

UNIVERSITY OF ARIZONA

KITCHEN REMODEL - KINGMAN, ARIZONA

ARCHITECT: (DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE)

SELBERG ASSOCIATES, INC.

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MAVEN ENGINEERING, ACC

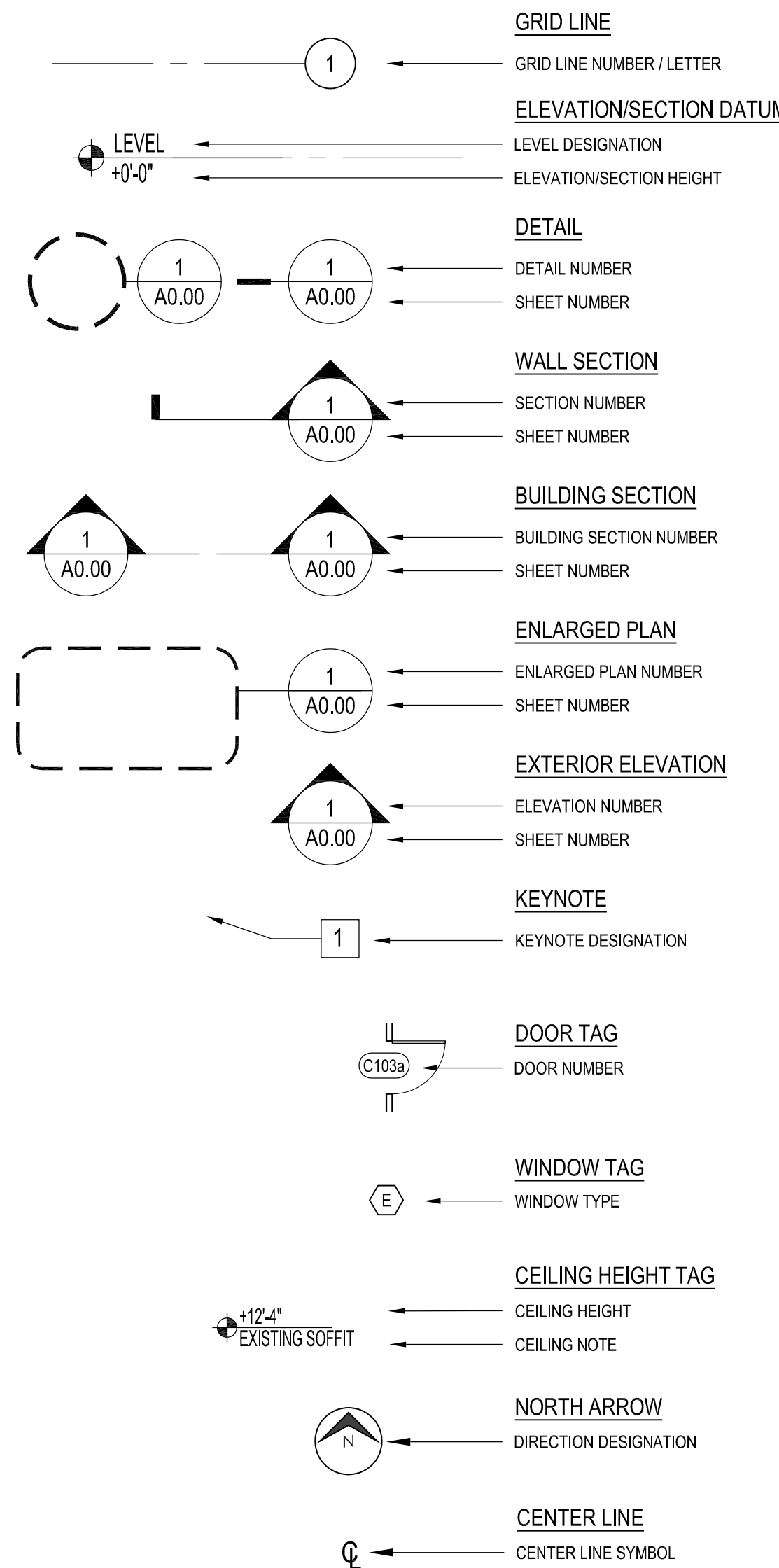
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STRUCTURAL ENGINEERING

CROWTHER ENGINEERING, LLC

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708-1685 EXT. 102

DRAFTING SYMBOLS



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		02-20-2023 PERMIT SET

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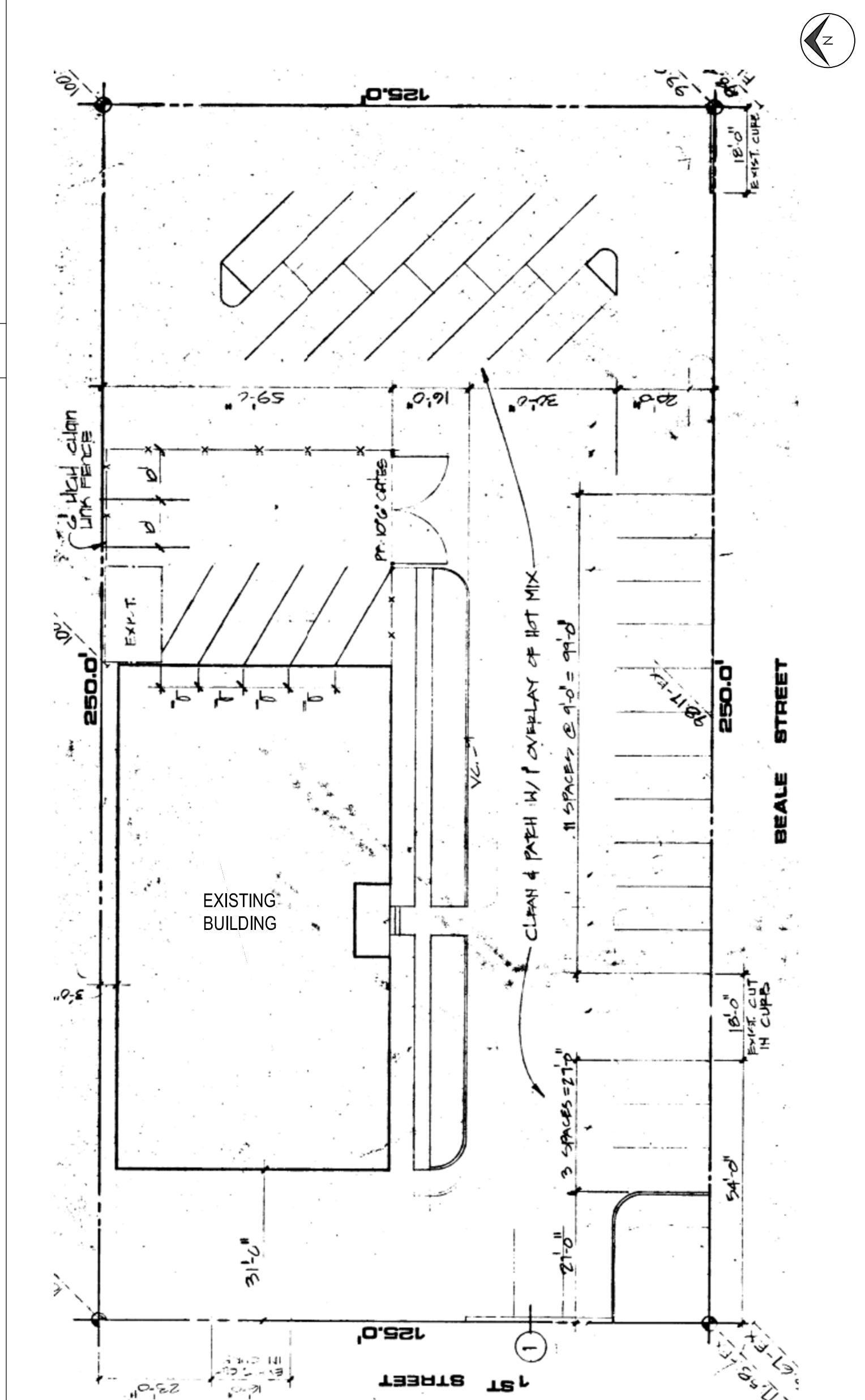
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REFERENCE SITE PLAN NOT TO SCALE



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PROJECT NAME:
**UNIVERSITY OF ARIZONA KITCHEN REMODEL
KINGMAN, ARIZONA**
101 BEALE ST, KINGMAN AZ 86401
APN: 303-08-063A

ARCHITECT OF RECORD

SELBERG ASSOCIATES INC.
ARCHITECTURE & PLANNING
2130 MESQUITE AVE | SUITE 204
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PROJECT NO. 22071

ISSUED FOR: PERMIT SET

ISSUED DATE: FEBRUARY 20, 2023

REVISION ISSUE DATE

SHEET TITLE:

COVER SHEET & PROJECT DATA

SHEET NO. **A0.01**

GENERAL NOTES

VERIFY ALL DIMENSIONS WITH ARCHITECT PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE OWNER. ALL CONSTRUCTION SHALL CONFORM TO ALL LOCAL, STATE, & FEDERAL CODES AND REGULATIONS.

ALL SPECIFICATIONS, DIMENSIONS, AND NOTES SHALL HAVE PRECEDENCE OVER SCALE.

NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES.

WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.

CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONARY MEASURES TO PROTECT THE PUBLIC AND ADJACENT PROPERTIES FROM DAMAGE THROUGHOUT CONSTRUCTION.

WHERE THERE MAY BE A CONFLICT IN THE SPECIFICATIONS AND/OR DRAWINGS THEN THE MORE EXPENSIVE LABOR, MATERIALS, AND EQUIPMENT SHALL BE ASSUMED TO BE REQUIRED AND SHALL BE PROVIDED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER.

WHEN WORK NOT SPECIFICALLY CALLED OUT IS REQUIRED TO COMPLETE THE PROJECT, IT SHALL BE PROVIDED BY THE CONTRACTOR WITH THE BEST MATERIALS AND WORKMANSHIP.

CONTRACTOR IS REQUIRED TO ABIDE BY THE LATEST EDITION OF THE AMERICAN INSTITUTE OF ARCHITECTS GENERAL CONDITIONS AND RELATED DOCUMENTS UNLESS DIRECTED OTHERWISE BY THE OWNER.

THE STARTING OF WORK BY ANY SUBCONTRACTORS SHALL BE CONSIDERED EVIDENCE THAT HE HAS INSPECTED AND ACCEPTED ALL CONDITIONS INVOLVED IN HIS WORK AND FINDS THEM SATISFACTORY.

ALL COMPONENTS, EQUIPMENT, ETC., SHALL BE INSTALLED PER THE MANUFACTURERS REQUIREMENTS AND PRINTED RECOMMENDATIONS.

THIS BUILDING IS TO BE CONSTRUCTED ACCORDING TO ALL INDUSTRY STANDARDS.

ALL EXPOSED SURFACES NOT FACTORY PREFINISHED SHALL BE PAINTED.

UNLESS OTHERWISE NOTED ALL WEATHER EXPOSED SURFACES SHALL HAVE A WEATHER RESISTIVE BARRIER TO PROTECT THE INTERIOR FINISHES.

ALL EXTERIOR OPENINGS SHALL BE FLASHED AND COUNTER FLASHED IN SUCH A MANNER AS TO MAKE THEM WEATHERPROOF.

ALL GYPSUM BOARD SHALL BE TAPED PER THE GYPSUM CONSTRUCTION HANDBOOK AND FASTENED PER THE MANUFACTURERS REQUIREMENTS UNLESS THE STRUCTURAL ENGINEER REQUIRES OTHERWISE OR IF THE FIRE RATED ASSEMBLY REQUIRES OTHERWISE.

SITE INFORMATION

PROJECT LOCATION: 101 BEALE ST. KINGMAN ARIZONA, 86402

OWNER NAME: MOHAVE COUNTY

PARCEL NUMBER(S): 303-08-063A

LOT AREA: 0.71 ACRES

LEGAL DESCRIPTION: KINGMAN, TOWN(PLAT OF) ON LINE A & P RR BLK 6LOTS 1,3,5,7,9,11,13, 15 17, & 19 EXCEPT THE N2 0' OF THE E20' OF LOT 9 & EXCEPT THE N11.50' OF THE W 19' OF LOT 11 CONT 31,069 SQ FT 303-08-063 SPLIT INTO (303-08-063A & B)

JURISDICTION: CITY OF KINGMAN

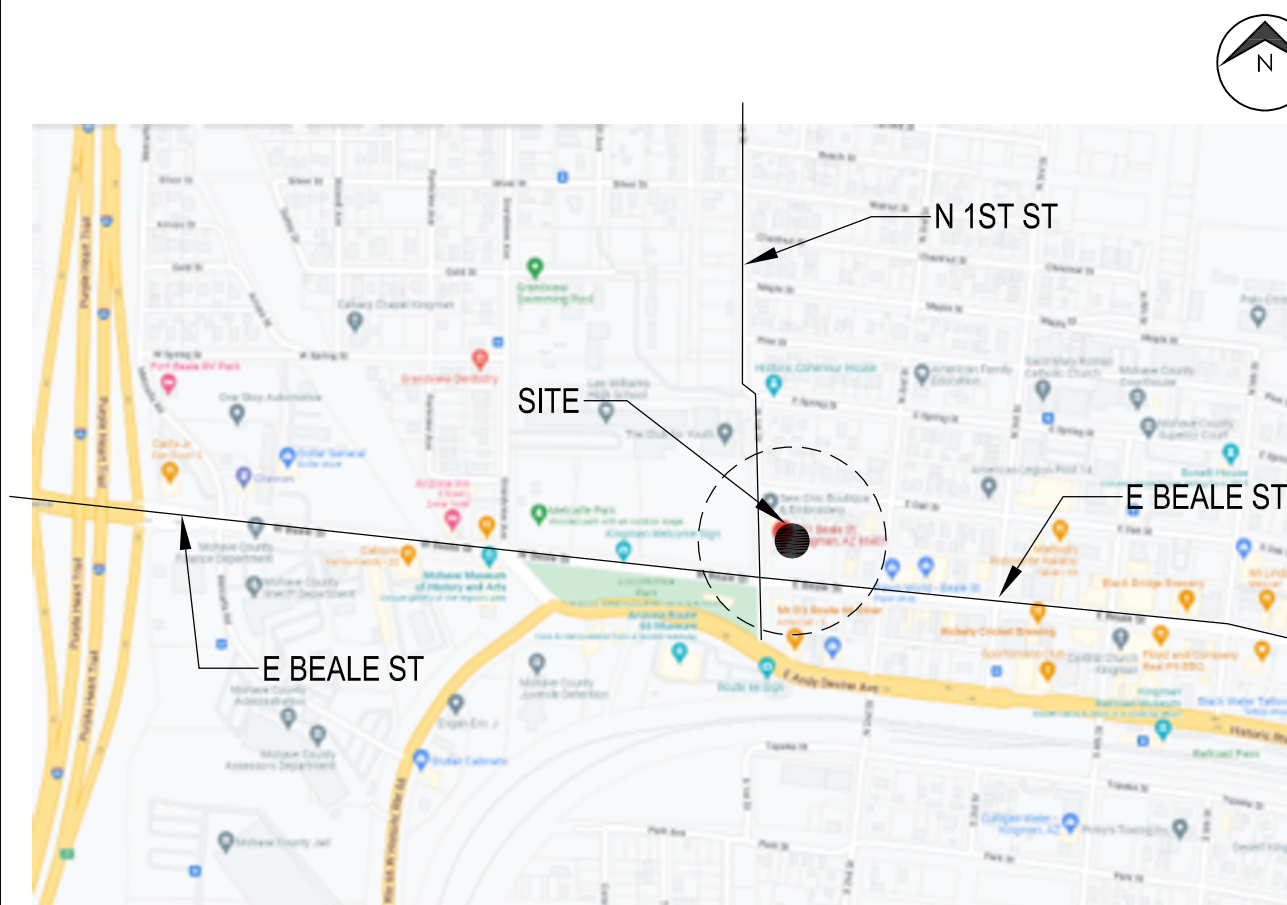
EXISTING ZONING: T5G GENERAL (T5G)

PLANNED LAND USE: PUBLIC/ QUASH-PUBLIC

BUILDING AREA:

- EXISTING BUILDING AREA: 5850 SF
- T.I. AREA: 765 SF

VICINITY MAP



CODE ANALYSIS

PROJECT DESCRIPTION:
NEW TENANT IMPROVEMENT AT THE EXISTING MOHAVE COOPERATIVE EXTENSION FACILITY ON 101 BEALE ST IN THE JURISDICTION OF KINGMAN, ARIZONA TO CONVERT THE EXISTING CONFERENCE INTO A NUTRITION/COOKING CLASSROOM. THE INTERIOR REMODEL CONSISTS OF THE DEMOLITION OF CABINETRY, SINK, AND OVEN IN THE EXISTING CONFERENCE ROOM TO BE REPLACED WITH 3-COMPARTMENT SINK, TYPE I HOOD, AND REFRIGERATION EQUIPMENT AS WELL AS REPAINTING WALLS AND INSTALLING VARIOUS FINISHES.

APPLICABLE CODES:
2018 INTERNATIONAL BUILDING CODE (IBC)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 INTERNATIONAL PLUMBING CODE (IPC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2017 NATIONAL ELECTRICAL CODE (NEC)
2009 ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES (A117.1)
2010 AMERICANS WITH DISABILITIES ACT (ADA)

- BASIS OF ANALYSIS:**
2018 INTERNATIONAL BUILDING CODE (IBC)
- OCCUPANCY CLASSIFICATION (IBC CHAPTER 3):**
GROUP 'E' - EDUCATIONAL
- CONSTRUCTION TYPE (IBC CHAPTER 6):**
TYPE V-B
- FIRE SPRINKLERS:**
EXISTING BUILDING IS NOT EQUIPPED WITH FIRE SPRINKLER SYSTEM
- FIRE ALARM:**
EXISTING BUILDING IS NOT EQUIPPED WITH FIRE ALARM SYSTEM
- BUILDING HEIGHTS AND ALLOWABLE AREAS (IBC TABLE 503):**
SCOPE OF WORK DOES NOT AFFECT THE BUILDING HEIGHT OR AREA

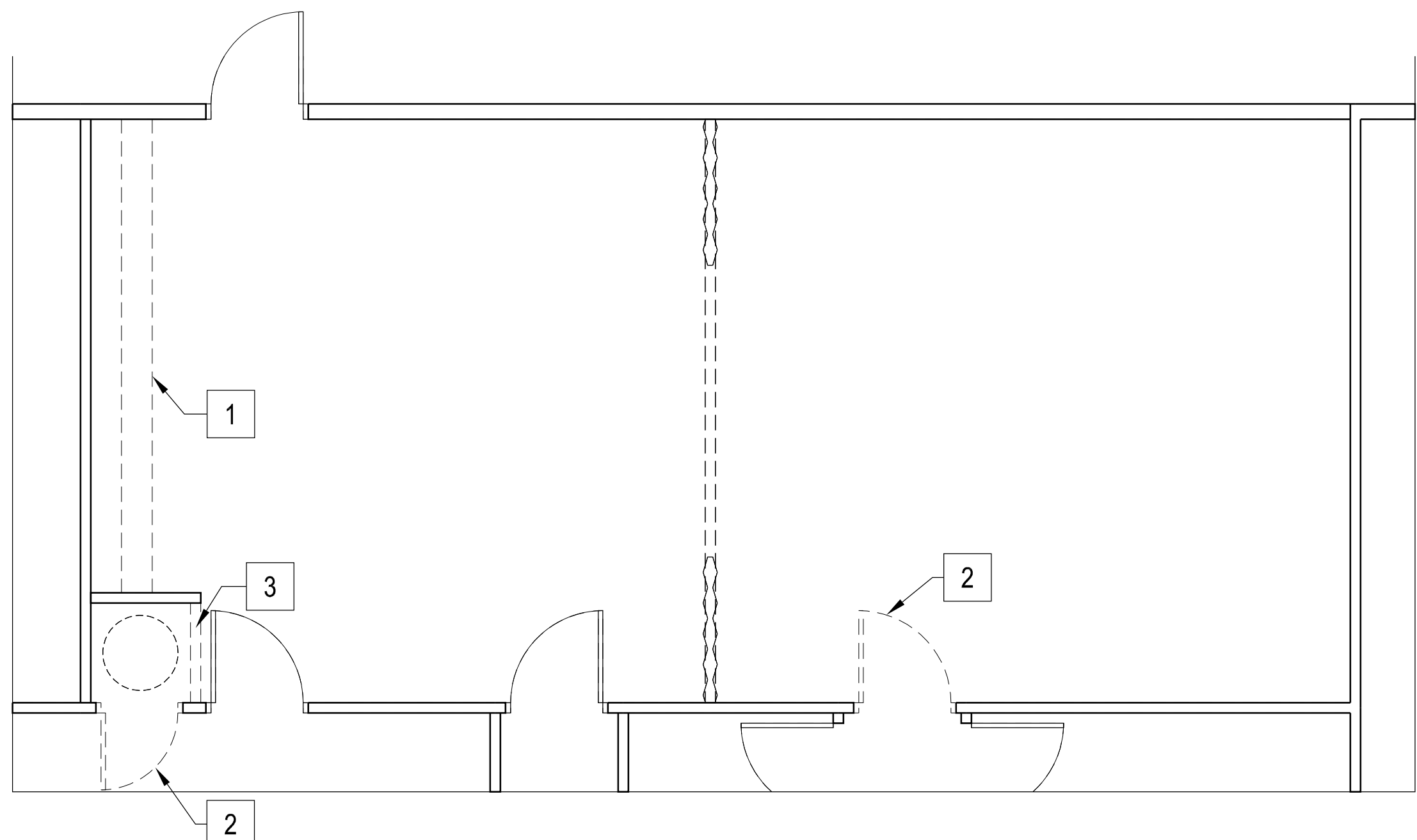
ALLOWABLE AREA BASED ON CONSTRUCTION TYPE						
BUILDING	USE GROUP	CONSTRUCTION TYPE	ALLOWABLE AREA	ACTUAL AREA	ALLOWABLE HEIGHT (FEET/STORIES)	ACTUAL HEIGHT (FEET/STORIES)
EDUCATIONAL	E	TYPE V-B	9,500 SF	5733 SF	40' / 1 (E)	8-11' / 1

- OCCUPANT LOAD FACTOR (IBC TABLE 1004.5):**
OCCUPANT LOAD FACTOR - SEE EGRESS PLAN
- EXIT TRAVEL DISTANCE (IBC TABLE 1017.2):**
OCCUPANCY GROUP E: 200' MAX
- PLUMBING FIXTURE CALCULATIONS (IBC TABLE 2902.1):**
NO CALCULATIONS REQUIRED. EXISTING RESTROOM FACILITIES WILL REMAIN.

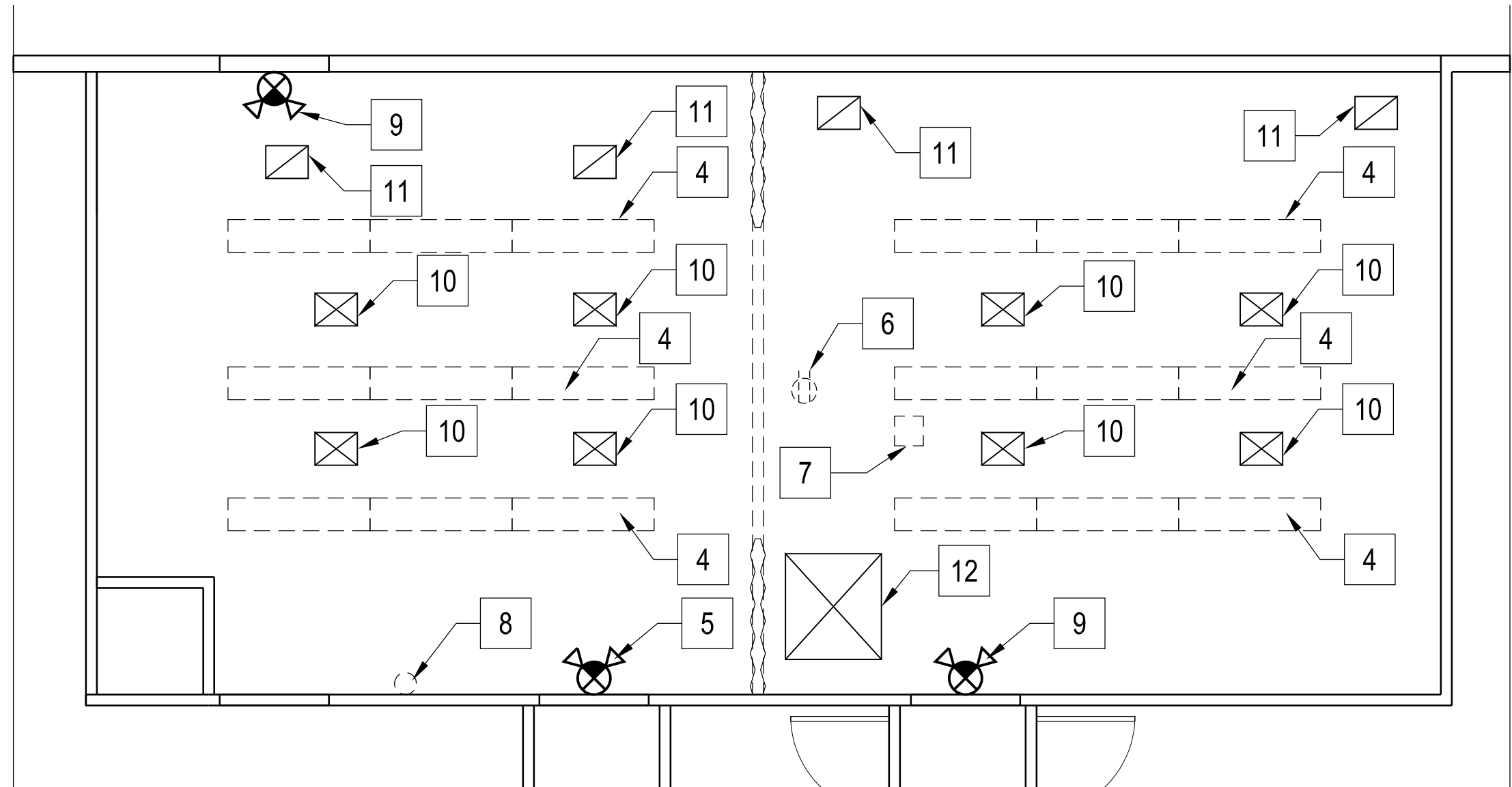
DEFERRED SUBMITTALS

- CONTRACTOR SHALL REVIEW AND STAMP SHOP DRAWINGS PRIOR TO SUBMITTING TO ARCHITECT AND/OR ENGINEER FOR REVIEW. CONTRACTORS REVIEW SHALL CHECK FOR COMPLETENESS/COMPLIANCE WITH CONTRACT DOCUMENTS.
- SHOP DRAWINGS ARE REVIEWED BY ARCHITECT AND/OR ENGINEER ONLY FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FABRICATION PROCESSES AND TECHNIQUES, COORDINATING WORK WITH OTHER TRADES AND SATISFACTORY AND SAFE PERFORMANCE OF THE WORK.
- CHANGES, SUBSTITUTIONS WILL NOT BE ACCEPTED VIA SHOP DRAWING REVIEW. ALL SUCH MODIFICATIONS SHALL BE SUBMITTED SEPARATELY FOR THE ARCHITECTS AND/OR ENGINEERS REVIEW.
- DEFERRED SUBMITTALS SHALL BE SUBMITTED TO THE ARCHITECT AND/OR ENGINEER FOR REVIEW. REFER TO EACH DISCIPLINE FOR DEFERRED SUBMITTALS REQUIRED.
- DEFERRED SUBMITTALS SHALL INCLUDE CALCULATIONS AND DRAWINGS PREPARED AND STAMPED BY AN APPROPRIATELY LICENSED ENGINEER.
- REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS SPECIFIC TO INDIVIDUAL REVIEW

DEFERRED ARCHITECTURAL SUBMITTAL:
- N/A



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



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

GENERAL DEMOLITION NOTES

- NEATLY CUT DEPRESSIONS, CHASES, AND THE LIKE WITH CORBORUNDUM SAWS AS REQUIRED, AND REMOVE ALL EXISTING CONSTRUCTION AS REQUIRED. FILL IN WITH MATERIALS TO MATCH EXISTING.
- CONDUCT ALL OPERATIONS WITH A MINIMUM OF NOISE.
- CONTRACTOR IS RESPONSIBLE TO PROMPTLY REPAIR DAMAGES TO EXISTING AND NEW FACILITIES CAUSED DURING CONSTRUCTION OPERATIONS AS DIRECTED BY CONTRACTING OFFICER AT NO COST TO OWNER.
- CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL DIMENSIONS, SIZES, AND LOCATION OF EXISTING AND NEW CONSTRUCTION.
- PROVIDE AND MAINTAIN SUITABLE BARRICADES, SHELTERS, LIGHTS AND DANGER SIGNALS DURING THE PROGRESS OF THE WORK. THEY SHALL MEET THE REQUIREMENTS OF STATE AND/OR LOCAL BUILDING CODES. ASSUME FULL RESPONSIBILITY OF BARRIERS TO COMPLETION OF CONTRACT AND REMOVE SAME.
- WHERE OPENINGS ARE TO BE CUT IN EXISTING STRUCTURE, CUT SUCH OPENINGS WITH CARE. WHERE MATERIALS ARE TO BE REMOVED, REMOVE SUCH ITEMS WITH CARE TO MINIMIZE DAMAGE TO ADJACENT MATERIALS.
- PATCH & REPAIR ALL EXISTING WALL & FLOOR SURFACES TO BE REMOVED.
- WHERE PATCHING IS REQUIRED, PATCH ALL AREAS USING THE SAME MATERIALS AND FINISH AS ADJACENT SURFACES AND PATCH IN SUCH A MANNER THAT THE REPAIRED AREA IS IN VISUAL HARMONY WITH THE SURROUNDING AREAS.
- PROPERLY REPAIR ANY ADJOINING SURFACES TO ORIGINAL CONDITION THAT ARE DAMAGED BY THE CONTRACTOR.
- WHERE WALL AND/OR CEILING SURFACES ARE DISTURBED, REFINISH ENTIRE SURFACE TO NEAREST INTERSECTION.
- EXISTING FLOORING SHALL BE PREPARED FOR NEW FLOORING INSTALLATION BY REMOVING EXISTING FLOORING MATERIAL AND BASE AND REPAIRING IRREGULARITIES IN EXISTING SURFACES.
- TAKE REASONABLE AND ADEQUATE PRECAUTIONS TO PROTECT THE OWNER'S PROPERTY FROM DAMAGE DURING DEMOLITION WORK, MOVING OF DEBRIS, RESTORE ANY DAMAGE TO THE OWNER'S PROPERTY DUE TO THE AFORE SAID WORK OR REPLACE IN A MANNER SATISFACTORY TO THE OWNER.
- ALL ITEMS SHOWN ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.
- RELOCATE ANY DEVICE WHERE THE FUTURE LOCATION OF THE EXISTING LIGHT FIXTURE WILL BE, TO THE ADJACENT FREE CEILING TILE.

WALL LEGEND

- EXISTING WALL TO REMAIN
- - - EXISTING WALL TO BE DEMOLISHED

DEMOLITION KEY NOTES

SYMBOL	DESCRIPTION
1	EXISTING KITCHEN FURNITURE TO BE DEMOLISHED
2	EXISTING DOOR & FRAME TO BE REMOVED, SALVAGED FOR REUSE
3	DEMO PORTION OF WALL AND & PREP FOR NEW DOOR. VERIFY SIZE OF DOOR SHOWN ON T
4	EXISTING LIGHT FIXTURE TO BE REMOVED
5	EXISTING EMERGENCY EXIT SIGN TO BE REMOVED
6	EXISTING CEILING OUTLET TO BE REMOVED
7	EXISTING CEILING MOUNT PROJECTOR TO BE REMOVED
8	EXISTING SECURITY CAMERA TO BE REMOVED OR RELOCATED
9	EXISTING EMERGENCY EXIT SIGN TO REMAIN
10	EXISTING AIR SUPPLY DIFFUSERS TO REMAIN
11	EXISTING RETURN AIR VENTS TO REMAIN
12	EXISTING PRINCIPAL RETURN AIR DIFFUSER TO REMAIN

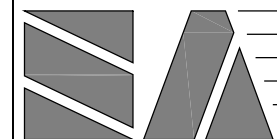
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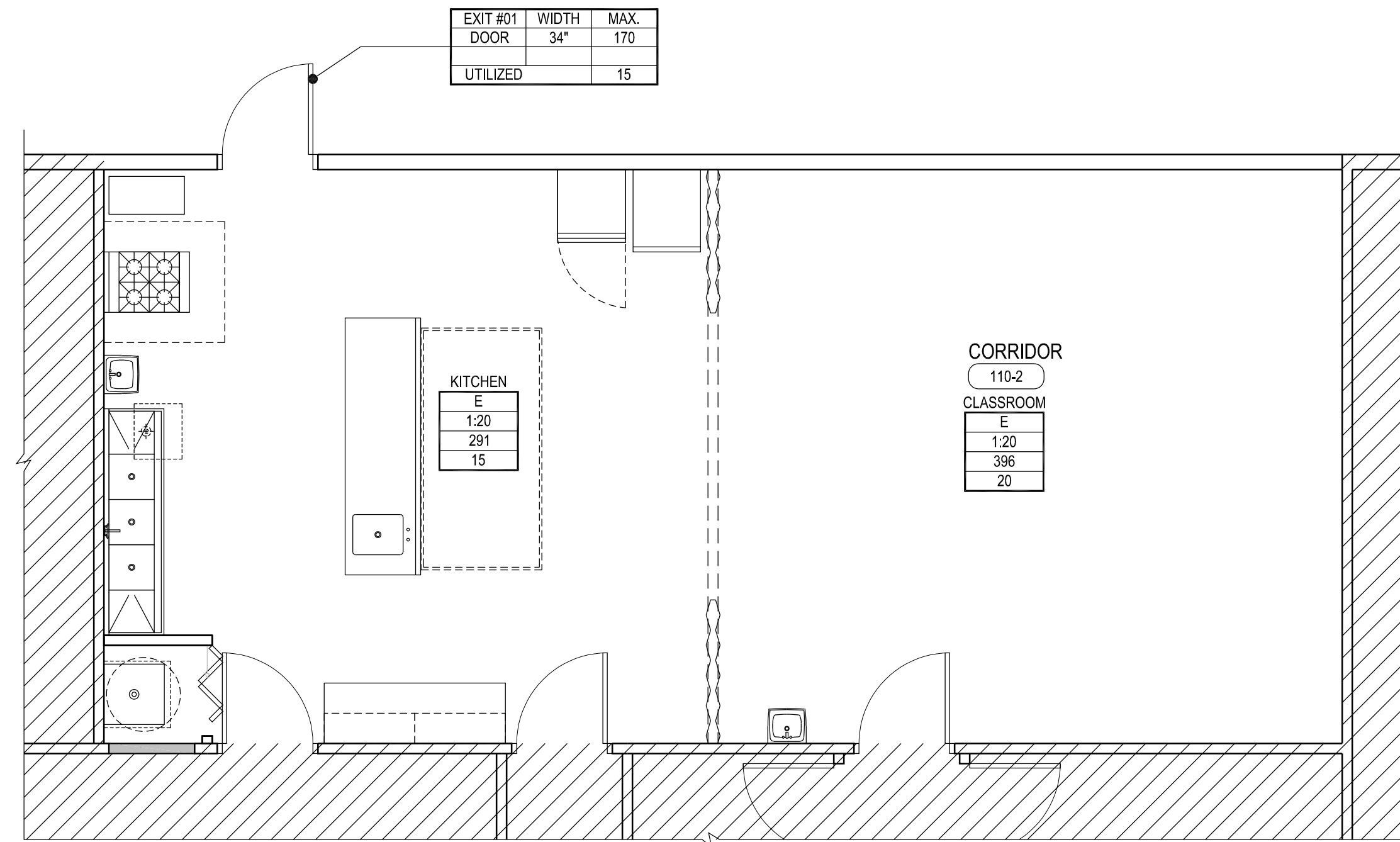
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REVISION	ISSUE DATE

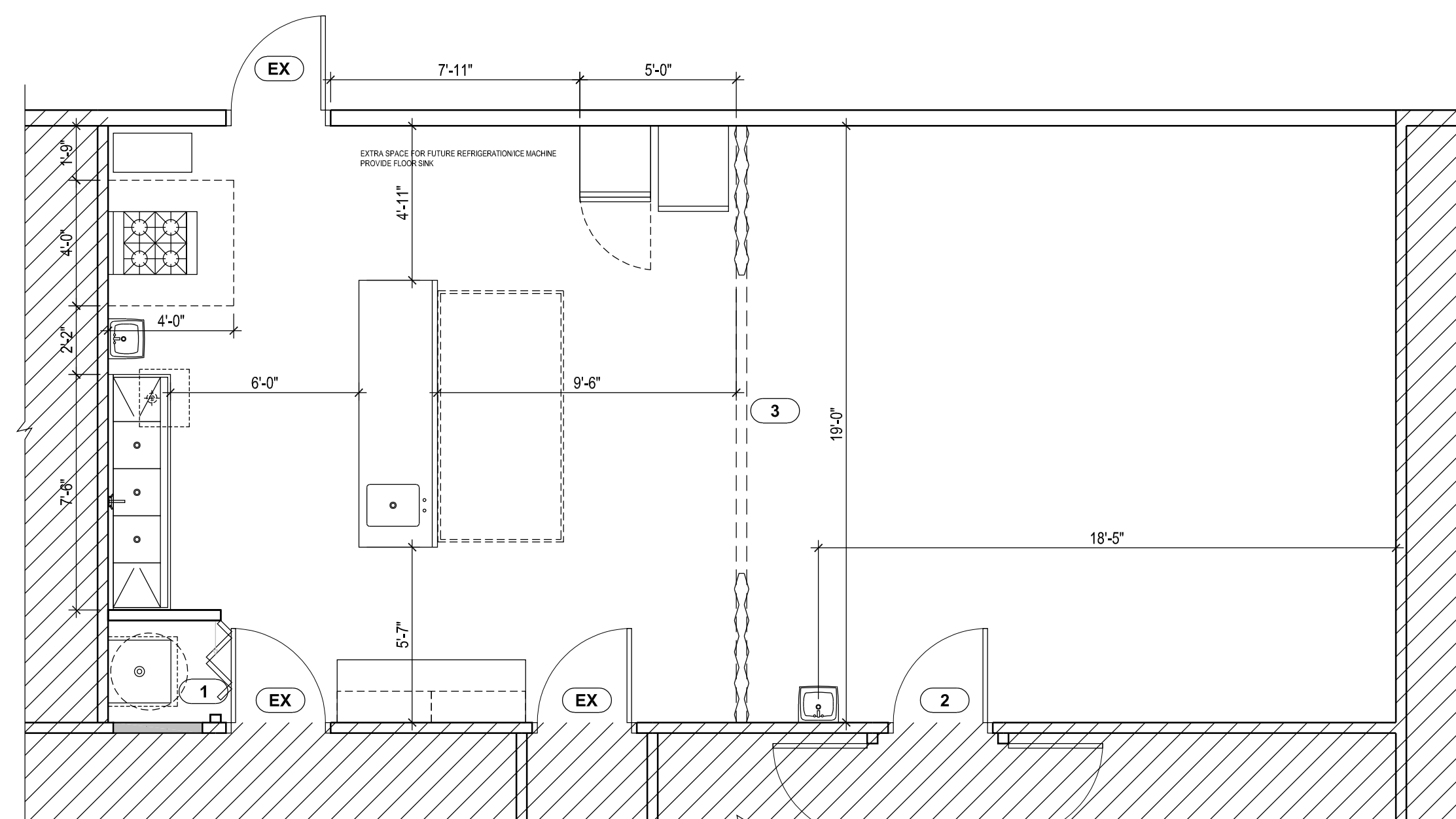
SHEET TITLE:

DEMOLITION FLOOR PLAN &
DEMOLITION REFLECTED CEILING
PLAN

SHEET NO. **A0.02**



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



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

EGRESS NOTES

- MAXIMUM EXIT ACCESS TRAVEL DISTANCE IS 200' WITHOUT SPRINKLER FOR E OCCUPANCY. PER 2018 IBC TABLE 1017.2.
- MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE IS 75' WITHOUT SPRINKLER FOR E OCCUPANCY. PER 2018 IBC TABLE 1006.2.1.

DESCRIPTION

DESCRIPTION	AREA (sq.ft.)	FACTOR	CALCULATION	LOAD
GROUP E				
CLASSROOM	396	50 NET	396 / 50	8
KITCHEN	384 SF - 93 SF (EQUIP.) 291 SF TOTAL	50 NET	291 / 50	6
TOTAL				14

EGRESS LEGEND

- ROOM NAME
 - OCCUPANCY
 - 1:150 - OCCUPANT LOAD FACTOR
 - AREA (SQUARE FEET)
 - # OF OCCUPANTS
- | EXIT #01 | WIDTH | MAX. |
|----------|-------|------|
| DOOR | | |
| STAIR | | |
| UTILIZED | | |
- DOOR WIDTH IN INCHES AND MAX. CAPACITY
 - STAIR WIDTH IN INCHES AND MAX. CAPACITY
 - NUMBER OF OCCUPANTS UTILIZED
 - (**) INDICATES VALUE FROM LEVEL ABOVE
- ① → - OCCUPANTS EXITING ROOM OR SPACE
 - ② → - ACCUMULATIONS OCCUPANTS
 - ③ → - OCCUPANTS FROM LEVEL ABOVE
 - → - MAX. TRAVEL DISTANCE

FIRE EXTINGUISHER NOTE:

- VERIFY EXACT LOCATION WITH KINGMAN FIRE DEPARTMENT PRIOR TO COMPLETION OF FRAMING. INSTALL APPROPRIATE BLOCKING IN WALL AT TOP & BOTTOM OF CABINET. INSTALL CABINETS PER MANUFACTURERS DETAILS & WRITTEN INSTALLATION INSTRUCTIONS.

DOOR SCHEDULE:

SYMBOL	DESCRIPTION:
①	NEW 36" x 80" FROST WHITE VINYL ACCORDION DOOR W/ HARDWARE OR APPROVED EQUAL BY OWNER (MOP SINK CLOSET DOOR)
②	EXISTING DOOR AND FRAME SALVAGED FOR REUSE FOR NEW DIRECTION OF DOOR SWING
③	NEW 19'-0"W X 8'-0"H ACCORDION DOOR. NEW ACCORDION DOOR TO MATCH EXISTING MODEL OR STRUCTURAL FRAMING

WALL LEGEND:

PLAN VIEW	DESCRIPTION:
[Symbol]	EXISTING WALLS TO REMAIN
[Symbol]	EXISTING INTERIOR WALL
[Symbol]	NEW INTERIOR WALL 3-6/8" X 20 GA. METAL STUDS @ 16" O.C. W/ 1-LAYER 5/8" TYPE "X" GYPSUM BOARD EACH EXPOSED SIDE R-19 BATT INSULATION INSTALLED

DOOR NOTES:

- ALL DOORS SHALL HAVE LEVER HARDWARE MEETING ADA REQUIREMENTS. U.N.O.
- DOORS SHALL HAVE A SMOOTH, UNINTERRUPTED SURFACE ON THE LOWER 10" OF DOOR.
- SEAL ALL SURFACES WITH CLEAR SEALANT.
- ALL EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
- MAIN EXIT DOOR TO HAVE A DURABLE SIGN STATING "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED" PER I.B.C. 1010.1.9.4 ITEM 2.2.
- DOOR HARDWARE SHALL BE SUCH THAT OPENING CAN OCCUR WITHOUT TIGHT GRIPPING, TIGHT PINCHING OR THE TWISTING OF THE WRIST PER I.B.C. 1010.1.9.1.
- DOOR CLOSERS: IF A DOOR HAS A CLOSER, THEN THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE DOOR WILL TAKE AT 5 SECONDS TO MOVE TO AN OPEN POSITION OF APPROXIMATELY 12 DEGREES 404.2.8.1 PER 2010 ADA.
- DOOR-OPENING FORCE: THE MAXIMUM FORCE, EXPRESSED IN POUNDS AND NEWTONS (N), FOR PUSHING OR PULLING OPEN A DOOR SHALL BE AS FOLLOWS:
 - FIRE DOORS SHALL HAVE THE MINIMUM OPENING FORCE ALLOWED BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY.
 - OTHER DOORS:
 - EXTERIOR HINGED DOORS: 5 LBS (22.2 N)
 - INTERIOR HINGED DOORS: 5 LBS (22.2 N)
 - SLIDING OR FOLDING DOORS: 5 LBS (22.2 N)
 THESE DO NOT APPLY TO THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAGED OTHER DEVICES THAT MAY HOLD THE DOOR IN A CLOSED POSITION. 404.2.9 PER 2010 ADA.
- ALL SURFACE MOUNTED OR EDGE MOUNTED FLUSH BOLTS ARE PROHIBITED 1010.1.9.4
- INTERIOR DOOR SHALL MATCH EXISTING DOORS OR APPROVED EQUAL BY OWNER.
- ALL DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING HARDWARE SHALL BE INSTALLED 34" MINIMUM AND 48" MAXIMUM ABOVE FINISH FLOOR PER I.B.C. 1010.1.9.2

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SHEET TITLE:

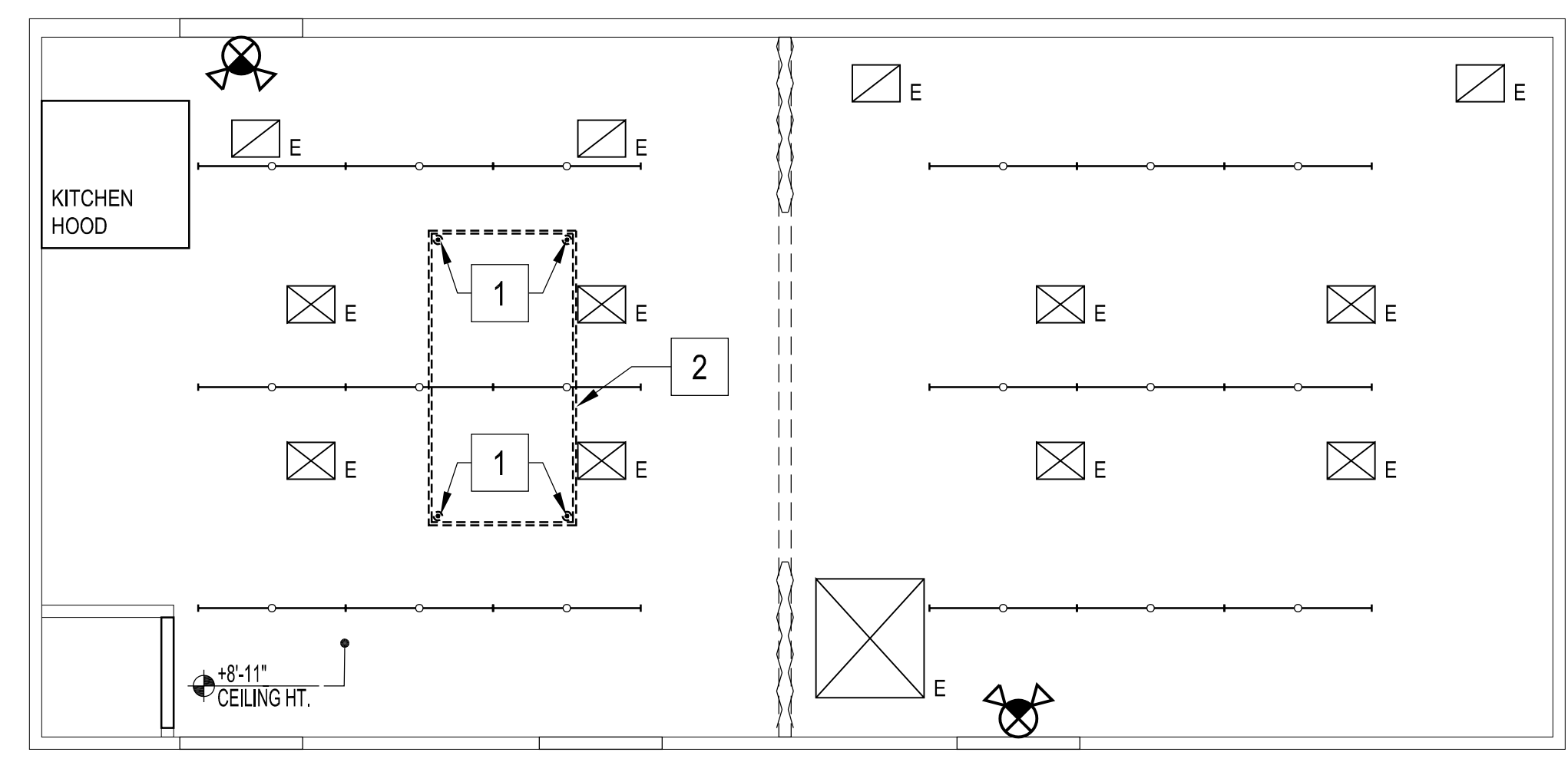
EGRESS PLAN & REMODELED FLOOR PLAN

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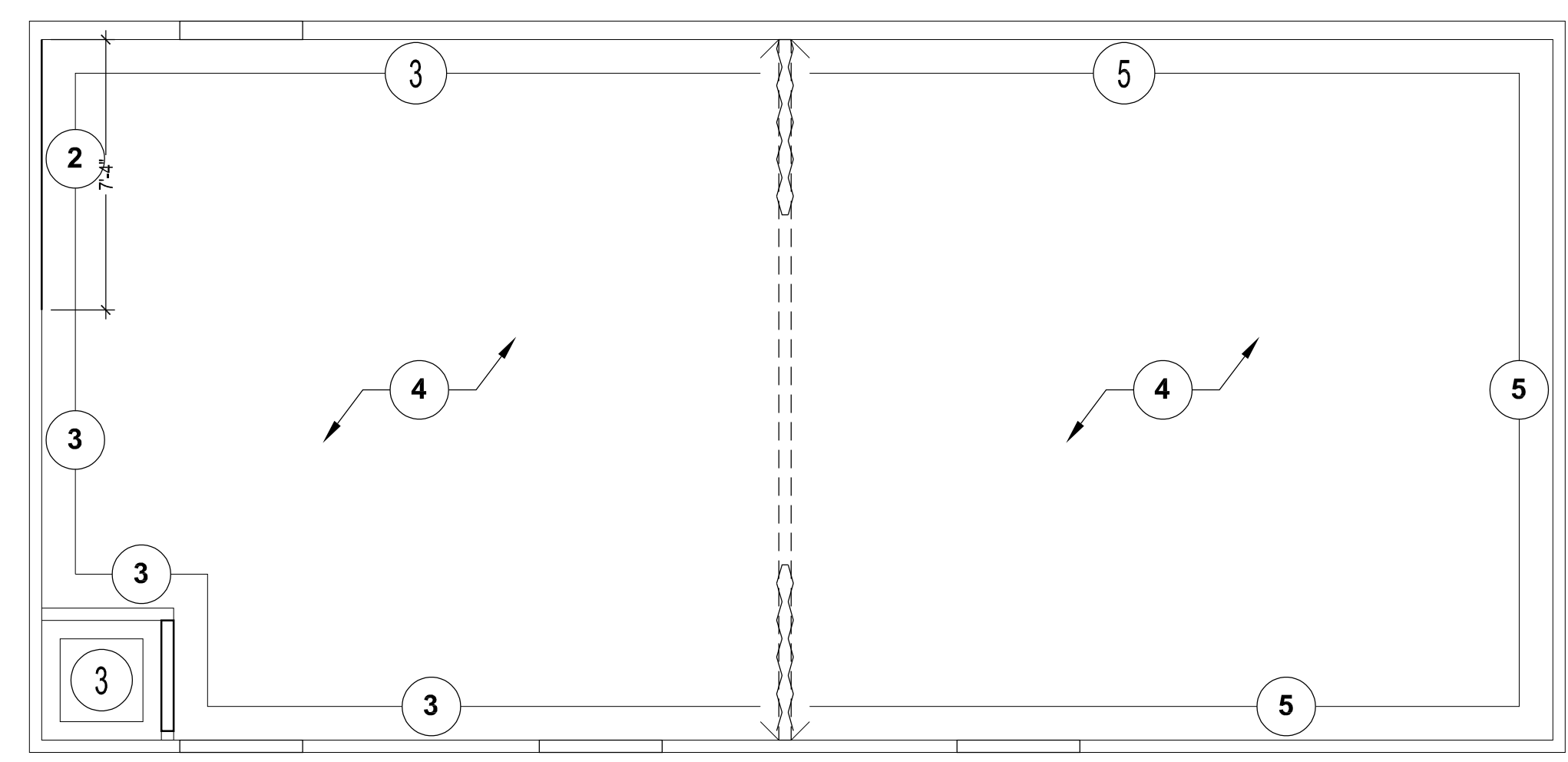
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02/22/2023



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



2 FINISH PLAN
1/4"=1'-0"

OVERHEAD MIRROR INSTALLATION

- LOCATE 4 LENGTHS OF 5 FEET LOOPCHAIN WITH S' HOOKS & EYEBOLTS ATTACHED. THREAD EYEBOLT INTO EACH CORNER & TIGHTEN LOCK NUT WITH WRENCH
- MIRRORLITE OVERHEAD DEMONSTRATION GLASSLESS MIRROR 48" X 96" X 1.25"
- INSTALL PER MANUFACTURER SPECIFICATIONS

CEILING NOTES

- GENERAL CONTRACTOR TO VERIFY EXISTING CEILING HEIGHTS PRIOR TO INSTALLATION OF NEW CEILING.
- GENERAL CONTRACTOR AND ELECTRICAL SUBCONTRACTOR TO CONDUCT A FIELD INSPECTION WITH OWNER'S REPRESENTATIVE AFTER ELECTRICAL ROUGH-IN IS COMPLETE TO ENSURE PROPER OUTLET LOCATION AND HEIGHTS.

CEILING LEGEND E = EXISTING, N = NEW

	4" LED STRIP SURFACE MOUNTED FIXTURE LIGHTING PER ELECTRICAL DRAWINGS.
	EMERGENCY LIGHT FIXTURE W/ EXIT SIGN, SEE ELECTRICAL DRAWINGS
	SUPPLY AIR DIFFUSER SEE MECHANICAL DWGS
	RETURN AIR DIFFUSER SEE MECHANICAL DWGS

FINISH KEYNOTES

SYMBOL	DESCRIPTION
1	NEW 5/8" TYPE "MR" GYP BOARD
2	STAINLESS STEEL PANELS O/ EXISTING DRYWALL
3	FULL HEIGHT FRP O/ EXISTING DRYWALL
4	CERAMIC TILE FLOORING
5	GYP. BD PAINTED W/ SW6248 NAVY BLUE

NOTE: VERIFY ALL COLORS WITH OWNER, REFER TO INTERIOR ELEVATIONS FOR FINISHES REMARKS. WALL AND CEILING MATERIALS SHALL NOT EXCEED THE FLAME SPREAD CLASSIFICATION IN I.B.C. TABLE 803.1.2

FINISH NOTES:

- CONTRACTORS TO SUBMIT ONE PRODUCT SAMPLE ILLUSTRATING THE PROFILE AND COLOR OF EACH FINISH. ALL PROPOSED EQUALS TO BE SUBMITTED FOR OWNER'S APPROVAL WITH MANUF'L LITERATURE AND INSTALLATION INSTRUCTIONS.
- PRIME AND PAINT ALL EXPOSED GYPSUM BOARD SURFACES TO MEET OR EXCEED PRO-INDUSTRIAL ACRYLIC COATING SYSTEM AS MANUFACTURED BY SHERWIN WILLIAMS, 11840 N. 24TH DRIVE, SUITE 102, PHOENIX, AZ. 85029, (602) 758-4871, OR APPROVED EQUAL BY THE OWNER.
- GYPSUM BOARD SURFACE FINISH TO BE DETERMINED BY THE OWNER AND THE ARCHITECT, OR AS REQUIRED BY WALL FINISH MANUFACTURER BEING INSTALLED OVER GYPSUM BOARD. SURFACE FINISHING CATEGORIES ARE AS FOLLOWS:
LEVEL 3: ALL JOINTS AND INTERIOR ANGLES SHALL HAVE TAPE EMBEDDED IN JOINT COMPOUND AND ONE ADDITIONAL COAT OF JOINT COMPOUND APPLIED OVER ALL JOINTS AND INTERIOR ANGLES. FASTENER HEADS AND ACCESSORIES SHALL BE COVERED WITH TWO SEPARATE COATS OF JOINT COMPOUND. ALL JOINT COMPOUND SHALL BE SMOOTH AND FREE OF TOOL MARKS AND RIDGES. NOTE: IT IS RECOMMENDED THAT THE PREPARED SURFACE BE COATED WITH A DRYWALL PRIMER PRIOR TO THE APPLICATION OF THE FINAL FINISH.
- ALL PAINTED INTERIOR GYPSUM BOARD WALLS TO RECEIVE ONE COAT OF PRIMER AND ONE COAT OF SATIN LATEX ENAMEL PAINT

MATERIALS:

- GYPSUM BOARD SHALL BE, TYPE "X" OR "MR", AS MANUFACTURED BY UNITED STATES GYPSUM OR APPROVED EQUAL BY THE OWNER, U.I.I.O.
- INTERIOR COLORS TO BE MANUFACTURED BY SHERWIN-WILLIAMS OR APPROVED EQUAL BY OWNER. COLORS TO BE SELECTED BY OWNER.
- CERAMIC BASE AND TILE TO BE AS MANUFACTURED BY THE TILE SHOP. TEXTILE NAVY FLOOR TILE, 12X12 IN. OR APPROVED EQUAL BY OWNER.

SEAL
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 APN: 303-08-063A

ARCHITECT OF RECORD

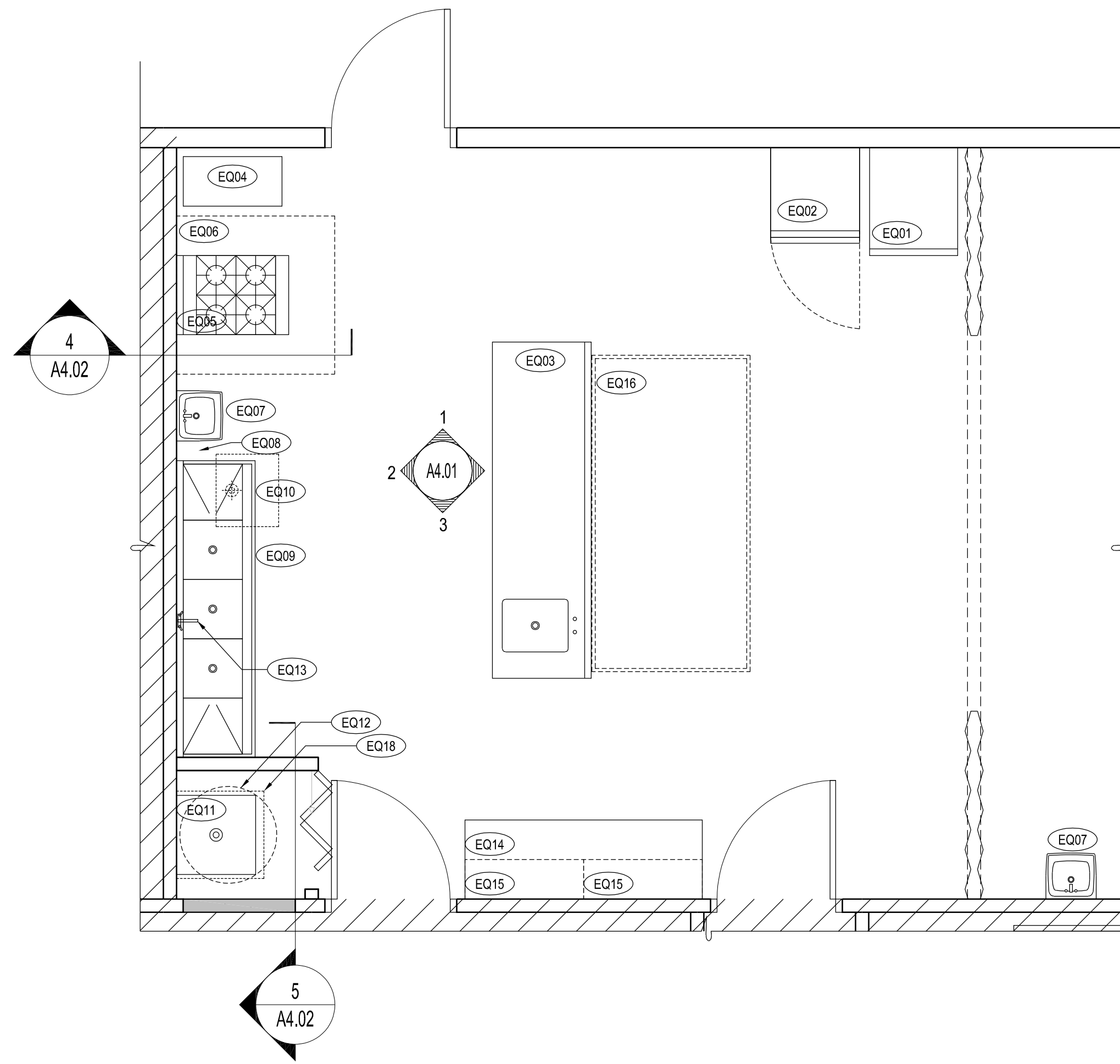
SELBERG ASSOCIATES INC.
 ARCHITECTURE & PLANNING
2130 MESQUITE AVE. | SUITE 204
 LAKE HAVASU CITY | ARIZONA | 86403
 (928) 955-8244

PROJECT NO.	22071
ISSUED FOR:	PERMIT SET
ISSUED DATE:	FEBRUARY 20, 2023
REVISION	ISSUE DATE

SHEET TITLE:

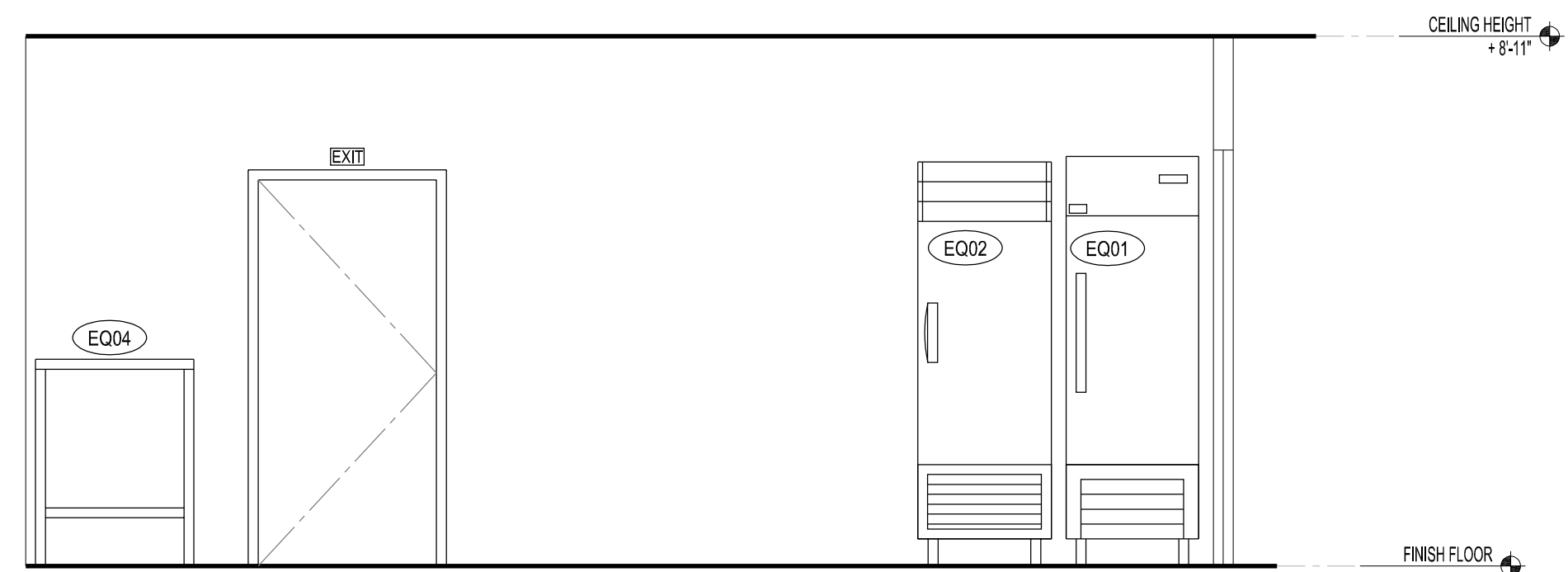
REMODELED
 REFLECTED CEILING PLAN
 FINISH PLAN

SHEET NO. **A2.02**

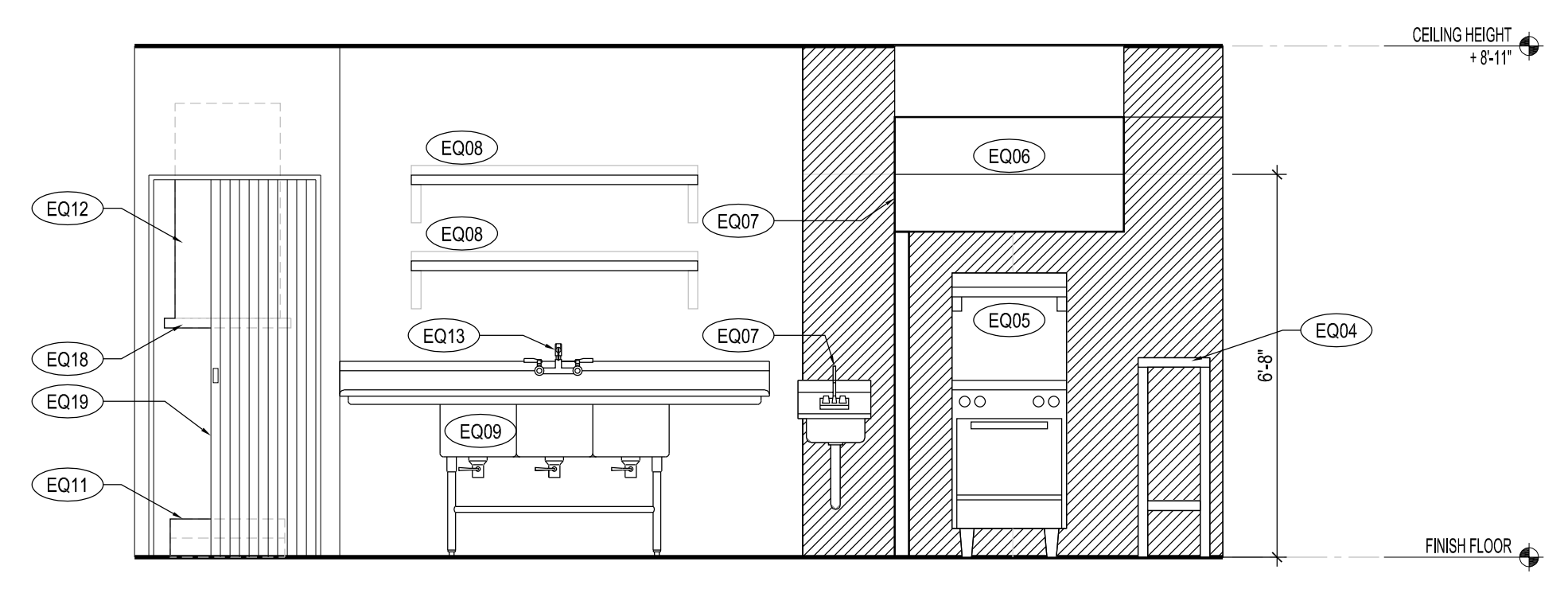


EQUIPMENT FLOOR PLAN

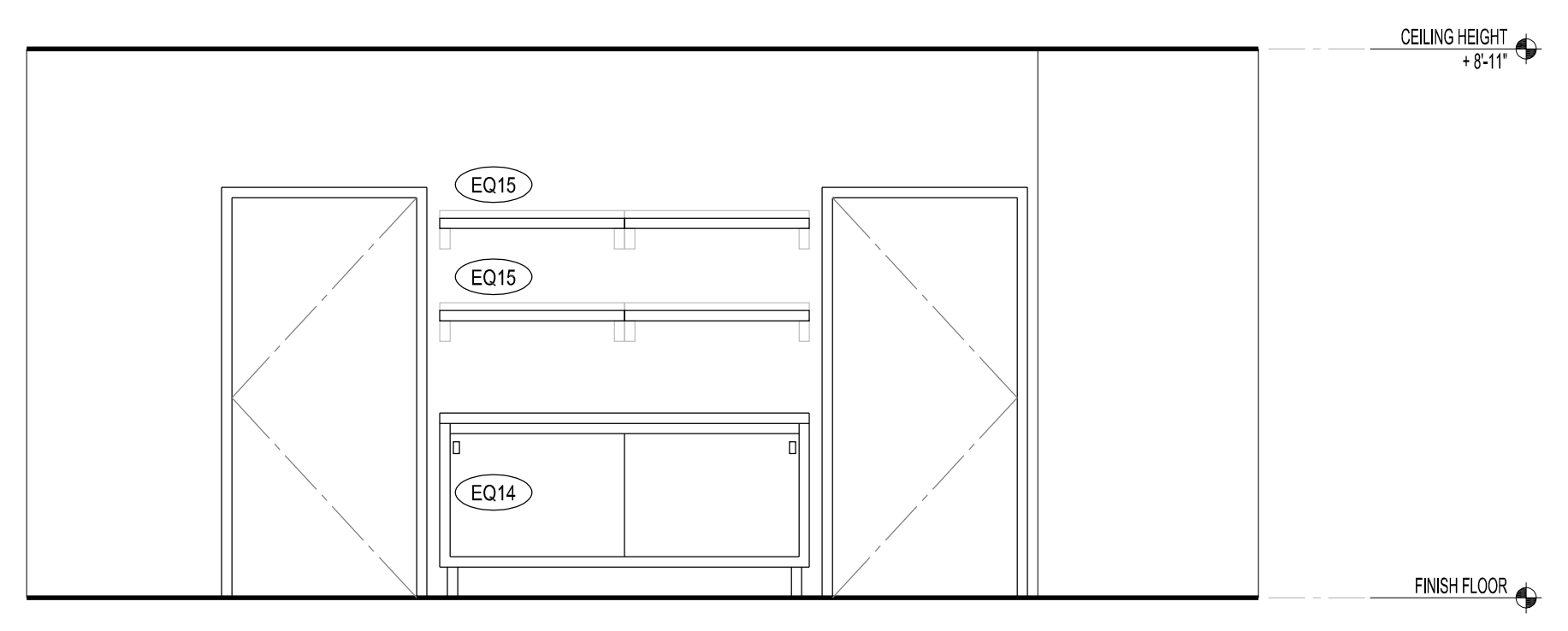
ID TAG	EQUIPMENT DESCRIPTION	PROVIDED BY	INSTALLED BY	QUANTITY	MANUFACTURER	MODEL NUMBER	COLOR / OPTIONS	REMARKS
EQ01	ONE SECTION REACH IN REFRIGERATOR, (1) RIGHT HINGE SOLID DOOR, 115V	TBD	GC	1	ARTIC AIR OR APPROVED EQUAL BY OWNER	AR23 26 3/4"	STAINLESS STEEL	COORDINATE WITH PLUMBING DRAWINGS FOR CONNECTION SPECIFICATIONS.
EQ02	SOLID DOOR REACH-IN FREEZER 115V	TBD	GC	1	HOSHIZAKI OR APPROVED EQUAL BY OWNER	EF1A-FS ECONOMY SERIES 27"	STAINLESS STEEL	COORDINATE WITH PLUMBING DRAWINGS FOR CONNECTION SPECIFICATIONS.
EQ03	PREP TABLE WITH SINK, 102"L X 30" W- RIGHT SINK, 6" BACKSPLASH ON LEGS	TBD	GC	1	APG OR APPROVED EQUAL BY OWNER	-	STAINLESS STEEL	COORDINATE WITH PLUMBING DRAWINGS FOR CONNECTION SPECIFICATIONS.
EQ04	30"x15" 18 GAUGE FILLER TABLE WITH BACKSPLASH & GALVANIZED UNDERSHELF	TBD	GC	1	REGENCY OR APPROVED EQUAL BY OWNER	ITEM NO. 600TB3015G	STAINLESS STEEL	
EQ05	24" 4" BURNER GAS RANGE W/ SPACE SAVER OVEN, NATURAL GAS	TBD	GC	1	SOUTHBEND OR APPROVED EQUAL BY OWNER	S24E 24"	STAINLESS STEEL	COORDINATE WITH PLUMBING DRAWINGS FOR CONNECTION SPECIFICATIONS.
EQ06	TYPE 1 LOW CEILING SLOPED FRONT COMMERCIAL KITCHEN HOOD SYSTEM WITH PSP MAKEUP AIR - 48"x48"	TBD	GC	1	HALIFAX OR APPROVED EQUAL BY OWNER	LPSHP448	STAINLESS STEEL	COORDINATE WITH PLUMBING DRAWINGS FOR CONNECTION SPECIFICATIONS.
EQ07	WALL MOUNT COMMERCIAL HAND SINK W/ 14"LX10"W X6"D BOWL GOOSENECK FAUCET	TBD	GC	1	KROWNE OR APPROVED EQUAL BY OWNER	HS-26L	-	COORDINATE WITH PLUMBING DRAWINGS FOR CONNECTION SPECIFICATIONS.
EQ08	(2) FABRICATED WALL SHELF 36"x12"	TBD	GC	1	CENTAUR	-	STAINLESS STEEL	
EQ09	90"W 3 COMPARTMENT SINK W/ 18"L X 18"W BOWL, 12" DEEP	TBD	GC	1	SPLASH OR APPROVED EQUAL BY OWNER	MRSA-3-D PART NO.: CS-3-18-18-12-DB 18	-	COORDINATE WITH PLUMBING DRAWINGS FOR CONNECTION SPECIFICATIONS.
EQ10	GREASE TRAP WITH THREADED CONNECTIONS	TBD	GC	1	ASHLAND POLYTRAP OR APPROVED EQUAL BY OWNER	4835 70 LB	-	COORDINATE WITH PLUMBING DRAWINGS FOR CONNECTION SPECIFICATIONS.
EQ11	MOP SERVICE SINK, 10" OVERALL HT 24"x24" BOWL SIZE	TBD	GC	1	E.L. MUSTEE SMC OR APPROVED EQUAL BY OWNER	MODEL 63M	-	COORDINATE WITH PLUMBING DRAWINGS FOR CONNECTION SPECIFICATIONS.
EQ12	ELECTRIC WATER HEATER 31"x22"	TBD	GC	1	A.O. SMITH # DEL-30 OR APPROVED EQUAL BY OWNER	# DEL-30	-	COORDINATE WITH PLUMBING DRAWINGS FOR CONNECTION SPECIFICATIONS.
EQ13	MOUNT FAUCET W/ 12 SWING NOZZLE	TBD	GC	1	ADVANCE TABCO	K-1 SPLASH	-	COORDINATE WITH PLUMBING DRAWINGS FOR CONNECTION SPECIFICATIONS.
EQ14	24" X 72" 16 GAUGE ENCLOSED BASE TABLE WITH SLIDING DOORS & ADJUSTABLE MIDSHELF	TBD	GC	1	REGENCY	TYPE 304	-	
EQ15	FABRICATED WALL SHELF 36"x12"	TBD	GC	1	CENTAUR	CWS1236SS	-	
EQ16	OVERHEAD DEMONSTRATION GLASSLESS MIRROR 48"x36"x1.25"	TBD	GC	1	MIRRORLITE	SKU: GGM0H-36x72	-	
EQ17	44"x80" STAINLESS STEEL INSULATED WALL PANEL	TBD	GC	1	HALIFAX	421ISSPAN47	STAINLESS STEEL	
EQ18	WALL HUNG PLATFORM	TBD	GC	1	HOLDRITE	50-SWHP-W	-	
EQ19	36" x 80" FROST WHITE VINYL ACCORDION DOOR WITH HARDWARE	TBD	GC	1	SPECTRUM OAKMONT	Model #HOK32-3680F	-	



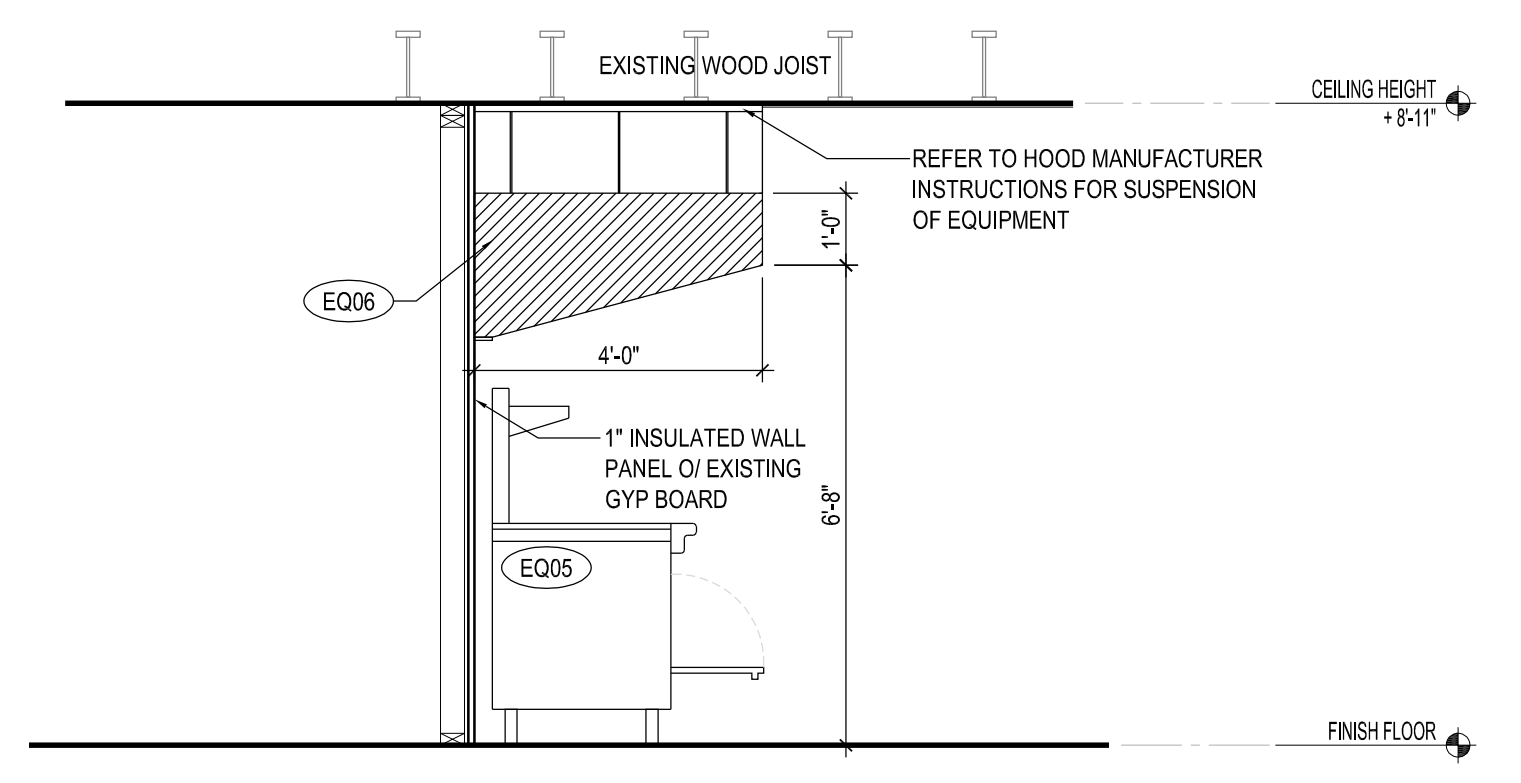
1 INTERIOR ELEVATION
3/8"=1'-0"



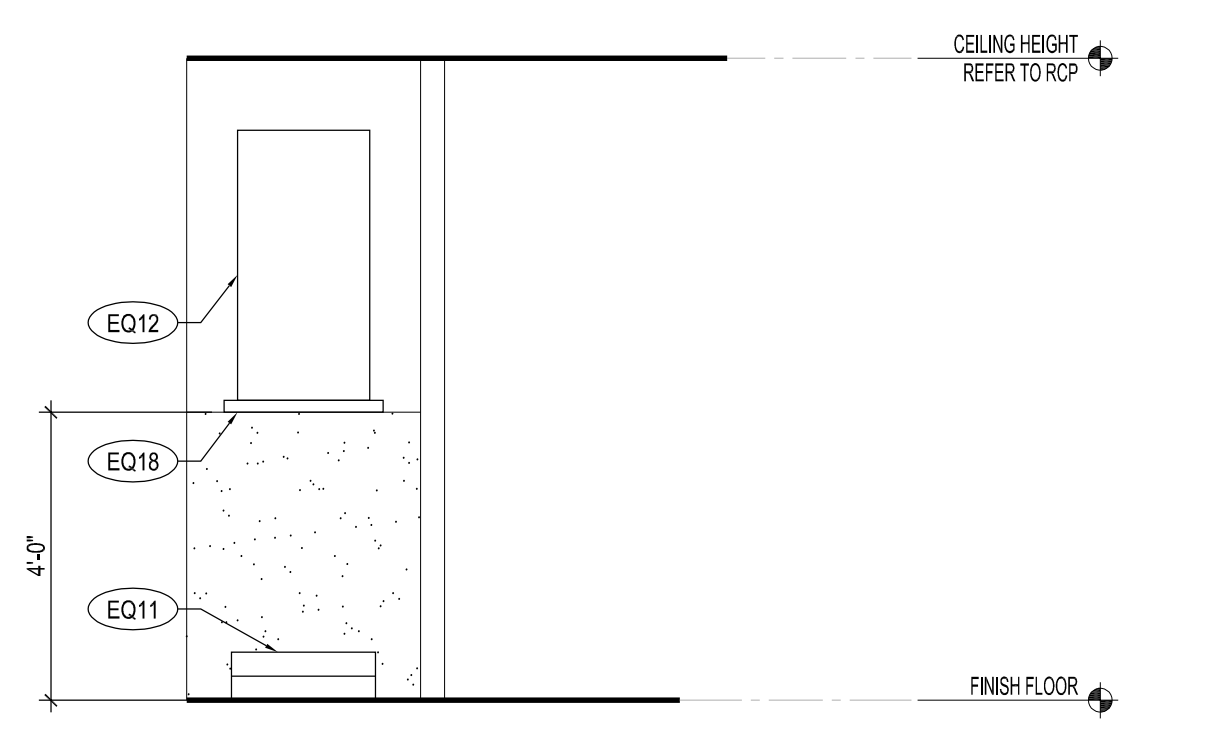
2 INTERIOR ELEVATION
3/8"=1'-0"



3 INTERIOR ELEVATION
3/8"=1'-0"



4 PARTIAL SECTION
3/8"=1'-0"



5 MOP SINK ROOM SECTION
3/8"=1'-0"

HEALTH NOTES:

ALL FOOD SERVICE AND RELATED EQUIPMENT SHALL BE FURNISHED IN CONFORMITY WITH NSF AND LOCAL GOVERNMENT HEALTH REGULATIONS.

ALL UTILITY LINES WITHIN KITCHEN AND FOOD SERVICE AREAS SHALL BE CONCEALED OR 3/4" CLEAR OF WALLS.

AN AISLE SPACE OF 36" MINIMUM SHALL BE PROVIDED WITHIN ALL WORK AND STORAGE AREAS.

ALL HAND BASINS SHALL BE EQUIPPED WITH A MIXING FAUCET FOR RUNNING HOT & COLD WATER - SOAP & PAPER TOWEL DISPENSERS.

ALL FOOD STORAGE REFRIGERATION EQUIPMENT SHALL HAVE THERMOMETERS WHICH ARE EASILY READABLE, IN GOOD WORKING CONDITION AND ACCURATE +/- 2° F.

LIGHTING THROUGHOUT THE KITCHEN & FOOD SERVICE AREAS SHALL CONSIST OF RECESSED OR SURFACE MOUNTED PLASTIC COVERED FLUORESCENT FIXTURES. ALL LIGHTING FIXTURES IN FOOD PREP AREAS, REFRIGERATION UNITS, UTENSILS & EQUIPMENT WASHING AREAS SHALL BE PROTECTED BY APPROVED SHIELDING.

RESTROOM DOORS SHALL BE SELF CLOSING.

FLOOR MOUNTED EQUIPMENT TO BE PLACED ON NSF APPROVED 6" LEGS PROPERLY SPACED OFF OF OR SEALED TO ADJACENT EQUIPMENT OR WALLS OR ON NSF APPROVED CASTERS.

SHELVING INTENDED FOR STORAGE OR HOLDING OF OPEN CUPS OR UTENSILS ARE TO BE MINIMUM 18" OFF FLOOR.

THE 3 COMPARTMENT UTENSIL WASHING SINK SHALL HAVE A MINIMUM COMPARTMENT SIZE OF AT LEAST 18X18X12 DEEP WITH MINIMUM 18X18 DRAINBOARDS EACH SIDE WITH SANITISING SOLUTIONS USED, HOWEVER SINK MUST BE CAPABLE OF ACCOMMODATING LARGEST UTENSIL TO BE WASHED AND THE DRAINBOARDS SHALL BE AS LARGE AS THE LARGEST SINK COMPARTMENT.

THE 3 COMPARTMENT UTENSIL WASHING SINK SHALL HAVE A METAL BACKSPLASH EXTENDING UP THE WALL AT LEAST 8", FORMED AS AN INTEGRAL PART OF THE SINK, AND SEALED TO THE WALL.

ALL WALLS BEHIND SINKS AND DISHWASHERS MUST BE PROTECTED WITH AT LEAST A 4" HIGH WATER RESISTANT MATERIAL.

ALL COUNTERS SUPPORTING 80 LBS. OR MORE EQUIPMENT SHALL HAVE NSF APPROVED 4" LEGS OR BE SEALED TO COUNTERS.

ALL EXPOSED WOOD WILL BE SEALED.

ALL CIRCULAR OPENINGS SEALED TO WITHIN 1/32".

NO LEADED OR METALLIC ENAMEL WILL BE USED.

ALL FLOOR/WALL JUNCTURES WILL HAVE 6" COVED VCT BASE.

ALL COOKING EQUIPMENT UNDER THE CANOPY EXHAUST SHALL BE PROPERLY SPACED OR PLACED ON CASTERS WITH GAS QUICK DISCONNECTS TO ALLOW ACCESS FOR CLEANING.

ADD CASTERS TO FRYERS AND PORK SMOKE HOUSE, CASTERS TO BE NSF APPROVED.

OWNER TO SUBMIT DATA SHEETS FOR ALL KITCHEN EQUIPMENT TO HEALTH DEPARTMENT FOR APPROVAL PRIOR TO INSTALLATION.

FRP SHALL BE INSTALLED ON ALL WALLS, EXISTING AND NEW, IN KITCHEN AND FOOD PREP AREAS. U.N.O.

CHEMICAL EXHAUST HOOD EXTINGUISHER COVERAGE TO EXTEND 6" BEYOND EDGES OF EQUIPMENT.

For Bid Only
02/22/2023

DRAWINGS AND SPECIFICATIONS REMAIN THE PROPERTY OF THE DESIGN PROFESSIONAL. COPIES OF THE DRAWINGS AND SPECIFICATIONS RETAINED BY THE CLIENT MAY BE UTILIZED ONLY FOR HIS USE AND FOR OCCUPYING THE PROJECT FOR WHICH THEY WERE PREPARED, AND NOT FOR THE CONSTRUCTION OF ANY OTHER PROJECTS.

PROJECT NAME:
UNIVERSITY OF ARIZONA KITCHEN REMODEL
KINGMAN, ARIZONA
101 BEALE ST., KINGMAN AZ 86401
APN: 303-08-066A

ARCHITECT OF RECORD:

SELBERG ASSOCIATES INC.
ARCHITECTURE & PLANNING
2130 MESQUITE AVE. | SUITE 204
LAKE HAVASU CITY | ARIZONA | 86403
(928) 955-8244

PROJECT NO.: 22071
ISSUED FOR: PERMIT SET
ISSUED DATE: FEBRUARY 20, 2023

REVISION	ISSUE DATE

SHEET TITLE:
EQUIPMENT FLOOR PLAN
INTERIOR ELEVATIONS

SHEET NO.:
A3.01

COMcheck Software Version 4.1.1.0 Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: U of A KITCHEN REMOD
Project Type: Alteration

Construction Site: KINGMAN, AZ
Owner/Agent:
Designer/Contractor: MAVEN ENGINEERING
8011 S AVENIDA DEL YAQUI
GUADALUPE, AZ 85283

Allowed Interior Lighting Power

Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B X C)
1-Common Space Types: Classroom/Lecture/Training: Exempt			

Total Allowed Watts = N/A

Area Category Exemption Qualifications

Activity Area	# Fixtures	Total # Watts
Pre-Alt.	Repl./Added	Pre-Alt.
Common Space Types: Classroom/Lecture/Training (772 sq.ft.)		1800.000
Exemption: Replacement of bulbs and ballasts only.		990.000

Proposed Interior Lighting Power

Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D (C X D) Watt.
Common Space Types: Classroom/Lecture/Training (772 sq.ft.): Exempt			

Total Proposed Watts = N/A

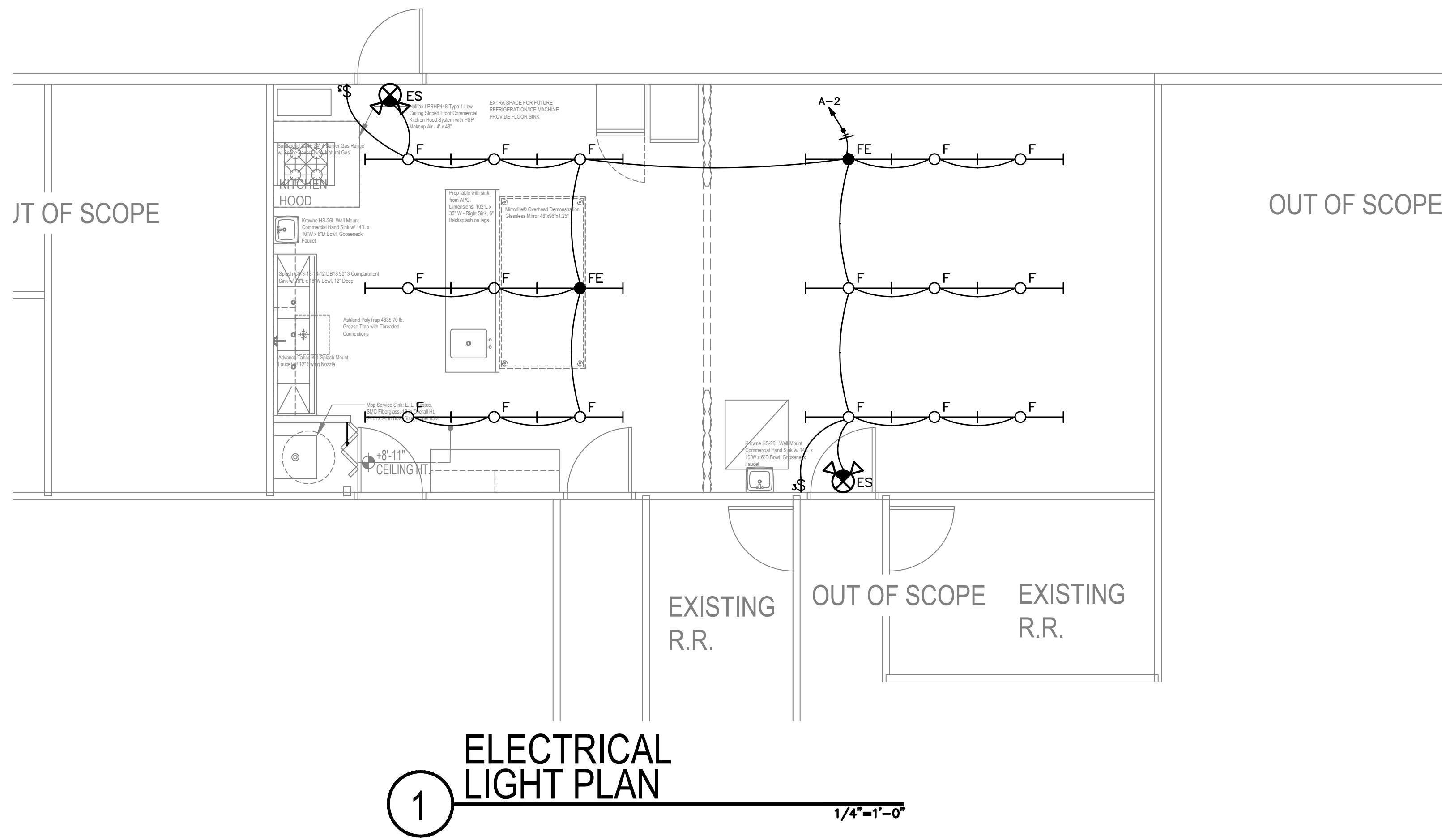
Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project 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 COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

BRYAN JEHLING, PE
Name - Title Signature Date 01/27/23

Project Title: U of A KITCHEN REMOD Report date: 01/27/23
Data filename: C:\Users\Revit_III\Dropbox (Maven)\Maven Engineering\2023\23SCK002 - U OF A CLASSROOM REMODEL\docs\IECC - 2018.cck Page 1 of 5



1 ELECTRICAL LIGHT PLAN
1/4"=1'-0"

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	LAMP	MODEL	DESCRIPTION	BALLAST	MOUNTING	INPUT WATTS	VOLTS
ES		(1) INCLUDED	LITHONIA LIGHTING LHQM-S-W-3-R-120/277-N	THERMOPLASTIC LED EXIT SIGN/EMERGENCY UNIT COMBO.	ELECTRONIC	CEILING	1	120V 1P 2W
F		(1) 55W LED	LITHONIA LIGHTING FMLWL LNK 48 ALO4 8SWW2	4' LED Wrap Linkable Low Profile LED Wrap	STANDARD	SURFACE	55	120V 1P 2W
FE		(1) 55W LED	LITHONIA LIGHTING FMLWL LNK 48 ALO4 8SWW2	4' LED Wrap Linkable Low Profile LED Wrap. PROVIDE EMERGENCY BATTERY BACK UP 90 MINUTE MINIMUM.	STANDARD	SURFACE	55	120V 1P 2W

ELECTRICAL SYMBOLS

NOT ALL SYMBOLS MAY APPLY.

- INDICATES CIRCUIT IN CONDUIT CONCEALED IN WALL OR CEILING SPACE.
- INDICATES HOMERUN TO PANELBOARD OR AS NOTED. HASH MARKS INDICATES NUMBER OF CONDUCTORS. IF NO HASH MARKS PROVIDE 2 CONDUCTORS #12 AWG. MINIMUM CONDUIT 3/4" MINIMUM.
- SIMPLEX RECEPTACLE, NEMA 5-20R, 15" A.F.F., UNLESS NOTED OTHERWISE.
- ⊖ DUPLEX RECEPTACLE, NEMA 5-20R, 15" A.F.F., UNLESS NOTED OTHERWISE.
- ⊖ DUPLEX RECEPTACLE, NEMA 5-20R, MTD. 6" ABOVE COUNTER BACK SPLASH OR PER ADA AND ARCHITECT OR U.A.O.
- ⊖ 1/2 SWITCHED DUPLEX RECEPTACLE.
- ⊖ FOURPLEX RECEPTACLE, NEMA 5-20R, 15" A.F.F., U.A.O.
- ⊖ WALL MOUNTED DUPLEX RECEPTACLE IN DEDICATED CIRCUIT: 20R, 120V, 3 WIRE GROUNDING, 5-20R, MTD. 6" A.F.F., (U.A.O.), "HUBBEL" #5362-1, OR EQUAL.
- ⊖ WALL MOUNTED DUPLEX RECEPTACLE WITH GROUNDING FAULT CIRCUIT INTERRUPTER: 20R, 120V, 3 WIRE, GROUNDING, NEMA 5-20R, MTD. 6" A.F.F. (U.A.O.), "HUBBEL" #67-5362-1, OR EQUAL. # SHALL BE ON ALL RECEPT. WITHIN 6" OF SINKS. READILY ACCESSIBLE PER NEC.
- ⊖ EXISTING RECEPTACLE OUTLET TO REMAIN-NO CHANGES MADE OR RECONNECT AS INDICATED ON PLAN.
- ⊖ ALL ISOLATED GROUND RECEPTACLE TO HAVE ORANGE COVER OR ISOLATED GROUND SYMBOL. PROVIDE (1) NEUTRAL, (1) GROUND, & (1) ISOLATED GROUND. PROVIDE LG RECEPTACLE WHEN PANEL SCHEDULE(S) INDICATE ISOLATED GROUND WIRES ON CIRCUIT(S).
- FLOOR BOX FLUSH MOUNTED IN FLOOR WITH DUPLEX RECEPTACLE (20R, 120V, 3W GROUNDING) NEMA 5-20R WITH CARPET FLANGE IN CARPETED AREAS. STEEL-CITY #664-SC/664-CST OR EQUAL.
- FLOOR BOX FLUSH MOUNTED IN FLOOR WITH QUAD-PLEX RECEPTACLE (20R, 120V, 3W GROUNDING) NEMA 5-20R WITH CARPET FLANGE IN CARPETED AREAS. STEEL-CITY #642-SC/664 OR EQUAL.
- MOTOR (SIZE AS INDICATED IN DRAWINGS)
- ⊖ SPECIAL OUTLET, VERIFY NEMA CONFIGURATION WITH EQUIP.
- JUNCTION BOX, SIZE PER N.E.C.
- JUNCTION BOX IN ACCESSIBLE LOCATION WITH FLEXIBLE CONDUIT CONNECTION TO LIGHTING FIXTURE OR EQUIPMENT AS NOTED.
- ⊖ HARNOWED CONNECTION
- ⊖ DISCONNECT SWITCH, SIZE AND POLES AS SHOWN (L.A., 30/3), FUSED WITH BUSBAR, LPNRK TYPE, U.A.O.
- ⊖ VOICE OUTLET, MOUNTED AT +18" A.F.F. U.A.O. PROVIDE 3/4" CONDUIT STUBBED UP TO ACCESSIBLE CEILING SPACE.
- ⊖ VOICE AND DATA OUTLET, MOUNTED AT +18" A.F.F. U.A.O. PROVIDE (2)-3/4" CONDUIT STUBBED UP TO ACCESSIBLE CEILING SPACE U.A.O. PROVIDE (1) 3/4" C. ONLY WHEN VENDOR IS SIMILAR FOR TELEPHONE AND DATA SYSTEMS.

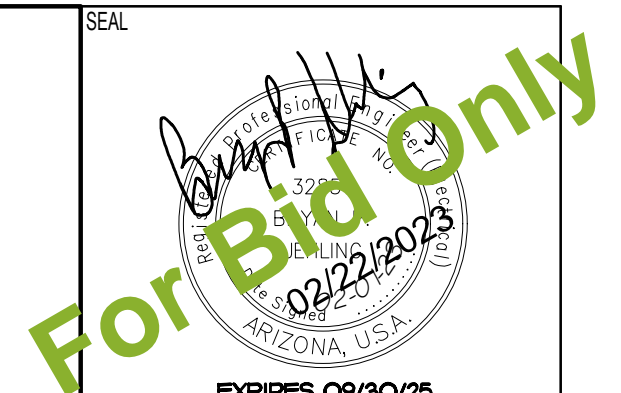
ABBREVIATIONS

- CONDUIT
- CTY - CLOSED CIRCUIT TELEVISION.
- EC - EMPTY CONDUIT WITH PULLWIRE.
- EDP - ELECTRIC DRINKING FOUNTAIN.
- S.E.S. - SERVICE ENTRANCE SECTION
- TTB - TELEPHONE TERMINAL BOARD.
- TMC - TELEPHONE MOUNTING CABINET.
- VP - VANDAL-PROOF.
- WG - WIRE GUARD.
- GND - GROUND.
- M.L.G. - MAIN LINES ONLY
- M.C.B. - MAIN CIRCUIT BREAKER
- N.E.C. - NATIONAL ELECTRICAL CODE
- NLL - NIGHT LIGHT
- WP - WEATHERPROOF
- U.A.O. - UNLESS NOTED OTHERWISE
- I.G. - ISOLATED GROUND
- E.P. - EXPLOSION PROOF
- WR - WEATHER RATED WHILE IN-USE COVER

LIGHTING GENERAL NOTES:

- PRIOR TO ROUGH-IN, THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL LIGHT FIXTURES: TO INCLUDE MOUNTING HEIGHTS AND LOCATIONS. ALL CONFLICTS SHALL BE REPORTED TO THE ENGINEER/ARCHITECT.
- THE ELECTRICAL CONTRACTOR SHALL (PRIOR TO THEIR BID) a) VISIT THE SITE AND FIELD VERIFY ALL EXISTING CONDITIONS AND b) TAKE ALL CONSIDERATIONS INTO ACCOUNT AT THE TIME OF BID. NO CONSIDERATIONS WILL BE GRANTED THE CONTRACTOR AFTER THE BID IS ACCEPTED.
- THE ELECTRICAL LIGHTING INSTALLATIONS SHALL CONFORM TO ALL STATE AND LOCAL SEISMIC AND CODE REQUIREMENTS REGARDING LIGHT FIXTURE SUPPORT.
- ALL ELECTRICAL METALLIC TUBING (EMT), RIGID NON-METALLIC CONDUITS, "SEAL TIGHT" TYPE CONDUITS AND ALL OTHER CONDUITS THAT DO NOT CONTAIN A CODE SIZED GROUND WIRE SHALL HAVE A CODE SIZED BOND WIRE INSTALLED WITH THE CIRCUIT CONDUCTORS.
- ALL FIXTURES INSTALLED OUTDOORS SHALL BE RATED FOR DAMP/WET LOCATIONS AS REQUIRED. THE CONTRACTOR SHALL COORDINATE DAMP/WET LOCATION RATING PER NEC ARTICLE 410.10(A). ALL INSTALLATIONS SHALL CONFORM TO NEC ARTICLE 410, ALL SUB ARTICLES
- EMERGENCY EGRESS ILLUMINATION SHALL BE POWERED BY THE BUILDING'S EMERGENCY POWER SYSTEM FOR NOT LESS THAN 90-MINUTES IN THE EVENT OF LOSS OF THE PRIMARY POWER SUPPLY PER IBC 1008.3

POWER



For Bid Only

PROJECT NAME
UNIVERSITY OF ARIZONA KITCHEN REMODEL
KINGMAN, ARIZONA
XXX

ARCHITECT OF RECORD
SELBERG ASSOCIATES INC.
ARCHITECTURE & PLANNING
2180 MIRSQUITE AVE. SUITE 204
TUCSON, ARIZONA 85705
(520) 885-8844

PROJECT NO. 22071
ISSUED FOR: CONSTRUCTION DOCUMENTS
ISSUED DATE: FEBRUARY 1, 2023
REVISION ISSUE DATE
SHEET TITLE: ELECTRICAL LIGHT PLAN

MAVEN ENGINEERING Job #23SCK002
Tel: (480) 303-0180
Fax: (480) 302-7927
8011 S Avenida del Yaqui
Guadalupe, Arizona 85283
Note: Any changes made to final bid documents due to field changes will be billed hourly to the contractor.

SHEET NO. **E1.01**

ELECTRICAL SPECIFICATIONS

1. SCOPE THE WORK SHALL INCLUDE LABOR, MATERIAL AND EQUIPMENT NECESSARY FOR A COMPLETE AND PROPER WORKING INSTALLATION OF THE ELECTRICAL SYSTEMS INDICATED ON THE DRAWINGS AND SPECIFICATIONS. THE WORK SHALL INCLUDE BUT IS NOT LIMITED TO:

A. CONDUIT, SLEEVES, MOUNTING BOARDS, WALL OUTLETS AND UNDERGROUND DUCT FOR TELEPHONE.

WORK NOT INCLUDED:
FURNISHING AND INSTALLING MOTORS AND AUTOMATIC CONTROLLERS.

2. PERMITS AND FEES: MAKE APPLICATION AND PAY FOR PERMITS AND INSPECTIONS REQUIRED BY MUNICIPAL AND STATE AUTHORITIES.

3. ELECTRICAL DRAWINGS: DRAWINGS ARE DIAGRAMMATIC AND OUTLET LOCATIONS ARE APPROXIMATE. REFER TO MECHANICAL AND STRUCTURAL PLANS REGARDING AVAILABLE SPACE AND CHECK FIELD CONDITIONS BEFORE MAKING ELECTRICAL INSTALLATIONS. CIRCUIT OUTLETS AS INDICATED ON THE DRAWINGS, MAKING REVISIONS ONLY WITH THE EXPRESS CONSENT OF THE ARCHITECT.

4. INSPECTION: THE WORK WILL BE INSPECTED FOR COMPLIANCE WITH DRAWING AND SPECIFICATIONS BY THE OWNER'S REPRESENTATIVE.

5. MATERIAL AND WORKMANSHIP: SHALL COMPLY WITH CURRENT ELECTRICAL AND MECHANICAL ENGINEERING PRACTICES. THE NATIONAL ELECTRICAL CODE AND ALL LOCAL CODES SHALL GOVERN ALL WORK. PROVIDE NEW STANDARD PRODUCTS LISTED BY UL. SIMILAR ITEMS OF MATERIAL SHALL BE OF THE SAME TYPE AND MANUFACTURES. ALL EXPOSED CONDUITS AND DEVICES SHALL BE TRUE TO LINE, PLUMB AND ADEQUATELY SECURED IN PLACE. ALL WIRING DEVICES, FIXTURES AND PANELBOARDS SHALL BE PROTECTED FROM MOISTURE, PLASTER AND DUST DURING STORAGE AND BUILDING CONSTRUCTION.

6. GROUNDING: PROVIDE GROUNDING CONDUCTOR OF SIZE INDICATED ON DRAWINGS IN ACCORDANCE WITH THE NEC AND ALL LOCAL CODES. BOND THE INTERIOR WATER PIPE SYSTEM TO THE MAIN ELECTRICAL GROUNDING SYSTEM.

7. CONDUIT: ALL WIRES (EXCEPT NM CABLE AND LOW VOLTAGE CONTROL) SHALL BE RUN IN CONDUIT. RIGID GALVANIZED STEEL CONDUIT SHALL BE USED IN CONCRETE AND UNDERGROUND LOCATIONS. STEEL CONDUIT INSTALLED UNDERGROUND SHALL BE ENCASED IN TWO INCH MINIMUM, CONCRETE ENVELOPE OR COMPLETELY COVERED WITH HALF-LAPPED #50 SCOTCH-WRAP TOP OF UNDERGROUND. CONDUITS SHALL NOT BE LESS THAN 24". PVC ELECTRICAL CONDUIT, UL LISTED MAY BE USED FOR UNDERGROUND SECTIONS OF LIGHTING CIRCUITS AND FEEDER RACEWAYS. ALL NON-METALLIC CONDUITS SHALL HAVE BOND WIRES, EXCEPT FEEDING SERVICES.

THIN-WALL EMT SHALL BE EQUIPPED WITH WATERTIGHT COUPLING AND T & B INSULINERS CONNECTORS.

CONDUIT AND EMT SHALL BE RIGIDLY SUPPORTED WITH DURABLE STRAPS AND HANGERS AT INTERVALS NOT TO EXCEED SIX FEET. COUPLINGS CONNECTORS AND LOCKNUTS SHALL BE TIGHTLY SECURED TO PROVIDE ELECTRICAL CONTINUITY OF GROUNDING.

RIGID STEEL CONDUIT SHALL BE HEAVY-WALLED, HOT-DIPPED, GALVANIZED OR SHERARIZED. USE RIGID STEEL CONDUIT IN CONCRETE SLABS, IN GRADE, IN EXPOSED LOCATIONS SUCH AS TUNNELS AND EQUIPMENT ROOMS, WHERE EXPOSED TO WEATHER AND WHERE BURIED IN EARTH. SCHEDULE 40 PVC NON-METALLIC CONDUIT MAY BE USED BURIED IN EARTH MINIMUM 24" BELOW GRADE. ALL CONDUIT EXTENDED UNDER DRIVEWAYS OR AREAS OF VEHICULAR USAGE SHALL BE GALVANIZED HEAVY WALL STEEL CONDUIT OR SCHEDULE 80 PVC NON-METALLIC CONDUIT, MINIMUM 30" BELOW GRADE. STEEL CONDUIT INSTALLED UNDERGROUND SHALL BE ENCASED IN TWO INCH MINIMUM, CONCRETE ENVELOPE OR COMPLETELY COVERED WITH HALF-LAPPED #50 SCOTCH-WRAP. TOP OF UNDERGROUND CONDUITS SHALL NOT BE LESS THAN 24". PVC ELECTRICAL CONDUIT, UL LISTED MAY BE USED FOR UNDERGROUND SECTIONS OF LIGHTING CIRCUITS AND FEEDER RACEWAYS. ALL NON-METALLIC CONDUITS SHALL HAVE BOND WIRES, EXCEPT WHEN FEEDING SERVICES.

8. OUTLET BOXES: GALVANIZED STEEL BOXES AT LEAST 1 1/2" DEEP AND 4" SQUARE SHALL BE PROVIDED IN FINISHED AREAS FOR EACH WALL SWITCH, RECEPTACLE, TELEPHONE AND LIGHTING FIXTURE LOCATION. BOXES SURFACE MOUNTED IN DRY LOCATIONS MAY BE 4 X 2 SIZE PROVIDING NOT MORE THAN FIVE WIRES ENTER.

9. WIRING DEVICES: CONVENIENCE RECEPTACLES, HUBBELL OR APPROVED EQUAL, 15 AMPS, 125 VOLT GROUNDING TYPE WITH IVORY, PLASTIC PLATE IN FINISHED AREAS. PROVIDE WEATHER PROOF RECEPTACLE OUTLET FOR EXTERIOR LOCATIONS. CLOCK RECEPTACLES SHALL BE HUBBELL COMPLETE WITH IVORY PLASTIC PLATE. SWITCHES SHALL BE HUBBELL SINGLE-POLE, OR APPROVED EQUAL, WHERE INDICATED WITH PLATE TO MATCH RECEPTACLES. TELEPHONE WALL OUTLETS SHALL BE EQUIPPED WITH ONE-HOLE WALL PLATES TO MATCH RECEPTACLES.

10. WIRE AND CABLE: CONDUCTORS SHALL BE SOFT DRAWN COPPER, WITH THWN-2 INSULATION, NM CABLE SHALL BE #12 AWG MINIMUM EXCEPT LOW-VOLTAGE CONTROL WIRE MAY BE #16 PLASTIC INSULATED.

11. MOTOR AND CONTROL WIRING: WIRE TO AND CONNECT MOTORS AND CONTROLS INDICATED ON THE DRAWINGS NOT PRE-WIRED BY THE SUPPLIER OF THE EQUIPMENT.

12. AS BUILT DRAWINGS: MAINTAIN ONE SET OF PRINTS ON THE JOB SHOWING LOCATIONS OF UNDERGROUND CONDUITS AND DUCTS. PROVIDE THE ARCHITECT WITH ONE SET OF SUCH "AS BUILT" ACCURATE, NEAT AND LEGIBLE DRAWINGS ON COMPLETION OF THE WORK.

13. GUARANTEE: THE CONTRACTOR SHALL GUARANTEE ALL MATERIAL FURNISHED BY HIM AND ALL WORKMANSHIP UNDER THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF WORK UNDER THIS CONTRACT. ANY DEFECTS DEVELOPED WITHIN THIS PERIOD TRACEABLE TO MATERIAL FURNISHED AS A PART OF THIS CONTRACT OR WORKMANSHIP PERFORMED HERE UNDER, SHALL BE MADE GOOD PROMPTLY AT THIS CONTRACTOR'S EXPENSE. THIS CONTRACTOR SHALL ACCEPT THIS CONDITION AND FULLY UNDERSTAND ITS PROVISIONS PRIOR TO THIS CONTRACT BEING AWARDED AND NO CLAIM FOR EXTRA COMPENSATION WILL BE ALLOWED FOR CORRECTION OF FAULTY WORK OR REPLACING DEFECTIVE MATERIAL.

14. LIGHT SWITCHES: (STANDARD COLOR WHITE - FINAL SELECTION BY ARCH.) MOUNTED @40"A.F.F. U.N.O.

HUBBELL #1221- 20A SINGLE POLE

HUBBELL #1223- 20A THREE WAY

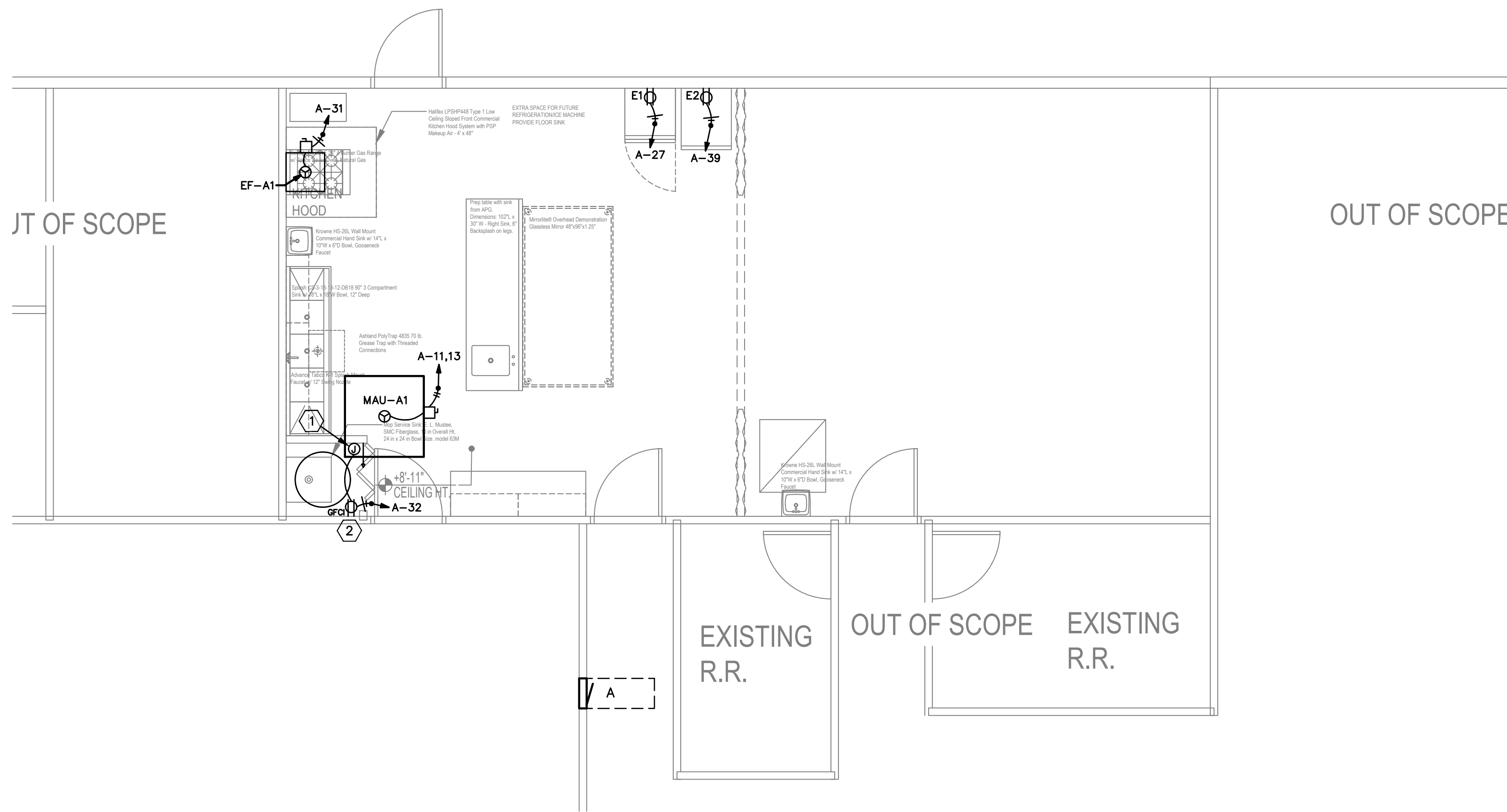
MANUFACTURERS SHALL BE HUBBELL, BRYANT OR SIERRA.

RECEPTACLES:

HUBBELL #5362- 20A/125V/DUPLEX

FOR ISOLATED GROUND - HUBBELL #G8300 (ORANGE)

FOR MEDICAL GRADE - HUBBELL #G8300R (RED)



1 ELECTRICAL POWER PLAN

1/4"=1'-0"

GENERAL EQUIPMENT SCHEDULE									
CALLOUT	SYMBOL	DESCRIPTION	VOLTS	AMPS	KVA	CALC. LOAD KVA	CIRCUIT	WIRE CALLOUT	NOTE 1
E1	☺	REACH-IN FREEZER	120V 1P 2W	3.2	0.38	0.48	A-27	3/4"C,1#12,#12N,#12G	
E2	☺	REACH-IN REF	120V 1P 2W	3	0.36	0.45	A-39	3/4"C,1#12,#12N,#12G	
EF-A1	☺	EXHAUST FAN	120V 1P 2W	6.3	0.76	0.95	A-31	3/4"C,1#12,#12N,#12G	
MAU-A1	☺	MAKE-UP AIR UNIT	240V 2P 2W	5.6	1.34	1.68	A-11,13	3/4"C,2#12,#12G	

POWER

GENERAL NOTES:

A. ALL EXTERIOR DISCONNECTS SHALL BE W.P. TYPE.

B. ALL RECEPTACLES WITHIN 6'-0" OF A SINK TO BE GFCI RATED.

C. REFER TO MECHANICAL AND PLUMBING PLANS FOR EXACT SIZE, LOCATION, AND ELECTRICAL REQUIREMENTS FOR ALL MECHANICAL AND PLUMBING EQUIPMENT. PROVIDE ELECTRICAL SERVICE AS REQUIRED FOR EACH ITEM.

D. ELECTRICAL CONTRACTOR RESPONSIBLE FOR COORDINATING EXACT LOCATION, QUANTITIES, AND INSTALLATION REQUIREMENTS OF ELECTRICAL EQUIPMENT IN MILL WORK.

E. ALL EXTERIOR 15 AND 20 AMPERE RECEPTACLES SHALL BE GFCI TYPE WITH HEAVY DUTY WEATHER PROOF WHILE IN USE COVER PER NEC 406.9(B)(1).

F. ALL ELECTRICAL PANEL BOARDS SHALL MAINTAIN MINIMUM 30" WIDTH OR WIDTH OF PANEL WHICH EVER IS GREATER AND 36" INFRONT WORKING CLEARANCE.

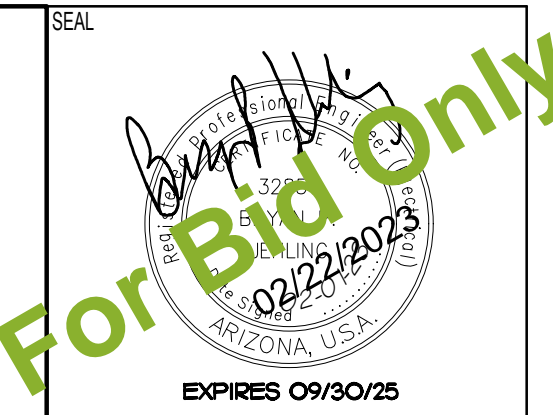
G. PER NEC 430.102 A DISCONNECTING MEANS SHALL BE PROVIDED FOR A MOTOR IN ACCORDANCE WITH NEC 430.102(B)(1) OR (B)(2).

POWER

GENERAL NOTES:

1. PROVIDE J-BOX FOR WATER HEATER IGNITOR VERIFY EXACT LOCATION WITH PLUMBING CONTRACTOR.

2. PROVIDE RECEPTACLE FOR RECIRCULATION PUMP. VERIFY EXACT LOCATION WITH PLUMBING CONTRACTOR.



FOR BID ONLY

UNIVERSITY OF ARIZONA KITCHEN REMODEL
KINGMAN, ARIZONA
XXX

ARCHITECT OF RECORD
SELBERG ASSOCIATES INC.
ARCHITECTURE & PLANNING
2180 MESQUITE AVE. SUITE 204
KINGMAN, ARIZONA 86403
(928) 855-8884

PROJECT NO. 22071

ISSUED FOR: CONSTRUCTION DOCUMENTS

ISSUED DATE: FEBRUARY 1, 2023

REVISION ISSUE DATE

1

SHEET TITLE:

ELECTRICAL POWER PLAN

SHEET NO.

E2.01

MAVEN ENGINEERING Job #23SCK002
Tel: (480) 303-0180
Fax: (480) 302-7927
8011 S Avenida del Yaqui
Guadalupe, Arizona 85283
Note: Any changes made to final bid documents due to field changes will be billed hourly to the contractor.

LOAD CALC @SES

TOTAL CONNECTED KVA BY PHASE		23.8	22.2		
LIGHTING	7.59	9.49 (125%)			
LARGEST MOTOR	10	12.5 (125%)			
OTHER MOTORS	9.84	9.84 (100%)			
RECEPTACLES	18.2	14.1 (50%>10)			
KITCHEN	0	0 (100%)			
TOTAL KVA		46	46.3		
BALANCED PHASE AMPS 193					

FAULT CURRENT SCHEDULE

DEVICE	AIC RATING	L-N VOLTS	UTILITY			FED FROM				FEEDER					DIRECTLY CONNECTED MOTOR LOAD				
			FAULT	X	R	DEVICE	FAULT	X	R	SIZE	X / 1000'	R / 1000'	LENGTH	X	R	KVA	FAULT	X	R
SES	22,000	120V	13,900	0.008465	0.001693					#3/0	0.042	0.077		0	0				
A	10,000	120V	7,838	0.01242	0.008949	SES	13,900	0.008465	0.001693	#3/0	0.042	0.077	94'	0.004	0.0073	19.8	331	0.352	0.088

A

ROOM	VOLTS	240/120V 2P 3W	AIC	10,000					
MOUNTING FLUSH	BUS AMPS	200	MAIN BKR	MLO					
FED FROM SES	NEUTRAL	100%	LUGS	STANDARD					
NOTE									
CKT #	CKT BKR	CIRCUIT DESCRIPTION	KVA LOAD A	KVA LOAD B	CKT #	CKT BKR	CIRCUIT DESCRIPTION	KVA LOAD A	KVA LOAD B
1	20/1	OUTSIDE LIGHTS	(1) 1		2	20/1	LAB LIGHTING	(2) 0.992	
3	40/2	A/C UNIT	3.5	3.5	4	20/1	OFFICE LIGHTING	(1) 0.7	0.7
5			3.5		6	20/1	OFFICE LIGHTING		
7	60/2	BACK RM A/C UNIT	5	5	8	20/1	OFFICE LIGHTING		
9			5		10	20/1	OFFICE LIGHTING		
11	20/2	MAU-A1	(2) 0.672	0.672	12	20/1	OFFICE LIGHTING		
13			(1) 0.672		14	20/1	OFFICE LIGHTING		
15	20/1	OUTLETS	1	1	16	20/1	OFFICE LIGHTING		
17	20/1	OUTLETS	1	1	18	20/1	OFFICE LIGHTING		
19	20/1	OUTLETS	0.6	0.6	20	20/1	OUTLETS		
21	20/1	OUTLETS	0.6	0.6	22	20/1	OUTLETS		
23	20/1	TELE EQ.	0.6	0.6	24	20/1	OUTLETS		
25	20/1	OUTLETS	1	1	26	20/1	OUTLETS		
27	20/1	E1-FREEZER	(2) 0.384	0.384	28	20/1	OUTLETS		
29	20/1	OUTLETS	(1) 1	1	30	20/1	OUTLETS		
31	20/1	EF-A1	(2) 0.756	0.756	32	20/1	OUTLETS MISC. W/H, RECIRC. PUMP		0.96
33	20/1	OUTLETS	(1) 1	1	34	20/1	OUTLETS		
35	20/1	OUTLETS	1	1	36	20/1	OUTLETS		
37	20/1	OUTLETS	1	1	38	20/1	OUTLETS		
39	20/1	E2-REF	(2) 0.36	0.36	40	20/1	OUTLETS		
TOTAL CONNECTED KVA BY PHASE			23.8	22.2					
TOTAL CONNECTED AMPS BY PHASE			198	185					
CONN. KVA		CALC. KVA	CONN. KVA	CALC. KVA					
LIGHTING	7.59	9.49 (125%)	CONTINUOUS	0	0 (125%)				
LARGEST MOTOR	10	12.5 (125%)	HEATING	0	0 (100%)				
OTHER MOTORS	9.84	9.84 (100%)	NONCONTINUOUS	0.36	0.36 (100%)				
RECEPTACLES	18.2	14.1 (50%>10)	KITCHEN EQUIP	0	0 (N/A)				
KITCHEN	0	0 (100%)	NONCOIN/DIVERSE	0	0 (N/A)				
TOTAL KVA		46	TOTAL KVA		46.3				
BALANCED PHASE AMPS 193									

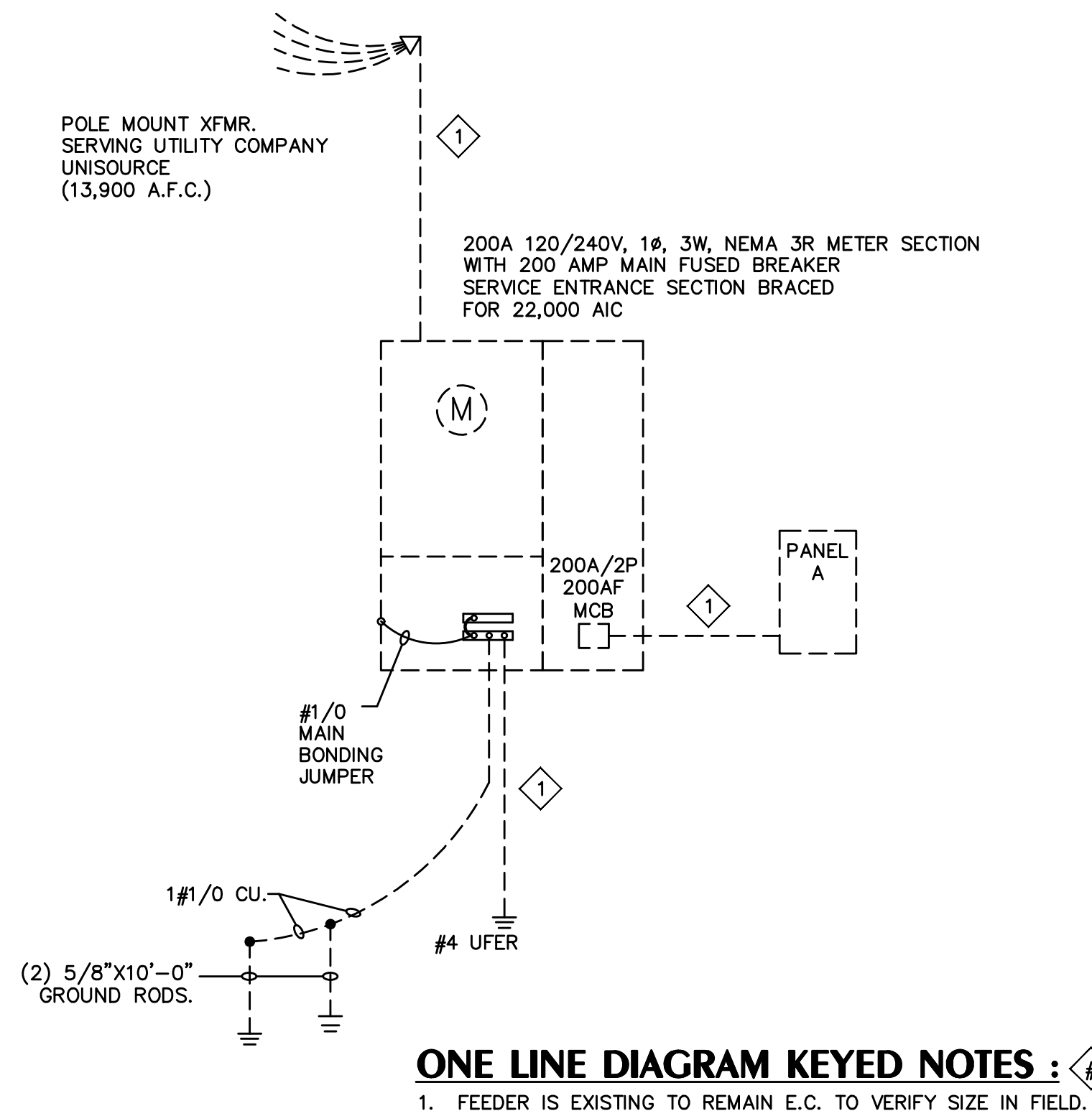
PANEL SCHEDULE KEYED NOTES :

- (1) INDICATES EXISTING BREAKER EXISTING LOAD.
- (2) INDICATES EXISTING BREAKER NEW LOAD.
- (3) INDICATES NEW BREAKER NEW LOAD.

FEEDER SCHEDULE

FEEDER AMPS	CONDUIT AND FEEDER	FEEDING THESE DEVICES
200	2" C, 2#3/0, #3/ON, #6G	A
200	2" C, 2#3/0, #3/ON, #4G	SES

SIZING METHOD: COPPER, 60°C #12 THROUGH #1, 75°C 1/0 AND ABOVE



ONE-LINE NOTES:

- A. SWITCHBOARD COMPONENTS, INCLUDING OVERCURRENT PROTECTIVE DEVICES SHALL BE FULLY RATED FOR THE AVAILABLE FAULT CURRENT SHOWN.
- B. PROVIDE ARC FLASH AND SHOCK HAZARD WARNING IDENTIFICATION PER NEC ARTICLE 110.16
- C. "NO DESIGN CHANGES MAY BE MADE TO THE SYSTEM WITHOUT THE PRIOR APPROVAL OF THE DESIGN ENGINEER AND THE ELECTRICAL INSPECTOR."

PANEL SCHEDULE NOTES:

- A. A.I.C. RATING SHOWN ON PANEL SCHEDULES ARE THE MINIMUM RATING FOR NEW AND REPLACEMENT OVERCURRENT PROTECTIVE DEVICES. EACH DEVICE SHALL BE FULLY RATED AT AFC AS SHOWN ON ONE-LINE DIAGRAM.
- B. ALL PANEL BOARDS SHALL HAVE A TYPE WRITTEN DIRECTORY IDENTIFYING EACH NUMBERED CIRCUIT PLACED IN A DIRECTORY HOLDER INSIDE THE DOOR.
- C. THE CONTRACTOR SHALL PERMANENTLY MARK WITH PERMANENT MARKER THE CIRCUIT IDENTIFICATIONS ON THE COVERPLATES OF RECEPTACLES, EQUIPMENT, AND LIGHTING JUNCTION BOXES. (STICK ON LABELS NOT ACCEPTABLE)

E.C. SHALL PROVIDE MAX AVAILABLE FAULT CURRENT FIELD MARKING OF SERVICE EQUIPMENT INCLUDING THE DATE THE CALCULATIONS WERE PERFORMED PER 2011 NEC 110.24

ONE-LINE DIAGRAM

N.T.S.

GENERAL NOTES :

- A. DASHED LINES INDICATE EXISTING EQUIPMENT.
- B. ALL NEW ELECTRICAL GEAR TO MATCH EXISTING BRAND EQUIPMENT OR EQUAL.
- C. NEW FEEDERS SHALL RUN BELOW GRADE OR IN CEILING SPACE/BUILDING ROOF STRUCTURE. DO NOT INSTALL FEEDER IN BUILDING INSULATION. FEEDERS SHALL NOT RUN EXPOSED TO DIRECT SUN LIGHT - EXCEPTION: HVAC FEEDERS 10'-0" OR LESS.
- D. WHERE NOT SPECIFIED FEEDERS SHALL BE COPPER.
- E. SCHEDULE 40 PVC NON-METALLIC CONDUIT MAY BE USED BURIED IN EARTH MINIMUM 24" BELOW GRADE. ALL CONDUIT EXTENDED UNDER DRIVEWAYS OR AREAS OF VEHICULAR USAGE SHALL BE GALVANIZED HEAVY WALL STEEL CONDUIT OR SCHEDULE 40 PVC NON-METALLIC CONDUIT, MINIMUM 30" BELOW GRADE. STEEL CONDUIT INSTALLED UNDERGROUND SHALL BE ENCASED IN TWO INCH MINIMUM, CONCRETE ENVELOPE OR COMPLETELY COVERED WITH HALF-LAPPED #50 SCOTCH-WRAP TOP OF UNDERGROUND CONDUITS SHALL NOT BE LESS THAN 24". PVC ELECTRICAL CONDUIT, UL LISTED MAY BE USED FOR UNDERGROUND SECTIONS OF LIGHTING CIRCUITS AND FEEDER RACEWAYS. ALL NON-METALLIC CONDUITS SHALL HAVE BOND WIRES, EXCEPT WHEN FEEDING SERVICES.
- F. CONDUIT RUN - PER NEC 350.26 THERE SHALL NOT BE MORE THAN THE EQUIVALENT OF FOUR QUATER BENDS (360 DEGREES TOTAL) BETWEEN PULL POINTS. PROVIDE PULLBOX AS NEEDED.



For Bid Only

PROJECT NAME
UNIVERSITY OF ARIZONA KITCHEN REMODEL
KINGMAN, ARIZONA
 XXX

ARCHITECT OF RECORD

SELBERG ASSOCIATES INC.
 ARCHITECTURE & PLANNING
 2480 MHSQUITE AVE. | SUITE 204
 TUCSON, ARIZONA 85705
 (520) 885-8844

PROJECT NO. 22071

ISSUED FOR: CONSTRUCTION DOCUMENTS

ISSUED DATE: FEBRUARY 1, 2023

REVISION ISSUE DATE

1

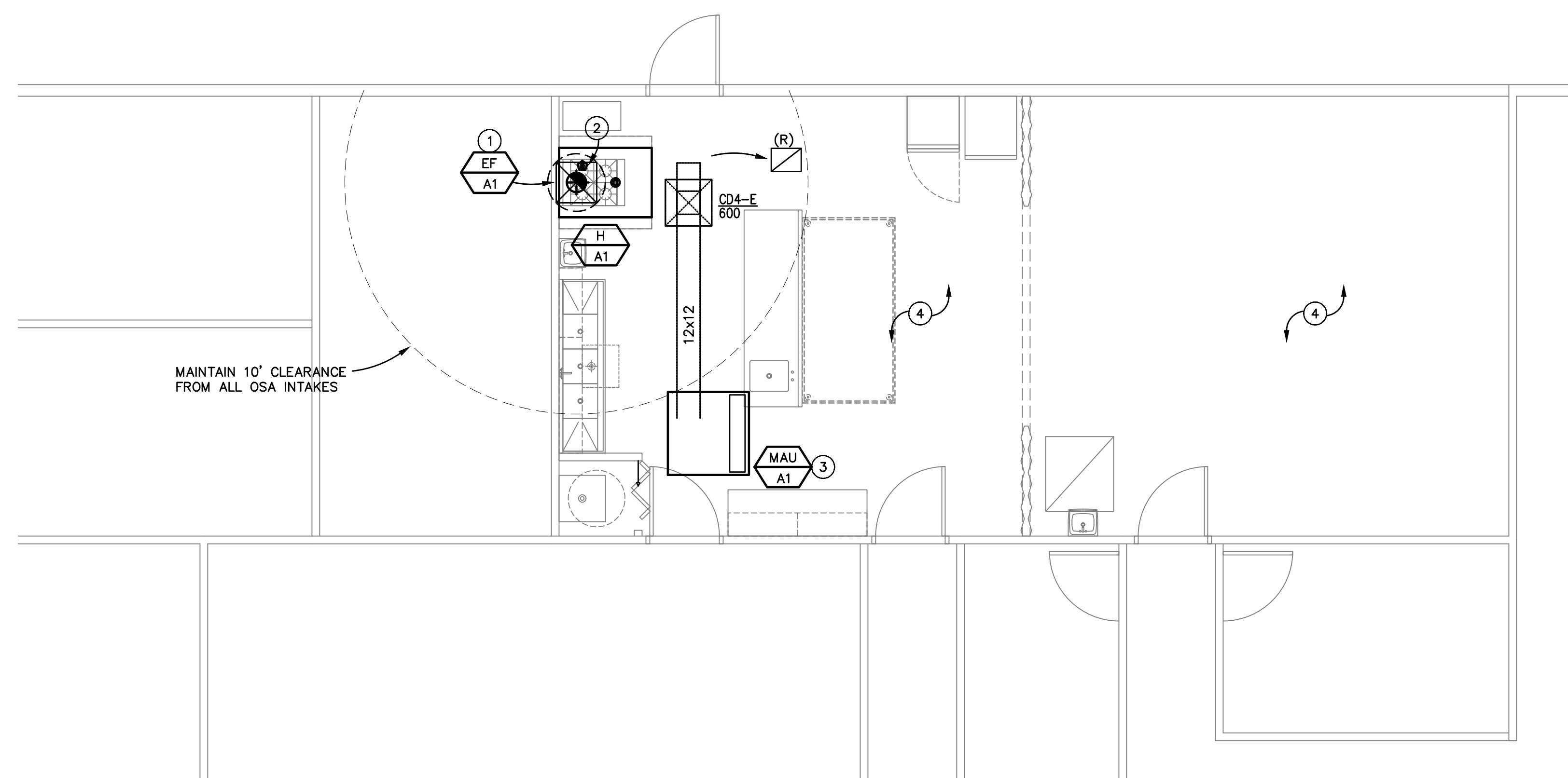
SHEET TITLE:

ONE-LINE DIAGRAM

SHEET NO.

E3.01

MAVEN ENGINEERING Job #23SCK002
 Tel: (480) 303-0180
 Fax: (480) 302-7927
 8011 S Avenida del Yaqui
 Guadalupe, Arizona 85283
 Note: Any changes made to final bid documents due to field changes will be billed hourly to the contractor.



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

KEYED NOTES :

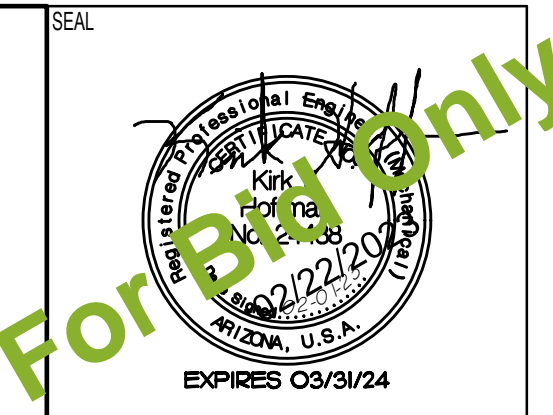
1. 10"ø @ 1375 FPM DUCT WORK TO UPBLAST EXHAUST FAN ON ROOF. PROVIDE 2 LAYERS OF FIREMASTER FAST WRAP AROUND GREASE DUCT PER ASTM E 2236. SEE DETAIL 3 SHEET M2.01.
2. HEAT SENSOR.
3. MAKE UP AIR UNIT INSTALLED PER MANUFACTURERS REQUIREMENTS COORDINATE UNIT LOCATION WITH FIELD CONDITIONS.
4. EXISTING AREA TO REMAIN, NO WORK REQUIRED.

GENERAL NOTES :

1. MOUNT THERMOSTATS 48" ABOVE FINISH FLOOR TO CENTER.
2. DUCTWORK AND EQUIPMENT SHOWN IS DIAGRAMMATIC. COORDINATE AND ROUTE DUCTWORK TO MEET JOB REQUIREMENTS. LOCATION OF EQUIPMENT MUST BE COORDINATED WITH ALL DISCIPLINES BEFORE FINAL LOCATIONS ARE SELECTED. WEIGHTS OF EQUIPMENT MUST BE VERIFIED AND COORDINATED WITH STRUCTURAL SYSTEMS BEFORE EQUIPMENT CAN BE INSTALLED AT JOBSITE.
3. SPACE ALLOCATED FOR MECHANICAL AND OTHER WORK ABOVE THE SUSPENDED CEILING IS CRITICAL. LIGHT FIXTURES AND AIR DIFFUSERS HAVE BEEN LOCATED TO ACHIEVE A DEFINITE ARCHITECTURAL EFFECT AND MAY NOT BE CHANGED WITHOUT THE CONSENT OF THE ARCHITECT. BECOME FAMILIAR WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS PRIOR TO FABRICATING AND INSTALLING ANY MATERIALS. HANG DUCTWORK AS CLOSE AS POSSIBLE TO THE STRUCTURE ABOVE, UNLESS INDICATED OTHERWISE.
4. COORDINATE THE LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS.
5. PASSAGES OF PIPES, CONDUITS, BUS DUCTS, CABLES, WIRES, AIRDUCTS, PNEUMATIC DUCTS, AND SIMILAR BUILDINGS SERVICE EQUIPMENT THROUGH FIRE BARRIERS SHALL BE PROTECTED AS FOLLOWS: THE SPACE BETWEEN THE PENETRATING ITEM AND FIRE BARRIER SHALL BE FILLED WITH A MATERIAL CAPABLE OF MAINTAINING THE FIRE RESISTANCE RATING OF THE FIRE BARRIER PRODUCT. PRODUCT USED MUST MEET TEST METHODS ASTM E814 OR NFPA 251 FOR FIRE RATING.
6. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DUCT & PIPING LOCATIONS IN FIELD AND INCLUDE IN BID EXTENDING TO EXISTING AS REQUIRED.
7. CONTRACTOR SHALL BALANCE ALL SYSTEMS TO CFM'S SHOWN. PROVIDE 3RD PARTY INSPECTION & PROVIDE COPY OF REPORT TO THE CITY OF KINGMAN INSPECTOR AT FINAL MECHANICAL INSPECTION
8. PLANS SHALL CONFORM TO THE 2018 IMC AND ALL CITY OF KINGMAN ADOPTED CODES AND AMENDMENTS.
9. MECHANICAL DESIGN IS INTENDED SO THAT THE AIR CONDITIONING SYSTEM WILL OPERATE CONTINUOUSLY DURING OCCUPIED HOURS TO MAINTAIN CURRENT VENTILATION REQUIREMENTS.
10. ALL DIFFUSERS AND GRILLES ARE LESS THAN 20LBS. CONTRACTOR SHALL POSITIVELY ATTACH TO CEILING MAIN RUNNERS
11. VENTS SHALL BE TERMINATED A MINIMUM OF 1'-0" ABOVE ROOF AND 2'-0" ABOVE OR 8'-0" AWAY FROM PARAPETS OR WALLS.
12. ALL NEW UNITS SHALL BE LOCATED AND INSTALLED BELOW THE PARAPET OR A SCREEN WALL PROVIDED,(SEE ARCHITECTURE DRAWINGS FOR SCREENING DETAILS).
13. THERMOSTATS ARE LOW VOLTAGE PROGRAMMABLE THERMOSTATS AND ARE TO BE LOCATED AS SHOWN.
14. REFER TO ARCHITECTURAL LOCATION OF DRAWINGS FOR EXACT REGISTERS, GRILLES & DIFFUSERS.
15. CALL FOR INSPECTION OF ALL MECHANICAL SYSTEM PRIOR TO COVER AND CONCEALMENT.
16. ALL EXISTING OR RELOCATED DIFFUSERS SHALL BE CLEANED PRIOR TO RE-USING AND MEET THE NECK SIZE OF THE DIFFUSER SHOWN ON THE FLOOR PLAN.

FIELD VERIFICATION NOTES :

1. THE HVAC CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT HIS BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
 - 1.A. EXACT PLACEMENT SIZE CAPACITY MANUFACTURER AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER SPECIFICALLY SHOWN OR NOT.
 - 1.B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
 - 1.C. SIZE AND LOCATION OF ALL EXISTING GRILLES REGISTERS AND DIFFUSERS
 - 1.D. LOCATION OF ALL EXISTING THERMOSTATIC CONTROLS
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN HIS BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ALLOWANCES WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTORS BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION



DRAWINGS AND SPECIFICATIONS REMAIN THE PROPERTY OF THE DESIGN PROFESSIONAL. COPIES OF THE DRAWINGS AND SPECIFICATIONS RETAINED BY THE CLIENT MAY BE UTILIZED ONLY FOR HIS USE AND FOR OCCUPYING THE PROJECT FOR WHICH THEY WERE PREPARED, AND NOT FOR THE CONSTRUCTION OF ANY OTHER PROJECTS.

PROJECT NAME
UNIVERSITY OF ARIZONA KITCHEN REMODEL
 KINGMAN, ARIZONA
 XXX

ARCHITECT OF RECORD

SELBERG ASSOCIATES INC.
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 2480 MHSQUITE AVE. SUITE 204
 KINGMAN, ARIZONA 86403
 (928) 855-8844

PROJECT NO.	22071
ISSUED FOR:	CONSTRUCTION DOCUMENTS
ISSUED DATE:	FEBRUARY 1, 2023
REVISION	ISSUE DATE
1	
SHEET TITLE:	MECHANICAL FLOOR PLAN
SHEET NO.	M1.01

MAVEN ENGINEERING Job #23SCK002
 Tel: (480) 303-0180
 Fax: (480) 302-7927
 8011 S Avenida del Yaqui
 Guadalupe, Arizona 85283
 Note: Any changes made to final bid documents due to field changes will be billed hourly to the contractor.

AIR CONDITIONING SPECIFICATIONS

1. GENERAL REQUIREMENTS AND SCOPE OF WORK:

THE WORK INCLUDED UNDER THIS SECTION CONSISTS OF FURNISHING ALL MATERIALS, EQUIPMENT AND LABOR, AND THE PERFORMING OF ALL FUNCTIONS, EXCEPT AS OTHERWISE SPECIFIED HEREIN OR SHOWN ON THE DRAWINGS TO BE PERFORMED BY OTHERS, FOR THE INSTALLATION OF COMPLETE AND WORKING AIR CONDITIONING, HEATING AND VENTILATING SYSTEMS WHICH COMPLIES WITH ALL CODES. CHECK FIELD CONDITIONS AND MAKE MEASUREMENTS BEFORE ORDERING MATERIALS.

MAINTENANCE MANUAL SHALL INCLUDE ALL AVAILABLE MANUFACTURERS' OPERATION AND MAINTENANCE INSTRUCTIONS TOGETHER WITH THE RECORD DRAWINGS TO PROPERLY OPERATE AND MAINTAIN THE EQUIPMENT. THE MANUAL SHALL ALSO INCLUDE THE NAME, ADDRESS, AND PHONE NUMBER OF THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS INVOLVED IN ANY OF THE WORK SPECIFIED HEREIN.

THE CONTRACTOR MUST, AT HIS OWN EXPENSE, OBTAIN ALL NECESSARY PERMITS, PAY ALL LEGAL FEES AND CHARGES AND COMPLY WITH ALL STATE AND MUNICIPAL BUILDING AND SAFETY LAWS, ORDINANCES AND REGULATIONS RELATING TO BUILDING AND PUBLIC HEALTH & SAFETY. ALL WORK AND MATERIALS SHALL BE IN CONFORMANCE WITH THE GOVERNING CODES.

PROVIDE MECHANICAL EQUIPMENT HAVING MOTORS WITH MOTOR PROTECTORS AND INTEGRAL STARTERS. WIRING AND PROPER OPERATION OF THE MECHANICAL EQUIPMENT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. ALL WIRING SHALL BE ROUTED IN CONDUIT OR IN PLENUM RATED WRING.

THE SYSTEM SHALL HAVE A WARRANTY COVERING LABOR, MATERIALS AND EQUIPMENT FOR A PERIOD OF ONE YEAR AFTER COMPLETION AND ACCEPTANCE. REPLACE OR REPAIR ALL DEFECTIVE WORKMANSHIP, EQUIPMENT, AND MATERIALS AT NO ADDITIONAL COST TO THE OWNER.

THE MECHANICAL CONTRACTOR SHALL COORDINATE EXACT DIFFUSER AND GRILLE LOCATIONS WITH ELECTRICAL CONTRACTOR AND ALL OTHER TRADES AND ALSO COORDINATE SPACE AVAILABILITY FOR DUCTWORK ABOVE RECESSED LIGHTING TO AVOID RELOCATING DUCTWORK AT THE MECHANICAL CONTRACTORS EXPENSE. ALL AIR DISTRIBUTION DEVICES IN LAY-IN CEILING SHALL BE INDEPENDENTLY SUPPORTED TO THE STRUCTURE WITH A MINIMUM OF (2) SUPPORT RODS OR WIRES IN COMPLIANCE WITH SECTION 2.3.1.3 OF THE NFPA 90A & BUILDING CODE IF REQUIRED BY THE LOCAL CODE AUTHORITY.

SHOULD A CHANGE ORDER TO THE CONTRACT DOCUMENTS BE NECESSARY, THE CONTRACTOR SHALL SUBMIT A FORMAL CHANGE ORDER TO THE ARCHITECT/ENGINEER FOR REVIEW BEFORE ANY WORK COMMENCES. ANY WORK DONE WITHOUT PRIOR WRITTEN APPROVAL IS SUBJECT TO COMPLETION AT THE CONTRACTOR'S EXPENSE. CHANGE ORDERS SHALL INCLUDE A DETAILED MATERIAL, EQUIPMENT, AND LABOR TAKE-OFF IDENTIFYING ALL NEW AND CREDITED ITEMS. COSTS FOR SUCH ITEMS SHALL NOT EXCEED THE VALUES LISTED IN THE LATEST EDITION OF THE MEANS ESTIMATING GUIDE. ALL CHANGE ORDERS SHALL HAVE A LOCAL PRICING, NO TRAVEL EXPENSE

SPECIAL INSPECTIONS OR OBSERVATIONS SUCH AS DUCT SMOKE DETECTORS AND GREASE DUCT WRAP MAY REQUIRED THE PROFESSIONAL ENGINEER OF RECORD TO SEAL CERTIFICATE COMPLIANCE OR OBSERVE INSTALLATION ARE SUBJECT TO ADDITIONAL CHARGES MINIMUM OF \$300.00 DEPENDING ON SIZE OF PROJECT.

PERFORM COMPLETE TESTING AND BALANCING OF ALL MECHANICAL SYSTEMS IN ACCORDANCE WITH AABC OR NEBB LATEST STANDARDS WITH REPORT. MECHANICAL CONTRACTOR TO PROVIDE BALANCE REPORT TO MECHANICAL INSPECTOR AT FINAL INSPECTION.

2. CONDENSATE DRAIN PIPING:

USE TYPE "M" HARD DRAWN COPPER FOR ALL CONDENSATE DRAIN LINES WITH MINIMUM FALL 1/8" PER FOOT FROM UNITS TO APPROVED PLUMBING CONNECTION. PROVIDE TRAPS AT UNIT AND INSTALL OVERFLOW DRAINS AS REQUIRED BY MECHANICAL CODE. TEST CONDENSATE PIPING TO HIGHEST POINT IN SYSTEM AND HOLD FOR FOUR HOURS.

3. DUCTWORK:

INSTALL ALL DUCTWORK IN ACCORDANCE WITH SMACNA GUIDELINES AND LOCAL STANDARDS FOR A MINIMUM OF 1" STATIC PRESSURE. RADIUS ELBOWS SHALL HAVE A MINIMUM RADIUS OF 1.5 TIMES THE DUCT DIMENSION IN THE DIRECTION OF TURN, AND SQUARE ELBOWS SHALL HAVE SINGLE THICKNESS TURNING VANES. ALL JOINTS SHALL BE TAPED WITH GLASS CLOTH AND HARDCAST OR ADHESIVE (UL LISTED). ALL DUCT SIZES ARE TO THE INSIDE OF LINING, INCREASE OUTSIDE DIMENSIONS AS NECESSARY. COVERINGS, LININGS, ADHESIVES AND INSULATION SHALL HAVE A SPREAD INDEX OF NOT OVER 25 AND A SMOKE-DEVELOPED INDEX OF NOT OVER 50. ALL INSULATION SHALL COMPLY WITH THE INTERNATIONAL ENERGY CONSERVATION CODE.

ALL INSULATION ADHESIVES & INSTALLATION SHALL COMPLY WITH NFPA_E 84.

CONCEALED DUCTS INSIDE OF BUILDING: SHALL BE SHEET METAL WRAPPED WITH 1" THERMAL INSULATION (MINIMUM OF R-6), WITH VAPOR BARRIER COVER.

EXPOSED SQUARE DUCTS INSIDE BUILDING AND DUCTS WITHIN 10 FEET OF A MECHANICAL UNIT SHALL BE SHEET METAL LINED WITH 1" ACOUSTICAL INSULATION. EXPOSED ROUND DUCTS DO NOT REQUIRE INSULATION.

FLEX DUCT: FLEX DUCT SHALL BE CLASS 0 OR 1 AND TESTED PER UL 181.

DUCTS OUTSIDE BUILDING OR IN UNCONDITIONED CEILING OR ATTIC SHALL BE SHEET METAL LINED WITH 2" ACOUSTICAL INSULATION (MINIMUM OF R-8).

4. GRILLES AND REGISTERS

GRILLES AND REGISTERS SHALL BE OF THE TYPE AND FINISH AS INDICATED ON THE DRAWINGS, COMPLETE WITH OPPOSED BLADE DAMPERS EXTRACTORS AND STRAIGHTENING GRIDS AS REQUIRED.

5. START-UP FOR MECHANICAL EQUIPMENT

ALL UNITS SHALL BE INSPECTED, CHECKED, AND STARTED UP BY MANUFACTURER'S FACTORY CERTIFIED HVAC TECHNICIAN. UPON COMPLETION, MANUFACTURER SHALL PROVIDE ONE YEAR PARTS AND LABOR WARRANTY.

6. EXHAUST FANS

DESCRIPTION: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY TO FURNISH AND INSTALL EXHAUST FANS AND BLOWERS FOR A COMPLETE AND OPERATIONAL SYSTEM. ITEMS NOT LISTED BUT REQUIRED DUE TO LOCAL CODES OR OPERATIONAL REQUIREMENTS SHALL BE INCLUDED UNDER BASE BID.

PROVIDE ROOF CAPS, WALL CAPS, FLASHINGS, BASES, SPEED SWITCHES, APPROVED VIBRATION ISOLATORS, INTEGRAL INLET GRILLES, INTEGRAL STARTERS AND DUCT CONNECTIONS AS INDICATED OR SPECIFIED. PROVIDE INTERNAL DISCONNECTING MEANS AND OVERLOAD PROTECTION ON ALL UNITS 1/2 HP AND SMALLER AND/OR 120 VOLT, SINGLE PHASE. TWO SPEED MOTOR SHALL BE TWO WINDING TYPE. ALL BELT DRIVEN EXHAUST FANS SHALL HAVE ADJUSTABLE MOTOR PULLEYS FOR FAN SPEED CONTROL. RATE BELTS FOR 150% OF MOTOR RATED HP. ALL FANS, EXCEPT TOILET EXHAUST FANS 200 CFM AND BELOW, SHALL BE AMCA CERTIFIED AND APPROVED.

7. EVAPORATIVE COOLER:

DESCRIPTION: PROVIDE ALL LABOR, MATERIALS, AND SERVICES NECESSARY TO FURNISH AND INSTALL ALL EVAPORATIVE COOLERS COMPLETE AS INDICATED OR SPECIFIED FOR A COMPLETE AND OPERATIONAL SYSTEM. ITEMS NOT LISTED BUT REQUIRED DUE TO LOCAL CODES OR OPERATIONAL REQUIREMENTS SHALL BE INCLUDED UNDER BASE BID.

PRODUCT: PAD TYPE OR CEL-DEK EVAPORATIVE COOLING UNITS SHALL BE QUIET IN OPERATION AND FREE FROM VIBRATION AND WITH HEAVY DUTY PUMP, WATER MAKE-UP ASSEMBLY, ADJUSTABLE MOTOR PULLEY, VIBRATION ABSORBING MOUNTS AND OVERFLOW DRAIN WITH BLEED FITTINGS. PROVIDE SLIDE DAMPER IN ACCESSIBLE LOCATION AT FAN DISCHARGE. COOLER MANUFACTURERS SHALL BE RESPONSIBLE FOR PROVIDING SPECIFIED AIR QUANTITIES AT SPECIFIED CONDITIONS. ALL COOLERS MUST HAVE CERTIFIED RATINGS AND BE UL LISTED.

8. KITCHEN HOOD AND FAN:

DESCRIPTION: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY TO FURNISH AND INSTALL KITCHEN HOOD AND VENTILATION UNIT, INCLUDING ALL DUCTWORK, BLOWERS, FIRE SUPPRESSION SYSTEM, MASTER ELECTRIC CONTROLS AND FILTER SECTIONS FOR A COMPLETE AND OPERATIONAL SYSTEM. ITEMS NOT LISTED BUT REQUIRED DUE TO LOCAL CODES OR OPERATIONAL REQUIREMENTS SHALL BE INCLUDED UNDER BASE BID. UNIT SHALL BE UL LISTED AND LABELED.

HOOD: THE HOOD SHALL BE DOUBLE SHELL TYPE, 18 GAUGE STAINLESS STEEL INNER LINER WITH 18 GAUGE GALVANIZED OUTER LINER WITH SATIN FINISH STAINLESS STEEL ON THE ENTIRE OUTER SHELL INCLUDING FACING, ENDS, AND SLOTS. AIR SHALL BE AS INDICATED ON PLANS. FABRICATION WILL BE IN ACCORDANCE WITH NFPA NO. 96 REQUIREMENTS AND BEAR THE NSF SEAL AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. THE INNER HOOD SHALL BE REINFORCED AND STIFFENED AND ALL JOINTS AND SEAMS WELDED. SUPPLY AIR VELOCITY WILL NOT EXCEED APPROXIMATELY 300-450 FEET PER MINUTE DEPENDING ON COOLING EQUIPMENT TO BE VENTILATED. THE HOOD SHALL BE HUNG FROM THE ROOF STRUCTURE WITH SOLID STEEL RODS WITH TURN BUCKLES. A 24 VOLT, PREWIRED, FLUSH MOUNTED HOOD CONTROL PANEL SHALL CONTAIN SEPARATE SWITCHES WITH SIGNAL LIGHTS FOR EXHAUST, MAKE-UP AIR, HEAT, AND INTERNAL LIGHTING. ALL HOOD LIGHTING WILL BE OF THE APPROVED VAPOR PROOF TYPE WITH CLEAR GLOBE AND CAST ALUMINUM GUARD, 36" MAXIMUM SPACING AND WIRED 110 VOLT TO A JUNCTION BOX AT THE TOP OF HOOD. LOW VOLTAGE WIRING IN CONDUIT CONFORMING TO NEC NO. 70 WILL BE PROVIDED IN THE FORM OF A WIRING HARNESS TO COMPLETE THE ELECTRICAL CIRCUITRY. ALL GREASE FILTERS 20" X 20" X 2" WILL BE PROVIDED ALONG WITH APPROPRIATE FILTER BLANKS TO PROVIDE FILTER MANUFACTURER'S OPTIMUM GREASE REMOVAL EFFICIENCY, AFI RATED.

VENTILATION: THE ROOF MOUNTED VENTILATION UNIT INCLUDING ALL COMPONENTS SHALL BE FULLY FACTORY ASSEMBLED AND WIRED IN ACCORDANCE WITH THE NEC. THE SYSTEM SHALL INCLUDE: CENTRIFUGAL SUPPLY FAN(S) WITH FORWARDLY CURVED BLADES WITH ADJUSTABLE BELT DRIVE, ALL MOUNTED IN A SHEET METAL HOUSING, EXHAUST FAN(S), POWER ROOF VENTILATOR TYPE WITH UP-BLAST DISCHARGE, ADJUSTABLE BELT DRIVEN CENTRIFUGAL FAN AND SPUN ALUMINUM HOUSING, FILTER SECTION FOR SUPPLY AIR WITH SIDE ACCESS SLIDE-IN FRAME, 2" OILED METAL, CLEANABLE AIR FILTERS IN AN ACCESS HOUSING, A FACTORY WIRED MASTER CONTROL PANEL OF THE VOLTAGE SPECIFIED, MOUNTED IN A WEATHERPROOF BOX, SHALL CONTAIN IN ADDITION TO TERMINALS AND WIRING FOR ABOVE, MAGNETIC STARTERS WITH THREE LEG OVERLOAD AND DISCONNECT SWITCHES FOR SUPPLY AND EXHAUST FANS AND CONTROL TRANSFORMER. ALL ELECTRICAL WORK SHALL BE DONE BY ONE MANUFACTURER IN ACCORDANCE WITH SYSTEM DESIGN AND IN STRICT ADHERENCE TO THE NEC, SUPPLY FAN, HEATING AND FILTER SECTIONS WILL BE ONE INTEGRATED UNIT, MOUNTED ON ADJUSTABLE SUPPORTS FOR POST MOUNTING. AN INSULATED STEEL WALL ROOF CURB IS PART OF THE FURNISHED SYSTEM, MASTER DISCONNECT SWITCHES AND WIRING TO THE MASTER ELECTRIC PANEL WILL ALSO BE INCLUDED.

ALL DUCT WORK WILL BE 16 GAUGE GALVANIZED WELDED EXHAUST, AND 18 GAUGE GALVANIZED SUPPLY, CONFORMING TO NFPA NO. 96.

EXTERIOR SURFACES OF ALL ROOF EQUIPMENT WILL BE WEATHERPROOF ENAMEL COATED.

EXHAUST FAN INFORMATION - JOB#5820471

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		1	EADU50H	ECDN-AIR	750	0.750	1320	TEAD-ECM	0.500	0.2140	1	115	6.3	285 FPM	83	11.8

HOOD INFORMATION - JOB#5820471

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)				HOOD CONSTRUCTION	HOOD CONFIG				
										WIDTH	LENG	HEIGHT	DIA		CFM	VEL	SP	END TO END	ROW
1		4812 ESX-2	ECDN-AIR	3' 0"	600 DEG	I	HEAVY	250	750			4'	10'	750	1375	-0.191'	430 SS WHERE EXPOSED	ALONE	ALONE

MECHANICAL EQUIPMENT SCHEDULE

NOTE: 1. AMBIENT TEMPERATURE 102 F COOLING, 27 F HEATING.
 2. NO EQUIPMENT WITH LESS THAN 98% OF LISTED CAPACITIES WILL BE APPROVED. COOLING CAPACITY INCLUDES FAN HEAT.
 3. FILTERS SHALL HAVE A MAXIMUM VELOCITY OF 500 FPM, 1" DEEP, 30% ATMOSPHERIC EFFICIENT.
 4. UNIT SHALL HAVE LOW AMBIENT COMPRESSOR LOCKOUT THERMOSTAT.
 5. SEE SPECIFICATION SECTION "AIR CONDITIONING UNITS" AND "FILTERS" FOR ADDITIONAL REQUIREMENTS.
 6. PROVIDE ONE ELECTRICAL CONNECTION FOR EACH UNIT.
 7. VERIFY ON PLAN FOR HORIZONTAL OR VERTICAL INSTALLATION.
 8. APPROVED HVAC MANUFACTURERS ARE: TRANE, CARRIER, LENNOX & AMERICAN STANDARD, ONLY.
 9. ALL UNITS SHALL BE INSPECTED, CHECKED, AND STARTED UP BY MANUFACTURER'S FACTORY CERTIFIED HVAC TECHNICIAN. UPON COMPLETION, MANUFACTURER SHALL PROVIDE ONE YEAR PARTS AND LABOR WARRANTY.
 10. NOT USED
 11. ALL KITCHEN EQUIPMENT SHALL OPERATE SIMULTANEOUS THIS INCLUDES, EF-A1, AND MAU-A1

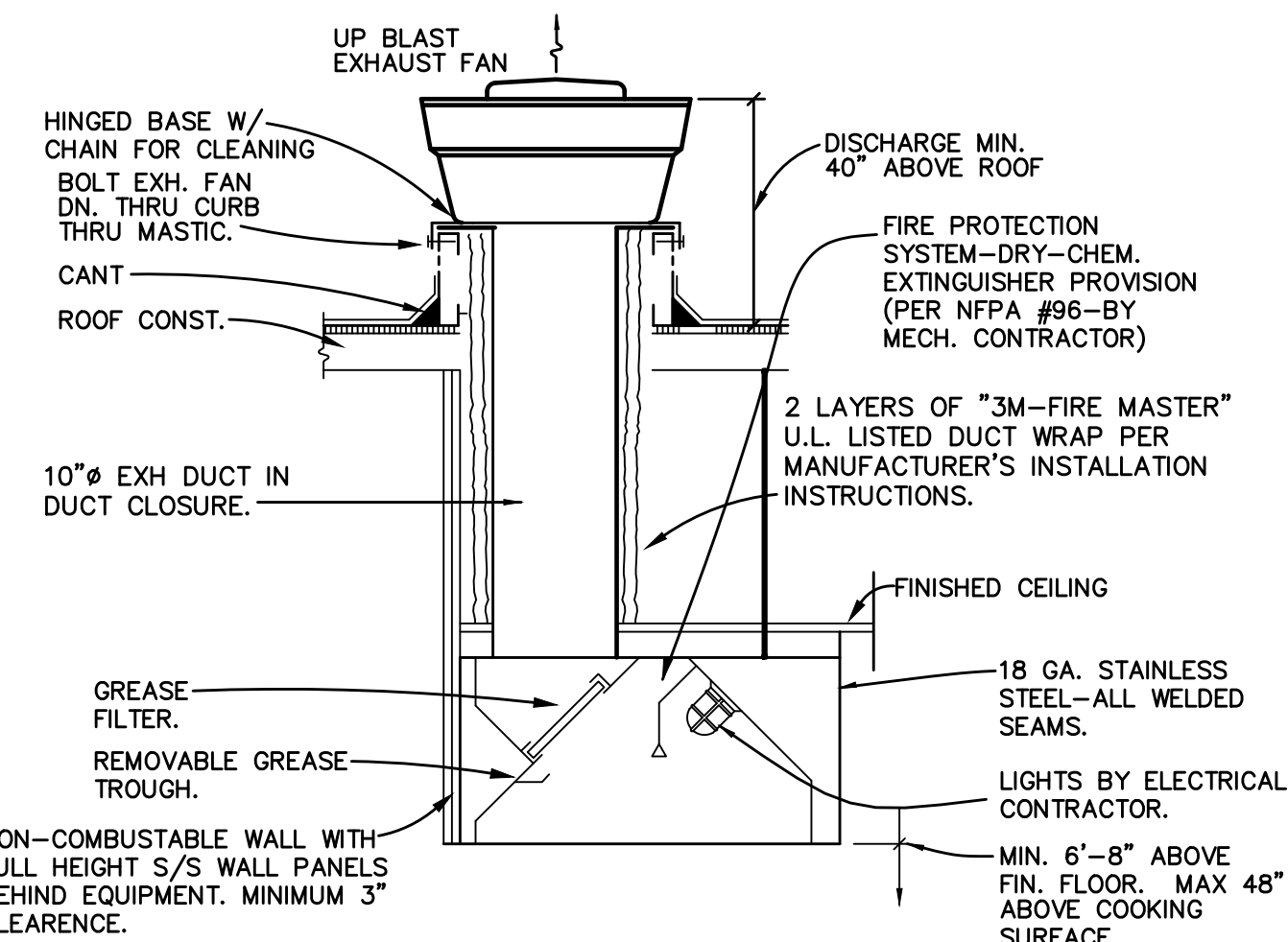
MARK	MANUFACTURER	MODEL	SEER /EER	CFM	ESP "WG"	HP	VOLT	PH	MCA	COOLING				HEATING				OSA CFM	WEIGHT LBS	NOTES	
										SEN MBH	TOT MBH	ENT AIR DB	ENT AIR WB	COMP MBH	KW/STAGES	VOLT	PH				
MAU-A1	AEROCOOL	TD3800	-	600	0.3	0.5	230	1	5.6	-	-	-	-	-	-	-	-	-	-	200	INTERLOCK W/ EF-A1

LEGEND: EXHAUST FAN (EF), SPLIT SYSTEM: INDOOR UNIT (IU), OUTDOOR UNIT (OU), ROOFTOP UNIT (RTU), AIR HANDLING UNIT (AHU), AIR CONDITIONER (AC), EVAPORATIVE COOLER (EC), MAKE-UP AIR UNIT (MUA)

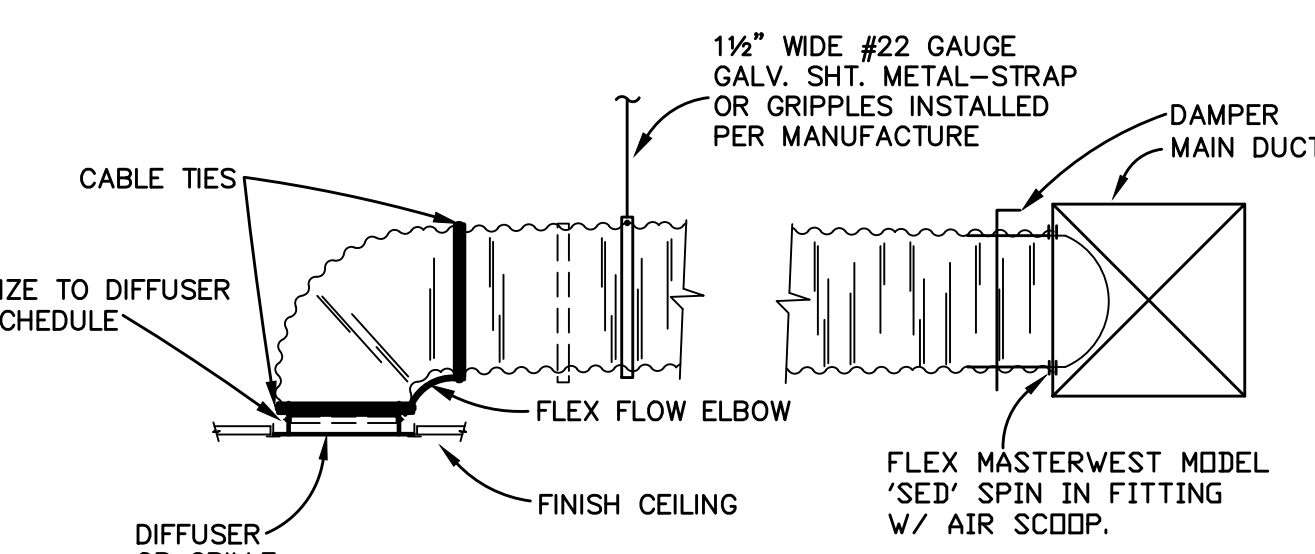
GRILLES, REGISTERS AND DIFFUSER SCHEDULE

NOTE: 1. PROVIDE OBD'S SHALL BE PROVIDED AT TAKE-OFF OF MAIN DUCT FOR ALL LAY-IN TYPE DIFFUSERS OR GRILLES AND OBD'S AT THE DIFFUSER OR GRILLE WHEN FLANGE TYPE.
 2. SEE SIZING SCHEDULES FOR NECK AND FLEX DUCT SIZES, UNLESS OTHERWISE DIRECTED.
 3. ALL LAY-IN DIFFUSERS OR GRILLES SHALL BE WHITE IN COLOR UNLESS DIRECTED OTHERWISE. ALL FLANGE TYPE DIFFUSERS, REGISTERS OR GRILLE COLORS SHALL BE AS DIRECTED BY THE ARCHITECT.
 4. CONTRACTOR SHALL PROVIDE SQUARE TO ROUND ADAPTERS AS REQUIRED FOR INSTALLATION.
 5. CONTRACTOR SHALL PROVIDE T-BAR BORDER IN ALL LAY-IN CEILINGS AND FLANGE TYPE BORDERS FOR ALL OTHER APPLICATIONS UNLESS OTHERWISE INDICATED.

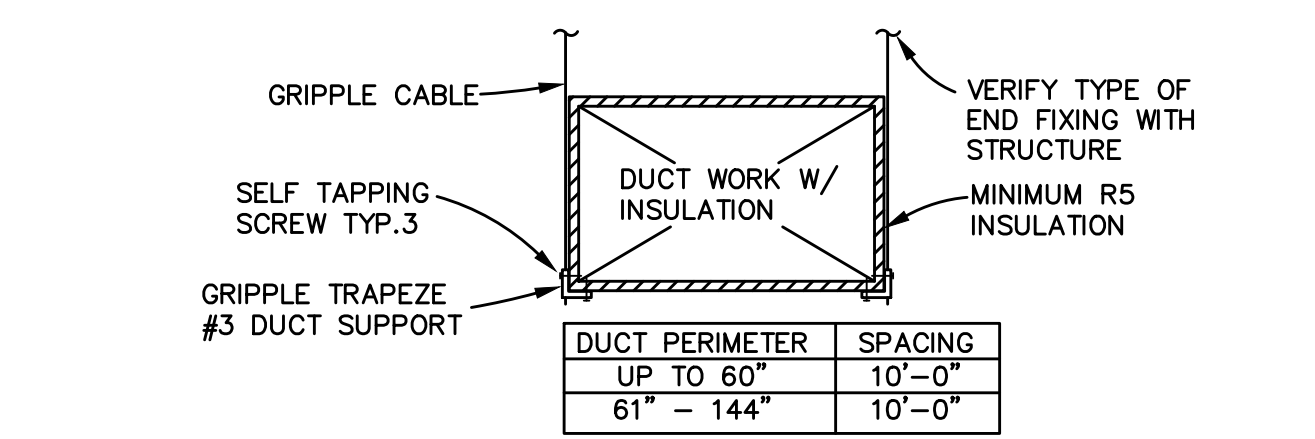
MARK	DESCRIPTION	MANUFACTURER	MODEL	MATERIAL	BORDER	FRONT BLADES	DAMPER	REMARKS
CD4	CEILING DIFFUSER	TITUS	PAS	STEEL	NOTE 5	HORIZONTAL	OBD	PERFERATED SUPPLY



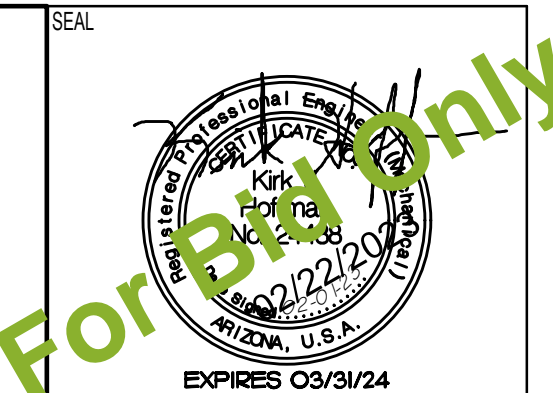
3 KITCHEN HOOD N.T.S.



1 DIFFUSER INSTALLATION (W/ FLEX DUCTWORK) N.T.S.



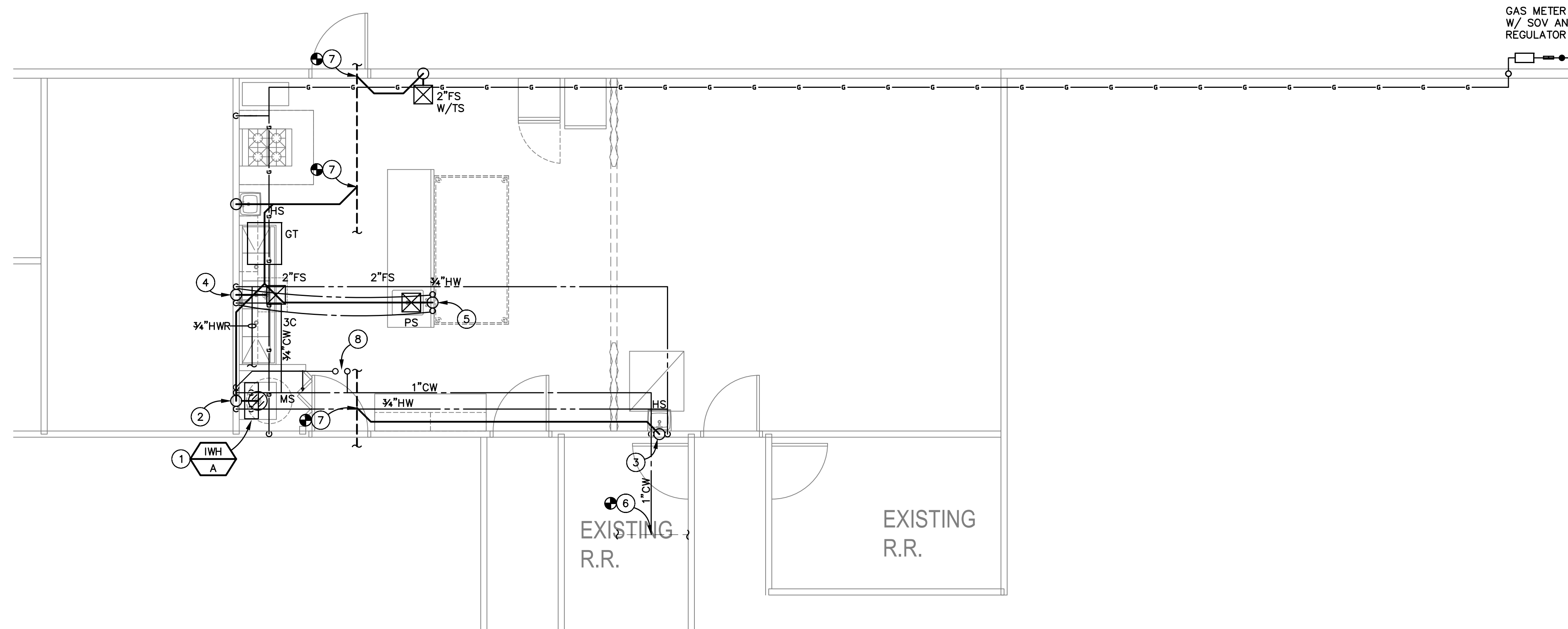
2 RECTANGULAR DUCTWORK GRIPPLE SUPPORTS N.T.S.



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UNIVERSITY OF ARIZONA KITCHEN REMODEL
KINGMAN, ARIZONA
 PROJECT NAME
 ARCHITECT OF RECORD
SELBERG ASSOCIATES INC.
 ARCHITECTURE & PLANNING
 2480 HIRSHOFT AVE. SUITE 204
 KINGMAN, ARIZONA 86403
 (928) 855-8994
 PROJECT NO. 22071
 ISSUED FOR: CONSTRUCTION DOCUMENTS
 ISSUED DATE: FEBRUARY 1, 2023
 REVISION ISSUE DATE
 SHEET TITLE: MECHANICAL SCHEDULES
 SHEET NO. **M2.01**

MAVEN ENGINEERING Job #23SC0002
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 Fax: (480) 302-7927
 8011 S Avenida del Yaqui
 Guadalupe, Arizona 85283
 Note: Any changes made to final bid documents due to field changes will be billed hourly to the contractor.



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

KEYED NOTES :

1. FULL SIZE T&P TO TERMINATE ABOVE MS W/ 1" AIR GAP.
2. 3/4"H&CW DOWN IN WALL TO MS.
3. 1/2"H&CW DOWN IN WALL TO HS.
4. 3/4"H&CW DOWN IN WALL TO SUPPLY 1/2"H&CW TO 3C AND HS, 1/2"H&CW TO ROUTE BELOW GRADE.
5. 1/2"H&CW UP FROM BELOW GRADE TO PS.
6. NEW 1" CW TO CONNECT TO EXISTING MINIMUM 1" CW, CONTRACTOR TO VERIFY SIZE PRIOR TO INSTALL AND LOCATE PIPE OF EQUAL OR GREATER SIZE.
7. NEW WASTE TO CONNECT TO EXISTING WASTE. VERIFY LOCATION, DIRECTION, AND INVERT IN FIELD.
8. 1/2" CW UP TO AND 3/4" DRAIN DOWN FROM EVAP COOLER ON ROOF, ROUTE DRAIN TO TERMINATE AT MOP SINK WITH AIR GAP. NOTE: EVAP IS PROTECTED FROM BACKFLOW VIA INTERNAL AIR GAP.

GENERAL NOTES :

1. EXACT LOCATION OF PLUMBING FIXTURES SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS.
2. BEFORE SUBMITTING BID, THE PLUMBING CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DRAWINGS AND INCLUDE IN HIS BID AN AMOUNT TO FURNISH AND INSTALL ANY FIXTURES WHICH ARE SHOWN IN ADDITION TO FIXTURES SHOWN ON THE PLUMBING DRAWINGS.
3. CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF SEWERS TO WHICH NEW WASTE LINES ARE TO BE CONNECTED BEFORE MAKING UP OR INSTALLATION OF NEW WASTE SYSTEM.
4. CONTRACTOR SHALL VERIFY AND COORDINATE LOCATION OF ALL PLUMBING LINES WITH DUCTWORK AND ELECTRICAL SERVICES.
5. THE INSTALLATION OF ALL VALVES, UNIONS, THERMOMETERS, GAUGES, OR OTHER INDICATING OR RECORDING EQUIPMENT, OR SPECIALTIES REQUIRING FREQUENT READING, REPAIRS, ADJUSTMENT, INSPECTION, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY AND ACCESSIBLY LOCATED WITH REFERENCE TO THE FINISHED BUILDING.
6. ALL VENTS THROUGH ROOF SHALL BE 10"-0" REMOVED FROM ALL AIR INTAKES, EVAPORATIVE COOLERS, ETC.
7. WHERE POSSIBLE, TIE VENTS TOGETHER SO THAT A MINIMUM NUMBER TERMINATE THROUGH THE ROOF.
8. WATER CLOSETS IN PUBLIC TOILET ROOMS SHALL CENTER ON THE FINAL LAYOUT OF TOILET PARTITIONS, EXCEPT AT ADA STALLS.
9. CONTRACTOR SHALL NOT CUT HOLES IN STRUCTURAL MEMBERS WITHOUT FIRST SECURING WRITTEN APPROVAL FROM THE ARCHITECT.
10. CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS AT CONNECTIONS OF DISSIMILAR METALS.
11. CONTRACTOR SHALL ROUGH-IN ALL WASTES AND SUPPLIES TO SPECIAL EQUIPMENT ACCORDING TO MANUFACTURERS SHOP DRAWINGS AND MAKE FINAL CONNECTIONS. ALL SUPPLIES SHALL BE VALVED.
12. ASSUMED WATER PRESSURE—CONTRACTOR SHALL VERIFY ACTUAL WATER PRESSURE PRIOR TO CONSTRUCTION. IF PRESSURE IS LESS THAN 50 PSI CONTRACTOR SHALL CONTACT THE ENGINEER FOR PIPE SIZING EVALUATION. IF PRESSURE EXCEEDS 80 PSI, A PRESSURE REDUCING VALVE SHALL BE PROVIDED. PIPING VELOCITY SHALL NOT EXCEED 8 FEET PER SECOND.
13. PLANS AND WORK SHALL CONFORM TO 2018 IPC AND IFGC AS ADOPTED BY THE CITY OF KINGMAN.

FIELD VERIFICATION NOTES :

1. THE PLUMBING CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT HIS BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
 - 1.A. EXACT PLACEMENT SIZE CAPACITY MANUFACTURER AND CONDITION OF ALL EXISTING PLUMBING EQUIPMENT WITHIN SCOPE OF WORK, WHETHER SPECIFICALLY SHOWN OR NOT.
 - 1.B. SIZE AND LOCATION OF ALL EXISTING WASTE, GREASE WASTE, VENT AND WATER PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, WATER, WASTE, GREASE WASTE AND VENT PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN HIS BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ALLOWANCES WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTORS BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION

PLUMBING SYMBOL LIST

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
—GW—	GREASE WASTE (GW)	●	POINT OF CONNECTION
----	EXISTING (E)	⊗	SHUT OFF VALVE (GATE)
----	SOIL WASTE LINE (W)	⊥	CHECK VALVE
----	VENT LINE (V)	⊥	UNION
----	COLD WATER (C.W.)	⊥	LUBRICATED PLUG VALVE
----	HOT WATER (H.W.)	⊥	HOSE BIBB (H.B.)
----	HOT WATER RETURN	⊥	BRANCH RISE OFF MAIN
— G —	GAS LINE	⊥	SURFACE CLEANOUT
— TW —	TEMPERED WATER	⊥	FLOOR CLEANOUT
— SW —	SOFT WATER	⊥	GLOBE VALVE
----	BUILDING SEWER	⊥	BALL VALVE
⊗	FLOOR DRAIN (F.D.)	—R.D.L.—	ROOF DRAIN LEADER
⊗	FLOOR SINK (F.S.)	—O.D.L.—	OVERFLOW DRAIN LEADER
⊗	ROOF DRAIN (R.D.)	—CD—	CONDENSATE DRAIN LINE
⊗	OVER FLOW DRAIN	—ICW—	INDUSTRIAL COLD WATER

NOTE: ONLY THOSE SYMBOLS SHOWN ON THE DRAWING APPLY

MAVEN ENGINEERING Job #23SCK002
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 Guadalupe, Arizona 85283

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PROJECT NAME:
UNIVERSITY OF ARIZONA KITCHEN REMODEL
KINGMAN, ARIZONA
 XXX

ARCHITECT OF RECORD:

SELBERG ASSOCIATES INC.
 ARCHITECTURE & PLANNING
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 KINGMAN, ARIZONA 86403
 (928) 835-8844

PROJECT NO. 22071

ISSUED FOR: CONSTRUCTION DOCUMENTS

ISSUED DATE: FEBRUARY 1, 2023

REVISION ISSUE DATE

1

SHEET TITLE:
 PLUMBING FLOOR PLAN

SHEET NO. **P1.01**

PLUMBING SPECIFICATIONS :

- SCOPE**
THE WORK SPECIFIED UNDER THIS CONTRACT INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, TOOLS, TRANSPORTATION, SERVICES, PERMITS, INSPECTION FEES, ETC., REQUIRED IN THE COMPLETE INSTALLATION OF PLUMBING WORK AS SPECIFIED HEREIN AND SHOWN ON ACCOMPANYING DRAWINGS AND AS REQUIRED BY THE CONDITIONS AT THE SITE. THE GENERAL AND SPECIAL CONDITIONS ARE HEREBY MADE A PART OF THIS SECTION. IN ADDITION, WORK IN THESE SECTIONS ARE GOVERNED BY ALL PROVISIONS OF THE CONTRACT DOCUMENTS.
- SUBMITTALS**
SUBMIT SHOP DRAWINGS AND ALL DATA REQUIRED IN ACCORDANCE WITH DETAILED REQUIREMENTS OF DIVISION 1, GENERAL REQUIREMENTS, FOR ALL WORK PROVIDED UNDER DIVISION 15.
- RECORD DRAWINGS**
PROVIDE RECORD DRAWINGS WHICH SHALL CLEARLY SHOW ALL DIFFERENCES BETWEEN THE CONTRACT WORK AS DRAWN AND INSTALLED. PIPING MAINS BELOW SLAB AND/OR GRADE AND ALL BRANCH LINES BELOW SLAB OR GRADE IN EXCESS OF 5 FT. IN LENGTH SHALL BE DIMENSIONED FROM COLUMNS OF ANY PERMANENT STRUCTURE. ALSO, SHOW ALL WORK ADDED TO THE CONTRACT WHICH IS NOT SHOWN ON THE CONTRACT DRAWINGS.
- EQUIPMENT LIST AND MAINTENANCE MANUAL**
MAINTENANCE MANUAL SHALL INCLUDE ALL AVAILABLE MANUFACTURERS' OPERATION AND MAINTENANCE INSTRUCTIONS TOGETHER WITH THE RECORD DRAWINGS HERE IN BEFORE SPECIFIED AND ALL OTHER DIAGRAMS AND INSTRUCTIONS NECESSARY TO PROPERLY OPERATE AND MAINTAIN THE EQUIPMENT. THE MANUAL SHALL ALSO INCLUDE THE NAME, ADDRESS, AND PHONE NUMBER OF THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS INVOLVED IN ANY OF THE WORK SPECIFIED HEREIN. THE EQUIPMENT LIST AND MAINTENANCE MANUAL SHALL BE SUBMITTED IN ACCORDANCE WITH DIVISION 1, GENERAL REQUIREMENTS.
- CODES, PERMITS, FEES, INSPECTIONS, RULES & REGULATIONS**
THE CONTRACTOR MUST, AT HIS OWN EXPENSE, OBTAIN ALL NECESSARY PERMITS, PAY ALL LEGAL FEES AND CHARGES INCLUDING WATER AND SEWER DEVELOPMENT FEES, AND COMPLY WITH ALL STATE AND MUNICIPAL BUILDING AND SAFETY LAWS, ORDINANCES AND REGULATIONS, RELATING TO BUILDING AND PUBLIC HEALTH AND SAFETY. ALL WORK SHALL BE IN CONFORMANCE WITH THE GOVERNING CITY CODES.
- NATURAL GAS: CONTRACTOR MUST, AT HIS OWN EXPENSE, SUBMIT ALL NECESSARY DRAWINGS TO SOUTHWEST GAS AND INCLUDE SLEEVE REQUIRED TO GAS METER LOCATION. COORDINATE LOCATIONS WITH UTILITY COMPANY.**
- EXCAVATION AND BACKFILL**
COMPLETE ALL SAW CUTTING, EXCAVATION AND BACKFILL AS NECESSARY FOR THE INSTALLATION OF UNDERGROUND PIPING. COMPACT AND TAMP BACKFILL TO ORIGINAL GRADE IN ACCORDANCE WITH REQUIREMENTS AS SPECIFIED IN SECTION ENTITLED "EARTHWORK" AND REMOVE EXCESS DIRT AS DIRECTED. NO WORK SHALL BE COVERED UNTIL PROPERLY TESTED AND APPROVED. ALL PAVEMENT, SIDEWALK, PIPING, ELECTRICAL CONDUIT, ETC., CAUSED TO BE CUT OR DAMAGED BY THIS SECTION SHALL BE RESTORED TO ORIGINAL CONDITION BY WORKMEN QUALIFIED AND ACTIVE IN THE TRADES INVOLVED.
- ELECTRIC WIRING**
ALL POWER WIRING IS INCLUDED IN DIVISION 16, ELECTRICAL. THE RESPONSIBILITY FOR PROPER CONNECTIONS AND OPERATION IS INCLUDED UNDER THIS DIVISION.
- WARRANTY**
WARRANTY THE SYSTEM, LABOR, MATERIALS AND EQUIPMENT FOR ONE (1) YEAR AFTER COMPLETION AND ACCEPTANCE. REPLACE OR REPAIR ALL DEFECTIVE WORKMANSHIP, EQUIPMENT, AND MATERIALS AT NO ADDITIONAL COST TO THE OWNER.
- WORK SPECIFIED HEREIN**
PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY TO FURNISH AND INSTALL COMPLETE PLUMBING AND PIPING SYSTEMS AS INDICATED OR SPECIFIED. INSTALL AND DELIVER ALL SYSTEMS COMPLETE, IN PERFECT WORKING ORDER, AND IN FULL ACCORDANCE WITH THE INTENT AND MEANING OF THE DRAWINGS AND SPECIFICATIONS. THE WORK, IN GENERAL, CONSISTS OF, BUT IS NOT NECESSARILY LIMITED TO, THE FOLLOWING:

COMPLETE SANITARY PLUMBING SYSTEMS FOR THE BUILDING WITH CONNECTIONS FROM EXISTING LINE IN THE BUILDING.

DOMESTIC WATER SYSTEM INCLUDING CONNECTION TO EXISTING STUB OUT, AND CONNECTIONS TO ALL PLUMBING FIXTURES AND EQUIPMENT.

ROUGH-IN AND FINAL CONNECTIONS OF WASTE AND WATER TO SPECIAL EQUIPMENT SPECIFIED UNDER OTHER SECTIONS OF THESE SPECIFICATIONS OR SUPPLIED BY OWNER, INCLUDING KITCHEN EQUIPMENT, CONDENSATE DRAIN PIPING, P-TRAPS, WASTE TUBING STOPS, FLEXIBLE TUBE RISERS, ETC. AS REQUIRED.

VALVED OUTLETS AND CONNECTIONS TO ALL HEATING, AIR CONDITIONING, OR ELECTRICAL EQUIPMENT WITH LOCATION AS REQUIRED.

INSULATION INCLUDING DOMESTIC HOT WATER SUPPLY PIPING. PER IECC 2018 PROVIDE FOAM INSULATION OR INSULATE WITH 1" INSULATION HAVING A CONDUCTIVITY BETWEEN 0.21-0.28 BTU PER INCH/H x FT.SQUARED x F.

FUEL GAS SYSTEM, INCLUDING METER, SERVICE LINE, AND VALVED CONNECTIONS TO ALL EQUIPMENT USING SAME AND INCLUDE SLEEVE REQUIRED TO GAS METER LOCATION. COORDINATE LOCATIONS WITH UTILITY COMPANY.

PLUMBING SPECIALTIES, INCLUDING CLEAN-OUTS, DRAINS, FIXTURE SUPPORTS, INTERCEPTORS, ETC.

PLUMBING EQUIPMENT AS SPECIFIED AND SCHEDULED.

PLUMBING FIXTURES AS SPECIFIED.

ADEQUATE SUPERVISION OF ERECTION, BALANCING, ADJUSTMENTS AND INSTRUCTIONS FOR PROPER OPERATION AND MAINTENANCE.

PAYMENT FOR ALL PLUMBING PERMITS AND INSPECTION FEES.

STERILIZATION OF POTABLE WATER SYSTEM. PEX SYSTEM SHALL BE STERILIZED WITH 50 MILLIGRAMS OF CHLORINE PER LITER FOR 24 HOURS.
- APPROVED MANUFACTURERS**
SPECIFICATION HEREIN BY BRAND NAME IS INTENDED TO ESTABLISH A STANDARD OF QUALITY. FURTHER, THIS EQUIPMENT HAS BEEN CHECKED AS TO SIZE AND WEIGHT REQUIREMENTS AND SPACE ALLOCATION HAS BEEN MADE ACCORDINGLY.

SUBMITTAL OF EQUIPMENT BY OTHER ACCEPTABLE MANUFACTURERS MUST BE COMPLETE IN EVERY DETAIL, INCLUDING SPACE REQUIREMENTS, WEIGHT, COMPLETE PERFORMANCE DATA, AND SUPPLEMENTAL DATA REQUESTED BY THE ARCHITECT. CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURANCE THAT THE EQUIPMENT MEETS ALL THE REQUIREMENTS DETAILED IN THIS AND OTHER SECTIONS, AND INDICATED ON THE DRAWINGS.

EACH SECTION INCLUDES A LIST OF MANUFACTURERS WHOSE EQUIPMENT IS ACCEPTABLE TO MANUFACTURE, SUBJECT TO CONFORMANCE WITH ALL DRAWINGS, SPECIFICATIONS AND ADDENDA ITEMS. CAREFUL CHECKING MUST BE MADE TO VERIFY THAT THE EQUIPMENT WILL MEET ALL CAPACITIES, REQUIREMENTS, SPACE ALLOCATIONS, AND THAT THE WEIGHTS ARE NOT EXCESSIVE.
- MATERIALS**
MANUFACTURERS INDICATE A STANDARD OF QUALITY, OTHER MANUFACTURES MUST BE APPROVED AS AN EQUAL.

SANITARY WASTE VENT AND STORM DRAINAGE: ABS CONFORMING TO ASTM D 2661. PROVIDE EXPANSION JOINTS, "FERNCO X-J" OR EQUAL, ON ALL VERTICAL BUILDING STACKS. LOCATION AND NUMBER OF EXPANSION JOINTS SHALL BE DETERMINED BASED ON PIPE MANUFACTURER'S RECOMMENDATIONS.

DOMESTIC WATER: TYPE "L" HARD DRAWN COPPER, CONFORMING TO ASTM B-88.

NATURAL GAS: PIPE, BLACK STEEL PIPE, SCHEDULE 40 BLACK STEEL CONFORMING TO ASTM A-53, GRADE A OR B, THREADED PIPING UP TO 4" DIAMETER, SEAMLESS WELDED PIPE FOR ALL LARGER SIZES.

GENERAL: WRAP ALL GAS PIPING INSTALLED BELOW GRADE OR EXPOSED TO WEATHER IN ACCORDANCE WITH MANVILLE SPECIFICATION 220. PROVIDE CATHODIC PROTECTION FOR GAS PIPING INSTALLED BELOW GRADE.

CLEAN OUTS: INTERIOR CONCRETE AND TILE FLOORS: "SIOUX CHIEF 834". INTERIOR FINISHED WALLS: "SIOUX CHIEF 870".

FLOOR DRAINS: TOILET ROOMS AND FINISHED AREAS: "SIOUX CHIEF 832".

FLOOR SINKS: EQUIPMENT ROOMS AND UNFINISHED AREAS: "WADE W-2530".

REDUCE PRESSURE BACKFLOW PREVENTER: WATTS #SS009, STAINLESS STEEL SHALL BE USED FOR ALL FOOD APPLICATIONS

BALL VALVES: NIBCO #S-585-70, 150# SOLDER JOINT FOR ALL LINES UP TO 2" IN DIAMETER.

CHECK VALVES: NIBCO #S-413-Y, 150# SOLDER JOINT FOR ALL VALVES UP TO 2" IN DIAMETER.

GLOBE VALVES: NIBCO #S-235-Y, 150# SOLDER JOINT FOR ALL VALVES UP TO 2" IN DIAMETER.

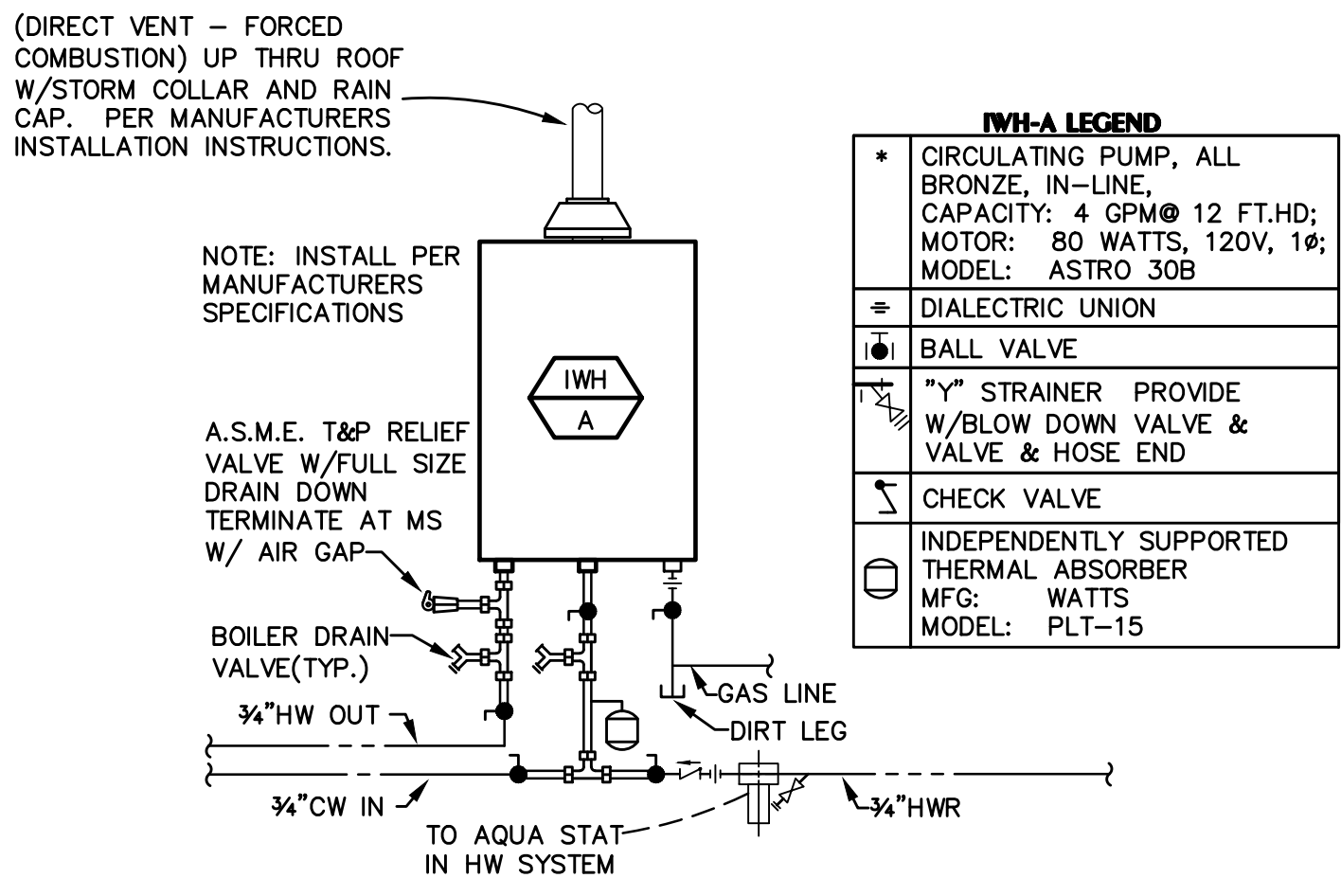
FIXTURES: USE POLISHED CHROME PLATED, ADJUSTABLE BRASS P-TRAPS AND WASTE ARMS WITH WALL ESCUTCHEONS AT ALL EXPOSED LOCATIONS. USE POLISHED CHROME PLATED FAUCETS WITH REMOVABLE TRIP, BRASS BODY AND BRASS HANDLES. FIXTURES AND SUPPLY FITTING SHALL BE AS SPECIFIED. PROVIDE DIAPHRAGM TYPE POLISHED CHROME PLATED FLUSH VALVES WITH INTEGRAL VACUUM BREAKERS AND SCREW DRIVER STOPS. PROVIDE FIXTURE STOPS AND VALVES AHEAD OF ALL EQUIPMENT OR FIXTURES. AFTER FIXTURES ARE SET IN PLACE AND SECURED TO WALLS, CAULK ALL AROUND BETWEEN FIXTURES AND WALL WITH EITHER "DOW CORNING #780" OR G.E. CONSTRUCTION SEALANT" WHITE SILICONE CAULKING COMPOUND.
- INSTALLATION**
THE ENTIRE PLUMBING SYSTEM SHALL BE INSTALLED IN A NEAT, WORKMANLIKE, FINISHED, AND SAFE MANNER. CONCEAL ALL PIPING IN FINISHED AREAS UNLESS NOTED OTHERWISE. ALL PIPING SHALL BE ADEQUATELY SUPPORTED AND INSTALLED PARALLEL WITH THE BUILDING WALLS. THE ENTIRE INSTALLATION SHALL BE SUBJECT TO THE ARCHITECT'S APPROVAL.
- TESTS**
TEST WATER PIPING TO 100 PSI AND HOLD FOR 4 HOURS.

TEST SEWER AND VENT PIPING WITH A 10 FOOT HEAD OF WATER FOR 4 HOURS.

TEST FUEL GAS SYSTEM TO 3 TIMES THE WORKING PRESSURE BUT NOT LESS THAN 3 PSIG AIR PRESSURE AND HOLD FOR 2 HOURS.

REPAIR ALL LEAKS UNTIL SYSTEMS ARE WATERTIGHT.

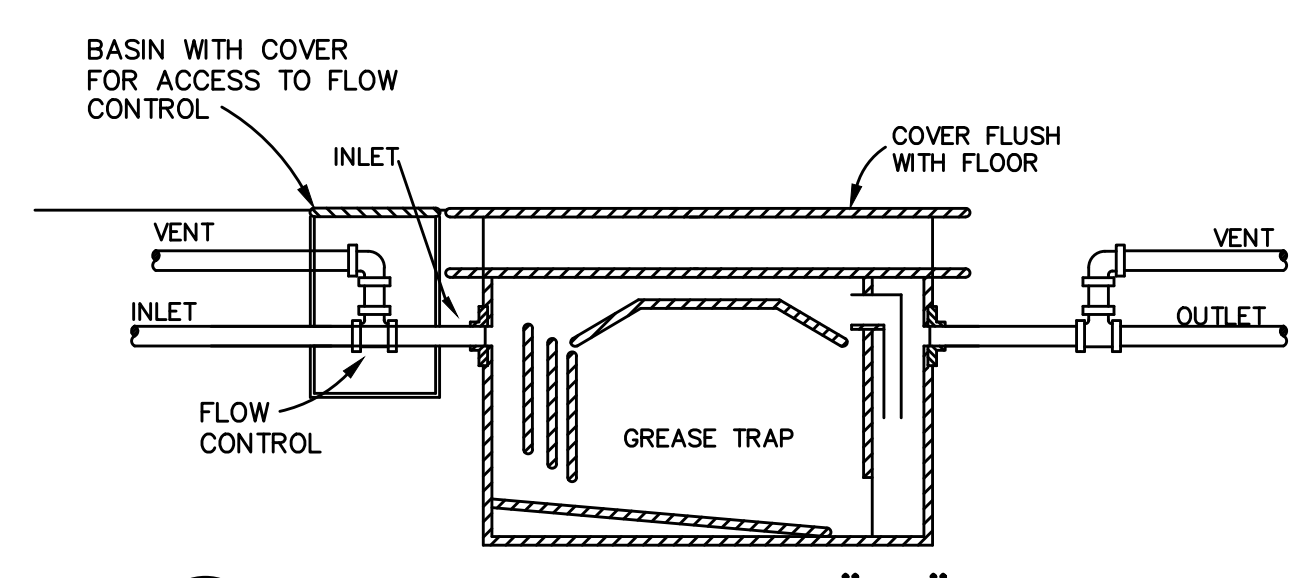
END OF SECTION



IWH-A LEGEND

- CIRCULATING PUMP, ALL BRONZE, IN-LINE, CAPACITY: 4 GPM @ 12 FT.HD; MOTOR: 80 WATTS, 120V, 1P; MODEL: ASTRO 30B
- DIALECTRIC UNION
- BALL VALVE
- STRAINER PROVIDE W/BLOW DOWN VALVE & VALVE & HOSE END
- CHECK VALVE
- INDEPENDENTLY SUPPORTED THERMAL ABSORBER MFG: WATTS MODEL: PLT-15

1 TANKLESS WATER HEATER N.T.S.



2 GREASE TRAP "GT" INSTALLATION DETAIL N.T.S.

GREASE TRAP SIZING
1 GALLON = 231 CUBIC INCHES

3-COMPARTMENT SINK
(3)14x16x12 COMPARTMENTS = 8,064

PREP SINK
(1)20x16x12 COMPARTMENTS = 3,840

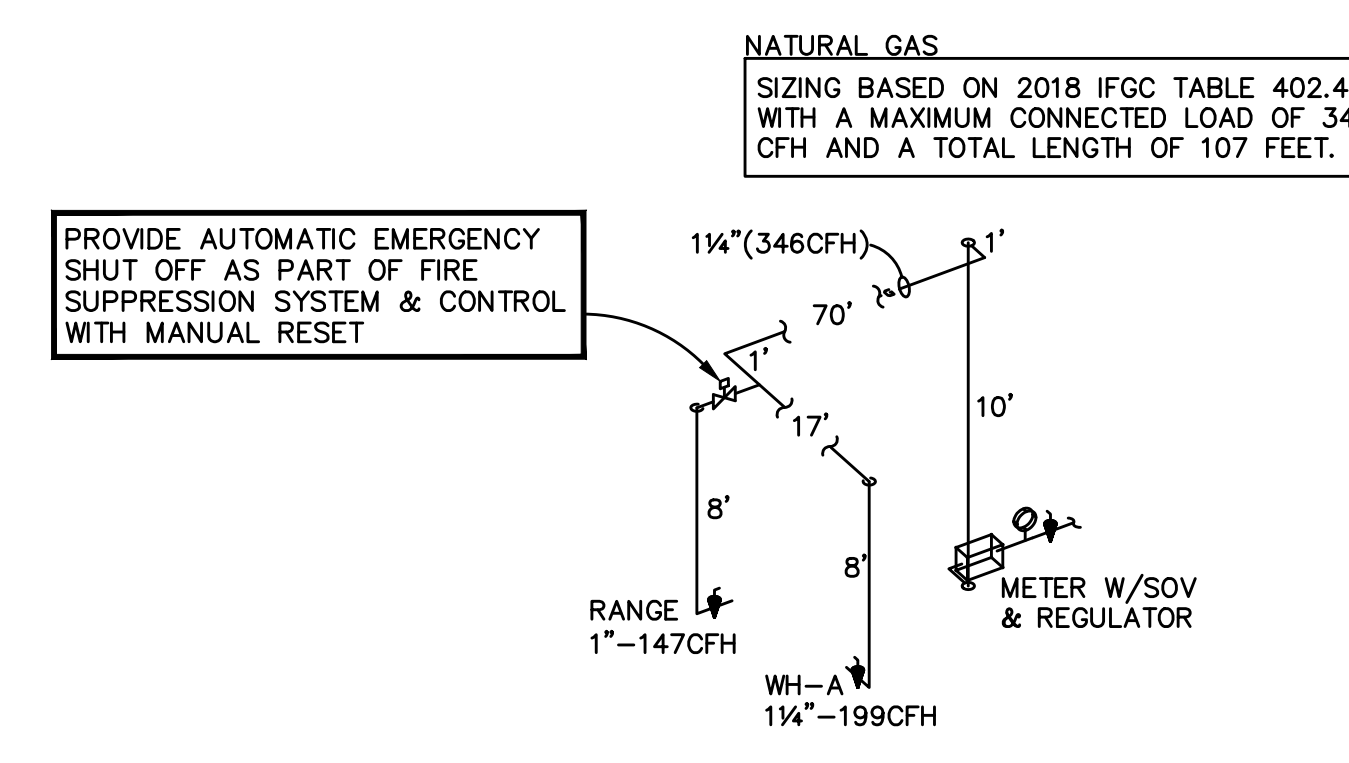
MOP SINK
(1)10x24x24 COMPARTMENTS = 5,760

TOTAL CUBIC INCHES = 17,664

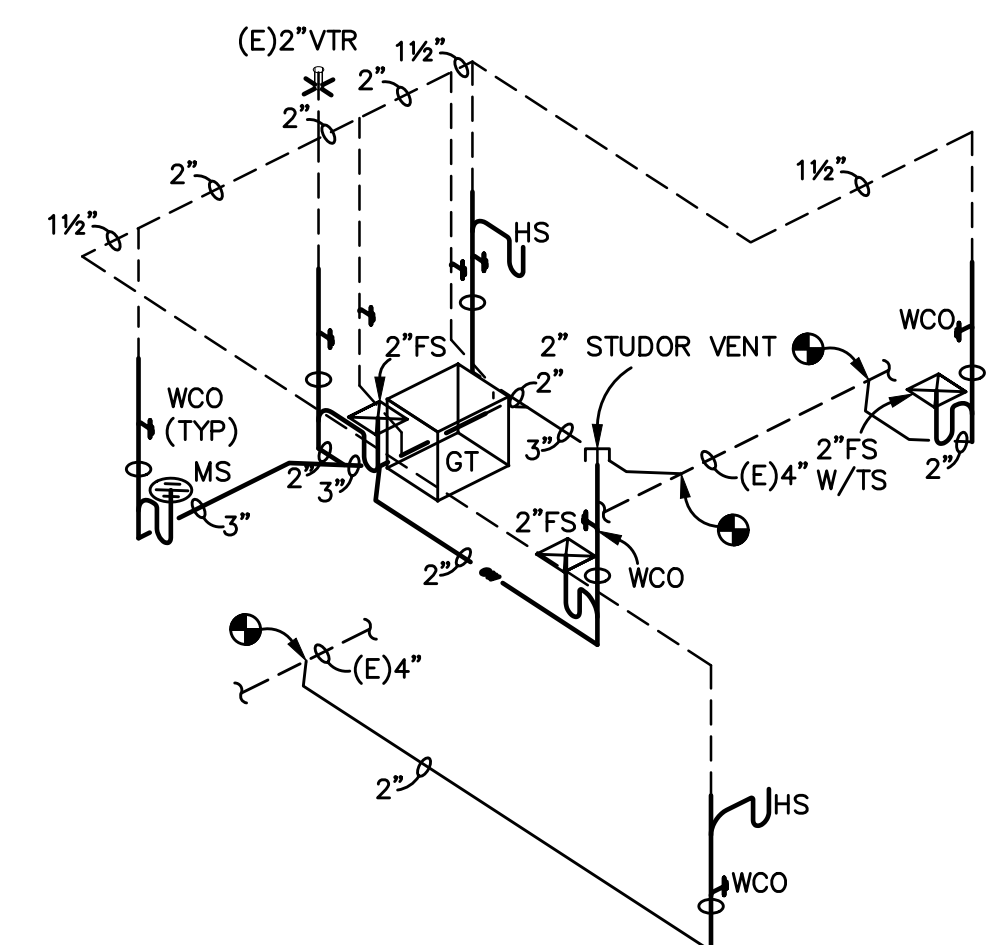
CAPACITY IN GALLONS
CUBIC IN./231 = GALLONS
17,664/231 = 76.5 GALLONS

REQUIRED FLOW RATE
76.5 GALLONS / 2.5 = 30.6

PROVIDE 35 GPM GREASE TRAP



2 GAS SCHEMATIC NTS



1 WASTE & VENT SCHEMATIC NTS

* VERIFY EXACT FIXTURES WITH OWNER/ARCH. PRIOR TO ORDERING.

MARK	DESCRIPTION	FITTING & CAPACITY		ACCESSORIES/REMARKS	FIXTURE CONNECTIONS			
		MANUFACTURER AND MODEL NUMBER			C.W.	H.W.	WASTE	VENT
PS	1 COMP. PREP SINK	"ADVANCE TABCO" #KMS-11B-306L-X	-	"FISHER" #22209 DRAIN, LEVERHANDLE	3/4"	3/4"	ID	1 1/2"
3C	3 COMPARTMENT SINK STAINLESS STEEL	"SPLASH" #ECS-3-18-18-12-DE18	"ADVANCE" #K-1	ANGLE STOPS & RISER TAILPIECE P-TRAP	3/4"	3/4"	ID	1 1/2"
HS	HAND SINK WALL MOUNTED STAINLESS STEEL	"KROWNE" #HS-26L	-	1/4 TURN ANGLE STOPS RISER & P-TRAP	1/2"	1/2"	2"	1 1/2"
MS	MOP SINK 24"x24"x10" DEEP FLOOR BIN	"GRAINGER" #63CM	SERVICE FAUCET #830-AA	HOSE & BRACKET - MOP HANGER W/ VACUUM BREAKER	3/4"	3/4"	3"	2"
FS	FLOOR SINK	"J.R.SMITH" #3110	"J.R.SMITH" TRAP SEAL #2692	ACID RESISTANT BODY	-	-	2"	1 1/2"
GT	GREASE TRAP	"J.R.SMITH" MODEL#8035 70 LBS. CAPACITY	PROVIDE FLOW CONTROL FITTING 35 GPM FLOW RATE	100 LBS. GREASE CAPACITY	-	-	3"	2"
IWH-A	TANKLESS GAS COMMERCIAL WATER HEATER	"RINNAI" #CU199	199 MBH INPUT NAT. GAS - 6.5 GPM RECOVERY @ 60' RISE	SEALED DIRECT VENT PROVIDE RECIRC. PUMP ASTRO 30B	1"	1"	-	-

WATER CALCULATION	
STATIC PRESS.:	65 PSI
BLDG. HEIGHT:	10
65.00 PSI PRESS. IN MAIN	
15.00 PSI PRESS. REQ'D AT FURTHEST FIXTURE	

50.00 PSI SUBTOTAL	
6.00 PSI PRESS. DROP THRU EXISTING METER (MIN. 5/8")	
10.00 PSI DROP THRU RBPB	

34.00 PSI SUBTOTAL	
4.33 PSI DROP FOR ELEVATION	

29.67 PSI ALLOWABLE FOR PIPE FRICTION	

TOTAL LENGTH OF WTR SYSTEM	= 150
EQUIVALENT FEET OF PIPE ALLOWED FOR TEES, ELBOWS, FITTINGS, ETC.	= 49.5
TOT. DEVELOPED LENGTH OF WTR SYSTEM	= 199.5

* ALLOWABLE FRICTION LOSS	= 14.8722 PSI/100'

WATER FIXTURE COUNT	
2 HS	2 FU = 4 FU
1 PS	4 FU = 4 FU
1 3C	4 FU = 4 FU
1 MS	3 FU = 3 FU

TOTAL FU	15
EXISTING FU	24
DEMO FU	6

TOTAL	33 23 GPM

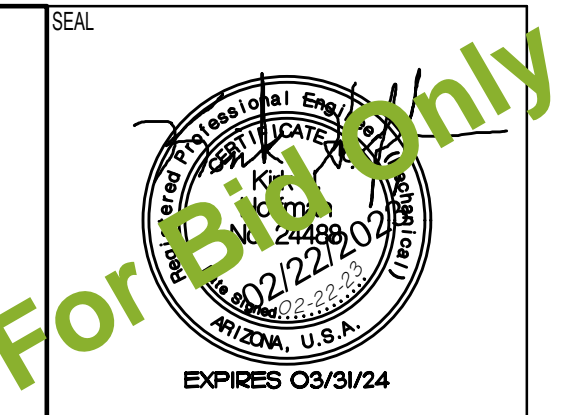
8.0 PSI DROP			
PIPE SIZE	GPM	FU (FT)	FU (FV)
1/2"	3	3	-
3/4"	8	11	-
1"	18	25	-
1 1/4"	30	55	14
1 1/2"	44	103	35
2"	77	259	135
2 1/2"	120	479	365
3"	170	748	739

PIPING MATERIALS

SANITARY WASTE AND VENT SYSTEMS
PIPING: ABS CONFORMING TO ASTM D 2661.

DOMESTIC WATER SYSTEM
PIPING: ABOVE GRADE: TYPE "L" HARD DRAWN COPPER, CONFORMING TO ASTM B-88. BELOW SLAB: TYPE "K" SOFT DRAWN COPPER, CONFORMING TO ASTM B-88, WITH PLASTIC SLEEVE.
PIPING, EXTERIOR BELOW GRADE ONLY: PVC CONFORMING ASTM D 1785, WITH TRACER WIRE.

FUEL GAS SYSTEM
PIPING: BLACK STEEL PIPE, SCHEDULE 40 BLACK STEEL CONFORMING TO ASTM A-53, GRADE A OR B, SEAMLESS OR WELDED PIPE.



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PROJECT NAME
UNIVERSITY OF ARIZONA KITCHEN REMODEL KINGMAN, ARIZONA
XXX

ARCHITECT OF RECORD
SELBERG ASSOCIATES INC.
ARCHITECTURE & PLANNING

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(520) 585-5844

PROJECT NO. 22071
ISSUED FOR: CONSTRUCTION DOCUMENTS
ISSUED DATE: FEBRUARY 1, 2023

REVISION ISSUE DATE
1

SHEET TITLE: WASTE & VENT SCHEMATIC

SHEET NO. **P2.01**

MAVEN ENGINEERING Job #23SCK002
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Note: Any changes made to final bid documents due to field changes will be billed hourly to the contractor.