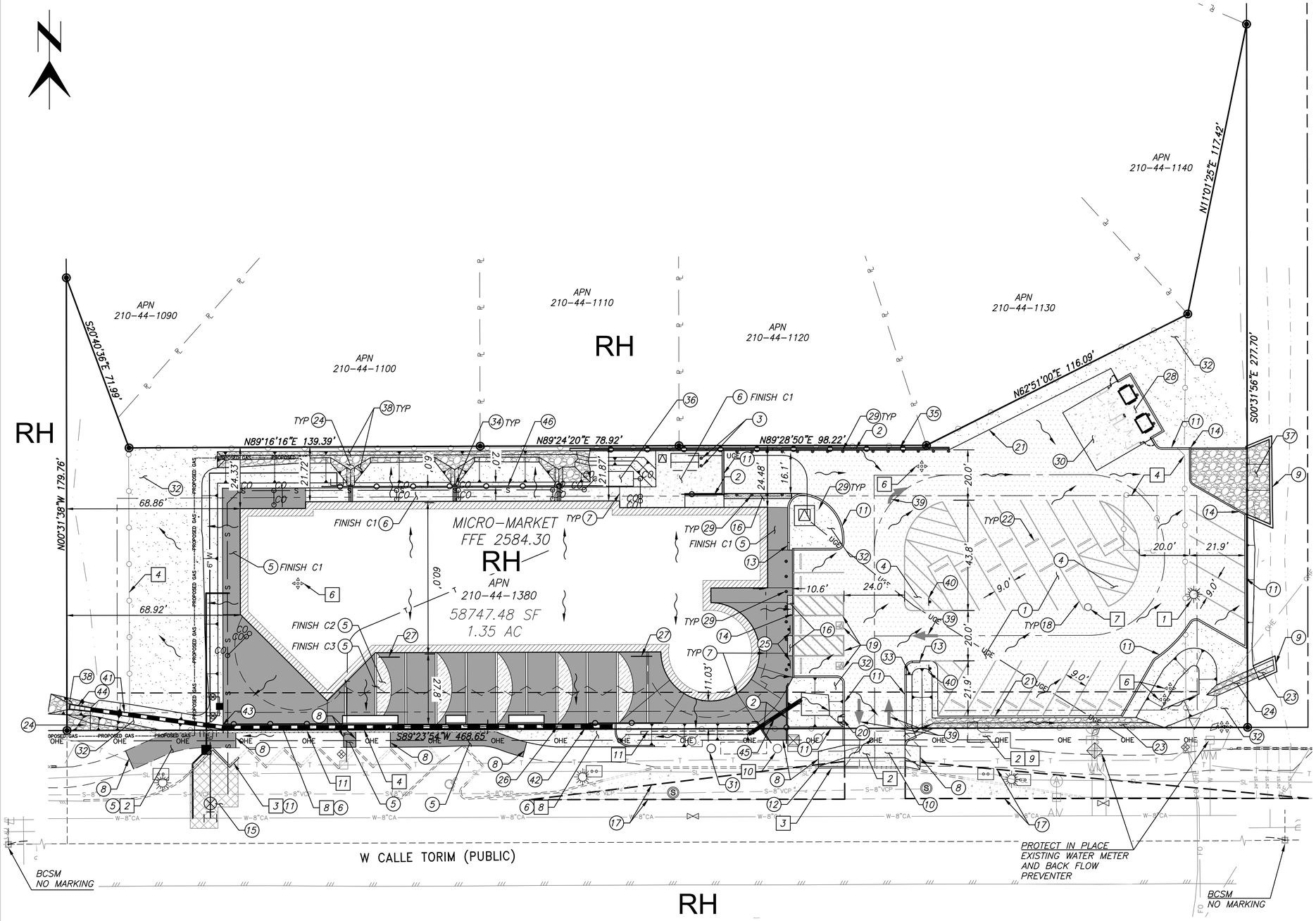

CR4

DEMOLITION KEYNOTES

1 REMOVE EXISTING LIGHT POLE BY TRICO (OR OTHERS)
2 REMOVE EXISTING SIDEWALK
3 REMOVE EXISTING CURB
4 REMOVE EXISTING FENCE (SEE NOTE 5)
5 NOT USED
6 REMOVE EXISTING WATER SPIGGOT
7 REMOVE EXISTING 4" CAPPED PIPE
8 REMOVE AND SALVAGE EXISTING LANDSCAPE ROCK
9 REMOVE EXISTING HANDRAIL
10 RELOCATE EXISTING TRASH CAN
11 REMOVE EXISTING RETAINING WALL

CONSTRUCTION KEYNOTES

1 PAVEMENT SECTION NO 1
2 HANDRAIL (USE ANCHOR PLATES PER PAG 105) (SEE ARCHITECT PLANS)
3 REMOVABLE POST BARRICADE (PAG DTL. 107) (SEE NOTE 1)
4 PARKING LOT LIGHTING (SEE ELECTRICAL PLANS)
5 CONCRETE SIDEWALK (PAG DTL. 200) (THICKNESS 4") (FINISH PER ARCHITECT PLANS) (SEE NOTE 3)
6 CONCRETE SIDEWALK (PAG DTL. 200) (THICKNESS 6") (FINISH PER ARCHITECT PLANS) (SEE NOTE 3)
7 CONCRETE SIDEWALK CONSTRUCTION JOINT
8 CONCRETE SIDEWALK: NEW TO EXISTING CONDITION (PAG DTL. 203)
9 1'X3' CONCRETE TOWDOWN
10 DRIVEWAY APRON (PAG DTL. 206)
11 CONCRETE VERTICAL CURB (TYPE 2) (PAG DTL. 209)
12 CONCRETE CURB: NEW TO EXIST. CONNECTION (PAG DTL. 211)
13 CONCRETE CURB TERMINAL SECTION (PAG DTL. 212)
14 CONCRETE HEADER (PAG DTL. 213)
15 TRENCH PATCH (TYPE 1) (PAG DTL. 216)
16 CURB ACCESS RAMP DETECTABLE WARNING STRIP (CAST IRON) AND CONSTRUCTION NOTES (PAG DTL. 207) (SHEET 10 OF 10)
17 SIGHT VISIBILITY TRIANGLE FOR PROPOSED DEVELOPMENT
18 PAVEMENT MARKING (4" SOLID WHITE)
19 ACCESSABLE MARKINGS AND SIGNS (SEE DETAIL C)
20 DEPRESSED CURB OUTLET (SEE DETAIL B)
21 ASPHALTIC CONCRETEE THICKENED EDGE (SEE DETAIL D)
22 CONCRETE WHEEL STOP (SEE DETAIL F)
23 GROUTED RIPRAP CHANNEL (SEE DETAIL G)
24 DUMPED RIPRAP (SEE DETAIL H)
25 ACCESSIBLE SIGN AND POST (SEE DETAIL C)
26 STAIRS (SEE DETAIL E)
27 BICYCLE RACK (SEE ARCHITECT PLANS FOR FINAL LOCATIONS AND DETAIL)
28 DOUBLE TRASH ENCLOSURE (SEE ARCHITECT PLANS)
29 POST BARRICADE (PAG DTL. 106) (TYPE B) (SEE NOTE 1)
30 TRASH ENCLUSURE PAD (SEE ARCHITECT PLANS)
31 NEW LOCATION FOR EXISTING TRASH CAN (SEE NOTE 2)
32 DECOMPOSED GRANITE (SEE NOTE 4)
33 NO RIGHT TURN SIGN (R-3-1) WITH SQUARE POST AND FOUNDATION
34 SIDEWALK SCUPPER (TYPE 1) (PAG DTL. 204) (SEE NOTE 7)
35 RETAINING WALL (SEE STRUCTURAL PLANS)
36 GREASE INTERCEPTOR (SEE NOTE 6)
37 DUMPED RIPRAP D50 = 6" T=12" OVER MIRAFI 180 N NONWOVEN GEOTEXTILE FABRIC
38 HANDPLACED GROUTED RIPRAP (SEE DETAIL A)
39 PAVEMENT LEGEND (SOLID WHITE)
40 DO NOT ENTER (R5-1) WITH SQUARE POST AND FOUNDATION (CONTINUOUS RED POST REFLECTOR FOR SQUARE POST DOT COMPLIANT)
41 18" ADS MEGA GREEN DUAL WALL STORM DRAIN PIPE (OR APPROVED EQUAL)
42 18" ADS DURASLOT XL TRENCH DRAIN WITH PEDESTIAN GRATE (OR APPROVED EQUAL) (SEE DETAIL E)
43 ADS MITERED BELL-BELL COUPLERS 18" DIAMETER (OR APPROVED EQUAL)
44 PARALLEL-DRAINAGE TYPE END SECTION (18", 10:1 SLOPE & SAFETY BARS) (ADOT PIPE, METAL SAFETY END SECTION) (SEE NOTE 8)
45 6" HDPE (25LF) (SEE DETAIL I)
46 HANDRAIL (USE GROUND INSTALLATION OPTION PER PAG 105) (SEE ARCHITECT PLANS)

NOTES:

1. FILL POST BARRICADE WITH CONCRETE WITH A 1" SMOOTH DOME ON TOP. PAINT TO BE APPLIED PER SECTION 1006. COLOR TO BE SELECTED BY PASQUA YAQUI TRIBE.
2. WELD OR USE STEEL FASTENERS TO CONNECT A NEW 3' POST (4" CIRCULAR OR SQUARE POST) TO EXISTING TRASH CAN. POST TO BE INSTALLED IN SLEEVE OR DIRECTLY INTO A CONCRETE FOUNDATION.
3. USE 3000 PSI CONCRETE FOR ALL FLAT WORK. FOR SIDEWALK INSIDE THE RIGHT OF WAY THE FINISHED CONCRETE SURFACE SHALL BE PER PAG DTL. 200 SHEET 2 OF 2 NOTE 6.
4. APPLY DECOMPOSED GRANITE, 1" POORLY GRADED, TO A DEPTH OF 3". THE COLOR TO BE SELECTED BY THE PASQUA YAQUI TRIBE.
5. REMOVE EXISTING FENCE EXCEPT WHERE THE FENCE IS SHARED WITH AN ADJACENT PROPERTY OWNER.
6. GREASE INTERCEPTOR SHALL BE JENSEN PRECAST MODEL JP-1500-EE-G OR APPROVED EQUAL (SEE UTILITY PLAN).
7. CUT TOP OF STEEL TUBE NEXT TO BUILDING TO ALLOW FOR PENETRATION OF ROOF DRAIN PIPE. THE SCUPPERS MAY NEED BE TO ADJUSTED TO MATCH THE BUILDING ROOF DRAIN LOCATIONS.
8. PARALLEL-DRAINAGE TYPE END SECTION DETAIL CAN BE FOUND AT THE FOLLOWING WEB SITE: https://azdot.gov/sites/default/files/2019/06/x1971.pdf
9. REFER TO ELECTRICAL PLANS FOR CONDUIT LAYOUT AND PARKING LOT LIGHT LOCATIONS.
10. ADJUST CONCRETE SIDEWALK PANEL AS REQUIRED FOR UNDERGROUND UTILITY

GRAPHIC SCALE
0 10 20 40 80
1 inch = 20 ft.

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No.	Revision Description	Engineer	Date

SOLIS Engineering Co.
239 N. Church Ave.
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SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
MICRO-MARKET
SITE PLAN SHEET

Job Number	P001012023
Design	BSH
Drafting	BSH
Checked	RPS
Appr.	RPS
Date	09-09-24

Sheet Description
SP1
SITE PLAN SHEET
Sheet 3 of 13

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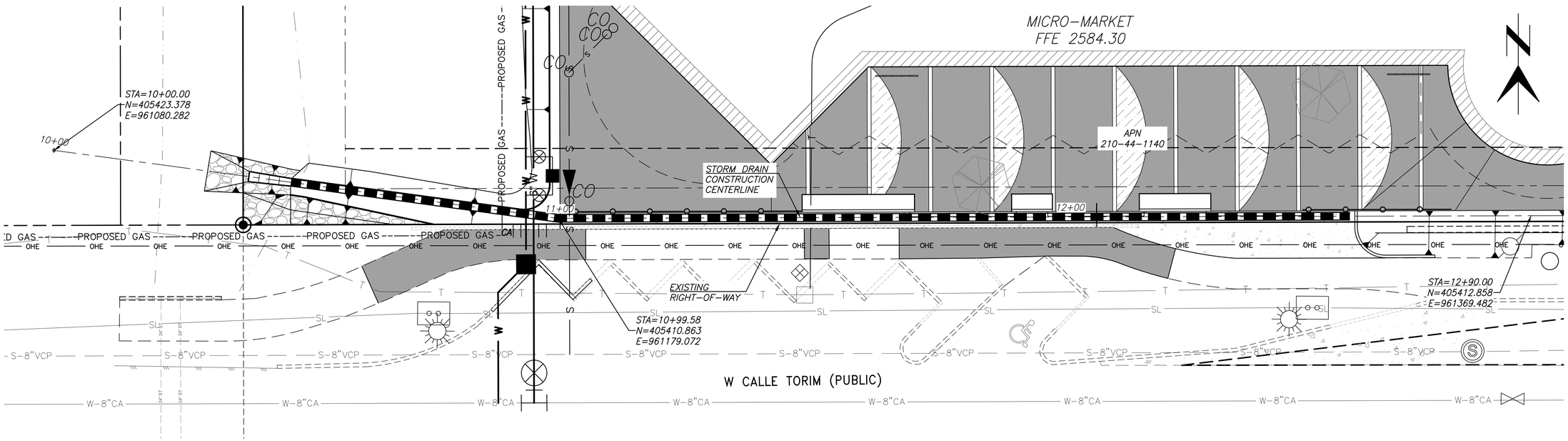

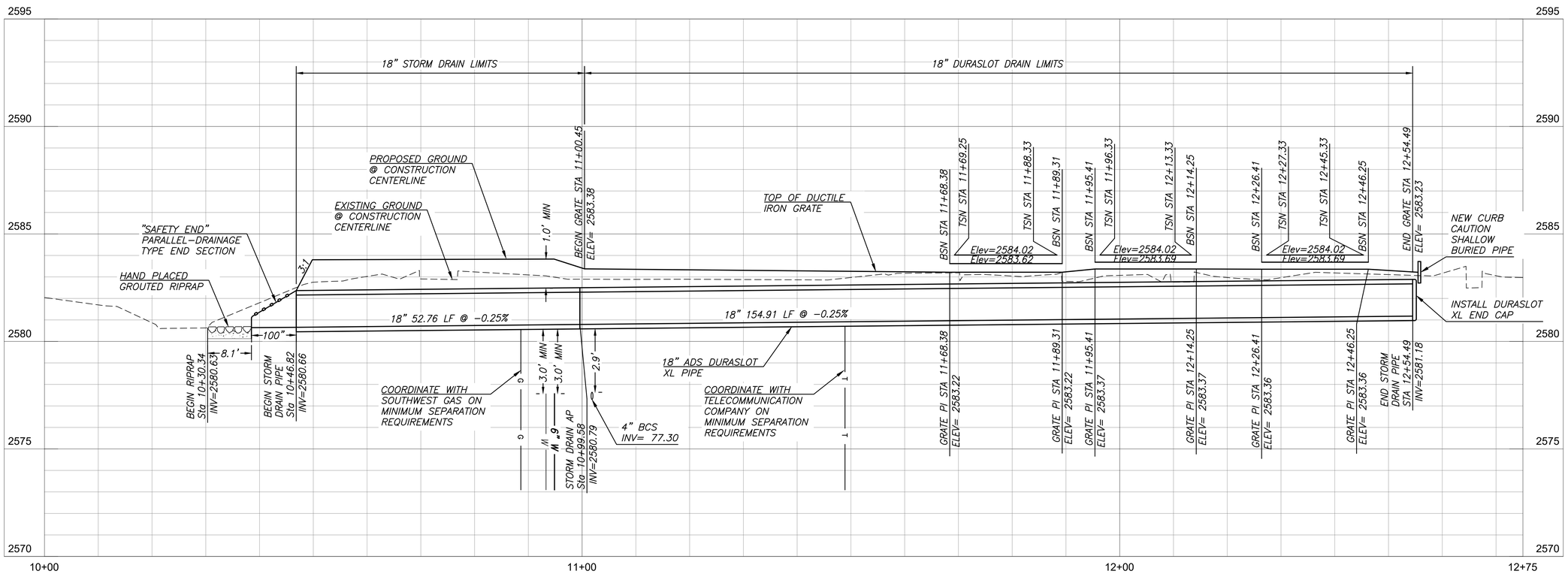

GRAPHIC SCALE

0 10 20 40 80

1 inch = 20 ft.

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SOLIS Engineering Co.
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SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
MICRO-MARKET
DRAINAGE PLAN & PROFILE SHEET

Job Number	P001012023
Design	BSH
Drafting	BSH
Checked	RPS
Appr.	RPS
Date	09-09-24

Sheet Description
DR1

DRAINAGE SHEET

Sheet 4 of 13

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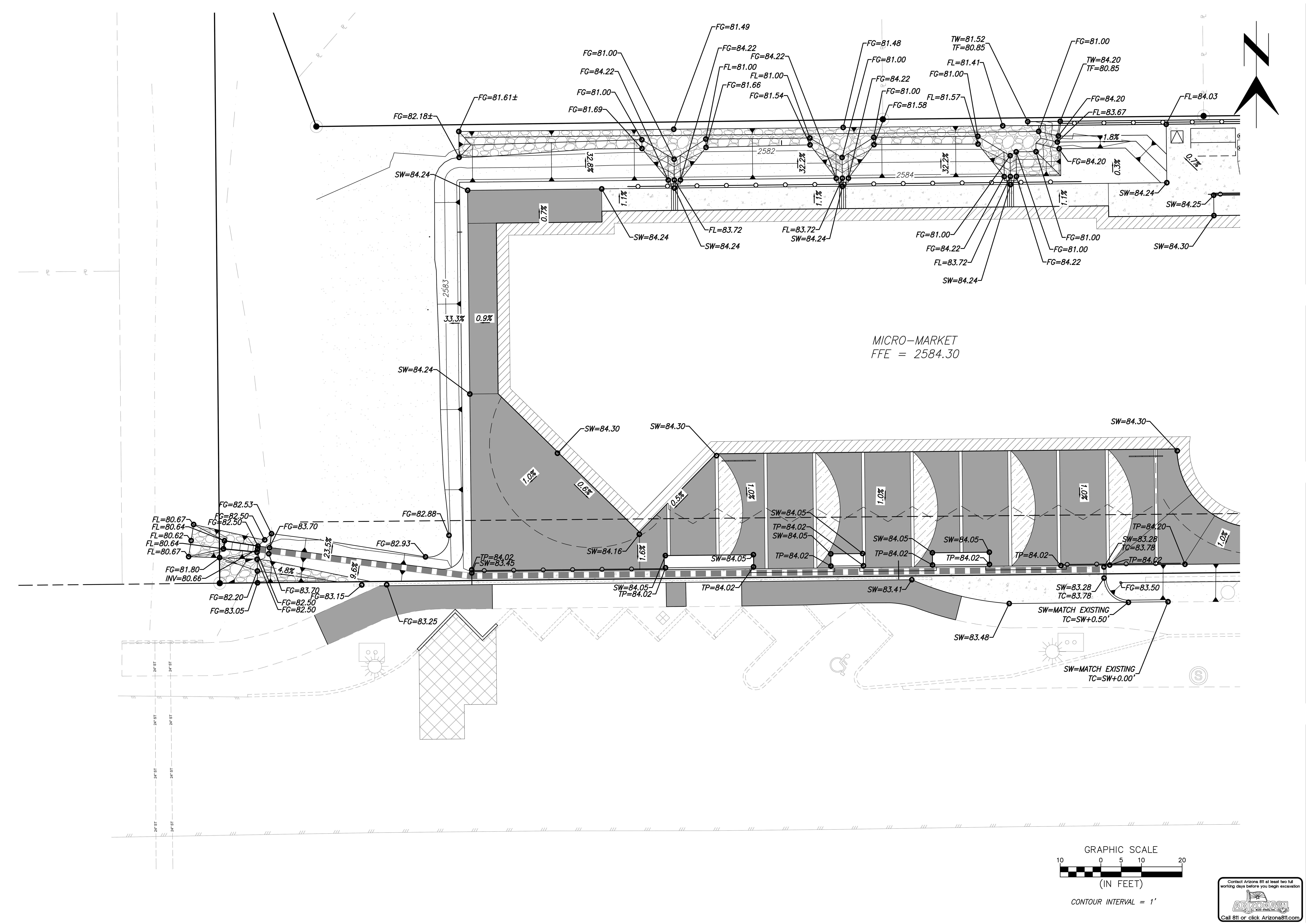

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No.	Revision Description	Engineer	Date

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SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
MICRO-MARKET
GRADING AND STAKING PLAN SHEET

Registered Professional Engineer (Civil) Certificate No. 43315 RICARDO P. SOLIS Date Signed 09/09/24 ARIZONA U.S.A.

Job Number	P001012023
Design	BSH
Drafting	BSH
Checked	RPS
Appr.	RPS
Date	09-09-24

Sheet Description
GR1
GRADING SHEET
Sheet 5 of 13

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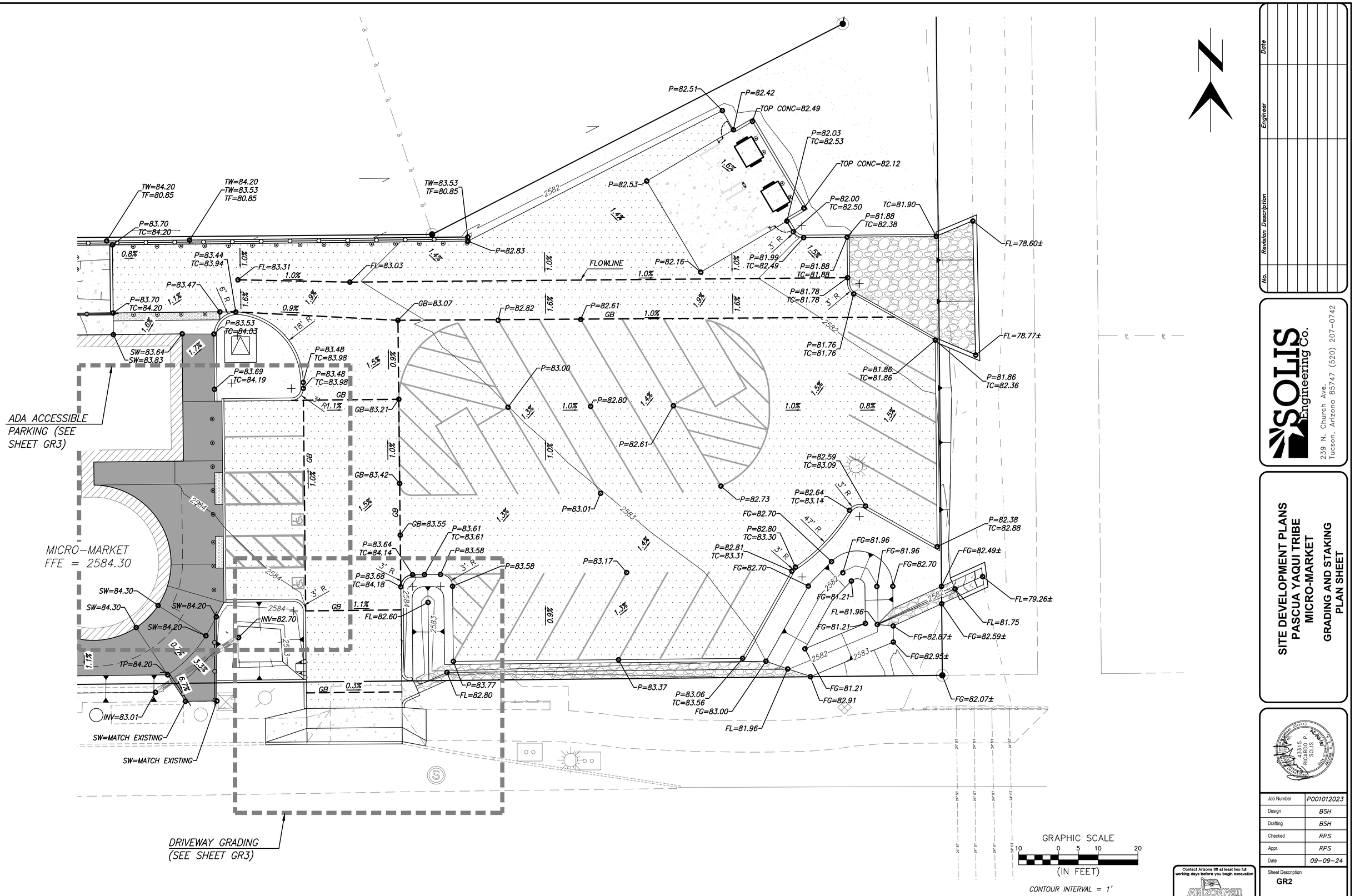

No.	Revision Description	Engineer	Date

SOLIS Engineering Co.
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SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
MICRO-MARKET
GRADING AND STAKING PLAN SHEET

Job Number	P001012023
Design	BSH
Drafting	BSH
Checked	RPS
Appr.	RPS
Date	09-09-24

Sheet Description
GR2
GRADING SHEET
Sheet 6 of 13

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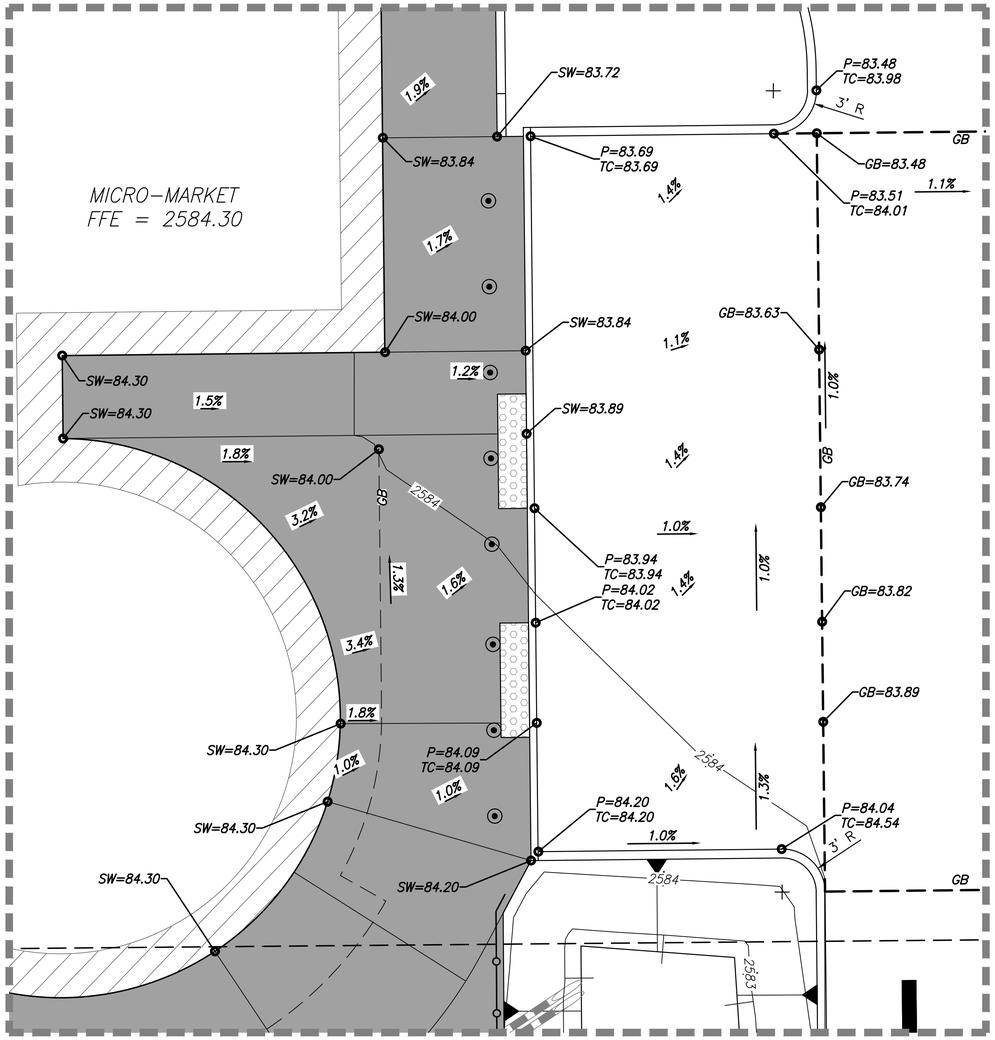
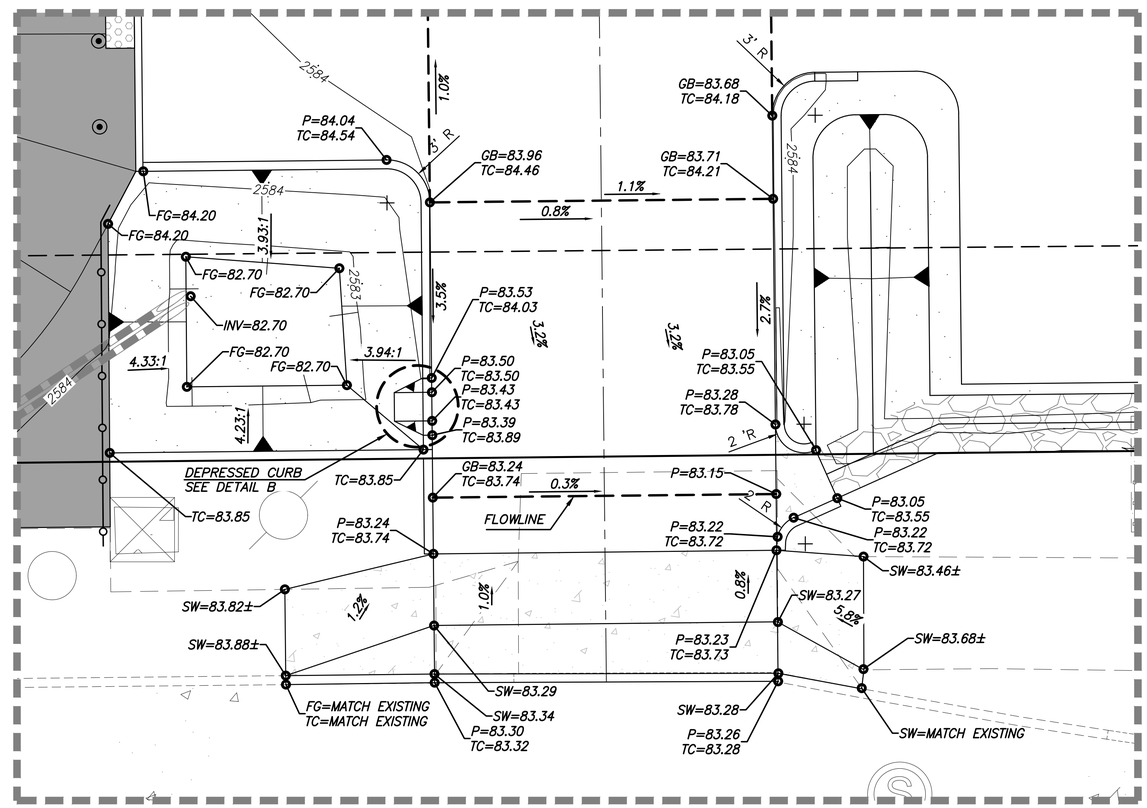


ADA ACCESSIBLE PARKING
GRADING DETAIL



DRIVEWAY GRADING
DETAIL

GRAPHIC SCALE

5 0 2.5 5 10

(IN FEET)

CONTOUR INTERVAL = 1'

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SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
MICRO-MARKET
GRADING AND STAKING
PLAN SHEET

CIVIL
43115
RICARDO P. SOLIS
Date Signed 9-26-24
Arizona, U.S.A.

Job Number	P001012023
Design	BSH
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Checked	RPS
Appr.	RPS
Date	09-09-24

Sheet Description
GR3

GRADING SHEET

Sheet 7 of 13

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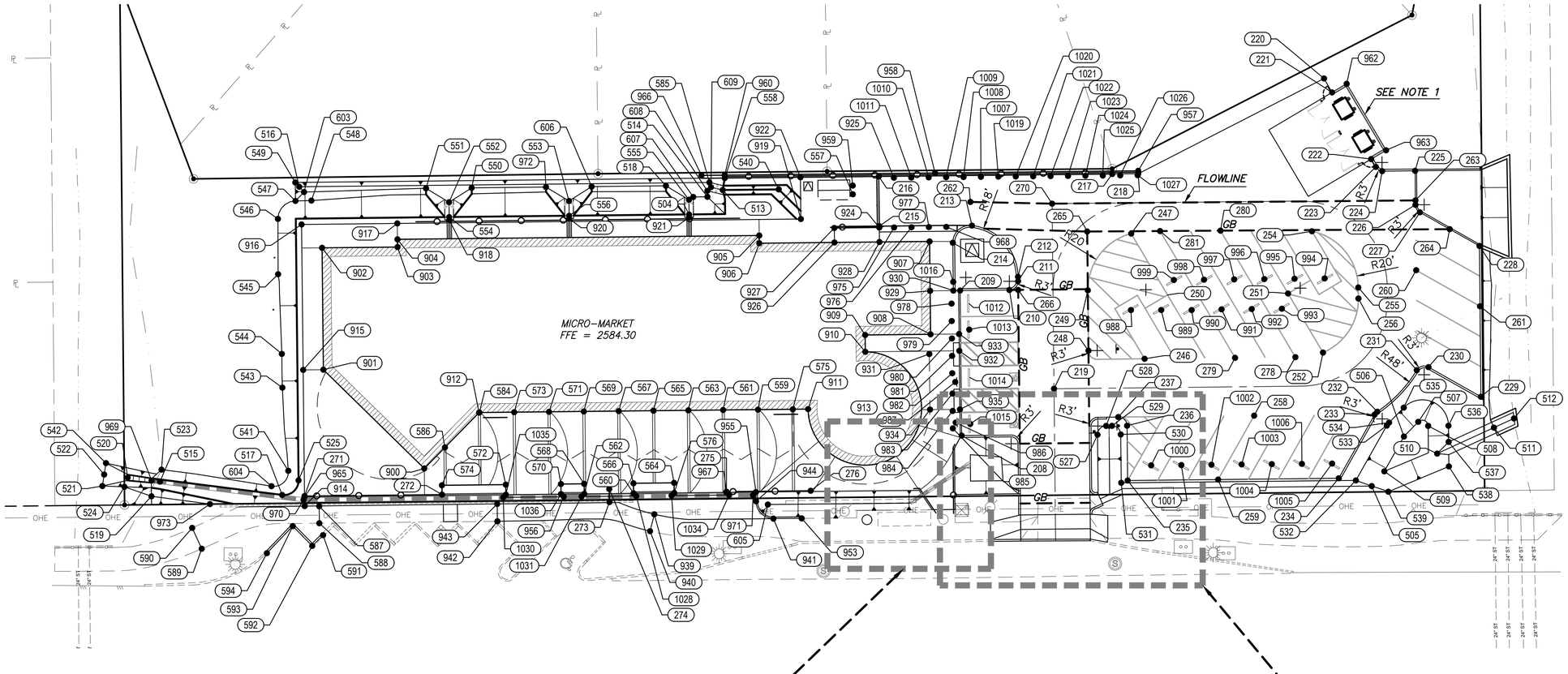
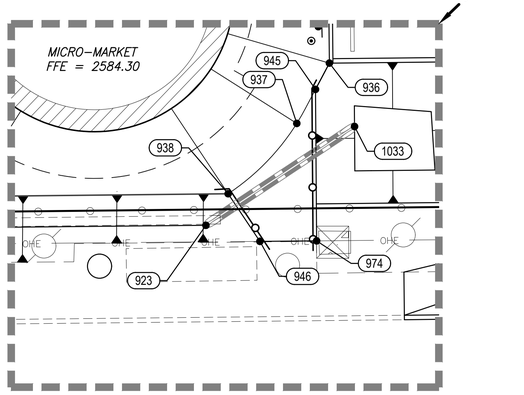


NOTES:

1. POINT NUMBER 963 IS THE OUTSIDE OF THE SOUTHEAST CORNER OF THE WALL FOR THE TRASH ENCLOSURE. POINT 962 IS A POINT ALONG THE BACK OF WALL TO PROVIDE A BEARING AND NOT A CORNER POINT FOR CONSTRUCTION. THE CONTRACTOR SHALL USE THE TRASH ENCLOSURE DETAIL ON THE ARCHITECTURAL PLANS TO DETERMINE THE DIMENSIONS OF THE WALL AND SLAB.



ACCESS RAMP

GRAPHIC SCALE
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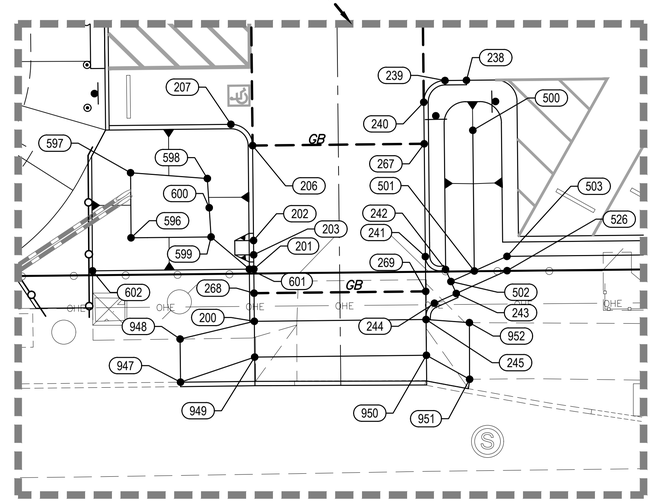

DRIVEWAY

GRAPHIC SCALE
(IN FEET)

No.	Revision Description	Engineer	Date

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SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
MICRO-MARKET
GRADING AND STAKING PLAN SHEET

Job Number	P001012023
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Appr.	RPS
Date	09-09-24

Sheet Description
GR4

STAKING SHEET

Sheet 8 of 13

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POINT TABLE

POINT #	NORTHING	EASTING	DESC
200	405405.66	961426.14	FG ASPHALT/FOC
201	405412.95	961426.06	FG ASPHALT/FOC
202	405416.95	961426.02	FG ASPHALT/OFC/DEPRESSED CURB
203	405414.95	961426.04	FG ASPHALT/OFC/DEPRESSED CURB
206	405430.22	961425.89	FG ASPHALT/FOC
207	405433.19	961422.86	FG ASPHALT/FOC
208	405433.01	961405.84	FG ASPHALT/FOC
209	405483.01	961405.32	FG ASPHALT/FOC
210	405483.19	961422.32	FG ASPHALT/FOC
211	405486.22	961425.28	FG ASPHALT/FOC
212	405487.71	961425.27	FG ASPHALT/FOC
213	405505.39	961409.40	FG ASPHALT/FOC
214	405499.47	961402.80	FG CONCRETE/FOC
215	405505.19	961377.47	FG ASPHALT/FOC
216	405522.33	961377.29	FG ASPHALT/FOC/FOW
217	405523.17	961457.72	FG ASPHALT
218	405523.26	961466.68	FG ASPHALT/FOW
219	405449.16	961437.67	FG ASPHALT
220	405556.10	961530.71	FG ASPHALT
221	405551.29	961533.48	FG ASPHALT
222	405528.31	961546.95	FG ASPHALT/FOC
223	405525.62	961548.54	FG ASPHALT/FOC
224	405524.15	961550.73	FG ASPHALT/FOC
225	405524.27	961562.09	FG ASPHALT/FOC
226	405512.54	961562.21	FG ASPHALT/FOC
227	405509.96	961563.73	FG ASPHALT/FOC
228	405498.37	961584.26	FG ASPHALT/FOC
229	405446.41	961584.75	FG ASPHALT/FOC
230	405456.60	961566.70	FG ASPHALT/FOC
231	405455.55	961562.67	FG ASPHALT/FOC
232	405441.24	961549.07	FG ASPHALT/FOC
233	405440.24	961548.15	FG ASPHALT/FOC
234	405418.28	961535.78	FG ASPHALT/FOC
235	405417.52	961463.04	FG ASPHALT
236	405436.42	961462.84	FG ASPHALT
237	405439.39	961459.81	FG ASPHALT
238	405439.35	961455.78	FG ASPHALT/FOC
239	405439.31	961452.78	FG ASPHALT/FOC
240	405436.28	961449.81	FG ASPHALT/FOC
241	405414.70	961450.04	FG ASPHALT/FOC
242	405412.90	961452.86	FG ASPHALT/FOC
243	405409.55	961454.35	FG ASPHALT/FOC
244	405408.19	961451.31	FG ASPHALT/FOC
245	405405.91	961450.13	FG ASPHALT/FOC
246	405459.48	961468.88	FG ASPHALT
247	405502.64	961464.27	FG ASPHALT
248	405462.28	961449.54	FG ASPHALT
249	405483.08	961449.32	FG ASPHALT
250	405481.47	961476.79	FG ASPHALT
251	405481.98	961518.31	FG ASPHALT
252	405461.63	961530.35	FG ASPHALT
254	405503.44	961526.53	FG ASPHALT
255	405484.06	961542.51	FG ASPHALT
256	405480.26	961542.55	FG ASPHALT
258	405439.88	961506.63	FG ASPHALT
259	405417.85	961494.21	FG ASPHALT
260	405490.02	961562.45	FG ASPHALT

POINT TABLE

POINT #	NORTHING	EASTING	DESC
261	405477.58	961584.46	FG ASPHALT/FOC
262	405513.54	961408.86	FG ASPHALT/FLOWLINE
263	405514.07	961562.20	FG ASPHALT/FOC
264	405504.16	961574.01	FG ASPHALT/FOC/GB
265	405503.34	961449.11	FG ASPHALT/GB
266	405483.22	961425.32	FG ASPHALT/GB
267	405430.47	961449.87	FG ASPHALT/FOC
268	405409.59	961426.10	FG ASPHALT/FOC
269	405409.84	961450.09	FG ASPHALT
270	405512.95	961437.00	FG ASPHALT/FLOWLINE
271	405412.16	961179.43	HANDRAIL
272	405412.66	961226.80	HANDRAIL
273	405410.09	961284.48	HANDRAIL
274	405414.59	961284.42	HANDRAIL
275	405413.69	961324.80	HANDRAIL
276	405413.99	961353.81	HANDRAIL
278	405460.03	961520.84	FG ASPHALT
279	405459.81	961500.05	FG ASPHALT
280	405503.64	961495.04	FG ASPHALT
281	405503.51	961474.21	FG ASPHALT
500	405432.35	961456.67	FLOW LINE
501	405412.69	961456.88	FLOW LINE
502	405411.22	961453.61	FLOW LINE
503	405414.74	961461.44	FLOW LINE
504	405509.19	961311.93	FLOW LINE
505	405415.61	961547.14	FLOW LINE
506	405432.68	961558.24	BOTTOM BASIN
507	405437.73	961563.16	BOTTOM BASIN
508	405436.35	961566.58	BOTTOM BASIN
509	405420.68	961551.48	BOTTOM BASIN
510	405426.80	961569.68	FLOW LINE
511	405435.75	961589.24	FLOW LINE
512	405438.91	961596.15	FLOW LINE
513	405517.66	961323.51	FLOW LINE
514	405515.30	961318.25	BOTTOM BASIN
515	405417.13	961129.63	TOP OF SLOPE
516	405518.77	961177.59	BOTTOM BASIN
517	405412.55	961171.71	TOP OF SLOPE HINGE
518	405519.10	961303.95	BOTTOM BASIN
519	405412.09	961126.69	FLOW LINE
520	405418.54	961118.47	FLOW LINE
521	405415.62	961109.77	TOE OF SLOPE
522	405419.58	961110.39	FLOW LINE
523	405421.27	961130.15	TOE OF SLOPE
524	405415.35	961117.37	FLOW LINE
525	405417.57	961177.37	TOP OF SLOPE
526	405412.74	961461.46	TOP OF SLOPE
527	405433.31	961452.66	TOP OF SLOPE
528	405436.34	961455.63	TOP OF SLOPE
529	405436.36	961457.63	TOP OF SLOPE
530	405433.40	961460.66	TOP OF SLOPE
531	405416.73	961460.83	TOP OF SLOPE
532	405417.55	961541.68	TOP OF SLOPE
533	405436.46	961552.33	TOP OF SLOPE
534	405437.51	961553.12	TOP OF SLOPE
535	405442.63	961558.16	TOP OF SLOPE
536	405436.41	961573.58	TOP OF SLOPE

POINT TABLE

POINT #	NORTHING	EASTING	DESC
537	405430.81	961573.64	TOP OF SLOPE
538	405422.38	961573.72	TOP OF SLOPE
539	405413.66	961552.86	TOP OF SLOPE
540	405517.86	961342.82	FLOW LINE
541	405420.87	961173.83	TOE OF SLOPE
542	405423.53	961111.00	TOE OF SLOPE
543	405449.54	961171.79	TOE OF SLOPE
544	405461.17	961171.60	TOE OF SLOPE
545	405488.62	961170.33	TOE OF SLOPE
546	405507.70	961170.25	TOE OF SLOPE
547	405513.89	961176.31	TOE OF SLOPE
548	405514.01	961181.80	TOE OF SLOPE
549	405520.26	961176.24	TOP OF SLOPE
550	405518.40	961237.01	BOTTOM BASIN
551	405518.23	961221.29	BOTTOM BASIN
552	405513.44	961229.22	FLOW LINE
553	405513.87	961270.55	FLOW LINE
554	405508.32	961229.27	FLOW LINE
555	405514.30	961311.88	FLOW LINE
556	405508.75	961270.60	FLOW LINE
557	405516.18	961368.35	BOLLARD
558	405521.77	961324.22	TOP OF SLOPE
559	405441.96	961335.67	CONCRETE C/L
560	405413.10	961292.80	TOP STAIR NOSE
561	405441.83	961323.67	CONCRETE C/L
562	405412.92	961275.80	TOP STAIR NOSE
563	405441.71	961311.67	CONCRETE C/L
564	405416.72	961306.76	PLANTER
565	405441.58	961299.67	CONCRETE C/L
566	405416.57	961292.76	PLANTER
567	405441.46	961287.67	CONCRETE C/L
568	405416.39	961275.77	PLANTER
569	405441.33	961275.67	CONCRETE C/L
570	405416.31	961267.77	PLANTER
571	405441.20	961263.67	CONCRETE C/L
572	405416.11	961248.77	PLANTER
573	405441.08	961251.68	CONCRETE C/L
574	405415.88	961226.77	PLANTER
575	405442.09	961347.67	CONCRETE C/L
576	405413.25	961306.80	TOP STAIR NOSE
584	405440.95	961239.68	CONCRETE C/L
585	405520.26	961318.93	BOTTOM BASIN
586	405428.94	961227.80	CONCRETE C/L
587	405408.66	961184.47	SIDEWALK
588	405402.80	961184.53	SIDEWALK
589	405394.00	961144.01	SIDEWALK
590	405401.19	961140.72	SIDEWALK
591	405398.70	961185.82	FG ASPHALT/FOC
592	405394.99	961182.08	FG ASPHALT/FOC
593	405401.81	961175.38	FG ASPHALT/FOC
594	405392.48	961166.45	FG ASPHALT/FOC
596	405417.33	961408.91	BASIN BOTTOM
597	405426.42	961408.84	BASIN BOTTOM
598	405425.62	961419.57	SIDEWALK
599	405417.45	961420.09	BASIN BOTTOM
600	405421.54	961419.83	BASIN BOTTOM
601	405412.95	961425.44	FACE OF CURB

POINT TABLE

POINT #	NORTHING	EASTING	DESC
602	405412.71	961403.52	FACE OF CURB
603	405516.95	961179.25	BOTTOM BASIN
604	405415.57	961168.05	TOE OF SLOPE
605	405409.25	961339.07	FLOWLINE
606	405518.83	961278.35	BASIN BOTTOM
607	405515.25	961313.37	BASIN BOTTOM
608	405517.37	961318.23	BASIN BOTTOM
609	405518.61	961319.48	FLOW LINE
900	405421.67	961220.69	BUILDING CORNER
901	405455.72	961185.92	BUILDING CORNER
902	405497.72	961185.47	BUILDING CORNER
903	405497.99	961211.47	BUILDING CORNER
904	405500.66	961211.45	BUILDING CORNER
905	405501.97	961336.11	BUILDING CORNER
906	405499.30	961336.13	BUILDING CORNER
907	405499.92	961394.80	BUILDING CORNER
908	405467.92	961395.13	BUILDING CORNER
909	405467.68	961372.59	BUILDING CORNER
910	405461.89	961372.65	BUILDING CORNER
911	405442.14	961352.94	BUILDING CORNER
912	405440.95	961239.57	BUILDING CORNER
913	405442.35	961372.48	RAD 19' 6 1/2"
914	405408.71	961179.47	SIDEWALK
915	405455.64	961178.95	SIDEWALK
916	405505.78	961178.40	SIDEWALK
917	405506.14	961211.39	SIDEWALK
918	405507.34	961229.28	SCUPPER
919	405507.66	961350.44	SIDEWALK
920	405507.79	961270.61	SCUPPER
921	405508.24	961311.94	SCUPPER/SIDEWALK
922	405522.04	961350.28	SIDEWALK
923	405409.72	961388.09	HDPE BEGIN
924	405504.74	961377.47	SIDEWALK/FOC
925	405521.88	961382.49	BOLLARD
926	405499.57	961362.02	SIDEWALK
927	405504.57	961361.97	SIDEWALK
928	405499.74	961377.52	SIDEWALK
929	405482.90	961394.98	SIDEWALK
930	405482.98	961402.98	FG CONCRETE/FOC
931	405461.13	961394.71	SIDEWALK/GB
932	405462.23	961405.03	SIDEWALK/BOC
933	405468.02	961404.96	SIDEWALK/BOC
934	405441.97	961394.94	SIDEWALK/GB
935	405442.02	961405.25	SIDEWALK
936	405432.39	961405.35	SIDEWALK
937	405423.97	961400.79	SIDEWALK
938	405414.14	961391.20	SIDEWALK
939	405405.88	961299.95	SIDEWALK
940	405400.06	961298.47	SIDEWALK
941	405404.38	961340.98	FG CONCRETE/FOC
942	405403.47	961245.88	SIDEWALK
943	405409.46	961245.81	SIDEWALK
944	405410.36	961335.00	FG CONCRETE/FOC
945	405428.72	961403.40	SIDEWALK
946	405407.48	961395.64	SIDEWALK
947	405397.15	961415.82	SIDEWALK
948	405403.18	961415.76	SIDEWALK

POINT TABLE

POINT #	NORTHING	EASTING	DESC
949	405400.66	961426.18	SIDEWALK
950	405400.91	961450.18	SIDEWALK
951	405397.56	961456.22	SIDEWALK
952	405405.47	961456.19	SIDEWALK
953	405404.48	961350.73	FG CONCRETE/FOC
954	405509.38	961324.35	TOP OF SLOPE
955	405413.53	961334.97	FG CONCRETE/FOC
956	405411.93	961268.73	BOTTOM STAIR NOSE
957	405524.26	961466.67	TOP BACK WALL
958	405523.53	961396.67	TOP BACK WALL
959	405519.18	961368.32	BOLLARD
960	405522.77	961324.21	TOP BACK OF WALL
962	405554.26	961538.50	POINT ON WALL
963	405531.35	961552.08	TRASH ENCLOSURE WALL
965	405411.91	961179.43	SIDEWALK
966	405522.68	961316.21	TOP BACK OF WALL
967	405413.44	961324.80	TOP STAIR NOSE
968	405504.93	961400.56	BOLLARD
969	405417.49	961126.73	BEGIN 18" SRP
970	405410.86	961179.07	ANG PT 18" SRP
971	405412.49	961333.98	END 18" SRP
972	405518.67	961262.62	BOTTOM BASIN
973	405409.40	961146.84	FLOW LINE
974	405407.55	961403.56	SIDEWALK
975	405504.75	961382.56	BOLLARD
976	405504.81	961388.56	BOLLARD
977	405504.87	961394.56	BOLLARD
978	405478.50	961402.38	BOLLARD
979	405472.50	961402.43	BOLLARD
980	405466.50	961402.49	BOLLARD
981	405460.50	961402.55	BOLLARD
982	405454.50	961402.61	BOLLARD
983	405447.50	961402.69	BOLLARD
984	405441.50	961402.75	BOLLARD
985	405435.50	961402.82	BOLLARD
986	405437.49	961403.79	SIGN
987	405451.49	961403.65	SIGN
988	405476.28	961464.17	WHEEL STOP
989	405476.30	961474.62	WHEEL STOP
990	405476.28	961485.09	WHEEL STOP
991	405476.52	961495.40	WHEEL STOP
992	405476.63	961505.79	WHEEL STOP
993	405476.74	961516.18	WHEEL STOP
994	405487.18	961530.92	WHEEL STOP
995	405487.07	961520.53	WHEEL STOP
996	405486.96	961510.14	WHEEL STOP
997	405486.85	961499.74	WHEEL STOP
998	405486.74	961489.35	WHEEL STOP
999	405486.64	961478.96	WHEEL STOP
1000	405422.74	961471.14	WHEEL STOP
1001	405422.85	961481.53	WHEEL STOP
1002	405422.96	961491.92	WHEEL STOP
1003	405423.07	961502.32	WHEEL STOP
1004	405423.18	961512.71	WHEEL STOP
1005	405423.37	961533.47	WHEEL STOP
1006	405423.26	961523.08	WHEEL STOP
1007	405522.20	961412.49	BOLLARD

POINT TABLE

POINT #	NORTHING	EASTING	DESC
1008	405522.13	961406.49	BOLLARD
1009	405522.07	961400.49	BOLLARD
1010	405522.01	961394.49	BOLLARD
1011	405521.94	961388.49	BOLLARD
1012	405478.54	961408.36	WHEEL STOP
1013	405469.54	961408.46	WHEEL STOP
1014	405453.04	961408.63	WHEEL STOP
1015	405437.04	961408.80	WHEEL STOP
1016	405485.98	961402.95	FG CONCRETE/FOC
1019	405522.26	961418.49	BOLLARD
1020	405522.32	961424.49	BOLLARD
1021	405522.38	961430.49	BOLLARD
1022	405522.45	961436.49	BOLLARD
1023	405522.51	961442.49	BOLLARD
1024	405522.57	961448.49	BOLLARD
1025	405522.64	961454.49	BOLLARD
1026	405522.70	961460.49	BOLLARD
1027	405522.76	961466.49	BOLLARD
1028	405412.19	961293.73	BOTTOM STAIR NOSE
1029	405412.32	961305.89	BOTTOM STAIR NOSE
1030	405411.71	961247.89	BOTTOM STAIR NOSE
1031	405411.99	961274.89	BOTTOM STAIR NOSE
1033	405423.53	961408.86	HDPE END
1034	405412.53	961325.73	BOTTOM STAIR NOSE
1035	405412.64	961248.80	TOP STAIR NOSE
1036	405412.84	961267.80	TOP STAIR NOSE

No.	Revision Description	Engineer	Date

SOLIS Engineering Co.
239 N. Church Ave.
Tucson, Arizona 85747 (520) 207-0742

SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
MICRO-MARKET
GRADING AND STAKING PLAN SHEET

Registered Professional Engineer (Civil) CERTIFICATE NO. 43315 RICARDO P. SOLIS ARIZONA U.S.A. Date Signed 09/09/24

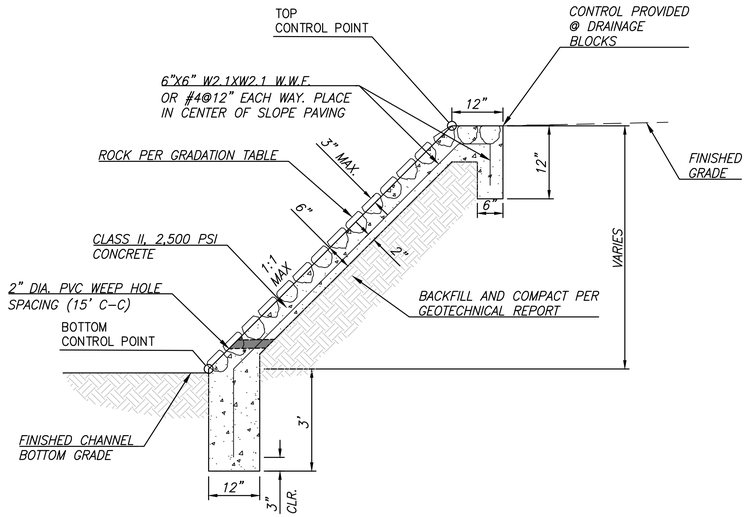
Job Number	P001012023
Design	BSH
Drafting	BSH
Checked	RPS
Appr.	RPS
Date	09-09-24

Sheet Description
GR5
STAKING SHEET
Sheet 9 of 13

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 BLUE STAKE, INC.
Call 811 or click Arizona811.com

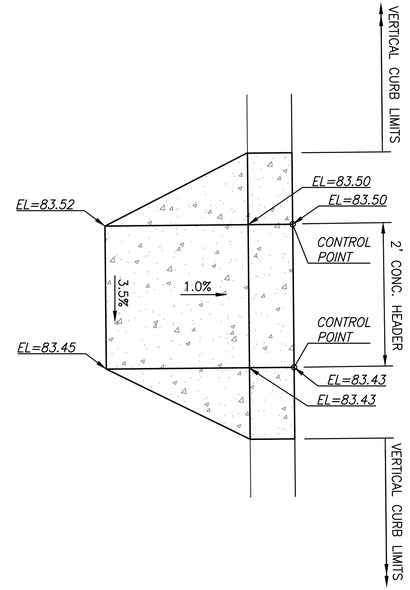
Z:\Projects\P001012023_PYT_Mini_Market\CADD\Sheet files\GR02.dwg Jan 20, 2025 Bryan
XREFS: 0101BD 0101BM 0101TP 0101Setbacks x012015UT-Calle Torim

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY SOLIS ENGINEERING CO. SHALL BE WITHOUT LIABILITY TO SOLIS ENGINEERING CO.



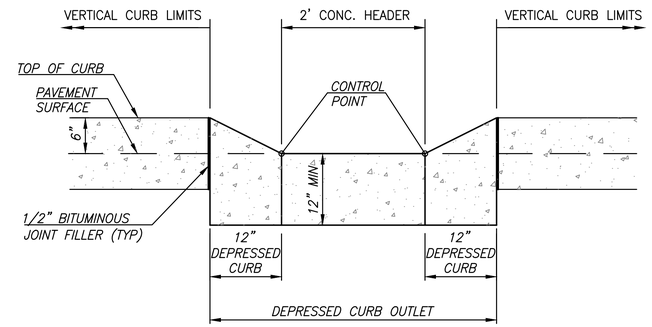
DETAIL A

HANDPLACED GROUTED RIP-RAP



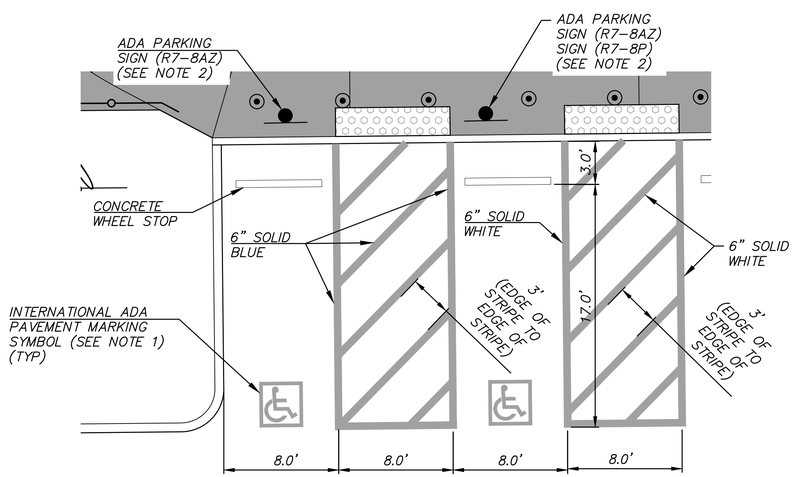
GENERAL NOTES

1. THE 12" DEPRESSED CURB SHALL BE COMPLETED IN ACCORDANCE WITH PAG DTL. 212 UNLESS OTHERWISE NOTED.



DETAIL B

DEPRESSED CURB OUTLET

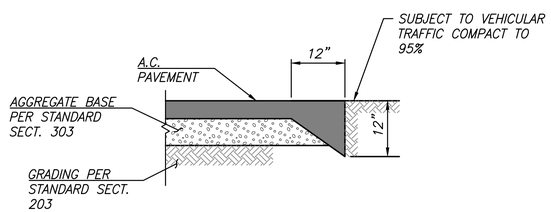


NOTES:

1. SIZE AND SHAPE OF INTERNATIONAL SYMBOL OF ACCESSIBILITY PARKING SPACE MARKER 36 INCHES WIDE AND 41 INCHES HIGH (PER (MUTCD) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES).
2. MOUNT BOTTOM OF PARKING SIGNS 7 FEET OFF CONCRETE ON SQUARE PERFORATED TUBE IN A SIGN POST FOUNDATION.

DETAIL C

PAINTED PAVEMENT LEGEND & ACCESSIBLE SIGN AND POST



DETAIL D

ASPHALT CONCRETE THICKENED EDGE

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 BLUE STAKE, INC.
Call 811 or click Arizona811.com

No.	Revision Description	Engineer	Date

SOLIS Engineering Co.
239 N. Church Ave.
Tucson, Arizona 85747 (520) 207-0742

SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
MICRO-MARKET
DETAIL SHEET

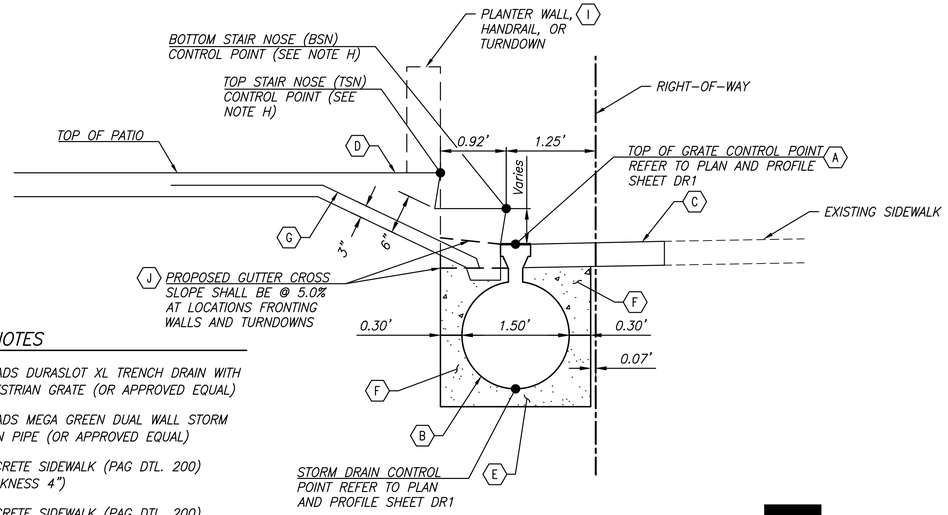
Job Number	P001012023
Design	BSH
Drafting	BSH
Checked	RPS
Appr.	RPS
Date	09-09-24

Sheet Description
DT1

DETAIL SHEET

Sheet 10 of 13

Z:\Projects\P001012023_PYT_Mini_Market\CADD\Sheet files\DT01.dwg Jun 20, 2025 Bryan
XREFS: 010180 010184 010111
THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY SOLIS ENGINEERING CO. SHALL BE WITHOUT LIABILITY TO SOLIS ENGINEERING CO.



NOTES

A. 18" ADS DURASLOT XL TRENCH DRAIN WITH PEDESTRIAN GRATE (OR APPROVED EQUAL)

B. 18" ADS MEGA GREEN DUAL WALL STORM DRAIN PIPE (OR APPROVED EQUAL)

C. CONCRETE SIDEWALK (PAG DTL. 200) (THICKNESS 4")

D. CONCRETE SIDEWALK (PAG DTL. 200) (THICKNESS 6") (FINISH PER ARCHITECT PLANS)

E. CEMENT-TREATED SLURRY

F. CONCRETE CLASS S, 3,000 PSI.

G. REFER TO STRUCTURAL DRAWINGS FOR REINFORCEMENT

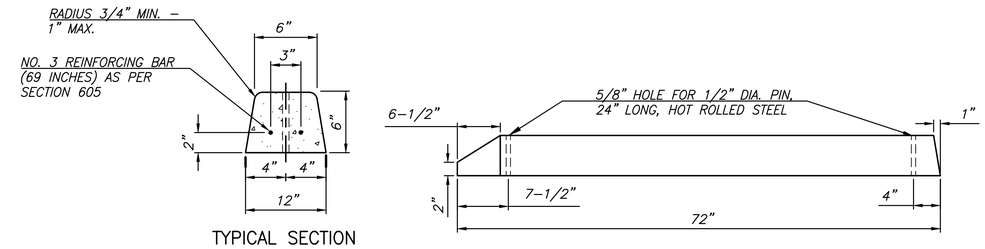
H. REFER TO GRADING AND STAKING PLANS SHEET 4 THRU 8.

I. SEE ARCHITECTURAL PLANS FOR PLANTER WALL, HANDRAIL, AND TURNDOWN DETAILS

J. CONCRETE VALLEY GUTTER BETWEEN TOP OF GRATE AND PLANTER WALLS OR TURNDOWNS.

DETAIL E

STORM DRAIN PIPE

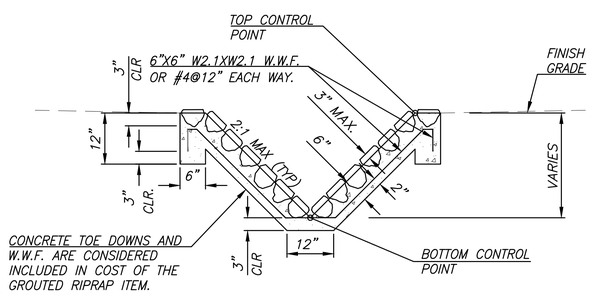


NOTES:

1. DIMENSIONAL AND REINFORCEMENT CHANGE WILL BE PERMITTED UPON PRIOR WRITTEN APPROVAL OF THE ENGINEER.

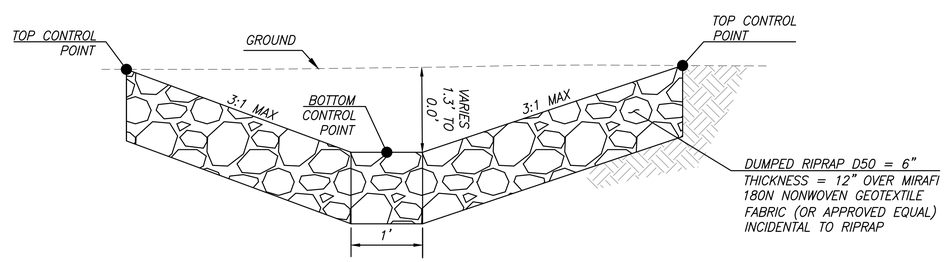
DETAIL F

CONCRETE WHEEL STOP



DETAIL G

GROUTED RIPRAP CHANNEL



DETAIL H

DUMPED RIPRAP CHANNEL

No.	Revision Description	Engineer	Date

SOLIS Engineering Co.
239 N. Church Ave.
Tucson, Arizona 85747 (520) 207-0742

SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
MICRO-MARKET
DETAIL SHEET

Job Number	P001012023
Design	BSH
Drafting	BSH
Checked	RPS
Appr.	RPS
Date	09-09-24

Sheet Description
DT2

DETAIL SHEET

Sheet 11 of 13

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 BLUE STAKE, INC.
Call 811 or click Arizona811.com

Z:\Projects\P001012023_PYT_Mini_Market\CADD\Sheet files\DT01.dwg Jan 20, 2025 Bryan
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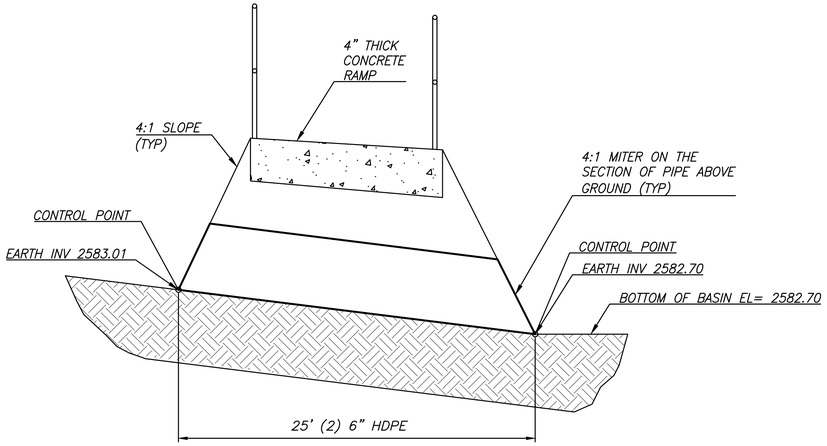

DETAIL I

STORM DRAIN PIPE

No.	Revision Description	Engineer	Date

SOLIS Engineering Co.
239 N. Church Ave.
Tucson, Arizona 85747 (520) 207-0742

SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
MICRO-MARKET
DETAIL SHEET

Job Number	P001012023
Design	BSH
Drafting	BSH
Checked	RPS
Appr.	RPS
Date	09-09-24

Sheet Description
DT3

DETAIL SHEET

Sheet 12 of 13

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ARIZONA811 Blue Stake, Inc.
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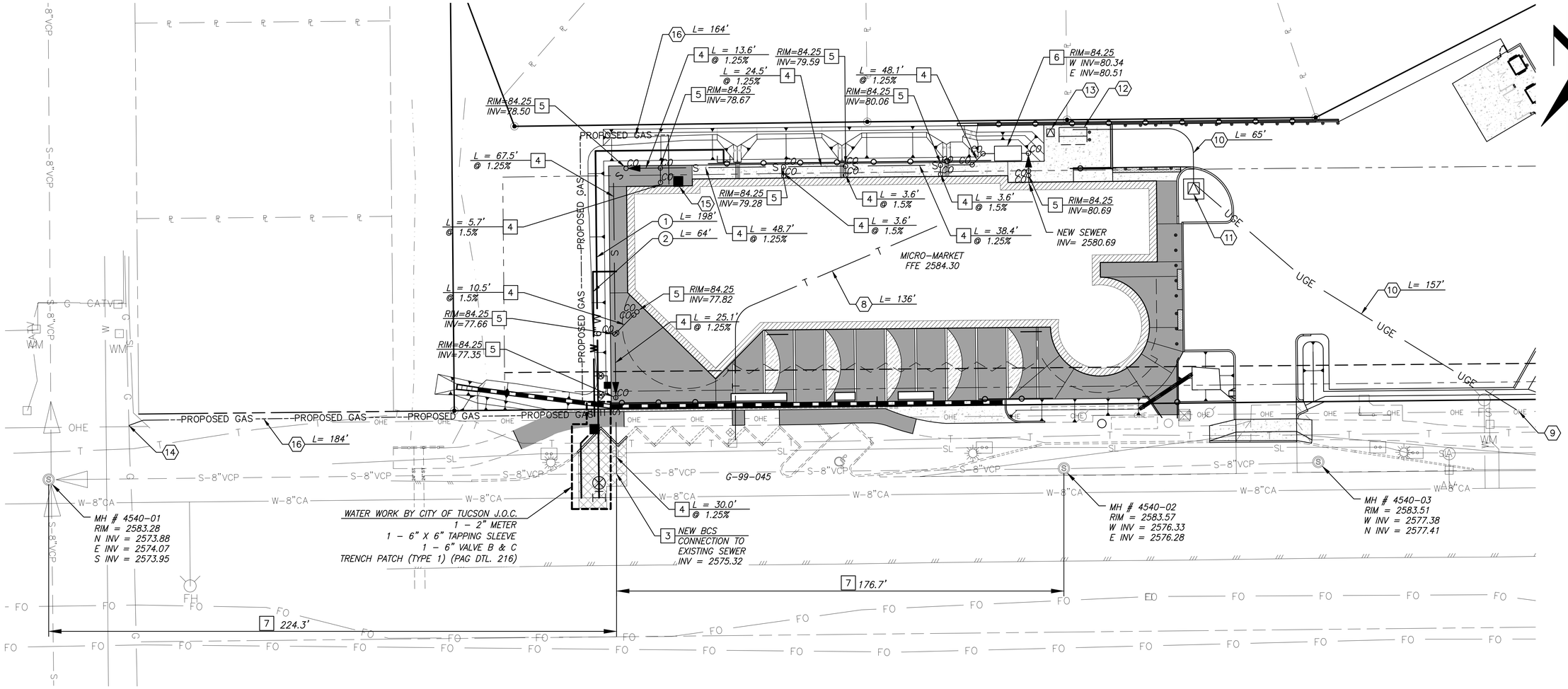

WATER AND FIRE NOTES

1. WATER SERVICE TO BUILDING FOR FIRE – FROM 6" VALVE, INSTALL 6" PVC MAIN LINE TO BUILDING DUCTILE WET PIPE RISER.
2. WATER (DOMESTIC) SERVICE TO FACILITY–FROM 2" METER, INSTALL 2 1/2" LINE TO 2 1/2" BACKFLOW PREVENTER (REDUCED PRESSURE ASSEMBLY PER SD–1802 AND UNIT COMPLIANCE WITH USC APL) AND MAIN LINE TO BUILDING PER MECHANICAL PLANS. BACKFLOW PREVENTER SHALL HAVE A CONCRETE PAD WITH 4" PVC SLEEVES FOR GALVANIZED PIPING AND CAGE INSTALLATION PER SD–332. CAGE SHALL BE MODIFIED AS NEEDED TO FIT BACKFLOW UNIT AND INCLUDE FREEZE PROTECTION BAG. CAGE SHALL BE PAINTED.

SEWER NOTES

3. NEW CONNECTION TO EXISTING 8" VCP SEWER MAIN PER WWM 401.
4. INSTALL 4" PVC SANITARY SEWER LINE BUILDING CONNECTION PER WWM401.
5. INSTALL PRIVATE SANITARY SEWER CLEAN OUT PER DETAIL R.W.R.D. 404, RIM AND INVERT ELEVATION AS NOTED.
6. INSTALL JENSEN PRECAST GREASE INTERCEPTOR MODEL JP–1500–EE–G OR APPROVED EQUAL.
7. DISTANCE BETWEEN EXISTING MANHOLE AND NEW BCS CONNECTION

UTILITY COORDINATION

8. NEW UNDERGROUND TELECOMMUNICATIONS – SEE ELECTRICAL PLAN
9. NEW OVERHEAD POWER FROM NEW POLE – SEE ELECTRICAL PLAN
10. NEW UNDERGROUND ELECTRICAL SERVICE – SEE ELECTRICAL PLAN
11. NEW TRANSFORMER – SEE ELECTRIC PLAN. INSTALL PAD PER TRICO STANDARDS
12. NEW SWITCHBOARD MSB–1 – SEE ELECTRIC PLAN
13. NEW ELECTRIC CABINET – SEE ELECTRIC PLAN
14. NEW GAS CONNECTION BY SOUTHWEST GAS
15. NEW GAS METER INSTALLED BY SOUTHWEST GAS
16. NEW GAS SERVICE INSTALLED BY SOUTHWEST GAS

UTILITY NOTES

1. THE CONTRACTOR MUST OBTAIN AN EXCAVATION PERMIT AND BARRICADING PERMITS FROM PASQUA YAQUI TRIBE PRIOR TO ANY WORK IN THE PUBLIC RIGHT–OF–WAYS.
2. THE CONTRACTOR MUST MEET WITH THE PASQUA YAQUI TRIBE RIGHT–OF–WAY INSPECTOR PRIOR TO ANY WORK IN THE PUBLIC RIGHT–OF–WAY.
3. ALL BACKFILL, WITHIN THE PASQUA YAQUI TRIBE RIGHT–OF–WAY, ABOVE THE UTILITY SHADING SHALL BE CONDUCTED IN ACCORDANCE TO THE PAG STANDARD DETAILS AND SPECIFICATIONS AND AS DIRECTED BY THE PASQUA YAQUI TRIBE RIGHT–OF–WAY INSPECTOR.
4. ALL PAVEMENT PATCHING SHALL BE CONDUCTED IN ACCORDANCE TO THE PAG STANDARD DETAILS AND SPECIFICATIONS AND AS DIRECTED BY THE PASQUA YAQUI TRIBE RIGHT–OF–WAY INSPECTOR.
5. PERMANENT PAVEMENT PATCHING SHALL BE WARRANTIED FOR 5–YEARS, PAVEMENT PATCH'S FAILING WITHIN THIS PERIOD SHALL BE REPAIRED/REPLACED AT NO COST TO THE COUNTY OR THE PASCUA YAQUI TRIBE (OR ANT OTHER AGENCY).
6. THIS PROJECT INCLUDES 4" SEWER, 6" FIRE SERVICE, 2" WATER, GAS, ELECTRIC AND COMMUNICATIONS. UTILITIES ARE TO BE INSTALLED IN A JOINT USE TRENCH PER TUCSON WATER SD–108. THE 6" WATER FIRE LINE SHALL HAVE A MINIMUM SEPARATION OF 6' FROM OUTSIDE WALL TO OUTSIDE WALL OF THE NEW SEWER. THE 2" WATER SERVICE SHALL HAVE A MINIMUM SEPARATION OF 3' FROM OUTSIDE WALL TO OUTSIDE WALL OF THE 6" WATER FIRE LINE. OTHER UTILITIES SHALL FOLLOW SD–108 USING THE 2" WATER SERVICE AS THE WATER LINE SHOWN IN THE DETAIL.
7. ALL FINISH RIM ELEVATIONS SHALL BE FINISHED TO MATCH SURROUNDING GRADE, NOT TO CREATE A LIP, REGARDLESS OF THE FINISH GRADE CALLED FOR ON THIS PLAN.

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)

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No.	Revision Description	Engineer	Date

SOLIS Engineering Co.
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SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
MICRO-MARKET
UTILITY PLAN SHEET

Job Number	P001012023
Design	BSH
Drafting	BSH
Checked	RPS
Appr.	RPS
Date	09–09–24

Sheet Description
UT1

UTILITY PLAN SHEET

Sheet 13 of 13

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GENERAL LANDSCAPE NOTES:

1. THE PYT HEALTH DIRECTOR, OR HIS REPRESENTATIVE, RESERVES THE RIGHT TO REFUSE ANY PLANT HE DEEMS UNACCEPTABLE.

2. FOR CLARIFICATION OF DISCREPANCIES BETWEEN THE DRAWINGS AND THE SITE, IT SHOULD BE BROUGHT TO ATTENTION OF THE ARCHITECT PRIOR TO BEGINNING WORK.

3. THE ARCHITECT IS TO APPROVE ANY AND ALL SUBSTITUTIONS.

4. THE PLANT LIST IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE PLANS TAKE PRECEDENCE.

5.. DOUBLE STAKE ALL 15 GALLON AND 24" BOX TREES AS REQUIRED.

6. EXPOSED SOIL IN PLANTERS SHALL BE RAKED AND FREE FROM ROCKS, ROOTS, WEEDS, ETC.

7. FINISHED GRADE IN GROUND COVER AND DG AREAS SHALL BE BE 6" BELOW ADJACENT HEADER BOARD, PAVING, CURBING, ETC.

8. PLANTS SHALL BE QUALITY MATERIAL HAVING A GROWTH HABIT THAT IS NORMAL FOR THE SPECIES AND BE SOUND, VIGOROUS, HEALTHY, AND FREE FROM INSECTS & INJURY.

9. DG SHALL EXTEND UNDER SHRUBS UNLESS NOTE OTHERWISE.

10. AFTER ALL WORK IS COMPLETED, THE CONTRACTOR SHALL REMOVE ALL MATERIALS NOT INCORPORATED IN THE SCOPE OF WORK FROM THE JOB SITE.

11. GRADING SHALL INCLUDE ALL EXCAVATION, SETTLEMENT, HANDLING, IMPORT, DISTRIBUTION, TRANSPORTATION, AND DISPOSAL NECESSARY TO BRING GROUND TO FINISH GRADE.

12. ALL EARTHWORK IS TO BE DONE SO THAT ALL WATER DRAINS AWAY FROM THE STRUCTURES.

13. ALL UNDERGROUND CONDUITS AND UTILITIES ARE TO BE LOCATED BEFORE DIGGING. CALL ARIZONA BLUESTAKE AT 811.

14. ALL PAINT MATERIAL TO GUARANTEED FOR A PERIOD OF EIGHTEEN (18) MONTHS AFTER FINAL ACCEPTANCE.

15. BACKFILL PLANTING SOIL FOR ALL NATIVE SPECIES, CACTI AND SUCCULENTS TO BE EXISTING NATIVE SOIL. A PLANTING MIX OF 1/3 MULCH, 2/3 NATIVE SOIL MIXED THOROUGHLY IS TO BE USED AS PLANT BACKFILL FOR NON-NATIVE OR EXOTIC SPECIES.

16. IN THE EVENT OF MAJOR DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY.

17. TEST DRAINAGE OF PLANT BEDS AND PITS BY FILLING WITH WATER. CONDITIONS PERMITTING RETENTION OF WATER IN LOCATIONS FOR MORE THAN TWENTY-FOUR (24) HOURS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ANY PLANTING.

(NOTES CONTINUED BELOW)

LANDSCAPE LEGEND

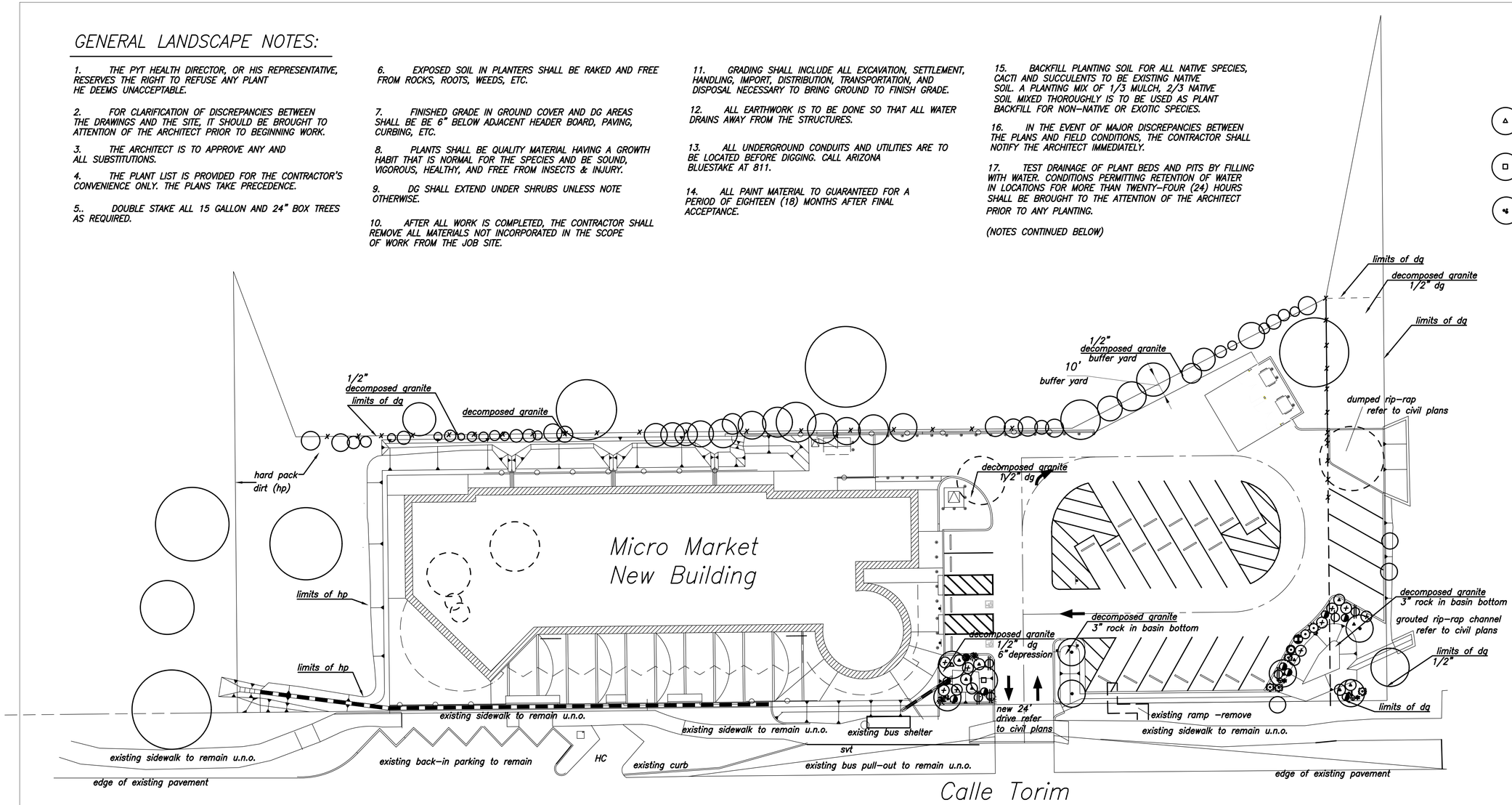
TREES	SIZE	QUANTITY
olneya tesoa ironwood	standard 48" box	—
prosopis velutina native mesquitte	speciman 36" box	1
parkinsinia microphylla foothills paloverde	standard 36" box	2
parkinsona praecox palo brea	" "	1
chilopsis linearis desert willow	multi 24" box	—
prosopis gladulosa v.t. west honey mesquite	standard 36" box	2

SHRUBS/ACCENTS	SIZE	QUANTITY
larrea tridentata creosote bush		—
pervskia atriplicifolia russian sage		—
buddleja marrubifolia wooly butterfly bush		9
calliandra eriophylla fairy duster		9
encelia farinosa brittlebush		2
salvia clevelandia cleveland sage		9
muhlenbergia capillaris pink muhly		6
oenothera berlandieri mexican evening primrose		2
penstemon pseudospectabilis arizona penstemon		4
penstemon parryi parry's penstemon		1

CACTI		
carnegiea gigantea saguaro		1
fourquieria splendens octotillo		—
agave desmettiana variegated smooth agave		2
ferocactus wizlinseni fishook barrel catus		—

GROUNDCOVER/HARDSCAPE MATERIAL

dg decomposed granite – 1/2" screened – apache gold or approved equal. 3" on planting areas as noted



Landscape Plan

1"=20' contact bluestake prior to start of work

existing tree/shrub to be removed

existing tree/shrub to remain unless it obstructs construction, then it can be removed

existing chain-link fencing to remain

existing chain-link fencing to be removed. fencing fronting calle torim, not shown, to be removed

u.n.o. unless noted otherwise

NOTE: NO IRRIGATION PLANS PASSIVE IRRIGATION PROVIDED WITH LANDSCAPE AREAS

Plan Sheet Index

L1.0 LANDSCAPE PLAN
L2.0 DETAILS

(NOTES CONTINUED FROM ABOVE)

20. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SLEEVES TO ALL LANDSCAPE AREAS REGARDLESS OF WHETHER THEY ARE SHOWN OR NOT. REFER TO SLEEVE SCHEDULE FOR THE SIZE AND QUANTITY. IF THERE IS ANY DOUBT OR DISCREPANCY REQUEST CLARIFICATION FROM THE ARCHITECT IN WRITING.

21. REFER TO THE ENVIRONMENTAL STUDY FOR PLANTS THAT ARE CONSIDERED TO BE INVASIVE OR SHOULD NOT BE UTILIZED ON THIS PROJECT.

REVISION	date
1	
2	
3	
4	
5	
6	
7	

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Rick Gonzalez Architect

EXPIRES 03/31/2026

REGISTERED ARCHITECT
CERTIFICATE NO.
26992
RICK L.
GONZALEZ
03/17/24
ARIZONA U.S.A.

SITE DEVELOPMENT PLANS
PASCUA YAQUI TRIBE
CHEPA'S MICRO-MARKET
LANDSCAPE DETAILS

L1.0

PLANT LEGEND

TREES

SYMBOL	BOTANICAL NAME COMMON NAME	QUANTITY	SIZE
	CARCIDIUM 'DESERT MUSEUM' DESERT MUSEUM PALO VERDE	4	15 GAL
	ACACIA SALICINA WILLOW ARACIA	4	15 GAL

SHRUBS/ACCENTS/GROUNDCOVER

SYMBOL	BOTANICAL NAME COMMON NAME	QUANTITY	SIZE
	BUDDLEIA MARRUBIFOLIA BUTTERFLY BUSH	3	5 GAL
	DASYLIRION WHEELERI DESERT SPOON	1	5 GAL
	HESPERALOE PARVIFLORA RED YUCCA	4	5 GAL
	LEUCOPPHYLLUM CANDIDUM THUNDER CLOUD SAGE	12	5 GAL
	DALEA GREGGII TRAILING DALEA	9	1 GAL
SR	SCREENED ROCK DESERT ROSE – 2" MIN. THICKNESS		

PLANT NOTES:

1. ALL PLANT QUANTITIES TO BE VERIFIED PRIOR TO PROCUREMENT. QUANTITIES SHOWN ON LEGEND ARE FOR REFERENCE ONLY IN CASE OF DISCREPANCY, QUANTITIES SHOWN ON PLANS WILL PREVAIL.

2. SCREENED ROCK SHALL BE PLACE IN ALL PLANTING AREAS (NON–PAVED AREAS) TO REDUCE DUST POLLUTION.

3. CONTRACTOR SHALL PROTECT PLANTS TO BE PRESERVED–IN–PLACE DURING CONSTRUCTION (IF ANY). ALL AREAS TO REMAIN UNDISTURBED AND PLANTS TO BE DESIGNATED TO BE PRESERVED–IN–PLACE SHALL BE FENCED OFF. FENCING WILL REMAIN IN PLACE FOR THE DURATION OF THE CONSTRUCTION ACTIVITIES.

4. ALL LANDSCAPING AND IRRIGATION SYSTEMS ON THE SITE OR WITHIN THE ABUTTING RIGHT–OF–WAY SHALL BE MAINTAINED AS SHOWN ON THE APPROVED PLANS. THE PROPERTY OWNER IS RESPONSIBLE FOR PROPER MAINTENANCE TO ACHIEVE PERMANENT, SAFE, AND SUCCESSFUL LANDSCAPING.

5. PER C.O.T. DEVELOPMENT STANDARDS, NO STRUCTURES OR VEGETATION BETWEEN 30" AND 72" IN HEIGHT SHALL BE PLACED WITHIN SIGHT VISIBILITY TRIANGLES. ANY EXISTING TREES WITHIN THE EXISTING OR PROPOSED SIGHT VISIBILITY TRIANGLES SHALL BE CHECKED AND TRIMMED TO ASSURE THAT THEY ARE CLEAR OF LEAVES OR BRANCHES TO A HEIGHT OF AT LEAST SIX FEET ABOVE GRADE. THE LOCATION OF TREES WITHIN THE EXISTING AND FUTURE SIGHT VISIBILITY TRIANGLES MAY BE RESTRICTED OR MODIFIED AS DETERMINED BY THE C.O.T. INSPECTOR IN ORDER TO PRESERVE VISIBILITY.

6. REFER TO C.O.T. LANDSCAPE CODE REQUIREMENTS TABLE, THIS SHEET, FOR STREET BORDER REQUIREMENTS.

7. BIKE RACK, TRASH SCREEN WALLS AND SIDEWALK DETAILS ARE SHOWN ON DP–1 (EXISTING) AND DP–2 (PROPOSED). RIP–RAP, IF REQUIRED, WILL BE SHOWN ON CIVIL DP.

8. ALL LANDSCAPING AREAS SHALL BE DEPRESSED 6"–9" TO FACILITATE WATER HARVESTING.

MAINTENANCE SCHEDULE:

FOR THE FIRST YEAR:

1. PLANTS NOT SURVIVING AFTER 30 DAYS SHALL BE REPLACED WITH EQUIVALENT SIZE AND SPECIES.

2. PLANT MATERIAL SHALL ONLY BE PRUNED TO CONTROL SIZE SIZE AND BE ALLOWED TO GROW IN ITS NATURAL GROWTH PATTERN, NOT BALLED.

3. INERT GROUNDCOVER SHALL BE REPLACED AS NEEDED DUE TO DISPLACEMENT OR EROSION.

4. MONTHLY MAINTENANCE SHALL BE PERFORMED TO KEEP LANDSCAPED AREAS FREE OF TRASH, WEEDS, DEBRIS AND DEAD PLANT MATERIAL.

C.O.T. LANDSCAPE REQUIREMENTS:

10' STREET LANDSCAPE BORDER REQUIREMENTS

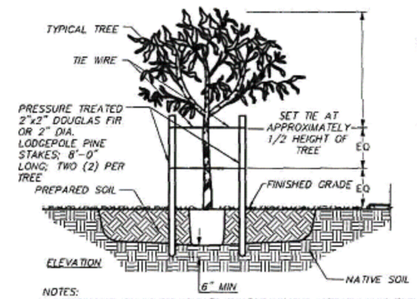
PLANTS REQUIRED ALONG SOUTH 6TH AVENUE	PLANTS PROVIDED
1 TREE PER 33' =	3 TREES
760 SF BORDER AREA	
50% COVERAGE REQUIRED = 380 SF	380 SF PROVIDED
30" SCREEN REQUIRED	

PLANTS REQUIRED ALONG NORTH, SOUTH & WEST BOUNDARY

NO INTERIOR BORDER REQUIRED PER SEC 3.7.2.4, C.3.b. OF THE CITY OF TUCSON (C.O.T.) LAND USE CODE.

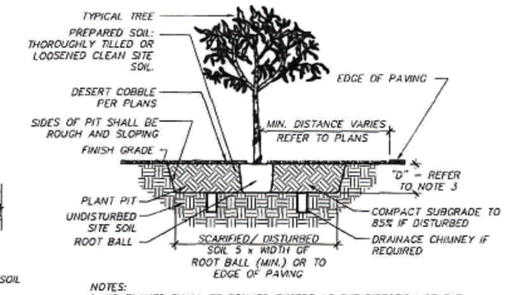
PLANTS REQUIRED ADJACENT TO PARKING AREAS

NUMBER OF PARKING SPACES: 26
REQUIRED NUMBER OF TREES: 7
PROVIDE NUMBER OF TREES: 7



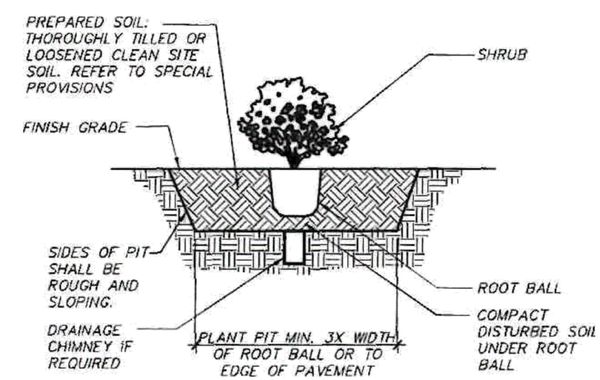
NOTES:
1. NO PLANTS SHALL BE PRUNED EXCEPT AT THE DIRECTION OF THE OWNER'S REPRESENTATIVE
2. STAKE TREE ONLY IF NEEDED PER DIRECTION OF OWNER'S REPRESENTATIVE.
3. SET STAKES PARALLEL TO SIDEWALK AND PAVEMENT

1 TREE STAKING
NTS



NOTES:
1. NO PLANTS SHALL BE PRUNED EXCEPT AT THE DIRECTION OF THE OWNER'S REPRESENTATIVE.
2. STAKE TREE ONLY IF NEEDED, PER DIRECTION OF OWNER'S REPRESENTATIVE. REFER TO TREE STAKING DETAIL.
3. DEPTH ("D") OF PLANT PIT TO BE EQUAL TO DEPTH OF ROOT BALL.
4. MULCH TO NOT TOUCH TRUNK OF TREE.

2 TREE PLANTING DETAIL
NTS



3 SHRUB PLANTING 5-GAL/1-GAL PLANTS
NOT TO SCALE

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EXPIRES 03/31/2026

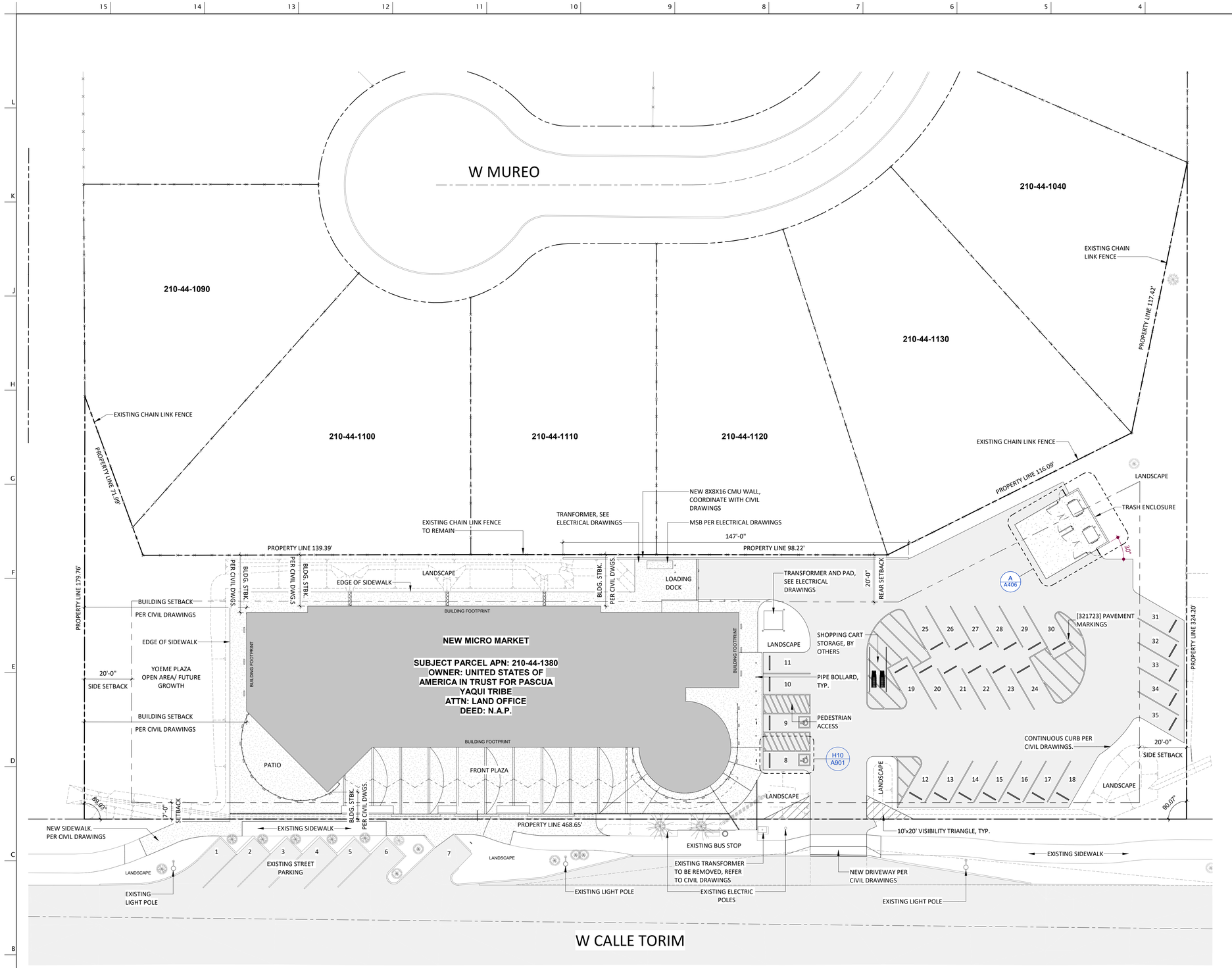
REGISTERED ARCHITECT
CERTIFICATE NO.
26992
RICK L.
GONZALEZ
03/15/24
Date Signed
ARIZONA, U.S.A.

LEGAL DESCRIPTION:
PASCUA YAQUI HOUSING AZ 40-1 LOT 50 BLK 40
OF SECTION 24, T.15S, R12E., CITY OF TUCSON, PIMA COUNTY, ARIZONA
ADDRESS: 5010 W CALLE TORIM
85757

PYT MICRO MARKET
5010 W CALLE TORIM
TUCSON, AZ 85757

COMMERCIAL
NEW

L2.0



OVERALL SITE PLAN

1" = 20'-0"

GENERAL INFORMATION

PROJECT TITLE: CHEPA'S MICRO-MARKET

OWNER: PASCUA YAQUI TRIBE

ARCHITECT: MERGE ARCHITECTURAL GROUP, LLC
CONTACT: CARLOS MURRIETA
ADDRESS: 600 N 4TH ST, SUITE 112
PHONE: (602) 635 1581
EMAIL: cam@mergeag.com

PROJECT ADRESS: 5010 W CALLE TORIM, TUCSON, AZ 85757

PARCEL NUMBERS: 210 - 44 - 1380

PROPERTY AREA: 1.35 AC.

EXISTING ZONING: RH

LOT SETBACKS USING RH (RURAL HOMESTEAD ZONE):
FRONT: 50' (SOUTH)
SIDES: 20' (EAST AND WEST)
REAR: 50' (NORTH)
PROPOSED SETBACKS USING RH (RURAL HOMESTEAD ZONE):
FRONT: 7' (SOUTH)
SIDES: 20' (EAST AND WEST)
REAR: 20' (NORTH)
HEIGHT LIMITATIONS:
MAX. BUILDING HEIGHT: 34'-0", 2 STORIES
PROPOSED BUILDING HEIGHT: 25'-0", 1 STORY
FLOOR AREA:
MAXIMUM FLOOR AREA: 15,000.00 SF
PROPOSED FLOOR AREA:
BUILDING FOOTPRINT: 12,920 SF
LIVABLE AREA: 12,400 SF
COVERED AREA: 14,815 SF
LANDSCAPE AREA:
TOTAL LANDSCAPE AREA IN THE PROPERTY: 14,299.81 SF

PARKING CALCULATIONS

PARKING REQUIRED (PER PIMA COUNTY ZONING):
USE: COMMERCIAL
1.0 SPACE FOR 300 SF
12,400 / 300 = 41.33 = **42 PARKING SPACES**
PARKING PROVIDED:
34 PARKING SPACES, INCLUDING 3 ADA.

GENERAL SHEET NOTES

1. COORDINATE ALL SPOT ELEVATIONS, SLOPES AND DIMENSIONS WITH CIVIL/LANDSCAPE/STRUCTURAL DRAWINGS. INFORM THE ARCHITECT IN WRITTING OF ANY DISCREPANCY.
2. CONTRACTOR TO ENSURE THAT AN ACCESSIBLE PATH CONNECTS THE ADA PARKING STALLS TO THE MAIN ENTRANCE.
3. CONTRACTOR TO ENSURE POSITIVE DRAINAGE ACROSS ALL PAVED SURFACES.

SITE GENERAL NOTES

1. PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING OF 5% FOR A DISTANCE OF 10 FEET U. N.O.
2. FINISH GRADE SLOPES SHALL BE NO STEEPER THAN 1 FT VERTICAL IN 3 FT HORIZONTAL U.N.O.
3. TEMPORARY PEDESTRIAN PROTECTION SHALL BE PROVIDED WHERE REQUIRED BY BUILDING USER'S TRAFFIC. COORDINATE WITH OWNER.
4. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES BELOW GRADE AND RELATED SERVICES CONNECTIONS WITH THE RESPECTIVE UTILITY COMPANIES.
5. CONTRACTOR SHALL COORDINATE THE REMOVAL, ABANDONMENT, AND/OR RELOCATION OF EXITING UTILITIES ABOVE OR BELOW GRADE WITH THE RESPECTIVE UTILITY COMPANIES.
6. SEE LANDSCAPE DRAWINGS FOR PLANTING & GROUND MATERIALS TO BE INSTALLED.
7. DEVELOPMENT AND USE OF THIS SITE WILL CONFORM WITH ALL APPLICABLE CODES & ORDINANCES.
8. ALL NEW UTILITIES WILL BE PLACED UNDERGROUND U.N.O. SEE CIVIL DRAWINGS.
9. ALL ROOFTOP, GROUND EQUIPMENT, AND SATELLITE DISHES SHALL BE SCREENED TO THE HEIGHT OF THE TALLEST EQUIPMENT.
10. LOCATE IRRIGATION CONTROL BOXES ON LANDSCAPE DRAWINGS & SET TOP LEVEL AT SIDEWALK LOCATIONS. PROVIDE CONCRETE BASE AND CASE FOR PROTECTION AS INDICATED BY ARCHITECT.
11. REFER TO PLUMBING DRAWINGS AND EXTERIOR ELEVATIONS TO IDENTIFY LOCATIONS OF OVERFLOW AND ROOF DRAIN LEADER DISCHARGE AREAS AND PROVIDE SPLASHBLOCK OR RIP-RAP PER SITE AND CIVIL DRAWINGS.
12. PROVIDE TRENCH DRAINS AT ANY LOCATION WHERE STORMWATER CROSSES ANY PEDESTRIAN SIDEWALK, SEE SITE DETAILS FOR TYPICAL DETAIL.
13. MINIMUM SLOPE AT SIDEWALKS FOR WATER DRAINAGE PURPOSES TO NO LESS THAN 1.0% AND NOT TO EXCEED 2%. SEE CIVIL DRAWINGS.
14. MINIMUM SLOPE AT SIDEWALKS FOR WATER DRAINAGE PURPOSES TO NO LESS THAN 1.0% AND NOT TO EXCEED 2%. SEE CIVIL DRAWINGS.
15. SIDEWALK AND SLAB CONTROL JOINTS NOT SHOWN FOR DRAWING CLARITY; CONTROL JOINTS TO BE PROVIDED AT 5'-0" O.C. MAXIMUM OR AT EQUAL SPACE DISTRIBUTED ALONG THE LENGHT OF THE SURFACE. SEE ALSO SITE DETAILS.
16. ALL CONCRETE AT SIDEWALKS, EQUIPMENT PADS, RAMPS AND STAIRS TO BE PROVIDED WITH FIBER REINFORCING AS FOLLOWS: SYNTHETIC MICRO-FIBER MONOFILAMENT POLYPROPYLENE MICRO-FIBERS ENGINEERED AND DESIGNED FOR USE IN CONCRETE, COMPLYING WITH ASTM C 1116/C 1116M, TYPE III, 1/2 TO 1 1/2 IN. LONG
17. THIS PROJECT IS LOCATED IN PASCUA YAQUI IN PIMA COUNTY, AZ AND HAS BEEN DESIGNATED AS HAVING AN ASSURED WATER SUPPLY.
18. STRUCTURES AND LANDSCAPING WITHIN A TRIANGLE MEASURED BACK 10' FROM PROPERTY LINE ON EACH SIDE OF THE DRIVEWAYS ENTRANCES WILL BE MAINTAINED AT A MAXIMUM HEIGHT OF 3'. COORDINATE FENCING AS REQUIRED TO MEET THIS REQUIREMENT.
19. ALL SERVICES AREAS SHALL BE SCREENED TO CONCEAL TRASH CONTAINERS, LOADING DOCKS, TRANSFORMERS, BACKFLOW PREVENTER AND OTHER MECHANICAL OR ELECTRICAL EQUIPMENT FROM EYE LEVEL ADJACENT TO ALL PUBLIC STREETS. SEE DETAILS ON SHEET A901 FOR SCREEN DESIGN.

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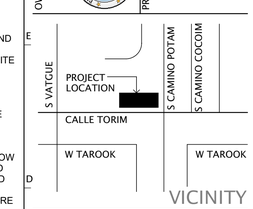
SEAL

REGISTERED ARCHITECT
CERTIFICATE NO. 45961
CARLOS ANTONIO MURRIETA
DATE SIGNED 01/20/2025
ARIZONA, U.S.A.

OWNER INFORMATION
Pascua Yaqui Tribe
7490 S CAMINO DE OESTE
TUCSON, AZ 85757

PROJECT
Micro Market
5010 W CALLE TORIM
TUCSON, AZ 85757



VICINITY

REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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SHEET TITLE

OVERALL SITE PLAN

DATE 01.20.2025

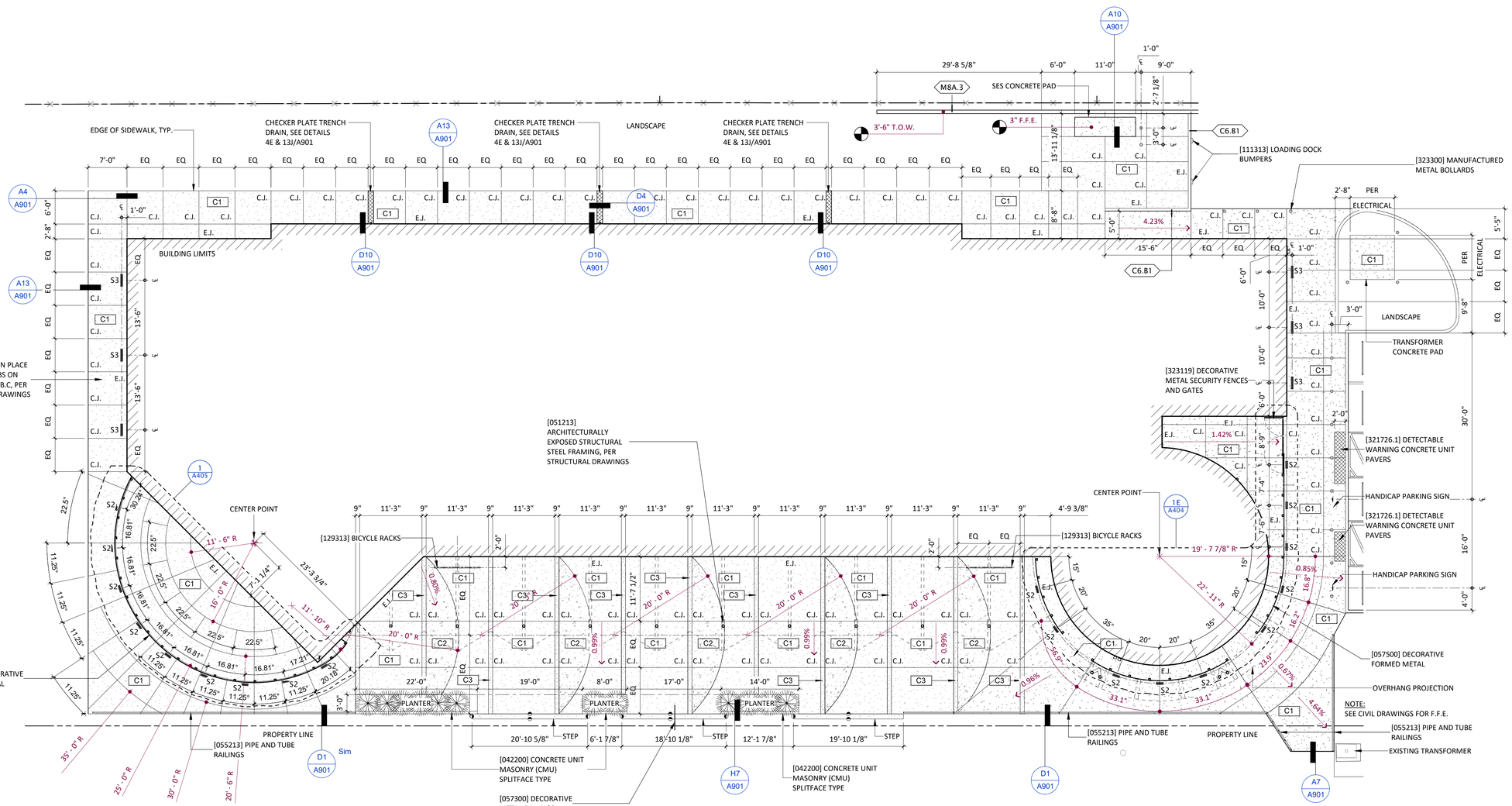
SHEET **A001**

EXTERIOR FINISH SCHEDULE

FINISH TAG	DESCRIPTION
C1	POLISHED CONCRETE
C2	SANDBLASTED CONCRETE
C3	COLOR-STAINED CONCRETE

LIGHT FIXTURE LEGEND

MARK	DESCRIPTION
A1	4' SUSPENDED LINEAR LIGHT
A2	4' SURFACE MOUNTED LINEAR LIGHT
B	6' RECESSED LINEAR LIGHT
C	19" DIA. PENDANT MOUNTED LIGHT
D	6" DIA. RECESSED DOWNLIGHT
E	SURFACE MOUNTED EDGE-LIT EXIT SIGN
F1	11' TRUNKING SYSTEM WITH LINEAR INSERTS AND WIDE BEAM OPTIC
F2A	11' TRUNKING SYSTEM WITH LINEAR INSERTS AND WIDE BEAM OPTIC AND ACCENT FIXTURES
F2B	11' TRUNKING SYSTEM WITH LINEAR INSERTS AND WIDE BEAM OPTIC AND ACCENT FIXTURES
K	4' RECESSED WOOK CEILING INTEGRATED LINEAR LIGHT
L1	GRID 2'X2' LED RECESSED FLAT PANEL
L2	GRID 2'X4' RECESSED FLAT PANEL
S1-4	4' SURFACE MOUNTED LINEAR LIGHT
S1-8	8' SURFACE MOUNTED LINEAR LIGHT
S2	16" RECESSED LINEAR IN-GRADE LUMINAIRE
S3	26" RECESSED LINEAR IN-GRADE LUMINAIRE
S4	SURFACE WALL MOUNTED BEGA LUMINAIRE
SA2	LED TWIN HEAD POLE LIGHTING
SB	LED SURFACE WALL MOUNTED LIGHT FIXTURE



NOTE:
SEE CIVIL DRAWINGS FOR F.F.E.

BUILDING SIDEWALKS 1A
1" = 10'-0"

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OWNER INFORMATION
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Micro Market
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VICINITY
S VATGUE | PROJECT LOCATION | S CAMINO POTAM | S CAMINO COCOIM
CALLE TORIM
W TAROOK | W TAROOK

REVISION		
NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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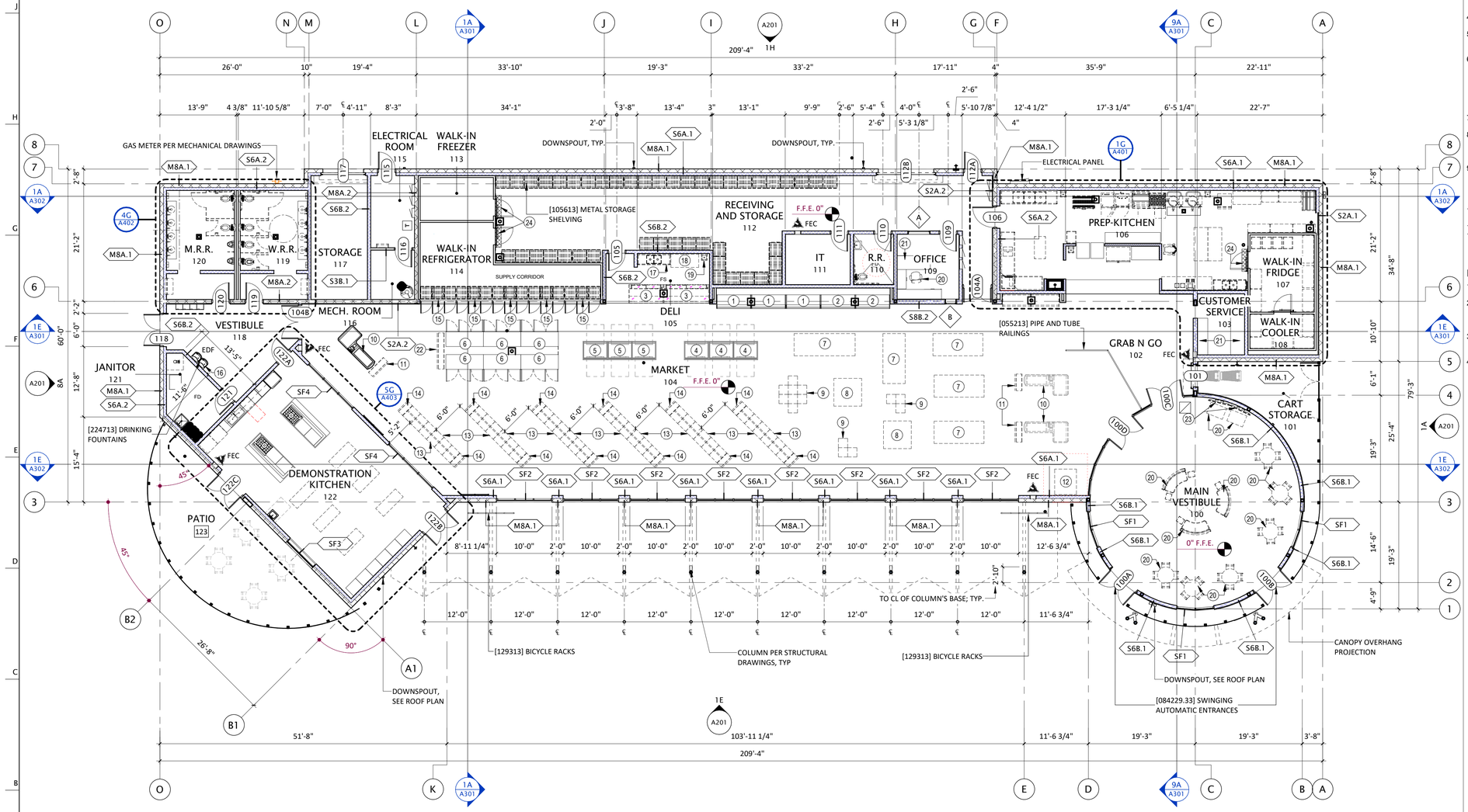
SHEET TITLE
ENLARGED SITE PLANS

DATE 01.20.2025
SHEET **A002**

WALL TYPES	
MARK	WALL DESCRIPTION
M8A.1	8" CMU WALL. 3/8" 1-COAT STUCCO SYSTEM ON EXTERIOR SIDE. COORDINATE WITH STRUCTURAL DRAWINGS
M8A.2	8" CMU INTERIOR WALL RUNNING BOND. COORDINATE WITH STRUCTURAL DRAWINGS
M8A.3	8" EXPOSED CMU WALL RUNNING BOND.
M8B.1	8" CMU PARAPET WALL. 3/8" 1-COAT STUCCO SYSTEM ON EXTERIOR SIDE. TPO ROOFING MEMBRANE ON INTERIOR/ROOF SIDE
S2A.1	1-1/2" Z-FURRING CHANNELS WITH 1-1/2" XPS INSULATION BD IN BETWEEN. + ONE LAYER OF 5/8" GYPSUM BOARD ON VISIBLE SIDE
S2A.2	1-1/2" Z-FURRING CHANNELS + ONE LAYER OF 5/8" GYPSUM BOARD ON VISIBLE SIDE
S3A.1	3 5/8" METAL STUD WALL @16" O.C WITH R-13 INSULATION + 5/8" SINGLE LAYER G.B. ON VISIBLE SIDE
S3A.2	3 5/8" METAL STUD WALL @16" O.C. +5/8" SINGLE LAYER G.B. ON VISIBLE SIDE
S3B.1	3 5/8" METAL STUD WALL @16" O.C. + 5/8" SINGLE LAYER G.B. ON EACH SIDE
S6A.1	6" METAL STUD WALL @ 16" O.C. WITH R-19 INSULATION. + 5/8" SINGLE LAYER G.B. ON VISIBLE SIDE
S6A.2	6" METAL STUD WALL @ 16" O.C. WITH R-19 INSULATION. + 5/8" SINGLE LAYER W.R.B. ON VISIBLE SIDE
S6B.1	6" METAL STUD WALL @16" O.C. WITH R-19 INSULATION. +5/8" SINGLE LAYER G.B. ON INT. SIDE. ONE LAYER OF 5/8" PLYWOOD SHEATHING ON EXT. SIDE + TWO LAYERS OF WATERPROOFING MEMBRANE + R-5 XPS INSULATION BOARD + 3/8" 1-COAT STUCCO SYSTEM
S6B.2	6" METAL STUD WALL @ 16" O.C. WITH R-19 INSULATION. 5/8" SINGLE LAYER G.B. ON EACH SIDE
S6B.3	6" METAL STUD WALL @16" O.C. + ONE LAYER 5/8" PLYWOOD SHEATHING BOTH SIDES. TWO LAYERS OF WATERPROOFING MEMBRANE + R-5 XPS INSULATIO BOARD + 3/8" 1-COAT STUCCO SYSTEM ON EXT. SIDE. TPO ROOFING MEMBRANE ON INTERIOR/ROOF SIDE
S8B.1	8" METAL STUD WALL @ 16" O.C. WITH R-19 INSULATION AND 5/8" SINGLE LAYER G.B. EACH SIDE
S8B.2	8" METAL STUD WALL @ 16" O.C. WITH R-19 INSULATION. 5/8" SINGLE LAYER G.B. ON STORAGE SIDE + 5/8" SINGLE LAYER GYPSUM BD. OVER 1-1/2" Z-FURRING CHANNEL ON MARKET SIDE
S8B.3	8" METAL STUD WALL @ 16" O.C. WITH R-19 INSULATION. 5/8" SINGLE LAYER G.B INT. SIDE. 5/8" SINGLE LAYER PLYWOOD SHEATHING ON EXT. SIDE + TWO LAYERS OF WATERPROOFING MEMBRANE + R-5 XPS INSULATION BOARD + 3/8" 1-COAT STUCCO SYSTEM

#	EQUIPMENT NAME	#	EQUIPMENT NAME
1	REFRIGERATED PRODUCE WET RACK	12	ICE VENDING MACHINE
2	REFRIGERATED OPEN MERCHANDISER - PRODUCE	13	GROCERY SHELVING - 16" BASE DECK
3	REFRIGERATED CURVED PROFILE DELI/MEAT CASE	14	GROCERY END CAP - 30"W X 16"D - 16" BASE DECK
4	REFRIGERATED SELF SERVICE ISLAND MEAT DISPLAY	15	REFRIGERATED REAR LOAD DAIRY/COLD ITEMS CASE
5	REFRIGERATED SELF SERVICE ISLAND SEAFOOD DISPLAY	16	BI-LEVEL DRINKING FOUNTAIN
6	REACH-IN FROZEN FOOD MERCHANDISER	17	2-COMPARTMENT SINK
7	SELF-SERVICE PRODUCE FIXTURE	18	5'-0" STAINLESS STEEL WORK TABLE
8	PRODUCE FIELD BINS	19	HAND SINK
9	BAKERY SPECIALTY BREAD/SEASONAL ITEMS	20	FURNITURE BY OWNER
10	CHECKSTAND REGISTER	21	COUNTER MILLWORK
11	BEVERAGE COOLER MERCHANDISER	22	GROCERY SHELVING END CAP - 78"WX16"D
		23	WALL MOUNTED TV/SCREEN
		24	PROVIDE STAINLESS STEEL, CHECKER PLATER SLOPE RAMP AT WALK-IN UNIT, TYPE AT EACH DOOR.



OVERALL FLOOR PLAN

1" = 10'-0"

FLOOR PLAN GENERAL NOTES

1. DIMENSIONS SHOWN ON FLOOR PLANS, SECTIONS, ELEVATIONS AND DETAILS ARE TO FACE OF STUD, MASONRY, CONCRETE, OR GRIDELINES, U.N.O.
2. INSULATION NOT SHOWN IN FLOOR PLANS FOR DRAWING CLARITY. REFER TO WALL TYPE SCHEDULE, WALL TYPE DETAILS AND SPECIFICATIONS FOR INSULATION REQUIREMENTS.
3. REFER TO CODE SHEETS FOR FIRE RATING REQUIREMENTS BETWEEN THE DIFFERENT SPACES AT WALLS.
4. COORDINATE WITH CIVIL DRAWINGS AND/ OR STRUCTURAL DRAWINGS FOR FINISH FLOOR ELEVATION.
5. REFER TO ROOM FINISH SCHEDULE FOR FURTHER DETAIL ON FLOOR FINISHES.
6. ALL DOORS SET WITH HINGE SIDE 4" FROM BACK OF DOOR FRAME TO FACE OF ADJACENT WALL UNLESS DIMENSIONED OTHERWISE.
7. DOOR THRESHOLDS NOT SHOWN FOR DRAWING CLARITY, SEE ENLARGED FLOOR PLANS AND ROOM FINISH SCHEDULE FOR LOCATIONS. IF NOT LISTED PROVIDE DOOR THRESHOLD AT ANY ROOM WITH FLOOR DRAIN.
8. COORDINATE ALL FLOOR PENETRATIONS WITH RESPECTIVE TRADES. ALL FLOOR PENETRATIONS REQUIRE ONE-HOUR FIRE RESISTIVE ASSEMBLY.

WALL GENERAL NOTES

1. FOR TYPICAL WALL STUD AND GAUGE, SEE MARK ON PLANS, STRUCTURAL NOTES AND WALL TYPE SCHEDULE.
2. FOR INTERIOR WALL SUBSTRATES REFER TO WALL TYPE SCHEDULE.
3. ALL STUD WALLS TO RECEIVE TWO BEADS OF SEALANT AT THE BOTTOM AND TOP TRACK, PROVIDE ADDITIONAL BEAD OF SEALANT AT BOTTOM OF ANY DRYWALL SUBSTRATE SHEATHING, U.N.O.
4. FOR INTERIOR WALL HEIGHT INFORMATION SEE CEILING PLANS AND SECTIONS.
5. ALL UNGROUTED CMU CELLS IN CONTACT WITH THE EXTERIOR ENVIRONMENT TO RECEIVE FOAMED IN PLACE INSULATION.
6. INSULATION NOT SHOW FOR DRAWING CLARITY. ALL STUDS TO RECEIVE BATT INSULATION U.N.O. AS FOLLOWS: 6" EXTERIOR STUDS: R-19; 6" INTERIOR STUDS: R-19; 3 5/8" INTERIOR STUDS: R-13; 2 1/2" INTERIOR STUDS: R-11; 1 5/8" INTERIOR STUDS: R-6.3 TYPE 701 BATT INSULATION; 1"Z' CHANNELS INTERIOR: R-5 (RIGID INSULATION).
7. PROVIDE ALUMINUM FACED INSULATION AT ALL WET AREAS, TOILET, KITCHEN, JANITOR, ETC.
8. ALL INTERIOR EXPOSED CORNERS INSIDE CORRIDORS AND WATER DISPENSING AREAS TO RECEIVE CORNER GUARDS PER SPECIFICATION. SEE ALSO INTERIOR ELEVATIONS FOR ADDITIONAL LOCATIONS.
9. PROVIDE ALL FIRE-RETARDANT BLOCKING AS REQUIRED FOR ALL TOILETS, ARCHITECTURAL MILLWORK, ACCESSORIES, ETC. LISTED ON DRAWINGS AS PART OF CONTRACT AND NOT IN CONTRACT (N.I.C.) PER SPECIFICATIONS.
10. REFER TO ROOM FINISH SCHEDULE FOR FURTHER DETAIL ON WALL FINISHES.
11. STUD SPACING PER STRUCTURAL.
12. PROVIDE ALL BLOCKING AS REQUIRED FOR ALL TOILETS, ARCHITECTURAL MILLWORK, ACCESSORIES, ETC. LISTED ON DRAWINGS AS PART OF CONTRACT AND NOT IN CONTRACT (N.I.C).

PARTITION HEAD CONDITIONS

1. PARTITIONS ARE TO EXTEND TO THE UNDERSIDE OF THE STRUCTURE ABOVE.
2. METAL STUDS ARE TO EXTEND TO UNDERSIDE OF STRUCTURE ABOVE SHEATING/GYPSUM WALLBOARD IS TO TERMINATE 6" ABOVE HEIGHT ADJACENT TO CEILING LID.
3. PARTITION TO TERMINATE 6" ABOVE HEIGHEST ADJACENT CEILING DIAGONALLY BRACE TO STRUCTURE ABOVE.
4. METAL STUDS TO EXTEND TO STRUCTURE ABOVE GYPSUM WALLBOARD ON ONE SIDE OF METAL STUDS TO EXTEND TO STRUCTURE ABOVE ON THE OTHER SIDE OF METAL STUDS GYPSUM WALLBOARD IS TO TERMINATE 6" ABOVE HEIGHEST ADHACENT CEILING LID.

PROJECT DATA

GROSS BLDG. S.F.:	**12,791 S.F.**
SALES AREA S.F.:	**4,728 S.F.**
GROCERY:	
GROCERY SHELVING	144 L.F.
GROCERY SHELVING END CAP	30 L.F.
TOTAL L.F.	**174 L.F.**
FROZEN FOOD:	
REACH-IN DOOR CASES	**16 DOORS**
DAIRY/COLD ITEMS:	
MULTI-DECK CASE REAR FILL	32.5 L.F.
COLD BEVERAGES	9.5 L.F.
TOTAL L.F.	**42 L.F.**
PRODUCE:	
PRODUCE WET RACK	12 L.F.
PRODUCE PACKAGED	19 L.F.
SELF-SERVICE PRODUCE FIXTURE	94 L.F.
TOTAL L.F.	**125 L.F.**
SELF-SERVICE PRODUCE BIN	**2 BINS**
MEAT:	
SERVICE MEAT CASE	8 L.F.
SELF SERVICE MEAT CASE	27 L.F.
TOTAL L.F.	**35 L.F.**
SEAFOOD:	
SELF SERVICE SEAFOOD	**27 L.F.**
DELI:	
SERVICE DELI CASE	**6 L.F.**
BAKERY/SEASONAL ITEMS:	
BAKERY TABLES	**14 TABLES**

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REGISTERED ARCHITECT CERTIFICATE NO. 45961 CARLOS ANTONIO MURRIETA DATE SIGNED 01/20/2025 ARIZONA, U.S.A.

OWNER INFORMATION

Pascua Yaqui Tribe

PROJECT

Micro Market

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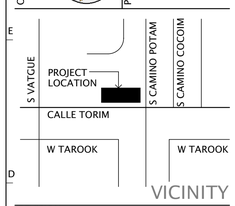

REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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SHEET TITLE

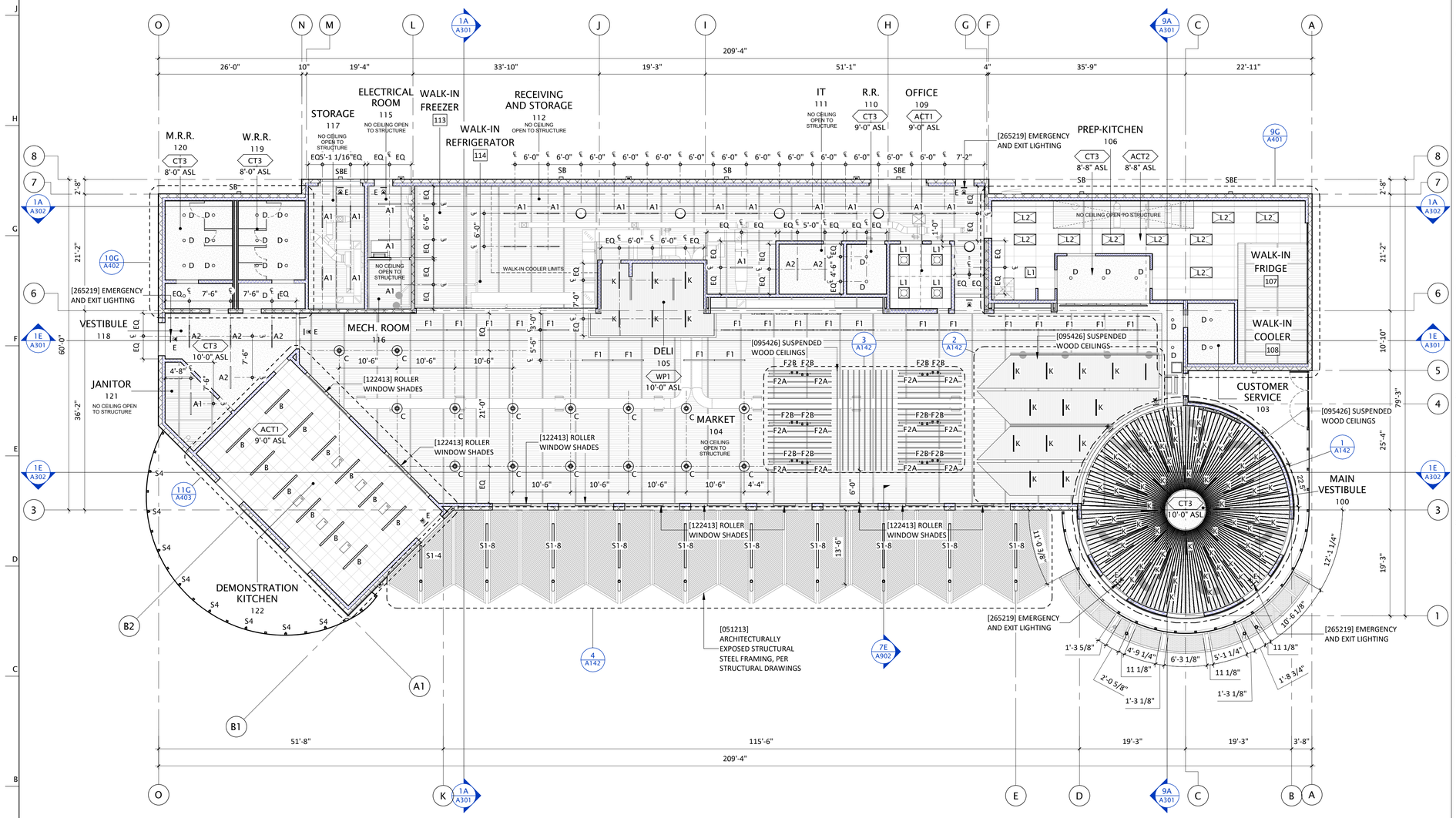
FLOOR PLAN

DATE 01.20.2025

SHEET **A101**

LIGHT FIXTURE LEGEND

MARK	DESCRIPTION
A1	4' SUSPENDED LINEAR LIGHT
A2	4' SURFACE MOUNTED LINEAR LIGHT
B	6' RECESSED LINEAR LIGHT
C	19" DIA. PENDANT MOUNTED LIGHT
D	6" DIA. RECESSED DOWNLIGHT
E	SURFACE MOUNTED EDGE-LIT EXIT SIGN
F1	11' TRUNKING SYSTEM WITH LINEAR INSERTS AND WIDE BEAM OPTIC
F2A	11' TRUNKING SYSTEM WITH LINEAR INSERTS AND WIDE BEAM OPTIC AND ACCENT FIXTURES
F2B	11' TRUNKING SYSTEM WITH LINEAR INSERTS AND WIDE BEAM OPTIC AND ACCENT FIXTURES
K	4' RECESSED WOOK CEILING INTEGRATED LINEAR LIGHT
L1	GRID 2'X2' LED RECESSED FLAT PANEL
L2	GRID 2'X4' RECESSED FLAT PANEL
S1-4	4' SURFACE MOUNTED LINEAR LIGHT
S1-8	8' SURFACE MOUNTED LINEAR LIGHT
S2	16" RECESSED LINEAR IN-GRADE LUMINAIRE
S3	26" RECESSED LINEAR IN-GRADE LUMINAIRE
S4	SURFACE WALL MOUNTED BEGA LUMINAIRE
SA2	LED TWIN HEAD POLE LIGHTING
SB	LED SURFACE WALL MOUNTED LIGHT FIXTURE



REFLECTED CEILING PLAN

1" = 10'-0"

GENERAL CEILING NOTES

1. ALL CEILING AND SOFFIT HEIGHTS ARE GIVEN ABOVE FINISHED FLOOR ELEVATION (EL. 0'-0")
2. GENERALLY ONLY CEILING MOUNTED FIXTURES ARE SHOWN ON THIS PLAN. COORDINATE WITH MEP PLANS FOR ADDITIONAL INFORMATION.
3. SOME OR ALL SPRINKLERS MAY NOT BE SHOWN ON THIS PLAN. COORDINATE WITH MEP DRAWINGS FOR ADDITIONAL INFORMATION. SPRINKLER HEADS TO BE CENTERED ON CEILING TILE, TYP.
4. VERIFY LOCATIONS OF ALL CEILING ACCESS PANELS WITH MEP DRAWINGS. COORDINATE LOCATIONS OF PANELS WITH ARCHITECT PRIOR TO INSTALLATION. ACCESS PANEL FIRE RATINGS MUST MATCH CEILING ASSEMBLY FIRE RATINGS.
5. LIGHTING FIXTURES TO BE CENTERED AND SPACED EQUALLY U.N.O.
6. LIGHT FIXTURES ARE SHOWN ON THIS DRAWING FOR THE ARCHITECTURAL LOCATIONS AND GENERAL FIXTURE TYPE ONLY. SEE ELECTRICAL DRAWINGS FOR THE EXACT FIXTURE TYPE AND CIRCUITING.
7. MECHANICAL REGISTERS ARE SHOWN ON THIS DRAWING FOR THE ARCHITECTURAL LOCATIONS ONLY. SEE MECHANICAL DRAWINGS AND SPECIFICATIONS FOR SIZING, DISTRIBUTION, CONNECTIONS, AND ALL OTHER REQUIREMENTS.
8. VERIFY MECHANICAL, ELECTRICAL AND SPRINKLER LOCATIONS. COORDINATE AND ADJUST AS REQUIRED.
9. IF PROJECT INCLUDES FIRE RATED CEILINGS, LIGHT FIXTURES LOCATED IN RATED CEILING ASSEMBLIES ARE TO BE TENTED OR OTHERWISE RATED TO MATCH THE CEILING.
10. CEILING SYSTEMS SHALL PROVIDE FOR LIGHTING FIXTURES AND AIR CONDITIONING DIFFUSERS. INDEPENDENT FRAMING AND ATTACHMENTS TO THE STRUCTURE SHALL BE ADEQUATE TO SUPPORT THE CEILING SYSTEM.
11. WHERE DUCTWORK INTERFERES WITH NORMAL SUSPENSION. ATTACHMENT OF HANGERS OR FRAMING TO DUCTWORK PROHIBITED.
12. COORDINATE EXACT LOCATION OF ALL CEILING ITEMS (DIFFUSERS, LIGHT FIXTURES, SPRINKLERS, ETC.) NOT DIMENSIONED ON THIS OR OTHER DRAWINGS IN FIELD WITH ARCHITECT.
13. FOR SMOKE DETECTOR LOCATIONS IN CEILING SEE SPECIAL ELECTRICAL DRAWINGS AND SPECIAL SYSTEM DRAWINGS.
14. FOR SPEAKER LOCATIONS IN CEILING SEE ELECTRICAL DRAWINGS.
15. ALL GYPSUM BOARD OVER STUDS EXTENDING TO STRUCTURE WHERE NOT EXPOSED TO VIEW, NEED ONLY JOINTS TAPED, NO TEXTURE OR FINISH.
16. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE VARIOUS TRADE ITEMS WITHIN THE SPACE ABOVE ALL CEILING (INCLUDING, BUT NOT LIMITED TO: STRUCTURAL MEMBERS, MECHANICAL DUCTS AND INSTALLATION, CONDUITS, RACEWAYS, SPRINKLER SYSTEMS, AND ANY SPECIAL STRUCTURAL SUPPORTS REQUIRED) AND SHALL BE RESPONSIBLE FOR MAINTAINING THE FINISH CEILING HEIGHT ABOVE THE FINISH FLOOR INDICATED IN THE DRAWINGS AND THE FINISH SCHEDULE. (CEILING HEIGHT DIMENSIONS ARE TO THE FINISH SURFACE OF CEILING).
17. FOR TYPICAL HANGER WIRE ATTACHMENT TO EXISTING STRUCTURE ABOVE REFER TO CEILING DETAILS AND SPECIFICATIONS.
18. REFER TO CEILING DETAILS FOR ANY CONTROL JOINTS AT FURRING CHANNELS AS OCCURS.
19. ACCESS PANELS SHALL BE PROVIDED & INSTALLED WHEREVER REQUIRED BY BUILDING CODE OR FOR THE PROPER OPERATION OR MAINTENANCE OF MECHANICAL OR ELECTRICAL EQUIPMENT, WHETHER OR NOT INDICATED ON DRAWINGS. CONTRACTOR SHALL COORDINATE SIZE, LOCATION AND TYPE OF ACCESS PANEL WITH OTHER CONTRACTORS WORK & RECEIVE APPROVAL OF THE ARCHITECT. NO ACCESS PANEL SHALL BE LOCATED, FRAMED OR INSTALLED WITHOUT THE EXPRESSED APPROVAL OF THE ARCHITECT.
20. ALL DUCT PENETRATIONS THROUGH PARTITIONS & CEILING SHALL BE PROVIDED WITH NECESSARY FRAMES AND BRACING AROUND THE OPENING & SHALL BE PROVIDED WITH AUTOMATIC FIRE DAMPERS AND FIRE CAULKING (IF REQUIRED) BY MECHANICAL DRAWINGS OR FOR FIRE-RATED PENETRATIONS.
21. ALL BATT INSULATION INSTALLED ON OPEN STRUCTURE SPACES, HORIZONTAL OR VERTICAL TO BE COVERED IN WITH MATTE BLACK ACOUSTIC OPEN WEAVE POLYESTER INSULATION WRAP, SO AS TO NOT ALLOW ANY LOOSE INSULATION FIBERS TO BECOME AIRBORNE. FABRIC SHALL HAVE A CLASS 'A' FLAMMABILITY RATING PER ASTM E-84, FLAME SPREAD INDEX OF 25 OR LESS.
22. ALL EXPOSED FRAMING, JOIST, CONDUIT, ROOF DECK, INSULATION (W/ FABRIC COVER) AND ANY OTHER ITEMS IN THE CEILING CAVITY; TO BE PAINTED. COLOR TO BE SELECTED BY ARCHITECT.
23. ALL EXPOSED ROUND DUCTWORK AND ITS CONNECTORS FROM THE MECHANICAL UNIT/AIR HANDLER TO BE PAINTED. COLOR TO BE SELECTED BY ARCHITECT.

RCP LEGEND

SYMBOL	TAG	NAME
	ACT1	[09 51 23] LAY-IN 24"X24" ACOUSTICAL CEILING TILE
	ACT2	[09 51 23] LAY-IN 24"X48" ACOUSTICAL CEILING TILE
	CT3	[09 29 00] HARD-LID GYPSUM BOARD CEILING
	WP1	[09 54 26] WOODWORKS LINEAR TEGULAR PANELS

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REGISTERED ARCHITECT CERTIFICATE NO. 45961 CARLOS ANTONIO MURRIETA DATE SIGNED 01/20/2025 ARIZONA, U.S.A.

OWNER INFORMATION

Pascua Yaqui Tribe

PROJECT

Micro Market

7490 S CAMINO DE OESTE TUCSON, AZ 85757

5010 W CALLE TORIM TUCSON, AZ 85757

VICINITY

S VATGUE | PROJECT LOCATION | S CAMINO POTAM | S CAMINO COCOIM | CALLE TORIM | W TAROOK | W TAROOK

REVISION		
NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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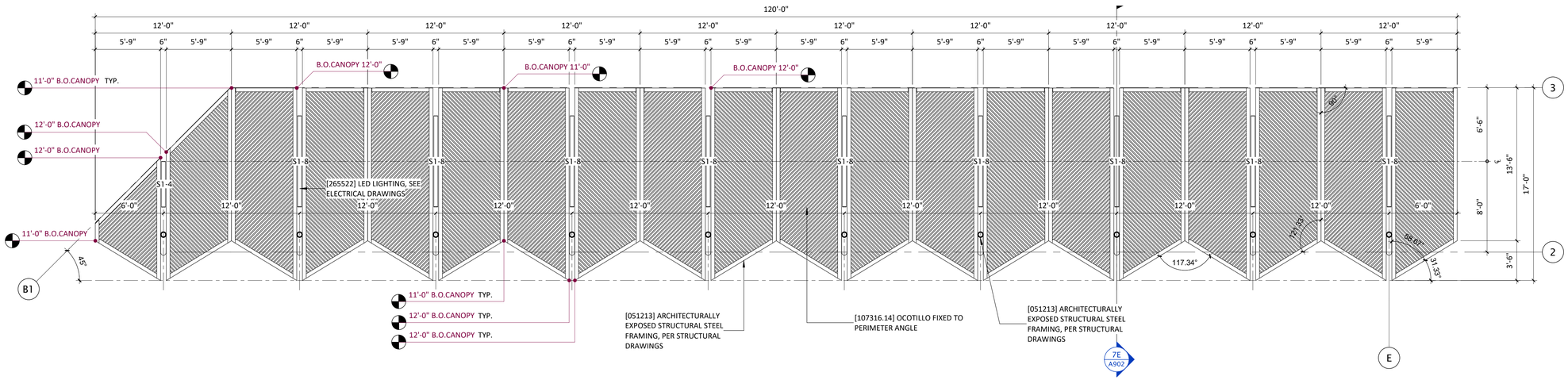
SHEET TITLE

REFLECTED CEILING PLAN

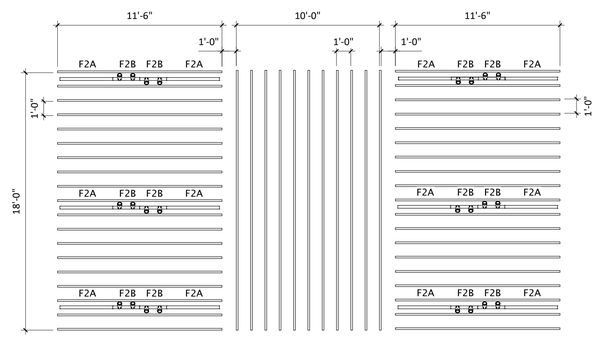
DATE 01.20.2025

SHEET **A141**



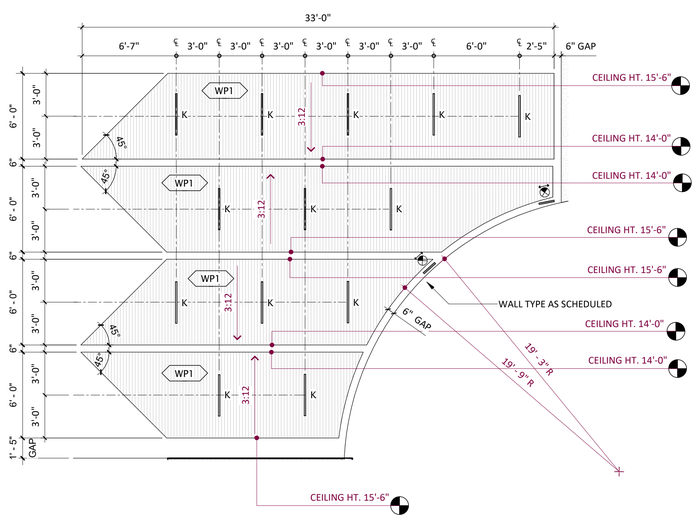
ENLARGED CANOPY RCP 4

1 : 60



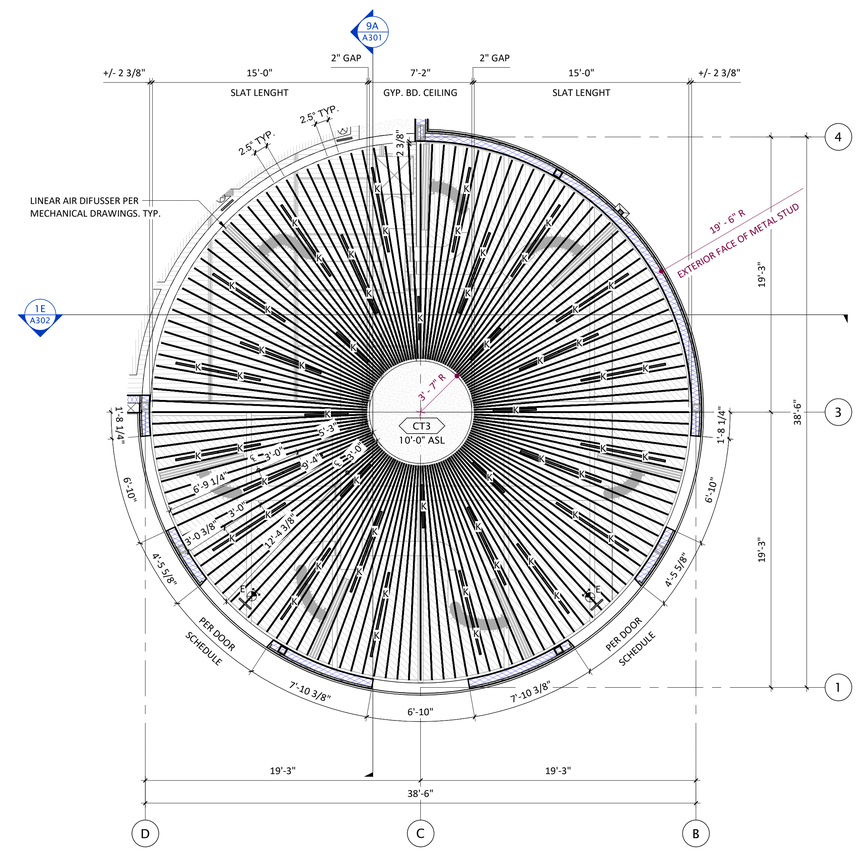
SUSPENDED PERGOLA RCP 3

1 : 60



SUSPENDED TEGULAR CEILING AT MAIN ENTRY 2

1 : 60



SUSPENDED SLAT CEILING AT MAIN VESTIBULE 1

1 : 60

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OWNER INFORMATION
Pascua Yaqui Tribe

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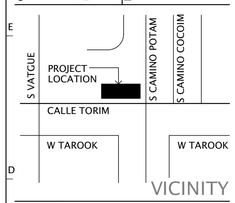

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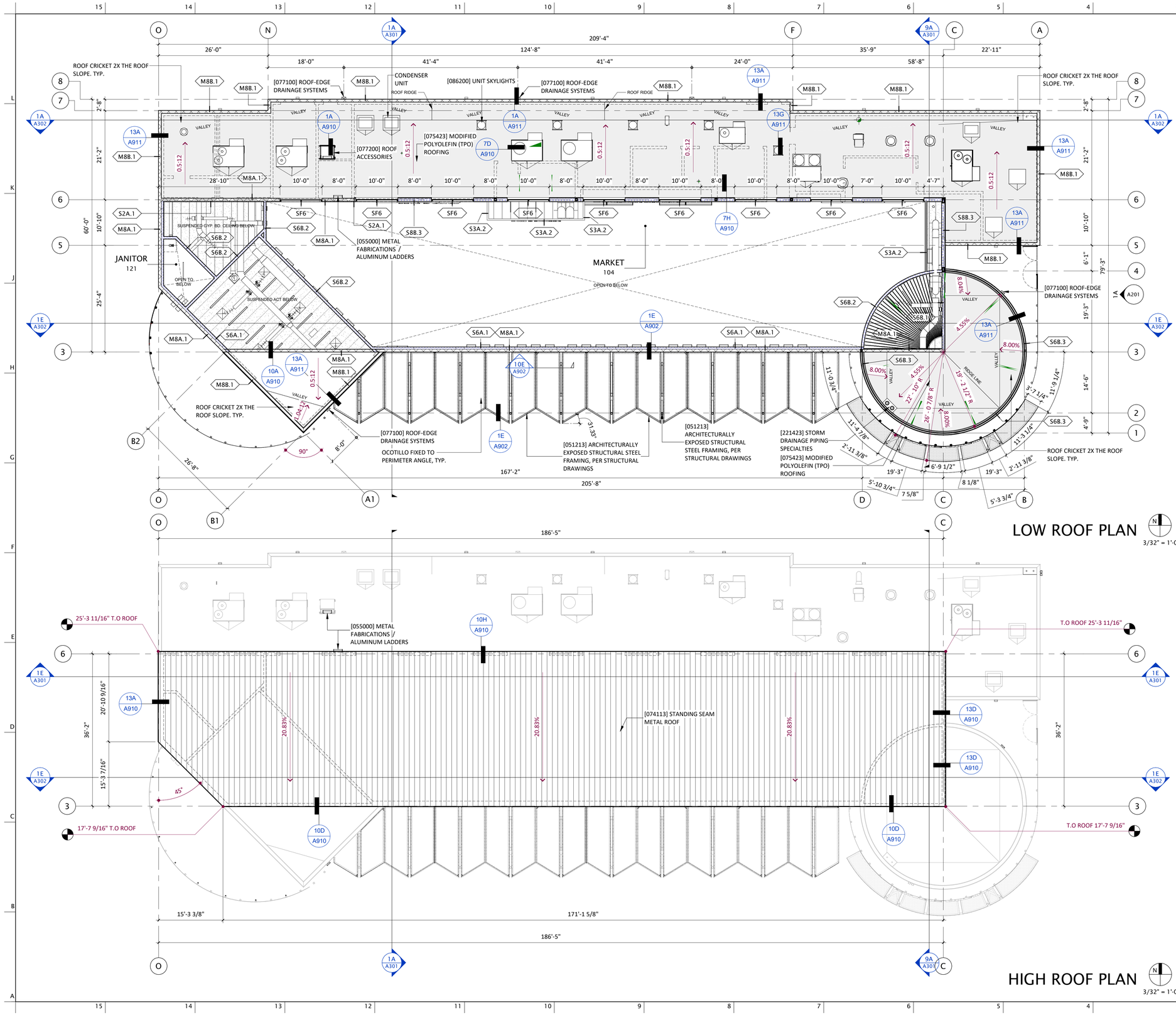
SHEET TITLE

ENLARGED RCP

DATE 01.20.2025

SHEET **A142**



GENERAL ROOF NOTES

1. MINIMUM SLOPES ON ROOF SHALL BE 1/4" PER FOOT IN DIRECTION OF DRAINS OR ROOF EDGE
2. ELEVATION ABBREVIATIONS AS FOLLOWS:
   - **BOD =** BOTTOM OF DECK
   - **TOS =** TOP OF STEEL
   - **TOP** = TOP OF PARAPET
3. OBJECT ABBREVIATIONS AS FOLLOWS:
   - **RD** = ROOF DRAIN
   - **RTU** = ROOFTOP UNIT
   - **RH** = ROOF HATCH
4. PROVIDE ALL ROOFING DETAILS BY MANUFACTURERS WARRANTED SYSTEMS.
5. PROVIDE WALKWAY PADS AT ALL ROOF LADDERS AND AT ALL ROOFTOP EQUIPMENT WORKING AREAS
6. PROVIDE CRICKETS AT ALL ROOFTOP EQUIPMENT TO FACILITATE DRAINAGE.
7. ROOF COVERING CLASSIFICATION 'U.L.' CLASS MEMBRANE BY TABLE 1505.1 OF THE INTERNATIONAL BUILDING CODE (IBC), OR AS LISTED ON PROJECT CODE SHEET DATA, AS APPLICABLE.
8. NOT ALL ROOF PENETRATIONS ARE SHOWN, COORDINATE WITH MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
9. COMPLY WITH SMACNA ARCHITECTURAL SHEET METAL MANUAL.
10. COORDINATE WITH ELECTRICAL DRAWINGS FOR POWER J-BOXES MOUNTED AT ROOF.
11. COORDINATE WITH ELECTRICAL DRAWINGS FOR LIGHTING STRIKE ARRESTORS ON ROOF.
12. PAINT GALVANIZED IRON AND FERROUS METALS U.N.O. COLOR AS SPECIFIED OR AS DIRECTED BY ARCHITECT.

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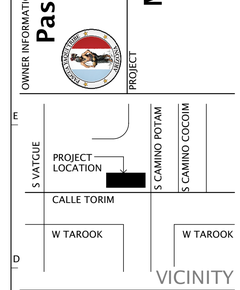

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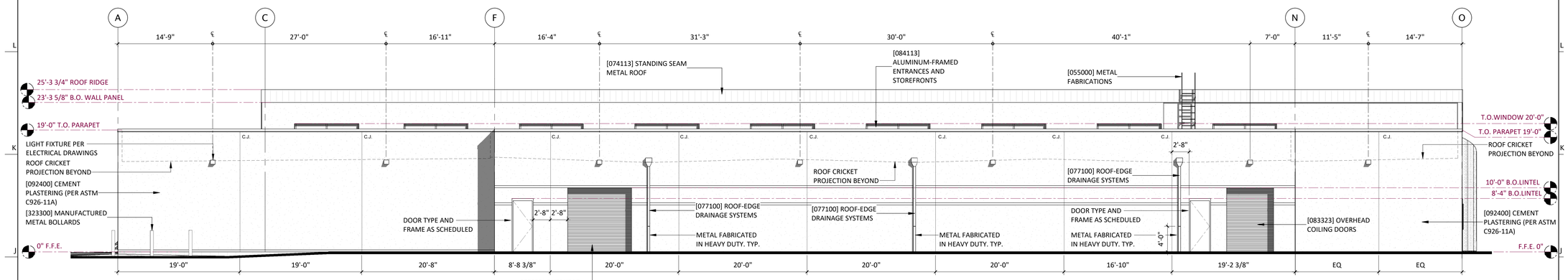
SHEET TITLE

ROOF PLAN

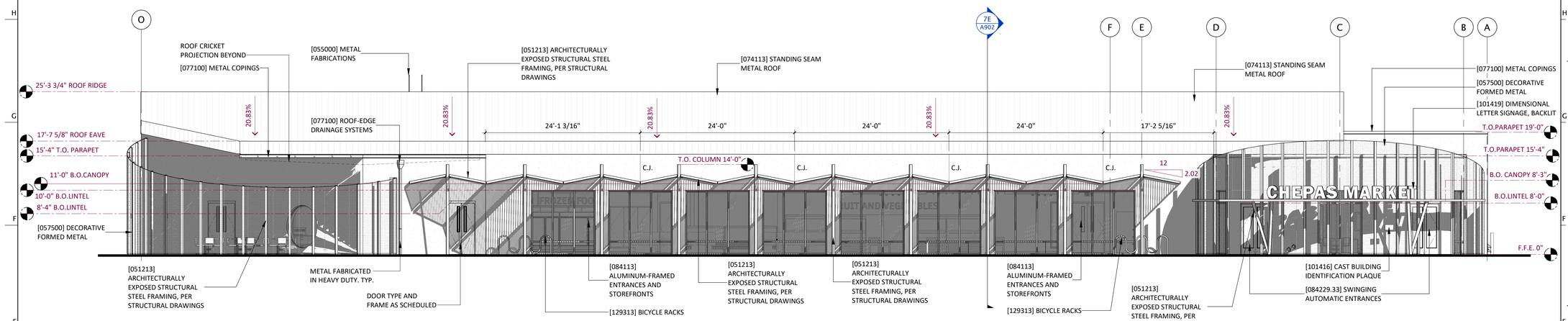
DATE 01.20.2025

SHEET **A171**



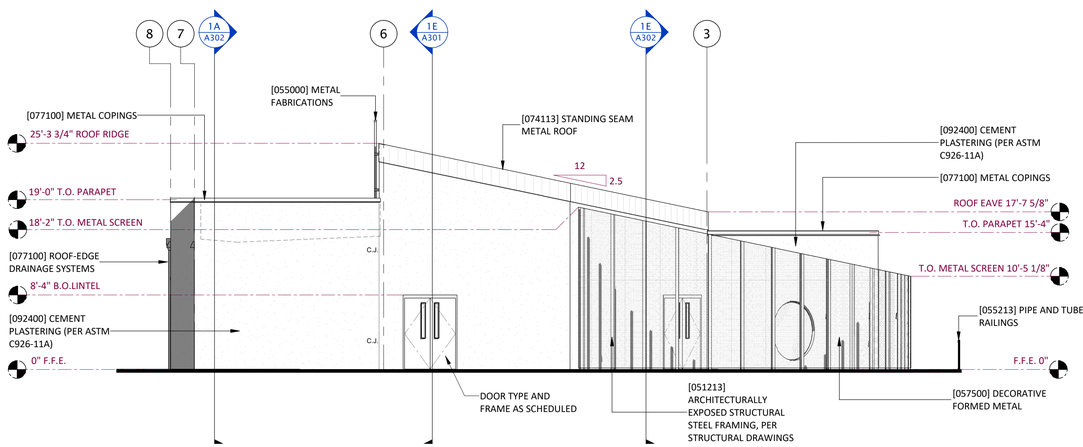
NORTH EXTERIOR ELEVATION 1H

1/8" = 1'-0"



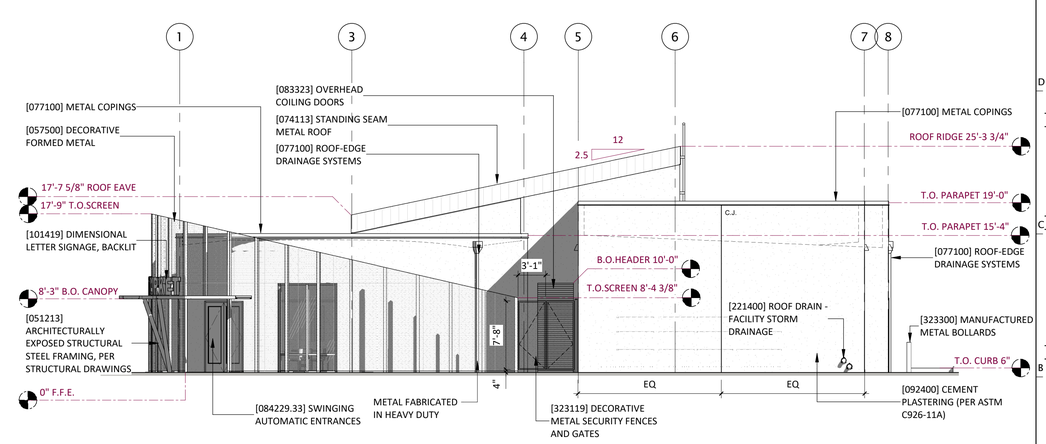
SOUTH EXTERIOR ELEVATION 1E

1/8" = 1'-0"



WEST EXTERIOR ELEVATION 8A

1/8" = 1'-0"



EAST EXTERIOR ELEVATION 1A

1/8" = 1'-0"

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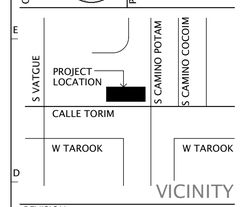

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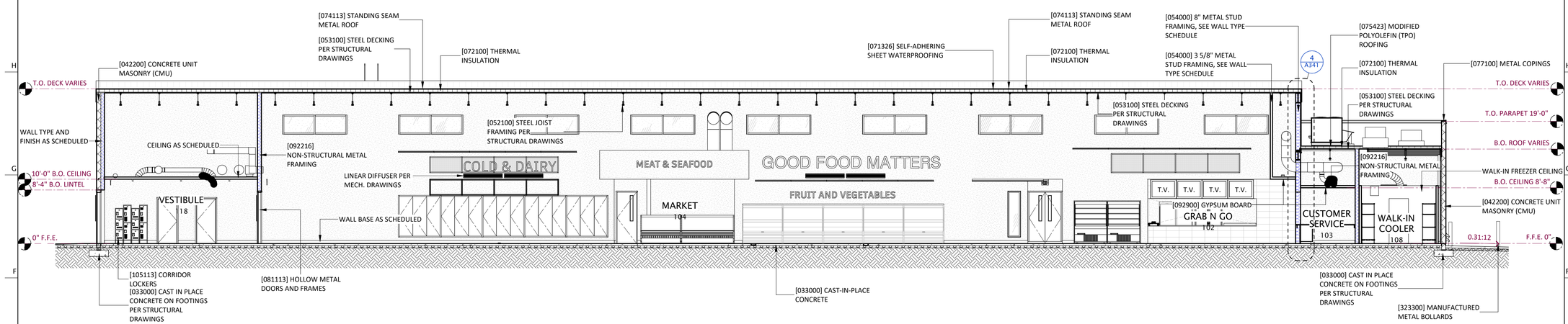
SHEET TITLE

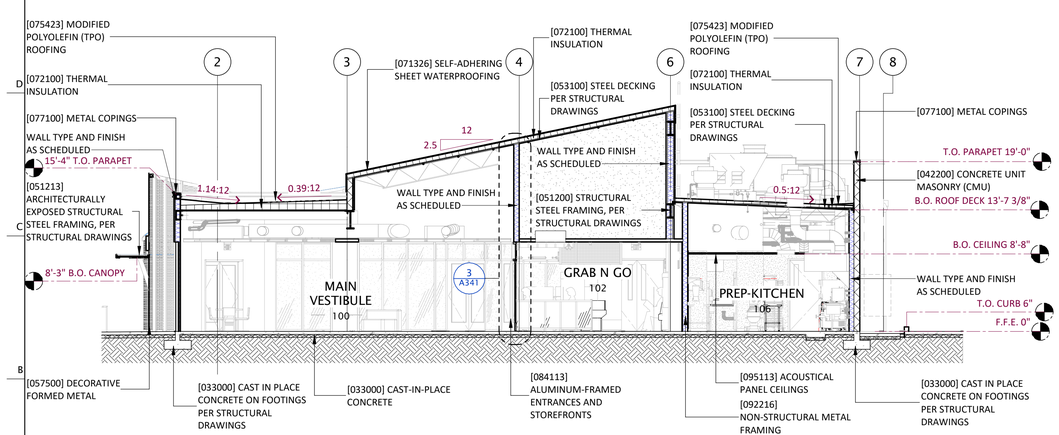
EXTERIOR ELEVATIONS

DATE 01.20.2025

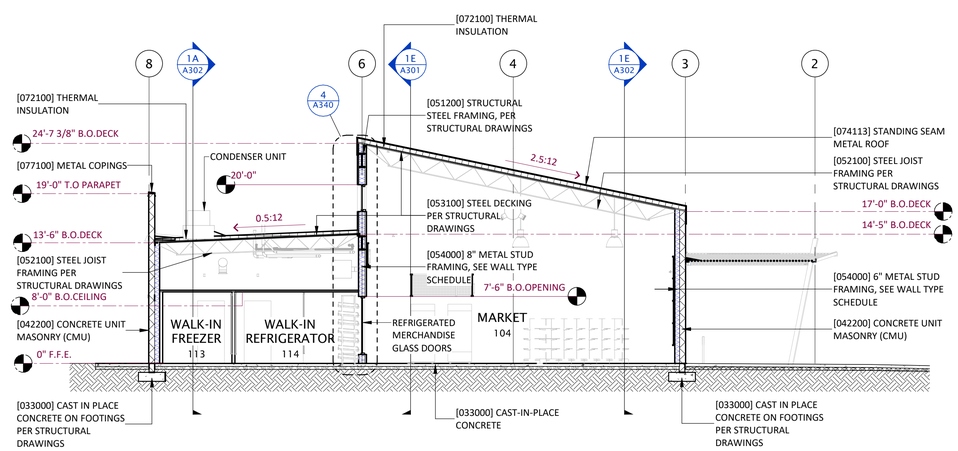
SHEET **A201**



BUILDING SECTION 1E
1/8" = 1'-0"



BUILDING SECTION 9A
1/8" = 1'-0"



BUILDING SECTION 1A
1/8" = 1'-0"

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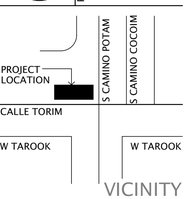
DATE SIGNED 01/20/2025
ARIZONA, U.S.A.

OWNER INFORMATION
Pascua Yaqui Tribe

PROJECT
7490 S CAMINO DE OESTE
TUCSON, AZ 85757
Micro Market
5010 W CALLE TORIM
TUCSON, AZ 85757



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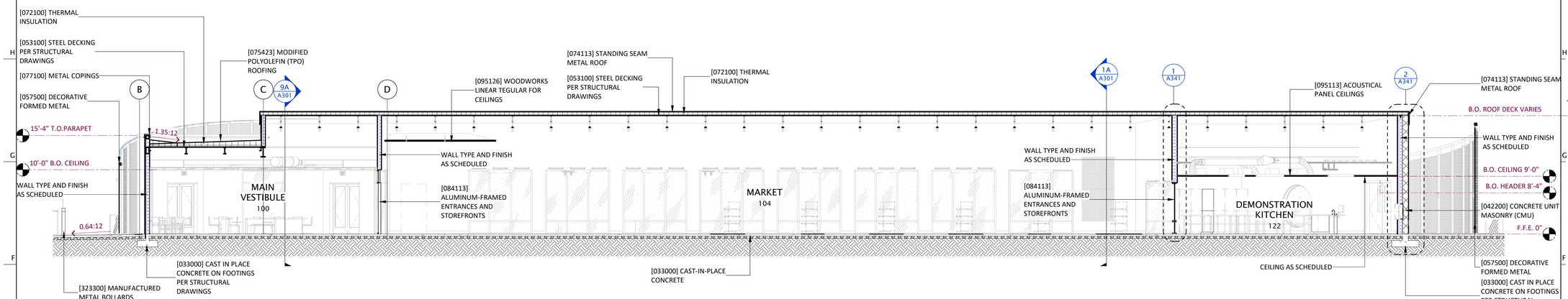
SHEET TITLE

BUILDING SECTIONS

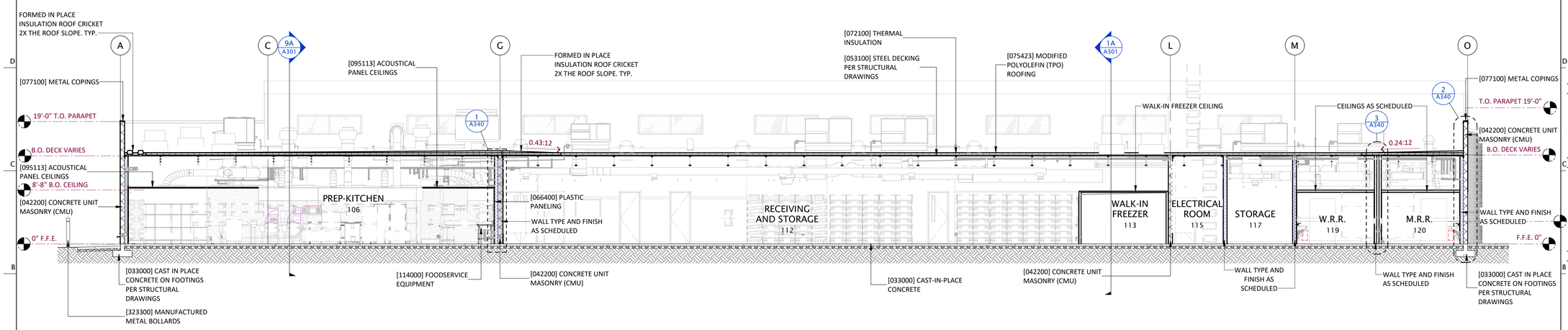
DATE 01.20.2025

SHEET

A301



BUILDING SECTION 1E
1/8" = 1'-0"



BUILDING SECTION 1A
1/8" = 1'-0"

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PROJECT
7490 S CAMINO DE OESTE
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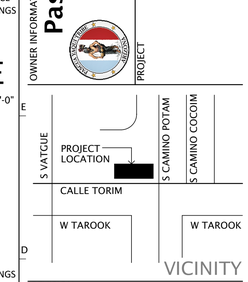

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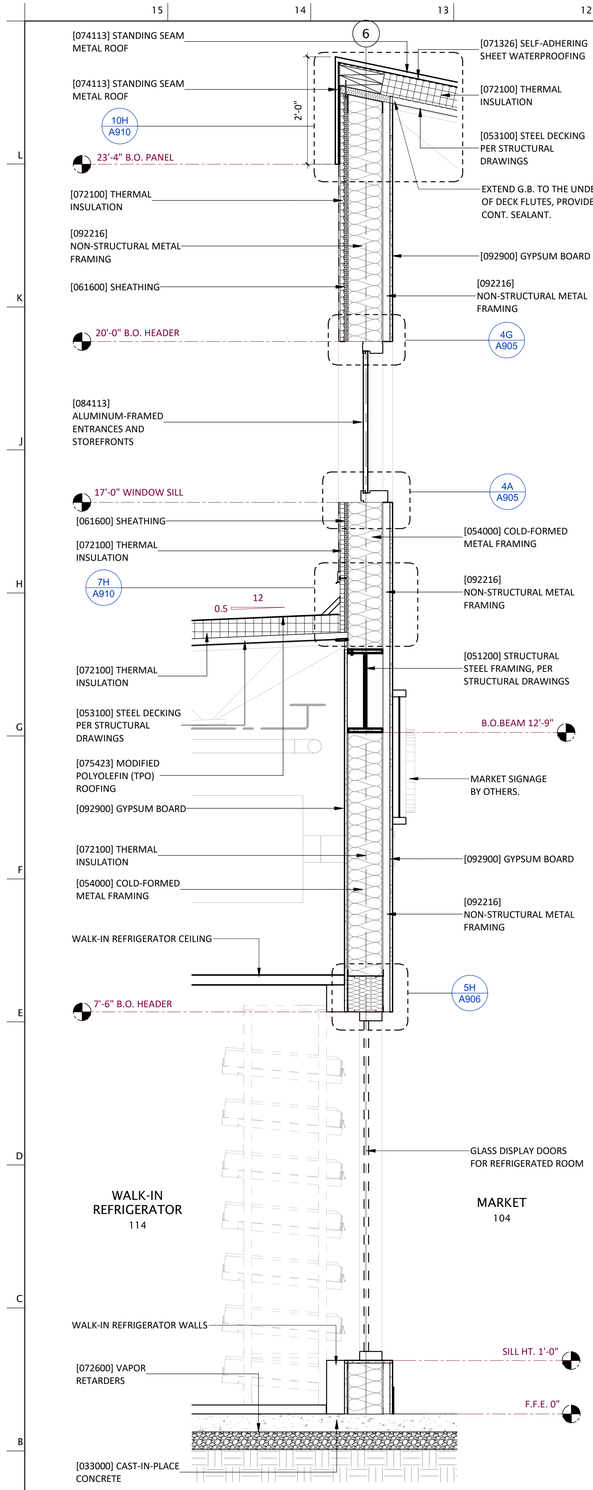
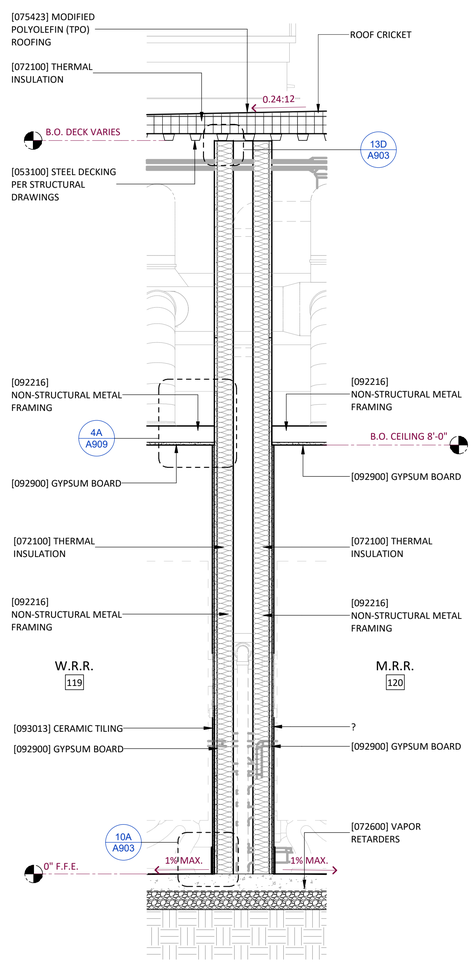
SHEET TITLE
BUILDING SECTIONS

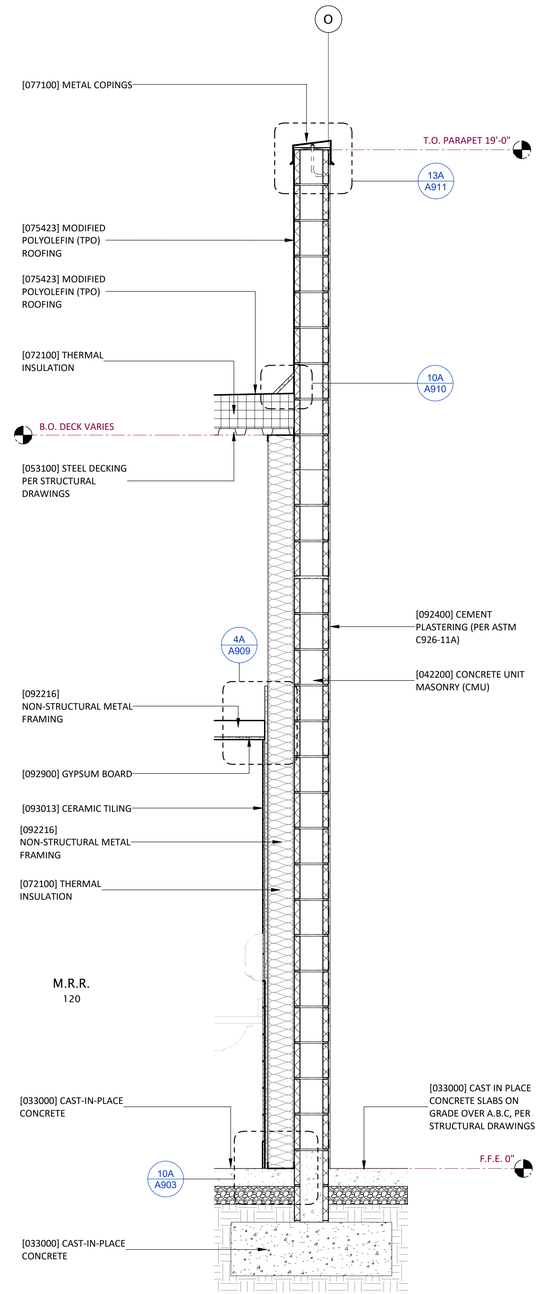
DATE 01.20.2025
SHEET **A302**



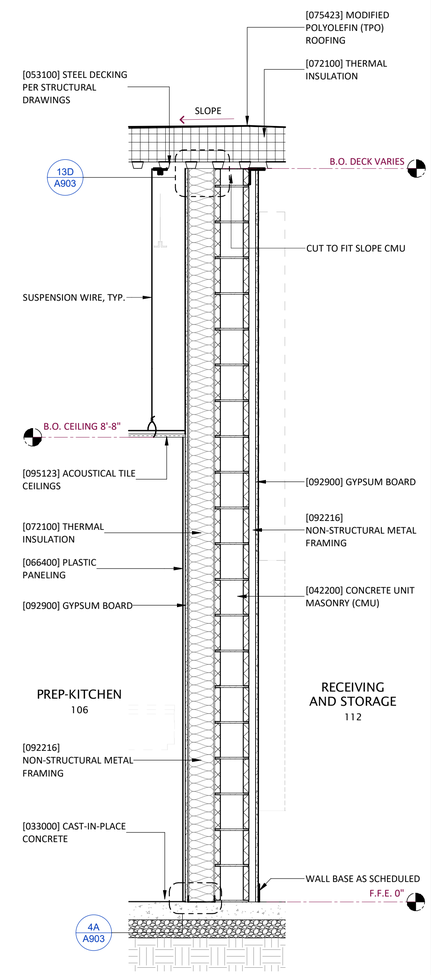
WALL SECTION 4
3/4" = 1'-0"



WALL SECTION 3
3/4" = 1'-0"



WALL SECTION 2
3/4" = 1'-0"



WALL SECTION 1
3/4" = 1'-0"

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OWNER INFORMATION
Pascua Yaqui Tribe

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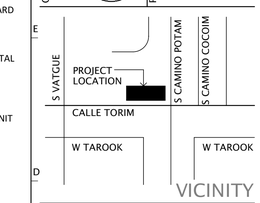

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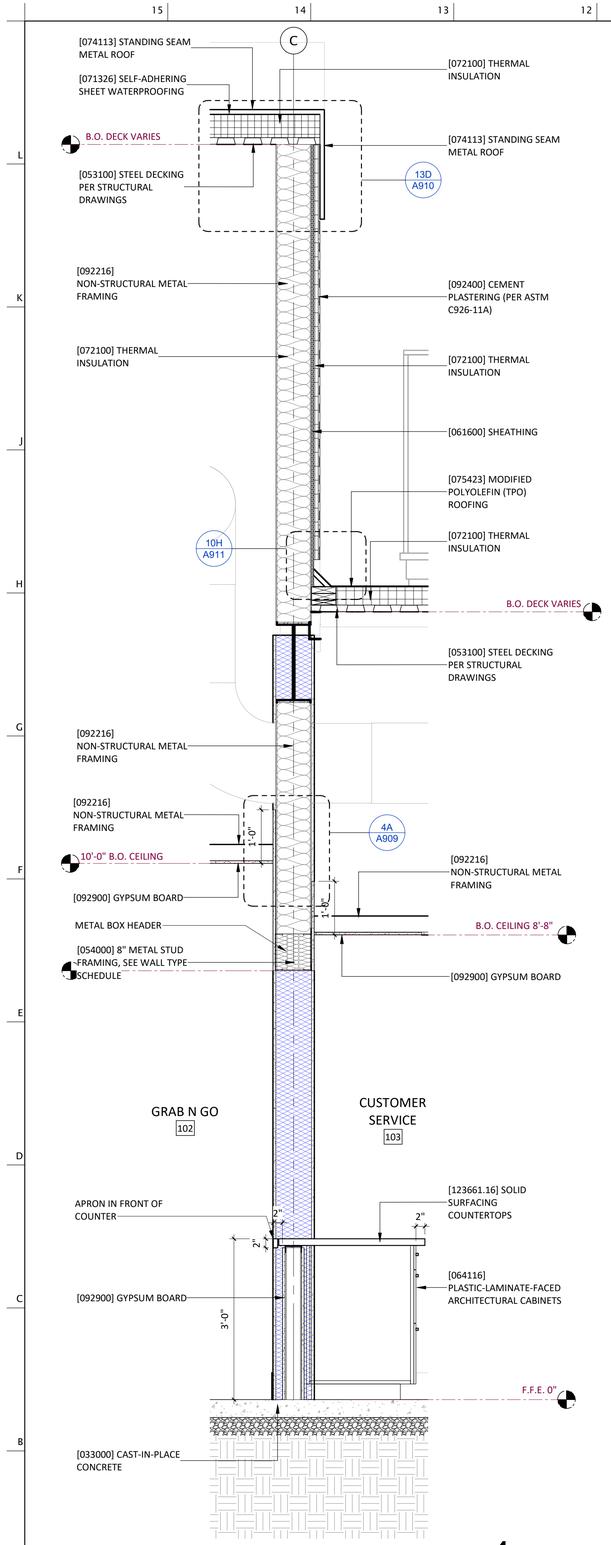
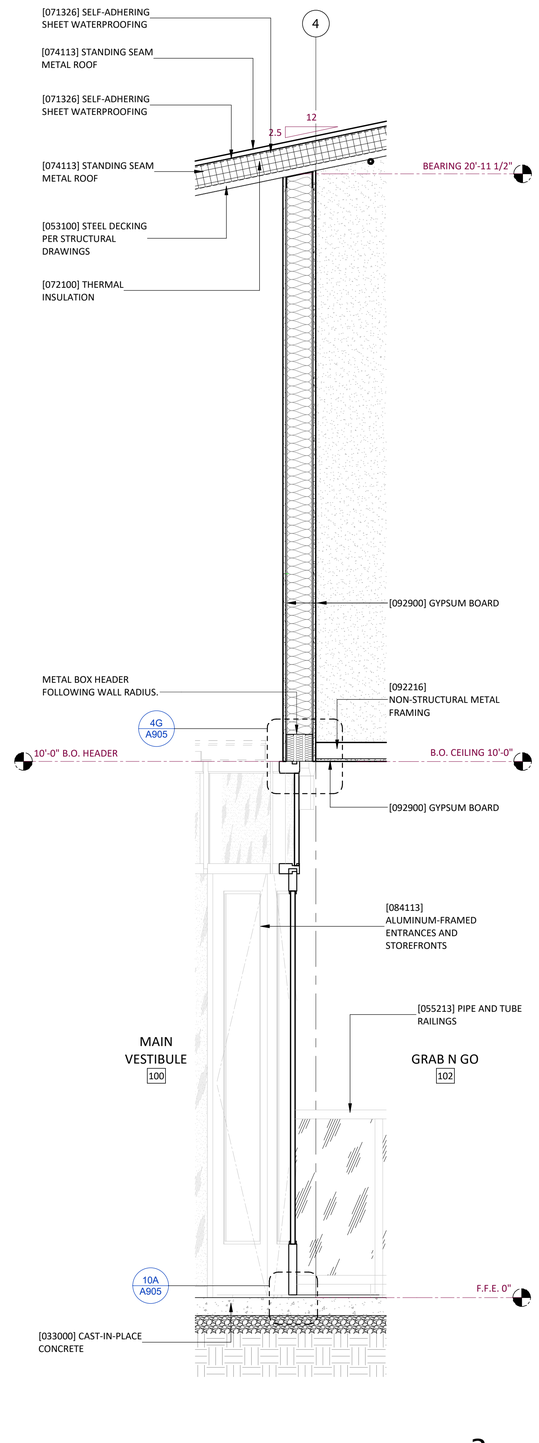
SHEET TITLE

WALL SECTIONS

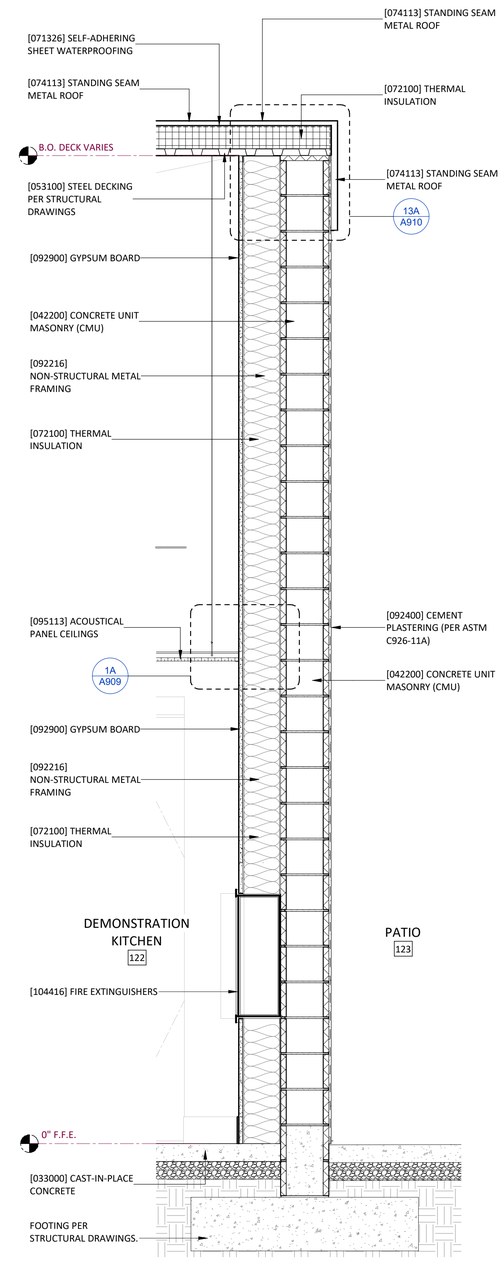
DATE 01.20.2025
SHEET **A340**



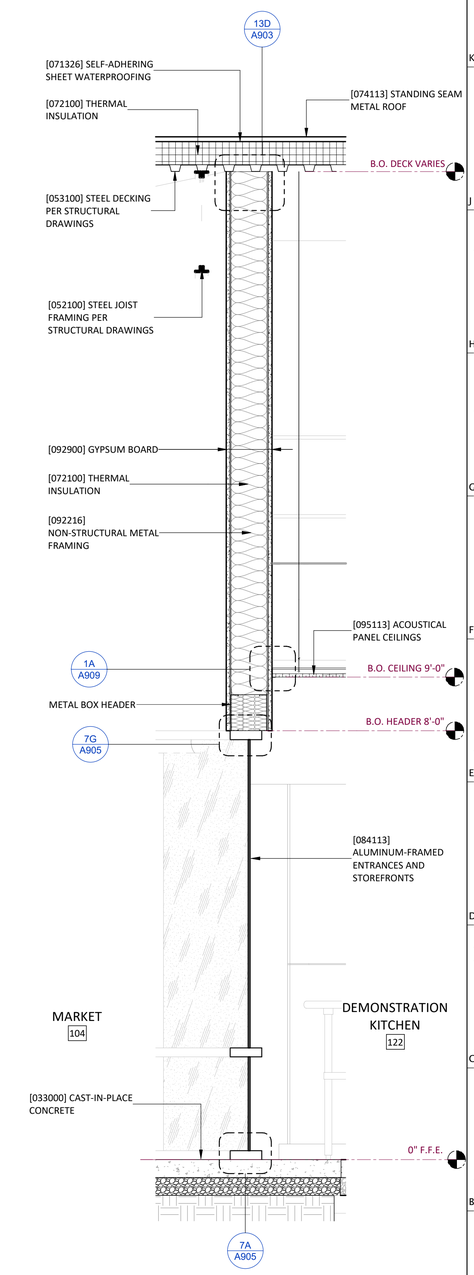
WALL SECTION 4
3/4" = 1'-0"



WALL SECTION 3
3/4" = 1'-0"



WALL SECTION CUT ON ANGLED CONDITION 2
3/4" = 1'-0"



WALL SECTION CUT ON ANGLED CONDITION 1
3/4" = 1'-0"

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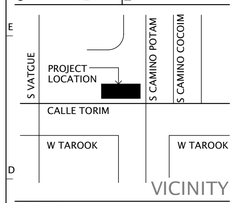

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PROJECT NO. 23C-001

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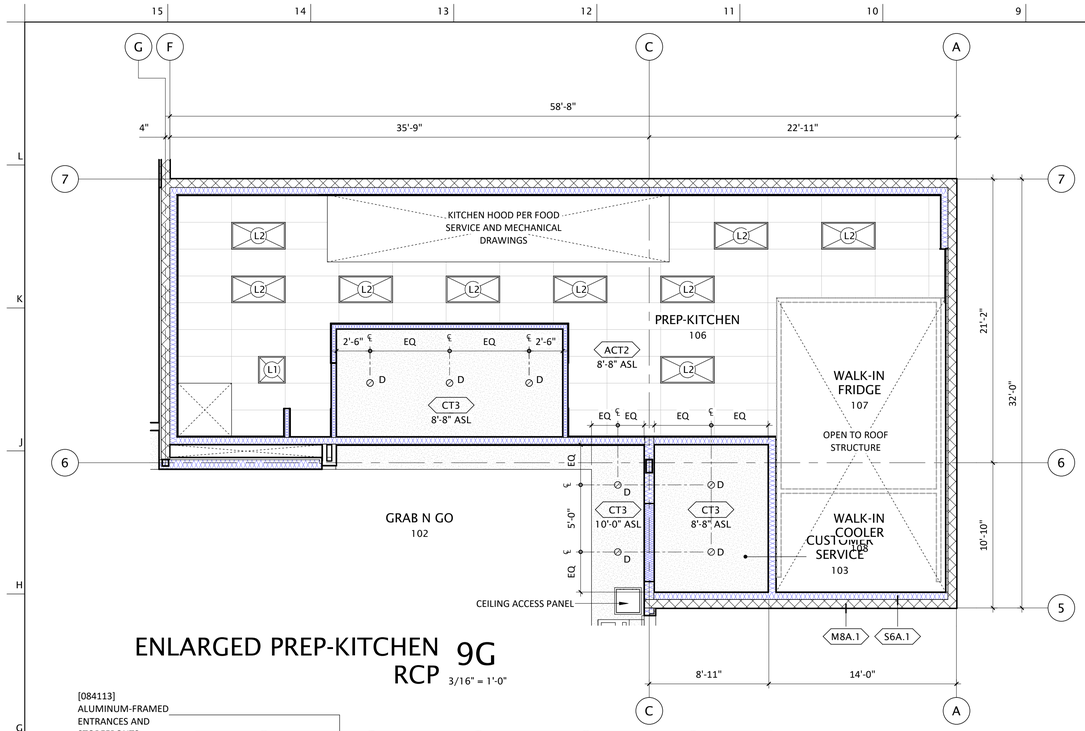
SHEET TITLE

WALL SECTIONS

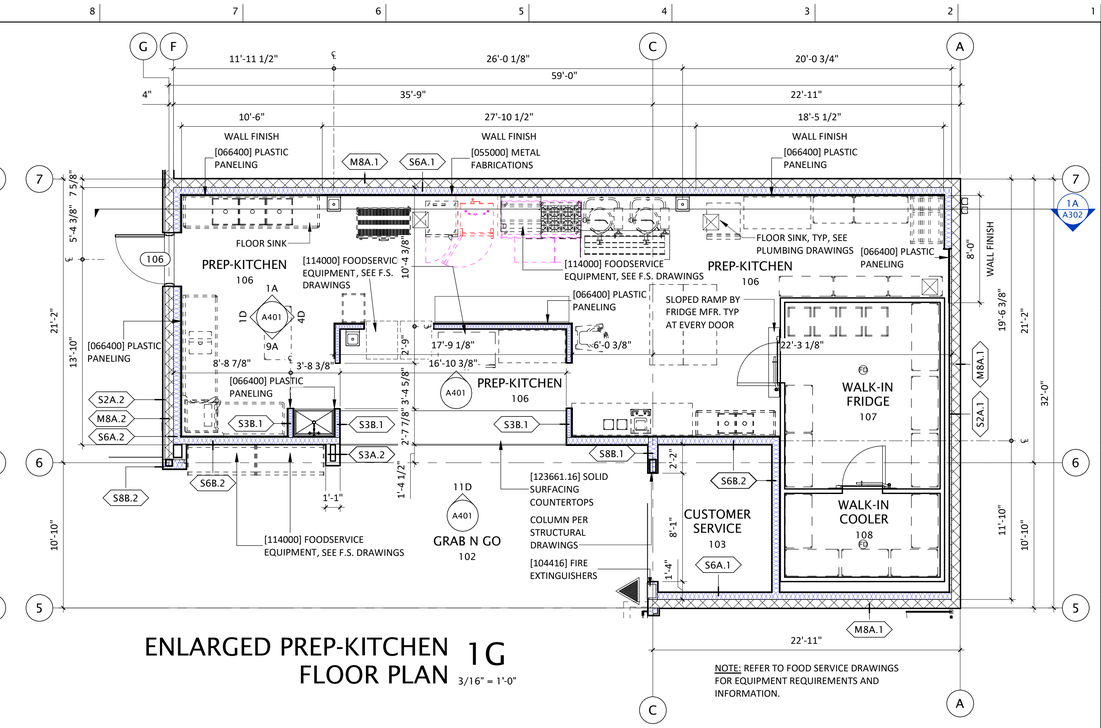
DATE 01.20.2025

SHEET

A341

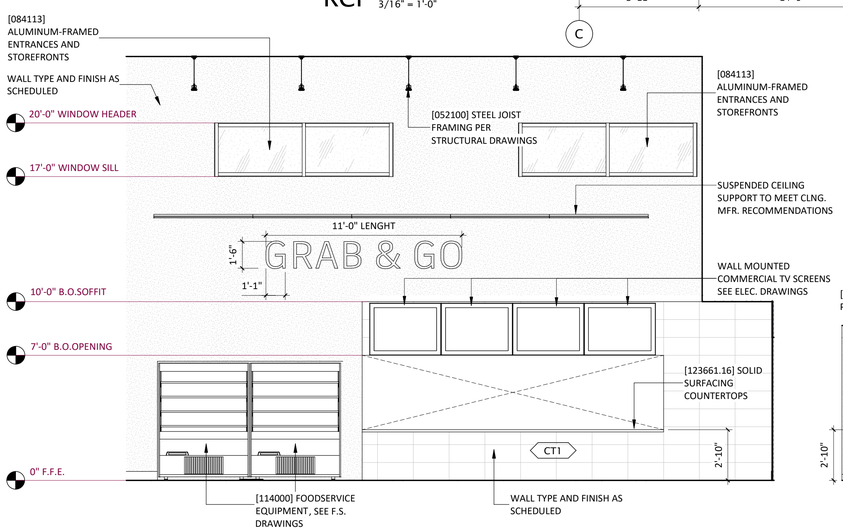


ENLARGED PREP-KITCHEN RCP 9G
3/16" = 1'-0"

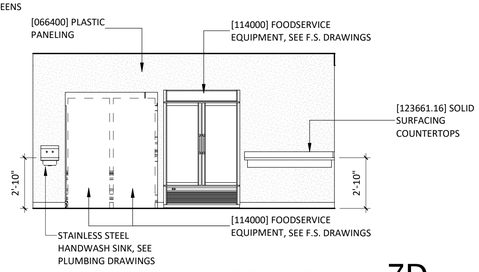


NOTE: REFER TO FOOD SERVICE DRAWINGS FOR EQUIPMENT REQUIREMENTS AND INFORMATION.

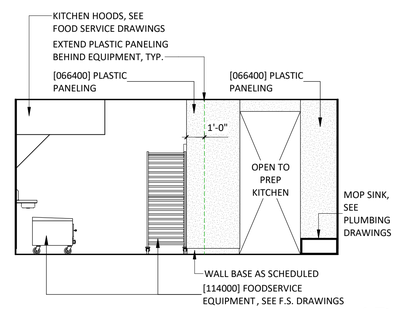
ENLARGED PREP-KITCHEN FLOOR PLAN 1G
3/16" = 1'-0"



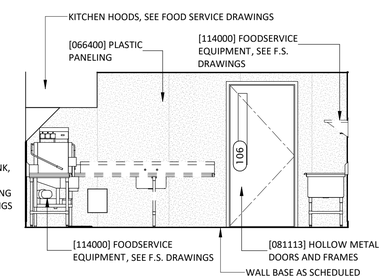
GRAB AND GO NORTH 11D
1/4" = 1'-0"



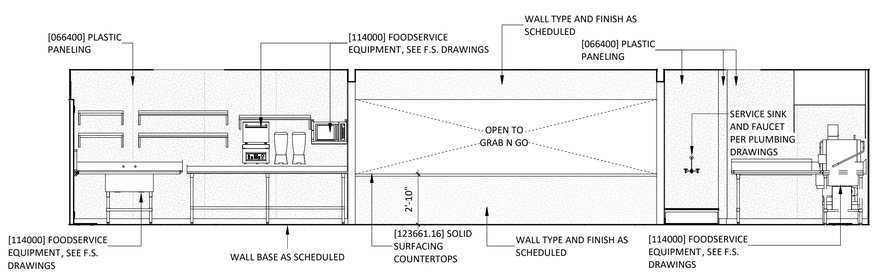
GRAB AND GO - NORTH 7D
1/4" = 1'-0"



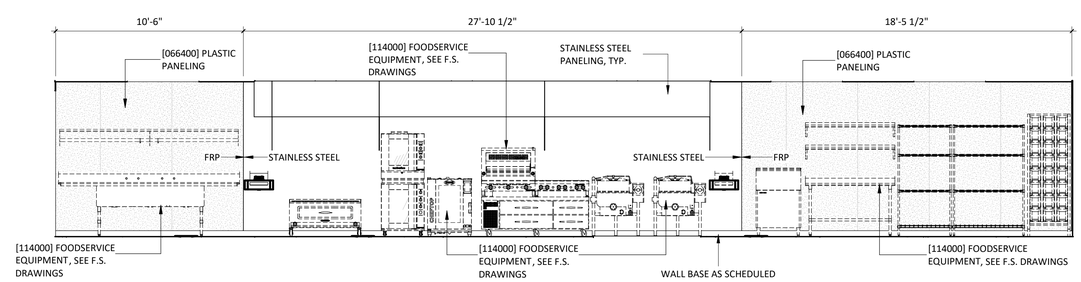
PREP. KITCHEN - EAST 4D
1/4" = 1'-0"



PREP. KITCHEN - WEST 1D
1/4" = 1'-0"



PREP. KITCHEN - SOUTH 9A
1/4" = 1'-0"



PREP. KITCHEN - NORTH 1A
1/4" = 1'-0"

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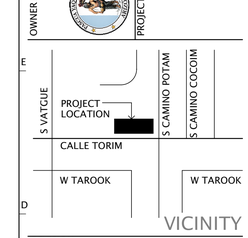
SEAL

REGISTERED ARCHITECT
CERTIFICATE NO. 45961
CARLOS ANTONIO MURRIETA
DATE SIGNED 01/20/2025
ARIZONA, U.S.A.

OWNER INFORMATION
Pascua Yaqui Tribe

PROJECT
Micro Market
7490 S CAMINO DE OESTE
TUCSON, AZ 85757
5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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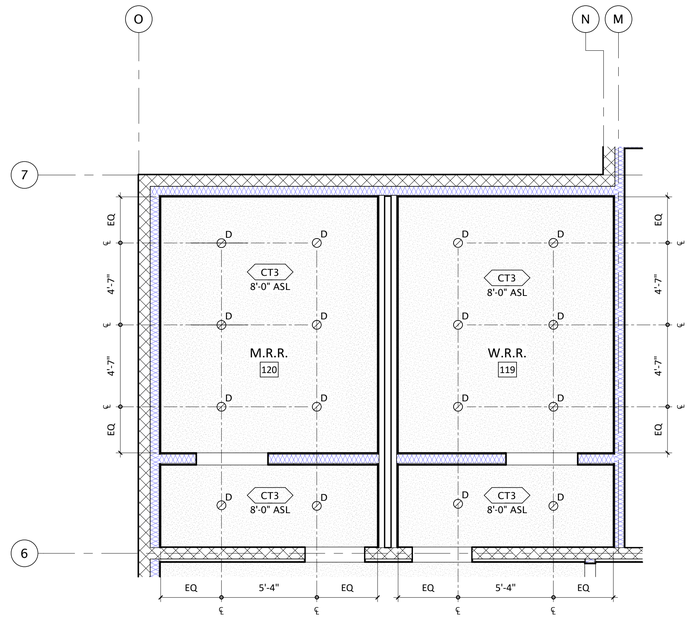
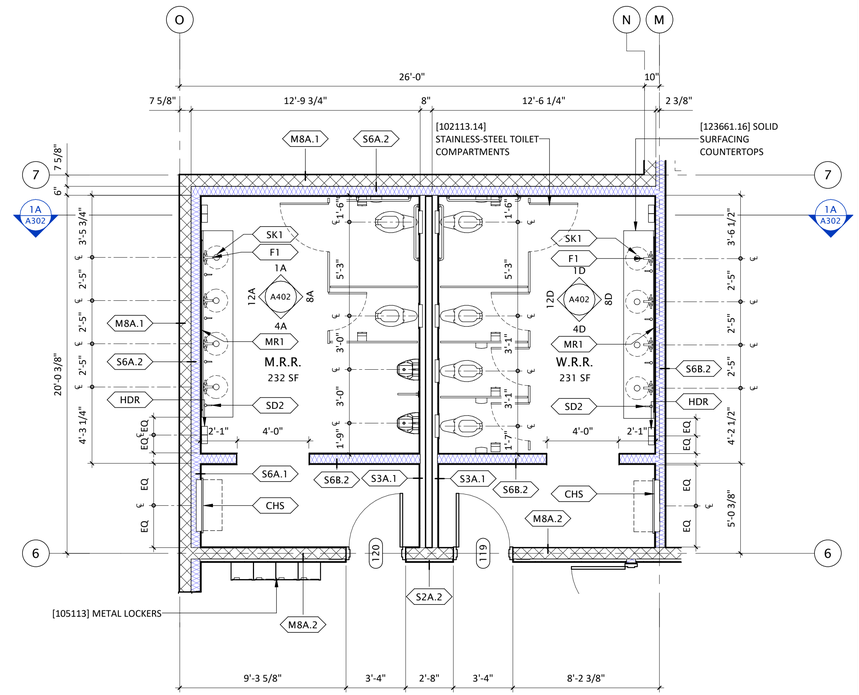
SHEET TITLE
ENLARGED PREP-KITCHEN

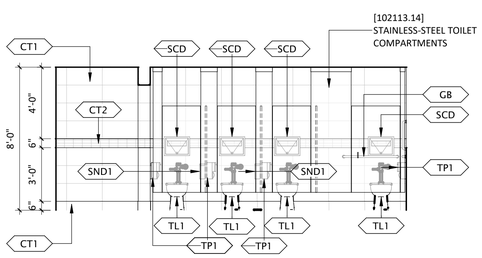
DATE 01.20.2025
SHEET A401



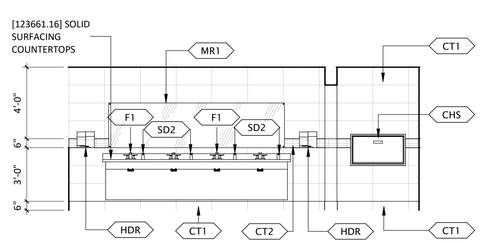
ENLARGED RESTROOMS RCP 10G
1/4" = 1'-0"



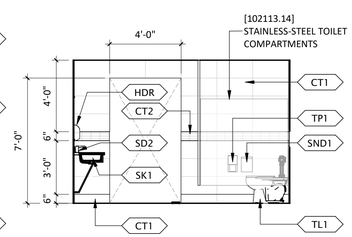
ENLARGED RESTROOMS 4G
1/4" = 1'-0"



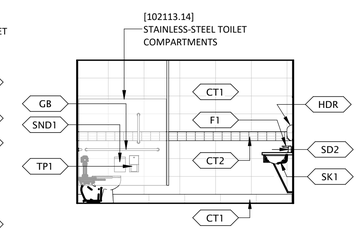
W.R.R. WEST 12D
1/4" = 1'-0"



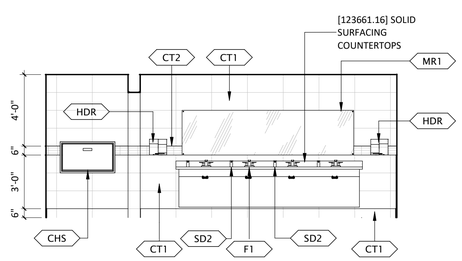
W.R.R. EAST 8D
1/4" = 1'-0"



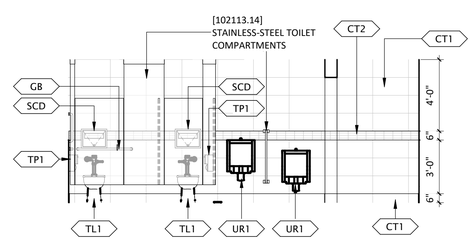
W.R.R. SOUTH 4D
1/4" = 1'-0"



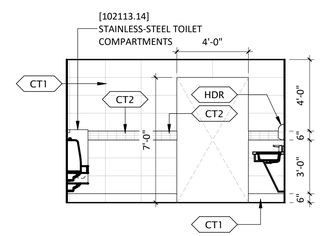
W.R.R. NORTH 1D
1/4" = 1'-0"



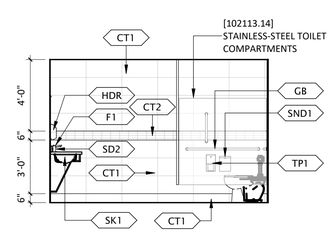
M.R.R. WEST 12A
1/4" = 1'-0"



M.R.R. EAST 8A
1/4" = 1'-0"



M.R.R. SOUTH 4A
1/4" = 1'-0"



M.R.R. NORTH 1A
1/4" = 1'-0"

PLUMBING FIXTURE SCHEDULE

ITEM TAG	DESCRIPTION
F1	CENTERSET BATHROOM SINK FAUCET
FD	FLOOR DRAIN
SK1	ROUND UNDERMOUNT SINK
SK2	ADA HAND SINK WITH PADDLE BLADE FAUCET
SK3	WALL HUNG SINK W/MIRROR
SK4	SINK KITCHEN - DOUBLE
TL1	FLOOR MOUNTED COMMERCIAL TOILET
UR1	HIGH EFFICIENCY URINAL

TOILET ACCESSORY SCHEDULE

MARK	DESCRIPTION
CHS	BABY CHANGING STATION
GB	GRAB BARS
MR1	STAINLESS STEEL MIRROR
SCD	RECESSED SEAT COVER DISPENSER
SD2	SOAP DISPENSER
SND1	SANITARY NAPKIN DISPOSAL
TP1	TOILET TISSUE DISPENSER
TP-1	CEILING-HUNG PARTITION STAINLES STEEL TOILET COMPARMENT
HDR	WALL MOUNTED HAND DRYER

RCP LEGEND

SYMBOL	TAG	NAME
	ACT1	[09 51 23] LAY-IN 24"X24" ACOUSTICAL CEILING TILE
	ACT2	[09 51 23] LAY-IN 24"X48" ACOUSTICAL CEILING TILE
	CT3	[09 29 00] HARD-LID GYPSUM BOARD CEILING
	WP1	[09 54 26] WOODWORKS LINEAR TEGULAR PANELS

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ARIZONA, U.S.A.

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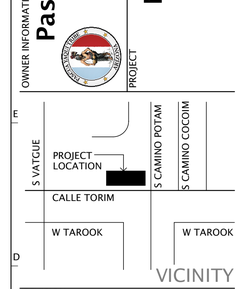

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PROJECT NO. 23C-001

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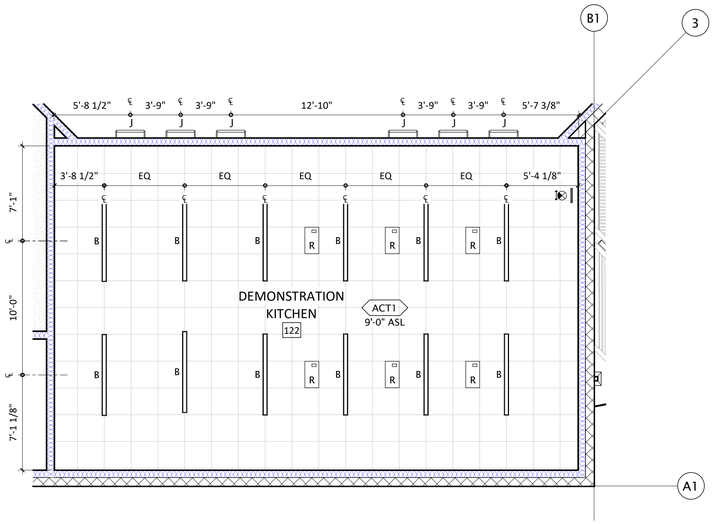
SHEET TITLE

ENLARGED RESTROOMS

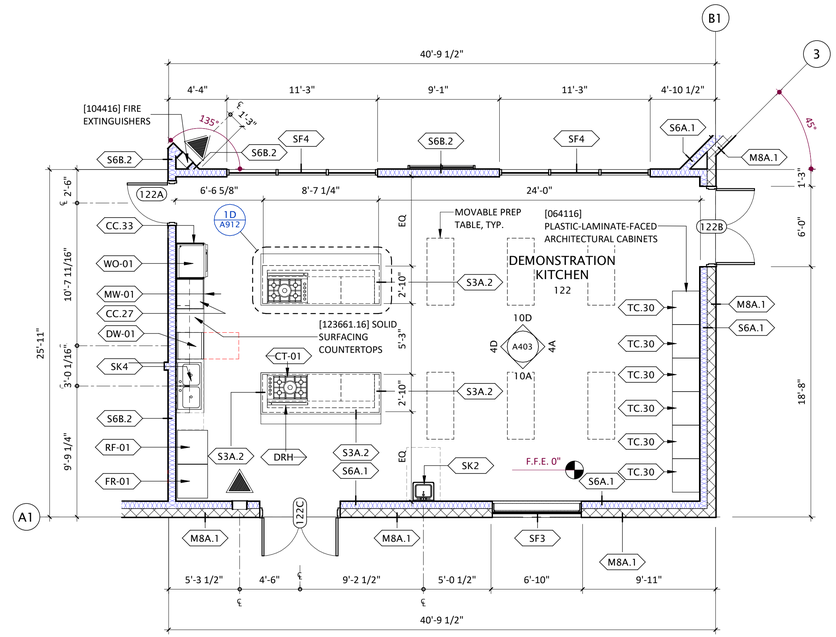
DATE 01.20.2025

SHEET A402



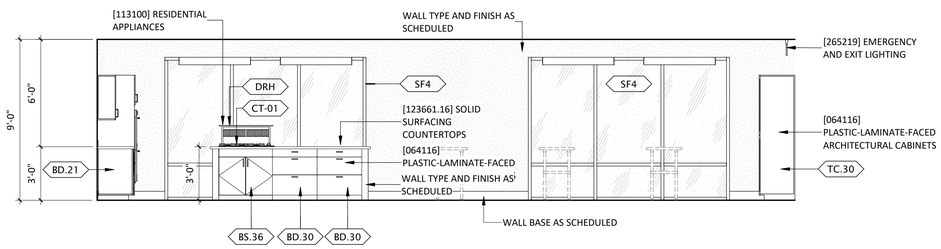
ENLARGED DEMONSTRATION KITCHEN RCP 11G

3/16" = 1'-0"



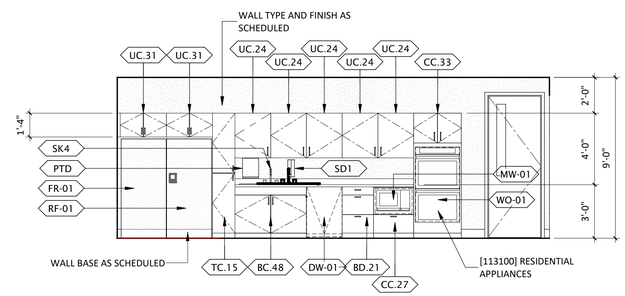
ENLARGED DEMONSTRATION KITCHEN 5G

3/16" = 1'-0"



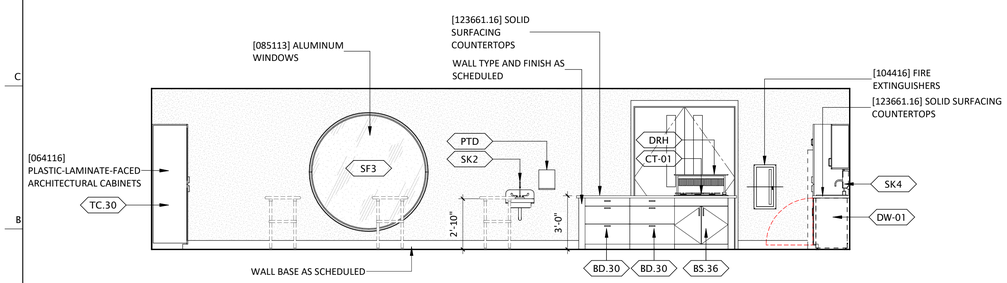
DEMO KITCHEN - NE 10D

1/4" = 1'-0"



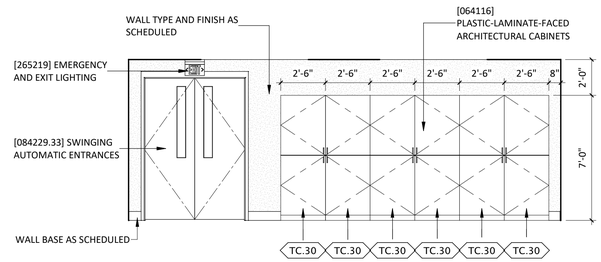
DEMO KITCHEN - NW 4D

1/4" = 1'-0"



DEMO KITCHEN - SW 10A

1/4" = 1'-0"



DEMO KITCHEN - SE 4A

1/4" = 1'-0"

KITCHEN EQUIPMENT SCHEDULE

ITEM TAG	DESCRIPTION
	Motorized Shade
CT-01	36" GAS COOKTOP
DRH	36" DOWNDRAFT EXHAUST
DW-01	DISHWASHER PER SPECIFICATIONS
FR-01	19 CU FT. SINGLE-DOOR ALL FREEZER
MW-01	2.2 CU FT. BUILT-IN MICROWAVE OVEN
PTD	PAPER TOWEL DISPENSER
RF-01	19 CU FT. SINGLE-DOOR ALL REFRIGERATOR
SD1	AUTOMATIC SOAP DISPENSER
WO-01	30" DOUBLE ELECTRIC WALL OVEN

CASEWORK SCHEDULE

ITEM TAG	WIDTH	HEIGHT	DEPTH	DESCRIPTION
BC.48	4' - 0"	2' - 10 1/2"	2' - 0"	BASE CABINET DOUBLE DOOR SINK UNIT
BD.21	1' - 9"	2' - 10 1/2"	2' - 0"	BASE CABINET WITH 3-DRAWERS
BD.30	2' - 6"	2' - 10 1/2"	2' - 0"	ISALAND BASE CABINET WITH 3-DRAWERS
BS.36	3' - 0"	2' - 10 1/2"	2' - 0"	ISLAND BASE CABINET DOUBLE DOOR SINK UNIT
CC.27	2' - 8"	7' - 0"	2' - 0"	BASE CABINET WITH ONE DRAWER AND TOP SIDE FOR BUILT-IN MICROWAVE
CC.33	2' - 8"	7' - 0"	2' - 0"	TALL CABINET FOR DOUBLE WALL OVEN OPENING AND DOUBLE DOORS ON UPPER SIDE
TC.15	1' - 3"	7' - 0"	2' - 0"	TALL CABINET WITH TWO SINGLE-DOORS
TC.30	2' - 6"	7' - 0"	2' - 0"	TALL CABINET WITH TWO SINGLE-DOORS
UC.24	2' - 0"	2' - 6"	1' - 0"	UPPER CABINET WITH SINGLE-DOOR
UC.31	2' - 7"	1' - 4"	2' - 0"	UPPER CABINET WITH DOUBLE DOORS

PLUMBING FIXTURE SCHEDULE

ITEM TAG	DESCRIPTION
F1	CENTERSET BATHROOM SINK FAUCET
FD	FLOOR DRAIN
SK1	ROUND UNDERMOUNT SINK
SK2	ADA HAND SINK WITH PADDLE BLADE FAUCET
SK3	WALL HUNG SINK W/MIRROR
SK4	SINK KITCHEN - DOUBLE
TL1	FLOOR MOUNTED COMMERCIAL TOILET
UR1	HIGH EFFICIENCY URINAL

RCP LEGEND

SYMBOL	TAG	NAME
	AP2	LAY-IN 24"X24" VYNIL FACED CEILING TILE
	B	72" NEXA 807 RECESSED
	J	HTG-1W-MM MULLION MOUNTED
		EXIT SIGN, SEE ELECTRICAL DRAWINGS
	R	PLENUM RATED CORD REEL ENCLOSURE WITH HEAVY DUTY CORD REEL FROM HUBBELL OR SIMILAR

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ARIZONA, U.S.A.

OWNER INFORMATION

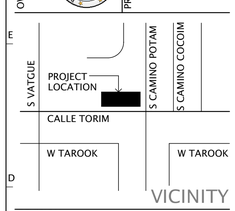
Pascua Yaqui Tribe

7490 S CAMINO DE OESTE
TUCSON, AZ 85757

PROJECT

Micro Market

5010 W CALLE TORIM
TUCSON, AZ 85757



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NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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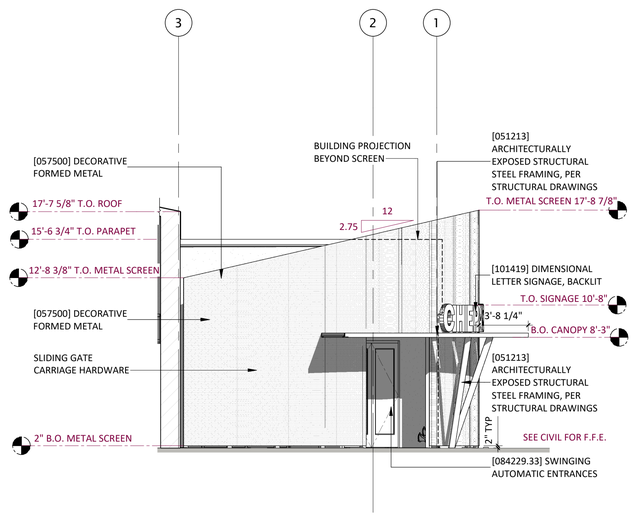
SHEET TITLE

ENLARGED DEMO KITCHEN

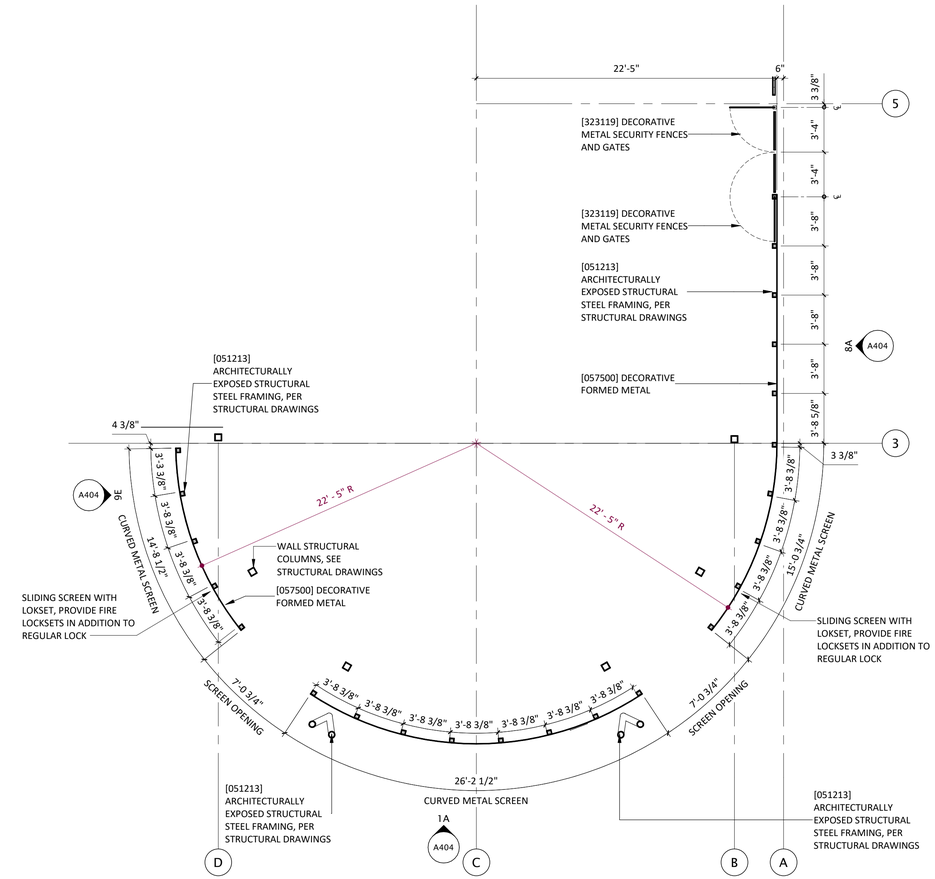
DATE 01.20.2025

SHEET **A403**



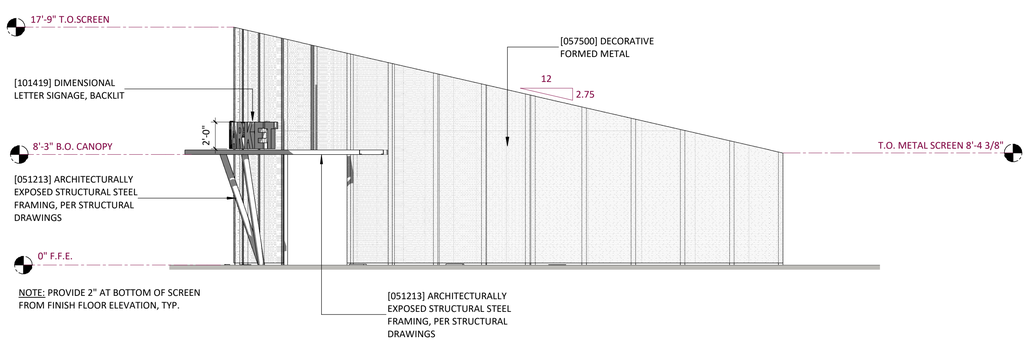
EAST METAL SCREEN - WEST VIEW 9E

3/16" = 1'-0"



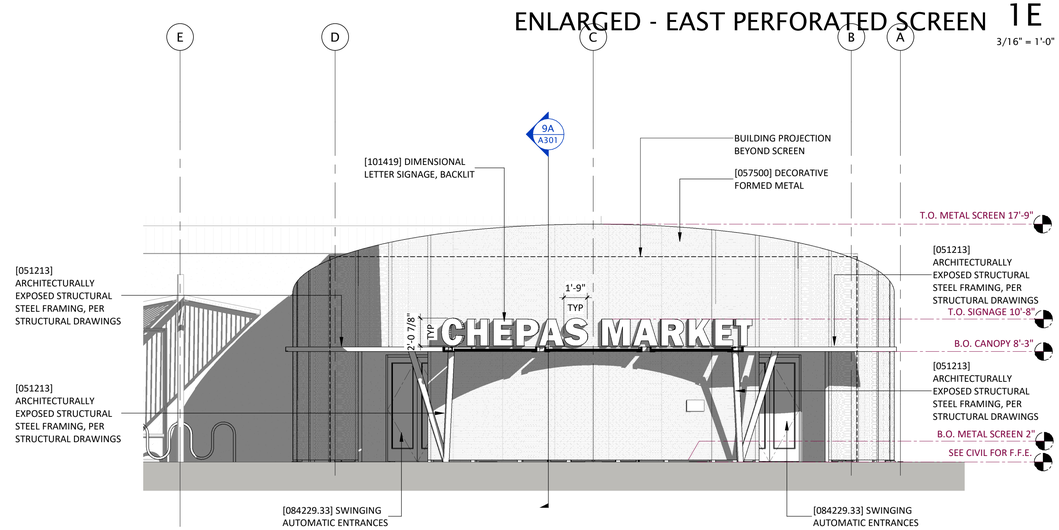
ENLARGED - EAST PERFORATED SCREEN 1E

3/16" = 1'-0"



EAST METAL SCREEN - EAST VIEW 8A

3/16" = 1'-0"



EAST METAL SCREEN - NORTH VIEW 1A

3/16" = 1'-0"

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CARLOS ANTONIO MURRIETA
Date Signed 01/20/2025
Expires 12/31/2026
ARIZONA, U.S.A.

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Pascua Yaqui Tribe

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TUCSON, AZ 85757

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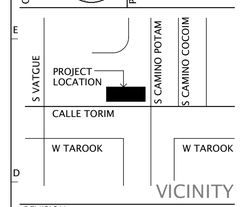

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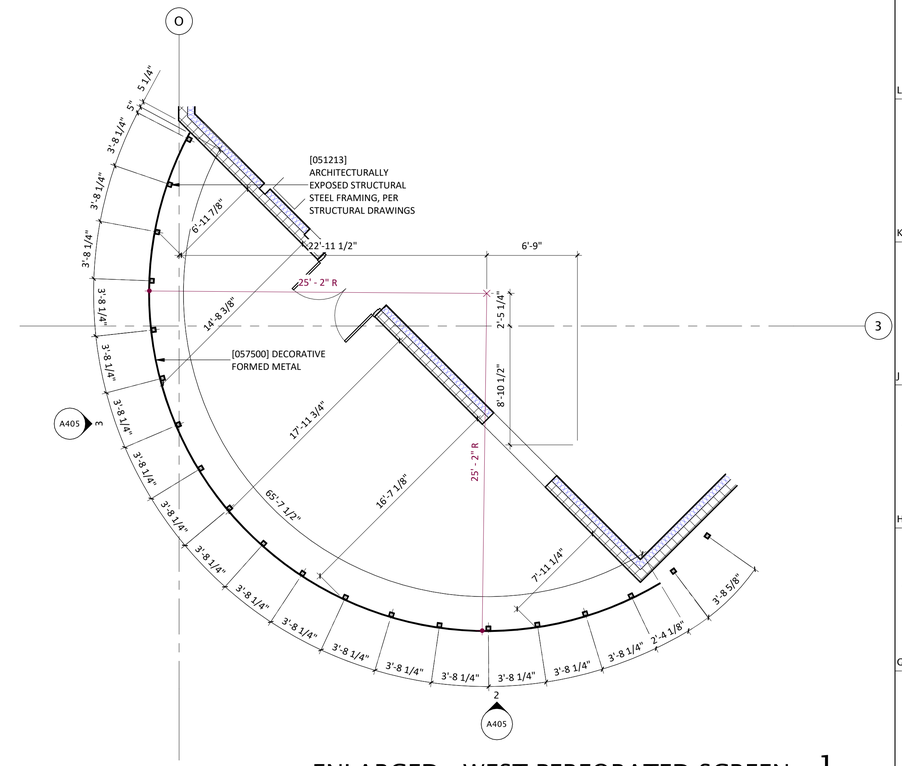
SHEET TITLE

PERFORATED SCREEN

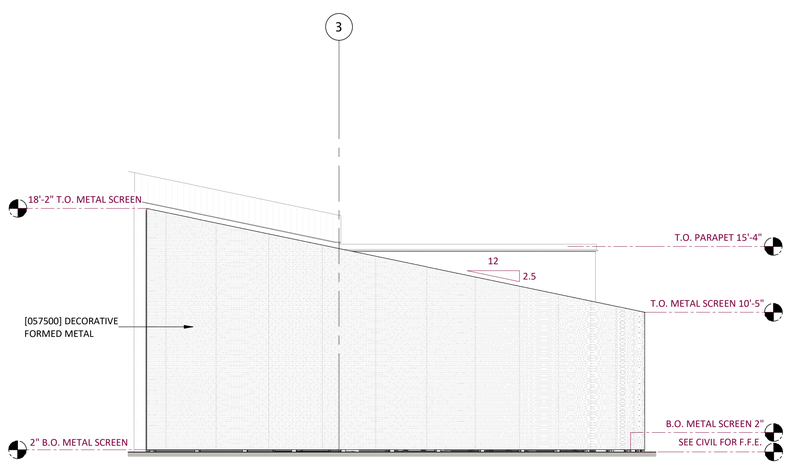
DATE 01.20.2025

SHEET **A404**



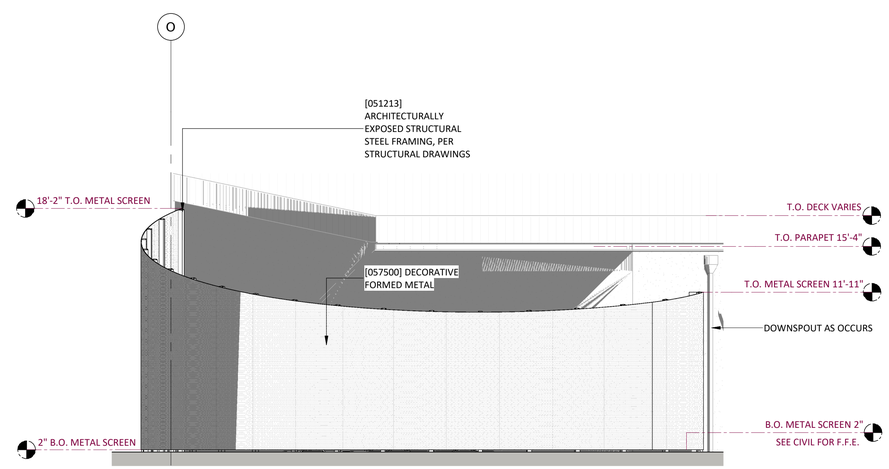
ENLARGED - WEST PERFORATED SCREEN 1

3/16" = 1'-0"



WEST SCREEN - WEST VIEW 3

3/16" = 1'-0"



NOTE: PROVIDE 2" AT BOTTOM OF SCREEN FROM FINISH FLOOR ELEVATION, TYP.

WEST SCREEN - SOUTH VIEW 2

3/16" = 1'-0"

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SEAL

REGISTERED ARCHITECT
CERTIFICATE NO.
45961
CARLOS
ANTONIO
MURRIETA
Date Signed 01/20/2025
Arizona, U.S.A.

OWNER INFORMATION

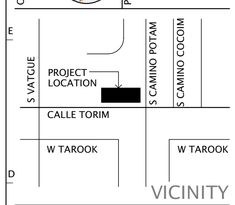
Pascua Yaqui Tribe

7490 S CAMINO DE OESTE
TUCSON, AZ 85757

PROJECT

Micro Market

5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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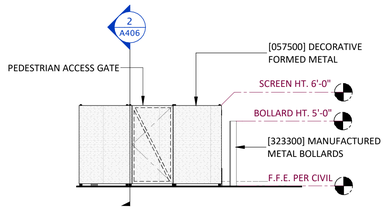
SHEET TITLE

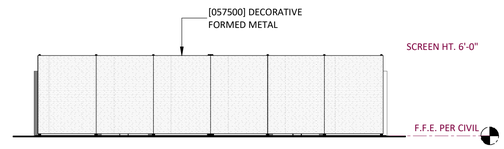
PERFORATED SCREEN

DATE 01.20.2025

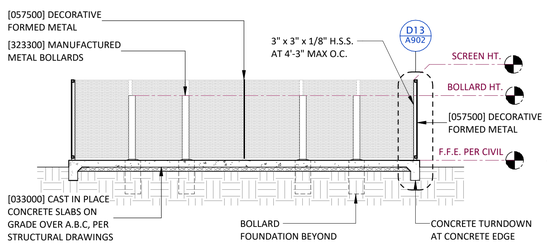
SHEET **A405**



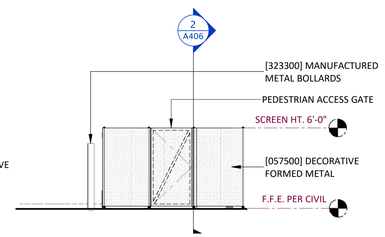
NORTH ELEVATION 4B
3/16" = 1'-0"



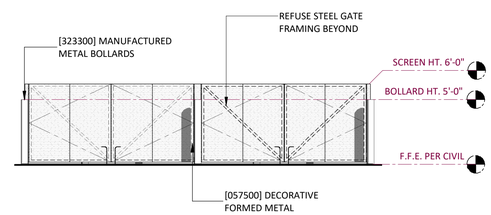
EAST ELEVATION 3B
3/16" = 1'-0"



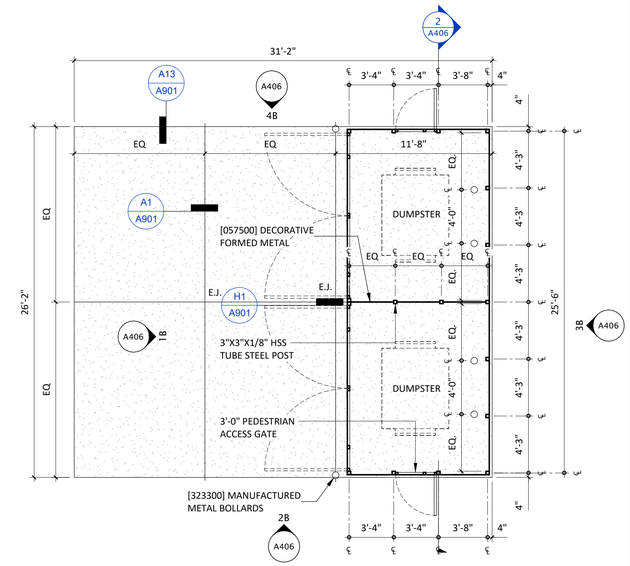
METAL TRASH ENCLOSURE SECTION 2
3/16" = 1'-0"



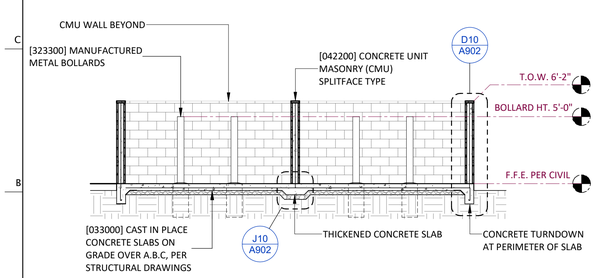
SOUTH ELEVATION 2B
3/16" = 1'-0"



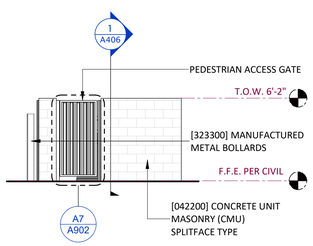
WEST ELEVATION 1B
3/16" = 1'-0"



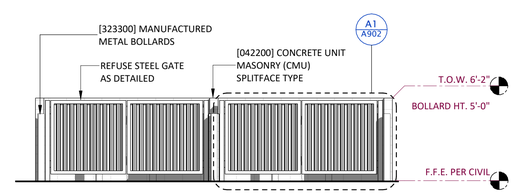
ALTERNATE METAL TRASH ENCLOSURE B
3/16" = 1'-0"



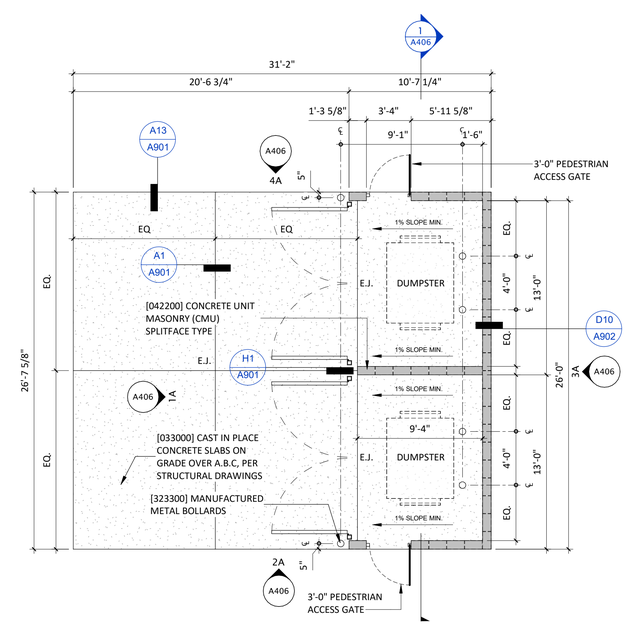
CMU TRASH ENCLOSURE SECTION 1
3/16" = 1'-0"



SOUTH ELEVATION 2A
3/16" = 1'-0"



WEST ELEVATION 1A
3/16" = 1'-0"



CMU TRASH ENCLOSURE A
3/16" = 1'-0"

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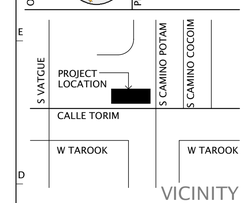
SEAL

REGISTERED ARCHITECT
CERTIFICATE NO. 45961
CARLOS ANTONIO MURRIETA
DATE SIGNED 01/20/2025
ARIZONA, U.S.A.

OWNER INFORMATION
Pascua Yaqui Tribe

PROJECT
Micro Market
7490 S CAMINO DE OESTE
TUCSON, AZ 85757
5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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SHEET TITLE

TRASH ENCLOSURE

DATE 01.20.2025

SHEET **A406**

MAIN VESTIBULE - NORTH 1

1/4" = 1'-0"

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SEAL

REGISTERED ARCHITECT
CERTIFICATE NO.
45961
CARLOS
ANTONIO
MURRIETA
Date Signed 01/20/2025
ARIZONA, U.S.A.

OWNER INFORMATION

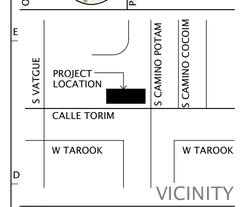
Pascua Yaqui Tribe

7490 S CAMINO DE OESTE
TUCSON, AZ 85757

PROJECT

Micro Market

5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

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SHEET TITLE

INTERIOR ELEVATIONS

DATE 01.20.2025

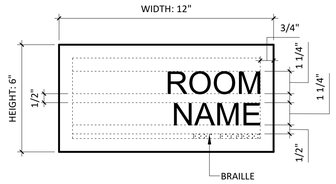
SHEET **A501**

NOTES:
LETTER FONT: SF ORSON CASUAL MEDIUM
HEIGHT: 1 1/4"
FONT COLOR: BY ARCHITECT
SIGNAGE BACKGROUND COLOR: BY ARCHITECT

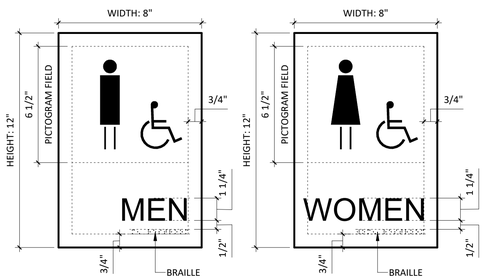
BRAILLE SHALL COMPLY WITH ADA REQUIREMENTS PER CHAPETER 7 SECTION 703.4

ROOMS TO HAVE ROOM SIGN:
JANITOR
STORAGE
MECHANICAL ROOM
ELECTRICAL ROOM(*)
FIRE RISER (**)

NOTES:
(*): EXTERIOR SIGN
(**): FIRE RISER SIGN PER IFC REQUIREMENTS



ROOM SIGN F7
3" = 1'-0"

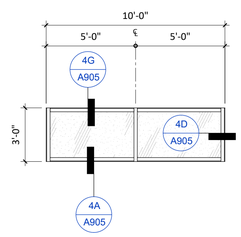


RESTROOM SIGNS F4
3" = 1'-0"

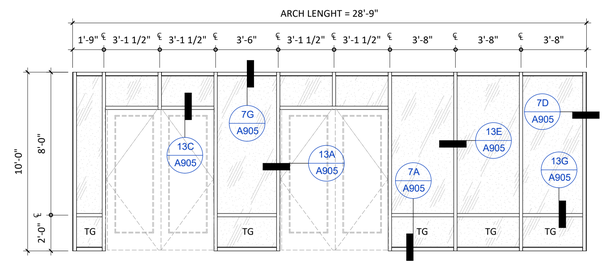
DOOR SCHEDULE

Room Name	MARK	FUNCTION	LEAVES	WIDTH	HEIGHT	TYPE	FINISH 1	FINISH 2	FRAME TYPE	FRAME FINISH 1	FRAME DIMENSIONS HEAD HEIGHT	FRAME DIMENSIONS JAMB WIDTH	HEAD DETAIL	JAMB DETAIL	SILL DETAIL	NOTES	HARDWARE SET	MARK
MAIN VESTIBULE	100A	Exterior	2	3' - 0"	7' - 10"	L30AL	FAC	TG	F00AL	FAC	0' - 2"	0' - 2"	5H/A906	2D/A906	1A/A906	DR1, DR3, DR4, DR8	1	100A
MAIN VESTIBULE	100B	Exterior	2	3' - 0"	7' - 10"	L30AL	FAC	TG	F00AL	FAC	0' - 2"	0' - 2"	5H/A906	2D/A906	1A/A906	DR1, DR3, DR4, DR8	1	100B
MAIN VESTIBULE	100C	Interior	1	3' - 0"	8' - 0"	L30AL	FAC	TG	MFR	FAC	0' - 0"	0' - 0"	13C/A905	13A/A905	1A/A906	DR8	15	100C
MAIN VESTIBULE	100D	Interior	1	3' - 0"	8' - 0"	L30AL	FAC	TG	MFR	FAC	0' - 0"	0' - 0"	13C/A905	13A/A905	1A/A906	DR8	15	100D
CART STORAGE	101	Exterior	1	4' - 0"	11' - 6"	L60STL	FAC	-	F60STL	PT	1' - 3"	0' - 0"	13A/A906	-	13H/A906	DR3	14	101
MARKET	104A	Interior	2	2' - 6"	8' - 0"	L21HM	PT	TG	F00HM	PT	0' - 2"	0' - 2"	4H/A906	4E/A906	4A/A906	DR2, DR9	8	104A
MARKET	104B	Interior	2	3' - 0"	8' - 0"	L21WD	WD	TG	F00HM	PT	0' - 2"	0' - 2"	4H/A906	4E/A906	4A/A906	DR2	7	104B
DELI	105	Interior	1	3' - 0"	8' - 0"	L21WD	WD	TG	F00HM	PT	0' - 2"	0' - 2"	4H/A906	4E/A906	4A/A906	DR2, DR9	9	105
PREP KITCHEN	106	Interior	1	3' - 8"	8' - 0"	L21HM	PT	TG	F00HM	PT	0' - 2"	0' - 2"	7H/A906	7E/A906	7A/A906	DR2, DR5, DR10	9.1	106
OFFICE	109	Interior	1	3' - 0"	8' - 0"	L00WD	WD	-	F00HM	PT	0' - 2"	0' - 2"	4H/A906	4E/A906	4A/A906	DR9	12	109
R.R.	110	Interior	1	3' - 0"	8' - 0"	L00WD	WD	-	F00HM	PT	0' - 2"	0' - 2"	4H/A906	4E/A906	4A/A906	DR2	13	110
IT	111	Interior	1	3' - 0"	8' - 0"	L00WD	WD	-	F00HM	PT	0' - 2"	0' - 2"	4H/A906	4E/A906	4A/A906	DR9	11	111
RECEIVING AND STORAGE	112A	Exterior	1	3' - 0"	8' - 0"	L00HM	PT	-	F00HM	PT	0' - 4"	0' - 2"	10H/A906	10E/A906	10A/A906	DR2, DR3, DR4, DR5, DR10	4	112A
RECEIVING AND STORAGE	112B	Exterior	1	10' - 0"	10' - 0"	L60STL	FAC	-	F60STL	PT	1' - 3"	0' - 0"	13H/A906	13E/A906	13A/A906	DR3	14	112B
ELECTRICAL ROOM	115	Exterior	1	3' - 0"	8' - 0"	L00HM	PT	-	F00HM	PT	0' - 4"	0' - 2"	10H/A906	10E/A906	10A/A906	DR3, DR5, DR10	3	115
MECH. ROOM	116	Interior	1	3' - 0"	7' - 0"	L00WD	WD	-	F00HM	PT	0' - 2"	0' - 2"	4H/A906	4E/A906	4A/A906	DR9	11	116
STORAGE	117	Exterior	1	7' - 4"	10' - 0"	L60STL	FAC	-	F60STL	PT	1' - 3"	0' - 0"	13H/A906	13E/A906	13A/A906	DR3	14	117
VESTIBULE	118	Exterior	2	2' - 10"	8' - 0"	L21HM	PT	TG	F00HM	PT	0' - 4"	0' - 2"	10H/A906	10E/A906	10A/A906	DR1, DR2, DR3, DR4, DR5, DR10	2	118
W.R.R.	119	Interior	1	3' - 0"	7' - 0"	L00WD	WD	-	F00HM	PT	0' - 2"	0' - 2"	7H/A906	7E/A906	4A/A906	DR2	10	119
M.R.R.	120	Interior	1	3' - 0"	7' - 0"	L00WD	WD	-	F00HM	PT	0' - 2"	0' - 2"	7H/A906	7E/A906	4A/A906	DR2	10	120
JANITOR	121	Interior	1	3' - 0"	8' - 0"	L00WD	PT	-	F00HM	PT	0' - 2"	0' - 2"	4H/A906	4E/A906	10A/A906	DR9, DR10	11	121
DEMONSTRATION KITCHEN	122A	Interior	1	3' - 0"	8' - 0"	L21HM	PT	TG	F00HM	PT	0' - 2"	0' - 2"	4H/A906	4E/A906	4A/A906	DR2	9	122A
DEMONSTRATION KITCHEN	122B	Exterior	2	2' - 10"	8' - 0"	L21HM	PT	TG	F00HM	PT	0' - 4"	0' - 2"	10H/A906	10E/A906	10A/A906	DR1, DR2, DR3, DR4, DR5, DR10	5	122B
DEMONSTRATION KITCHEN	122C	Exterior	2	2' - 10"	8' - 0"	L21HM	PT	TG	F00HM	PT	0' - 4"	0' - 2"	10H/A906	10E/A906	10A/A906	DR1, DR2, DR3, DR5, DR10	5	122C

NOTE: REFER TO SPEC 08 71 00 FOR DOOR HARDWARE SCHEDULE

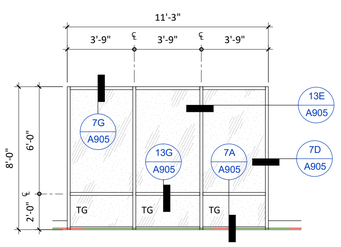


EXT. SF ELEVATION SF6
1/4" = 1'-0"

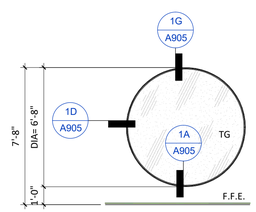


NOTE: CURVED STOREFRONT

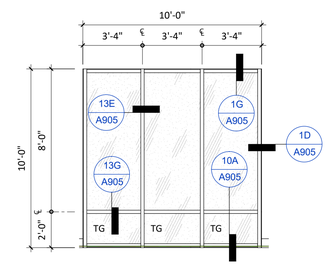
INT. SF ELEVATION SF5
1/4" = 1'-0"



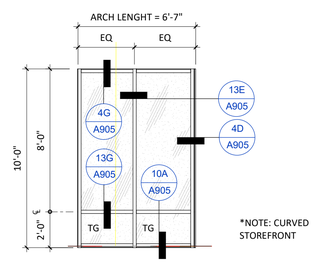
INT. SF ELEVATION SF4
1/4" = 1'-0"



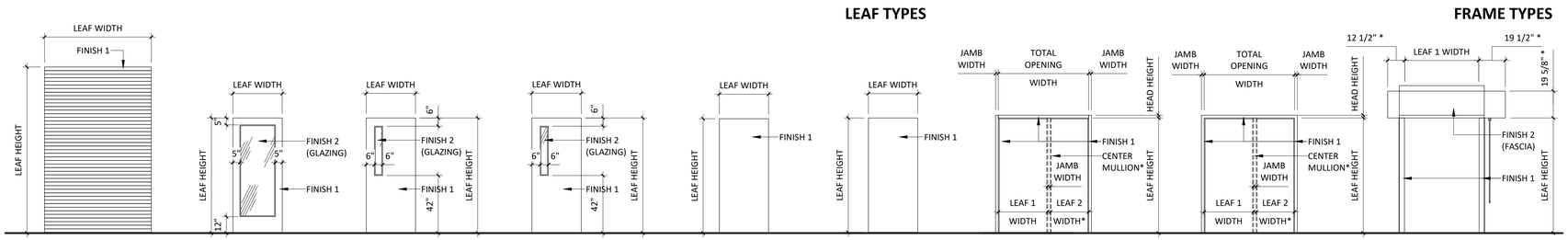
EXT. SF ELEVATION SF3
1/4" = 1'-0"



EXT. SF ELEVATION SF2
1/4" = 1'-0"



EXT. SF ELEVATION SF1
1/4" = 1'-0"



L60STL INSULATED STEEL 2 5/8" SLAT ROLLING OVERHEAD DOOR LEAF

L30AL ALUMINUM PANEL LEAF w/ FULL GLASS_WIDE STILE

L21HM HOLLOW METAL PANEL LEAF w/ HALF GLASS NARROW LITE

L21WD WOOD PANEL LEAF w/ HALF GLASS NARROW LITE

L00HM STANDARD FLUSH LEAF HOLLOW METAL

L00WD STANDARD FLUSH LEAF WOOD

* IF CALLED FOR IN SCHEDULE
F00AL ALUMINUM FRAME STANDARD

* IF CALLED FOR IN SCHEDULE
F00HM HOLLOW METAL FRAME STANDARD

* VERIFY w/ MANUFACTURER
F60STL STEEL TRACK OVERHEAD COILING DOOR FRAME REAR FACE MOUNT

LEAF AND FRAME TYPES A4
1/4" = 1'-0"

GENERAL SHEET NOTES

1. ALL EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT AND SHALL BE ACCESSIBLE BY THE HANDICAPPED.
2. MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED THE FOLLOWING:
   A. INTERIOR DOORS: 5 POUNDS
   B. EXTERIOR DOORS: 8.5 POUNDS
   C. FIRE DOORS: 15 POUNDS
3. PROVIDE AND INSTALL HARDWARE AS SPECIFIED. ALL DOORS SHALL OPEN FROM INSIDE WITHOUT A KEY OR SPECIAL KNOWLEDGE.
4. DOOR OPENING NOT LOCATED BY DIMENSION OR WHERE +/- DIMENSIONS ARE SHOWN, SHALL BE CENTERED IN WALLS AS SHOWN OR LOCATED 4" FROM FINISH WALL TO FINISH JAMB UNLESS OTHERWISE NOTED.
5. PROVIDE ALL EXTERIOR DOORS WITH 18 GA DRIP FIXED/WELDED CONTINUOUSLY AT FRAME.
6. PROVIDE ALL EXTERIOR DOORS WITH WEATHER STRIPPING AND AUTOMATIC SELF-CLOSING BOTTOM TRIM.
7. DOORS SERVING ROOMS OR SPACES WITH AN OCCUPANT LOAD OF 50 OR MORE IN A GROUP A OR E OCCUPANCY SHALL NOT BE PROVIDED WITH A LATCH OR LOCK UNLESS IT IS PANIC HARDWARE OR FIRE EXIT HARDWARE.
8. ELECTRICAL ROOMS WITH EQUIPMENT RATED 1,200 AMPERES OR MORE AND OVER 6 FEET WIDE THAT CONTAIN OVERCURRENT DEVICES, SWITCHING DEVICES OR CONTROL DEVICES WITH EXIT OR EXIT ACCESS DOORS SHALL BE EQUIPPED WITH PANIC HARDWARE OR FIRE EXIT HARDWARE. THE DOOR SHALL SWING IN THE DIRECTION OF EGRESS TRAVEL.
9. REFERENCE TO MECHANICAL PLAN FOR UNDER CUT AT DOORS. SEE MECHANICAL SCHEDULES FOR EXHAUST REQUIREMENTS.

GLAZING DOOR / WINDOW FRAME NOTES

1. FIELD VERIFY WINDOW AND DOOR OPENING PRIOR TO FABRICATION.
2. ALL EXTERIOR GLAZING AT DOORS AND WINDOWS TO BE CLEAR 1" INSULATING GLAZING.
3. GLASS DOORS, ADJACENT PANELS AND ALL GLAZED OPENING WITHIN 18 INCHES OF ADJACENT FLOOR SHALL BE APPROVED FOR IMPACT HAZARD.
4. ALL GLASS IN DOORS, SIDELITES, OR AS INDICATED ON DRAWINGS SHALL BE SAFETY GLAZING AS PER IBC 2406.3
5. DOORS & WINDOWS BETWEEN CONDITIONED AND UNCONDITIONED SPACES SHALL BE DESIGNED TO LIMIT AIR LEAKAGE INTO OR FROM THE BUILDING ENVELOPE. COORDINATION WITH MECHANICAL DRAWINGS.
6. ALL GLAZING WITHIN 40" OF ANY LOCKING HARDWARE DEVICE SHALL BE SAFETY/TEMPERED GLAZING. (TG)

DOOR LEGEND:

HM	HOLLOW METAL	PT	PAINT FINISH
MFR	PER MANUFACTURER	WD	WOOD STAIN GRADE
SG	SAFETY GLAZING	PI	POLYISOCYANURATE
PY	POLYURETHANE	PC	PARTICLE BOARD CORE
AL	ALUMINUM	FAC	FACTORY FINISH
MB	MINERAL BOARD	TS	TUBE STEEL (2X2 SQ.)
SA	STEEL ANGLE	ST	STEEL
TG	TEMPERED GLAZING		

COMMENTS/NOTES:

DR1	DOOR GLAZING TO BE INSULATED.
DR2	PROVIDE AUTOMATIC DOOR CLOSER.
DR3	PROVIDE SOUND WEATHER STRIPPING PROOF GASKETS AT DOOR ASSEMBLY. SEE SPECS. USE WEATHER-STRIPPING FOR EXTERIOR CONDITIONS.
DR4	PROVIDE PANIC HARDWARE/MECHANISM
DR5	PROVIDE AUTOMATIC DOOR BOTTOM OVER THRESHOLD OR FINISH FLOOR AS OCCURS.
DR6	PROVIDE KEY PAD TO OPEN DOOR, COORDINATE WITH HARDWARE SPECIFICATION
DR7	PROVIDE DOOR HOLDERS.
DR8	PROVIDE MANUAL MEANS OF EGRESS AT POWER FAILURE. FORCE TO SET DOOR IN MOTION NOT TO EXCEED 30 POUNDS. COMPLY WITH BHMA A156.10
DR9	PROVIDE DOOR STOP AT WALL OR FLOOR
DR10	PROVIDE DOOR THRESHOLD, SEE DOOR AND WINDOW DETAILS.

HARDWARE FINISH LEGEND:

26D	SATIN CHROME	AL	ALUMINUM
32D	SATIN STAINLESS STEEL	BL	BLACK
626	SATIN CHROMIUM PLATED	CL	CLEAR
630	SATIN STAINLESS STEEL	US28	ALUMINUM - CLEAR ANODIZED
689	ALUMINUM PAINTED		

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SEAL

REGISTERED ARCHITECT
CERTIFICATE NO. 45961
CARLOS ANTONIO MURRIETA
DATE SIGNED 01/20/2025
ARIZONA, U.S.A.

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Pascua Yaqui Tribe
7490 S CAMINO DE OESTE
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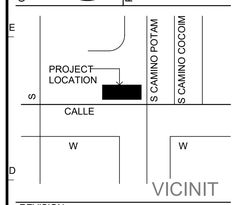
PROJECT
Micro Market
5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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SHEET TITLE

DOOR AND WINDOW SCHEDULE

DATE 01.20.2025

SHEET **A601**

ROOM FINISH SCHEDULE

MAIN VESTIBULE	100	1,137.4 SF	S1	F2	B2	W1	W1	W1	W1	C14	R4
CART STORAGE	101	191.02 SF	S1	F0	B0	W3	W7	W3	W3	C0	
GRAB N GO	102	344.64 SF	S1	F2	B2	W2/W4	W2	W2	W2	C10/C13	R4
CUSTOMER SERVICE	103	94.7 SF	S1	F2	B2	W2	W2	W2	W2	C4	R1
MARKET	104	4,722.78 SF	S1	F2	B2	W2	W2	W2	W2	C10/C13	R1, R4, R8
DELI	105	166.22 SF	S1	F2	B2	W2	W2	W2	W2	C13	R4, R5
PREP-KITCHEN	106	883.92 SF	S1	F3	B4	W5/W6	W5	W5	W5	C6	R1, R5
WALK-IN FRIDGE	107	161.2 SF	S1	F1	B0	W0	W0	W0	W0	C9	
WALK-IN COOLER	108	72.4 SF	S1	F1	B0	W0	W0	W0	W0	C9	
OFFICE	109	130.37 SF	S1	F2	B1	W1	W1	W1	W1	C7	
R.R.	110	64.47 SF	S1	F1	B3	W4	W4	W4	W4	C4	R2,R3, R5, R6, R7
IT	111	105.77 SF	S1	F1	B1	W1	W1	W1	W1	C4	
RECEIVING AND STORAGE	112	1,253.36 SF	S1	F1	B1	W1	W1	W1	W1	C10	
WALK-IN FREEZER	113	102.3 SF	S1	F1	B0	W0	W0	W0	W0	C9	
WALK-IN REFRIGERATOR	114	301.92 SF	S1	F1	B0	W0	W0	W0	W0	C9	
ELECTRICAL ROOM	115	102.44 SF	S1	F1	B1	W1	W8	W1	W1	C10	
MECH. ROOM	116	70.31 SF	S1	F1	B1	W1	W8	W8	W1	C10	
STORAGE	117	231.67 SF	S1	F1	B1	W1	W1	W8	W1	C10	
VESTIBULE	118	287.94 SF	S1	F2	B2	W1	W1	W1	W1	C4	
W.R.R.	119	230.53 SF	S1	F2	B3	W4/W9	W4/W9	W4W/9	W4/W9	C4	R2,R3, R5, R6, R7
M.R.R.	120	232.37 SF	S1	F2	B3	W4/W9	W4/W9	W4/W9	W4/W9	C4	R2,R3, R5, R6, R7
JANITOR	121	115.05 SF	S1	F1	B1	W1	W1	W1	W1	C10	R5, R8
DEMONSTRATION KITCHEN	122	944.19 SF	S1	F2	B2	W1/W4	W1/W4	W1/W4	W1/W4	C7	R1, R5
PATIO	123	640.56 SF	S1	F0	B0	W3	W3	W7	W7	C0	

FLOOR SUB.

S1	CONCRETE SLAB
S2	NOT USED
S3	NOT USED

FLOOR FINISH

F0	CONCRETE SLAB
F1	SEALED CONRETE SLAB
F2	800 GRITT GRIND POLISHED CONCRETE SEALED
F3	EPOXY FLOORING WITH GRANULES
F4	NOT USED
F5	NOT USED
F6	NOT USED
F7	NOT USED
F8	NOT USED
F9	NOT USED
F10	NOT USED
F11	NOT USED
F12	NOT USED

BASE FINISH

B0	NONE
B1	4" RUBBER COVE BASE
B2	6" RUBBER COVE BASE
B3	6" CERAMIC TILE COVE BASE (CT-1)
B4	6" EPOXY COVE BASE WITH GRANULES
B5	NOT USED
B6	NOT USED
B7	NOT USED
B8	NOT USED
B9	NOT USED
B10	NOT USED
B11	NOT USED
B12	NOT USED

WALL FINISH

W0	FACTORY FINISH
W1	LEVEL 4 PRIMED AND PAINTED
W2	LEVEL 5 PRIMED AND PAINTED
W3	WESTERN 1-KOTE STUCCO SYSTEM
W4	CERAMIC TILE (CT-1)
W5	GLASS FIBER REINCFORCED PANELS
W6	STAINLESS STEEL WALL PANELS
W7	PERFORATED METAL PANELS
W8	SEALED C.M.U.
W9	MOSAIC ACCENT TILE (CT-2)
W10	NOT USED
W11	NOT USED
W12	NOT USED
W13	NOT USED
W14	NOT USED

CEILING FINISH

C0	NONE - EXPOSED STRUCTURE ABOVE
C1	LEVEL 3 + ORANGE PEEL TEXTURE
C2	LEVEL 3 PRIMED AND PAINTED
C3	LEVEL 4 + LIGHT ORANGE PEEL TEXTURE
C4	LEVEL 4 PRIMED AND PAINTED
C5	LEVEL 5 PRIMED AND PAINTED
C6	2'X4' VYNIL FACED CEILING TILE
C7	2'X2' ACOUSTICAL CEILING TILE
C8	2'X2' VYNIL FACED CEILING TILE
C9	FACTORY FINISH
C10	PAINTED EXPOSED STRUCTURE ABOVE
C11	PERFORATED METAL PANELING
C12	METAL CEILING
C13	SOLID WOOD PANELS
C14	LINEAR BAFFLE CEILING

NOTE:
1. COORDINATE INTERIOR ELEVATIONS, CEILING PLANS, FLOOR PLANS TO IDENTIFY ANY DIFFERENCE IN WALL TYPES AND MATERIALS.
2. THIS SCHEDULE IS BASED ON THE OVERALL FINISH/MATERIAL APPLIED TO THE SPECIFIC AREA.
3. COORDINATE WITH SPECIFICATIONS.

FINISH SCHEDULE REMARKS

R1 SEE INTERIOR ELEVATIONS FOR ARCHITECTURAL CASEWORK & EQUIPMENT MOUNTING BRACKETS.
R2 PROVIDE ALL BLOCKING AS REQUIRED FOR ALL TOILET ACCESSORIES, ARCHITECTURAL CASEWORK, & EQUIPMENT (INCLUDING N.I.C. EQUIPMENT).
R3 PROVIDE TILE FINISH BEHIND ALL TOILET ROOM ACCESSORIES AS OCCURS, U.N.O.
R4 SEE REFLECTED CEILING PLAN FOR SOFFIT HEIGHTS & CONFIGURATIONS AS OCCUR.
R5 PROVIDE WATER RESISTANT GB AT ALL WET AREAS & 36" AROUND ANY PLUMBING PENETRATION.
R6 SEE INTERIOR ELEVATIONS AND ENLARGED PLANS FOR TYPICAL WALL TILE PATTERN.
R7 CERAMIC TILE GROUT JOINTS SEALED
R8 PAINT CEILING ELEMENT PER SCHEDULE NUMBER

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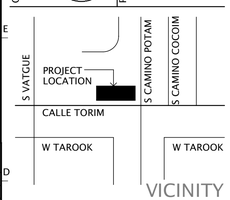

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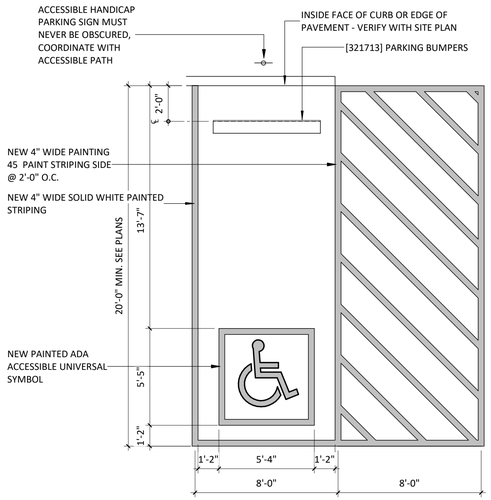
SHEET TITLE

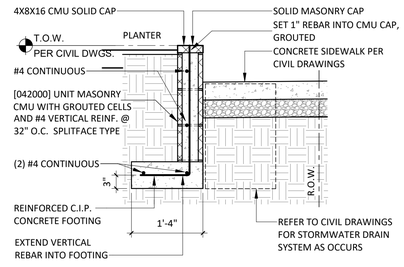
FINISH SCHEDULES

DATE 01.20.2025

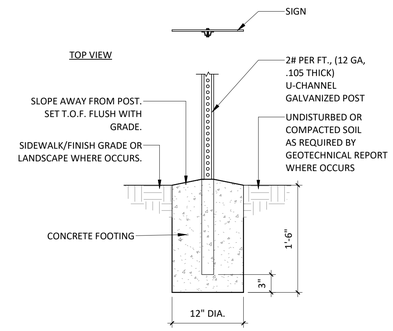
SHEET A602



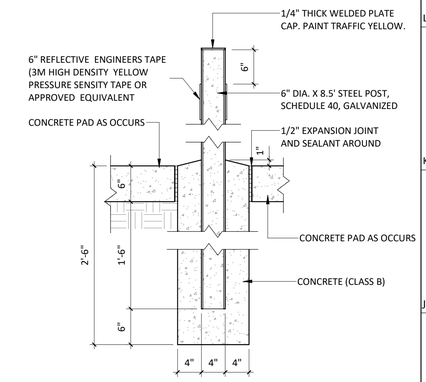
ADA PARKING STALL H10
1/4" = 1'-0"



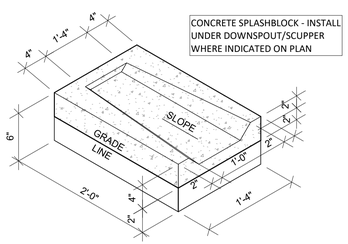
CMU PLANTER DETAIL H7
3/4" = 1'-0"



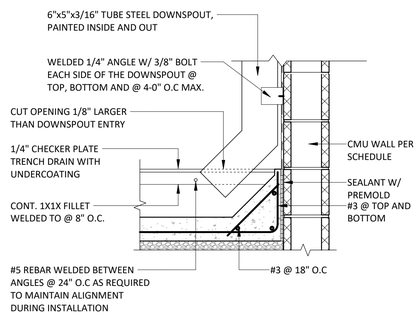
TYP. POST AND FOOTING H4
1" = 1'-0"



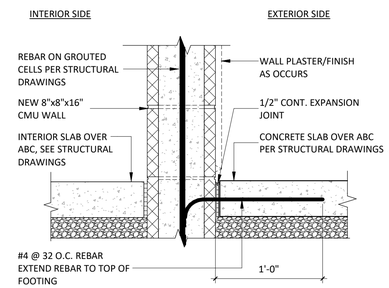
PIPE BOLLARD H1
1" = 1'-0"



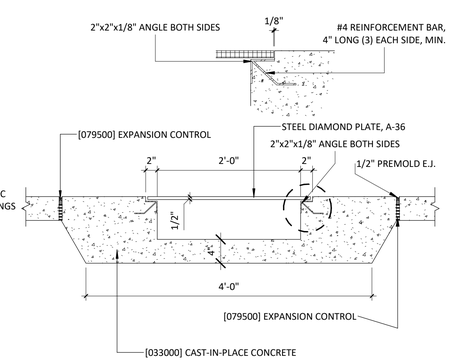
TYP. CONCRETE SPLASH BLOCK D13
1" = 1'-0"



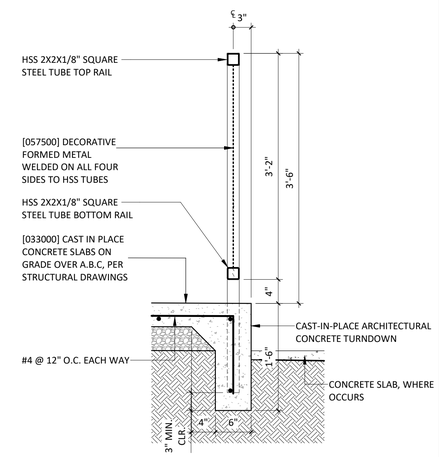
DOWNSPOUT @ TRENCH D10
1" = 1'-0"



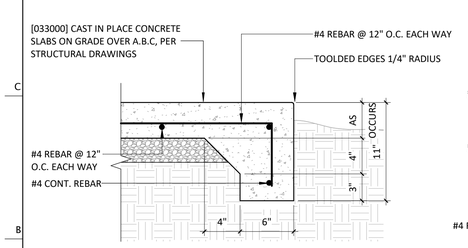
TYP. SIDEWALK @ STEM WALL D7
1 1/2" = 1'-0"



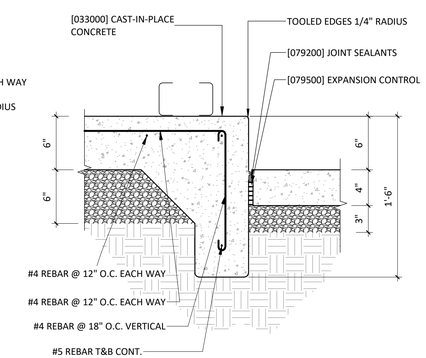
SCUPPER UNDER SIDEWALK D4
1" = 1'-0"



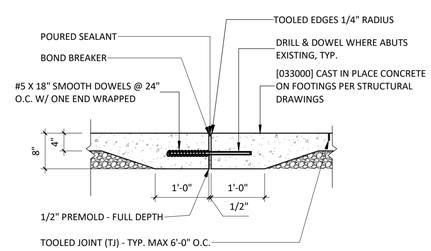
GUARDRAIL DETAIL AT PLAZA D1
1" = 1'-0"



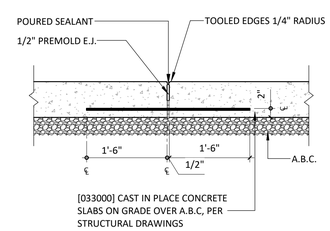
CONCRETE SLAB EDGE A13
1 1/2" = 1'-0"



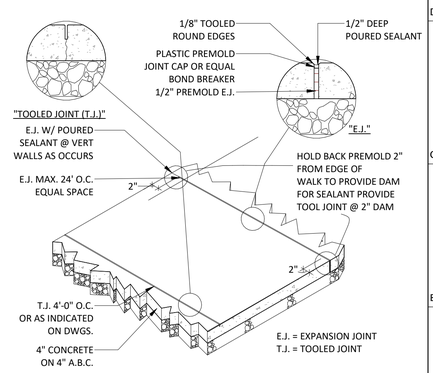
TYP. HOUSEKEEPING PAD A10
1 1/2" = 1'-0"



NEW TO EXISTING TYP. SIDEWALK (EJ) A7
3/4" = 1'-0"



TYP. CONSTRUCTION JOINT NEW SIDEWALKS A4
3/4" = 1'-0"



SIDEWALK JOINT A1
1/2" = 1'-0"

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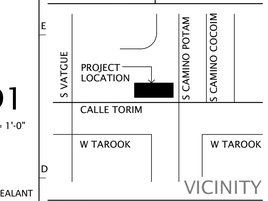

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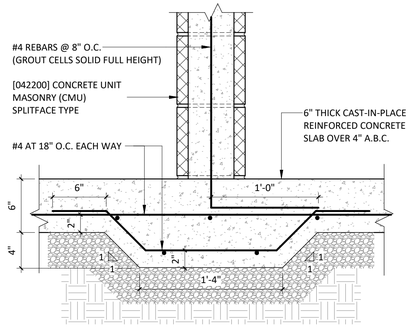
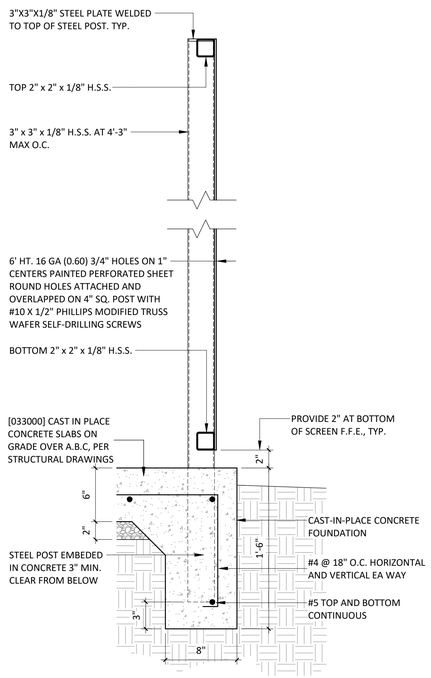
SHEET TITLE

SITE DETAILS

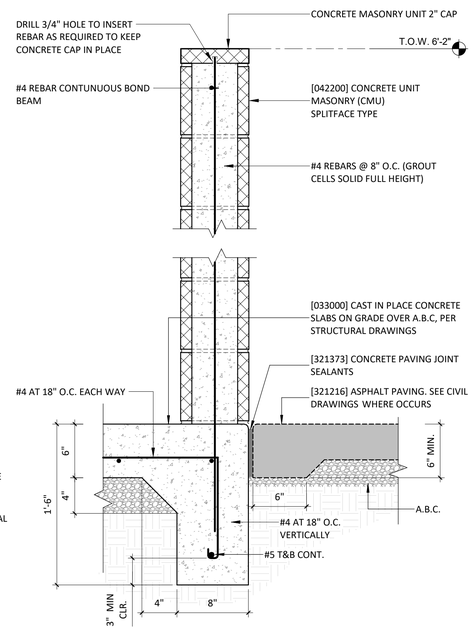
DATE 01.20.2025
SHEET **A901**



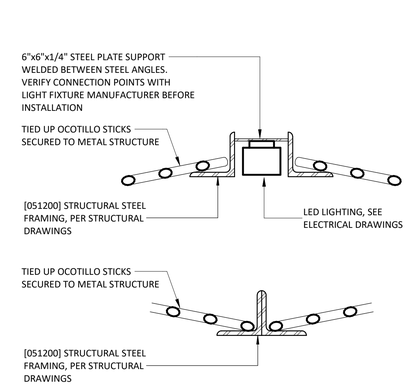
CMU WALL AT CONCRETE PAD EDGE J10
1 1/2" = 1'-0"



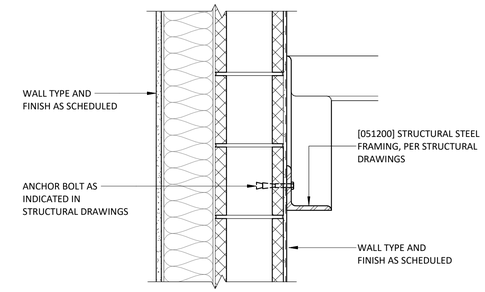
STEEL POST AT CONCRETE PAD EDGE D13
1 1/2" = 1'-0"

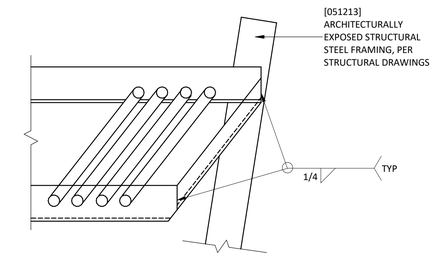


CMU WALL AT CONCRETE PAD EDGE D10
1 1/2" = 1'-0"

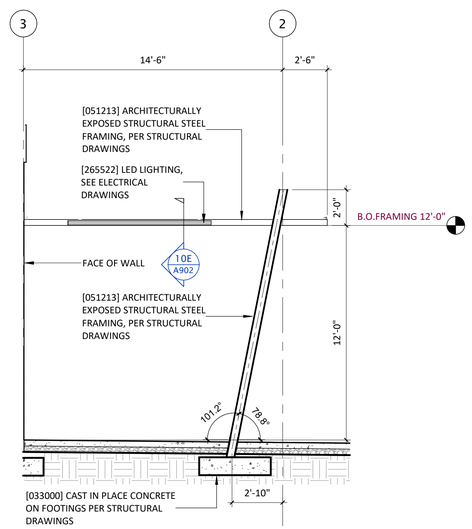


CANOPY DETAIL 10E
1 1/2" = 1'-0"

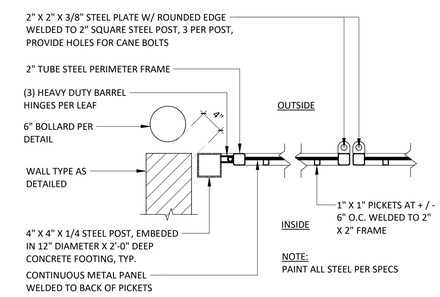




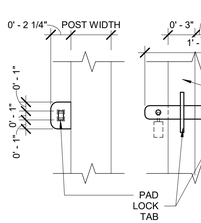
STEEL CANOPY 1E
1 1/2" = 1'-0"

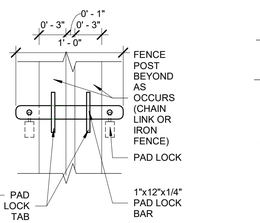


CANOPY SECTION 7E
1/4" = 1'-0"



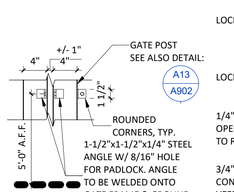
REFUSE DOUBLE SWING GATE WITH SQ POST D4
1" = 1'-0"





NOTE:
1. 1/4" PLATE STEEL BY 2 1/2 X 3" WITH OPENING TO RECEIVE BAR FOR PAD LOCK
2. WELD FIRE DEPT. APPROVED KNOX KEY BOX TO FRAME OR POST AS DIRECTED BY FIRE MARSHAL
3. COORDINATE DUAL LOCK DESIGN W/ FIRE DEPARTMENT APPROVED STANDARDS & AS DIRECTED BY FIRE MARSHAL.

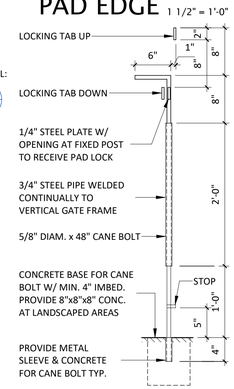
PADLOCK SYSTEM - O.I. A13
1 1/2" = 1'-0"



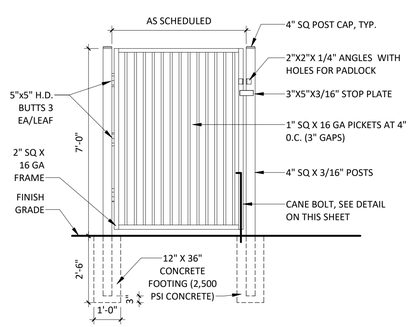
HASPS:
EASE ALL EXPOSED EDGES, TYP.

LOCKING TABS:
ALIGN 1/4"x3" PLATE STEEL W/OPENING TO RECEIVE PADLOCK. WELD PLATE ALL AROUND AND GRIND SMOOTH. EASE ALL EXPOSED EDGES.

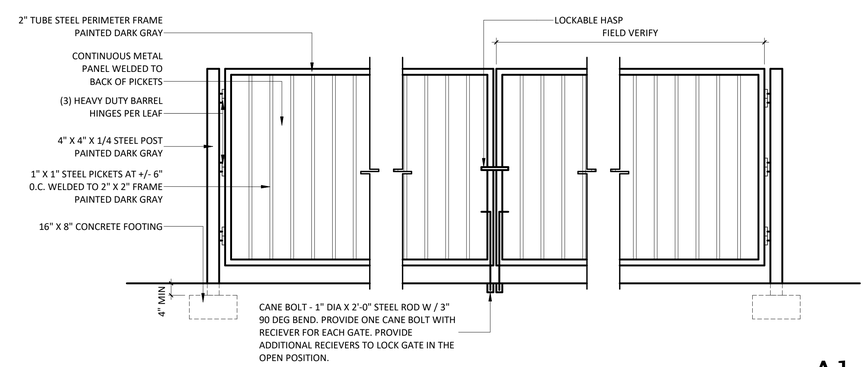
CANE BOLT:
5/8" DIAM. SOLID BAR x 48" LONG W/6" HANDLE AT EACH LEAF FOR CLOSED AND OPEN POSITION INTO MIN. 5/8" DIAM. x 4" SLEEVE FINISH FLOOR.



STEEL GATE CANE BOLT A10
1" = 1'-0"



STEEL MAN GATE NON-PANIC A7
3/8" = 1'-0"



REFUSE GATE ELEVATION A1
1/2" = 1'-0"

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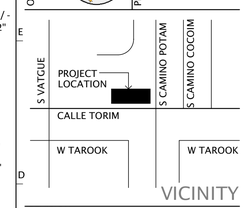
SEAL

REGISTERED ARCHITECT
CERTIFICATE NO.
45961
CARLOS
ANTONIO
MURRIETA
Date Signed 01/20/2025
ARIZONA, U.S.A.

OWNER INFORMATION
Pascua Yaqui Tribe

PROJECT
7490 S CAMINO DE OESTE
TUCSON, AZ 85757
Micro Market
5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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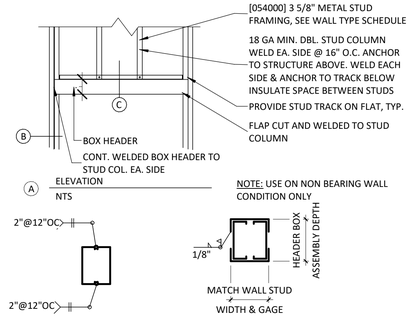
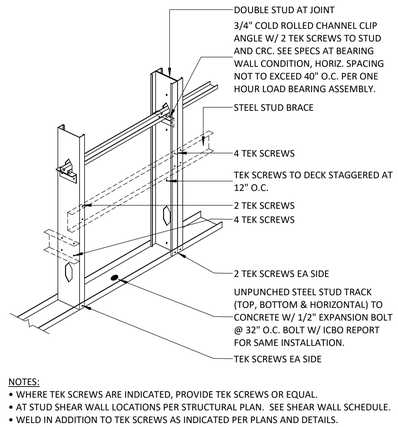
SHEET TITLE

SITE DETAILS

DATE 01.20.2025
SHEET **A902**

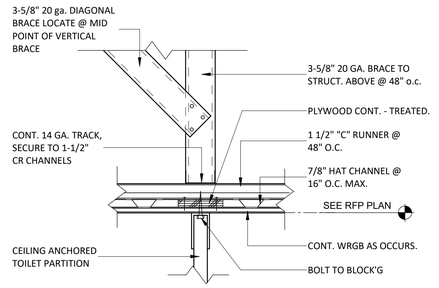


TYP. FRAME OPENING 13G
1 1/2" = 1'-0"

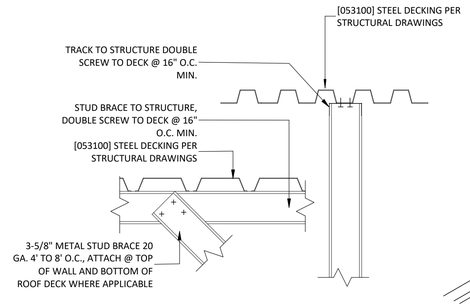


NOTES:
- WHERE TEK SCREWS ARE INDICATED, PROVIDE TEK SCREWS OR EQUAL.
- AT STUD SHEAR WALL LOCATIONS PER STRUCTURAL PLAN. SEE SHEAR WALL SCHEDULE.
- WELD IN ADDITION TO TEK SCREWS AS INDICATED PER PLANS AND DETAILS.

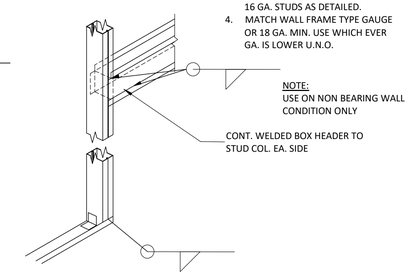
TYP. STEEL STUD ATTACHMENT 10G
1/2" = 1'-0"



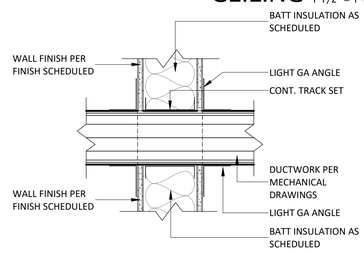
TOILET PARTITION TO CEILING 7J
1 1/2" = 1'-0"



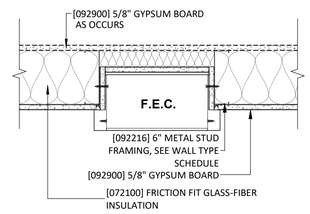
TYP. BRACE TO STEEL DECK 4J
1 1/2" = 1'-0"



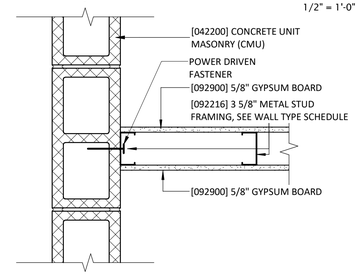
HEADER/TRACK COLUMN 1J
1/2" = 1'-0"



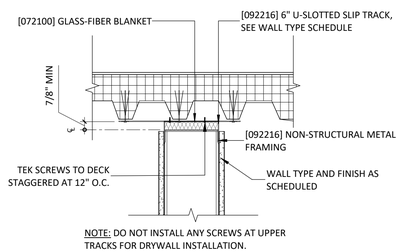
TYP. DUCT THRU STUD WALL 7G
1 1/2" = 1'-0"



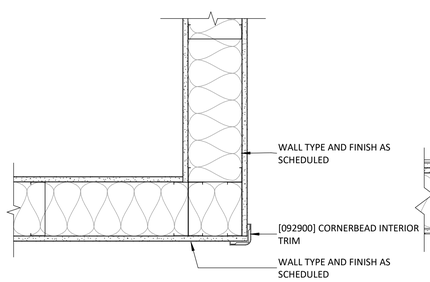
RECESSED F.E.C. 4G
1 1/2" = 1'-0"



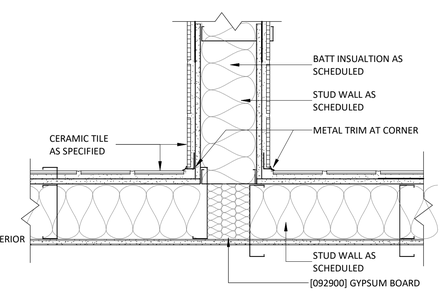
METAL STUD TO MASONRY WALL 1G
1 1/2" = 1'-0"



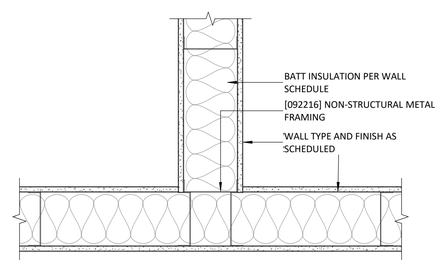
TYP. SLIP JOINT CONNECTION 13D
1 1/2" = 1'-0"



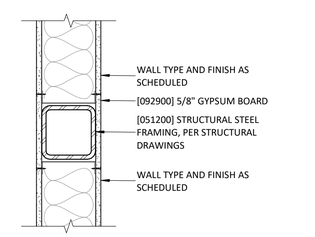
TYP. EXTERIOR WALL CORNER 10D
1 1/2" = 1'-0"



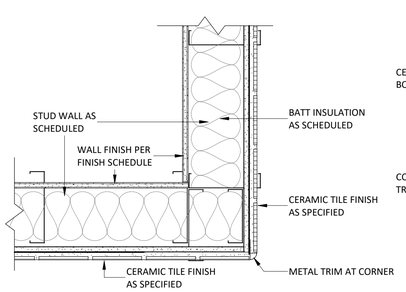
STUD TO STUD WALL 7D
1 1/2" = 1'-0"



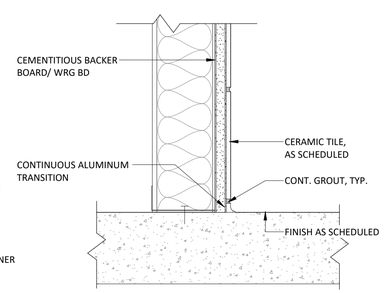
STUD WALL TO STUD WALL 4D
1 1/2" = 1'-0"



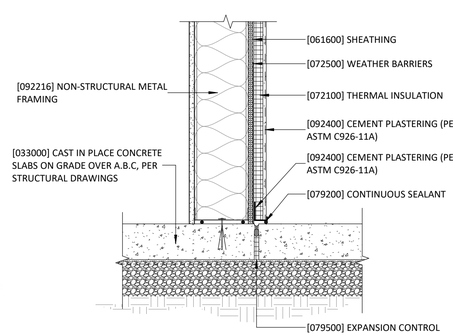
STEEL COLUMN @ STUD WALL 1D
1 1/2" = 1'-0"



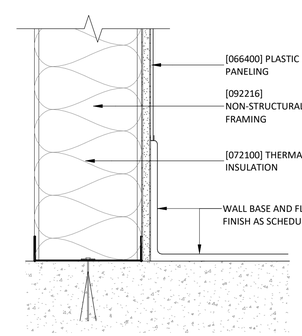
CERAMIC TILE WALL CORNER 13A
1 1/2" = 1'-0"



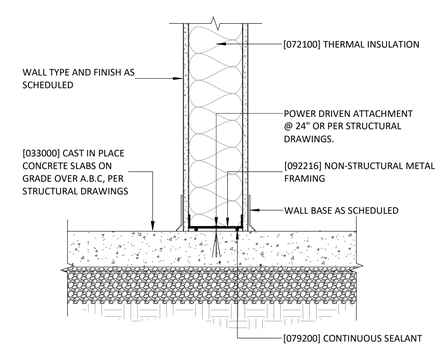
BASE TRANSITION @ TILE 10A
3" = 1'-0"



EIFS TERMINATION AT SIDEWALK 7A
1 1/2" = 1'-0"



BASE TRANSITION @ FRP 4A
3" = 1'-0"



TYP. STUD WALL @ SLAB 1A
1 1/2" = 1'-0"

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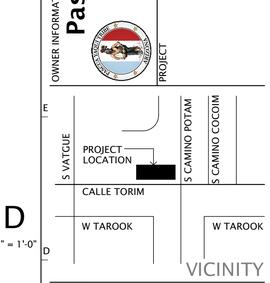
SEAL

OWNER INFORMATION
Pascua Yaqui Tribe

PROJECT
Micro Market
7490 S CAMINO DE OESTE
TUCSON, AZ 85757
5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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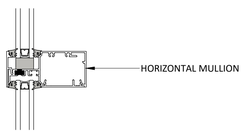
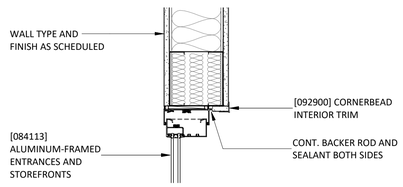
SHEET TITLE

FRAMING DETAILS

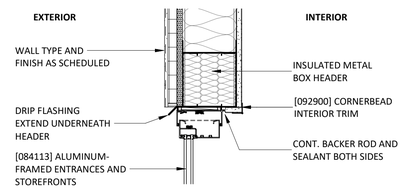
DATE 01.20.2025
SHEET **A903**



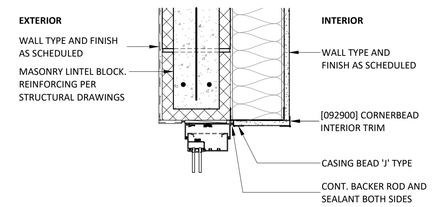
HORIZONTAL MULLION 13G
3" = 1'-0"



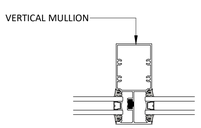
INT. STOREFRONT HEAD 7G
1 1/2" = 1'-0"



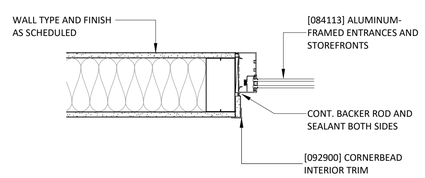
EXT. STOREFRONT HEAD 4G
1 1/2" = 1'-0"



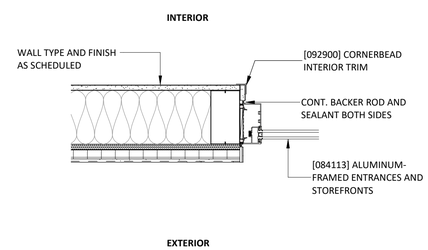
STOREFRONT HEAD @ CMU 1G
1 1/2" = 1'-0"



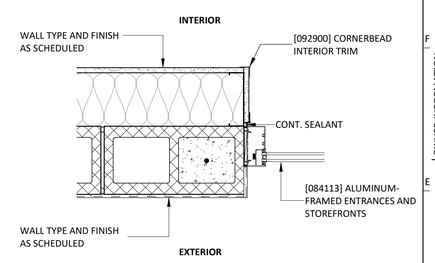
VERTICAL MULLION 13E
3" = 1'-0"



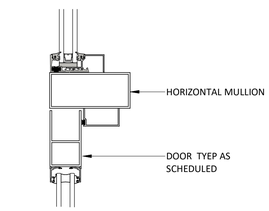
INT. STOREFRONT JAMB 7D
1 1/2" = 1'-0"



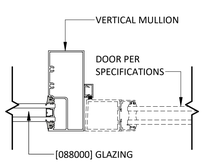
EXT. STOREFRONT JAMB 4D
1 1/2" = 1'-0"



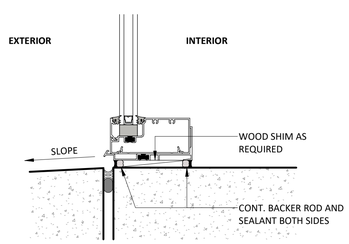
STOREFRONT JAMB @ CMU 1D
1 1/2" = 1'-0"



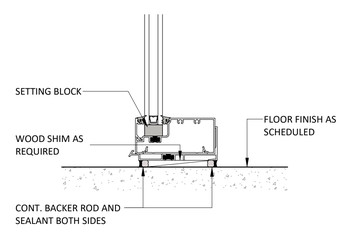
DOOR HEADER @ TRANSOM 13C
3" = 1'-0"



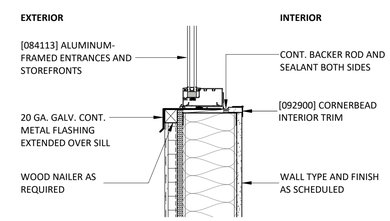
DOOR JAMB @ FRAME 13A
3" = 1'-0"



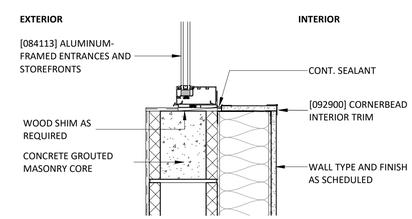
EXT. STOREFRONT SILL 10A
3" = 1'-0"



INT. STOREFRONT SILL 7A
3" = 1'-0"



EXT. STOREFRONT SILL 4A
1 1/2" = 1'-0"



EXT. STOREFRONT SILL 1A
1 1/2" = 1'-0"

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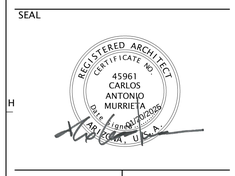
SEAL

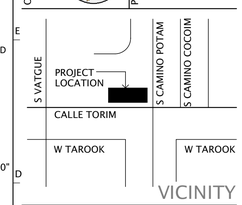


OWNER INFORMATION
Pascua Yaqui Tribe

7490 S CAMINO DE OESTE
TUCSON, AZ 85757

PROJECT
Micro Market

5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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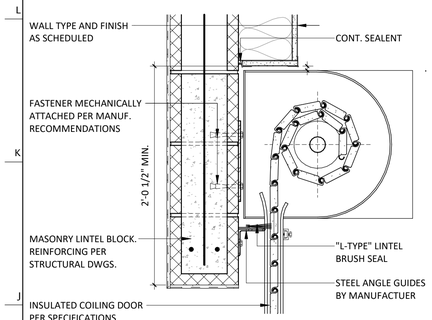
SHEET TITLE

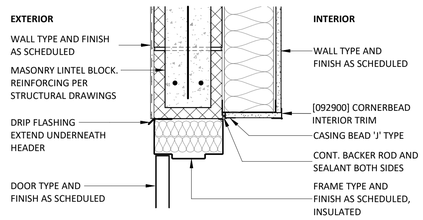
STOREFRONT DETAILS

DATE 01.20.2025
SHEET **A905**

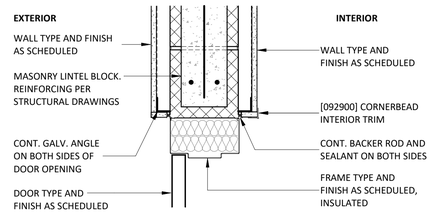
NOTE:
VERIFY MFR. RECOMMENDATIONS
FOR ANY REQUIRED CLEARANCE



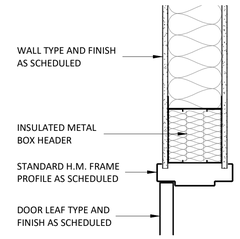
COIL DOOR HEAD 13H
1 1/2" = 1'-0"



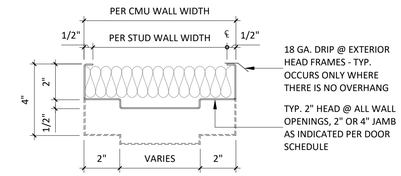
EXT. H.M. DOOR HEAD 10H
1 1/2" = 1'-0"



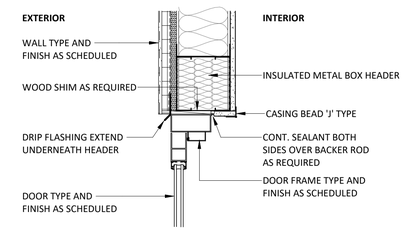
INT. H.M. DOOR HEAD 7H
1 1/2" = 1'-0"



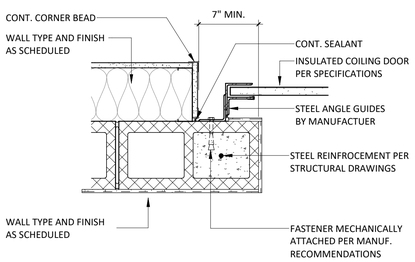
INT. DOOR HEAD 4H
1 1/2" = 1'-0"



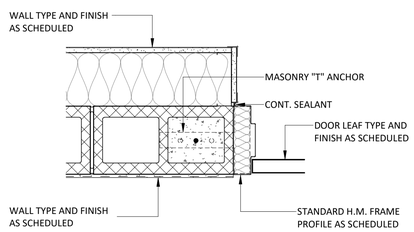
H.M. FRAME PROFILE 5D
3" = 1'-0"



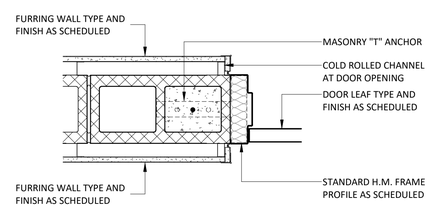
EXT. ALUM. DOOR HEAD 5H
1 1/2" = 1'-0"



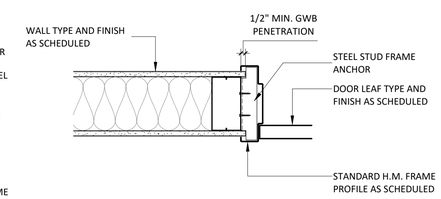
COIL DOOR JAMB 13E
1 1/2" = 1'-0"



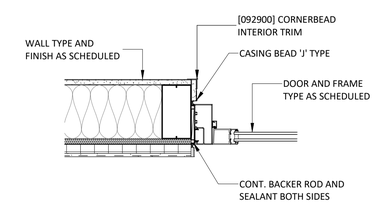
EXT. H.M. DOOR JAMB 10E
1 1/2" = 1'-0"



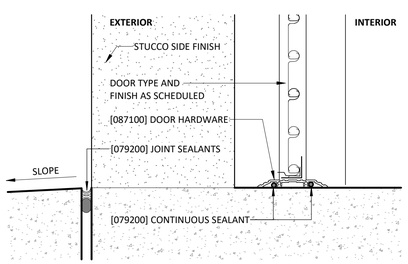
INT. H.M. DOOR JAMB 7E
1 1/2" = 1'-0"



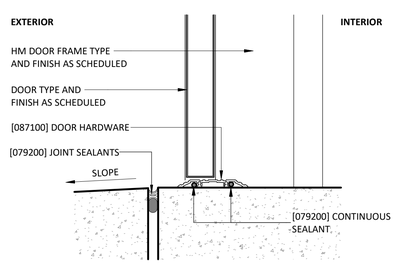
INT. DOOR JAMB 4E
1 1/2" = 1'-0"



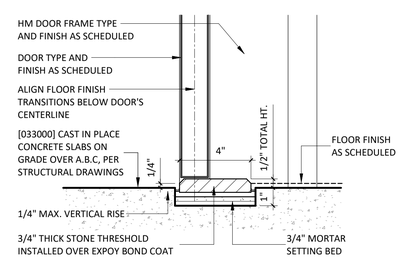
EXT. ALUM. DOOR JAMB 2D
1 1/2" = 1'-0"



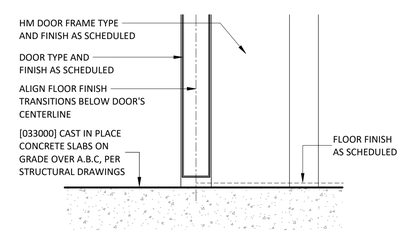
COIL DOOR SILL 13A
3" = 1'-0"



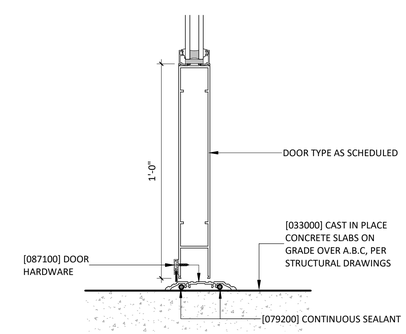
EXT. H.M. DOOR SILL 10A
3" = 1'-0"



INT. H.M. DOOR SILL 7A
3" = 1'-0"



INT. DOOR SILL 4A
3" = 1'-0"



EXT. ALUM. DOOR SILL 1A
3" = 1'-0"

MERGE ARCHITECTURAL GROUP
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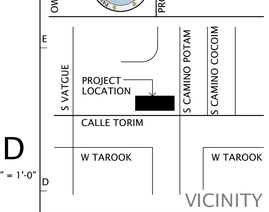
cdc@mergeAG.com

SEAL

REGISTERED ARCHITECT
CERTIFICATE NO. 45961
CARLOS ANTONIO MURRIETA
DATE SIGNED 01/20/2025
ARIZONA, U.S.A.

OWNER INFORMATION
Pascua Yaqui Tribe

PROJECT
7490 S CAMINO DE OESTE
TUCSON, AZ 85757
Micro Market
5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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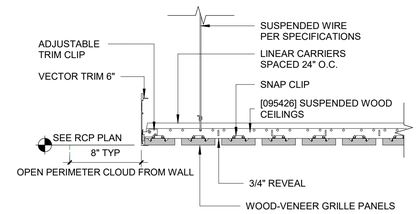
SHEET TITLE

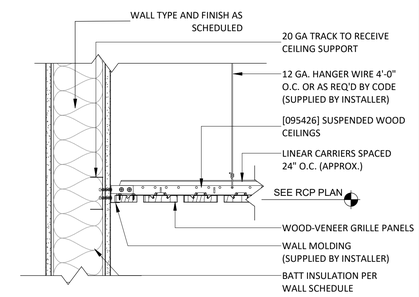
DOOR DETAILS

DATE 01.20.2025
SHEET **A906**



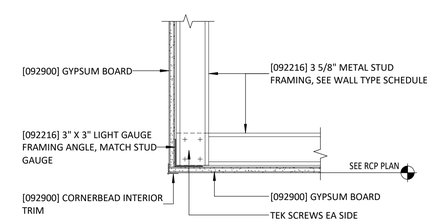
LINEAR PROFILE @ OPEN CEILING 1H

1 1/2" = 1'-0"



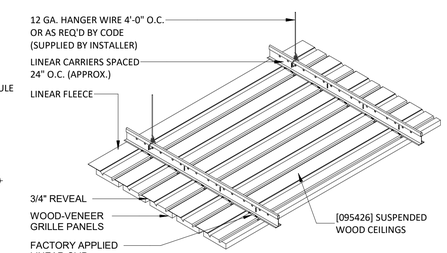
LINEAR PROFILE @ WALL 1F

1 1/2" = 1'-0"



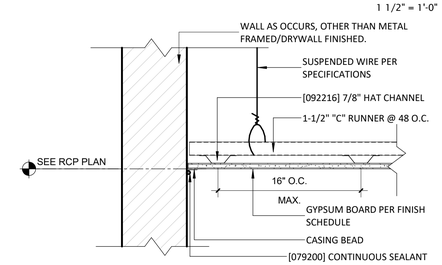
SOFFIT DETAIL 4C

1 1/2" = 1'-0"



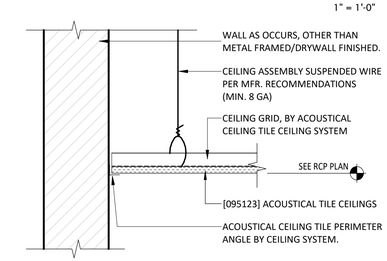
WOODWORKS LINEAR - ISO 1C

1" = 1'-0"



SUSPENDED G.B. CEILING 4A

1 1/2" = 1'-0"



SUSPENDED ACOUSTIC CEILING 1A

1 1/2" = 1'-0"

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SEAL

OWNER INFORMATION

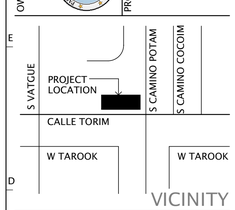
Pascua Yaqui Tribe

7490 S CAMINO DE OESTE
TUCSON, AZ 85757

PROJECT

Micro Market

5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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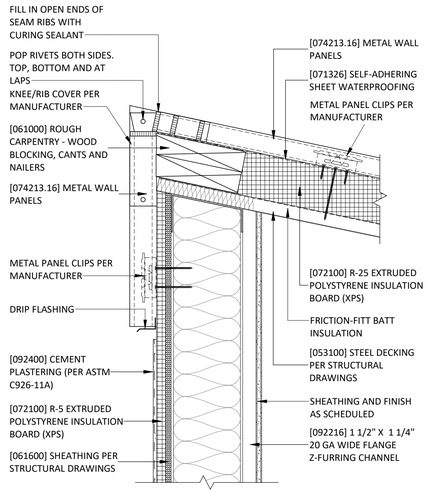
SHEET TITLE

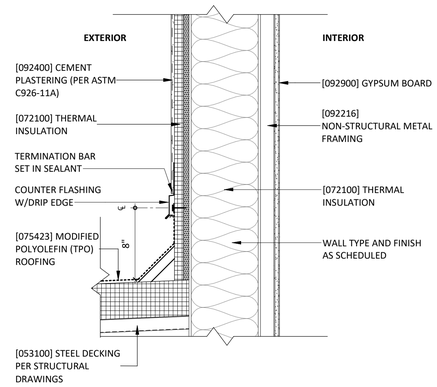
CEILING DETAILS

DATE 01.20.2025

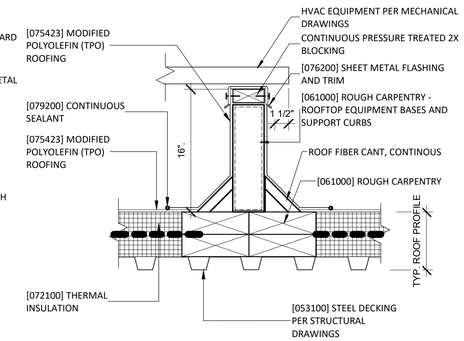
SHEET **A909**



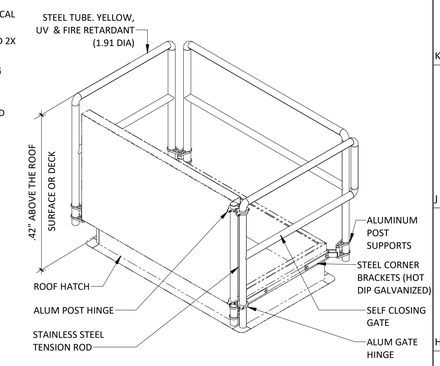
METAL PANELS AT METAL STUD 10H
1 1/2" = 1'-0"



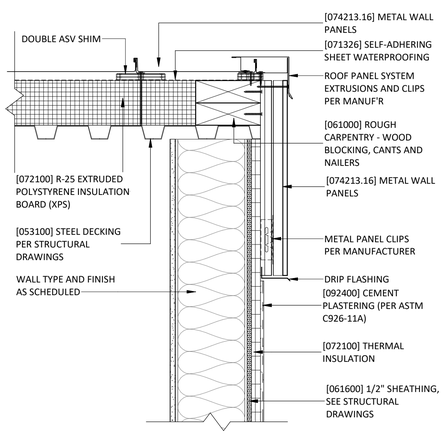
WALL @ TPO ROOFING 7H
1 1/2" = 1'-0"



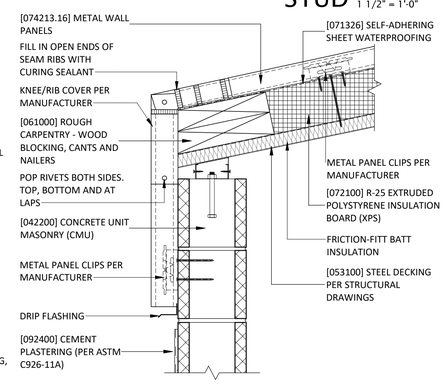
EQP. SUPPORT AT METAL DECK 4H
1 1/2" = 1'-0"



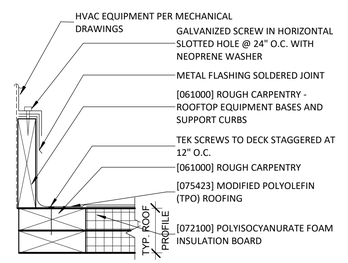
ROOF HATCH PROTECTION 1H
1" = 1'-0"



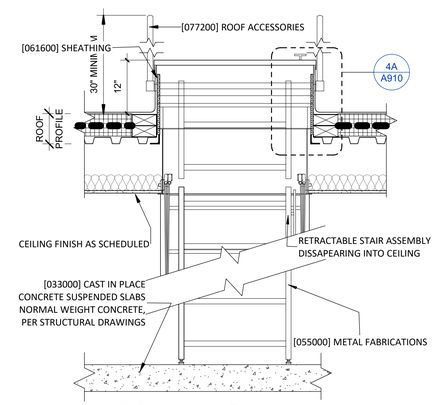
METAL WALL PANELS AT METAL STUD 13D
1 1/2" = 1'-0"



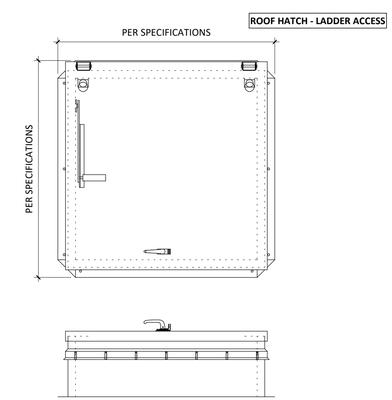
METAL PANELS AT CMU WALL 10D
1 1/2" = 1'-0"

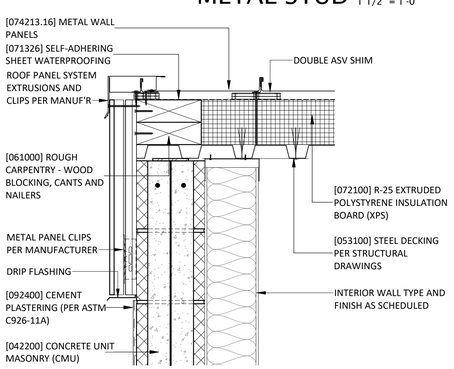


TYP. MECH CURB 7D
1 1/2" = 1'-0"

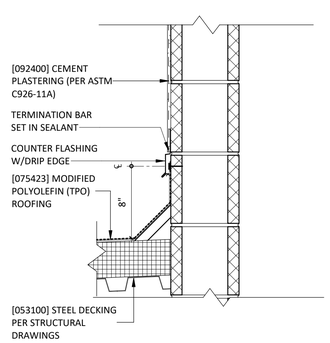


ROOF HATCH LADDER (OSHA) 4D
3/4" = 1'-0"

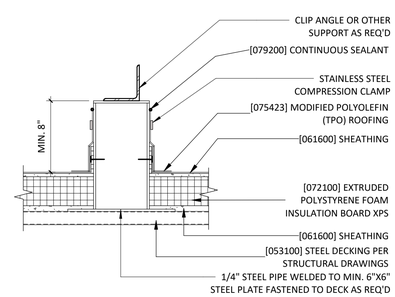




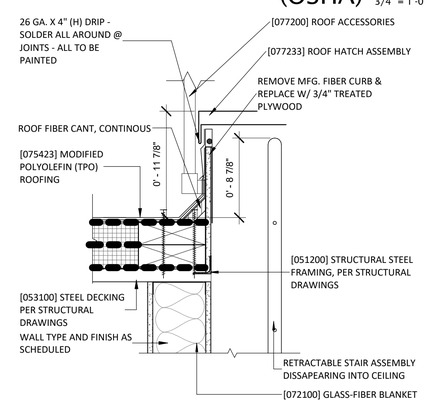
METAL WALL PANELS AT CMU WALL 13A
1 1/2" = 1'-0"



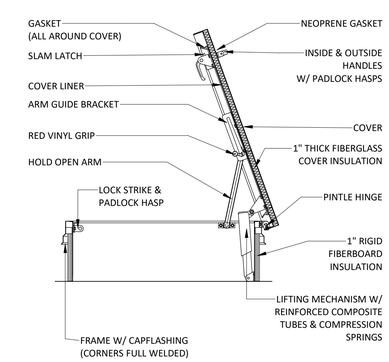
CMU WALL @ TPO ROOFING 10A
1 1/2" = 1'-0"



STEEL PRE-MANUFACTURED EQUIPMENT CURB 7A
1 1/2" = 1'-0"



ROOF HATCH 4A
1 1/2" = 1'-0"



ROOF HATCH DETAILS 1A
NTS

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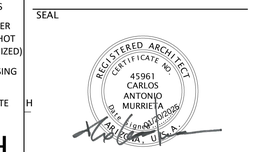
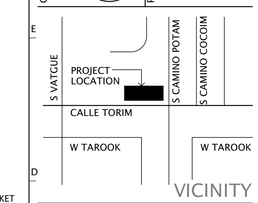
F (602) 635 1581
cam@mergeAG.com
cdc@mergeAG.com

SEAL



OWNER INFORMATION
Pascua Yaqui Tribe

PROJECT
Micro Market
7490 S CAMINO DE OESTE
TUCSON, AZ 85757
5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION		
NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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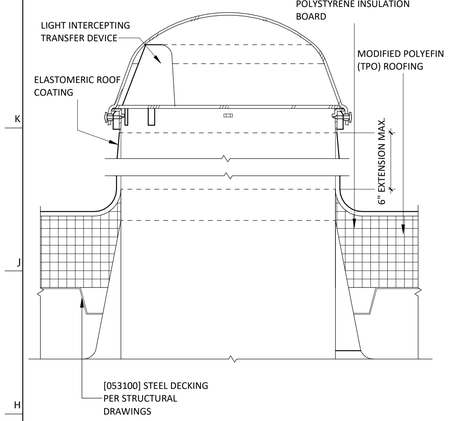
SHEET TITLE

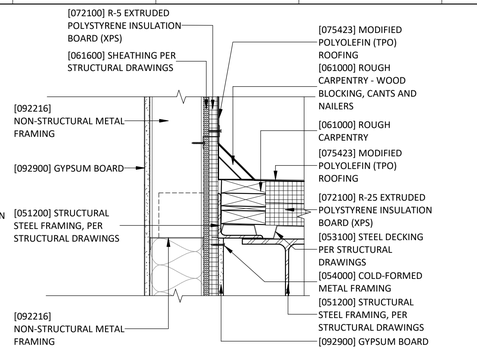
ROOF DETAILS

DATE 01.20.2025

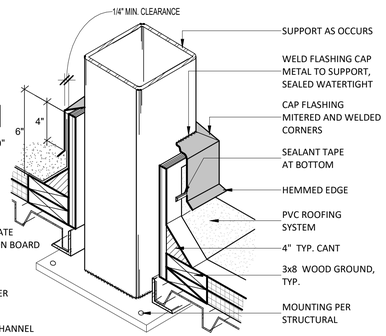
SHEET **A910**



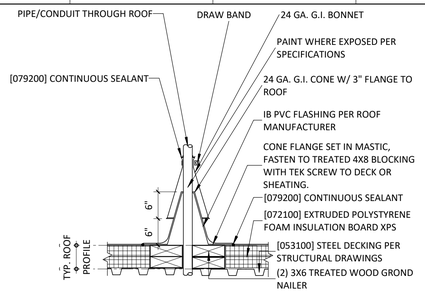
DAYLIGHT DEVICE ROOF PENETRATION 13G
3" = 1'-0"



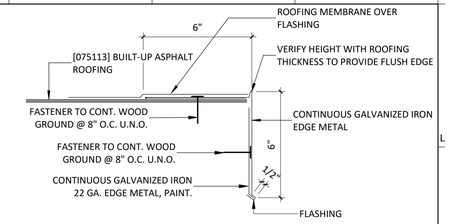
ROOF AT PARAPET 10H
1 1/2" = 1'-0"



T.S. PENETRATION FLASHING 8G
1 1/2" = 1'-0"

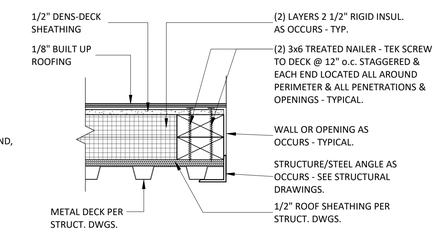


TYP. CONDUIT THRU ROOF 4J
3/4" = 1'-0"

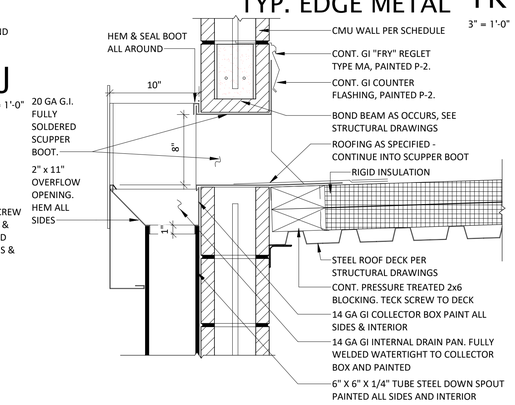


TYP. EDGE METAL 1K
3" = 1'-0"

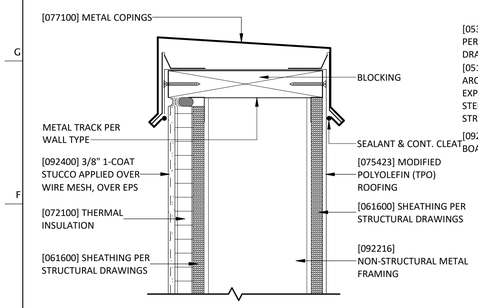
NOTE: SEE ADDITIONAL DETAILS FOR EACH SPECIFIC CONDITION, THIS IS A TYPICAL ROOF ROOF PROFILE



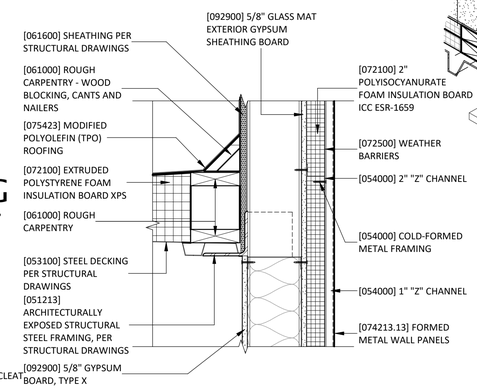
TYP. ROOF PROFILE 4G
1 1/2" = 1'-0"



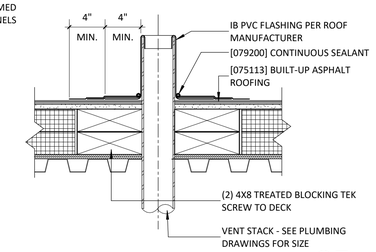
THRU CMU WALL SCUPPER 1G
1 1/2" = 1'-0"



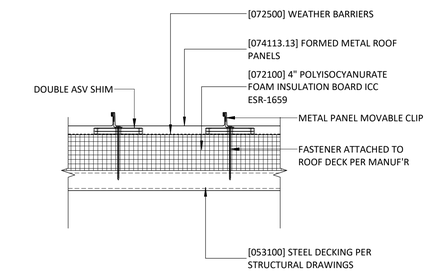
PARAPET COPING @ METAL STUD WALL 13E
3" = 1'-0"



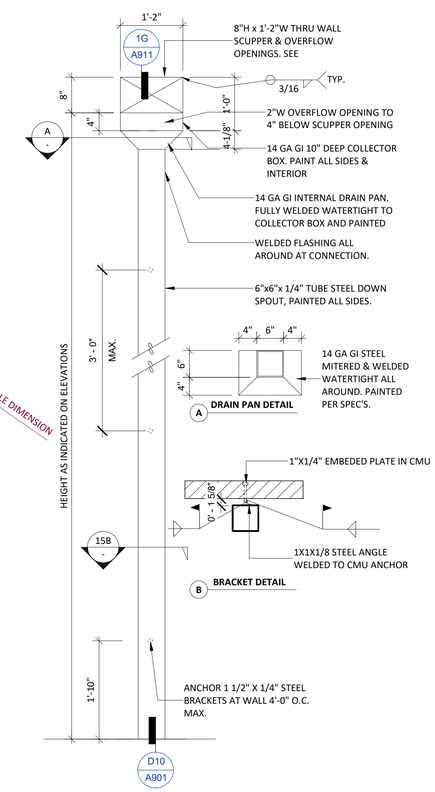
ROOF AT PARAPET - CRICKET 10F
1 1/2" = 1'-0"



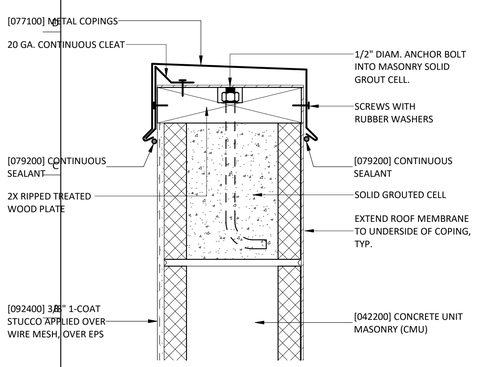
VENT THRU ROOF 8E
1 1/2" = 1'-0"



STANDING SEAM TYP. ROOF PROFILE 4E
1 1/2" = 1'-0"

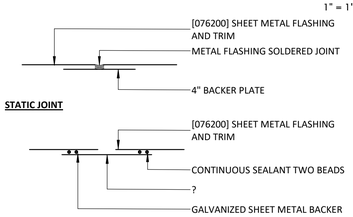


DOWNSPOUT DETAIL 1A
3/4" = 1'-0"



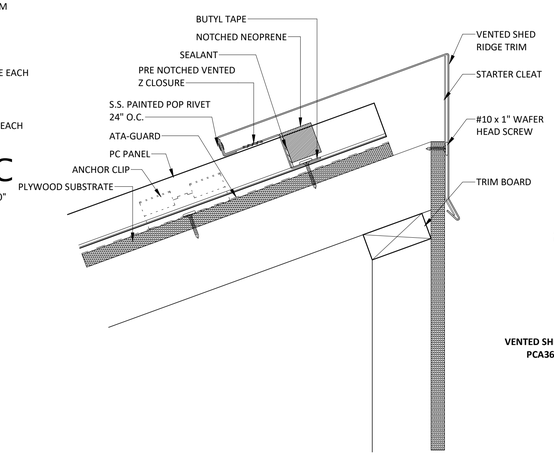
PARAPET COPING @ CMU WALL 13A
3" = 1'-0"

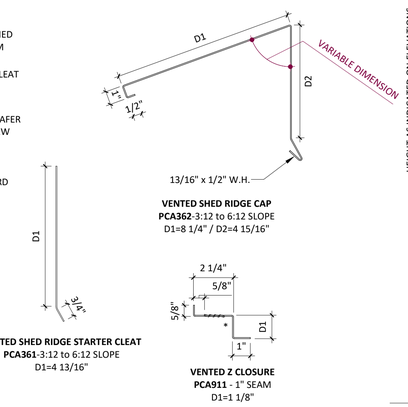
TYP. FLASHING INTERSECT 10C
1" = 1'-0"



CONSTRUCTION/EXPANSION JOINT
LOCATE EJ'S
1. 1" WIDTH @ 40" OC MAX AND 12' O.C. MIN.
ALIGN W/ NEAREST MASONRY JOINT.

TYP. FLASHING JOINT 10A
1 1/2" = 1'-0"





NOTE: NEOPRENE CLOSURES ARE NOT REQUIRED IF FACTORY PRE NOTCHED VENTED Z CLOSURES ARE UTILIZED.

PC VENTED SHED RIDGE DETAIL 4A
3" = 1'-0"

MERGE ARCHITECTURAL GROUP
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SEAL

OWNER INFORMATION
Pascua Yaqui Tribe

PROJECT
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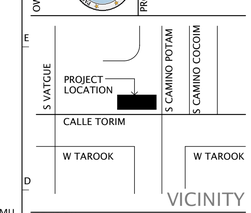
Micro Market
5010 W CALLE TORIM TUCSON, AZ 85757



REVISION		
NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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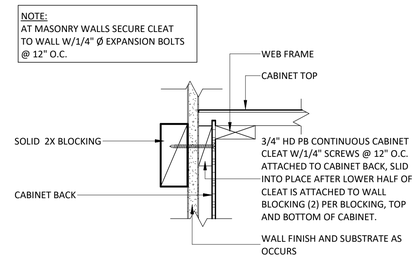
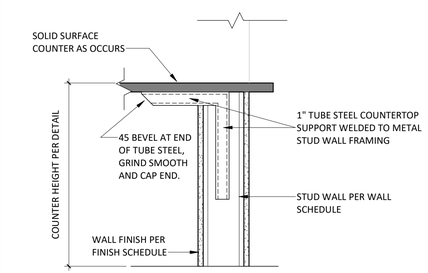
SHEET TITLE
ROOF DETAILS

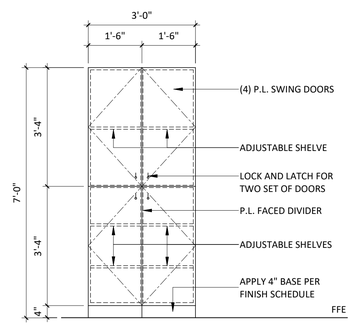
DATE 01.20.2025
SHEET **A911**



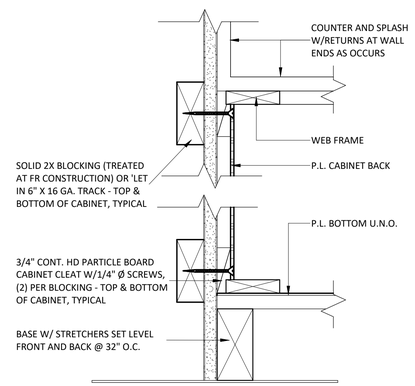
CLEAT AT WALL MOUNTED CABINET 7G
3" = 1'-0"



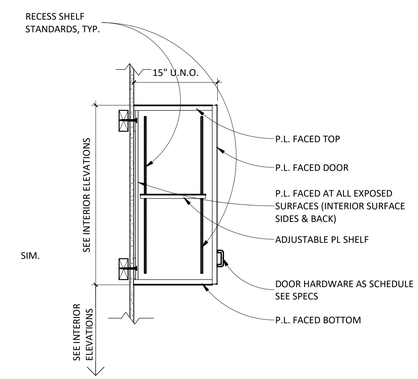
IN-WALL SUPPORT 13D
1 1/2" = 1'-0"



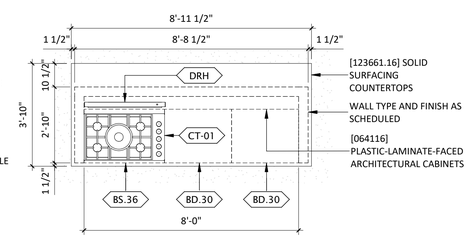
FULL HEIGHT CABINET ELEVATION 10E
1/2" = 1'-0"



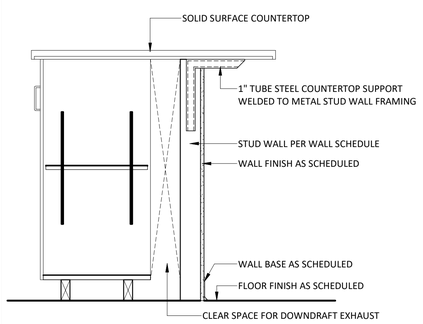
CLEAT AT WALL BASE 7D
3" = 1'-0"



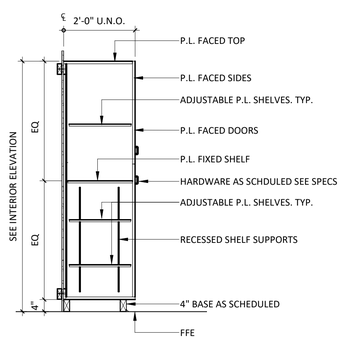
UPPER CABINET - TYPICAL 4D
1" = 1'-0"



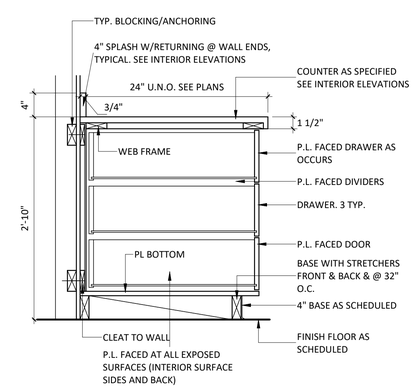
ISLAND PLAN 1D
3/8" = 1'-0"



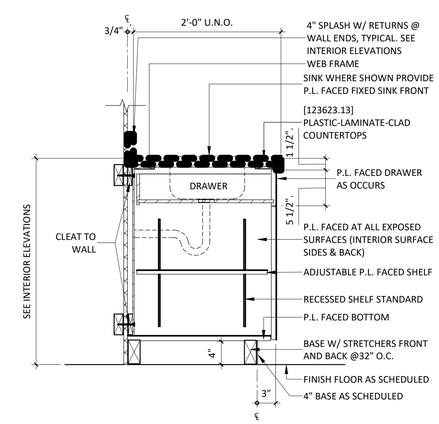
ISLAND SECTION 13A
1" = 1'-0"



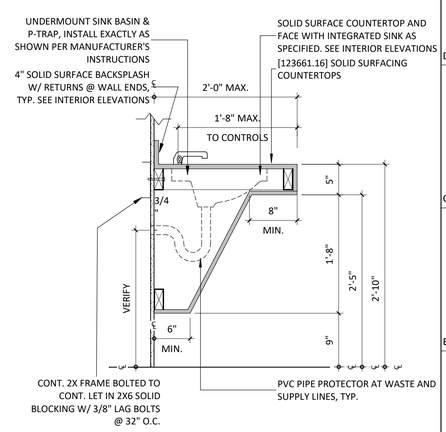
FULL HEIGHT CABINET SECTION 10A
1/2" = 1'-0"



3 DRAWER BASE CABINET 7A
1" = 1'-0"



1 DRAWER BASE CABINET 4A
1" = 1'-0"



LAVATORY AT RESTROOMS 1A
1" = 1'-0"

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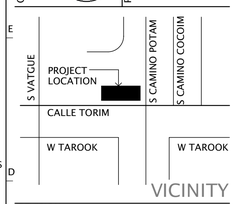
PROJECT
Micro Market
5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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SHEET TITLE
MILLWORK DETAILS

DATE 01.20.2025
SHEET A912

TERMS AND ABBREVIATIONS

ABBRV	TERM
(#)	NUMERICAL QUANTITIES WHEN ENCLOSED IN PARENTHESES
A\E	ARCHITECT/ENGINEER
AB	ANCHOR BOLT
ABC	AGGREGATE BASE COURSE
ARCH	ARCHITECT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BOD	BOTTOM OF DECK
BOS	BOTTOM OF STEEL
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION JOINT CONTROL JOINT
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
DIA	DIAMETER
DIM	DIMENSION
DL	DEAD LOAD
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
EOS	EDGE OF SLAB
EQ	EQUAL
(E)	EXISTING
EW	EACH WAY
(F)	FUTURE
FF	FINISH FLOOR ELEVATION
FLR	FLOOR
FT	FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GLB	GLUED LAMINATED WOOD BEAM
GSN	GENERAL STRUCTURAL NOTES
HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL
I	SECTION MOMENT OF INERTIA
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
INT	INTERIOR
KIP, K	ONE THOUSAND POUNDS
KLF	KIP PER LINEAR FOOT
L	STEEL ANGLE
LB	POUND
LL	LIVE LOAD
LLBB	LONG LEG BACK TO BACK
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSL	LAMINATED STRAND LUMBER
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
MCJ	MASONRY CONTROL JOINTS
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
NA	NOT APPLICABLE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
PERP	PERPENDICULAR
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	POST TENSIONED
QA	QUALITY ASSURANCE
QC	QUALITY CONTROL
REQ'D	REQUIRED
RFI	REQUEST FOR INFORMATION
RTU	ROOF TOP UNIT
SF	SQUARE FOOT
SIM	SIMILAR
STD	STANDARD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOD	TOP OF DECK
TOF	TOP OF FOOTING
TOM	TOP OF MASONRY
TOP	TOP OF PARAPET
TOS	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/C	WATER TO CEMENT RATIO
WL	WINDLOAD
WP	WORK POINT
WWF	WELDED WIRE FABRIC
WWR	WELDED WIRE REINFORCEMENT

CODE:

2018 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC)

DESIGN LOADS:

1. ROOF:
   - LIVE LOAD____20 PSF (REDUCIBLE)
   - DEAD LOAD____20 PSF*
   - SUPERIMPOSED DEAD LOAD ON TRUSSES____17 PSF* (14PSF TOP CHORD / 3PSF BOTTOM CHORD)
   - *ROOF DEAD LOAD INCLUDES A 1.5 PSF ALLOWANCE FOR FIRE SPRINKLER PIPE BRANCH LINES LESS THAN 3 INCH DIAMETER. DESIGNERS OF STRUCTURAL MEMBERS ENGINEERED BY OTHERS SHALL COORDINATE THE WEIGHTS AND LOCATIONS OF ALL FIRE SPRINKLER BRANCH LINES GREATER THAN 3 INCH DIAMETER AND DESIGN FOR ADDITIONAL LOADS ACCORDINGLY.
   - MECHANICAL LOADS SHOWN ON PLANS SHALL BE IN ADDITION TO THE LOADING REQUIREMENTS NOTED ABOVE.
2. WIND LOAD:
   - RISK CATEGORY____II
   - BASIC WIND SPEED, V :____105 MPH
   - EXPOSURE CATEGORY:____C
   - IMPORTANCE FACTOR, Iw:____1.0
   - MEAN ROOF HEIGHT:____18 FT
   - INTERNAL PRESSURE COEFFICIENT____+/- 0.18
   - G:____0.85
   - Kd:____0.85
   - Kzt:____1.0
   - Kz:____0.88
   - ENCLOSURE CLASSIFICATION: ____ENCLOSED BUILDING
3. SEISMIC LOADS:
   - RISK CATEGORY____II
   - IMPORTANCE FACTOR, Ie :____1.0
   - SEISMIC SITE CLASS:____D
   - Ss:____0.270
   - S1:____0.083
   - SDS:____0.285
   - SD1:____0.133
   - SEISMIC DESIGN CATEGORY:____B
   - BASIC SEISMIC FORCE RESISTING SYSTEM:
     - INTERMEDIATE REINFORCED MASONRY WALL SYSTEM
   - R:____3.5
   - Ω:____2
   - Cd:____2.25
   - Cs:____0.081
   - BASE SHEAR, V:____0.081W

FOUNDATIONS:

1. GEOTECHNICAL CONSULTANT: ATEK ENGINEERING CONSULTANTS
2. REPORT NUMBER: 230057
3. REPORT DATE: JUNE 13, 2023
4. SPREAD FOOTINGS SHALL BEAR ON OF COMPACTED FILL. FOR FILL REQUIREMENTS, SEE SOIL REPORT. DESIGN SOIL BEARING VALUE 2,000 PSF. BOTTOM OF FOOTINGS TO BE 1'-6" MINIMUM BELOW FINISHED GRADE. FINISHED GRADE IS DEFINED AS TOP OF SLAB FOR INTERIOR FOOTINGS AND LOWEST ADJACENT FINISHED GRADE WITHIN 5 FEET FOR PERIMETER FOOTINGS. FOUNDATION EXCAVATIONS SHALL BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE.

GENERAL:

1. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.
2. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK THAT CONFORMS TO THE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) SAFETY AND HEALTH STANDARDS FOR THE CONSTRUCTION INDUSTRY.
3. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.
4. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.
5. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION. DO NOT PENETRATE ANY STRUCTURAL ELEMENTS (BEAMS, COLUMNS, WALLS, SLABS, STEEL DECKS, ETC.) WITHOUT PRIOR WRITTEN APPROVAL OF STRUCTURAL ENGINEER THROUGH ARCHITECT OR OWNER.
6. OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. HE SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF HE CHOOSES AN OPTION AND HE SHALL COORDINATE ALL DETAILS.
7. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.
8. TYPICAL DETAILS ARE NOT CUT ON DRAWINGS, BUT APPLY UNLESS NOTED OTHERWISE. TYPICAL DETAILS SHALL APPLY TO ALL SUCH SITUATIONS AND CONDITIONS WHICH ARE SIMILAR TO THE CONDITION SHOWN ON THE DETAIL OR VERBALLY DESCRIBED IN THE TITLE OF THE DETAIL OR NOTES ON THE DETAIL. TYPICAL DETAILS SHALL APPLY REGARDLESS OF WHETHER OR NOT THE DETAIL IS CUT ON THE PLANS.
9. WHERE ANY DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.
10. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED. SUPPLIER OF ENGINEERED STRUCTURAL COMPONENTS SHALL BE RESPONSIBLE FOR COMPLETE DESIGN AND SHALL USE ALL CONTRACT DOCUMENTS FROM ALL DISCIPLINES.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND FINISHED GRADE WITH CIVIL DRAWINGS PRIOR TO START OF CONSTRUCTION. ALL DIMENSIONS SHOWN ON STRUCTURAL DRAWINGS ARE TO ASSIST CONTRACTOR IN VERIFICATION. DO NOT SCALE DIMENSIONS FROM DRAWINGS.
12. ITEMS SHOWN BY OTHER DISCIPLINES WITH REFERENCE TO STRUCTURAL DRAWINGS BUT NOT SHOWN ON THESE STRUCTURAL DRAWINGS SHALL BE CONSIDERED DESIGN BUILD ITEMS. CONTRACTOR SHALL SUBMIT DESIGN BY OTHERS FOR REVIEW

CONCRETE:

1. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301, "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".
2. ADDITION OF WATER TO THE BATCH FOR MATERIAL WITH INSUFFICIENT SLUMP WILL NOT BE PERMITTED, UNLESS THE SUPPLIER HAS SPECIFICALLY WITHHELD WATER FROM THE BATCH AT THE PLANT. IN SUCH CASE THE MIX DESIGN AND TRUCK TICKET MUST CLEARLY STATE THE MAXIMUM AMOUNT OF WATER THAT CAN BE ADDED TO THE BATCH ON SITE. IN NO CASE SHALL THE DESIGN WATER TO CEMENTITIOUS MATERIAL RATIO BE EXCEEDED.
3. CONCRETE CONTAINING SUPERPLASTICIZING ADMIXTURE SHALL HAVE A SLUMP OF 4" +/- 1", TO BE FIELD VERIFIED, PRIOR TO ADDING ADMIXTURE, AND NOT EXCEEDING 8" AT PLACEMENT.
4. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND UNDER-FLOOR DUCTS, SLAB EDGES, REINFORCING, KEYS, ETC. MECHANICALLY VIBRATE ONLY THE TOP 5 FEET OF DRILLED PIER CONCRETE. REVIBRATE TOP OF DRILLED PIER 15 MINUTES AFTER PLACING CONCRETE.
5. UNLESS APPROVED OTHERWISE IN WRITING BY THE ARCHITECT, ALL CONCRETE SLABS ON GRADE SHALL BE BOUND BY CONSTRUCTION JOINTS, KEYED OR SAW CUT, SUCH THAT THE ENCLOSED AREA DOES NOT EXCEED 150 SQUARE FEET. MAXIMUM PANEL SIZE (IN FEET) EQUALS APPROXIMATELY THREE TIMES THE THICKNESS OF THE SLAB (IN INCHES) IN BOTH DIRECTIONS. KEYED CONSTRUCTION JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING POURING. ALL OTHER JOINTS MAY BE SAW CUT. CONTRACTOR SHALL SUBMIT PROPOSED SAWCUT AND CONSTRUCTION JOINT LAYOUT FOR REVIEW PRIOR TO CONSTRUCTION. CAST CLOSURE POUR AROUND COLUMNS AFTER DEAD LOAD IS APPLIED.
6. TEST DATA FOR CONCRETE SUBMITTALS SHALL BE SUBMITTED FOR REVIEW PRIOR TO PLACEMENT OF CONCRETE. REFERENCE ACI 318 CHAPTER 5, TABLE R5.3 FOR SPECIFIC REQUIREMENTS.
7. CLOSURE POUR SHALL BE CAST AROUND COLUMNS AFTER FULL COLUMN DEAD LOAD HAS BEEN APPLIED.
8. IF PERMITTED BY ARCHITECTURAL SPECIFICATIONS, FLY ASH SHALL BE LIMITED TO 25% OF THE TOTAL CEMENTITIOUS MATERIALS BY WEIGHT. FLY ASH PER ASTM C618. FLY ASH SHALL NOT BE USED IN ARCHITECTURALLY EXPOSED CONCRETE OR IN SLABS WITH AN ACID OR BURNISHED FINISH.
9. CONCRETE TESTING SAMPLES SHALL BE CAST FOR EACH CLASS OF CONCRETE PLACED EACH DAY. ONE SAMPLE SHALL BE TAKEN EVERY 150 YD3. CONCRETE SAMPLING PER ASTM C31 AND TESTING OF SAMPLES PER ASTM C39.
10. VAPOR BARRIER IF REQUIRED BY ARCHITECTURAL SPECIFICATION OR SOILS REPORT SHALL CONSIST OF A MINIMUM 15 MIL MATERIAL LAPPED A MINIMUM OF 6 INCHES AND TAPED PER MANUFACTURER RECOMMENDATIONS. REFER TO SOILS REPORT FOR ADDITIONAL INFORMATION.
11. AT CONCRETE OVER PRECAST TEES OR STEEL DECK, ACTUAL CONCRETE VOLUMES MAY EXCEED THEORETICAL VOLUMES DUE TO CAMBER AND DEFLECTION. CONTRACTOR SHOULD MAKE ALLOWANCE FOR THIS IN THE BID. NO CLAIMS FOR ADDITIONAL CONCRETE VOLUMES WILL BE ALLOWED.
12. DRILLED PIER CONCRETE SHALL BE CHANNELED TO FREE FALL DOWN THE SHAFT WITHOUT STRIKING THE REINFORCING OR THE SIDES OF THE SHAFT. MAXIMUM HEIGHT OF FREE-FALL IS 10'-0".
13. CONCRETE PROPERTIES:

CONCRETE USE — MINIMUM 28 DAY COMPRESSIVE STRENGTH

- UNLESS NOTED OTHERWISE ALL CONCRETE SHALL BE____3,000 PSI
- FOOTINGS AND STEM WALLS____3,000 PSI
- SLABS ON GRADE ____4,000 PSI

DEFERRED SUBMITTALS:

1. DEFERRED SUBMITTALS ARE THOSE PORTIONS OF THE DESIGN WHICH ARE NOT SUBMITTED AT THE TIME OF PERMIT APPLICATION AND WHICH ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL WITHIN A SPECIFIED PERIOD.
2. SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD THROUGH THE ARCHITECT AND GENERAL CONTRACTOR WITHIN 6 WEEKS OF AWARD OF CONTRACT TO THE GENERAL CONTRACTOR. ONCE THE SUBMITTAL DOCUMENTS HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS, THE ENGINEER OF RECORD WILL FORWARD THEM TO THE ARCHITECT WITH A NOTATION INDICATING THAT THEY ARE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE ARCHITECT WILL FORWARD THE DEFERRED SUBMITTAL DOCUMENTS TO THE GENERAL CONTRACTOR WHO WILL MAINTAIN ONE SET ON SITE FOR REFERENCE BY THE CITY INSPECTOR. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.
3. ALL DEFERRED SUBMITTALS SHALL BE STAMPED BY A LICENSED ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED. THIS INCLUDES ALL CALCULATIONS AND DRAWINGS ASSOCIATED WITH THE SCOPE BEING PERFORMED. DEFERRED TRUSSES OR JOISTS SHALL HAVE BOTH CALCULATIONS AND DRAWINGS PRODUCED BY MANUFACTURER STAMPED THE LICENSED ENGINEER. CONTRACTOR SUBMITTING DEFERRED SUBMITTAL IS RESPONSIBLE TO MEET ALL CITY REQUIREMENTS PER PERMIT.
4. UNITED STRUCTURAL DESIGN WILL NOT STAMP DRAWINGS PRODUCED BY OTHERS WITH ENGINEERING SEAL. CONTRACTOR IS RESPONSIBLE FOR GETTING ALL ENGINEERING SEALS TO MEET THE CITY REQUIREMENTS FOR THE DEFERRED SUBMITTALS.
5. ITEMS THAT ARE SUBMITTED FOR CONSIDERATION AS DEFERRED SUBMITTALS ARE AS FOLLOWS:

- STEEL JOISTS AND JOIST GIRDERS
- HAMBRO STEEL JOISTS
- PREFABRICATED OPEN WEB WOOD/STEEL JOISTS
- COLD-FORMED STEEL FRAMING

MASONRY(2018 IBC):

1. MASONRY WORK SHALL CONFORM TO ALL REQUIREMENTS OF TMS 402, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES".
2. ALL UNITS SHALL BE LAID IN RUNNING BOND UNLESS NOTED OTHERWISE. VERTICAL ALIGNMENT OF CELLS SHALL MAINTAIN A CONTINUOUS CLEAR, UNOBSTRUCTED CELL NOT LESS THAN 3 INCHES SQUARE. MINIMUM DEPTH OF HORIZONTAL BOND BEAM CHANNEL BELOW TOP OF UNIT SHALL BE 1 1/2", AND CHANNEL SHALL BE 3" WIDE MINIMUM. ALL UNITS SHALL BE FREE OF DUST AND DIRT AT THE TIME OF LAYING.
3. MORTAR SHALL CONFORM TO ASTM C270 AND SHALL BE TYPE S WITH COMPRESSIVE STRENGTH = 1,800 PSI. MASONRY CEMENT AND EXTENDED LIFE MORTAR SHALL NOT BE USED.
4. GROUT SHALL CONFORM TO ASTM C-476. GROUT FOR WALLS CONSTRUCTED WITH HOLLOW CONCRETE MASONRY UNITS OR FOR TWO-WYTHE WALLS SHALL HAVE AN F'g = 2000 PSI. GROUT FOR WALLS CONSTRUCTED WITH HOLLOW BRICK MASONRY UNITS SHALL HAVE AN F'g = 3000 PSI.
5. VERTICAL REINFORCING (UNLESS NOTED OTHERWISE): PLACE #4 (6" WALLS), #5 (8" WALLS), #5 (12" WALL) BAR IN CENTER OF GROUT AT CENTER OF WALL, CONTINUOUS FULL HEIGHT OF WALL, WITH ONE BAR AT ALL CORNERS, INTERSECTIONS, WALL ENDS, BEAM BEARING, JAMBS AND EACH SIDE OF CONTROL JOINTS AND AT INTERVALS NOT TO EXCEED 48" OC TIE AT 8'-0" VERTICALLY, WITH SINGLE WIRE LOOP TIE BY AA PRODUCTS COMPANY. UNLESS NOTED OTHERWISE, LAP SPLICES SHALL BE PER LAP SPLICE SCHEDULE IN TYPICAL DETAILS. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION WITH STANDARD 90 DEGREE HOOKED DOWELS TO MATCH VERTICAL REINFORCING.
6. HORIZONTAL REINFORCING (UNLESS NOTED OTHERWISE): PLACE (2) #4 (6" WALL), (2) #5 (8" WALL), (2) #5 (12" WALL) BARS IN MINIMUM 8" DEEP GROUTED CONTINUOUS BOND BEAM AT ROOF AND ELEVATED FLOOR LINES. PLACE #4 (6" WALL), #5 (8" WALL), #5 (12" WALL) BAR IN MINIMUM 8" DEEP GROUTED CONTINUOUS BOND BEAM AT TOP OF PARAPET OR TOP OF A FREE-STANDING WALL. PLACE THESE BARS CONTINUOUS THROUGH CONTROL JOINT. WRAP MASTIC TAPE FOR 1'-6" EACH SIDE OF CONTROL JOINT. PROVIDE BENT BARS, TO MATCH HORIZONTAL BOND BEAM REINFORCING, AT CORNERS AND WALL INTERSECTIONS TO MAINTAIN BOND BEAM CONTINUITY. UNLESS NOTED OTHERWISE, LAP SPLICES SHALL BE PER TYPICAL REINFORCING BAR SPLICE DETAIL. STAGGER ALTERNATE SPLICES A MINIMUM OF 4'-0". PROVIDE STANDARD WEIGHT (NO.9 GAGE WIRE) DUR-O-WALL OR DUR-O-WIRE LADDER TYPE JOINT REINFORCING AT 16" OC IN MASONRY WALLS. LAP JOINT REINFORCING 6" MINIMUM. PROVIDE ADDITIONAL LADDER JOINT REINFORCING AT TOP AND BOTTOM OF ALL WALL OPENINGS AND EXTEND 24" PAST THE OPENING.
7. GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACING AND RECONSOLIDATED AFTER EXCESS MOISTURE HAS BEEN ABSORBED, BUT BEFORE WORKABILITY IS LOST.
8. PROVIDE CLEANOUTS IF GROUT POUR EXCEEDS 5'-0" IN HEIGHT. IF CLEANOUTS ARE PROVIDED, GROUT POUR MAXIMUM HEIGHT = 12'-0", IN LIFTS NOT TO EXCEED 6'-0".
9. UNLESS NOTED OTHERWISE ON THE PLANS, PLACE CONTROL JOINTS IN MASONRY WALLS SUCH THAT NO STRAIGHT RUN OF WALL EXCEEDS 24'-0". CONTROL JOINTS SHALL NOT OCCUR WITHIN 24" OF WALL CORNERS, INTERSECTIONS, ENDS OVER OPENINGS, OR WITHIN 24" OF JAMBS OR CONCENTRATED LOADS. CONTRACTOR SHALL PROVIDE MCJ LAYOUT TO ARCHITECT AND ENGINEER OF RECORD FOR REVIEW PRIOR TO START OF CONSTRUCTION.
10. GROUT ALL CELLS CONTAINING REINFORCING AND ALL MASONRY BELOW GRADE.
11. MASONRY UNIT PROPERTIES:

a. HOLLOW CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 WITH A COMPRESSIVE STRENGTH OF 2,000 PSI AND A DENSITY BETWEEN 105 PCF AND 125 PCF (MEDIUM WEIGHT). F'm FOR DESIGN IS 2000 PSI.

STEEL REINFORCING:

1. ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK. LATEST ACI CODE AND DETAILING MANUAL APPLY. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE. REINFORCING BAR SPACINGS GIVEN ARE MAXIMUM ON CENTERS.
2. ALL REINFORCING TO BE WELDED SHALL BE WELDED IN ACCORDANCE WITH AWS D1.4. NO TACK WELDING OF REINFORCING BARS IS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE BY STRUCTURAL ENGINEER.
3. REINFORCING LAP SPLICES IN CONCRETE SHALL BE PER TYPICAL DETAIL UNLESS NOTED OTHERWISE. ALL SPLICE LOCATIONS ARE SUBJECT TO APPROVAL. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS.
4. LAP IN WELDED WIRE FABRIC SHALL BE MADE SO THAT THE OVERLAP MEASURED BETWEEN THE OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2 INCHES.
5. TYPICAL REINFORCING BAR STRENGTHS
6. REINFORCING (NON-WELDABLE): ASTM A615, DEFORMED, Fy = 60 KSI
7. REINFORCING (WELDABLE): ASTM A706, DEFORMED, Fy = 60 KSI
8. WELDED WIRE REINFORCEMENT: ASTM A1064

9. TYPICAL CLEAR CONCRETE COVERAGES
- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
- FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:
  - #6 AND LARGER: 2"
  - #5 AND SMALLER: 1 1/2"
- FORMED CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
  SLABS, WALLS OR JOISTS:
  - #14 AND LARGER: 1 1/2”
    - #11 AND SMALLER: 3/4”
- BEAMS, COLUMNS (TO PRIMARY REINF., TIES OR STIRRUPS): 1 1/2”

ALL OTHERS PER LATEST EDITION OF ACI 318.

SHOP DRAWINGS:

1. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS AND ITEMS REQUIRED BY ARCHITECTURAL SPECIFICATIONS. UNITED STRUCTURAL DESIGN, LLC. ASSUMES NO RESPONSIBILITY FOR THE FAILURE OF THE CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW.
2. THE GENERAL CONTRACTOR WILL REVIEW AND STAMP ALL SHOP DRAWINGS AND PRODUCT DATA FOR CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS PRIOR TO SUBMISSION. DIMENSIONS AND ELEVATIONS SHOWN ON SHOP DRAWINGS SHALL BE COORDINATED BY THE GENERAL CONTRACTOR. ANY SHOP DRAWINGS OR PRODUCT DATA NOT REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR WILL BE RETURNED WITHOUT REVIEW. ITEMS NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS SHALL BE FLAGGED UPON CONTRACTORS REVIEW.
3. THE CONSTRUCTION DOCUMENTS MAY NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS.
4. ELECTRONIC FILES OF CONSTRUCTION DOCUMENTS WILL NOT BE MADE AVAILABLE FOR USE AS SHOP DRAWINGS.
5. VERIFY ALL DIMENSIONS AND FINISHED GRADE WITH ARCHITECTURAL DRAWINGS, CIVIL DRAWINGS, AND FIELD CONDITIONS.
6. THE ENGINEER OF RECORD HAS THE RIGHT TO APPROVE OR DISAPPROVE ANY CHANGES TO CONTRACT DOCUMENTS AT ANYTIME BEFORE OR AFTER SHOP DRAWING REVIEW.
7. ITEMS OMITTED OR SHOWN INCORRECTLY AND ARE NOT FLAGGED BY THE STRUCTURAL ENGINEER OR ARCHITECT SHALL NOT BE CONSIDERED CHANGES TO THE CONTRACT DOCUMENTS.
8. SHOP DRAWINGS DO NOT REPLACE THE CONTRACT DOCUMENTS. REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. IT IS THE CONTRACTOR’S RESPONSIBILITY TO ENSURE ALL ITEMS ARE CONSTRUCTED ACCORDING TO THE CONTRACT DOCUMENTS.

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USD Project No.:240005

STRUCTURAL STEEL:

1. LATEST AISC AND AWS CODES APPLY. THE WORD APPROVED INSPECTION 4.4 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES IS REDEFINED AS REVIEWED.
2. STEEL SHALL BE FINISHED AT LOCATIONS EXPOSED TO WEATHER WITH A CORROSION RESISTANT COATING APPLICABLE TO WEATHER AND EXPOSURE CONDITIONS OF PROJECT LOCATION.
3. WHEN STRUCTURAL STEEL IS FURNISHED TO A SPECIFIED MINIMUM YIELD POINT GREATER THAN 36 KSI, THE ASTM OR OTHER SPECIFICATION DESIGNATION SHALL BE INCLUDED NEAR THE ERECTION MARK ON EACH SHIPPING ASSEMBLY OR IMPORTANT CONSTRUCTION COMPONENT OVER ANY SHOP COAT OF PAINT PRIOR TO SHIPMENT FROM THE FABRICATORS PLANT.
4. IF IT IS NECESSARY TO SPLICE ANY MEMBER, SPLICE LOCATIONS ARE SUBJECT TO REVIEW BY STRUCTURAL ENGINEER. SPLICES SHALL BE FULL PENETRATION WELDED AND TESTED PER THIS SECTION. INDICATE ALL SPLICE LOCATIONS, AND WELDING PROCEDURES ON SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.
5. ALL BEAMS SHALL BE ERECTED WITH THE NATURAL CAMBER UPWARDS.
6. ALL BOLTS SHALL BE INSTALLED WITH STEEL WASHERS.
7. ALL WELDING BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES, CERTIFICATES SHALL BE THOSE ISSUED BY AN INDEPENDENT TESTING AGENCY.
8. ALL WELDING DONE BY E70 SERIES LOW HYDROGEN RODS. USE E90 SERIES FOR ASTM A706 REINFORCING BARS. USE E308 SERIES FOR STAINLESS TO STAINLESS WELDS AND E309 SERIES FOR STAINLESS TO CARBON STEELS.
9. ALL WELDING PER AMERICAN WELDING SOCIETY STANDARDS. ALL WELDS ON DRAWINGS ARE SHOWN AS SHOP WELDS. CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS OR FIELD WELDS SHALL BE SHOWN ON SHOP DRAWINGS.
10. SLAG SHALL BE REMOVED FROM ALL COMPLETED WELDS, AND THE WELD AND ADJACENT BASE METAL SHALL BE CLEANED BY BRUSHING OR OTHER SUITABLE MEANS. WELDED JOINTS SHALL NOT BE PAINTED UNTIL AFTER WELDING HAS BEEN COMPLETED AND THE WELD ACCEPTED.
11. ALL COMPLETE PENETRATION WELDS SHALL BE TESTED.
12. STEEL FABRICATOR TO COORDINATE ALL BRACING, PLATES, ERECTION BOLTS, ETC. WITH STEEL JOIST MANUFACTURER AND STEEL ERECTOR.
13. ALL STRUCTURAL STEEL SHALL BE FABRICATED BY A FABRICATOR WITH ANY ONE OF THE FOLLOWING MINIMUM QUALIFICATIONS. QUALIFICATIONS SHALL BE IN EFFECT AT TIME OF BID.
    - INTERNATIONAL ACCREDITATION SERVICE, INC. (IAS) APPROVED FABRICATOR.
    - AISC CERTIFIED FABRICATOR (STD).
14. STEEL PROPERTIES
    - WIDE FLANGE COLUMNS, BEAMS AND TEES: ASTM A992 (Fy = 50 KSI)
    - CHANNELS, PLATES AND ANGLES: ASTM A36 (Fy = 36 KSI)
    - PIPE STEEL: ASTM A53 Gr. B (Fy = 35 KSI)
    - HSS RECTANGULAR STEEL: ASTM A500 Gr. C (Fy = 50 KSI)
    - HSS ROUND STEEL: ASTM A500 Gr. C (Fy = 46 KSI)
    - BOLTS: ASTM F3125 (A325) OR ASTM A F1852 TWIST-OFF TYPE
    - ANCHOR RODS: ASTM F1554 Gr. 36 (Fy = 36 KSI)
15. STEEL BOLTS SHALL BE PRETENSIONED UNLESS OTHERWISE NOTED AS A SNUG-TIGHT CONNECTION ON THE DRAWINGS OR DETAILS. ONE OF THE FOLLOWING METHODS SHALL BE USED TO ASSURE ADEQUATE PRETENSIONING IS ACHIEVED:
    - TURN-OF-NUT METHOD
    - DIRECT TENSION INDICATOR WASHERS
    - CALIBRATED WRENCH
    - TWIST-OFF TYPE BOLT

SHEET LIST

SHEET NUMBER	SHEET NAME
S0.1	GENERAL STRUCTURAL NOTES
S0.2	GENERAL STRUCTURAL NOTES
S0.3	SPECIAL INSPECTIONS
S0.4	SPECIAL INSPECTIONS
S1.1	TYPICAL DETAILS
S1.2	TYPICAL DETAIL
S1.3	TYPICAL DETAIL
S1.4	TYPICAL DETAIL
S1.5	SCHEDULES
S2.1	FOUNDATION PLAN
S3.1	ROOF FRAMING PLAN
S3.2	HIGH ROOF FRAMING PLAN
S4.1	FOUNDATION DETAILS
S5.1	FRAMING DETAILS
S5.2	FRAMING DETAILS

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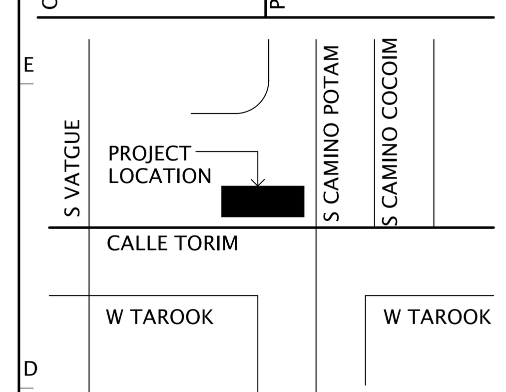

VICINITY

REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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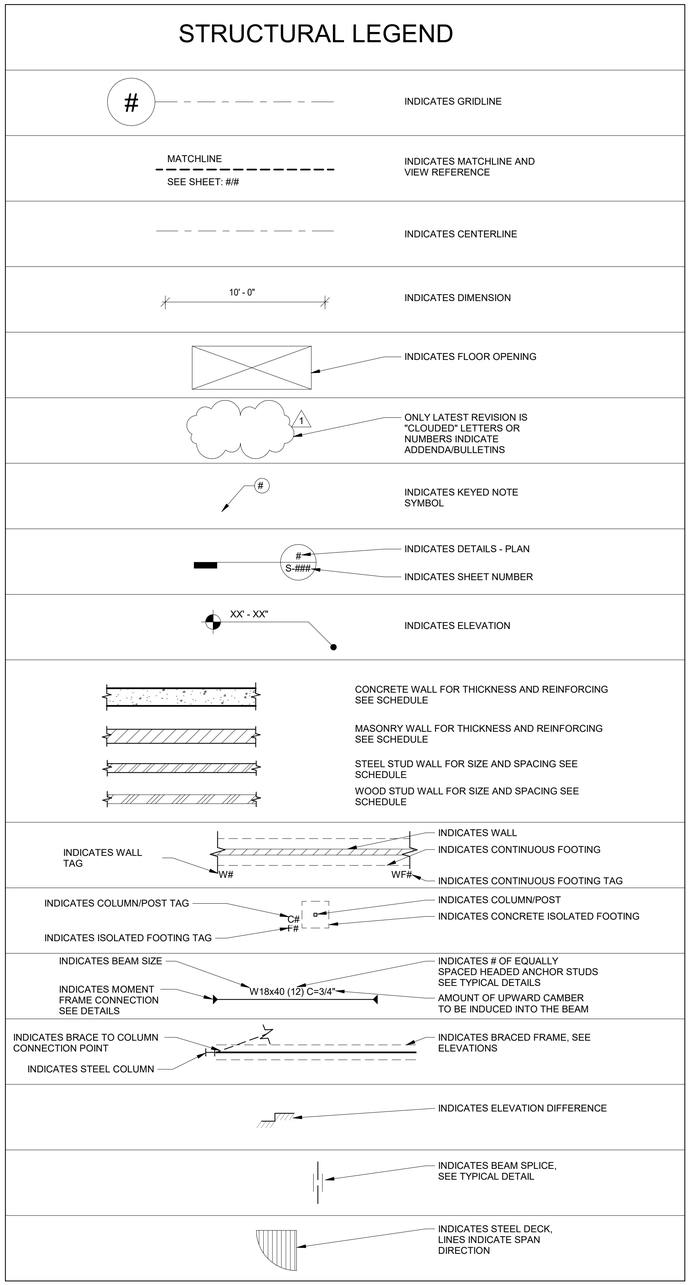
SHEET TITLE
GENERAL STRUCTURAL NOTES

DATE 01.11.2024

SHEET S0.1

STRUCTURAL LEGEND



COLD-FORMED STEEL FRAMING:

1. ALL COLD-FORMED STEEL FRAMING SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS BY THE AMERICAN IRON AND STEEL INSTITUTE AND THE STEEL STUD MANUFACTURERS ASSOCIATION AND ICC ESR-3064P).
2. STEEL FOR ALL MEMBERS AND FOR ALL STRAPS SHALL HAVE A MINIMUM YIELD STRENGTH OF 50,000 PSI.
3. STEEL SHALL BE GALVANIZED AT LOCATIONS EXPOSED TO WEATHER AND WHENEVER NOTED ON THE DRAWINGS.
4. ALL MEMBERS SHALL BE SECURELY SEATED FOR FULL BEARING UNLESS NOTED OTHERWISE.
5. TRACK ANCHOR RODS SHALL BE 1/2" DIAMETER PLACED SO AS NOT TO EXCEED 4'-0" OC UNLESS NOTED OTHERWISE. ANCHOR RODS SHALL BE PLACED AT ALL JAMBS, CORNERS, INTERSECTIONS AND WALL ENDS. ALL BOTTOM TRACKS SHALL HAVE A MINIMUM OF 2 ANCHOR RODS.
6. ALL WELDING SHALL BE PERFORMED BY WELDERS EXPERIENCED IN LIGHT GAGE STEEL FRAMING WORK.
7. ALL COLD-FORMED FRAMING SIZES, GAGE AND SPACING ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL CONSTRUCT AND ASSURE THE PROPER PERFORMANCE OF THE COMPLETE WALL OR SOFFIT ASSEMBLAGE.
8. ALL SCREWS REFERENCED IN THE DRAWINGS FOR LIGHT GAUGE CONNECTIONS SHALL BE DRIL-FLEX BY HILTI OR APPROVED EQUIVALENT (ICC ESR-3332).
9. STEEL STUD SIZES ARE AS INDICATED IN PLANS AND KEYNOTES. THICKNESSES REFERENCED IN THE DRAWINGS ARE AS FOLLOWS:
   - 16 GAUGE MATERIAL - 0.0566 INCHES
   - 14 GAUGE MATERIAL - 0.073 INCHES
   - 12 GAUGE MATERIAL - 0.1017 INCHES
   - 10 GAUGE MATERIAL - 0.1242 INCHES
   - NOTE: THE UNCOATED MINIMUM STEEL THICKNESS OF THE COLD-FORMED STEEL PRODUCTS AS DELIVERED TO THE JOB SITE SHALL NOT AT ANY LOCATION BE LESS THAN 95 PERCENT OF THE DESIGN THICKNESS INDICATED ABOVE.
10. SSMA NON-STRUCTURAL INTERIOR STEEL STUD AND TRACKS SHALL BE AS FOLLOWS - TYPICAL UNO (DESIGN BASIS = 5 PSF INTERIOR LOAD, DEFLECTION LIMIT = L/240) AT A MINIMUM WALLS SHALL HAVE A SINGLE LAYER OF 5/8" TYPE x GYPSUM BOARD INSTALLED IN THE VERTICAL ORIENTATION TO BOTH SIDES OF THE WALL OVER FULL HEIGHT USING MINIMUM NO. 6 TYPE S DRYWALL SCREWS SPACED AT A MAXIMUM OF 12" OC FOR STUDS AT 24" OC AND 16" OC FOR STUDS AT 16" OC

MAX WALL HEIGHT	STUD SIZE-MILS		STUD SPACING	TRACK SIZE-MILS
0'-0" TO 12'-8"	3 5/8"	362S125-27	24" OC	362T125-27
12'-9" TO 14'-6"	3 5/8"	362S125-27	16" OC	362T125-27
14'-7" TO 19'-6"	6"	600S125-30	24" OC	600T125-30
19'-7" TO 22'-4"	6"	600S125-30	16" OC	600T125-30

16. BRIDGING SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS WITH THE FOLLOWING MINIMUM REQUIREMENTS:

- FOR NON-BEARING WALLS, PROVIDE BRIDGING AT MID-HEIGHT FOR WALLS LESS THAN OR EQUAL TO 10'-0" HIGH, AND 5'-0" OC MAXIMUM FOR WALLS GREATER THAN 10'-0" HIGH. FOR BEARING WALLS, PROVIDE BRIDGING EQUALLY SPACED AT 4'-0" OC MAXIMUM. IN ADDITION, BRIDGING SHALL BE PROVIDED AT ROOF LINES, FLOOR LINES AND ELSEWHERE AS NOTED ON THE DRAWINGS. SOLID BLOCKING SHALL BE INSTALLED IN LIEU OF BRIDGING WHERE NOTED ON THE DRAWINGS.

DRYPACK/FLOWABLE GROUT:

1. THE SPACE BENEATH ALL BASEPLATES AND BEARING PLATES SHALL BE THOROUGHLY CLEANED BEFORE DRYPACKING OR GROUTING. DRYPACK/GROUT SOLID BENEATH ALL BASEPLATES AND BEARING PLATES (MINIMUM 95% BEARING). NO VOIDS ARE PERMISSIBLE. USE OF DRYPACK OR FLOWABLE GROUT IS AT THE CONTRACTORS OPTION UNLESS SPECIFICALLY NOTED ON THE PLANS OR DETAILS. DRYPACK/GROUT PER THE FOLLOWING:

- DRYPACK - PORTLAND CEMENT, ASTM C150, TYPE I; AND CLEAN, NATURAL SAND, ASTM C404, SIZE NO. 2. MIX AT RATIO OF 1 PART CEMENT TO 2 1/2 PARTS SAND, BY VOLUME, WITH MINIMUM WATER REQUIRED FOR PLACEMENT AND HYDRATION. MINIMUM COMPRESSIVE STRENGTH SHALL BE 3000 PSI AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM C109.
- FLOWABLE GROUT - PREMIXED, NONMETALLIC, NONCORROSIVE, NONSTAINING GROUT CONTAINING SELECTED SILICA SANDS, PORTLAND CEMENT, SHRINKAGE COMPENSATING AGENTS, PLASTICIZING AND WATER-REDUCING AGENTS, COMPLYING WITH ASTM C1107, OF CONSISTENCY SUITABLE FOR APPLICATION, AND A 30-MINUTE WORKING TIME. MINIMUM COMPRESSIVE STRENGTH SHALL BE 5000 PSI AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM C1107. GROUT MUST BE CURED WITH WATER OR AN ASTM C309 CURE.

POST-INSTALLED ANCHORS:

1. POST-INSTALLED ANCHOR SYSTEMS SHALL COMPLY WITH THE LATEST REVISION OF ICC-ES ACCEPTANCE CRITERIA AND HAVE A VALID ICC-ES REPORT IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE.
2. ANCHORS INSTALLED IN THE BOTTOM OF CONCRETE OVER STEEL DECK SHALL BE INSTALLED IN THE BOTTOM FLUTE ONLY.
3. ANCHORS ARE NOT TO BE INSTALLED UNTIL CONCRETE OR GROUT HAS REACHED ITS DESIGN STRENGTH.
4. FOR ANCHOR EMBEDMENT, SEE DRAWINGS OR TYPICAL DETAIL. USE EMBEDMENT RECOMMENDED BY MANUFACTURER WHERE NO EMBEDMENT IS SHOWN.
5. MANUFACTURER'S INSTALLATION TRAINING AND CERTIFICATION IS REQUIRED ON ALL POST-INSTALLED ANCHORS FOR ANCHOR INSTALLER.
6. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION TO SUPPORT SUSTAINED TENSION LOADS SHALL BE DONE BY A CERTIFIED ADHESIVE INSTALLER (AAI) AS CERTIFIED THROUGH ACI/CRSI PER ACI 318. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.
7. POST INSTALLED ANCHORS IN MASONRY MUST BE INSTALLED IN MASONRY THAT HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 1,500 PSI.
8. ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS PER ACI 318.
9. EXPANSION BOLTS IN CONCRETE SHALL BE ONE OF THE FOLLOWING:
   - HILTI KWIK BOLT TZ CARBON STEEL ANCHORS (ICC-ES REPORT ESR-1917).
   - SIMPSON STRONG-TIE STRONG-BOLT 2 ANCHOR (ICC-ES REPORT ESR-3037).
   - DEWALT POWER-STUD+SD2 ANCHOR (ICC-ES REPORT ESR-2502).
10. SCREW ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING:
    - HILTI KWIK HUS-EZ CONCRETE SCREW ANCHOR (ICC-ES REPORT ESR-3027.)
    - SIMPSON TITEN HD CONCRETE SCREW ANCHOR (ICC-ES REPORT ESR-2713)
11. ADHESIVE ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING:
    - HILTI HIT-RE 500 V3 ADHESIVE ANCHOR (ICC-ES REPORT ESR-3814).
    - SIMPSON STRONG - TIE SET - 3G (ICC ES ESR-4057).
12. ANCHORS IN CONCRETE OVER STEEL DECK SHALL BE ONE OF THE FOLLOWING:
    - HILTI KWIK BOLT TZ CARBON STEEL ANCHORS (ICC-ES REPORT ESR-1917).
    - HILTI KWIK HUS-EZ CONCRETE SCREW ANCHOR (ICC-ES REPORT ESR-3027).
    - SIMPSON STRONG-TIE STRONG-BOLT 2 WEDGE ANCHOR (ICC-ES REPORT ESR-3037).
    - SIMPSON STRONG-TIE TITEN HD SCREW ANCHOR (ICC-ES REPORT ESR-2713) AND STAINLESS STEEL TITEN HD SCREW ANCHOR (IAPMO UES ER-493).
    - DEWALT POWER-STUD+SD2 ANCHOR (ICC-ES REPORT ESR-2502).
13. EXPANSION BOLTS IN MASONRY SHALL BE ONE OF THE FOLLOWING:
    - HILTI KWIK BOLT 3 (ICC-ES REPORT ESR-1385).
    - HILTI KWIK BOLT TZ CARBON STEEL ANCHORS (ICC-ES REPORT ESR-3785).
    - SIMPSON STRONG - TIE STRONG-BOLT 2 ANCHOR (IAPMO UES ER-240).
14. ADHESIVE ANCHORS IN MASONRY SHALL BE ONE OF THE FOLLOWING:
    - HILTI HIT HY 270 ADHESIVE ANCHOR (ICC-ES REPORT ESR-4143).
    - SIMPSON STRONG-TIE SET-3G ADHESIVE ANCHOR (IAPMO UES ER-265).
15. SCREW ANCHORS IN GROUT FILLED MASONRY SHALL BE ONE OF THE FOLLOWING:
    - HILTI KWIK HUS-EZ CONCRETE MASONRY SCREW ANCHOR (ICC-ES REPORT ESR-3056).
    - SIMPSON STRONG-TIE TITEN HD SCREW ANCHOR (ICC-ES REPORT ESR-1056).
    - FOR UNREINFORCED MASONRY: SIMPSON STRONG-TIE ET-HP (ICC-ES ESR-3638 OR SET-XP (IAPMO UES ER-265).

STEEL ROOF DECKING:

1. STEEL ROOF DECK SHALL HAVE CURRENT ICC OR IAPMO APPROVAL.
2. SHEETS SHALL HAVE LAPPED ENDS. MINIMUM LAP = 2".
3. 2" MINIMUM BEARING AT ALL SUPPORTS.
4. THE FIRST SHEET OF STEEL DECK ADJACENT AND PARALLEL TO WALLS, PERIMETER MEMBERS OR MEMBERS IDENTIFIED AS CHORD, COLLECTOR OR DRAG MEMBERS (ON ONE OR BOTH SIDES AS APPLICABLE) SHALL BE FULL PANEL WIDTH SHEETS.
5. ALL WELDING SHALL BE PERFORMED BY WELDERS EXPERIENCED IN LIGHT GAGE STEEL DECK WORK. ALL WELDING DONE BY E60 (MINIMUM) SERIES RODS.
6. SCREW FASTENERS SHALL BE CADMIUM PLATED, SELF-DRILLING, SELF-TAPPING SCREWS WITH NEOPRENE WASHERS. ALL SCREWS REFERENCED IN THE DRAWINGS SHALL BE SIMPSON STRONG-TIE X OR PPSD SELF-DRILLING TAPPING SCREWS (ICC-ES ESR-3006); OR DRIL-FLEX BY HILTI OR APPROVED EQUIVALENT (ICC ESR-3332).
7. DECK PROPERTIES:
   - DEPTH: 1 1/2"
   - WIDTH: 36"
   - GAUGE: 20
   - MINIMUM YIELD STRESS: 50 KSI
   - MINIMUM +S: 0.230 INCHES^3 PER FOOT OF WIDTH
   - MINIMUM I: 0.231 INCHES^4 PER FOOT OF WIDTH
   - SPAN MINIMUM: 3 SPAN
   - MAXIMUM CLEAR SPAN BETWEEN SUPPORTS: 8 FEET
   - MINIMUM DIAPHRAGM SHEAR CAPACITY: 386 PLF
   - FINISH: GALVANIZED
8. DECK ATTACHMENT:
   - (4) #12-24 SCREWS PER SHEET AT ENDS, END LAPS AND INTERMEDIATE SUPPORTS. PROVIDE (7) #12-24 SCREWS PER SHEET AT CANOPY AT ENDS, END LAPS AND INTERMEDIATE SUPPORTS.
   - #12-24 AT 12" OC AT BEAMS AND OPENING EDGES RUNNING PARALLEL TO THE DECK
   - #10 SCREWS AT 12" OC AT SIDE SEAM ATTACHMENTS.
9. ALTERNATE ROOF DECK ATTACHMENT:
   - (4) 3/4" VISIBLE DIAMETER (1/2" EFFECTIVE DIAMETER) OR 5/8"x1 1/4" VISIBLE SIZE (3/8"x1" EFFECTIVE SIZE) ARC SPOT PUDDLE WELDS PER SHEET AT ENDS, END LAPS AND INTERMEDIATE SUPPORTS.
   - 12" OC 3/4" VISIBLE DIAMETER (1/2" EFFECTIVE DIAMETER) OR 5/8"x1 1/4" VISIBLE SIZE (3/8"x1" EFFECTIVE SIZE) ARC SPOT PUDDLE WELDS AT BEAMS AND OPENING EDGES RUNNING PARALLEL TO THE DECK
   - #10 SCREWS AT 12" OC AT SIDE SEAM ATTACHMENTS.

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STEEL JOISTS AND JOIST GIRDERS:

1. ALL JOISTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE STEEL JOIST INSTITUTE, AND OSHA REGULATIONS
2. MANUFACTURER SHALL DESIGN JOIST AND JOIST GIRDERS IN ACCORDANCE WITH THE UL DESIGN REQUIREMENTS IN ORDER TO ACHIEVE THE FIRE RATING SPECIFIED IN THE ARCHITECTURAL DRAWINGS.
3. STEEL JOIST FABRICATOR SHALL HAVE AN ICC APPROVAL OR BE AN APPROVED FABRICATOR ACCORDING TO THE BUILDING JURISDICTION.
4. ALL JOISTS AND JOIST GIRDERS SHALL BE CAMBERED PER SJI SPECIFICATIONS.
5. DEFLECTIONS SHALL BE LIMITED PER TABLE 1604.3 IN THE INTERNATIONAL BUILDING CODE.
6. ALL BRIDGING SHOWN ON PLAN IS FOR COORDINATION PURPOSES ONLY. FOR BIDDING PURPOSES AND SHOP DRAWINGS, BRIDGING SHALL BE PROVIDED PER SJI SPECIFICATIONS. WHERE CROSS BRIDGING INTERFERES WITH MECHANICAL INSTALLATIONS, REMOVE THIS CROSS BRIDGING AFTER TOTAL DEAD LOAD IS APPLIED AND REPLACE WITH HORIZONTAL ANGLES 2"x2"x3/16" AT TOP AND BOTTOM CHORDS.
7. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SEALED CALCULATIONS FOR ALL MEMBERS, FOR REVIEW PRIOR TO FABRICATION. SUBMITTAL SHALL INCLUDE CALCULATIONS FOR ALL JOIST SHOES WHERE BEARING LENGTH IS LESS THAN 4" AT LH SERIES JOISTS OR 3" FOR K SERIES JOISTS. CALCULATIONS SHALL INCLUDE DEAD, ROOF LIVE AND WIND LOAD DEFLECTIONS. STRESS RATIOS FOR INDIVIDUAL MEMBERS IN THE CALCULATIONS SHALL NOT EXCEED 1.00 FOR COMBINED LOAD. SHOP DRAWINGS AND CALCULATIONS SHALL INCLUDE DETAILS OF ANY OPTIONAL FIELD SPLICES AND IF HIGH STRENGTH BOLTS OR COMPLETE PENETRATION WELDS ARE UTILIZED, CONTRACTOR SHALL RETAIN AN INDEPENDENT TESTING LABORATORY FOR TESTING AND CERTIFICATION.
8. ALL FRAMING MEMBERS OR OTHER POINT LOADS SHALL BEAR AT A PANEL POINT, AND SHALL BE EQUALLY SPACED BETWEEN COLUMN LINES - TYP. UNO.
9. WHERE BOTTOM CHORD WELDING IS INDICATED, DO NOT WELD BOTTOM CHORD TO SUPPORT UNTIL FULL DEAD LOAD IS IN PLACE.
10. LOADS SHOWN ON PLANS FOR JOIST AND JOIST GIRDERS ARE SUPERIMPOSED LOADS AND DO NOT INCLUDE SELFWEIGHT.
11. IN ADDITION TO ALL OTHER LOADS SHOWN ON THE DRAWINGS, ALL JOISTS SHALL BE DESIGNED FOR AN ADDITIONAL 600 LB. POINT LOAD AT ANY PANEL POINT.
12. IN ADDITION TO ALL OTHER LOADS SHOWN ON THE DRAWINGS, ALL JOIST GIRDERS SHALL BE DESIGNED FOR AN ADDITIONAL 1,000 LB. POINT LOAD AT EACH PANEL POINT.
13. VERIFY SIZE, WEIGHT, AND LOCATION OF SUPPORTED EQUIPMENT WITH ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, AND SPRINKLER DRAWINGS. SPRINKLER AND PLUMBING PIPING 4" DIA. OR GREATER MUST BE ADDED TO JOIST DESIGN LOADS (REFER TO FIRE PROTECTION AND PLUMBING DRAWINGS).
14. THIS IS A DEFERRED SUBMITTAL ITEM.
15. JOIST SIZES ARE AS INDICATED ON PLANS. TYPICAL CALLOUTS ARE AS FOLLOWS:
    - TYPICAL STEEL JOIST - 24LH 300/150/80
    - 24 - INDICATES JOIST DEPTH (INCHES)
    - LH - INDICATES JOIST TYPE
    - 300 - INDICATES TOTAL LOAD (PLF)
    - 150 - INDICATES LIVE LOAD (PLF)
    - 80 - INDICATES NET WIND UPLIFT LOAD (PLF) (00 INDICATES NO NET WIND UPLIFT)

    - TYPICAL STEEL JOIST GIRDER - 32G 5N 10.0K
    - 32 - INDICATES GIRDER DEPTH (INCHES)
    - G - INDICATES GIRDER TYPE
    - 5N - INDICATES NUMBER OF JOIST SPACES
    - 10.0K - INDICATES TOTAL LOAD AT PANEL POINT

NOTE TO CONTRACTOR REGARDING PRICING/BIDDING OF PROGRESS CONSTRUCTION DRAWINGS:

1. IF THESE DRAWINGS DO NOT HAVE THE ENGINEER OF RECORD'S SEAL AND SIGNATURE AND CITY APPROVED STAMP THEN THESE DRAWINGS SHALL BE ASSUMED FOR PROGRESS REVIEW AND COORDINATION, AND ARE NOT 100% CONSTRUCTION DOCUMENTS. IF THESE DRAWINGS ARE TO BE USED FOR PRICING, BID, OR STEEL MILL ORDER, THE CONTRACTOR SHALL PROVIDE IN THE PROJECT BUDGET AN ALLOWANCE FOR THE COMPLETION OF THE STRUCTURAL DESIGN. THIS ALLOWANCE SHALL BE CARRIED UNTIL ALL SHELL BUILDING PERMITS ARE OBTAINED, AND FINAL CONSTRUCTION DOCUMENTS ARE ISSUED. AS THESE DRAWINGS ARE NOT ISSUED FOR CONSTRUCTION, CHANGES TO STRUCTURAL COMPONENTS SHOW ARE POSSIBLE. ADDITIONALLY, MISCELLANEOUS ITEMS MAY NOT BE SHOWN ON THESE DRAWINGS. REFER TO ARCHITECTURAL MECHANICAL, ELECTRICAL, AND OTHER SPECIALTY DRAWINGS FOR ADDITIONAL INFORMATION. THE BUDGET ALLOWANCE SHALL INCLUDE THESE ITEMS. THE STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR ANY CHANGE ORDER COSTS INCURRED (INCLUDING DISCARDED MATERIAL COSTS) DUE TO BIDDING OR STEEL MILL ORDER FROM PROGRESS DRAWINGS. CONTACT STRUCTURAL ENGINEER THROUGH ARCHITECT FOR CLARIFICATION IF THE SCOPE AND QUANTITY OF ALLOWANCE TO BE CARRIED IS NOT CLEAR.

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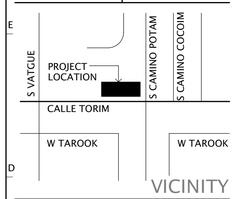

REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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SHEET TITLE

GENERAL STRUCTURAL NOTES

DATE 01.11.2024

SHEET **S0.2**

SPECIAL STRUCTURAL INSPECTIONS:

PER IBC SECTION 1704 AND 1705 SPECIAL INSPECTIONS ARE IN ADDITION TO THE REQUIRED INSPECTION CONDUCTED BY THE BUILDING JURISDICTION PER IBC SECTION 110.
THE TYPES OF WORK LISTED BELOW SHALL BE INSPECTED BY A SPECIAL INSPECTOR.

1. ALL SPECIAL INSPECTORS SHALL BE UNDER THE SUPERVISION OF A REGISTERED CIVIL OR STRUCTURAL ENGINEER.
2. THE QUALIFICATIONS OF ALL SPECIAL INSPECTORS SHALL BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
3. THE MINIMUM QUALIFICATIONS FOR THE SPECIAL INSPECTORS ARE AS FOLLOWS:
   - CONCRETE INSPECTION - ICC CERTIFICATION IN REINFORCED CONCRETE OR EIT CERTIFICATION.
   - STRUCTURAL WELDING INSPECTION
     - VISUAL TESTING - ICC CERTIFICATION IN STRUCTURAL STEEL AND WELDING OR AWS CERTIFIED WELD INSPECTOR (CWI).
     - NON-DESTRUCTIVE TESTING - AWS CWI
   - HIGH STRENGTH BOLTING INSPECTION - ICC CERTIFICATION IN STRUCTURAL STEEL AND WELDING.
   - SPECIAL CASES - EXPERIENCE ACCEPTABLE TO THE STRUCTURAL ENGINEER OF RECORD.
4. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
   - THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK REQUIRING SPECIAL INSPECTION FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
   - THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO BE KEPT AT THE SITE FOR USE BY THE BUILDING OFFICIAL, THE CONTRACTOR, THE STRUCTURAL ENGINEER OF RECORD, AND THE ARCHITECT OF RECORD. IF SPECIAL INSPECTION IS PROVIDED BY ANYONE OTHER THAN THE STRUCTURAL ENGINEER OF RECORD, INSPECTION REPORTS SHALL BE SUBMITTED TO THE OFFICE OF THE STRUCTURAL ENGINEER ON A WEEKLY BASIS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.
   - UPON COMPLETION OF THE ASSIGNED WORK, THE SPECIAL INSPECTOR SHALL COMPLETE AND SIGN A FINAL REPORT CERTIFYING THAT TO THE BEST OF THEIR KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.
5. DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR:
   - NOTIFY THE RESPONSIBLE INSPECTOR THAT WORK IS READY FOR INSPECTION AT LEAST ONE WORKING DAY (24 HOURS MINIMUM) BEFORE SUCH INSPECTION IS REQUIRED.
   - ALL WORK REQUIRING SPECIAL STRUCTURAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT IS OBSERVED BY THE SPECIAL STRUCTURAL INSPECTOR.
6. SPECIAL INSPECTION
   - INSPECTION OF FABRICATORS
   - INSPECTION OF CONCRETE CONSTRUCTION
   - INSPECTION OF MASONRY CONSTRUCTION
   - INSPECTION OF STRUCTURAL STEEL
   - INSPECTION OF COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION
   - INSPECTION OF POST-INSTALLED ANCHORS
   - INSPECTION OF SOILS

SEE TABLES ON GSN FOR ADDITIONAL INFORMATION.

2018 IBC, 1705.6 SPECIAL INSPECTION OF SOILS

SPECIAL INSPECTION FOR EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT AND LOAD-BEARING REQUIREMENTS SHALL BE AS REQUIRED BY TABLE 1705.6.

2018 IBC, TABLE 1705.6: REQUIRED VERIFICATION AND INSPECTION OF SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
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 THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X

1705.2.2 SPECIAL INSPECTION OF STRUCTURAL STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL

SPECIAL INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH TABLE 1705.2.2

IBC, TABLE 1705.2.2 REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCE STANDARD
1. MATERIAL VERIFICATION OF COLD-FORMED STEEL			
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	-	X	APPLICABLE ASTM MATERIAL STANDARD
b. MANUFACTURER'S CERTIFIED TEST REPORTS.	-	X	
2. INSPECTION OF WELDING:			
a. COLD-FORMED STEEL DECK:			
1) FLOOR AND ROOF DECK WELDS.	-	X	AWS D1.3
b. REINFORCING STEEL:			AWS D1.4 ACI 318: SECTION 3.5.2
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706	-	X	
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCING.	X	-	
3) SHEAR REINFORCEMENT.	X	-	
4) OTHER REINFORCING STEEL.	-	X	

SPECIAL CASES: POST-INSTALLED ANCHORS

SPECIAL INSPECTION FOR EXPANSION, SCREW, AND EPOXY/ADHESIVE ANCHORS ARE REQUIRED DURING THE PLACEMENT OF ALL POST-INSTALLED ANCHORS SHOWN ON STRUCTURAL DRAWINGS AND INCLUDE:
- VISUAL VERIFICATION OF HOLE DIAMETER, HOLE DEPTH, AND DRILL BIT CONFORMANCE.
- VISUAL VERIFICATION OF HOLE CLEANING PER SPECIFIED PRODUCT MANUFACTURER'S RECOMMENDATIONS.
- VISUAL VERIFICATION OF ANCHOR INSTALLATION ACCORDING TO SPECIFIED PRODUCT MANUFACTURER'S RECOMMENDATIONS. INSPECTION OF EXPANSION AND SCREW ANCHORS SHALL INCLUDE VERIFICATION OF THE TIGHTENING TORQUE REQUIRED PER SPECIFIED ANCHOR MANUFACTURER.

1704.2.5 SPECIAL INSPECTION OF FABRICATORS:

SPECIAL INSPECTION OF FABRICATION OF STRUCTURAL STEEL BEING PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP IS REQUIRED.

EXCEPTION: SPECIAL INSPECTIONS OF FABRICATORS WITH ONE OF THE FOLLOWING QUALIFICATIONS IS NOT REQUIRED:
- INTERNATIONAL ACCREDITATION SERVICE, INC. (IAS) APPROVED FABRICATOR.
- AISC CERTIFIED FABRICATOR (STD).

THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR INSPECTION CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. THE SPECIAL INSPECTOR SHALL REVIEW THE PROCEDURES FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS FOR THE FABRICATOR'S SCOPE OF WORK.

ANSI S240, SPECIAL INSPECTION OF COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION

O - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS

P - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER

TABLE D65-1 MATERIAL VERIFICATION TASKS PRIOR TO ASSEMBLY OR INSTALLATION

TASK	QC	QA
VERIFY COMPLIANCE OF COLD-FORMED STEEL STRUCTURAL MEMBERS	P	P
VERIFY COMPLIANCE OF CONNECTORS	P	P
DOCUMENT ACCEPTANCE OR REJECTION OF COLD-FORMED STEEL STRUCTURAL MEMBERS AND CONNECTORS	*	P

*DOCUMENTATION TASKS FOR QUALITY CONTROL SHOULD BE AS DEFINED BY THE APPLICABLE QUALITY CONTROL PROGRAM OF THE COMPONENT MANUFACTURER OR INSTALLER.

TABLE D6.5-2 MATERIAL VERIFICATION TASKS AFTER ASSEMBLY OR INSTALLATION

TASK	QC	QA
VERIFY COMPLIANCE OF COLD-FORMED STEEL STRUCTURAL MEMBERS	P	P
VERIFY COMPLIANCE OF CONNECTORS	P	P
DOCUMENT ACCEPTANCE OR REJECTION OF COLD-FORMED STEEL STRUCTURAL MEMBERS AND CONNECTORS	*	P

*DOCUMENTATION TASKS FOR QUALITY CONTROL SHOULD BE AS DEFINED BY THE APPLICABLE QUALITY CONTROL PROGRAM OF THE COMPONENT MANUFACTURER OR INSTALLER.

TABLE D6.6-1 INSPECTION OR EXECUTION TASKS PRIOR TO WELDING

TASK	QC	QA
WELDING PROCEDURE SPECIFICATIONS AVAILABLE	O	O
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	O	O
MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O
CHECK WELDING EQUIPMENT	O	O

TABLE D6.6-2 INSPECTION OR EXECUTION TASKS DURING WELDING

TASK	QC	QA
USE OF QUALIFIED WELDERS	O	O
CONTROL AND HANDLING OF WELDING CONSUMABLES	O	O
ENVIRONMENTAL CONDITIONS (WIND SPEED, MOISTURE, TEMPERATURE)	O	O
WELDING PROCEDURE SPECIFICATIONS FOLLOWED	O	O

TABLE D6.6-3 INSPECTION OR EXECUTION TASKS AFTER WELDING

TASK	QC	QA
VERIFY COMPLIANCE OF WELDS	P	P
WELDS MEET VISUAL ACCEPTANCE CRITERIA	P	P
VERIFY REPAIR ACTIVITIES	P	P
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED CONNECTIONS	*	P

*DOCUMENTATION TASKS FOR QUALITY CONTROL SHOULD BE AS DEFINED BY THE APPLICABLE QUALITY CONTROL PROGRAM OF THE COMPONENT MANUFACTURER OR INSTALLER.

TABLE D6.7-1 INSPECTION OR EXECUTION TASKS PRIOR TO MECHANICAL FASTENING

TASK	QC	QA
MECHANICAL FASTENER MANUFACTURER INSTALLATION INSTRUCTIONS AVAILABLE FOR MECHANICAL FASTENERS	O	O
PROPER TOOLS AVAILABLE FOR MECHANICAL FASTENER INSTALLATION	O	O
PROPER STORAGE FOR MECHANICAL FASTENERS	O	O

TABLE D6.7-2 INSPECTION OR EXECUTION TASKS DURING MECHANICAL FASTENING

TASK	QC	QA
MECHANICAL FASTENERS ARE POSITIONED AS REQUIRED	O	O
MECHANICAL FASTENERS ARE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS	O	O

TABLE D6.7-3 INSPECTION OR EXECUTION TASKS AFTER MECHANICAL FASTENING

TASK	QC	QA
VERIFY COMPLIANCE OF MECHANICAL FASTENERS	P	P
REPAIR ACTIVITIES	P	P
DOCUMENT ACCEPTANCE OR REJECTION OF MECHANICALLY FASTENED CONNECTIONS	*	P

*DOCUMENTATION TASKS FOR QUALITY CONTROL SHOULD BE AS DEFINED BY THE APPLICABLE QUALITY CONTROL PROGRAM OF THE COMPONENT MANUFACTURER OR INSTALLER.

TABLE D6.8-1 INSPECTION OR EXECUTION TASKS AFTER INSTALLATION OF COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION

TASK	QC	QA
VERIFY COMPLIANCE OF COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION	P	P
DOCUMENT ACCEPTANCE OR REJECTION OF COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION	*	P

*DOCUMENTATION TASKS FOR QUALITY CONTROL SHOULD BE AS DEFINED BY THE APPLICABLE QUALITY CONTROL PROGRAM OF THE COMPONENT MANUFACTURER OR INSTALLER.

TABLE D6.9-2 ADDITIONAL INSPECTION OR EXECUTION TASKS PRIOR TO WELDING OF COLD-FORMED STEEL LATERAL FORCE-RESISTING SYSTEMS

TASK	QC	QA
WELDER IDENTIFICATION SYSTEM*	O	O
FIT-UP OF WELDS (ALIGNMENT, GAPS, CONDITION OF STEEL SURFACES)	O/P**	O

*A SYSTEM MAINTAINED BY THE COMPONENT MANUFACTURER OR INSTALLER, AS APPLICABLE, BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED.
**SEE SECTION D6.9.1

ANSI S240, SPECIAL INSPECTION OF COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION - CONTINUED

TABLE D6.9-3 ADDITIONAL INSPECTION OR EXECUTION TASKS PRIOR TO MECHANICAL FASTENING OF COLD-FORMED STEEL LATERAL FORCE-RESISTING SYSTEMS

TASK	QC	QA
PROPER FASTENERS SELECTED	O	O
PROPER INSTALLATION PROCEDURE SELECTED	O	O
CONNECTING ELEMENTS MEET APPLICABLE REQUIREMENTS	O	O

TABLE D6.9-4 ADDITIONAL INSPECTION OR EXECUTION TASKS DURING MECHANICAL FASTENING OF COLD-FORMED STEEL LATERAL FORCE-RESISTING SYSTEMS

TASK	QC	QA
FOR SCREW CONNECTIONS, JOINT BROUGHT TIGHT (E.G., CLAMPED) TO AVOID GAPS BETWEEN PLIES	O	O
FOR SCREW CONNECTIONS, TOOL ADJUSTED TO AVOID STRIPPED AND OVERDRIVEN FASTENERS	O	O
FOR POST-INSTALLED CONNECTIONS TO CONCRETE, INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS	P	P

TABLE D6.9-5 ADDITIONAL INSPECTION OR EXECUTION TASKS AFTER INSTALLATION OF COLD-FORMED STEEL LATERAL FORCE-RESISTING SYSTEMS

TASK	QC	QA
VERIFY COMPLIANCE OF COLD-FORMED STEEL LATERAL FORCE-RESISTING SYSTEM INSTALLATION	P	P
DOCUMENT ACCEPTANCE OR REJECTION OF INSTALLATION OF COLD-FORMED STEEL LATERAL FORCE-RESISTING SYSTEM	*	P

*DOCUMENTATION TASKS FOR QUALITY CONTROL SHOULD BE AS DEFINED BY THE APPLICABLE QUALITY CONTROL PROGRAM OF THE COMPONENT MANUFACTURER OR INSTALLER.

2018 IBC SPECIAL INSPECTION OF STRUCTURAL STEEL CONSTRUCTION

SPECIAL INSPECTION FOR STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360.

NONDESTRUCTIVE TESTING OF WELDED JOINTS (SEE DESIGN LOADS FOR RISK CATEGORY):
- FOR RISK CATEGORY III OR IV - UT SHALL BE PERFORMED ON ALL CJP GROOVE WELDS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING.
- FOR RISK CATEGORY II - UT SHALL BE PERFORMED ON 10% OF WELDS IN MATERIALS 5/16" OR THICKER. WHERE MATERIAL IS LESS THAN 5/16", NO UT IS REQUIRED.
- FOR RISK CATEGORY I - UT NOT REQUIRED.

O - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS

P - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER

AISC 360 TABLE N5.4-1: INSPECTION TASKS PRIOR TO WELDING

WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	P
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P
MATERIAL IDENTIFICATION (TYPE/GRADE)	O
WELDER IDENTIFICATION SYSTEM*	O
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) • JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION) • BACKING TYPE AND FIT (IF APPLICABLE)	O
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) • FIT-UP CJP GROOVE WELDS OF HSS T-, Y- & K-JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY) • JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION) • BACKING TYPE AND FIT (IF APPLICABLE)	O
CONFIGURATION AND FINISH OF ACCESS HOLES	O
FIT-UP OF FILLET WELDS • DIMENSIONS (ALIGNMENT, GAPS AT ROOT) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION)	O

*THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.

AISC 360 TABLE N5.4-2: INSPECTION TASKS DURING WELDING

USE OF QUALIFIED WELDERS	O
CONTROL AND HANDLING OF WELDING CONSUMABLES • PACKAGING • EXPOSURE CONTROL	
CONTROL AND HANDLING OF WELDING CONSUMABLES • PACKAGING • PRECIPITATION AND TEMPERATURE	O
NO WELDING OVER CRACKED TACK WELDS	O
ENVIRONMENTAL CONDITIONS • WIND SPEED WITHIN LIMITS • PRECIPITATION AND TEMPERATURE	O
WPS FOLLOWED • SETTINGS ON WELDING EQUIPMENT • TRAVEL SPEED • SELECTED WELDING MATERIALS • SHIELDING GAS TYPE/FLOW RATE • PREHEAT APPLIED • INTERPASS TEMPERATURE MAINTAINED (MIN/MAX) • PROPER POSITION (F,V,H,OH)	O
WELDING TECHNIQUES • INTERPASS AND FINAL CLEANING • EACH PASS WITHIN PROFILE LIMITATIONS • EACH PASS MEETS QUALITY REQUIREMENTS	O

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2018 IBC SPECIAL INSPECTION OF STRUCTURAL STEEL CONSTRUCTION (CONT.)

AISC 360 TABLE N5.4-3: INSPECTION TASKS AFTER WELDING

WELDS CLEANED	O
SIZE, LENGTH AND LOCATION OF WELDS	P
WELDS MEET VISUAL ACCEPTANCE CRITERIA • CRACK PROHIBITION • WELD/BASE-METAL FUSION • CRATER CROSS SECTION • WELD PROFILES • WELD SIZE • UNDERCUT • POROSITY	P
ARC STRIKES	P
WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP SHAPES.	P
K-AREA*	P
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P
REPAIR ACTIVITIES	P
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P
*WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 INCHES OF THE WELD.	

AISC 360 TABLE N5.6-1: INSPECTION TASKS PRIOR TO BOLTING

MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS.	P
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O
CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE).	O
CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS.	O
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED.	O
CORRECT STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	O

AISC 360 TABLE N5.6-2: INSPECTION TASKS DURING BOLTING

FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	O
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION.	O
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING.	O
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGE.	O

AISC 360 TABLE N5.6-3: INSPECTION TASKS AFTER BOLTING

DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P

AISC 360 TABLE N6.1: INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT

PLACEMENT AND INSTALLATION OF STEEL DECK	P
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	P
DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	P

AISC 360 SECTION N5.8:

THE FABRICATOR'S QCI SHALL INSPECT THE FABRICATED STEEL TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE SHOP DRAWINGS.

THE ERECTOR'S QCI SHALL INSPECT THE ERECTED STEEL FRAME TO VERIFY COMPLIANCE WITH THE FIELD INSTALLED DETAILS SHOWN ON THE ERECTION DRAWINGS.

THE QAI SHALL BE ON THE PREMISES FOR INSPECTION DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. AS A MINIMUM, THE DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR ROD OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE, SHALL BE VERIFIED AND DOCUMENTED PRIOR TO PLACEMENT OF CONCRETE. THE QAI SHALL INSPECT THE FABRICATED STEEL OR ERECTED STEEL FRAME, AS APPLICABLE, TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION DOCUMENTS.

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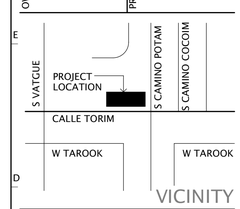

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SHEET TITLE

SPECIAL INSPECTIONS

DATE 01.11.2024
SHEET **S0.3**

2018 IBC, 1705.4 SPECIAL INSPECTION FOR MASONRY CONSTRUCTION

SPECIAL INSPECTION OF MASONRY CONSTRUCTION SHALL BE INSPECTED AND VERIFIED IN ACCORDANCE WITH TMS 402/602 QUALITY ASSURANCE PROGRAM REQUIREMENTS.

LEVEL 2 QUALITY ASSURANCE PROGRAM PER TABLE 3.1.2. APPLIES

TMS 402/602 TABLE 3.1.2 - LEVEL 2 QUALITY ASSURANCE PROGRAM				
MINIMUM VERIFICATION				
PRIOR TO CONSTRUCTION, VERIFICATION OF COMPLIANCE OF SUBMITTALS. REF. ART 1.5.				
PRIOR TO CONSTRUCTION, VERIFICATION OF f'M AND f'AAC, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THE CODE. REF. ART 1.4B.				
DURING CONSTRUCTION, VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) WHEN SELF-CONSOLIDATING GROUT IS DELIVERED TO THE PROJECT SITE. REF. 1.5 & 1.6.3.				
MINIMUM INSPECTION				
VERIFICATION AND INSPECTION NEED TMS 402-16	CONTINUOUS	PERIODIC	REFERENCE TMS 402	REFERENCE TMS 602
1. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
a. PROPORTIONS OF SITE-PREPARED MORTAR	-	X		ART. 2.1, 2.6 A & 2.6C
b. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	-	X		ART. 2.4 B, 2.4 H
c. GRADE, TYPE AND SIZE OF REINFORCEMENT, CONNECTORS, ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES.	-	X		ART. 3.4, 3.6 A
d. PRESTRESSING TECHNIQUE	-	X		ART. 3.6 B
e. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	X	X		ART. 2.1 C.1
f. SAMPLE PANEL CONSTRUCTION	-	X		ART. 1.6 D
2. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
a. GROUT SPACE	-	X		ART. 3.2 D, 3.2 F
b. PLACEMENT OF PRESTRESSING TENDONS AND ANCHORAGES.	-	X	SEC. 10.8 & 10.9	ART. 2.4, 3.6
c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS.	-	X	SEC. 6.1, 6.3.1, 6.3.6, 6.3.7	ART. 3.2 E, 3.4
d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	-	X		ART. 2.6 B, 2.4 G.1.B
3. VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION:	X	X		
a. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	-	X		ART. 1.5
b. PLACEMENT OF MASONRY UNITS AND MORTAR JOIST CONSTRUCTION .	-	X		ART. 3.3 B
c. SIZE AND LOCATION OF STRUCTURAL MEMBERS.	-	X		ART. 3.3 F
d. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION.	-	X	SEC. 1.2.1 (e), 6.2.1, & 6.3.1	
e. WELDING OF REINFORCEMENT.	X	-	SEC. 6.1.6.1.2	
f. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40 DEG F (4.4 DEG C) OR HOT WEATHER (TEMPERATURE ABOVE 90 DEG F (32.2 DEG C).	-	X		ART. 1.8 C, 1.8 D
g. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE.	X	-		ART. 3.6 B
h. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	X	-		ART. 3.5, 3.6 C
i. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	X	X		ART. 3.3 B.9, 3.3 F.1.b
4. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	-	X		ART. 1.4 B.2.a.3 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4

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2018 IBC, 1705.3 SPECIAL INSPECTION OF CONCRETE CONSTRUCTION

SPECIAL INSPECTION AND VERIFICATIONS FOR CONCRETE CONSTRUCTION SHALL BE AS REQUIRED BY TABLE 1705.3.

EXCEPTIONS: SPECIAL INSPECTIONS SHALL NOT BE REQUIRED FOR:
1. ISOLATED SPREAD CONCRETE FOOTINGS OF BUILDING THREE STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK.
2. CONTINUOUS CONCRETE FOOTINGS SUPPORTING WALLS OF BUILDINGS THREE STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK WHERE:
3. THE FOOTINGS SUPPORT WALLS OF LIGHT-FRAME CONSTRUCTION;
4. THE STRUCTURAL DESIGN OF THE FOOTING IS BASED ON A SPECIFIED COMPRESSIVE STRENGTH, f'c, NO GREATER THAN 2,500 PSI REGARDLESS OF THE COMPRESSIVE STRENGTH SPECIFIED.
3. CONCRETE SLABS ON GRADE. STEEL REINFORCING STILL REQUIRES SPECIAL INSPECTION..

2018 IBC, TABLE 1705.3: REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION				
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCE STANDARD	IBC REFERENCE
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	-	X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1910.4
2. REINFORCING BAR WELDING. a. VERIFY WELDABILITY OF REINFORCING BARS. OTHER THAN ASTM A706 b. INSPECT SINGLE PASS FILLET WELDS, MAXIMUM 5/16". c. INSPECT ALL OTHER WELDS.	 - - X	 - X X	AWS D1.4 ACI 318: 26.6.4	—
3. INSPECT ANCHORS CAST IN CONCRETE.	-	X	ACI 318: 17.8.2	—
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	 X -	 - X	 ACI 318: 17.8.2.4 ACI 318: 17.8.2	
5. VERIFYING USE OF REQUIRED DESIGN MIX.	-	X	ACI 318: Ch 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C 172 ASTM C 31 ACI 318: 26.5, 26.12	1908.10
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	ACI 318: 26.5.3-26.5.5	1908.9
9. INSPECT PRESTRESSED CONCRETE FOR: a. APPLICATION OF PRESTRESSING FORCES. b. GROUTING OF BONDED PRESTRESSING TENDONS.	 X X	 - -	ACI 318: 26.10	—
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	-	X	ACI 318: Ch 26.9	—
11. VERIFY OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X	ACI 318: 26.11.2	—
12. INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X	ACI 318: 26.11.1.2 (b)	—

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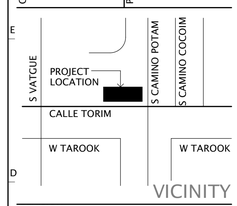

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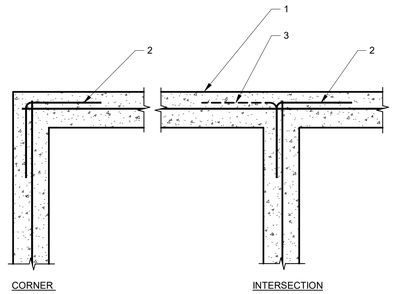
SHEET TITLE

SPECIAL INSPECTIONS

DATE 01.11.2024

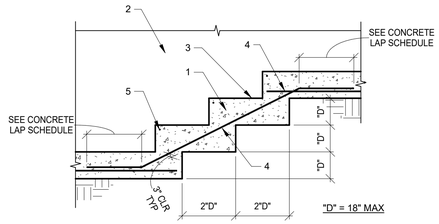
SHEET **S0.4**

1. CONCRETE FOOTING OR CONCRETE WALL.
2. CORNER BARS SAME SIZE AND SPACING AS HORIZONTAL REINFORCING.
3. ALTERNATE LEG DIRECTION AT INTERSECTING WALLS.



C1 PLAN - TYPICAL CORNER REINFORCING IN CONCRETE FOOTING AND STEM WALL
NO SCALE
3230-1T-03
105-15

1. CONCRETE WALL FOOTING.
2. CONCRETE OR MASONRY WALL ABOVE.
3. TOP OF WALL FOOTING.
4. WALL FOOTING LONGITUDINAL REINFORCING.
5. CONTINUOUS NOSING REBAR TO MATCH WALL FOOTING REINFORCING.



C2 TYPICAL STEPPED FOOTING
NO SCALE
3230-1T-02
105-10

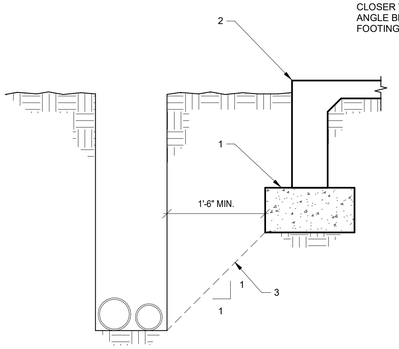
1. TOP BARS ARE ANY HORIZONTAL BARS PLACED SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCING.
2. THIS TABLE IS BASED ON NORMAL WEIGHT CONCRETE.

TYPICAL CONCRETE LAP SPLICE TABLE

CONCRETE STRENGTH		CLASS B TENSION SPLICE LENGTH, INCHES					
		f'c >= 2,500 PSI / 3,000 PSI		f'c >= 4,000 PSI		f'c >= 5,000 PSI	
BAR SIZE	BAR GRADE	BAR LOCATION		BAR LOCATION		BAR LOCATION	
		OTHER	TOP	OTHER	TOP	OTHER	TOP
#3	Gr 60	24"	31"	19"	24"	17"	22"
#4	Gr 60	32"	41"	25"	32"	22"	29"
#5	Gr 60	39"	51"	31"	40"	28"	36"
#6	Gr 60	47"	61"	37"	48"	33"	43"
#7	Gr 60	69"	89"	54"	70"	49"	63"
#8	Gr 60	78"	102"	62"	80"	55"	72"
#9	Gr 60	88"	115"	70"	91"	63"	81"
#10	Gr 60	99"	129"	79"	102"	70"	91"

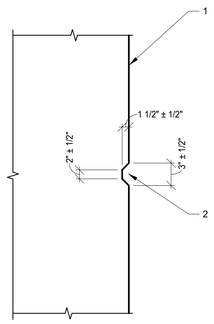
C3 TYPICAL LAP SPLICE IN CONCRETE
NO SCALE
3000-1T-01
103-01C

1. CONCRETE WALL FOOTING.
2. BUILDING SLAB ABOVE AS OCCURS.
3. DO NOT EXCAVATE A TRENCH CLOSER THAN A 45 DEGREE ANGLE BELOW BOTTOM OF FOOTING OR FOUNDATION.



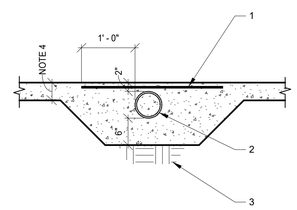
B1 TYPICAL TRENCH PARALLEL TO FOUNDATION
NO SCALE
3231-1T-01
105-13

1. CONCRETE.
2. REMOVE FORM MATERIAL PRIOR TO PLACING ADJACENT CONCRETE.

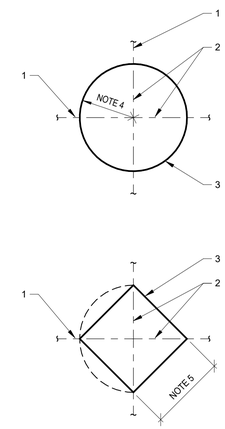


B2 TYPICAL KEY IN CONCRETE
NO SCALE
3000-1T-02
105-01

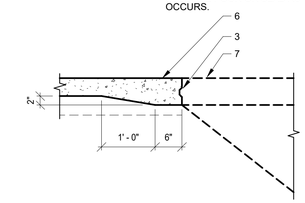
1. 4x4 - W1.4xW1.4 WWF OR #4 AT 12" OC.
2. PIPE OR CONDUIT.
3. FIRM UNDISTURBED SOIL OR COMPACTED BASE.
4. TYPICAL SLAB THICKNESS.



B3 TYPICAL SLEEVE FOR PIPE AT SLAB ON GRADE
NO SCALE
3150-1T-01
101-12



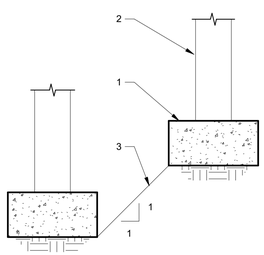
1. 'CONC CJ' WHERE SHOWN ON PLAN.
2. CENTERLINE OF COLUMN.
3. KEYED JOINT - SEE TYPICAL KEY IN CONCRETE DETAIL.
4. 1'-6" MIN./3'-0" MAX.
5. 2'-0" MIN./4'-0" MAX.
6. CONCRETE SLAB ON GRADE.
7. LINE OF CONCRETE CLOSURE POUR OR SLAB AS OCCURS.



NOTE:
- COLUMNS OMITTED FOR CLARITY.
- FOR CONFIGURATION OF SPECIFIC CLOSURE POURS, SEE PLAN.

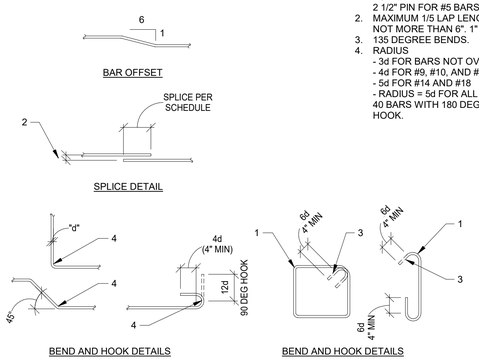
B4 TYPICAL COLUMN CLOSURE POUR AT CONCRETE SLAB ON GRADE
NO SCALE
3100-1T-01
101-05

1. CONCRETE WALL FOOTING.
2. CONCRETE OR MASONRY WALL ABOVE.
3. MAXIMUM SLOPE BETWEEN BOTTOMS OF FOOTINGS SHALL BE 45 DEGREES. STEP FOOTINGS AS REQ'D. SEE TYPICAL STEPPED FOOTING DETAIL.



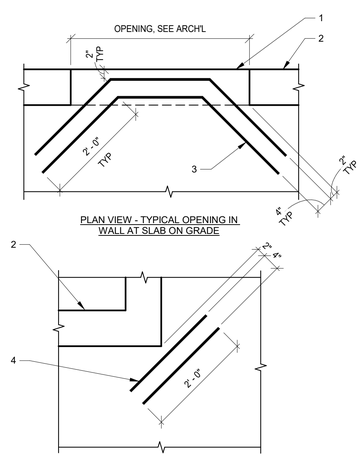
A1 TYPICAL MAXIMUM SLOPE BETWEEN ADJACENT FOOTINGS
NO SCALE
3232-1T-01
105-12

1. BEND AROUND 1 1/2" PIN FOR #3 BARS. BEND AROUND 2" PIN FOR #4 BARS. BEND AROUND 2 1/2" PIN FOR #5 BARS.
2. MAXIMUM 1/5 LAP LENGTH BUT NOT MORE THAN 6". 1" MIN.
3. 135 DEGREE BENDS.
4. RADIUS
   - 3d FOR BARS NOT OVER #8
   - 4d FOR #9, #10, AND #11 BARS
   - 5d FOR #14 AND #18
   - RADIUS = 5d FOR ALL GRADE 40 BARS WITH 180 DEGREE HOOK.



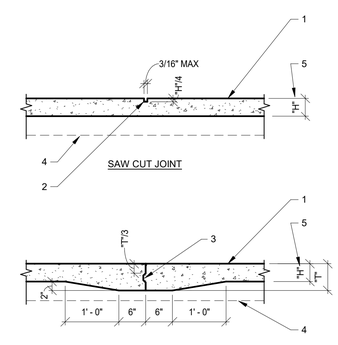
A2 TYPICAL CONCRETE AND MASONRY REINFORCING BAR DETAILS
NO SCALE
5000-1T-01
103-02

1. CONCRETE CONSTRUCTION JOINT OR EDGE OF SLAB.
2. CONCRETE OR MASONRY WALL.
3. (2) #3 CENTERED IN SLAB AT OPENINGS IN WALLS.
4. (2) #3 CENTERED IN SLAB AT ALL REENTRANT CORNERS.



A3 TYPICAL REENTRANT CORNER REINFORCING IN SLAB ON GRADE
NO SCALE
3130-1T-04
101-10

1. CONCRETE SLAB.
2. SAW CUT SHALL BE MADE SOON ENOUGH TO PREVENT CRACKING, BUT NOT SO SOON AS TO CAUSE SPALLING OF THE CONCRETE WHILE SAWING. FOR JOINT FILLER SEE ARCH'L DRAWINGS AND SPECIFICATIONS.
3. CONTINUOUS KEY. SEE TYPICAL KEY IN CONCRETE DETAIL.
4. FOR SUBBASE REQUIREMENTS SEE GSN.
5. SLAB THICKNESS PER PLANS.



NOTE:
- KEYED CONSTRUCTION JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING POURING.

A4 CONSTRUCTION JOINT IN SLAB ON GRADE
NO SCALE
3130-1T-01
101-03

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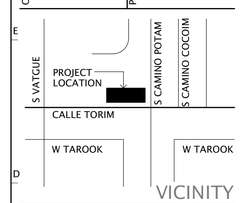

REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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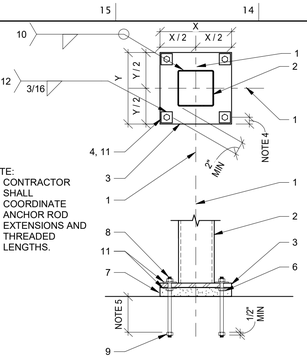
SHEET TITLE
TYPICAL DETAILS

DATE 01.11.2024
SHEET
S1.1



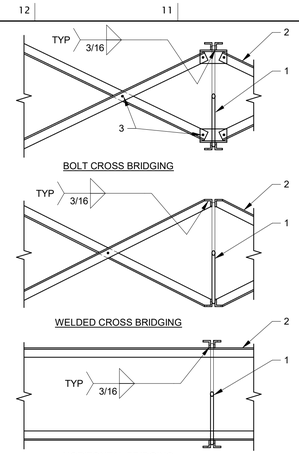
NOTE:
- CONTRACTOR SHALL COORDINATE ANCHOR ROD EXTENSIONS AND THREADED LENGTHS.

1. CENTERLINE OF COLUMN AND STEEL BASE PLATE.
2. STEEL COLUMN PER PLANS.
3. STEEL BASE PLATE.
4. EDGE DISTANCE PER AISC TABLE J3.4.
5. EMBEDMENT PER COLUMN SCHEDULE.
6. DOUBLE NUTS.
7. 1 1/2" DRYPACK.
8. ANCHOR ROD PER GSN AND COLUMN SCHEDULE.
9. HEAVY HEX NUT. TACK WELD OR DING THREADS TO PREVENT MOVEMENT OF NUT.
10. 3/16" FILLET WELD AT WALL THICKNESS 1/4" OR LESS, 1/4" FILLET WELD AT WALL THICKNESS 5/16" AND 3/8" AT WALL THICKNESS GREATER THAN 3/8".
11. STEEL PLATE WASHERS REQ'D AT OVERSIZED HOLES.
12. WELD TOP STEEL PLATE WASHERS ALL AROUND TO STEEL BASE PLATE. WELD ONLY REQUIRED AT STEEL MOMENT FRAMES AND STEEL BRACED FRAMES ONLY.

STEEL COLUMN BASE PLATES (GRADE 36 ANCHOR RODS)

F1554, GRADE 36 ANCHOR ROD DIA	STEEL PLATE WASHER (A36)	HOLE SIZE AT STEEL PLATE WASHER	OVERSIZED HOLE DIA AT STEEL BASEPLATE	EDGE DISTANCE OF BASE PLATE TO CENTERLINE OF HOLE
3/4"	3/8"x2 1/2"x2 1/2"	13/16"	1 5/16"	1 1/2"
1"	1/2"x3 1/4"x3 1/4"	1 1/16"	1 13/16"	2"

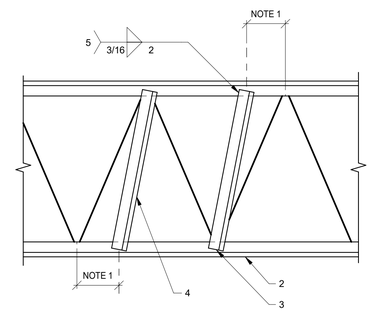
C1 TYPICAL HSS STEEL COLUMN AT BASE PLATE
NO SCALE
5150-1T-406-03



1. STEEL JOIST PER PLAN.
2. BRIDGING ANGLES - SIZED AND INSTALLED PER MFR. RECOMMENDATIONS.
3. 1/2" DIA. BOLTS AS SHOWN.

NOTES:
- STEEL DECK NOT SHOWN FOR CLARITY.
- FOR ADDITIONAL INFORMATION, SEE PLAN AND GSN.

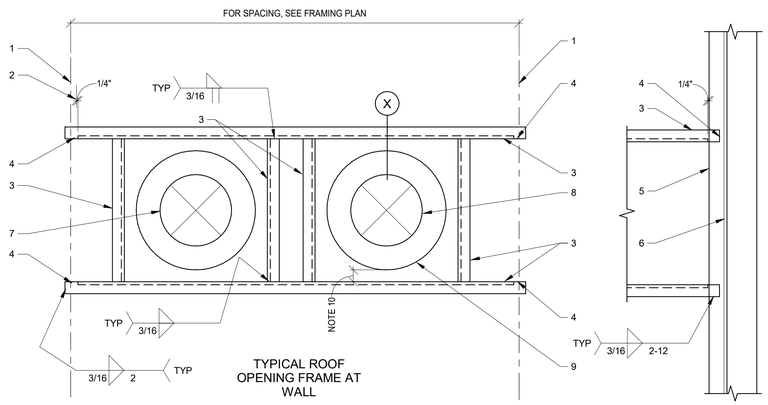
C2 TYPICAL BRIDGING AT STEEL JOISTS
NO SCALE
5250-2T-01
401-15



1. ADDITIONAL MEMBER REQ'D WHEN LOAD IS MORE THAN 3" AWAY FROM PANEL POINT.
2. STEEL JOIST PER PLAN.
3. STEEL ANGLE 2x2x3/16" EACH SIDE FROM TOP CHORD TO NEAREST BOTTOM CHORD PANEL POINT.
4. STEEL ANGLE 2x2x3/16" EACH SIDE FROM BOTTOM CHORD TO NEAREST TOP CHORD PANEL POINT.
5. TYPICAL EACH ANGLE EACH END.

NOTE:
- PROVIDE THIS DETAIL WHEN CONCENTRATED LOAD EXCEEDS 100 LBS.
- NOTIFY ENGINEER WHEN LOAD EXCEEDS 400 LBS.
- DO NOT SUSPEND UTILITIES FROM DECK OR BRIDGING.

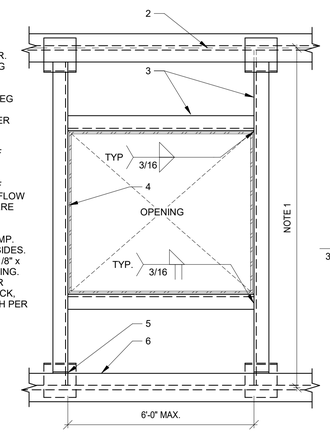
C3 WEB MEMBER AT CONCENTRATED LOAD AWAY FROM PANEL POINT
NO SCALE
5250-2T-01
401-12



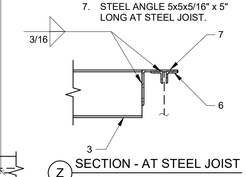
TYPICAL ROOF OPENING FRAME AT WALL

1. CENTERLINE OF FRAMING MEMBER.
2. EDGE OF FRAMING MEMBER.
3. L4x3x1/4"(LLV).
4. COPE VERTICAL LEG OF ANGLE.
5. STEEL LEDGER PER PLAN.
6. WALL.
7. OPENING IN ROOF DECK FOR ROOF DRAIN.
8. OPENING IN ROOF DECK FOR OVER FLOW ROOF DRAIN WHERE APPLICABLE.
9. DRAIN BODY AND UNDERDECK CLAMP.
10. 3" MAXIMUM ALL SIDES.
11. HSS 1 1/2"x1 1/2"x1/8" x LENGTH OF OPENING.
12. STEEL DECK - FOR DIRECTION OF DECK, SEE PLAN. ATTACH PER GSN.

B1 TYPICAL ROOF DRAIN OPENING FRAME
NO SCALE
5154-2T-02
401-11



1. SEE PLAN FOR SPACING (12'-0" MAXIMUM).
2. CENTERLINE OF FRAMING MEMBER.
3. C8x11.5 STEEL BEAM.
4. 1/4" STEEL EDGE PLATE AROUND OPENING. STITCH WELD TO STEEL CHANNELS. TYPICAL.
5. CONNECTION PER TYPICAL STEEL BEAM TO STEEL BEAM DETAIL. REFER TO SECTION Z FOR CONNECTION AT STEEL JOIST.
6. STEEL BEAM OR JOIST SUPPORT.
7. STEEL ANGLE 5x5x5/16" x 5" LONG AT STEEL JOIST.



NOTE:
- STEEL DECK NOT SHOWN FOR CLARITY.
- VERIFY OPENING SIZE WITH APPROPRIATE TRADE.

B3 PLAN - TYPICAL FRAME AT LARGE OPENING OR AT MECHANICAL UNIT SUPPORT
NO SCALE
5151-2T-03
401-08

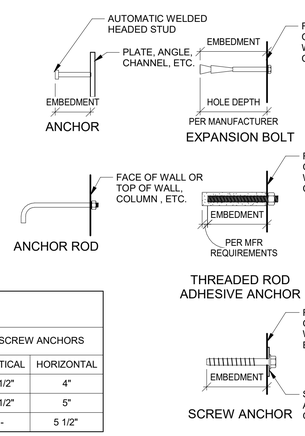
NOMINAL BEAM DEPTH "D"	NUMBER OF 3/4" DIAMETER BOLTS (ASTM F1852)
UP TO 7"	2
8" - 11"	2
12" - 14"	3
15" - 17"	4
18" - 20"	5
21" - 23"	6
24" - 29"	7
30" - 32"	8
33" - 35"	9
36"	10

1. THE TYPICAL STEEL BEAM TO STEEL COLUMN OR STEEL BEAM TO STEEL BEAM CONNECTION CONSISTS OF 3/8" SINGLE SHEAR PLATES WITH BOLTS PER SCHEDULE. USE 9/16" SHEAR PLATES WHERE "D" = 27" OR GREATER.
2. FABRICATOR SHALL TAKE NECESSARY PRECAUTIONS AGAINST BOLT SHANK OUT. FABRICATOR'S OPTION:
   - PROVIDE THICKER SHEAR PLATE.
   - PROVIDE MULTIPLE WASHERS AT EITHER END OF BOLT (2 MAXIMUM PER END).

B4 TYPICAL BOLT SCHEDULE FOR TYPICAL STEEL CONNECTIONS
NO SCALE
5100-2T-01
401-03

VERTICAL AND HORIZONTAL ANCHOR EMBEDMENT LENGTH FOR ANCHORS IN CONCRETE

ANCHOR DIAMETER	ANCHOR AND ANCHOR RODS		EXPANSION ANCHORS	THREADED ROD ADHESIVE ANCHORS	REBAR ADHESIVE ANCHORS	SCREW ANCHORS
	VERTICAL	HORIZONTAL				
1/2" (#4)	7"	4"	5"	4"	4"	4"
5/8" (#5)	7"	4 1/2"	6 1/8"	5"	5"	4 3/8"
3/4" (#6)	7"	5"	7 1/2"	6"	6"	6 1/4"
7/8" (#7)	8"	6"	-	7"	7"	-
1" (#8)	9"	7"	9 3/4"	8"	8"	-
1 1/4"	11"	9"	-	-	-	-
1 1/2"	12"	10"	-	-	-	-

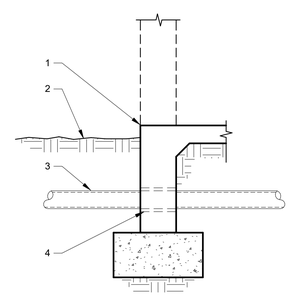


NOTES:
- FOR APPROVED MANUFACTURERS OF EXPANSION BOLTS, ADHESIVE ANCHORS AND SCREW ANCHORS IN CONCRETE AND MASONRY, SEE GSN.
- PROVIDE ANCHORS, ANCHOR RODS, EXPANSION BOLTS, ADHESIVE ANCHORS, AND SCREW ANCHORS PER THIS SCHEDULE UNLESS NOTED OTHERWISE ON PLAN OR DETAILS.
- ANCHORS, ANCHOR RODS, EXPANSION BOLTS, ADHESIVE ANCHORS, AND SCREW ANCHORS USED IN MASONRY SHALL BE INSTALLED IN GROUTED CELLS, IF GROUTED CELLS ARE NOT ENCOUNTERED, BREAK INTO CELL AND GROUT SOLID FOR 8" MINIMUM ABOVE AND BELOW BOLT LOCATION.
- ANCHOR RODS, EXPANSION BOLTS, THREADED ANCHORS, AND SCREW ANCHORS SHALL BE INSTALLED WITH STEEL WASHERS.
- THREADED ROD AND ADHESIVE SHALL BE SUPPLIED BY THE SAME APPROVED MANUFACTURER.

VERTICAL AND HORIZONTAL ANCHOR EMBEDMENT LENGTH FOR ANCHORS IN MASONRY

ANCHOR DIAMETER	ANCHOR AND ANCHOR RODS		EXPANSION ANCHORS		THREADED ROD ADHESIVE ANCHORS		SCREW ANCHORS	
	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL
1/2" (#4)	5"	4"	3"	3 1/2"	4 1/2"	4 1/2"	4 1/2"	4"
5/8" (#5)	6 1/2"	4 1/2"	3 1/2"	4 3/8"	5 5/8"	5 5/8"	4 1/2"	5"
3/4" (#6)	7"	5"	-	5 1/4"	-	6 1/2"	-	5 1/2"

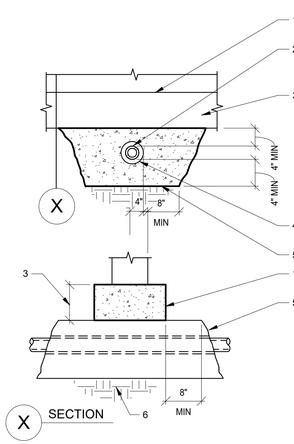
A1 TYPICAL ANCHOR, ANCHOR ROD, EXPANSION BOLT, ADHESIVE ANCHORS, AND SCREW ANCHOR SCHEDULE
NO SCALE
5000-123T-01
401-01



1. FOUNDATION WALL BELOW GRADE AND WALL ABOVE WHERE OCCURS.
2. FINISHED GRADE AS OCCURS.
3. PIPE OR CONDUIT SLEEVE. PIPE SLEEVE TO HAVE AN INSIDE DIAMETER 1" LARGER THAN PIPE PASSING THROUGH WALL TO ALLOW FOR 1/2" ALL AROUND.
4. PIPE OR CONDUIT PASSING THROUGH WALL ABOVE FOOTING.

NOTE:
- NO PIPES SHALL PASS THROUGH FOOTING.

A3 TYPICAL PIPE PASSING THROUGH FOUNDATION STEM WALL
NO SCALE
3250-1T-02
105-19



1. CONCRETE FOOTING.
2. UTILITY PIPE TO CLEAR SLEEVE BY 1/2" ALL AROUND.
3. NO UTILITIES TO PASS THRU FOOTING.
4. PIPE SLEEVE TO ALLOW FOR 1/2" CLEARANCE ALL AROUND PIPE PASSING UNDER FOOTING.
5. CONCRETE FILLED - PLACE ALL FILL PRIOR TO POURING FOOTINGS. FILL MUST REACH DESIGN STRENGTH PRIOR TO POURING FOUNDATIONS (MINIMUM f'c = 500 PSI).
6. PREPARED COMPACTED SUBGRADE - REFER TO GEOTECHNICAL REPORT.

NOTE:
- NO UTILITIES BELOW COLUMN FOOTINGS.
- FOR ADDITIONAL INFORMATION, SEE MECH'L, ELECTRICAL AND CIVIL DRAWINGS.

A4 TYPICAL PIPE PASSING BELOW FOOTING
NO SCALE
3250-1T-01
105-18A

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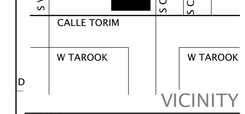

REVISION

NUMBER	DESCRIPTION	DATE

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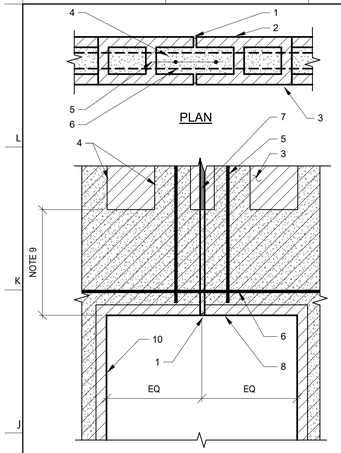
SHEET TITLE

TYPICAL DETAIL

DATE 01.11.2024

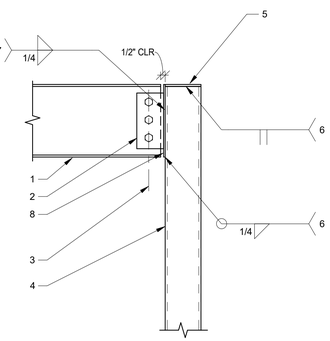
SHEET **S1.2**



1. RAKE JOINT BOTH SIDES AND BOTTOM, FULL HEIGHT OF LINTEL.
2. OPEN END MASONRY UNITS. INSTALL AS SHOWN SYMMETRICAL ABOUT CONTROL JOINT FULL LENGTH OF LINTEL.
3. MASONRY WALL PER PLAN.
4. GROUT SOLID FULL HEIGHT OF WALL.
5. VERTICAL REINFORCING TO MATCH WALL REINFORCING EACH SIDE OF CONTROL JOINT.
6. HORIZONTAL LINTEL REINFORCING PER SCHEDULE CONTINUOUS THRU CONTROL JOINT.
7. JOINT MATERIAL ABOVE LINTEL.
8. BOTTOM OF LINTEL.
9. HEIGHT OF LINTEL PER PLAN.
10. OPENING JAMB.

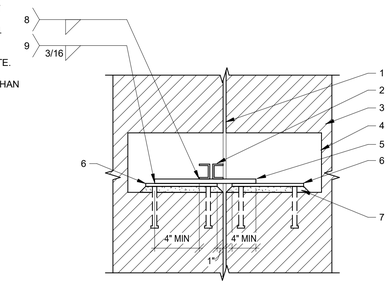
NOTE:
- LOCATE CONTROL JOINT AT MIDSPAN OF MASONRY LINTEL. BOND BEAM AND LINTEL REINFORCING SHALL NOT BE LAPPED WITHIN 8'-0" OF CONTROL JOINT. DO NOT WRAP IN MASTIC.
- FOR ADDITIONAL INFORMATION, SEE LINTEL SCHEDULE.

C1 TYPICAL CONTROL JOINT IN MASONRY LINTEL
NO SCALE
4041-123T-507-05



1. STEEL BEAM PER PLAN.
2. 3/8" STEEL SHEAR PLATE. 9/16" STEEL SHEAR PLATE WHERE "D"=27" OR MORE.
3. FOR SIZE AND NUMBER OF BOLTS, SEE TYPICAL BOLT SCHEDULE.
4. STEEL COLUMN PER PLAN.
5. 1/2" STEEL CAP PLATE.
6. WELD PLATE TO COLUMN.
7. WELD SHEAR TAB TO PLATE.
8. 1/2" THICK STEEL PLATE x BEAM DEPTH x 1/2" LESS THAN COLUMN WIDTH.

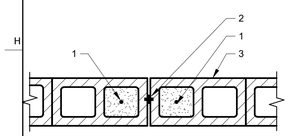
C2 TYPICAL STEEL BEAM TO STEEL COLUMN
NO SCALE
5151-2T-14
415-19



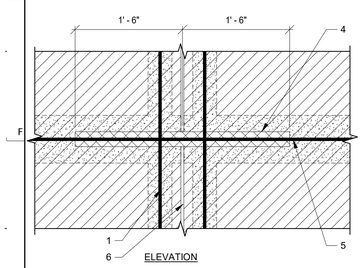
1. MASONRY CONTROL JOINT.
2. STEEL JOIST PER PLAN.
3. MASONRY WALL PER PLAN.
4. POCKET IN MASONRY WALL FOR JOIST BEARING.
5. STEEL PLATE 3/4"x4"x AS REQ'D.
6. STEEL BEARING PLATE PER PLANS.
7. ±1" DRYPACK/FLOWABLE GROUT.
8. 1/8"x3" AT K JOISTS
   1/4"x3" AT LH JOISTS.
9. WELD 2 SIDES.

NOTE:
- WELD STEEL PLATE TO BEARING PLATE ON ONE SIDE OF CONTROL JOINT ONLY.

C3 TYPICAL STEEL JOIST BEARING AT MASONRY CONTROL JOINT
NO SCALE
4152-23T-01
447-20



PLAN SECTION

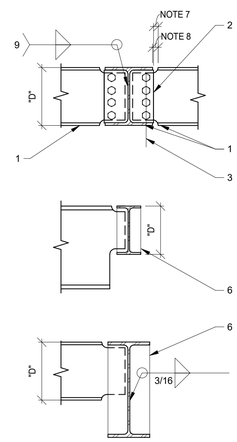


ELEVATION

1. MIN. ONE VERTICAL BAR EACH SIDE OF JOINT IN SOLID GROUTED CELLS TO MATCH VERTICAL WALL REINFORCING.
2. CONTROL JOINT MATERIAL PER ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
3. MASONRY WALL PER PLAN.
4. WRAP REINFORCING WITH MASTIC FOR BOND BREAK.
5. CONTINUOUS BOND BEAM BARS.
6. CONTROL JOINT.

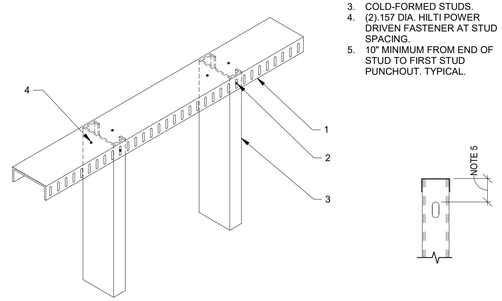
NOTE:
- BOND BEAM BARS SHALL NOT BE LAPPED WITHIN 8'-0" OF THE CONTROL JOINT.
- DO NOT LOCATE LESS THAN 2'-0" FROM BEARING PLATE OR JAMB OF AN OPENING. SUBMIT FOR REVIEW PRIOR TO CONSTRUCTION.
- AT FIRE RATED WALLS, PROVIDE CERAMIC FIBER BLANKET AS REQUIRED PER ARCHITECTURAL DRAWINGS.

B1 TYPICAL CONTROL JOINT IN MASONRY WALL
NO SCALE
4041-123T-507-01



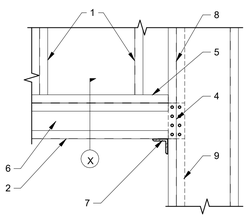
1. STEEL BEAM PER PLAN.
2. 3/8" STEEL SHEAR PLATE - USE 9/16" STEEL SHEAR PLATE WHERE "D" = 27" OR GREATER. EDGE DISTANCES PER TYPICAL BOLT SCHEDULE AND LATEST EDITION OF AISC.
3. FOR SIZE, TYPE AND NUMBER OF BOLTS. SEE TYPICAL BOLT SCHEDULE.
4. "D" = LESSER OF BEAM DEPTHS AS OCCURS.
5. WELD 3 SIDES TYPICAL - USE SAME CONNECTION AT STIFFENER PLATES WHEN REQ'D.
6. AT ONE SIDED CONNECTIONS INSTALL 3/8" STIFFENER PLATE OPPOSITE SHEAR PLATE. TYPICAL.
7. 1/2" MAXIMUM FROM EDGE OF SHEAR PLATE IF SHEAR PLATE EXTENDS BEYOND EDGE OF BEAM FLANGE.
8. 1/2" MAXIMUM FROM EDGE OF BEAM FLANGE IF FLANGE EXTENDS BEYOND EDGE OF SHEAR PLATE.
9. 5/16" WELD AT 3/8" PLATE
   1/2" WELD AT 9/16" PLATE.

B2 TYPICAL WIDE FLANGE BEAM TO BEAM CONNECTION
NO SCALE
5151-2T-08
412-07

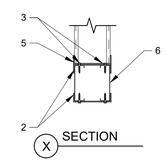


1. CONTINUOUS SLOTTED SLIP TRACK SAME GA. AS COLD-FORMED STUDS.
2. #10 x 3/4" LONG SELF-DRILLING SCREWS EACH SIDE CENTERED IN SLOTTED HOLE.
3. COLD-FORMED STUDS.
4. (2).157 DIA. HILTI POWER DRIVEN FASTENER AT STUD SPACING.
5. 10" MINIMUM FROM END OF STUD TO FIRST STUD PUNCHOUT. TYPICAL.

B3 TYPICAL SLOTTED VERTICAL SLIP TRACK
NO SCALE
5050-2T-02
408-23

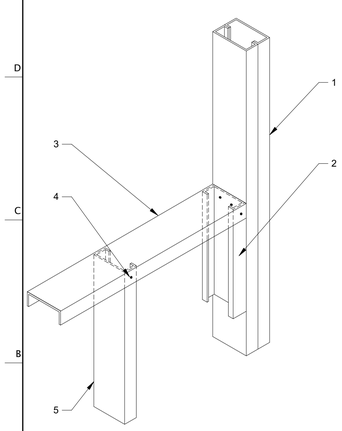


BOX BEAM HEADER SIZE		
SPAN	BOX BEAM STUD SIZE	ADD'L JAMB STUDS EACH SIDE OF OPENING
0'-0" TO 4'-0"	DOUBLE C6x2x14 GAUGE	1
4'-0" TO 8'-0"	DOUBLE C8x2x14 GAUGE	2
8'-0" TO 10'-0"	DOUBLE C10x2x14 GAUGE	2
10'-0" TO 15'-0"	DOUBLE C12x2x14 GAUGE	3



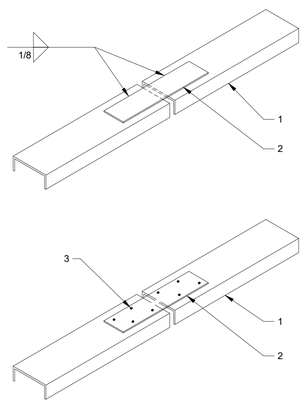
1. STEEL STUDS, PER PLAN.
2. CONTINUOUS 14 GAUGE TRACK TOP AND BOTTOM.
3. (2) #12 SCREWS AT 16" OC
4. COPE WEB OF FLANGE OF BOX BEAM HEADER AND ATTACH TO STUD WITH (4) #12 SCREWS EACH SIDE.
5. 16 GAUGE TRACK FOR WALL FRAMING.
6. BOX BEAM HEADER. SEE SCHEDULE THIS DETAIL FOR SIZE.
7. 16 GAUGE CLIP ANGLE WITH (4) #12 SCREWS EACH LEG EACH END OF HEADER.
8. FULL HEIGHT JAMB STUD.
9. ADDITIONAL FULL HEIGHT JAMB STUD PER SCHEDULE BELOW.

B4 TYPICAL STEEL STUD HEADER IN STEEL STUD BEARING WALL
NO SCALE
5051-2T-408-17



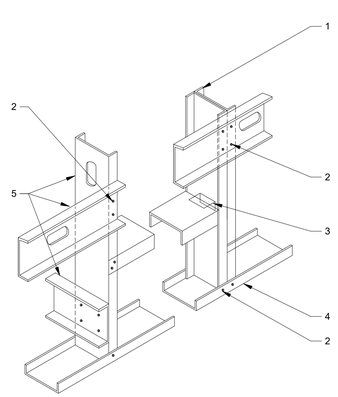
1. FULL HEIGHT COLD-FORMED JAMB STUDS PER SCHEDULE.
2. SECTION OF COLD-FORMED STUD WITH (4) #10 x 3/4" LONG SELF-DRILLING SCREWS TO JAMB; MATCH GAGE AND SIZE AS COLD-FORMED JAMB STUDS.
3. CONTINUOUS TRACK SAME GAGE AS COLD-FORMED STUDS.
4. (1) #10 x 3/4" LONG SELF-DRILLING SCREWS, EACH SIDE.
5. COLD-FORMED STUD.

A1 TYPICAL COLD FORMED SILL AT JAMB STUD
NO SCALE
5050-2T-408-16



1. TOP TRACK; SAME GAGE AS COLD-FORMED STUDS.
2. 3"x12" x 12 GA STRAP.
3. (8) #10 x 3/4" LONG SELF DRILLING (PANCAKE HEAD) SCREWS (4) EACH SIDE OF SPLICE.

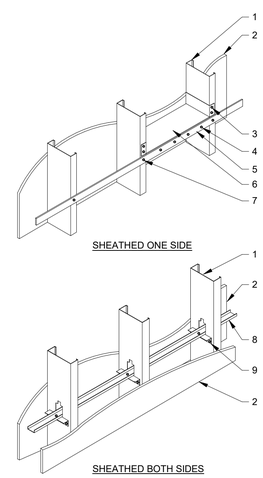
A2 TYPICAL TOP TRACK SPLICE
NO SCALE
5100-2T-03
408-15



1. BACK-TO-BACK COLD-FORMED STUDS WHERE SHOWN ON PLAN.
2. (2) #10x3/4" LONG SELF-DRILLING SCREWS, EACH STUD.
3. COLD-FORMED STUD BLOCKING WITH 16 GA. SUPPORT ANGLE OR SLOTTED BLOCKING MEMBER AND CONNECTION TO FLANGES.
4. CONTINUOUS BOTTOM TRACK SAME GAUGE AS COLD-FORMED STUDS.
5. COLD-FORMED STUD.

NOTE:
- FOR SIZE AND GAUGE OF TYPICAL STEEL STUDS, SEE GSN. SPECIAL SIZES ARE CALLED OUT ON PLAN AND/OR DETAIL.
- INSTALL ALL SCREWS PER METAL STUD ASSOC. SPECS.

A3 TYPICAL STEEL STUD WALL - SCREW CONNECTION
NO SCALE
5150-2T-09
408-14



SHEATHED ONE SIDE

SHEATHED BOTH SIDES

1. STEEL STUD WALL, PER PLAN.
2. GYPBOARD, PLYWOOD OR OTHER SHEATHING MATERIAL AS OCCURS.
3. CUT FLANGE OF BLOCKING AND BEND UP. ATTACH TO STEEL STUD WITH (2) #10 SELF TAPPING SCREWS.
4. (4) #10 SELF TAPPING SCREWS AT SOLID BLOCKING.
5. 2"x18 GA STRAP BRIDGING. FOR SPACING SEE GSN AND WALL SCHEDULE AS OCCURS.
6. SOLID BLOCKING TO MATCH STEEL STUD SIZE AND GAUGE AT FIRST AND LAST TWO STUD SPACES AND NOT TO EXCEED EVERY SIXTH STUD SPACE. ATTACH SHEATHING MATERIAL TO BLOCKING WITH (4) SCREWS MINIMUM.
7. (1) #10 SELF TAPPING SCREW AT EACH STUD.
8. STEEL U CHANNEL 1 1/2"x16 GA.
9. STEEL CLIP ANGLE 1 1/2" x 1 1/2" x 16 GA AT EACH STUD. ATTACH TO STEEL STUD WITH (2) NO. 10 x 3/4" LONG SELF TAPPING SCREWS. CLIP ANGLE LENGTH SHALL BE 1/2" LESS THAN STUD DEPTH.

A4 TYPICAL LIGHT GAGE STEEL STUD BRIDGING
NO SCALE
5070-2T-01
408-13

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Expires 6/30/2025

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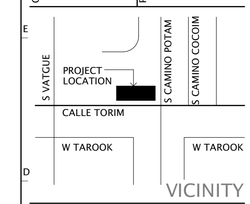

REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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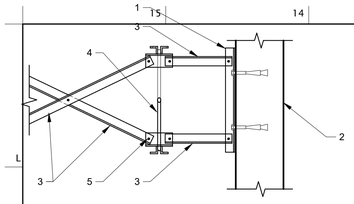
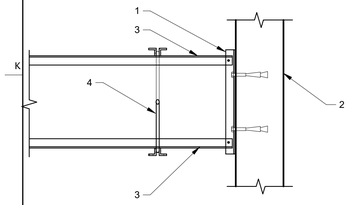
SHEET TITLE
TYPICAL DETAIL

DATE 01.11.2024
SHEET S1.3



CROSS BRIDGING

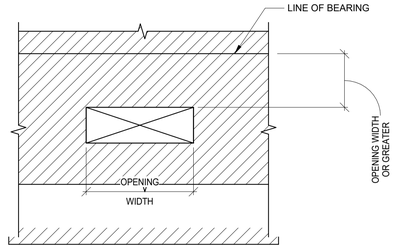


HORIZONTAL BRIDGING

1. L3x3x1/4" - LENGTH AS REQ'D WITH (2) 5/8" DIA. EXPANSION BOLTS INTO WALL.
2. WALL - FOR SIZE AND TYPE, SEE PLAN.
3. BRIDGING AS REQ'D BY JOIST MFR.
4. STEEL JOIST PER PLAN.
5. BOLTS BY JOIST MFR.

NOTES:
- STEEL DECK NOT SHOWN FOR CLARITY.
- FOR ADDITIONAL INFORMATION, SEE PLAN AND GSN

C1 TYPICAL STEEL JOIST BRIDGING CONNECTION TO WALL
NO SCALE
4052-3T-01
401-16



NOTE:
- UNLESS NOTED OR SHOWN OTHERWISE, PROVIDE LINTELS SHOWN IN NON-BEARING WALLS. PROVIDE 5" MINIMUM BEARING OF ANGLES ON JAMB. FOR BEARING WALLS WHERE THESE LINTELS MAY BE USED, SEE ELEVATION ABOVE. PROVIDE SOLID GROUT BETWEEN WEBS AND MASONRY FACE SHELLS FOR FULL LENGTH OF ALL STEEL LINTELS. MORTAR MAY BE USED FOR GROUT FOR THIS PURPOSE ONLY. FACE UNITS, SOAPS, ROMANS, ETC., SHALL BE LAID WITH FULL HEAD AND BED JOINTS.

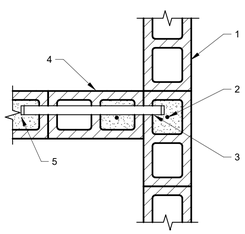
STEEL ANGLE LINTELS

OPENING WIDTH	6" MASONRY	8" MASONRY	12" MASONRY
0 THRU 3'-4"	(2) 3x2 1/2x3/16"(LLV)	(2) 3x2 1/2x1/4"(LLH)	(3) 3 1/2x3 1/2x1/4"
3'-5" THRU 4'-8"	(2) 3x2 1/2x1/4"(LLV)	(2) 3 1/2x3x1/4"(LLH)	(3) 3 1/2x3 1/2x5/16"
4'-9" THRU 6'-0"	(2) 3 1/2x2 1/2x1/4"(LLV)	(2) 3 1/2x3 1/2x1/4"	(3) 4x3 1/2x1/4"(LLV)

MASONRY LINTELS

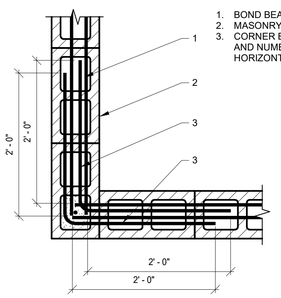
OPENING WIDTH	6" MASONRY	8" MASONRY	12" MASONRY
0 THRU 3'-4"	HEIGHT: 16" (2) #4 BOTTOM	HEIGHT: 16" (2) #5 BOTTOM	HEIGHT: 16" (2) #5 BOTTOM
3'-5" THRU 4'-8"	HEIGHT: 24" (2) #4 BOTTOM	HEIGHT: 24" (2) #5 BOTTOM	HEIGHT: 24" (2) #5 BOTTOM
4'-9" THRU 6'-0"	HEIGHT: 32" (2) #4 BOTTOM	HEIGHT: 32" (2) #5 BOTTOM	HEIGHT: 32" (2) #5 BOTTOM

C2 TYPICAL LINTELS AT MASONRY WALLS NOT SCHEDULED
NO SCALE
4000-23T-01
504-01A



1. CONTINUOUS MASONRY WALL.
2. (1) VERTICAL REINFORCING BAR IN GROUTED CELLS AT END OR AT INTERSECTION OF WALLS.
3. 1/4" THICK x 1 1/2" WIDE BENT STEEL TIE BAR WITH 2" BENDS AT EACH END. SPACE BARS AT 48" OC VERTICALLY.
4. MASONRY WALL WHICH ABUTS CONTINUOUS MASONRY WALL AND IS NOT "TOOTHED" INTO IT.
5. EMBED TIE BAR IN GROUTED CELL.

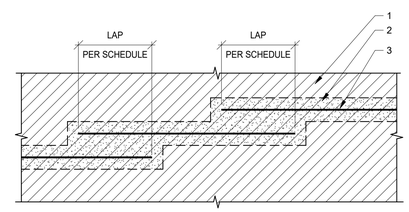
B1 PLAN - TYPICAL MASONRY WALL INTERSECTION NON-TOOTHED
NO SCALE
4040-123T-01
501-07



PLAN SECTION

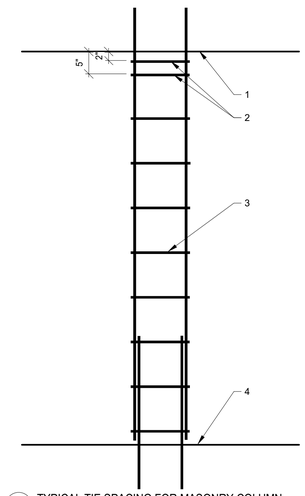
1. BOND BEAM BARS.
2. MASONRY WALL PER PLAN.
3. CORNER BARS SAME SIZE AND NUMBER AS HORIZONTAL REINFORCING.

B2 PLAN - TYPICAL REINFORCING IN MASONRY WALL BOND BEAM AT CORNER
NO SCALE
4000-12T-01
510-11



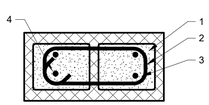
1. MASONRY WALL PER PLAN.
2. SOLID GROUTED BOND BEAM.
3. BOND BEAM BARS.

B3 TYPICAL STEPPED BOND BEAM IN MASONRY WALL
NO SCALE
4000-01T-01
510-03

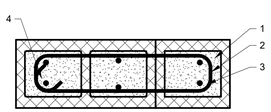


1. BOTTOM OF STRUCTURE OR TOP OF COLUMN.
2. #4 TIES AT TOP OF COLUMN; (2) TOTAL.
3. TIES - FOR SIZE AND SPACING SEE SCHEDULE.
4. TOP OF FOUNDATION OR STRUCTURE.

B4 TYPICAL TIE SPACING FOR MASONRY COLUMN
NO SCALE
4000-013T-01
530-01



MC1



MC2

1. SOLID GROUTED MASONRY COLUMN PER PLAN.
2. TIES.
3. VERTICAL REINFORCING.
4. STAGGER LAPS ON ALTERNATING TIES.

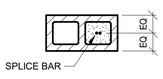
A1 PLAN - TYPICAL SOLID GROUTED MASONRY COLUMN
NO SCALE
4000-1T-01 M
530-05

MASONRY LAP SPLICE LENGTH IN INCHES

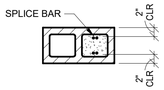
WALL THICKNESS		6" WALL		8" WALL		10" WALL		12" WALL	
BAR SIZE	BAR GRADE	CENTER	EACH FACE	CENTER	EACH FACE	CENTER	EACH FACE	CENTER	EACH FACE
#4	Gr 40	20"	NP	20"	20"	20"	20"	20"	20"
#4	Gr 60	21"	NP	21"	26"	21"	26"	21"	26"
#5	Gr 60	32"	NP	32"	40"	32"	40"	32"	40"
#6	Gr 60	NP	NP	43"	54"	43"	54"	43"	54"
#7	Gr 60	NP	NP	60"	63"	60"	63"	60"	63"
#8	Gr 60	NP	NP	NP	NP	72"	72"	72"	72"

1. LAPS APPLY TO BOTH VERTICAL AND HORIZONTAL REINFORCING.
2. DO NOT SPLICE HORIZONTAL BARS WITHIN 8'-0" OF CONTROL JOINTS.
3. LAP LENGTHS BASED ON A CALCULATED STEEL STRESS (fs) NOT EXCEEDING 80 PERCENT OF THE ALLOWABLE STEEL STRESS (Fs).

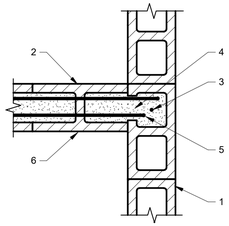
A2 TYPICAL LAP SPLICE IN MASONRY
NO SCALE
4000-123T-01
501-105

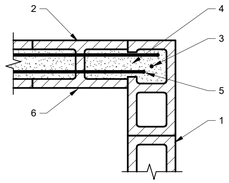


STEEL CENTERED IN WALL



STEEL EACH FACE IN WALL





1. MASONRY WALL PER PLAN.
2. OPEN END MASONRY UNITS.
3. VERTICAL REINFORCING.
4. BREAK OUT FACE SHELL AND GROUT SOLID FULL HEIGHT OF LINTEL.
5. STANDARD 90 DEG HOOK.
6. MASONRY LINTEL - FOR SIZE AND REINFORCING, SEE SCHEDULE.

A3 PLAN - TYPICAL MASONRY WALL INTERSECTION AT MASONRY LINTEL
NO SCALE
4040-123T-
501-08

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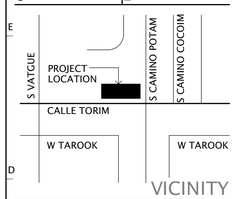

REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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SHEET TITLE

TYPICAL DETAIL

DATE 01.11.2024

SHEET

S1.4

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ISOLATED FOOTING (F) SCHEDULE

NOTE:
IF FIELD DIMENSION OF FOOTING IS LARGER THAN SHOWN IN SCHEDULE, CONTRACTOR TO PLACE ADDITIONAL REINFORCING TO MAINTAIN ACI 318 MINIMUM AREA OF STEEL REQUIREMENTS.

MARK	WIDTH	LENGTH	DEPTH	REINFORCING
F2	4' - 0"	4' - 0"	1' - 0"	(5) #5 EACH WAY, BOTTOM
F3	5' - 0"	5' - 0"	1' - 6"	(6) #5 EACH WAY, TOP AND BOTTOM
F4	6' - 0"	6' - 0"	1' - 6"	(7) #5 EACH WAY, TOP AND BOTTOM

STEEL COLUMN (C) SCHEDULE

MARK	SIZE	BASE PLATE AND ANCHORAGE
C1	HSS6X6X5/16	3/4"x13"x13" STEEL BASEPLATE WITH (4) 3/4" DIAMETER ANCHORS WITH 7" EMBEDMENT
C2	HSS4X4X3/8	1/2"x11"x11" STEEL BASE PLATE WITH (4) 3/4" DIA. ANCHOR RODS WITH 7" EMBEDMENT
C3	HSS12X6X3/8	1"x18"x18" STEEL BASEPLATE WITH (4) 3/4" DIAMETER ANCHORS WITH 7" EMBEDMENT
C4	Pipe5STD	1/2"x12"x12" STEEL BASEPLATE WITH (4) 3/4" DIAMETER ANCHORS WITH 7" EMBEDMENT

CONTINUOUS FOOTING (WF) SCHEDULE

NOTE:
IF FIELD DIMENSION OF FOOTING IS LARGER THAN SHOWN IN SCHEDULE, CONTRACTOR TO PLACE ADDITIONAL REINFORCING TO MAINTAIN ACI 318 MINIMUM AREA OF STEEL REQUIREMENTS.

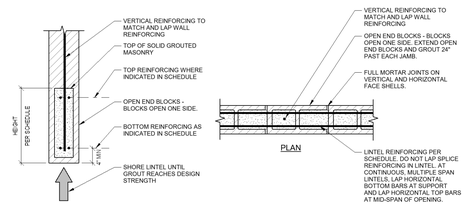
MARK	WIDTH	DEPTH	REINFORCING		NOTES
			TRANSVERSE	CONTINUOUS	
WF1	6' - 0"	1' - 6"	#5 AT 12" O.C.	(7) #5, TOP AND BOTTOM	
WF2	3' - 0"	1' - 0"	#5 AT 12" O.C.	(4) #5, BOTTOM	
WF3	4' - 6"	1' - 0"	#5 AT 12" O.C.	(5) #5, BOTTOM	

MASONRY COLUMN (MC) SCHEDULE

NOTES:
-MASONRY COLUMNS TO EXTEND FULL HEIGHT OF MASONRY WALL
-REFER TO TYPICAL DETAILS FOR TIE SPACING

MARK	SIZE	REINFORCING		REMARKS
		VERTICAL	TIES	
MC2	8"x24"	(6) #5	#3 AT 8" O.C.	

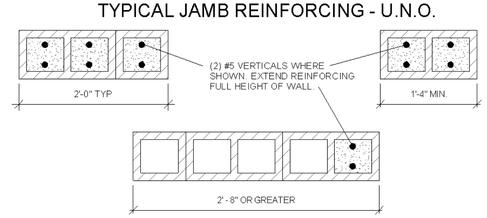
MASONRY LINTEL (ML) SCHEDULE



MARK	DEPTH	REINFORCING	REMARKS
ML1	16"	(2) #5 BOTTOM	--
ML4	24"	(2) #6 TOP AND BOTTOM	

MASONRY WALL (MW) SCHEDULE

TYPICAL JAMB REINFORCING - U.N.O.



MARK	THICKNESS	REINFORCING	NOTES
MW1	8"	#5 AT 40" O.C. VERTICAL	
MW2	8"	(2) #5 AT 8" O.C	

STEEL STUD WALL (W) SCHEDULE

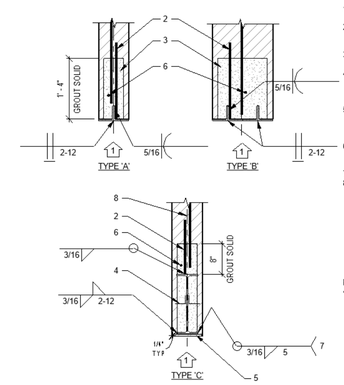
MARK	STUD SIZE	STUD SPACING	REMARKS
W1	600S162-54	1'-4" O.C.	

LEDGER (L) SCHEDULE

NOTE:
SPLICE LEDGERS PER TYPICAL DETAIL.

MARK	MEMBER SIZE	NOTES
L1	L3 1/2X3 1/2X1/4	EMBED PLATES AT 48" O.C. AND 12" MAX FROM END OF WALL
L2	L3 1/2X3 1/2X1/4	EMBED PLATES AT 48" O.C. AND 12" MAX FROM END OF WALL MIN (2) WELD PLATES BETWEEN EACH JOIST
L3	T6.125"x2.5"x16 GA.	(3) #12 SCREWS AT EACH STUD

STEEL LINTEL (SL) SCHEDULE



1. WHEN SPAN EXCEEDS 6'-0", SHORE LINTELS AT MIDSPAN.
2. WELD DOWELS TO LINTELS TO MATCH AND LAP VERTICAL REINFORCING.
3. GROUT ALL CELLS SOLID TO HEIGHT SHOWN.
4. AT TYPE 'C', USE VENEER TIES AT 16" O.C. EACH SIDE OF BEAM. TACK WELD TIES TO WEB OF BEAM.
5. AT TYPE 'C', EXTEND BOTTOM PLATE TO END OF STEEL BEAM. FOR BOTTOM PLATE, SEE LINTEL SCHEDULE.
6. (1) #4 IN 8" DEEP GROUTED BOND BEAM EXTEND MIN. 24" PAST JAMB EACH END.
7. TYPICAL EACH END.
8. CENTERLINE OF MASONRY WALL, STEEL LINTEL AND COLUMN BELOW AS OCCURS.

NOTE:
- PROVIDE 5" MINIMUM BEARING EACH END. INSTALL ON FRESH MORTAR BED.

MARK	MEMBER SIZE	LINTEL TYPE	NOTES
SL4	W16X31	'C'	WITH 3/8" CONTINUOUS STEEL PLATE

SEAL

Registered Professional Engineer (Structural) CERTIFICATE NO. 63915 JOHN B. ELDER Date Signed 06/30/2025 ARIZONA U.S.A. Expires 6/30/2025

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5010 W CALLE TORIM
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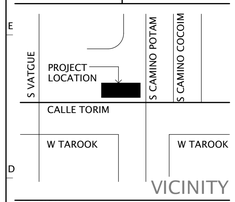

REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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SHEET TITLE

SCHEDULES

DATE 01.11.2024

SHEET

S1.5

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2058 S. DOBSON RD. SUITE 10, MESA, AZ 85202
OFFICE: (480) 454-6408 | www.unitedstr.com

USD Project No.:240005

KEYNOTES

101 4" THICK CONCRETE SLAB ON GRADE WITH 6x6-W2.9xW2.9 WWR CENTERED IN SLAB OVER 4" A.B.C. FILL. REFER TO SOILS REPORT FOR SUBBASE REQUIREMENTS.

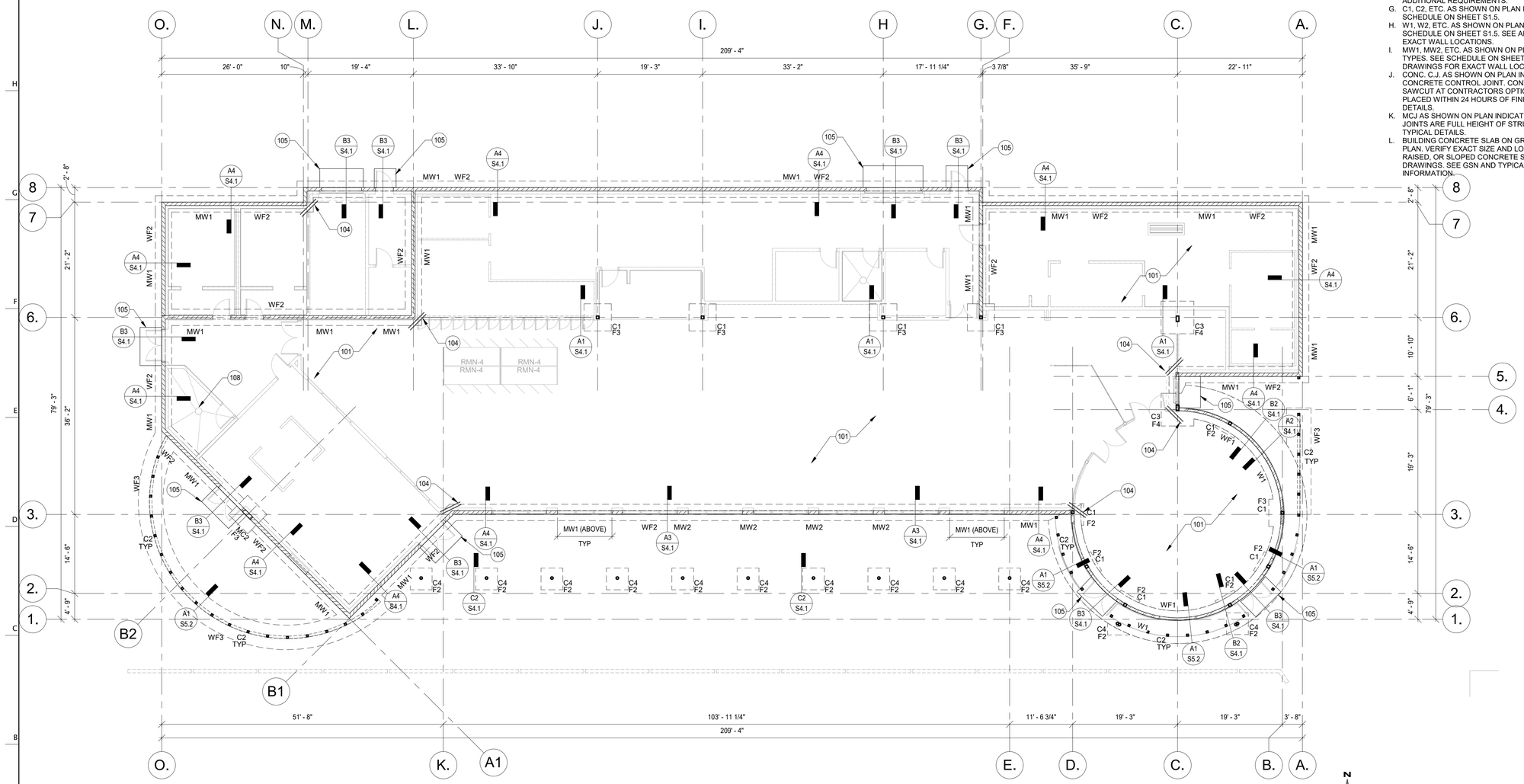
104 (2) #3x2'-0" CENTERED IN SLAB WHERE SHOWN ON PLAN AND AS REQUIRED PER TYPICAL DETAIL A3/S1.1.

105 5" CONCRETE SLAB OVER SUBGRADE WITH #3 AT 16" O.C. EACH WAY. PARALLEL TO EXTERIOR WALL, EXTEND REINFORCING SLAB 18" MINIMUM PAST DOOR JAMB OR EDGE OF SLAB WHICHEVER IS LONGER. PERPENDICULAR TO EXTERIOR WALL, EXTEND REINFORCED SLAB 48" MINIMUM PAST DOOR SILL. IN ALL CASES THE REINFORCED SLAB EXTENDS TO AN EDGE OF SLAB OR SCORE LINE. COORDINATE WITH ARCHITECTURAL DRAWINGS.

108 APPROXIMATE LOCATION OF FLOOR DRAIN, REFER TO ARCHITECTURAL DRAWINGS FOR EXACT SIZE AND LOCATION.

FOUNDATION NOTES

A. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. DIMENSIONS, ELEVATIONS WHERE SHOWN ARE TO BE USED AS AN AID AND SHALL BE COORDINATED WITH THE ARCHITECT OR GENERAL CONTRACTOR PRIOR TO CONSTRUCTION. DO NOT USE CONC C.J. FOR LOCATING BUILDING ELEMENTS.
B. FOR ADDITIONAL INFORMATION, REFERENCE GENERAL STRUCTURAL NOTES.
C. ANY REFERENCE TO ELEVATIONS ARE BASED ON A PROJECT DATUM OF 0'-0" AT FINISH FLOOR OF 1ST FLOOR. FOR MORE INFORMATION SEE ARCHITECTURAL DRAWINGS.
D. WF1, WF2, ETC. AS SHOWN ON PLAN INDICATES CONTINUOUS WALL FOOTING. SEE SCHEDULE ON SHEET S1.5. FOOTING SHALL BE CENTERED UNDER WALL UNO
E. F1, F2, ETC. AS SHOWN ON PLAN INDICATES ISOLATED FOOTING. SEE SCHEDULE ON SHEET S1.5. FOOTING SHALL BE CENTERED UNDER COLUMN UNO
F. FOUNDATION ELEVATIONS NOTED ON PLANS AND IN GSN ARE MINIMUMS. FOUNDATION CONTRACTOR SHALL COORDINATE WITH SOIL REPORT AND ALL TRADES TO ENSURE FOUNDATION ELEVATIONS ARE ADEQUATE. SEE TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS.
G. C1, C2, ETC. AS SHOWN ON PLAN INDICATES STEEL COLUMN. SEE SCHEDULE ON SHEET S1.5.
H. W1, W2, ETC. AS SHOWN ON PLAN INDICATES WALL TYPES. SEE SCHEDULE ON SHEET S1.5. SEE ARCHITECTURAL DRAWINGS FOR EXACT WALL LOCATIONS.
I. MW1, MW2, ETC. AS SHOWN ON PLAN INDICATES MASONRY WALL TYPES. SEE SCHEDULE ON SHEET S1.5. SEE ARCHITECTURAL DRAWINGS FOR EXACT WALL LOCATIONS.
J. CONC. C.J. AS SHOWN ON PLAN INDICATES LOCATION OF CONCRETE CONTROL JOINT. CONTROL JOINTS MAY BE KEYED OR SAWCUT AT CONTRACTORS OPTION. CONC. C.J.'S SHALL BE PLACED WITHIN 24 HOURS OF FINISHING. SEE GSN AND TYPICAL DETAILS.
K. MCJ AS SHOWN ON PLAN INDICATES MASONRY CONTROL JOINT. JOINTS ARE FULL HEIGHT OF STRUCTURE UNO SEE GSN AND TYPICAL DETAILS.
L. BUILDING CONCRETE SLAB ON GRADE SHALL BE AS NOTED ON PLAN. VERIFY EXACT SIZE AND LOCATION OF ALL DEPRESSED, RAISED, OR SLOPED CONCRETE SLABS WITH ARCHITECTURAL DRAWINGS. SEE GSN AND TYPICAL DETAILS FOR ADDITIONAL INFORMATION.



1 FOUNDATION PLAN
1" = 10'-0"

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JOHN B. ELDER
Date Signed 06/30/2025
ARIZONA U.S.A.
Expires 6/30/2025

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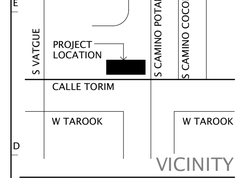
TUSCON, AZ 85757



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SHEET TITLE
FOUNDATION PLAN

DATE 01.11.2024
SHEET
S2.1

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USD Project No.:240005

KEYNOTES

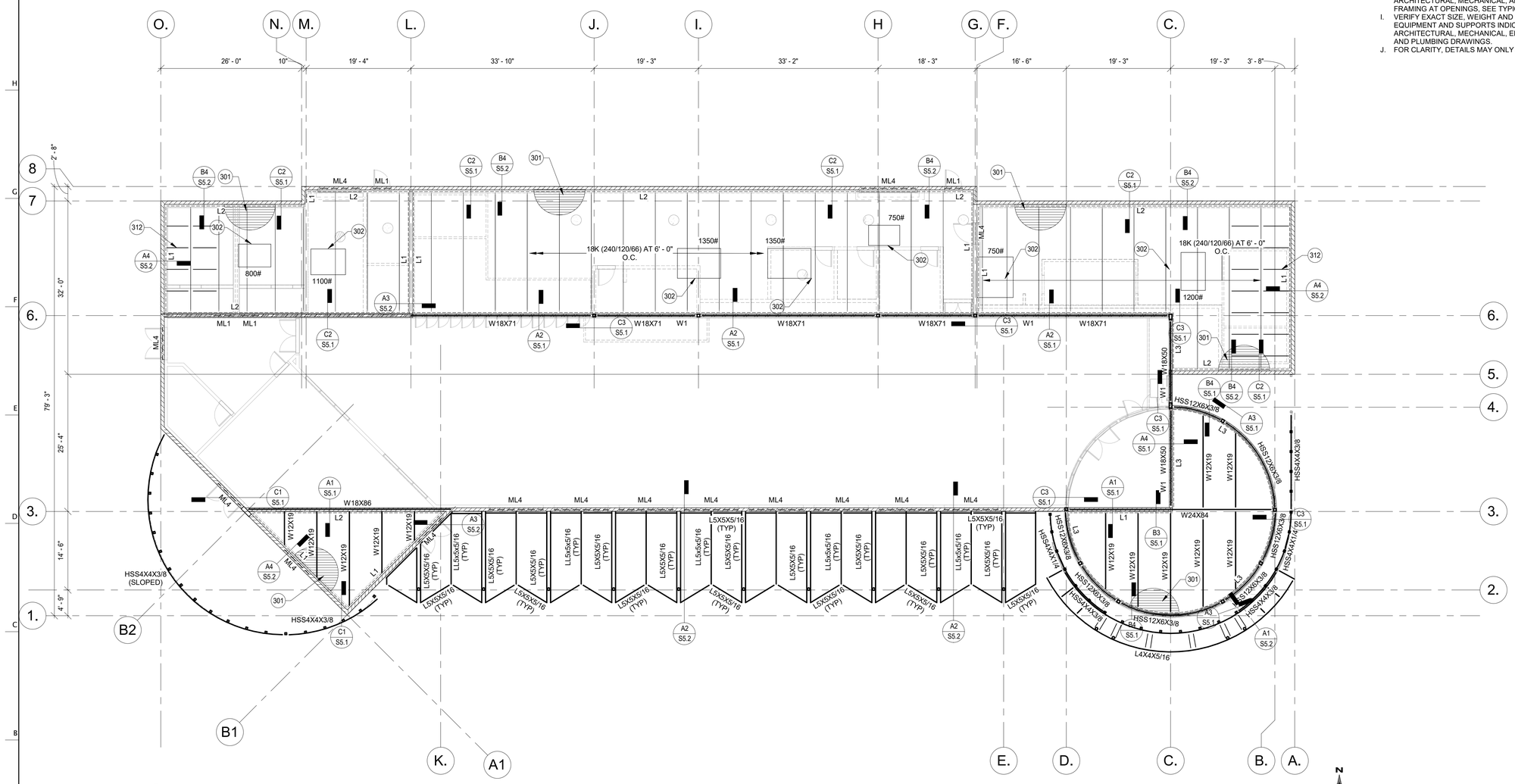
301 1 1/2"x20 GA. STEEL DECK. ATTACH PER GSN.

302 APPROXIMATE LOCATION OF MECHANICAL UNIT. FOR FRAMING AT MECHANICAL UNITS AND AROUND OPENINGS, REFER TO TYPICAL DETAILS. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR EXACT SIZE AND LOCATION.

312 BRIDGING AT 4'-0" O.C. FOR TWO BAYS MINIMUM. ATTACH PER DETAIL C1/S1.4.

ROOF FRAMING NOTES

A. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. DIMENSIONS, ELEVATIONS WHERE SHOWN ARE TO BE USED AS AN AID AND SHALL BE COORDINATED WITH THE ARCHITECT OR GENERAL CONTRACTOR PRIOR TO CONSTRUCTION.
B. FOR ADDITIONAL INFORMATION, REFERENCE GENERAL STRUCTURAL NOTES.
C. ANY REFERENCE TO ELEVATIONS ARE BASED ON A PROJECT DATUM OF 0'-0" AT FINISH FLOOR OF 1ST FLOOR. FOR MORE INFORMATION SEE ARCHITECTURAL DRAWINGS.
D. ML1, ML2, ETC. AS SHOWN ON PLAN INDICATES MASONRY LINTEL. SEE SCHEDULE ON SHEET S1.5.
E. SL1, SL2, ETC. AS SHOWN ON PLAN INDICATES STEEL LINTEL. SEE SCHEDULE ON SHEET S1.5.
F. FOR MISCELLANEOUS MASONRY LINTELS NOT SHOWN, SEE TYPICAL DETAILS. MASONRY CONTRACTOR TO COORDINATE WITH OTHER TRADES FOR EXACT SIZE AND LOCATIONS REQUIRED.
G. L1, L2, ETC. AS SHOWN ON PLAN INDICATES LEDGER. SEE SCHEDULE ON SHEET S1.5.
H. FOR CLARITY, ALL ROOF OPENINGS MAY NOT BE SHOWN ON FRAMING PLAN. FOR EXACT SIZE, NUMBER AND LOCATION SEE ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS. FOR FRAMING AT OPENINGS, SEE TYPICAL DETAILS.
I. VERIFY EXACT SIZE, WEIGHT AND LOCATION OF MECHANICAL UNITS, EQUIPMENT AND SUPPORTS INDICATED ON PLAN WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, FIRE PROTECTION, AND PLUMBING DRAWINGS.
J. FOR CLARITY, DETAILS MAY ONLY SHOW ONE SIDE OF CONNECTION.



1 LOW ROOF FRAMING PLAN
1" = 10'-0"

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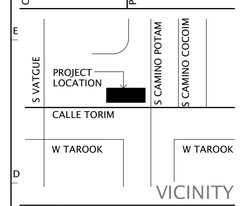

VICINITY

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SHEET TITLE

ROOF FRAMING PLAN

DATE 01.11.2024

SHEET

S3.1

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USD Project No.:240005

ROOF FRAMING NOTES

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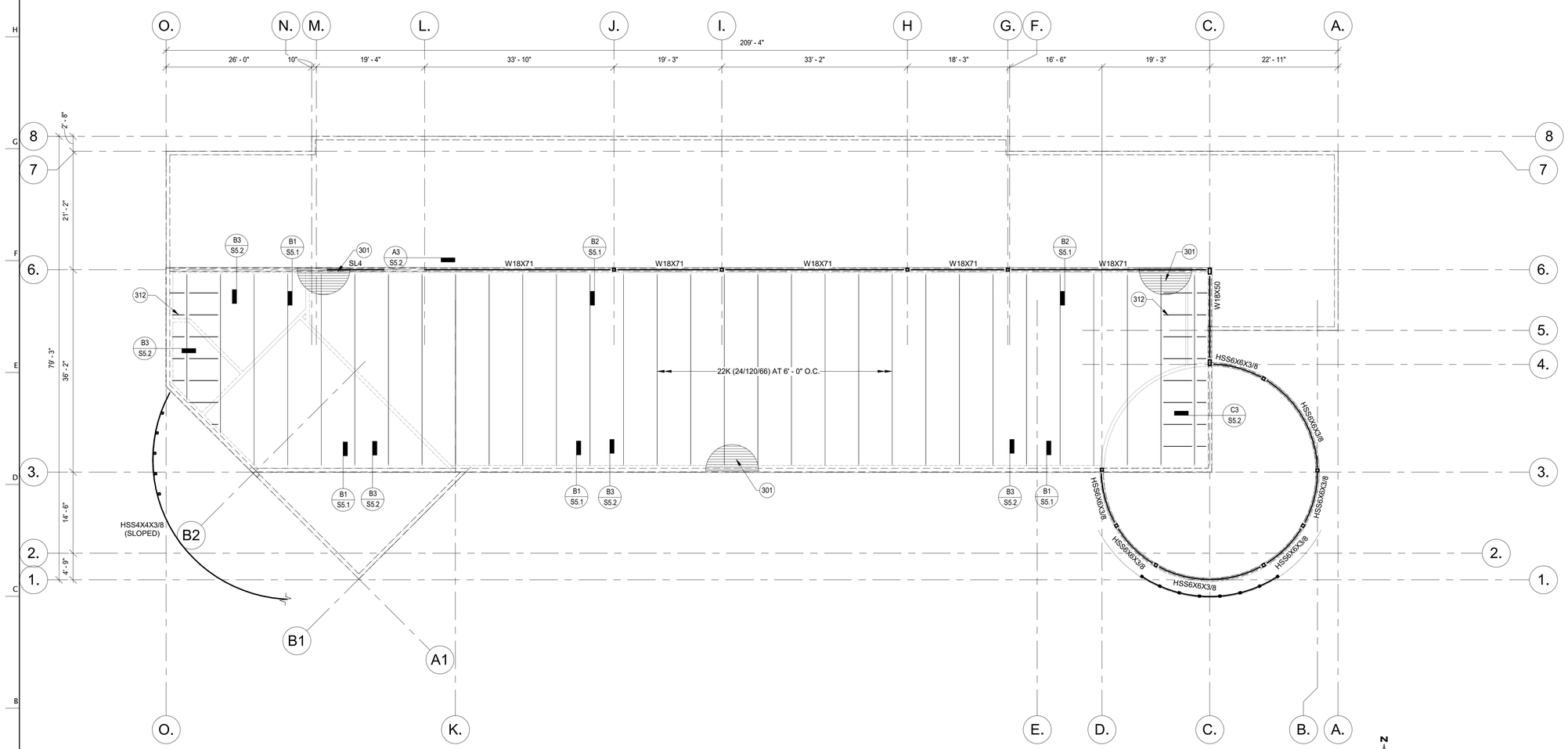
D. ML1, ML2, ETC. AS SHOWN ON PLAN INDICATES MASONRY LINTEL. SEE SCHEDULE ON SHEET S1.5.
E. SL1, SL2, ETC. AS SHOWN ON PLAN INDICATES STEEL LINTEL. SEE SCHEDULE ON SHEET S1.5.
F. FOR MISCELLANEOUS MASONRY LINTELS NOT SHOWN, SEE TYPICAL DETAILS. MASONRY CONTRACTOR TO COORDINATE WITH OTHER TRADES FOR EXACT SIZE AND LOCATIONS REQUIRED.
G. L1, L2, ETC. AS SHOWN ON PLAN INDICATES LEDGER. SEE SCHEDULE ON SHEET S1.5.
H. FOR CLARITY, ALL ROOF OPENINGS MAY NOT BE SHOWN ON FRAMING PLAN. FOR EXACT SIZE, NUMBER AND LOCATION SEE ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS. FOR FRAMING AT OPENINGS, SEE TYPICAL DETAILS.
I. VERIFY EXACT SIZE, WEIGHT AND LOCATION OF MECHANICAL UNITS, EQUIPMENT AND SUPPORTS INDICATED ON PLAN WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, FIRE PROTECTION, AND PLUMBING DRAWINGS.
J. FOR CLARITY, DETAILS MAY ONLY SHOW ONE SIDE OF CONNECTION.



1 HIGH ROOF FRAMING PLAN
1" = 10'-0"

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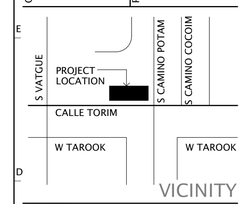

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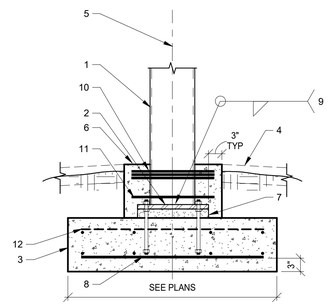
SHEET TITLE

HIGH ROOF FRAMING PLAN

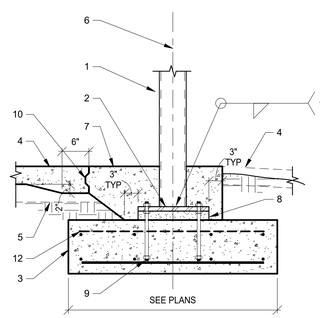
DATE 01.11.2024

SHEET **S3.2**



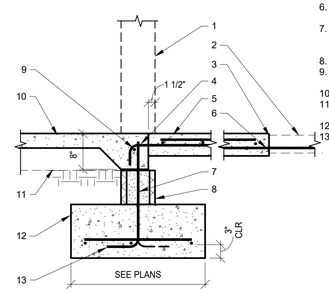
1. STEEL COLUMN PER PLAN.
2. STEEL BASEPLATE WITH ANCHOR RODS AND DOUBLE NUTS. REFER TO SCHEDULE.
3. CONCRETE FOOTING PER PLANS.
4. FINISHED GRADE OR CONCRETE SLAB AS OCCURS.
5. CENTERLINE OF STEEL COLUMN, BASEPLATE AND FOOTING.
6. CONCRETE CLOSURE POUR. PROVIDE 3" COVER AROUND ALL STEEL BELOW GRADE.
7. 1 1/2" +/- DRYPACK.
8. HEAVY HEX NUT - TACK WELD.
9. FOR WELD SIZE - SEE TYPICAL STEEL COLUMN AT BASE PLATE DETAIL.
10. (3) #3 TIES IN TOP 5".
11. #3 TIES AT 8" O.C.
12. TOP REINFORCING WHERE NOTED IN FOOTING SCHEDULE.

C2 EXTERIOR STEEL COLUMN AT FOOTING
NO SCALE
3251-1SM-04 137-15M S2.1



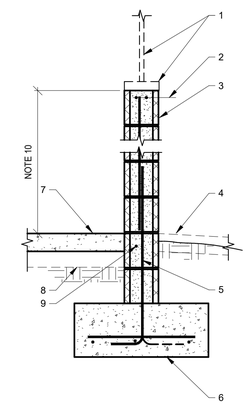
1. STEEL COLUMN PER PLAN.
2. STEEL BASEPLATE WITH ANCHOR RODS AND DOUBLE NUTS. REFER TO SCHEDULE.
3. CONCRETE FOOTING PER PLANS.
4. CONCRETE SLAB ON GRADE. SEE OTHER DETAILS FOR MORE INFORMATION.
5. FOR SUBBASE REQUIREMENTS, SEE GSN AND SOILS REPORT.
6. CENTERLINE OF STEEL COLUMN, BASEPLATE AND FOOTING.
7. CONCRETE CLOSURE POUR. PROVIDE 3" COVER AROUND ALL STEEL BELOW GRADE.
8. ±1 1/2" DRYPACK.
9. HEAVY HEX NUT - TACK WELD.
10. CONTINUOUS KEY - SEE TYPICAL KEY IN CONCRETE DETAIL.
11. FOR WELD SIZE - SEE TYPICAL STEEL COLUMN AT BASE PLATE DETAIL.
12. TOP REINFORCING WHERE NOTED IN FOOTING SCHEDULE.

B2 EXTERIOR STEEL COLUMN AT FOOTING
NO SCALE
3251-1S-01 137-01 S2.1



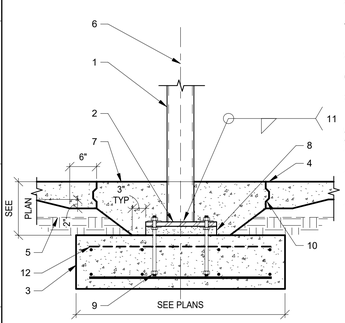
1. MASONRY WALL BEYOND.
2. CONCRETE SIDEWALK SLAB - SEE ARCH'L DRAWINGS.
3. TOOLED JOINT.
4. 1/2" DIA.x6"x24" LONG SMOOTH BENT DOWELS SPACED AT 24" OC.
5. REINFORCED CONCRETE SLAB SEE PLANS.
6. 1/2" DIA. x24" LONG SMOOTH DOWELS SPACED AT 24" OC.
7. DOWELS TO MATCH VERTICAL WALL REINFORCING SIZE AND SPACING.
8. GROUT MASONRY WALL SOLID.
9. REINFORCING CONTINUOUS FROM STEM WALL BEYOND.
10. CONCRETE SLAB.
11. FOR SUBBASE REQUIREMENTS, SEE GSN.
12. CONCRETE FOOTING.
13. STANDARD 90 DEGREE HOOK. ALTERNATE BENDS.

B3 EXTERIOR MASONRY WALL AT FOOTING AT DOOR OPENING
NO SCALE
3240-1S-14 111-16 S2.1



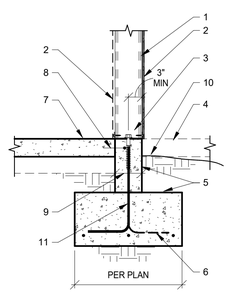
1. WINDOW AND/OR SILL - SEE ARCH'L DRAWINGS.
2. BOND BEAM PER TYPICAL DETAIL OR GSN.
3. MASONRY WALL - SOLID GROUT BELOW GRADE.
4. FINISHED GRADE OR CONCRETE SLAB WHERE OCCURS.
5. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING PER GSN - ALTERNATE BENDS.
6. CONCRETE FOOTING.
7. CONCRETE SLAB ON GRADE.
8. FOR SUBBASE REQUIREMENTS, SEE GSN.
9. (1) #5 CONTINUOUS IN 8" DEEP GROUTED BOND BEAM.
10. 4'-0" MAX. - SEE ARCH'L DRAWINGS.

B4 MASONRY WALL FOOTING AT WINDOW OPENING
NO SCALE
3240-1S-03 108-16



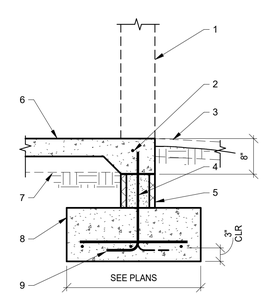
1. STEEL COLUMN PER PLAN.
2. STEEL BASEPLATE WITH ANCHOR RODS AND DOUBLE NUTS. REFER TO SCHEDULE.
3. CONCRETE FOOTING PER PLANS.
4. CONCRETE SLAB ON GRADE. SEE OTHER DETAILS FOR MORE INFORMATION.
5. FOR SUBBASE REQUIREMENTS, SEE GSN AND SOILS REPORT.
6. CENTERLINE OF STEEL COLUMN, BASEPLATE AND FOOTING.
7. CONCRETE CLOSURE POUR. PROVIDE 3" COVER AROUND ALL STEEL BELOW GRADE.
8. ±1 1/2" DRYPACK.
9. HEAVY HEX NUT - TACK WELD.
10. CONTINUOUS KEY - SEE TYPICAL KEY IN CONCRETE DETAIL.
11. FOR WELD SIZE - SEE TYPICAL STEEL COLUMN AT BASE PLATE DETAIL.
12. TOP REINFORCING WHERE NOTED IN FOOTING SCHEDULE.

A1 INTERIOR STEEL COLUMN AT FOOTING
NO SCALE
3251-1S-03 137-07 S2.1



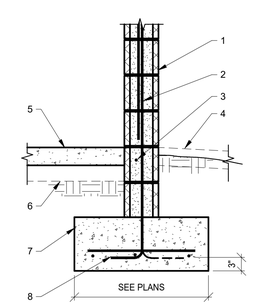
1. STEEL STUD WALL PER PLAN.
2. SHEATHING MATERIAL AND ATTACHMENT AS OCCURS.
3. CONTINUOUS TRACK TO MATCH STUD GAUGE WITH 3/8" DIA. DEWALT POWERS-STUD + SD2 AT 24" O.C. (EST-2502) - UNO.
4. CONCRETE SLAB WHERE OCCURS.
5. CONCRETE STEM WALL AND FOOTING.
6. #4 HOOKED DOWELS AT 48" O.C. - ALTERNATE BENDS.
7. CONCRETE SLAB ON GRADE.
8. (1) #4 CONTINUOUS.
9. THICKNESS OF CONCRETE STEM WALL TO MATCH NOMINAL THICKNESS OF WALL.
10. FINISHED GRADE.
11. #5 HOOKED REBAR AT 24" O.C.

A2 EXTERIOR STEEL STUD WALL FOOTING
NO SCALE
3260-1S-15 134-01.1M S2.1



1. MASONRY WALL BEYOND.
2. REINFORCING CONTINUOUS FROM STEM WALL BEYOND.
3. FINISHED GRADE OR CONCRETE SLAB AS OCCURS.
4. DOWELS TO MATCH VERTICAL WALL REINFORCING SIZE AND SPACING.
5. GROUT MASONRY WALL SOLID.
6. CONCRETE SLAB.
7. FOR SUBBASE REQUIREMENTS SEE GSN.
8. CONCRETE FOOTING.
9. STANDARD 90 DEGREE HOOK. ALTERNATE BENDS.

A3 EXTERIOR MASONRY WALL AT FOOTING AT WALL OPENING
NO SCALE
3240-1S-12 111-07 S2.1



1. MASONRY WALL PER PLAN.
2. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING. SEE TYPICAL LAP SCHEDULE.
3. (1) #5 CONTINUOUS.
4. FINISHED GRADE OR CONCRETE SLAB AS OCCURS
5. CONCRETE SLAB ON GRADE.
6. FOR SUBBASE REQUIREMENTS, SEE GSN.
7. CONTINUOUS WALL FOOTING.
8. STANDARD 90 DEGREE HOOK. ALTERNATE BENDS.

NOTE:
- AT CONTRACTORS OPTION, USE CONCRETE STEM WALL WITH SAME REINFORCING.

A4 EXTERIOR MASONRY WALL FOOTING
NO SCALE
3240-1S-01 108-14 S2.1

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REVISION		
NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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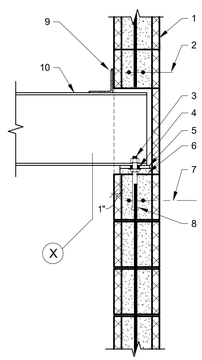
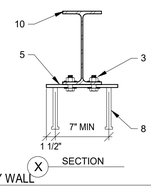
SHEET TITLE

FOUNDATION DETAILS

DATE 01.11.2024

SHEET **S4.1**



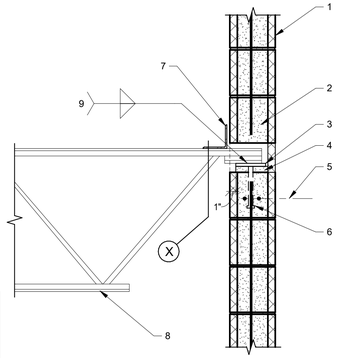


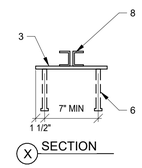
1. MASONRY WALL PER PLAN.
2. CONTINUOUS 8" DEEP GROUTED BOND BEAM PER GSN.
3. (2) 3/4" DIA BOLTS - TACK WELD BOLTS TO BOTTOM OF PLATE. TIGHTEN NUTS FINGER TIGHT.
4. SLOTTED HOLES 1 1/2" LONG ON BEAM GAUGE - EACH SIDE.
5. STEEL BEARING PLATE (Fy=50 KSI) PER BELOW SCHEDULE WITH (2) LAYERS OF 15 POUND BUILDING PAPER. UNO ON PLANS.
6. 1" +/- DRYPACK/FLOWABLE GROUT.
7. (2) #5x48" IN 8" DEEP GROUTED BOND BEAM.
8. HEADED STUDS WITH 5" MINIMUM EMBEDMENT.
9. CONTINUOUS STEEL LEDGER ANGLE.
10. STEEL BEAM PER PLAN.

UNLESS NOTED OTHERWISE ON PLAN:

TYPICAL PLATE SCHEDULE (Fy=50 KSI)	
W8, W10	1/2"x5"x12"
W12, W14	1"x6"x12"
W16, W18	1 1/4"x6"x14"
W21, W24	1 3/4"x6"x16"
W27, W30	2 1/4"x6"x20"

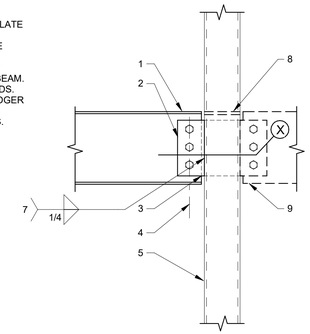
C1 STEEL BEAM BEARING ON MASONRY WALL
NO SCALE
4053-2SS- S3.1



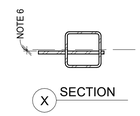


1. MASONRY WALL PER PLAN.
2. GROUT SOLID.
3. 1/2"X5"X12" STEEL BEARING PLATE WITH (2) 3/4" DIA. HEADED STUDS, WITH 2 LAYERS OF 15 POUND BUILDING PAPER. FOR PLATE SIZE, SEE PLAN.
4. ±1" DRYPACK/FLOWABLE GROUT.
5. (2) #5 IN CONTINUOUS 8" DEEP GROUTED BOND BEAM.
6. (2) 3/4" DIA HEADED STUDS.
7. 1/8"x3" AT K JOISTS 1/4"x3" AT LH JOISTS.

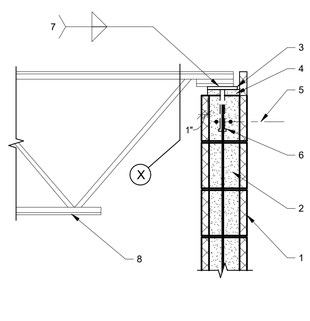
C2 STEEL JOIST BEARING ON MASONRY WALL
NO SCALE
4052-2S-01 447-02 S3.1



1. STEEL BEAM PER PLAN.
2. 3/8" STEEL KNIFE PLATE. 9/16" STEEL KNIFE PLATE WHERE "D"=27" OR MORE.
3. WHERE BEAM OCCURS 1 SIDE ONLY, EXTEND KNIFE PLATE 1/2" FROM COLUMN FACE AT UNFRAMED SIDE.
4. FOR SIZE AND NUMBER OF BOLTS, SEE TYPICAL BOLT SCHEDULE.
5. STEEL COLUMN PER PLAN.
6. 1/2 OF BEAM WEB - TYP.
7. WELD PLATE TO COLUMN BOTH SIDES.
8. 1/2" CAP PLATE WHERE COLUMN DOES NOT CONTINUE.
9. STEEL BEAM BOTH SIDES AS OCCURS.

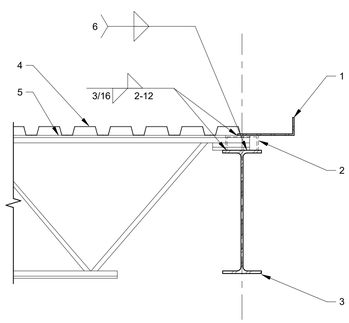


C3 TYPICAL STEEL BEAM TO STEEL COLUMN CONNECTION
NO SCALE
5153-2SS- S3.1



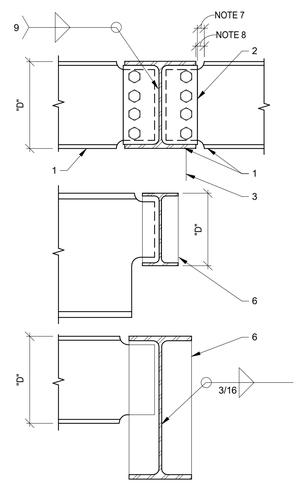
1. MASONRY WALL PER PLAN.
2. GROUT SOLID.
3. 1/2"x5"x12" STEEL BEARING PLATE WITH (2) 3/4" DIA. HEADED STUDS, WITH 2 LAYERS OF 15 POUND BUILDING PAPER. FOR PLATE SIZE, SEE PLAN.
4. ±1" DRYPACK/FLOWABLE GROUT.
5. (2) #5 IN CONTINUOUS 8" DEEP GROUTED BOND BEAM.
6. (2) 3/4" DIA HEADED STUDS.
7. 1/8"x3" AT K JOISTS 1/4"x3" AT LH JOISTS.
8. STEEL JOIST PER PLANS.

B1 STEEL JOIST BEARING ON MASONRY WALL
NO SCALE
4052-2S M-01 447-02 S3.2



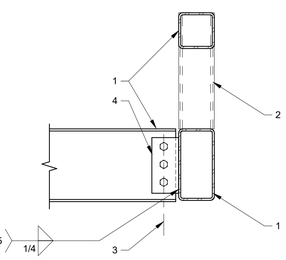
1. 1/4" CONTINUOUS BENT STEEL PLATE OR ANGLE.
2. CONTINUOUS INVERTED STEEL "U" PLATE BETWEEN JOISTS.
3. STEEL BEAM PER PLAN.
4. STEEL DECK - FOR DIRECTION OF DECK, SEE PLAN. ATTACH PER GSN.
5. STEEL JOIST PER PLAN.
6. 1/8"x3" AT K JOISTS 1/4"x3" AT LH JOISTS.

B2 STEEL JOIST AT STEEL BEAM
NO SCALE
5152-2S-02 437-121 S3.2



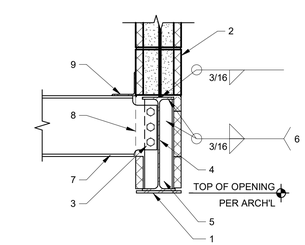
1. STEEL BEAM PER PLAN.
2. 3/8" STEEL SHEAR PLATE - USE 9/16" STEEL SHEAR PLATE WHERE "D" = 27" OR GREATER. EDGE DISTANCES PER TYPICAL BOLT SCHEDULE AND LATEST EDITION OF AISC.
3. FOR SIZE, TYPE AND NUMBER OF BOLTS. SEE TYPICAL BOLT SCHEDULE.
4. "D" = LESSER OF BEAM DEPTHS AS OCCURS.
5. WELD 3 SIDES TYPICAL - USE SAME CONNECTION AT STIFFENER PLATES WHEN REQUIRED.
6. AT ONE SIDED CONNECTIONS INSTALL 3/8" STIFFENER PLATE OPPOSITE SHEAR PLATE. TYP.
7. 1/2" MAXIMUM FROM EDGE OF SHEAR PLATE IF SHEAR PLATE EXTENDS BEYOND EDGE OF BEAM FLANGE.
8. 1/2" MAXIMUM FROM EDGE OF BEAM FLANGE IF FLANGE EXTENDS BEYOND EDGE OF SHEAR PLATE.
9. 5/16" WELD AT 3/8" PLATE 1/2" WELD AT 9/16" PLATE.

B3 TYPICAL STEEL BEAM TO BEAM CONNECTION
NO SCALE
5153-23SS- S3.1



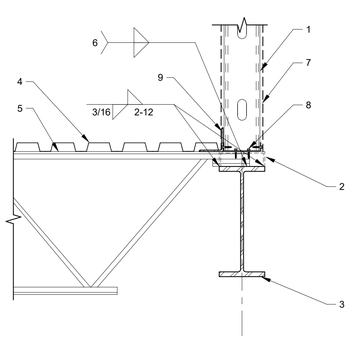
1. STEEL BEAM PER PLAN.
2. STEEL STUD WALL INFILL.
3. FOR SIZE AND NUMBER OF BOLTS, SEE TYPICAL BOTL SCHEDULE.
4. 3/8" STEEL KNIFE PLATE. 9/16" STEEL KNIFE PLATE WHERE "D"=27" OR MORE.
5. WELD PLATE TO BEAM BOTH SIDES.

B4 WIDE FLANGE BEAM TO HSS BEAM
NO SCALE
5153-2SSM- S3.1



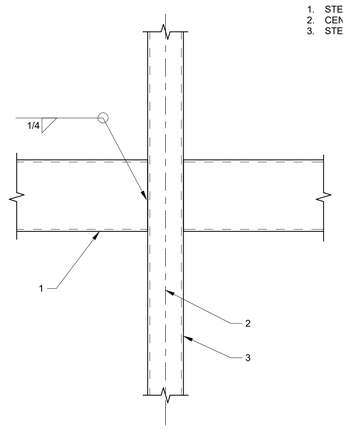
1. PLATE AND CONNECTION PER TYPICAL DETAILS.
2. MASONRY WALL PER PLAN.
3. CONNECTION PER TYPICAL BEAM TO BEAM CONNECTION.
4. STEEL LINTEL BEAM.
5. 3/8" STEEL STIFFENER PLATE BOTH SIDES OF BEAM. ALIGN WITH CENTERLINE OF STEEL POST.
6. WELD STIFFENERS TO BEAM, 3 SIDES.
7. STEEL BEAM PER PLAN.
8. MASONRY WALL BEYOND.
9. CONTINUOUS STEEL LEDGER ANGLE.

A1 STEEL BEAM AT STEEL LINTEL BEAM
NO SCALE
5035-2SSM- S3.1



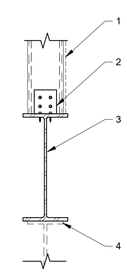
1. STEEL STUD WALL PER PLAN.
2. CONTINUOUS INVERTED STEEL "U" PLATE BETWEEN JOISTS.
3. STEEL BEAM PER PLAN.
4. STEEL DECK - FOR DIRECTION OF DECK, SEE PLAN. ATTACH PER GSN.
5. STEEL JOIST PER PLAN.
6. 1/8"x3" AT K JOISTS 1/4"x3" AT LH JOISTS.'
7. SHEATHING AND FINISH PER ARCHITECTURAL DRAWINGS.
8. CONTINUOUS 16 GAUGE TRACK WITH (2) #12 SCREWS PER STUD AND (2) #12 SCREWS AT 12" O.C. ATTACHING THROUGH PLATE.
9. CONTINUOUS LEDGER ANGLE. ATTACH TO STUDS WITH (3) #12 SCREWS AT EACH STUD.

A2 STEEL JOIST AT STEEL BEAM
NO SCALE
5152-2S M-02 437-121 S3.1



1. STEEL BEAM PER PLAN.
2. CENTERLINE OF COLUMN.
3. STEEL COLUMN PER PLAN.

A3 STEEL BEAM CONNECTION STEEL COLUMN
NO SCALE
415-03M S3.1



1. SHEATHING AND FINISH PER ARCHITECTURAL DRAWINGS.
2. L4x4x14 GA CLIP ANGLE AT EACH STUD WITH (4) #12 SCREWS EA. SIDE.
3. STEEL BEAM PER PLANS.
4. WINDOW PER ARCH'L.

A4 STEEL BEAM AT COLD FORMED WALL
NO SCALE
5071-2SSM- S3.1

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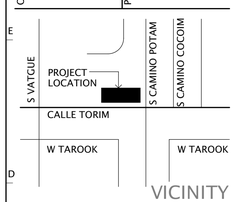

REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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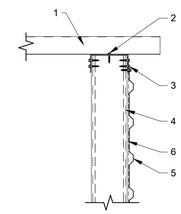
SHEET TITLE

FRAMING DETAILS

DATE 01.11.2024

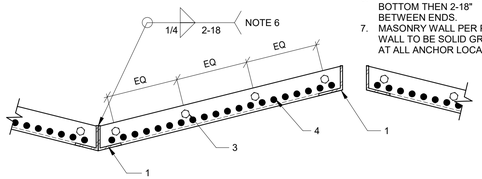
SHEET **S5.1**

1. STEEL DECK - FOR DIRECTION OF DECK, SEE PLAN. ATTACH PER GSN.
2. STEEL DECK ATTACHMENT PER GSN.
3. CONTINUOUS TOP TRACK PER WALL SCHEDULE. ATTACH WITH (2) #12 SELF DRILLING SCREWS PER STUD.
4. STEEL STUD WALL PER PLANS.
5. METAL WALL PANEL PER WALL SCHEDULE.
6. EXTERIOR WALL FINISH PER ARCHITECTURAL DRAWINGS.

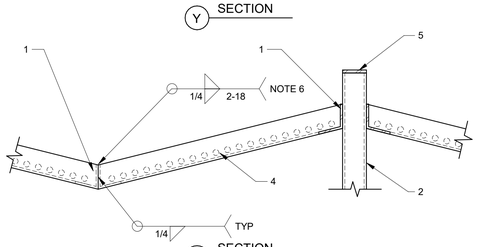


C3 ROOF DECK AT EXTERIOR STUD WALL
NO SCALE
7154-3SS- S3.2

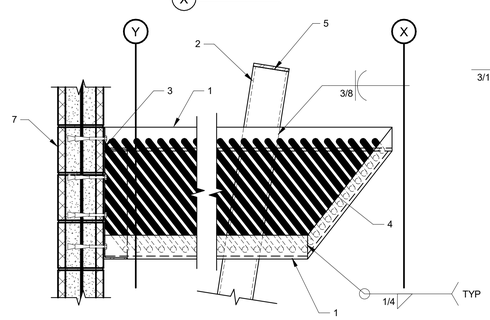
1. STEEL ANGLE PER PLAN. MITTER ALL CORNERS AND WELD ALL AROUND. AT TOP AND BOTTOM ANGLES, USE BENT PLATE AS NEEDED TO ACHIEVE ANGLES THAT ARE BENT OPEN OR CLOSED TO MATCH CANOPY SLOPE.
2. STEEL COLUMN PER PLAN.
3. STEEL ANGLE BOLTED TO MASONRY WALL WITH (4) 3/4" DIAMETER EXPANSION BOLTS AT EACH ANGLE AS SHOWN (24" O.C. MAXIMUM).
4. 1" DIA ROUND BAR PER ARCHITECTURAL DRAWINGS. WELD TO STEEL ANGLES.
5. 1/2" STEEL CAP PLATE. SEAL WELD ALL AROUND.
6. WELD FIRST 8" TOP AND BOTTOM THEN 2-18" BETWEEN ENDS.
7. MASONRY WALL PER PLANS. WALL TO BE SOLID GROUTED AT ALL ANCHOR LOCATIONS.



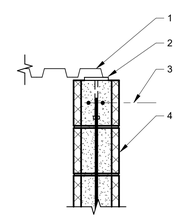
Y SECTION



X SECTION

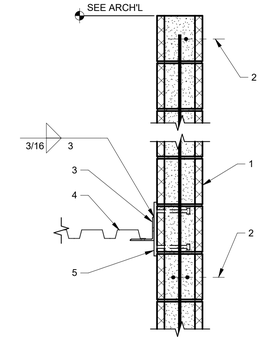


1. STEEL DECK - FOR DIRECTION OF DECK, SEE PLAN. ATTACH PER GSN.
2. CONTINUOUS STEEL PLATE 1/4"x4" WITH 5/8" DIA HEADED STUDS AT 24" O.C. AND 1" DIA AIR RELEASE HOLES AT 16" O.C. (2 STUDS MINIMUM).
3. CONTINUOUS 8" DEEP GROUTED BOND BEAM PER GSN.
4. MASONRY WALL PER PLAN.



B3 STEEL DECK AT MASONRY WALL
NO SCALE
4054-3S-01 485-01 S3.2

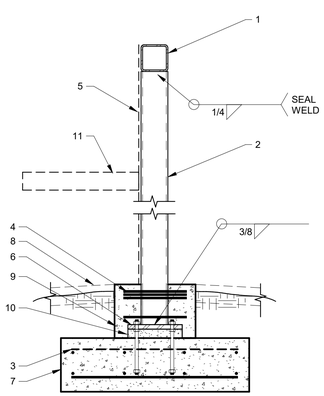
SEE ARCH'L



1. MASONRY WALL PER PLAN.
2. CONTINUOUS BOND BEAM PER GSN.
3. CONTINUOUS STEEL LEDGER ANGLE. SEE PLANS AND LEDGER SCHEDULE.
4. STEEL DECK - FOR DIRECTION OF DECK, SEE PLAN. ATTACH PER GSN.
5. STEEL PLATE, 1/4"x4"x9" WITH (2) 1/2" DIAMETER HEADED STUDS AT 6" OC IN SOLID GROUTED CELLS IN MASONRY WALL. GROUT MINIMUM 4" ABOVE AND BELOW ANCHORS. FOR PLATE SPACING, SEE LEDGER SCHEDULE.

B4 LEDGER ANGLE AND COMPOSITE DECK AT MASONRY WALL
NO SCALE
4035-2S-04 486-02 S3.1

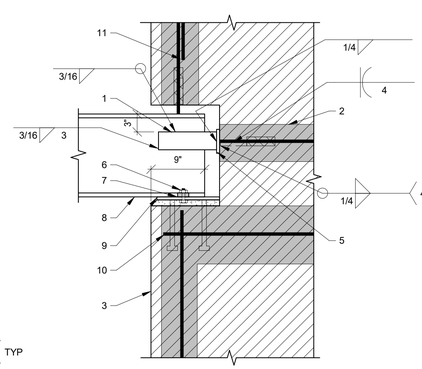
1. CONTINUOUSE STEEL BEAM PER PLAN. SLOPE AND RADIUS BEAM PER ARCH'L DRAWINGS. CONTRACTOR MAY PROPOSE SPLICE LOCATIONS IN SHOP DRAWINGS, WELD ALL AROUND WITH FULL DEPTH PJP AT SPLICE LOCATIONS AND GRIND SMOOTH.
2. STEEL COLUMN PER PLAN.
3. TOP REINFORCING WHERE NOTED IN FOOTING SCHEDULE.
4. #3 TIES AT 8" O.C. WITH (3) #3 TIES IN TOP 5".
5. PERFORATED METAL PANEL PER ARCHITECTURAL DRAWINGS. WELD PANEL TO STRUCTURAL STEEL AT 6" O.C. MAXIMUM (1/8"x1 1/2" LONG FILLET WELDS OR 3/4" DIAMETER PUDDLE WELDS). ALTERNATE ATTACHMENTS MAY BE PROPOSED BY CONTRACTOR AND SUBMITTED FOR REVIEW BY EOR.
6. STEEL BASEPLATE WITH ANCHOR RODS AND DOUBLE NUTS. REFER TO SCHEDULE.
7. CONCRETE FOOTING PER PLANS.
8. FINISHED GRADE OR CONCRETE SLAB AS OCCURS.
9. CONCRETE CLOSURE POUR. PROVIDE 3" COVER AROUND ALL STEEL BELOW GRADE.
10. 1 1/2" +/- DRYPACK.
11. STEEL CANOPY WHERE OCCURS, REFERNCE OTHER DETAILS FOR MORE INFORMATION.



A1 EXTERIOR STEEL COLUMN
NO SCALE
S2.1

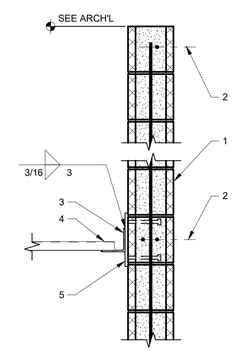
A2 STEEL CANOPY
NO SCALE
S3.1

1. STEEL PLATE 3/8x3x8" FIELD WELD AFTER BEAM IS INSTALLED.
2. BOND BEAM PER GSN.
3. MASONRY WALL PER PLAN.
4. TYPICAL PLATE TO PLATE.
5. STEEL PLATE 1/2x4x4" WITH (2) #5x42" IN 8" DEEPx48" LONG SOLID GROUTED BOND BEAM. WRAP BARS WITH 1/4" THICKx12" LONG MASTIC AND LAP REINFORCING WITH ADJACENT BOND BEAM AS REQUIRED.
6. (2) 3/4" DIA. BOLTS TACK WELDED TO BOTTOM OF PLATE. - TIGHTEN FINGER TIGHT.
7. 1 1/2" LONG SLOTTED HOLES.
8. STEEL BEAM PER PLAN.
9. 3/4x6x12" STEEL BEARING PLATE WITH (2) 3/4" DIA HEADED STUDS OVER ±1" DRYPACK.
10. (2) #5x3'-6" LONG IN 8" DEEPx4'-0" LONG GROUTED BOND BEAM EACH WAY. PROVIDE CORNER BARS.
11. 24" LONG DOWEL TO MATCH VERTICAL REINFORCING. WRAP WITH 1/4" THICKx8" LONG MASTIC.



A3 STEEL BEAM AT MASONRY WALL
NO SCALE
4051-2SS- 417-32 S3.1

SEE ARCH'L



1. MASONRY WALL PER PLAN.
2. CONTINUOUS BOND BEAM PER GSN.
3. CONTINUOUS STEEL LEDGER ANGLE. SEE PLANS AND LEDGER SCHEDULE.
4. STEEL DECK - FOR DIRECTION OF DECK, SEE PLAN. ATTACH PER GSN.
5. STEEL PLATE, 1/4"x4"x9" WITH (2) 1/2" DIAMETER HEADED STUDS AT 6" OC IN SOLID GROUTED CELLS IN MASONRY WALL. GROUT MINIMUM 4" ABOVE AND BELOW ANCHORS. FOR PLATE SPACING, SEE LEDGER SCHEDULE.

A4 LEDGER ANGLE AND STEEL DECK AT MASONRY WALL
NO SCALE
4035-2S-02 486-01 S3.1

UNITED STRUCTURAL DESIGN LLC
2058 S. DOBSON RD. SUITE 10, MESA, AZ 85202
OFFICE: (480) 454-6408 | www.unitedstr.com

USD Project No.:240005

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cam@mergeAG.com
cdc@mergeAG.com

SEAL

OWNER INFORMATION
PASCUA YAQUI TRIBE

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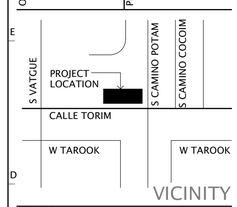
TUSCON, AZ 85757
MICRO-MARKET
5010 W CALLE TORIM
TUCSON, AZ 85757



REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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SHEET TITLE

FRAMING DETAILS

DATE 01.11.2024

SHEET **S5.2**

DUCTWORK CONSTRUCTION AND LEAKAGE SCHEDULE

SYSTEM	DUCT PRESSURE CLASS (IN. W.C.)			ROUND METAL DUCT		RECTANGULAR METAL DUCT		DUCT TEST PRESSURE: IN. W.C.	REMARKS
	SUPPLY	RETURN	EXHAUST	DUCT SEAL CLASS	DUCT LEAK CLASS	DUCT SEAL CLASS	DUCT LEAK CLASS		
SUPPLY	+2			A	6	A	12	2.0	1
KITCHEN HOOD MAKE-UP AIR DUCT	+2			A	6	A	12	1.0	1
RETURN		-1		A	6	A	12	1.0	1
EXHAUST			+/- 1	A	6	A	12	1.0	1

REMARKS:

1. TEST IN ACCORDANCE WITH SPECIFICATION SECTION 230593, TESTING, ADJUSTING, AND BALANCING FOR HVAC, AND THE PROCEDURES IN SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL. 100% OF ALL DUCT SYSTEMS SHALL BE TESTED IN BUILDINGS 'A' AND 'B'; A 25% SAMPLE OF DUCT SYSTEMS SHALL BE TESTED IN BUILDING 'C'. SEND RFI TO ENGINEER PRIOR TO TESTING TO REQUEST WHICH SAMPLE UNITS SHALL HAVE DUCT SYSTEMS DUCT AIR LEAKAGE TESTED.

GENERAL NOTES

1. ALL OSA INTAKES MUST BE AT LEAST 18" ABOVE ROOF AND AT LEAST 10' FROM ALL EXHAUST VENTS AND PLUMBING VENTS.
2. FLEXIBLE DUCT SHALL BE LIMITED IN LENGTH TO A MAXIMUM OF 10' LENGTH, EXCEPT WHERE SHOWN. FLEXIBLE DUCT SHALL BE UL CLASS 1 RATED.
3. DISCREPANCIES: IF THE CONTRACTOR FINDS DISCREPANCIES, OR OMISSIONS, OR IS IN DOUBT AS TO THE EXACT MEANING OF THE PLANS OR SPECIFICATIONS, THEY SHALL, BEFORE STARTING WORK, CONTACT THE OWNER AND ENGINEER FOR CLARIFICATION.
4. THESE DRAWINGS ARE IN GENERAL DIAGRAMMATIC, AND CANNOT SHOW ALL OFFSETS, BENDS, CLEARANCES, OR ISSUES OF GENERAL CONSTRUCTION. LOCATION AND FINISH OF ALL WORK SHALL BE VERIFIED IN THE FIELD AND SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR, THE ARCHITECT, AND ALL TRADES, PRIOR TO ANY CONSTRUCTION. IN THE EVENT THERE ARE DISCREPANCIES, OMISSIONS, OR DOUBT, AS TO THE INTENT OF THESE PLANS OR SPECIFICATIONS, BEFORE, ANY WORK, ORDER OF ANY MATERIAL, OR SELECTION OF ANY METHODS OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE OWNER, ARCHITECT, AND ENGINEER IN WRITING FOR CLARIFICATION.
5. ACOUSTICAL DUCT LINER SHALL BE USED IN SUPPLY/RETURN DUCTWORK WITHIN 5 FEET OF UNIT DISCHARGE/INTAKE AND WHERE SHOWN ON PLANS INCLUDING LARGE HORIZONTAL SUPPLY AND RETURN DUCT SECTIONS NEAR UNIT DISCHARGE/INTAKE VERTICAL DUCTS, AND FOR 5 FEET AT VAV TERMINAL UNIT OUTLETS; 1" THICK DUCT LINER WITH ENHANCED SURFACE EQUAL TO CERTAINTEED TOUGHGARD R, EXCEPT 1/2" THICK LINER SHALL BE USED AFTER VAV TERMINAL UNITS. CONTRACTOR SHALL ALSO PROVIDE PINS AND ADHESIVE PER MANUFACTURER'S RECOMMENDATIONS FOR ATTACHING DUCT LINER TO DUCTWORK. ALL SEAMS AND ENDS OF DUCT LINER SHALL BE LAGGED WITH ARABOL OR OTHER LAGGING ADHESIVE APPROVED BY THE MANUFACTURER. NO CELLULOSE MATERIAL SHALL BE IN AIR STREAM IN COMMON RETURN PLENUM.
6. CONTRACTOR SHALL COORDINATE AND INCLUDE ANY AND ALL INCIDENTAL ELECTRICAL AND PLUMBING WORK AS REQUIRED. ALL EQUIPMENT SHALL BE PROVIDED WITH OVER-CURRENT PROTECTION PER THE MANUFACTURER'S RECOMMENDATIONS.
7. COMPLY WITH ALL APPLICABLE PROVISIONS OF THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE. INSTALLING CONTRACTOR AND/OR GENERAL CONTRACTOR SHALL COMPLETE FORMS.
8. DUCT AIR LEAKAGE TESTING SHALL OCCUR FOR BOTH PACKAGED ROOFTOP UNIT DUCTING SYSTEMS AND ALL OTHER DUCTING SYSTEMS. SEE DUCT AIR LEAKAGE TESTING REQUIREMENTS IN SPECIFICATION SECTION 230593, AND TABLE ON THIS SHEET.
9. ALL MANUFACTURERS INSTALLATION INSTRUCTIONS RECEIVED ON-SITE OR THROUGH OTHER MEANS SHALL BE RETAINED IN A 3-RING BINDER FOR USE ON JOBSITE.
10. REFER TO THE TAB SUMMARY ON AIR FLOW DIAGRAM SHEETS M4.1 FOR SUPPLEMENTAL TAB INSTRUCTIONS.
11. BUILDING DUCTWORK SHALL HAVE LONGITUDINAL AND TRANSVERSE JOINTS, SEAMS, AND CONNECTIONS OF SUPPLY AND RETURN DUCTS SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), MASTIC-PLUS EMBEDDED-FABRIC SYSTEMS OR TAPES INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.
12. ALL DUCT DIMENSIONS SHOWN ARE NET FREE AREA.
13. PROVIDE METAL DUCTWORK ELBOWS WITH A CENTERLINE RADIUS OF 1.5 TIMES THE WIDTH OR DIAMETER OF THE DUCT WHERE SPACE PERMITS. OTHERWISE, ELBOWS HAVING A MINIMUM RADIUS EQUAL TO THE WIDTH OR DIAMETER OF THE DUCT OR SQUARE ELBOWS WITH FACTORY FABRICATED TURNING VANES ARE ALLOWED.
14. DUCT INSULATION SHALL HAVE A MINIMUM INSTALLED R-VALUE OF 6.0.
15. PROVIDE CODE REQUIRED AND MANUFACTURER'S RECOMMENDED CLEARANCES FOR ACCESS AND MAINTENANCE ON ALL EQUIPMENT.
16. THIS PROJECT WILL REQUIRE COMMISSIONING PER THE 2018 IECC REQUIREMENTS. THE GENERAL OR MECHANICAL CONTRACTOR SHALL HIRE THE COMMISSIOING AGENT AND THE MECHANICAL CONTRACTDOR SHALL INCLUDE COMFORMANCE TO THE IECC COMMISSIONING REQUIREMENTS IN ALL WORK SHOWN. REFER TO 2018 IECC, SECTION 503.2.9. THE MECHANICAL CONTRACTOR SHALL ALSO PROVIDE THE BUILDING OWNER WITH AN OPERATION AND MAINTENANCE MANUAL PER THIS IECC SECTION REQUIREMENT.
17. A COPY OF THE TAB REPORT SHALL BE PROVIDED TO THE AUTHORITY HAVING JURISDICTION.
18. THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS TO THE OWNER AND AUTHORITY HAVING JURISDICTION WITHIN 90 DAYS OF SYSTEM ACCEPTANCE.

MECHANICAL SYMBOLS

SYMBOL	DESCRIPTION
	SUPPLY AIR DUCT
	RETURN AIR DUCT
	EXHAUST DUCT
	FLEXIBLE DUCT
C	CO_2 SENSOR
M	MOTORIZED DAMPER
S	SMOKE DETECTOR
T	THERMOSTAT / TEMP. SENSOR
H	HUMIDISTAT / HUMIDITY SENSOR
P	PRESSURE SENSOR
SP	STATIC PRESSURE SENSOR
S	SWITCH
POC	POINT OF CONNECTION
(MVD)	MANUAL VOLUME DAMPER
	UNDERCUT DOOR 1"
FSD	FIRE/SMOKE DAMPER (VERT.)
FSD	FIRE/SMOKE DAMPER (HORIZ.)
TS	TEMPERATURE SENSOR
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST AIR GRILLE
	DUCT TURNING VANES
RISE	DUCT OFFSET, RISING
DROP	DUCT OFFSET, DROPPING
	SEISMIC SWAY BRACING

NOTE: SOME SYMBOLS MAY NOT APPLY TO THIS PROJECT

AIR DEVICE CALL OUT

1 / 2 — 1 - LETTER MARK (SEE SCHEDULE) 2 - CFM

EQUIPMENT CALL OUT

1 / 2 — 1 - EQUIPMENT MARK (SEE SCHEDULE) 2 - EQUIPMENT NUMBER

MECHANICAL ABBREVIATIONS

AHU	AIR HANDLER UNIT
AP	ACCESS PANEL
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CR	CEILING REGISTER
CU	CONDENSING UNIT
DG	DOOR GRILLE
DL	DRUM LOUVER
DN	DOWN
DTR	DOWN THROUGH ROOF
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EL	EXHAUST LOUVER
EXH	EXHAUST
FF	FILTER FRAME
FG	FILTER GRILLE
FLEX	FLEXIBLE
FB	BOTTOM OF DUCT FITTING IS FLAT
FT	TOP OF DUCT FITTING IS FLAT
GPM	GALLONS PER MINUTE
IL	INTAKE LOUVER
MUA	MAKE UP AIR
MVD	MANUAL VOLUME DAMPER
OSA	OUTSIDE AIR
R/A	RETURN AIR
RG	RETURN GRILLE
S/A	SUPPLY AIR
SD	SIDEWALL DIFFUSER
TG	TRANSFER GRILLE
TYP	TYPICAL
UTR	UP THROUGH ROOF
OBD	OPPOSED BLADE DAMPER

NOTE: SOME ABBREVIATIONS MAY NOT APPLY TO THIS PROJECT

MECHANICAL SHEET INDEX

M1.1	MECHANICAL GENERAL NOTES, SYMBOLS, & SPECIFICATIONS
M1.2	IECC COMPLIANCE FORMS - MECHANICAL & PLUMBING
M1.3	IECC COMPLIANCE FORMS - MECHANICAL & PLUMBING
M2.1	MECHANICAL PLAN
M2.2	MECHANICAL ROOF PLAN
M3.1	MECHANICAL ENLARGED PLAN
M3.2	MECHANICAL SECTIONS
M4.1	AIRFLOW DIAGRAM
M5.1	MECHANICAL DETAILS
M5.2	MECHANICAL DETAILS
M6.1	MECHANICAL SCHEDULES
M6.2	MECHANICAL SCHEDULES
M7.1	MECHANICAL CONTROLS

MECHANICAL SPECS INDEX

230500	COMMON WORK RESULTS FOR HVAC
230593	TESTING, ADJUSTING, AND BALANCING FOR HVAC
230700	HVAC INSULATION
230923	DIRECT-DIGITAL CONTROL SYSTEM FOR HVAC
233000	HVAC AIR DISTRIBUTION
238103	PACKAGED ROOFTOP AIR CONDITIONING UNITS
238126	MINI-SPLIT SYSTEMS

JOB NO. 4081

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STERNCO engineers, inc.

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SEAL

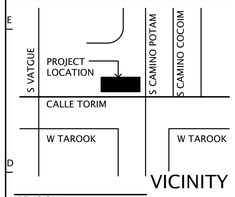
Registered Professional Engineer (Mechanical) CERTIFICATE NO. 26380 JOHN R. STERNITZKE Date Signed 10/16/2025 ARIZONA, U.S.A.

OWNER INFORMATION
Pascua Yaqui Tribe

PROJECT
Micro Market

7490 S CAMINO DE OESTE TUCSON, AZ 85757

5010 W CALLE TORIM TUCSON, AZ 85757



VICINITY

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

PROJECT NO. 23C-001

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SHEET TITLE
MECHANICAL GENERAL NOTES, SYMBOLS, & SPECIFICATIONS

DATE 02.20.2024

SHEET **M1.1**

COM*check* Software Version 4.1.5.3

Mechanical Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	Chepa's Micro-Market
Location:	Tucson, Arizona
Climate Zone:	2b
Project Type:	New Construction

Construction Site:
5010 W Calle Torim
Tucson, AZ 85757

Owner/Agent:

Designer/Contractor:
John R. Sternitzke, PE, FPE, CxA
Sternco Engineers, Inc.
Yuma, AZ 85364

Additional Efficiency Package(s)

Credits: 1.0 Required 0.0 Proposed

Mechanical Systems List

Quantity	System Type & Description
2	RTU-1 & 2 (6 Ton) (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 72 kBtu/h Proposed Efficiency = 82.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 65 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 12.20 EER, Required Efficiency: 11.00 EER + 12.6 IEER Fan System: None
2	RTU-3 & 4 (10 Ton) (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 180 kBtu/h Proposed Efficiency = 82.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 103 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 11.40 EER, Required Efficiency: 11.00 EER + 12.6 IEER Fan System: None
1	RTU-5 (4 Ton) (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 67 kBtu/h Proposed Efficiency = 81.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 44 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 17.40 SEER, Required Efficiency: 14.00 SEER Fan System: None
1	RTU-6 (7.5 Ton) (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 125 kBtu/h Proposed Efficiency = 82.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 85 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 12.00 EER, Required Efficiency: 11.00 EER + 12.6 IEER Fan System: None
1	MAU-1 (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 331 kBtu/h Proposed Efficiency = 81.00% Et, Required Efficiency: 80.00 % Et Cooling: 1 each - Single Package DX Unit, Capacity = 264 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 9.80 EER, Required Efficiency: 9.80 EER + 11.4 IEER Fan System: None
1	GWH: Gas Storage Water Heater, Capacity: 100 gallons, Input Rating: 250 kBtu/h w/ Circulation Pump Proposed Efficiency: 96.00 % Et, Required Efficiency: 80.00 % Et

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C403.12.2 & C403.12.3 [FO9][1]	Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature and outdoor temperature. future connection to controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design 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 2018 IECC requirements in COM*check* Version 4.1.5.3 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

John R. Sternitzke, PE, FPE, CxA — Name - Title
Signature
03/28/24 — Date

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.6.1, C404.6.2 [PL3][1]	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

COM*check* Software Version 4.1.5.3

Inspection Checklist

Energy Code: 2018 IECC

Requirements: 89.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR2][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C103.2 [PR3][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

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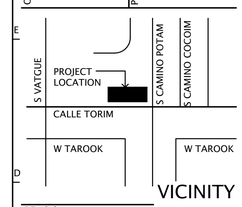

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NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

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SHEET TITLE

IECC COMPLIANCE FORMS - MECHANICAL & PLUMBING

DATE 02.20.2024

SHEET **M1.2**

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41][3]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.8.1 [ME65][3]	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. *See the Mechanical Systems list for values.*
C403.8.1 [ME65][3]	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. *See the Mechanical Systems list for values.*
C403.8.1 [ME65][3]	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. *See the Mechanical Systems list for values.*
C403.8.1 [ME65][3]	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. *See the Mechanical Systems list for values.*
C403.8.1 [ME65][3]	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. *See the Mechanical Systems list for values.*
C403.8.3 [ME117][2]	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Fans integral to equipment listed under Section C403.2.3.
C403.8.3 [ME117][2]	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Fans integral to equipment listed under Section C403.2.3.
C403.8.3 [ME117][2]	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Fans integral to equipment listed under Section C403.2.3.
C403.8.3 [ME117][2]	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Fans integral to equipment listed under Section C403.2.3.
C403.8.3 [ME117][2]	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Fans integral to equipment listed under Section C403.2.3.
C403.12.1 [ME71][2]	Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.2.3 [ME55][2]	HVAC equipment efficiency verified.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
C403.2.2 [ME59][1]	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.7.1 [ME59][1]	Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.7.2 [ME115][3]	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.6 [ME141][3]	HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.4 [ME57][1]	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.5 [ME116][3]	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.11.1 , C403.11.2 [ME60][2]	HVAC ducts and plenums insulated in accordance with C403.11.1 and constructed in accordance with C403.11.2, verification may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.4 [ME63][2]	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.3.3 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.3.3 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.3.3 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.3.3 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.3.3 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.2.1 [ME111][2]	Gas-fired water-heating equipment installed in new buildings: where a singular piece of water-heating equipment >= 1,000 kBtu/h serves the entire building, thermal efficiency >= 90 Et. Where multiple pieces of water-heating equipment serve the building with combined rating >= 1,000 kBtu/h, the combined input-capacity-weighted-average thermal efficiency >= 90 Et. Exclude input rating of equipment in individual dwelling units and equipment <= 100 kBtu/h.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C408.2.2.1 [ME53][1]	Air outlets and zone terminal devices have means for air balancing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5, C403.5.1, C403.5.2 [ME123][3]	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2..	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.3 [FI8][3]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.2 [FI27][3]	HVAC systems and equipment capacity does not exceed calculated loads.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.2 [FI38][3]	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1.3 [FI20][3]	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2 [FI39][3]	Each zone equipped with setback controls using automatic time clock or programmable control system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2.1, C403.2.4.2.2 [FI40][3]	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C404.3 [FI11][3]	Heat traps installed on supply and discharge piping of non-circulating systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.4 [FI25][2]	All piping insulated in accordance with section details and Table C403.11.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.6.1 [FI12][3]	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank. System return pipe is a dedicated return pipe or a cold water supply pipe.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.1 [FI28][1]	Commissioning plan developed by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.1 [FI31][1]	HVAC equipment has been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.2 [FI10][1]	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.4 [FI29][1]	Preliminary commissioning report completed and certified by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.1 [FI7][3]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.3 [FI43][1]	An air and/or hydronic system balancing report is provided for HVAC systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.4 [FI30][1]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

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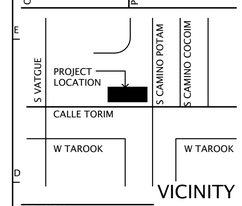

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SHEET TITLE
IECC COMPLIANCE FORMS - MECHANICAL & PLUMBING

DATE 02.20.2024

SHEET **M1.3**

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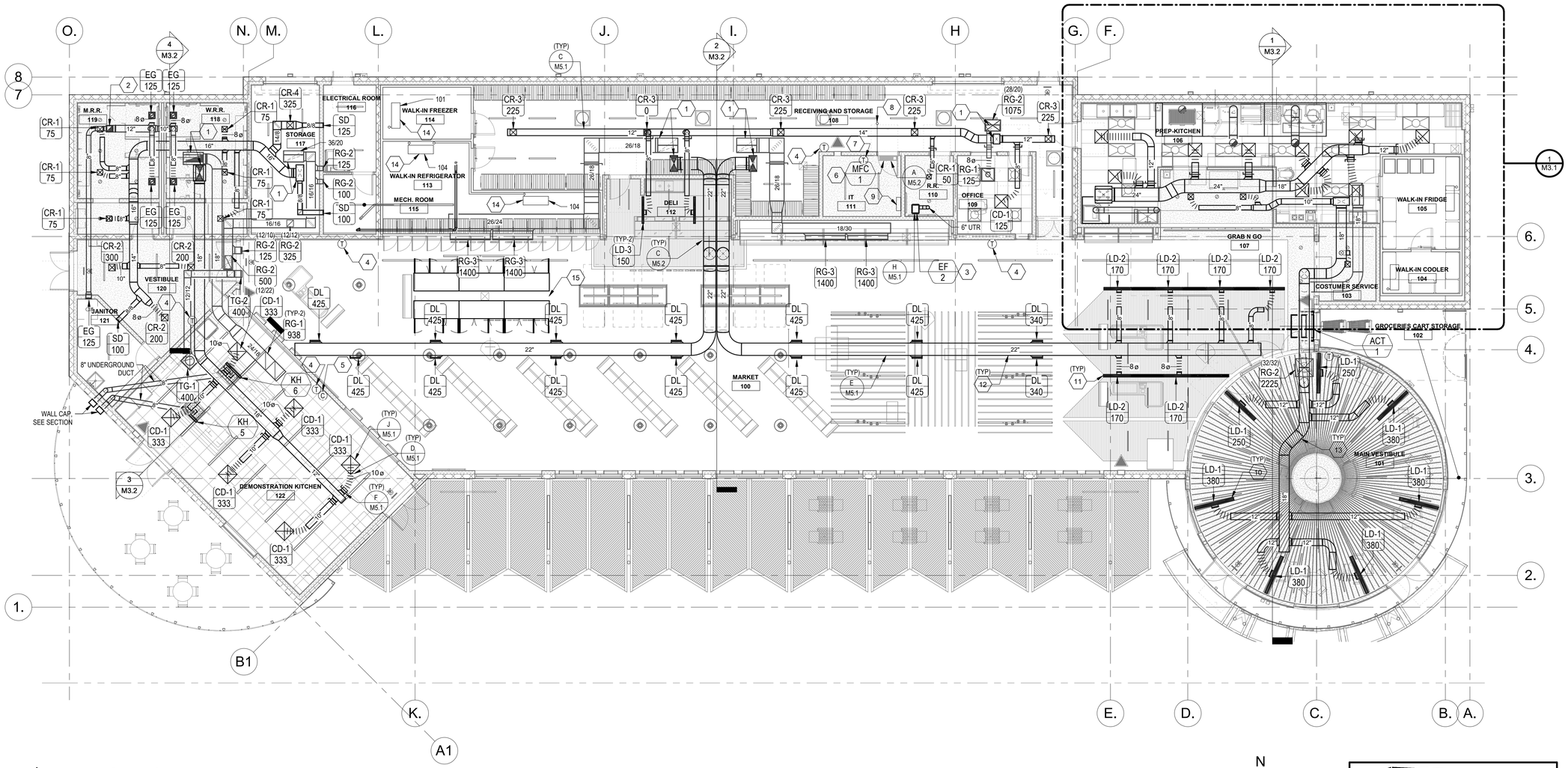
KEYNOTES

1. SUPPLY AND RETURN DUCTS FROM PACKAGED ROOFTOP AIR CONDITIONING UNIT. TRANSITION DUCTS BELOW ROOF TO SIZES INDICATED.
2. EXHAUST DUCT UP TO EXHAUST FAN ON ROOF.
3. CEILING MOUNTED EXHAUST FAN CONTROLLED BY LIGHT SWITCH. EXHAUST DUCT UP THRU ROOF TO TERMINATE WITH EXHAUST CURB WITH CAP.
4. APPROXIMATE LOCATION OF DDC TEMPERATURE AND HUMIDITY SENSOR MOUNTED AT 48" A.F.F. COORDINATE EXACT LOCATION WITH ARCHITECT. REFER TO CONTROLS SHEETS.
5. APPROXIMATE LOCATION OF CO2 SENSOR MOUNTED AT 48" A.F.F. COORDINATE EXACT LOCATION WITH ARCHITECT. REFER TO CONTROLS SHEETS.
6. WALL MOUNTED FAN COIL UNIT MOUNTED HIGH IN THE SPACE, ABOVE DOOR.
7. APPROXIMATE LOCATION OF FAN COIL WIRED THERMOSTAT MOUNTED AT 48" A.F.F. COORDINATE EXACT LOCATION WITH ARCHITECT.
8. REFRIGERANT AND CONTROL LINE SET UP TO CONDENSING UNIT ON ROOF.
9. PROPOSED DDC CONTROLLER BOX LOCATION. COORDINATE WTH ELECTRICAL DRAWINGS FOR DEDICATED ELECTRICAL CIRCUIT.
10. LINEAR DIFFUSER TO FIT BETWEEN METAL SLATS WITH BOTTOM OF DIFFUSER AT BOTTOM OF SLATS. COORDINATE EXACT INSTALLATION WITH ARCHITECT AND EXACT CEILING DETAILS. PROVIDE LINEAR DIFFUSER WITH INSULATED PLENUM BOX ABOVE CEILING. PLENUM BOX TO INCLUDE ROUND DUCT CONNECTION, SIZE AS SHOWN, WITH CONNECTION ABOVE CEILING ASSEMBLY.

KEYNOTES

11. LINEAR DIFFUSER TO FIT BETWEEN SLATS WITH BOTTOM OF DIFFUSER AT BOTTOM OF SLATS. COORDINATE EXACT INSTALLATION WITH ARCHITECT AND EXACT CEILING DETAILS. PROVIDE LINEAR DIFFUSER WITH INSULATED PLENUM BOX ABOVE CEILING. PLENUM BOX TO INCLUDE ROUND DUCT CONNECTION, SIZE AS SHOWN, WITH CONNECTION ABOVE CEILING ASSEMBLY. LINEAR DIFFUSER TO BE APPROXIMATE TOTAL LENGTH AS SHOWN. WITH 48" ACTIVE FLOW SECTIONS WHERE SHOWN.
12. EXPOSED DUCT TO HAVE ALL JOINTS SEALED NEATLY AND DUCT PREPPED FOR PAINTING PER ARCHITECTURAL PLANS.
13. EXPOSED DUCT ABOVE CEILING TO HAVE ALL JOINTS SEALED NEATLY AND DUCT PREPPED FOR PAINTING PER ARCHITECTURAL PLANS.
14. APPROXIMATE LOCATION FOR EVAPORATOR UNITS FOR WALK-IN COOLER AND FREEZER, SHOWN FOR REFERENCE ONLY; REFER TO FOOD SERVICE PLANS FOR EQUIPMENT DETAILS.
15. PROVIDE STAINLESS STEEL SHIELD TO DIVERT HEAT UP ABOVE FREEZERS TO THE HVAC RETURN GRILLS.



1 MECHANICAL PLAN

M2.1 SCALE: 1/8" = 1'-0"

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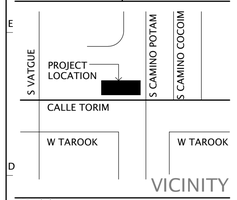

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SHEET TITLE

MECHANICAL PLAN

DATE 02.20.2024

SHEET **M2.1**

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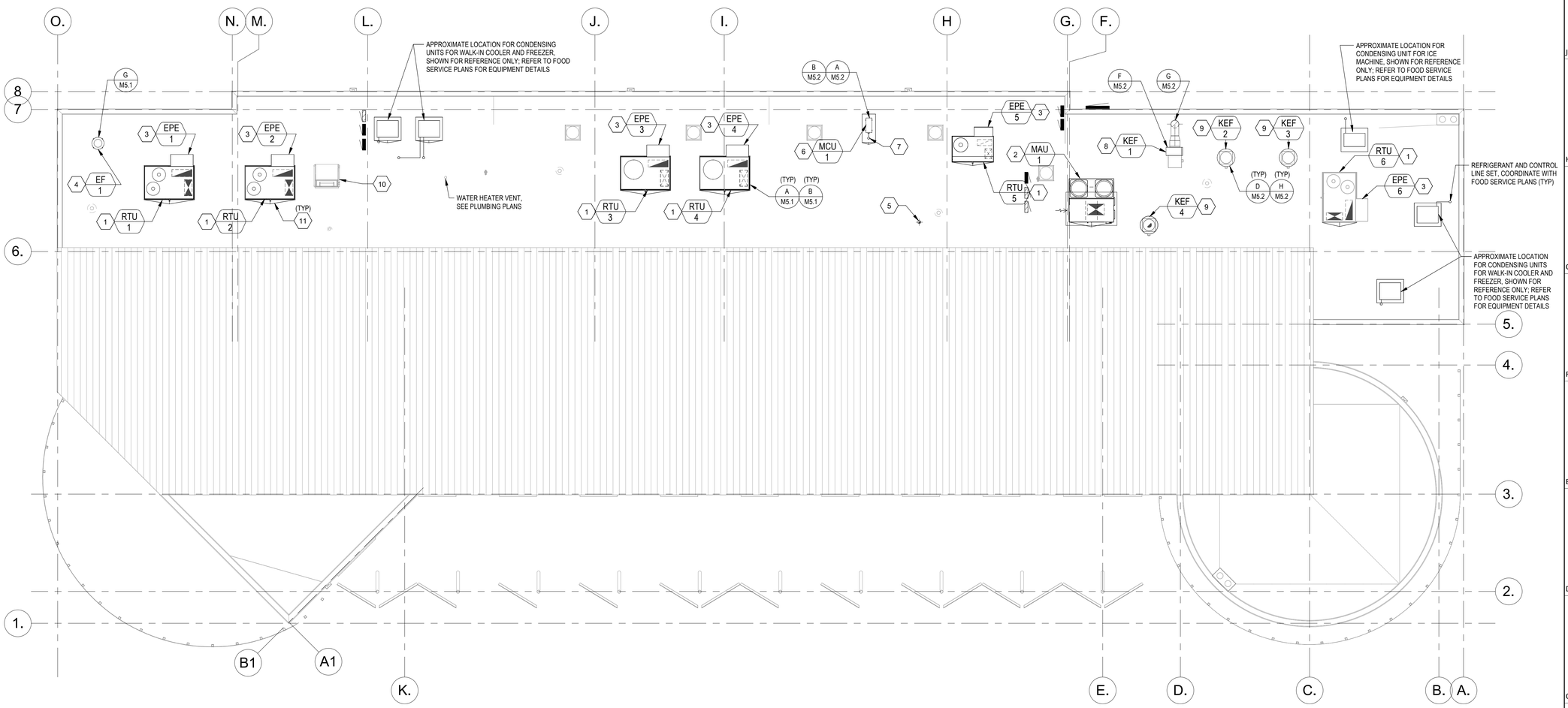
KEYNOTES

1. DOWN DISCHARGE AND VERTICAL RETURN PACKAGED AIR CONDITIONING UNIT ON ROOF CURB SLOPED TO MATCH ROOF PITCH.
2. DOWN DISCHARGE PACKAGED MAKE-UP AIR UNIT ON ROOF CURB SLOPED TO MATCH ROOF PITCH.
3. COMBINATION ECONOMIZER AND POWERED EXHAUST ACCESSORY MOUNTED ON PACKAGED ROOFTOP AIR CONDITIONING UNIT. PROVIDE SUPPORT UNDER ACCESSORY.
4. EXHAUST FAN MOUNTED ON ROOF CURB SLOPED TO MATCH ROOF PITCH.
5. EXHAUST DUCT UP THRU ROOF FROM EXHAUST FAN BELOW. TERMINATE WITH ROOF CURB WITH CAP.
6. MINI SPLIT CONDENSING UNIT, MOUNT ON AND FASTEN TO FLAT CURB WITH FLASHING. SEE DETAIL.
7. REFRIGERANT LINE SET DOWN THROUGH ROOF TO FAN COIL UNIT BELOW. SEE MECHANICAL FLOOR PLAN FOR CONTINUATION.
8. UTILITY SET KITCHEN EXHAUST FAN MOUNTED ON FLAT ROOF CURB PLATFORM. FAN TO TERMINATE WITH VERTICAL UPFLOW EXHAUST.
9. KITCHEN HOOD EXHAUST FAN MOUNTED ON FACTORY VENTED ROOF CURB SLOPED TO MATCH ROOF PITCH.
10. ROOF HATCH SHOWN FOR REFERENCE.
11. ALL ROOF CURBS TO INCLUDE CRICKET, COORDINATE WITH ARCHITECT ON CRICKET REQUIREMENTS.



1 MECHANICAL ROOF PLAN

M2.2 SCALE: 1/8" = 1'-0"

N

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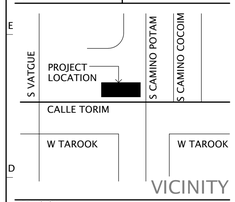

REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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SHEET TITLE

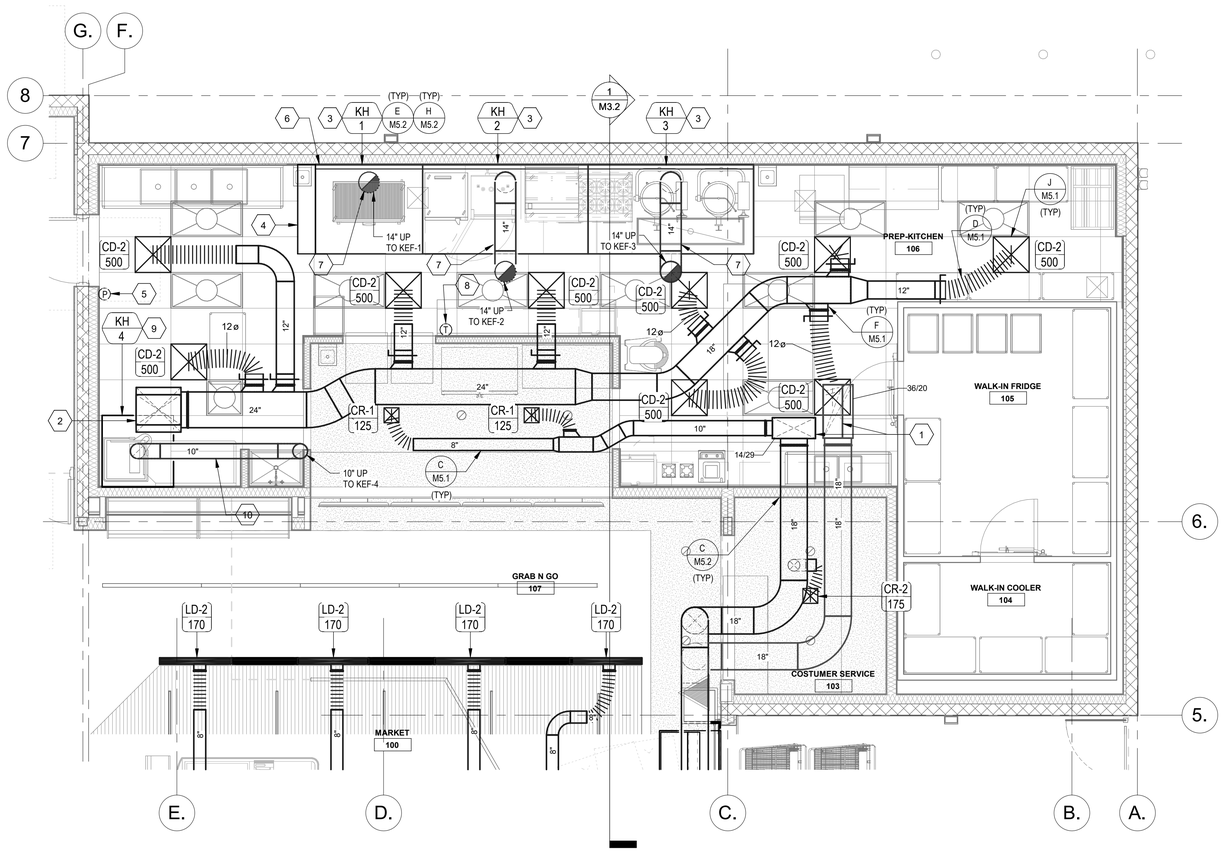
MECHANICAL ROOF PLAN

DATE 02.20.2024

SHEET **M2.2**

KEYNOTES

1. SUPPLY AND RETURN DUCTS FROM PACKAGED ROOFTOP AIR CONDITIONING UNIT. TRANSITION DUCTS BELOW ROOF TO SIZES INDICATED.
2. SUPPLY DUCT FROM MAKE-UP AIR UNIT ON ROOF. TRANSITION DUCT BELOW ROOF TO SIZE INDICATED.
3. TYPE 1 KITCHEN HOOD. HANG HOOD FROM BUILDING STRUCTURE AT 48" MAX ABOVE COOKING SURFACE. INSTALL HOOD PER MANUFACTURER'S UL LISTED INSTRUCTIONS. PROVIDE ADDITIONAL BRACING AS REQUIRED. HOOD TO INCLUDE INTEGRAL
4. INTEGRAL KITCHEN HOOD UTILITY CABINET TO HOUSE FIRE SUPPRESSION AUTOMAN TANKS, HOOD VFD'S, AND CONTROL COMPONENTS.
5. APPROXIMATE LOCATION OF REMOTE AGENT PULL STATION.
6. NON-COMBUSTIBLE WALL LINED WITH STAINLESS STEEL BACKSPLASH THAT SHALL EXTEND TO FLOOR AND 18" PAST HOOD IN ALL DIRECTION, REFER TO ARCHITECTURAL AND FOOD SERVICE PLANS.
7. GREASE DUCT UP FROM KITCHEN HOOD EXHAUST COLLAR WITH TRANSITIONS AS REQUIRED FOR OFFSET AND PENETRATION THROUGH ROOF. SLOPE HORIZONTAL GREASE DUCT GREATER THAN 2 PERCENT SLOPE FROM ROOF PENETRATION. PROVIDE CLEANOUT OPENINGS ON SIDE OF HORIZONTAL DUCT WITH TIGHT FITTING DOORS.
8. APPROXIMATE LOCATION OF SPACE TEMPERTAURE SENSOR, CONNECTED TO MAKE-UP AIR UNIT.
9. PROVIDE TYPE II DISHWASHER KITCHEN HOOD AS SPECIFIED. HANG HOOD FROM BUILDING STRUCTURE AT 48" MAX ABOVE HEATING SURFACE. INSTALL HOOD PER MANUFACTURER'S UL LISTED INSTRUCTIONS. PROVIDE ALL CONNECTIONS AS REQUIRED. COORDINATE SWITCH LOCATION FOR CONTROL OF EXHAUST FAN.
10. TYPE II EXHAUST DUCT TO TRANSITION AND ROUTE THRU ROOF AT THE APPROXIMATE LOCATION SHOWN, UP TO EXHAUST FAN ON ROOF.



1 MECHANICAL ENLARGED PLAN

M3.1 SCALE: 1/4" = 1'-0"

N

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OWNER INFORMATION
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Micro Market

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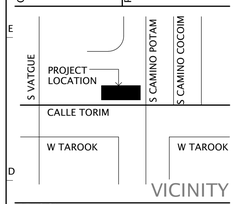

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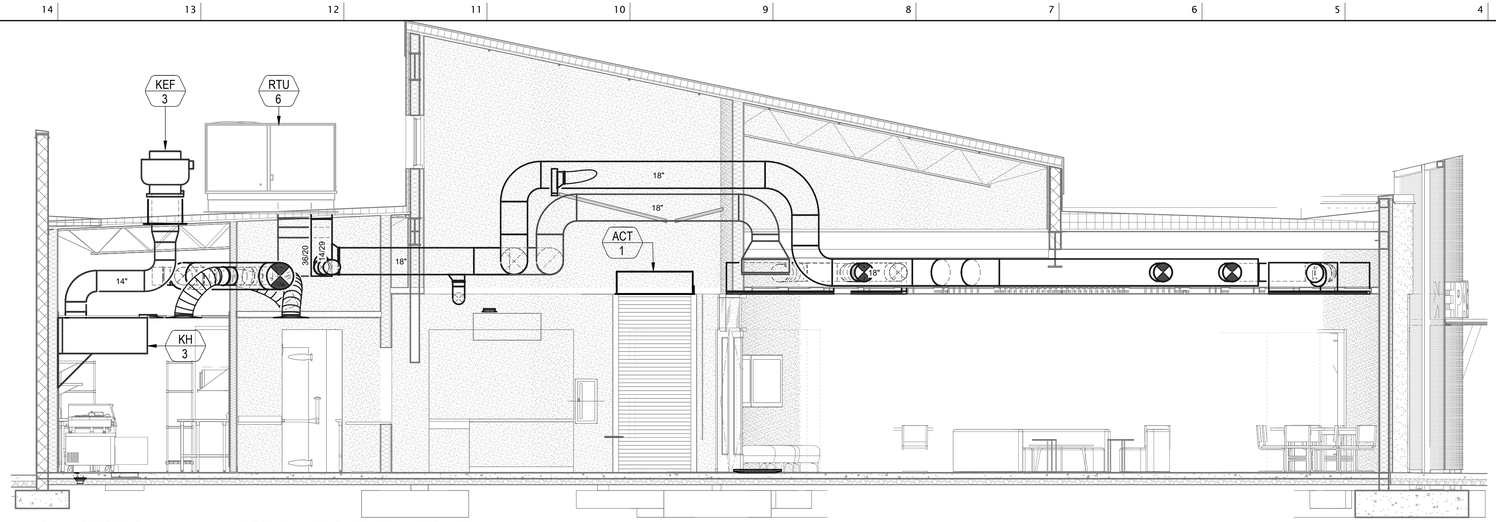
SHEET TITLE

MECHANICAL ENLARGED PLAN

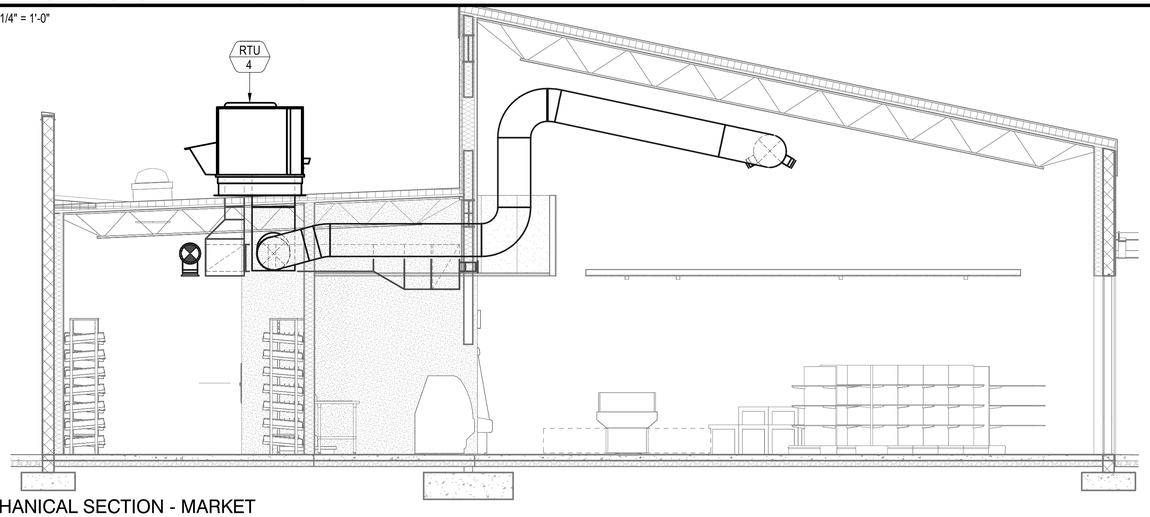
DATE 02.20.2024

SHEET **M3.1**



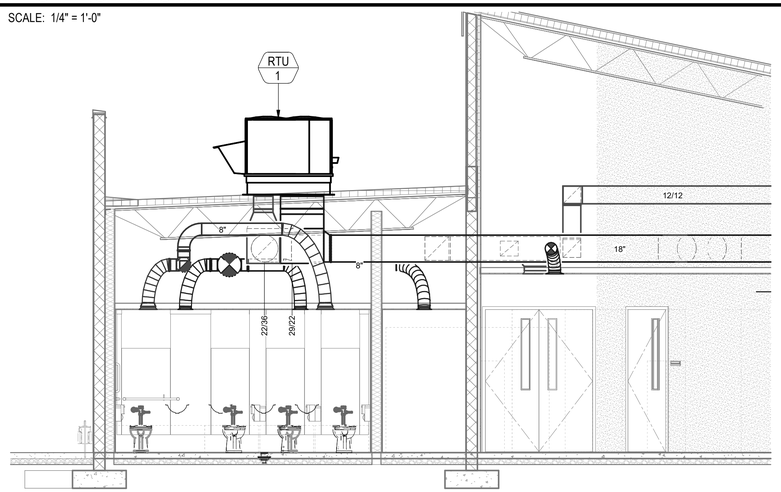
1 MECHANICAL SECTION - MAIN VESTIBULE & PREP KITCHEN

M3.2 SCALE: 1/4" = 1'-0"



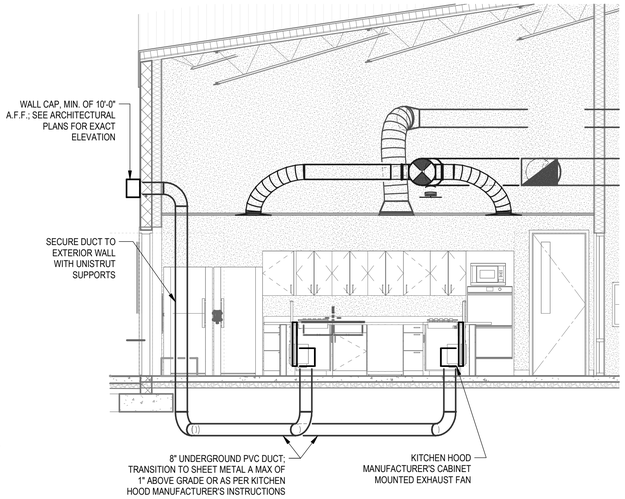
2 MECHANICAL SECTION - MARKET

M3.2 SCALE: 1/4" = 1'-0"



4 MECHANICAL SECTION - RESTROOMS

M3.2 SCALE: 1/4" = 1'-0"



3 MECHANICAL SECTION - DEMONSTRATION KITCHEN

M3.2 SCALE: 1/4" = 1'-0"

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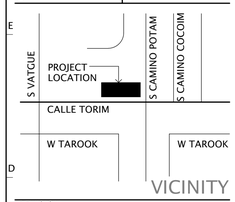

REVISION

NUMBER	DESCRIPTION	DATE

PROJECT NO. 23C-001

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SHEET TITLE

MECHANICAL SECTIONS

DATE 02.20.2024

SHEET **M3.2**

BUILDING PRESSURE SUMMARY
RTU-1 AREAS

RTU-1 AREAS - KH-5 & KH-6 BOTH ON				
UNIT	OUTSIDE AIR - KH'S ON	EXHAUST	TRANSFER AIR (ESTIMATED)	REMARKS
RTU-1	500	-	-	1
KH-5	-	450	-	1
KH-6	-	450	-	1
TRANSFER FROM RTU-3,4 AREAS	-	-	400	1
TOTAL	500	900	400	1
SPACE PRESS.	500 - 900 + 400 = 0 CFM			1
RTU-1 AREAS - ONLY 1 KH ON				
UNIT	OUTSIDE AIR - 1 KH ON	EXHAUST	TRANSFER AIR (ESTIMATED)	REMARKS
RTU-1	500	-	-	1
KH-5	-	450	-	1
KH-6	-	0	-	1
TRANSFER FROM RTU-3,4 AREAS	-	-	0	1
TOTAL	500	450	0	1
SPACE PRESS.	500 - 450 + 0 = +50 CFM			1
RTU-1 AREAS - NO KH'S ON				
UNIT	OUTSIDE AIR - KH'S ON	EXHAUST	TRANSFER AIR (ESTIMATED)	REMARKS
RTU-1	125	-	-	1
KH-5	-	0	-	1
KH-6	-	0	-	1
TRANSFER FROM RTU-3,4 AREAS	-	-	0	1
TOTAL	125	0	0	1
SPACE PRESS.	125 - 0 + 0 = +125 CFM			1

BUILDING PRESSURE SUMMARY
RTU-2 AREAS

UNIT	OUTSIDE AIR - AT MINIMUM	EXHAUST	TRANSFER AIR (ESTIMATED)	REMARKS
RTU-2	625	-	-	1
EF-1	-	625	-	1
TRANSFER FROM RTU-3,4 AREAS	-	-	125	1
TOTAL	625	625	125	1
SPACE PRESS.	625 - 625 + 125 = +125 CFM			1

BUILDING PRESSURE SUMMARY
RTU-3,4,6 AREAS

UNIT	OUTSIDE AIR - AT MINIMUM	EXHAUST	TRANSFER AIR (ESTIMATED)	REMARKS
RTU-3	600	-	-	1
RTU-4	600	-	-	1
RTU-6	600	-	-	1
TRANSFER TO RTU-1 AREAS	-	-	-400	1
TRANSFER TO RTU-2 AREAS	-	-	-125	1
TRANSFER TO MAU-1 AREAS	-	-	-1600	1
TRANSFER FROM RTU-5	-	-	300	1
TOTAL	1800	0	-1825	1
SPACE PRESS.	1800 - 0 + (-1825) = -25 CFM			1

BUILDING PRESSURE SUMMARY
RTU-5 AREAS

UNIT	OUTSIDE AIR - AT MINIMUM	EXHAUST	TRANSFER AIR (ESTIMATED)	REMARKS
RTU-5	400	-	-	1
EF-2	-	75	-	1
TRANSFER TO RTU-3,4 AREAS	-	-	-300	1
TOTAL	400	75	-300	1
SPACE PRESS.	400 - 75 + (-300) = +25 CFM (EF-2 ON), +100 CFM (EF-2 OFF)			1

BUILDING PRESSURE SUMMARY
KITCHEN AREAS

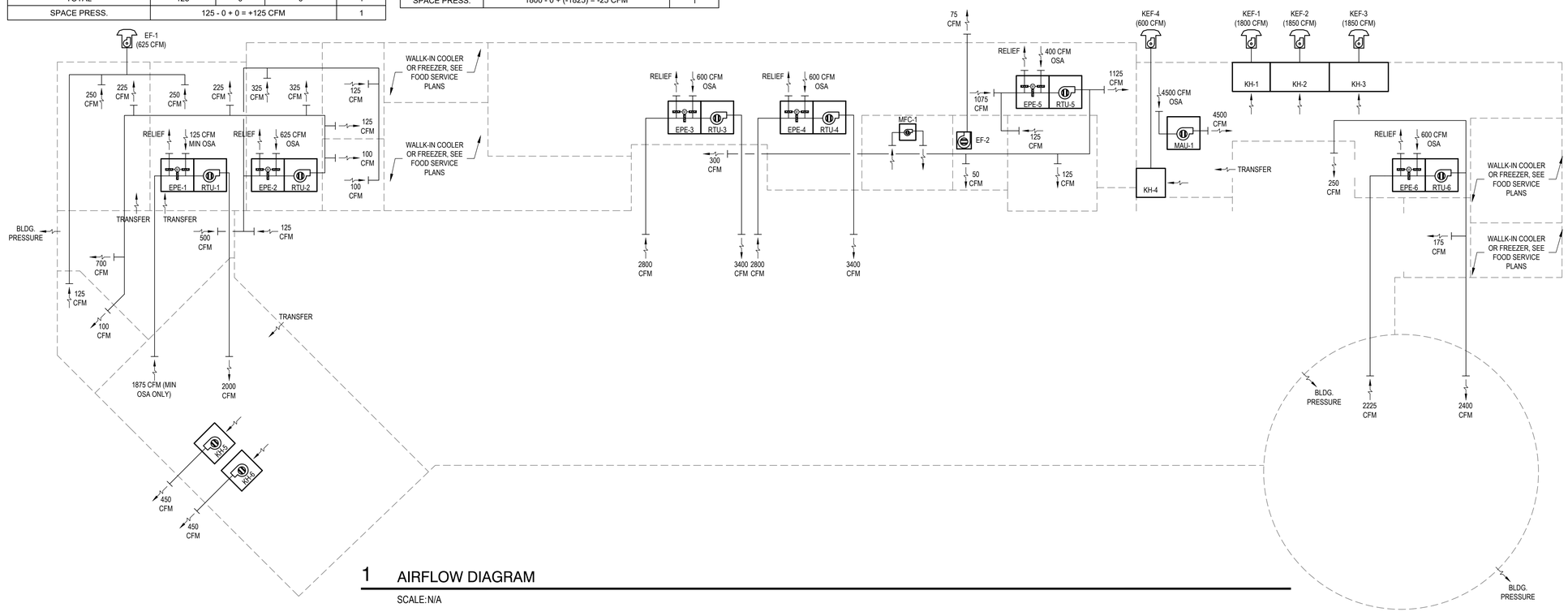
UNIT	OUTSIDE AIR - AT MINIMUM	EXHAUST	TRANSFER AIR (ESTIMATED)	REMARKS
MAU-1	4500	-	-	1
KEF-1	-	1800	-	1
KEF-2	-	1850	-	1
KEF-3	-	1850	-	1
KEF-4	-	600	-	1
TRANSFER FROM RTU-3,4 AREAS	-	-	1600	1
TOTAL	4500	6100	1600	1
SPACE PRESS.	4500 - 6100 + 1600 = +0 CFM (ALL KEF'S ON)			1

BUILDING PRESSURE SUMMARY
ENTIRE BUILDING

	ALL EQUIPMENT ON		KH-5 & KH-6 OFF, ALL OTHER EQUIPMENT ON		KEF-4, KH-5, & KH-6 OFF, ALL OTHER EQUIPMENT ON		
UNIT	OUTSIDE AIR - AT MINIMUM	EXHAUST	OUTSIDE AIR - AT MINIMUM	EXHAUST	OUTSIDE AIR - AT MINIMUM	EXHAUST	REMARKS
RTU-1	500	-	125	-	125	-	-
RTU-2	625	-	625	-	625	-	-
RTU-3	600	-	600	-	600	-	-
RTU-4	600	-	600	-	600	-	-
RTU-5	400	-	400	-	400	-	-
RTU-6	600	-	600	-	600	-	-
MAU-1	4500	-	4500	-	4500	-	-
KEF-1	-	1800	-	1800	-	1800	-
KEF-2	-	1850	-	1850	-	1850	-
KEF-3	-	1850	-	1850	-	1850	-
KEF-4	-	600	-	600	-	0	2
KH-5	-	450	-	0	-	0	1
KH-6	-	450	-	0	-	0	1
EF-1	-	625	-	625	-	625	-
EF-2	-	75	-	75	-	75	-
TOTAL	7825	7700	7700	6800	7700	6200	1
SPACE PRESS.	7825 - 7700 = +125 CFM (ALL KEF'S ON)		7700 - 6800 = +900 CFM (KH-5 & KH-6 OFF)		7700 - 6200 = +1500 CFM (KH-5, KH-6, & KEF-4 OFF)		1

REMARK 1: KITCHEN HOODS KH-5 & KH-6 (DEMONSTRATION HOODS) ARE INTERMITTENT; BUILDING PRESSURE WILL BE MUCH HIGHER WHEN THIS HOOD IS NOT IN OPERATION

REMARK 2: KITCHEN HOOD KEF-4 (DISHWASHER HOOD) IS ALSO INTERMITTENT; BUILDING PRESSURE WILL BE MUCH HIGHER WHEN THIS HOOD IS NOT IN OPERATION



1 AIRFLOW DIAGRAM

SCALE:N/A

OUTSIDE AIR SUMMARY

UNIT	SPACE	OCCUPANCY SUBCATEGORY	AREA (SF)	PEOPLE OSA RATE (RP) (CFM/PERSON)	AREA OSA RATE (RA) (CFM/SF)	OCCUPANT DENSITY (#/1000 SF)	DEFAULT OCCUPANCY (PZ)	ACTUAL OCCUPANCY (IF KNOWN)	PEOPLE USED IN CALC	PEOPLE OSA	AREA OSA	BREATHING ZONE OSA (VBZ)	ZONE AIR DISTRIBUTION EFFECTIVENESS (EZ) [T6-4]	ZONE OUTDOOR AIRFLOW (VOZ)	DESIGN PRIMARY AIRFLOW (VPZ)	ZONE PRIMARY OUTDOOR AIR FRACTION (ZP)	SYSTEM POPULATION (PS)	OCCUPANT DIVERSITY (D)	UNCORRECTED OSA INTAKE (VOU)	SYSTEM VENT. EFFICIENCY (EV)	OSA INTAKE FLOW RATE (VOT)	CALCULATED MIN DCV FLOW (AREA REQUIRED OSA WITH 1 PERSON)	SCHEDULED MINIMUM OSA	SCHEDULED MAX DCV OSA
RTU-1 (DEMO KITCHEN)	122 DEMONSTRATION KITCHEN	Kitchen (cooking)	944	7.5	0.12	20	19		19	142	113	255	1	255	2000	0.13	19	1	255	1	255	121	500	125
RTU-2 (RESTROOMS)	115 MECH. ROOM	Occupiable storage rooms for dry materials	70	5	0.06	2	0		0	1	4	5	1	5	100	0.05	4	1	60	1	60	61	625	N/A
	116 ELECTRICAL ROOM	Occupiable storage rooms for dry materials	102	5	0.06	2	0		0	1	6	7	1	7	125	0.06								
	117 STORAGE	Occupiable storage rooms for dry materials	232	5	0.06	2	0		0	2	14	16	1	16	325	0.05								
	120 VESTIBULE (WEST)	Main entry lobbies	284	5	0.06	10	3		3	14	17	31	1	31	700	0.04								
RTU-3 (MARKET WEST)	100 MARKET (WEST)	Supermarket	2157	7.5	0.06	8	17		17	129	129	259	1	259	3400	0.08	17	1	259	1	259	137	600	N/A
RTU-4 (MARKET EAST)	100 MARKET (EAST)	Supermarket	2620	7.5	0.06	8	21		21	157	157	314	1	314	2720	0.12	24	1	361	1	361	195	600	N/A
	107 GRAB AND GO	Supermarket	388	7.5	0.06	8	3		3	23	23	47	1	47	680	0.07								
RTU-5 (RECEIVING)	108 RECEIVING AND STORAGE	Shipping/receiving	1250	10	0.12	2	3		3	25	150	175	1	175	1125	0.16	4	1	206	0.9	229	190	400	N/A
	112 DELI	Supermarket	166	7.5	0.06	8	1		1	10	10	20	1	20	300	0.07								
	OFFICE	Office space	130	5	0.06	5	1		1	3	8	11	1	11	125	0.09								
RTU-6 (MAIN VESTIBULE)	101 MAIN VESTIBULE	Break Rooms	1137	5	0.06	25	28		28	142	68	210	1	210	2400	0.09	33	1	249	1	249	100	600	N/A
	103 CUSTOMER SERVICE	Reception areas	99	5	0.06	30	3		3	15	6	21	1	21	175	0.12								
	KITCHEN ORDER AREA	Supermarket	145	7.5	0.06	8	1		1	9	9	17	1	17	250	0.07								
MAU-1 (PREP KITCHEN)	106 PREP-KITCHEN	Kitchen (cooking)	749	7.5	0.12	20	15		15	112	90	202	1	202	4500	0.04	15	1	202	1	202	97	4500	N/A

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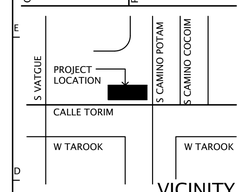

VICINITY

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

PROJECT NO. 23C-001

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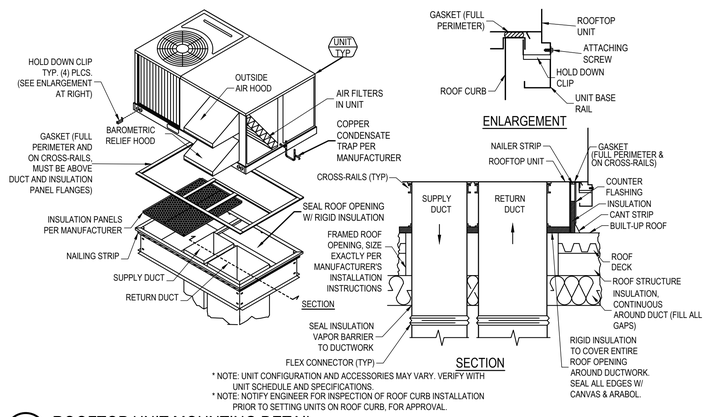
SHEET TITLE

AIRFLOW DIAGRAM

DATE 02.20.2024

SHEET **M4.1**

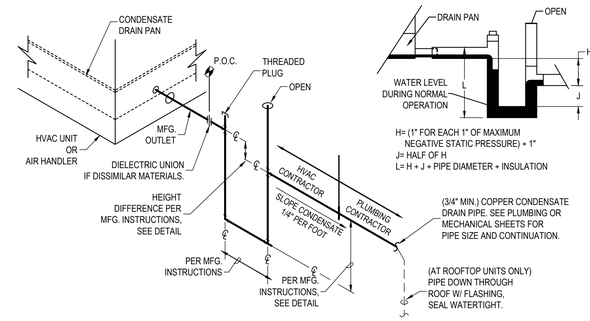


* NOTE: UNIT CONFIGURATION AND ACCESSORIES MAY VARY. VERIFY WITH UNIT SCHEDULE AND SPECIFICATIONS.
* NOTE: NOTIFY ENGINEER FOR INSPECTION OF ROOF CURB INSTALLATION PRIOR TO SETTING UNITS ON ROOF CURB, FOR APPROVAL.

A ROOFTOP UNIT MOUNTING DETAIL

SCALE: N.T.S.

RTU-05.DWG



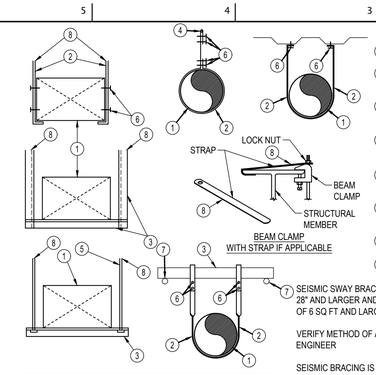
H= (1" FOR EACH 1" OF MAXIMUM NEGATIVE STATIC PRESSURE) + 1"
J= HALF OF H
L= H + J + PIPE DIAMETER + INSULATION

PLUMBING AND/OR HVAC CONTRACTOR SHALL COORDINATE TO PERFORM A DRAIN TEST USING WATER. FILL CONDENSATE COLLECTION PAN WITH WATER, ACCESS DRAIN PAN THROUGH OPEN CABINET DOOR OR REMOVED ACCESS PANEL. CHECK FOR PROPER DRAINAGE WITH UNIT RUNNING AFTER REPLACING UNIT ACCESS PANEL OR CLOSING DOOR. THIS TEST SHALL BE APPROVED BY THE ENGINEER PRIOR TO ACCEPTANCE. ALL CONDENSATE PIPING SHALL ALSO BE TESTED PER CODE "DRAINAGE AND VENT" TEST.

B CONDENSATE DRAIN & TEST DETAIL

SCALE: N.T.S.

CONDO-04.DWG



KEY NOTES:

1. DUCT
2. SHEET METAL STRAP 1" (25.44 MM) WIDE OF SAME METAL GAUGE AS DUCT
3. STEEL ANGLE NOT LESS THAN 1"x1"x1/8" SIZED TO MATCH DUCT OR RGA UNISTRUT
4. SHEET METAL BAND 1" WIDE OF SAME METAL GAUGE AS DUCT
5. ALL THREAD HANGER ROD WITH ACCESSORIES AS USED FOR LIGHT PIPE HANGER
6. SELF TAPPING CADMIUM PLATED HEX HEAD SHEET METAL SCREW
7. CROSS MEMBER OF STRUCTURAL JOIST
8. SEISMIC STRAP REQUIRED.

SEISMIC SWAY BRACING IS REQUIRED ON ROUND DUCTS OF DIAMETERS OF 28" AND LARGER AND RECTANGULAR DUCTS WITH CROSS SECTIONAL AREAS OF 6 SQ FT AND LARGER

VERIFY METHOD OF ANCHORING TO STRUCTURE WITH STRUCTURAL ENGINEER

SEISMIC BRACING IS NOT REQUIRED IF THE TOP OF THE DUCT WORK IS WITHIN 12" OF THE SUPPORTING STRUCTURE FOR THE ENTIRE LENGTH OF THE RUN AND THE CONNECTION POINT OF EACH SUPPORT TO THE DUCT IS WITHIN 2" FROM THE TOP OF THE DUCT.

HANGER SIZES FOR RECTANGULAR DUCT

MAX LENGTH ANY SIDE	HANGER	HORIZONTAL SUPPORT ANGLE	MAX. SPACE
30"	1"x18 GA. STRAP	NONE REQUIRED	10'-0"
36"	1/4" ROUND ROD	1-1/2"x1-1/2"x1/8"	8'-0"
48"	1/4" ROUND ROD	2" x 2" x 1/8"	8'-0"
60"	5/16" ROUND ROD	2" x 2" x 1/8"	8'-0"
84"	3/8" ROUND ROD	2" x 2" x 1/8"	8'-0"

WHEN STRAPS ARE LAP-JOINED, USE THESE MINI FASTENERS:
1"x18, 20, 22 GA - (2) #10 OR 1/4" BOLT.
PLACE FASTENERS IN SERIES, NOT SIDE BY SIDE.

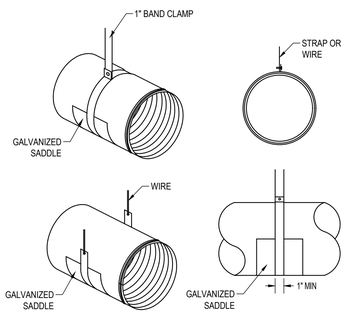
HANGER SIZES FOR ROUND DUCT

MAX DIAMETER	HANGER	ROD	MAX SPACE
10"-24"Ø	1"x22 GA. STRAP	1/4"	12'-0"
25"-36"Ø	1"x20 GA. STRAP	3/8"	12'-0"
37"-50"Ø	(2) 1"x20 GA. STRAP	(2) 3/8"	12'-0"
51"-60"Ø	(2) 1"x18 GA. STRAP	(2) 3/8"	12'-0"
61"-80"Ø	(2) 1"x16 GA. STRAP	(2) 3/8"	12'-0"

C SHEET METAL DUCT HANGER DETAIL

SCALE: N.T.S.

HNGR-01.DWG

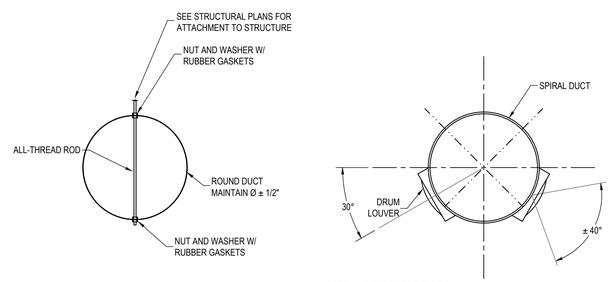


SUPPORT SYSTEM MUST NOT DAMAGE DUCT, CAUSE OUT OF ROUND SHAPE, OR COMPRESS INSULATION.

D FLEXIBLE DUCT SUPPORTS

SCALE: N.T.S.

HGNR-06.DWG

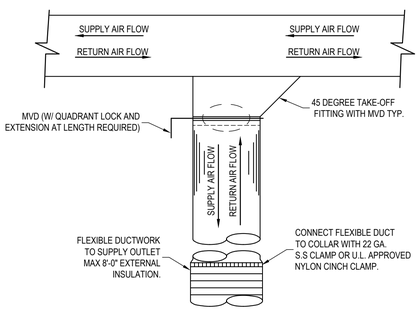


* SEE PLANS FOR DUCT ELEVATION.
* SEE PLANS FOR WHETHER LAYOUT HAS A DRUM LOUVER ON ONE OR TWO SIDES

E EXPOSED ROUND DUCT HANGER AND DRUM LOUVER POSITIONING DETAIL

SCALE: N.T.S.

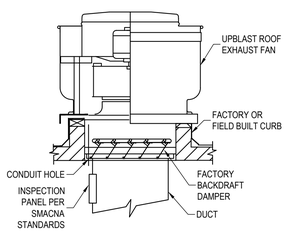
HNGR-08.DWG



F BRANCH ROUND DUCT TAKE-OFF (SUPPLY OR RETURN)

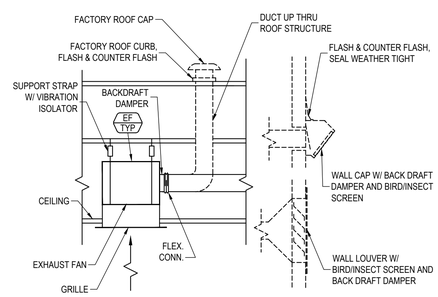
SCALE: N.T.S.

DUCT-03.DWG



G ROOF MOUNTED EXHAUST FAN DETAIL

SCALE: N.T.S.

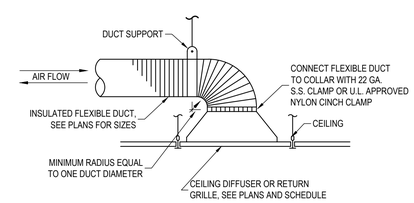


NOTES: 1. SEE MECHANICAL PLANS FOR EXHAUST DUCT CONFIGURATION
2. IF EXHAUST FAN IS EQUIPPED W/ INTEGRAL BACK DRAFT DAMPER, NONE IS REQUIRED AT WALL CAP OR LOUVER.

H CEILING MOUNTED EXHAUST FAN DETAIL

SCALE: N.T.S.

DETDR2.DWG (REV. 4/10/08)



J DIFFUSER/GRILLE CONNECTION DETAIL

SCALE: N.T.S.

DIFF-04.DWG

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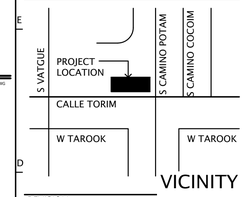

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

PROJECT NO. 23C-001

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SHEET TITLE

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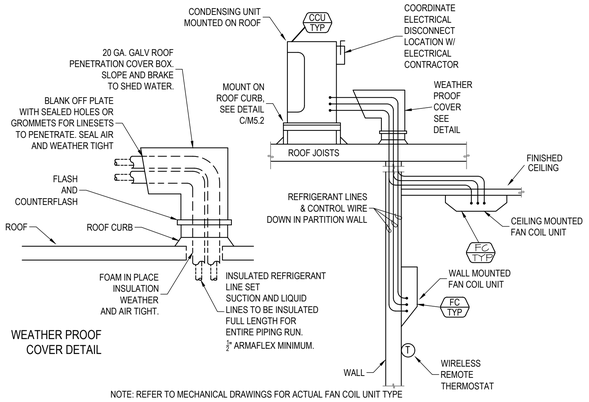
DATE 02.20.2024

SHEET **M5.1**

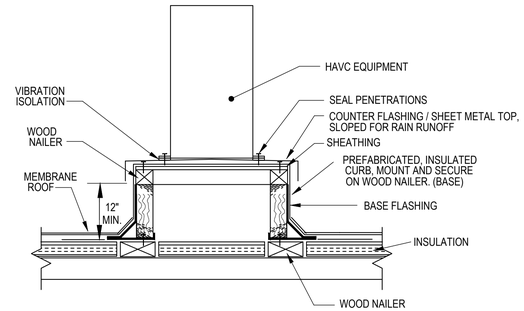


NOTE: REFER TO MECHANICAL DRAWINGS FOR ACTUAL FAN COIL UNIT TYPE

A MINI SPLIT SYSTEM DETAIL

SCALE: N.T.S.

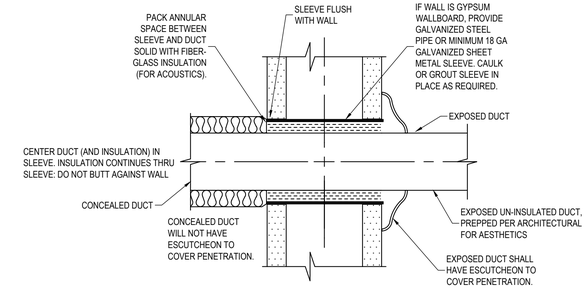
MINI-02.DWG



B CONDENSING UNIT CURB DETAIL

SCALE: N.T.S.

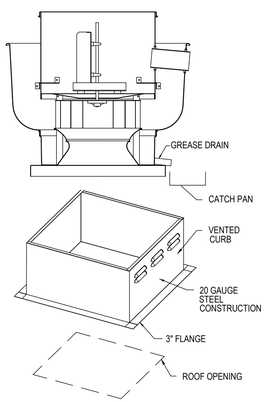
DPEN-06.DWG



REFER TO ARCHITECTURAL DRAWINGS FOR WALL LOCATIONS.
REFER TO SPECIFICATIONS FOR ALTERNATIVE INSTALLATIONS.

C DUCT PENETRATION OF INTERIOR NON-FIREWALL

SCALE: N.T.S.



FEATURES:

- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL762
- AMCA SOUND AND AIR CERTIFIED
- WIRING FROM MOTOR TO DISCONNECT SWITCH
- WEATHERPROOF DISCONNECT
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

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

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

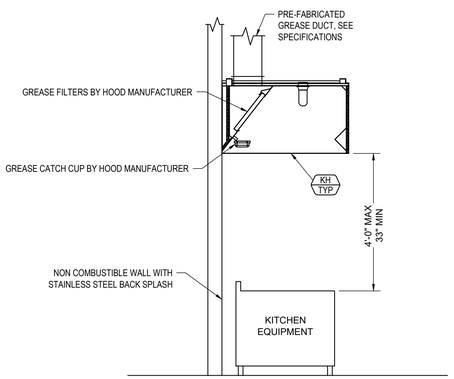
OPTIONS
GREASE BOX
EXHAUST FAN HEAT BAFFLE
UPBLAST FAN WHEEL ACCESS PORT
FAN BASE CERAMIC SEAL - FOR GREASE DUCTS

FOR GREASE DUCT, ALL ACCESSORIES UL-LISTED FOR GREASE DUCTS.

D ROOF MOUNTED KITCHEN HOOD GREASE EXHAUSTER DETAIL

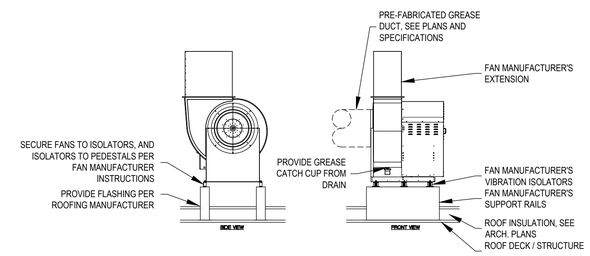
SCALE: N.T.S.

DETAIL.DWG



E KITCHEN HOOD (TYPE I, WALL MOUNT CANOPY)

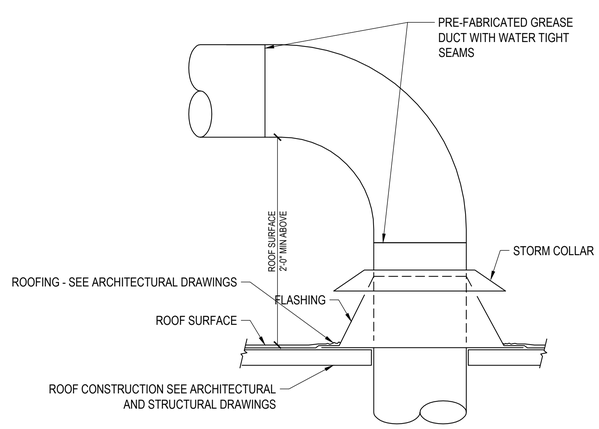
SCALE: N.T.S.



NOTES:
1. SEE DRAWINGS FOR SUCTION AND DISCHARGE DUCT SIZES.
2. VERIFY WITH PLANS WHETHER FAN IS CLOCKWISE OR COUNTERCLOCKWISE ORIENTATION.
3. SEE SCHEDULES AND SPECIFICATIONS FOR FAN REQUIREMENTS.

F UTILITY SET EXHAUST FAN - ROOF MOUNTED

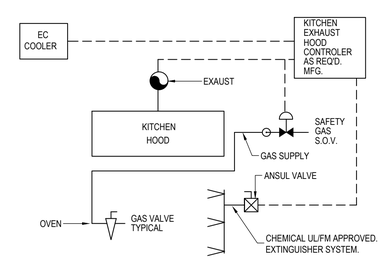
SCALE: N.T.S.



G DUCT THRU ROOF PENETRATION DETAIL

SCALE: N.T.S.

PAN-B.DWG



H SIMPLE INTERLOCK - KH CONTROL AND SHUT DOWN SCHEMATIC DETAIL

SCALE: N.T.S. (REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION)

DETAIL.DWG

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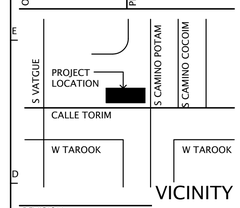

VICINITY

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

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SHEET TITLE

MECHANICAL DETAILS

DATE 02.20.2024

SHEET **M5.2**

PACKAGED AIR CONDITIONING WITH GAS HEATING UNIT SCHEDULE

RTU MARK

MARK	MANUF.	MODEL	SUPPLY	OSA	MOTOR	E.S.P.	NOMINAL	EER / IEER OR SEER	COOLING CAPACITY		NATURAL GAS HEATING SECTION			VOLTAGE	MCA	MOCP	WEIGHT LESS ROOF CURB	ROOF CURB WEIGHT	HEIGHT	REMARKS
									TOTAL	SENSIBLE	STAGES	INPUT	OUTPUT							
			(CFM)	(CFM)	(HP)	(IN WC)	(TONS)		(MBH)	(MBH)		(MBH)	(MBH)	(V/ø/Hz)	(AMPS)	(AMPS)	(LBS)	(LBS)	(IN)	
1	CARRIER	48GCDN07	2000	SEE OUTSIDE AIR SUMMARY	2.4	0.8	6	12.2 / 17.5	64.6	46.3	2	72	59	460/3/60	17	20	850	250	41-1/4	1, 2, 4 - 13
2	CARRIER	48GCDN07	1800	SEE OUTSIDE AIR SUMMARY	2.4	0.8	6	12.2 / 17.5	64.6	46.3	2	72	59	460/3/60	17	20	850	250	41-1/4	1, 2, 4 - 13
3	CARRIER	48GCDN12	3400	SEE OUTSIDE AIR SUMMARY	2.4	0.8	10	11.4 / 17.2	102.5	69.4	2	180	148	460/3/60	27	30	1100	250	49-3/8	1, 3 - 13
4	CARRIER	48GCDN12	3400	SEE OUTSIDE AIR SUMMARY	2.4	0.8	10	11.4 / 17.2	102.5	69.4	2	180	148	460/3/60	27	30	1100	250	49-3/8	1, 3 - 13
5	CARRIER	48GCDK05	1600	SEE OUTSIDE AIR SUMMARY	1.1	0.8	4	17.4	44.3	30.2	2	67	54	460/3/60	12	15	600	150	33-3/8	1, 2, 4 - 13
6	CARRIER	48GCDN08	2825	SEE OUTSIDE AIR SUMMARY	2.4	0.8	7.5	12.0 / 17.5	84.6	61.0	2	125	102.5	460/3/60	20	25	950	250	49-3/8	1, 2, 4 - 13

REMARKS:

1. COOLING CAPACITIES AT 110°F AMBIENT, 80°F ENTERING DB, & 67°F ENTERING WB.
2. VERTICAL SUPPLY AND RETURN CONFIGURATION.
3. HORIZONTAL SUPPLY AND VERTICAL RETURN CONFIGURATION.
4. 2" PLEATED FILTERS IN UNIT; MERV 8 MINIMUM EFFICIENCY.
5. FACTORY INSTALLED DIRTY FILTER SWITCH ACROSS FILTERS IN UNIT.
6. REFER TO CONTROLS DRAWINGS FOR THERMOSTAT OR TEMPERATURE SENSOR REQUIREMENTS. PROVIDE UNIT WITH BACNET COMMUNICATION MODULE.
7. 18" TALL ROOF CURB SLOPED TO MATCH ROOF PITCH.
8. AIR TIGHT FLEXIBLE DUCT CONNECTION TO ROOFTOP UNIT / ROOF CURB.
9. COORDINATE ELECTRICAL DISCONNECT AND CONNECTIONS WITH ELECTRICAL DRAWINGS.
10. PROVIDE WITH MANUFACTURER'S DOWNFLOW ECONOMIZER WITH MODULATING POWERED EXHAUST.
11. UNIT TO INCLUDE MANUFACTURER'S HUMIDIMIZER ACCESSORY TO PROVIDE DEHUMIDIFICATION.
12. PROVIDE UNIT WITH MANUFACTURER'S INTEGRAL RETURN AIR SMOKE DETECTOR INSTALLED IN UNIT.
13. UNIT WEIGHT DOES NOT INCLUDE ECONOMIZER AND POWERED EXHAUST ACCESSORY WEIGHT; SEE 'EPE' SCHEDULE FOR ADDITIONAL WEIGHT.

MINI-SPLIT FAN COIL UNIT SCHEDULE

MFC MARK

MARK	MANUF.	MODEL	NOMINAL	SEER	HSPF	CAPACITY		VOLTAGE	POWER	MCA	MOCP	WEIGHT	HEIGHT	REMARKS:
						COOLING	HEATING							
			(TONS)			(MBTU)	(MBTU)	(V/ø/Hz)	ACV/DCV	(AMPS)	(AMPS)	(LBS)	(IN)	
1	FUJITSU	ASU12RLF1	1.0	22.0	11.0	12.0	12.0	SEE NOTES	ACV	SEE NOTE	SEE NOTE	19	10-5/16	1 - 7, 9

REMARKS:

1. MOUNT FAN COIL HIGH ON WALL SUPPORTED FROM BUILDING STRUCTURE. COORDINATE LOCATION WITH ALL TRADES.
2. MATCHING WIRED ELECTRONIC THERMOSTAT WITH AUTO CHANGEOVER.
3. COORDINATE ELECTRICAL CONNECTIONS WITH ELECTRICAL DRAWINGS.
4. FAN COIL UNIT IS MATCHED WITH CORRESPONDING CONDENSING UNIT MARK NUMBER.
5. FAN COIL IS POWERED FROM SINGLE POINT POWER AT OUTDOOR UNIT.
6. MANUFACTURER RECOMMENDED DISCONNECT ONLY
7. 14 AWG INTERUNIT POWER UMBILICAL CORD TO BE SUPPLIED BY UNIT MANUFACTURER.
8. PROVIDE WITH MANUFACTURER RECOMMENDED CONDENSATE PUMP THAT INSTALLS EITHER IN FAN COIL CAVITY, OR EXTERNAL WALL MOUNTED.

MINI-SPLIT CONDENSING UNIT SCHEDULE

MCU MARK

MARK	MANUF.	MODEL	NOMINAL	SEER	HSPF	CAPACITY (MBH)		VOLTAGE	MCA	MOCP	WEIGHT	HEIGHT	REMARKS:
						COOLING	HEATING						
			(TONS)			(MBH)	(MBH)	(V/ø/Hz)	(AMPS)	(AMPS)	(LBS)	(IN)	
1	FUJITSU	AOU12RLFW1	1.0	22.0	11.0	12.0	12.0	208-230/1/60	-	20	80	21-1/4	1 - 6

REMARKS:

1. CAPACITIES AT ARI CONDITIONS.
2. COORDINATE ELECTRICAL DISCONNECT AND CONNECTIONS WITH ELECTRICAL DRAWINGS.
3. DETERMINE CORRECT REFRIGERATION LINE SIZES WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ELEVATION AND DISTANCE.
4. INSULATE VAPOR AND LIQUID LINE AND PROVIDE PROPER SUPPORT FOR REFRIGERATION LINES. COORDINATE RUNS DOWN IN PARTITION WALLS WITH OTHER TRADES.
5. CONDENSING UNIT IS MATCHED WITH CORRESPONDING FAN COIL(S).
6. FAN COIL(S) IS POWERED FROM SINGLE POINT POWER AT OUTDOOR UNIT.

EXHAUST FAN SCHEDULE

EF MARK

MARK	MANUF.	MODEL	CFM	WATTS	HP	E.S.P.	VOLTAGE	OPERATING WEIGHT	HEIGHT	REMARKS:
						(IN WG)	(V/ø/Hz)	(LBS)	(IN)	
1	GREENHECK	G-095-VG	625	N/A	1/6	0.5	115/1/60	26	16-3/8	1
2	GREENHECK	SP-B80	75	19	N/A	0.125	115/1/60	10	7	2, 3

REMARKS:

1. ROOF MOUNTED DOWNBLAST EXHAUST FAN. PROVIDE WITH FACTORY ROOF CURB, ECM ADJUSTABLE SPEED MOTOR, BACKDRAFT DAMPER IN CURB FRAME.
2. CEILING MOUNTED EXHAUST FAN WITH DELUXE ALUMINUM GRILLE, VIBRATION ISOLATION HANGERS, BACKDRAFT DAMPER AT DISCHARGE, FLEX DUCT CONNECTOR AT OUTLET, SIZED TO MATCH DUCT.
3. FACTORY ROOF CAP WITH CURB AND BIRDSCREEN, SIZED TO MATCH DUCT.

COMBINATION ECONOMIZER / POWERED EXHAUST UNIT SCHEDULE

EPE MARK

MARK	MANUF.	MODEL	CORRESPONDING UNIT	OSA MIN AND DCV	MOTOR	VOLTAGE	FLA	MCA	MOCP	WEIGHT	REMARKS
				(CFM)	(HP)	(V/ø/Hz)	(AMPS)	(AMPS)	(AMPS)	(LBS)	
1	CANFAB	1122-MPE24B-4R44	RTU-1	SEE RTU SCHEDULE	0.75	460/3/60	1.5	1.875	3.375	331	1 - 7
2	CANFAB	1122-MPE24B-4R44	RTU-2	SEE RTU SCHEDULE	0.75	460/3/60	1.5	1.875	3.375	331	1 - 7
3	CANFAB	1124-MPE40E-4R44	RTU-3	SEE RTU SCHEDULE	2	460/3/60	3.1	3.875	6.975	331	1 - 7
4	CANFAB	1124-MPE40E-4R44	RTU-4	SEE RTU SCHEDULE	2	460/3/60	3.1	3.875	6.975	331	1 - 7
5	CANFAB	1118-MPE16A-4R44	RTU-5	SEE RTU SCHEDULE	0.5	460/3/60	1.2	1.5	2.7	222	1 - 7
6	CANFAB	1124-MPE30D-4R44	RTU-6	SEE RTU SCHEDULE	1.5	460/3/60	2.4	3	5.4	331	1 - 7

REMARKS:

1. PACKAGED COMBINATION ECONOMIZER AND POWERED EXHAUST ACCESSORY FOR VERTICAL RETURN FLOW UNIT.
2. POWERED EXHAUST ACCESSORY WITH VFD TO MAINTAIN BUILDING PRESSURE SLIGHTLY POSITIVE WITH RESPECT TO OUTDOORS.
3. UNIT SHALL BE MOUNTED TO AND COMPATIBLE WITH CORRESPONDING ROOFTOP HEAT PUMP UNIT, VERIFY EXACT 'EPE' MODEL NUMBER PER UNIT. UNIT SHALL BE PROVIDED BY HVAC UNIT MANUFACTURER.
4. ECONOMIZER TO BE FULLY MODULATING AND ULTRA LOW LEAKAGE, COMPLYING WITH IECC 2018 LEAKAGE REQUIREMENTS. INTAKE SET FOR MIN. CFM AS SPECIFIED. PROVIDE FAULT DETECTION AND DIAGNOSTICS TO COMPLY WITH 2018 IECC.
5. PROVIDE SIEMENS OR BELIMO ZIP CONTROLLER, WITH DIFFERENTIAL ENTHALPY CONTROL.
6. COORDINATE ELECTRICAL DISCONNECT AND CONNECTIONS WITH ELECTRICAL DRAWINGS. UNIT TO HAVE SEPARATE POWER SOURCE THAN ROOFTOP HVAC UNIT.
7. PROVIDE PRESSURE TUBING AND FACTORY PRESSURE PICKUP PORTS FOR CEILING OR WALL MOUNTED INSTALLATION.

AIR CURTAIN SCHEDULE

ACT MARK

MARK	MANUF.	MODEL	NOZZLE WIDTH	OPENING WIDTH x HEIGHT	CFM	HP	VOLTAGE	FLA	MOCP	OPERATING WEIGHT	HEIGHT	REMARKS:
			(IN)	(IN x IN)			(V/ø/Hz)	(AMPS)	(AMPS)	(LBS)	(IN)	
1	BERNER	CHD10-1048A	48	48 x 120	1,768	1/2	115/1/60	6.5	15	53	14.09	1

REMARKS:

1. EXTERIOR RATED WALL MOUNTED AIR CURTAIN FOR ENVIRONMENTAL SEPARATION UP TO 10' HIGH. PROVIDE WITH THREE-SPEED MOTOR.
2. UNIT TO INCLUDE ALUMINUM EXTERIOR COLOR, CONFIRM WHITE OR BLACK STANDARD COLOR, OR OPTION COLOR OR STAINLESS STEEL FINISH WITH ARCHITECT.
3. INCLUDE MANUFACTURER'S BASIC CONTROL PACKAGE INCLUDING DOOR SWITCH AND LINE VOLTAGE CONTROL.

DIFFUSERS, REGISTERS, GRILLES, LOUVERS, & ACCESSORIES

MARK CFM

MARK	MANUF.	MODEL	SERVICE	MATERIAL	SIZE	MOUNTING	DAMPER	REMARKS:
CD-1	TITUS	TDC-AA	CEILING DIFFUSER	ALUMINUM	24" SQUARE MODULE	T-BAR LAY-IN	MVD	1, 2
CD-2	TITUS	PCS-AA	CEILING DIFFUSER	ALUMINUM	24" SQUARE MODULE	T-BAR LAY-IN	MVD	1, 2
CR-1	TITUS	TDC-AA	CEILING REGISTER	ALUMINUM	6" x 6"	SURFACE MOUNTED	OBD	1, 2
CR-2	TITUS	TDC-AA	CEILING REGISTER	ALUMINUM	9" x 9"	SURFACE MOUNTED	OBD	1, 2
CR-3	TITUS	250-AA	CEILING REGISTER	ALUMINUM	12" x 12"	SURFACE MOUNTED	OBD	1, 2
DL	TITUS	DL	DRUM LOUVER	ALUMINUM	18" x 6"	SPIRAL DUCT MOUNTED	OBD	1, 9
LD-1	TITUS	ML-40	LINEAR DIFFUSER	ALUMINUM	6' LONG - (2) 1.5" SLOTS	EXPOSED - NARROW FRAME	OBD	1, 6
LD-2	TITUS	ML-37	LINEAR DIFFUSER	ALUMINUM	4' LONG - (3) 0.5" SLOTS	EXPOSED - NARROW FRAME	OBD	1, 6, 7
LD-3	TITUS	ML-37	LINEAR DIFFUSER	ALUMINUM	4' LONG - (2) 0.5" SLOTS	EXPOSED - NARROW FRAME	OBD	1, 6
RG-1	TITUS	50F	RETURN GRILLE	ALUMINUM	24" SQUARE MODULE	T-BAR LAY-IN	MVD	1, 2, 3, 4
RG-2	TITUS	50F	RETURN GRILLE	ALUMINUM	SEE PLANS	SURFACE MOUNTED	OBD / MVD	1, 3, 4
RG-3	TITUS	CT-580	LINEAR BAR RETURN GRILLE	ALUMINUM	6" x 72"	SURFACE MOUNTED	MVD	1, 2, 5
SD	TITUS	350FL	SIDEWALL DIFFUSER	ALUMINUM	8" x 8"	SURFACE MOUNTED	OBD	1, 2, 8
TG-1	TITUS	50F	RETURN GRILLE	ALUMINUM	24" SQUARE MODULE	T-BAR LAY-IN	NONE	1, 3, 4
TG-2	TITUS	50F	RETURN GRILLE	ALUMINUM	12" x 12"	SURFACE MOUNTED	NONE	1, 3

REMARKS:

1. PROVIDE ALL TRANSITIONS AND CONNECTIONS NECESSARY FOR PROPER INSTALLATION.
2. PROVIDE MVD AT BRANCH TAKE-OFF UNLESS OTHERWISE REQUIRED IN FIELD FOR ACCESSIBILITY TO ADJUST AIR FLOW.
3. HEAVY EXTRUDED ALUMINUM BORDER AND 1/2" x 1/2" x 1/2" ALUMINUM CORE (GRILLE).
4. GRILLE FACE TO BE FULL SIZE OF CEILING TILE.
5. LINEAR BAR GRILLE WITH 1/8" BLADES AT 1/2" SPACING.
6. LINEAR DIFFUSER WITH SLOT WIDTHS AND QUANTITIES AS INDICATED. PROVIDE ROUND DUCT DAMPER WITH REMOTE ADJUSTMENT LOCATED INTERNAL TO LINEAR DIFFUSER FRAME, AND ACCESSIBLE FROM BOTTOM OF LINEAR DIFFUSER. NARROW FRAME BORDER IS ~0.75" WIDE.
7. LINEAR DIFFUSER TO HAVE A CONTINUOUS DIFFUSER SECTION WITH APPROXIMATE LENGTH AS SHOWN ON PLANS (28'-0" FOR NORTH SECTION, 18'-8" FOR SOUTH SECTION ESTIMATED), WITH LINEAR DIFFUSER ACTIVE SECTIONS OF 48" LONG, QUANTITIES AS SHOWN ON PLANS. PROVIDE BLANK-OFF PLATES AND OTHER REQUIRED ACCESSORIES FOR NON-ACTIVE SECTIONS.
8. SIDEWALL DIFFUSER WITH DOUBLE DEFLECTION GRILLES.
9. DRUM LOUVER WITH +/- 30 DEGREE ROTATION, WITH INDIVIDUALLY ADJUSTABLE BLADES. PROVIDE WITH SPIRAL DUCT FRAME TO MATCH SIZE OF SPIRAL DUCT PER PLANS. PROVIDE WITH MANUFACTURER'S AIR SCOOP WITH FRONT OPERATOR.

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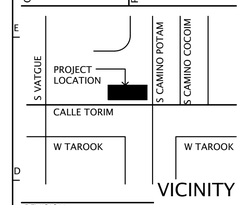

VICINITY

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

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SHEET TITLE

MECHANICAL SCHEDULES

DATE 02.20.2024

SHEET **M6.1**

KITCHEN HOOD SCHEDULE (SCHEDULED FOR REFERENCE)

KH ##

MARK	MANUF.	MODEL	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	MAX COOKING TEMP (°F)	HOOD TYPE	APPLIANCE DUTY	EXHAUST (CFM)	EXHAUST DUCT COLLAR SIZE (IN)	EXHAUST DUCT COLLAR QTY.	UTILITY CABINET DIMENSIONS (WXLXH)	LED LIGHTS (QUANTITY)	VERTICAL END PANEL SIDES	WEIGHT (LBS)	REMARKS:
1	CAPTIVEAIRE	6024 ND-2	6'-0"	60	24	700	I	EXTRA-HEAVY	1800	14"Ø	1	12 X 60 X 24	2	LEFT & RIGHT	777	1 - 12
2	CAPTIVEAIRE	6024 ND-2	9'-3"	60	24	600	I	HEAVY	1850	14"Ø	1	N/A	3	LEFT	557	1 - 12
3	CAPTIVEAIRE	6024 ND-2	9'-3"	60	24	600	I	HEAVY	1850	14"Ø	1	N/A	3	RIGHT	557	1 - 12
4	CAPTIVEAIRE	4824 VHB-G	4'-0"	48	24	700	II	N/A	600	10"Ø	1	N/A	0	0	175	13
5, 6	BOSCH	HDD86051UC	3'-1"	N/A	N/A	N/A	DOWNDRAFT	RESIDENTIAL	450	8"Ø	1	N/A	N/A	N/A	N/A	14

REMARKS:

1.	TYPE 1, WALL CANOPY HOOD WITH AND STAINLESS STEEL BAFFLE FILTERS. INCLUDE MANUFACTURERS HOOD MOUNTED UTILITY CABINET (WHERE SCHEDULED) FOR FIRE AGENT TANK AND ELECTRICAL CONTROL PANEL MOUNTING. THE FIRE SUPPRESSION SYSTEM SHALL BE HOUSED IN THE UTILITY CABINET AND SERVE HOODS KH-1 THRU KH-3.
2.	TYPE 430 STAINLESS STEEL VERTICAL END PANELS ON SIDES SHOWN IN SCHEDULE, BACKSPLASH (EXTENDING 18" PAST HOOD IN ALL DIRECTIONS), STRUCTURAL FRONT PANEL, AND FIELD WRAPPER TO CEILING.
3.	HOODS KH-1 KH-2, AND KH-3, TO BE CONNECTED TOGETHER, WITH COMMON MAKE-UP AIR UNIT. CONTROLS SHALL BE SHARED BETWEEN HOODS.
4.	TYPE 430 STAINLESS STEEL CONSTRUCTION WELDED WITH LIQUID TIGHT SEAMS.
5.	3" INSULATED AIR SPACE PROVIDED TO MEET NFPA 96 CLEARANCE REQUIREMENTS AND FILLER PANELS AS REQUIRED FOR EXTENSION OF HOOD TO CEILING. INSULATION FOR TOP AND BACK OF HOOD FOR KH-1.
6.	PRE-WIRED UL LISTED L55 SERIES E26 CANOPY LIGHT FIXTURES, GREASE DRAIN SYSTEM, AND CATCH CUP.
7.	HVAC CONTRACTOR TO PROVIDE DUCT CONNECTION TO EXHAUST AND SUPPLY COLLARS (WHERE NOTED) WITH VOLUME DAMPERS IN SUPPLY.
8.	DUCT THERMOSTAT IN KITCHEN HOOD EXHAUST COLLAR OR DUCT FOR INTERLOCK WITH EXHAUSTER AND MAKE-UP AIR UNIT.
9.	HOOD TO INCLUDE MANUFACTURER'S COMPLETE ELECTRICAL CONTROL PANEL FOR CONTROL OF ALL EQUIPMENT (INCLUDING KITCHEN HOOD EXHAUSTER AND MAKE-UP AIR UNIT, AND VARIABLE SPEED CONTROL WITH SMART CONTROLS DCV). AS LISTED ABOVE, CONTROLS TO BE SHARED FOR KH-1, KH-2, AND KH-3.
10.	PRE-PIPED CORE PROTECTION FIRE SUPPRESSION SYSTEM AND ACCESSORIES, TO MATCH KITCHEN EQUIPMENT LAYOUT BENEATH HOOD PER FOOD SERVICE PLANS. CORE PROTECTION SYSTEM ALSO TO INCLUDE AUTOMATIC WASH. COORDINATE WITH PLUMBING AND FIRE SUPPRESSION CONTRACTORS FOR DOMESTIC HOT AND COLD WATER REQUIREMENTS, AND FIRE SUPPRESSION SYSTEM REQUIREMENTS.
11.	HVAC CONTRACTOR SHALL SUSPEND FROM STRUCTURE WITH ALL-THREAD RODS PER MANUFACTURER'S INSTRUCTIONS AND STRUCTURAL DRAWINGS. ADD ADDITIONAL BRACING WHERE REQUIRED.
12.	PROVIDE EACH HOOD WITH AUDIBLE OR VISUAL NOTIFICATION OF HOOD FIRE SYSTEM ACTIVATION.
13.	TYPE II DISHWASHER HOOD WITH FIELD WRAPPER TO CEILING. INCLUDE SWITCH FOR ON/OFF CONTROL OF KITCHEN EXHAUST FAN.
14.	DOWNDRAFT HOOD TO SERVE 36" WIDE RESIDENTIAL GAS RANGE. PROVIDE WITH MANUFACTURER'S CABINET MOUNTED INLINE EXHAUST FAN (MODEL DHG602DUC), NECESSARY SEAL KIT AND TRIM KIT, AND ALL OTHER NECESSARY ACCESSORIES.

KITCHEN HOOD EXHAUSTER SCHEDULE (SCHEDULED FOR REFERENCE)

KEF ##

MARK	MANUF.	MODEL	CFM	E.S.P. (IN WG)	HP	RPM	VOLTAGE (V/ø/Hz)	WEIGHT (LBS)	REMARKS:
1	CAPTIVEAIRE	USBI18DD-RM	1800	1.7	2.0	1206	460/3/60	419	1, 4 - 8
2	CAPTIVEAIRE	DU180HFA	1850	1.25	2.0	1071	460/3/60	164	2, 4 - 8
3	CAPTIVEAIRE	DU180HFA	1850	1.25	2.0	1071	460/3/60	164	2, 4 - 8
4	CAPTIVEAIRE	DU33HFA	600	0.5	0.33	1370	115/1/60	68	3 - 7

REMARKS:

1.	UTILITY SET EXHAUST FAN WITH VERTICAL VERTICAL UPPER LEFT - CW INLET. INCLUDE HIGH TEMPERATURE HEAT AND SMOKE OPTION. FAN TO BE MOUNTED ON SPRING VIBRATION ISOLATORS, MOUNTED ON FLAT CURB PLATFORM. INCLUDE CLEANOUT PORT AND GREASE CUP AND MEET ALL NFPA 96 PROVISIONS.
2.	UPBLAST DISCHARGE UL 705 AND UL 762 RATED KITCHEN HOOD EXHAUSTER, MOUNTED ON FACTORY VENTED ROOF CURB SLOPED TO MATCH ROOF PITCH, 20" MINIMUM HEIGHT. INCLUDE HINGED CURB CAP WITH LOCKING PIN AND CURB SEAL FOR CLEANING GREASE DUCT UP FROM HOOD. INCLUDE CLEANOUT PORT AND GREASE CUP AND MEET ALL NFPA 96 PROVISIONS.
3.	UPBLAST DISCHARGE UL 705 RATED KITCHEN HOOD EXHAUSTER, MOUNTED ON FACTORY VENTED ROOF CURB SLOPED TO MATCH ROOF PITCH, 20" MINIMUM HEIGHT. INCLUDE HINGED CURB CAP WITH LOCKING PIN AND CURB SEAL. INCLUDE ECM WIRING PACKAGE, BIRD SCREEN, AND BACKDRAFT DAMPER IN CURB FRAME.
4.	INTERLOCK WITH CORRESPONDING KITCHEN HOOD AND MAKE-UP AIR UNIT.
5.	INCLUDE TRANSITION AND CONNECTION TO DUCT UP FROM HOOD, SIZE AS SPECIFIED.
6.	COORDINATE CONNECTIONS WITH ALL OTHER TRADES.
7.	BELT GUARD AND VENTED MOTOR COVER FOR WEATHER PROTECTION.
8.	INCLUDE MANUFACTURERS VARIABLE FREQUENCY DRIVE TO CONTROL UNIT SPEED BASED ON KITCHEN HOOD MANUFACTURER'S ELECTRICAL CONTROL PANEL.

KITCHEN HOODS (KH-1 THRU 4), MAKE-UP AIR UNIT (MAU-1), KITCHEN HOOD EXHAUSTER (KEF-1 THRU 4) SCHEDULES

THESE UNITS ARE SCHEDULE FOR REFERENCE. SEE FOOD SERVICE SHEETS FOR FURTHER DETAILS AND SCHEDULES OF THESE UNITS. COORDINATE WITH GENERAL CONTRACTOR AND FOOD SERVICE CONSULTANT AS TO WHETHER SPECIFIC PIECES OF EQUIPMENT AND GREASE DUCT SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR OR OTHERS.

PACKAGED MAKE-UP AIR UNIT WITH GAS HEATING SCHEDULE

MAU MARK

MARK	MANUF.	MODEL	SUPPLY (CFM)	OSA (CFM)	MOTOR (HP)	E.S.P. (IN WC)	NOMINAL (TONS)	IEER	COOLING CAPACITY TOTAL (MBH)	COOLING CAPACITY SENSIBLE (MBH)	COOLING CAPACITY EAT - DB / WB (°F)	COOLING CAPACITY LAT - DB / WB / DP (°F)	NATURAL GAS HEATING SECTION STAGES	NATURAL GAS HEATING SECTION INPUT (MBH)	NATURAL GAS HEATING SECTION OUTPUT (MBH)	VOLTAGE (V/ø/Hz)	MCA (AMPS)	MOCP (AMPS)	WEIGHT LESS ROOF CURB (LBS)	ROOF CURB WEIGH (LBS)	HEIGHT (IN)	REMARKS
1	PARAGON (CAPTIVEAIRE)	CASRTU3-I.400-24-20T	4500	100% OSA	5	0.5	20	18.2	264.0	224.4	115.0 / 67.0	61.3 / 57.2 / 54.8	-	331.0	268.1	460/3/60	54.9	60	2760	250	41-3/8	1 - 10

REMARKS:

1.	100% OUTDOOR AIR MAKE-UP AIR UNIT PROVIDED BY KITCHEN HOOD MANUFACTURER. UNIT TO INCLUDE 2" DOUBLE WALL CONSTRUCTION WITH 4-13 INSULATION MINIMUM; DOWN DISCHARGE CONFIGURATION.
2.	UNIT TO INCLUDE INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR; DIRECT DRIVE PLENUM BLOWER; EC MOTOR CONDENSING FANS; ELECTRONIC EXPANSION VALVE; SUCTION LINE ACCUMULATOR.
3.	PROVIDE WITH AVERAGIN INTAKE, EVAP, AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT).
4.	UNIT TO INCLUDE 81% EFFICIENT FURNACE WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE, 6:1 TURNDOWN.
5.	PROVIDE WITH FULLY MODULATING HOT GAS REHEAT.
6.	2" PLEATED FILTERS IN UNIT; MERV 8 MINIMUM EFFICIENCY.
7.	18" TALL ROOF CURB SLOPED TO MATCH ROOF PITCH.
8.	AIR TIGHT FLEXIBLE DUCT CONNECTION TO ROOFTOP UNIT / ROOF CURB.
9.	COORDINATE ELECTRICAL DISCONNECT AND CONNECTIONS WITH ELECTRICAL DRAWINGS.
10.	PROVIDE INTEGRAL UNIT CONTROLLER WITH BACNET INTERFACE.

FACTORY BUILT DOUBLE WALL GREASE DUCT MODEL DW-2R SPECIFICATION:

FURNISH DOUBLE WALL, FACTORY BUILT GREASE DUCT FOR USE WITH TYPE I KITCHEN HOODS, WHICH CONFORMS TO THE REQUIREMENTS OF NFPA-96. PRODUCTS SHALL BE ETL LISTED TO UL-1978 AND UL-2221 FOR VENTING AIR AND GREASE VAPORS FROM COMMERCIAL COOKING OPERATION. TESTING HAS BEEN EXTENDED TO RECONGNIZE ASTM E2336 AND AC101 DUE TO SIMILAR TESTING CRITERIA. MODELS DW-2R, 3R AND 3Z ARE USED FOR GREASE DUCT APPLICATIONS WHEN INSTALLED IN ACCORDANCE WITH THESE INSTRUCTIONS AND NFPA 96; STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS. DOUBLE WALL GREASE DUCTS ARE LISTED FOR A CONTINUOUS INTERNAL TEMPERATURE OF 500 DEGREES F AND INTERMITTENT TEMPERATURES OF 2000 DEGREES F.
THE DUCT SECTIONS SHALL BE CONSTRUCTED OF AN INNER DUCT WALL AND AN OUTER WALL WITH INSULATION IN BETWEEN. THE INNER DUCT WALL SHALL BE CONSTRUCTED OF 0.036 INCH THINK, 430 TYPE STAINLESS STEEL AND BE AVAILABLE IN DIAMETERS 8" THROUGH 24". THE OUTER WALL SHALL BE CONSTRUCTED OF STAINLESS STEEL AT A MINIMUM OF 0.024 INCH THICKNESS. THE DUCT, BASED ON MODEL NUMBER, SHALL INCLUDE LAYERS OF SUPER WOOL 607 PLUS INSULATION BETWEEN THE INNER AND OUTER WALL. GREASE DUCT JOINTS SHALL BE HELD TOGETHER BY MEANS OF FORMED V CLAMPS AND SEALED WITH 3M FIRE BARRIER 2000+. THE DUCT WALL ASSEMBLY SHALL BE TESTED AT 3/4" OR ZERO INCH CLEARANCE, ACCORDING TO CLASSIFICATIONS.

CLASSIFICATIONS AND CLEARANCES
UL 2221: STANDARD FOR FIRE RESISTIVE GREASE DUCT ENCLOSURE ASSEMBLIES. CHAPTER 7 OF THIS STANDARD REFERENCES A TEST LABELED INTERNAL FIRE TEST. SECTION 7.1.1 REFERENCES TWO INSTALLATION CONDITIONS, CONDITION A AND CONDITION B. CONDITION A REPRESENTS ALL INSTALLATION CONDITION EXCEPT FOR INSTALLATION WITHIN NON-VENTILATED COMBUSTIBLE ENCLOSURES. CONDITION B REPRESENTS INSTALLATION WITHIN A NON-VENTILATED COMBUSTIBLE ENCLOSURE.

MODEL DW-2R IS CLASSIFIED UNDER UL2221 AS AN ALTERNATE TO 2-HR FIRE RESISTIVE SHAFT ENCLOSURES WITH A REDUCED CLEARANCE TO COMBUSTIBLES (SIZES 8" TO 16" DIAMETER). MODEL 2R IS LISTED IN ACCORDANCE WITH THE REQUIREMENTS FOR DUCT ENCLOSURE CONDITION B.

MODEL DW-2R: 3/4" CLEARANCE TO COMBUSTIBLES FROM THE SURFACE OF THE DUCT OUTER SHELL; ZERO INCH CLEARANCE FROM COMBUSTIBLES FROM THE TIP OF THE OUTER V BAND.

DOUBLE WALL GREASE DUCT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S "INSTALLATION, OPERATION AND MAINTENANCE MANUAL," ETL LISTING, STATE AND LOCAL CODES. FANS SHALL BE SUPPORTED INDEPENDENTLY FROM THE GREASE DUCT SECTIONS. PROTECT GREASE DUCT FROM TWISTING OR MOVEMENT CAUSED BY FAN TORQUE OR VIBRATION.

CERTIFICATIONS:
THE DW-2R SERIES HAS BEEN CERTIFIED BY ITS. THIS CERTIFICATION MARK INDICATES THAT THE PRODUCT HAS BEEN TESTED TO AND HAS MET THE MINIMUM REQUIREMENTS OF A WIDELY RECOGNIZED (CONSENSUS) U.S. AND CANADIAN PRODUCTS SAFETY STANDARD, THAT THE MANUFACTURING SITE HAS BEEN AUDITED, AND THAT THE APPLICANT HAS AGREED TO A PROGRAM OF PERIODIC FACTORY FOLLOW-UP INSPECTIONS TO VERIFY CONTINUED PERFORMANCE.

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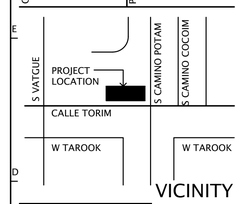

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

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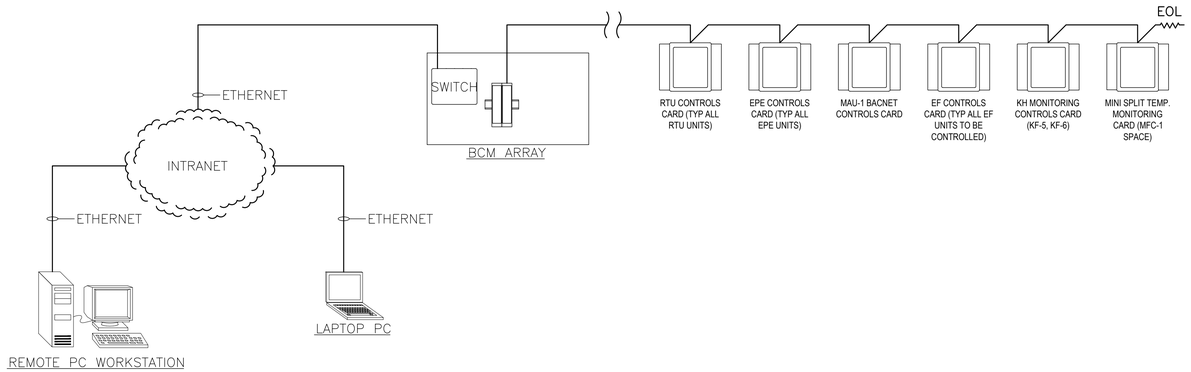
SHEET TITLE

MECHANICAL SCHEDULES

DATE 02.20.2024

SHEET **M6.2**



A NETWORK ARCHITECTURE DIAGRAM

SCALE: N/A

EXHAUST FAN POINTS (EF-1)

	HARDWARE POINTS				SOFTWARE POINTS					
POINT NAME	AI	AO	BI	BO	AV	BV	SCHED	TREND	ALARM	SHOW ON GRAPHIC
FAN STATUS			X					X		X
FAN START/STOP				X				X		X
SCHEDULE							X			
FAN FAILURE									X	

SEQUENCE OF OPERATION: EXHAUST FAN (EF-1):

RUN CONDITIONS - SCHEDULED
THE EXHAUST FAN SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE, TO MATCH THE CORRESPONDING BUILDING OCCUPANCY SCHEDULE.

MINI SPLIT TEMPERATURE MONITORING POINTS (PER SPACE)

	HARDWARE POINTS				SOFTWARE POINTS					
POINT NAME	AI	AO	BI	BO	AV	BV	SCHED	TREND	ALARM	SHOW ON GRAPHIC
ZONE TEMPERATURE	X		X					X		X
HIGH ZONE TEMP									X	

SEQUENCE OF OPERATION: PER EACH MINI SPLIT SPACE & WALK-IN FREEZER & COOLER:

EACH SPACE THAT HAS A MINI SPLIT, AS LISTED BELOW, SHALL BE PROVIDED WITH A TEMPERATURE SENSOR TO MONITOR THE SPACE TEMPERATURE. IF THE SPACE TEMPERATURE EXCEEDS SETPOINT BY +5°F (ADJ.), AN ALARM SHALL BE GENERATED.

UNIT SPACES:
- MFC-1 SPACE
- EACH OF THE WALK-IN COOLERS OR FREEZERS

THE SPACE TEMPERATURE SENSOR CAN BE CONNECTED TO A CONTROL CARD SERVED BY OTHER UNITS IF SPACE IS AVAILABLE

KITCHEN HOOD SEQUENCE OF OPERATION

APPLIES TO EACH INDEPENDENT KITCHEN HOOD SET OF EQUIPMENT
- HOOD SETUP 1: KH-1/2/3, KEF-1/2/3, MAU-1
- HOOD SETUP 2: KH-4, KEF-4

MANUAL UNIT START UP
- ON MANUAL ACTIVATION OF KH, KEF & MAU FAN SHALL ACTIVATE
- ON SWITCH OFF OF KH, KEF SHALL SWITCH OFF

AUTOMATIC UNIT START UP
- TEMPERATURE SENSOR DETECTS COOKING EQUIPMENT SWITCHED ON (READING AT MANUFACTURERS RECOMMENDED TEMPERATURE), KEF & MAU FAN SHALL SWITCH ON.
- ON TEMPERATURE SENSOR DETECTING COOKING EQUIPMENT SWITCHED OFF (READING LESS THAN MANUFACTURERS RECOMMENDED TEMPERATURE), KEF & MAU SHALL SWITCH OFF.

AUTOMATIC FIRE SUPPRESSION MODE
- HIGH TEMPERATURE READING AT SENSOR (MANUFACTURERS RECOMMENDED TEMPERATURE)
- EXHAUSTER FAN KEEPS RUNNING
- MAU FAN TURNS OFF
- SHUNT TRIP ELECTRICAL EQUIPMENT UNDER HOOD
- SHUT OFF GAS VALVE
- FIRE SUPPRESSION TRIGGERED
- FIRE SUPPRESSOR SETS OFF SUPERVISORY SIGNAL TO FIRE ALARM SYSTEM

MANUAL FIRE SUPPRESSION MODE
- ON MANUAL FIRE SUPPRESSANT ACTIVATION
- KEF KEEP RUNNING
- MAU FAN TURNS OFF
- SHUNT TRIP ELECTRICAL EQUIPMENT UNDER HOOD
- SHUT OFF GAS VALVE
- FIRE SUPPRESSION TRIGGERED
- FIRE SUPPRESSOR SETS OFF SUPERVISORY SIGNAL TO FIRE ALARM SYSTEM

KITCHEN HOODS TO OPERATE AT VARIABLE SPEED THROUGH CAPTIVE AIRE'S DCV SMART DIGITAL CONTROLLER

DURING TIMES WHERE KITCHEN HOOD IS NOT ON, MAKE-UP AIR UNIT AND KITCHEN HOOD EXHAUST FANS SHALL CYCLE ON AT LOW SPEED AS REQUIRED TO MAINTAIN SPACE TEMPERATURE

PACKAGED ROOFTOP UNIT AND ECONOMIZER/POWERED EXHAUST ACCESSORY POINTS (PER RTU AND EPE)

	HARDWARE POINTS				SOFTWARE POINTS					
POINT NAME	AI	AO	BI	BO	AV	BV	SCHED	TREND	ALARM	SHOW ON GRAPHIC
ZONE TEMPERATURE	X							X		X
ZONE SETPOINT ADJUST	X									X
SPACE RELATIVE HUMIDITY	X							X		X
FILTER DIFFERENTIAL PRESSURE	X							X		X
OSA TEMP (GLOBAL)	X							X		X
OSA HUMIDITY (GLOBAL)	X							X		X
DISCHARGE TEMP	X							X		X
ZONE CO2 PPM (WHERE CO2 SENSOR INDICATED)	X							X		X
SPACE PRESSURE (FOR POWERED EXHAUST CONTROL)	X							X		X
MIXED AIR DAMPERS		X						X		X
ZONE OVERRIDE			X					X		X
SUPPLY FAN STATUS			X					X		X
POWERED EXHAUST FAN STATUS			X					X		X
SUPPLY FAN START/STOP				X				X		X
POWERED EXHAUST FAN START/STOP				X				X		X
GAS HEATING STAGES (TYP. POINT PER STAGE, OR AO POINT)				X				X		X
COMPRESSOR STAGE 1				X				X		X
COMPRESSOR STAGE 2 (AS APPLICABLE)				X				X		X
ZONE CO2 PPM SETPOINT (WHERE CO2 SENSOR INDICATED)					X			X		X
EMERGENCY SHUTDOWN						X		X	X	X
SCHEDULE							X			
HEATING SETPOINT									X	X
COOLING SETPOINT									X	X
HIGH ZONE TEMP									X	
LOW ZONE TEMP									X	
FILTER CHANGE REQUIRED									X	
HIGH DISCHARGE AIR TEMP									X	
LOW DISCHARGE AIR TEMP									X	
HIGH SPACE HUMIDITY									X	
SUPPLY FAN FAILURE									X	
POWERED EXHAUST FAN FAILURE									X	
HIGH ZONE CO2 PPM (WHERE CO2 SENSOR INDICATED)									X	

SEQUENCE OF OPERATION: PER EACH ROOFTOP UNIT (RTU):

RUN CONDITIONS - SCHEDULED
THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:
- OCCUPIED MODE: THE UNIT SHALL MAINTAIN
  - A 75°F (ADJ.) COOLING SETPOINT; 50% RH MAX
  - A 72°F (ADJ.) HEATING SETPOINT; 50% RH MAX
- UNOCCUPIED MODE: THE UNIT SHALL MAINTAIN
  - A 85°F (ADJ.) COOLING SETPOINT (NOTE: AT MINIMUM, SHALL BE SET AT LISTED TEMPERATURE PER IECC REQUIREMENTS); 50% RH MAX
  - A 68°F (ADJ.) HEATING SETPOINT (NOTE: AT MAXIMUM, SHALL BE SET AT LISTED TEMPERATURE PER IECC REQUIREMENTS); 50% RH MAX

ZONE SETPOINT ADJUST
THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING AND COOLING SETPOINTS AT THE ZONE SENSOR BY +/- 2°F (ADJ.).

ZONE UNOCCUPIED OVERRIDE
A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE WHILE IN UNOCCUPIED MODE AND PLACE THE UNIT INTO AN OCCUPIED MODE FOR AN ADJUSTABLE PERIOD OF TIME; START WITH A TIME OF 2 HOURS (ADJ). AT THE EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE NORMAL SCHEDULE.

HEATING AND COOLING MODES: OCCUPIED AND UNOCCUPIED
THE UNIT AND COMPRESSORS OR GAS VALVE SHALL CYCLE BASED ON THE FACTORY CONTROL BOARD OR CONTROLS SYSTEM SIGNALS. THE UNITS SHALL CONTROL TO MAINTAIN HUMIDITY LEVELS WITH INTEGRAL HUMIDITY CONTROL EQUIPMENT.

OUTSIDE AIR DAMPER
THE OUTSIDE AIR DAMPER SHALL BE AT ITS MINIMUM AIRFLOW SETTING WHEN IN OCCUPIED MODE, AND SHALL BE CLOSED WHEN IN UNOCCUPIED MODE. SEE THE ECONOMIZER AND DEMAND CONTROLLED VENTILATION SECTIONS FOR OUTSIDE AIR DAMPER MODULATION AT THOSE POINTS. ALSO SEE SPECIFIC SEQUENCE FOR RTU-1 OUTSIDE AIR DAMPER. FOR HEAT PUMP UNITS WITH 2-SPEED INDOOR SUPPLY FANS, THE OUTSIDE AIR DAMPER SHALL ADJUST POSITION WHERE NECESSARY TO MAINTAIN SET OUTSIDE AIR FLOW BASED ON THE SUPPLY FAN SPEED. COORDINATE WITH TAB CONTRACTOR ON CORRECT SETTINGS, IF OUTSIDE AIR IS WITHIN AN ACCEPTABLE MARGIN (+/- 20%) AT ALL SUPPLY FAN SPEEDS, THE DAMPER SHALL BE MAINTAINED AT A CONSTANT MINIMUM POSITION.

ECONOMIZER MODE
ECONOMIZER MODE SHALL BE ENABLED WHEN THE OUTDOOR AIR DRYBULB TEMPERATURE IS LOWER THAN 65°F (ADJ.) AND THE OUTDOOR AIR DEWPOINT IS LOWER THAN 51°F (ADJ.). THE ECONOMIZER DAMPER SHALL FULLY MODULATE TO MAINTAIN A HEAT PUMP DISCHARGE AIR TEMPERATURE OF 55°F (ADJ.) OR AS REQUIRED TO MAINTAIN SPACE TEMPERATURE. NOTE THE ECONOMIZER DAMPER INCLUDES ALL DAMPERS IN THE ECONOMIZER/POWERED EXHAUST ACCESSORY.

ECONOMIZER/MIXED AIR DAMPERS TO BE CONTROLLED DIRECTLY THROUGH THE DDC CONTROLS SYSTEM, AND SHALL BE DELIVERED TO THE SITE READY FOR CONTROLS CONTRACTOR CONNECTIONS. COORDINATE WITH CONTROLS CONTRACTOR ON WHETHER DAMPER ACTUATORS SHALL BE PROVIDED BY UNIT MANUFACTURER, OR PROVIDED BY CONTROLS CONTRACTOR. COORDINATE EXACT ACTUATOR SELECTION WITH CONTROLS CONTRACTOR.

RTU-1 AND EPE-1 ONLY OUTSIDE AIR SEQUENCE:
THE OUTSIDE AIR DAMPER SHALL BE AT ITS MINIMUM AIRFLOW SETTING WHEN IN OCCUPIED MODE AND NOT IN OTHER MODES LISTED BELOW, AND SHALL BE CLOSED WHEN IN UNOCCUPIED MODE.

OTHER MODES:
- DEMAND CONTROLLED VENTILATION (DCV) MODE: WHEN THE CO2 IN EACH ZONE (WHERE APPLICABLE) RISES ABOVE 1000 PPM, THE OUTSIDE AIR DAMPER SHALL MODULATE OPEN IN STEPS UNTIL THE ZONE CO2 IS AGAIN BELOW 1000 PPM.
- KITCHEN HOOD OPERATING MODE: WHEN ONE OR BOTH KITCHEN HOODS (KH-5 OR KH-6) ARE IN OPERATION, THE OUTSIDE AIR SHALL BE AT ITS SCHEDULED MINIMUM OUTSIDE AIR (500 CFM).
- ECONOMIZER MODE: OPERATE IN ECONOMIZER MODE PER ECONOMIZER MODE SEQUENCE ABOVE.

POWERED EXHAUST
THE POWERED EXHAUST SHALL OPERATE AND MODULATE TO MAINTAIN A SPACE STATIC PRESSURE OF APPROXIMATELY +0.03" W.C. POWERED EXHAUST SHALL NOT RUN WHEN THE OUTSIDE AIR DAMPER IS AT MINIMUM OUTSIDE AIR SETTING.

SUPPLY FAN CONTROL
THE SUPPLY FAN SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN, UNLESS SHUTDOWN ON SAFETIES. THE SUPPLY FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED MODE.

FILTER MONITORING
THE FILTER DIFFERENTIAL PRESSURE SHALL BE MONITORED AND AN ALARM SHALL BE SET WHEN THE DIFFERENTIAL PRESSURE IS ABOVE THE RECOMMENDED FILTER CHANGE SETPOINT (ADJ.)

COMPATIBILITY WITH EXISTING OWNER CONTROLS SYSTEM:
THE BASIS OF DESIGN IS CARRIER CONTROLS. VERIFY THE EXACT CONTROLS SYSTEM REQUIREMENT WITH THE OWNER; THE NEW SYSTEM SHALL BE FULLY COMPATIBLE AND FULLY INTEGRATE WITH THE EXISTING OWNER CONTROLS SYSTEM, AND SHALL BE TIED INTO THE DISTRICT FRONT END. TIE IN TO THE EXISTING FRONT END PER DISTRICT REQUIREMENTS.

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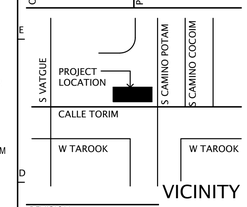

VICINITY

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

PROJECT NO. 23C-001

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SHEET TITLE

MECHANICAL CONTROLS

DATE 02.20.2024

SHEET **M7.1**

GENERAL PLUMBING NOTES

1. SCOPE OF WORK INCLUDED SHALL INCLUDE ALL MATERIALS, LABOR AND EQUIPMENT TO PROVIDE AN OPERATING PLUMBING SYSTEM.
2. ALL WASTE AND VENT PIPE SHALL BE PER PIPING MATERIAL SCHEDULE. JOINTS BETWEEN PLASTIC PIPE (PVC OR ABS) AND EXISTING HUBLESS CAST IRON PIPE SHALL BE MADE WITH AN APPROVED ADAPTER FITTING PER 2018 IPC, SECTION 705.16.4. ABS OR PVC PIPING MATERIALS ARE NOT APPROVED FOR INSTALLATION IN AIR PLENUMS.
3. ALL WASTE AND VENT PIPE SHALL BE WATER FILL TESTED.
4. ALL WORK SHALL CONFORM TO THE 2018 IPC, 2018 IFGC, 2018 IMC, 2018 IBC, 2020 NEC AND LOCAL CODES.
5. DISINFECT THE WATER SYSTEM PER ENVIRONMENTAL HEALTH SERVICES BULLETIN, LATEST EDITION.
6. SLOPE ALL WASTE LINES @ 1/4" PER FOOT UNLESS OTHERWISE APPROVED BY THE AUTHORITY HAVING JURISDICTION, OR OTHERWISE NOTED ON DRAWINGS.
7. ALL PLUMBING SYSTEMS SHALL BE INSPECTED AND TESTED FOR LEAKS PER THE IPC SECTION 312, AND ALL LOCAL REGULATIONS.
8. ALL FUEL GAS PIPING SHALL BE CLEARED OF DEBRIS, PURGED (FLUSHED), INSPECTED AND TESTED FOR LEAKS PER CURRENT IFGC SECTION 406 AND ALL LOCAL REGULATIONS.
9. INSULATE ALL STORM, HOT, RECIRCULATION, COLD AND CONDENSATE PIPING CONCEALED IN CEILING SPACES AND IN WALLS (UNCONDITIONED SPACES) PER THE PIPE MINIMUM INSULATION TABLE.
10. PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL COMPLY WITH 2018 IBC, SECTION 712 & 714.
11. ALL VALVES SHALL BE EASILY ACCESSIBLE & IN ACCESS PANELS.
12. ALL PIPING SHALL BE SUPPORTED FROM SAGGING, POCKETING, AND SWAYING.
13. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND ALL CONNECTIONS TO CITY WATER AND SEWER.
14. THESE DRAWINGS ARE IN GENERAL DIAGRAMMATIC AND DO NOT SHOW ALL OFFSETS AND GENERAL DIFFICULTIES IN INSTALLING THE SYSTEM. ASK IF YOU DO NOT UNDERSTAND, OR WE ASSUME YOU DO UNDERSTAND.
15. THE CONTRACTOR SHALL OFFER ONLY TOP QUALITY FIXTURES FOR APPROVAL BY THE OWNER OR THE ARCHITECT.
16. THE FINAL LOCATIONS OF ALL FIXTURES SHALL BE FIELD VERIFIED AND MEET THE APPROVAL OF THE OWNER OR HIS REPRESENTATIVE.
17. DRAIN, WASTE, VENT, AND RD&OF DRAIN PIPING INSTALLED IN RETURN AIR PLENUMS SHALL BE HUBLESS CAST IRON. NO EXCEPTIONS.
18. (XXXX SQ FT) = FLAT ROOF AREA + 50% OF VERTICAL WALL(S) AREA). AREA SHOWN @ "RD&OF" IN SQUARE FEET.
19. ALL BURIED NON-METALLIC PIPING SHALL BE IDENTIFIED WITH A MINIMUM #12 GAUGE SOLID COPPER INSULATED TRACER WIRE SECURELY ATTACHED TO PIPE OR WRAPPED AROUND THE PIPE. ATTACHMENTS SHALL BE PROVIDED AT MAXIMUM 20' INTERVALS AND AT EACH CHANGE IN DIRECTION. PER CITY AMENDMENT.

PLUMBING LEGEND

SYMBOLS

SYMBOL	DESCRIPTION	ABBREVIATION
CD	CONDENSATE DRAIN	CND / CD
	CORROSIVE WASTE	COW
	DOMESTIC COLD WATER	DCW / CW
	DOMESTIC HOT WATER	DHW / HW
	DOMESTIC HOT WATER RECIRC.	DHWR / HWR
D	DRAIN / OVERFLOW	D / DRAIN
GW	GREASE WASTE	GW
LP	LIQUEFIED PETROLEUM	LP / LPG
NG	NATURAL GAS	NG / G
OFL	OVERFLOW LEADER	OFL / OST
RDL	ROOF DRAIN LEADER	RDL / ST
	SANITARY SEWER / WASTE	SAN / WASTE
105 105	TEMPERED WATER	105
120 120	≤ 120° F WATER	120
FW FW	FILTERED WATER	FW
SW SW	SOFTENED WATER	SW
TP	TRAP PRIMER	TP
RO RO	RO WATER	RO
	VENT PIPING	VENT / V
	CONTINUATION	CONT.
	ELBOW DOWN	
	RISE UP	
	TEE DOWN	
	CAP	
	HOSE BIBB	HB
	WALL CLEAN-OUT	WCO
	GATE VALVE	
	GLOBE VALVE	
	CHECK VALVE	
	AUTOMATIC GAS SHUT OFF VALVE	
	HOT WATER CIRCULATOR PUMP	
	SHUT OFF VALVE	SOV
	GAS COCK	
	FLOOR / SURFACE CLEAN-OUT	FCO / SCO
	FLOOR DRAIN	FD
	FLOOR SINK	FS
	POINT OF CONNECTION	POC

ABBREVIATIONS

AP	ACCESS PANEL	OF	OVERFLOW
AFF	ABOVE FINISH FLOOR	PEX	CROSS-LINKED PE
CI	CAST IRON	PVC	POLYVINYL CHLORIDE
CU	COPPER	RD	ROOF DRAIN
DN	DOWN	TYP	TYPICAL
EX / EXIST.	EXISTING	UG	UNDERGROUND
GC	GENERAL CONTRACTOR	VTR	VENT THRU ROOF
KEC	KITCHEN EQUIP CONTRACTOR	W/	WITH

NOTE: SOME OF THE SYMBOLS AND ABBREVIATIONS MAY NOT BE USED ON THIS PROJECT.

PLUMBING SHEET INDEX

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P2.2	PLUMBING PLAN - DOM. WATER & NAT. GAS
P2.3	PLUMBING ROOF PLAN
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220500	COMMON WORK RESULTS FOR PLUMBING
220503	PIPES AND TUBES FOR PLUMBING PIPING AND EQUIPMENT
220523	GENERAL-DUTY VALVES FOR PLUMBING PIPING
220529	HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT
220700	PLUMBING INSULATION
221123	FACILITY NATURAL GAS PIPING
224000	PLUMBING FIXTURES

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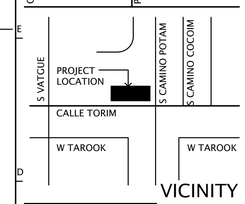

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SHEET TITLE

PLUMBING GENERAL NOTES AND SYMBOLS

DATE 02.20.2024

SHEET **P1.1**

KEYNOTES

1 BUILDING SEWER LINE TO CONNECT TO SEWER MAIN. SEE SITE/CIVIL PLANS FOR CONTINUATION AND COORDINATION OF INVERT ELEVATIONS. ADD TRACER WIRE TO ANY ACCESSIBLE UNDERGROUND PIPING, PER CURRENT CITY STANDARDS AND CODES.

2 WASTE PIPE DOWN IN FURRED WALL TO JUST BELOW SLAB. PROVIDE 45 DEGREE ELBOW AWAY FROM FOOTING AND EXTEND TO REQUIRED INVERT ELEVATION. SEE THE WASTE LINE AT FOOTING DETAIL ON THE DETAIL SHEET.

3 PROVIDE RELIEVING ARC, OR A PIPE SLEEVE WHERE PIPING PASSES UNDER OR THROUGH THE FOUNDATION. SLEEVE PIPE SHALL BE BUILT INTO THE FOUNDATION AND SHALL BE 2 PIPE SIZES GREATER THAN THE PIPE PASSING THROUGH THE FOUNDATION WALL.

4 SAMPLE PORT INSTALLED IMMEDIATELY FOLLOWING THE DISCHARGE OF TREATED WASTEWATER. THE SAMPLE PORT SHALL CONSIST OF A 6" (MIN.) SDR-35 PIPE WITH A 6" SDXFIP ADAPTER AND 6" SD THREADED PLUG-RAISED HEAD, AND AN 8" CAST IRON FRAME AND COVER. SEE DETAIL.

5 ALL HORIZONTAL VENT PIPING IN CEILING SPACE SHALL BE SLOPED SO WATER MAY DRIP BACK INTO THE DRAINAGE SYSTEM BY GRAVITY. ALL VENT PIPING SHALL BE FREE FROM DROPS OR SAGS.

6 FULLY INSULATED, COPPER CONDENSATE DRAIN, FROM HVAC EQUIPMENT, DROP IN PLUMBING WALL TO DISCHARGE INTO FLOOR SINK. PROVIDE MINIMUM AIR GAP PER CURRENT CODE. SLOPE PIPING 1/8" PER FOOT MINIMUM, OR 1/4" PER FOOT WHERE POSSIBLE. PLUMBING CONTRACTOR SHALL PERFORM A CONDENSATE DRAIN TEST. NO EXCEPTIONS.

KEYNOTES

7 CONDENSATE DRAIN, FULLY INSULATED, FROM FAN COIL UNIT(S), DOWN IN WALL TO WET-LAV TAILPIECE. SLOPE PIPING 1/8" PER FOOT MINIMUM, OR 1/4" PER FOOT WHERE POSSIBLE. PLUMBING CONTRACTOR SHALL PERFORM A CONDENSATE DRAIN TEST. NO EXCEPTIONS.

8 ROOF DRAIN AND OVERFLOW LEADER LINES (SIZE AS SPECIFIED) IN CEILING SPACE TO OUTSIDE. TERMINATE WITH DOWNSPOUT COVER. INSTALL DOWNSPOUT COVER PER MANUFACTURER RECOMMENDATIONS. COORDINATE EXACT LOCATION AND HEIGHT WITH ARCHITECT.

9 COORDINATE ANY AN ALL ROUGH-IN, BACKING, SUPPORT, GREEN BOARD, ETC REQUIREMENTS WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

10 GAS WATER HEATER MANUFACTURER'S 3" CONCENTRIC VENT AND INTAKE FOR THROUGH THE ROOF INSTALLATION. CONNECT 3" CPVC EXHAUST AND INTAKE PER MANUFACTURER REQUIREMENTS AND UL LISTING TO MANUFACTURER'S 4" VERTICAL CONCENTRIC ROOF VENT. SUPPORT PER MANUFACTURER REQUIREMENTS. ALL INTAKE AND EXHAUST PIPE TO BE CPVC ASTM-D2846.

11 COPPER CONDENSATE DRAIN FROM FREEZER COIL, WRAPPED WITH HEATED WIRE OVER THE ENTIRE EXPOSED SURFACE IN THE FREEZER UNIT. RUN FULLY INSULATED IN WALL AND INSTALL A P-TRAP IN THE FREEZER DRAIN OUTSIDE OF FREEZER AT OR NEAR THE FLOOR DRAIN, COORDINATE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

KEYNOTES

12 COPPER CONDENSATE DRAIN FROM COOLER COIL, RUN FULLY INSULATED IN WALL. INSTALL A P-TRAP IN THE COOLER DRAIN OUTSIDE OF COOLER AT OR NEAR THE FLOOR DRAIN, COORDINATE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

13 COORDINATE WITH CIVIL AND ARCHITECTURAL FOR SITE STORM WATER DRAINAGE.

14 2" VENT PIPING BELOW GRADE. COORDINATE ROUTING WITH STRUCTURAL AND ALL SITE UTILITIES.

15 SEE CIVIL FOR COORDINATIOIN OF ALL SITE PIPING. SITE PIPING SHOWN HERE FOR REFERENCE ONLY.

16 ROOF DRAIN AND OVERFLOW DOWNSPOUT NOZZLES. INSTALL OVERFLOW DRAIN NOZZLE HIGHER THAN ROOF DRAIN NOZZLE, SEE ARCHITECTURAL PLANS FOR ACTUAL INSTALLATION ELEVATION.

17 PROVIDE CPVC DWV PIPE FROM THE DISH WASHER (305) FLOOR SINK AND FROM THE FLOOR THROUGH (226) TO THE GREASE INTERCEPTOR INLET CONNECTION.

GENERAL NOTES

1 INSULATE ALL CONDENSATE, ROOF DRAIN, OVERFLOW DRAIN, HOT, RECIRCULATION AND COLD WATER PIPING CONCEALED IN CEILING SPACES AND WALLS. NO EXCEPTIONS.

2 FIELD COORDINATE FINAL ROUTING OF DHW, DHWR, DCW, VENT, NATURAL GAS, AND CONDENSATE PIPING IN CEILING SPACES WITH HVAC DUCTWORK, FIRE SPRINKLER PIPING AND ALL OTHER TRADES. NO EXCEPTIONS.

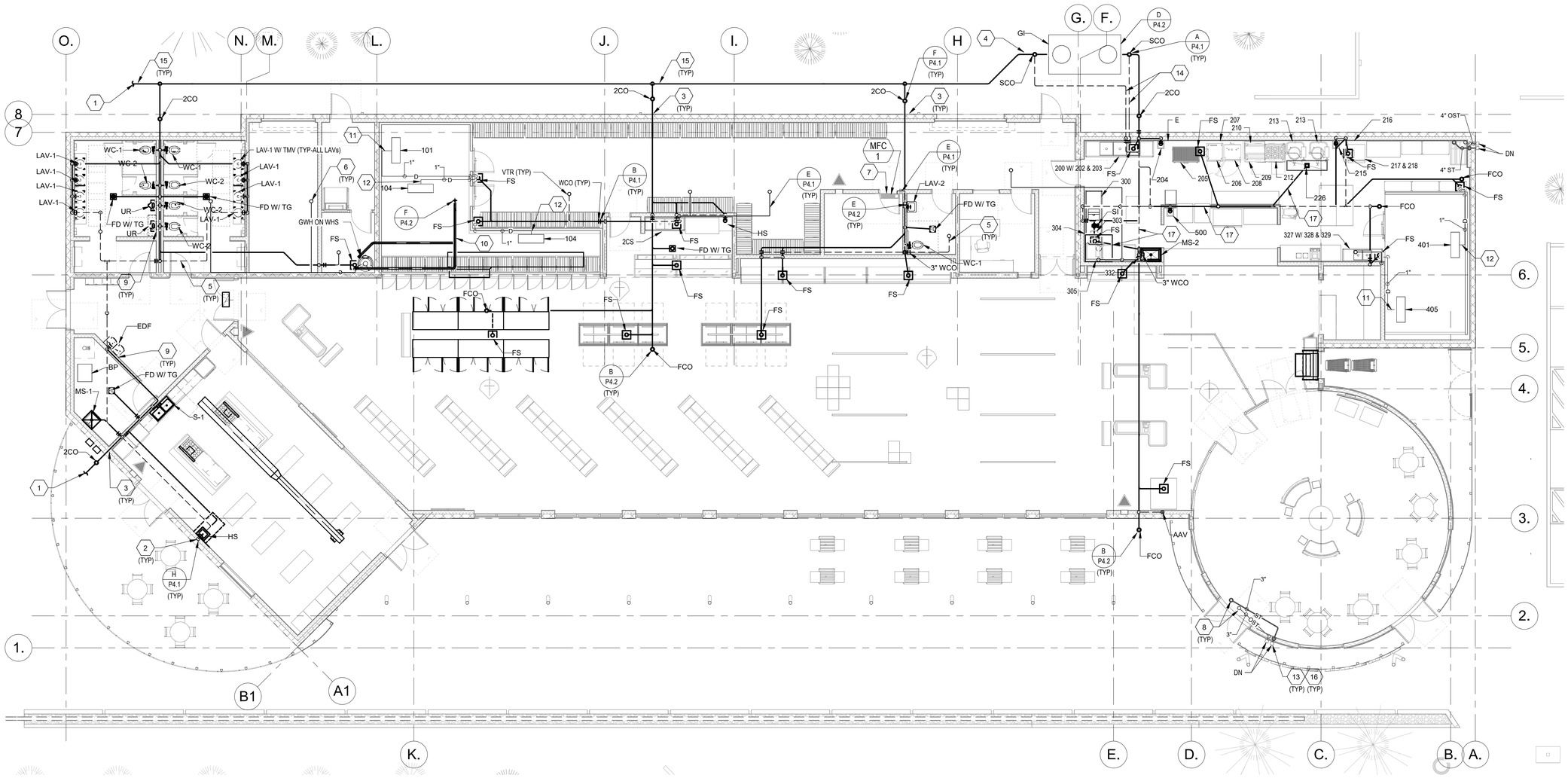
3 COORDINATE ALL FIXTURE MOUNTING HEIGHTS WITH ARCHITECTURAL PLANS.

4 COORDINATE FIXTURE BACKSPLASH REQUIREMENTS WITH ARCHITECTURAL PLANS.

5 USE THE MINIMUM NUMBER OF GLUE JOINTS NECESSARY FOR ALL GRAVITY DRAIN PIPE, BELOW AND ABOVE GRADE.

6 EXACT LOCATION OF PLUMBING FIXTURE SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS.

7 ROOF DRAIN / STROM PIPING SIZED PER 2018 IPC TABLE 1106.2 & 1106.3 BASED ON 3" RAINFALL RATE AND HORIZONATAL PIPING AT 1/4 UNITS VERTICAL IN 12 UNITS HORIZONATAL (2% SLOPE). PIPING TO BE MINIMUM SLOPE INDICATED.



1 PLUMBING PLAN - WASTE & VENT

P2.1 SCALE: 1/8" = 1'-0"

N

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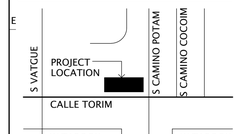

VICINITY

REVISION		
NUMBER	DESCRIPTION	DATE

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SHEET TITLE

PLUMBING PLAN - WASTE & VENT

DATE 02.20.2024

SHEET **P2.1**

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KEYNOTES

1 DOMESTIC WATER SUPPLY LINE FROM WATER MAIN. SEE SITE/CIVIL FOR CONTINUATION. BURIED COLD WATER LINE WITHIN 5 FEET OF BUILDING SHALL BE WRAPPED WITH 4 LAYERS OF 10 MIL VINYL PIPEWRAP TAPE. PROVIDE TRANSIONT TO 3" AMES IN BUILDING RISER.

2 DOMESTIC COLD WATER IN-BUILDING RISER WITH AMIN SHUT-OFF VALVE IN JANITOR 121

3 PROVIDE SHUT-OFF VALVE ABOVE T-BAR CEILING FOR ISOLATION.

4 DCW LINE TO BFP AND WATER FILTER 207 SERVING 206 AND 208. PROVIDE CONNECTION TO BACKFLOW PREVENTER AND WATER FILTER (WATER FILTER BY OTHERS). ALL DRINKING WATER LINES SHALL BE PEX. COORDINATE ROUGH-INS AND ALL REQUIREMENTS WITH KITCHEN CONSULTANT PLANS AND ACTUAL PROVIDED EQUIPMENT INSTALLATION REQUIREMENTS.

5 DCW LINE TO BFP AND WATER FILTER 216 SERVING 218. PROVIDE CONNECTION BFP AND WATER FILTER (WATER FILTER BY OTHERS). ALL DRINKING WATER LINES SHALL BE PEX. COORDINATE ROUGH-INS AND ALL REQUIREMENTS WITH KITCHEN CONSULTANT PLANS AND ACTUAL PROVIDED EQUIPMENT INSTALLATION REQUIREMENTS.

6 FULL SIZE T&P RELIEF VALVE DRAIN LINE AS REQUIRED BY WATER HEATER MANUFACTURER DOWN IN WALL TO DISCHARGE INTO FLOOR SINK. PROVIDE 3" MINIMUM AIR GAP.

7 HOT WATER CIRCULATOR PUMP INSTALLED ON WALL NEXT TO WATER HEATER WITH GRUNDFOS TIMER & AQUASTAT. PROVIDE ISOLATION & CHECK VALVES AS SHOWN ON THE WATER HEATER RECIRCULATION LOOP DETAIL ON THE DETAIL SHEET.

KEYNOTES

8 APPROVED AUTOMATIC GAS SHUT-OFF VALVE ACCESSIBLE ABOVE T-BAR CEILING, FOR USE WITH KITCHEN HOODS FIRE SUPPRESSION SYSTEMS PER NFPA 96. VALVE FURNISHED BY KITCHEN HOOD VENDOR AND INSTALLED BY PLUMBING CONTRACTOR. CONNECT VALVE TO HOOD FIRE SUPPRESSION SYSTEMS FOR AUTOMATIC SHUT-OFF. FIELD COORDINATE INSTALLATION WITH KITCHEN HOOD INSTALLER.

9 GAS METER AND REGULATOR WITH ISOLATION VALVES BY SOUTHWEST GAS.

10 NATURAL GAS SUPPLY LINE FROM GAS MAIN BY SOUTHWEST GAS.

11 ROOF DRAIN AND OVERFLOW LEADER LINES (SIZE AS SPECIFIED) IN CEILING SPACE TO OUTSIDE. TERMINATE WITH DOWNSPOUT COVER. INSTALL DOWNSPOUT COVER PER MANUFACTUER RECOMMENDATIONS. COORDINATE EXACT LOCATION AND HEIGHT WITH ARCHITECT AND G.C.

12 BELOW GRADE NATURAL GAS PIPING IN MINIMUM 3" YELLOW SCH 40 PVC CONDUIT BURIED AT A MINIMUM DEPTH OF 12" BELOW THE SLAB. CONDUIT ENDS TO BE A MINIMUM OF 2" AFF AT BOTH ENDS WHERE CONDUIT PENETRATES THE SLAB.

13 PROVIDE LOUVERED ACCESS PANEL (AP-L) FOR ACCESS TO BOTH ISOLATION VALVES AND BOTH TRANSITIONS TO ARC RESISTANT TYPE CORRUGATED STAINLESS STEEL TUBING (CSST) WITH AN EQUIVALENT HYDRAULIC DIAMETER (EHD) OF 30 (~1" STANDARD PIPE SIZE). CSST TO BE UL LISTED/NFPA 54. PROVIDE AND INSTALL CSST PIPING PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CURRENT CODE.

14 1/8" DRAIN FROM FREEZELESS ROOF MOUNTED HOSE BIBB, ROUTE DRAIN TO NEAREST FLOOR SINK OR MOP SINK.

15 GAS PRESSURE REGULATOR VENT PIPE ROUTE PIPE UP THROUGH ROOF AND TERMINATE WITH 180° BEND. PROVIDE FLASHING AND ENSURE WEATHER TIGHT. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

KEYNOTES

16 POINT OF CONNECTION WITH SHUTOFF VALVE FOR ASSE 1055 COMPLIANT MOP SINK CHEMICAL DISPENSER.

17 PROVIDE DRAIN TEMPERING VALVE (DTV) WITH SHOCK ARRESTOR AT DISHWASHING MACHINE DRAIN OUTLET, INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. SLOPE PIPING 1/8" PER FOOT MINIMUM, OR 1/4" PER FOOT WHERE POSSIBLE. PLUMBING CONTRACTOR SHALL PERFORM A DRAIN TEST. NO EXCEPTIONS.

18 BACKFLOW PREVENTER WITH MANUFACTURER'S AIR GAP FITTING, INSTALL PER INSTALLATION INSTRUCTIONS AND ROUTE DRAIN PIPING TO DISCHARGE INTO MOP SINK OR FLOOR SINK.

19 APPROXIMATE FIRE RISER LOCATION, COORDINATE EXACT LOCATION WITH FIRE SPRINKLER CONTRACTOR.

GENERAL NOTES

1 INSULATE ALL CONDENSATE, ROOF DRAIN, OVERFLOW DRAIN, HOT, RECIRCULATION AND COLD WATER PIPING CONCEALED IN CEILING SPACES AND WALLS. NO EXCEPTIONS.

2 FIELD COORDINATE FINAL ROUTING OF DHW, DHWR, DCW, VENT, NATURAL GAS, AND CONDENSATE PIPING IN CEILING SPACES WITH HVAC DUCTWORK, FIRE SPRINKLER PIPING AND ALL OTHER TRADES. NO EXCEPTIONS.

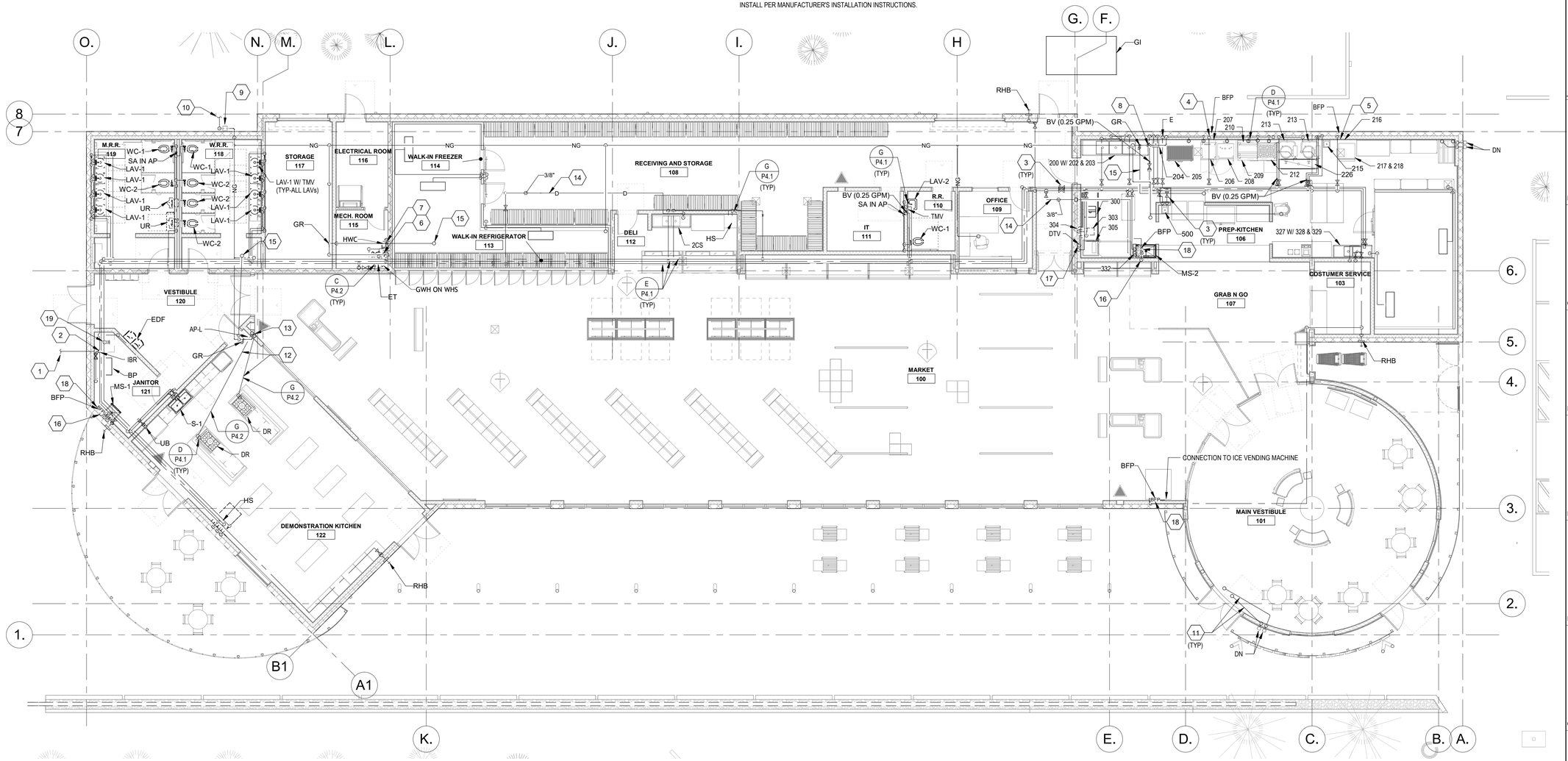
3 COORDINATE ALL FIXTURE MOUNTING HEIGHTS WITH ARCHITECTURAL PLANS.

4 COORDINATE FIXTURE BACKSPLASH REQUIREMENTS WITH ARCHITECTURAL PLANS.

5 USE THE MINIMUM NUMBER OF GLUE JOINTS NECESSARY FOR ALL GRAVITY DRAIN PIPE, BELOW AND ABOVE GRADE.

6 EXACT LOCATION OF PLUMBING FIXTURE SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS.

7 ROOF DRAIN / STROM PIPING SIZED PER 2018 IPC TABLE 1106.2 & 1106.3 BASED ON 3" RAINFALL RATE AND HORIZONATAL PIPING AT 1/4 UNITS VERTICAL IN 12 UNITS HORIZONATAL (2% SLOPE). PIPING TO BE MINIMUM SLOPE INDICATED.



1 PLUMBING PLAN - DOMESTIC WATER & NATURAL GAS

P2.2 SCALE: 1/8" = 1'-0"

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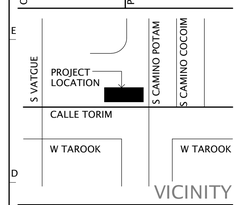

VICINITY

REVISION

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SHEET TITLE

PLUMBING PLAN - DOM. WATER & NAT. GAS

DATE 02.20.2024

SHEET **P2.2**

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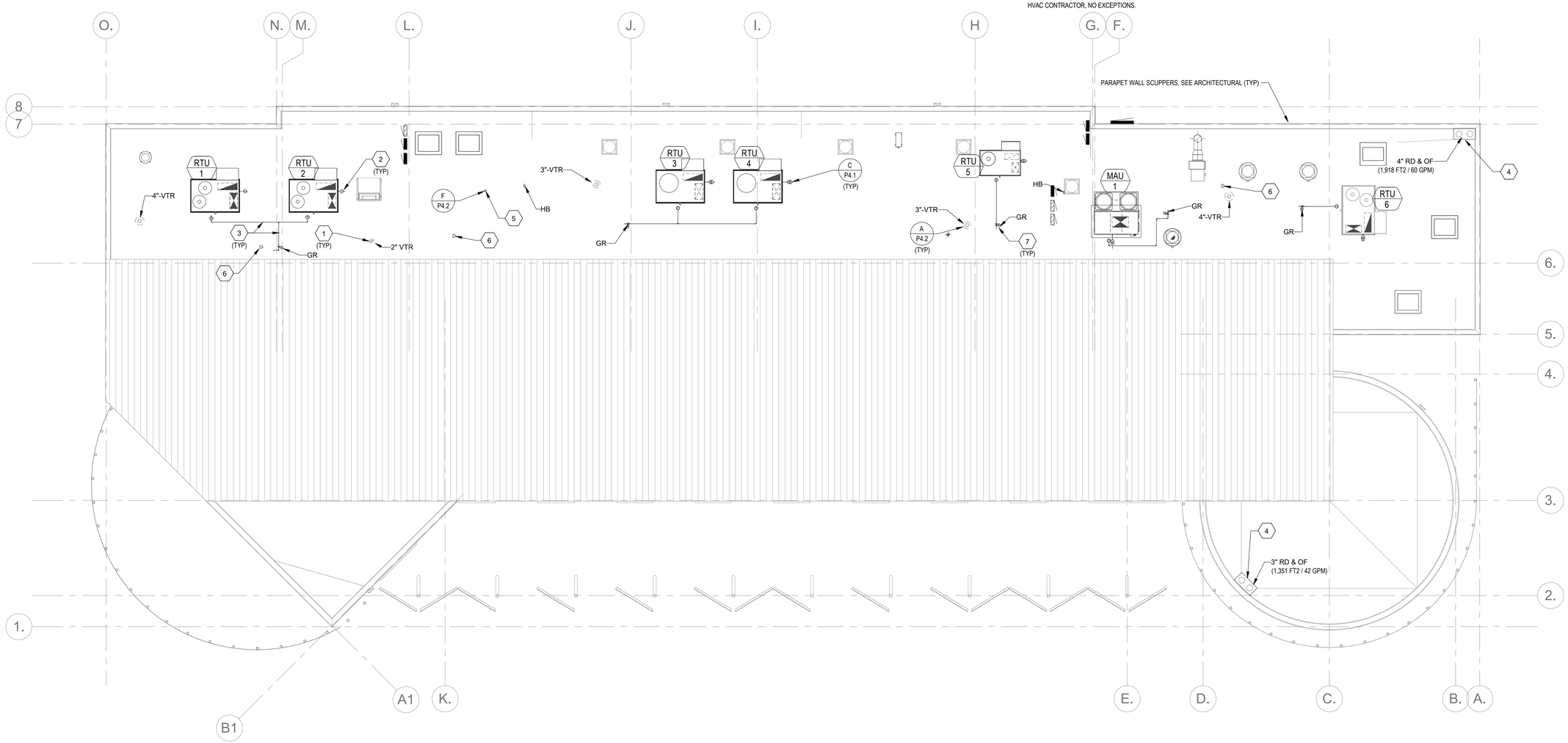
KEYNOTES

1. OFFSET ALL VENT(S) THROUGH ROOF (VTR's) MORE THAN 10 FEET FROM ALL OUTSIDE AIR INTAKE HOODS. REFER TO HVAC PLANS AND COORDINATE FINAL LOCATIONS OF VTR's WITH HVAC CONTRACTOR. NO EXCEPTIONS.
2. VENTED CONDENSATE TRAP @ HVAC UNIT, FULL SIZE OF UNIT DISCHARGE W/ CONDENSATE DRAIN PENETRATION THROUGH ROOF. PROVIDE FLASHING AND ENSURE WEATHER TIGHT. SEE THE CONDENSATE DRAIN AND TEST DETAIL ON THE DETAIL SHEET.
3. NATURAL GAS PIPE TO RUN EXPOSED ON ROOF. INSTALL NOT LESS THAT 3-1/2" ABOVE THE ROOF SURFACE PER THE 2018 IFGC SECTION 404.9 AND SECURELY SUPPORTED AND PROTECTED AGAINST DAMAGE AS REQUIRED TO COMPLY WITH IFGC 2018 EDITION. FIELD VERIFY FINAL ROUTING. SUPPORTS SPACED NO MORE THAN 10 FT.
4. ROOF DRAIN AND OVERFLOW LEADER LINES (SIZE AS SPECIFIED) IN CEILING SPACE TO OUTSIDE. TERMINATE WITH DOWNSPOUT COVER. INSTALL DOWNSPOUT COVER PER MANUFACTUER RECOMMENDATIONS. COORDINATE EXACT LOCATION AND HEIGHT WITH ARCHITECT AND G.C.
5. MANUFACTURER'S CONCENTRIC INTAKE AND VENT UP THROUGH ROOF FROM GAS WATER HEATER. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
6. GAS PRESSURE REGULATOR VENT PIPE ROUTE PIPE UP THROUGH ROOF AND TERMINATE WITH 180° BEND. PROVIDE FLASHING AND ENSURE WEATHER TIGHT. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE MINIMUM 10 FEET CLEARANCE FROM ALL OUTSIDE AIR INTAKE HOODS, REFER TO HVAC PLANS AND COORDINATE FINAL LOCATIONS WITH HVAC CONTRACTOR, NO EXCEPTIONS.
7. GAS PRESSURE REGULATOR (GR), INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE MINIMUM 10 FEET CLEARANCE FROM ALL OUTSIDE AIR INTAKE HOODS, REFER TO HVAC PLANS AND COORDINATE FINAL LOCATIONS WITH HVAC CONTRACTOR, NO EXCEPTIONS.

GENERAL NOTES

1. INSULATE ALL CONDENSATE, ROOF DRAIN, OVERFLOW DRAIN, HOT, RECIRCULATION AND COLD WATER PIPING CONCEALED IN CEILING SPACES AND WALLS. NO EXCEPTIONS.
2. FIELD COORDINATE FINAL ROUTING OF DHW, DHWR, DCW, VENT, NATURAL GAS, AND CONDENSATE PIPING IN CEILING SPACES WITH HVAC DUCTWORK, FIRE SPRINKLER PIPING AND ALL OTHER TRADES. NO EXCEPTIONS.
3. COORDINATE ALL FIXTURE MOUNTING HEIGHTS WITH ARCHITECTURAL PLANS.
4. COORDINATE FIXTURE BACKSPLASH REQUIREMENTS WITH ARCHITECTURAL PLANS.
5. USE THE MINIMUM NUMBER OF GLUE JOINTS NECESSARY FOR ALL GRAVITY DRAIN PIPE, BELOW AND ABOVE GRADE.
6. EXACT LOCATION OF PLUMBING FIXTURE SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS.
7. ROOF DRAIN / STROM PIPING SIZED PER 2018 IPC TABLE 1106.2 & 1106.3 BASED ON 3" RAINFALL RATE AND HORIZONATAL PIPING AT 1/4 UNITS VERTICAL IN 12 UNITS HORIZONATAL (2% SLOPE). PIPING TO BE MINIMUM SLOPE INDICATED.



1 PLUMBING ROOF PLAN

P2.3 SCALE: 1/8" = 1'-0"

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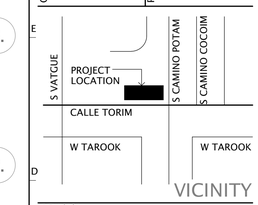

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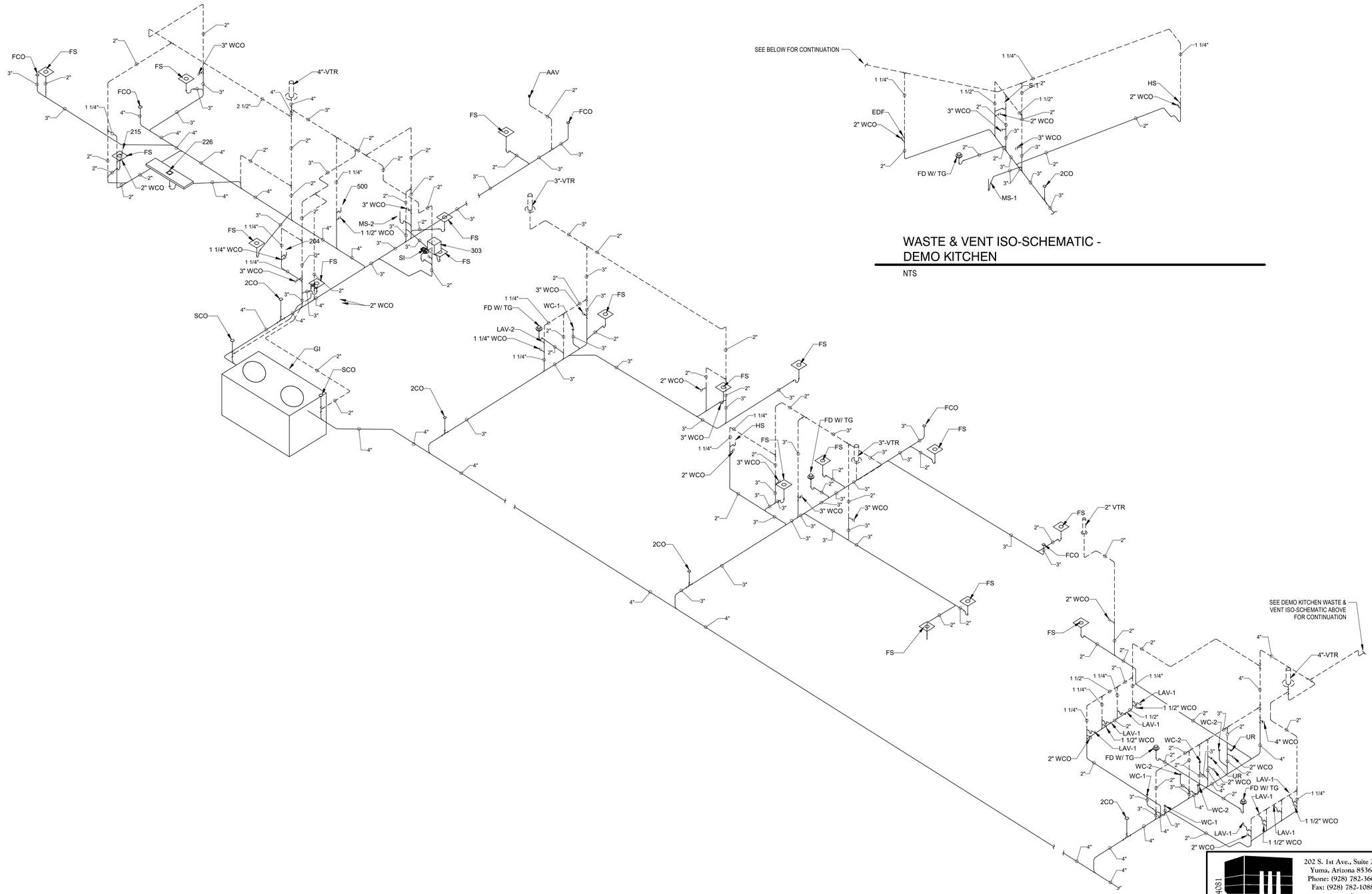
SHEET TITLE

PLUMBING ROOF PLAN

DATE 02.20.2024

SHEET **P2.3**



WASTE & VENT ISO-SCHEMATIC - DEMO KITCHEN

NTS

WASTE & VENT ISO-SCHEMATIC

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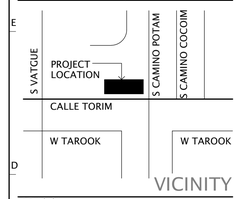

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SHEET TITLE

PLUMBING ISO-SCHEMATICS

DATE 02.20.2024

SHEET **P3.1**

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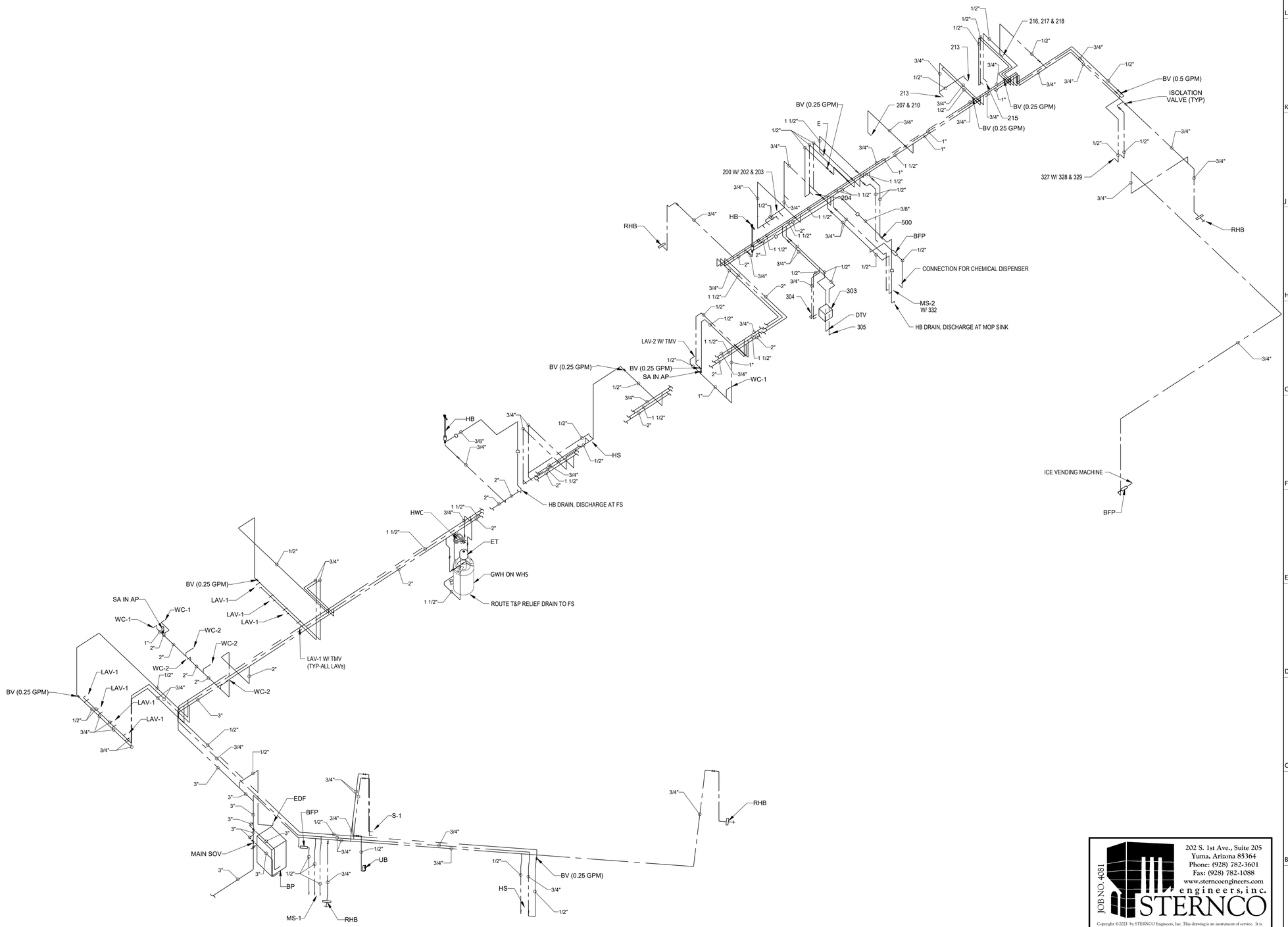

DOMESTIC WATER ISO-SCHEMATIC

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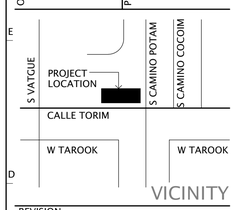

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DATE 02.20.2024

SHEET **P3.2**

GAS PIPE CALLOUT	
1	
2	3

1 – AMOUNT OF GAS (CFH)
2 – APPROXIMATE LENGTH (FT)
3 – DIA. OF PIPE

XXX' = EQUIVALENT LENGTH OF FITTING

NOTE: SIZED PER "A.3.2 BRANCH LENGTH METHOD" AND TABLE 402.4(5), IFGC 2018 WITH 400' TOTAL DEVELOPED LENGTH (PIPING LENGTH + EQUIVALENT LENGTH OF PIPE FITTINGS) FROM GAS METER TO MOST REMOTE OUTLET INDICATED.

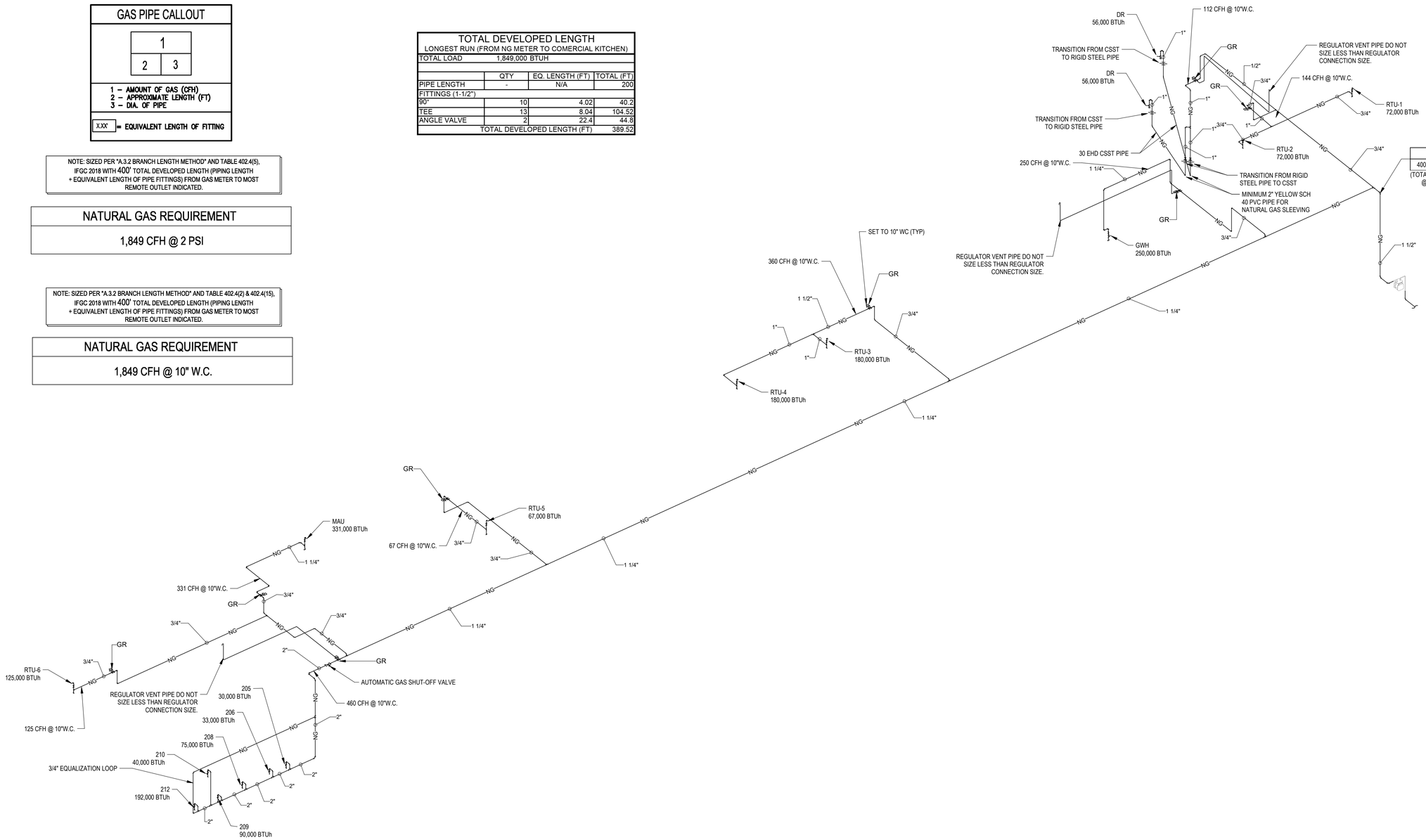
NATURAL GAS REQUIREMENT
1,849 CFH @ 2 PSI

NOTE: SIZED PER "A.3.2 BRANCH LENGTH METHOD" AND TABLE 402.4(2) & 402.4(15), IFGC 2018 WITH 400' TOTAL DEVELOPED LENGTH (PIPING LENGTH + EQUIVALENT LENGTH OF PIPE FITTINGS) FROM GAS METER TO MOST REMOTE OUTLET INDICATED.

NATURAL GAS REQUIREMENT
1,849 CFH @ 10" W.C.

TOTAL DEVELOPED LENGTH
LONGEST RUN (FROM NG METER TO COMERCIAL KITCHEN)

TOTAL LOAD	1,849,000 BTUH		
	QTY	EQ. LENGTH (FT)	TOTAL (FT)
PIPE LENGTH	-	N/A	200
FITTINGS (1-1/2")			
90°	10	4.02	40.2
TEE	13	8.04	104.52
ANGLE VALVE	2	22.4	44.8
TOTAL DEVELOPED LENGTH (FT)			389.52



NATURAL GAS ISO-SCHEMATIC

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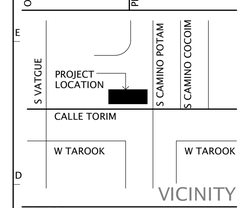

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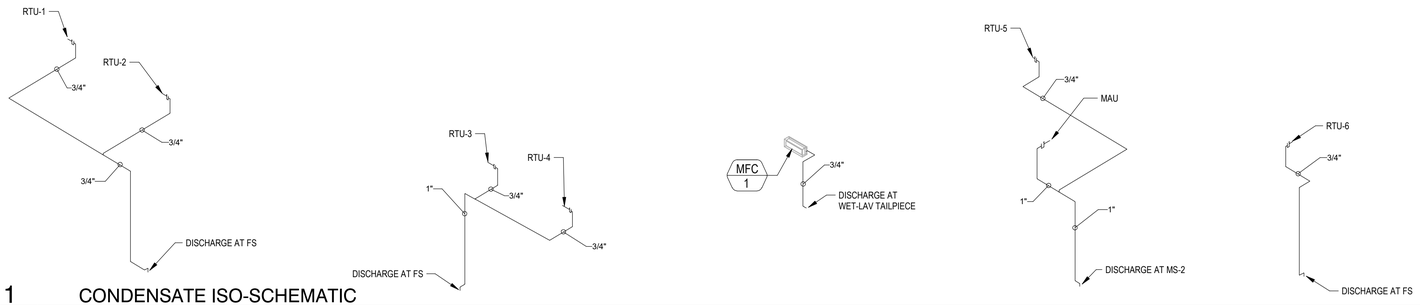
SHEET TITLE

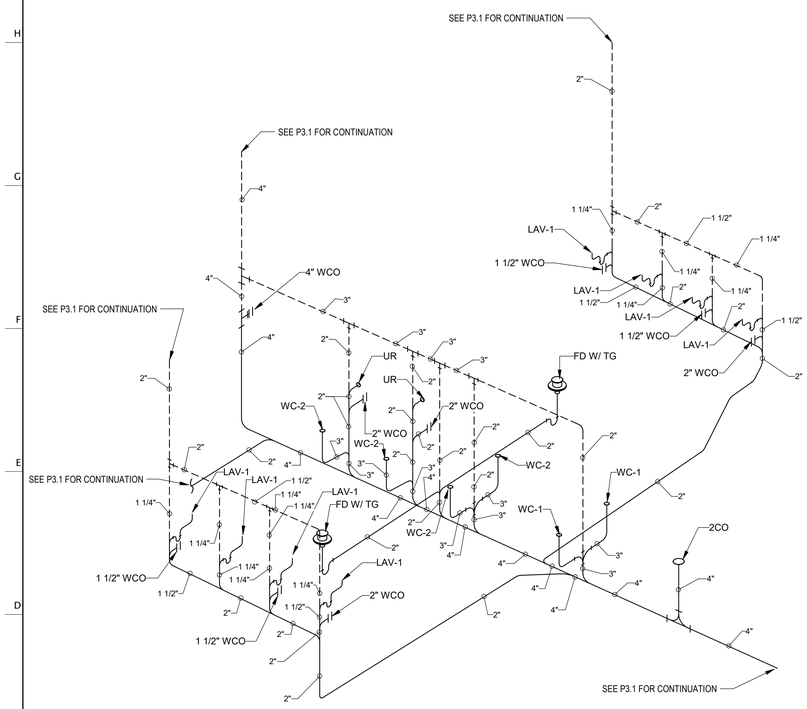
PLUMBING ISO-SCHEMATICS

DATE 02.20.2024
SHEET **P3.3**



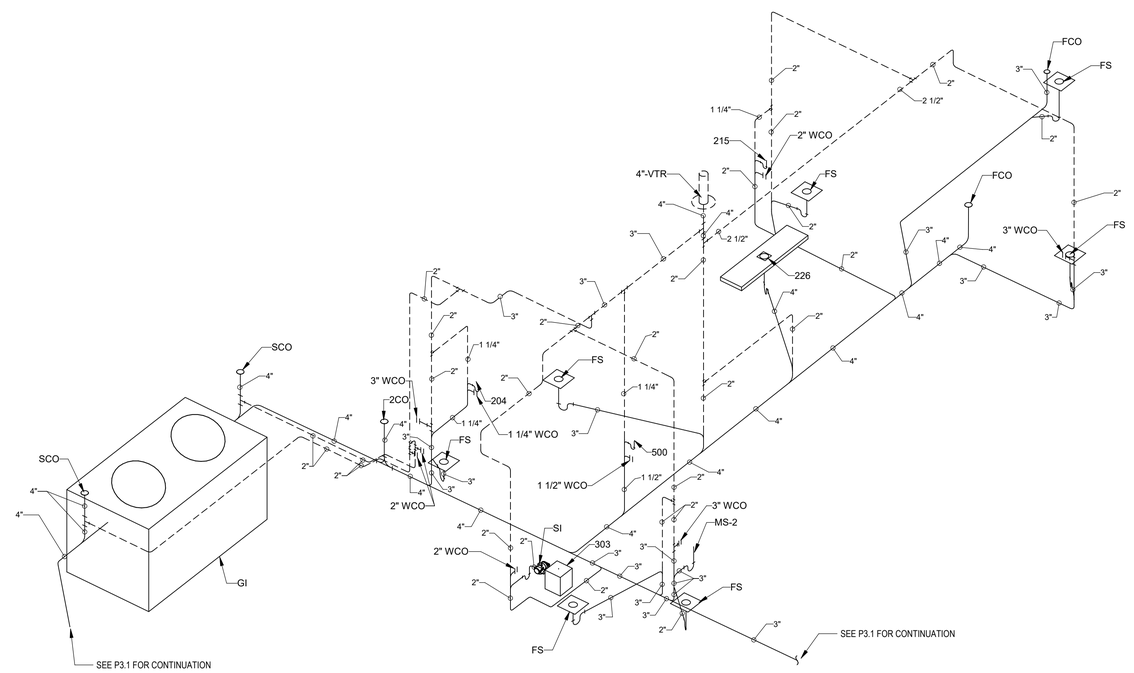
1 CONDENSATE ISO-SCHEMATIC

P3.4



2 WASTE & VENT ISO -SCHEMATIC - MAIN RESTROOM ENALARGED

P3.4 SCALE:



3 WASTE & VENT ISO -SCHEMATIC - KITCHEN ENALARGED

P3.4 SCALE:

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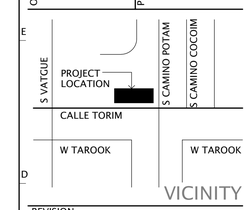

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SHEET **P3.4**

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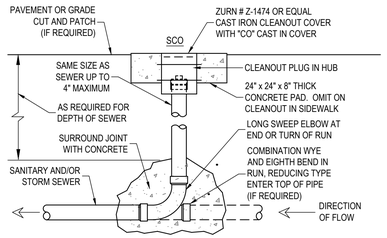
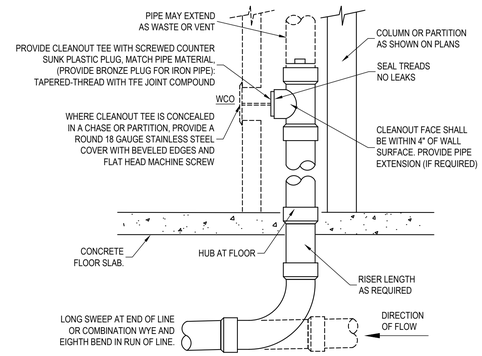


NOTE: LOCATE EXTERIOR CLEANOUTS AT ENDS OF RUNS, AT TURNS OF PIPE GREATER THAN 45 DEGREES, AT MAXIMUM 50' INTERVALS ON STRAIGHT RUNS, AND WHERE SHOWN ON PLANS. VERIFY SOIL/ROCK CONDITIONS WITH GEOTECHNICAL REPORT OR SITE EXAMINATION. USE ACRYLONITRILE-BUTODIENE-STYRENE (ABS) OR SCHEDULE-40 POLYVINYLCHLORIDE (PVC) PIPE & FITTINGS WITH SOLVENT WELD JOINTS. BACKFILL WITH CRUSHED ROCK TO COVER PIPE MINIMUM 6". PROVIDE EARTH BACKFILL & COMPACTION PER ARCHITECTURAL SPECS. REPAIR ANY SOD AND/OR PAVEMENT TO MATCH EXISTING.

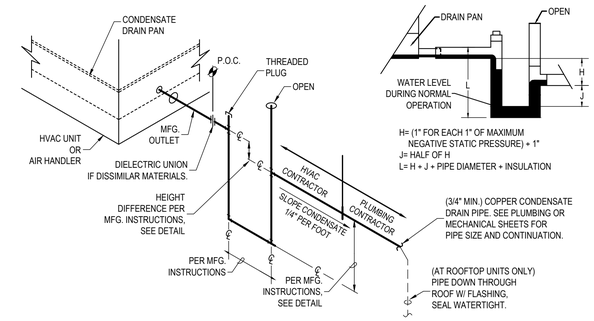
A SURFACE CLEANOUT (SCO) DETAIL

SCALE: N.T.S.



B WALL CLEANOUT (WCO) DETAIL

SCALE: N.T.S.

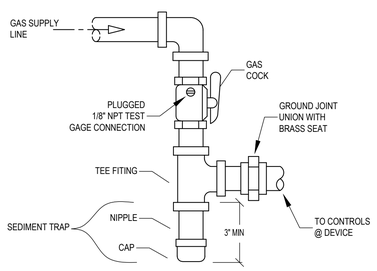


PLUMBING AND/OR HVAC CONTRACTOR SHALL COORDINATE TO PERFORM A DRAIN TEST USING WATER. FILL CONDENSATE COLLECTION PAN WITH WATER, ACCESS DRAIN PAN THROUGH OPEN CABINET DOOR OR REMOVED ACCESS PANEL. CHECK FOR PROPER DRAINAGE WITH UNIT RUNNING AFTER REPLACING UNIT ACCESS PANEL OR CLOSING DOOR. THIS TEST SHALL BE APPROVED BY THE ENGINEER PRIOR TO ACCEPTANCE. ALL CONDENSATE PIPING SHALL ALSO BE TESTED PER CODE "DRAINAGE AND VENT" TEST.

C CONDENSATE DRAIN & TEST DETAIL

SCALE: N.T.S.

CONDI-04.DWG

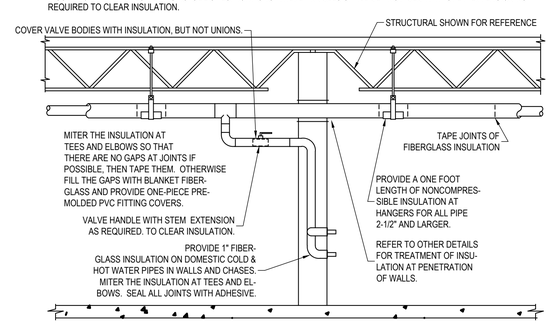


D TYPICAL GAS CONNECTION DETAIL

SCALE: N.T.S.

GDGAS.DWG

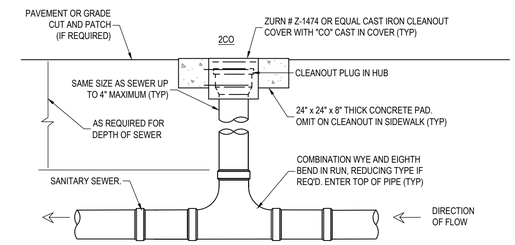
PROVIDE 1" FIBERGLASS INSULATION WITH ALL-SERVICE JACKET WITH VAPOR BARRIER ON ALL SIZES OF HOT, COLD AND CONDENSATE PIPING. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION REGARDING INSULATION. INSTALL ALL ITEMS PER SPECIFICATIONS AND MANUFACTURER'S INSTRUCTIONS. MAINTAIN VAPOR BARRIER ON COLD PIPING BY MEANS OF SEALANT AND TAPE. FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES SHALL NOT EXCEED 25/50. SEAL EXPOSED ENDS OF FIBERGLASS INSULATION WITH ADHESIVE MASTIC. SEE SPECIFICATIONS. VALVE HANDLES SHALL BE PROVIDED WITH STEM EXTENSION AS REQUIRED TO CLEAR INSULATION.



E PIPE INSULATION DETAIL

SCALE: N.T.S.

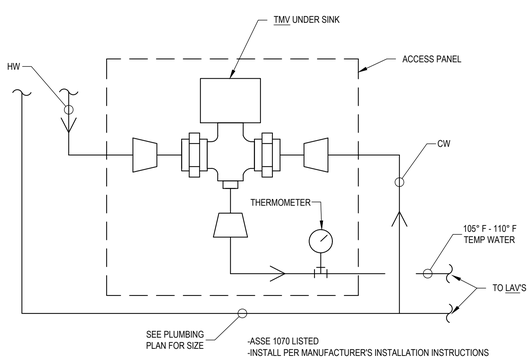
INSL-01.DWG



NOTE: LOCATE 2-WAY CLEANOUT WITHIN 5' OF EXTERIOR OF BUILDINGVERIFY SOIL/ROCK CONDITIONS WITH GEOTECHNICAL REPORT OR SITE EXAMINATION. USE ACRYLONITRILE-BUTODIENE-STYRENE (ABS) OR SCHEDULE-40 POLYVINYLCHLORIDE (PVC) PIPE & FITTINGS WITH SOLVENT WELD JOINTS. BACKFILL WITH CRUSHED ROCK TO COVER PIPE MINIMUM 6". PROVIDE EARTH BACKFILL & COMPACTION PER ARCHITECTURAL SPECS. REPAIR ANY SOD AND/OR PAVEMENT TO MATCH EXISTING.

F 2-WAY CLEANOUT (2CO) DETAIL

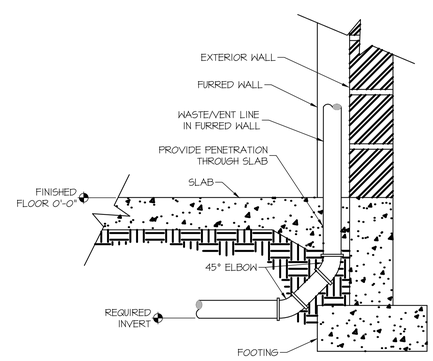
SCALE: N.T.S.



G THERMOSTATIC MIXING VALVE DETAIL

SCALE: N.T.S.

HSC-002.WD



H WASTE LINE @ FOOTING DETAIL

SCALE: N.T.S.

HSITE-02.DWG

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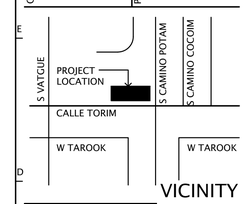

REVISION

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PROJECT NO. 23C-001

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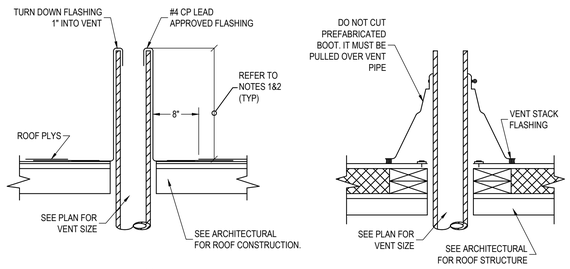


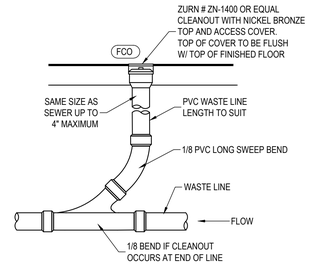
VENT TERMINATIONS PER CURRENT CODE REQUIREMENTS

NOTE 1: ALL VENTS THAT TERMINATE 10 FEET OR MORE FROM INTAKE OPENINGS. ALL VENTS TO TERMINATE AT LEAST 6 INCHES ABOVE THE ROOF, AND AT LEAST 1 FOOT FROM ANY VERTICAL SURFACE.

NOTE 2: VENTS THAT TERMINATE 10 FEET OR LESS FROM INTAKE OPENINGS SHALL TERMINATE AT LEAST 3 FEET ABOVE INTAKE OPENINGS.

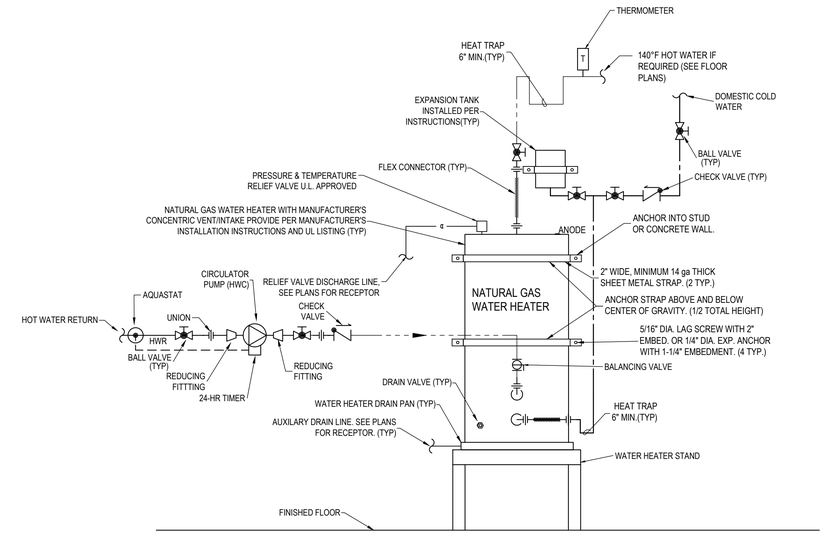
A VENT FLASHING (VTR) DETAIL

SCALE: N.T.S.



B INTERIOR FLOOR CLEANOUT DETAIL

SCALE: N.T.S.

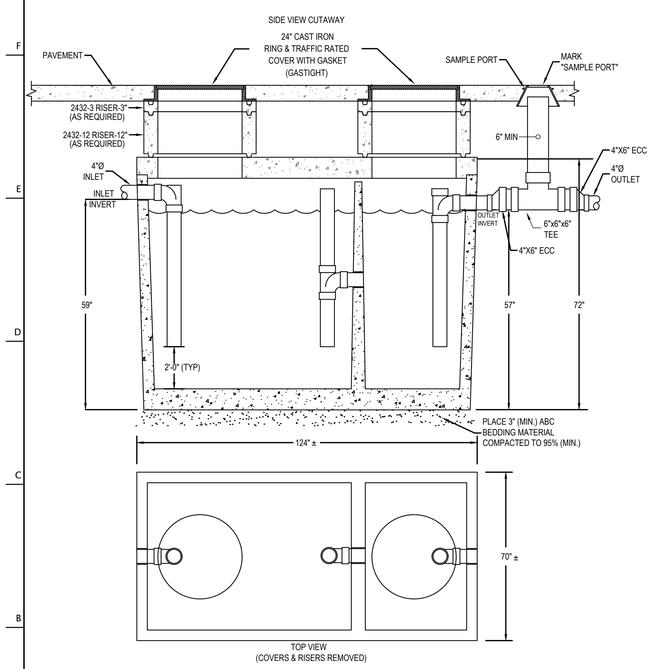


-COORDINATE ALL WATER HEATER AND MIXING VALVE PIPING REQUIREMENTS WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS
-WIRING BY ELECTRICAL CONTRACTOR

C NATURAL GAS WATER HEATER DETAIL

SCALE: N.T.S.

1500 GALLON GREASE INTERCEPTOR

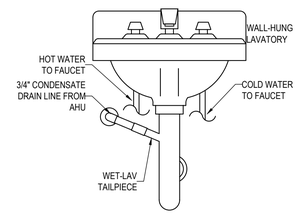


LIQUID CAPACITY: 1500 GALLONS.

BOX DESIGN LOAD: H-20 TRAFFIC FROM 1' TO 6' OF SOIL COVER.

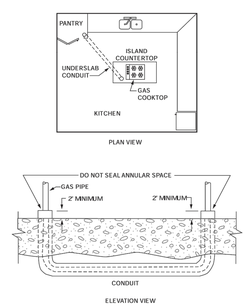
D GREASE INTERCEPTOR DETAIL

SCALE: N.T.S.



E WET-LAV TAILPIECE DETAIL

SCALE: N.T.S.



Commentary Figure 404.8.2
PIPE UNDER SLAB BETWEEN INTERIOR POINTS

2018 IFGC SECTION 404.8.2

G NATURAL GAS CONDUIT DETAIL

SCALE: N.T.S.

NOTE: THESE IMAGES ARE FROM THE INSTALLATION MANUAL OF THE GAS WATER HEATER SHOWN/SCHEDULED ON THE PLUMBING PLANS (A.O. SMITH MODEL BTH-250); CONFIRM EXACT CONCENTRIC VENT REQUIREMENTS WITH EXACT PROVIDED WATER HEATER

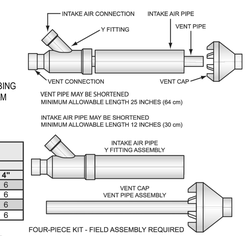
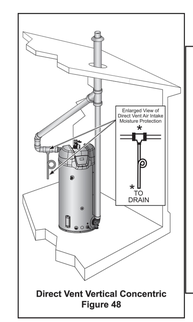


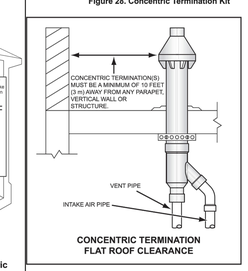
Figure 28. Concentric Termination Kit

Table 7. PVC/CPVC Equivalent Length and Maximum Number of Elbows

Model	Equivalent Vent Length			Max Elbows		
	2"	3"	4"	2"	3"	4"
120	12' to 40'	7' to 50'	50' to 120'	4	4	6
150	12' to 40'	7' to 50'	50' to 120'	4	4	6
199	12' to 40'	7' to 50'	50' to 120'	4	4	6
250	12' to 20'	7' to 50'	50' to 120'	2	4	6



Direct Vent Vertical Concentric
Figure 48



CONCENTRIC TERMINATION
FLAT ROOF CLEARANCE

Figure 27

F GAS WATER HEATER DIRECT VENT INSTALLATION

SCALE: N.T.S.

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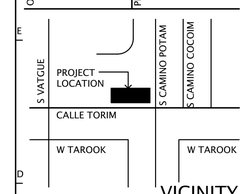

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SHEET **P4.2**

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PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	ROUGH-IN HW	ROUGH-IN CW	ROUGH-IN WASTE	ROUGH-IN TRAP	ROUGH-IN VENT	GPM/GPF	BASIS OF DESIGN	ACCEPTABLE MANUFACTURERS	REMARKS
EDF	ELECTRIC DRINKING FOUNTAIN	N/A	1/2"	2"	1-1/4"	1-1/2"	N/A	ELKAY LZSTL8WSLK	ELKAY, HALSEY TAYLOR	BI LEVEL ELECTRIC REFRIGERATED WALL MOUNTED WATER COOLER WITH WATER FILTER AND BOTTLE FILLING STATION, VANDAL RESISTANT BUBBLER WITH MECHANICAL FRONT BUBBLER BUTTON ACTIVATION. 8.0 GPH CAPACITY OF 50°F AT 90°F AMBIENT AND 80°F INLET WATER. UNIT SHALL MEET ADA GUIDELINES, AND BE LEAD-FREE CERTIFIED TO NSF/ANSI 61 AND 372 AND MEET ALL FEDERAL AND STATE LOW LEAD REQUIREMENTS. UNIT SHALL BE CERTIFIED UL 399 AND CAN/CSA 22.2 NO. 120. ELECTRIC REQUIREMENTS 115V/60HZ/370W. FURNISH WITH PLUG-IN 3 WIRE GROUNDING TYPE SERVICE CORD AND MANUFACTURER'S IN-WALL CARRIER. COORDINATE BACKSPLASH REQUIREMENTS WITH ARCHITECT.
UB	UTILITY BOX	N/A	1/2"	N/A	N/A	N/A	0.35	SIOUX CHIEF 696-G1010M	OATEY, SIOUX CHIEF, IPS CORPORATION	ICE MAKER OUTLET BOX WITH E-Z TURN BALL VALVE, MOLDED BOX WITH ADJUSTABLE FACE PLATE, AND LEAD FREE MIP VALVE WITH INTEGRAL SHOCK ARRESTOR
RHB	RECESSED HOSE BIBB	N/A	3/4"	N/A	N/A	N/A		WOODFORD B24	WOODFORD, WATTS, ZURN, JR SMITH	RECESSED WALL HYDRANT WITH APPROVED ANTI-SIPHON VACUUM BREAKER, CHROME FINISH ON BRASS CASTING, LOOSE TEE KEY FURNISHED TO EACH HYDRANT, INSTALL AT 32" ABOVE FINISHED FLOOR ON EXTERIOR OF BUILDING
HB	ROOF HOSE BIBB	N/A	1"	N/A	N/A	N/A		WOODFORD RHY1-1-MS	WOODFORD, WATTS, ZURN, JR SMITH	FREEZELESS ROOF HYDRANT WITH HYDRANT SUPPORT AND UNDER DECK MOUNTING SUPPORT, 3/4" BRASS HOSE NOZZLE, 1" N.P.T MALE INLET CONNECTION AND 1/8" NPT DRAIN HOLE CONNECTION. PROVIDE 1/8" DRAIN TO NEAREST FLOOR SINK OR MOP SINK.
MS-1	MOP SINK	1/2"	1/2"	3"	3"	2"	2.0	STERN-WILLIAMS HL-1800	STERN-WILLIAMS, FIAT, MUSTEE	24"X24"X12" MOP SERVICE SINK WITH STAINLESS STEEL CAP ON THRESHOLD AND STEEL DOME STRAINER AND LINT BASKET, P-TRAP AND SPLASH SURROUND. PROVIDE 3 STATION MOP HANGER RACK, 5 FOOT VINYL HOSE, BUMPER GUARD, SEALANT AND 3" WASTE ROUGH-IN.
								ZURN Z841M1-WHK	ZURN, CHICAGO FAUCET, AMERICAN STANDARD	PROVIDE WITH SERVICE SINK FAUCET WITH CAST BRASS VACUUM BREAKER SPOUT, WALL HOOK, 3/4" HOSE THREAD ON OUTLET, VANDAL RESISTANT COLOR-CODED BRASS LEVER HANDLES, ADJUSTABLE INLETS WITH INTEGRAL STOPS AND 1/2" NPT FEMALE INLETS WITH 5-3/8" SWING GOOSENECK SPOUT, 1.0 MAXIMUM GPM SPRAYHEAD / AERATOR. POLISHED CHROME-PLATE CAST BRASS FAUCET WITH ADA COMPLIANT, VANDAL RESISTANT COLOR-CODED BRASS WRIST BLADE HANDLES
MS-2	MOP SINK ITEM 333 IN KITCHEN CONSULTANT SCHEDULE	1/2"	1/2"	3"	3"	2"	2.0	ACORN 1636-KMH	ACORN	36"X24"X10" MOP SERVICE SINK. 16 GAGE TYPE 304 STAINLESS STEEL, SEAMLESS WELDED CONSTRUCTION WITH SATIN FINISH WITH INTEGRAL DRAIN W/ REMOVABLE FLAT GRID STRAINER AND GASKET CONNECTION TO 3" IPS PIPE. PROVIDE P-TRAP AND MANUFACTURER'S 3 STATION MOP HANGER BRACKET, 5 FOOT VINYL HOSE, SEALANT AND 3" WASTE ROUGH-IN. COORDINATE WITH KITCHEN CONSULTANT DRAWINGS.
								SEE ITEM 332 IN THE KITCHEN CONSULTANT DRAWINGS		
S-1	SINK	3/4"	3/4"	1-1/14"	1-1/14"	1-1/14"	2.0	JUST MFG DL-1625-A-GR	JUST, ELKAY	TWO COMPARTMENT SINK. STAINLESS STEEL, 18 GAUGE, TYPE 304, 43"X22", 7-5/8" DEEP , (3) HOLES ON 4" CENTERS. PROVIDE GRID STRAINER, TAIL PIECE, P-TRAP, FLEX CONNECTIONS AND ANGLE STOP VALVES COMPRESSION FITTING WITH TRIM,PROVIDE TRAP AND SUPPLY COVER/INSULATION FOR ALL EXPOSED PIPING. PRIOR TO PURCHASE OF FIXTURE VERIFY ALL CASE WORK WITH ARCHITECT, INTERIOR DESIGNER AND GENERAL CONTRACTOR.
								ZURN Z831C4-XL	ZURN, CHICAGO FAUCET, AMERICAN STANDARD	PROVIDE FAUCET WITH 5-3/8" SWING GOOSENECK SPOUT, 2.2 MAXIMUM GPM SPRAYHEAD / AERATOR. POLISHED CHROME-PLATE CAST BRASS FAUCET WITH ADA COMPLIANT, VANDAL RESISTANT COLOR-CODED BRASS WRIST BLADE HANDLES
HS	HAND SINK	1/2"	1/2"	2"	1-1/4"	1-1/4"	0.35-0.5	JOHN BOOS PBHS-W-0909-P-SSLR-X	JOHN BOOS	WALL MOUNTED STAINLESS STEEL HAND SINK WITH LEFT AND RIGHT SIDE SPLASH. 12"X14-1/2"X12-1/4" OVERAL SIZE WITH A 9"X9"X5" BOWL, SPLASH MOUNT FOUCET HOLES WITH 4" CENTERS, 2" DRAIN OPENING WITH BASKET DRAIN PROVIDE WITH MANUFACTURER'S MOUNTING BRACKET AND FAUCET (PBF-4-SLF). PROVIDE TAIL PIECE, P-TRAP, FLEX CONNECTIONS AND ANGLE STOP VALVES COMPRESSION FITTING WITH TRIM,PROVIDE TRAP AND SUPPLY COVER/INSULATION.
2CS	TWO COMPARTMENT SINK	1/2"	1/2"	1-1/2" (INDIRECT)				JOHN BOOS 2B184-2D18-X	JOHN BOOS	TWO COMPARTMENT SINK. ALL STAINLESS STEEL CONSTRUCTION WITH STAINLESS STEEL LEGS WITH ADJUSTABLE BULLET FEET. 75-1/2"X23-1/2"X44-1/16" OVERALL SIZE WITH 18"X18"X14" COMPARTMENTS AND 18" LEFT AND RIGHT DRAINBOARDS. WITH SPLASH MOUNTED FAUCET WITH 8" CENTERS.
								T & S B-3950	T & S	TWIST WASTE VALVE, 3-1/2" SINK OPENING, 2" DRAIN OUTLET WITH 1-1/2" ADAPTER.
								T & S B-0133-01	T & S	PRE-RINSE FAUCET W/ ADD ON FAUCET. 8" WALL MOUNT WITH 14" SWING NOZZLE 18" RISER , OVERHEAD SPRING, LEVER HANDLES, 56" FLEX HOSE, SPRAY VALVE (B-0107), WITH 9" WALL SUPPORT.
BV	BALANCING VALVE	MATCH PIPE SIZE		N/A	N/A	N/A	N/A	B&G RF=1/2S LF	B&G, ZURN, WATTS,	MANUAL BALANCING VALVE, NSF 61 CERTIFIED, FOR POTABLE HOT WATER SYTEMS. VALVES TO BE SET BY TAB CONTRACTOR AT GPM SHOWN. VALVE TO HAVE CALIBRATED NAMEPLATE AND MEMORY STOP INDICATOR AND 1/4" NPT TAPPED AND PLUGGED DRAIN PORT.
ET	THERMAL EXPANSION TANK	N/A	3/4"	N/A	N/A	N/A	N/A	ZURN XT-18	ZURN, WATTS, AMTROL	PRE-PRESSURIZED WATER THERMAL EXPANSION TANK. 4.8 GALLONS VOLUME AND 3/4" MNPT CONNECTION. PROVIDE WITH SEISMIC BRACING AND MOUNTING BRACKET PER CURRENT BUILDING CODE.
LAV-1	LAVATORY	1/2"	1/2"	2"	1-1/4"	1-1/4"	0.35-0.5	AMERICAN STD. 0618.000.020	AMERICAN STANDARD	FIXTURE: UNDER COUNTER MOUNTED BATHROOM SINK, WHITE VITREOUS CHINA (CONFIRM COLOR WITH ARCHITECT) WITH OVERFLOW AND MANUFACTURER'S MOUNTING KIT. PROVIDE WITH 5" WHEELCHAIR OFFSET P-TRAP, FLEX CONNECTIONS, ANGLE STOP VALVES COMPRESSION FITTING WITH TRIM. LAV TRAP AND SUPPLY COVER/INSULATION FOR ALL EXPOSED PIPING. PRIOR TO PURCHASE OF FIXTURE, VERIFY ALL CASE WORK WITH ARCHITECT, INTERIOR DESIGNER AND GENERAL CONTRACTOR.
								SLOAN EAF-200	ZURN, CHICAGO FAUCET, AMERICAN STANDARD	FAUCET: SENSOR OPERATED FAUCET WITH MANUFACTURER'S PLUG ADAPTER MODEL EAF-11. ADA COMPLIANT LAVATORY FAUCET, 0.5 GPM FAUCET MUST MEET ADA AND LEAD FREE REQUIREMENTS . PROVIDE WITH ASME 1070 RATED THERMOSTATIC MIXING VALVE (TMV), SEE SCHEDULE BELOW. COORDINATE INSTALLATION WITH ELECTRICAL AND GENERAL CONTRACTORS.
LAV-2	LAVATORY	1/2"	1/2"	2"	1-1/4"	1-1/4"	0.35-0.5	AMERICAN STD. 9024.001EC	AMERICAN STANDARD	FIXTURE: WALL HUNG BATHROOM SINK, WHITE VITREOUS CHINA WITH OVERFLOW AND MANUFACTURER'S WALL HANGER AND SINGLE CENTER HOLE. PROVIDE WITH 5" WHEELCHAIR OFFSET P-TRAP, FLEX CONNECTIONS, ANGLE STOP VALVES COMPRESSION FITTING WITH TRIM. LAV TRAP AND SUPPLY COVER/INSULATION FOR ALL EXPOSED PIPING.
								SLOAN EAF-225	ZURN, CHICAGO FAUCET, AMERICAN STANDARD	FAUCET: SENSOR OPERATED FAUCET WITH MANUFACTURER'S PLUG ADAPTER MODEL EAF-11. ADA COMPLIANT LAVATORY FAUCET, 0.5 GPM FAUCET MUST MEET ADA AND LEAD FREE REQUIREMENTS . PROVIDE WITH ASME 1070 RATED THERMOSTATIC MIXING VALVE (TMV), SEE SCHEDULE BELOW. COORDINATE INSTALLATION WITH ELECTRICAL AND GENERAL CONTRACTORS.
TMV	THERMOSTATIC MIXING VALVE	SEE REMARKS		N/A	N/A	N/A	N/A	POWERS LFG480-00	ZURN, WATTS	PROVIDE ASSE 1070 RATED TMV, SIZED TO SERVE SINGLE LAVATORY AS SHOWN ON PLANS, MINIMUM FLOW OF 0.25 GPM SET OUTLET TEMPERATURE TO 105˚F TO 110˚F. PROVIDE TMV WITH WALL ACCESS PANEL
WC-1	ADA WATER CLOSET	N/A	1"	3"	INT.	2"	1.0 -1.28	KOHLER K-96057-B	KOHLER, AMERICAN STANDARD, SLOAN, PROFLO	FLOOR MOUNTED 12" ROUGH IN, VITREOUS CHINA, ELONGATED BOWL, ADA HEIGHT. 2-1/4" FULLY GLAZED TRAPWAY, 1-1/2" TOP SPUD. MEETS ASME A112.19.2 STANDARD.
								SLOAN ROYAL 111-1.28	ZURN, SLOAN, KOHLER AMERICAN STANDARD	ADA COMPLIANT METAL OSCILLATING NON-HOLD-OPEN HANDLE, EXPOSED INSTALLATION ON TOP SPUD FIXTURE CONNECTION, 1" SUPPLY PIPE. WITH VACUUM BREAKER, SCREWDRIVER BAK-CHEK ANGLE STOP WITH VANDAL RESISTANT STOP CAP. VALVE SHALL BE IN COMPLIANCE WITH THE APPLICABLE SECTIONS OF ASSE 1037 AND ANSI/ASME 112.19.2.
								MAINLINE ML1055SSC	MAINLINE, CHURCH	OPEN FRONT ELONGATED SEAT, HEAVY DUTY COMMERCIAL SOLID PLASTIC WITH SELF SUSTAINING HINGES
WC-2	WATER CLOSET	N/A	1"	3"	INT.	2"	1.0 -1.28	KOHLER K-96053	KOHLER, AMERICAN STANDARD, SLOAN, PROFLO	FLOOR MOUNTED 12" ROUGH IN, VITREOUS CHINA, ELONGATED BOWL, 15-3/16" HIGH. 2-1/4" FULLY GLAZED TRAPWAY, 1-1/2" TOP SPUD. MEETS ASME A112.19.2 STANDARD.
								SLOAN ROYAL 111-1.28	ZURN, SLOAN, KOHLER AMERICAN STANDARD	ADA COMPLIANT METAL OSCILLATING NON-HOLD-OPEN HANDLE, EXPOSED INSTALLATION ON TOP SPUD FIXTURE CONNECTION, 1" SUPPLY PIPE. WITH VACUUM BREAKER, SCREWDRIVER BAK-CHEK ANGLE STOP WITH VANDAL RESISTANT STOP CAP. VALVE SHALL BE IN COMPLIANCE WITH THE APPLICABLE SECTIONS OF ASSE 1037 AND ANSI/ASME 112.19.2.
								MAINLINE ML1055SSC	MAINLINE, CHURCH	OPEN FRONT ELONGATED SEAT, HEAVY DUTY COMMERCIAL SOLID PLASTIC WITH SELF SUSTAINING HINGES
UR	URINAL	N/A	N/A	2"	INT.	N/A	N/A	SLOAN WES-1000	KOHLER, AMERICAN STANDARD, SLOAN, PROFLO	WALL-HUNG WATERLESS URINAL, VITREOUS CHINA, COORDINATE INSTALLATION HEIGHT WITH ARCHITECTURAL REQUIREMENTS. 2" OUTLET SPUD, STRAINER AND (2) WALL HANGERS. MEETS ASME A112.19.2 STANDARD. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
SA	SHOCK ARRESTOR	SIZE AS REQUIRED						PPP SC-	PPP, IPS, WATTS, ZURN, JR SMITH, MIFAB	MAINTENANCE FREE, BARREL FABRICATED OF "TYPE K" HARD DRAWN COPPER, 25 PSI AIR PRE-LOAD. PROVIDE IN WALL ACCESS PANEL. (SEE BELOW)
FD	FLOOR DRAIN	N/A	N/A	2"	2"	1-1/2"	N/A	ZURN ZN-415--P	ZURN, JR SMITH, JOSAM, MIFAB	NO HUB OUTLET WITH TYPE "B" STRAINER, SIZE AS INDICATED, WITH ADJUSTABLE COLLAR, SCREWS, P-TRAP, AND TRAP GUARD (TG), SEE TG SCHEDULED BELOW.
FS	FLOOR SINK	N/A	N/A	2"	2"	1-1/2"	N/A	ZURN ZN-1901-K	ZURN, JR SMITH, JOSAM, MIFAB	NO HUB OUTLET, 8" DEEP RECEPTOR WITH DOME BOTTOM STRAINER. PROVIDE WITH HALF OPEN TOP GRATE UNLESS SHOWN ON DRAWINGS, AND TRAP GUARD (TG), SEE TG SCHEDULED BELOW.
TG	TRAP GUARD	N/A		SIZE AS REQUIRED		N/A		PROVENT SYSTEMS PROSET	JRS SMITH, RECTORSEAL, GREEN DRAIN, SIOUX CHIEF	TRAP GUARD INSERT FITTING. BARRIIER TYPE TRAP PROTECTION DEVISE. DEVISE TO REMAIN NORMALLY CLOSED WHEN NOT IN USE AND OPEN EASILY TO ALLOW FREE FLOW OF WATER INTO THE DRAIN. PROVIDE TO TRAP GUARD TO FIT THE SUPPLIED FLOOR DRAIN AND FLOOR SINKS.
BFP	REDUCED PRESSURE ZONE ASSEMBLY BACKFLOW PREVENTER	N/A	1/2"	N/A	N/A	N/A	N/A	WATTS LF009-QT	WATTS, ZURN, MIFAB, APOLLO	REDUCED PRESSURE ZONE ASSEMBLY BACKFLOW PREVENTER SHALL BE ASSE LISTED 1013 AND NSF 61 CERTIFIED, RATED UP TO 175 PSI WITH AN OPERATING TEMPERATURE RANGE OF 33°F-180°F. SUPPLIED WITH QUARTER-TURN BALL VALVES AND MANUFACTURER'S AIR GAP (MODEL 909AGA). AWWA COMPLAINT C510 IAPMO LISTED AND UL CLASSIFIED. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CURRENT CITY STANDARDS.
FCO	INTERIOR FLOOR CLEANOUT	SIZE AS REQUIRED						ZURN ZN-1400	ZURN, MIFAB, JR SMITH	ADJUSTABLE CLEANOUT, NH OUTLET, BRONZE TOP WITH GAS AND WATERTIGHT ABS TAPERED THREAD PLUG. SIZE AS REQUIRED. USE ABS OR PVC PIPE AND FITTINGS
SCO	EXTERIOR SURFACE CLEAN OUT	SIZE AS REQUIRED						ZURN Z1474	ZURN, MIFAB, JR SMITH	CAST IRON CLEANOUT COVER WITH "CO" CAST IN COVER. SIZE AS REQUIRED. USE ABS OR PVC PIPE AND FITTINGS.
WCO	WALL CLEANOUT	SIZE AS REQUIRED							ZURN, MIFAB, JR SMITH	SIZE AS REQUIRED. COUNTER SUNK PVC OR ABS (MATCH PIPING MATERIAL) PLUG WITH FRAME AND STAINLESS STEEL COVER.
2CO	TWO-WAY CLEANOUT	SIZE AS REQUIRED							ZURN, MIFAB, JR SMITH	IRON CLEANOUT COVERS WITH "CO" CAST IN COVER. SIZE AS REQUIRED. PROVIDE WITH TWO-WAY CLEANOUT FITTING. INSTALL TO MATCH WASTE PIPE INVERT ELEVATION AND SIZE
RD & OF	ROOF DRAIN	SIZE AS REQUIRED						ZURN Z164	ZURN, MIFAB, JR SMITH	SIZE AS REQUIRED. COMBINATION ROOF DRAIN AND OVERFLOW DRAIN. PROVIDE TOP SET DECK PLATE AND VERIFY INSTALLATION REQUIREMENTS WITH ROOF SUBSTRATE AND ROOF MANUFACTURER'S INSTALLATION REQUIREMENTS. 15" DIAMETER COMBINATION MAIN ROOF AND OVERFLOW DRAIN, DURA COATED CAST IRON BODY WITH TOP-SET DECK PLATE, OVERFLOW PIPE PROVIDED WITH 2" EXTERNAL WATER DAM. PROVIDE WITH LOW SILHOUETTE CAST IRON DOME. VERIFY PIPE SIZE REQUIRED. NO HUB OUTLET. SEE ARCHITECTURAL FOR DISCHARGE THRU WALL/SPLASH BLOCK.
DN	DOWNSPOUT NOZZLE	SIZE AS REQUIRED						ZURN Z199-DC	ZURN, MIFAB, JR SMITH, WATTS	SIZE AS REQUIRED. STAINLESS STEEL FRAME WITH FABRICATED SECURED PERFORATED STAINLESS STEEL HINGED STRAINER.
DTV	DRAIN TEMPERING VALVE	N/A	1/2"					THERMOMEGATECH DTV	THERMOMEGATECH OR EQUAL	DRAIN TEMPERING VALVE. RUGGED AND CLOG RESISTANT TEMPERING VALVE MUST BE ABLE TO MODULATE TO CONSERVE WATER. WITH 1/2" INLET CONNECTION AND 1" DRAIN CONNECTION, VALVE MUST BE ABLE TO LOWER THE WASTE WATER TEMPERATURE TO A MAXIMUM OF 140°F TO. PROVIDE WITH CHECK VALVE AND WATER HAMMER ARRESTOR PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
NOTE:	- ALL NEW PLUMBING FIXTURES SHALL BE LOW FLOW, WATER SAVING FIXTURES.									
	- SEE SHEET P5.2 FOR PLUMBING FIXTURE SCHEDULE CONTINUATION.									

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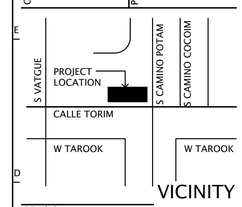

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

PROJECT NO. 23C-001

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SHEET TITLE

PLUMBING SCHEDULES

DATE 02.20.2024

SHEET **P5.1**

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PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	ROUGH-IN HW	ROUGH-IN CW	ROUGH-IN WASTE	ROUGH-IN TRAP	ROUGH-IN VENT	GPM/GPF	BASIS OF DESIGN	ACCEPTABLE MANUFACTURERS	REMARKS
GR	GAS REGULATOR VALVE	SIZE TO MATCH OUTLET PIPE SIZE					N/A	MAXITROL 325-3L	MAXITROL, ITRON, AMERICAN METER	NATURAL GAS PRESSURE REGULATOR, MATCH OUTLET PIPE SIZE. MAXIMUM FLOW AT 2 PSI INLET PRESSRUE 250 CFH. MAX INDIVIDUAL APPLIANCE FLOW OF 140,000 BTUH. INSTALL AT GAS LINE WITH NATURAL GAS LOADS UP TO 100 CFH @ 10" W.C.
								MAXITROL 325-5L	MAXITROL, ITRON, AMERICAN METER	NATURAL GAS PRESSURE REGULATOR, MATCH OUTLET PIPE SIZE. MAXIMUM FLOW AT 2 PSI INLET PRESSRUE 600 CFH. MAX INDIVIDUAL APPLIANCE FLOW OF 425,000 BTUH. INSTALL AT GAS LINES WITH NATURAL GAS LOADS BETWEEN 100 CFH AND 200 CFH @ 10"W.C.
								MAXITROL 325-7AL	MAXITROL, ITRON, AMERICAN METER	NATURAL GAS PRESSURE REGULATOR, MATCH OUTLET PIPE SIZE. MAXIMUM FLOW AT 2 PSI INLET PRESSRUE 1250 CFH. MAX INDIVIDUAL APPLIANCE FLOW OF 1,250,000 BTUH. INSTALL AT GAS LINES WITH NATURAL GAS LOADS GREATER THAN 200 CFH @ 10"W.C.
GI	GREASE INTERCEPTOR	N/A	N/A	4"	N/A	N/A	N/A	JENSEN PRECAST 1500 GAL.	JENSEN PRECAST, BORDER PRECAST	1500 GALLON CAPACITY PRECAST TANK, TWO COMPARTMENT. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND COORDINATE WITH CIVIL AND ALL OTHER TRADES.
SI	SOLIDS INTERCEPTOR	N/A	N/A	2"	N/A	N/A	N/A	STRIEM SIDEKICK	STRIEM, ZURN, JR SMITH, MIFAB, WATTS	SOLIDS INTERCEPTOR WITH SIDE ACCESS, TOP INLET AND HORIZONTAL OR SIDE OUTLET.
IBR	IN BUILDING DOMESTIC WATER RISER	SIZE PER PLANS		N/A	N/A	N/A	N/A	WATTS SERIES TR2	WATTS, ZURN	TRANSITION RISER SINGLE PIECE EXTENDED 90 DEGREE FITTING OF 304 STAINLESS STEEL PIPE WITH FLANGE CONNECTION, MAX WORKING PRESSURE 200 PSI. CERTIFIED TO NSF 61, AND UL LISTED.
WHS	WATER HEATER STAND	N/A	N/A	N/A	N/A	N/A	N/A	HOLDRIGHT 40-S-34-U	OATEY, MIFAB, JR SMITH	WATER HEATER EQUIPMENT STAND. PROVIDE SYSTEM TO SUPPORT ACTUAL WATER HEATER PROVIDED. GALVANIZED STEEL CONSTRUCTION, PROVIDE MANUFACTURER'S REQUIRED HARDWARE/SAFETY CLIP FOR INSTALLATION.
AAV	AIR ADMITTANCE VALVE	N/A	N/A	N/A	N/A	2"	N/A	OATEY SURE-VENT	STUDOR, PROFLO, OATEY	AIR ADMITANCE VALVE SIZED AS SHOWN IN PLANS, PROVIDE WITH MANUFACTURER'S RECESS WALL BOX WITH FACEPLATE KIT.
AP	ACCESS PANEL	N/A	N/A	N/A	N/A	N/A	N/A		MIFAB, JR SMITH, ELMDOR	UNIVERSAL ACCESS PANEL, FACE OF WALL TYPE ACCESS DOOR, STAINLESS STEEL 16 GAUGE # 304, WITH CONCEALED PIVOT PINS, CYLINDER KEY LATCH, 12"X12" MINIMUM, PROVIDE MATCHED KEYS FOR ALL PANELS
AP-L	ACCESS PANEL - LOUVERED	N/A	N/A	N/A	N/A	N/A	N/A	WB DOORS GP LV 103	MIFAB, JR SMITH, ELMDOR	UNIVERSAL LOUVERED ACCESS PANEL, FACE OF WALL TYPE ACCESS DOOR, PAINTABLE FINISH (CONFIRM FINISH REQUIREMENTS WITH ARCHITECT), STAINLESS STEEL 16 GAUGE # 304, WITH CONCEALED PIVOT PINS, CYLINDER KEY LATCH, 14"X14" MINIMUM (SIZE AS REQUIRED FOR FULL REQUIRED ACCESS), PROVIDE MATCHED KEYS FOR ALL PANELS.
NOTE:	- ALL NEW PLUMBING FIXTURES SHALL BE LOW FLOW, WATER SAVING FIXTURES.									
	- SEE SHEET P5.1 FOR PLUMBING FIXTURE SCHEDULE CONTINUATION.									

KITCHEN EQUIPMENT

SYMBOL	FIXTURE	ROUGH-IN HW	ROUGH-IN CW	ROUGH-IN WASTE	ROUGH-IN INDIRECT	ROUGH-IN VENT	ROUGH-IN NG	ROUGH-IN KBTU	REMARKS
101	EVAPORATOR FOR FREEZER			1"	YES				COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
104	EVAPORATOR FOR COOLER			1"	YES				COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
200	3 COMP SINK 24"X24" BOWLS								COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS. PROVIDE WITH 202 AND 203.
202	TWIST WASTE VALVE			1-1/2" (3)	YES				COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
203	WALL MOUNT FAUCET	1/2" (2)	1/2" (2)						COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
204	HAND SINK W/ L&R SIDE SPLASHES	1/2"	1/2"	1-1/2"	NO	1-1/4"			COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
205	CHARBROILER, WOOD BURNING						3/4"	30	COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
206	CONVECTION OVEN, GAS		3/4" (HB)				3/4"	33	COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS. WATER FROM FILTER 207.
207	WATER FILTER FOR STEAM		3/4"						COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS. FILTER TO FEED 206 AND 208.
208	COMBI OVEN, GAS		3/4" (HB)				3/4"	75	COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS. WATER FROM FILTER 207.
209	GRIDDLE, 36"						3/4"	90	COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
210	SALAMANDER BROILER, GAS						3/4"	40	COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
212	6 BURNER HOTPLATE, 36"						3/4"	192	COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
213	FAUCET, KETTLE / POT FILLER		1/2" (2)						COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS. EACH FAUCET TO SERVE ONE 214 (2 TOTAL)
215	HAND SINK W/ L&R SIDE SPLASHES	1/2"	1/2"	1-1/2"	NO	1-1/4"			COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
216	WATER FILTER SYSTEM, TWIN		1/2"						COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS. FILTER TO FEED 218.
217	ICE BIN, 500LB			1"	YES				COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
218	ICE MAKER, CUBE-STYLE		1/2"	1"	YES				COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS. WATER FROM FILTER 216.
226	FLOOR TROUGH, 18"X72"			4"	NO	2"			COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
300	SOILED DISHTABLE, 96"			1-1/2"	YES				COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS. PROVIDE WITH 303 AND 304.
303	DISPOSER		1/2"	2"	NO	1-1/2"			COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
304	PRE-RINSE FAUCET	1/2"	1/2"						COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
305	DISHWASHER, DOOR TYPE	1/2"		1-1/2"	YES				COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
327	2 COMP SINK								COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS. PROVIDE WITH 328 AND 329.
328	TWIST WASTE VALVE			1-1/2" (2)	YES				COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
329	PRE-RINSE FAUCET W/ ADD ON FAUCET	1/2"	1/2"						COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
332	SERVICE FAUCET	1/2"	1/2"						COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS. PROVIDE WITH 333 (MS-2).
333	MOP BASIN			3"	NO	2"			SEE MS-2 IN THE PLUMBING SCHEDULE AND COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
401	EVAPORATOR FOR COOLER			1"	YES				COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
405	EVAPORATOR FOR FREEZER			1"	YES				COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
500	HAND SINK W/ L&R SIDE SPLASHES	1/2"	1/2"	1-1/2"	NO	1-1/4"			COORDINATE WITH ARCHITECTURAL AND KITCHEN CONSULTANT DRAWINGS.
E	KITCHEN HOOD	1-1/2"		1-1/2"	YES				SINGLE INLET CONNECTION FOR ALL THREE HOODS, SEVEN DRAIN CONNECTIONS, INSTALL PER HOOD INSTALLATION INSTRUCTIONS, COORDINATE WITH GAS LINE IN WALL.

DEMONSTRATION KITCHEN EQUIPMENT

SYMBOL	FIXTURE	ROUGH-IN HW	ROUGH-IN CW	ROUGH-IN WASTE	ROUGH-IN INDIRECT	ROUGH-IN VENT	ROUGH-IN NG	ROUGH-IN KBTU	REMARKS
DR	DOMESTIC RANGE	N/A					1/2"	56	COORDINATE WITH ARCHITECTURAL DRAWINGS.

NATURAL GAS DOMESTIC WATER HEATERS

MARK	MANUF.	MODEL	TANK CAPACITY (GAL)	NG PRESSURE (IN WC)	INPUT (MBTUH)	OUTPUT (MBTUH)	THERMAL EFFICIENCY	OUTLET TEMPERATURE (°F)	WATER INLET/OUTLET (IN)	NATURAL GAS INLET (IN)	RECOVERY RATE GPH @ 100°F	AIR INLET (IN)	VENT OUTLET (IN)	ELECTRICAL VOLTAGE (V/PH/Hz)	ELECTRICAL (AMPS)	WEIGHT (LBS)	REMARKS:
GWH	AO SMITH	BTH-250	100	4.8 - 14	250	240	96%	140	1-1/2	3/4	291	3	3	120/1/60	5	1400	1-11

REMARKS:
1 WATER HEATER TO COME WTH FACTORY INSTALLED ASME RATED T&P RELIEF VALVE.
2 WATER HEATER TO MEET SCAQMD RULE 1146.2 AND ASHRAE THERMAL EFFICIENCY & STAND BY LOSS REQUIREMENTS.
3 PROVIDE DIELECTRIC CONNECTIONS ON ALL WATER HEATER PIPE CONNECTION POINTS FOR PROTECTION OF WATER HEATER FROM CORROTION.
4 TANK TO HAVE A MAXIMUM WORKING PRESSURE OF 150 PSI.
5 WATER HEATER TO BE PROVIDED WTH INTEGRAL FACTORY CONTROLS.
6 PROVIDE WTH MANUFACTURER'S CONCENTRIC VENTING KITS AND INSTALL PER 2018 IFGC, 2018 IPC AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
7 THE VENT MAXIMUM ALLOWED EQUIVALENT LENGTH IS 70' OF 4" PIPE (50' OF 3" PIPE). SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER INFORMATION.
8 WATER HEATER SHALL BE COMPLETELY FACTORY ASSEMBLED INCLUDING A PRESSURE REGULATOR PROPERLY ADJUSTED FOR OPEATION ON NATURAL GAS AND AUTOMATIC GAS SHUTOFF DEVICE.
9 PROVIDE WTH MANUFACTURER'S CONDENSATE NEUTRALIZATION KIT (KIT P/N 100112380).
10 INSTALL WTH CATCH PAN ON WATER HEATER STAND (SEE WHS ON THE PLUMBING FIXTURE SCHEDULE)
11 ACCEPTABLE MANUFACTURERS: AO SMITH, RHEEM, RUUD, BRADFORD WHITE, AMERICAN, LOCHINVAR, OR EQUAL.

HOT WATER RECIRCULATOR SCHEDULE

MARK	MANUF.	MODEL	DISCHARGE	PERFORMANCE FLOW (GPM)	PERFORMANCE HEAD (FT)	ELECTRICAL HP	ELECTRICAL VOLTAGE (V/PH/Hz)	ELECTRICAL (AMPS)	WEIGHT (LBS)	REMARKS:
HWC	GRUNDFOS	UP15-10B5 TLC	1/2"	1	5	0.034	115/1/60	0.22	6.5	1-4

REMARKS:
1 UL/CSA LISTED, NSF 61 LISTED.
2 TEST PUMP AND SAFETY SWITCH PER MANUFACTURER'S INSTALLATION INSTRUCTIONS
3 PROVIDE PUMP WITH MANUFACTURER'S THERMOSTATIC (AQUASTAT) AND TIMER CONTROLS TO TURN PUMP ON/OFF BASED ON SCHEDULE AND TEMPERATURE.
4 ACCEPTABLE MANUFACTURERS: GRUNDFOS, BELL & GOSSETT, TACO, OR EQUAL.

BOOSTER PUMP SCHEDULE

MARK	MANUF.	MODEL	SIZE (IN x IN)	SUCTION (PSI)	BOOST (PSI)	SET PRESSURE (PSI)	PERFORMANCE FLOW (GPM)	PERFORMANCE TOTAL DYNAMIC HEAD (FT)	ELECTRICAL HP	ELECTRICAL VOLTAGE (V/PH/Hz)	ELECTRICAL FULL LOAD (AMPS)	MOTOR SPEED (RPM)	VFD (Y / N)	WEIGHT (LBS)	REMARKS:
BP	QUANTUMFLO	38230 PRODIGY SIMPLEX QEB	1-1/2 x 1-1/2	33	42	75	75	97	3	480/3/60	6.6	3450	Y	250	1-6

REMARKS:
1 UL/CSA LISTED AND NSF 61 CERTIFIED
2 COORDINATE PUMP INSTALLATION WITH ELECTRICAL CONTRACTOR
3 COORDINATE COMPLETE INSTALLATION OF SAFETY SWITCH WITH ELECTRICAL CONTRACTORS AND WITH MANUFACTURERS INSTALLATION INSTRUCTIONS
4 TEST PUMP AND SAFETY SWITCH PER MANUFACTURER'S INSTALLATION INSTRUCTIONS
5 PROVIDE WTH MANUFACTURER'S OPTIONS: MONITORING PROTOCOL: BACNET IP, VIBRATION ISOLATION KIT, 3" NSF 61 FLEX CONNECTORS AND COUPLINGS
6 ACCEPTABLE MANUFACTURERS: QUANTUMFLO, GRUNDFOS, BELL & GOSSETT, TACO, OR EQUAL.

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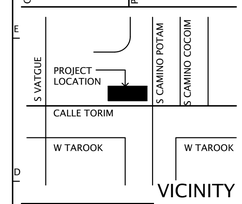

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

PROJECT NO. 23C-001

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SHEET TITLE

PLUMBING SCHEDULES

DATE 02.20.2024

SHEET

P5.2

WATER FIXTURE UNIT COUNT SCHEDULE

SYMBOL	FIXTURE	COLD	HOT	TOTAL. EACH	NO. USED	F.U. TOTAL
EDF	ELECTRIC DRINKING FOUNTAIN	0.25	-	0.25	1	0.25
HB	HOSE BIBB	3.00	-	3.00	1	3.00
HB	HOSE BIBB (EACH ADDITIONAL)	1.50	-	1.50	5	7.50
UB	UTILITY BOX	0.25	-	0.25	1	0.25
S-1	SINK	3.00	3.00	4.00	1	4.00
LAV-1&2	LAVATORY (PUBLIC)	1.50	1.50	2.00	9	18.00
MS	MOP SINK	2.25	2.25	3.00	2	6.00
WC	WATER CLOSET (PUBLIC, FLUSH VALVE)	10.00	-	10.00	7	70.00
HS	HAND WASH SINK (MATCH KITCHEN CONSULTANT)	1.50	1.50	2.00	2	4.00
2CS	TWO COMPARTMENT SINK	3.00	3.00	4.00	1	4.00
-	PRODUCE DISPLAYS	0.25	-	0.25	1	0.25
KITCHEN EQUIPMENT						
203	WALL MOUNT FAUCET (FOR #200 TWO FAUCETS)	3.00	3.00	4.00	2	8.00
204	HAND SINK W/ L&R SIDE SPLASHES	1.50	1.50	2.00	1	2.00
206	CONVECTION OVEN, GAS	1.00	-	1.00	1	1.00
208	COMBI OVEN, GAS	1.00	-	1.00	1	1.00
213	FAUCET, KETTLE / POT FILLER	1.50	-	1.50	2	3.00
215	HAND SINK W/ L&R SIDE SPLASHES	1.50	1.50	2.00	1	2.00
218	ICE MAKER, CUBE-STYLE	0.50	-	0.50	1	0.50
303	DISPOSER (FOR # 300)	2.25	-	2.25	1	2.25
304	PRE-RINSE FAUCET (FOR #300)	3.00	3.00	4.00	1	4.00
305	DISHWASHER, DOOR TYPE	-	2.25	2.25	1	2.25
329	PRE-RINSE FAUCET W/ ADD ON FAUCET (FOR #327)	3.00	3.00	4.00	1	4.00
332	SERVICE FAUCET (FOR 333)	2.25	2.25	3.00	1	3.00
500	HAND SINK W/ L&R SIDE SPLASHES	1.50	1.50	2.00	1	2.00
E	KITCHEN HOOD (ONLY ON DURING UNOCCUPIED HRS)	-	4.00	4.00	1	N/A
NOTE:	FIXTURE UNIT VALUES PER 2018 IPC, TABLE E103.3(2).				TOTAL =	152.25

WATER CALCULATIONS

DESIGN DATA		
APPROXIMATE WATER PRESSURE AT BLDG RISER		**34 PSI**
BOOSTER PUMP PRESSURE RISE		**41 PSI**
TOTAL PRESSURE AFTER BOOSTER PUMP		**75 PSI**
WATER METER-SIZE		**SEE CIVIL DRAWINGS**
BACKFLOW PREVENTER DEVICE		**SEE CIVIL DRAWINGS**
WATER LINE PROVIDED FROM SITE TO BLDG RISER		**3 INCH**
BUILDING TOTAL WFU's		**152.25 FU's**
TOTAL GALLONS PER MINUTE		**79.45 GPM**
PIPE LENGTH		
HORIZONTAL PIPE LENGTH (TAP TO LAST FIXTURE)	230	FT
VERTICAL PIPE LENGTH (TAP TO LAST FIXTURE)	20	FT
TOTAL PIPE LENGTH	250	FT
FITTING ALLOWANCE (TOTAL PIPE LENGTH X 0.25)	62.50	FT
TOTAL PIPE LENGTH		**313 FT**
PRESSURE LOSSES		
SPECIAL FIXTURE LOSS - FILTER		**15 PSI**
FIXTURE HEIGHT (STATIC HEAD IN FEET)		**5 FT**
VERTICAL RISE PSI LOSS (VERTICAL RISE X .43)		**2.15 PSI**
MINIMUM PRESSURE REQUIRED AT FIXTURE (PSI LOSSES)		**25 PSI**
STREET PRESSURE	75	PSI
LESS TOTAL LOSSES	42.15	PSI
PSI DIFFERENCE		**32.85 PSI**
ALLOWABLE FRICTION FACTOR (PSI DROP PER 100')		
32.85 X 100 FT / 313	=	**10.5 PSI PER 100'**
WATER LINE REQUIRED	=	2-1/2 INCHES
WATER LINE PROVIDED	=	3 INCHES
ALL PIPE SIZED PER FIGURE E103.3(3) (2018 IPC)		

SITE DOMESTIC WATER PRESSURE

DESIGN DATA		
APPROXIMATE STREET WATER PRESSURE		**52 PSI**
WATER METER-SIZE		**SEE CIVIL DRAWINGS**
BACKFLOW PREVENTER DEVICE		**SEE CIVIL DRAWINGS**
REQUIRED SITE WATER PIPE MINIMUM SIZE		**3 INCHES**
TOTAL WFU's		**152.25 FU's**
TOTAL GALLONS PER MINUTE		**79.45 GPM**
PIPE LENGTH		
HORIZONTAL PIPE LENGTH (TAP TO LAST RISER)	100	FT
VERTICAL PIPE LENGTH	2	ft
PRESSURE LOSSES		
WATER METER PSI LOSS		**1.5 PSI**
BACKFLOW PREVENTER DEVICE		**13 PSI**
		1.33 PSI
CALCULATED SITE PIPE LENGTH PSI LOSS (TO RISER)		**1.5 PSI**
CALCULATED SITE FITTINGS PSI LOSS		**0.5 PSI**
AVAILABLE PRESSURE AT LAST DOMESTIC WATER RISER		
APPROXIMATE PRESSURE AT WATER METER	52	PSI
TOTAL SITE PRESSURE DROP	17.83	PSI
TOTAL PRESSURE AT RISER WORST CASE	**34.17**	**PSI**

WASTE FIXTURE UNIT COUNT SCHEDULE

SYMBOL	FIXTURE	F.U. EACH	NO. USED	F.U. TOTAL
EDF	ELECTRIC DRINKING FOUNTAIN	0.5	1	0.5
FD	FLOOR DRAIN (EMERGENCY)	0	5	0
FS	FLOOR SINK (2" TRAP)	3	11	33
FS	FLOOR SINK (3" TRAP)	5	7	35
S-1	SINK	2	1	2
HS	HAND SINK W/ L&R SIDE SPLASHES	1	2	2
LAV-1 & 2	LAVATORY	1	9	9
MS	MOP SINK (3" TRAP)	5	2	10
UR	URINAL (WATERLESS)	0.5	2	1
WC	WATER CLOSET 1.6 GPF (PUBLIC)	4	7	28
KITCHEN EQUIPMENT				
204	HAND SINK W/ L&R SIDE SPLASHES	1	1	1
215	HAND SINK W/ L&R SIDE SPLASHES	1	1	1
226	FLOOR TROUGH, 18"X72" (4" TRAP)	6	1	6
303	DISPOSER (FOR # 300)	4	1	4
333	MOP BASIN (SEE MS-2 ON PFS)	5	1	5
500	HAND SINK W/ L&R SIDE SPLASHES	1	1	1
NOTE:	FIXTURE UNIT VALUES PER IPC 2018, TABLE 709.1 AND		TOTAL =	138.5

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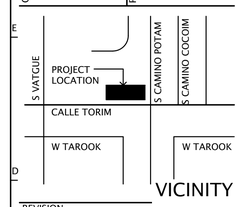

VICINITY

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

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SHEET TITLE

PLUMBING SCHEDULES

DATE 02.20.2024

SHEET **P5.3**

DRAWING CONVENTIONS

LA1-1 — PANEL NAME & CIRCUIT NUMBER
AC GFI — SPEC. NOTES: GFI, WP, TWISTLOCK, ETC
MOUNTING REQUIREMENTS:
HEIGHT SHOWN IN INCHES;
ABOVE COUNTER "AC", CEILING NOTED "C", ETC

A — LUMINAIRE TAG, REFER TO SCHEDULE
a — LOWER CASE LETTER INDICATES SWITCH LEG (WHERE APPLICABLE)
LA1-1 — PANEL NAME AND OR CIRCUIT NUMBER

ELECTRICAL SHEET INDEX

E1.1	GENERAL NOTES AND SPECIFICATIONS
E1.2	ELECTRICAL SITE PLAN
E1.3	LIGHTING PHOTOMETRIC SITE PLAN
E2.1	POWER AND SIGNAL PLAN
E3.1	LIGHTING PLAN
E4.1	ROOF PLAN
E5.1	SINGLE LINE DIAGRAM AND CALCULATIONS
E5.2	PANEL SCHEDULES
E5.3	PANEL SCHEDULES
E6.1	DETAIL SHEET #1
E6.2	DETAIL SHEET #2
E6.3	DETAIL SHEET #3
E6.4	DETAIL SHEET #4
E7.1	IECC COMPLIANCE
E7.2	IECC COMPLIANCE

ELECTRICAL SPECS INDEX

26 0100	GENERAL PROVISIONS
26 4130	SWITCHBOARDS
26 4160	PANELBOARDS
26 4600	LOW-VOLTAGE TRANSFORMERS
26 4800	FUSES
26 5190	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES
26 5260	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
26 5330	RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS
26 5480	VIBRATION AND SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS
26 5530	IDENTIFICATION FOR ELECTRICAL SYSTEMS
26 5730	OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY
26 6000	LIGHTING
26 7260	WIRING DEVICES

ELECTRICAL SYMBOLS

LIGHTING SEE FIXTURE SCHEDULE

Symbol	Description
	LED RECESSED OR SEMI-RECESSED LED LUMINAIRE
	SURFACE MOUNTED LED LUMINAIRE
	PENDANT MOUNTED LED LUMINAIRE
	LED STRIP LUMINAIRE
	LED WALL MOUNTED LED LUMINAIRE
	LED RECESSED DOWN LIGHT
	LED ACCENT LIGHT
	LED TRACK LIGHTING - SEE PLANS FOR LENGTH AND NUMBER OF HEADS
	LED EXIT SIGN - SHADED PORTION INDICATES FACE; PROVIDE ARROWS AS SHOWN ON DRAWINGS
	LED EMERGENCY LIGHTING BATTERY PACK - SINGLE OR DOUBLE HEAD
	POLE MOUNTED LUMINAIRE WITH POLE AND BASE - NUMBER OF LUMINAIRES AND CONFIGURATIONS INDICATED ON DRAWINGS

SWITCHES & CONTROLS

Symbol	Description
S S_3 S_4 S_P	TOGGLE SWITCH - SINGLE POLE, 3-WAY, 4-WAY, ("P" INDICATES ILLUMINATED HANDLE OR PILOT LIGHT) AT +48" AFF U.N.O.
S_2	2-POLE SINGLE THROW SWITCH AT +48" AFF U.N.O.
S_K	KEYED / LOCKABLE SECURE LIGHTING SWITCH AT +48" AFF U.N.O.
PC	PHOTOCELL - ROOF MOUNTED FACING NORTH
S_T	TIMESWITCH - NEMA 1, FLUSH MOUNTED, HINGED ENCLOSURE WITH LOCKABLE COVER
S_{DM}	DIMMER SWITCH - MOUNT AT +48" AFF. TRACK LIGHTING SHALL HAVE "LUTRON" NP2000 DIMMER OR EQUAL.
MS	LIGHTING MOTION SENSOR, CEILING MOUNTED.
PC	LIGHTING MOTION SENSOR WITH PHOTOCELL, CEILING MOUNTED.

WIRING

Symbol	Description
	CIRCUIT IN CONCEALED CONDUIT. HASH MARKS INDICATE QUANTITY OF CONDUCTORS. NO HASH MARKS INDICATE TWO CONDUCTORS PLUS GROUND(S). (NOTE: WIRE AND/OR CONDUIT SIZE SHOWN ON PANEL SCHEDULES IS THE MINIMUM SIZE FOR THE ENTIRE CIRCUIT: #12 A.W.G. CU, 1/2" C. MINIMUM). LONG STROKE(S) INDICATE NEUTRAL CONDUCTOR(S), SHORT STROKES PHASE OR SWITCHED CONDUCTORS, AND LONG STROKES WITH DOT INDICATE GREEN INSULATED GROUNDING CONDUCTOR(S). EACH ISOLATED GROUND CIRCUIT SHALL HAVE A SEPARATE NEUTRAL AND GROUND WIRE. BOND WIRES ARE NOT SHOWN ON DRAWINGS. BOND WIRES SHALL BE INSULATED CU. SIZED IN ACCORDANCE WITH NEC #250.
	CIRCUIT IN CONDUIT CONCEALED IN FLOOR
	CIRCUIT IN CONDUIT CONCEALED IN WALLS OR ABOVE CEILING
	HOMERUN TO PANELBOARD OR AS NOTED.
	APPROVED TEMPERATURE SEAL-OFF AND EXPANSION JOINTS AS REQUIRED BY NEC ART. #300-7

TELECOMMUNICATIONS

Symbol	Description
	RECESSED COMBINATION DATA/TELEPHONE OUTLET AT +18" AFF TO CENTER LINE OR AS NOTED WITH 3/4" C. AND STRING UP INTO ACCESSIBLE CEILING SPACE UNLESS SHOWN OTHERWISE.
FC	RECESSED COMBINATION DATA/TELEPHONE OUTLET FLUSH CEILING MOUNTED WITH 3/4" C. AND STRING INTO ACCESSIBLE CEILING SPACE UNLESS SHOWN OTHERWISE.
	RECESSED COMBINATION DATA OUTLET AT +18" AFF TO CENTER LINE OR AS NOTED WITH 3/4" C. AND STRING UP INTO ACCESSIBLE CEILING SPACE UNLESS SHOWN OTHERWISE.
TELE/DATA	TELEPHONE / DATA PLYWOOD BACKBOARD, 3/4" THK. FULL HEIGHT ALONG WALLS SHOWN, PAINT TO MATCH ADJACENT WALL .

LOW VOLTAGE

Symbol	Description
SC	SECURITY SURVEILLANCE CAMERA FLUSH J-BOX AT +120" OR AS NOTED WITH 3/4" C. WITH PULLSTRING TO BUILDING I.T. ROOM. VERIFY FINAL LOCATION WITH OWNER PRIOR TO ROUGH IN.
TV	CABLE TV OUTLET WALL MOUNTED AT HEIGHT NOTED WITH 3/4" C. UP INTO ACCESSIBLE CEILING SPACE UNLESS SHOWN OTHERWISE. VERIFY FINAL LOCATION WITH OWNER PRIOR TO ROUGH IN.
S	FLUSH CEILING / WALL SPEAKER J-BOX. PROVIDE AND INSTALL J-BOX WITH 3/4'C. WITH PULLSTRING TO BUILDING TELE/DATA BACKBOARD. VERIFY FINAL LOCATION WITH OWNER PRIOR TO ROUGH IN.
WAP	ABOVE CEILING WIRELESS ACCESS POINT. PROVIDE AND INSTALL J-BOX WITH 3/4'C. WITH PULLSTRING TO BUILDING TELE/DATA BACKBOARD. VERIFY FINAL LOCATION WITH OWNER PRIOR TO ROUGH IN.
CR	CARD READER WALL MOUNTED AT +48" AFF TO CENTER LINE WITH 3/4" C. UP INTO ACCESSIBLE CEILING SPACE UNLESS SHOWN OTHERWISE. VERIFY FLUSH J-BOX SIZE WITH OWNER PRIOR TO ROUGH IN.
IC	INTERCOM STATION WALL MOUNTED AT +48" AFF TO CENTER LINE WITH 3/4" C. UP INTO ACCESSIBLE CEILING SPACE UNLESS SHOWN OTHERWISE. VERIFY FLUSH J-BOX SIZE WITH OWNER PRIOR TO ROUGH IN.
	DOOR LOCKDOWN J-BOX WITH 3/4" C. WITH PULLSTRING UP INTO ACCESSIBLE CEILING SPACE UNLESS SHOWN OTHERWISE. VERIFY FLUSH J-BOX SIZE AND LOCATION WITH ARCHITECT AND OWNER PRIOR TO ROUGH IN.
DC	DOOR CONTACT FOR ELECTRONIC DOOR CONTROL J-BOX. VERIFY MOUNTING REQUIREMENTS WITH ARCHITECT AND DOOR HARDWARE. PROVIDE 3/4" C. WITH PULLSTRING UP INTO ACCESSIBLE CEILING SPACE UNLESS SHOWN OTHERWISE.

POWER & DISTRIBUTION

Symbol	Description
	MAJOR ELECTRICAL COMPONENT OR DEVICE. VOTLAGE AND AMPERAGE AS INDICATED ON DRAWINGS.
	PANELBOARD, MOUNT AT +6'-8" TO TOP. STUD (2) 3/4" EC INTO ACCESSIBLE CEILING SPACE ON FLUSH MOUNTED PANELS.
T	TRANSFORMER, kVA SIZE AND VOLTAGE AS NOTED

RECEPTACLES & BOXES

Symbol	Description
J	JUNCTION BOX FOR SPECIFIED EQUIPMENT IN ACCESSIBLE LOCATION
J	JUNCTION BOX IN ACCESSIBLE LOCATION ABOVE REMOVABLE CEILING WITH FLEXIBLE CONDUIT CONNECTION TO LIGHT FIXTURE
	FLEXIBLE CONDUIT CONNECTION TO EQUIPMENT
	RECESSED SIMPLEX RECEPTACLE AT +18" AFF TO CENTER LINE, UNO - DEDICATED OUTLET
	RECESSED DUPLEX RECEPTACLE AT +18" AFF TO CENTER LINE, UNO.
U	DUPLEX RECEPTACLE PROVIDED INTEGRAL WITH LOCKER SYSTEM.
L	RECESSED DUPLEX RECEPTACLE AT +18" AFF TO CENTER LINE, UNO, PROVIDE WITH "C.W. COLE" CAST ALUMINUM LOCKING RECESSED "IN-USE" WALL BOX SERIES #TL-210-WCS-1-GFCI. PROVIDE WITH "GFI" TYPE RECEPTACLE WITH ALL BOXES KEYED ALIKE.
	RECESSED RECEPTACLE (TYPE AS SHOWN ON DRAWINGS) AT +44" AFF, UNO
	RECESSED 220V OUTLET - VERIFY MOUNTING HEIGHT W/ APPLIANCE REQUIREMENTS
	RECESSED FOURPLEX CONVENIENCE OUTLET AT +18" AFF TO CENTER LINE, UNO
CR	GFI RECEPTACLE WITH CORD-SET SUSPENDED FROM CEILING WITH PLUG-SET AT +72" ABOVE THE FINISH FLOOR. PROVIDE JUNCTION BOX ABOVE SECURED TO STRUCTURE. PROVIDE CORD-SET AS MANUFACTURER "COXREELS" MODEL "PC13-3512-F".
	RECESSED SPECIAL USE RECEPTACLE. VERIFY NEMA NUMBER AND MOUNTING HEIGHT WITH EQUIPMENT
D	RECESSED DEDICATED CIRCUIT DUPLEX CONVENIENCE RECEPTACLE AT +18" AFF TO CENTER LINE, UNO
FC	RECESSED DUPLEX RECEPTACLE FLUSH CEILING MOUNTED, UNO.
	COMBINATION RECEPTACLE - TELE/DATA FLUSH FLOOR BOX BY "FSR INC.", MODEL #FL-600P-BLP. PROVIDE WITH TWO (2) DUPLEX RECEPTACLES AND TWO (2) DATA RECEPTACLES WITH TWO (2) DROPS (CAT6E) FROM PROJECT I.T. RACK.
	RECEPTACLE - FLUSH FLOOR BOX BY "FSR INC.", MODEL #FL-600P-BLP. PROVIDE WITH TWO (2) DUPLEX RECEPTACLES

MOTORS & CONTROLS

Symbol	Description
	MOTOR - SIZE AND RATING AS NOTED. EF INDICATES 115 WATT, 120V, EXHAUST FAN
	FUSED DISCONNECT SWITCH - HORSEPOWER RATED, NEMA 3R WHERE OUTDOORS. FUSE AS NOTED OR PER EQUIPMENT MANUFACTURER' SPECIFICATIONS.
	NON-FUSED DISCONNECT SWITCH - HORSEPOWER RATED, NEMA 3R WHERE OUTDOORS. N.F. INDICATES NON-FUSED. (FUSE PER EQUIPMENT MANUFACTURER' SPECIFICATIONS).
	FUSED DISCONNECT VIA MOTOR STARTER HORSEPOWER RATED, NEMA 3R WHERE OUTDOORS. FUSE AS NOTED OR PER EQUIPMENT MANUFACTURER' SPECIFICATIONS.
	A.C. MAGNETIC STARTER BY ELECTRICAL CONTRACTOR. HORSEPOWER, VOLTAGE AND PHASE RATED, NUMBER OF POLES REQUIRED. FURNISH WITH (1) N.O. AUXILIARY CONTACT (120V CONTROL) SINGLE SPEED NON-REVERSING , UNO ON DRAWINGS
S_M	MOTOR RATED SWITCH WITH THERMAL PROTECTION
S_V	MOTOR SPEED CONTROL SWITCH. FURNISHED BY ELECTRICAL CONTRACTOR

ABBREVIATIONS

A, AMP	AMP, AMPERES	KW	KILOWATTS
AC	AIR COMPRESSOR	KVA	KILOVOLT AMPERES
AFI, AFCI	ARC FAULT CIRCUIT INTERRUPTER PROTECTED	MCB	MAIN CIRCUIT BREAKER
AFF	ABOVE FINISH FLOOR	MCC	MOTOR CONTROL CENTER
AL	ALUMINUM	MLO	MAIN LUGS ONLY
APS	ARIZONA PUBLIC SERVICE	MSB	MAIN SWITCH BOARD
ATS	AUTOMATIC TRANSFER SWITCH	NEC	NATIONAL ELECTRIC CODE
C	CONDUIT	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CB	CIRCUIT BREAKER	NEU	NEUTRAL
C.O.	CONDUIT ONLY WITH PULLSTRING	NIC	NOT IN CONTRACT
CP	CORD AND PLUG	NL	NIGHT LIGHT
CPAI	CONTRACTOR SHALL PROVIDE AND INSTALL	PNL	PANEL
CU	COPPER	PIV	POST INDICATOR VALVE
DSD	DUCT SMOKE DETECTOR	PVC	POLYVINYL CHLORIDE
D.W.	DISH WASHER	SES	SERVICE ENTRANCE SECTION
(E), EX, EXIST	EXISTING	TEL	TELEPHONE
EC	ELECTRICAL CONTRACTOR	TMB	TELEPHONE MOUNTING BOARD
EDF	ELECTRIC DRINKING FOUNTAIN	TTB	TELECOMMUNICATIONS TERMINAL BOARD
EL, EM	EMERGENCY LIGHT	TV	TELEVISION
FA	FIRE ALARM	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
FACP	FIRE ALARM CONTROL PANEL	TYP	TYPICAL
FBO	FURNISHED BY OWNER	UGPS	UNDERGROUND PULL SECTION
FC	FLUSH CEILING	UL	UNDERWRITERS LABORATORY
FSD	FIRE SMOKE DAMPER	UPS	UNINTERRUPTIBLE POWER SOURCE
GC	GENERAL CONTRACTOR	U.N.O.	UNLESS NOTED OTHERWISE
GFCI, GFI	GROUND FAULT CIRCUIT INTERRUPTER PROTECTED	V	VOLT(S)
GND, GRD	GROUND	VA	VOLT AMPERES
GU	GENERAL USE RECEPTACLE	WCS	
		WP	WEATHER PROOF
		XFMR	TRANSFORMER

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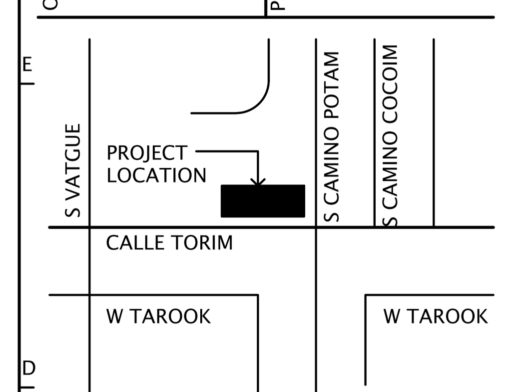

VICINITY

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

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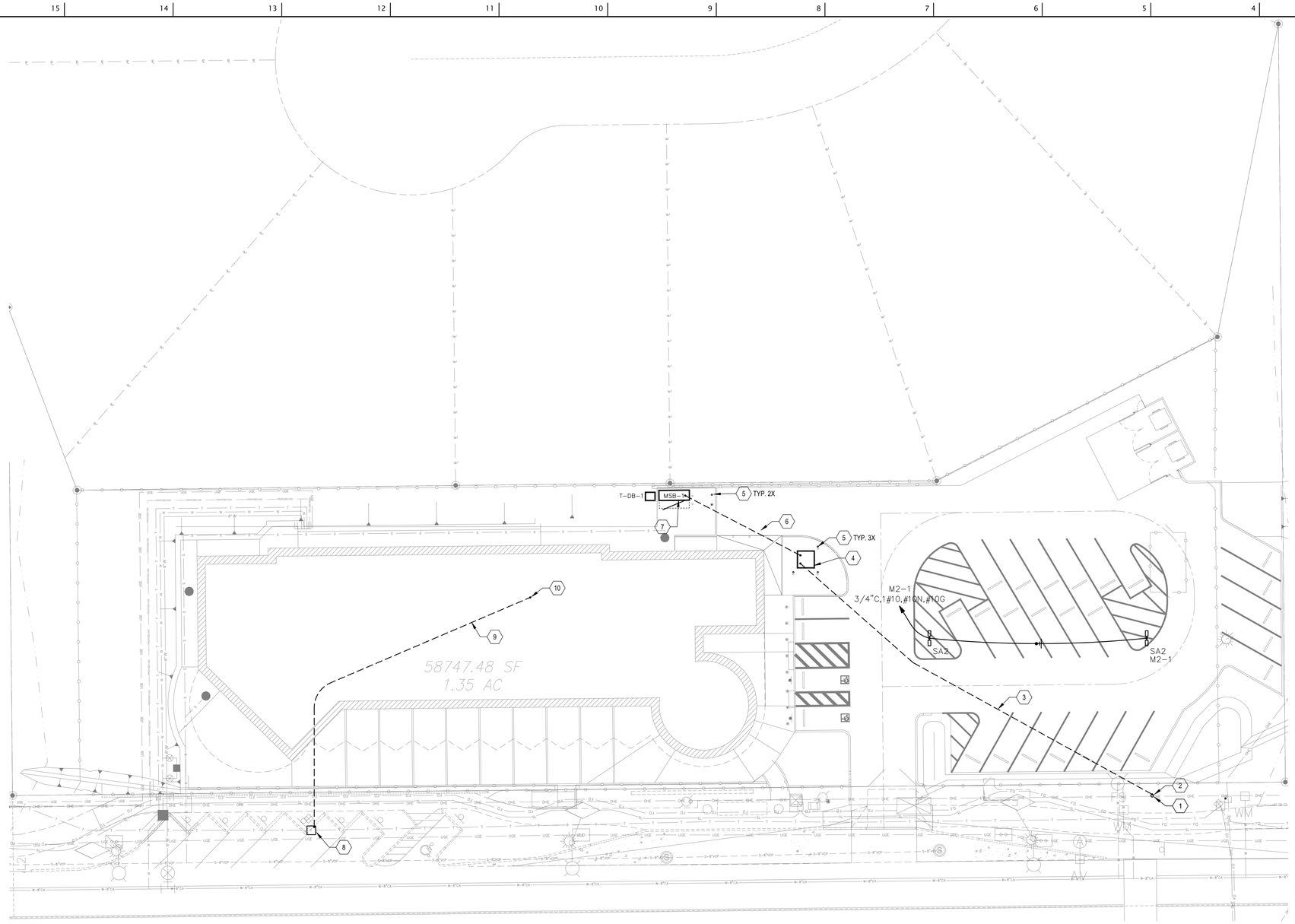
SHEET TITLE
GENERAL NOTES AND SPECIFIACATIONS

DATE 02.20.2024
SHEET **E1.1**



KEYNOTES

1. NEW ELECTRIC UTILITY SERVICE POLE. VERIFY POLE LOCATION. NUMBER AND REQUIREMENTS WITH ELECTRIC UTILITY SHOP DRAWINGS PRIOR TO ALL ROUGH IN.
2. PROVIDE AND INSTALL ELECTRIC UTILITY PRIMARY RISER CONDUIT, VERIFY CONDUIT RISER QUANTITY, SIZE AND REQUIREMENTS WITH ELECTRIC UTILITY SHOP DRAWINGS PRIOR TO ALL ROUGH IN.
3. PROVIDE AND INSTALL ELECTRIC UTILITY PRIMARY FEEDER CONDUIT(S) AS SHOWN, REFER TO SINGLE LINE DIAGRAM FOR MORE INFORMATION. VERIFY CONDUIT QUANTITY, SIZE, ROUTING AND REQUIREMENTS WITH ELECTRIC UTILITY SHOP DRAWINGS PRIOR TO ALL ROUGH IN.
4. ELECTRIC UTILITY PAD MOUNTED SERVICE TRANSFORMER. VERIFY LOCATION AND REQUIREMENTS WITH ELECTRIC UTILITY SHOP DRAWINGS PRIOR TO ALL ROUGH IN. PROVIDE AND INSTALL TRANSFORMER CONCRETE PAD PER ELECTRIC UTILITY SHOP DRAWINGS.
5. PROVIDE AND INSTALL THREE (3) ELECTRIC UTILITY TRANSFORMER PROTECTIVE REMOVABLE BOLLARDS PER ELECTRIC UTILITY SHOP DRAWINGS.
6. PROVIDE AND INSTALL ELECTRIC UTILITY SECONDARY FEEDER CONDUIT(S) AS SHOWN, REFER TO SINGLE LINE DIAGRAM FOR MORE INFORMATION. VERIFY CONDUIT QUANTITY, SIZE, ROUTING AND REQUIREMENTS WITH ELECTRIC UTILITY SHOP DRAWINGS PRIOR TO ALL ROUGH IN.
7. NEW SWITCHBOARD "MSB-1" WITH ELECTRIC UTILITY UNDERGROUND PULL SECTION (UGPS) WITH SECONDARY CONDUIT(S) STUBBED.
8. EXISTING TELEPHONE UTILITY SERVICE PEDESTAL. FIELD VERIFY ACTUAL LOCATION PRIOR TO ALL ROUGH IN. VERIFY PEDESTAL LOCATION, NUMBER AND REQUIREMENTS WITH TELEPHONE UTILITY SHOP DRAWINGS PRIOR TO ALL ROUGH IN.
9. PROVIDE AND INSTALL TELEPHONE UTILITY 2-2"C.O. WITH PULL STRING. VERIFY CONDUIT QUANTITY, SIZE, ROUTING AND REQUIREMENTS WITH TELEPHONE UTILITY SHOP DRAWINGS PRIOR TO ALL ROUGH IN.
10. TELEPHONE UTILITY CONDUIT STUB LOCATION IN I.T. ROOM #111.

GENERAL NOTES

1. NOT USED.

1 ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"

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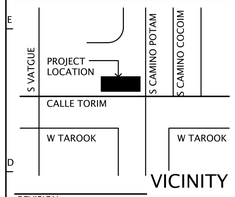

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SHEET TITLE

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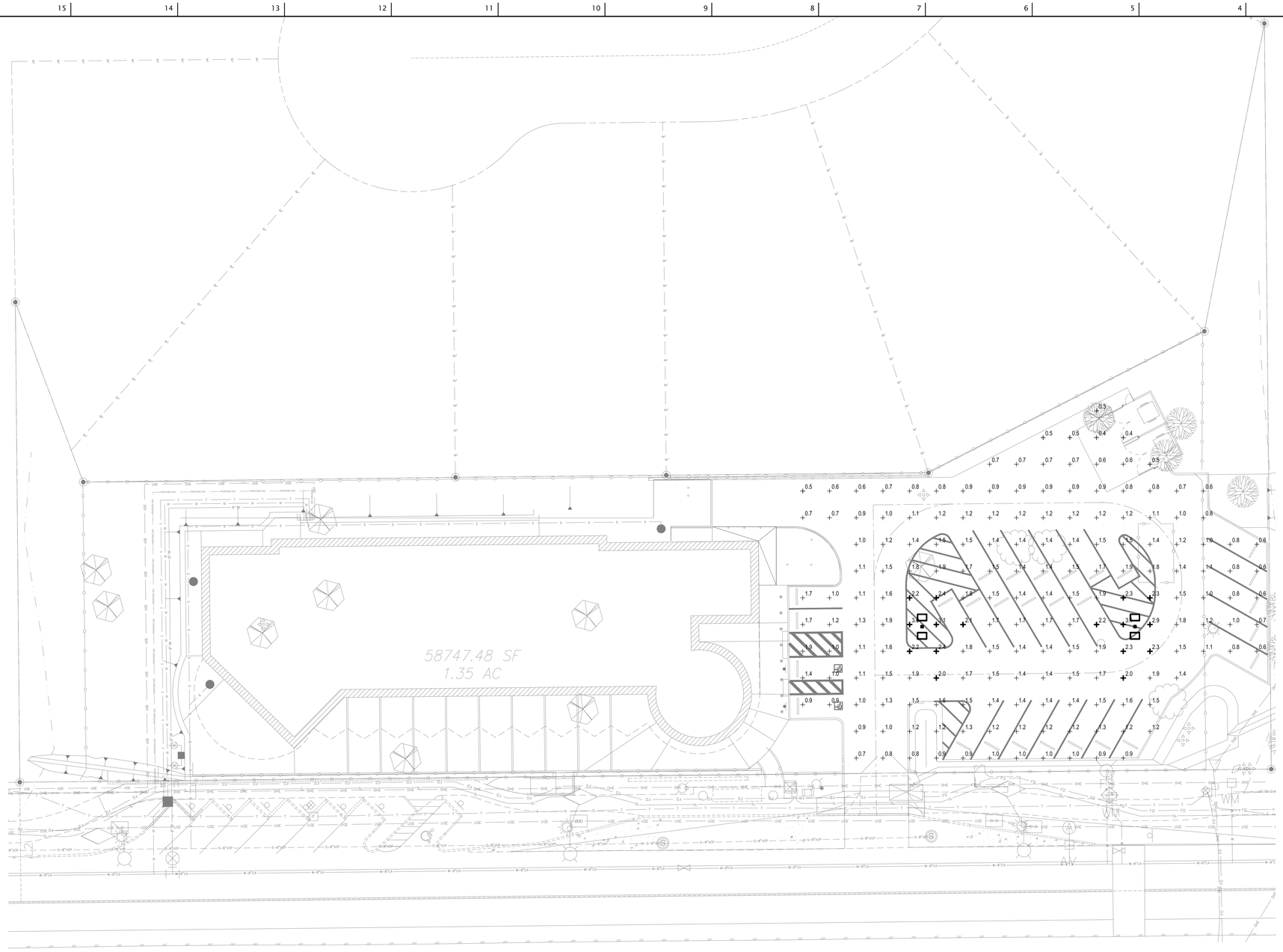
DATE 02.20.2024

SHEET **E1.2**



KEYNOTES

1 NOT USED.

GENERAL NOTES

1. NOT USED.

PHOTOMETIC CALULATIONS

PARKING LOT	PARKING LOT
Average	1.3 fc
Maximum	3.1 fc
Minimum	0.3 fc
Max/Min	10.3 : 1
Avg/Min	4.3 : 1

1 LIGHTING PHOTOMETRIC SITE PLAN

SCALE: 1" = 20'-0"

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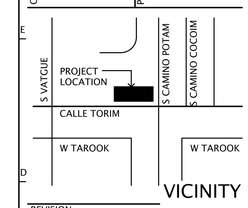

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SHEET TITLE

LIGHTING PHOTOMETRIC SITE PLAN

DATE 02.20.2024

SHEET **E1.3**

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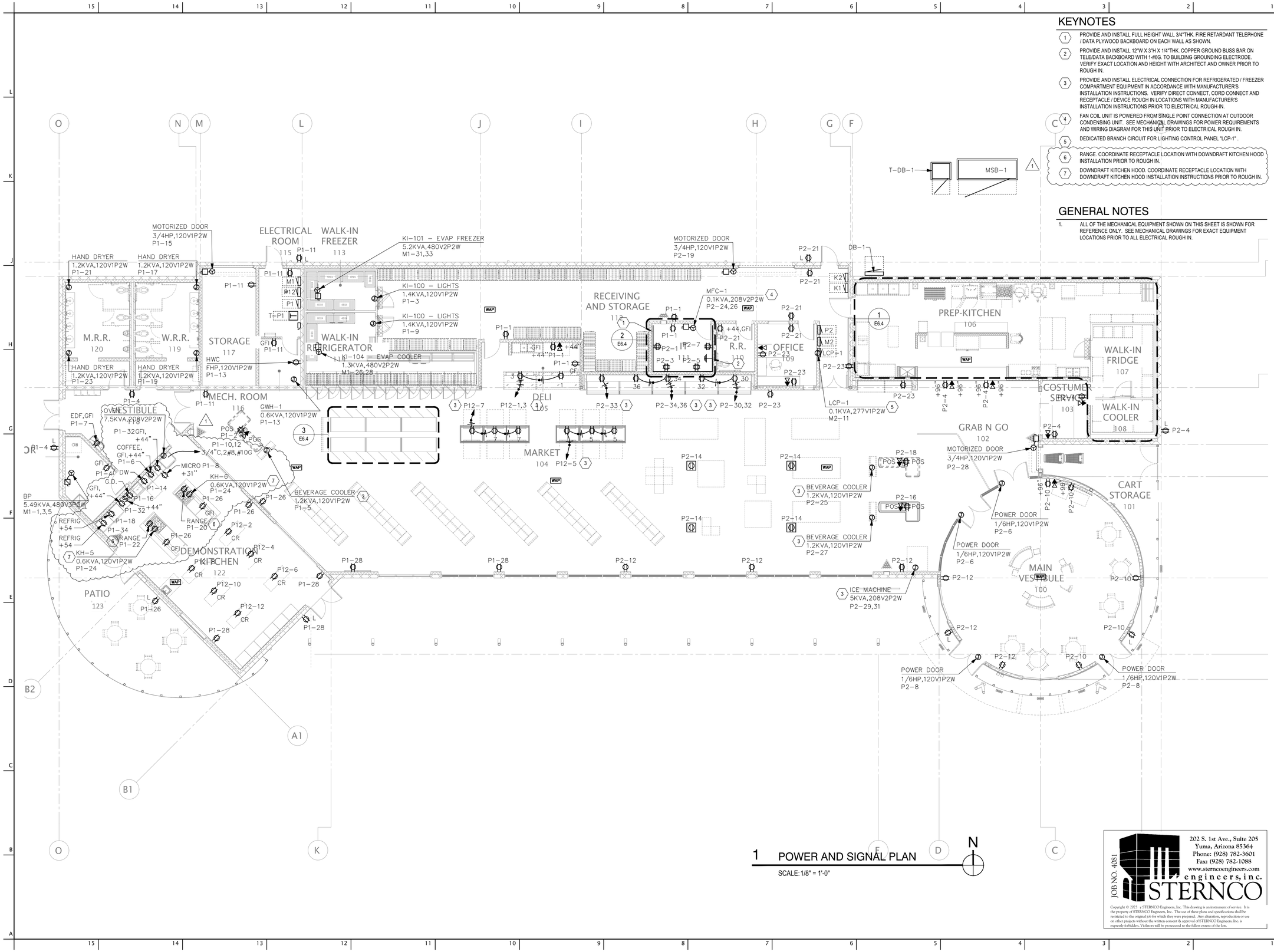

1 POWER AND SIGNAL PLAN

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

KEYNOTES

1. PROVIDE AND INSTALL FULL HEIGHT WALL 3/4"THK. FIRE RETARDANT TELEPHONE / DATA PLYWOOD BACKBOARD ON EACH WALL AS SHOWN.
2. PROVIDE AND INSTALL 12"W X 3"H X 1/4"THK. COPPER GROUND BUSS BAR ON TELE/DATA BACKBOARD WITH 1-#6G. TO BUILDING GROUNDING ELECTRODE. VERIFY EXACT LOCATION AND HEIGHT WITH ARCHITECT AND OWNER PRIOR TO ROUGH IN.
3. PROVIDE AND INSTALL ELECTRICAL CONNECTION FOR REFRIGERATED / FREEZER COMPARTMENT EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. VERIFY DIRECT CONNECT, CORD CONNECT AND RECEPTACLE / DEVICE ROUGH IN LOCATIONS WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS PRIOR TO ELECTRICAL ROUGH-IN.
4. FAN COIL UNIT IS POWERED FROM SINGLE POINT CONNECTION AT OUTDOOR CONDENSING UNIT. SEE MECHANICAL DRAWINGS FOR POWER REQUIREMENTS AND WIRING DIAGRAM FOR THIS UNIT PRIOR TO ELECTRICAL ROUGH IN.
5. DEDICATED BRANCH CIRCUIT FOR LIGHTING CONTROL PANEL "LCP-1".
6. RANGE. COORDINATE RECEPTACLE LOCATION WITH DOWNDRAFT KITCHEN HOOD INSTALLATION PRIOR TO ROUGH IN.
7. DOWNDRAFT KITCHEN HOOD. COORDINATE RECEPTACLE LOCATION WITH DOWNDRAFT KITCHEN HOOD INSTALLATION INSTRUCTIONS PRIOR TO ROUGH IN.

GENERAL NOTES

1. ALL OF THE MECHANICAL EQUIPMENT SHOWN ON THIS SHEET IS SHOWN FOR REFERENCE ONLY. SEE MECHANICAL DRAWINGS FOR EXACT EQUIPMENT LOCATIONS PRIOR TO ALL ELECTRICAL ROUGH IN.

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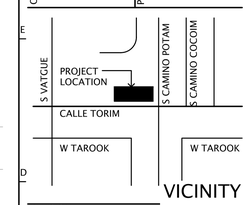

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SHEET TITLE

POWER AND SIGNAL PLAN

DATE 02.20.2024

SHEET **E2.1**

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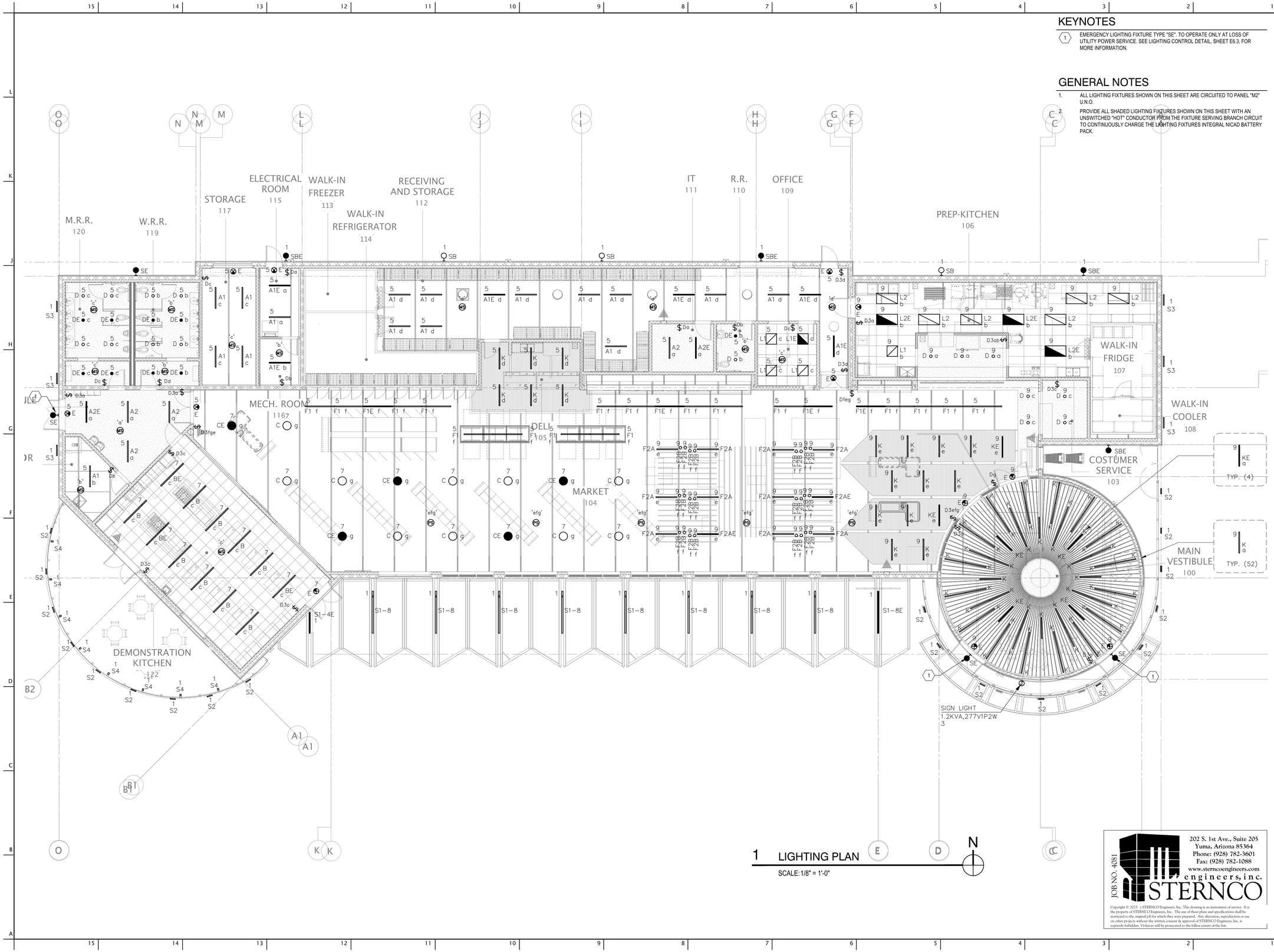
KEYNOTES

1. EMERGENCY LIGHTING FIXTURE TYPE "SE". TO OPERATE ONLY AT LOSS OF UTILITY POWER SERVICE. SEE LIGHTING CONTROL DETAIL, SHEET E6.3, FOR MORE INFORMATION.

GENERAL NOTES

1. ALL LIGHTING FIXTURES SHOWN ON THIS SHEET ARE CIRCUITED TO PANEL "M2" U.N.O.

   PROVIDE ALL SHADED LIGHTING FIXTURES SHOWN ON THIS SHEET WITH AN UNSWITCHED "HOT" CONDUCTOR FROM THE FIXTURE SERVING BRANCH CIRCUIT TO CONTINUOUSLY CHARGE THE LIGHTING FIXTURES INTEGRAL NICAD BATTERY PACK.



1 LIGHTING PLAN

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

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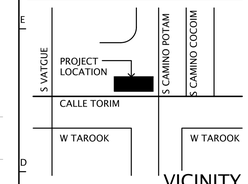

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SHEET TITLE

LIGHTING PLAN

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DATE 02.20.2024

SHEET **E3.1**

KEYNOTES

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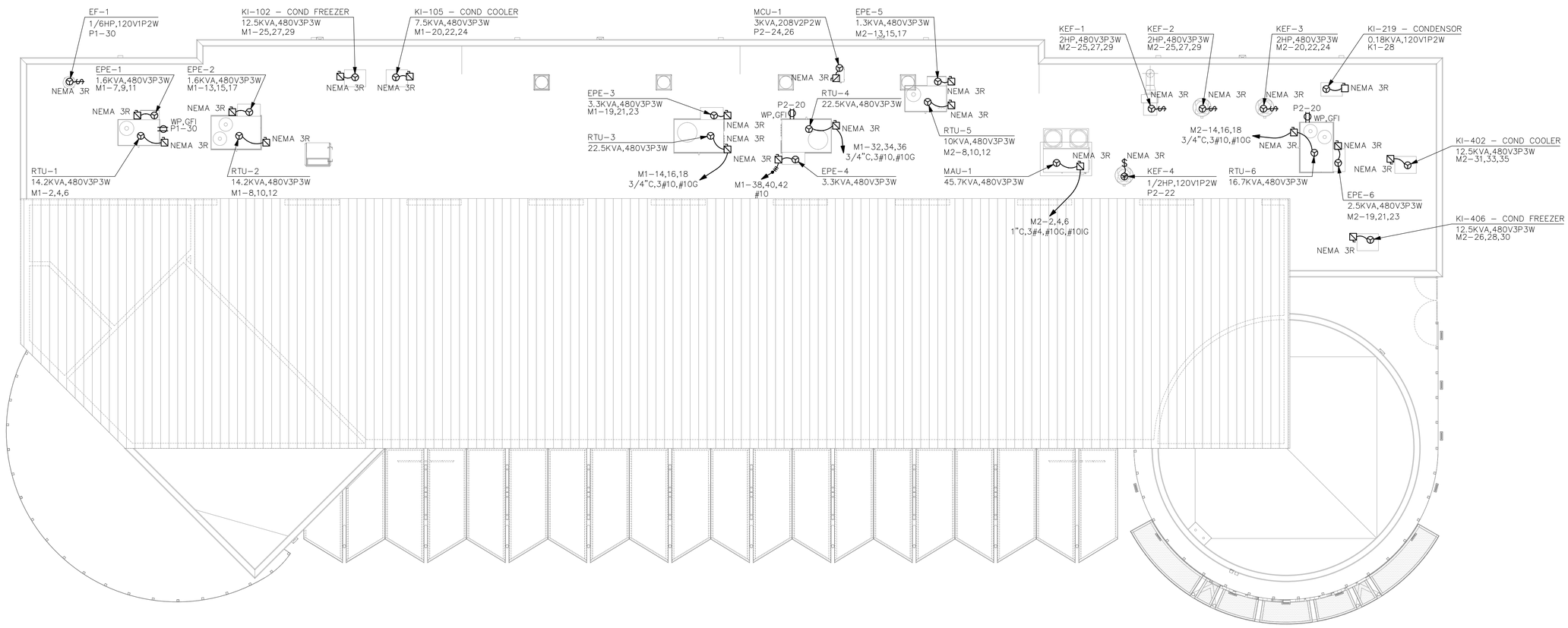

1 ROOF PLAN

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

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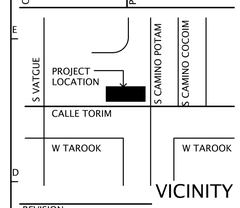

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SHEET TITLE

ROOF PLAN

DATE 02.20.2024

SHEET **E4.1**

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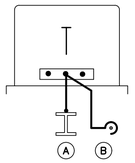
GROUNDING DIAGRAM



GROUND SIZE CHART

TRANSFORMER SIZE (KVA)	GROUND SIZE (Cu.)
9kVA	#8
15kVA	#8
30kVA	#8
45kVA	#4
75kVA	#2
112.5kVA	#1/0
150kVA	#2/0
300kVA	#3/0

TRANFORMER GROUNDING DIAGRAM

KEY NOTES - GROUNDING DIAGRAM

(A) BUILDING STEEL AND METAL BUILDING FRAME GROUNDING WIRE. REFER TO CHART FOR MINIMUM SIZE. IF NOT BUILDING STEEL IS PRESENT, INSTALL PER NOTE "B."

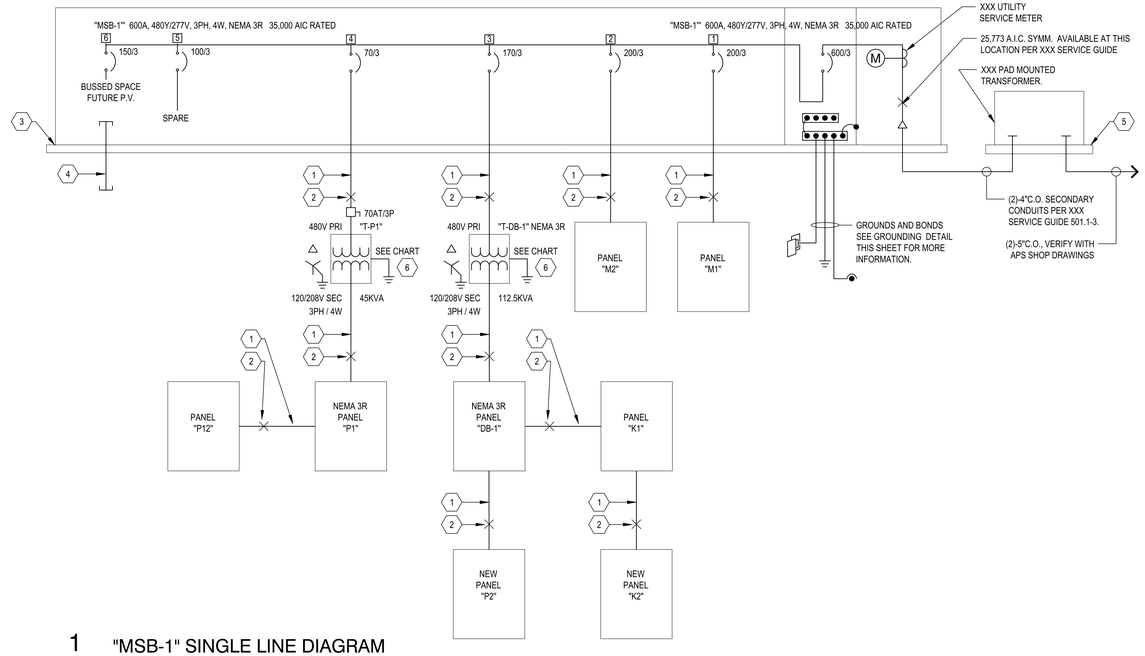
(B) WATER PIPING, SECURITY FENCING, NEW BUILDING GROUND RING, METAL BOLLARDS AND SUNSHADE STRUCTURE GROUNDING WIRE, REFER TO CHART FOR MINIMUM SIZE.

GENERAL NOTES - GROUNDING DIAGRAM

1. THIS DETAIL IS PROVIDED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE ARTICLES 250 AND 450 PERTAINING TO THE "GROUNDING ELECTRODE SYSTEM".
2. ANY VARIANCE FROM THIS DRAWING AND/OR SPECIFICATION MUST BE REQUESTED AND APPROVED IN WRITING PRIOR TO INSTALLATION.
3. ALL INSTALLATIONS SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF ARTICLE 250 AND 450 (ALL SUBPARAGRAPHS) OF THE NATIONAL ELECTRICAL CODE AND ALL STATE AND LOCAL CODE REQUIREMENTS.

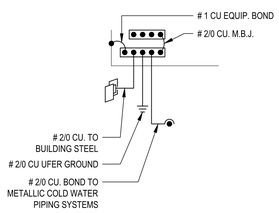
3 TRANSFORMER GROUNDING DIAGRAM

SCALE:NTS



1 "MSB-1" SINGLE LINE DIAGRAM

SCALE:NTS



2 "MSB-1" GROUNDING

SCALE:NTS

MSB-1

ROOM EXTERIOR
MOUNTING FLOOR
FED FROM UTILITY
NOTE NEW

VOLTS 480Y/277V 3P 4W
BUS AMPS 600
NEUTRAL 100%

AIC 35,000
MAIN BKR 600
LUGS STANDARD
ISO GND BUS

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	200/3	PANEL M1	39.5	39.5	36.2	2"C,3#3/0,#3/0N,#6G
2	225/3	PANEL M2	42.2	42.2	41.2	2-1/2"C,3#4/0,#4/0N,#4G
3	175/3	XFMR T-DB-1	36.5	37	37.3	1-1/2"C,3#2/0,#6G
4	125/3	XFMR T-P1	22.6	24	24.5	1-1/2"C,3#1/0,#4G
5	100/3	SPARE	0	0	0	
6	150/3	B.S. FUTURE P.V.	0	0	0	–
		TOTAL CONNECTED KVA BY PHASE	141	143	139	

	CONN KVA	CALC KVA	
LIGHTING	12.2	15.2	(125%)
LARGEST MOTOR	45.7	11.4	(25%)
MOTORS	285	285	(100%)

	CONN KVA	CALC KVA	
RECEPTACLES	22.9	16.5	(50%>10)
KITCHEN EQUIPMENT	101	65.8	(65%)
CONTINUOUS	1.2	1.5	(125%)
NONCONTINUOUS	0.4	0.4	(100%)
TOTAL LOAD		396	
BALANCED 3-PHASE LOAD		476 A	

FAULT CURRENT SCHEDULE

DEVICE	FAULT	AIC RATING	L-L VOLTS	FEEDER SIZE	FEEDER LENGTH	TRANSFORMER KVA	TRANSFORMER Z%	TRANSFORMER FAULT AT PRIMARY	MOTOR FAULT
MSB-1	27,114	35,000	480V	(2)#350kcmil					1,341
M1	12,801	14,000	480V	#3/0	165'				699
M2	19,040	22,000	480V	#4/0	76'				922
T-DB-1	12,410	14,000	208V	#2/0	18'	112.5	2	23,102	306
DB-1	12,147	22,000	208V	(2)#3/0	5'				301
K1	11,340	22,000	208V	#3/0	11'				262
K2	11,149	22,000	208V	#1	2'				253
P2	10,220	22,000	208V	#1/0	23'				266
T-P1	8,622	14,000	208V	#1/0	172'	75	1.75	9,531	445
P1	8,521	10,000	208V	#4/0	2'-10"				444
P12	8,380	10,000	208V	#1	2'-3"				433

FEEDER SCHEDULE

FEEDER AMPS	CONDUIT AND FEEDER	FEEDING THESE DEVICES
100	1-1/2"C,3#1,#1N,#8G	K2, P12
125	1-1/2"C,3#1/0,#1/0N,#6G	P2
150	1-1/2"C,3#1/0,#4G	T-P1
175	1-1/2"C,3#2/0,#6G	T-DB-1
200	2"C,3#3/0,#3/0N,#6G	K1, M1
225	2-1/2"C,3#4/0,#4/0N,#4G	M2
225	2-1/2"C,3#4/0,#4/0N,#2G	P1
400	(2)2"C,3#3/0,#3/0N,#2G	DB-1

SIZING METHOD: COPPER, 60°C #12 THROUGH #1, 75°C 1/0 AND ABOVE

VOLTAGE DROP SCHEDULE

DEVICE	FEEDER VOLTAGE DROP	FEEDER WIRE SIZE	BRANCH CIRCUIT MAX VOLTAGE DROP	BRANCH CIRCUIT WIRE SIZE	TOTAL VOLTAGE DROP
M1	0.76%	#3/0	1.01% (CKT 32,34,36)	#10	1.77%
M2	0.34%	#4/0	0.79% (CKT 31,33,35)	#12	1.13%
T-DB-1	1.55%	#2/0	–	–	1.55%
DB-1	1.59%	(2)#3/0	–	–	1.59%
K1	1.71%	#3/0	2.41% (CKT 6)	#12	4.12%
K2	1.72%	#1	0.79% (CKT 8,10,12)	#8	2.52%
P2	1.83%	#1/0	2.75% (CKT 28)	#12	4.59%
T-P1	*2.12%*	#1/0	–	–	2.12%
P1	*2.15%*	#4/0	2.8% (CKT 34)	#12	4.95%
P12	*2.17%*	#1	*3.17% (CKT 1)*	#12	*5.34%*
			P12-1: 3.17%	#12	

KEYNOTES

1. SEE FEEDER SCHEDULE, THIS SHEET, FOR CONDUIT AND CONDUCTOR REQUIREMENTS.
2. SEE FAULT CURRENT CALCULATIONS, THIS SHEET, FOR AVAILABLE FAULT CURRENT AT THIS LOCATION.
3. PROVIDE AND INSTALL SWITCHGEAR 3" HOUSEKEEPING PAD PRIOR TO ROUGH IN. PROVIDE PAD TO MATCH SWITCHGEAR FOOTPRINT +1" ON ALL SIDES. ENSURE METER HEIGHT AND CLEAR WORKING SPACE IN FRONT OF SWITCHGEAR IS IN COMPLIANCE WITH ELECTRICAL UTILITY SERVICE GUIDE REQUIREMENTS PRIOR TO ALL ROUGH IN.
4. STUB 2-2"C.O. WITH PULL ROPE FROM "MSB-1" AS SHOWN FOR FUTURE PV. ROUTE CONDUIT TO ARCHITECTURAL DESIGNATED AREA FOR FUTURE PV. VERIFY LOCATION WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH IN.
5. PROVIDE AND INSTALL UTILITY TRANSFORMER HOUSEKEEPING PAD PER UTILITY SHOP DRAWINGS AND UTILITY SERVICE GUIDE REQUIREMENTS.
6. PROVIDE AND INSTALL 3" TRANSFORMER HOUSEKEEPING PAD MAX. +1" LARGER THAN EQUIPMENT FOOTPRINT.

GENERAL NOTES

1. ALL CONDUCTORS FOR THIS PROJECT SHALL BE COPPER.
2. INSULATION FOR CONDUCTORS SHALL BE "THWN / THHN", 75C.
3. THE ELECTRICAL DISTRIBUTION SYSTEM SHOWN ON THIS SHEET IS A FULLY RATED SYSTEM. SERIES RATING OR DEVICE DE-RATING WILL NOT BE ACCEPTED.
4. EACH BRANCH CIRCUIT THAT SUPPLIES THAT SUPPLIES NON-LINEAR LOADS, TO INCLUDE COMPUTERS, COMMUNICATIONS RACKS, VFD'S, ETC. SHALL HAVE A DEDICATED NEUTRAL.
5. MULTI-WIRE BRANCH CIRCUITS FOR GENERAL LOADS CAN INCLUDE UP TO THREE PHASE CONDUCTORS WITH A SHARED NEUTRAL IF AN IDENTIFIED HANDLE TIE IS PROVIDED TO A SIMULTANEOUSLY DISCONNECT ALL SINGLE POLE CIRCUIT BREAKERS THAT SUPPLY INDIVIDUAL PHASE CONDUCTORS OF THE MULTI-WIRE CIRCUIT.

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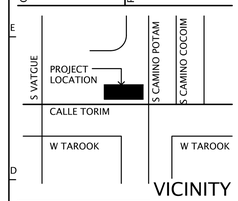

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

PROJECT NO. 23C-001

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SHEET TITLE

SINGLE LINE DIAGRAM AND CALCULATIONS

DATE 02.20.2024

SHEET

E5.1

P2

ROOM RECEIVING AND STORAGE 108
MOUNTING FLUSH
FED FROM DB-1
NOTE NEW

VOLTS 208Y/120V 3P 4W
BUS AMPS 125
NEUTRAL 100%

AIC 22,000
MAIN BKR 125
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	RECEPTACLE	0.36			2	20/1	KI-400 – LIGHTS	1.4		
3	20/1	RECEPTACLE		0.36		4	20/1	RECEPTACLE		0.9	
5	20/1	RECEPTACLE			0.36	6	20/1	POWER DOOR			1.06
7	20/1	RECEPTACLE	0.36			8	20/1	POWER DOOR	1.06		
9	20/1	SECURITY PANEL		0.1		10	20/1	RECEPTACLE		0.9	
11	20/1	DDC CONTROL			0.1	12	20/1	RECEPTACLE			1.08
13	20/1	FACP	0.1			14	20/1	RECEPTACLE	0.72		
15	20/1	CCTV PANEL		0.1		16	20/1	POS		0.9	
17	20/1	SPARE			0	18	20/1	POS			0.9
19	20/1	MOTORIZED DOOR	1.66			20	20/1	RECEPTACLE	0.36		
21	20/1	RECEPTACLE		0.9		22	20/1	KEF-4		1.18	
23	20/1	RECEPTACLE			0.9	24	20/2	MCU-1, MFC-1			1.55
25	20/1	BEVERAGE COOLER	1.2			26	|		1.55		
27	20/1	BEVERAGE COOLER		1.2		28	20/1	MOTORIZED DOOR		1.66	
29	30/2	ICE MACHINE			2.5	30	20/1	30E SERIES RECEP			1.72
31	|		2.5			32	20/1	30E SERIES RECEP	1.72		
33	20/1	30E SERIES RECEP		1.72		34	20/1	30E SERIES RECEP		1.72	
35	20/1	SPARE			0	36	20/1	30E SERIES RECEP			1.72
37	20/1	SPARE	0			38	20/1	SPARE	0		
39	20/1	SPARE		0		40	20/1	SPARE		0	
41	20/1	SPARE			0	42	20/1	SPARE			0
								TOTAL CONNECTED KVA BY PHASE	13	11.6	11.9

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	1.4	1.75	(125%)	RECEPTACLES	9	9	(50%>10)
LARGEST MOTOR	5	1.25	(25%)	KITCHEN EQUIPMENT	8.58	6.01	(70%)
MOTORS	17.1	17.1	(100%)	NONCONTINUOUS	0.4	0.4	(100%)
				TOTAL LOAD		35.5	
				BALANCED 3-PHASE LOAD		98.6 A	

P1

ROOM ELECTRICAL ROOM 116
MOUNTING SURFACE
FED FROM T-P1
NOTE NEW

VOLTS 208Y/120V 3P 4W
BUS AMPS 225
NEUTRAL 100%

AIC 10,000
MAIN BKR 225
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	RECEPTACLE	0.9			2	20/1	POS	0.9		
3	20/1	KI-100 – LIGHTS		1.4		4	20/1	RECEPTACLE		0.54	
5	20/1	BEVERAGE COOLER			1.2	6	20/1	COFFEE			0.18
7	20/1	EDF	0.9			8	20/1	MICRO	1.4		
9	20/1	KI-100 – LIGHTS		1.4		10	40/2	OVEN		3.75	
11	20/1	RECEPTACLE			0.9	12	|				3.75
13	20/1	GWH-1, HWC	0.7			14	20/1	DISH WASHER (DW)	1.4		
15	20/1	MOTORIZED DOOR		1.66		16	20/1	DISPOSER		1.4	
17	20/1	HAND DRYER			1.2	18	20/1	REFRIG			1.4
19	20/1	HAND DRYER	1.2			20	20/1	RANGE IGNITER	0.25		
21	20/1	HAND DRYER		1.2		22	20/1	RANGE IGNITER		0.25	
23	20/1	HAND DRYER			1.2	24	20/1	KH-5, KH-6			1.2
25	20/3	KRATOS FREEZER	1.43			26	20/1	RECEPTACLE	0.9		
27	|			1.43		28	20/1	RECEPTACLE		0.9	
29	|				1.43	30	20/1	EF-1, RECEPTACLE			0.708
31	20/3	KRATOS FREEZER	1.43			32	20/1	RECEPTACLE	0.36		
33	|			1.43		34	20/1	REFRIG		1.4	
35	|				1.43	36	20/1	SPARE			0
37	100/3	PANEL P12	10.4			38	20/1	SPARE	0		
39	|			9.15		40	20/1	SPARE		0	
41	|				8.43	42	20/1	SPARE			0
								TOTAL CONNECTED KVA BY PHASE	22.1	25.9	23

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	2.8	3.5	(125%)	MOTORS	35.9	35.9	(100%)
LARGEST MOTOR	4.3	1.08	(25%)	RECEPTACLES	9.72	9.72	(50%>10)
				KITCHEN EQUIPMENT	22.7	14.7	(65%)
				TOTAL LOAD		64.9	
				BALANCED 3-PHASE LOAD		180 A	

P12

ROOM ELECTRICAL ROOM 116
MOUNTING SURFACE
FED FROM P1
NOTE NEW

VOLTS 208Y/120V 3P 4W
BUS AMPS 100
NEUTRAL 100%

AIC 10,000
MAIN BKR MLO
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	40E SERIES RECEP	1.92			2	20/1	CORD REEL	0.75		
3	20/1	40E SERIES RECEP		1.92		4	20/1	CORD REEL		0.75	
5	20/1	SIM4AA RECEP			1.2	6	20/1	CORD REEL			0.75
7	20/1	SIM4AA RECEP	1.2			8	20/1	CORD REEL	0.75		
9	20/1	SPARE		0		10	20/1	CORD REEL		0.75	
11	20/1	SPARE			0	12	20/1	CORD REEL			0.75
13	20/3	SPARE	0			14	20/3	KRATOS FREEZER	1.43		
15	|			0		16	|			1.43	
17	|				0	18	|				1.43
19	20/3	KRATOS FREEZER	1.43			20	20/3	KRATOS FREEZER	1.43		
21	|			1.43		22	|			1.43	
23	|				1.43	24	|				1.43
25	20/3	KRATOS FREEZER	1.43			26	20/1	SPARE	0		
27	|			1.43		28	20/1	SPARE		0	
29	|				1.43	30	20/1	SPARE			0
								TOTAL CONNECTED KVA BY PHASE	10.4	9.15	8.43

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	4.3	1.08	(25%)	RECEPTACLES	4.5	4.5	(50%>10)
MOTORS	17.2	17.2	(100%)	KITCHEN EQUIPMENT	6.24	4.06	(65%)
				TOTAL LOAD		26.8	
				BALANCED 3-PHASE LOAD		74.5 A	

KEYNOTES

1. DENOTES LIGHTING CIRCUIT ROUTED VIA LIGHTING CONTROL PANEL "LCP-1". SEE "LCP-1" WITING DIAGRAM AND SCHEDULE FOR MORE INFORMATION.
2. PROVIDE AND INSTALL THIS CIRCUIT BREAKER WITH A "BLACK" LOCK-ON DEVICE.
3. PROVIDE AND INSTALL THIS CIRCUIT BREAKER WITH A "RED" LOCK-ON DEVICE.

GENERAL NOTES

1. NOT USED.

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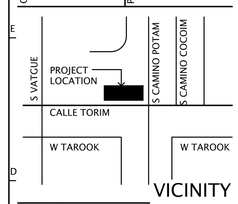

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

PROJECT NO. 23C-001

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SHEET TITLE

PANEL SCHEDULES

DATE 02.20.2024

SHEET **E5.2**

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M1

ROOM ELECTRICAL ROOM 116
MOUNTING SURFACE
FED FROM MSB-1
NOTE NEW

VOLTS 480Y/277V 3P 4W
BUS AMPS 200
NEUTRAL 100%

AIC 14,000
MAIN BKR MLO
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/3	BP	1.83			2	20/3	RTU-1	4.73		
3	|			1.83		4	|			4.73	
5	|				1.83	6	|				4.73
7	15/3	EPE-1	0.533			8	20/3	RTU-2	4.73		
9	|			0.533		10	|			4.73	
11	|				0.533	12	|				4.73
13	15/3	EPE-2	0.533			14	30/3	RTU-3	7.5		
15	|			0.533		16	|			7.5	
17	|				0.533	18	|				7.5
19	15/3	EPE-3	1.1			20	40/3	KI-105 – COND COOLER	2.5		
21	|			1.1		22	|			2.5	
23	|				1.1	24	|				2.5
25	40/3	KI-102 – COND FREEZER	4.17			26	20/2	KI-104 – EVAP COOLER	0.65		
27	|			4.17		28	|			0.65	
29	|				4.17	30	20/1	SPARE			0
31	20/2	KI-101 – EVAP FREEZER	2.6			32	30/3	RTU-4	7.5		
33	|			2.6		34	|			7.5	
35	20/1	SPARE			0	36	|				7.5
37	20/1	SPARE	0			38	15/3	EPE-4	1.1		
39	20/1	SPARE		0		40	|			1.1	
41	20/1	SPARE			0	42	|				1.1
								TOTAL CONNECTED KVA BY PHASE	39.5	39.5	36.2

	CONN KVA	CALC KVA			CALC KVA
LARGEST MOTOR	22.5	5.63	(25%)	TOTAL LOAD	121
MOTORS	115	115	(100%)	BALANCED 3-PHASE LOAD	145 A

K1

ROOM RECEIVING AND STORAGE 108
MOUNTING SURFACE
FED FROM DB-1
NOTE NEW

VOLTS 208Y/120V 3P 4W
BUS AMPS 200
NEUTRAL 100%

AIC 22,000
MAIN BKR 200
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	KI-502 – DISPLAY REFRIG	1.5			2	20/1	KI-321 – MICRO	1.6		
3	30/2	KI-503 – HEATED DISP.		2.5		4	20/1	KI-322A – BLENDER		1.8	
5	|				2.5	6	20/1	KI-322B – BLENDER			1.8
7	20/1	KI-501 – REFRIG	0.4			8	20/1	KI-323 – PACKAGE	1.2		
9	20/1	KI-310A – HEAT CAB		1.9		10	20/1	RECEPTACLE		1	
11	20/1	KI-310B – HEAT CAB			1.9	12	20/1	RECEPTACLE			1
13	20/1	RECEPTACLE	1			14	20/3	KI-316 – MIXER	1.07		
15	20/1	RECEPTACLE		1		16	|			1.07	
17	20/1	KI-315 – MICRO			1.6	18	|				1.07
19	20/3	KI-303 – DISPOSER	0.6			20	20/2	KI-218 – ICE MAKER	1.25		
21	|			0.6		22	|			1.25	
23	|				0.6	24	20/1	RECEPTACLE			0.18
25	50/3	KI-305 – DISHWASHER	5.93			26	20/1	KI-223 – SLICER	0.6		
27	|			5.93		28	20/1	KI-219 – CONDENSOR		0.18	
29	|				5.93	30	20/1	SPARE			0
31	20/1	SPARE	0			32	20/1	SPARE	0		
33	20/1	SPARE		0		34	20/1	SPARE		0	
35	20/1	SPARE			0	36	20/1	SPARE			0
37	20/1	SPARE	0			38	100/3	PANEL K2	8.13		
39	20/1	SPARE		0		40	|			8.89	
41	20/1	SPARE			0	42	|				8.33
								TOTAL CONNECTED KVA BY PHASE	23.3	26.1	24.9

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	0.18	0.045	(25%)	RECEPTACLES	4.18	4.18	(50%>10)
MOTORS	0.18	0.18	(100%)	KITCHEN EQUIPMENT	70	45.5	(65%)
				TOTAL LOAD		49.9	
				BALANCED 3-PHASE LOAD		138 A	

M2

ROOM RECEIVING AND STORAGE 108
MOUNTING FLUSH
FED FROM MSB-1
NOTE NEW

VOLTS 480Y/277V 3P 4W
BUS AMPS 225
NEUTRAL 100%

AIC 22,000
MAIN BKR MLO
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	LIGHTING, SITE POLE LIGHTING	1.36			2	60/3	MAU-1	15.2		
3	20/1	SIGN LIGHT		1.2		4	|			15.2	
5	20/1	LIGHTING			2.35	6	|				15.2
7	20/1	LIGHTING	2.1			8	15/3	RTU-5	3.33		
9	20/1	LIGHTING		2.2		10	|			3.33	
11	20/1	LCP-1			0.1	12	|				3.33
13	15/3	EPE-5	0.433			14	25/3	RTU-6	5.57		
15	|			0.433		16	|			5.57	
17	|				0.433	18	|				5.57
19	15/3	EPE-6	0.833			20	20/3	KEF-3	0.942		
21	|			0.833		22	|			0.942	
23	|				0.833	24	|				0.942
25	20/3	KEF-1, KEF-2	1.88			26	40/3	KI-406 – COND FREEZER	4.17		
27	|			1.88		28	|			4.17	
29	|				1.88	30	|				4.17
31	20/3	KI-402 – COND COOLER	4.17			32	20/3	KI-401 – EVAP COOLER, KI-405 – EVAP FREEZER	2.23		
33	|			4.17		34	|			2.23	
35	|				4.17	36	|				2.23
37	20/1	SPARE	0			38	20/1	SPARE	0		
39	20/1	SPARE		0		40	20/1	SPARE		0	
41	20/1	SPARE			0	42	20/1	SPARE			0
								TOTAL CONNECTED KVA BY PHASE	42.3	42.2	41.2

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	8.01	10	(125%)	MOTORS	116	116	(100%)
LARGEST MOTOR	45.7	11.4	(25%)	CONTINUOUS	1.2	1.5	(125%)
				TOTAL LOAD		139	
				BALANCED 3-PHASE LOAD		168 A	

K2

ROOM RECEIVING AND STORAGE 108
MOUNTING SURFACE
FED FROM K1
NOTE NEW

VOLTS 208Y/120V 3P 4W
BUS AMPS 100
NEUTRAL 100%

AIC 22,000
MAIN BKR 100 ← (1)
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	KI-206 – OVEN	0.1			2	40/3	KI-214A – KETTLE	3.97		
3	20/1	KI-208 – COMBI OVEN		0.96		4	|			3.97	
5	20/1	KI-211 – REFRIG			0.4	6	|				3.97
7	20/1	KI-212 – OVEN	0.1			8	40/3	KI-214B – KETTLE	3.97		
9	20/1	SPARE		0		10	|			3.97	
11	20/1	SPARE			0	12	|				3.97
13	20/1	SPARE	0			14	20/1	SPARE	0		
15	20/1	SPARE		0		16	20/1	SPARE		0	
17	20/1	SPARE			0	18	20/1	SPARE			0
								TOTAL CONNECTED KVA BY PHASE	8.13	8.89	8.33

	CONN KVA	CALC KVA			CALC KVA
KITCHEN EQUIPMENT	25.4	23.8	(LARGEST 2)	TOTAL LOAD	23.8
				BALANCED 3-PHASE LOAD	66.1 A

KEYNOTES

(1) PROVIDE AND INSTALL A SHUNT TRIP TYPE MAIN CIRCUIT BREAKER FOR INTERFACE WITH FIRE SUPPRESSION "ANSUL" SYSTEM.

GENERAL NOTES

1. NOT USED.

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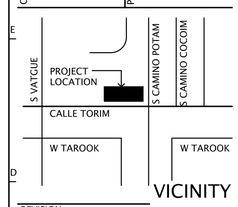

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

PROJECT NO. 23C-001

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SHEET TITLE

PANEL SCHEDULES

DATE 02.20.2024

SHEET **E5.3**

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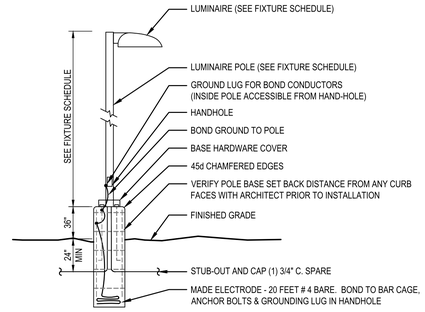
LIGHTING FIXTURE SCHEDULE

CALLOUT	SYMBOL	LAMP	DESCRIPTION	MOUNTING	MODEL	INPUT WATTS	VOLTS
8' Linear EM		(1)		CEILING		64	120V 1P 2W
A1		LED / 3000K	2" WIDE X 3.25" HIGH X 4' LONG LED SUSPENDED LINEAR WITH SATIN ACRYLIC LENS, 80 CRI, INTEGRAL 0–10V 1% DIMMING DRIVER. 6.5 WATTS PER FOOT, 120–277V	PENDANT MOUNTED AT 10'–0" A.F.F.	PRUDENTIAL LIGHTING BOLT–PRO–LED3–MO–4'–SAL–YSL–UNV–CA48"–X3–DM01	26	277V 1P 2W
A1E		LED / 3000K	SAME AS TYPE "A1" EXCEPT PROVIDE WITH INTEGRAL 90–MIN NICAD BATTERY PACK RATED AT 1200 LU MIN.	PENDANT MOUNTED AT 10'–0" A.F.F.	PRUDENTIAL LIGHTING BOLT–PRO–LED3–MO–4'–SAL–YSL–UNV–CA48"–X3–DM01–EMHE	26	277V 1P 2W
A2		LED / 3000K	2" WIDE X 3.25" HIGH X 4' LONG LED SURFACE MOUNTED LINEAR WITH SATIN ACRYLIC LENS, 80 CRI, INTEGRAL 0–10V 1% DIMMING DRIVER. 6.5 WATTS PER FOOT, 120–277V	SURFACE CEILING	PRUDENTIAL LIGHTING BOLT–PRO–LED3–MO–4'–SAL–YSL–UNV–SUR–X3–DM01	26	277V 1P 2W
A2E		LED / 3000K	SAME AS TYPE "A2" EXCEPT PROVIDE WITH INTEGRAL 90–MIN NICAD BATTERY PACK RATED AT 1200 LU MIN.	SURFACE CEILING	PRUDENTIAL LIGHTING BOLT–PRO–LED3–MO–4'–SAL–YSL–UNV–SUR–X3–DM01–EMHE	26	277V 1P 2W
B		LED / 3000K	3.25" WIDE X 1.76" HIGH X 6' LONG LED RECESSED LINEAR, 90+ CRI, INTEGRAL 0–10V 1% DIMMING DRIVER. 120–277V	RECESSED	VODE LIGHTING 807–NX3–RS–6'–72– –0–IP–AE–2–0–Z–SO–309–CE–0–AL–0	39.6	277V 1P 2W
BE		LED / 3000K	SAME AS TYPE "B" EXCEPT PROVIDE AND INSTALL REMOTE 90–MINUTE NICAD BATTERY PACK WITH MINIMUM 1400 LUMEN OUTPUT. MOUNT TO ADJACENT STRUCTURE IN AN ACCESSIBLE MANNER. PROVIDE WITH RED ILLUMINATED TEST SWITCH.	RECESSED	VODE LIGHTING 807–NX3–RS–6'–72– –0–IP–AE–2–0–Z–SO–309–CE–0–AL–0	39.6	277V 1P 2W
C		LED / 3000K	19" DIAMETER X 11" HIGH LED DIRECT/INDIRECT STEM MOUNTED PENDANT WITH SEMI OPAQUE DOUBLE LAYER LENS, 80 CRI, INTEGRAL 0–10V 10% DIMMING DRIVER. VERIFY STEM LENGTH. 108 WATTS, 120–277V	PENDANT MOUNTED AT 10'–0" A.F.F.	LUMINIS HC1600–L4L90–277V–BKT–K3SPG–15FT	108	277V 1P 2W
CE		LED / 3000K	SAME AS TYPE "C" EXCEPT PROVIDE WITH INTEGRAL 90–MIN NICAD BATTERY PACK RATED AT 1200 LU MIN.	PENDANT MOUNTED AT 10'–0" A.F.F.	LUMINIS HC1600–L4L90–277V–BKT–EMLC4–K3–SPG–15FT	108	277V 1P 2W
D		LED / 3000K	6" DIAMETER LED RECESSED DOWNLIGHT WITH SEMI SPECULAR CLEAR REFLECTOR, 80+ CRI, INTEGRAL 0–10V 10% DIMMING DRIVER. 10.4 WATTS, 120–277V	RECESSED	LITHONIA LIGHTING LDN6–30/10–L06–AR–LSS–TRW–MVOLT–GZ10	10.4	277V 1P 2W
DE		LED / 3000K	SAME AS TYPE "D" EXCEPT PROVIDE WITH INTEGRAL 90–MIN NICAD BATTERY PACK RATED AT 1200 LU MIN.	RECESSED	LITHONIA LIGHTING LDN6–30/10–L06–AR–LSS–TRW–MVOLT–GZ10–E10WCP	10.4	277V 1P 2W
E		LED	EDGE – LIT EXIT SIGN WITH WHITE HOUSING AND GREEN LETTERS WITH ARROWS AND FACES PER PLANS.	SURFACE	LITHONIA LRP–W–PER PLAN–GC/GMR–PER PLAN–120/277–ELN	3	277V 1P 2W
F1		LED / 3000K	11' TRUNKING SYSTEM WITH LED LINEAR INSERTS AND WIDE BEAM OPTIC, 80+ CRI, 0–10V DIMMING. PROVIDE ALL PARTS AND PIECES FOR A COMPLETE, WORKING SYSTEM. 104 WATTS, 120–277V	PENDANT MOUNTED AT 10' A.F.F.	NORDEON BT–7W–11–BL + BL–6–3000K–UNV–WB–5.5–BL–DIM–0–10V–BMB–AIR–SS–BSC–15 FT	57	277V 1P 2W
F1E		LED / 3000K	SAME AS TYPE "F1" EXCEPT PROVIDE WITH INTEGRAL 90–MIN NICAD BATTERY PACK RATED AT 1200 LU MIN.	PENDANT MOUNTED AT 10' A.F.F.	NORDEON BT–7W–11–BL + BLE–6–3000K–UNV–WB–5.5–BL–DIM–0–10V–BMB–AIR–SS–BSC–15 FT	57	277V 1P 2W
F2A		LED / 3000K	11' TRUNKING SYSTEM INCLUDING LED LINEAR INSERTS WITH WIDE BEAM OPTIC AND ACCENT FIXTURES WITH 45 DEGREE OPTICS, 80+ CRI, 0–10V DIMMING. PROVIDE ALL PARTS AND PIECES FOR A COMPLETE, WORKING SYSTEM. 104 WATTS, 150–277V	PENDANT MOUNTED AT 10' A.F.F.	NORDEON BT–7W–11–BL + (2)BL–4–3000K–UNV–WB–3.7–BL–DIM + (2)SKE2–45W–UNV–940–WB–BL–DIM–0–10V BMB–AIR–SS–BSC–15 FT	37	277V 1P 2W
F2AE		LED / 3000K	SAME AS TYPE "F2A" EXCEPT PROVIDE WITH INTEGRAL 90–MIN NICAD BATTERY PACK RATED AT 1200 LU MIN.	PENDANT MOUNTED AT 10' A.F.F.	NORDEON BT–7W–11–BL + (2)BLE–4–3000K–UNV–WB–3.7–BL–DIM + (2)SKE2–45W–UNV–940–WB–BL–DIM–0–10V–BMB–AIR–SS–BSC–15 FT	37	277V 1P 2W
F2B		LED / 3000K	11' TRUNKING SYSTEM INCLUDING LED LINEAR INSERTS WITH WIDE BEAM OPTIC AND ACCENT FIXTURES WITH 45 DEGREE OPTICS, 80+ CRI, 0–10V DIMMING. PROVIDE ALL PARTS AND PIECES FOR A COMPLETE, WORKING SYSTEM. 104 WATTS, 150–277V	PENDANT MOUNTED AT 10' A.F.F.	NORDEON BT–7W–11–BL + (2)BL–4–3000K–UNV–WB–3.7–BL–DIM + (2)SKE2–38W–UNV–940–WB–BL–DIM–0–10V–BMB–AIR–SS–BSC–15 FT	19	277V 1P 2W
K		LED / 3000K	1.3125" WIDE X 2.25" HIGH X 4' LED WOOK CEILING INTEGRATED LINEAR LUMINAIRE WITH FLAT LENS, 80 CRI, INTEGRAL 0–10V 1% DIMMING DRIVER. 16.4 WATTS, 120–277V	RECESSED	AXIS LIGHTING SL1–4'– SO–400–80–30– –UNV–DP–1–UWB	12.3	277V 1P 2W
KE		LED / 3000K	SAME AS TYPE "K" EXCEPT PROVIDE AND INSTALL REMOTE 90–MINUTE NICAD BATTERY PACK WITH MINIMUM 1400 LUMEN OUTPUT. MOUNT TO ADJACENT STRUCTURE IN AN ACCESSIBLE MANNER. PROVIDE WITH RED ILLUMINATED TEST SWITCH.	RECESSED	AXIS LIGHTING SL1–4'– SO–400–80–30– –UNV–DP–1–UWB	12.3	277V 1P 2W

LIGHTING FIXTURE SCHEDULE (CONT.)

CALLOUT	SYMBOL	LAMP	DESCRIPTION	MOUNTING	MODEL	INPUT WATTS	VOLTS
L1		LED / 3500K	2' X 2' LED RECESSED FLAT PLANEL WITH ANTI–MICROBIAL PAINT, 80 CRI, 0–10V 10% DIMMING DRIVER. 36.3 W, 120–277V	GRID	LITHONIA LIGHTING CPX–2X2–4000LM–80CRI–35K–SWL–MIN10–ZT–MVOLT–DWAM	36.3	277V 1P 2W
L2		LED / 3500K	2' X 4' LED RECESSED FLAT PLANEL WITH ANTI–MICROBIAL PAINT, 80 CRI, 0–10V 10% DIMMING DRIVER. 36.7 W, 120–277V	GRID	LITHONIA LIGHTING CPX–2X4–4000LM–80CRI–35K–SWL–MIN10–ZT–MVOLT–DWAM	36.7	277V 1P 2W
L2E		LED / 3500K	SAME AS TYPE "L2" EXCEPT PROVIDE WITH INTEGRAL 90–MIN NICAD BATTERY PACK RATED AT 1200 LU MIN.	GRID	LITHONIA LIGHTING CPX–2X4–4000LM–80CRI–35K–SWL–MIN10–ZT–MVOLT–E10WLCP–DWAM	36.7	277V 1P 2W
S1–4		LED / 3000K	3.7" WIDE X 3.8" HIGH X 4' LENGTH LED WET LOCATION SURFACE MOUNT LINEAR WITH END POWER FEED, 80 CRI, INTEGRAL 0–10V 1% DIMMING DRIVER. 4.7 WATTS PER FOOT, 120–277V	IN–GRADE	PINNACLE LIGHTING EX3–WET–N–830–4'–IND–S–U–FSD–1–0–BR–EPF	18.8	MULTIPLE
S1–4E		LED / 3000K	SAME AS TYPE "S1–4" EXCEPT PROVIDE WITH INTEGRAL 90–MIN NICAD BATTERY PACK RATED AT 1200 LU MIN.	SURFACE	PINNACLE LIGHTING EX3–WET–N–830–4'–IND–S–U–FSD–1–FSB–BR–EPF	18.8	277V 1P 2W
S1–8		LED / 3000K	3.7" WIDE X 3.8" HIGH X 8' LENGTH LED WET LOCATION SURFACE MOUNT LINEAR WITH END POWER FEED, 80 CRI, INTEGRAL 0–10V 1% DIMMING DRIVER. 4.7 WATTS PER FOOT, 120–277V	SURFACE	PINNACLE LIGHTING EX3–WET–N–830–4'–IND–S–U–FSD–1–0–BR–EPF	37.6	277V 1P 2W
S1–8E		LED / 3000K	SAME AS TYPE "S1–8" EXCEPT PROVIDE WITH INTEGRAL 90–MIN NICAD BATTERY PACK RATED AT 1200 LU MIN.	SURFACE	PINNACLE LIGHTING EX3–WET–N–830–8'–IND–S–U–FSD–1–0–BR–FSB–EPF	37.6	277V 1P 2W
S2		LED / 3000K	15.375" LONG X 4.625" WIDE X 5" HIGH LED WET LOCATION (IP68) RECESSED LINEAR IN–GRADED LUMINAIRE WITH WALL GRAZE OPTIC AND GLARE SHIELD, 80 CRI, 0–10V DIMMING DRIVER. 13.4 WATTS, 130–277V	IN–GRADE	VISTAPRO 1141–GB–WG–30–A–MV–010–GS	13.4	277V 1P 2W
S3		LED / 3000K	26.375" LONG X 4.625" WIDE X 5" HIGH LED WET LOCATION (IP68) RECESSED LINEAR IN–GRADED LUMINAIRE WITH WALL GRAZE OPTIC AND GLARE SHIELD, 80 CRI, 0–10V DIMMING DRIVER. 35.6 WATTS, 130–277V	IN–GRADE	VISTAPRO 1142–GB–WW–30–B–DV–010–GS	35.6	277V 1P 2W
S4		LED / 3000K	WALL LUMINAIRE WITH 3000K COLOR TEMPERATURE.	SURFACE MOUNTED AT 6'–0" A.F.F. TO B.O FIXTURE	BEGA B33514–MVOLT–K3–BRZ	3	277V 1P 2W
SA2		LED / 3000K	LED TWIN HEAD POLE LIGHTING FIXTURE WITH TYPE "T4M" OPTICS WITH BRONZE HOUSING COLOR AND BRONZE POLE COLOR ON 36" A.F.G. CONCRETE BASE WITH SQUARE STRAIGHT 22'–0" ALUMINUM POLE.	POLETOP AT +25' A.F.F.	LITHONIA FIXTURE HEAD DSX0–P4–30K–80CRI–T4M–MVOLT–SPA–DDBXD LITHONIA FIXTURE POLE SSA–22–6J–DM28AS–VD–FBC–DDBXD	186	MULTIPLE
SB		LED / 3000K	LED SURFACE WALL MOUNTED LIGHTING FIXTURE WITH TYPE "VW" WIDE OPTICS AND BRONZE HOUSING WITH 3000K COLOR TEMPERATURE.	SURFACE WALL AT +14' A.F.F.	LITHONIA WDGE1–LED–P2–30K–80CRI–VW–MVOLT–DDBXD	15	277V 1P 2W
SBE		LED / 3000K	SAME AS TYPE "SB" EXCEPT PROVIDE WITH INTEGRAL 90–MINUTE NICADE BATTERY PACK RATED AT 1200 LUMEN.	SURFACE WALL AT +14' A.F.F.	LITHONIA WDGE1–LED–P2–30K–80CRI–VW–MVOLT–DDBXD–E4WH	15	277V 1P 2W
SE		LED / 3000K	LED EMERGENCY WALL PACK WITH BRONZE FINISH AND 3000K COLOR TEMPERATURE.	SURFACE WALL MOUNTED AT 8'–0" A.F.F.	LITHONIA WPX0–LED–AL0–1–3000–MVOLT–DDBXD	6.4	MULTIPLE

NOTE:
LIGHT FIXTURE DETAIL SHOWN FOR SCHEMATIC PURPOSES ONLY. GENERAL CONTRACTOR SHALL OBTAIN FINAL, ENGINEERED POLE BASE DETAIL FROM POLE MANUFACTURER OR STRUCTURAL ENGINEER AND SUBMIT TO AHJ FOR APPROVAL PRIOR TO ANY WORK.



1 POLE BASE 'SA' AND 'SB' DETAIL

SCALE: NONE

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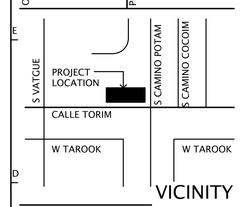

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

PROJECT NO. 23C-001

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SHEET TITLE

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DATE 02.20.2024

SHEET **E6.1**

KEYNOTES

1. NOT USED.

GENERAL NOTES

1. NOT USED.

ELECTRICAL EQUIPMENT SCHEDULE

CALLOUT	SYMBOL	NEMA	VOLTS	AMPS	KVA	HP	DISCONNECT	DISCONNECT FUSE SIZE	DISCONNECT FUSE TYPE
BEVERAGE COOLER			120V 1P 2W	10	1.2		JUNCTION BOX		
BEVERAGE COOLER			120V 1P 2W	10	1.2		JUNCTION BOX		
BEVERAGE COOLER			120V 1P 2W	10	1.2		JUNCTION BOX		
BP			480V 3P 3W	6.6	5.49		FUSED	15	RK5
EF-1		NEMA 3R	120V 1P 2W	4.4	0.53	1/6 HP	TOGGLE SWITCH		
EPE-1		NEMA 3R	480V 3P 3W	1.92	1.6		FUSED	15	RK5
EPE-2		NEMA 3R	480V 3P 3W	1.92	1.6		FUSED	15	RK5
EPE-3		NEMA 3R	480V 3P 3W	3.97	3.3		FUSED	15	RK5
EPE-4		NEMA 3R	480V 3P 3W	3.97	3.3		FUSED	15	RK5
EPE-5		NEMA 3R	480V 3P 3W	1.56	1.3		FUSED	15	RK5
EPE-6		NEMA 3R	480V 3P 3W	3.01	2.5		FUSED	15	RK5
FACP		NEMA 3R	120V 1P 2W	0.83	0.1		JUNCTION BOX		
GWH-1			120V 1P 2W	5	0.6		JUNCTION BOX		
HAND DRYER			120V 1P 2W	10	1.2		JUNCTION BOX		
HAND DRYER			120V 1P 2W	10	1.2		JUNCTION BOX		
HAND DRYER			120V 1P 2W	10	1.2		JUNCTION BOX		
HAND DRYER			120V 1P 2W	10	1.2		JUNCTION BOX		
HWC			120V 1P 2W	0.83	0.1	F HP	DUPLEX RECEPTACLE	20	
ICE MACHINE			208V 2P 2W	24.04	5		JUNCTION BOX		
KEF-1		NEMA 3R	480V 3P 3W	3.4	2.83	2 HP	TOGGLE SWITCH		
KEF-2		NEMA 3R	480V 3P 3W	3.4	2.83	2 HP	TOGGLE SWITCH		
KEF-3		NEMA 3R	480V 3P 3W	3.4	2.83	2 HP	TOGGLE SWITCH		
KEF-4		NEMA 3R	120V 1P 2W	9.8	1.18	1/2 HP	TOGGLE SWITCH		
KH-5			120V 1P 2W	5	0.6		DUPLEX RECEPTACLE		
KH-6			120V 1P 2W	5	0.6		DUPLEX RECEPTACLE		
KI-100 – LIGHTS			120V 1P 2W	11.67	1.4		JUNCTION BOX		
KI-100 – LIGHTS			120V 1P 2W	11.67	1.4		JUNCTION BOX		
KI-101 – EVAP FREEZER			480V 2P 2W	10.83	5.2		NON-FUSED		
KI-102 – COND FREEZER		NEMA 3R	480V 3P 3W	15.04	12.5		FUSED	40	RK5
KI-104 – EVAP COOLER			480V 2P 2W	2.71	1.3		NON-FUSED		
KI-105 – COND COOLER		NEMA 3R	480V 3P 3W	9.02	7.5		FUSED	40	RK5
KI-208 – COMBI OVEN			120V 1P 2W	8	0.96		JUNCTION BOX		
KI-214A – KETTLE			208V 3P 3W	33.03	11.9		JUNCTION BOX		
KI-214B – KETTLE			208V 3P 3W	33.03	11.9		JUNCTION BOX		
KI-218 – ICE MAKER			208V 2P 2W	12.02	2.5		JUNCTION BOX		
KI-219 – CONDENSOR		NEMA 3R	120V 1P 2W	1.5	0.18		NON-FUSED		
KI-303 – DISPOSER			208V 3P 3W	5	1.8		JUNCTION BOX		
KI-305 – DISHWASHER			208V 3P 3W	49.41	17.8		JUNCTION BOX		
KI-316 – MIXER			208V 3P 3W	8.88	3.2		JUNCTION BOX		
KI-400 – LIGHTS			120V 1P 2W	11.67	1.4		JUNCTION BOX		
KI-401 – EVAP COOLER			480V 3P 3W	1.8	1.5		JUNCTION BOX		
KI-402 – COND COOLER		NEMA 3R	480V 3P 3W	15.04	12.5		FUSED	20	RK5

ELECTRICAL EQUIPMENT SCHEDULE (CONT.)

CALLOUT	SYMBOL	NEMA	VOLTS	AMPS	KVA	HP	DISCONNECT	DISCONNECT FUSE SIZE	DISCONNECT FUSE TYPE
KI-405 – EVAP FREEZER			480V 3P 3W	6.25	5.2		JUNCTION BOX		
KI-406 – COND FREEZER		NEMA 3R	480V 3P 3W	15.04	12.5		FUSED	40	RK5
KI-503 – HEATED DISP.			208V 2P 2W	24.04	5		JUNCTION BOX		
KRATOS FREEZER			208V 3P 4W	11.94	4.3		SPECIAL RECEPTACLE		
KRATOS FREEZER			208V 3P 4W	11.94	4.3		SPECIAL RECEPTACLE		
KRATOS FREEZER			208V 3P 4W	11.94	4.3		SPECIAL RECEPTACLE		
KRATOS FREEZER			208V 3P 4W	11.94	4.3		SPECIAL RECEPTACLE		
KRATOS FREEZER			208V 3P 4W	11.94	4.3		SPECIAL RECEPTACLE		
KRATOS FREEZER			208V 3P 4W	11.94	4.3		SPECIAL RECEPTACLE		
LCP-1			277V 1P 2W	0.36	0.1		JUNCTION BOX		
MAU-1		NEMA 3R	480V 3P 3W	54.97	45.7		FUSED	60	RK5
MCU-1		NEMA 3R	208V 2P 2W	14.42	3		FUSED	20	RK5
MFC-1			208V 2P 2W	0.48	0.1		NON-FUSED		
MOTORIZED DOOR			120V 1P 2W	13.8	1.66	3/4 HP	NON-FUSED		
MOTORIZED DOOR			120V 1P 2W	13.8	1.66	3/4 HP	NON-FUSED		
MOTORIZED DOOR			120V 1P 2W	13.8	1.66	3/4 HP	NON-FUSED		
OVEN			208V 2P 2W	36.06	7.5		JUNCTION BOX		
POWER DOOR			120V 1P 2W	4.4	0.53	1/6 HP	JUNCTION BOX		
POWER DOOR			120V 1P 2W	4.4	0.53	1/6 HP	JUNCTION BOX		
POWER DOOR			120V 1P 2W	4.4	0.53	1/6 HP	JUNCTION BOX		
POWER DOOR			120V 1P 2W	4.4	0.53	1/6 HP	JUNCTION BOX		
RTU-1		NEMA 3R	480V 3P 3W	17.08	14.2		FUSED	20	RK5
RTU-2		NEMA 3R	480V 3P 3W	17.08	14.2		FUSED	20	RK5
RTU-3		NEMA 3R	480V 3P 3W	27.06	22.5		FUSED	30	RK5
RTU-4		NEMA 3R	480V 3P 3W	27.06	22.5		FUSED	30	RK5
RTU-5		NEMA 3R	480V 3P 3W	12.03	10		FUSED	15	RK5
RTU-6		NEMA 3R	480V 3P 3W	20.09	16.7		FUSED	25	RK5
SIGN LIGHT			277V 1P 2W	4.33	1.2		JUNCTION BOX		

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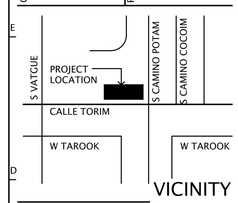

VICINITY

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

PROJECT NO. 23C-001

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SHEET TITLE

DETAIL SHEET #2

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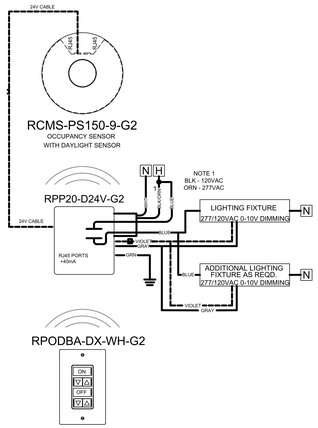
DATE 02.20.2024

SHEET **E6.2**

LIGHTING CONTROL WIRING DIAGRAM DETAIL



LIGHTING CONTROL PANEL 'LCP-1' PANEL SCHEDULE

RELAY NO.	PANEL CIRCUIT NO.	ZONE NO.	LIGHTING AREA SERVED	CONTROL TYPE & NOTES
1	M2-1	SITE	SITE POLE LIGHTING	1
2	M2-1	SITE	EXTERIOR BUILDING MOUNTED LIGHTING	1
3	M2-1	SITE	EXTERIOR BUILDING ACCENT LIGHTING	1
4	M2-1	SITE	EXTERIOR BUILDING EMERGENCY LIGHTING FIXTURE TYPE "SE"	1
5	M2-3	SITE	EXTERIOR SIGN LIGHTING	5
6-8	-	-	SPARE	-

NOTES:

1	EXTERIOR LIGHTING CIRCUIT WITH PHOTOCELL "ON" TIME CLOCK "OFF" CONTROL.
2	INTERIOR LIGHTING CIRCUIT, TIMECLOCK "ON", TIMECLOCK "OFF" . COORDINATE WITH OWNER DURATION / SEQUENCE TIMES.
3	ENSURE THIS CIRCUIT IS PROVIDED WITH VOLTAGE BARRIER.
4	INTERIOR LIGHTING CIRCUIT, TIMECLOCK "ON", TIMECLOCK "OFF" WITH MOMENTARY PUSHBUTTON OVER-RIDE (3-HOUR OPERATION).
5	EXTERIOR LIGHTING CIRCUIT, NORMALLY "OFF", BUILDING LOSS OF POWER "ON"

KEYNOTES

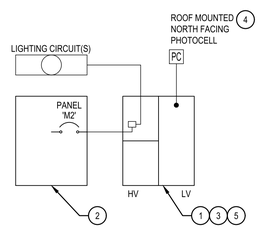
1. NOT USED.

GENERAL NOTES

1. NOT USED.

LIGHTING CONTROL LEGEND

SYMBOL	QTY	PRODUCT #	DESCRIPTION
N/A		ACUITY - nLIGHT RPP20-D24V-G2	16 AMP RELAY PACK WITH 0-10V DIMMING CONTROL CHASE NIPPLE MOUNTING.
Da D3a $ $		ACUITY - nLIGHT RPODBA-DX-WH-G2	SINGLE POLE ON/OFF TOGGLE WITH DIMMING
MS		ACUITY - nLIGHT RCMS-PS150-9-G2	SMALL RANGE 360° MOTION SENSOR-CEILING MOUNT, LOW VOLTAGE, PASSIVE INFRARED DETECTION (PIR) WITH PHOTOCELL, SWITCH LEG CONTROLLED NOTED.

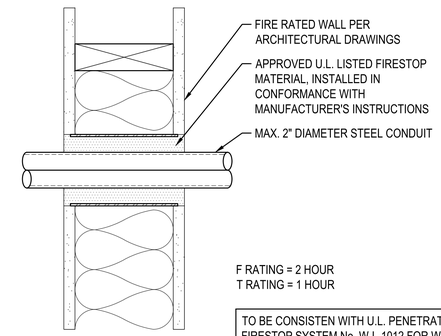


LIGHTING CONTROL DIAGRAM NOTES

1. LIGHTING CONTROL PANEL 'LCP-1' (FLUSH MOUNTED)
   MANUFACTURER: ACUITY OR EQUAL
   CATALOG #: GR1408LT-ENC-SM-NE1-GR1408-LT-INT-08-NCL-DTCMOD-DV-2VB
2. LIGHTING BRANCH CIRCUIT PANEL 'M2'.
3. SERVED VIA BRANCH CIRCUIT, SEE PANEL SCHEDULE FOR SPECIFIC CIRCUIT.
4. EXTERIOR CONTACT INPUT PHOTOCELL
   MANUFACTURER: ACUITY OR EQUAL
   CATALOG #: PCELL-2WO-BB
5. PROVIDE PANEL WITH U.L. LISTED AND APPROVED VOLTAGE BARRIER(S)

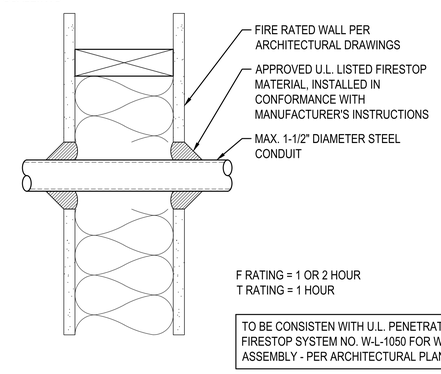
1 LIGHTING CONTRL PANEL 'LCP-1' AND WIRING DIAGRAM

SCALE:NTS



1 FIRE STOPPING DETAIL - 2" CONDUIT

SCALE:NTS

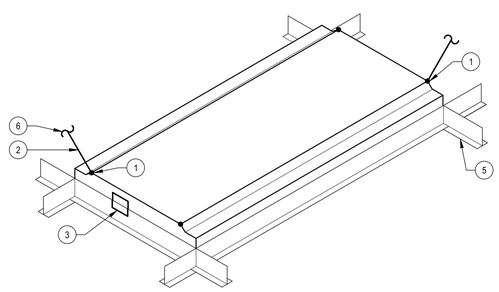


2 FIRE STOPPING DETAIL - 1" AND SAMLLER CONDUIT

SCALE:NTS

3 LIGHTING CONTROLS SCHEDULE AND WIRING DIAGRAMS

SCALE:NONE

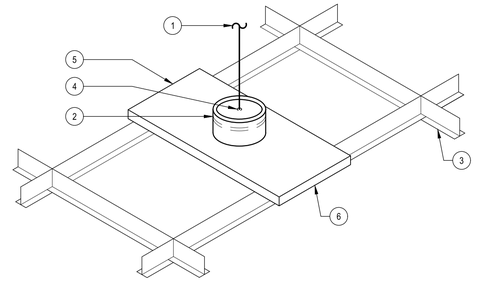


DETAIL NOTES

1. FASTEN SEISMIC RESTRAINT CLIPS TO LIGHT FIXTURE WITH HEX WASHER HEAD, SHEET METAL SCREWS, MINIMUM TWO (2) PER CLIP (OPTIONAL METHOD). USE IF SAFETY WIRE SUPPORT HOLES ARE NOT PROVIDED WITH FIXTURE.
2. 12 GA. SLACK SAFETY WIRE TIES TO SEISMIC CLIPS OR SAFETY WIRE SUPPORT HOLES AND ANCHOR TO BUILDING STRUCTURE. MINIMUM TWO (2) SAFETY WIRES PER LIGHT FIXTURE FOR 2'X4' OR LARGER FIXTURES.
3. SEISMIC RESTRAINT CLIP MINIMUM TWO (2) PER LIGHT FIXTURE, SCREWED TO T-BAR PER SPECIFICATIONS. TYPICAL.
4. LIGHT FIXTURE SAFETY WIRE SUPPORT HOLE. TYPICAL.
5. EXPOSED T-BAR CEILING SYSTEM, HEAVY DUTY GRID. TYPICAL.
6. 5/16" DIAMETER DRILL-IN EXPANSION ANCHOR (TO CONCRETE) OR TWO (2) #8X1/2" SELF-TAPPING SCREWS (TO METAL DECKING).

4 SEISMIC RESTRAINT DETAIL - TROFFER LIGHTS

SCALE:NTS



DETAIL NOTES

1. #9 SAFETY WIRE TIED TO SAFETY WIRE SUPPORT HOLE AND FASTENED TO BUILDING STRUCTURE WITH 1" X 2-1/2" LONG SCREW-EYE OR EQUAL.
2. LIGHT FIXTURE OR SPEAKER ENCLOSURE.
3. EXPOSED T-BAR CEILING SYSTEM OR CONCEALED SUSPENSION SYSTEM.
4. SAFETY WIRE SUPPORT HOLE IN FIXTURE OR SPEAKER ENCLOSURE.
5. MOUNTING CHANNELS OR T-BAR BRIDGE TO SPAN CEILING SUSPENSION SYSTEM, AS RECOMMENDED BY MANUFACTURER.
6. ATTACH TO SUSPENSION SYSTEM WITH CLIPS OR WIRE TIES.

2 SEISMIC RESTRAINT DETAIL - DOWNLIGHT/SPEAKER

SCALE:NTS

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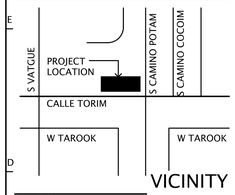

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

PROJECT NO. 23C-001

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SHEET TITLE

DETAIL SHEET #3

DATE 02.20.2024

SHEET **E6.3**

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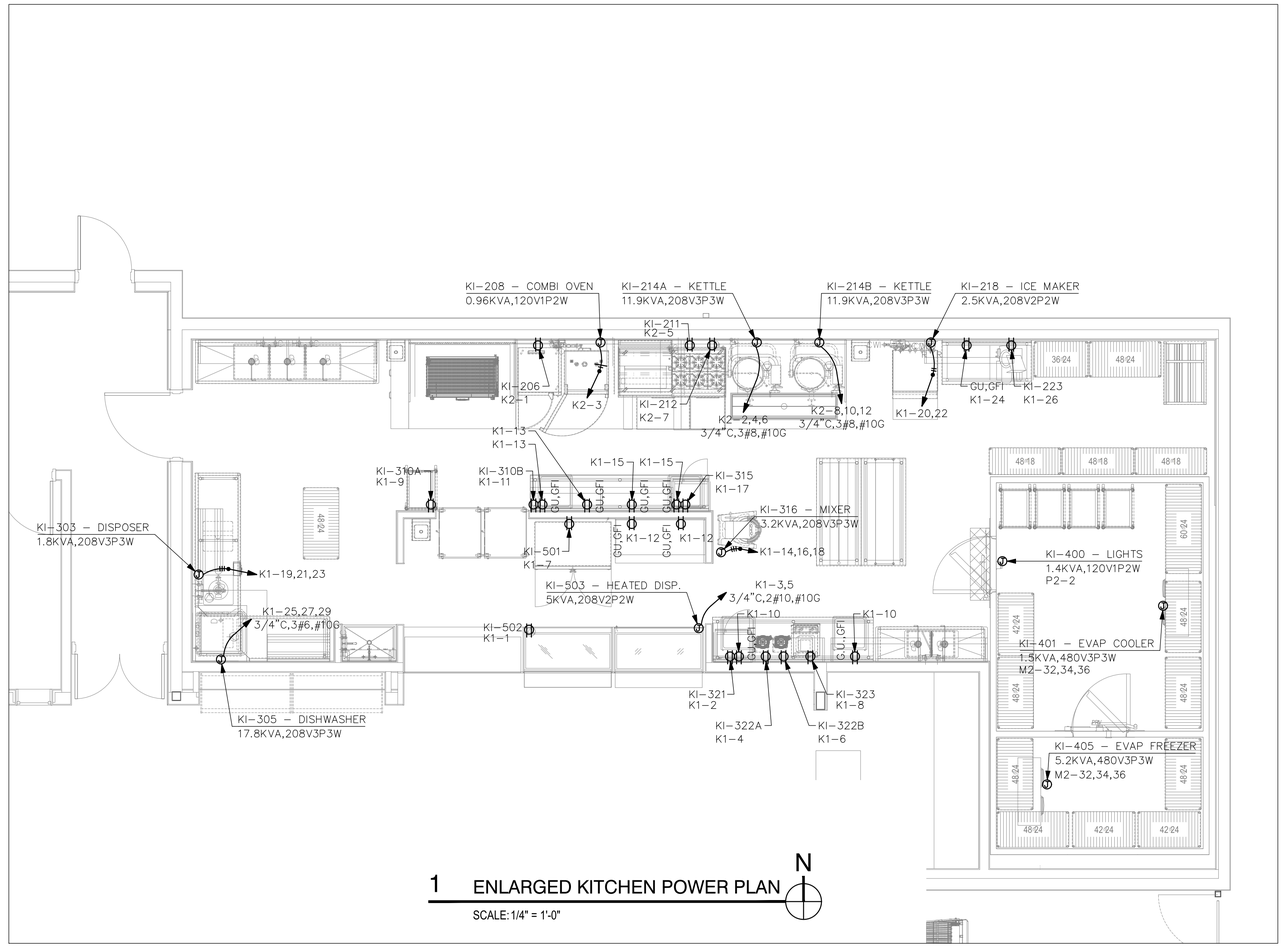
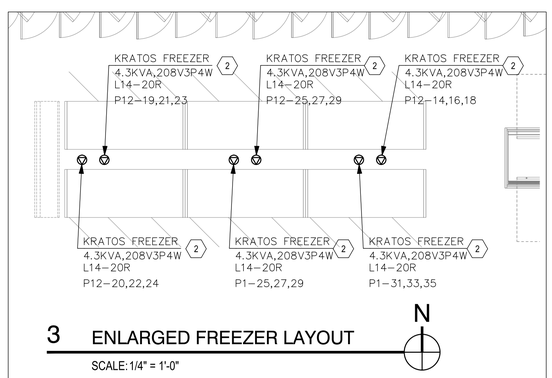


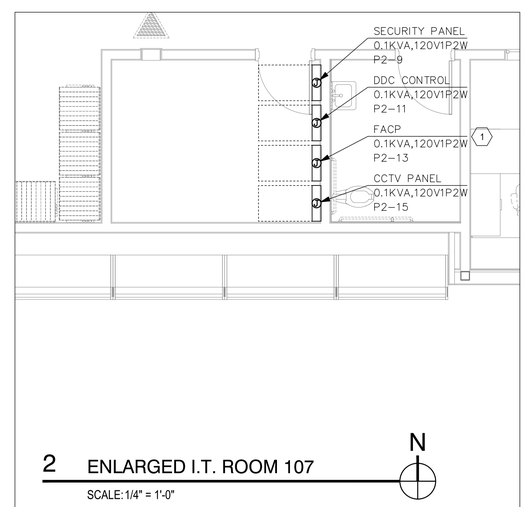
1 ENLARGED KITCHEN POWER PLAN

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



3 ENLARGED FREEZER LAYOUT

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



2 ENLARGED I.T. ROOM 107

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

KEYNOTES

1. DEDICATED BRANCH CIRCUIT FOR FIRE ALARM CONTROL PANEL . VERIFY FINAL LOCATION PRIOR TO WORK. COORDINATE ADDITIONAL REQUIREMENTS WITH FA CONTRACTOR AS NEEDED.
2. PROVIDE AND INSTALL ELECTRICAL CONNECTION FOR REFRIGERATED / FREEZER COMPARTMENT EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. VERIFY DIRECT CONNECT, CORD CONNECT AND RECEPTACLE / DEVICE ROUGH IN LOCATIONS WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS PRIOR TO ELECTRICAL ROUGH-IN.

GENERAL NOTES

1. SEE FOOD SERVICE DRAWINGS FOR ALL ELECTRICAL DEVICE BOX, RECEPTACLE AND EQUIPMENT ROUGH IN LOCATION(S), MOUNTING HEIGHT(S), SPECIFIC REQUIREMENTS AND DEVICE NEMA TYPES PRIOR TO ALL ROUGH IN.
2. ALL DEVICES SHOWN ON THIS SHEET SHALL HAVE STAINLESS STEEL DEVICE COVER PLATES, U.N.O.
3. ALL DEVICES SHOWN ON THIS SHEET INSTALLED WITHIN 6'-0" OF SINKS SHALL BE GFCI TYPE.

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Registered Professional Engineer (Electrical) CERTIFICATE NO. 31172 DAVID G. WATSON 1/17/2025 Registered Professional Engineer ARIZONA, U.S.A.

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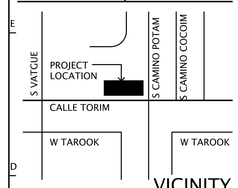

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SHEET TITLE

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DATE 02.20.2024

SHEET **E6.4**

COMcheck Software Version 4.1.5.5

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: Chepa's Micro Market
Project Type: New Construction

Construction Site:
5010 W Calle Torim
Tucson, AZ 85757

Owner/Agent:
Pascau Yaqui Tribe

Designer/Contractor:
Sternco Engineers

Additional Efficiency Package(s)

Credits: 1.0 Required 0.0 Proposed

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Vestibule (Common Space Types:Lobby - General)	1421	1.00	1421
2-Utility (Common Space Types:Electrical/Mechanical)	393	0.43	169
3-Receiving and Storage (Common Space Types:Storage)	1886	0.63	1188
4-Kitchen, Deli (Common Space Types:Food Preparation)	1284	1.06	1361
5-Common Space Types:Restrooms	529	0.85	450
6-Demonstration Kitchen (Common Space Types:Classroom/Lecture/Training)	944	0.96	906
7-Market (Common Space Types:Sales Area)	5161	1.59	8206
8-Common Space Types:Office - Enclosed	130	0.93	121
		Total Allowed Watts =	13822

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Vestibule (Common Space Types:Lobby - General)				
K: Other:	1	52	12	640
KE: Other:	1	4	12	49
A2: Other:	1	3	26	78
A2E: Other:	1	1	26	26
E: Other:	1	3	3	9
2-Utility (Common Space Types:Electrical/Mechanical)				
A1: Other:	1	2	26	52
A1E: Other:	1	2	26	52
A2: Other:	1	1	26	26
A2E: Other:	1	1	26	26
E: Other:	1	1	3	3
3-Receiving and Storage (Common Space Types:Storage)				
A1: Other:	1	13	26	338
A1E: Other:	1	4	26	104
E: Other:	1	2	3	6

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
4-Kitchen, Deli (Common Space Types:Food Preparation)				
L1: Other:	1	1	36	36
L2: Other:	1	6	37	220
L2E: Other:	1	3	37	110
K: Other:	1	6	12	74
D: Other:	1	3	10	31
E: Other:	1	1	3	3
5-Common Space Types:Restrooms				
D: Other:	1	9	10	94
DE: Other:	1	9	10	94
6-Demonstration Kitchen (Common Space Types:Classroom/Lecture/Training)				
B: Other:	1	9	40	356
BE: Other:	1	3	40	119
E: Other:	1	1	3	3
7-Market (Common Space Types:Sales Area)				
C: Other:	1	10	108	1080
CE: Other:	1	5	108	540
D: Other:	1	4	10	42
F1: Other:	1	17	57	969
F1E: Other:	1	4	57	228
F2A: Other:	1	10	37	370
F2AE: Other:	1	2	37	74
F2B: Other:	1	24	19	456
K: Other:	1	11	12	135
KE: Other:	1	2	12	25
E: Other:	1	4	3	12
8-Common Space Types:Office - Enclosed				
L1: Other:	1	3	36	109
L1E: Other:	1	1	36	36
			Total Proposed Watts =	6624

Interior Lighting PASSES: Design 52% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COM*check* Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

DAVE WATSON — Name - Title
Signature
03-20-2024 — Date

COMcheck Software Version 4.1.5.5

Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: Chepa's Micro Market
Project Type: New Construction
Exterior Lighting Zone 2 (Residential mixed use area (LZ2))

Construction Site:
5010 W Calle Torim
Tucson, AZ 85757

Owner/Agent:
Pascau Yaqui Tribe

Designer/Contractor:
Sternco Engineers

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Parking area	18655 ft2	0.04	Yes	746
Illuminated area of facade wall or surface	3588 ft2	0.07	No	269
Walkway < 10 feet wide	1302 ft of	0.5	Yes	651
Loading dock	655 ft2	0.35	Yes	229
Walkway >= 10 feet wide	1284 ft2	0.1	Yes	128
			Total Tradable Watts (a) =	1755
			Total Allowed Watts =	2024
			Total Allowed Supplemental Watts (b) =	400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Parking area (18655 ft2): Tradable Wattage				
SA2: Other:	1	2	186	372
Illuminated area of facade wall or surface (3588 ft2): Non-tradable Wattage				
S2: Other:	1	19	13	255
S3: Other:	1	6	36	214
Walkway < 10 feet wide (1302 ft of walkway length): Tradable Wattage				
SB: Other:	1	3	15	45
SBE: Other:	1	2	15	30
Loading dock (655 ft2): Tradable Wattage				
SB: Other:	1	1	15	15
SBE: Other:	1	1	15	15
Walkway >= 10 feet wide (1284 ft2): Tradable Wattage				
S1-4E: Other:	1	2	19	38
S1-8: Other:	1	8	38	301
S4: Other:	1	8	3	24
			Total Tradable Proposed Watts =	839

Exterior Lighting PASSES: Design 57% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COM*check* Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

DAVE WATSON — Name - Title
Signature
03-20-2024 — Date

COMcheck Software Version 4.1.5.5

Inspection Checklist

Energy Code: 2018 IECC

Requirements: 72.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C103.2 [PR8][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2.2 [EL22][1]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.1, C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.1.2 [EL19][1]	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.1.3 [EL20][1]	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.2, C405.2.2.1, C405.2.2.2 [EL21][2]	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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Registered Professional Engineer (Electrical) CERTIFICATE NO. 31172 DAVID G. WATSON 1/17/2025 United States ARIZONA U.S.A.

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PROJECT
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5010 W CALLE TORIM
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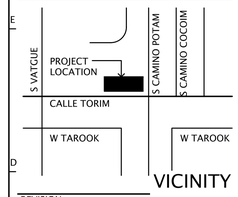

VICINITY

REVISION

NUMBER	DESCRIPTION	DATE
1	COUNTY COMMENTS	10/9/2024

PROJECT NO. 23C-001

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DATE 02.20.2024
SHEET **E7.1**

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3, C405.2.3.1, C405.2.3.2 [EL23][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.4 [EL26][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.4 [EL27][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.5 [EL28][Incl]	Manual controls required by the energy code are in a location with ready access to occupants and located where the controlled lights are visible, or identify the area served and their status.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.6 [EL30][Incl]	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.3 [EL6][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.6 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.7 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.8.2, C405.8.2.1 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.9 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.4.1 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
C405.5.1 [FI19][1]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.5.1 [FI16][3]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

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SEAL

OWNER INFORMATION
Pascua Yaqui Tribe

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Micro Market
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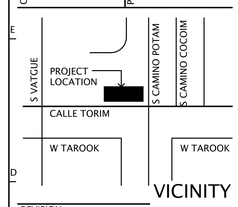

VICINITY

REVISION

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1	COUNTY COMMENTS	10/9/2024

PROJECT NO. 23C-001

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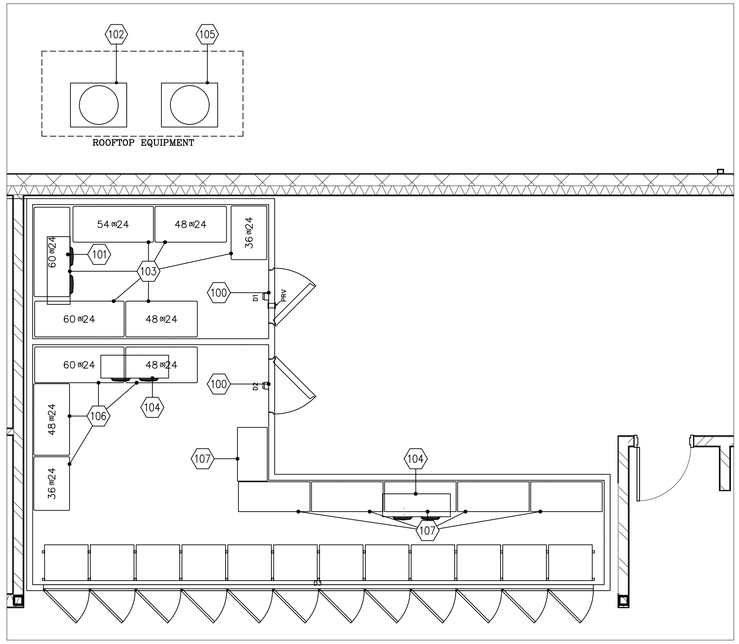
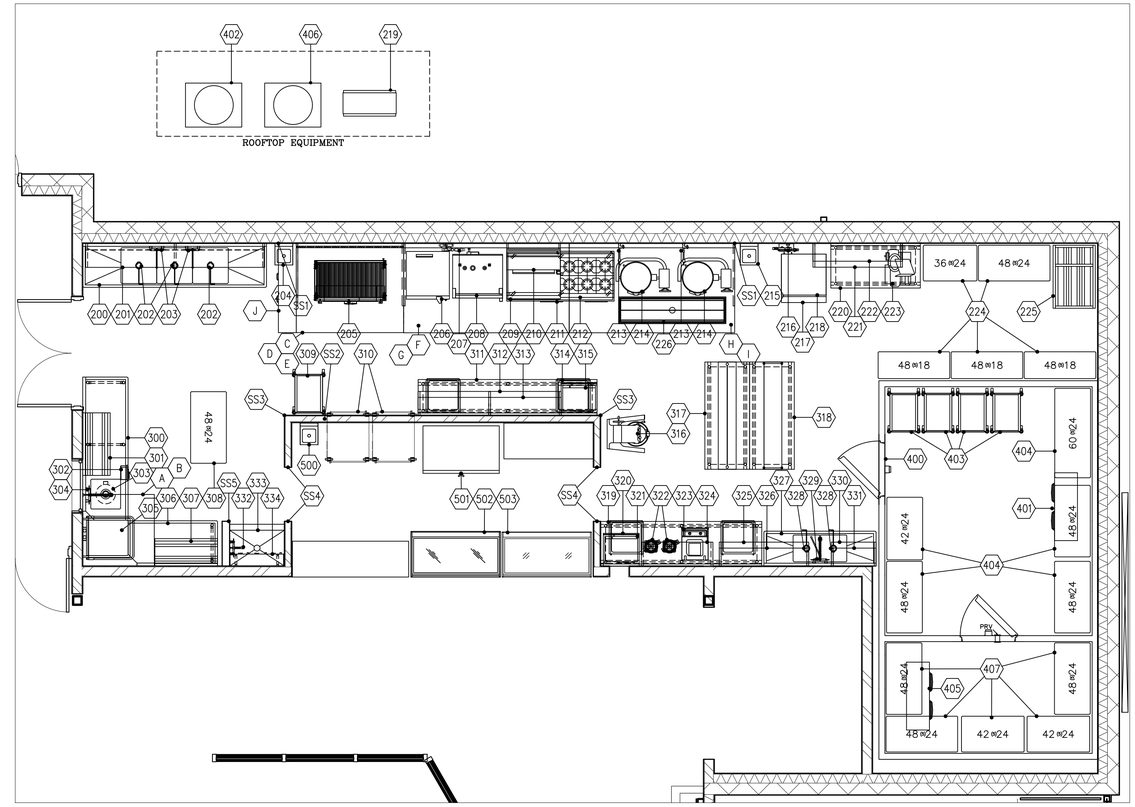
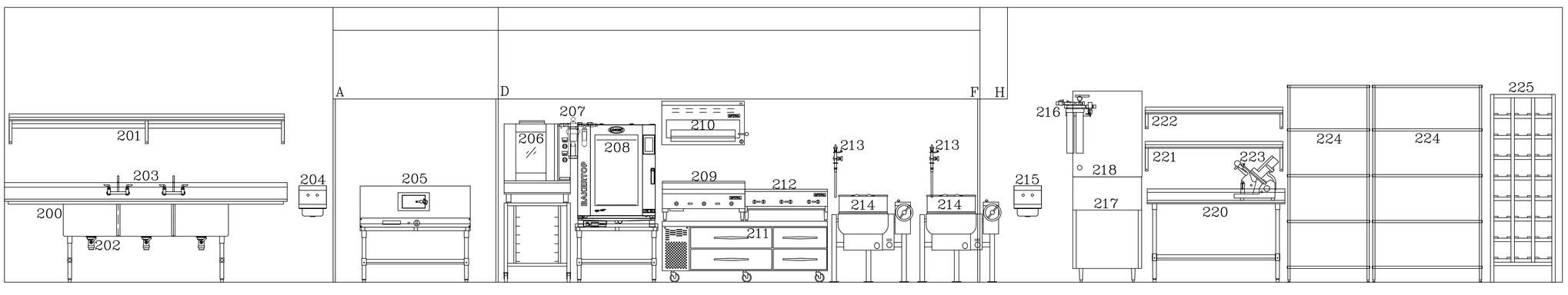
SHEET **E7.2**



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



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



E1 KITCHEN – NORTH

SCALE: 1/2"=1'-0"

STATUS	REV.
-	-
-	-
-	-
-	-
-	-

ARCHITECT

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MICRO MARKET
TUCSON, ARIZONA

FOODSERVICE EQUIPMENT PLAN

Drawn by: JBM

Checked by:

Date: 2/29/2024

Sheet Number:

FS-1.0

REGISTERED ARCHITECT
CERTIFICATE NO. 45961
CARLOS ANTONIO MURRIETA
Date Signed 02-29-24
ARIZONA, U.S.A.

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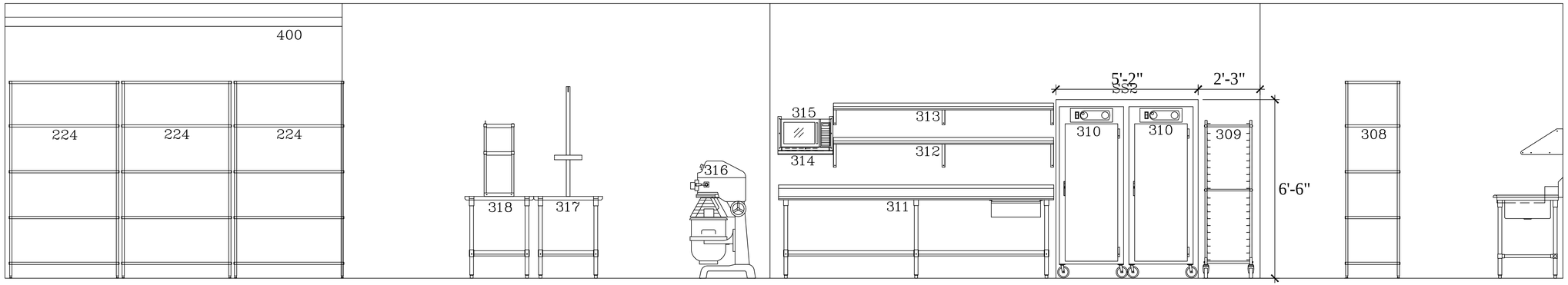
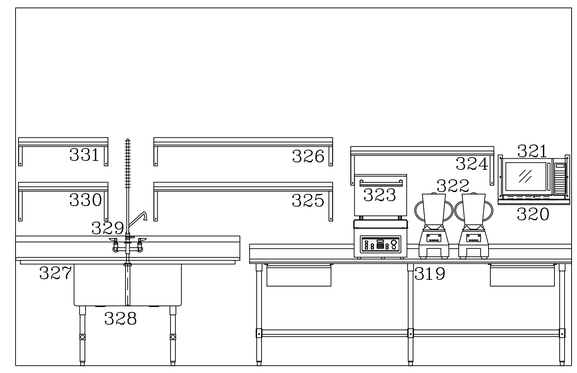


E2 KITCHEN – SOUTH

SCALE: 1/2"=1'-0"



E3 PREP AREA – SOUTH

SCALE: 1/2"=1'-0"

STATUS	REV.
-	-
-	-
-	-
-	-
-	-

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MICRO MARKET
TUCSON, ARIZONA

EQUIPMENT SCHEDULE

Drawn by: JBM

Checked by:

Date: 2/29/2024

Sheet Number:

FS-1.1

REGISTERED ARCHITECT
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EQUIPMENT SCHEDULE

PROVIDED BY GC	PROVIDED BY FEC	PROVIDED BY VENDOR	PROVIDED BY OWNER	Item Number	Quantity	Mfr	Model	Description	Equipment Remarks	Hard Wire Direct	Cord & Plug	NEMA	Voltage	Phase	Amps	Hp	Electrical Rough In AFF	Electrical Remarks	Cold Water Size	Cold Rough In AFF	Hot Water Size	Hot Rough In AFF	Indirect Waste Size	Direct Waste Size	Direct Waste Rough In AFF	Gas Size	Gas Rough In AFF	Gas MBTU	Gas Type	Plumbing Remarks	Item Number
	X			100	1	AmeriKooler	2COMPBOX	2 Comp Cooler/Freezer		X			115	1	12		120"	Light Connection @ Box													100
	X			101	1	AmeriKooler	BEL0090BS4EEAB0402	Evaporator for Freezer		X			208	1	1		120"					1"								Copper to Floor Sink	101
	X			102	1	AmeriKooler	BCH0035LCACZA0200	Condenser for Freezer		X			208	3	28.8		RT	Rooftop Connection, Provide Shutoff @ Unit													102
	X			103	1	Quantum	_GY	Wire Shelving Unit	See Written Specs for Configuration																						103
	X			104	1	AmeriKooler	BEL0125AS6AMAB0402	Evaporator for Cooler		X			115	1	1.8		120"					1"								Copper to Floor Sink	104
	X			105	1	AmeriKooler	BCH0050MCACZA0000	Condenser for Cooler		X			208	3	28.5		RT	Rooftop Connection, Provide Shutoff @ Unit													105
	X			106	1	Quantum	_GY	Wire Shelving Unit	See Written Specs for Configuration																						106
	X			107	1	Quantum	482412DPP	Dunnage Rack, Vented																							107
	X			200	1	John Boos	3B244-2D24-X	3 Comp Sink, 24"x24" Bowls																							200
	X			201	1	John Boos	BHS16120PR	Wall Shelf, 16"x120" w/ Pot Rack	Mount @ 72" AFF to Shelf																						201
	X			202	1	T&S Brass	B-3950	Twist Waste Valve														1 1/2"							ABS to Floor Sink	202
	X			203	2	T&S Brass	B-0231	Wall Mount Faucet											1/2"	18"	1/2"	18"									203
	X			204	1	John Boos	PBHS-W-0909-P-SSLR-X	Hand Sink w/ L&R Side Splashes	Mount @ 34" to Top of Sink Bowl										1/2"	21"	1/2"	21"		1 1/2"	18"						204
	X			205	1	Imperial	MSQ-48	Charbroiler, Wood Burning	w/ Stand & Casters																	3/4"	36"	30k	NAT	w/ Quick Disconnect Gas Hose	205
	X			206	1	Moffat	G32D5	Convection Oven, Gas	w/ Stand & Casters		X	5-15P	115	1	1		48"		3/4" HB	FILT						1/2"	36"	33k	NAT	Hose Bib Connection w/ Quick Disconnect Gas Hose	206
	X			207	1	3M Purification	SF165	Water Filter for Steam	Feeds both #206 & 208										3/4"	72"										Outlet to #206 & 208, Backflow 1013 Required	207
	X			208	1	UNOX	XAVC-1011-GPRM	Combi Oven, Gas		X			120	1	8		48"		3/4" HB	FILT						3/4"	36"	75k	NAT	Hose Bib Connection w/ Quick Disconnect Gas Hose	208
	X			209	1	Imperial	ITG-36	Griddle, 36"																		3/4"	30"	90k	NAT	w/ Quick Disconnect Gas Hose	209
	X			210	1	Imperial	IRSB-36	Salamander Broiler, Gas	Mount @ 54" AFF to Bottom																	3/4"	76"	40k	NAT	Hard Pipe	210
	X			211	1	Turbo Air	PRCBE-72R-N	Refrigerated Equipment Stand, 72"			X	5-15P	115	1	3.3	1/4	24"														211
	X			212	1	Imperial	IHPA-6-36	6 Burner Hotplate, 36"																		3/4"	30"	192k	NAT	w/ Quick Disconnect Gas Hose	212
	X			213	2	T&S Brass	B-0605-H	Faucet, Kettle / Pot Filler													1/2"	54"									213
	X			214	2	Crown	ELT-20	Kettle, Electric, Tilting		X			208	3	33.3		36"	Utility x2													214
	X			215	1	John Boos	PBHS-W-0909-P-SSLR-X	Hand Sink w/ L&R Side Splashes	Mount @ 34" to Top of Sink Bowl										1/2"	21"	1/2"	21"		1 1/2"	18"						215
	X			216	1	Hoshizaki	H9320-52	Water Filter System, Twin											1/2"	72"										Backflow Preventor 1013 Required	216
	X			217	1	Hoshizaki	B-500SF	Ice Bin, 500lb														1"								PVC to Floor Sink	217
	X			218	1	Hoshizaki	KM-901MRJZ	Ice Maker, Cube-Style		X			208	1	12		72"	Provide Shutoff @ Unit	1/2"	FILT		1"								PVC to Floor Sink	218
	X			219	1	Hoshizaki	URC-14FZ	Remote Condenser Unit		X			115	1	1.5		RT	Provide Shutoff @ Rooftop Unit													219
	X			220	1	John Boos	ST6R5-3060SSK-X	Work Table, 30"x60"																							220
	X			221	1	John Boos	EWS8-1660-X	Wall Shelf, 16"x60"	Mount @ 60" AFF to Shelf																						221
	X			222	1	John Boos	EWS8-1260-X	Wall Shelf, 12"x60"	Mount @ 75" AFF to Shelf																						222
	X			223	1	Globe	GC512	Food Slicer, Electric			X	5-15P	115	1	4.8		48"														223
	X			224	1	Quantum	_GY	Dry Storage Shelving Unit	See Written Specs for Configuration																						224
	X			225	1	Channel	CSR-156	Can Rack																							225
	X			226	1	John Boos	FTSG-1872	Floor Trough, 18"x72"															4"	0"						226
	X			300	1	John Boos	SDT6-S96SBK-R	Soiled Dishtable, 96"	w/ Undershelf													1 1/2"								ABS to Floor Sink	300
	X			301	1	John Boos	BHS1842-TS-X	Slant Rack Shelf, 42", Tubular	Mount @ 54" AFF to Bottom																						301
	X			302	1	Salvajor	MRSS	Disposer Control Panel																							302
	X			303	1	Salvajor	100-SA-3-MRSS	Disposer	w/ Control Mounting Bracket	X			208	3	4.9	1	18"	Provide Shutoff @ Unit	1/2"	18"			2"							Backflow Preventor 1013 Required	303
	X			304	1	T&S Brass	B-0133-B	Pre-Rinse Faucet											1/2"	21"	1/2"	21"									304
	X			305	1	Jackson WWS	DYNASTAR HH-E	Dishwasher, Door Type		X			208	3	49.3	2	18"				1/2"	18"	1 1/2"							Copper to Floor Sink	305
	X			306	1	John Boos	CDT6-S60SBK-L	Clean Dishtable, 60"	w/ Undershelf																						306
	X			307	1	John Boos	BHS1842-TS-X	Slant Rack Shelf, 42", Tubular																							307
	X			308	1	Quantum	_GY	Wire Shelving Unit	See Written Specs for Configuration																						308
	X			309	1	John Boos	ABPR-1820-3KD	Bun Pan Rack																							309
	X			310	2	Metro	C569-SFC-UPFCA	Pass-Thru Heated Cabinet			X	5-15P	120	1	16		48"														310
	X			311	1	John Boos	ST6R5-24120SSK	Work Table, 24"x120"	w/ (2) Drawers																						311
	X			312	1	John Boos	EWS8-1696-X	Wall Shelf, 16"x96"	Mount @ 60" AFF to Shelf																						312
	X			313	1	John Boos	EWS8-1296-X	Wall Shelf, 12"x96"	Mount @ 75" AFF to Shelf																						313
	X			314	1	John Boos	BMS2024-X	Microwave Shelf, 20"x24"	Mount @ 54" AFF to Bottom																						314
	X			315	1	ACP	RCS10TS	Microwave Oven			X	5-15P	120	1	13		66"														315
	X			316	1	Globe	SP60	60 qt Mixer		X			208	3	9	3	48"														316
	X			317	1	John Boos	ST6-3072SSK	Work Table, 30"x72"	w/ Pot Rack & Overshelf																						317
	X			318	1	John Boos	ST6-3072SSK	Work Table, 30"x72"	w/ Double Overshelf																						318
	X			319	1	John Boos	ST6R5-30108SSK	Work Table, 30"x108"	w/ (2) Drawers																						319
	X			320	1	John Boos	BMS2024-X	Microwave Shelf, 20"x24"	Mount @ 54" AFF to Bottom																						320
	X			321	1	ACP	RCS10TS	Microwave Oven			X	5-15P	120	1	13		66"														321
	X			322	2	Waring	CB15P	Commercial Food Blender			X	5-15P	120	1	15	3 3/4	48"														322
	X			323	1	Henkelman	BOXER 35 COMBIVAC	Food Packaging Machine			X	5-15P	115	1	9.5	3/4	48"														323
	X			324	1	John Boos	EWS8-1648-X	Wall Shelf, 16"x48"	Mount @ 72" AFF to Shelf																						324
	X			325	1	John Boos	EWS8-1660-X	Wall Shelf, 16"x60"	Mount @ 60" AFF to Shelf																						325
	X			326	1	John Boos	EWS8-1260-X	Wall Shelf, 12"x60"	Mount @ 75" AFF to Shelf																						326
	X			327	1	John Boos	2B184-2D18-X	2 Comp Sink																							327
	X			328	2	T&S Brass	B-3950	Twist Waste Valve														1 1/2"							ABS to Floor Sink	328
	X			329	1	T&S Brass	B-0133-01	Pre-Rinse Faucet w/ Add On Faucet											1/2"	18"	1/2"	18"									329
	X			330	1	John Boos	EWS8-1630	Wall Shelf, 16"x30"	Mount @ 60" AFF to Shelf																						330
	X			331	1	John Boos	EWS8-1230	Wall Shelf, 12"x30"	Mount @ 75" AFF to Shelf																						331
	X			332	1	T & S Brass	B-0665-BSTP	Service Faucet											1/2"	33"	1/2"	33"									332
X				333	1	By GC	CUSTOM	Mop Basin															3"								333
	X			334	1	John Boos	PB-MSS836	Wall Shelf, 8"x36" w/ Mop Rack	Mount @ 66" AFF to Shelf																						334
	X			400	1	AmeriKooler	2COMPBOX	2 Comp Cooler/Freezer		X			115	1	12		120"														400
	X			401	1	AmeriKooler	BEL0105AS6AMAB0400	Evaporator for Cooler		X			115	1	0.9		120"					1"								Copper to Floor Sink	401
	X			402	1	AmeriKooler	BCH0010MBACZA0000	Condenser for Cooler		X			208	3	15		RT	Rooftop Connection, Provide Shutoff @ Unit													402
	X			403	4	John Boos	ABPR-1820-3KD	Bun Pan Rack																							403
	X			404	1	Quantum	_GY	Wire Shelving Unit	See Written Specs for Configuration													1"							Copper to Floor Sink	404
	X			405	1	AmeriKooler	BEL0105AS6AMAB0400	Evaporator for Freezer		X			208	1	1		120"														405
	X			406	1	AmeriKooler	BCH0022LBACZA0200	Condenser for Freezer		X			208	3	28.8		RT	Rooftop Connection, Provide Shutoff @ Unit													406
	X			407	1	Quantum	_GY	Wire Shelving Unit	See Written Specs for Configuration																						407
	X			500	1	John Boos	PBHS-W-0909-P-SSLR-X	Hand Sink w/ L&R Side Splashes											1/2"	21"	1/2"	21"		1 1/2"	18"						500
	X			501	1	Turbo Air	TGM-47SD-N	Refrigerated Merchandiser			X	5-15P	115	1	3.4	1/3	48"														501
	X			502	1	Federal Industries	ITR6034-B18	Display Case, Refrigerated			X	5-15P	120	1	12		18"														502
	X			503	1	Federal Industries	ITH6034-B18	Display Case, Heated			X	6-15P	208	1	24		24"														503
	X			SS1	1	LEOW	WALLFLASH	Wall Flashing																							SS1
	X			SS2	1	LEOW	H&J	Header & Jambs																							SS2
	X			SS3	2	LEOW	CORNER2X2	Corner Guard																							SS3
	X			SS4	2	LEOW	H&J	Header & Jambs																							SS4
	X			SS5	1	LEOW	WALLCAP5IN	Wall Cap, 5" x 9'6"h																							SS5
	X			A	1	Captive-Aire	4824VHB-G	Condensate Hood																							A
	X			B	1	Captive-Aire	DU33HFA	Exhaust Fan		X			208	3	3.5		RT														B
	X			C	1	Captive-Aire	6024ND-2	Type I Exhaust Hood		X			115	1			120"	Light Connection @ Box			1/2"	120"	1 1/2"							Copper to Floor Sink	C
	X			D	1	Captive-Aire	USBI18DD-RM	Utility Set		X			208	3	6.1	2	RT	Provide Shutoff @ Unit													D
	X			E	1	Captive-Aire	CASRTU3-1.400-24-20T	Make Up Air Unit		X			208	3	109.7	5	RT	Provide Shutoff @ Unit												Plumber to confirm Drain Requirments	E
	X			F	1	Captive-Aire	6024ND-2	Type I Exhaust Hood		X			115	1			120"	Light Connection @ Box			1/2"	120"	1 1/2"							Copper to Floor Sink	F
	X			G	1	Captive-Aire	DU180HFA	Exhaust Fan		X			208	3	6.1	2	RT	Provide Shutoff @ Unit													G
	X			H	1	Captive-Aire	6024ND-2	Type I Exhaust Hood		X			115	1			120"	Light Connection @ Box			1/2"	120"	1 1/2"							Copper to Floor Sink	H
	X			I	1	Captive-Aire	DU180HFA	Exhaust Fan		X			208	3	6.1	2	RT	Provide Shutoff @ Unit													I
	X			J	1	Captive-Aire	COREFP	Fire Suppression System																							J

REGISTERED ARCHITECT
CERTIFICATE NO. 45961
CARLOS ANTONIO MURRIETA
Date Signed 02-29-24
ARIZONA, U.S.A.

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MICRO MARKET
TUCSON, ARIZONA

EQUIPMENT SCHEDULE

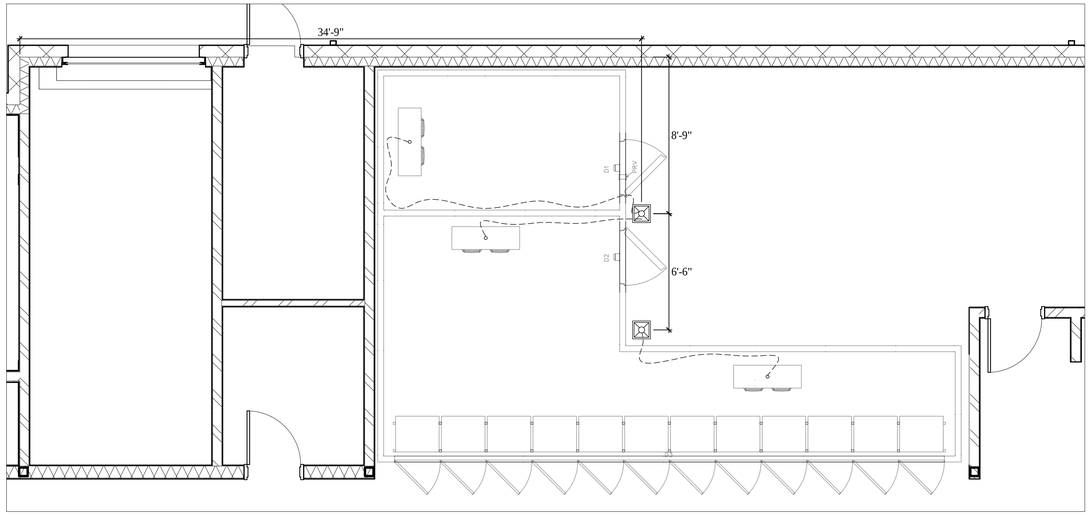
Drawn by: JBM

Checked by:

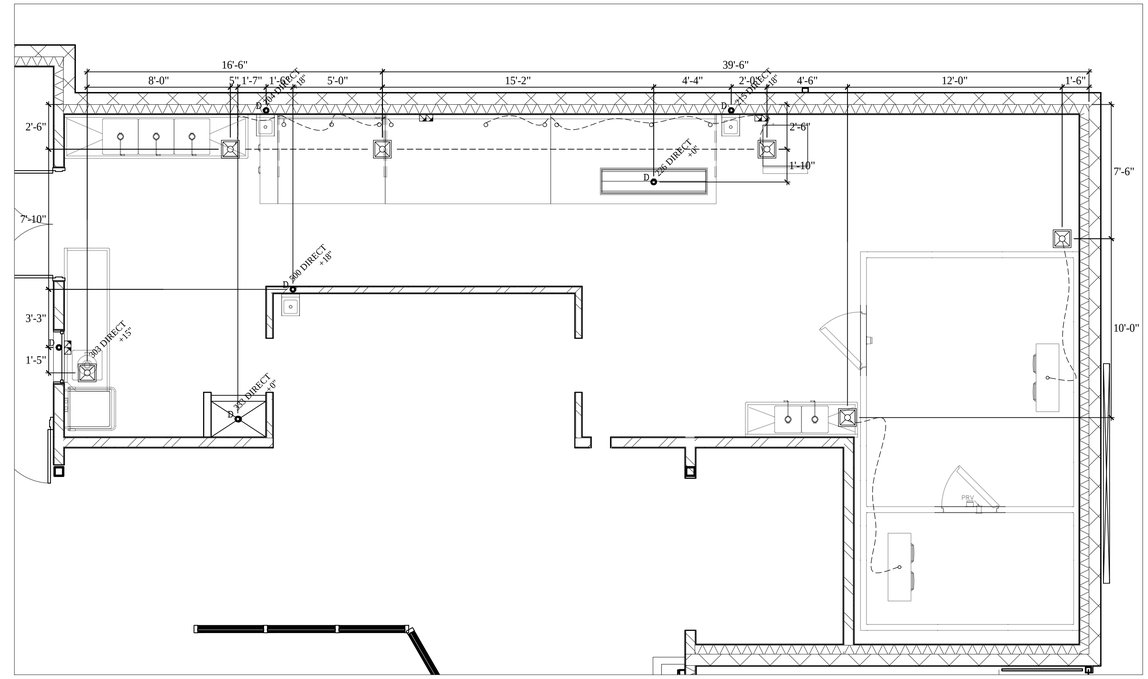
Date: 2/29/2024

Sheet Number:

FS-1.2

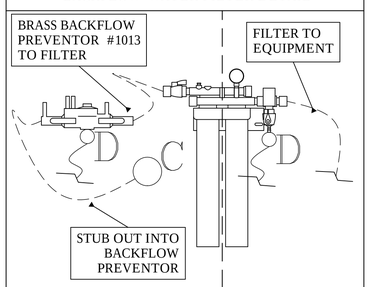


DRAIN ROUGH IN PLAN
SCALE: 1/4"=1'-0"



DRAIN ROUGH IN PLAN
SCALE: 1/4"=1'-0"

BACKFLOW/WATER FILTER DETAIL



PLUMBER SCOPE	INSTALLER SCOPE

LEGEND – PLUMBING CONNECTIONS
NOT ALL SYMBOLS MAY BE USED

- C — UNTREATED COLD WATER STUB OUT
- C — REVERSE OSMOSIS COLD WATER STUB OUT
- H — UNTREATED HOT WATER STUB OUT
- HOT/COLD WATER CONNECTION POINT TO BE INSTALLED BY PLUMBING CONTRACTOR
- G — G-GAS STUB OUT AT WALL
- GAS CONNECTION POINT TO BE INSTALLED BY PLUMBING CONTRACTOR
- D — DIRECT DRAIN STUB OUT
- DRAIN CONNECTION POINT PVC OR COPPER (AS REQUIRED) TO FLOOR SINK TO BE INSTALLED BY PLUMBING CONTRACTOR
- FLOOR SINK, NEW
- FLOOR SINK, EXISTING
- FLOOR DRAIN
- BACKFLOW PREVENTER LOCATION – SEE SCHEUDLE
- SODA CONDUIT STUB OUT (UNDERGROUND)
- SODA LINES (OVERHEAD)
- BEER CONDUIT STUB OUT (UNDERGROUND)

PLUMBING SCOPE OF WORK - WATER

KEC TO PROVIDE:
- ALL FAUCETS, AS REFLECTED ON EQUIPMENT SCHEDULE,
- WATER CONNECTION FROM ICE MACHINE FILTER TO ICE MACHINE.

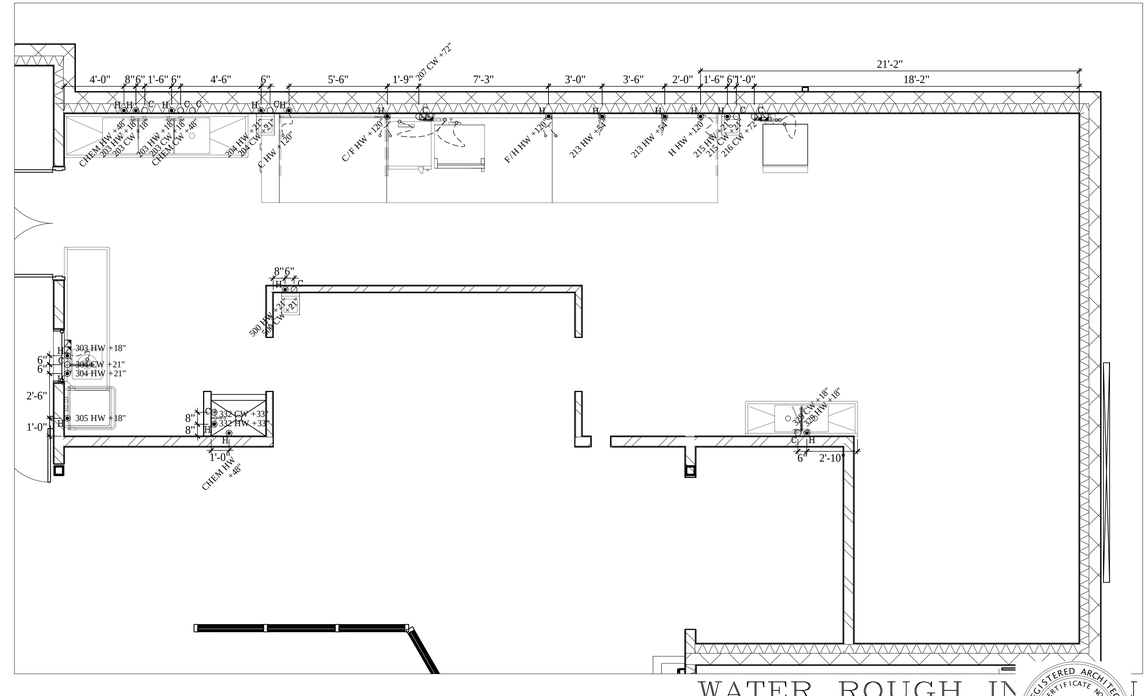
PLUMBING CONTRACTOR TO PROVIDE:
- INSTALLATION OF ALL FIXTURES PROVIDED BY KEC,
- FINAL WATER CONNECTIONS FOR ALL EQUIPMENT REQUIRED,
- CONNECTION FROM STUB OUT TO ANY WATER FILTER,
- ½" SHUT OFF VALVE FROM STUB OUT TO ALL WATER FILTERS REFLECTED ON THIS PLAN,
- NECESSARY BACK FLOW EQUIPMENT AT SODA EQUIPMENT, ICE MACHINE, OR ANY OTHER DIRECT WATER CONNECTION AS REQUIRED PER CODE,
- PRESSURE REGULATOR FOR PROPER INSTALLATION OF DISH MACHINE AS REQUIRED BY MANUFACTURER.

VENDOR TRADES:
- FINAL CONNECTION FROM FILTER TO PROVIDED EQUIPMENT.

PLUMBING SCOPE OF WORK - DRAINS

KEC TO PROVIDE:
- ALL TWIST WASTE VALVES & BASKET DRAINS, AS REFLECTED ON EQUIPMENT SCHEDULE,
- INSTALLATION OF PVC DRAINS FOR ICE MACHINE AND ICE BIN WITH NECESSARY AIR VENT AS PER CODE,
- PIPE CONDENSATE DRAIN FOR WALK IN COOLER WITH 3/4" COPPER TUBING, WITH NECESSARY "P" TRAPS AS PER CODE,
- PIPE CONDENSATE DRAIN FOR WALK IN FREEZER WITH 3/4" COPPER TUBING, WITH NECESSARY "P" TRAPS AS PER CODE, PROVIDE INSULATION AND HEAT TAPE IN ALL FREEZER AREAS.

PLUMBING CONTRACTOR TO PROVIDE:
- RIGID DRAIN LINES FOR ALL DIRECT & INDIRECT WASTE. COPPER REQUIRED FOR HOT WATER DRAIN APPLICATIONS/PVC FOR COLD, SEE PLUMBING SCHEDULE NOTES,
- MINIMIUM 1½" AIR GAP ABOVE FLOOR SINK FOR ALL INDIRECT WASTE PER CODE,
- ANCHOR ALL INDIRECT PIPING MINIMUM 6" ABOVE FLOOR WITH UNI-STRUT AND STRAPS FOR CLEAN FINISH.



WATER ROUGH IN PLAN
SCALE: 1/4"=1'-0"

REGISTERED ARCHITECT
CERTIFICATE NO. 45961
CARLOS ANTONIO MURRIETA
Date Signed 02-29-24
ARIZONA, U.S.A.

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MICRO MARKET
TUCSON, ARIZONA
PLUMBING ROUGH IN PLAN

Drawn by: JBM
Checked by:
Date: 2/29/2024
Sheet Number:
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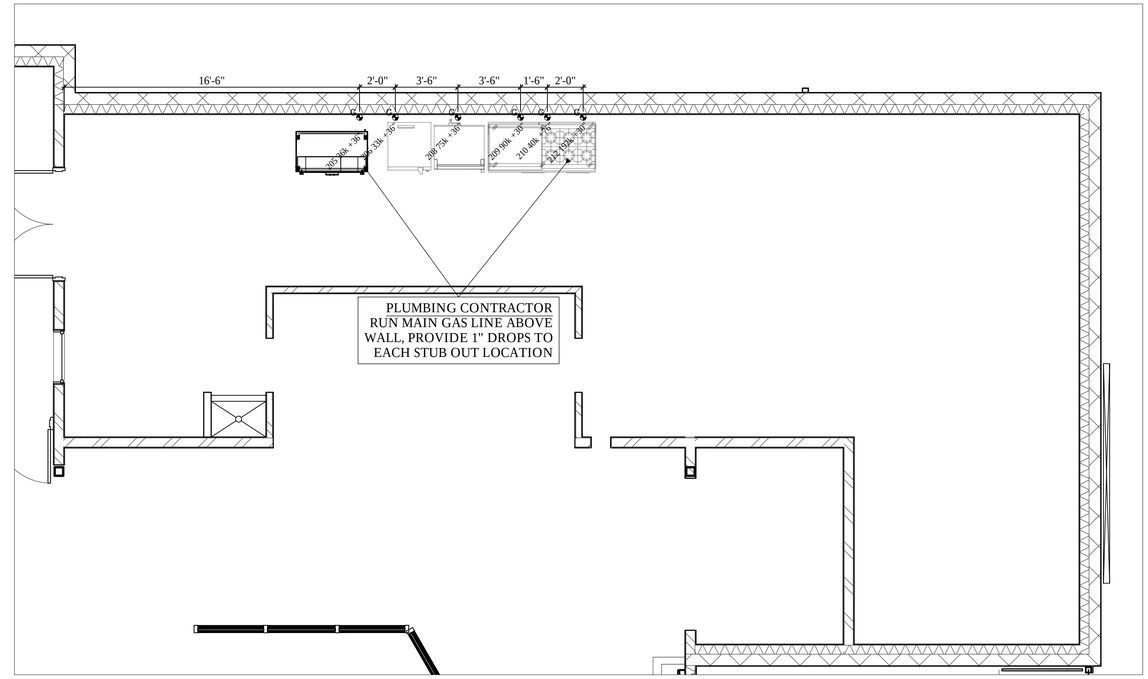

GAS ROUGH IN PLAN
SCALE: 1/4"=1'-0"

LEGEND – PLUMBING CONNECTIONS
NOT ALL SYMBOLS MAY BE USED

- C — UNTREATED COLD WATER STUB OUT
- C — REVERSE OSMOSIS COLD WATER STUB OUT
- H — UNTREATED HOT WATER STUB OUT
- HOT/COLD WATER CONNECTION POINT TO BE INSTALLED BY PLUMBING CONTRACTOR
- G — G-GAS STUB OUT AT WALL
- GAS CONNECTION POINT TO BE INSTALLED BY PLUMBING CONTRACTOR
- D — DIRECT DRAIN STUB OUT
- DRAIN CONNECTION POINT PVC OR COPPER (AS REQUIRED) TO FLOOR SINK TO BE INSTALLED BY PLUMBING CONTRACTOR
- FLOOR SINK, NEW
- FLOOR SINK, EXISTING
- FLOOR DRAIN
- BACKFLOW PREVENTER LOCATION – SEE SCHEUDLE
- SODA CONDUIT STUB OUT (UNDERGROUND)
- SODA LINES (OVERHEAD)
- BEER CONDUIT STUB OUT (UNDERGROUND)

PLUMBING SCOPE OF WORK - GAS NOTES

KEC TO PROVIDE:
- QUICK DISCONNECT GAS HOSE KITS, ¾" X 48" FOR EACH PIECE OF GAS EQUIPMENT AS NOTED ON EQUIPMENT SCHEDULE,
- SOLENOID VALVE FOR MAIN GAS LINE SHUT OFF (PART OF THE ANSUL SYSTEM).

PLUMBING CONTRACTOR TO PROVIDE:
- INSTALLATION OF ALL QUICK DISCONNECT GAS HOSES & SAFETY CABLES AS SHOW IN THE DETAIL ABOVE,
- INSTALLATION OF SOLENOID VALVE FOR MAIN GAS LINE IN LOCATION DETAILED BY PLUMBING ENGINEER ON GAS LINE SCHEMATIC.
- APPROPRIATE GAS PSI/W.C. TO ALL NECESSARY EQUIPMENT, PER SPEC SHEETS PROVIDED

ELECTRICAL CONTRACTOR TO PROVIDE:
- WIRING FROM SOLENOID VALVE TO ELECTRICAL CONTROLS OF HOOD SYSTEM

REGISTERED ARCHITECT
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MICRO MARKET
TUCSON, ARIZONA

PLUMBING ROUGH IN PLAN

Drawn by: JBM
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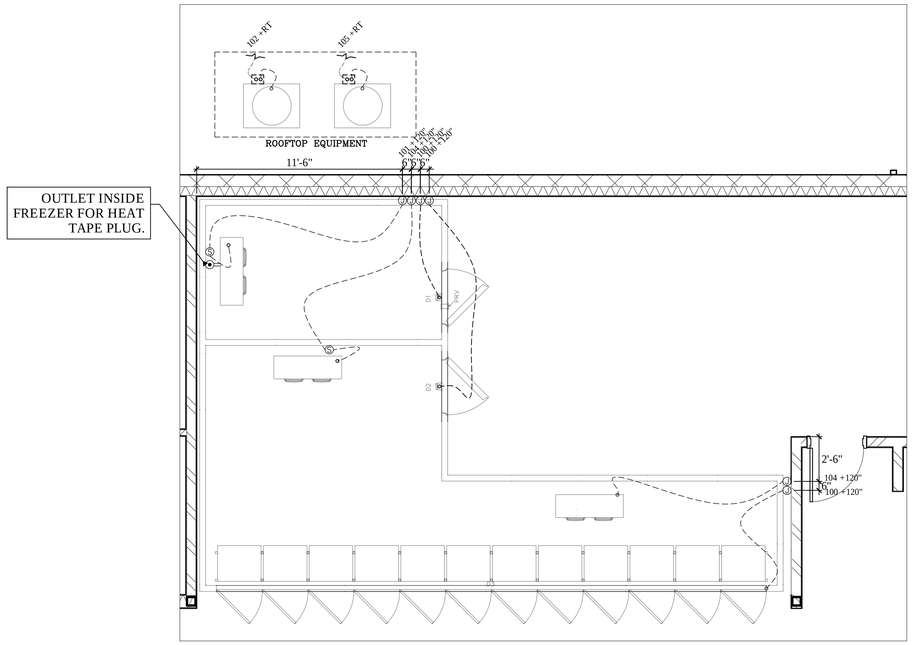
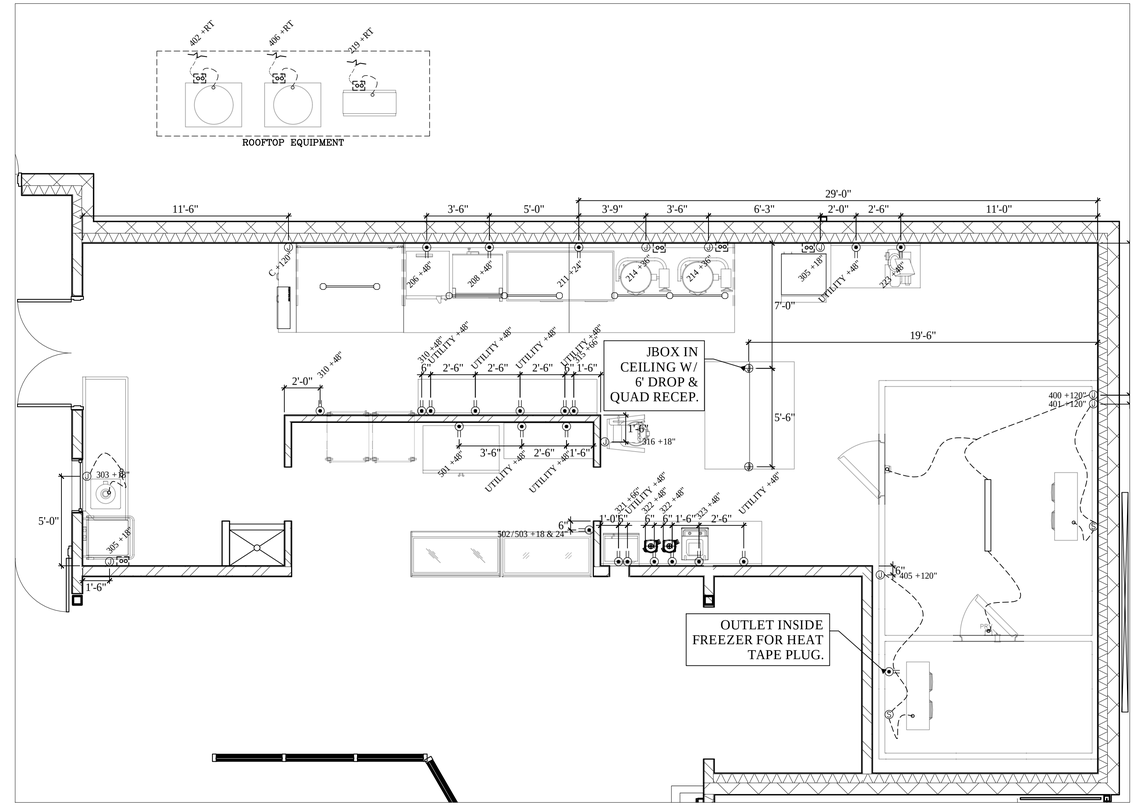


ELECTRICAL ROUGH IN PLAN
SCALE: 1/4"=1'-0"



ELECTRICAL ROUGH IN PLAN
SCALE: 1/4"=1'-0"

LEGEND – ELECTRICAL CONNECTIONS

NOT ALL SYMBOLS MAY BE USED

- DUPLEX RECEPT., 15-AMP, 120-VOLT, GROUND TYPE, VERTICAL MOUNT
- DUPLEX RECEPT., 20-AMP, 120-VOLT, GROUND TYPE, VERTICAL MOUNT
- DUPLEX RECEPT. W/ GFI, 20-AMP, 120-VOLT, GROUND TYPE, VERTICAL MOUNT
- SIMPLEX RECEPT., 20-AMP, 120-VOLT, GROUND TYPE, VERTICAL MOUNT
- SPECIAL PURPOSE OUTLET, 208/240-VOLT NEMA CONFIG. AS INDICATED, ON EQUIP. SCHEDULE AS INDICATED, GROUND TYPE, VERTICAL MOUNT
- JUNCTION BOX FOR DIRECT CONNECTION
- STUB OUT FOR UNDERGROUND CONDUIT
- FIELD WIRING, EXPOSED RIGID WATERTIGHT CONDUIT
- REMOTE CONDENSER ELECTRICAL CONNECTION OUTGOING FROM KITCHEN TO ROOFTOP
- MANUAL DISCONNECT SWITCH, WATERTIGHT
- BASIC SWITCH, WATERTIGHT

ELECTRICAL SCOPE OF WORK

ELECTRICAL CONTRACTOR NOTES:

1) ALL DIMENSIONS ARE TO CENTER OF OUTLET BOX.
2) RUN CONDENSER POWER FROM BACK OF ICE MACHINE TO ROOFTOP WITH REFRIGERATION LINES,
3) MOUNT WATERPROOF JBOX TO ICE MACHINE CONDENSER - PROVIDE SHUT OFF SWITCH WITHIN 6 FEET PER CODE - INCOMING POWER FROM ICE MACHINE TO ROOFTOP LOCATION,
4) PROVIDE DIRECT SHUNT TRIP BREAKER FOR WALK IN FREEZER DOOR HEAT STRIP (BY KEC/WALK IN MANUFACTURER) AND DRAIN LINE HEATER (BY KEC) - WIRE TIME CLOCK IF SHIPPED LOOSE,
5) PROVIDE DISCONNECT SWITCH FOR EACH WALK IN CONDENSER WITHIN 6 FEET PER CODE,
6) WIRE EXHAUST FANS, MAKE UP AIR UNITS AND ALL DESIGNATED OU HOOD SYSTEMS INTO ELECTRICAL CONTROL PANEL (KEC PROVIDED

GENERAL NOTES:

- PROVIDE GFI OUTLETS IN ALL AREAS OF THE KITCHEN,
- DIRECT CONNECTIONS REQUIRED ARE TO BE WATERTIGHT CONDUI

REGISTERED ARCHITECT CERTIFICATE NO. 45961 CARLOS ANTONIO MURRIETA Date Signed 02-29-24 ARIZONA, U.S.A.

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STATUS	REV.	
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ARCHITECT

MERGE ARCHITECTURAL
600 N. 4TH STREET #112
PHOENIX, ARIZONA 85004
602-635-1581

AZ RC ARIZONA RESTAURANT CONSULTING
7920 E. OAK STREET, SCOTTSDALE, ARIZONA 85257
602.699.5131
JUSTIN@AZRESTAURANTCONSULTING.COM

MICRO MARKET
TUCSON, ARIZONA

ELECTRICAL ROUGH IN PLAN

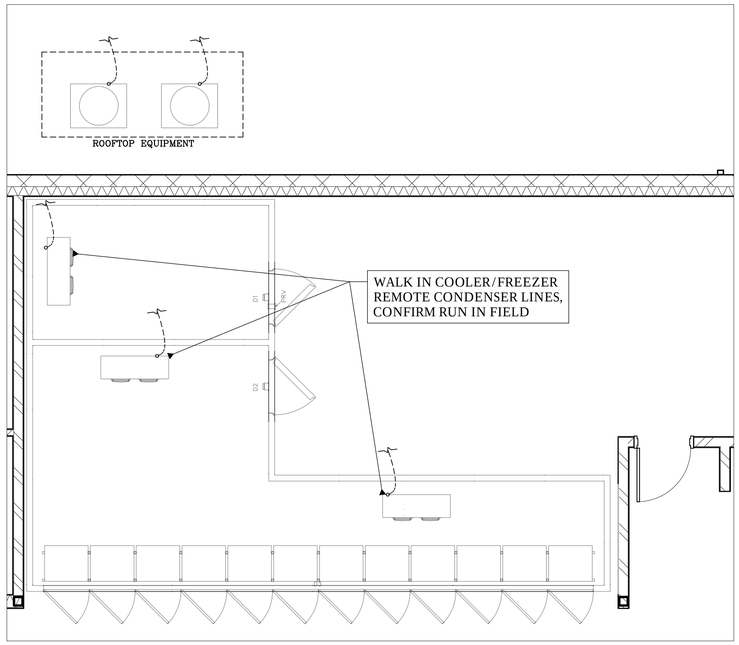
Drawn by: JBM

Checked by:

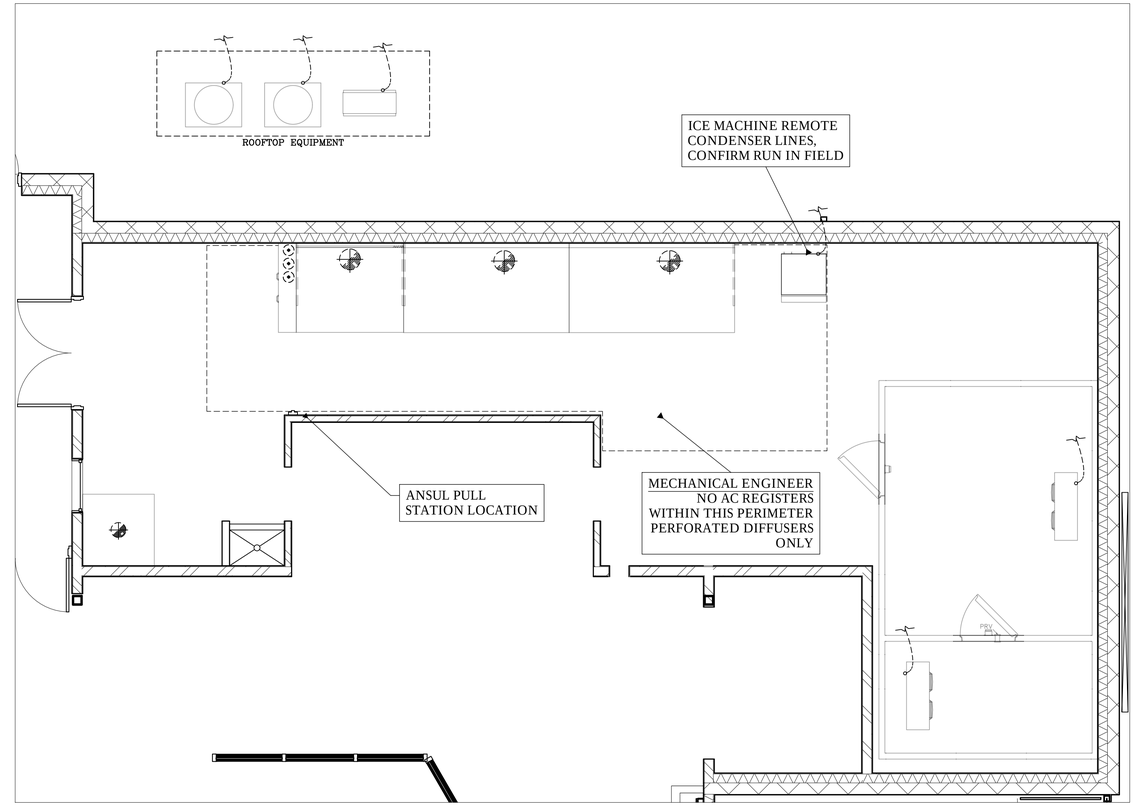
Date: 2/29/2024

Sheet Number:

FS-3.0



MECHANICAL ROUGH IN PLAN
SCALE: 1/4"=1'-0"



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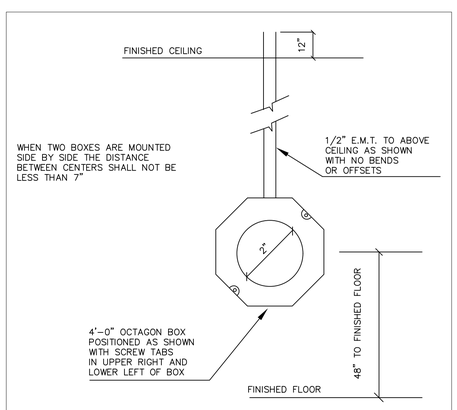

REMOTE PULL STATION

LEGEND – MECHANICAL CONNECTIONS

NOT ALL SYMBOLS MAY BE USED

- FIRE SUPPRESSION PULL SWITCH, OCTAGON BOX TO BE SET INSIDE WALL WITH CONCEALED CONDUIT.
- REMOTE CONDENSER LINE SET OUTGOING/INCOMING FROM KITCHEN TO ROOFTOP.
- FLU EXHAUST CONNECTION POINT FOR WATER HEATER, INSTALLED BY PLUMBER
- FIRE SUPPRESSION SYSTEM TANKS & CONTROLS
- MAKE UP AIR DUCT RISER
- GREASE DUCT RISER
- AC DUCT RISER

MECHANICAL SCOPE OF WORK

KEC TO PROVIDE:
- RECEIVING OF EQUIPMENT DELIVERY ONSITE,
- HOOD BOXES,
- 20 GA. S/S WALL FLASHING UP TO 120" HIGH (CONFIRM WITH GC CODE REQUIREMENT ON HEIGHT) FROM 4"ABOVE FLOOR, END OF HOOD TO END OF HOOD AND ANY SIDE WALL(S) AROUND PERIMETER OF HOOD,
- EXHAUST FAN(S) & ROOF CURB(S),
- EVAP COOLER/MAKE UP AIR UNIT & ROOF CURB(S),
- ELECTRICAL CONTROL PANEL W/ RELAYS & CONTACTORS,
-
- RECEIVING OF ROOFTOP EQUIPMENT ONSITE, ONSITE STORAGE IF NECESSARY,
- CRANE TO ROOFTOP,
- CUTTING OF ROOF DECK & PLACEMENT OF CURBS, PATCHING OF ROOF,
- GREASE DUCT/FIREWRAP & INSTALLATION,
- MUA/AC DUCT & INSTALLATION
- ANSUL SYSTEM PIPING, TANKS, PERMIT, INSTALLATION & FINAL TEST,
- HANGING OF HOOD BOXES & INSTALLATION OF S/S WALL FLASHING,
- PERFORMANCE CHECK OF SYSTEM AFTER HVAC START UP,
- LOCATIONS FOR ROOF PENETRATIONS FOR REMOTE CONDENSERS WITH PVC CHASE,
- PRESSURE TREATED 4"X4" WOOD FOR SETTING OF REMOTE CONDENSERS WHEN NECESSARY.

GC/MECHANICAL CONTRACTOR TO PROVIDE:
- MOUNTING OF ELECTRICAL CONTROLS (IF NECESSARY),
- ALL FINAL ELECTRICAL & PLUMBING CONNECTIONS,
- START UP AND BALANCE OF HOOD WITH AC,
- CUTTING AND SEAL ROOF PENETRATIONS FOR REMOTE CONDENSER LINE CHASE - KEC PROVIDED ALUMNIMUM "GOOSENECK".
- CONDENSER CURBS SHOULD THEY BE REQUIRED OVER 4"X4" WOOD BY KEC.

REGISTERED ARCHITECT
CERTIFICATE NO. 45961
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Date Signed 02-29-24
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MICRO MARKET
TUCSON, ARIZONA

MECHANICAL ROUGH IN PLAN

Drawn by: JBM

Checked by:

Date: 2/29/2024

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HOOD INFORMATION – JOB#6599699

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1		6024 ND–2	CAPTIVEAIRE	6' 0"	700 DEG	I	EXTRA–HEAVY	300	1800			4"	14"	1800	1684	–0.854"	430 SS 100%	ALONE	ALONE
2		6024 ND–2	CAPTIVEAIRE	9' 3"	600 DEG	I	HEAVY	200	1850			4"	14"	1850	1731	–0.704"	430 SS 100%	LEFT	ALONE
3		6024 ND–2	CAPTIVEAIRE	9' 3"	600 DEG	I	HEAVY	200	1850			4"	14"	1850	1731	–0.704"	430 SS 100%	RIGHT	ALONE
4	Dish Hood	4824 VHB–G	CAPTIVEAIRE	4' 0"	700 DEG	II	N/A	150	600			4"	10"	600	1100	–0.090"	430 SS 100%	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY	TYPE	WIRE GUARD	UTILITY CABINET(S) LOCATION	SIZE	FIRE SYSTEM TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1		CAPTRATE SOLO FILTER	4	20"	16"	85% SEE FILTER SPEC	2	L55 SERIES E26	NO	LEFT	12"x60"x24"	CORE PROTECTION	0	SC–331110MA	1 LIGHT 1 FAN	YES	777 LBS
2		CAPTRATE SOLO FILTER	6	20"	16"	85% SEE FILTER SPEC	3	L55 SERIES E26	NO							YES	557 LBS
3		CAPTRATE SOLO FILTER	6	20"	16"	85% SEE FILTER SPEC	3	L55 SERIES E26	NO							YES	545 LBS
4	Dish Hood						0									NO	175 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1		FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 80.00" HIGH X 84.00" LONG 430 SS VERTICAL.
		INSULATION FOR TOP OF HOOD.
		INSULATION FOR BACK OF HOOD.
		WC–CORE PROTECTION.
		RIGHT WIDE VERTICAL END PANEL 42" TOP WIDTH, 36" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
		LEFT WIDE VERTICAL END PANEL 42" TOP WIDTH, 36" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
2		FIELD WRAPPER 18.00" HIGH FRONT, LEFT.
		BACKSPLASH 80.00" HIGH X 222.00" LONG 430 SS VERTICAL.
		STRUCTURAL FRONT PANEL.
		RISER SENSOR INSTALL 6IN PLEN.
		WC–CORE PROTECTION.
		LEFT WIDE VERTICAL END PANEL 42" TOP WIDTH, 36" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
3		FIELD WRAPPER 18.00" HIGH FRONT, RIGHT.
		RISER SENSOR INSTALL 6IN PLEN.
		WC–CORE PROTECTION.
		RIGHT WIDE VERTICAL END PANEL 42" TOP WIDTH, 36" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
4	Dish Hood	FIELD WRAPPER 18.00" HIGH FRONT, RIGHT.

FOR QUESTIONS, EMAIL THE
Arizona Office
REGION 93
PHONE: (480) 926 – 6810
EMAIL: reg93@captiveaire.com

SPECIFICATION: CAPTRATE GREASE–STOP SOLO FILTER

THE CAPTRATE GREASE–STOP SOLO FILTER IS A SINGLE–STAGE FILTER FEATURING A UNIQUE S–BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

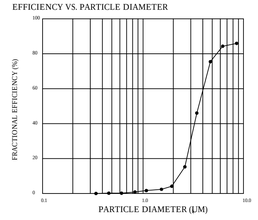
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2–INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

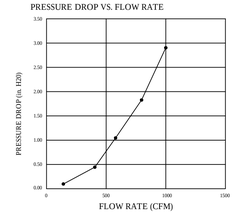
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE–STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519–05. MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

EFFICIENCY VS. PARTICLE DIAMETER

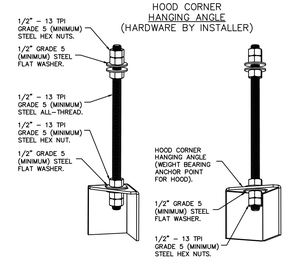


PRESSURE DROP VS. FLOW RATE



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:.
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC–S649.

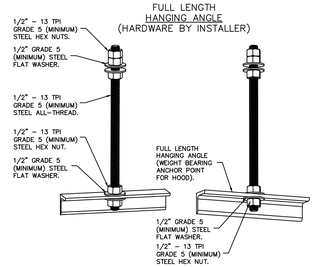
HOOD CORNER HANGING ANGLE (HARDWARE BY INSTALLER)



ASSEMBLY INSTRUCTIONS

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

FULL LENGTH HANGING ANGLE (HARDWARE BY INSTALLER)



ASSEMBLY INSTRUCTIONS

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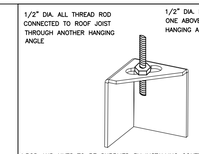


* ROD AND NUTS TO BE SUPPLIED BY INSTALLING CONTRACTOR
HANGING ANGLE IS PRE–PUNCHED AT FACTORY

ND–2 HANGING ANGLE DETAIL

HOOD STYLE	DIM FROM REAR	DIM FROM FRONT (24"H)	DIM FROM FRONT (30"H)
CANOPY ND2	4.166"	2.246"	2.246"
ND2–PSP–F	4.166"	2.246"	2.246"
BACKSHELF 2847BD	2.00"	14.25"	–
VHB/VHB–G	36"X36"	42"X42"	48"X48"
FRONT/BACK DIMS BY SIZE	2.246"	2.246"	2.246"

HANGING ANGLE LOCATIONS

EXHAUST CFM=LENGTH OF HOOD X CFM/LIN.FT. (LOAD)

SUPPLY CFM=EXHAUST CFM X PERCENTAGE REQUIRED

$$\text{TOTAL DUCT AREA} = 144 \times \frac{\text{CFM}}{\text{FPM}(*)}$$

$$\text{DUCT LENGTH} = \frac{\text{TOTAL DUCT AREA}}{\text{DUCT DEPTH}}$$

* CAPTIVE–AIRE VENTILATOR DUCT SIZES ARE CALCULATED USING AN EXHAUST VELOCITY OF 1500–1800 FPM AND A SUPPLY VELOCITY OF 1000 FPM.

CALCULATIONS UTILIZED

CAPTIVE–AIRE HOODS ARE BUILT IN COMPLIANCE WITH:

LISTED #3054804–001 & #3054804–002 — STANDARD 710 — Intertek — BUILT IN ACCORDANCE WITH NFPA No. 96

Listed under ETL File number 3054804–001/002

BUILDING CODES

CAPTIVE–AIRE HOODS HAVE OPTIONAL CLEARANCE REDUCTION SYSTEMS AVAILABLE AS FOLLOWS:

MATERIAL	CLEARANCE REDUCTION SYSTEM
NON–COMBUSTIBLE	NONE REQUIRED
LIMITED–COMBUSTIBLE	3" UNINSULATED STANDOFF
COMBUSTIBLE	1" INSULATED STANDOFF

CLEARANCE TO COMBUSTIBLES

INSTALLATION

1. ALL ELECTRICAL "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY ELECTRICAL CONTRACTORS.
2. ALL PLUMBING "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY PLUMBING CONTRACTORS.
3. HANGING BRACKETS LOCATED AND WELDED AS SHOWN ON PLANS. ALL OTHER HANGER MATERIALS PROVIDED BY INSTALLING CONTRACTORS.
4. ALL CONNECTIONS FROM CAPTIVE–AIRE DUCT PER MECHANICAL CONTRACTOR'S PLANS.
5. COOKING EQUIPMENT TO SHUTOFF IN EVENT OF FIRE.
6. EXHAUST FANS TO TURN ON IN EVENT OF FIRE.
7. ALL LIGHTS FIXTURE SHOWN INSTALLED BY CAPTIVE–AIRE ARE FACTORY PREWIRED. INTERCONNECTIONS BETWEEN HOODS AND TO SWITCHES BY ELECTRICAL CONTRACTORS.
8. LAMPS FOR LIGHT FIXTURES BY INSTALLING CONTRACTORS.
9. SEISMIC RESTANTS ARE RESPONSIBILITY OF INSTALLING CONTRACTOR.
10. INSTALLING CONTRACTORS ASSUME ALL RELATED REPONSIBILITY FOR VERIFICATION OF DIMENSIONAL DATA CONTAINED ON THESE DOCUMENTS FOR ACCURACY, INTEGRATION, AND ADMINISTRATION OF CODE REQUIREMENTS IN EFFECT PRIOR TO ANY RELEASE FOR PRODUCTION OF EQUIPMENT SHOWN.

BALANCE

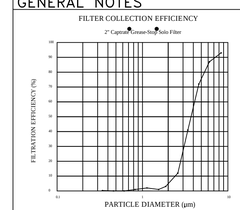
11. KITCHEN HOODS MUST BE BALANCED WITH KITCHEN.
12. KITCHEN SHALL BE NEGATIVE WITH RESPECT TO DINING AREA.
13. RESTAURANT SHALL BE POSITIVE WITH RESPECT TO AMBIENT PRESSURE.

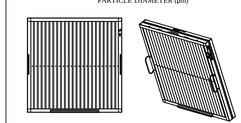
ADDITIONAL

14. WRITTEN HOOD DIMENSIONS HAVE PRECEDENCE OVER SCALE.
15. SIGNED AND "APPROVED" COPIES OF THIS DOCUMENT MUST BE RECEIVED BY THE FACTORY PRIOR TO COMMENCEMENT OF FABRICATION.

GENERAL NOTES

FILTER COLLECTION EFFICIENCY





CaptiveAire Captrate Solo Filter
ETL Listed Grease Extracting Filters
Made From 430 Stainless Steel

FILTER DETAIL

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

HVAC DISTRIBUTION NOTE

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

VERIFY CEILING HEIGHT

___' - ___"

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

CUSTOMER APPROVAL TO MANUFACTURE:

APPROVED AS NOTED ☐
APPROVED WITH NO EXCEPTION TAKEN ☐
REVISE AND RESUBMIT ☐
SIGNATURE _____
YOUR TITLE _____ DATE _____

REVISIONS

DESCRIPTION	DATE:

CAPTIVEAIRE
www.captiveaire.com
Arizona Office
18206 N 19th Ave. Ste1A-1B, Phoenix, AZ, 85023 PHONE: (480) 926 - 6810 FAX: 8777192227 EMAIL: reg93@captiveaire.com

4081 Chepas Market – Tucson – FARS R2
TUCSON, AZ, 85705

DATE: 2/9/2024
DWG.#: 6599699
DRAWN BY:
SCALE: 3/4" = 1'–0"
MASTER DRAWING

REGISTERED ARCHITECT CERTIFICATE NO. 45961 CARLOS ANTONIO MURRIETA Date Signed 02-29-24 ARIZONA, U.S.A.

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MICRO MARKET
TUCSON, ARIZONA

MECHANICAL SPECIFICATIONS

Drawn by: TM
Checked by: JBM
Date: 2/29/2024
Sheet Number:

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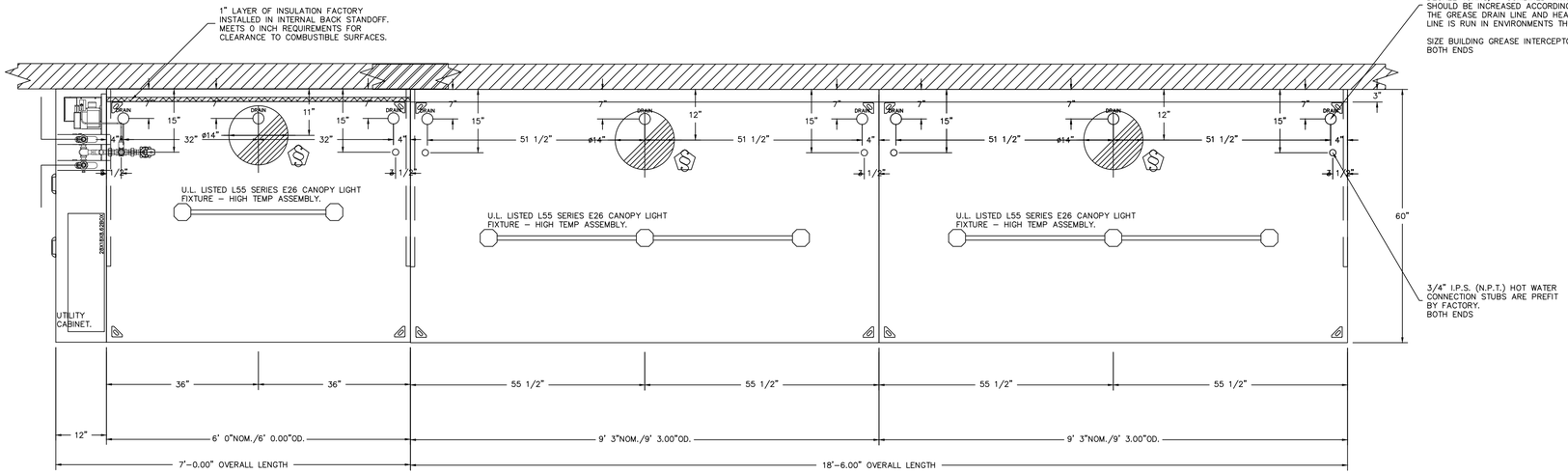
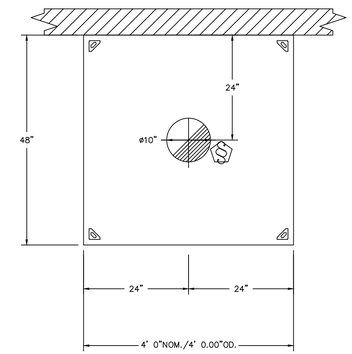


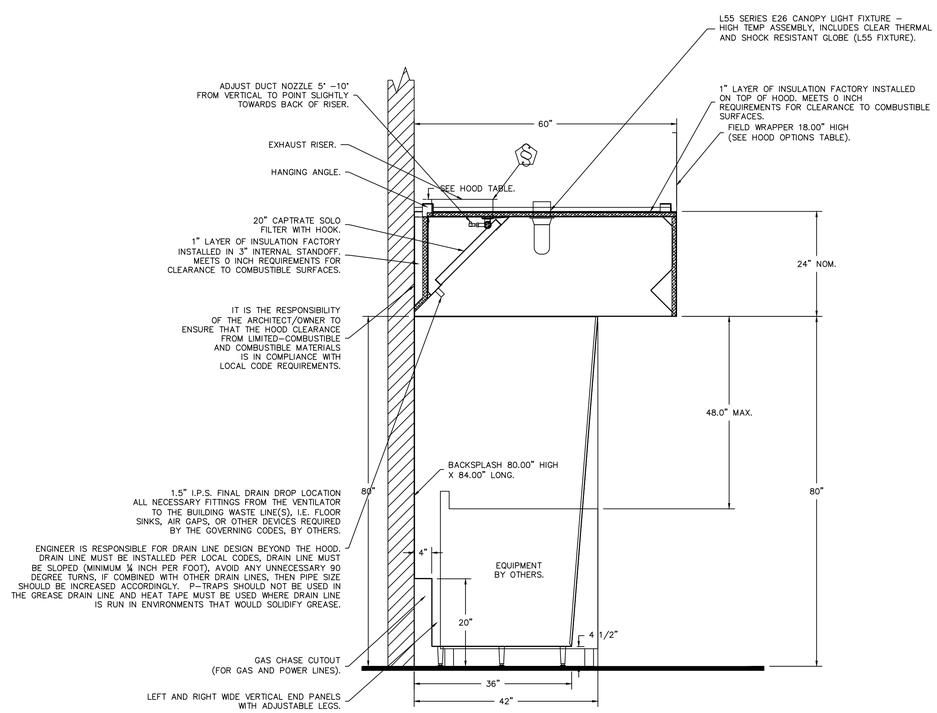
PLAN VIEW - HOOD #1
6' 0.00" LONG 6024ND-2

PLAN VIEW - HOOD #2
9' 3.00" LONG 6024ND-2

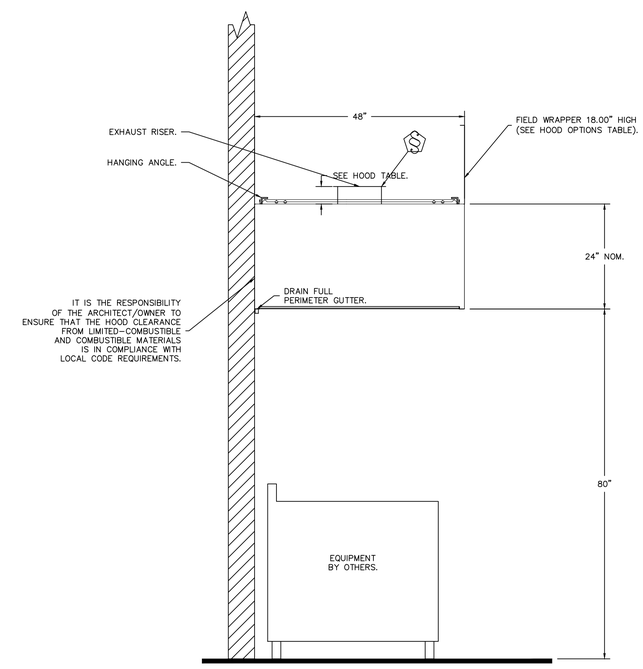
PLAN VIEW - HOOD #3
9' 3.00" LONG 6024ND-2



PLAN VIEW - HOOD #4 (Dish Hood)
4' 0.00" LONG 4824VHB-G



SECTION VIEW - MODEL 6024ND-2
HOOD - #1,2,3



SECTION VIEW - MODEL 4824VHB-G
HOOD - #4 (Dish Hood)

REVISIONS

DESCRIPTION	DATE:

CAPTIVEAIRE
www.captiveaire.com
Arizona Office
18206 N 19th Ave. Ste1A-1B, Phoenix, AZ. 85023 PHONE: (480) 926 - 6810 FAX: 8777192227 EMAIL: reg93@captiveaire.com

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MERGE ARCHITECTURAL
600 N. 4TH STREET #112
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MICRO MARKET
TUCSON, ARIZONA
MECHANICAL SPECIFICATIONS

Drawn by: TM
Checked by: JBM
Date: 2/29/2024
Sheet Number:
FS-4.2

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FIRE SYSTEM INFORMATION – JOB#6599699

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1		CORE PROTECTION	0	0	0	FIRE CABINET LEFT	LEFT, HOOD 1

GAS VALVE(S)

SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	TBD	CAPTIVEAIRE SYSTEMS

FIRE SYSTEM PARTS LIST KEY

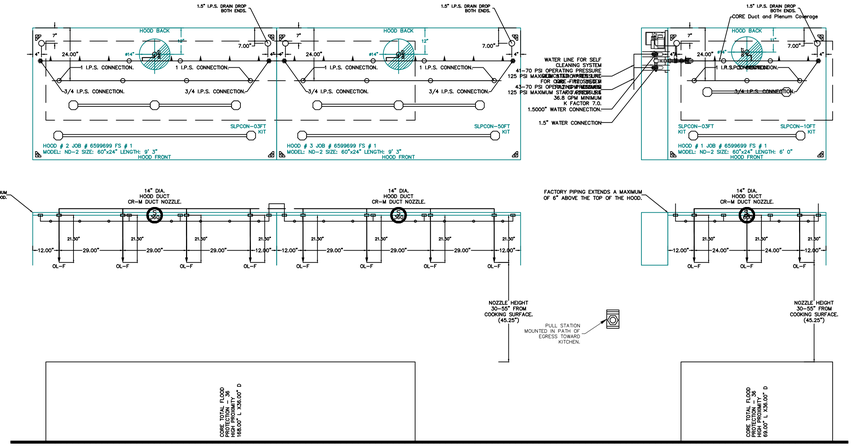
FIRE SYSTEM NO	TAG	KEY NUMBER – PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
1		34 – 34 – A0019852 24VDC OR 120VAC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT.	1	0
		26 – 26 – GSA–3/8 QUIK SEAL – 3/8" (I.A.).	11	0
		16 – 16 – OL–F NOZZLE – CORE PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME–PLATED PIPE).	11	0
		16 – 16 – 79210 1/2" X 3/8" NPT MALE ADAPTER, VEGA.	11	0
		0 – 0 – SLPCON–50FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN HOODS WITH UP TO 48' GAP. KIT CONTAINS 52 FEET OF BLACK MC WIRE, 52 FEET OF TAN MC WIRE, 50 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	1	0
		0 – 0 – SLPCON–10FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN END TO END HOODS WITH LESS THAN A 8' GAP OR BACK TO BACK HOODS WITH LESS THAN A 2' GAP. KIT CONTAINS 12 FEET OF TAN MC WIRE, 12 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	1	0
		0 – 0 – SLPCON–03FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN END TO END HOODS WITH LESS THAN A 2' GAP. KIT CONTAINS 5 FEET OF BLACK MC WIRE, 5 FEET OF TAN MC WIRE, 3 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	2	0
		0 – 0 – A0029078 JUNCTION BOX FOR CORE PROTECTION MANUAL PULL STATION. 1.5" DEEP BACK BOX, BLUE.	1	0
		0 – 0 – 94767 1" X 1/2" X 1" PROPRESS TEE, USED IN APPLIANCE SPRAY BAR, VEGA.	11	0
		0 – 0 – 79330 1" X 1" NPT PROPRESS FEMALE ADAPTER, VEGA.	6	0
		0 – 0 – 79245 1" X 1" NPT PROPRESS MALE ADAPTER, VEGA.	1	0
		0 – 0 – 77412 1" PROPRESS TEE, VEGA.	1	0
		0 – 0 – 77027 1" PROPRESS 90 DEG ELBOW, VEGA.	1	0
		0 – 0 – 44296287 1" BRASS PLUG.	6	0
		0 – 0 – 32–00002 QUIK SEAL – 1/2" (I.A.).	3	0
		0 – 0 – 12–298021–32144–07–600 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 600?.	1	0
		0 – 0 – 12–298021–32144–07–360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360?.	2	0

CORE APPLIANCE PIPING WATER FLOW SUMMARY	PIPE DIAMETER	MINIMUM FLOW RATE (GPM)	PRESSURE DROP (PSI)
FIELD PIPING/DUCT RUN BETWEEN ALL HOOD GROUPS.	1.5	36.8	10.00
HOOD/DUCT RUN INTERNAL PIPING	0.75	17.2	.33

SELF CLEANING WATER FLOW SUMMARY	PIPE DIAMETER	MINIMUM FLOW RATE (GPM)	PRESSURE DROP (PSI)
FIELD PIPING/DUCT RUN BETWEEN ALL HOOD GROUPS	1.50000	17.2	10.00000
HOOD/DUCT RUN INTERNAL PIPING	0.75	17.2	.30

TOTAL SYSTEM INLET REQUIREMENTS	MINIMUM FLOW RATE (GPM)	MINIMUM PRESSURE (PSI)	WATER HEATER INSTANTANEOUS DEMAND (MBH)
TOTAL CORE INLET REQUIREMENTS	36.8	43	750
TOTAL SELF–CLEANING INLET REQUIREMENTS	17.2	41	

* OPERATING PRESSURE RANGE AT CORE PANEL GAUGE IS 43 TO 70 PSI. MAXIMUM STATIC PRESSURE IS 125 PSI.
* OPERATING PRESSURE RANGE AT Self Cleaning PANEL GAUGE IS 41 TO 70 PSI. MAXIMUM STATIC PRESSURE IS 125 PSI.
* HOT WATER TEMPERATURE RANGE FOR SELF CLEANING 140–170?.



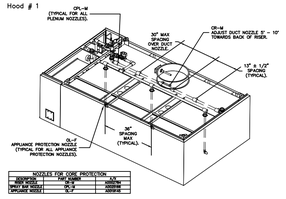
NOTES
- FIELD PIPE DROPS AS SHOWN
  ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD–INSTALLED.
  SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD–INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.
- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
- THIS FIRE SYSTEM COMPLIES WITH ULL 300 REQUIREMENTS.
- CORE / SELF CLEANING (UNITED STATES) – US PATENT 7963282 B2.
  CORE / SELF CLEANING (EUROPE) – EP PATENT 2274069 A1.
  CORE SUPERVISION – US PATENT 8378834 B1.
  CORE ELECTRICAL – US PATENT 8610601 B2.
- OL–F NOZZLE PART NUMBER REPLACES 3070–3/8H–10–SS
- CR–M NOZZLE PART NUMBER REPLACES 1/4TT+TP1530+CP1325
- CPL–M NOZZLE PART NUMBER REPLACES 1/4TT+TC–4.3W
- MK–F NOZZLE PART NUMBER REPLACES 3070–3/8H–00120–SS

JOB #: 6599699.
JOB NAME: 4081 CHEPAS MARKET – TUCSON – FARS R2.

SYSTEM SIZE: CORE
HOOD # 1 6' 0.00" LONG x 60" WIDE x 24" HIGH.
RISER # 1 SIZE: 14" DIA.
HOOD # 1 METAL BLOW–OFF CAPS INCLUDED.
HOOD # 2 9' 3.00" LONG x 60" WIDE x 24" HIGH.
RISER # 1 SIZE: 14" DIA.
HOOD # 2 METAL BLOW–OFF CAPS INCLUDED.
HOOD # 3 9' 3.00" LONG x 60" WIDE x 24" HIGH.
RISER # 1 SIZE: 14" DIA.
HOOD # 3 METAL BLOW–OFF CAPS INCLUDED.

– SOLID–FUEL APPLIANCES (EXTRA HEAVY–DUTY RATED 700?) REQUIRE AN ADDITIONAL FIRESTAT AT END OF THE EXHAUST DUCT NEAR EXHAUST FAN IF THE DUCT IS MORE THAN 10 FT LONG OR CONTAINS ANY HORIZONTAL SECTIONS.
– SOLID–FUEL APPLICATIONS WHERE THE DUCTWORK EXCEEDS 50 FT IN LENGTH WILL REQUIRE A THIRD FIRESTAT, MOUNTED IN A SERVICEABLE LOCATION, IDEALLY AT THE END OF A HORIZONTAL RUN OR TRANSITION. CONSULT ENGINEERING ON DUCT LENGTHS OVER 100 FT.
– HEAVY–DUTY APPLIANCES (RATED 600?) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
– MEDIUM TO LIGHT–DUTY APPLIANCES (RATED 450?) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

Hood # 1



NOZZLES FOR CORE PROTECTION		
ADJUSTABLE	CR–M	1/4TT
DUCT NOZZLE	CPL–M	1/4TT
WAIST BAR NOZZLE	OL–F	3070H
PLENUM NOZZLE	CPL–M	1/4TT

ISOMETRIC VIEWS ARE FOR GRAPHICAL REPRESENTATION OF TYPICAL NOZZLE PLACEMENTS AND TYPE, QUANTITIES OF NOZZLES WILL VARY.

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REVISIONS

	DESCRIPTION	DATE:
△		
△		
△		
△		

CAPTIVEAIRE
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TUCSON, AZ, 85705

DATE: 2/9/2024
DWG.#: 6599699
DRAWN BY:
SCALE: 3/8" = 1'–0"
MASTER DRAWING

REGISTERED ARCHITECT CERTIFICATE NO. 45961 CARLOS ANTONIO MURRIETA Date Signed 02-29-24 ARIZONA U.S.A.

STATUS	-
REV.	-
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EXHAUST FAN INFORMATION – JOB#6599699

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	KEF 1	1	USBI18DD–RM	CAPTIVEAIRE	1800	1.700	1206	ODP,PREMIUM	2.000	0.9490	3	208	6.1	923 FPM	419	17.3
2	KEF 2	1	DU180HFA	CAPTIVEAIRE	1850	1.250	1071	ODP,PREMIUM	2.000	0.8200	3	208	6.1	427 FPM	164	11.4
3	KEF 3	1	DU180HFA	CAPTIVEAIRE	1850	1.250	1071	ODP,PREMIUM	2.000	0.8200	3	208	6.1	427 FPM	164	11.4
4	DISH FAN	1	DU33HFA	CAPTIVEAIRE	600	0.500	1370	TEAO–ECM	0.333	0.1470	1	115	4.3	297 FPM	68	13

DOAS/RTU FAN SCHEDULE – JOB#6599699

FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	ELECTRICAL INFORMATION HP	PHASE	VOLT	MCA	MOCP	COOLING INFORMATION OUTSIDE AIR DB	WB	LEAVING AIR DB	WB	CAPACITY DP	TOTAL	SENS.	IEER	ISMRE	REHEAT INFORMATION DISCHARGE DB	WB	CAPACITY DESIRED	MAX	MOISTURE REMOVAL RATE	GAS HEAT INFORMATION GAS TYPE	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	NOTES
5	RTU / PARAGON	1	CASRTU3–I.400–24–20T	CAPTIVEAIRE	24MF–3–RTU	0	4500	4500	2790	0.500	5.00	3	208	109.7A	110A	115.0°F	76.0°F	61.3°F	57.2°F	54.8°F	264.0 MBH	224.4 MBH	18.2	6.0	70.0°F	60.8°F	40 MBH	129.6 MBH	36.1 LBS/HR	NATURAL	331011	268119	56°F	7 IN. W.C. – 14 IN. W.C.	1,2,3,4,5,6,7,8,9,10,11,12,13,14

NOTES:
1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
5. EC MOTOR CONDENSING FANS
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
7. SUCTION LINE ACCUMULATOR
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
10. 2" EXTERIOR DUAL–WALL CONSTRUCTION W/ R–13 INSULATION–MINIMUM 20GA EXTERIOR W/ 14GA BASE
11. 81% EFFICIENT FURNACE, WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE, 6:1 TURNDOWN WITH NG AND 5:1 TURNDOWN WITH LP
12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
13. FULLY MODULATING HOT GAS REHEAT
14. DOWN DISCHARGE/NO RETURN

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF 1	1	BI18 – INLET SERVICE DUCT CONNECTION. USED TO CONNECT TO STANDARD 20" GREASE DUCT OR FIELD WELDED DUCT. INCLUDES (2) 7" RISERS BOLTED TO STANDARD INLET RISER
		1	UTILITY SET GREASE CUP
		1	BI18 – 24" DISCHARGE EXTENSION
		1	BI – DISCHARGE ORIENTATION VERTICAL UPPER LEFT – CW INLET SIDE
		1	BI18 – INLET CONNECTION STANDARD 20" FLANGED GREASE DUCT
		1	BI18DD – HIGH TEMPERATURE HEAT & SMOKE OPTION
		1	UTILITY SET – SPRING VIBRATION ISOLATORS – BI18 / EQUIVALENT SIZED UTILITY SET – INDOOR/OUTDOOR USE
		1	2 YEAR PARTS WARRANTY
2	KEF 2	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL – INSTALLED AT PLANT – FOR GREASE DUCTS
		1	2 YEAR PARTS WARRANTY
3	KEF 3	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL – INSTALLED AT PLANT – FOR GREASE DUCTS
		1	2 YEAR PARTS WARRANTY
4	DISH FAN	1	ECM WIRING PACKAGE – EXHAUST – MANUAL OR 0–10VDC REFERENCE SPEED CONTROL –MSC– (TELCO), CCW ROTATION
		1	SCR–11 BIRD SCREEN
		1	1.15–BDD DAMPER
		1	2 YEAR PARTS WARRANTY
5	RTU / PARAGON	1	INLET PRESSURE GAUGE, 0–35"
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	INTAKE FIRESTAT SET TO 135°F
		1	FREEZESTAT
		1	DISCHARGE FIRESTAT SET TO 240°F
		1	SHIP LOOSE GAS STRAINER 1"
		1	CASLINK BUILDING MONITORING SYSTEM – INTERNET OR CELLULAR CONNECTION REQUIRED
		1	RTU3 DOWN DISCHARGE, 400, 500 MBH
		1	2" MERV 13 FILTERS FOR RTU3 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU3 (QTY. 4)
		1	OVERHEAT STAT
		1	SPECIAL ORIFICES FOR IF HEATERS ABOVE 2,000'
		1	HIGH AMBIENT – 20 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS. USED FOR SUMMER CONDITIONS ABOVE 110F DEGREES
		1	20 TON MODULATING REHEAT OPTION – SPACE DEWPOINT CONTROL
		1	OCCUPIED SCHEDULING
		1	RTU3 CURB DUCT HANGER
		1	120V FIRE INPUT
		1	COMMERCIAL SMOKE DETECTOR/ALARM INTERLOCK – ALARM SUPPLIED BY OTHERS
		1	CLOGGED FILTER SWITCH – NOTIFICATION ON HMI
		1	RTU3 CONVENIENCE OUTLET (GFCI), 15 AMP – REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J–BOX
		1	RTU3 NO RETURN – 100% OA
		1	RTU FIXED 100% OA INTAKE CONTROL
		1	UNIT MOUNTED VFD CONFIGURED FOR DCV
		1	AUXILIARY REHEAT
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON–DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE
		1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST GREASE CUP	EXHAUST GRAVITY DAMPER	EXHAUST WALL MOUNT	SUPPLY SIDE DISCHARGE	SUPPLY GRAVITY DAMPER	SUPPLY MOTORIZED DAMPER	SUPPLY WALL MOUNT
1	KEF 1	YES						
2	KEF 2	YES						
3	KEF 3	YES						
4	DISH FAN		YES					

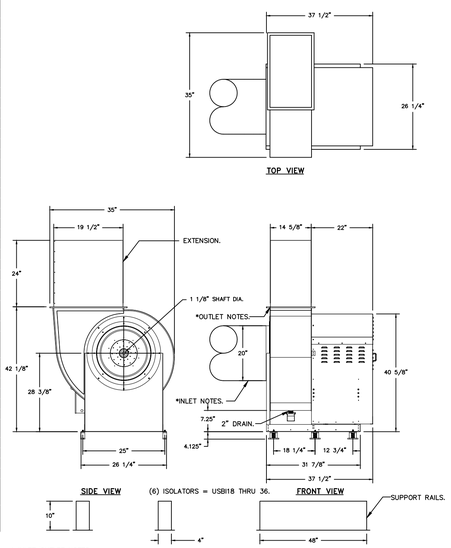
CURB ASSEMBLIES

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF 1	25 LBS	RAIL	4.000"W X 48.000"L X 10.000"H COMES AS A SET OF 2.
2	# 2	KEF 2	43 LBS	CURB	26.500"W X 26.500"L X 20.000"H VENTED HINGED.
3	# 3	KEF 3	43 LBS	CURB	26.500"W X 26.500"L X 20.000"H VENTED HINGED.
4	# 4	DISH FAN	31 LBS	CURB	19.500"W X 19.500"L X 20.000"H VENTED HINGED.
5	# 5	RTU / PARAGON	104 LBS	CURB	59.500"W X 91.000"L X 14.000"H INSULATED.

HMI SCHEDULE

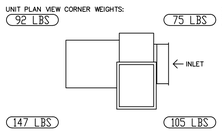
UNIT NUMBER	HMI #	HMI LOCATION	TEMP AVERAGING	MODBUS ADDRESS
FAN #5	HMI #1 – UNIT HMI # 1	MOUNTED IN UNIT	NOT AVERAGED	55
FAN #5	HMI #2 – SPACE HMI # 1		AVERAGED	56

FAN #1 USBI18DD–RM – EXHAUST FAN (KEF 1)



* INLET/OUTLET NOTES:
LENGTH OF THE STRAIGHT DUCT ON THE INLET AND OUTLET TO BE 3 TIMES THE EQUIVALENT DUCT DIAMETER BEFORE CONNECTING TO ANY FITTINGS SUCH AS ELBOWS TO AVOID SYSTEM EFFECT.

UNIT PLAN VIEW CORNER WEIGHTS:



CORNER WEIGHTS ARE CALCULATED BASED ON VERTICAL DISCHARGE. SUPPORT DUCT PROPERLY BEFORE FAN TO ENSURE CORNER WEIGHTS ARE NOT AFFECTED.

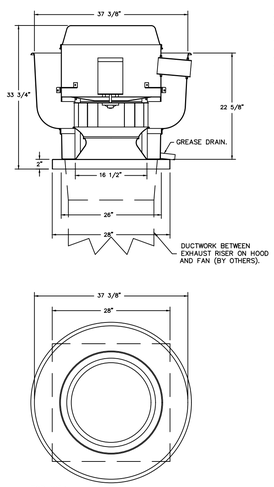
NORMAL TEMPERATURE TEST DIRECT DRIVE
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 350°F (176°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

FEATURES:

- ROOF MOUNTED FANS.
- UL705.
- UL762 AND ULC–S645 (RESTAURANT MODEL).
- HIGH HEAT OPERATION DIRECT DRIVE 350°F (176°C).
- HEAT SLINGER.
- NEMA 3R SAFETY DISCONNECT SWITCH.
- GREASE CLASSIFICATION TESTING.
- 2" DRAIN.
- MOTOR WEATHER COVER.
- FULLY SEALED SCROLL HOUSING.
- SCROLL ACCESS DOOR.
- FLANGE 1 1/4".

OPTIONS
- BI18 – INLET SERVICE DUCT CONNECTION. USED TO CONNECT TO STANDARD 20" GREASE DUCT OR FIELD WELDED DUCT. INCLUDES (2) 7" RISERS BOLTED TO STANDARD INLET RISER
- UTILITY SET GREASE CUP.
- BI18 – 24" DISCHARGE EXTENSION.
- BI – DISCHARGE ORIENTATION VERTICAL UPPER LEFT – CW INLET SIDE.
- BI18 – INLET CONNECTION STANDARD 20" FLANGED GREASE DUCT.
- BI18DD – HIGH TEMPERATURE HEAT & SMOKE OPTION – 350°F CONTINUOUS.
- UTILITY SET – SPRING VIBRATION ISOLATORS – BI18 / EQUIVALENT SIZED UTILITY SET – INDOOR/OUTDOOR USE.
- 2 YEAR PARTS WARRANTY.

FANS #2 (KEF 2), #3 (KEF 3) – DU180HFA EXHAUST FAN



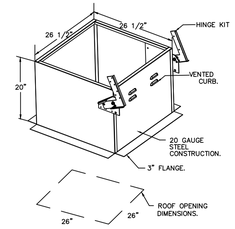
FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC–S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

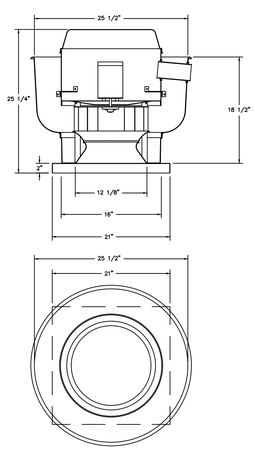
NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

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

OPTIONS
- GREASE BOX.
- FAN BASE CERAMIC SEAL – INSTALLED AT PLANT – FOR GREASE DUCTS.
- 2 YEAR PARTS WARRANTY.



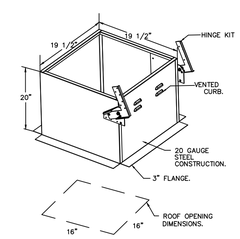
FAN #4 DU33HFA – EXHAUST FAN (DISH FAN)



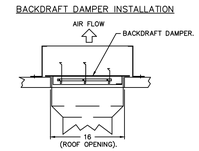
FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- UL705.
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- NEMA 3R SAFETY DISCONNECT SWITCH.

OPTIONS
- ECM WIRING PACKAGE – EXHAUST – MANUAL OR 0–10VDC REFERENCE SPEED CONTROL –MSC– (TELCO), CCW ROTATION.
- SCR–11 BIRD SCREEN.
- 1.15–BDD DAMPER.
- 2 YEAR PARTS WARRANTY.



BACKDRAFT DAMPER INSTALLATION



VERIFY PITCH CURB
Curb Pitch Required in order to manufacture the curb to specification.

VERIFY DUCT RUN(S) IN FIELD

REVISIONS

	DESCRIPTION	DATE:
△		
△		
△		
△		

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4081 Chepas Market – Tucson – FARS R2
TUCSON, AZ, 85705

DATE: 2/9/2024
DWG.#: 6599699
DRAWN BY:
SCALE: 1/2" = 1'–0"
MASTER DRAWING

REGISTERED ARCHITECT CERTIFICATE NO. 45961 CARLOS ANTONIO MURRIETA Date Signed 02-29-24 ARIZONA, U.S.A.

	STATUS	REV.
	–	–
	–	–
	–	–
	–	–
	–	–

ARCHITECT
MERGE ARCHITECTURAL
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MICRO MARKET
TUCSON, ARIZONA
MECHANICAL SPECIFICATIONS

Drawn by: TM
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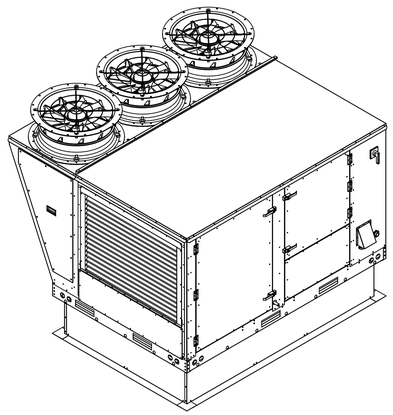
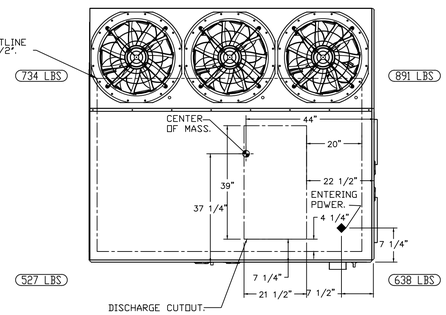
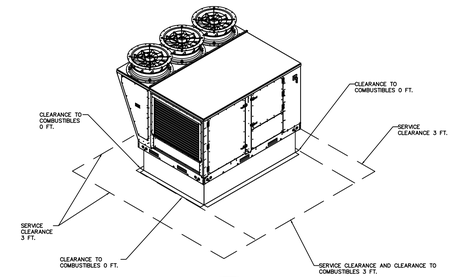
FAN #5 CASRTU3-I.400-24MF-20T - HEATER (RTU / PARAGON)

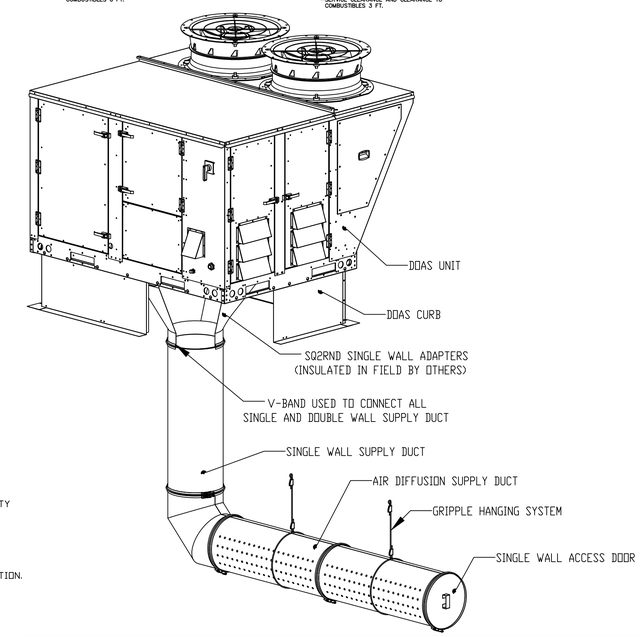
NOTES:
1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
2. ( ) DENOTES CORNER WEIGHT.
3. ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.
4. CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.

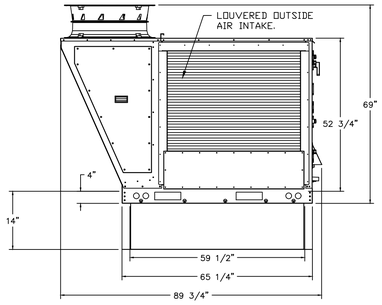
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT.
SUGGESTED STRAIGHT DUCT SIZE IS 21.5" x 39".

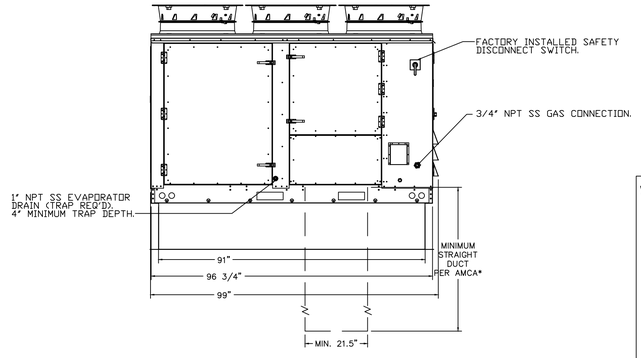


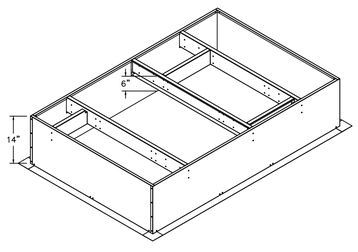


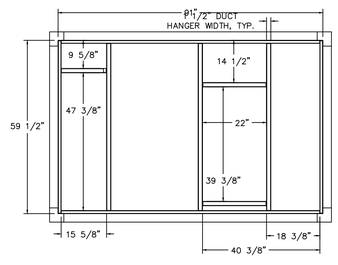












AIR DIFFUSION SUPPLY DUCT SPECIFICATIONS:
PROVIDE AIR DIFFUSION SUPPLY DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL DW-S0(HC), DW-S90(HC), & DW-S180(HC).
THREE DISTINCT HOLE PATTERN OPTIONS TO COVER A VARIETY OF CEILING HEIGHTS.
NO ADDITIONAL DIFFUSERS REQUIRED, AS THE DUCT ITSELF PROVIDES AIR DIFFUSION.
MADE OF HIGH QUALITY STAINLESS STEEL DESIGNED TO LAST 20+ YEARS.
HIGH INDUCTION SUPPLY DUCT IS CONSTRUCTED USING 24 GAUGE, 430 SS - 5" THRU 24".
HIGH INDUCTION SUPPLY DUCT IS CONSTRUCTED USING 20 GAUGE, 430 SS - 26" THRU 36".
QUICK ONSITE ASSEMBLY USING EPDM GASKETS & UNIVERSAL V-BANDS.
DOUBLE WALL SUPPLY DUCT AVAILABLE FOR INTERIOR AND EXTERIOR SPACES, EITHER CONDITIONED OR UNCONDITIONED.
DOUBLE WALL SUPPLY DUCT AVAILABLE IN DW-1S, DW-2S, & DW-3S TO MEET SPECIFIC REGIONAL "R" VALUE REQUIREMENTS.

Insulation R-Value Recommendations

Supply Duct Type	Minimum R-value	Space Type
Single Wall - S & -HC	N/A	Conditioned Space Only
Double Wall - 1S	R-4	Unconditioned Interior Space Only
Double Wall - 2S	R-8	Unconditioned Space Climate Zones 1-4
Double Wall - 3S	R-12	Unconditioned Space Climate Zones 5-8

DOUBLE WALL SUPPLY DUCT IS INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.
AIR DIFFUSION SUPPLY DUCT COMPLIES WITH SMACNA (SHEET METAL AND AIR CONDITIONING CONTRACTORS) BEST PRACTICES.
POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTION TO DISCHARGE, SEE NFPA 13, TABLE 8.12.5.1.1.

REVISIONS

DESCRIPTION	DATE:

CAPTIVEAIRE
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18206 N 19th Ave. Ste1A-1B, Phoenix, AZ, 85023 PHONE: (480) 926 - 6810 FAX: 8777192227 EMAIL: reg93@captiveaire.com

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MASTER DRAWING

SH

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STATUS	REV.	
-	A	-
-	B	-
-	C	-
-	1	-
-	2	-

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MICRO MARKET
TUCSON, ARIZONA

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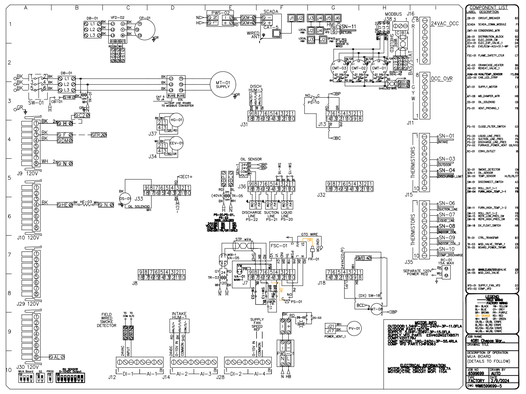

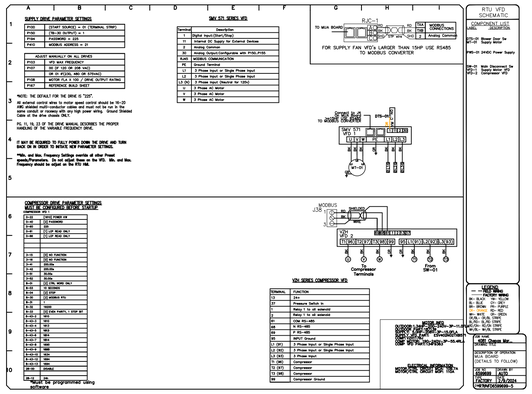

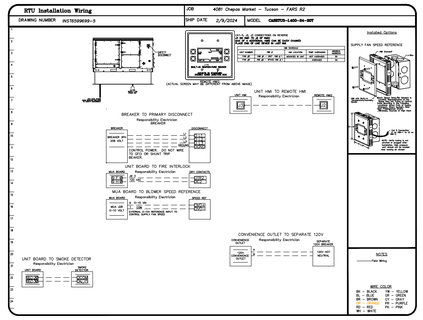

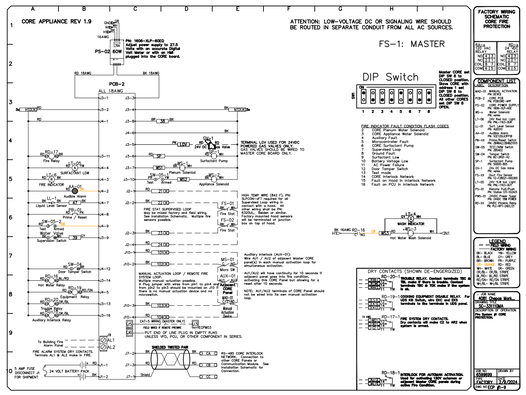

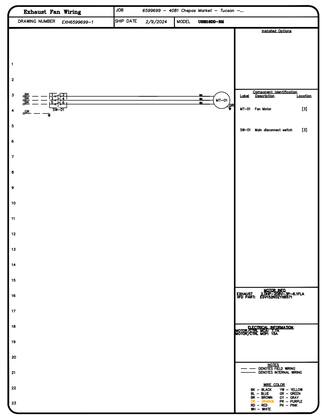

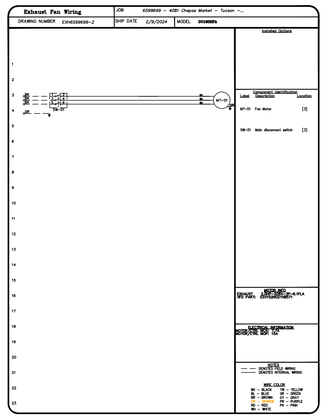

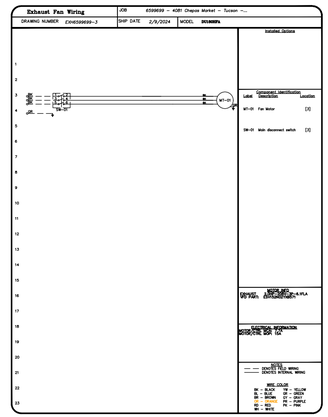

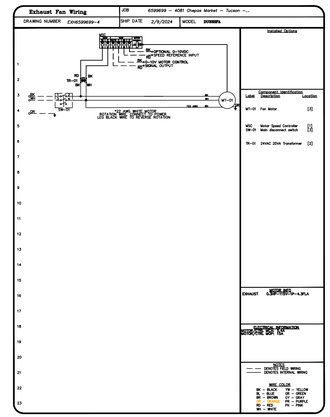

SYSTEM DESIGN VERIFICATION (SDV)

IF ORDERED, CAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.

ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE SDV WILL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR AND CORRESPONDING TRADES ON SITE. THESE ISSUES WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE. IF CAS SERVICE HAS TO RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE GENERAL CONTRACTOR WILL BE NOTIFIED AND BILLED FOR THE WORK. SHOULD A RETURN TRIP BE REQUIRED DUE TO ANY FIELD RELATED DISCREPANCY THAT CANNOT BE RESOLVED DURING THE SDV, THERE WILL BE ADDITIONAL TRIP CHARGES.

DURING THE SDV, CAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED, THE GENERAL CONTRACTOR AND APPROPRIATE SALES OFFICE WILL BE NOTIFIED. THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.

REVISIONS

DESCRIPTION	DATE:

CAPTIVEAIRE
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18206 N 19th Ave. Ste1A-1B, Phoenix, AZ, 85023 PHONE: (480) 926 - 6810 FAX: 8777192227 EMAIL: rep93@captiveaire.com

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MICRO MARKET
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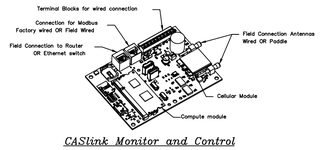
ELECTRICAL PACKAGE – JOB#6599699

NO	TAG	PACKAGE #	LOCATION	SWITCHES LOCATION	SWITCHES QUANTITY	OPTION
1		SC-331110MA	UTILITY CABINET LEFT	UTILITY CABINET LEFT	1 LIGHT	SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY
				HOOD # 1	1 FAN	

FANS CONTROLLED					
FAN TAG	TYPE	Φ	HP	VOLT	FLA
KEF 1	EXHAUST	3	2.000	208	6.1
KEF 2	EXHAUST	3	2.000	208	6.1
KEF 3	EXHAUST	3	2.000	208	6.1
RTU / PARAGON	SUPPLY	3	5.000	208	15.0



CASlink Monitor and Control

-- Hood control panel to support communications to cloud-based Building Management System.
-- Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.
-- Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.
-- Hood Control Panel to allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.

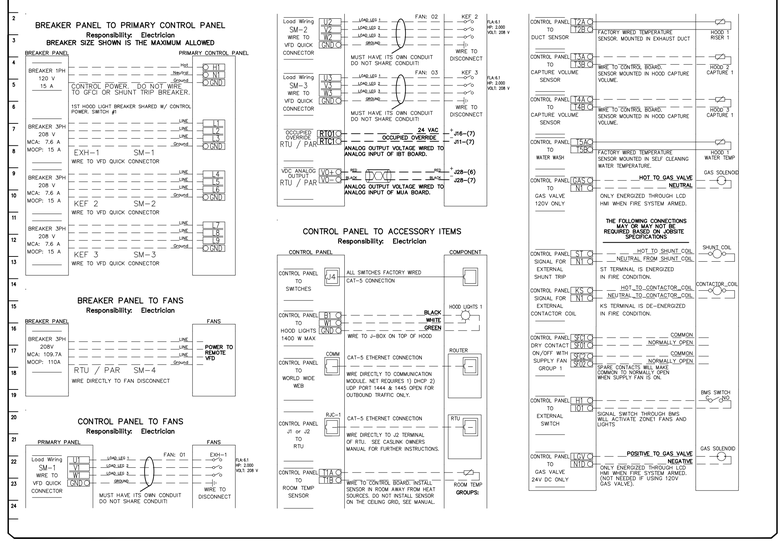
MONITORING AND CONTROL POINTS LIST

DCV Packages	Function
Room Temperature	MONITOR
Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR
Fan Amperage	MONITOR
Fan Power	MONITOR
VFD Faults	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults	MONITOR
PCU Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire System	MONITOR
Building Pressures	MONITOR
Prep Time Button	MONITOR & CONTROL
Fans Button	MONITOR & CONTROL
Lights Button	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL

SC Packages	Function
Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults	MONITOR
PCU Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire System	MONITOR
Building Pressures	MONITOR
Fans Button(s)	MONITOR & CONTROL
Lights Button(s)	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL

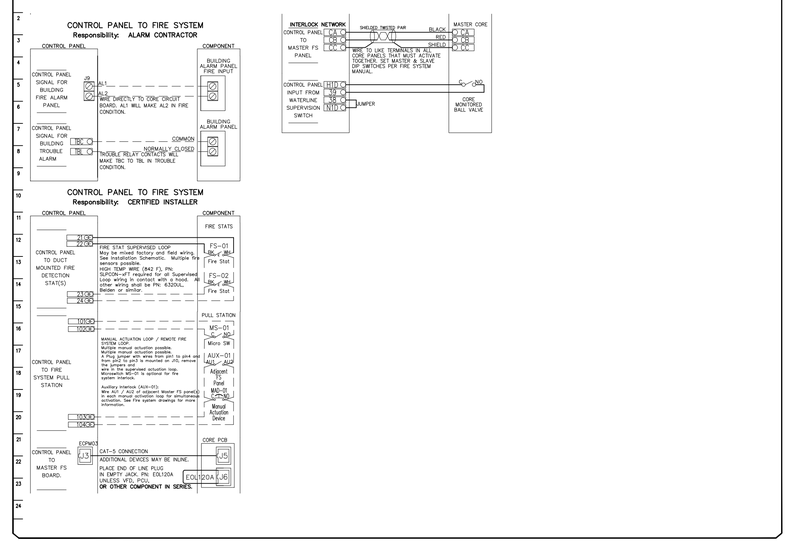
JOB NO 6599699 | MODEL NUMBER SC-331110MA | JOB NAME 4081 Chepos Market – Tucson –... | DRAWN BY | DATE 2/9/2024 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-1

DESCRIPTION OF OPERATION:
3 Phase w/ control for 3 Exhaust Fans, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Relay On/Off with Supply Fan, Fan(s) On/Off Thermostatically Controlled. Room temperature sensor shipped loose for field installation. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD.



JOB NO 6599699 | MODEL NUMBER SC-331110MA | JOB NAME 4081 Chepos Market – Tucson –... | DRAWN BY | DATE 2/9/2024 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-2

DESCRIPTION OF OPERATION:
3 Phase w/ control for 3 Exhaust Fans, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Relay On/Off with Supply Fan, Fan(s) On/Off Thermostatically Controlled. Room temperature sensor shipped loose for field installation. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD.



JOB NO 6599699 | MODEL NUMBER SC-331110MA | JOB NAME 4081 Chepos Market – Tucson –... | DRAWN BY | DATE 2/9/2024 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-3

DESCRIPTION OF OPERATION:
Fire System @ CORE PROTECTION.

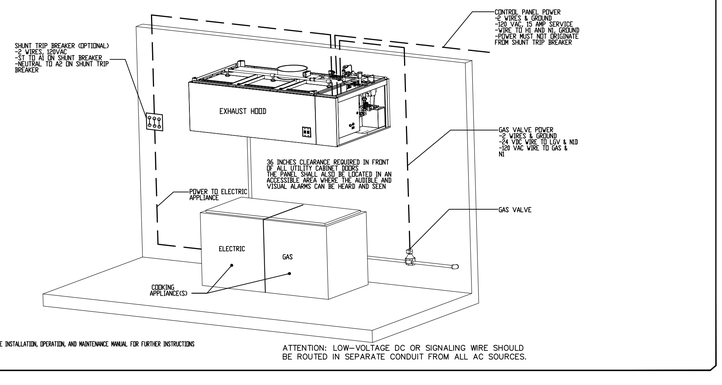
CORE TOTAL FLOOD PROTECTION ELECTRICAL DETAIL

04/14/2014 Rev. 10

FS-1: MASTER

ELECTRICIAN
1. WIRE MAIN CONTROL PANEL PER INCLUDED SCHEMATIC
2. WIRE ALL FANS PER INCLUDED SCHEMATIC
3. WIRE SHUNT TRIP BREAKER (OPTIONAL)
4. WIRE GAS VALVE APPLIANCE KILL SWITCH, IF EQUIPPED (OPTIONAL)
5. WIRE GAS VALVE

ELECTRICAL CONTRACTOR REQUIREMENT					
ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
SHUNT TRIP BREAKER (OPTIONAL)	ST & N1	BREAKER COIL (A1 & A2)	120 VAC	< 4 AMPS	EST TO A1 ON SHUNT BREAKER COIL, AND NEUTRAL TO A2 ON SHUNT TRIP BREAKER COIL
CONTROL PANEL POWER	HI & N1 + GROUND	CIRCUIT BREAKER	120 VAC	15 AMPS	CONTROL PANEL POWER MUST NOT BE RUN THROUGH SHUNT TRIP BREAKER
UDS APPLIANCE KILL SWITCH (OPTIONAL)	KTS & N1	KTS & N1	120 VAC	< 4 AMPS	KILL SWITCH TERMINALS MUST BE IN SERIES WITH OTHER KILL SWITCHES
REMOTE ANSUL AUTOMAN (OPTIONAL)	AU1, AU2	SOLENOID	120 VAC	< 6 AMPS	120V TO AU1, AU2 TO ANSUL ELECTRIC AUTOMAN; ANSUL SOLENOID TO NEUTRAL
GAS VALVE	LGV & N1D (IF 24 VDC) GAS & N1 (IF 120 VAC)	RED/RED/GREEN	24 VDC OR 120 VAC	< 1.0 AMPS	IF 24 VDC – 2 WIRES & GROUND; N1D TO RED, LGV TO RED, AND GREEN TO GROUND. IF 120 VAC – 2 WIRES & GROUND; GAS TO RED, N1 TO RED, AND GREEN TO GROUND



NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES.

JOB NO 6599699 | MODEL NUMBER SC-331110MA | JOB NAME 4081 Chepos Market – Tucson –... | DRAWN BY | DATE 2/9/2024 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-4

DESCRIPTION OF OPERATION:
Fire System @ CORE PROTECTION.

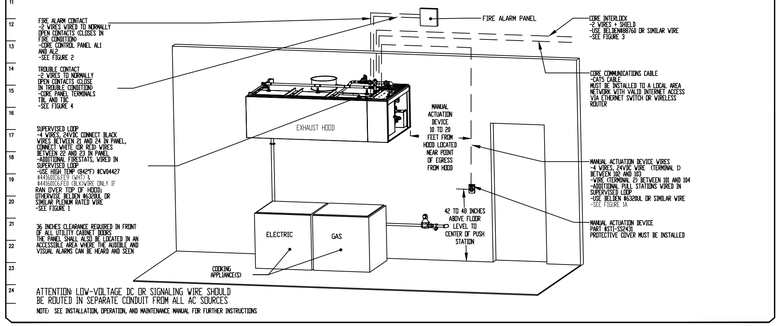
CORE TOTAL FLOOD PROTECTION LOW-VOLTAGE DETAIL

10/01/23 Rev. 13

FS-1: MASTER

ALARM CONTRACTOR:
1. WIRE MANUAL ACTUATION DEVICE(S), REMOTE FIRESTAT(S), CORE INTERLOCK(S), FIRE SENSOR(S) AND FIRE ALARM CONTACTS
2. CONFIRM FUNCTIONAL HEIGHT OF SYSTEM
3. PERFORM FINAL CORE SYSTEM TEST
4. FILL SUPPRESSANT TANK

ALARM CONTRACTOR REQUIREMENT					
ITEM	CONNECTION IN PANEL	CONNECTION ON DEVICE	VOLTAGE	AMPERAGE	COMMENTS
MANUAL ACTUATION DEVICE(S)	101 AND 104 102 AND 103	1 & 2	24 VDC	< 1.0 AMPS	WIRE MANUAL ACTUATION DEVICE TERMINAL 1 BETWEEN CORE PANEL TERMINALS 102 AND 103 WIRE MANUAL ACTUATION DEVICE TERMINAL 2 BETWEEN CORE PANEL TERMINALS 101 AND 104 JUMPER 101 TO 104 AND 102 TO 103 IF NO MANUAL ACTUATION DEVICE IS INSTALLED
MANUAL ACTUATION DEVICE COVER	N/A	N/A	N/A	N/A	MANUAL ACTUATION DEVICE COVER MUST BE INSTALLED TO PROTECT ACTUATION DEVICE FROM ACCIDENTAL ACTUATION
REMOTE FIRESTAT SENSOR(S)	23 AND 24 22 AND 23	BLACK AND WHITE	24 VDC	< 1.0 AMPS	WIRE FIRE SENSOR WHITE WIRES BETWEEN HOOD CORE PANEL TERMINALS 22 AND 23 WIRE FIRE SENSOR BLACK WIRE BETWEEN HOOD CORE PANEL TERMINALS 23 AND 24 HIGH TEMP (842°F) #4A5B0251E1 (WHITE) & #4A5B0251E2 (BLACK) OR SIMILAR ONLY IF RAN OVER TOP OF HOOD. BELDEN 9620UL OR SIMILAR RATED WIRE. SEE FIGURE 1
FIRE ALARM CONTACT	AL1, AL2	VARIES	50V MAX (AC/DC)	UP TO 1 AMP	FIRE ALARM RELAY CONTACTS FOR BUILDING FIRE ALARM LOCATED IN THE CORE ELECTRICAL CONTROL PANEL
CORE INTERLOCK(S)	CA, CB, CC	CA, CB, CC	RS-485 COMMUNICATIONS SIGNAL		CORE SYSTEM (1) CA, TO CORE SYSTEM (2) CA. CORE SYSTEM (1) CB, TO CORE SYSTEM (2) CB. CORE SYSTEM (1) CC, TO CORE SYSTEM (2) CC. USE BELDEN 9896 OR SIMILAR WIRE
TROUBLE CONTACT	TBC, TBL, TDK	VARIES	MAX 120 VAC	UP TO 6 AMPS	WIRE TO TBL & TBC NORMALLY OPEN CONTACT, CLOSES IN TROUBLE CONDITION
CORE COMMUNICATIONS CABLE	RJ-45 Jack	INTERNET CONNECTION	SIGNAL	<1.0 AMPS	TYPICAL CONNECTION CAT5 CABLE TO LOCAL AREA NETWORK VIA ETHERNET SWITCH OR WIRELESS ROUTER WITH VALID INTERNET CONNECTION



ATTENTION LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES
NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

REVISIONS	
DESCRIPTION	DATE:

CAPTIVEAIRE
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STATUS	REV.	ARCHITECT
-	1	MERGE ARCHITECTURAL 600 N. 4TH STREET #112 PHOENIX, ARIZONA 85004 602-635-1581
-	2	
-	3	
-	4	
-	5	
-	6	

AZ RC ARIZONA RESTAURANT CONSULTING
7920 E. OAK STREET, SCOTTSDALE, ARIZONA 85257
602.699.5131
JUSTIN@AZRESTAURANTCONSULTING.COM

4081 Chepos Market – Tucson – FARS R2
TUCSON, AZ, 85705

DATE: 2/9/2024
DWG.#: 6599699
DRAWN BY:
SCALE: 3/4" = 1'-0"
MASTER DRAWING

MICRO MARKET
TUCSON, ARIZONA
MECHANICAL SPECIFICATIONS

Drawn by: TM
Checked by: JBM
Date: 2/29/2024
Sheet Number:
FS-4.7

REGISTERED ARCHITECT CERTIFICATE NO. 45961 CARLOS ANTONIO MURRIETA Date Signed 02-29-24 ARIZONA, U.S.A.

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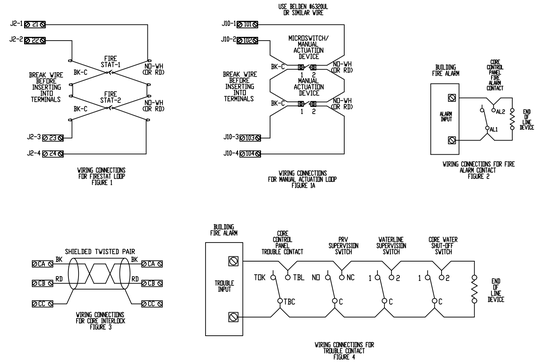
JOB NO	MODEL NUMBER	DRAWN BY	SCHEMATIC TYPE	DESCRIPTION OF OPERATION:
6599699	SC-331110MA		INSTALL	Fire System @1 CORE PROTECTION.
	JOB NAME: 4081 Chepos Market – Tucson –...	DATE: 2/9/2024	DWG NO: ECP #1-5	

CORE TOTAL FLOOD PROTECTION LOW-VOLTAGE FIGURES

10/01/2023 Rev. 17

FS-1: MASTER



NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES

JOB NO	MODEL NUMBER	DRAWN BY	SCHEMATIC TYPE	DESCRIPTION OF OPERATION:
6599699	SC-331110MA		INSTALL	Fire System @1 CORE PROTECTION.
	JOB NAME: 4081 Chepos Market – Tucson –...	DATE: 2/9/2024	DWG NO: ECP #1-6	

CORE TOTAL FLOOD PROTECTION PLUMBING DETAIL

10/01/2023 Rev. 17

FS-1: MASTER

PLUMBER:
1. CONNECT HOT WATER LINE(-#4PVC, COPPER, STAINLESS STEEL PIPE OR LISTED BRAIDED HOSE ONLY
2. CONNECT PRV TO HOT WATER LINE, SEE PLUMBING DETAIL FOR DETAILS
3. CONNECT HOT WATER LINE TO END AND BACK-TO-BACK HOOD SHUTOFF VALVE(S) (PLUMBING IS FIELD SUPPLIED FOR THIRD FIELD PLUMBING MUST NOT EXCEED HEIGHT OF VACUUM BREAKER IN MAIN UTILITY CABINET
4. CONNECT HOT WATER LINE TO END AND BACK-TO-BACK HOOD SHUTOFF VALVE(S) (PLUMBING IS FIELD SUPPLIED FOR THIRD FIELD PLUMBING MUST NOT EXCEED HEIGHT OF VACUUM BREAKER IN MAIN UTILITY CABINET
5. CONNECT HOT WATER LINE TO END AND BACK-TO-BACK HOOD SHUTOFF VALVE(S) (PLUMBING IS FIELD SUPPLIED FOR THIRD FIELD PLUMBING MUST NOT EXCEED HEIGHT OF VACUUM BREAKER IN MAIN UTILITY CABINET
6. CONNECT HOT WATER LINE TO END AND BACK-TO-BACK HOOD SHUTOFF VALVE(S) (PLUMBING IS FIELD SUPPLIED FOR THIRD FIELD PLUMBING MUST NOT EXCEED HEIGHT OF VACUUM BREAKER IN MAIN UTILITY CABINET
7. CONNECT HOT WATER LINE TO END AND BACK-TO-BACK HOOD SHUTOFF VALVE(S) (PLUMBING IS FIELD SUPPLIED FOR THIRD FIELD PLUMBING MUST NOT EXCEED HEIGHT OF VACUUM BREAKER IN MAIN UTILITY CABINET
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23. CONNECT HOT WATER LINE TO END AND BACK-TO-BACK HOOD SHUTOFF VALVE(S) (PLUMBING IS FIELD SUPPLIED FOR THIRD FIELD PLUMBING MUST NOT EXCEED HEIGHT OF VACUUM BREAKER IN MAIN UTILITY CABINET
24. CONNECT HOT WATER LINE TO END AND BACK-TO-BACK HOOD SHUTOFF VALVE(S) (PLUMBING IS FIELD SUPPLIED FOR THIRD FIELD PLUMBING MUST NOT EXCEED HEIGHT OF VACUUM BREAKER IN MAIN UTILITY CABINET

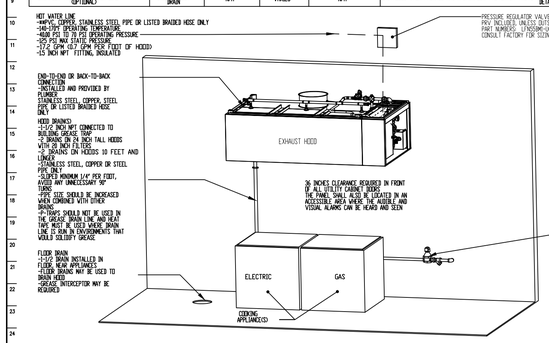
PLUMBING CONTRACTOR REQUIREMENT					
ITEM	CONNECTION	TEMPERATURE	PRESSURE	FLOW RATE	COMMENTS
HOT WATER LINE	1.5 INCH NPT	140 to 170°F	40.00 PSI TO 70 PSI	172 GPM (0.17 GPM PER FOOT OF HOOD)	INSULATE HOT WATER PIPE, MINIMUM PRESSURE DEPENDENT ON LENGTH AND CONFIGURATION OF HOOD SYSTEM
HOOD DRAIN(S)	1-1/2 INCH NPT	N/A	GRAVITY DRAIN	SEE ABOVE	2 DRAINS ON 24 INCH TALL HOODS WITH 20 INCH TALL FILTERS AND HOODS 10 FEET AND LONGER
END-TO-END CORE CONNECTION	VARIES	N/A	N/A	N/A	CONNECT WITH NPT PIPE, SEAL ALL THREADS, HOOD CONNECTION PROVIDED
BACK-TO-BACK CORE CONNECTION	VARIES	N/A	N/A	N/A	CONNECT WITH NPT PIPE, SEAL ALL THREADS, HOOD CONNECTION PROVIDED
GAS VALVE	VARIES	N/A	SEE TABLE	N/A	UP TO 2 INCHES NPT WITH 24V CONTROLS, 2-1/2 AND 3 INCH USE 120V CONTROL
FLOOR DRAIN(S)	1-1/2 INCH	N/A	GRAVITY DRAIN	N/A	USED TO HELP CLEAN UP FIRE SYSTEM DISCHARGE, GREASE INTERCEPTOR MAY BE REQUIRED
BACKFLOW PREVENTER DRAIN LINE	INLET/OUTLET DRAIN	N/A	VARIES	N/A	INSTALLED WHEN PACKAGE HAS A BACKFLOW PREVENTER VALVE, SEE BACKFLOW PREVENTER VALVE MANUAL FOR DETAILS

HOT WATER LINE
-#4PVC, COPPER, STAINLESS STEEL PIPE OR LISTED BRAIDED HOSE ONLY
-140-170°F OPERATING TEMPERATURE
-40.00 PSI TO 70 PSI OPERATING PRESSURE
-1.5 INCH NPT FITTING, INSULATED
-172 GPM (0.17 GPM PER FOOT OF HOOD)
-1.5 INCH NPT FITTING, INSULATED

END-TO-END OR BACK-TO-BACK CONNECTION
-INSTALLED AND PROVIDED BY PLUMBER
-STAINLESS STEEL, COPPER, STEEL PIPE OR LISTED BRAIDED HOSE ONLY

HOOD DRAIN(S)
-1-1/2 INCH NPT CONNECTED TO BUILDING GREASE DRAIN
-2 DRAINS ON 24 INCH TALL HOODS WITH 20 INCH TALL FILTERS
-2 DRAINS ON HOODS 10 FEET AND LONGER
-STAINLESS STEEL, COPPER OR STEEL PIPE ONLY
-SLOPED MINIMUM 1/4" PER FOOT, AVOID ANY UNNECESSARY 90° TURNS
-PIPE SIZE COULD BE INCREASED WHEN COMBINED WITH OTHER DRAINS
-P-TRAPS SHOULD NOT BE USED IN THE GREASE DRAIN LINE AND HEAT TAPE MUST BE USED WHERE DRAIN LINE IS RUN IN ENVIRONMENTS THAT WOULD SOLIDIFY GREASE

FLOOR DRAIN
-1-1/2 INCH DRAIN INSTALLED IN FRONT OF FIRE APPLIANCES
-FLOOR DRAINS MAY BE USED TO DRAIN HOOD
-GREASE INTERCEPTOR MAY BE REQUIRED



2" MANIFOLD MINIMUM OPERATING PRESSURE REQUIREMENTS		
LENGTH OF HOOD (FT)	MINIMUM INLET WATER PRESSURE FOR HOT WATER	DISCHARGE COEFFICIENTS (K-FACTOR)
4	30	0.6
8	30	1.3
12	30	1.9
16	30	2.5
20	30	3.1
24	30	3.8
28	31	4.3
32	33	4.8
36	35	5.3
40	42	5.4
44	43	5.9
48	45	6.3

TOTAL FLOWRATE = K FACTOR x PRESSURE$^{0.44}$

GAS VALVE
-SIZEABLE NPT CONNECTION
-SEE TABLE BELOW FOR MAX PRESSURE
-STRAINER INSTALLED UPSTREAM OF VALVE

SIZE	MAX INLET PRESSURE (PSI)	VOLTAGE	BTU/HR
3/4"	5	24VDC	593,280
1"		24VDC	1,132,300
1-1/4"		24VDC	1,925,000
1-1/2"		24VDC	2,496,000
2"		24VDC	2,940,500
2-1/2"		120VAC	5,687,000
3"		120VAC	5,661,700

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS
#PVC PIPING CANNOT BE WITHIN 10 FT OF HOOD, CONNECTIONS TO THE MANIFOLD MUST BE HARD PIPED WITH COPPER, OR STAINLESS STEEL.

JOB NO	MODEL NUMBER	DRAWN BY	SCHEMATIC TYPE	DESCRIPTION OF OPERATION:
6599699	SC-331110MA		INSTALL	Fire System @1 CORE PROTECTION.
	JOB NAME: 4081 Chepos Market – Tucson –...	DATE: 2/9/2024	DWG NO: ECP #1-7	

CORE TOTAL FLOOD PROTECTION SPRINKLER DETAIL

10/01/2023 Rev. 15

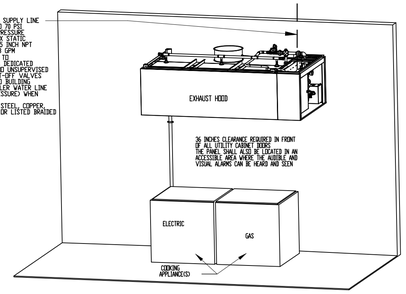
FS-1: MASTER

BUILDING SPRINKLER CONTRACTOR:
1. CONNECT CORE WATER LINE TO BUILDING WET SPRINKLER SYSTEM. STAINLESS STEEL, COPPER, STEEL PIPE OR LISTED BRAIDED HOSE ONLY

SPRINKLER CONTRACTOR REQUIREMENT					
ITEM	CONNECTION	OPERATING PRESSURE	K-FACTOR	FLOW RATE	COMMENTS
CORE WATER SUPPLY LINE	1.5 INCH NPT	43.00 PSI TO 70 PSI	7.0	36.8 GPM (1.5 GPM PER FOOT OF HOOD)	WATER LINE MUST BE SUPERVISED AND HAVE NO UNSUPERVISED MANUAL SHUT-OFF VALVES. MINIMUM PRESSURE AND FLOWRATE DEPENDENT ON LENGTH OF HOOD SYSTEM

PRESSURE REGULATOR VALVE (PRV)
-PRV INCLUDED, UNLESS OUTLOOK DESIGN PRESSURE MUST BE PROVIDED.
INSTALLED AND ADJUSTED BY THE SPRINKLER CONTRACTOR TO MEET INCOMING PRESSURE REQUIREMENT
-A REGULATOR SIZED AT THE EXHAUST BRAND MODEL NUMBER URFA-205-25" OR THE UP-35 SERIES PARTS KITS SHOULD BE UTILIZED
-MUST BE CONFIRMED WITH THE FIRE MARSHAL OR LOCAL AUTHORITY HAVING JURISDICTION ONLY

CORE WATER SUPPLY LINE
-43.00 PSI TO 70 PSI OPERATING PRESSURE
-125 PSI MAX STATIC PRESSURE, 1.5 INCH NPT FITTING, 36.8 GPM
-CONNECTED TO DEDICATED 1.5 INCH NPT CORE WATER NO UNSUPERVISED MANUAL SHUT-OFF VALVES
-CONNECT TO BUILDING FIRE SPRINKLER WATER LINE VIA DUALE PRESSURE WHEN REQUIRED
-STAINLESS STEEL, COPPER, STEEL PIPE OR LISTED BRAIDED HOSE ONLY



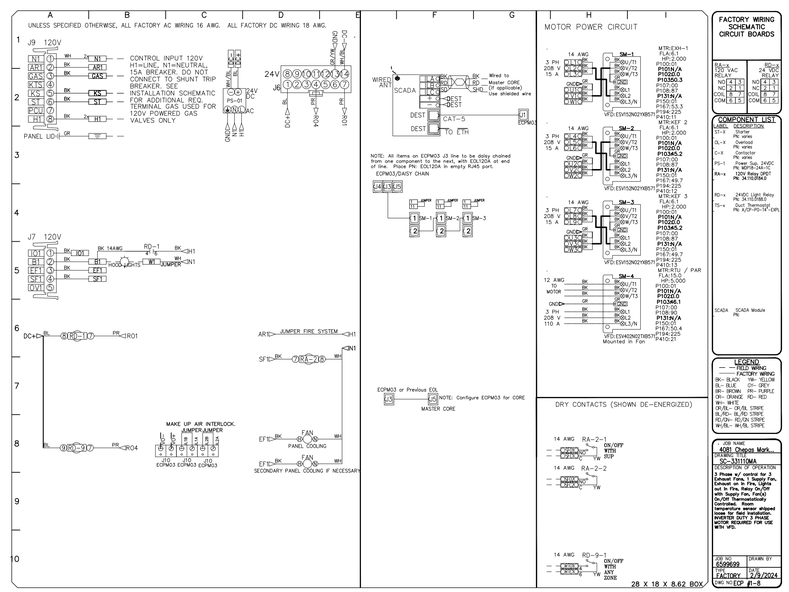
MINIMUM OPERATING PRESSURE REQUIREMENTS			
LENGTH OF HOOD (FT)	MINIMUM INLET WATER PRESSURE FOR HOT WATER (PSI)	MINIMUM INLET WATER PRESSURE FOR CORE PROTECTION (PSI)	DISCHARGE COEFFICIENTS (K-FACTOR)
4	30	30	1.3
8	30	30	2.6
12	30	30	4.0
16	30	30	5.4
20	30	30	6.7
24	32	36	8.1
28	31	33	9.0
32	33	35	10.0
36	35	45	10.1
40	42	50	10.7
44	43	55	11.3
48	45	60	11.9

TOTAL FLOWRATE = K FACTOR x PRESSURE$^{0.44}$

NOZZLE HEIGHTS ABOVE HAZARD		
NOZZLE PART NUMBER	NOZZLE ABOVE HAZARD	
	MIN	MAX
OL-F	30"	55"

NOZZLES FOR CORE PROTECTION			
DESCRIPTION	PART NUMBER	MACOLA	FLOW RATE
RISER NOZZLE	CR-M	A0002784	2.6 GPM @ 30 PSI
SPRAY BAR NOZZLE	CPL-M	A0025166	0.7 GPM @ 30 PSI

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS



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REVISIONS

DESCRIPTION	DATE:

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Arizona Office
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4081 Chepos Market – Tucson – FARS R2
TUCSON, AZ, 85705

DATE: 2/9/2024
DWG.#: 6599699
DRAWN BY:
SCALE: 3/4" = 1'-0"
MASTER DRAWING

REGISTERED ARCHITECT CERTIFICATE NO. 45961 CARLOS ANTONIO MURRIETA Date Signed 02.29.24 ARIZONA U.S.A.

STATUS	REV.
-	-
-	-
-	-
-	-
-	-
-	-

ARCHITECT

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600 N. 4TH STREET #112
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MICRO MARKET
TUCSON, ARIZONA

MECHANICAL SPECIFICATIONS

Drawn by: TM
Checked by: JBM
Date: 2/29/2024
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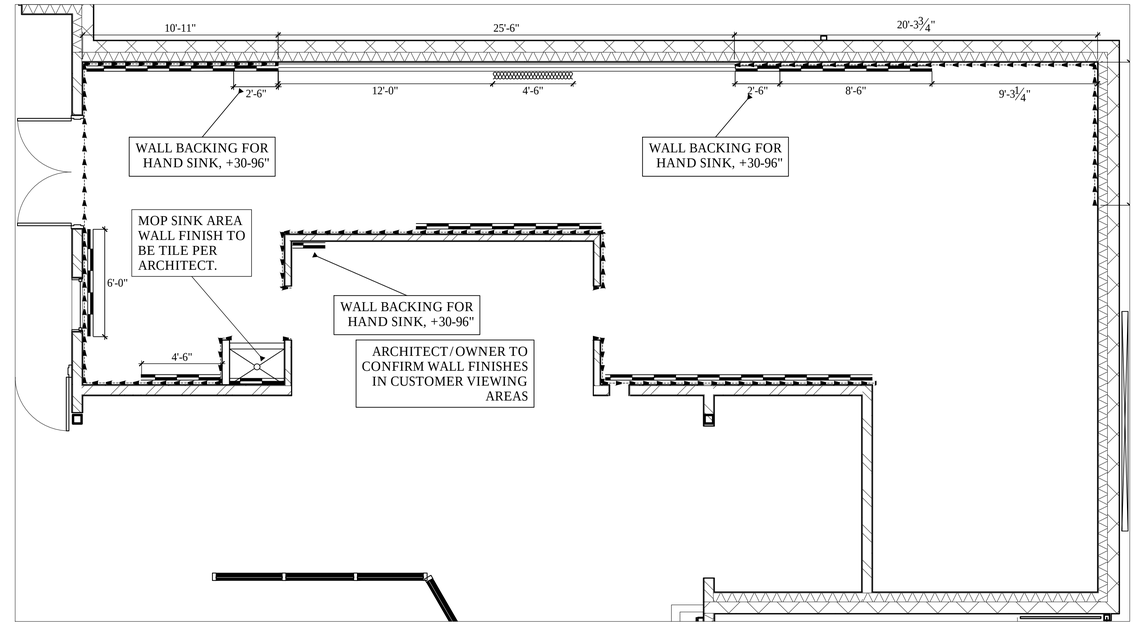
FS-4.8



SPECIAL CONDITIONS PLAN

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

WALL FINISH DETAILS IN FOODSERVICE AREAS

NOT ALL SYMBOLS MAY BE USED

S/S WALL FLASHING, 20 GUAGE W/ JOINING STRIPS @ SEAMS, MOUNT FROM 6" to 8'-6" AFF. w/ 6" COVED BASE

FRP, WHITE W/ JOINING STRIPS @ SEAMS, MOUNT FROM TOP OF COVED BASE TO CEILING GRID UNLESS OTHERWISE NOTED ON PLAN.

EPOXY PAINT, NSF APPROVED OVER BLOCK CONSTRUCTION AS APPROVED BY HEALTH DEPARTMENT.

WALL BACKING DETAILS IN FOODSERVICE AREAS

NOT ALL SYMBOLS MAY BE USED

⅝" PLYWOOD WALL BACKING, IN LIEU OF SHEETROCK FROM 4'-0" TO 8'-0" UNLESS OTHERWISE NOTED ON PLAN

NON-COMBUSTIBLE WALL BACKING, TBD BY GC, B SHEETROCK FROM 4'-0" TO 8'-0" UNLESS OTHER NOTED ON PLAN

REGISTERED ARCHITECT
CERTIFICATE NO. 45961
CARLOS ANTONIO MURRIETA
Date Signed 02-29-24
ARIZONA, U.S.A.

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REV.	STATUS
A	-
B	-
0	-
1	-
2	-

ARCHITECT

MERGE ARCHITECTURAL
600 N. 4TH STREET #112
PHOENIX, ARIZONA 85004
602-635-1581

AZ RC ARIZONA RESTAURANT CONSULTING
7920 E. OAK STREET, SCOTTSDALE, ARIZONA 85257
602.699.5131
JUSTIN@AZRESTAURANTCONSULTING.COM

MICRO MARKET
TUCSON, ARIZONA

SPECIAL CONDITIONS PLAN

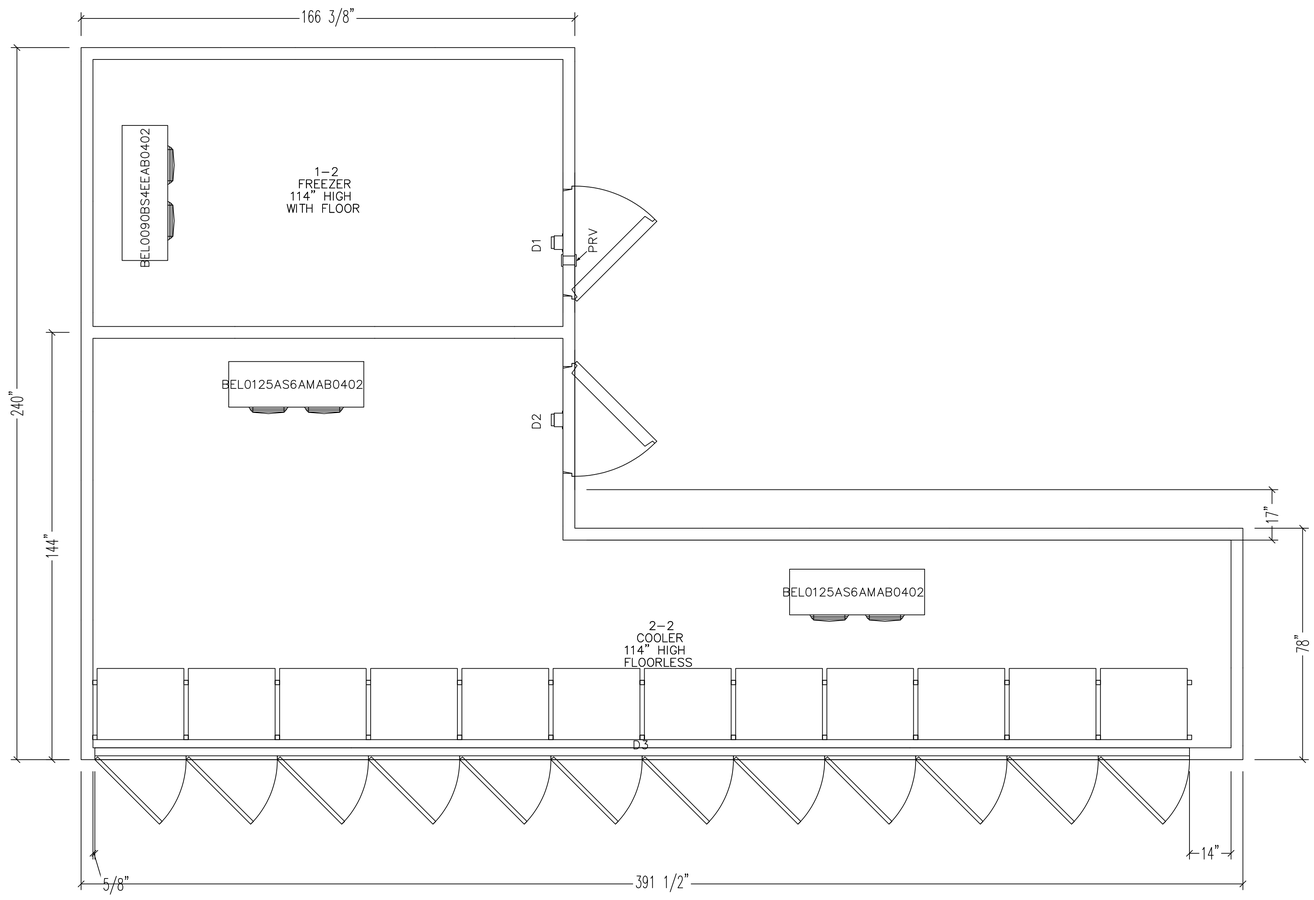
Drawn by: JBM

Checked by:

Date: 2/29/2024

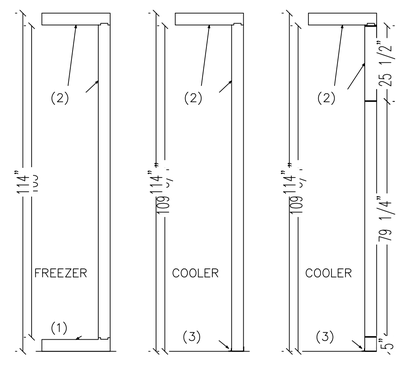
Sheet Number:

FS-5.0



SECTIONAL VIEW

(1) .050 SMOOTH ALUMINUM
OVER 1/2" PLYWOOD UNDERLAY
FOR 1200 LB/SQ.FT UNIFORMLY DISTRIBUTED LOAD
(2) 4" INSULATED PANELS.
26 GA. STUCCO EMBOSSED ACRYLUME
(3) NSF VINYL SCREED



CUSTOMER NAME:
AZ Restaurant Consulting

JOB NAME:
33' x 20' Combo

SCALE: 3/8" = 1" DRAWN BY: VF

575 EAST 10th AVENUE,HIALEAH,FLORIDA 33010
FAX(305)884-8330

DATE: 02/05/2024 REV: 1 1/17/2025

JOB NUMBER:
24-02798-2

PAGE: 1 of 4

QUOTE#: 24-02798
PO#:
FAX#:

STATUS	REV.
-	-
-	-
-	-
-	-
-	-

ARCHITECT

MERGE ARCHITECTURAL
600 N. 4TH STREET #112
PHOENIX, ARIZONA 85004
602-635-1581

AZRC ARIZONA
RESTAURANT CONSULTING
7920 E. OAK STREET, SCOTTSDALE, ARIZONA 85257
602.699.5131
JUSTIN@AZRESTAURANTCONSULTING.COM

MICRO MARKET
TUCSON, ARIZONA

WALK IN SPECIFICATIONS

Drawn by: -

Checked by: JBM

Date: 2/29/2024

Sheet Number:

FS-6.0

REGISTERED ARCHITECT
CERTIFICATE NO.
45961
CARLOS
ANTONIO
MURRIETA
Date Signed 02-29-24
ARIZONA, U.S.A.

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FREEZER REFRIGERATION PACKAGE

BOHN

BCH0035LDBCZA0200 - SUBMITTAL

Project Name:	24-02798 REV	Project Location:	US
Quote ID:	R3037789	Item #:	1000
Submitted For:		Submitted On:	02/21/2024
Submitted By:	Michael Maddox	Submitted From:	
Identity #:		Tag:	

☐ For Record ☐ For Approval By:______ Date:______

General Product Information

Product Family:	HTS	Compressor Brand:	Copeland
Application:	Outdoor	Compressor Type:	Scroll
Temperature Range:	Low Temp	Compressor Hp:	3.5
Voltage: (Volts/Ph/Hz)	460/3/60	Compressor Model:	ZF11K4E-TFD-231
Refrigerant Type:	R448A	Number of Compressor(s):	1
Piping:	Standard	Coil Type:	Microchannel

Technical Information

Performance Data

Ambient Temperature (°F)	Saturated Suction Temperature (°F)	Application Capacity* (BTU/H)	Altitude (ft)	AWEF Value
95	-20.0	11,240	0	3.15

Electrical Data

Compressor(s)		Fan Motor(s)			Electric Ratings						
RLA	LRA	Quantity	Hp	FLA	Defrost Type	High or Low Amps?	Number of Contactors	MCA	MOPD	Evap.Fan Amps	Defrost Heater Amps
5.8	44	2	1/15	1	ELECTRIC DEFROST			15	15		

Unit Specifications

Connections (in.)		Receiver 90% Full (lbs)		Fan Blade(s) Diameter (in)	Sound Data (dB)	Approx. Net Weight (lbs)
Liquid Line	Suction	Standard	Over Sized			
0.5	0.875	14	20	14	64	232

Dimensional Drawing(s)

AGENCY LISTINGS c UL us — UOM inches

Page 1 of 8

BOHN

BCH0035LDBCZA0200 - SUBMITTAL

Standard Features

CABINET AND CONSTRUCTION
- MICROCHANNEL COIL TECHNOLOGY STANDARD ON ALL UNITS

QUALITY
- ALL UNITS ARE COMPLETELY LEAK TESTED IN A HELIUM ENVIRONMENT, BUMP TESTED AND ALLOWED TO CYCLE OFF ON THE HIGH AND LOW PRESSURE CONTROL. EACH UNIT HAS A COPY OF THE RUN DATA SHIPPED INSIDE THE ELECTRICAL PANEL
- ELECTRICAL CIRCUITS ARE COMPLETELY CHECKED FOR CONTINUITY
- PIPING IS LAID OUT TO MINIMIZE STRESS AND VIBRATION AND IS PRE-BENT TO ELIMINATE LEAKS
- ENCAPSULATED, AUTO-RESET, HIGH AND LOW PRESSURE CONTROLS TO ELIMINATE LEAKS (ADJUSTABLE LOW PRESSURE CONTROL STANDARD)
- PAINTED STEEL CABINETS FOR SUPERIOR STRENGTH AND CORROSION PROTECTION
- HEAVY DUTY, STEEL, 1-1/2" TALL BASE

SERVICEABILITY
- SUCTION SERVICE VALVES FOR HERMETIC AND SCROLL COMPRESSORS LOCATED OUTSIDE THE CABINET FOR QUICK INSTALLATIONS.
- RECEIVER WITH FUSIBLE PLUG, LIQUID SHUTOFF VALVE AND CHARGING PORT IS STANDARD
- LARGE ELECTRICAL PANEL FOR EASE OF ACCESS
- PREFABRICATED WIRING HARNESSES FOR TIGHT CRIMP CONNECTIONS AND CONSISTENT LABELING
- UNIT STAYS ON IF THE HOOD IS REMOVED FOR SERVICING
- SIGHT GLASS IS EASILY VIEWABLE

Options

Mounted Options
- Preferred Package Code - A0200
- Motor - PSC
- Receiver Options - STANDARD
- Liquid Line Options - FILTER DRIER AND SIGHT GLASS
- Discharge Line Options - HEAD PRESSURE VALVE 145#
- Fused Disconnect - NO FUSED DISCONNECT
- Crankcase Heater - CRANKCASE HEATER
- Pre Charged - NONE
- Hail Guard Factory Installed - NONE
- Brand Label - BOHN
- Coil Selection - MICROCHANNEL COIL
- Defrost Timer Options - ELECTRIC DEFROST TIMER
- Suction Line Options - SUCTION TUBE ONLY
- Cabinet Selection - Painted
- Pressure Options - ADJUSTABLE LOW - FIXED HIGH
- Phase Loss Monitor - NONE
- Snow Legs - NONE

Shipped-Loose Options (Unit)

(QTY)Part Number - Description
- (1) AZL3 - AZL3 3 - 3.5HP SCROLL WARRANTY

Minimum Unit Clearances

Walls or Obstructions for Horizontal Air Flow — AIR FLOW — W* MIN. — *W = unit width

Multiple Units with Horizontal Air Flow — AIR FLOW — W* MIN.

* Capacities shown are Application Capacities reflecting nominal operation at 10°F TD. For models within the scope of the DOE AWEF (Annual Walk-in Energy Factor) standard, the Net Capacity is determined by the AHRI 1250 test method. DOE will publish this compliance data at www.regulations.doe.gov

Page 2 of 8

BOHN

BEL0090MS4ECAB0402 - SUBMITTAL

Project Name:	24-02798 REV	Project Location:	US
Quote ID:	R3037789	Item #:	2000
Submitted For:		Submitted On:	02/21/2024
Submitted By:	Michael Maddox	Submitted From:	
Identity #:		Tag:	

☐ For Record ☐ For Approval By:______ Date:______

General Product Information

Product Family:	BEL	Motor type	PSC-TE
Defrost Type:	Electric	Number of Fans:	2
Voltage: (Volts/Ph/Hz)	460/1/60	Fan HorsePower	1/20
Refrigerant Type:	R448A	Fins per Inch	4

Technical Information

Performance Data

Capacity			Air Flow				Altitude (ft)	AWEF Value	
TD (°F)	SST (°F)	Application Capacity* (BTU/H)	CFM	Fan Diameter (in.)	Air Throw (ft) Standard	w/Collar		Cooler > 32	Freezer <= 32
10	-20.0	8,800	1332	12			0	N/A	N/A

Electrical Data

Fan Motor(s)		Defrost Heater(s)		Drain Pan Heater(s)	
Watts	Amps	Watts	Amps	Watts	Amps
234	0.8	2100	4.6		

Unit Specifications

Coil Inlet	Suction	External Equalizer	Drain	Side Port	Hot Gas Drain Pan	Approx. Net Weight (lbs)
1/2	7/8	1/4	3/4			59

Dimensional Drawing(s)

7/8" ELECTRICAL KNOCKOUTS — REFRIGERANT CONNECTION END — ELECTRICAL CONNECTION END — 3/4" MPT (14 NPS) DRAIN CONNECTION — AIR FLOW — AGENCY LISTINGS — UOM inches

Page 3 of 8

BOHN

BEL0090MS4ECAB0402 - SUBMITTAL

Standard Features

EASE OF INSTALLATION SERVICE
- ALL ELECTRICAL COMPONENTS FACTORY WIRED TO TERMINAL BOARD AND IDENTIFIED, MAKING IT EASY TO FIELD WIRE THE UNIT

RELIABLE DURABLE
- HEAVY GAUGE GRAINED ALUMINUM CABINET CLEANS EASILY AND LOOKS ATTRACTIVE
- MOLDED FAN GUARD AND ACCESS PANELS ARE MADE OF STRONG, DURABLE, AND NSF AND UL SANITATION RATED PLASTIC MATERIAL
- SWEAT CONNECTIONS TO REDUCE POTENTIAL FOR LEAKS

PERFORMANCE
- EC MOTORS STANDARD ON ALL MODELS FOR IMPROVED UNIT EFFICIENCY

VERSATILE
- LARGE DIAMETER DRAIN HOLE (3/4 " ID) IS LOCATED TOWARDS THE BACK OF THE UNIT
- MINIMAL HEIGHT OF THE LOW PROFILE SERIES MAKES IT IDEAL FOR LOW CEILING COOLERS
- CABINET DESIGN FEATURES HINGED, REMOVABLE FRONT ACCESS PANELS ON EACH SIDE FOR EASY ACCESS TO ELECTRICAL AND REFRIGERATION COMPONENTS
- LIQUID LINE SOLENOID WIRE HARNESS IS FACTORY-INSTALLED FOR QUICK INSTALLATION
- MOTORS PLUG INTO WIRING HARNESS FOR EASIER SERVICING
- HINGED, REMOVABLE DRAIN PAN FOR EASY AND SAFE ACCESS
- PRE-DRILLED HOLES ON THE BACK OF THE UNIT FOR ROOM THERMOSTAT
- QUICK REMOVAL FAN GUARD/MOTOR ASSEMBLY FOR EASY SERVICE OR REPLACEMENT OF AIR MOVER PARTS
- INTERNAL PANELS ARE ISOLATED FOR QUIET OPERATION
- INTERNALLY ENHANCED TUBING AND FIN DESIGN FOR HIGHER EFFICIENCY

Options

Mounted Options
- DOE Compliance - Does not meet DOE minimum AWEF requirement for WICF
- Motor - PSC - Totally Enclosed
- DTFD Option - Fixed
- Fan Guard - Molded
- Drain Pan Type - Stucco
- Solenoid Voltage - 230
- Coil Mechanical Option - Mounted Sporlan TXV / Std Sol Mounted [BBIDE-1-1/2-ZP / L-1-1/2]
- Customer Specified Valve Type - TXV
- Heater Limit Switch - Included
- Brand Label - BOHN
- Drain Pan Defrost Voltage - 460/1/60
- Fan Blade - Standard
- Cabinet Type - Stucco
- Controller Option - Mechanical Thermostat
- Fin Material - Aluminum
- Liquid Temperature - 95
- Valve Family - L

Minimum Unit Clearances

One Evaporator — Two Evaporators — PLAN VIEW — AIR FLOW — 1 1/2 H — 3H — NOTE: H =Total Height evaporator coil surface.

* Capacities shown are Application Capacities reflecting nominal operation at 10°F TD. For models within the scope of the DOE AWEF (Annual Walk-in Energy Factor) standard, the Net Capacity is determined by the AHRI 1250 test method. DOE will publish this compliance data at www.regulations.doe.gov

Page 4 of 8

COOLER REFRIGERATION PACKAGE

BOHN

BCH0050MDACZA0000 - SUBMITTAL

Project Name:	24-02798 REV	Project Location:	US
Quote ID:	R3037789	Item #:	3000
Submitted For:		Submitted On:	02/21/2024
Submitted By:	Michael Maddox	Submitted From:	
Identity #:		Tag:	

☐ For Record ☐ For Approval By:______ Date:______

General Product Information

Product Family:	HTS	Compressor Brand:	Copeland
Application:	Outdoor	Compressor Type:	Scroll
Temperature Range:	Medium Temp	Compressor Hp:	5
Voltage: (Volts/Ph/Hz)	460/3/60	Compressor Model:	ZS33KAE-TFD-118
Refrigerant Type:	R448A	Number of Compressor(s):	1
Piping:	Standard	Coil Type:	Microchannel

Technical Information

Performance Data

Ambient Temperature (°F)	Saturated Suction Temperature (°F)	Application Capacity* (BTU/H)	Altitude (ft)	AWEF Value
95	25.0	37,130	0	7.6

Electrical Data

Compressor(s)		Fan Motor(s)			Electric Ratings						
RLA	LRA	Quantity	Hp	FLA	Defrost Type	High or Low Amps?	Number of Contactors	MCA	MOPD	Evap.Fan Amps	Defrost Heater Amps
9	52	1	1/3	1.9	AIR DEFROST			15	20	9	23

Unit Specifications

Connections (in.)		Receiver 90% Full (lbs)		Fan Blade(s) Diameter (in)	Sound Data (dB)	Approx. Net Weight (lbs)
Liquid Line	Suction	Standard	Over Sized			
0.5	1.125	20	40	22	63	330

Dimensional Drawing(s)

AGENCY LISTINGS c UL us — UOM inches

Page 5 of 8

BOHN

BCH0050MDACZA0000 - SUBMITTAL

Standard Features

(Same standard features as page 2.)

Options

Mounted Options
- Preferred Package Code - A0000
- Motor - PSC
- Receiver Options - STANDARD
- Liquid Line Options - FILTER DRIER AND SIGHT GLASS
- Discharge Line Options - HEAD PRESSURE VALVE 150#
- Fused Disconnect - NO FUSED DISCONNECT
- Crankcase Heater - CRANKCASE HEATER
- Pre Charged - NONE
- Hail Guard Factory Installed - NONE
- Brand Label - BOHN
- Coil Selection - MICROCHANNEL COIL
- Defrost Timer Options - NO TIMER
- Suction Line Options - SUCTION TUBE ONLY
- Cabinet Selection - Painted
- Pressure Options - ADJUSTABLE LOW - FIXED HIGH
- Phase Loss Monitor - NONE
- Snow Legs - NONE

Shipped-Loose Options (Unit)

(QTY)Part Number - Description
- (1) AZL5 - AZL5 4 - 5.9HP SCROLL WARRANTY

Minimum Unit Clearances

Walls or Obstructions for Horizontal Air Flow — Multiple Units with Horizontal Air Flow

Page 6 of 8

BOHN

BEL0125AS6AMAB0402 - SUBMITTAL

Project Name:	24-02798 REV	Project Location:	US
Quote ID:	R3037789	Item #:	4000
Submitted For:		Submitted On:	02/21/2024
Submitted By:	Michael Maddox	Submitted From:	
Identity #:		Tag:	

☐ For Record ☐ For Approval By:______ Date:______

General Product Information

Product Family:	BEL	Motor type	2 SPEED EC
Defrost Type:	Air	Number of Fans:	2
Voltage: (Volts/Ph/Hz)	115/1/60	Fan HorsePower	1/20
Refrigerant Type:	R448A	Fins per Inch	6

Technical Information

Performance Data

Capacity			Air Flow				Altitude (ft)	AWEF Value	
TD (°F)	SST (°F)	Application Capacity* (BTU/H)	CFM	Fan Diameter (in.)	Air Throw (ft) Standard	w/Collar		Cooler > 32	Freezer <= 32
10	25.0	15,500	1220	12			0	9	N/A

Electrical Data

Fan Motor(s)		Defrost Heater(s)		Drain Pan Heater(s)	
Watts	Amps	Watts	Amps	Watts	Amps
110	1.8				

Unit Specifications

Coil Inlet	Suction	External Equalizer	Drain	Side Port	Hot Gas Drain Pan	Approx. Net Weight (lbs)
1/2	7/8	1/4	3/4			56

Dimensional Drawing(s)

7/8" ELECTRICAL KNOCKOUTS — REFRIGERANT CONNECTION END — ELECTRICAL CONNECTION END — 3/4" MPT (14 NPS) DRAIN CONNECTION — AIR FLOW — AGENCY LISTINGS — UOM inches

Page 7 of 8

BOHN

BEL0125AS6AMAB0402 - SUBMITTAL

Standard Features

(Same standard features as page 4.)

Options

Mounted Options
- Brand Label - BOHN
- DTFD Option - None
- Fan Guard - Molded
- Drain Pan Type - Stucco
- Solenoid Voltage - 115
- Coil Mechanical Option - Mounted Sporlan TXV / Std Sol Mounted [BBIDE-1-1/2-C / L-1-1/2]
- Customer Specified Valve Type - TXV
- Motor - 2 Speed EC
- Fan Blade - Standard
- Cabinet Type - Stucco
- Controller Option - Mechanical Thermostat
- Fin Material - Aluminum
- Liquid Temperature - 95
- Valve Family - L

Minimum Unit Clearances

One Evaporator — Two Evaporators — PLAN VIEW — AIR FLOW — 1 1/2 H — 3H — NOTE: H =Total Height evaporator coil surface.

Page 8 of 8

JOB NAME: 33' x 20' Combo

CUSTOMER NAME: AZ Restaurant Consulting

DATE: 02/05/2024 | REV: 1 | 1/17/2025

SCALE: 3/8" = 1" | DRAWN BY: VF

JOB NUMBER: 24-02798-2

PAGE: 2 of 4

QUOTE#: 24-02798
PO#:
FAX#:

amerikooler — taking cool further

575 EAST 10th AVENUE,HIALEAH,FLORIDA 33010
FAX(305)884-8330

ARCHITECT
MERGE ARCHITECTURAL
600 N. 4TH STREET #112
PHOENIX, ARIZONA 85004
602-635-1581

REV.		STATUS
A	-	-
B	-	-
0	-	-
1	-	-
2	-	-

AZ RC ARIZONA
RESTAURANT CONSULTING
7920 E. OAK STREET - SCOTTSDALE, ARIZONA 85257
602.699.5131
JUSTIN@AZRESTAURANTCONSULTING.COM

MICRO MARKET
TUCSON, ARIZONA
WALK IN SPECIFICATIONS

Drawn by: -
Checked by: JBM
Date: 2/29/2024
Sheet Number: FS-6.1

REGISTERED ARCHITECT — CERTIFICATE NO. 45961 — CARLOS ANTONIO MURRIETA — Date Signed 02.29.24 — ARIZONA, U.S.A.

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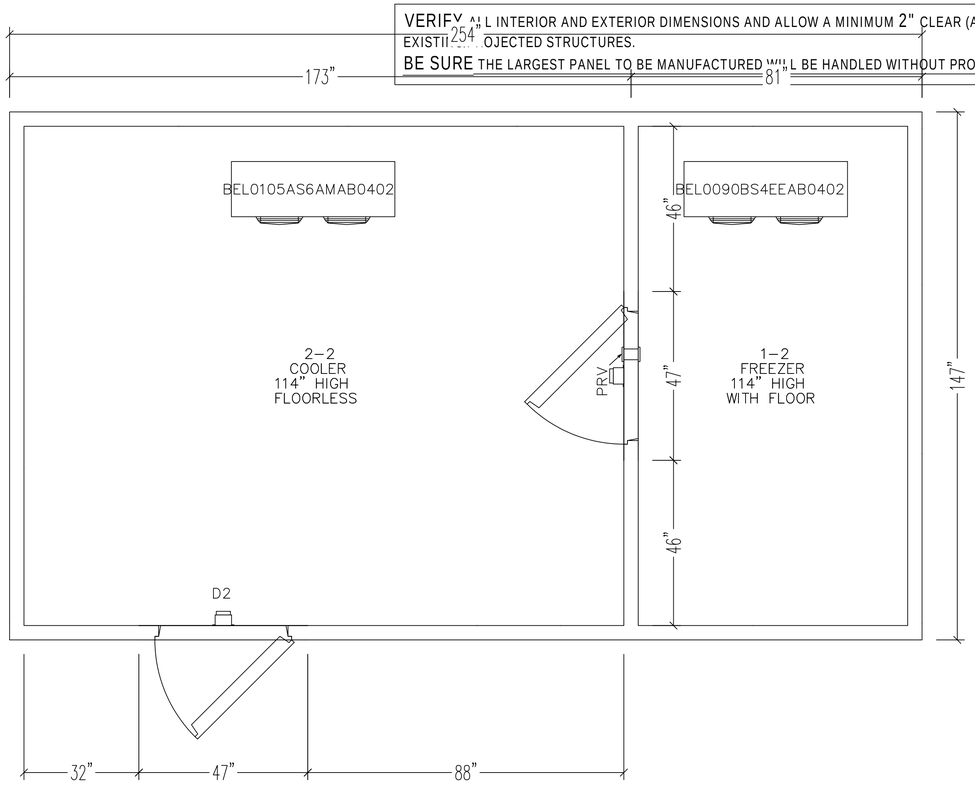
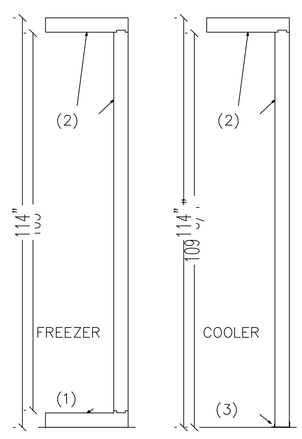
VERIFY ALL INTERIOR AND EXTERIOR DIMENSIONS AND ALLOW A MINIMUM 2" CLEAR (AIR) BETWEEN WALK-IN AND EXISTING OR PROJECTED STRUCTURES.
BE SURE THE LARGEST PANEL TO BE MANUFACTURED WILL BE HANDLED WITHOUT PROBLEM INSIDE YOUR ROOM

4" INSULATION, AK-XPS4 HI-PERFORMANCE PANEL CORE
COOLERS R-29, FREEZERS R-32
CORE FLAME SPREAD RATING OF 15
SMOKE DEVELOPED OF 165
INSULATION WITH 50 YEAR R-VALUE WARRANTY



SECTIONAL VIEW

(1) .050 SMOOTH ALUMINUM
OVER 1/2" PLYWOOD UNDERLAY
FOR 1200 LB/SQ.FT UNIFORMLY DISTRIBUTED LOAD
(2) 4" INSULATED PANELS.
26 GA. STUCCO EMBOSSED ACRYLUME
(3) NSF VINYL SCREED



JOB NAME: 21' x 6'9 Combo

CUSTOMER NAME: AZ Restaurant Consulting

SCALE: 3/8" = 1" DRAWN BY: VF

575 EAST 10th AVENUE,HIALEAH,FLORIDA 33010
FAX(305)884-8330

DATE: 02/01/2024 REV: 1/17/2025

JOB NUMBER: 24-03107-1

PAGE: 3 of 4

QUOTE#: 24-03107
PO#:
FAX#:

ameri kooler taking cool further

REGISTERED ARCHITECT CERTIFICATE NO. 45961 CARLOS ANTONIO MURRIETA Date Signed 02-29-24 ARIZONA U.S.A.

STATUS	REV.	
-	A	-
-	B	-
-	C	-
-	D	-
-	1	-
-	2	-

ARCHITECT

MERGE ARCHITECTURAL
600 N. 4TH STREET #112
PHOENIX, ARIZONA 85004
602-635-1581

AZRC ARIZONA RESTAURANT CONSULTING
7920 E. OAK STREET, SCOTTSDALE, ARIZONA 85257
602.699.5131
JUSTIN@AZRESTAURANTCONSULTING.COM

MICRO MARKET
TUCSON, ARIZONA

WALK IN SPECIFICATIONS

Drawn by: -

Checked by: JBM

Date: 2/29/2024

Sheet Number:

FS-6.2

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FREEZER REFRIGERATION PACKAGE

BCH0035LDBCZA0200 - SUBMITTAL

BOHN

Project Name:	24-03107	Project Location:	US
Quote ID:	R3039204	Item #:	1000
Submitted For:		Submitted On:	02/22/2024
Submitted By:	Michael Maddox	Submitted From:	
Identity #:		Tag:	

☐ For Record ☐ For Approval By:______________________ Date:______________

General Product Information

Product Family:	HTS	Compressor Brand:	Copeland
Application:	Outdoor	Compressor Type:	Scroll
Temperature Range:	Low Temp	Compressor Hp:	3.5
Voltage: (Volts/Ph/Hz)	460/3/60	Compressor Model:	ZF11K4E-TFD-231
Refrigerant Type:	R448A	Number of Compressor(s):	1
Piping:	Standard	Coil Type:	Microchannel

Technical Information

Performance Data

Ambient Temperature (°F)	Saturated Suction Temperature (°F)	Application Capacity* (BTU/H)	Altitude (ft)	AWEF Value
95	-20.0	11,240	0	3.15

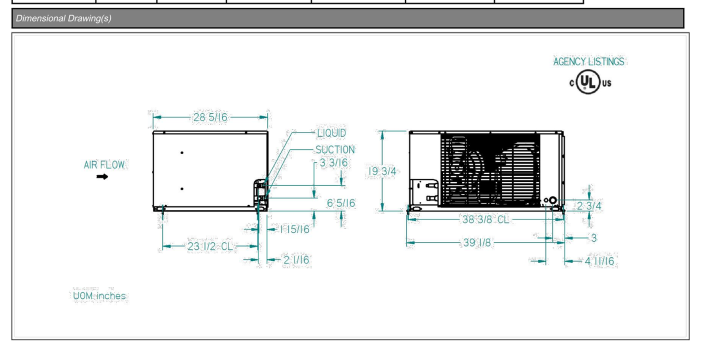
Electrical Data

Compressor(s)		Fan Motor(s)			Electric Ratings						
RLA	LRA	Quantity	Hp	FLA	Defrost Type	High or Low Amps?	Number of Contactors	MCA	MOPD	Evap.Fan Amps	Defrost Heater Amps
5.8	44	2	1/15	1	ELECTRIC DEFROST			15	15		

Unit Specifications

Connections (in.)		Receiver 90% Full (lbs)		Fan Blade(s) Diameter (in)	Sound Data (dB)	Approx. Net Weight (lbs)
Liquid Line	Suction	Standard	Over Sized			
0.5	0.875	14	20	14	64	232

Dimensional Drawing(s)



BCH0035LDBCZA0200 - SUBMITTAL

BOHN

Project Name:	24-03107	Project Location:	US
Quote ID:	R3039204	Item #:	1000
Submitted For:		Submitted On:	02/22/2024
Submitted By:	Michael Maddox	Submitted From:	
Identity #:		Tag:	

Standard Features

CABINET AND CONSTRUCTION

- MICROCHANNEL COIL TECHNOLOGY STANDARD ON ALL UNITS

QUALITY

- ALL UNITS ARE COMPLETELY LEAK TESTED IN A HELIUM ENVIRONMENT, BUMP TESTED AND ALLOWED TO CYCLE OFF ON THE HIGH AND LOW PRESSURE CONTROL. EACH UNIT HAS A COPY OF THE RUN DATA SHIPPED INSIDE THE ELECTRICAL PANEL
- ELECTRICAL CIRCUITS ARE COMPLETELY CHECKED FOR CONTINUITY
- PIPING IS LAID OUT TO MINIMIZE STRESS AND VIBRATION AND IS PRE-BENT TO ELIMINATE LEAKS
- ENCAPSULATED, AUTO-RESET, HIGH AND LOW PRESSURE CONTROLS TO ELIMINATE LEAKS (ADJUSTABLE LOW PRESSURE CONTROL STANDARD)
- PAINTED STEEL CABINETS FOR SUPERIOR STRENGTH AND CORROSION PROTECTION
- HEAVY DUTY, STEEL, 1-1/2" TALL BASE

SERVICEABILITY

- SUCTION SERVICE VALVES FOR HERMETIC AND SCROLL COMPRESSORS LOCATED OUTSIDE THE CABINET FOR QUICK INSTALLATIONS.
- RECEIVER WITH FUSIBLE PLUG, LIQUID SHUTOFF VALVE AND CHARGING PORT IS STANDARD
- LARGE ELECTRICAL PANEL FOR EASE OF ACCESS
- PREFABRICATED WIRING HARNESSES FOR TIGHT CRIMP CONNECTIONS AND CONSISTENT LABELING
- UNIT STAYS ON IF THE HOOD IS REMOVED FOR SERVICING
- SIGHT GLASS IS EASILY VIEWABLE

Options

Mounted Options

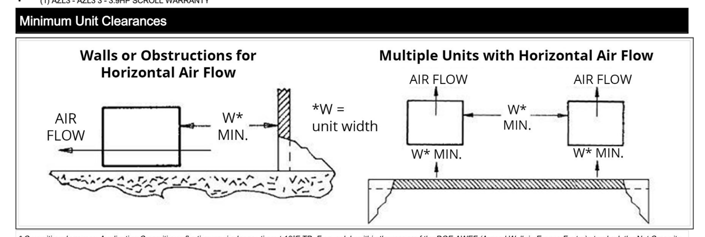
- Preferred Package Code - A0200
- Motor - PSC
- Receiver Options - STANDARD
- Liquid Line Options - FILTER DRIER AND SIGHT GLASS
- Discharge Line Options - HEAD PRESSURE VALVE 145#
- Fused Disconnect - NO FUSED DISCONNECT
- Crankcase Heater - CRANKCASE HEATER
- Pre Charged - NONE
- Hail Guard Factory Installed - NONE
- Brand Label - BOHN
- Coil Selection - MICROCHANNEL COIL
- Defrost Timer Options - ELECTRIC DEFROST TIMER
- Suction Line Options - SUCTION TUBE ONLY
- Cabinet Selection - Painted
- Pressure Options - ADJUSTABLE LOW - FIXED HIGH
- Phase Loss Monitor - NONE
- Snow Legs - NONE

Shipped-Loose Options (Unit)

(QTY)Part Number - Description (QTY)Part Number - Description

- (1) AZL3 - AZL3 3 - 3.9HP SCROLL WARRANTY

Minimum Unit Clearances



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BEL0090MS4ECAB0402 - SUBMITTAL

BOHN

Project Name:	24-03107	Project Location:	US
Quote ID:	R3039204	Item #:	2000
Submitted For:		Submitted On:	02/22/2024
Submitted By:	Michael Maddox	Submitted From:	
Identity #:		Tag:	

☐ For Record ☐ For Approval By:______________________ Date:______________

General Product Information

Product Family:	BEL	Motor type	PSC-TE
Defrost Type:	Electric	Number of Fans:	2
Voltage: (Volts/Ph/Hz)	460/1/60	Fan HorsePower	1/20
Refrigerant Type:	R448A	Fins per Inch	4

Technical Information

Performance Data

Capacity			Air Flow				Altitude (ft)	AWEF Value	
TD (°F)	SST (°F)	Application Capacity* (BTU/H)	CFM	Fan Diameter (in.)	Air Throw (ft) Standard	Air Throw (ft) w/Collar		Cooler > 32	Freezer <= 32
10	-20.0	8,800	1332	12			0	N/A	N/A

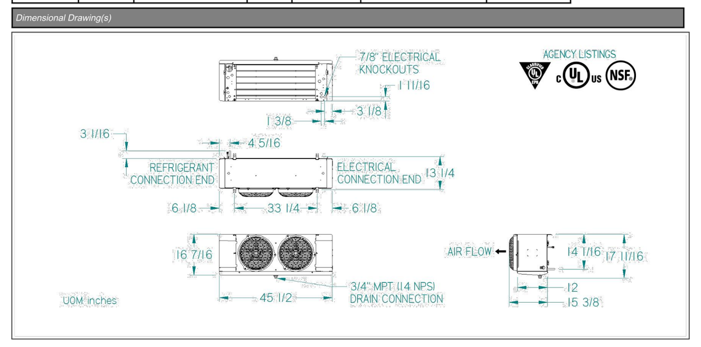
Electrical Data

Fan Motor(s)		Defrost Heater(s)		Drain Pan Heater(s)	
Watts	Amps	Watts	Amps	Watts	Amps
234	0.8	2100	4.6		

Unit Specifications

Connections (in.)						Approx. Net Weight (lbs)
Coil Inlet	Suction	External Equalizer	Drain	Side Port	Hot Gas Drain Pan	
1/2	7/8	1/4	3/4			59

Dimensional Drawing(s)



BEL0090MS4ECAB0402 - SUBMITTAL

BOHN

Project Name:	24-03107	Project Location:	US
Quote ID:	R3039204	Item #:	2000
Submitted For:		Submitted On:	02/22/2024
Submitted By:	Michael Maddox	Submitted From:	
Identity #:		Tag:	

Standard Features

EASE OF INSTALLATION SERVICE

- ALL ELECTRICAL COMPONENTS FACTORY WIRED TO TERMINAL BOARD AND IDENTIFIED, MAKING IT EASY TO FIELD WIRE THE UNIT

RELIABLE DURABLE

- HEAVY GAUGE GRAINED ALUMINUM CABINET CLEANS EASILY AND LOOKS ATTRACTIVE
- MOLDED FAN GUARD AND ACCESS PANELS ARE MADE OF STRONG, DURABLE, AND NSF AND UL SANITATION RATED PLASTIC MATERIAL
- SWEAT CONNECTIONS TO REDUCE POTENTIAL FOR LEAKS

PERFORMANCE

- EC MOTORS STANDARD ON ALL MODELS FOR IMPROVED UNIT EFFICIENCY

VERSATILE

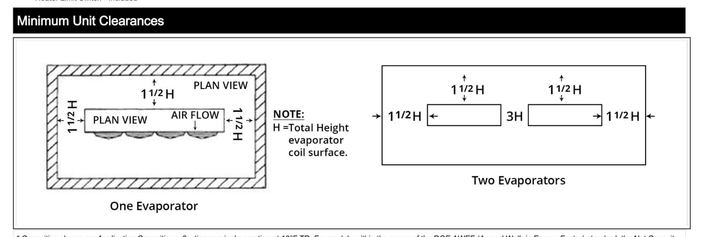
- LARGE DIAMETER DRAIN HOLE (3/4 " ID) IS LOCATED TOWARDS THE BACK OF THE UNIT
- MINIMAL HEIGHT OF THE LOW PROFILE SERIES MAKES IT IDEAL FOR LOW CEILING COOLERS
- CABINET DESIGN FEATURES HINGED, REMOVABLE FRONT ACCESS PANELS ON EACH SIDE FOR EASY ACCESS TO ELECTRICAL AND REFRIGERATION COMPONENTS
- LIQUID LINE SOLENOID WIRE HARNESS IS FACTORY-INSTALLED FOR QUICK INSTALLATION
- MOTORS PLUG INTO WIRING HARNESS FOR EASIER SERVICING
- HINGED, REMOVABLE DRAIN PAN FOR EASY AND SAFE ACCESS
- PRE-DRILLED HOLES ON THE BACK OF THE UNIT FOR ROOM THERMOSTAT
- QUICK REMOVAL FAN GUARD/MOTOR ASSEMBLY FOR EASY SERVICE OR REPLACEMENT OF AIR MOVER PARTS
- INTERNAL PANELS ARE ISOLATED FOR QUIET OPERATION
- INTERNALLY ENHANCED TUBING AND FIN DESIGN FOR HIGHER EFFICIENCY

Options

Mounted Options

- DOE Compliance - Does not meet DOE minimum AWEF requirement for WICF
- Motor - PSC - Totally Enclosed
- DTFD Option - Fixed
- Fan Guard - Molded
- Drain Pan Type - Stucco
- Solenoid Voltage - 230
- Coil Mechanical Option - Mounted Sporlan TXV / Std Sol Mounted [BBIDE-1-1/2-ZP / L-1-1/2]
- Customer Specified Valve Type - TXV
- Heater Limit Switch - Included
- Brand Label - BOHN
- Drain Pan Defrost Voltage - 460/1/60
- Fan Blade - Standard
- Cabinet Type - Stucco
- Controller Option - Mechanical Thermostat
- Fin Material - Aluminum
- Liquid Temperature - 95
- Valve Family - L

Minimum Unit Clearances



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COOLER REFRIGERATION PACKAGE

BCH0020MDACZA0000 - SUBMITTAL

BOHN

Project Name:	24-03107	Project Location:	US
Quote ID:	R3039204	Item #:	3000
Submitted For:		Submitted On:	02/22/2024
Submitted By:	Michael Maddox	Submitted From:	
Identity #:		Tag:	

☐ For Record ☐ For Approval By:______________________ Date:______________

General Product Information

Product Family:	HTS	Compressor Brand:	Copeland
Application:	Outdoor	Compressor Type:	Scroll
Temperature Range:	Medium Temp	Compressor Hp:	2
Voltage: (Volts/Ph/Hz)	460/3/60	Compressor Model:	ZS15KAE-TFD-118
Refrigerant Type:	R448A	Number of Compressor(s):	1
Piping:	Standard	Coil Type:	Microchannel

Technical Information

Performance Data

Ambient Temperature (°F)	Saturated Suction Temperature (°F)	Application Capacity* (BTU/H)	Altitude (ft)	AWEF Value
95	25.0	16,410	0	7.6

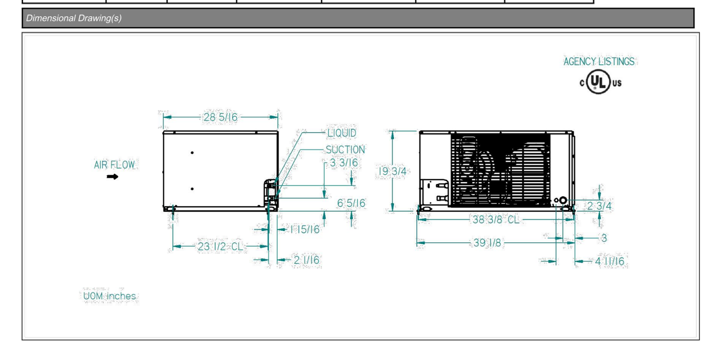
Electrical Data

Compressor(s)		Fan Motor(s)			Electric Ratings						
RLA	LRA	Quantity	Hp	FLA	Defrost Type	High or Low Amps?	Number of Contactors	MCA	MOPD	Evap.Fan Amps	Defrost Heater Amps
4.8	29	2	1/15	1	AIR DEFROST			15	15		

Unit Specifications

Connections (in.)		Receiver 90% Full (lbs)		Fan Blade(s) Diameter (in)	Sound Data (dB)	Approx. Net Weight (lbs)
Liquid Line	Suction	Standard	Over Sized			
0.5	0.875	14	20	14	63	221

Dimensional Drawing(s)



BCH0020MDACZA0000 - SUBMITTAL

BOHN

Project Name:	24-03107	Project Location:	US
Quote ID:	R3039204	Item #:	3000
Submitted For:		Submitted On:	02/22/2024
Submitted By:	Michael Maddox	Submitted From:	
Identity #:		Tag:	

Standard Features

CABINET AND CONSTRUCTION

- MICROCHANNEL COIL TECHNOLOGY STANDARD ON ALL UNITS

QUALITY

- ALL UNITS ARE COMPLETELY LEAK TESTED IN A HELIUM ENVIRONMENT, BUMP TESTED AND ALLOWED TO CYCLE OFF ON THE HIGH AND LOW PRESSURE CONTROL. EACH UNIT HAS A COPY OF THE RUN DATA SHIPPED INSIDE THE ELECTRICAL PANEL
- ELECTRICAL CIRCUITS ARE COMPLETELY CHECKED FOR CONTINUITY
- PIPING IS LAID OUT TO MINIMIZE STRESS AND VIBRATION AND IS PRE-BENT TO ELIMINATE LEAKS
- ENCAPSULATED, AUTO-RESET, HIGH AND LOW PRESSURE CONTROLS TO ELIMINATE LEAKS (ADJUSTABLE LOW PRESSURE CONTROL STANDARD)
- PAINTED STEEL CABINETS FOR SUPERIOR STRENGTH AND CORROSION PROTECTION
- HEAVY DUTY, STEEL, 1-1/2" TALL BASE

SERVICEABILITY

- SUCTION SERVICE VALVES FOR HERMETIC AND SCROLL COMPRESSORS LOCATED OUTSIDE THE CABINET FOR QUICK INSTALLATIONS.
- RECEIVER WITH FUSIBLE PLUG, LIQUID SHUTOFF VALVE AND CHARGING PORT IS STANDARD
- LARGE ELECTRICAL PANEL FOR EASE OF ACCESS
- PREFABRICATED WIRING HARNESSES FOR TIGHT CRIMP CONNECTIONS AND CONSISTENT LABELING
- UNIT STAYS ON IF THE HOOD IS REMOVED FOR SERVICING
- SIGHT GLASS IS EASILY VIEWABLE

Options

Mounted Options

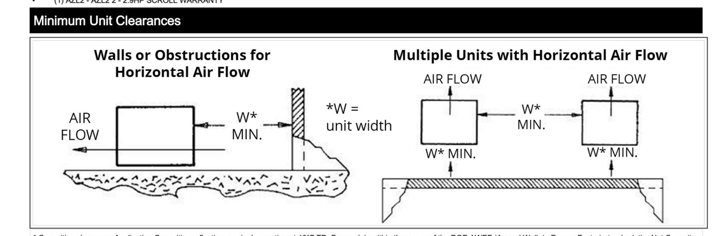
- Preferred Package Code - A0000
- Motor - PSC
- Receiver Options - STANDARD
- Liquid Line Options - FILTER DRIER AND SIGHT GLASS
- Discharge Line Options - HEAD PRESSURE VALVE 150#
- Fused Disconnect - NO FUSED DISCONNECT
- Crankcase Heater - CRANKCASE HEATER
- Pre Charged - NONE
- Hail Guard Factory Installed - NONE
- Brand Label - BOHN
- Coil Selection - MICROCHANNEL COIL
- Defrost Timer Options - NO TIMER
- Suction Line Options - SUCTION TUBE ONLY
- Cabinet Selection - Painted
- Pressure Options - ADJUSTABLE LOW - FIXED HIGH
- Phase Loss Monitor - NONE
- Snow Legs - NONE

Shipped-Loose Options (Unit)

(QTY)Part Number - Description (QTY)Part Number - Description

- (1) AZL2 - AZL2 2 - 2.9HP SCROLL WARRANTY

Minimum Unit Clearances



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BEL0105AS6AMAB0402 - SUBMITTAL

BOHN

Project Name:	24-03107	Project Location:	US
Quote ID:	R3039204	Item #:	4000
Submitted For:		Submitted On:	02/22/2024
Submitted By:	Michael Maddox	Submitted From:	
Identity #:		Tag:	

☐ For Record ☐ For Approval By:______________________ Date:______________

General Product Information

Product Family:	BEL	Motor type	2 SPEED EC
Defrost Type:	Air	Number of Fans:	2
Voltage: (Volts/Ph/Hz)	115/1/60	Fan HorsePower	1/20
Refrigerant Type:	R448A	Fins per Inch	6

Technical Information

Performance Data

Capacity			Air Flow				Altitude (ft)	AWEF Value	
TD (°F)	SST (°F)	Application Capacity* (BTU/H)	CFM	Fan Diameter (in.)	Air Throw (ft) Standard	Air Throw (ft) w/Collar		Cooler > 32	Freezer <= 32
10	25.0	12,500	1305	12			0	9	N/A

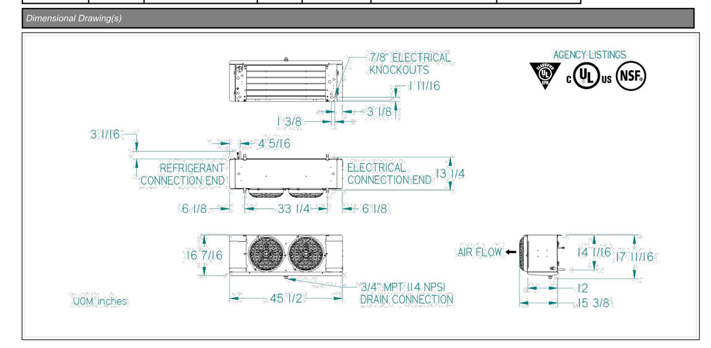
Electrical Data

Fan Motor(s)		Defrost Heater(s)		Drain Pan Heater(s)	
Watts	Amps	Watts	Amps	Watts	Amps
110	1.8				

Unit Specifications

Connections (in.)						Approx. Net Weight (lbs)
Coil Inlet	Suction	External Equalizer	Drain	Side Port	Hot Gas Drain Pan	
1/2	5/8	1/4	3/4			52

Dimensional Drawing(s)



BEL0105AS6AMAB0402 - SUBMITTAL

BOHN

Project Name:	24-03107	Project Location:	US
Quote ID:	R3039204	Item #:	4000
Submitted For:		Submitted On:	02/22/2024
Submitted By:	Michael Maddox	Submitted From:	
Identity #:		Tag:	

Standard Features

EASE OF INSTALLATION SERVICE

- ALL ELECTRICAL COMPONENTS FACTORY WIRED TO TERMINAL BOARD AND IDENTIFIED, MAKING IT EASY TO FIELD WIRE THE UNIT

RELIABLE DURABLE

- HEAVY GAUGE GRAINED ALUMINUM CABINET CLEANS EASILY AND LOOKS ATTRACTIVE
- MOLDED FAN GUARD AND ACCESS PANELS ARE MADE OF STRONG, DURABLE, AND NSF AND UL SANITATION RATED PLASTIC MATERIAL
- SWEAT CONNECTIONS TO REDUCE POTENTIAL FOR LEAKS

PERFORMANCE

- EC MOTORS STANDARD ON ALL MODELS FOR IMPROVED UNIT EFFICIENCY

VERSATILE

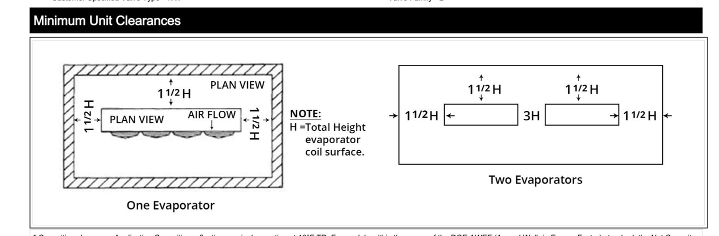
- LARGE DIAMETER DRAIN HOLE (3/4 " ID) IS LOCATED TOWARDS THE BACK OF THE UNIT
- MINIMAL HEIGHT OF THE LOW PROFILE SERIES MAKES IT IDEAL FOR LOW CEILING COOLERS
- CABINET DESIGN FEATURES HINGED, REMOVABLE FRONT ACCESS PANELS ON EACH SIDE FOR EASY ACCESS TO ELECTRICAL AND REFRIGERATION COMPONENTS
- LIQUID LINE SOLENOID WIRE HARNESS IS FACTORY-INSTALLED FOR QUICK INSTALLATION
- MOTORS PLUG INTO WIRING HARNESS FOR EASIER SERVICING
- HINGED, REMOVABLE DRAIN PAN FOR EASY AND SAFE ACCESS
- PRE-DRILLED HOLES ON THE BACK OF THE UNIT FOR ROOM THERMOSTAT
- QUICK REMOVAL FAN GUARD/MOTOR ASSEMBLY FOR EASY SERVICE OR REPLACEMENT OF AIR MOVER PARTS
- INTERNAL PANELS ARE ISOLATED FOR QUIET OPERATION
- INTERNALLY ENHANCED TUBING AND FIN DESIGN FOR HIGHER EFFICIENCY

Options

Mounted Options

- Brand Label - BOHN
- DTFD Option - None
- Fan Guard - Molded
- Drain Pan Type - Stucco
- Solenoid Voltage - 115
- Coil Mechanical Option - Mounted Sporlan TXV / Std Sol Mounted [BBIDE-1-1/2-C / L-3/4]
- Customer Specified Valve Type - TXV
- Motor - 2 Speed EC
- Fan Blade - Standard
- Cabinet Type - Stucco
- Controller Option - Mechanical Thermostat
- Fin Material - Aluminum
- Liquid Temperature - 95
- Valve Family - L

Minimum Unit Clearances



* Capacities shown are Application Capacities reflecting nominal operation at 10°F TD. For models within the scope of the DOE AWEF (Annual Walk-in Energy Factor) standard, the Net Capacity is determined by the AHRI 1250 test method. DOE will publish this compliance data at www.regulations.doe.gov

JOB NAME:
21' x 6'9 Combo

QUOTE#: 24-03107
PO#:
FAX#:

DATE: 02/01/2024 REV: 1/17/2025

JOB NUMBER:
24-03107-1

PAGE: 4 of 4

CUSTOMER NAME:
AZ Restaurant Consulting

SCALE: 3/8" = 1" DRAWN BY: VF

575 EAST 10th AVENUE,HIALEAH,FLORIDA 33010
FAX(305)884-8330

amerikooler taking cool further™

STATUS	REV.
-	A -
-	B -
-	0 -
-	1 -
-	2 -

ARCHITECT

MERGE ARCHITECTURAL
600 N. 4TH STREET #112
PHOENIX, ARIZONA 85004
602-635-1581

AZ RC ARIZONA
RESTAURANT CONSULTING
7920 E. OAK STREET - SCOTTSDALE, ARIZONA 85257
602.699.5131
JUSTIN@AZRESTAURANTCONSULTING.COM

MICRO MARKET
TUCSON, ARIZONA
WALK IN SPECIFICATIONS

Drawn by: -
Checked by: JBM
Date: 2/29/2024
Sheet Number:

FS-6.3

REGISTERED ARCHITECT CERTIFICATE NO. 45961 CARLOS ANTONIO MURRIETA Date Signed 02.29.24 ARIZONA, U.S.A.

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