GENERAL NOTES

1. CONTRACTORS SHALL VERIFY ALL DIMENSIONS WITH CONDITIONS AT THE JOB SITE BEFORE PROCEEDING WITH ANY WORK. CONTRACTORS SHALL NOTIFY PROJECT DESIGNER IF EXISTING CONDITIONS DIFFER FROM THOSE ON DRAWINGS.
2. ALL DIMENSIONS SHALL BE AS INDICATED ON DRAWINGS OR AS CLARIFIED BY PROJECT DESIGNER. UNDER NO CIRCUMSTANCES SHALL DIMENSIONS BE DETERMINED BY SCALING THE DRAWINGS.
3. ANY ERRORS, OMISSIONS, OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT DESIGNER PRIOR TO COMMENCEMENT OF WORK.
4. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND THE HIGHEST STANDARDS OF THE TRADE.
5. ALL WORK SHALL BE DONE IN A SAFE, ORDERLY MANNER WITHOUT DAMAGE TO OTHER PARTS OF THE PREMISES OR ADJACENT PROPERTIES.
6. NO MATERIALS CONTAINING ASBESTOS MAY BE USED.

CODE COMPLIANCE

CITY OF SAN PABLO MUNICIPAL CODE
2022 CBC, CALIFORNIA BUILDING CODE
2022 CMC, CALIFORNIA MECHANICAL CODE
2022 CEC, CALIFORNIA ELECTRICAL CODE
2022 CPC, CALIFORNIA PLUMBING CODE
2022 CFC, CALIFORNIA FIRE CODE
2022 CCR, CALIFORNIA CODE OF REGULATIONS, TITLE 24
2022 CALIFORNIA GREEN BUILDING STANDARD CODE
2022 CALIFORNIA ENERGY CODE

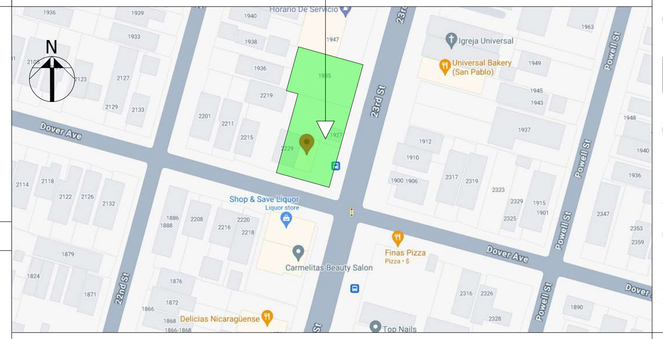
DEFERRED SUBMITTAL

1. DETACHED KITCHEN AND CENTRAL KITCHEN HOOD FIRE SPRINKLER SYSTEM
2. DETACHED KITCHEN BUILDING FIRE SPRINKLER SYSTEM

FOOD MENU FOR DETACHED KITCHEN

PARCEL MAP

SITE



VICINITY MAP

SITE

SHEET INDEX

CENTRAL KITCHEN TI & DETACHED KITCHEN CONVERSION
2229 DOVER AVE & 1927 23RD ST, SAN PABLO, CA 9480

SCOPE OF WORK

CENTRAL KITCHEN TENANT IMPROVEMENT (2229 DOVER AVE)
1. CONVERT EXISTING 1,386 SF UNCONDITIONED CMU EXTERIOR WALL WAREHOUSE TO CONDITIONED CENTRAL KITCHEN THAT PREPARE SALSA AND MEAT FOR LOCAL CHAIN RESTAURANT.
2. NEW FINISHES FOR THE WORK AREA AND ADA RESTROOM.
3. NEW PLUMBING, ELECTRICAL AND MECHANICAL WORKS.
4. NEW EQUIPMENT FOR THE WORK AREA.
5. ADA IMPROVEMENTS FOR THE RESTROOM.

DETACHED KITCHEN CONVERTION (1927 23RD ST)
1. CONVERT EXISTING 192 SF WOOD STUDS STORAGE ROOM TO NEW 734 SF DETACHED TAKE OUT FOOD KITCHEN WITH WORK AREA AND AN ADA RESTROOM.
2. NEW FINISHES FOR THE WORK AREA AND ADA RESTROOM.
3. NEW PLUMBING, ELECTRICAL AND MECHANICAL WORKS.
4. NEW EQUIPMENT FOR THE WORK AREA.
5. ADA IMPROVEMENTS FOR THE RESTROOM.

CONTACT LIST

PROJECT ADDRESS:
2229 DOVER AVE
SAN PABLO, CA 9480

OWNER:
ORANGE ENGINEERING LLC
2229 DOVER AVE
SAN PABLO, CA 9480
CELL: (408) 888-7836
EMAIL ADDRESS: XIN@ORENGR.COM, NAN@ORENGR.COM

DESIGNERR:
ORANGE ENGINEERING LLC
4005 CLIPPER CT
FREMONT, CA 94538
(408)888-7836
XIN@ORENGR.COM
XIANLI@ORENGR.COM

PROPERTY INFORMATION

CENTRAL KITCHEN

ZONING:	SP1
APN:	411-201-014
OCCUPANCY:	B
OCCUPANY LOAD:	7
EMPLOYEE NUMBER:	3
OPERATION HOURS:	10 AM TO 6 PM
TYPE OF CONSTRUCTION:	V-B
FIRE SPRINKLERS:	NO
LOT SIZE:	4,125 SF
EXISTING PARKING:	24
PROPOSED PARKING:	20
REQUIRED PARKING ANALYSIS:	17
(N) CENTRAL KITCHEN -PRIVATE SERVICE:	1384/300=5
(E) THAI RESTAURANT (PUBLIC AREA):	375/50=8
(N) DETACHED KITCHEN(OUTDOOR DINNING):	200/50=4

	EXISTING	PROPOSED	TOTAL
WAREHOUSE (UNCONDITIONED):	1,384 SF	-1,384 SF	0 SF
CENTRAL KITCHEN (CONDITIONED):	0 SF	+1,384 SF	1,384 SF
TOTAL BUILDING FOOTPRINT:	2,590 SF	NO CHANGE	2,590 SF

DETACHED KITCHEN CONVENTION

ZONING:	SP1
APN:	411-201-013
OCCUPANCY:	B
OCCUPANCY LOAD:	4
EMPLOYEE NUMBER:	3
OPERATION HOURS:	11 AM TO 10 PM
TYPE OF CONSTRUCTION:	V-B
FIRE SPRINKLERS:	YES
LOT SIZE:	4,125 SF
EXISTING PARKING:	24
PROPOSED PARKING:	20
REQUIRED PARKING ANALYSIS:	17
(N) CENTRAL KITCHEN -PRIVATE SERVICE:	1384/300=5
(E) THAI RESTAURANT (PUBLIC AREA):	375/50=8
(N) DETACHED KITCHEN(OUTDOOR DINNING):	200/50=4

	EXISTING	PROPOSED	TOTAL
WAREHOUSE (UNCONDITIONED):	192 SF	-192 SF	0 SF
DETACHED KITCHEN (CONDITIONED):	0 SF	+734 SF	734 SF
TOTAL BUILDING FOOTPRINT:	192 SF	+542 SF	734 SF

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DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS: 2229 DOVER AVE SAN PABLO, CA 9480

SHEET TITLE: COVER SHEET

PROJECT NUMBER: 24002

SUBMITTAL

DATE	DESCRIPTION
12/10/24	PLANNING

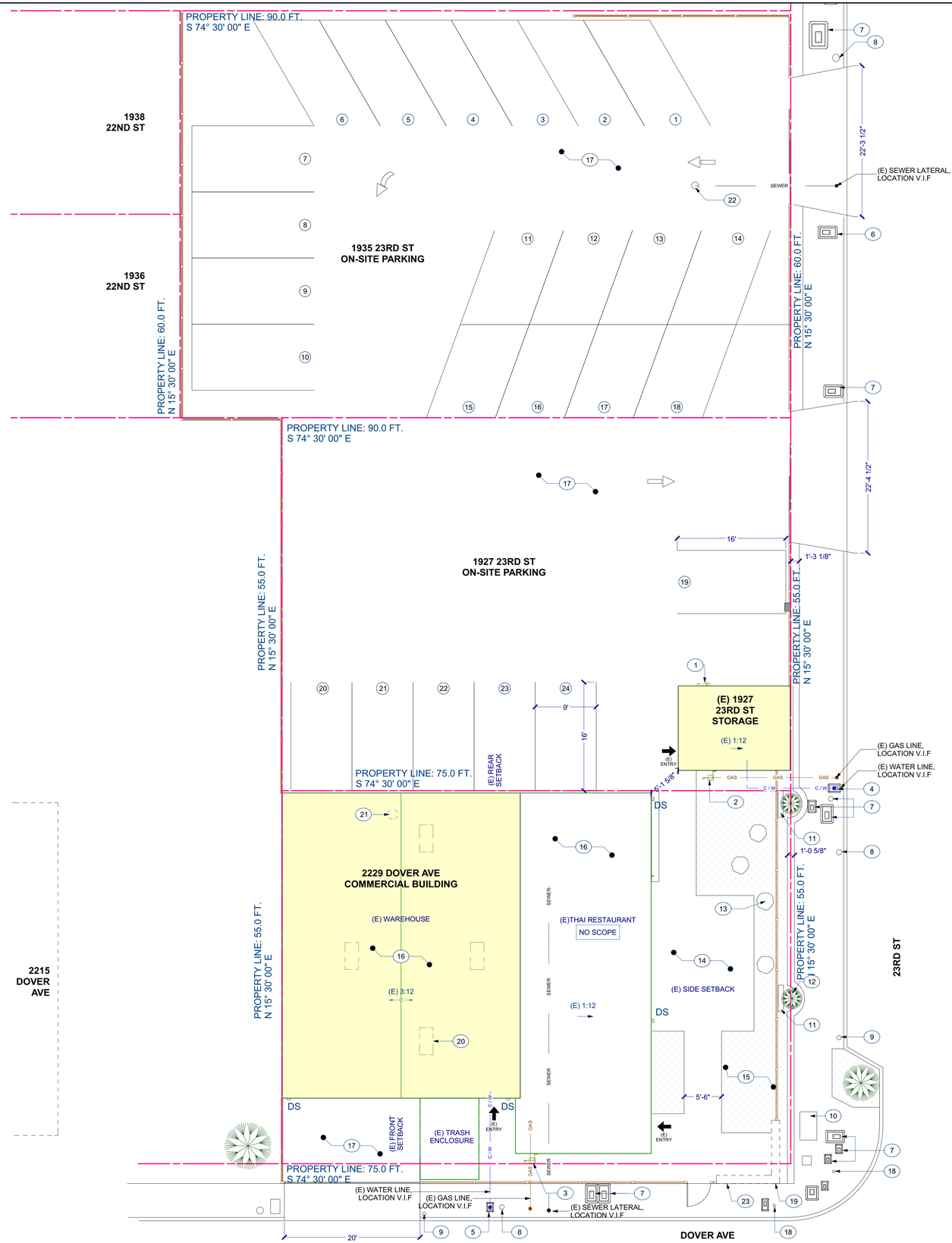
REVISION

DELTA	DATE	DESCRIPTION

SHEET NO.

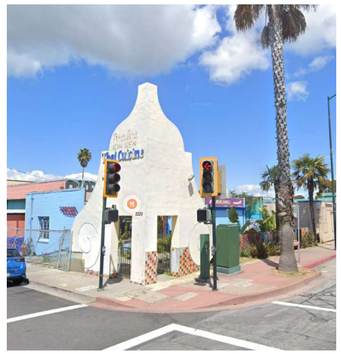
A 0.0

NOTE:
A RETAIL FOOD FACILITY OWNER IS REQUIRED TO HIRE A QUALIFIED THIRD PARTY COMPANY OR AN INDIVIDUAL TO MAINTAIN OUTDOOR GARBAGE AREA IF THERE IS NO TRASH ENCLOSURE PROVIDED



NOTES:

1. (E) ELECTRICAL METER WITH MAIN ELECTRIC PANEL, 100 AMPS, FOR #1927 LOCATION AND SIZE, V.I.F.
2. (E) GAS METER 3/4" DIA. FOR #1927, LOCATION AND SIZE V.I.F.
3. (E) GAS METER 3/4" DIA. FOR #2229, LOCATION AND SIZE V.I.F.
4. (E) WATER METER, 5/8" DIA. FOR #1927, LOCATION AND SIZE V.I.F.
5. (E) WATER METER, 5/8" DIA. FOR #2229, LOCATION AND SIZE V.I.F.
6. (E) WATER METER, 1" DIA, LOCATION AND SIZE V.I.F.
7. (E) UTILITY COVER
8. (E) STREET LIGHT
9. (E) STREET SIGN
10. (E) TRANSFORMER
11. (E) SLAB
12. (E) TREE, TYP.
13. (E) SHRUBS, TYP.
14. (E) CONCRETE
15. (E) LANDSCAPE
16. (E) TORCH DOWN ROOF
17. (E) CONCRETE DRIVEWAY
18. (E) TRAFFIC LIGHT
19. (E) REMOVE DECORATIVE WALL
20. (E) SKYLIGHT, LOCATION AND SIZE, V.I.F. TYP.
21. (E) SUN TUNNEL
22. (E) SEWER
23. (E) STRUCTURE TO BE DEMOLISHED



NOTE:
REMOVE DAMAGED DECORATIVE WALL AT STREET CORNER FOR SAFETY CONCERN, REPLACE WITH 4' TALL X 4" WIDE X 4"DEEP CONCRETE DECORATIVE PANEL TO MATCH WITH EXISTING, LOCATION SEE PROPOSED SITE PLAN

EXISTING SITE PLAN 1

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

N

LEGEND

- GAS — GAS LINE, V.I.F
- SEWER — SEWER SEWER LATERAL, V.I.F
- C / W — C / W COLD WATERLINE, V.I.F

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DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS: 2229 DOVER AVE, SAN PABLO, CA 9480

SHEET TITLE: EXISTING SITE PLAN

PROJECT NUMBER: 24002

SUBMITTAL

DATE	DESCRIPTION
12/10/24	PLANNING

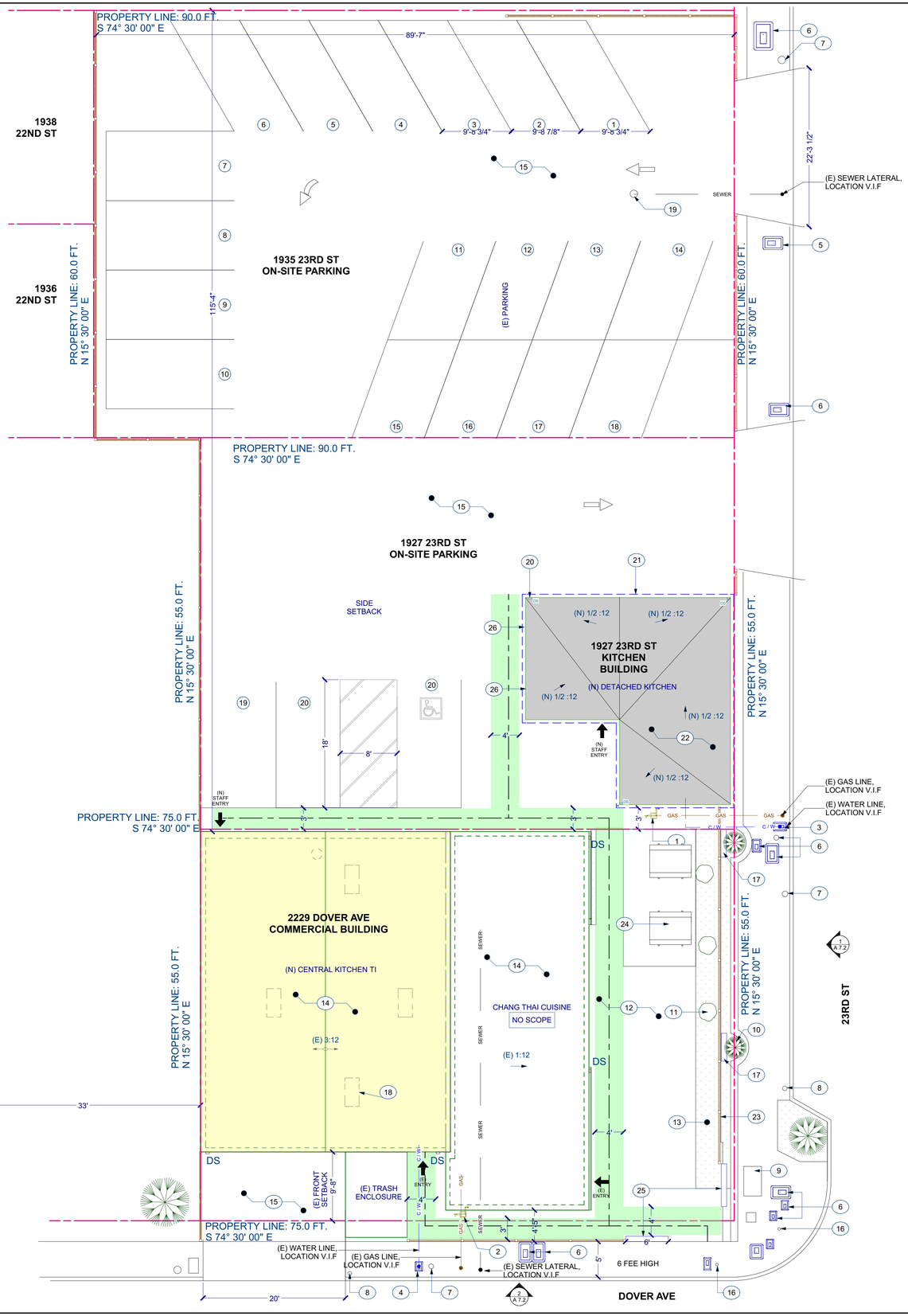
REVISION

DELTA	DATE	DESCRIPTION

SHEET NO.

A 1.0

NOTE:
A RETAIL FOOD FACILITY OWNER IS REQUIRED TO HIRE A QUALIFIED THIRD PARTY COMPANY OR AN INDIVIDUAL TO MAINTAIN OUTDOOR GARBAGE AREA IF THERE IS NO TRASH ENCLOSURE PROVIDED



NOTES:

1. (E) GAS METER 3/4" DIA. FOR #1927, LOCATION AND SIZE V.I.F.
2. (E) GAS METER 3/4" DIA. FOR #2229, LOCATION AND SIZE V.I.F.
3. (E) WATER METER, 5/8" DIA. FOR #1927, LOCATION AND SIZE V.I.F.
4. (E) WATER METER, 5/8" DIA. FOR #2229, LOCATION AND SIZE V.I.F.
5. (E) WATER METER, 1" DIA, LOCATION AND SIZE V.I.F.
6. (E) UTILITY COVER
7. (E) STREET LIGHT
8. (E) STREET SIGN
9. (E) TRANSFORMER
10. (E) TREE, TYP.
11. (E) SHRUBS, TYP.
12. (E) CONCRETE
13. (E) LANDSCAPE
14. (E) TORCH DOWN ROOF
15. (E) CONCRETE DRIVEWAY
16. (E) TRAFFIC LIGHT
17. (E) DECORATIVE SLAB
18. (E) SKYLIGHT, LOCATION AND SIZE, V.I.F. TYP.
19. (E) SEWER
20. (N) DOWNSPOUT, TYP.
21. (N) PARAPET WALL
22. (N) TORCH DOWN ROOF
23. (N) FENCING
24. (N) OUTDOOR TABLE AND BENCHES
25. (N) 6 FEET LONG X 4 FEET HIGH DECORATIVE SLAB TO MATCH EXISTING SLABS
26. (N) TAKE-OUT WINDOW

NOTE:
REMOVE DAMAGED DECORATIVE WALL AT STREET CORNER FOR SAFETY CONCERN, REPLACE WITH 4' TALL X 4" WIDE X 4"DEEP CONCRETE DECORATIVE PANEL TO MATCH WITH EXISTING, LOCATION SEE PROPOSED SITE PLAN

PROPOSED SITE PLAN 1

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

N

LEGEND

- GAS ——— GAS ——— GAS LINE, V.I.F
- SEWER ——— SEWER LATERAL, V.I.F
- C / W ——— COLD WATERLINE, V.I.F
- MIN. 3 FT WIDTH ACCESSIBLE PATH OF TRAVEL - RUNNING SLOPE 1:20 MAX, CROSS SLOPE 1:48 MAX.

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DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS: 2229 DOVER AVE, SAN PABLO, CA 94806

SHEET TITLE: PROPOSED SITE PLAN

PROJECT NUMBER: 24002

SUBMITTAL

DATE	DESCRIPTION
12/10/24	PLANNING

REVISION

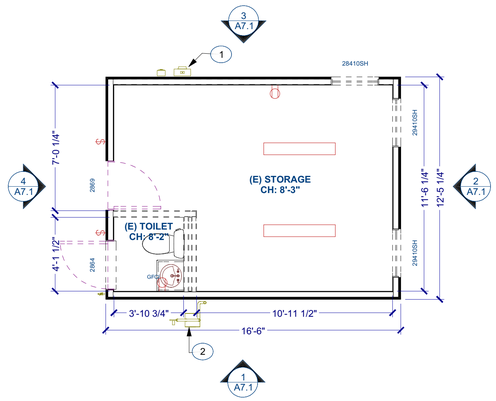
DELTA	DATE	DESCRIPTION

SHEET NO.

A 1.1

NOTES:

1. (E) ELECTRICAL METER WITH MAIN ELECTRIC PANEL, 100 AMPS, LOCATION AND SIZE, V.I.F.
2. (E) GAS METER, LOCATION AND SIZE V.I.F.



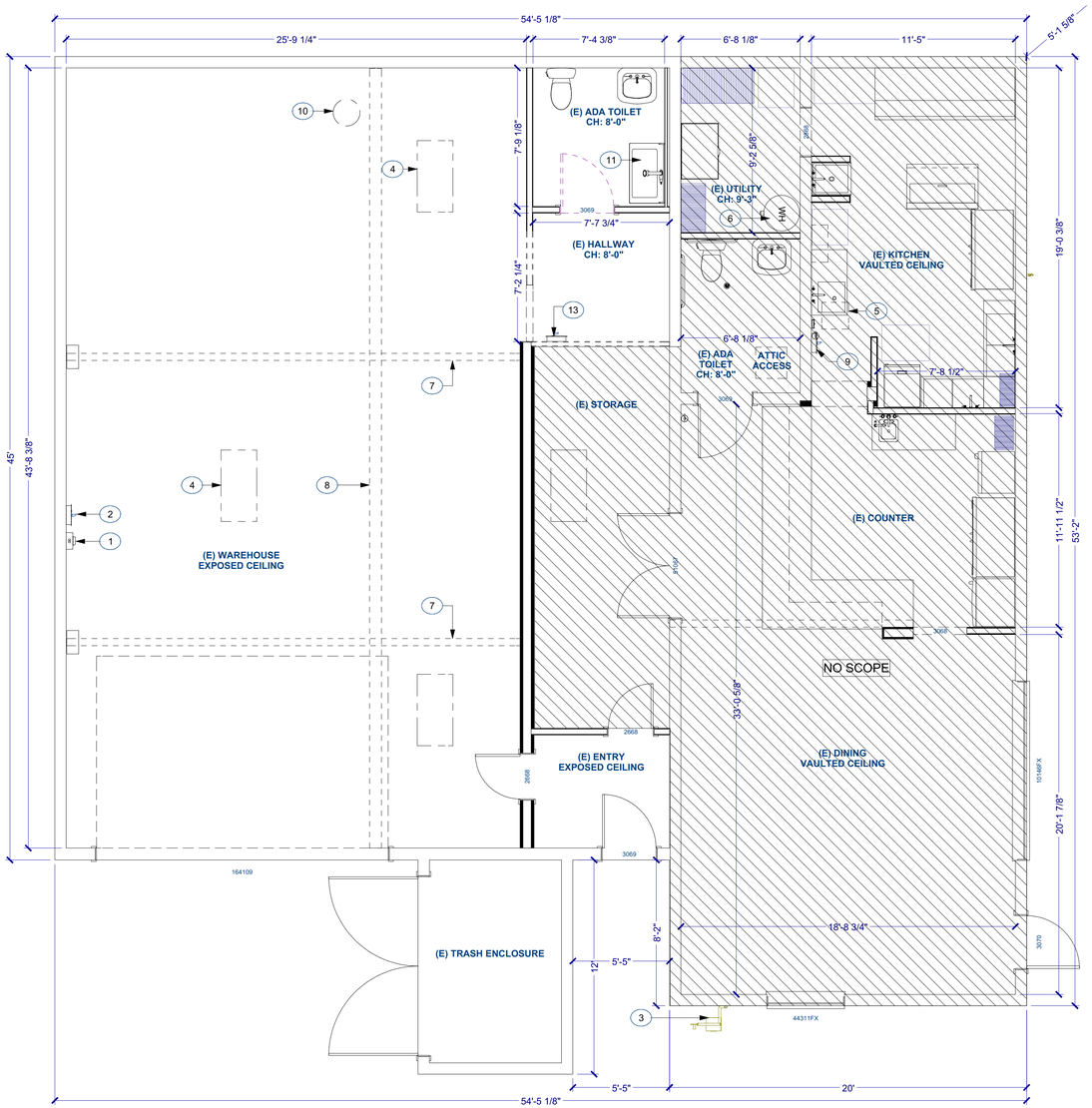
EXISTING FLOOR PLAN - STORAGE

2

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

N

DIMENSION NOTE:
ALL DIMENSIONS ARE FROM FINISHED WALL TO FINISHED WALL, U.O.N.



EXISTING FLOOR PLAN - WAREHOUSE

1

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

N

NOTES:

1. (E) ELECTRICAL METER WITH MAIN ELECTRIC PANEL, 200 AMPS, LOCATION AND SIZE, V.I.F.
2. (E) ELECTRICAL SUB-PANEL
3. (E) GAS METER, LOCATION AND SIZE V.I.F.
4. (E) SKYLIGHT, TYP. LOCATION AND SIZE V.I.F.
5. (E) CEILING REGISTER, V.I.F.
6. (E) WATER HEATER, 50 GALS.
7. (E) TRUSS
8. (E) BEAM
9. (E) ELECTRICAL SUB-PANEL
10. (E) ROOF VENT
11. (E) MOP SINK TO BE REMOVED
    (E) ELECTRICAL METER WITH MAIN ELECTRIC PANEL, 100 AMPS, LOCATION AND SIZE, V.I.F.
12. (E) ELECTRICAL SUB-PANEL TO BE RELOCATED

WALL LEGEND

- EXISTING WALL
- WALL TO BE DEMOLISHED

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DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS: 2229 DOVER AVE SAN PABLO, CA 9480

SHEET TITLE: EXISTING FLOOR PLANS

PROJECT NUMBER: 24002

SUBMITTAL

DATE	DESCRIPTION
12/10/24	PLANNING

REVISION

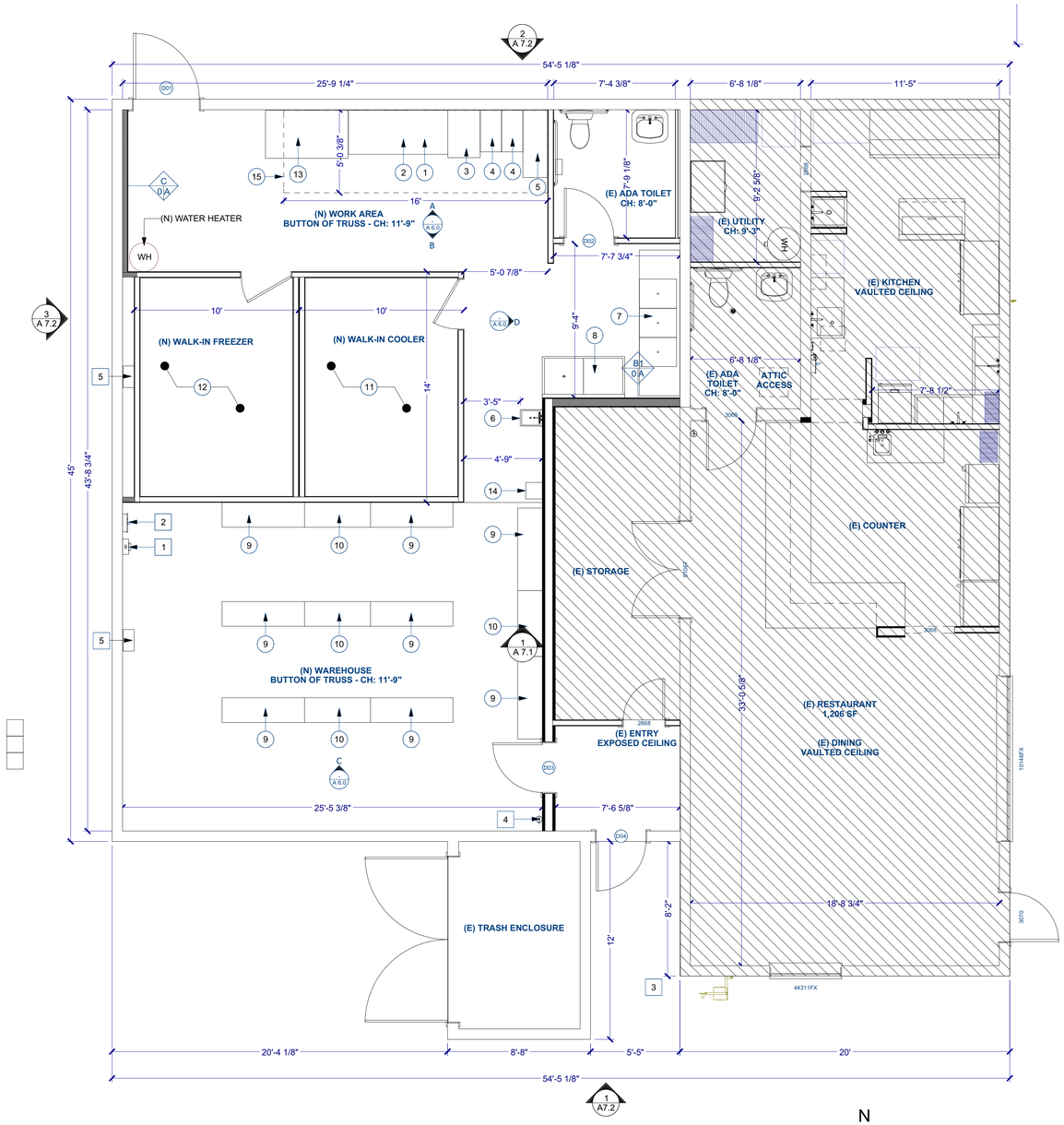
DELTA	DATE	DESCRIPTION

SHEET NO.

A 2.0

DOOR SCHEDULE (ACTUAL SIZE)											
NUMBER	LABEL	QTY	SIZE	WIDTH	HEIGHT	DESCRIPTION	COMMENTS	HANDLE, EXTERIOR	HANDLE, INTERIOR	OPENING FORCE	HARDWARE HEIGHT
D01	4068	1	4068 L EX	48"	80"	EXTERIOR - 20 MIN FIRE RATED METAL	NEW	KNOB	PUSH BAR	MAX 5 POUNDS (22 N)	MIN. 34", MAX 48"
D02	3068	1	3068 L IN	36"	80"	INTERIOR	EXISTING	KNOB	KNOB	MAX 5 POUNDS (22 N)	MIN. 34", MAX 48"
D03	3068	1	3068 R IN	36"	80"	INTERIOR	NEW	KNOB	KNOB	MAX 5 POUNDS (22 N)	MIN. 34", MAX 48"
D04	3068	1	3068 R IN	36"	80"	EXTERIOR	NEW	KNOB	PUSH BAR	MAX 5 POUNDS (22 N)	MIN. 34", MAX 48"

EQUIPMENT SCHEDULE													
NO.	QTY	EQUIPMENT ITEM	MANUFACTURER	MODEL NUMBER	NSF/ANSI LISTED	SPECIALLY FABRICATED	GAS	ELECTRICAL	HOT WATER	COLD WATER	DIRECT WASTE	INDIRECT WASTE	COMMENTS
1	1	COUNTERTOP GRIDDLE	CPG	351GMCPG72NL	YES	N/A	YES	N/A	N/A	N/A	N/A	N/A	NEW
2	1	EQUIPMENT STAND 72" LONG	AVANTCO	178CBE72HC	YES	N/A	N/A	YES	N/A	N/A	N/A	N/A	NEW
3	1	GAS RANGE	GARLAND	U24-4L	YES	N/A	YES	N/A	N/A	N/A	N/A	N/A	NEW
4	2	FRYER	AVANTCO	177FF50N	YES	N/A	YES	N/A	N/A	N/A	N/A	N/A	NEW
5	1	STOCK POT RANGE	VULCAN	VSP200F	YES	N/A	YES	N/A	N/A	N/A	N/A	N/A	NEW
6	1	HAND SINK W/ SPLASH GUARD, TOWEL AND SOAP DISPENSER	REGENCY	600HS12SP	YES	N/A	N/A	N/A	YES	YES	YES	N/A	NEW
7	1	THREE COMPARTMENT SINK	REGENCY	600S321824X	YES	N/A	N/A	N/A	YES	YES	YES	N/A	NEW
8	1	PREPARE SINK	ADVANCE TABCO	94-81-20-24R	YES	N/A	N/A	N/A	YES	YES	YES	N/A	NEW
9	8	18" X 60" SHELVING	REGENCY	460EC1860K75	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NEW
10	4	18" X 48" SHELVING	REGENCY	460EC1848K75	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NEW
11	1	WALK-IN COOLER	MASTER_BILT	QS1014	YES	N/A	N/A	YES	N/A	N/A	N/A	N/A	NEW
12	1	WALK-IN FREEZER	MASTER_BILT	QS771014	YES	N/A	N/A	YES	N/A	N/A	N/A	N/A	NEW
13	1	PREP TABLE	AVANTCO	178APT60MHC	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NEW
14	1	LOCKERS, NO LEGS, WALL MOUNTED 6" ABOVE FINISHES FLOOR	HALLOWELL	434U12286PT	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NEW
15	1	KITCHEN HOOD	ECON-AIR	6024EX-2	YES	N/A	N/A	YES	N/A	N/A	N/A	N/A	NEW



PROPOSED FLOOR PLAN - CENTRAL KITCHEN

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

1

PLAN NOTES:

1. (E) ELECTRICAL METER WITH MAIN ELECTRIC PANEL, 200 AMPS, LOCATION AND SIZE, V.I.F.
2. (E) ELECTRICAL SUB-PANEL
3. (E) GAS METER, LOCATION AND SIZE V.I.F.
4. (N) FIRE EXTINGUISHER
5. (E) COLUMN

DIMENSION NOTE:
ALL DIMENSIONS ARE FROM FINISHED WALL TO FINISHED WALL, U.O.N.

GENERAL NOTES:

1. ALL SELF CONTAIN EQUIPMENT DRAIN LINE CONNECTIONS ARE INDIRECT TO FLOOR SINK(S)
2. ALL COOKING EQUIPMENT ON EON CASTERS WITH FRONT LOCKING
3. ALL COOKING EQUIPMENT QUICK GAS DISCONNECT MUST BE CHAINED UP AND TOUCH TO THE WALL
4. ALL COOKING EQUIPMENT WITH ANSUL SYSTEM (UL 300)
5. FLOOR TILE GROUT MUST BE EPOXY WITH 1/4-IN GAP BETWEEN TILE
6. ENTRANCE/EXIT/ RESTROOM DOOR MUST BE PROVIDED WITH SELF-CLOSING DEVICES.
7. ENTRANCE/EXIT DOORS MUST BE PROVIDED WITH WEATHER STRIPE AND DOOR ASTRAGAL
8. ALL LIGHTS MUST BE PROVIDED WITH SHATTER PROOF COVERS IN THE FOOD PREPARATION AND STORAGE AREAS INCLUDING UTENSILS/EQUIPMENT STORAGE AND COOKING AREAS.
9. MOP SINK MUST BE PROVIDED WITH BROOM/MOP RACK AND STAINLESS STEEL SHELF FOR CHEMICAL STORAGE
10. EXHAUST FAN AND RESTROOM LIGHT MUST BE INTERLOCK IN ONE SWITCH
11. MAKE-UP AIR FAN AND EXHAUST HOOD FAN MUST BE INTERLOCK IN ONE SWITCH
12. ALL WASHING SINKS MUST BE PROVIDED WITH COMMERCIAL PAPER TOWEL DISPENSERS AND SOAP DISPENSERS
13. WATER HEATER MUST BE INSTALLED ON METAL OR STAINLESS STEEL STAND WITH AT LEAST 6" LEGS IN HEIGHT
14. DRY STORAGE SPACE CONTAINS 25% OF THE KITCHEN AND BAR FLOOR AREA, WHICH SHELVING SHALL BE PROVIDED.

WALL LEGEND

EXISTING WALL

NEW WALL

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DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS: 2229 DOVER AVE SAN PABLO, CA 9480

SHEET TITLE: PROPOSED FLOOR PLAN - CENTRAL KITCHEN

PROJECT NUMBER: 24002

SUBMITTAL

DATE	DESCRIPTION
12/10/24	PLANNING

REVISION

DELTA	DATE	DESCRIPTION

SHEET NO.

A 2.1

EQUIPMENT SCHEDULE

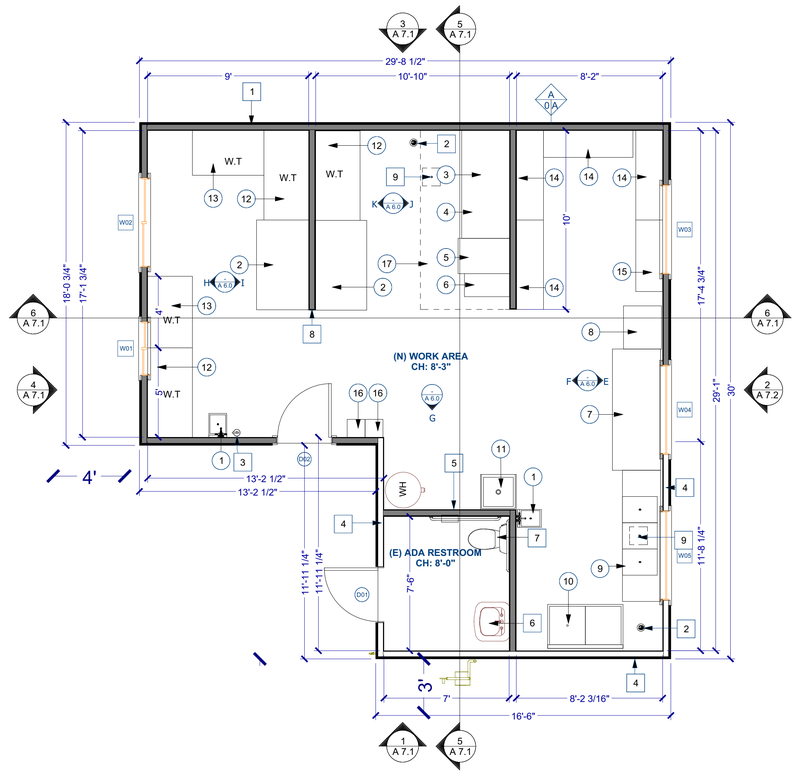
NO.	QTY	EQUIPMENT ITEM	MANUFACTURER	MODEL NUMBER	NSF/ANSI LISTED	SPECIALLY FABRICATED	GAS	ELECTRICAL	HOT WATER	COLD WATER	DIRECT WASTE	INDIRECT WASTE	COMMENTS
1	2	HAND SINK W/ SPLASH GUARD, TOWEL AND SOAP DISPENSER	REGENCY	600HS12SP	YES	N/A	N/A	N/A	YES	YES	YES	N/A	NEW
2	2	SANDWICH PREP TABLE	AVANTCO	178APT60MHC	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NEW
3	1	COUNTERTOP GRIDDLE	CPG	351GMCPG72NL	YES	N/A	YES	N/A	N/A	N/A	N/A	N/A	NEW
4	1	CHEF BASE	AVANTCO	178CBE72HC	YES	N/A	N/A	YES	N/A	N/A	N/A	N/A	NEW
5	1	GAS RANGE	GARLAND	U24-4L	YES	N/A	YES	N/A	N/A	N/A	N/A	N/A	NEW
6	1	FRYER	AVANTCO	177FF50N	YES	N/A	YES	N/A	N/A	N/A	N/A	N/A	NEW
7	1	3 DOOR REFRIGERATOR	AVANTCO	178SS3RHC	YES	N/A	N/A	YES	N/A	N/A	N/A	N/A	NEW
8	1	1 DOOR FREEZER	AVANTCO	178A19FHC	YES	N/A	N/A	YES	N/A	N/A	N/A	N/A	NEW
9	1	3 COMPARTMENT SINK	REGENCY	600S3162018G	YES	N/A	N/A	N/A	YES	YES	YES	N/A	NEW
10	1	PREPARE SINK	REGENCY	60S1242424XL	YES	N/A	N/A	N/A	YES	YES	YES	N/A	NEW
11	1	MOP SINK	REGENCY	600SM24246	YES	N/A	N/A	N/A	YES	YES	YES	N/A	NEW
12	3	30" X 60" WORKING TABLE	REGENCY	600T3060G	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NEW
13	2	30" X 48" WORKING TABLE	REGENCY	600T3048G	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NEW
14	4	18" X 60" SHELVING	REGENCY	460EC1860K75	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NEW
15	1	18" X 48" SHELVING	REGENCY	460EC1848K75	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NEW
16	2	LOCKERS, NO LEGS, WALL MOUNTED 6" ABOVE FINISHES FLOOR	HALLOWELL	434U1228PT	YES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NEW
17	1	KITCHEN HOOD	ECON-AIR	6024EX-2	YES	N/A	N/A	YES	N/A	N/A	N/A	N/A	NEW

DOOR SCHEDULE (ACTUAL SIZE)

NUMBER	LABEL	QTY	SIZE	WIDTH	HEIGHT	DESCRIPTION	COMMENTS	HANDLE, EXTERIOR	HANDLE, INTERIOR	OPENING FORCE	HARDWARE HEIGHT
D01	3064	1	3064 R EX	36"	76"	EXTERIOR 20 MIN FIRE RATED DOOR	NEW	LEVER	LEVER	MAX 5 POUNDS (22 N)	MIN. 34", MAX 48"
D02	3068	1	3068 R EX	36"	80"	EXTERIOR	NEW	LEVER	PUSH BAR	MAX 5 POUNDS (22 N)	MIN. 34", MAX 48"

NEW WINDOW SCHEDULE (ACTUAL SIZE)

NUMBER	LABEL	QTY	SIZE	WIDTH	HEIGHT	BOTTOM	DESCRIPTION	EXISTING/NEW
W01	3036LS	1	3036LS	36"	42"	39"	LEFT SLIDING	NEW
W02	5036LS	1	5036LS	60"	42"	39"	LEFT SLIDING	NEW
W03	5020FX	1	5020FX	60"	24"	61"	FIXED GLASS	NEW
W04	5020FX	1	5020FX	60"	24"	61"	FIXED GLASS	NEW
W05	5020FX	1	5020FX	60"	24"	61"	FIXED GLASS	NEW



PROPOSED FLOOR PLAN - DETACHED KITCHEN 1

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

N

PLAN NOTES:

1. (N) ELECTRICAL METER WITH MAIN ELECTRIC PANEL, 100 AMPS
2. (N) FLOOR DRAIN, TYP.
3. (N) FIRE EXTINGUISHER
4. (N): MODIFY EXISTING EXTERIOR WALL TO MEET 1 HR FIRE RATED, TYP
5. (N) ELECTRIC PANEL, 100 AMPS
6. (N) LAVATORY, DETAIL SEE ADA SHEET
7. (N) WATERCLOSET, DETAIL SEE ADA SHEET
8. (N) PONY WALL, 42" HEIGHT W/ WALL CAP
9. (N) FLOOR SINK UNDER COMPARTMENT SINK

DIMENSION NOTE:
ALL DIMENSIONS ARE FROM FINISHED WALL TO FINISHED WALL, U.O.N.

GENERAL NOTES:

1. ALL SELF CONTAIN EQUIPMENT DRAIN LINE CONNECTIONS ARE INDIRECT TO FLOOR SINK(S)
2. ALL COOKING EQUIPMENT ON EON CASTERS WITH FRONT LOCKING
3. ALL COOKING EQUIPMENT QUICK GAS DISCONNECT MUST BE CHAINED UP AND TOUCH TO THE WALL
4. ALL COOKING EQUIPMENT WITH ANSUL SYSTEM (UL 300)
5. FLOOR TILE GROUT MUST BE EPOXY WITH 1/4-IN GAP BETWEEN TILE
6. ENTRANCE/EXIT/ RESTROOM DOOR MUST BE PROVIDED WITH SELF-CLOSING DEVICES.
7. ENTRANCE/EXIT DOORS MUST BE PROVIDED WITH WEATHER STRIPE AND DOOR ASTRAGAL
8. ALL LIGHTS MUST BE PROVIDED WITH SHATTER PROOF COVERS IN THE FOOD PREPARATION AND STORAGE AREAS INCLUDING UTENSILS/EQUIPMENT STORAGE AND COOKING AREAS.
9. MOP SINK MUST BE PROVIDED WITH BROOM/MOP RACK AND STAINLESS STEEL SHELF FOR CHEMICAL STORAGE
10. EXHAUST FAN AND RESTROOM LIGHT MUST BE INTERLOCK IN ONE SWITCH
11. MAKE-UP AIR FAN AND EXHAUST HOOD FAN MUST BE INTERLOCK IN ONE SWITCH
12. ALL WASHING SINKS MUST BE PROVIDED WITH COMMERCIAL PAPER TOWEL DISPENSERS AND SOAP DISPENSERS
13. WATER HEATER MUST BE INSTALLED ON METAL OR STAINLESS STEEL STAND WITH AT LEAST 6" LEGS IN HEIGHT
14. DRY STORAGE SPACE CONTAINS 25% OF THE KITCHEN AND BAR FLOOR AREA, WHICH SHELVING SHALL BE PROVIDED.

WALL LEGEND

EXISTING WALL

NEW WALL

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DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS: 2229 DOVER AVE, SAN PABLO, CA 9480

SHEET TITLE: PROPOSED FLOOR PLANS - DETACHED KITCHEN

PROJECT NUMBER: 24002

SUBMITTAL

DATE	DESCRIPTION
12/10/24	PLANNING

REVISION

DELTA	DATE	DESCRIPTION

SHEET NO.

A 2.1

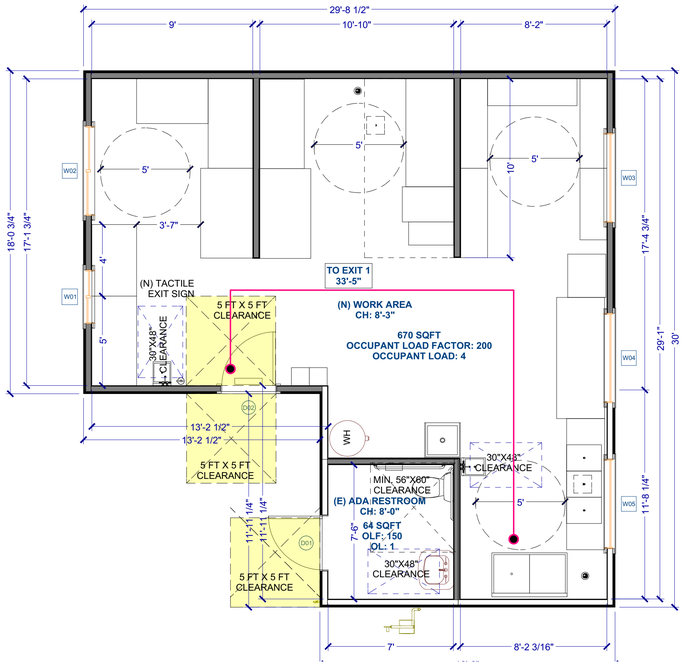
DETACHED KICHEN OCCUPANT LOAD CALCULATION				
ROOM	AREA (SF)	OCCUPANT LOAD FACTOR	OCCUPANT TYPE	OCCUPANT LOAD
WORKING AREA	670	200	B	4
RESTROOM	64	150	B	1
			TOTAL	**5**

Number of required exits: **1**
Number of provided exits: **1**

Number of occupants using exit 1: **5**

Provided min. egress width: **36"**

Required common path of travel: **100'**
Required exit acess travel distance (with sprinkler): **300'**
Provided path of travel from furthest point to exit 1: **33'5"**



PROPOSED PATH OF EGRESS - DETACHED KITCHEN

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

1

N

CENTRAL KITHCEN OCCUPANT LOAD CALCULATION				
ROOM	AREA (SF)	OCCUPANT LOAD FACTOR	OCCUPANT TYPE	OCCUPANT LOAD
WORKING AREA	729	200	B	4
STORAGE	547	300	B	2
WALK-IN FREEZER	123	300	B	1
WALK-IN COOLER	124	300	B	1
RESTROOM	70	150	B	1
			TOTAL	**9**

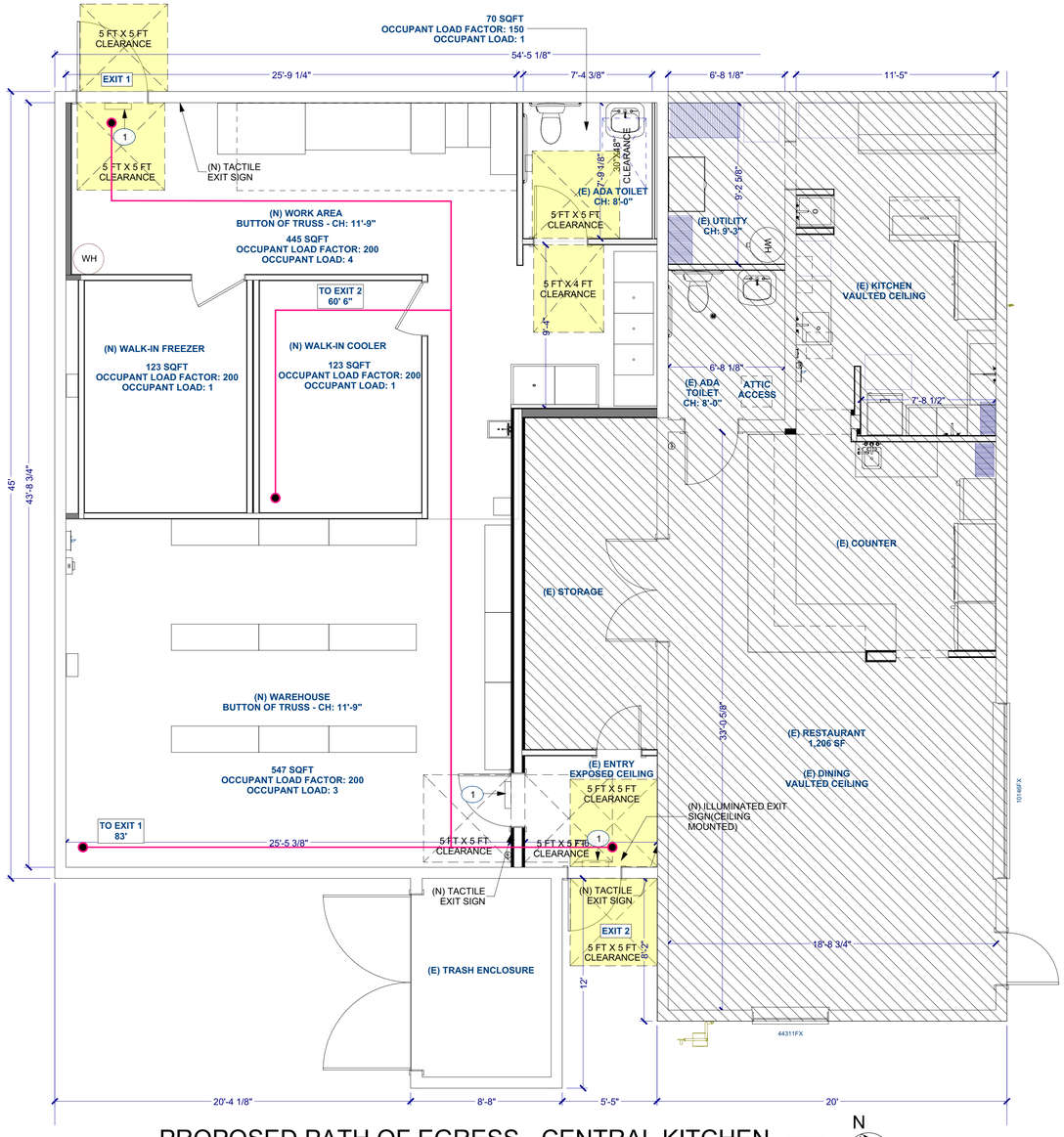
Number of required exits: **1**
Number of provided exits: **2**

Number of occupants using exit 1: **5**
Number of occupants using exit 2: **5**

Provided min. egress width: **36"**

Required common path of trave(w/o sprinkler)l: **100'**
Provided path of travel from furthest point to exit 1: **83'**
Provided path of travel from furthest point to exit 2: **60'6"**

Provided Separation of exit (w/o sprinkler):
2 exits distance is more than 1/2 the diagonal length of the space



PROPOSED PATH OF EGRESS - CENTRAL KITCHEN

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

1

N

NOTES

1 (N) ILLUMINATED EXIT SIGN WITH EMERGENCY LIGHT

LEGEND

ACCESSIBLE LANDING NOT TO EXCEED 2% SLOPE

ORANGE ENGINEERING
4005 CLIPPER CT
FREMONT, CA 94538
TEL (408) 888-7836

DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS: 2229 DOVER AVER
SAN PABLO, CA 9480

SHEET TITLE: PATH OF EGRESS

PROJECT NUMBER: 24002

SUBMITTAL

DATE	DESCRIPTION
12/10/24	PLANNING

REVISION

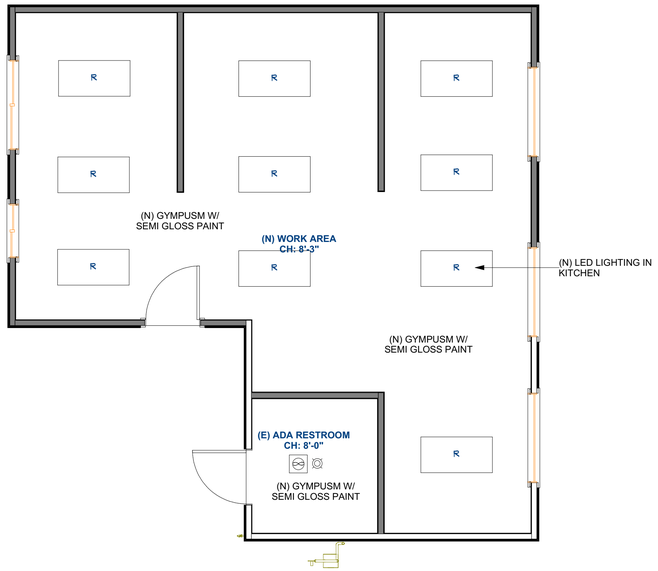
DELTA	DATE	DESCRIPTION

SHEET NO.

A 3.0

NOTES:

1. (N) DOWNSPOUT, TYP.
2. (N) 30" HIGH PARAPET WALL
3. (N) PARAPET WALL, 30 INCH HIGH

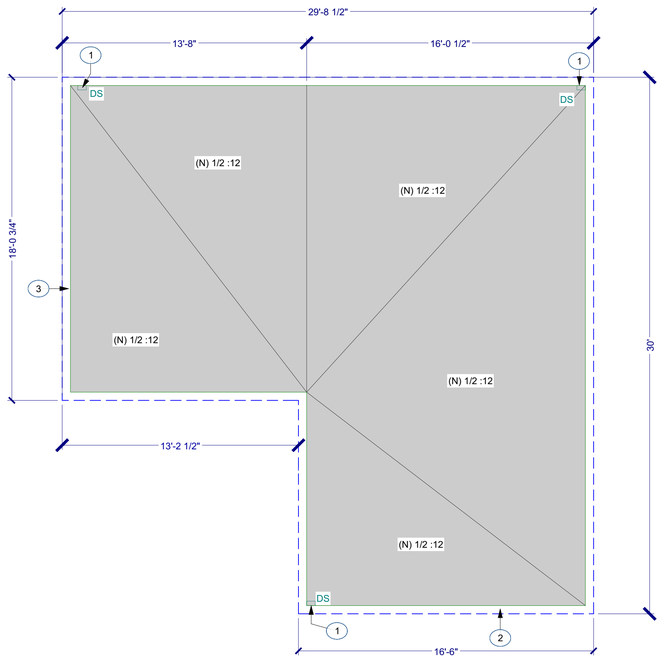


PROPOSED CEILING PLAN - DETACHED KITCHEN

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

3

N



PROPOSED ROOF PLAN - DETACHED KITCHEN

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

2

N

ROOF LEGEND

NEW TORCH DOWN ROOF

CEILING LEGEND:

- (N) ACOUSTIC TILE
- R — (N) RECESSED LIGHT FIXTURE
- (E) AIR RETURN
- (N) EXHAUST FAN
- (R) — (N) RECESSED LIGHT

PROPOSED CEILING PLAN - CENTRAL KITCHEN

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

1

N

WALL LEGEND

- EXISTING WALL
- NEW WALL

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DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS: 2229 DOVER AVE SAN PABLO, CA 9480

SHEET TITLE: PROPOSED CEILING PLANS

PROJECT NUMBER: 24002

SUBMITTAL

DATE	DESCRIPTION
12/10/24	PLANNING

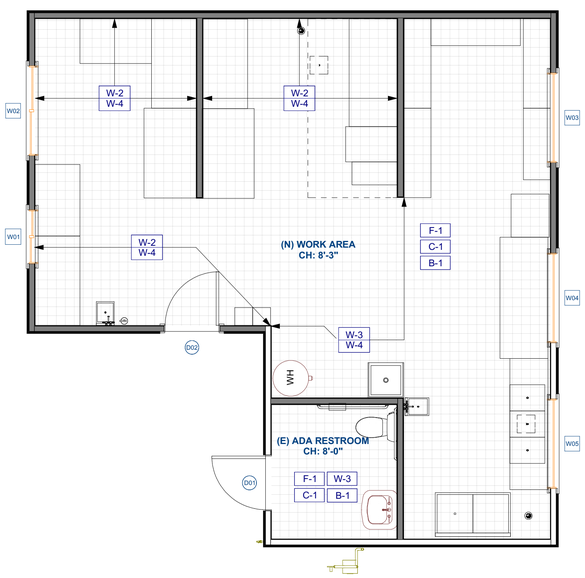
REVISION

DELTA	DATE	DESCRIPTION

SHEET NO.

A 4.0

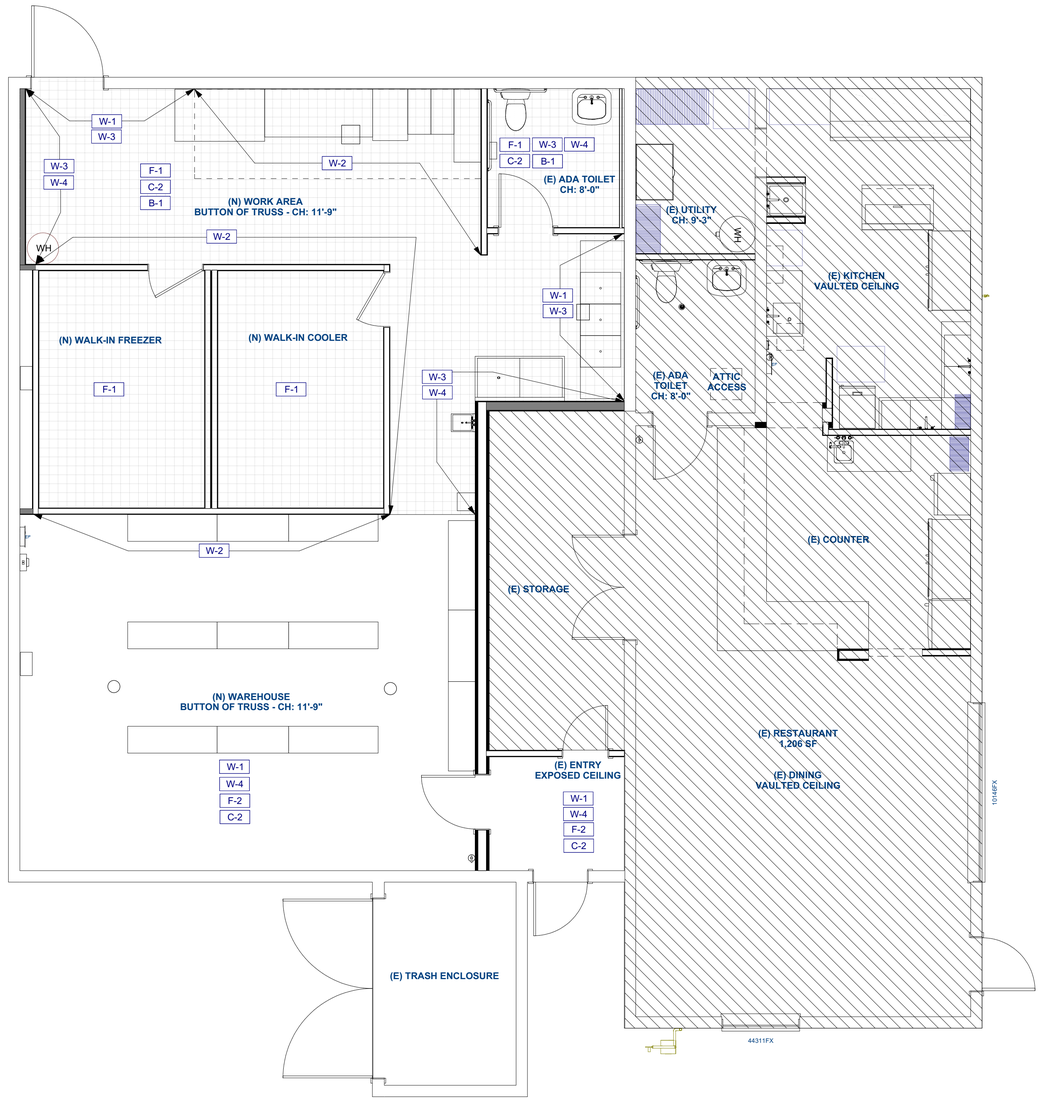
FLOOR FINISH KEY & LEGEND			
SYMBOL	DESCRIPTION	SIZE / TYPE	NOTE:
F-1	QUARRY TILE	6" X 6"	
F-2	POLISHED CONCRETE		
CEILING FINISH KEY & LEGEND			
SYMBOL	DESCRIPTION	SIZE / TYPE	NOTE:
C-1	GYPSUM BOARD, PAINTED	SEMI GLOSS PAINT	ABOVE FRP OR STEEL PANEL IF APPLICABLE
C-2	WASHABLE T-BAR CEILING TILES	24" X 48"	
WALL FINISH KEY & LEGEND			
SYMBOL	DESCRIPTION	SIZE / TYPE	NOTE:
W-1	CMU WALL PAINTED	SEMI GLOSS PLAINT	
W-2	STAINLESS STEEL PANEL	10'-0" A.F.F	ALSO ABOVE WALK-IN FREEZER/COOLER
W-3	FIBER REINFORCED PANEL	8'-0" A.F.F.	OVER CMU OR GYPSUM PANEL IF APPLICABLE
W-4	GYPSUM BOARD, PAINTED	SEMI GLOSS PAINT	
COVE BASE			
SYMBOL	DESCRIPTION	SIZE / TYPE	NOTE:
B-1	QUARRY TILE BASE	6"X6" W/ 3/8" MIN. RADIUS	
B-2	RUBBER BASE	4" HIGH W/ 3/8" MIN. RADIUS	



PROPOSED FINISH PLAN - DETACHED KITCHEN

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

2



PROPOSED FINISH PLAN - CENTRAL KITCHEN

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

1

WALL LEGEND

- EXISTING WALL
- NEW WALL

FLOOR FINISH KEY & LEGEND			
SYMBOL	DESCRIPTION	SIZE / TYPE	NOTE:
F-1	QUARRY TILE	6" X 6"	
F-2	POLISHED CONCRETE		
CEILING FINISH KEY & LEGEND			
SYMBOL	DESCRIPTION	SIZE / TYPE	NOTE:
C-1	GYPSUM BOARD, PAINTED	SEMI GLOSS PAINT	ABOVE FRP OR STEEL PANEL IF APPLICABLE
C-2	WASHABLE T-BAR CEILING TILES	24" X 48"	
WALL FINISH KEY & LEGEND			
SYMBOL	DESCRIPTION	SIZE / TYPE	NOTE:
W-1	CMU WALL PAINTED	SEMI GLOSS PLAINT	
W-2	STAINLESS STEEL PANEL	10'-0" A.F.F	ALSO ABOVE WALK-IN FREEZER/COOLER
W-3	FIBER REINFORCED PANEL	8'-0" A.F.F.	OVER CMU OR GYPSUM PANEL IF APPLICABLE
W-4	GYPSUM BOARD, PAINTED	SEMI GLOSS PAINT	
COVE BASE			
SYMBOL	DESCRIPTION	SIZE / TYPE	NOTE:
B-1	QUARRY TILE BASE	6"X6" W/ 3/8" MIN. RADIUS	
B-2	RUBBER BASE	4" HIGH W/ 3/8" MIN. RADIUS	

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REVIEW BY:

PROJECT ADDRESS: 2229 DOVER AVE SAN PABLO, CA 9480

SHEET TITLE: PROPOSED FINISH PLANS

PROJECT NUMBER: 24002

SUBMITTAL

DATE	DESCRIPTION
12/10/24	PLANNING

REVISION

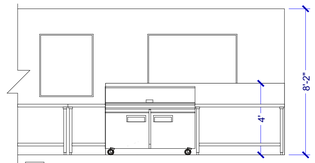
DELTA	DATE	DESCRIPTION

SHEET NO.

A 5.0

GENERAL NOTES:

1. REFER TO ADDITIONAL NOTES AND REQUIREMENTS AN ALL OTHER DOCUMENTS, OTHER DISCIPLINES AND SPECIFICATIONS.
2. ALL PLUMBING FIXTURES SHOWN ON THIS SHEET IS PROVIDED FOR COORDINATION PURPOSES ONLY, REFER TO PLUMBING DOCUMENTS FOR SPECIFIC DESIGN INFO.
3. PROVIDE ADEQUATE BLOCKING FOR ALL WALL MOUNTED SHELVING.



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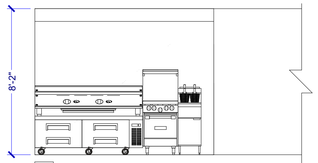

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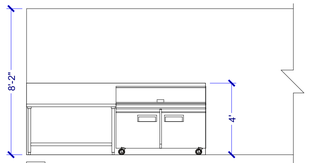

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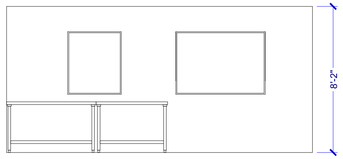

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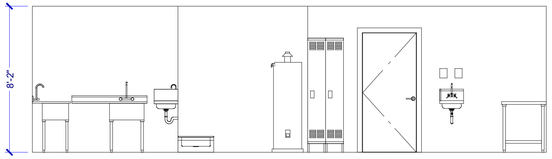

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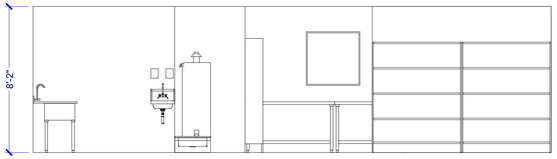

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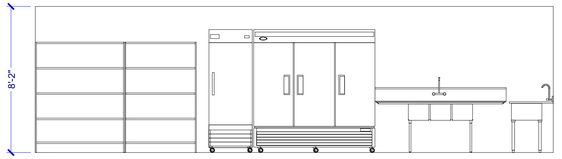
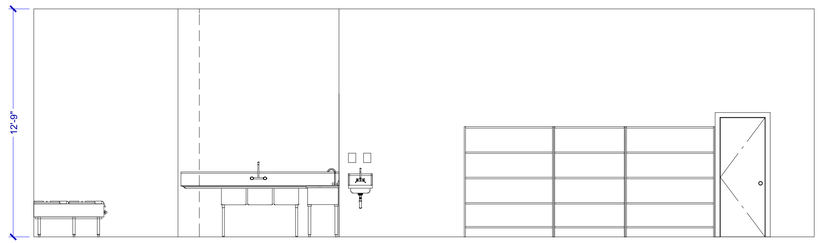


E

INTERIOR ELEVATION - DETACHED KITCHEN

SCALE: 1/2"=1'-0"

2



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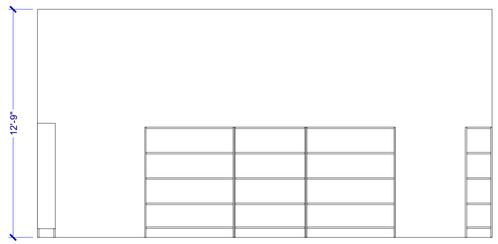

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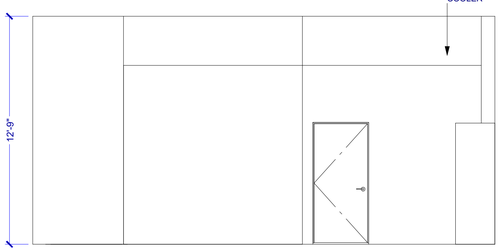

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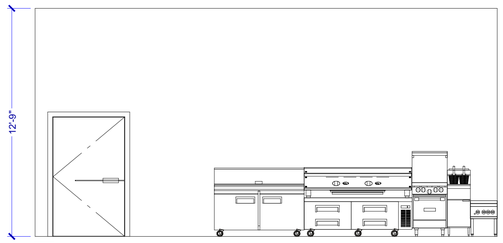

A

INTERIOR ELEVATIONS - CENTRAL KITCHEN

SCALE: 1/2"=1'-0"

1

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DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS
2229 DOVER AVE
SAN PABLO, CA 9480

SHEET TITLE
INTERIOR ELEVATIONS

PROJECT NUMBER:
24002

SUBMITTAL

DATE	DESCRIPTION
12/10/24	PLANNING

REVISION

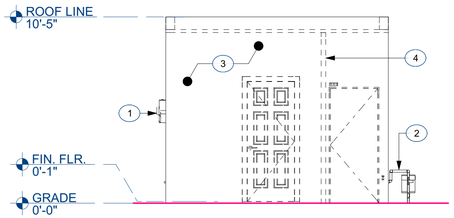
DELTA	DATE	DESCRIPTION

SHEET NO.

A 6.0

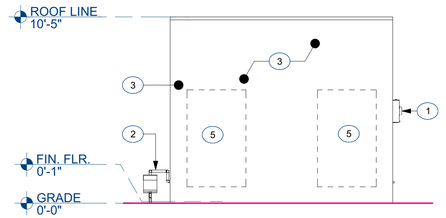
NOTES:

1. (E) ELECTRICAL METER WITH MAIN ELECTRIC PANEL, 100 AMPS FOR #1927, LOCATION AND SIZE, V.I.F.
2. (E) GAS METER 3/4" DIA. FOR #1927, LOCATION AND SIZE V.I.F.
3. (E) STUCCO
4. (E) VENT
5. (E) COVERED WINDOW TO REMOVE



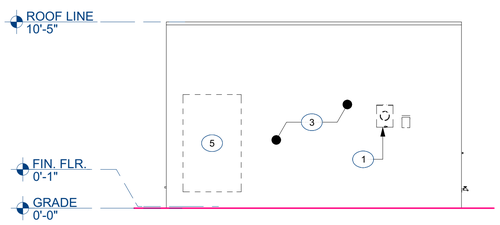
EXISTING ELEVATION - DETACHED KITCHEN : WEST D

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



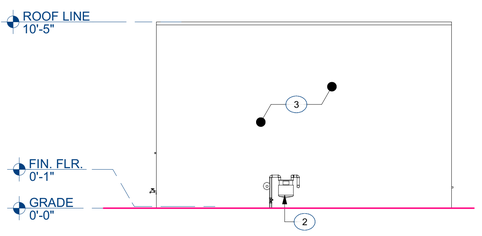
EXISTING ELEVATION - DETACHED KITCHEN : EAST B

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



EXISTING ELEVATION - DETACHED KITCHEN : NORTH C

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



EXISTING ELEVATION - DETACHED KITCHEN : SOUTH A

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

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FREMONT, CA 94538
TEL (408) 888-7836

DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS: 2229 DOVER AVE SAN PABLO, CA 9480

SHEET TITLE: EXISTING ELEVATIONS - DETACHED KITCHEN

PROJECT NUMBER: 24002

SUBMITTAL

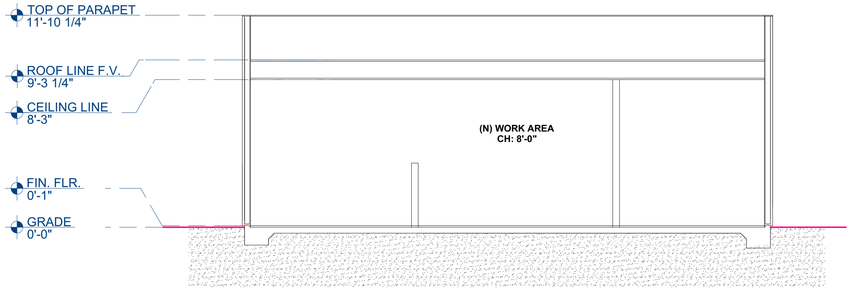
DATE	DESCRIPTION
12/10/24	PLANNING

REVISION

DELTA	DATE	DESCRIPTION

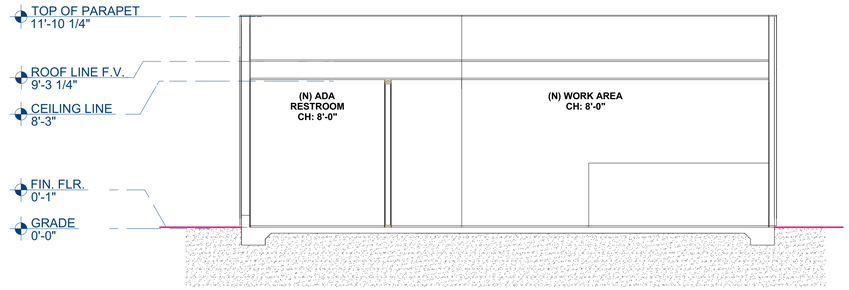
SHEET NO.

A 7.0



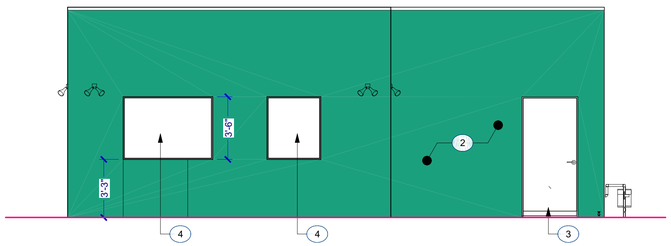
PROPOSED SECTION - KITCHEN : TRANSVERSE 6

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



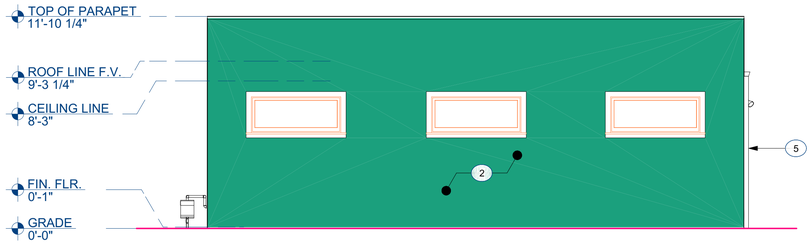
PROPOSED SECTION - KITCHEN : LONGITUDINAL 5

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



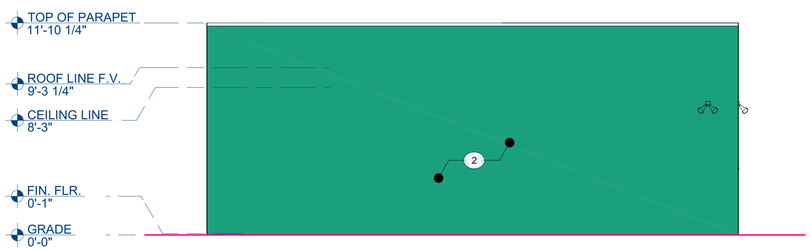
PROPOSED ELEVATION - DETACHED KITCHEN : WEST 4

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



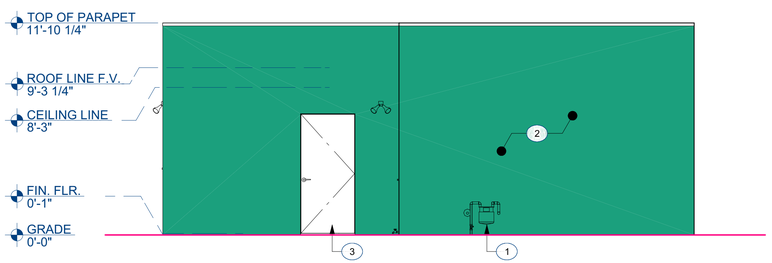
PROPOSED ELEVATION - DETACHED KITCHEN : EAST 3

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



PROPOSED ELEVATION - DETACHED KITCHEN : NORTH 2

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



PROPOSED ELEVATION - DETACHED KITCHEN : SOUTH 1

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

NOTES:

1. (E) GAS METER 3/4" DIA. FOR #1927, LOCATION AND SIZE V.I.F.
   (N) 3 COAT STUCCO SYSTEM 7/8" MINIMUM THICKNESS 2X LAYER OF GRADE D PAPER, COLOR MATCH WITH LOGO BACKGROUND GREEN
2. (N) DOOR
3. (N) WINDOW OPENING
4. (N) DOWNSPOUT TO CONNECT TO STORM DRAIN, TYP.

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4005 CLIPPER CT
FREMONT, CA 94538
TEL (408) 888-7836

DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS: 2229 DOVER AVE, SAN PABLO, CA 94806

SHEET TITLE: PROPOSED ELEVATIONS & SECTIONS - DETACHED KITCHEN

PROJECT NUMBER: 24002

SUBMITTAL

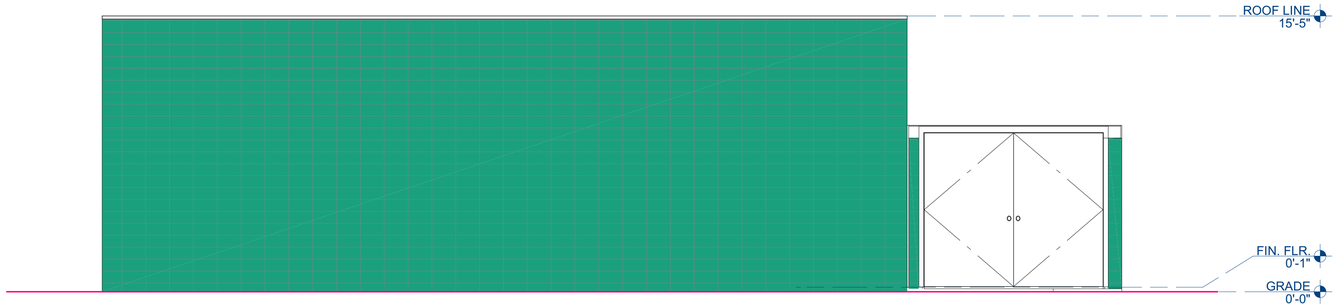
DATE	DESCRIPTION
12/10/24	PLANNING

REVISION

DELTA	DATE	DESCRIPTION

SHEET NO.

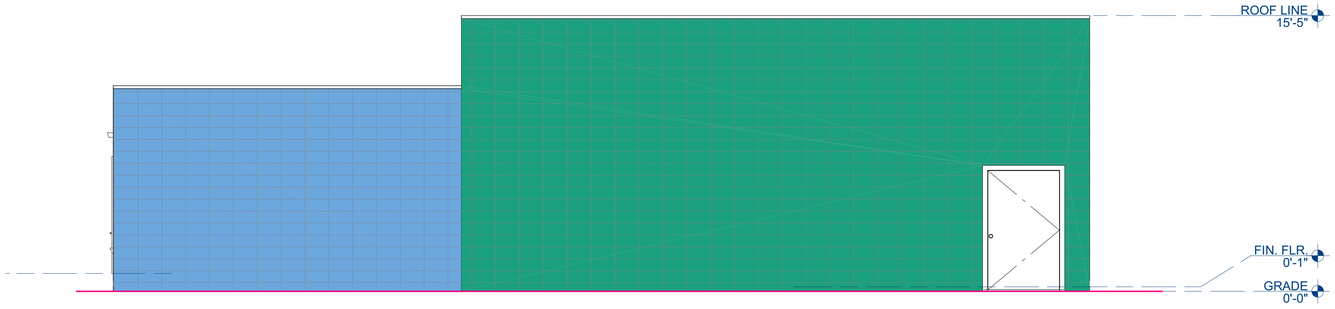
A 7.1



PROPOSED ELEVATION - CENTRAL KITCHEN : WEST

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

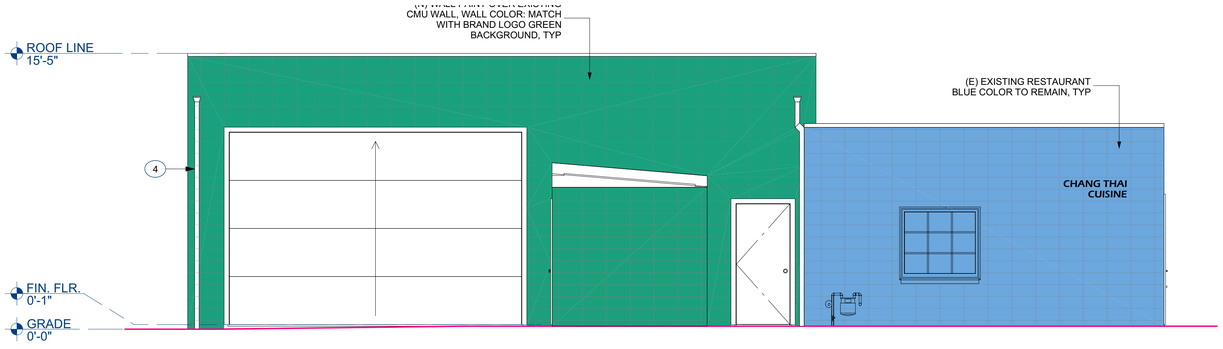
3



PROPOSED ELEVATION - CENTRAL KITCHEN : NORTH

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

2



PROPOSED ELEVATION - CENTRAL KITCHEN : SOUTH

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

1

ORANGE ENGINEERING

4005 CLIPPER CT
FREMONT, CA 94538
TEL (408) 888-7836

DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS
2229 DOVER AVE
SAN PABLO, CA 9480

SHEET TITLE
PROPOSED ELEVATIONS & SECTIONS -
CENTRAL KITCHEN

PROJECT NUMBER:
24002

SUBMITTAL

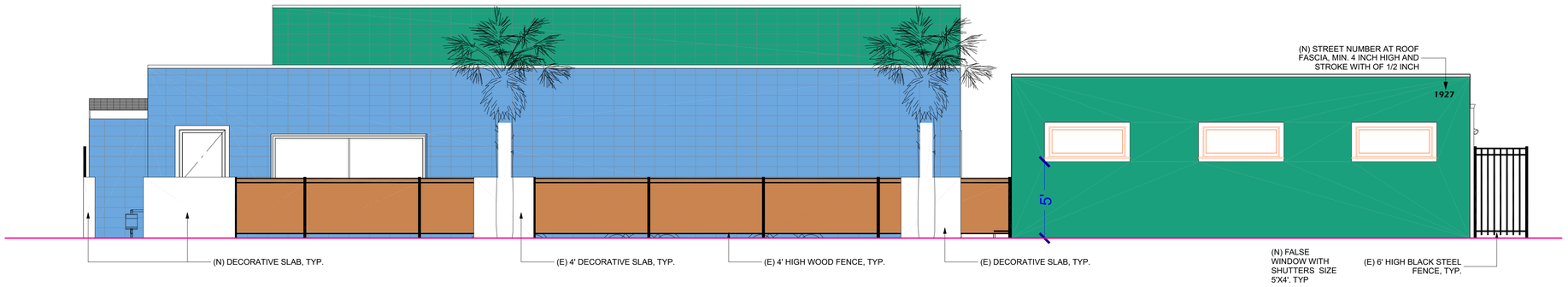
DATE	DESCRIPTION
12/10/24	PLANNING

REVISION

DELTA	DATE	DESCRIPTION

SHEET NO.

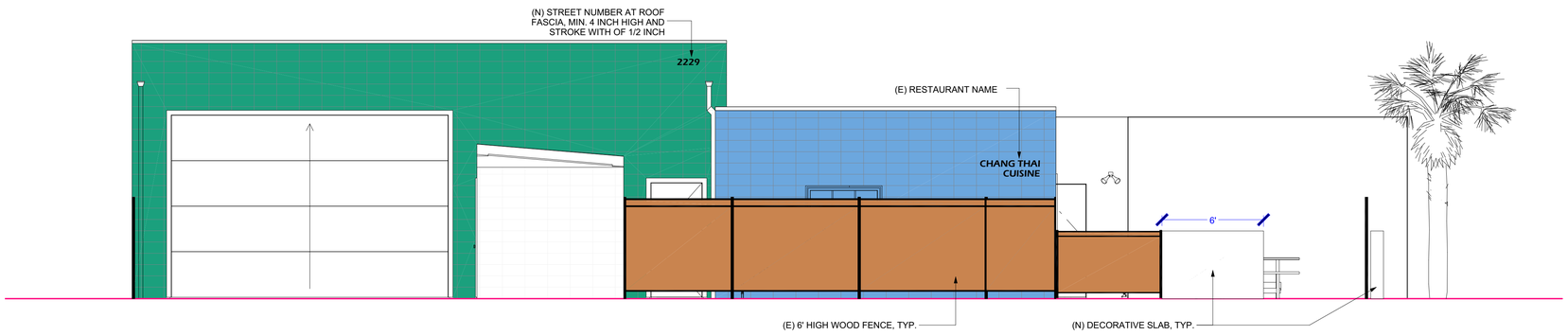
A 7.2



SITE ELEVATION (ALONG 23RD ST)

SCALE: 1/2"=1'-0"

2



SITE ELEVATION (ALONG DOVER AVE)

SCALE: 1/2"=1'-0"

1

ORANGE ENGINEERING

4005 CLIPPER CT
FREMONT, CA 94538
TEL (408) 888-7836

DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS: 2229 DOVER AVE SAN PABLO, CA 9480

SHEET TITLE: PROPOSED SITE ELEVATIONS

PROJECT NUMBER: 24002

SUBMITTAL

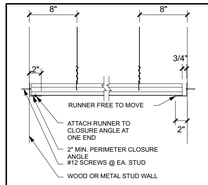
DATE	DESCRIPTION
12/10/24	PLANNING

REVISION

DELTA	DATE	DESCRIPTION

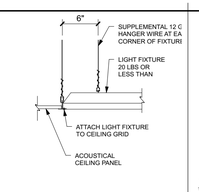
SHEET NO.

A 7.3



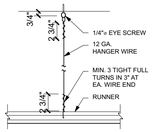
NOTE: ROOF MEMBERS SHALL BE MIN. 2X6 FOR ATTACHMENT OF ANY WIRE OR COMPRESSION STRUT

CEILING PERIMETER DETAIL



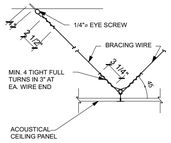
NOTE: ROOF MEMBERS SHALL BE MIN. 2X6 FOR ATTACHMENT OF ANY WIRE OR COMPRESSION STRUT

LIGHT FIXT. ATTACHMENT DETAIL



NOTE: ROOF MEMBERS SHALL BE MIN. 2X6 FOR ATTACHMENT OF ANY WIRE OR COMPRESSION STRUT

HANGING WIRE TIE DETAIL

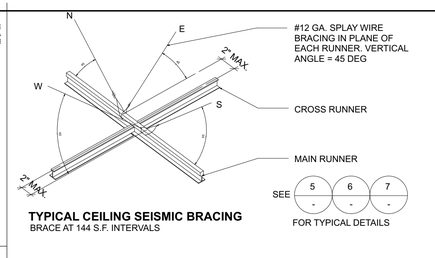


NOTE: ROOF MEMBERS SHALL BE MIN. 2X6 FOR ATTACHMENT OF ANY WIRE OR COMPRESSION STRL

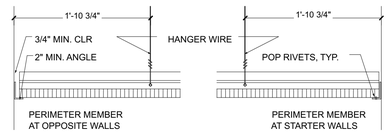
BRACING WIRE TIE DETAIL

T-BAR CEILING DETAIL 10

NTS



TYPICAL CEILING SEISMIC BRACING
BRACE AT 144 S.F. INTERVALS



FLOATING END - 2" MIN. EDGE MOLDING (ANGLE) WITH 3/4 MIN. CLEARANCE

THE GRID SHALL BE ATTACHED AT TWO ADJACENT WALLS

T-BAR CEILING INSTALLATION RUNNERS AT WALLS 7

NTS

SIANAGE NOTES

1 SEE PLAN FOR LOCATIONS OF SIGNS.

2 TACTILE SIGNS SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE.

3 WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR.

4 WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR AT THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL.

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

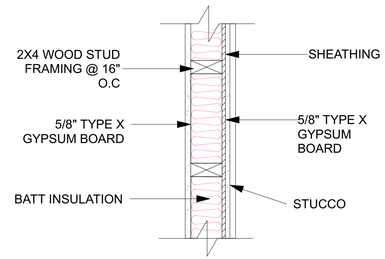
6 SIGNS IDENTIFYING PERMANENT ROOMS AND SPACES SHALL BE LOCATED AT THE ENTRANCE TO, AND OUTSIDE OF THE ROOM OR SPACE.

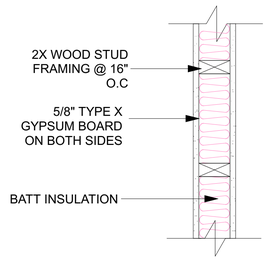
7 SIGNS IDENTIFYING EXITS SHALL BE LOCATED AT THE EXIT DOOR WHEN APPROACHED IN THE DIRECTION OF EGRESS TRAVEL.

8 IN ALTERATIONS WHERE SIGN INSTALLATION LOCATIONS IDENTIFIED IN SECTION 11B-703.4.2 ARE OBSTRUCTED OR OTHERWISE UNAVAILABLE FOR SIGN INSTALLATION, SIGNS WITH TACTILE CHARACTERS SHALL BE PERMITTED ON THE PUSH SIDE OF DOORS WITH CLOSERS AND WITHOUT HOLD-OPEN DEVICES.

9 AN ADDITIONAL SIGN SHALL BE POSTED EITHER PER 11B-502.8: A). IN A CONSPICUOUS PLACE AT EACH ENTRANCE TO AN OFF-STREET PARKING FACILITY OR B). IMMEDIATELY ADJACENT TO ON-SITE ACCESSIBLE PARKING AND VISIBLE FROM EACH PARKING SPACE.

10 THE ADDITIONAL SIGN SHALL NOT BE LESS THAN 17 INCHES WIDE BY 22 INCHES HIGH PER 11B-502.8.1.



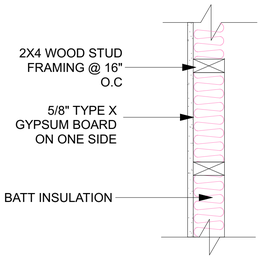


B / 0 / A — 2X4 WOOD STUD WALL

TYP WALL TYPE, NOT INDICATED ON PLANS

A / 0 / A — 1-HR FIRE RATED EXTERIOR WALL, UL DES U344

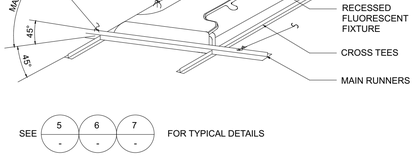
B1 / 0 / A — 2X6 WOOD STUD WALL



C / 0 / A — 2X4 WOOD FURRING WALL

WALL TYPES 5

NTS



COMPRESSION STRUT SCHEDULE		
ALLOWABLE MAX. STRUT LENGTH	USG DONN COMPRESSION STRUT	EMT COMPRESSION STRUT
2'-6"	VSA 18/30	12"⌀
4'-0"	VSA 30/48	12"⌀
7'-0"	VSA 48/84	34"⌀
8'-6"	VSA 84/102	1"⌀

T-BAR CEILING DETAIL 9

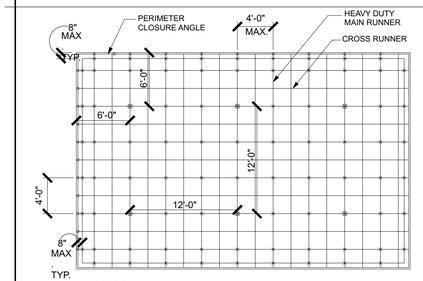
NTS

NO. 12 GA. LATERAL SUPPORT WIRE WITHIN 3" OF EA. CORNER OF LIGHT FIXTURE. SPLAY WIRE AS SHOWN AND FASTEN TO FACE OF GLU-LAM ROOF PURLIN OR BEAM WITH 16D RING SHANK NAIL. MIN. OF 3 WIRE TURNS EACH CONNECTION POINT. WIRE SUPPORT BY ACCOUSTICAL CLG. CONTRACTOR. SEE CURRENT UBC STANDARD.

FIXTURES WEIGHT 20# OR MORE: CONNECT 2-12 GA. FIXTURE SUPPORT WIRES AT DIAGONAL CORNERS OF EACH FIXTURE THREE FULL WRAPS MINIMUM. FIXTURE SUPPORT WIRES SUPPLIED AND HUNG BY T-BAR CONTRACTOR. MAXIMUM FIXTURE WEIGHT 55#.

LIGHT FIXTURE BRACING 6

NTS

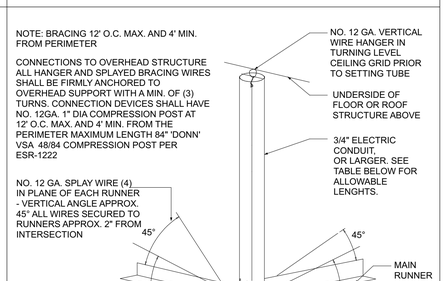


NOTES:

1. EXCEPT WHERE RIGID BRACES ARE USED TO LIMIT LATERAL DEFLECTION, SPRINKLER HEADS OTHER PENETRATIONS SHALL HAVE A 2" OVERSIZE RING, SLEEVE, OR ADAPTER THROUGH THE TILE TO ALLOW FOR FREE MOVEMENT OF AT LEAST 1" IN ALL HORIZONTAL DIRECTIONS. ALTERNATIVELY, A SWING JOINT THAT CAN ACCOMMODATE 1" OF CEILING MOVEMENT IN ALL HORIZONTAL DIRECTIONS IS PERMITTED TO BE PROVIDED AT THE TOP OF THE SPRINKLER HEAD EXTENSION.
2. SEE DET. C-6/- FOR DETAILS AT CEILING PERIMETER.
3. CEILING WITH AN AREA GREATER THAN 2500 SQ. FT. SHALL BE PROVIDED WITH SEISMIC SEPA JOINTS.
4. SEE DET. D-6/- FOR ATTACHMENT DETAIL OF LIGHT FIXTURE 20 LBS OR LESS.
5. THE INFORMATION PROVIDED IN THIS DESIGN GUIDE CARRIES NO IMPLIED OR INFERRED GU AGAINST FAILURE OR DEFECTS. BY USING THIS DESIGN GUIDE, THE CONTRACTOR/OWNER ACC FULL RESPONSIBILITY OF RISK. ALTERNATE DESIGN MAY BE USED WHEN PROVIDED WITH WET S

T-BAR CEILING DETAIL 8

NTS

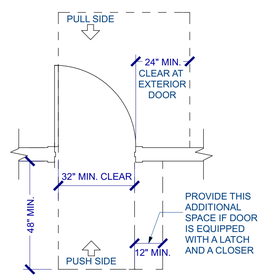


TYPE	SIZE	TUBE LENGTH	OVERALL MIN. COMPRESSION POST LENGTH	
				MAXIMUM
'DONN' VSA 4884	3/4" DIA.	40"	48"	84"
	1" DIA.	48"		

PROVIDE APPROVED COMPRESSION POST. 'DONN' OR APPRVD. EQ. IN ACCORDANCE WITH ICC-ES EVALUATION REPORT ESR-1222

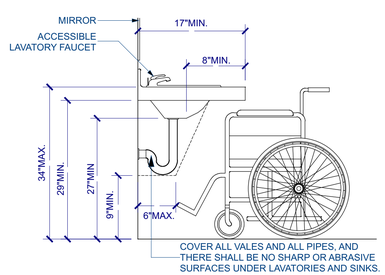
COMPRESSION STRUT 5

NTS



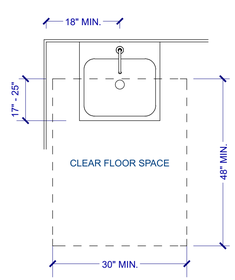
DOOR MANEUVERING CLEARANCE 3

NTS



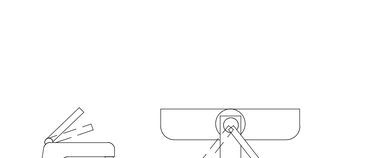
KNEE AND TOE CLEARANCE 2

NTS



ADA DOOR THRESHOLD 1

NTS



LEVEL HANDLE OPERATED

LEVEL-OPERATED OR EQV. SEE BELOW
FAUCETS SHALL BE LEVER-OPERATED, PUSH-TYPE,
AND ELECTRONICALLY CONTROLLED MECHANISMS ARE
EXAMPLES OF ACCEPTABLE DESIGNS. IF SELF-CLOSING
VALVES ARE USED THE FAUCET SHALL REMAIN OPEN
FOR AT LEAST 10 SECONDS.
CONTROLS AND OPERATING MECHANISMS SHALL BE
OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE
TIGHT GRASPING, PINCHING, OR TWISTING OF THE
WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS
SHALL BE NO GREATER THAN 5 LBF (22.2 N).

ACCESSIBLE LAVATORY FAUCET 4

NTS

ORANGE ENGINEERING

4005 CLIPPER CT
FREMONT, CA 94538
TEL (408) 888-7836

DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS: 2229 DOVER AVE SAN PABLO, CA 9480

SHEET TITLE: ADA & DETIALS

PROJECT NUMBER: 24002

SUBMITTAL

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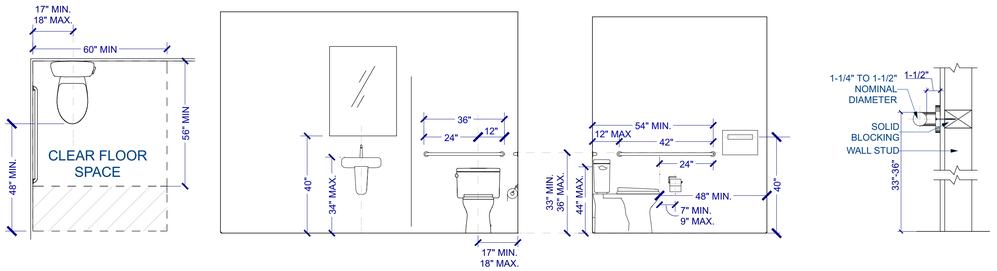
SHEET NO.

A 8.0

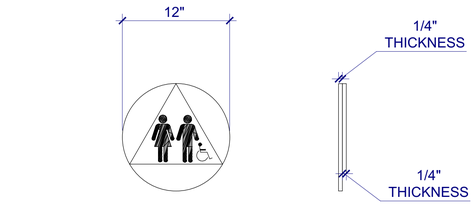
MOUNTING HEIGHT & ACCESSORY NOTES

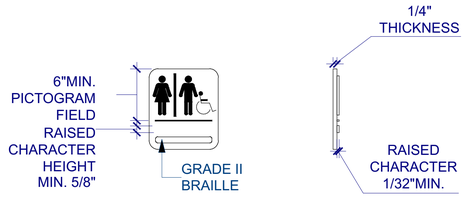
1. SURFACE MOUNTED ACCESSORIES THAT PROJECT MORE THAN 4" FROM THE FACE OF THE WALL MUST BE MOUNTED IN AN ALCOVE, OVER A COUNTER, OR WITH THE BOTTOM EDGE NO MORE THAN 2'-3" AFF.
2. WHEN MOUNTED NEAR A GRAB BAR, PROVIDE AT LEAST 2" CLEARANCE BETWEEN THE TOP OF AN ACCESSORY AND THE BOTTOM OF THE GRAB BAR OR 1'-0" CLEARANCE BETWEEN THE BOTTOM OF AN ACCESSORY AND THE TOP OF A GRAB BAR. DOES NOT APPLY TO FULLY RECESSED ACCESSORIES.
3. FOR ACCESSORIES NOT INDICATED OR DIFFERING SUBSTANTIALLY FROM THE DIAGRAMS, CONSULT THE ARCHITECT PRIOR TO INSTALLATION OF BLOCKING/ BACKING.
4. PLUMBING FIXTURES SHOWN ARE DIAGRAMMATIC. SEE PLUMBING DOCUMENTS FOR SPECIFICATIONS OF FIXTURE TO BE INSTALLED.
5. ALL DIMENSIONS ARE TAKEN TO FINISHED SURFACE.
6. ALL BLOCKING TO BE 22 GA SHEET METAL OR WOOD BLOCKING PER GENERAL CONTRACTOR OPTION AND CONSTRUCTION TYPE , TYP.
7. ITEMS FOR WHICH MOUNTING HEIGHTS ARE INDICATED ON THIS SHEET MAY OR MAY NOT BE USED - SEE PROJECT PLANS, SPECIFICATIONS AND INTERIOR ELEVATIONS FOR SPECIFIC PROJECT ITEMS.



ADA DETAILS - ACCESSIBLE TOILET 4

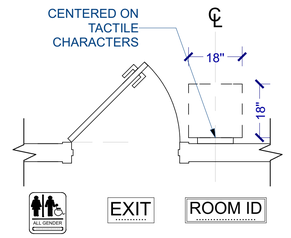
SCALE: 3/8" = 1'-0"



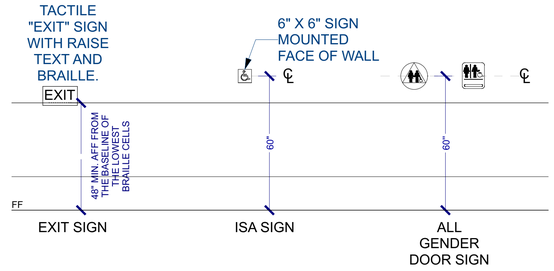


NOTE: CHARACTERS AND BRAILLE SHALL NOT BE LOCATED IN THE PICTOGRAM FIELD

NOTE: SYMBOLS OF ACCESSIBILITY AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH.
SYMBOLS OF ACCESSIBILITY SHALL CONTRAST WITH THEIR BACKGROUND WITH EITHER A LIGHT SYMBOL ON A DARK BACKGROUND OR A DARK SYMBOL ON A LIGHT BACKGROUND.

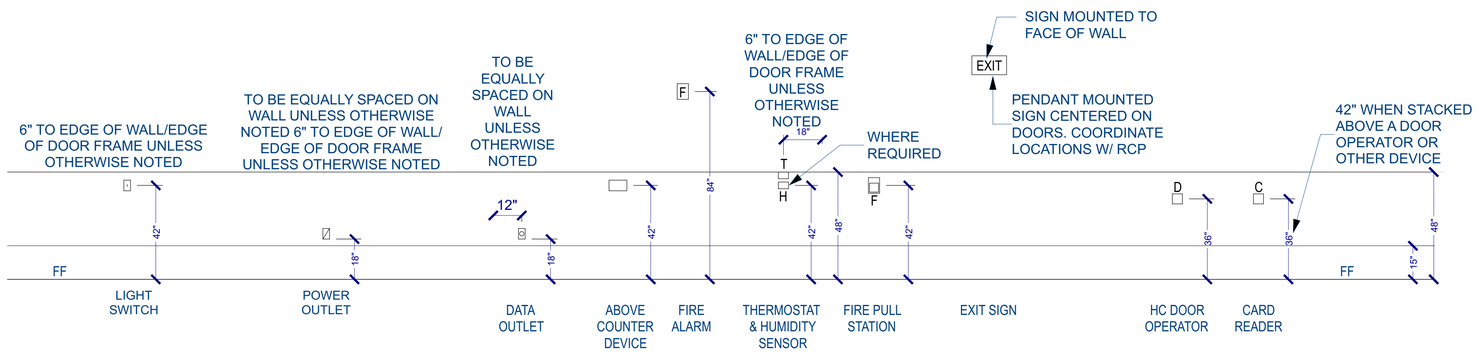


ISA SYMBOL SHALL CONSIST OF A WHITE FIGURE ON A BLUE BACKGROUND. THE BLUE SHALL BE A COLOR NO. 15090 IN FEDERAL STANDARD 595B



WALL SIGN MOUNTING DETAILS 3

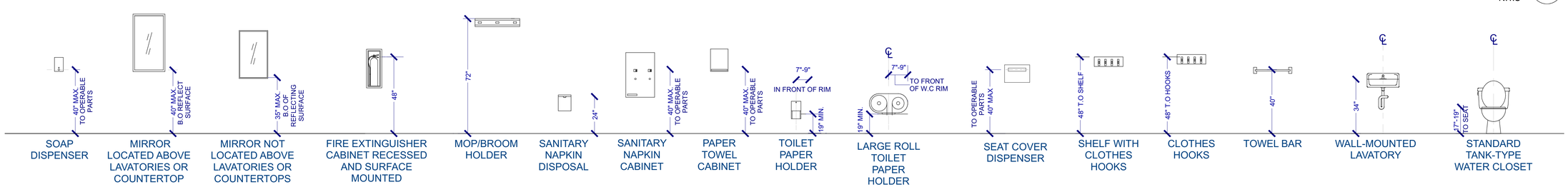
N.T.S



****ALL DIMENSION ARE TO THE CENTER LINE OF THE DEVICE UNLESS NOTED OTHERWISE****

DEVICE MOUNTING HEIGHT 2

N.T.S



TOILET ACCESSORY MOUNTING HEIGHTS 1

SCALE: 3/8" = 1'-0"

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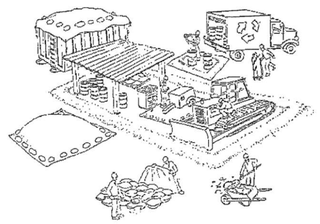
A8.1

Clean Bay Blue Print



Make sure your crews and subs do the job right!

Runoff from streets and other paved areas is a major source of pollution and damage to creeks and the San Francisco Bay. Construction activities can directly affect the health of creeks and the Bay unless contractors and crews plan ahead to keep dirt, debris, and other construction waste away from storm drains and local creeks. Following these guidelines and the project specifications will ensure your compliance with **City of San Pablo** requirements.

Materials storage & spill cleanup

Non-hazardous materials management

- Sand, dirt, and similar materials must be stored at least 10 feet (3 meters) from catch basins. All construction material must be covered with a tarp and contained with a perimeter control during wet weather or when rain is forecasted or when not actively being used within 14 days.
- Use (but don't overuse) reclaimed water for dust control as needed.
- Sweep or vacuum streets and other paved areas daily. Do not wash down streets or work areas with water!
- Recycle all asphalt, concrete, and aggregate base material from demolition activities. Comply with **City of San Pablo** Ordinances for recycling construction materials, wood, gyp board, pipe, etc.
- Check dumpsters regularly for leaks and to make sure they are not overfilled. Repair or replace leaking dumpsters promptly.
- Cover all dumpsters with a tarp at the end of every work day or during wet weather.

Hazardous materials management

- Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state, and federal regulations.
- Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecasted.
- Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecasted within 24 hours.
- Be sure to arrange for appropriate disposal of all hazardous wastes.

Spill prevention and control

- Keep a stockpile of spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times.
- When spills or leaks occur, contain them immediately and be particularly careful to prevent leaks and spills from reaching the gutter, street, or storm drain. Never wash spilled material into a gutter, street, storm drain, or creek!
- Dispose of all containment and cleanup materials properly.
- Report any hazardous materials spills immediately! Dial 911

Construction Entrances and Perimeter

- Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking.

Vehicle and equipment maintenance & cleaning

- Inspect vehicles and equipment for leaks frequently. Use drip pans to catch leaks until repairs are made; repair leaks promptly.
- Fuel and maintain vehicles on site only in a bermed area or over a drip pan that is big enough to prevent runoff.
- If you must clean vehicles or equipment on site, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or creeks.
- Do not clean vehicles or equipment on-site using soaps, solvents, degreasers, steam cleaning equipment, etc.

Earthwork & contaminated soils

- Keep excavated soil on the site where it will not collect in the street.
- Transfer to dump trucks should take place on the site, not in the street.
- Use fiber rolls, silt fences, or other control measures to minimize the flow of silt off the site.

- Earth moving activities are only allowed during dry weather by permit and as approved by the City Inspector in the Field.
- Mature vegetation is the best form of erosion control. Minimize disturbance to existing vegetation whenever possible.
- If you disturb a slope during construction, prevent erosion by securing the soil with erosion control fabric, or seed with fast-growing grasses as soon as possible. Place fiber rolls down-slope until soil is secure.
- If you suspect contamination (from site history, discoloration, odor, texture, abandoned underground tanks or pipes, or buried debris), call the Engineer for help in determining what should be done, and manage disposal of contaminated soil according to their instructions.

Dewatering operations

- Effectively manage all run-on, all runoff within the site, and all runoff that discharges from the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance.
- Reuse water for dust control, irrigation, or another on-site purpose to the greatest extent possible.
- Be sure to notify and obtain approval from the Engineer before discharging water to a street, gutter, or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the Engineer to determine what testing is required and how to interpret results. Contaminated groundwater must be treated or hauled off-site for proper disposal.

Saw cutting

- Always completely cover or barricade storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or sand/gravel bags to keep slurry out of the storm drain system.
- Shovel, absorb, or vacuum saw-cut slurry and pick up all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- If saw cut slurry enters a catch basin, clean it up immediately.

Paving/asphalt work

- Always cover storm drain inlets and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.
- Protect gutters, ditches, and drainage courses with sand/gravel bags, or earthen berms.
- Do not sweep or wash down excess sand from sand sealing into gutters, storm drains, or creeks. Collect sand and return it to the stockpile, or dispose of it as trash.
- Do not use water to wash down fresh asphalt concrete pavement.

Concrete, grout, and mortar storage & waste disposal

- Store concrete, grout, and mortar under cover, on pallets, and away from drainage areas. These materials must never reach a storm drain.
- Wash out concrete equipment/trucks off-site or into contained washout areas that will not allow discharge of wash water onto the underlying soil or onto the surrounding areas.

- Collect the wash water from washing exposed aggregate concrete and remove it for appropriate disposal off site.

Painting

- Never rinse paint brushes or materials in a gutter or street!
- Paint out excess water-based paint before rinsing brushes, rollers, or containers in a sink.
- Paint out excess oil-based paint before cleaning brushes in thinner.
- Filter paint thinners and solvents for reuse whenever possible. Dispose of oil-based paint sludge and unusable thinner as hazardous waste.

Landscape Materials

- Contain, cover, and store on pallets all stockpiled landscape materials (mulch, compost, fertilizers, etc.) during wet weather or when rain is forecasted or when not actively being used within 14 days.
- Discontinue the application of any erodible landscape material within 2 days of forecasted rain and during wet weather.

Storm drain polluters may be liable for fines of $10,000 or more per day!

For references and more detailed information:
www.cleanwaterprogram.org
www.cabmphandbooks.com

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DESIGN BY: ORANGE ENGINEERING

REVIEW BY:

PROJECT ADDRESS: 2229 DOVER AVE SAN PABLO, CA 9480

SHEET TITLE: CLEAN BAY BLUE PRINT

PROJECT NUMBER: 24002

SUBMITTAL

DATE	DESCRIPTION
12/10/24	PLANNING

REVISION

DELTA	DATE	DESCRIPTION

SHEET NO.

C 1.0

GENERAL REQUIREMENTS

1. VERIFICATION: VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
2. CONFLICTS: NOTES AND DETAILS ON THE DRAWINGS TAKE PRECEDENCE OVER THE GENERAL NOTES AND TYPICAL DETAILS IN CASE OF CONFLICT.
3. SUBSTITUTIONS: PROVIDE MANUFACTURER'S APPROVED PRODUCT EVALUATION REPORTS ICC REPORTS AND A LIST OF ALL PROPOSED SUBSTITUTIONS TO THE ENGINEER FOR REVIEW AND WRITTEN APPROVAL BEFORE FABRICATION.
4. SIMILAR WORK: WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE THE SAME AS FOR SIMILAR WORK SHOWN ON THE DRAWINGS.
5. PIPES, DUCTS, SLEEVES, CHASES, ETC.: SHALL NOT BE PLACED IN SLABS, BEAMS, OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC., UNLESS SPECIFICALLY SHOWN. OBTAIN PRIOR WRITTEN APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.
6. EXCAVATIONS: LOCATE AND PROTECT UNDERGROUND OR CONCEALED CONDUIT, PLUMBING OR OTHER UTILITIES WHERE NEW WORK IS BEING PERFORMED.
7. CONSTRUCTION LOADS: MATERIALS SHALL BE EVENLY DISTRIBUTED IF PLACED ON FRAMED FLOORS OR ROOFS. LOADS SHALL NOT EXCEED THE ALLOWABLE LOADING FOR THE SUPPORTING MEMBERS AND THEIR CONNECTIONS.
8. CONSTRUCTION METHODS AND PROJECT SAFETY: THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE METHODS, PROCEDURES OR SEQUENCE OF CONSTRUCTION. TAKE NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION. NEITHER THE OWNER NOR ARCHITECT/ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
9. CHANGES TO THE DRAWINGS: OBTAIN PRIOR WRITTEN APPROVAL.

REINFORCED CONCRETE

1. MATERIALS:
   CEMENT.....ASTM C-150 TYPE II
   AGGREGATE.....ASTM C-33 STANDARD WEIGHT
   REINFORCEMENT.....ASTM A-615 GRADE 60 TYPICAL
   ANCHOR BOLTS.....ASTM A-307 HOOKED ANCHOR BOLTS
   ANCHOR BOLTS.....ASTM A-307 HEADED MACHINE BOLTS
2. CONCRETE STRENGTHS: THE CONCRETE STRENGTHS SHOWN IN THE FOLLOWING TABLE ARE THE MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS; AND THE AGGREGATE (AGG) SHOWN IS THE MAXIMUM SIZE. CONCRETE SHALL BE STANDARD WEIGHT CONCRETE (145 PCF).

ITEM OF CONSTRUCTION	STRENGTH (PSI)	AGG (IN)	SLUMP (IN)
FOUNDATIONS	2,500	1 1/2	4
POUR IN PLACE WALL	2,500	1 1/2	4
SLABS-ON-GRADE	2,500	1	4

(DESIGN STRENGTH BASED ON 2,500 PSI NO SPECIAL INSPECTION IS PROVIDED)
   EXCEPTION:
   A) THE WEIGHT PERCENTAGE OF SULFATE — STRENGTH(PSI)
      > 1.0 — 4000
      > 2.0 — 4500
   B) SHOTCRETE CONCRETE STRENGTH = 4000 PSI MIN.
3. REINFORCEMENT:
   A) DETAILING, FABRICATION AND PLACING: SHALL CONFORM TO AND ACI 318.
   B) MINIMUM CONCRETE COVER:
      CAST AGAINST & EXPOSED TO EARTH .....3"
      EXPOSED TO EARTH OR WEATHER .....2"
      NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
      SLABS, WALLS, JOISTS .....3/4"
      BEAMS, COLUMNS (TIES, STIRRUPS, SPIRALS).....1-1/2"
   C) CHAIRS, SPACERS AND SAND PLATES: AS REQUIRED TO MAINTAIN CONCRETE COVER.
   D) VERTICAL REINFORCEMENT: SHALL BE DOWELED TO SUPPORTING MEMBERS WITH THE SAME SIZE AND SPACING OF REINFORCEMENT AS SHOWN IN THE DRAWINGS AND GENERAL NOTES.
   E) SPACING: CLEAR DISTANCE BETWEEN PARALLEL REINFORCEMENT IN A LAYER SHALL NOT BE LESS THAN 1-1/2 TIMES THE NOMINAL DIAMETER OF THE REINFORCEMENT, OR 1-1/3 TIMES MAXIMUM SIZE AGGREGATE, NOR LESS THAN 1-1/2".
   F) TACK WELDING, WELDING, HEATING OR CUTTING OF BARS: NOT PERMITTED U.O.N.
   G) SLAB CORNERS: PROVIDE 2-#4 X 4'-0" AT RE-ENTRANT CORNERS AND EACH CORNER OF RECTANGULAR HOLES IN SLABS. PLACE BARS DIAGONALLY.
   H) SPLICES (STANDARD LAPS): LAP SPLICE PER DETAIL 13/SD1.0. STAGGER BOTTOM SPLICES AT LEAST 5'-0" FROM SPLICES IN OTHER BOTTOM REINFORCEMENT. STAGGER SPLICES FOR TOP REINFORCEMENT SIMILARLY.
4. ANCHOR BOLTS, DOWELS AND HOLD DOWN ANCHORS: SECURELY HELD IN PLACE PRIOR TO FOUNDATION INSPECTION BY THE BUILDING OFFICIAL AND OBSERVATION BY THE ENGINEER.
5. PIPES, SLEEVES AND DUCTS: NOT TO BE PLACED IN WALLS, BEAMS, SLABS, FOOTINGS OR COLUMNS UNLESS SPECIFICALLY DETAILED.
6. CHAMFER: 3/4 INCH ON EXPOSED CORNERS.
7. ADMIXTURES: REVIEWED BY THE ENGINEER. CALCIUM CHLORIDE OR ADDED CHLORIDES ARE NOT PERMITTED.
8. CONSTRUCTION JOINTS: ACI 117.9 & 6.4, 1/4 INCH AMPLITUDE MINIMUM OR EYED JOINTS PER PLAN. LOCATION OF JOINTS TO BE REVIEWED BY THE ENGINEER. WAIT 48 HOURS BETWEEN POURS.
9. SLAB-ON-GRADE JOINTS: LOCATION OF ALL CONSTRUCTION, CONTROL AND WEAKENED PLANE JOINTS NOT SPECIFICALLY INDICATED ON THE DRAWINGS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO THE PLACING OF REINFORCEMENT. MAXIMUM SPACING 15 FEET ON CENTER.
10. ACTUAL DIMENSIONS: SLAB, WALL, BEAM AND COLUMN DIMENSIONS SHOWN ARE ACTUAL DIMENSIONS NOT NOMINAL DIMENSIONS (i.e. A 4 INCH SLAB IS 4 INCHES THICK, NOT 3-1/2 INCHES.)
11. CONCRETE CURING: ACI 318
12. VIBRATION: ALL CONCRETE SHALL BE CONSOLIDATED WITH MECHANICAL VIBRATORS.

ENGINEERED LUMBER

1. LVL - LAMINATED VENEER LUMBER SHALL BE 2.0E MICROLLAM LVL.
2. PSL - PARALLEL STRAND LUMBER SHALL BE 2.0E PARALLAM PSL.
3. LSL - LAMINATED STRAND LUMBER SHALL BE 1.3E TIMBERSTRAND FOR STUDS, RIM BOARDS AND BLOCKING, 1.55E TIMBERSTRAND FOR JOIST, BEAMS AND HEADERS.

ENGINEERED LUMBER I-JOISTS

I-JOIST SHALL BE APA PERFORMANCE RATED MANUFACTURED IN CONFORMANCE WITH PRI-400, PERFORMANCE STANDARD FOR APA EWS. I-JOIST FLANGES TO HAVE MINIMUM WIDTH OF 1 1/2" 7 MINIMUM THICKNESS OF 1 5/16". WEBS TO BE PLYWOOD OR OSB WITH MINIMUM THICKNESS OF 3/8". FOR ONE HOUR CONSTRUCTION, PRI-50 JOISTS ARE REQUIRED AT 24" OC. MAX., SEE ESR-1405. PROPER STORAGE, HANDLING AND INSTALLATION SHALL BE FOR THESE PLANS AND MANUFACTURER'S RECOMMENDATIONS.

WOOD

1. GRADE STAMPED DOUGLAS FIR/LARCH (SEE LUMBER GRADES).
2. NAILS: COMMON WIRE UNLESS OTHERWISE NOTED. EDGE SEE NAILING NOTE BELOW.
3. THE SPACING CENTER TO CENTER OF NAILS IN THE DIRECTION OF STRESS
4. SHALL NOT BE LESS THAN THE REQUIRED PENETRATION. HOLES FOR NAILS, WHERE NECESSARY TO PREVENT SPLITTING, SHALL BE BORED TO A IAMETER SMALLER THAN THAT OF THE NAIL.
5. ANCHOR BOLTS (FOUNDATION ANCHOR BOLTS): PROVIDE 5/8 INCH DIAMETER ANCHOR OR MACHINE BOLTS WITH A MINIMUM OF 7 INCHES EMBEDMENT INTO THE CONCRETE AND WITHIN 12 INCHES OF EACH END OF EACH PLATE. SPACE ANCHORS AT 48 INCHES ON CENTER U.O.N. ANCHORS SHALL BE LOCATED A MAXIMUM OF 2 INCHES FROM THE FACE OF STUD RECEIVING WOOD STRUCTURAL PANELS. ANCHOR BOLT HOLES 1/32 TO 1/16 INCH LARGER THAN THE ANCHOR BOLT DIAMETER. HOLES MORE THAN 1/16 INCH LARGER THAN THE ANCHOR BOLT SHALL BE EPOXY FILLED UNDER THE CONTINUOUS SUPERVISION OF A LICENSED SPECIAL INSPECTOR.
6. BOLTS: NOT LESS THAN 7 BOLT DIAMETERS FROM THE END AND 4 DIAMETERS FROM THE EDGE OF THE MEMBER. BOLT HOLES 1/32 TO 1/16 INCH LARGER THAN THE BOLT DIAMETER. ALL NUTS SHALL BE TIGHTENED WHEN INSTALLED AND RE-TIGHTENED AT THE COMPLETION OF WORK OR BEFORE CLOSING IN. THREAD PROJECTION SHALL BE 1/16 INCH MINIMUM BEYOND THE NUT. BOLTS IN SPECIFIED SLOTTED HOLES SHALL BE CENTERED IN THE SLOT UON.
7. LAG SCREW CLEARANCE & LEAD HOLES SHALL BE BORED AS FOLLOWS: THE CLEARANCE HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK, AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF UNTHREADED SHANK. THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 60% TO 75% OF THE SHANK DIAMETER AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION.
8. SQUARE STEEL PLATE WASHERS (PW): ANCHOR BOLTS, BOLTS, LAGS AND NUTS, NOTED PW, SHALL BE SQUARE STEEL PLATE WASHERS:

BOLT DIAM (IN)	THICKNESS (IN)	SIZE (IN)
1/2	1/4	3 X 3
5/8	1/4	3 X 3
3/4	5/16	3 X 3
7/8	5/16	3 X 3
1	3/8	3 1/2 X 3 1/2

9. CUT STEEL WASHERS: FOR BOLTS, LAGS AND NUTS, UON.
10. FRAMING CONNECTORS: PER MANUFACTURER'S APPROVED PRODUCT EVALUATION REPORTS ICC APPROVED AND INSTALLED ACCORDINGLY. SIZE AND NUMBER OF NAILS TO BE MAXIMUM SPECIFIED BY THE MANUFACTURER UON.
11. NAILED/SCREWED HOLD DOWN ANCHORS: INSTALL PER MANUFACTURER'S APPROVED ICC PRODUCT EVALUATION REPORT. INSTALL HOLD DOWNS 1/2 INCH MINIMUM ABOVE THE PLATE TO ALLOW FOR TIGHTENING ANCHOR BOLT. THE HOLD DOWN SHALL BE INSTALLED TIGHT TO THE HOLD DOWN POST WITHOUT FILLERS OR DAPPING. DO NOT BEND HOLD DOWN ANCHORS.
12. BOLTED HOLD DOWN ANCHORS: INSTALL PER MANUFACTURER'S APPROVED ICC PRODUCT EVALUATION REPORT. INSTALL HOLD DOWNS 1/2 INCH MINIMUM ABOVE THE PLATE TO ALLOW FOR TIGHTENING ANCHOR BOLT. TIGHTEN HOLD DOWN ANCHOR BEFORE TIGHTENING POST BOLTS. USE EXTRA CARE IN BORING THE POST BOLT HOLES (1/32 TO 1/16 LARGER THAN THE BOLT DIAMETER). THE HOLD DOWN SHALL BE INSTALLED TIGHT TO THE HOLD DOWN POST WITHOUT FILLERS OR DAPPING. THE POST BOLTS SHALL NOT BE COUNTERSUNK INTO THE HOLD DOWN POST UON. DO NOT BEND HOLD DOWN ANCHORS.
13. PRESERVATIVE TREATED WOOD: WOOD EXPOSED TO THE WEATHER; FOUNDATION PLATES ON CONCRETE SLABS, FOUNDATIONS WHICH ARE IN DIRECT CONTACT WITH EARTH SHALL BE TREATED WOOD WITH PRESERVATIVE RETENTION AS REQUIRED FOR USE. NEWLY EXPOSED SURFACES RESULTING FROM FIELD CUTTING, BORING OR HANDLING SHALL BE FIELD TREATED IN ACCORDANCE WITH AWPA M-4.
14. TOP PLATES: TWO PIECES, SAME SIZE AS STUDS, STAGGER SPLICE 4'-0" MINIMUM. CENTER SPLICES OVER STUDS. SPLICE WITH 12-16d MINIMUM UON.
15. FULL-DEPTH SOLID BLOCKING OR CROSS BRACING: INSTALLED AT INTERVALS NOT EXCEEDING 8 FEET FOR ALL JOISTS AND RAFTERS 2x12 AND DEEPER.
16. SOLID BLOCKING: TWO INCH FULL WIDTH BLOCKING (FIRE STOPS) IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AT THE CEILING AND FLOOR LEVELS AND AT 10-FOOT INTERVALS BOTH VERTICAL AND HORIZONTAL.
17. CUTTING AND NOTCHING: DO NOT CUT, BORE, COUNTERSINK OR NOTCH WOOD MEMBERS EXCEPT WHERE SHOWN IN THE DETAILS. HOLES THROUGH PLATES, STUDS AND DOUBLE PLATES IN WALLS SHALL FOLLOW DETAIL 5/SD1.0, THE MEMBER WIDTH AND SHALL BE LOCATED IN THE CENTER OF THE MEMBER.
18. PARTITIONS: DOUBLE JOISTS UNDER PARTITIONS PARALLEL TO JOISTS AND PROVIDE SOLID BLOCKING UNDER PARTITIONS PERPENDICULAR TO JOISTS.
19. END SUPPORT: ROOF AND FLOOR JOISTS OVER 4 INCHES DEEP SHALL HAVE THEIR ENDS HELD IN POSITION WITH EITHER:
    FULL DEPTH SOLID BLOCKING;
    NAILED BRIDGING;
    NAILING OR BOLTING TO OTHER FRAMING MEMBERS; OR
    APPROVED JOIST HANGERS.
20. HOT DIPPED ZINC-COATED GALVANIZING: ALL EXPOSED STEEL TIMBER HARDWARE, FASTENERS AND CONNECTORS.
21. FASTENERS FOR PRESERVATIVE TREATED WOOD SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL

LUMBER GRADES DOUGLAS FIR/LARCH

COMPLY WITH PS 20, AMERICAN SOFTWOOD LUMBER STANDARD AND STANDARD GRADING RULES FOR WESTERN LUMBER. 19% MAXIMUM MOISTURE CONTENT AT TIME OF PLACEMENT.

1. DIMENSION LUMBER: BLOCKING
   (2" TO 4" THICK, 2" TO 4" & NONBEARING STUDS WIDE; STANDARD) (10' MAXIMUM)
2. DIMENSION LUMBER: BEARING
   (2" TO 4" THICK, 2" TO 4" STUDS JOISTS & RAFTERS WIDE; NO. 2)
3. DIMENSION LUMBER: JOISTS AND RAFTERS
   (2" TO 4" THICK, 5" AND STUDS, BLOCKING, WIDER; NO. 2)
4. BEAMS AND STRINGERS:
   (5" AND THICKER, WIDTH MORE THAN 2" GREATER THAN THICKNESS; NO. 1)
5. POSTS AND TIMBERS:
   (4" AND 6", AND LARGER, WIDTH NOT MORE THAN 2" GREATER THAN THICKNESS; NO.2)
6. HOLD DOWN POSTS: (NO. 2)

ABBREVIATION:

&	AND	FTG.	FOOTING
ARCH.	ARCHITECTURAL	GLB	GLU-LAM BEAM
BLDG.	BUILDING	JST	JOIST
BM.	BEAM	M.B.	MACHINE BOLT
BOT.	BOTTOM	MIN.	MINIMUM
CONC.	CONCRETE	No. or #	NUMBER
CONT.	CONTINUOUS	O.C.	ON CENTER
DBL.	DOUBLE	REF.	REFERENCE
DET.	DETAIL	SIM.	SIMILAR
DIA.	DIAMETER	SQ.	SQUARE
DIM.	DIMENSION	STAGG.	STAGGERED
EA.	EACH	STD.	STANDARD
E.E.	EACH END	STL.	STEEL
E.F.	EACH FACE	T.&B.	TOP & BOTTOM
EL.	ELEVATION	THK.	THICK
E.N.	EDGE NAILING	TYP.	TYPICAL
EQ.	EQUAL	U.O.N.	UNLESS OTHERWISE NOTED
E.S.	EACH SIDE	VERT.	VERTICAL
E.W.	EACH WAY	W/	WITH
F.G.	FINISH GRADE	W/O	WITHOUT
FL.	FLOOR		

NAILING

1. ALL NAILING SHALL BE COMMON WIRE NAILS AND FOLLOW THIS TABLE:

SIZE PENNY	DIAMETER INCHES	WIRE GAGE	PENETRATION INCHES
8d	0.134	10-1/4	1-5/8
10d	0.148	9	1-7/8
16d	0.165	8	2
20d	0.203	6	2-3/8

PENETRATION IS MEASURED INTO THE PIECE RECEIVING THE NAIL POINT. 1-1/2 INCHES OF PENETRATION FOR 10d AND 16d NAILS IS ACCEPTABLE FOR TOP PLATES AND DOUBLED 2X MEMBERS. WHERE THE NAIL PENETRATION WILL BE LESS THAN SPECIFIED, INCREASE NAIL LENGTH (SIZE) TO OBTAIN THE PENETRATION REQUIRED FOR THE NAIL SPECIFIED.

2. FASTENER SCHEDULE FOR STRUCTURAL MEMBERS - THE CONNECTIONS LISTED ARE THE MINIMUM PERMISSIBLE. USE COMMON WIRE NAILS FOR ALL NAILED CONNECTIONS. WHERE POSSIBLE, NAILS DRIVEN PERPENDICULAR TO THE GRAIN SHALL BE USED INSTEAD OF TOE NAILS. SEE THE DRAWINGS FOR ADDITIONAL NAILING REQUIREMENTS.

ROOF

1. CL'G. JOIST/RAFTER/TRUSS TO TOP PLATE/OTHER FRAMING BELOW, EACH END, TOE NAIL 3-8d
   BLOCKING (NOT AT THE WALL TOP PLATE) TO RAFTER OR TRUSS,EACH END, TOENAIL 2-8d
   BLOCKING (NOT AT THE WALL TOP PLATE) TO RAFTER OR TRUSS,END NAIL 2-16d
   FLAT BLOCKING TO TRUSS AND WEB FILLER, FACE NAIL .....14d @ 6" O.C.
1. CL'G. JOIST TO TOP PLATE, EACH JOIST, TOENAIL.....3-8d
2. CL'G. JOIST LAPS OVER PARTITIONS(NO THRUST),FACE NAIL.....3-16d
3. CL'G. JOIST ATTACHED TO PARALLEL RAFTER(HEEL JOINT), FACE NAIL PER DETAIL
4. COLLAR TIE TO RAFTER,FACE NAIL 3-10d
5. RAFTER OR ROOF TRUSS TO TOP PLATE,TOENAIL.....3-10d
6. ROOF FATHERS TO RIDGE VALLEY OR HIP RAFTERS OR RIDGE BOARD,END NAIL 2-16d
   ROOF FATHERS TO RIDGE VALLEY OR HIP RAFTERS OR RIDGE BOARD, TOENAIL 3-10d

WALL

1. STUD TO STUD (NOT AT BRACED WALL PANELS),FACE NAIL .....16d @24" O.C.
2. STUD TO STUD & ABUTTING STUDS AT INTERSECTING WALL CORNER, FACE NAIL .....16d @16" O.C.
3. BUILT-UP HEADER(2" TO 2" HEADER),EACH EDGE, FACE NAIL.....16d @16"O.C.
4. CONTINUOUS HEADER TO STUD,TOENAIL 4-8d
5. TOP PLATE TO TOP PLATE,FACE NAIL.....16d @16"O.C.
6. TOP PLATE TO TOP PLATE(AT END JOISTS),EACH SIDE OF END JOINT, FACE NAIL.....8-16d

7. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS),FACE NAIL.....16d @16"O.C.
8. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING),FACE NAIL .....2-16d @16"O.C.
9. STUD TO TOP OR BOTTOM PLATE,TOENAIL.....4-8d
10. STUD TO TOP OR BOTTOM PLATE,END NAIL.....2-16d
11. TOP PLATES,LAPS AT CORNERS AND INTERSECTIONS,FACE NAIL.....2-16d
12. 1" BRACE TO EACH STUD AND PLATE,FACE NAIL.....2-8d
13. 1"x6" SHEATHING TO EACH BEARING,FACE NAIL.....2-8d
14. 1"x8" AND WIDER SHEATHING TO EACH BEARING,FACE NAIL.....3-8d

FLOOR

1. JOIST TO SILL,TOP PLATE OR GIRDER,TOENAIL.....3-8d
2. RIM /BAND JOIST/ BLK'G TO TOP PLATE/SILL/OTHER FRAMING BELOW, TOENAIL .....8d @ 6" O.C.
3. 1"X6" SUBFLOOR OR LESS TO EACH JOIST,FACE NAIL.....2-8d
4. 2" SUBFLOOR TO JOIST OR GIRDER,FACE NAIL.....2-16d
5. 2"PLANKS(PLANK & BEAM - FLOOR&ROOF),EACH BEATING,FACE NAL.....2-16d
6. BUILT-UP GIRDERS AND BEAM,2" LUMBER LAYERS,FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES.....20d @32" O.C.
   BUILT-UP GIRDERS AND BEAM,2" LUMBER LAYERS,EACH SPLICE ,FACE NAIL 2-20d
7. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS,EACH JOIST OR RAFTER, FACE NAIL 3-16d
8. JOIST TO BAND JOIST OR RIM JOIST,END NAIL.....3-16d
9. BRIDGING OR BLOCKING TO JOIST,RAFTER OR TRUSS,EACH END, TOENAIL 2-8d

WOOD STRUCTURAL PANELS (PANEL)

1. REFERENCES: PS1, PS2, APA STANDARD PRP-108, NATIONAL EVALUATION SERVICE REPORT NER-108
2. WALL PANELS.....OSB OR STRUCTURAL I, 15/32 INCH
3. ROOF PANELS.....OSB OR STRUCTURAL I, 15/32 INCH
4. FLOOR PANELS.....STURD-I-FLOOR, SANDED 19/32 INCH 20 OC, T&G (EXTERIOR EXPOSURE AT BALCONIES AND DECKS)
5. BLOCKING:
   A) WALLS: ALL UNSUPPORTED PANEL JOINTS SHALL BE BLOCKED SOLID WITH 3x BLOCKING
   B) FLOORS & ROOFS: WHERE NOTED ON THE DRAWINGS, ALL SUPPORT PANEL JOINTS SHALL BE BLOCKED SOLID WITH 3x4 FLAT BLOCKING.
6. NAILING: COMMON WIRE NAILS. PANEL NAILS SHALL BE DRIVEN SO THAT THE HEADS ARE FLUSH WITH THE SURFACE OF THE PANEL. FIELD NAILING (FN) SHALL BE 12 INCHES ON CENTER AND THE MINIMUM PANEL EDGE DISTANCES SHALL BE MAINTAINED.
7. MACHINE NAILING: SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION FOR THIS PROJECT AND REVIEW BY THE ENGINEER. THE USE OF MACHINE NAILING IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. PANEL NAILS SHALL BE DRIVEN SO THAT THE HEADS ARE FLUSH WITH THE SURFACE OF THE PANEL AND THE MINIMUM PANEL EDGE DISTANCES ARE MAINTAINED.
8. GLUED FLOORS: FIELD GLUE TO ALL SUPPORTS AND T&G EDGES PER APA, AFG-01. FRAMING SHALL BE FREE OF SURFACE MOISTURE & DEBRIS PRIOR TO GLUING.
9. WOOD STRUCTURAL PANELS (PANELS): WHERE ADJACENT WALLS ARE PANELED, PANELS SHALL BE INSTALLED OVER AND UNDER OPENINGS.

WALL STUDS TABLE

TRIB WIDTH = 10 FT, ROOF DL= 20, LL= 20, FLOOR DL=15, LL=40

STUD SIZE	STUD HEIGHT	MAX. SPACING					
		1 STORY	2 STORY		3 STORY		
			2ND LEVEL	1ST LEVEL	3RD LEVEL	2ND LEVEL	1ST LEVEL
2X4	10'–0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	N/A
2X4	12'–0"	16" O.C.	16" O.C.	12" O.C.	16" O.C.	12" O.C.	N/A
3X4	12'–0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.
2X6	12'–0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	12" O.C.
2–2X4	12'–0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.
2–2X6	12'–0"	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.

*LOWER STUDS MUST BE INLINE WITH UPPER STUDS
*2X BLOCKING BETWEEN STUDS AT 4'–6" O.C.

STRUCTURAL STEEL

1. All structural steel materials and construction shall conform to the requirements specified in Building Code, Chapter 22 & Reference.
2. Steel shall be primed with a rust resistance primer & should conform to ASTM A36 (fy=36 ksi) as a minimum, unless otherwise noted. All W shapes to be ASTM A992. (fy=50 ksi)
3. Steel pipe shall conform to ASTM A53, Grade B (Fy=35 ksi).
4. Round HSS tubing shall conform to ASTM A500 Grade B (Fy=42 ksi)
5. Rectangular and square HSS tubing shall conform to ASTM A500, Grade B (Fy=46 ksi).
6. HP sections shall conform to ASTM A572, Grade 50 (Fy=50 ksi).
7. All structural welding procedures and materials shall conform to Building Code, Section 2204.1. All welding shall be by the shield metal arc welding process or the submerged arc welding process using E70XX-low hydrogen electrodes, unless otherwise noted.
8. All bolts for connections of steel members shall conform to Building Code, Section 2204.2 & ASTM A325N, unless otherwise noted. Holes for bolts should be drilled or punched & shall be 1/16" larger than bolt diameter.
9. Prefabricated steel moment frames per manufacturer. Steel moment frame manufacturer shall submit shop drawing, design calculations, and approved moment frame test report (ICC, IAMPO, or test per Appendix S of AISC SEISMIC PROVISION) to E.O.R. for review.
10. All shop welding and fabrication must be done in a shop approved by a special inspection agency which is approved by the Building Official. All field welding must be performed by a certified welder and a special inspector shall continuously inspect all structural field welding. Both shall be approved by the Building Official.

CONCRETE MASONRY

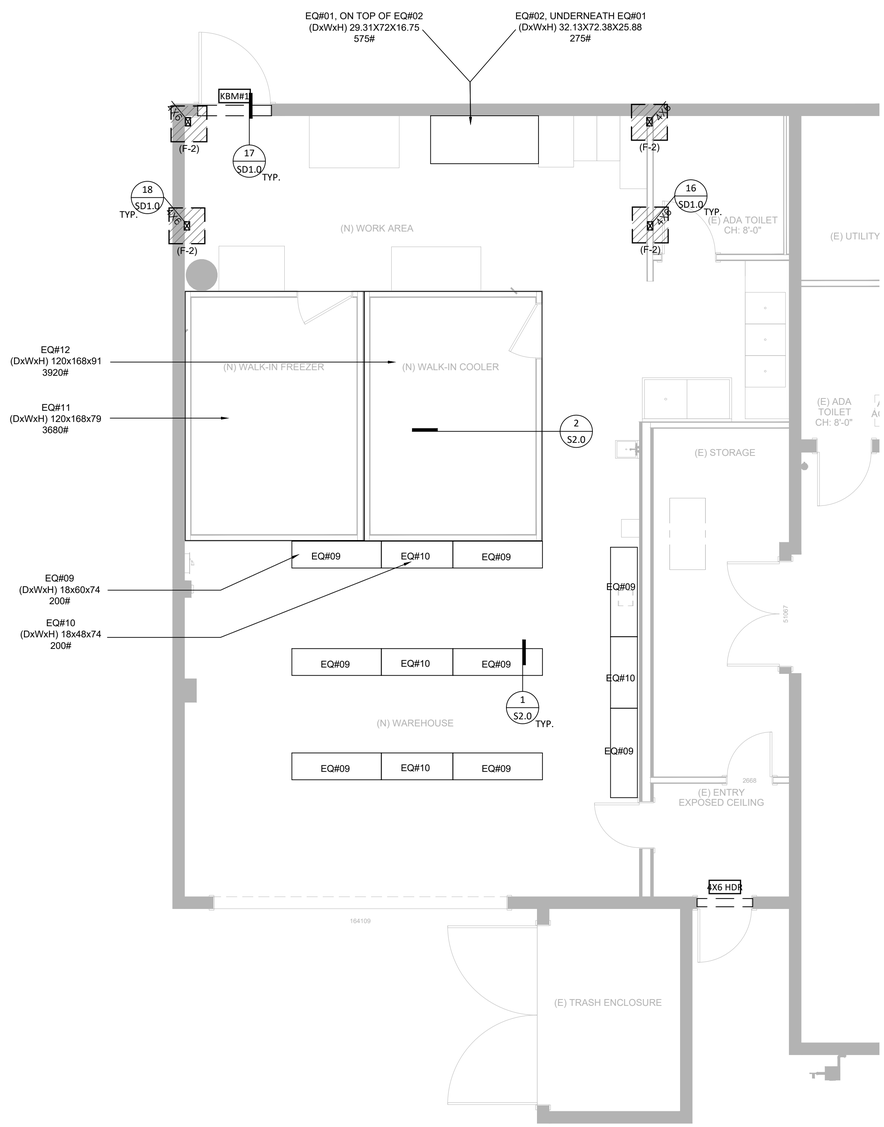
1. All concrete masonry materials and construction shall be in accordance with Building Code, Chapter 21.
2. All materials making up finished concrete masonry construction shall conform to standards required by Building Code Sec. 2103.
3. Mortar shall be type M or S as applicable and conforming with ASTM C270 and shall be proportioned per Article 2.1 & 2.6A of Specification for Masonry Structures (TMS 602-13/ACI 530.1-13/ASCE 6-13).
4. Grout shall comply with Article 2.2 & 2.6 of TMS 602-13/ACI 530.1-13/ASCE 6-13 and shall attain a minimum compression strength at 28 days of 2000 psi or the required compression, f'm, whichever is greater. The compressive strength of grout shall be determined in accordance with ASTM C-1019.
5. Concrete masonry units shall conform to ASTM C90 for load bearing concrete masonry units. Concrete brick shall conform to ASTM C55, Specifications for Concrete Building Brick.
6. Grade N concrete bricks are for use as architectural veneer and facing, limited to in exterior walls.
7. Grade S concrete bricks are for general use where moderate strength and resistance to frost action and moisture penetration is required.
8. The specified compressive strength of masonry, f'm, shall be 2000 psi, unless noted otherwise.
9. Special inspection for concrete masonry construction shall be carried out in accordance with Building Code Section 1704 and requirements in Special Inspection tables on sheet SN1.0. Masonry compressive strength, f'm shall be verified by Unit strength method or Prism test method prior to and during construction as described in Building Code, Section 2105.

SHOTCRETE

1. STRUCTURAL WET-MIX SHOTCRETE SHALL BE ALLOWED WHEN SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS AND WHERE THE OWNER, CONTRACTOR AND CONCRETE SUPPLIER COMPLY WITH THESE PROCEDURES, IN ADDITION TO THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE (CBC) SECTION 1913.
2. LIMITATIONS:
   A) STRUCTURAL WET-MIX SHOTCRETE SHALL NOT BE PLACED WHERE THE STREAM FROM THE NOZZLE CANNOT DIRECTLY IMPINGE ON THE SURFACE ON WHICH THE SHOTCRETE IS TO BE PLACED. WHERE CONDITIONS PRECLUDE THE POSSIBILITY OF OBTAINING CORES FROM THE STRUCTURE, THIS METHOD SHALL NOT BE USED.
   B) THE MAXIMUM SIZE OF REINFORCEMENT SHALL BE #5 BARS UNLESS IT CAN BE DEMONSTRATED BY PRE-CONSTRUCTION TESTS THAT ADEQUATE ENCASEMENT OF LARGER BARS WILL BE ACHIEVED.
   C) LAP SPLICES OF REINFORCING BARS SHALL UTILIZE NONCONTACT LAP SPLICES UNLESS IT CAN BE DEMONSTRATED BY PRE-CONSTRUCTION TESTS THAT ADEQUATE ENCASEMENT OF BARS WILL BE ACHIEVED, AND PROVIDED THAT THE SPLICE IS ORIENTED SO THAT A PLANE THROUGH THE CENTER OF THE LAPPED BARS IS PERPENDICULAR TO THE SURFACE OF THE SHOTCRETE.
   D) SHOTCRETE SHRINKAGE SHALL BE LIMITED TO 0.06 PERCENT AT THREE MONTHS AS DETERMINED BY ASTM C157.
   E) SHOTCRETE MAY ONLY BE APPLIED TO TIED COLUMNS WHERE THE SPACING OF THE REINFORCING STEEL IS THE SAME AS FOR WALLS UNLESS IT CAN BE DEMONSTRATED BY PRE-CONSTRUCTION TESTS THAT ADEQUATE ENCASEMENT OF THE BARS USED IN THE DESIGN CAN BE ACHIEVED
3. INSPECTION
   A) SHOTCRETE REQUIRES CONTINUOUS INSPECTION BY A REGISTERED DEPUTY INSPECTOR.
   B) CONTINUOUS INSPECTION SHALL BE PROVIDED FOR THE PLACEMENT OF ALL REINFORCING STEEL, THE PLACEMENT OF SHOTCRETE AND THE ASSEMBLY, SHOOTING, TESTING AND DISASSEMBLY OF PRE-CONSTRUCTION TEST PANELS
4. PRE-CONSTRUCTION TEST:
   A) TEST PANELS SHALL BE REPRESENTATIVE OF THE PROJECT AND SIMULATE JOB CONDITIONS AS CLOSE AS POSSIBLE. PANEL THICKNESS AND REINFORCING SHALL REPRODUCE THE THICKEST AND MOST CONGESTED AREA SPECIFIED IN STRUCTURAL DESIGN. MULTIPLE TEST PANELS MAY BE NECESSARY TO PROVIDE A COMPLETE REPRESENTATION OF THE ACTUAL CONDITIONS WHERE SHOTCRETE IS TO BE USED.
   B) THE TEST PANELS SHALL BE SHOT AT THE SAME ANGLE, USING THE SAME EQUIPMENT AND NOZZLEMAN, AND WITH THE SAME CONCRETE MIX DESIGN THAT WILL BE USED ON THE PROJECT.
   C) THE TEST PANELS SHALL BE CURED, THEN DISASSEMBLED, EXAMINED, SAWED AND/OR CORE DRILLED AT THE DISCRETION OF THE STRUCTURAL ENGINEER AND NSPECTOR, AND TESTED PRIOR TO COMMENCEMENT OF SHOTCRETE WORK.
   D) TEST PANELS SHALL BE A MINIMUM OF 4 FEET SQUARE.
5. MATERIALS:
   A) CEMENT SHALL COMPLY WITH ASTM C150, TYPE I OR TYPE II LOW ALKALI.
   B) AGGREGATE HALL BE NORMAL WEIGHT COMPLYING WITH ASTM C33. OMBINED AGGREGATE GRADATION SHALL MEET ACI 506R, TABLE 1.1, RADATION NO. 2.
   C) WATER SHALL BE CLEAN AND POTABLE
   D) ADD WATERPROOFING ADMIXTURE PER WATERPROOFING CONSULTANT'S RECOMMENDATIONS AT PERIMETER RETAINING WALLS.
6. CONDITIONS:

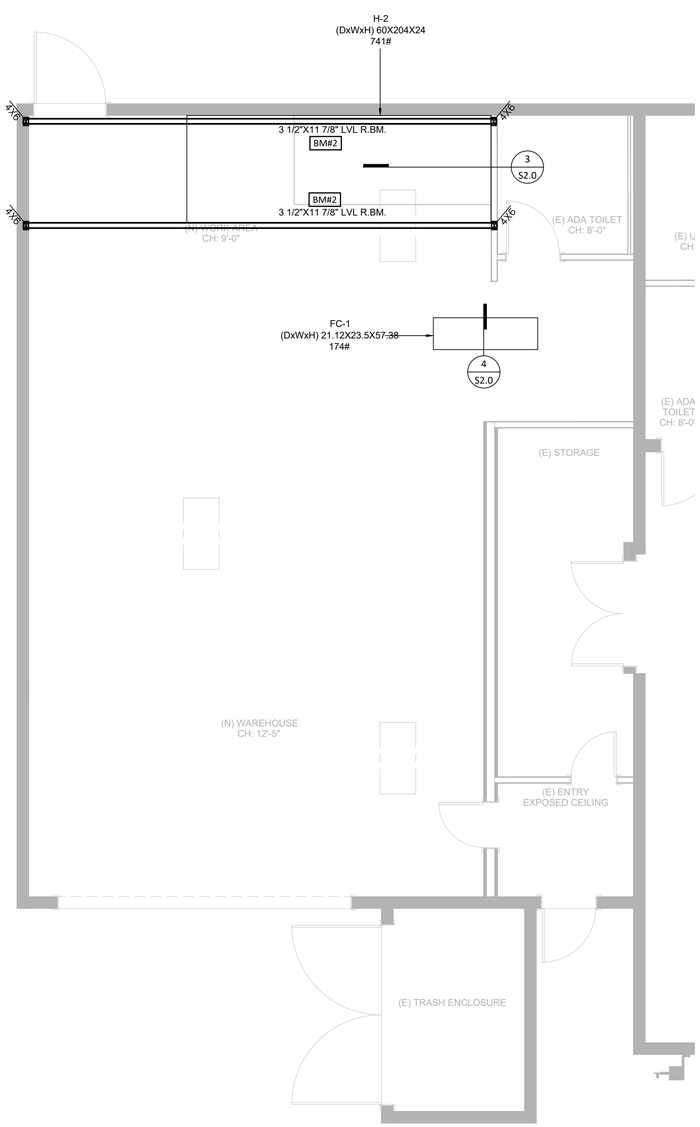
A. FLASH COATS AND FINISH COATS ARE NOT PERMITTED UNLESS FULL DESIGN THICKNESS IS ACHIEVED WITHOUT CONSIDERING THE FLASH COAT OR FINISH COAT.
B. MINIMUM SLUMP SHALL BE 1 1/2" AND MAXIMUM SLUMP SHALL BE 2 1/2". SLUMP SHALL BE MEASURED AT THE POINT OF DISCHARGE FROM THE MIXER, EXCEPT THE BUILDING INSPECTOR MAY REQUIRE SLUMP TESTS AT THE DISCHARGE POINT WHERE WATER MAY HAVE BEEN ADDED.
C. A CAPABLE NOZZLEMAN'S HELPER WITH AN AIR BLOW PIPE SHALL BE PROVIDED TO ASSIST THE NOZZLEMAN IN KEEPING ALL REBOUND BUILD-UP OUT OF THE WORK.
D. ADDITIONAL WORKERS MAY BE REQUIRED TO TAKE THE REBOUND FROM THE WORK IF THE REBOUND CANNOT BE REMOVED B

	EQUIPMEN	BRAND AND Model	D (in)	W (in)	H (in)	Weight (lb)	Location
CENTRAL KITCHEN	EQ#01	COOKING PERFORMANCE GROUP GM-CPG-72-NL	29.31	72.00	16.75	575	FLOOR
	EQ#02	AVANTO CBE-72-HC 72"	32.13	72.38	25.88	275	FLOOR
	EQ#09	REGENCY 18" x 60" x 74"	18.00	60.00	74.00	200.00	FLOOR
	EQ#10	REGENCY 18" x 48" x 74"	18.00	48.00	74.00	200	FLOOR
	EQ#11	MASTER BILT QS1014	120.00	168.00	79.00	CAL TBD	FLOOR
	EQ#12	MASTER BILT QS771014	120.00	168.00	91.00	CAL TBD	FLOOR
	MUA-2	ECON-AIR A2-20D	38.00	99.00	37.00	553	ROOF
	HP-1	TRANE 4TWR7048	37.25	34.25	45.13	292.00	ROOF
	FC-1	TRANE TEM8A0C48	21.13	23.5	57.38	174.00	CEILING
	H-2	ECON-AIR 6024 EX-2	60.00	191.00	24.00	741.00	CEILING



FOUNDATION PLAN

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



CEILING PLAN

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

SYMBOLS LEGEND

- WOOD POST
- WOOD POST ABOVE
- DIRECTION OF JOISTS
- SHEAR PANEL LENGTH AND SCHEDULE
- SHEAR PANEL LENGTH AND SCHEDULE (LENGTH / TYPE)
- DETAIL (X / SDX)
- BEAM NUMBER, REFER TO E.O.R. CALCULATIONS (BM#)
- SHEAR LINE (X.X)
- CALIFORNIA FRAMING
- PAD FOOTING
- (E) FOUNDATION
- (N) FOUNDATION

FOUNDATION NOTES

1. CONFIRM ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
   PLAN SHOWS STRUCTURAL SLAB, WALLS, ABOVE FOUNDATION.
   ARCHITECTURAL BACKGROUND INDICATES NON-STRUCTURAL WALLS
   CONFIRM ALL BACKGROUND INFORMATION WITH CURRENT ARCHITECTURAL DRAWINGS.
2. SEE STRUCTURAL SPECIFICATIONS ON SHEET SN1

ANCHOR SCHEDULE (ANCHOR AT EACH LEG)(ESR-4266)			
EQ #	ANCHOR TYPE	EMBEDMENT	TOTAL # OF ANCHOR
EQ#1 & 2	3/8" HILTI KB-TZ2	2"	4
EQ#09	3/8" HILTI KB-TZ2	2"	4
EQ#10	3/8" HILTI KB-TZ2	2"	4
EQ#11	1/4" HILTI KH-EZ	1-5/8"	16
EQ#12	1/4" HILTI KH-EZ	1-5/8"	16
H-2	1/2" LAG SCREW	3"	4
MUA-2	3/8" LAG SCREW	2.5"	6
HP-1	1/2" LAG SCREW	2.5"	4

ORANGE ENGINEERING
4005 CLIPPER CT
FREMONT, CA 94538
TEL (408) 888-7836

REGISTERED PROFESSIONAL ENGINEER
DI YANG
No. C92766
12/31/25
STATE OF CALIFORNIA

TI & ADDITION
2229 DOVER AVE
SAN PABLO, CA 94806

DATE: 10/11/24
JOB NO. SS24805

ISSUE & REVISION

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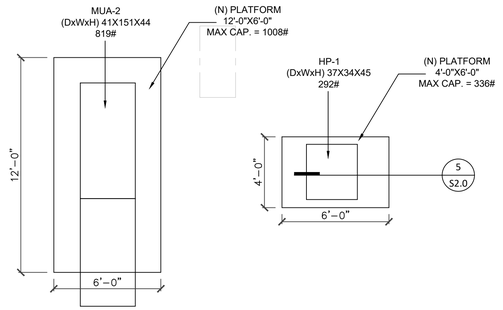
SHEET NAME.
FOUNDATION & CEILING PLAN - CENTRAL KITCHEN

SHEET NO.
S1.0

DRAWN BY:



PARTIAL ROOF PLAN

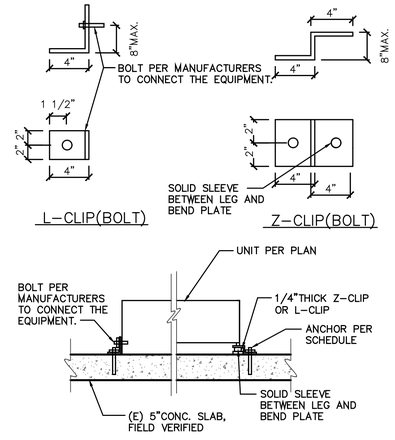
SCALE : 1/4" = 1'-0"

SYMBOLS LEGEND

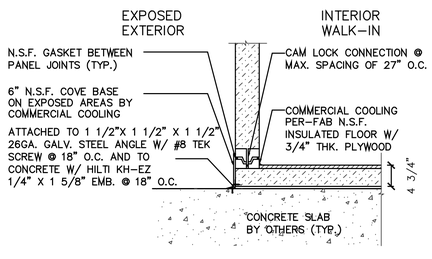
- WOOD POST
- WOOD POST ABOVE
- DIRECTION OF JOISTS
- SHEAR PANEL LENGTH AND SCHEDULE
- SHEAR PANEL LENGTH AND SCHEDULE
- DETAIL
- BEAM NUMBER, REFER TO E.O.R. CALCULATIONS
- SHEAR LINE
- CALIFORNIA FRAMING
- PAD FOOTING
- (E) FOUNDATION
- (N) FOUNDATION

FOUNDATION NOTES

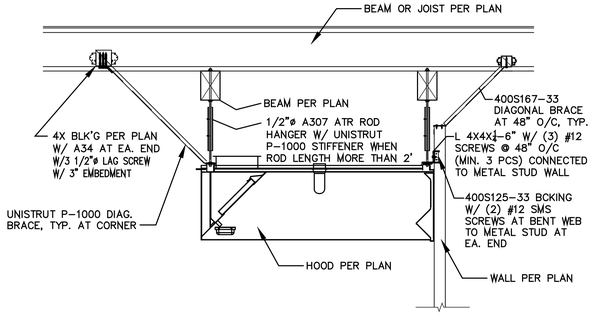
1. CONFIRM ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
   PLAN SHOWS STRUCTURAL SLAB, WALLS, ABOVE FOUNDATION.
   ARCHITECTURAL BACKGROUND INDICATES NON-STRUCTURAL WALLS
   CONFIRM ALL BACKGROUND INFORMATION WITH CURRENT ARCHITECTURAL DRAWINGS.
2. SEE STRUCTURAL SPECIFICATIONS ON SHEET SN1



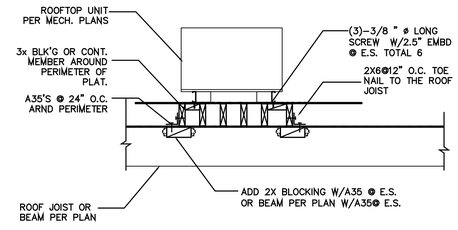
1 UNIT ON SLAB CONNECTION DETAIL



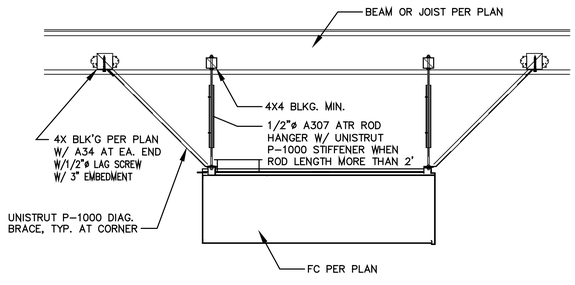
2 WALK-IN CONNECTION DETAIL



3 HOOD CONNECTION DETAIL



5 ROOF EQUIPMENT CONNECTION



4 HANGING CONNECTION DETAIL

ORANGE ENGINEERING

4005 CLIPPER CT
FREMONT, CA 94538
TEL (408) 888-7836

REGISTERED PROFESSIONAL ENGINEER
DI YANG
No. C92766
12/31/25
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2229 DOVER AVE
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SHEET NAME.

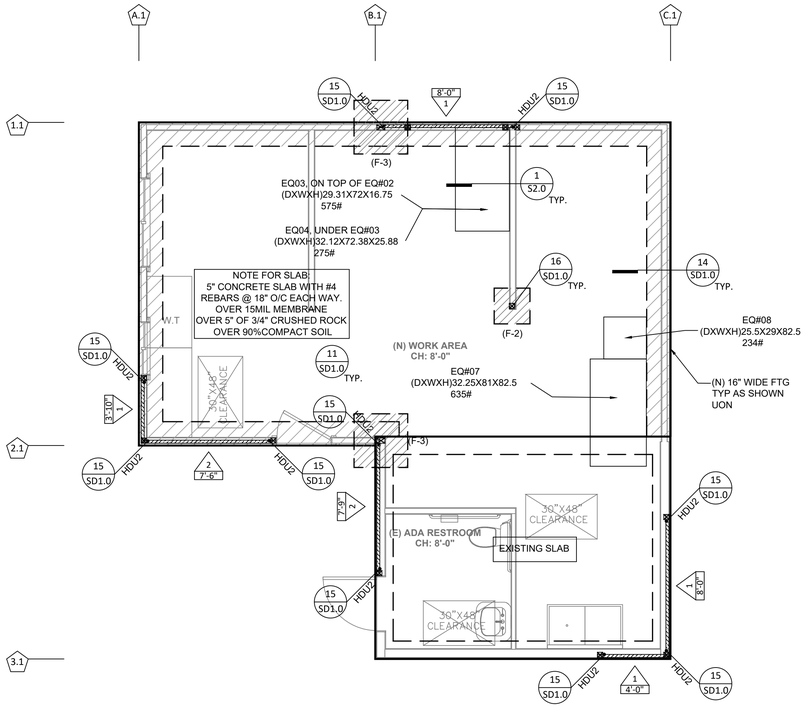
ROOF PLAN - CENTRAL KITCHEN

SHEET NO.

S2.0

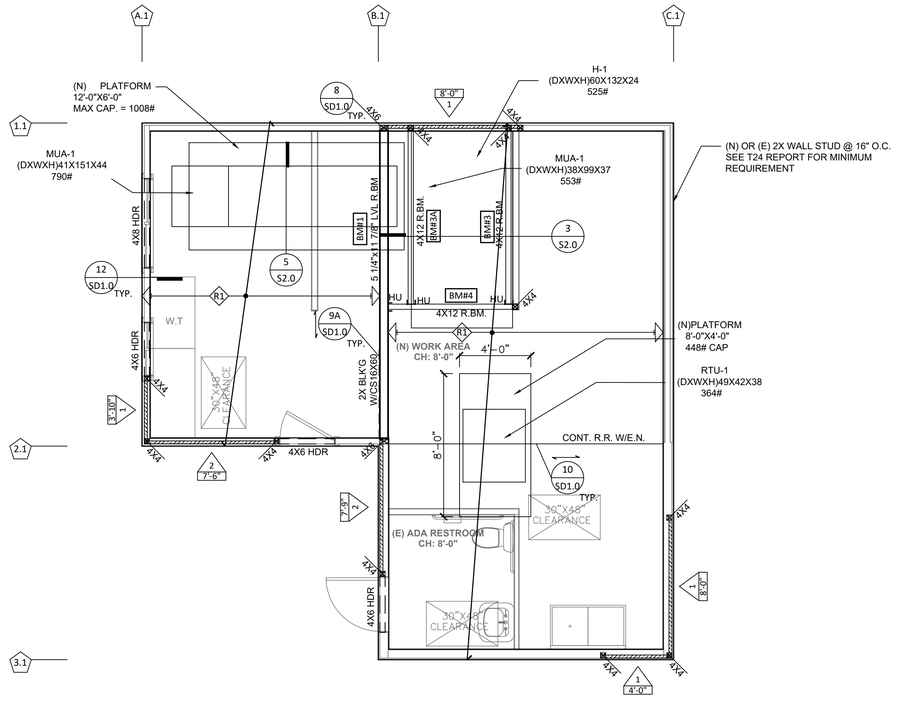
DRAWN BY:

	EQUIPMENT	BRAND AND Model	D (in)	W (in)	H (in)	Weight (lb)	Location
SAMLL KITCHEN	EQ#03	COOKING PERFORMANCE GROUP GM-CPG-72-NL	29.31	72.00	16.75	575	FLOOR
	EQ#04	AVANTO CBE-72-HC 72"	32.13	72.38	25.88	275	FLOOR
	EQ#07	AVANTO SS-3R-HC	32.25	81.00	82.50	635.00	FLOOR
	EQ#08	AVANTO A-19F-HC	25.50	29.00	82.50	234.00	FLOOR
	EQ#15	REGENCY 18" x 60" x 74"	18.00	60.00	74.00	200.00	FLOOR
	EQ#16	REGENCY 18" x 48" x 74"	18.00	48.00	74.00	200	FLOOR
	H-1	ECON-AIR 6024 EX-2	60.00	120.00	24.00	525.00	CEILING
	MUA-1	ECON-AIR A2-20D	38.00	190.00	44.00	692.00	ROOF
	RTU-1	TRANE 4WCC4036A	49.00	42.00	38.00	364.00	ROOF



FOUNDATION PLAN

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



ROOF FRAMING PLAN

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

SYMBOLS LEGEND

- WOOD POST / WOOD POST ABOVE
- DIRECTION OF JOISTS
- SHEAR PANEL LENGTH AND SCHEDULE
- SHEAR PANEL LENGTH AND SCHEDULE (LENGTH / TYPE)
- DETAIL (X / SDX)
- BEAM NUMBER, REFER TO E.O.R. CALCULATIONS (BM#)
- SHEAR LINE (X.X)
- CALIFORNIA FRAMING
- PAD FOOTING
- (E) FOUNDATION
- (N) FOUNDATION

FRAMING NOTES

R1 — 2 X 12 ROOF RAFTERS @ 16" O.C.

FOUNDATION & FRAMING NOTES

1. CONFIRM ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
   PLAN SHOWS STRUCTURAL WALLS, ROOF LINES ABOVE FOUNDATION. ARCHITECTURAL BACKGROUND INDICATES NON-STRUCTURAL WALLS.
   CONFIRM ALL BACKGROUND INFORMATION WITH CURRENT ARCHITECTURAL DRAWINGS.
2. SEE STRUCTURAL SPECIFICATIONS ON SHEET SN1.0.
3. NEW STEM WALL FTG. SHALL BE 16" WIDE CONT. FTG. W/ (2)-#4 T&B & #3 VERT @ 24" O.C. TYP.
4. PROVIDE 2x SOLID BLOCKING @ 8' OC BETWEEN FL JOIST TYP.
5. ALL FLOOR USE 3/4" PLYWOOD T&G WITH 10d@ 6" O.C. EDGE NAILS 10" O.C. FIELD NAILS TYP AT FLOOR AREA GLUED AND NAILED.
6. PROVIDE FLOOR PLYWOOD EDGE NAILS FULL LENGTH AT ALL SHEAR WALL LINE.
7. FL JST, GIRDER W/ HUTF HGR AT END TO WALL SILL PL TYP.
8. HOLDOWNS SHOULD BE RE-TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.
9. ALL HOLDOWNS REQUIRED 4x4 MINIMUM POST.
10. FULL HEIGHT STUDS SHALL BE USED ON EXTERIOR WALLS OF ROOM WITH VAULTED CEILINGS. 2x6 STUD @ 16" O.C. FOR 12'-0" OR MORE WALL HIGH.
11. ALL ROOF USE 1/2" OSB PLYWOOD WITH 10d @ 6" OC EDGE NAILS AND 12" OC FIELD NAILS UNBLOCKED TYPICAL.
12. ALL FLOOR 3/4" PLYWOOD T&G WITH 10d@ 6" OC EDGE NAILS 10" OC FIELD NAILS TYP AT FLOOR AREA GLUED AND NAILED.
13. PROVIDE SIMP. CS16x30" @ SIDE OF EXTERIOR WALL & SHEAR WALL WHERE TOP PLATES SPLICED OR CONNECTED TO BM TYP AS SHOWN.
14. ALL BEAM TO BEAM SUPPORT USE HANGER PER HANGER SCHEDULE.
15. PROVIDE SIMP. CS16x30"MIN @ SIDE OF EXTERIOR WALL & SHEAR WALL WHERE TOP PLATES SPLICED OR CONNECTED TO BM TYP.
16. PROVIDE PC4 CAP & BC4 BASE TYP AT EA END OF DROPPED FLOOR BM EXTEND POST DOWN TO FOUNDATION.
17. SOLID BLOCKING SHALL BE PROVIDED AT ALL HORIZONTAL JOINTS OCCURRING IN BRACED WALL PANELS.
18. ALL BEAMS PROVIDE 4x BEAM WIDTH POST.
19. ALL EXTERIOR WALLS AND WOOD FRAMED CHIMNEYS MUST BE SHEATHED WITH SHEAR PANEL U.N.
20. PLYWOOD OF ALL INTERIOR SHEAR WALL TO BE EXTENDED UP TO ROOF.
21. THE NEW FOUNDATION TYPE MUST MATCH EXISTING FOUNDATION, REPORT TO ENGINEER OF RECORD IF IT IS DIFFERENT.
22. HOLDOWN ANCHOR BOLT TO BE SET AND POSITIONED IN PLACE PRIOR TO CALLING FOR FOUNDATION INSPECTION.

ANCHOR SCHEDULE (ANCHOR AT EACH LEG)(ESR-4266)				
EQ #	ANCHOR TYPE	EMBEDMENT	TOTAL # OF ANCHOR	HANGER ROD #
EQ#3&4	3/8" HILTI KB-TZ2	2"	4	NA
EQ#07	3/8" HILTI KB-TZ2	2"	4	NA
EQ#08	3/8" HILTI KB-TZ2	2"	4	NA
EQ#15	3/8" HILTI KB-TZ2	2"	4	NA
EQ#16	3/8" HILTI KB-TZ2	2"	4	NA
H-1	1/2" LAG SCREW	3"	4	4
MUA-1	3/8" LAG SCREW	2.5"	6	NA
RTU-1	3/8" LAG SCREW	2.5"	4	NA

PAD FOOTING SCHEDULE				
MARK	FOOTING SIZE	1-STORY THICKNESS	2-STORY THICKNESS	REINFORCING
(F-1)	1'-6" x 1'-6"	18"	24"	3-#4 EA. WAY
(F-2)	2'-0" x 2'-0"	18"	24"	4-#4 EA. WAY
(F-3)	3'-0" x 3'-0"	18"	24"	4-#5 EA. WAY
(F-4)	4'-0" x 4'-0"	18"	24"	6-#5 EA. WAY
(F-5)	5'-0" x 5'-0"	18"	24"	7-#5 EA. WAY

HANGER SCHEDULE (U.N.O.)		
SUPPORTED MEMBER SIZE	HANGER	MIN. POST SIZE REQ.
2X RAFTERS, DBL. RAFTERS	LSSJ, LSSR	- -
2X CEILING / FLOOR JOISTS, DBL. JOISTS	LUS, HU	- -
TJI FLOOR I-JOISTS	ITS	- -
4X BEAM SAWN LUMBER	HU	4X4 DF#2
6X BEAM SAWN LUMBER	HU	4X6 DF#2
3 1/2" WIDE ENGINEERED BEAM	HHUS	4X4 DF#2
5 1/4" WIDE ENGINEERED BEAM	HHUS	4X6 DF#2
7" WIDE ENGINEERED BEAM	HGUS	6X6 DF#1 / 4X8 DF#1
1 3/4" MICROLAM	LSU, HU	2-2X4 DF#2
TRUSS HANGERS	USE MANUF. SUPPLIED HANGERS	

PLYWOOD SHEAR WALL SCHEDULE														
EDGE NAILING			FDN. SILL PLATE		ANCHOR BOLT SPACING		A35/LTP4 CLIPS SPACING		PLATE CONNECTION NAILING				CAPACITY (PLF)	
MARK	TYPE	SPACING	1 SIDE	2 SIDE	1 SIDE	2 SIDE	1 SIDE	2 SIDE	1 SIDE	RIM/BLKG	2 SIDE	RIM/BLKG	1 SIDE	2 SIDE
SHEAR	1	6" O.C.	2x		32" O.C.		16" O.C.		16d @ 6" O.C.	2x			310	
SHEAR	2	4" O.C.	2x	3x	24" O.C.	12" O.C.	12" O.C.	12" O.C. EA. SIDE	16d @ 4" O.C.	3x	SDS @ 6" O.C.	3x	460	920
SHEAR	3	3" STAGG.	3x	3x	16" O.C.	8" O.C.	9" O.C.	9" O.C. EA. SIDE	(2) 16d @ 6" O.C.	3x	(2) SDS @ 10" O.C.	4x	600	1200
SHEAR	4	2" STAGG.	3x	3x	12" O.C.	6" O.C.	6" O.C.	6" O.C. EA. SIDE	SDS @ 6" O.C.	3x	(2) SDS @ 6" O.C.	4x	770	1540

1. ALL SHEAR PANEL SHALL BE 1/2" OSB OR CDX PLYWOOD. ALL FIELD NAILING SHALL BE 10d @ 12" O.C.
2. STUDS SHALL BE 2X4 MINIMUM AND SPACED @ 16" O.C. MAXIMUM. U.N.
3. INTERIOR SHEAR WALLS SHALL BE EXTENDED THROUGH THE ATTIC TO THE ROOF SHEATHING.
4. NAILS SHALL BE COMMON NAILS, PLACED AT LEAST 1/2" FROM PANEL EDGES AND AT LEAST 1/2" FROM THE EDGE OF CONNECTION MEMBER OF ALL PANELS.
5. NAILS SHALL BE STAGGERED IN TWO LINES ALONG PANEL EDGES WHEN NAIL SPACING IS 3" OR LESS O.C. (MINIMUM SPACING BETWEEN NAIL LINES IS 1/2")
6. NAILS FOR PRESERVATIVE-TREATED WOOD SHALL BE HOT-DIP GALVANIZED.
7. SDS DENOTES 1/4"Ø SDS WOOD SCREWS WITH 2" MINIMUM PENETRATION INTO FRAMING BELOW. ROWS OF SDS SHALL BE STAGGERED 1/2" APART.
8. ALL ANCHOR BOLTS SHALL HAVE 3"SQ.x1/4" W/ 11/16"x1 3/4"DIAGONAL SLOT *USE STD. CUT WASHER O/ PLATE WASHER) PLATE WASHERS. USE 3"x4 1/2" AT 6" THICK SHEAR WALL. PLATE WASHER. PLATE WASHER TO EXTEND TO WITHIN 1/2" OF THE EDGED OF THE SILL PLATE ON THE SIDE WITH SHEATHING.
   a. 5/8Ø" A.B. W/ x 7" MINIMUM EMBEDMENT INTO CONCRETE. OR
   b. SIMPSON RETROFIT FOUNDATION PLATES URFP/FRFP PER MANUFACTURE'S RECOMENDATION.
   c. 5/8Ø" x 7" SIMPSON TITEN HD.
   d. IN NON-P.T. SLABS, 5/8Ø" EXPENSION BOLT W/ 2 3/4" MIN. EMBEDMENT W/ MINIMUM 9" EDGE DISTANCE.

ORANGE ENGINEERING
4005 CLIPPER CT
FREMONT, CA 94538
TEL (408) 888-7836

REGISTERED PROFESSIONAL ENGINEER — DI TANG — No. C92766 — 12/31/25 — STATE OF CALIFORNIA

TI & ADDITION
2229 DOVER AVE
SAN PABLO, CA 94806

DATE: 10/11/24
JOB NO. SS24805

ISSUE & REVISION

	MM/DD/YY	CITY SUBMITTAL
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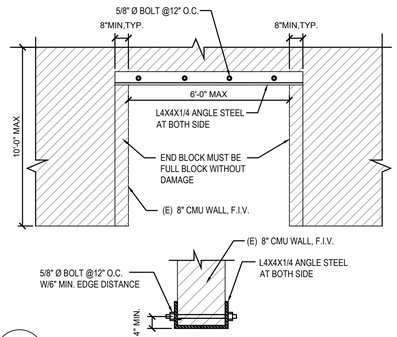
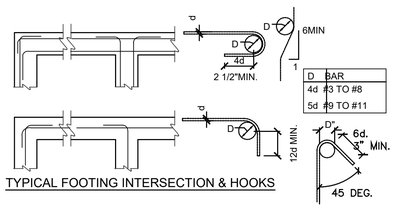
SHEET NAME.
FOUNDATION & ROOF PLAN - SAMLL KITCHEN

SHEET NO.
S3.0

DRAWN BY:

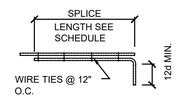


17 (N) OPENDING AT (E) CMU WALL DETAIL



D BAR
4d #3 TO #8
5d #9 TO #11

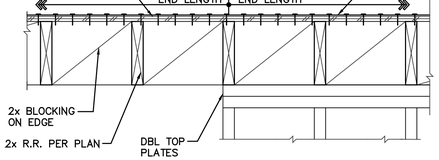
TYPICAL FOOTING INTERSECTION & HOOKS



BAR LAP SCHEDULE	
BAR #	LAP IN INCHES
4	24
5	30
6	36

TYPICAL REBAR SPLICE

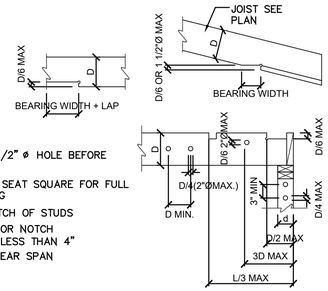
13 REBARS TYPICAL BENDING



	STRAP	END LENGTH	NAIL SIZE & SPACING	CAPACITY*
A	CS16	3'-6"	(2) ROWS 8d @ 4 1/8"	1700#
B	(2) CS16	3'-6"	(2) ROWS 8d @ 4 1/2"	3400#

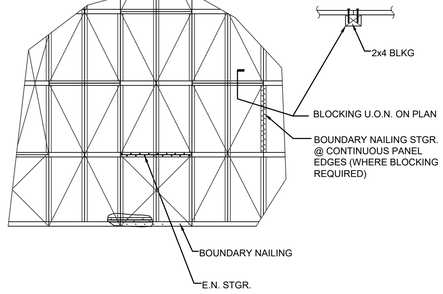
NOTES:
1. STRAP TO EXTEND ON ALL BLKG. (MIN. (3) BAYS).
2. USE DOUBLE BLOCKING OR FLAT BLOCKS FOR CONDITION B.
3. USE SINKER AT STRAPS.
* NAIL LATERAL VALUES BASED ON SPF/HF.

9 STRAP DETAIL



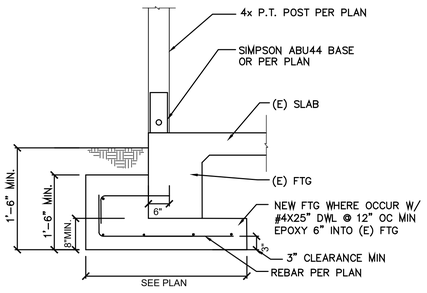
NOTE:
1. DRILL 1/2" ø HOLE BEFORE NOTCH
2. NOTCH SEAT SQUARE FOR FULL BEARING
3. NO NOTCH OF STUDS
4. HOLES OR NOTCH FOR D LESS THAN 4"
5. L = CLEAR SPAN

5 TYPICAL ALLOWABLE NOTCHS AT JOIST

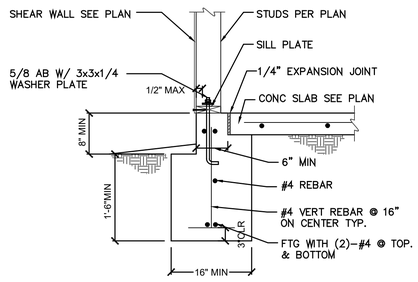


NOTES:
1. FOR ITEMS NOT NOTED SEE PLANS.
2. MINIMUM PANEL DIMENSION IS 2'-0".

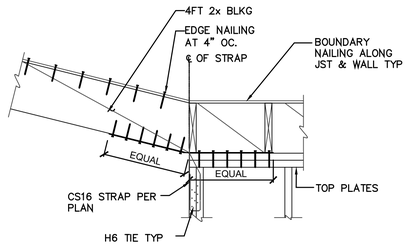
1 TYPICAL DIAPHRAGM FRAMING



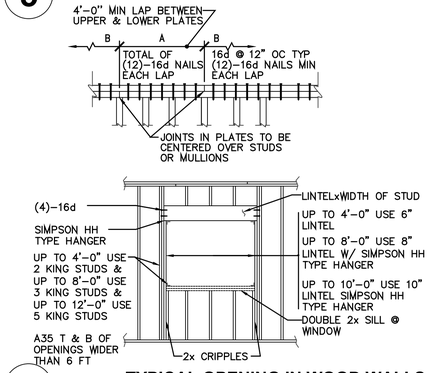
18 (N) PAD FTG. TO (E) SLAB



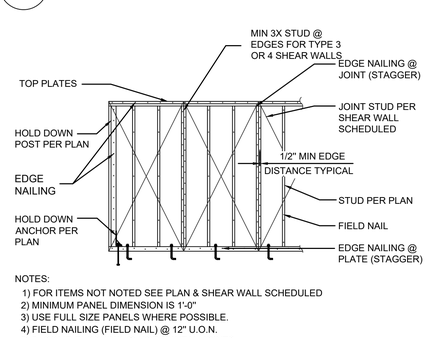
14 EXTERIOR WALL FOOTING



10 STRAP DETAIL

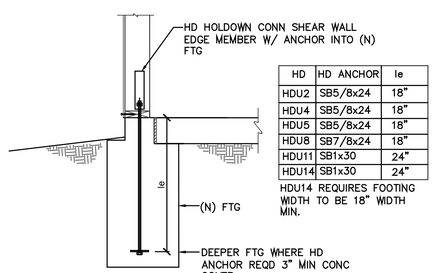


6 TYPICAL OPENING IN WOOD WALLS



NOTES:
1) FOR ITEMS NOT NOTED SEE PLAN & SHEAR WALL SCHEDULED
2) MINIMUM PANEL DIMENSION IS 1'-0"
3) USE FULL SIZE PANELS WHERE POSSIBLE.
4) FIELD NAILING (FIELD NAIL) @ 12" U.O.N.
5) 3x SOLID BLOCKING @ HORIZONTAL JOINTS.

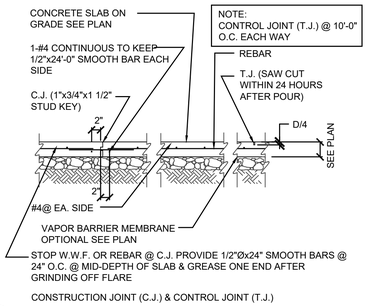
2 TYPICAL SHEAR WALL ELEVATION



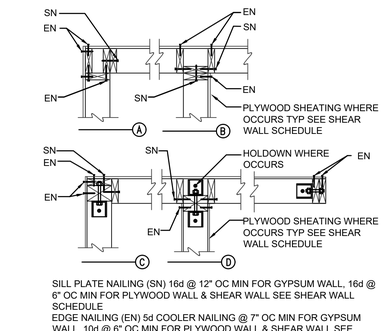
HD	HD ANCHOR	le
HDU2	SB5/8x24	18"
HDU4	SB5/8x24	18"
HDU5	SB5/8x24	18"
HDU8	SB7/8x24	18"
HDU11	SB1x30	24"
HDU14	SB1x30	24"

HDU14 REQUIRES FOOTING WIDTH TO BE 18" WIDTH MIN.

15 HOLDOWN TO (N) FTG DETAIL

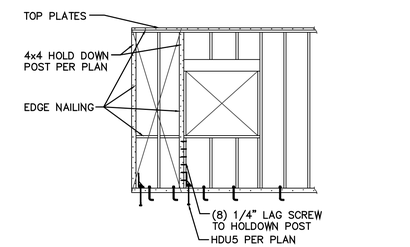


11 TYPICAL SLAB DETAIL

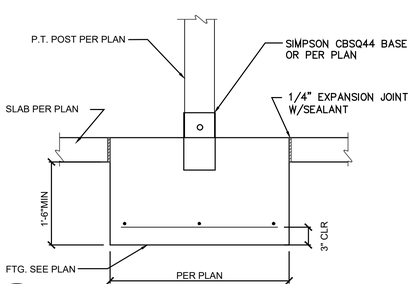


SILL PLATE NAILING (SN) 16d @ 12" OC MIN FOR GYPSUM WALL, 16d @ 6" OC MIN FOR PLYWOOD WALL & SHEAR WALL SEE SHEAR WALL SCHEDULE
EDGE NAILING (EN) 5d COOLER NAILING @ 7" OC MIN FOR GYPSUM WALL, 10d @ 6" OC MIN FOR PLYWOOD WALL & SHEAR WALL SEE SHEAR WALL SCHEDULE TYP

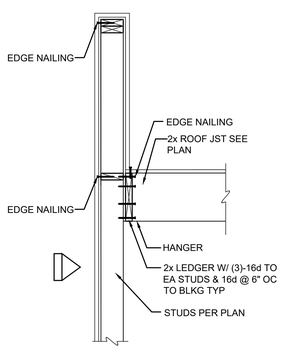
7 TYPICAL SHEAR WALL INTERSECTION



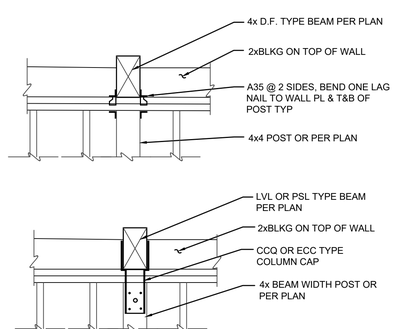
3 SHEAR WALL W/ OPENING ELEVATION



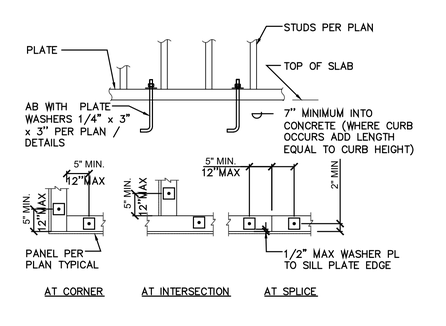
16 NEW PAD FTG. TO SLAB



12 SHEAR TRANSFER AT EAVE



8 RIDGE CONNECTION DETAIL



4 TYPICAL PLATE ANCHOR BOLTS

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REGISTERED PROFESSIONAL ENGINEER
DI YANG
No. C92766
12/31/25
STATE OF CALIFORNIA

TI & ADDITION
2229 DOVER AVE
SAN PABLO, CA 94806

DATE: 10/11/24
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ISSUE & REVISION

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SHEET NAME.
DETAILS

SHEET NO.
SD1.0

DRAWN BY:

SYMBOLS AND ABBREVIATIONS

SYMBOL	ABBR.	DESCRIPTION
	CFM	CUBIC FEET PER MINUTE
	EA	EXHAUST AIR
	EF	ROOF MOUNTED EXHAUST FAN
	ESP	EXTERNAL STATIC PRESSURE
	EXIST (E)	EXISTING
FD	FD	FIRE DAMPER
FSD	FSD	FIRE SMOKE DAMPER
	FLA	FULL LOAD AMPERES
	HZ	HERTZ
	HP	HORSEPOWER
	MVD	MANUAL VOLUME DAMPER
	NEW (N)	NEW
	OSA	OUTSIDE SUPPLY AIR
	RA	RETURN AIR
	SA	SUPPLY AIR
SD	SD	SMOKE DETECTOR
	SP	STATIC PRESSURE
	TYP	TYPICAL
	U/C	UNDERCUT DOOR
	U.T.R.	UP THRU ROOF
	V	VOLT
		SUPPLY AIR PLENUM CROSS-SECTION
		RETURN AIR PLENUM CROSS-SECTION
		SUPPLY DIFFUSER
		RETURN AIR GRILLE
		EXHAUST AIR GRILLE / CEILING EXHAUST FAN
		SIDE WALL SUPPLY REGISTER
		SIDE WALL RETURN GRILLE
T		THERMOSTAT
S		SENSOR
CO2		CO2 SENSOR
CO		CO SENSOR
RTU 1		MECHANICAL EQUIPMENT TAG
		POC
		NEW DUCT
		EXISTING DUCT
CD		CONDENSATE DRAIN
		CONDENSATE DRAIN CLEANOUT
REF		REFRIGERANT LINE
		OSA INTAKE
OSA		OSA DUCT

NOTE:
REFER TO PLAN SHEETS FOR ANY ADDITIONAL LEGEND, SYMBOLS AND RELATED ABBREVIATIONS.

SHEET INDEX

SCOPE OF WORK

- EXISTING COMMERCIAL TENANT IMPROVEMENT.
- PROVIDE NEW HVAC UNITS.
- PROVIDE DUCTWORKS AND AIR DEVICES THROUGHOUT THE SPACE.

HVAC SPECIFICATIONS

1. A MAINTENANCE LABEL SHALL BE AFFIXED TO MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED TO THE OWNER PER STANDARDS.
2. CONCEALED SPACES, CIRCULATION AIR

   INSULATED WIRES, PLASTIC TUBING OR PIPING, PIPE INSULATION, CONDENSATE PAN INSULATION, WOOD, PVC, ABS AND OTHER PLASTICS) TO BE IN CONCEALED SPACES USED TO CONVEY CIRCULATING AIR SUPPLY. WHEN COMBUSTIBLE MATERIAL IS TO BE LOCATED IN THE ABOVE SPACES, IT SHALL BE APPROVED FOR SUCH INSULATION.
3. INSULATION OF DUCTS

   PORTIONS OF SUPPLY-AIR AND RETURN-AIR DUCTS CONVEYING HEATED OR COOLED AIR LOCATED IN ONE OR MORE OF THE FOLLOWING SPACES SHALL BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-8:
   1. OUTDOORS; OR
   2. IN A SPACE BETWEEN THE ROOF AND AN INSULATED CEILING; OR
   3. IN A SPACE DIRECTLY UNDER A ROOF WITH FIXED VENTS OR OPENINGS TO THE OUTSIDE OR UNCONDITIONED SPACES; OR
   4. IN AN UNCONDITIONED CRAWL SPACE; OR
   5. IN OTHER UNCONDITIONED SPACES.

   PORTIONS OF SUPPLY-AIR DUCTS THAT ARE NOT IN ONE OF THESE SPACES, INCLUDING DUCTS BURIED IN CONCRETE SLAB, SHALL BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-4.2 OR BE ENCLOSED IN DIRECTLY CONDITIONED SPACE.
4. SEALING

   TRANSVERSE SUPPLY DUCTS, TAPED OR SEALED WITH MASTIC EXCEPT FOR DUCTS EXPOSED TO CONDITIONED SPACE, WHERE DUCT STATIC PRESSURE EXCEEDS 3/4" WATER, LONGITUDINAL JOINTS, TAPED OR SEALED WITH MASTIC.
5. INSPECTION

   INSPECTION TO BE MADE AND DUCTWORK APPROVED BEFORE COVERING WITH INSULATION.
6. PIPE INSULATION

   SPACE-CONDITIONING AND SERVICE WATER-HEATING SYSTEM SHALL BE INSULATED IN ACCORDANCE WITH THE FOLLOWING TABLE:

PIPE INSULATION THICKNESS

FLUID TEMP. RANGE (°F)	CONDUCTIVITY RANGE (BTU*/HR PER SQFT/°F)	INSULATION MEAN RATING TEMP. (°F)	NOMINAL PIPE DIAMETER (")				
			<1	1 TO <1.5	1.5 TO <4	4 TO <8	8 AND LARGER
			INSULATION THICKNESS REQUIRED (")				
SPACE HEATING, HOT WATER SYSTEMS AND SERVICE WATER HEATING SYSTEMS							
350<	0.32-0.34	250	4.5	5.0	5.0	5.0	5.0
251-350	0.29-0.31	200	3.0	4.0	4.5	4.5	4.5
201-250	0.27-0.30	150	2.5	2.5	2.5	3.0	3.0
141-200	0.25-0.29	125	1.5	1.5	2.0	2.0	2.0
105-140	0.22-0.28	100	1.0	1.5	1.5	1.5	1.5
SPACE COOLING SYSTEMS (CHILLED WATER, REFRIGERANT AND BRINE)							
40-60	0.21-0.27	75	NONRES 0.5 RES 0.75		1.0	1.0	1.0
<40	0.20-0.26	50	1.0	1.5	1.5	1.5	1.5

   EXCEPTIONS:
   (1) FACTORY-INSTALLED PIPING WITHIN SPACE CONDITIONING EQUIPMENT;
   (2) PIPING THAT CONVEYS FLUIDS THAT HAVE A DESIGN OPERATING TEMPERATURE RANGE BETWEEN 60 DEGREES AND 105 DEGREES FAHRENHEIT;
   (3) WHERE THE HEAT GAIN OR HEAT LOSS TO OR FROM PIPING WITHOUT INSULATION WILL NOT INCREASE BUILDING SOURCE ENERGY USE;
   (4) PIPING THAT PENETRATES FRAMING MEMBERS SHALL NOT BE REQUIRED TO HAVE PIPE INSULATION FOR THE DISTANCE OF THE FRAMING PENETRATION. METAL PIPING THAT PENETRATES METAL FRAMING SHALL USE GROMMETS, PLUGS, WRAPPING OR OTHER INSULATING MATERIAL TO ASSURE THAT NO CONTACT IS MADE WITH THE METAL FRAMING.
7. TEMPERATURE CONTROLS

   EACH HVAC SYSTEM SHALL BE PROVIDED WITH AT LEAST ONE AUTOMATIC TEMPERATURE CONTROL DEVICE FOR THE REGULATION OF TEMPERATURE THESE AUTOMATIC TEMPERATURE CONTROL DEVICES SHALL BE CAPABLE OF BEING SET TO MAINTAIN SPACE TEMPERATURE SET POINTS FROM 55 DEGREES F TO 85 DEGREES F, SHALL BE CAPABLE OF OPERATING THE SYSTEM HEATING AND/OR COOLING IN SEQUENCE.

   EXCEPT AS ALLOWED, THESE CONTROLS SHALL BE ADJUSTABLE TO PROVIDE A DEAD BAND OF 5 DEGREES F BETWEEN FULL HEATING AND FULL COOLING. CONTROLS SHALL HAVE THE CAPABILITY OF TERMINATING ALL HEATING AT A TEMPERATURE NO MORE THAN 70 DEGREES F AND OF TERMINATING ALL COOLING AT A TEMPERATURE NOT LESS THAN 78 DEGREES F.

DUCT GAUGE SELECTIONS

FOR GALVANIZED STEEL (SMACNA TABLE 1-4/E5)

MAXIMUM 1" W.G. STATIC POSITIVE AND NEGATIVE

DUCT DIAMETER (INCHES)	MINIMUM THICKNESS GALVANIZED IRON (U.S. GAUGE/INCHES)	MINIMUM THICKNESS ALUMINUM (INCHES)
LESS THAN 12	26/.022	.025
13-30	26/.022	.025
31-36	24/.023	.026

FOOTNOTES:

1. HEATING AND AIR CONDITIONING UNITS NOT EXCEEDING 2000 CFM OR ONE INCH WATER GAUGE (WG) POSITIVE OR NEGATIVE PRESSURE. DUCT FITTINGS SHALL BE CONSTRUCTED OF MATERIAL NOT LESS THAN THE GAUGE OF THE DUCT.
2. DUCTWORK AND FITTINGS LARGER THAN TWENTY INCHES SHALL BE CONSTRUCTED TO THE GAUGING REQUIREMENTS OF ANSI SMACNA 006-2006 HVAC DUCT CONSTRUCTION STANDARDS.

MECHANICAL CODE

- 2022 CMC
- 2022 BUILDING ENERGY EFFICIENCY STANDARDS

HVAC GENERAL NOTES

1. ALL WORK SHALL CONFORM TO MECHANICAL CODE, BUILDING CODE AND ALL OTHER APPLICABLE CITY CODES AND REGULATIONS.
2. THE CONTRACTOR SHALL PAY FOR ALL PERMITS AND FEES.
3. CONTROL LOW VOLTAGE WIRING BY MECHANICAL CONTRACTOR AND CONDUIT BY ELECTRICAL CONTRACTOR.
4. CONDENSATE DRAIN PIPING AND FINAL CONNECTION TO UNIT BY PLUMBING CONTRACTOR.
5. G.C. TO VERIFY CURRENT ELECTRICAL POWER CONDITION IN FIELD BEFORE PURCHASING ANY MECHANICAL EQUIPMENT.
6. CONTRACTOR TO VERIFY MECHANICAL HEATING EQUIPMENT TO BE CONFORM TO LOCAL EPA STANDARD BEFORE PURCHASING EQUIPMENT.
7. ACCURATE AS-BUILT DRAWINGS SHALL BE MADE DURING CONSTRUCTION AND SUBMITTED FOR APPROVAL UPON COMPLETION OF INSTALLATION.
8. THE CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR SIZE AND LOCATION OF DUCTWORK ROOF OPENINGS AND WITH ELECTRICAL CONTRACTOR FOR ELECTRICAL REQUIREMENTS OF ALL MECHANICAL EQUIPMENT AND ARCHITECTURAL DRAWINGS FOR AIR DISTRIBUTION LOCATION.
9. THE CONTRACTOR SHALL SUBMIT BID BASED ON THE DRAWINGS AND ALTERNATE FOR COST SAVING. THESE DRAWINGS ARE FOR BIDDING PURPOSES.
10. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TRANSPORTATION AND SERVICES NECESSARY FOR COMPLETION OF THE WORK. ALL MATERIALS AND WORK SHALL COMPLY WITH APPLICABLE CODES AND GOVERNING REGULATIONS AND MEET THE APPROVAL OF THE LOCAL JURISDICTION.
11. TAKE ALL PRECAUTIONS NECESSARY TO PROTECT THE MATERIALS BEFORE, DURING AND AFTER INSTALLATION. IN THE EVENT OF DAMAGE, IMMEDIATELY REPAIR ALL DAMAGED AND DEFECTIVE WORK TO THE APPROVAL OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
12. THESE DRAWINGS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH ALL OTHER TRADES. THIS INCLUDES COORDINATING THE LOCATION AND SIZE OF ALL OPENINGS, LOCATIONS OF EQUIPMENT PADS AND CHANGES OF ELEVATIONS OF DUCTWORK, PIPING AND OTHER EQUIPMENT.
13. ANY MATERIAL, ARTICLE OR PIECE OF EQUIPMENT OTHER THAN THAT INDICATED SHALL NOT BE USED UNLESS APPROVED IN WRITING BY THE ENGINEER AND ANY CHANGES IN MECHANICAL, ELECTRICAL AND/OR OTHER SYSTEMS REQUIRED DUE TO SUCH SUBSTITUTION SHALL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR; AND AT NO ADDITIONAL COST TO THE OWNER.
14. THE CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING TO VERIFY LOCATIONS AND SIZES OF ALL EXISTING EQUIPMENT AND INFORM THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES.
15. CONTRACTOR TO VERIFY ADEQUATE PLUMBING CONNECTIONS ARE READILY AVAILABLE FOR EVAPORATIVE COOLERS AND GAS HEATING SYSTEMS BEFORE PURCHASING EQUIPMENT.
16. COORDINATE ENTIRE INSTALLATION OF THE H.V.A.C. SYSTEM WITH THE WORK OF ALL OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. PROVIDE ALL FITTINGS, OFFSETS, AND TRANSITIONS AS REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
17. WARRANTIES; 1-YEAR WARRANTY FOR EQUIPMENT, 5-YEAR COMPRESSORS. REFER TO CONSTRUCTION CONTRACT FOR OTHER APPLICABLE WARRANTIES.
18. EQUIPMENT SPECIFICATION AND INTERLOCK DIAGRAM SHALL BE SUBMITTED FOR APPROVAL PRIOR TO PURCHASE OF EQUIPMENT FOR INSTALLATION.
19. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL FITTINGS, TRANSITIONS, DAMPERS, VALVES AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
20. HEATING, VENTILATING, AND AIR-CONDITIONING SYSTEMS SHALL BE BALANCED BY A LICENSED T&B CONTRACTOR IN ACCORDANCE WITH ONE OF THE FOLLOWING METHODS (CMC 314.1):
    - AABC NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE
    - ACCA MANUAL B
    - ASHRAE 111
    - NEBB PROCEDURAL STANDARDS FOR TESTING ADJUSTING BALANCING OF ENVIRONMENTAL SYSTEMS
    - SMACNA HVAC SYSTEMS TESTING, ADJUSTING AND BALANCING
21. PROVIDE FILTER FOR AIR CONDITIONING AND/OR AIR SIDE UNITS AS REQUIRED PER ASHRAE AND MECHANICAL CODE.
22. THERMOSTAT SHALL BE 24 VOLT, ONE STAGE HEATING AND ONE OR TWO STAGE COOLING WITH MATCHING SUBBASE AND TAMPER PROOF COVER.
23. CONDENSATE PIPING SHALL BE SIZED IN ACCORDANCE WITH MECHANICAL CODE.
24. AUTOMATIC FIRE DAMPER REQUIREMENTS ARE AS FOLLOWS:
    a. PROVIDE AUTOMATIC FIRE DAMPERS AT ALL PENETRATIONS OF FIRE-RATED CEILINGS AND WALLS THROUGHOUT. CONTRACTOR SHALL COORDINATE WITH FIRE-RATED CEILING AREAS AND WALLS AS INDICATED ON ARCHITECTURAL DRAWINGS. THIS NOTE SHALL TAKE PRECEDENCE OVER ANY OMISSIONS ON THE DRAWINGS. SEE SPECIFICATIONS.
    b. LOCATION OF FIRE-RATED CEILINGS AND WALLS ARE AS INDICATED ON THE ARCHITECTURAL DRAWINGS.
26. CONDENSATE WASTE SHALL CONNECT INDIRECTLY TO THE DRAINAGE SYSTEM THROUGH AN AIR GAP OR AIR BREAK TO PROPERLY TRAPPED AND VENTED RECEPTORS, DRY WELLS, OR THE TAILPIECE OF A PLUMBING FIXTURE.
27. WHERE CONDENSATE WASTE FROM AIR CONDITIONING COILS DISCHARGES BY DIRECT CONNECTION TO A LAVATORY TAILPIECE OR TO AN APPROVED ACCESSIBLE INLET ON A BATHTUB OVERFLOW, THE CONNECTION SHALL BE LOCATED IN AN AREA CONTROLLED BY THE SAME PERSON CONTROLLING THE AIR-CONDITIONED SPACE.
28. THE REFRIGERATION EQUIPMENT REFRIGERANT SERVICE PORTS LOCATED OUTDOORS SHALL BE FITTED WITH LOCKING TYPE TAMPER RESISTANT CAPS OR SHALL BE PROTECTED FROM UNAUTHORIZED ACCESS BY A MEANS ACCEPTABLE TO THE ENFORCING AGENCY.
29. THE HEATING AND COOLING DUCT SYSTEM IS SIZED IN ACCORDANCE WITH ASHRAE.
30. G.C. TO VERIFY SUFFICIENCY OF DUCT SPACE BEFORE PURCHASING ANY MECHANICAL EQUIPMENT.
31. DUCTWORK SHALL BE INSULATED OR LINED AS NOTED ON DRAWINGS. ALL DUCTWORK EXPOSED ON ROOF SHALL BE INTERNALLY LINED UNLESS OTHERWISE INDICATED OR SPECIFIED. ALL DUCT SIZES ARE SHEET METAL SIZES. ALL DUCT JOINTS SHALL BE SEALED PER SPECIFICATIONS.
32. CONNECT MAIN DUCT TO AIR CONDITIONING UNIT WITH WEATHERPROOF FLEXIBLE CONNECTION. SUN SHIELD OVER ENTIRE FLEXIBLE CONNECTIONS REQUIRED IF FLEXIBLE CONNECTION IS EXPOSED TO WEATHER.
33. ALL LINED DUCT DIMENSIONS ARE NET CLEAR DIMENSION AFTER LINING HAS BEEN INSTALLED.
34. ALL DUCTWORK SIZE SHOWN ON PLAN ARE INTERIOR DIAMETER. CONTRACTOR SHALL ADD INSULATION THICKNESS INTO CONSIDERATION BEFORE INSTALLATION.
35. DUCTS SHALL BE SUPPORTED WITH 1" WIDE 16-GAUGE HANGER STRAPS AND SHALL BE SPACED AT NO MORE THAN 7'-0" ON CENTERS AND SHALL BE SECURED TO STRUCTURAL MEMBER. EXPOSED DUCTWORK ON ROOF SHALL BE SUPPORTED BY GALVANIZED STEEL ANGLE & SHALL BE PER LOCAL CODE.
36. ROUND AND RECTANGULAR DUCTWORK ARE INTERCHANGEABLE IF CROSS SECTION AREAS ARE EQUIVALENT. CONTRACTOR IS TO VERIFY THE EXACT CEILING SPACE AND INTERCHANGE THE DUCT SIZE TO FIT THE CEILING SPACE WITHOUT ADDITIONAL FEE CHARGE.
37. ALL FACTORY-FABRICATED DUCT SYSTEMS SHALL COMPLY WITH UL 181 FOR DUCTS AND CLOSURE SYSTEMS, INCLUDING COLLARS, CONNECTIONS, AND SPLICES, AND BE LABELED AS COMPLYING WITH UL 181.
38. INSTALL VOLUME CONTROL DAMPERS AT EACH SUPPLY DIFFUSER TO AFFORD COMPLETE CONTROL OF THE AIR FLOW IN THE VARIOUS DUCT SYSTEMS. INSTALL SPLITTER DAMPER AT DUCT TAKEOFFS AND DAMPER AS REQUIRED.
39. COORDINATE THE LOCATION OF ALL CEILING DIFFUSERS, REGISTERS AND GRILLES WITH THE ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL LIGHTING LAYOUT AND ARCHITECTURAL ROOM ELEVATIONS.
40. ALL CEILING DIFFUSERS ARE 4-WAY UNLESS OTHERWISE NOTED.
41. PROVIDE BACK-DRAFT DAMPER FOR ALL EXHAUST AIR DUCT UNLESS OTHERWISE NOTED PER CODE.
42. EXHAUST TERMINATION SHALL BE MINIMUM 10'-0" AWAY OR 3'-0" ABOVE FROM ANY FRESH AIR INTAKE, OPERABLE WINDOWS, DOORS AND 10'-0" MINIMUM ABOVE GRADE.
43. PROVIDE ALL FRESH AIR INTAKES AND EXHAUST OUTLETS WITH HOOD, 1/2" GALVANIZED MESH SCREENS AND OUTSIDE AIR BACK-DRAFT DAMPERS.
44. ALL HVAC UNITS OR SYSTEMS SERVING A COMMON AIR SPACE MUST BE INTERCONNECTED TO SHUT DOWN IMMEDIATELY UPON ALARM CONDITION FROM DUCT DETECTORS (OR FIRE ALARM SYSTEM WHEN USING AREA SMOKE DETECTORS IN LIEU OF DUCT DETECTORS) WITHOUT INTERFERENCE FROM EMS OR ANY OTHER SYSTEMS. ALL CONTROL RELAYS USED FOR SHUT DOWN MUST BE APPROVED BY STATE OR LOCAL JURISDICTION FOR RELEASING SERVICE.
45. PURCHASING PARTY SHALL ENSURE THE MOTOR SPECS PRIOR TO ORDERING EXHAUST SYSTEM TO ENSURE THE PANEL IS BUILT CORRECTLY.
46. REDWOOD SLEEPER OR PLATFORM FOR ROOF MOUNTED UNIT, DUCT PENETRATION, CUTTING AND PATCHING BY GENERAL CONTRACTOR, UNLESS OTHERWISE NOTED ON PLAN.
47. 42" MINIMUM GUARDS TO BE PROVIDED WHEN ROOF MOUNTED OR ROOF ACCESS EQUIPMENT THAT REQUIRE SERVICE ARE LOCATED WITHIN 10' OF A ROOF EDGE OR OPEN SIDE OF A WALKING SURFACE AND SUCH EDGE OR OPEN SIDE IS LOCATED MORE THAN 30" ABOVE THE ROOF SURFACE.
48. CONTRACTOR SHALL SUBMIT A COMPLETE BALANCE REPORT FOR APPROVAL. SYSTEMS AIR BALANCE SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCE CONSULTANT. A CERTIFIED AABC OR NEBB. THE REPORT SHALL INCLUDE THE FOLLOWING:
    a. AIR QUANTITIES AT EACH REGISTER.
    b. STATIC PRESSURE READINGS AT INLET AND DISCHARGE OF EACH AIR HANDLING SYSTEM AND AT INLET OF EACH EXHAUST AIR SYSTEM.
    c. COOLING AND HEATING SUPPLY AND RETURN AIR TEMPERATURES AT EACH AIR CONDITIONING UNIT.

CA GREEN BUILDING NOTES

5.504.1 TEMPORARY VENTILATION:
IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MERV OF 8, BASED ON ASHRAE 52.2-1999. OR AN AVERAGE EFFICIENCY OF 30% BASED ON ASHRAE 52.1-1992. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY. APPLIES TO ADDITIONS OR ALTERATIONS.

5.504.3 COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION:
AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC,SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM.

5.504.5.3 FILTERS:
IN MECHANICALLY VENTILATED BUILDINGS, PROVIDE REGULARLY OCCUPIED AREAS OF THE BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR PRIOR TO OCCUPANCY THAT PROVIDES AT LEAST A MERV OF 13.

5.506.1 OUTSIDE AIR DELIVERY:
FOR MECHANICALLY OR NATURALLY VENTILATED SPACES IN BUILDINGS, MEET THE MINIMUM REQUIREMENTS OF SECTION 120.1 OF THE CALIFORNIA ENERGY CODE AND CHAPTER 4 OF CCR, TITLE 8, OR THE APPLICABLE LOCAL CODE, WHICHEVER IS MORE STRINGENT.

5.508.1.1. CHLOROFLUOROCARBONS (CFCs):
INSTALL HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN CFCs.

5.508.1.2. HALONS:
INSTALL HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN HALONS.

CA TITLE 24 NOTES

ADMINISTRATIVE REQUIREMENTS:

A. THE PERSON WITH OVERALL RESPONSIBILITY FOR CONSTRUCTION OR THE PERSON RESPONSIBLE FOR THE INSTALLATION OF REGULATED FEATURES, MATERIALS, COMPONENTS, OR MANUFACTURED DEVICES SHALL POST, OR MAKE AVAILABLE WITH THE BUILDING PERMIT(S) ISSUED FOR THE BUILDING, THE REQUIRED INSTALLATION CERTIFICATE(S) FOR FEATURES, MATERIALS, COMPONENTS, OR MANUFACTURED DEVICES REGULATED BY THE APPLIANCE EFFICIENCY REGULATIONS OR PART 6. SUCH INSTALLATION CERTIFICATE(S) SHALL BE MADE AVAILABLE TO THE ENFORCEMENT AGENCY FOR ALL APPROPRIATE INSPECTIONS. THESE CERTIFICATES SHALL:
   - A.1. IDENTIFY FEATURES, MATERIALS, COMPONENTS, OR MANUFACTURED DEVICES REQUIRED TO VERIFY COMPLIANCE WITH THE APPLIANCE EFFICIENCY REGULATIONS AND PART 6.
   - A.2. INCLUDE A STATEMENT INDICATING THAT THE FEATURES, MATERIALS, COMPONENTS, OR MANUFACTURED DEVISE CONFORM TO THE APPLIANCE EFFICIENCY REGULATIONS AND PART 6 AND THE REQUIREMENTS FOR SUCH FEATURES, MATERIALS, COMPONENTS, OR MANUFACTURED DEVICES GIVEN IN THE PLANS AND SPECIFICATIONS APPROVED BY THE LOCAL ENFORCEMENT AGENCY.
   - A.3. STATE THE NUMBER OF THE BUILDING PERMIT UNDER WHICH THE CONSTRUCTION OR INSTALLATION WAS PERFORMED.

B. WITHIN 90 DAYS AFTER ISSUANCE OF CERTIFICATE OF OCCUPANCY RECORD DRAWINGS SHALL BE PROVIDED TO THE OWNER. IF A BUILDING DESIGN FEATURE, MATERIAL, COMPONENT OR MANUFACTURED DEVICE IS CHANGED BEFORE FINAL CONSTRUCTION AND INSTALLATION, SUCH THAT THE BUILDING MAY NO LONGER COMPLY WITH PART 6, THE BUILDING MUST BE BROUGHT INTO COMPLIANCE, AND SO INDICATED ON AMENDED PLANS AND CERTIFICATE OF COMPLIANCE(S) THAT SHALL BE SUBMITTED FOR APPROVAL.

C. THE BUILDER SHALL PROVIDE THE BUILDING OWNER OR THE PERSON(S) RESPONSIBLE FOR BUILDING MAINTENANCE (IN CASE OF MULTI-TENANT OR CENTRALLY OPERATED BUILDINGS) AT OCCUPANCY THE FOLLOWING:
   - C.1. OPERATING INFORMATION: THE APPROPRIATE CERTIFICATE(S) OF COMPLIANCE AND A LIST OF THE FEATURES, MATERIALS, COMPONENTS, AND MECHANICAL DEVICES INSTALLED IN THE BUILDING AND INSTRUCTIONS ON HOW TO OPERATE THEM EFFICIENTLY.
   - C.2. MAINTENANCE INFORMATION: REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY STATED AND INCORPORATED ON A READILY ACCESSIBLE LABEL. THE LABEL MAY BE LIMITED TO IDENTIFYING THE OPERATION AND MAINTENANCE MANUAL.
   - C.3. VENTILATION INFORMATION: A DESCRIPTION OF THE QUANTITIES OF OUTDOOR AND RECIRCULATED AIR THAT THE VENTILATION SYSTEMS ARE DESIGNED TO PROVIDE TO EACH AREA.

MANDATORY MEASURES:

A. (IF APPLICABLE) MANUFACTURED FENESTRATION AND EXTERIOR DOORS SHALL MEET ALL LISTED REQUIREMENTS IN SEC 10-111-(A) UNDER SECTION 110.6(A) OF PART 6. TEMPORARY LABELS FOR MANUFACTURED FENESTRATION SHALL HAVE A CLEARLY VISIBLE TEMPORARY LABEL AND SHALL COMPLY WITH LABELING REQUIREMENTS OF NFRC 700. NO OTHER VALUES FOR U-FACTOR, SHGC, VT AND AIR LEAKAGE ARE ALLOWED ON THE TEMPORARY LABEL ATTACHED TO THE MANUFACTURED FENESTRATION PRODUCT OR EXTERIOR DOOR.

B. (IF APPLICABLE) RATED FENESTRATION SHALL HAVE A PERMANENT LABEL CONSISTENT WITH THEIR RATING AND CERTIFICATION THAT IS EITHER A STAND-ALONE LABEL, AN EXTENSION OR TAB OF AN EXISTING PERMANENT CERTIFICATION LABEL BEING USED BY THE MANUFACTURER/RESPONSIBLE PARTY, OR A SERIES OF MARKS OR ETCHINGS ON THE PRODUCT.

C. JOINTS, PENETRATIONS AND OTHER OPENINGS IN THE BUILDING ENVELOPE THAT ARE POTENTIAL SOURCES OF AIR LEAKAGE SHALL BE CAULKED, GASKETED, WEATHER STRIPPED, OR OTHERWISE SEALED TO LIMIT INFILTRATION AND EXFILTRATION.

D. ALL INSULATING MATERIAL SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAME-SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF THE CBC.

E. NON-CENTRALIZED ENERGY MANAGEMENT SYSTEMS SHALL HAVE SETBACK THERMOSTATS; CAPABLE TO PROGRAM TEMPERATURE SETPOINTS FOR AT LEAST FOUR PERIODS WITHIN A 24-HR. PERIOD.

F. ALL RECIRCULATED AIR OR OUTDOOR AIR SUPPLIED TO OCCUPIABLE SPACES IS FILTERED (MINIMUM MERV 13) BEFORE PASSING THROUGH ANY AIR CONDITIONING COMPONENT; THE LESSER OF THE MINIMUM RATE OF OUTDOOR AIR REQUIRED BY SEC. 120.1 (C), OR THREE COMPLETE AIR CHANGES SHALL BE SUPPLIED TO THE ENTIRE BUILDING DURING THE ONE-HOUR PERIOD IMMEDIATELY BEFORE THE BUILDING IS NORMALLY OCCUPIED.

G. ALL MECHANICAL VENTILATION AND SPACE-CONDITIONING SYSTEMS SHALL BE DESIGNED WITH DUCTWORK, DAMPERS, AND CONTROLS WHICH ALLOWS OUTSIDE AIR RATES TO BE OPERATED AT THE LARGER OF (1) THE MINIMUM LEVELS SPECIFIED IN SECTION 120.1(C)3 OR (2) THE RATE REQUIRED FOR MAKE-UP OF EXHAUST SYSTEMS THAT ARE REQUIRED FOR AN EXEMPT OR COVERED PROCESS, FOR CONTROL OF ODORS, OR FOR THE REMOVAL OF CONTAMINANTS WITHIN THE SPACE. MEASURED OUTSIDE AIR RATES OF CONSTANT AND VARIABLE VOLUME MECHANICAL VENTILATION SYSTEMS SHALL BE WITHIN 10% OF OUTSIDE AIR RATE SHOWN ON TABLE 120.1-A.

H. THE THERMOSTATIC CONTROLS FOR HVAC SYSTEMS SHALL BE CAPABLE OF BEING SET LOCALLY OR REMOTELY BY TO CONTROL COMFORT HEATING DOWN TO 55 °F OR LOWER AND COOLING UP TO 85°F OR HIGHER. THE THERMOSTATIC CONTROLS SHALL BE CAPABLE OF PROVIDING A DEAD BAND RANGE OF AT LEAST 5 °F WITHIN WHICH HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCE TO A MINIMUM.

I. OUTDOOR AIR SUPPLY AND EXHAUST EQUIPMENT SHALL BE INSTALLED WITH DAMPERS THAT AUTOMATICALLY CLOSE UPON FAN SHUTDOWN.

J. AIR DISTRIBUTION SYSTEM DUCTS AND PLENUMS, INCLUDING, BUT NOT LIMITED TO, BUILDING CAVITIES, MECHANICAL CLOSETS, AIR-HANDLER BOXES AND SUPPORT PLATFORMS USED AS DUCTS OR PLENUMS, SHALL BE INSTALLED, SEALED AND INSULATED TO MEET THE REQUIREMENTS OF CHAPTER 6 CMC CODE AND ANSI/SMACNA -006-2006 HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE. SUPPLY-AIR DUCTS CONVEYING HEATED OR COOLED AIR SHALL BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-4.2 (R-8 IN UNCONDITIONED SPACE), UNLESS DUCTS ARE IN CONDITIONED SPACE.

K. MAXIMUM LENGTH OF FLEXIBLE DUCT AND CONNECTORS SHALL NOT BE MORE THAN 5 FEET. FLEXIBLE DUCTS SHALL NOT BE USED IN LIEU OF RIGID ELBOWS.

L. EACH SPACE-CONDITIONING SYSTEM SHALL BE INSTALLED WITH CONTROLS (1) CAPABLE OF AUTOMATICALLY SHUTTING OFF THE SYSTEM DURING PERIODS OF NON-USE AND SHALL HAVE (A) 4-HR TIMER OR; (B) OCCUPANCY SENSORS OR; (C) AUTO TIME SWITCH CONTROLS AND ACCESSIBLE MANUAL OVERRIDE FOR UP TO 4-HRS. (2) AUTOMATICALLY RESTART AND TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN SETBACK THERMOSTAT SETPOINTS FOR MECHANICAL HEATING AND COOLING. (3) MULTIPURPOSE, CLASSROOMS CONFERENCE, CONVENTION, AUDITORIUM AND MEETING CENTER ROOMS OF CERTAIN SIZE WHICH DO NOT HAVE PROCESSES OR OPERATIONS THAT GENERATE DUSTS, FUMES, VAPORS OR GASSES SHALL BE EQUIPPED WITH OCCUPANT SENSOR(S) TO ACCOMPLISH THE FOLLOWING DURING UNOCCUPIED PERIODS (A) AUTOMATICALLY SETUP THE OPERATING COOLING TEMPERATURE SET POINT BY 2°F OR MORE AND SETBACK THE OPERATING HEATING TEMPERATURE SET POINT BY 2°F OR MORE AND;

AIR DEVICE SCHEDULE

TYPE # / MARK	FACE SIZE	TYPE	MOUNTING TYPE	DIRECTION	MANUF.	NOTES
S-1	24X24	SUPPLY	SURFACE/ LAY-IN	PERFORATED	CAPTIVEAIRE (OR EQUIV.)	1,2,3,4
S-2	12X12	SUPPLY	SURFACE/ LAY-IN	4-WAY	TITUS (OR EQUIV.)	1,2,3,4
S-3	-	SUPPLY	WALL MOUNTED	1-WAY	TITUS (OR EQUIV.)	1,2,3,4
S-4	24X24	SUPPLY	DROP FACE	EVAPORATIVE COOLER BOX	TRUAIR (OR EQUIV.)	1,2,3,4
R-1	-	RETURN	SURFACE/ LAY-IN	1-WAY	TITUS (OR EQUIV.)	1,2,3

NOTES:

1. PROVIDE NECESSARY MOUNTING HARDWARE AND ACCESSORIES AS REQUIRED.
2. ALL AIR DEVICES SHALL HAVE MANUFACTURER-APPLIED STANDARD WHITE FINISH UNLESS NOTED OTHERWISE. REFER TO ARCHITECTURAL DRAWINGS FOR RCP COORDINATION.
3. AIR DEVICE SHALL BE OF STEEL CONSTRUCTION.
4. AIR DEVICE SHALL BE INSTALLED COMPLETE WITH MANUFACTURER AVAILABLE MOLDED INSULATION BACKING. FIELD-FABRICATED INSULATION BACKING IS NOT ALLOWED UNLESS FIRST APPROVED BY THE OWNER'S CONSTRUCTION MANAGER.

SPLIT SYSTEM OUTDOOR HEAT PUMP SCHEDULE

EQ #	MARK	MANUFACTURER	MODEL	NOMINAL TONS	COOLING CAPACITY (BTUH)		HEATING CAP. (BTUH)	ELECTRICAL			EER2 / SEER2	HSPF2	WEIGHT (LBS)	DIMENSIONS (HxWxD) (INCHES)
					TH	SH		V/PH/HZ	MCA	MOCP				
HP -	1	TRANE	4TWR7048	4	47,500	35,800	48,500	208 / 1 /60	27	45	12 / 16	8.1	292	45-1/8 X 34-1/4 X 37-1/4

NOTES:

1	INSTALL OUTDOOR UNIT WITH DISCONNECT SWITCH AND ALL WEATHERPROOF GFCI.
2	INSTALL PER MANUFACTURER'S MANUAL.

SPLIT SYSTEM INDOOR FAN COIL SCHEDULE

EQ #	MARK	MANUFACTURER	MODEL	TYPE	CFM	ELECTRICAL			WEIGHT (LBS)	DIMENSIONS (HxWxD) (INCHES)
						V/PH/HZ	MCA	MOCP		
FC -	1	TRANE	TEM8A0C48	MULTI-POSITIONAL	1,600	208 / 1 / 60	7	15	174	57-3/8 X 23-1/2 X 21-1/8

NOTES:

1	THERMOSTATS INSTALLED AT 48"AFF.
2	EXTEND CONDENSATE DRAIN DIRECTLY TO A LOCAL CODE APPROVED RECEPTOR.
3	PROVIDE STANDARD THROWAWAY CONSTRUCTION FILTERS OF MERV 13. MECHANICAL CONTRACTOR SHALL FURNISH AND FIELD INSTALL NEW FILTER PRIOR TO BUILDING OCCUPANCY (INCLUDING FOR INTERNAL PRESSURE DROP.

PACKAGED ROOFTOP HEAT PUMP UNIT SCHEDULE

EQ #	MARK	MAKE & MODEL	NOMINAL TONS	COOLING CAPACITY (BTUH)		HEATING CAPACITY (BTUH)	HSPF/ COP	SUPPLY FAN		POWER SUPPLY				EER/ SEER/ IEER	WEIGHT (LBS.)	UNIT DIMENSIONS (IN.)		
		(EQUIV. ACCEPTABLE)		TH	SH			CFM	HP	VOLT	PH	HZ	MCA/ MOCP			H	W	D
RTU -	1	TRANE 4WCC4036A	3	35,800	25,060	32,600	7 HSPF2	1,200	1 / 2	208	1	60	24.4 / 40	11EER2 / 13.4SEER2	364	38	42	49

NOTES:

1	INSTALL WITH DISCONNECT SWITCH AND ALL WEATHERPROOF GFCI.
2	THERMOSTATS INSTALLED AT 48"AFF W/ REMOTE SENSORS.
3	PROVIDE STANDARD THROWAWAY CONSTRUCTION FILTERS OF MERV 13. MECHANICAL CONTRACTOR SHALL FURNISH AND FIELD INSTALL NEW FILTER PRIOR TO BUILDING OCCUPANCY (INCLUDING FOR INTERNAL PRESSURE DROP.
4	EXTEND CONDENSATE DRAIN DIRECTLY TO A LOCAL CODE APPROVED RECEPTOR.
5	PROVIDE REMOTE ALARM INDICATORS FOR THE SUPPLY AIR SMOKE DETECTORS CLEARLY LABELED AS TO FUNCTION AND UNIT SERVED.
6	DUCT SMOKE DETECTORS SHALL BE PROVIDED FOR SYSTEMS HAVING A GREATER THAN 2,000 CFM CAPACITY ON SUPPLY PLENUM. KEYED REMOTE TEST SWITCHES WITH LED LIGHT INDICATOR ARE TO BE PROVIDED ON THE WALL AT NO GREATER THAN 6 FEET FOR ALL DUCT DETECTORS. DUCT DETECTOR ACTIVATION SHALL RESULT IN COMPLETE SHUT DOWN OF HVAC UNITS AND NOTIFICATION TO THE FIRE ALARM SYSTEM IN THE FORM OF A SUPERVISORY SIGNAL.
7	EACH COOLING AIR HANDLER THAT HAS A DESIGN TOTAL MECHANICAL COOLING CAPACITY OVER 33,000 BTU/HR SHALL INCLUDE AN AIR ECONOMIZER CAPABLE OF MODULATING OUTSIDE-AIR AND RETURN-AIR DAMPERS TO SUPPLY 100 PERCENT OF THE DESIGN SUPPLY AIR QUANTITY AS OUTSIDE AIR. INSTALL WITH A FAULT DETECTION AND DIAGNOSTICS (FDD) SYSTEM.

FAN SCHEDULE

EQ #	MARK	EQUIP.	CFM	SP. (W.G.)	RPM	HP	FLA	MOTOR (ELEC)	SONES (DB)	WT (LBS)	MANUFACTURER & MODEL NO.	REMARKS
EF -	1	RESTROOM EXH FAN	80	0.1"	-	7.6W	0.1	120 / 1	0.3	12.5	BROAN XB80	1,2,3

REMARKS:

1	EQUIVALENT ACCEPTABLE.
2	INSTALL WITH BACK DRAFT DAMPER.
3	ELECTRICALLY INTERLOCKED WITH LIGHT SWITCH WITH MANUAL OVER-RIDE SWITCH.

KITCHEN EXHAUST FAN/MAKE-UP AIR SCHEDULE

EQ #	MARK	EQUIP.	CFM	SP. (W.G.)	RPM	HP	FLA	MOTOR (ELEC)	SONES (DB)	WT (LBS)	MANUFACTURER & MODEL NO.	REMARKS
KEF -	1	KITCHEN HOOD EXH FAN	2750	0.75	1045	1.5	6.6	208 /3	12.4	178	CAPTIVEAIRE DU180HFA	1,2,3
KEF -	2	KITCHEN HOOD EXH FAN	4400	1.0	799	2.0	7.4	208 /3	12.7	335	CAPTIVEAIRE DU240HFA	1,2,3
MAU -	1	KITCHEN MAKE-UP AIR	2750	0.5	1134	1.0	3.8	208 /3	11.5	790	CAPTIVEAIRE A2-20D	1,3,4
MAU -	2	KITCHEN MAKE-UP AIR	4400	0.375	1569	3.0	9.5	208 /3	20.7	819	CAPTIVEAIRE A2-20D	1,3,4

REMARKS:

1	EQUIVALENT ACCEPTABLE.
2	KITCHEN HOOD EXHAUST FAN; HOOD CONTRUCTION: 430SS.
3	INTERLOCK EXHAUST FAN AND MAKE-UP FAN AIR FAN WITH HOOD CONTROL AND EMERGENCY SHUT-OFF. EXHAUST & MAKE-UP AIR SYSTEMS ARE ELECTRICALLY INTERLOCKED WITH ONE ELECTRIC SWITCH.
4	PROVIDE ROOF CURB AND ROOF JACK AS REQUIRED.

CENTRAL KITCHEN VENTILATION SCHEDULE

Room	AREA	DCV	OSA REQUIRED		EXHAUST REQUIRED		
	AREA(S.F.)		RATE(CFM/SF)	REQUIRED CFM	RATE(CFM/SF)	REQUIRED CFM	PROVIDED CFM
KITCHEN	405	NO	0.15	60.75	0.7	283.5	4400
WALK-IN COOLER	140	NO	0	0	0	0	0
WALK-IN FREEZER	140	NO	0	0	0	0	0
WAREHOUSE	619	NO	0.15	92.85	0	0	0
ADA TOILET	65	NO	0	0	70 / WC or UR	70	80
TOTAL REQUIRED:				153.6			
TOTAL PROVIDED:				4700			

AIR BALANCE SCHEDULE CALCULATION-CENTRAL KITCHEN

UNIT	OUTSIDE AIR	RETURN AIR	SUPPLY AIR	EXHAUST AIR	PRESSURE
FC-1	300	1300	1600		300
EF-1				80	-80
MAU-2	4400		4400		4400
KEF-2				4400	-4400
TOTAL	4700	1300	6000	4480	220

SMALL KITCHEN VENTILATION SCHEDULE

Room	AREA	DCV	OSA REQUIRED		EXHAUST REQUIRED		
	AREA(S.F.)		RATE(CFM/SF)	REQUIRED CFM	RATE(CFM/SF)	REQUIRED CFM	PROVIDED CFM
WORK AREA	670	NO	0.15	100.5	0.7	469	2750
ADA RESTROOM	64	NO	0	0	70 / WC or UR	70	80
TOTAL REQUIRED:				100.5			
TOTAL PROVIDED:				3050			

AIR BALANCE SCHEDULE CALCULATION-SMALL KITCHEN

UNIT	OUTSIDE AIR	RETURN AIR	SUPPLY AIR	EXHAUST AIR	PRESSURE
RTU-1	300	900	1200		300
EF-1				80	-80
MAU-1	2750		2750		2750
KEF-1				2750	-2750
TOTAL	3050	900	3950	2830	220

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LICENSED PROFESSIONAL ENGINEER — ROTH CHEN — No. 40917 — EXP. 08-31-26 — MECHANICAL — STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

DRAWN:	CHECKED:
K.T.	R.C.
DATE: 10/08/2024	SCALE:

SHEET TITLE:

MECHANICAL SCHEDULES

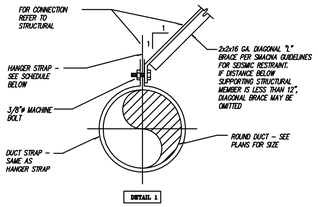
M001

PLOT DATE: 12/10/2024 10:47:13 AM

NOTE:
WHERE DUCT IS LARGER THAN 28"ø USE 2 1/2" x 2 1/2" x 16 GA. VERTICAL ANGLE IN PLACE OF HANGER STRAP AT EACH SEISMIC BRACE.

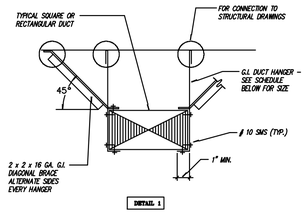
HANGER STRAP SCHEDULE

DUCT SIZE	STRAP SIZE	MAX. LOAD EA. HANGER	MAX. SPACING
UP THRU 10"	1" x 22 GA.	260 LBS	10'-0"
11" TO 18"	1" x 22 GA.	260 LBS	10'-0"
19" TO 24"	1" x 22 GA.	260 LBS	10'-0"
25" TO 36"	1" x 20 GA.	320 LBS	10'-0"



ROUND DUCT

RECTANGULAR DUCT

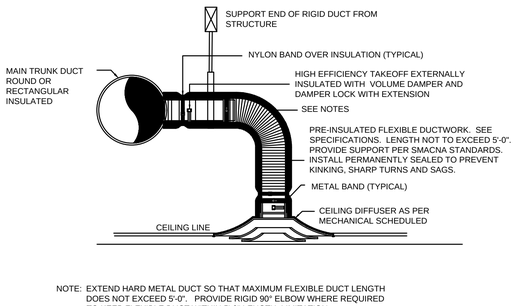


NOTE:
WHERE DUCT IS 6 SF. OR LARGER IN CROSS SECTIONAL AREA - USE 2 1/2 x 2 1/2 x 16 GA. VERTICAL ANGLE IN PLACE OF HANGER AT SEISMIC BRACE.

MAX. HALF OF DUCT PERIMETER	MAX. LOAD EACH HANGER	HANGER SIZE	HANGER SPACING
P/2 = 30"	260 LBS	1" x 22 GA.	10'-0" O/C
P/2 = 72"	420 LBS	1" x 18 GA.	10'-0" O/C
P/2 = 96"	700 LBS	1" x 16 GA.	10'-0" O/C
P/2 = 120"	1100 LBS	1 1/2" x 16 GA.	10'-0" O/C

DUCT MOUNTING DETAIL

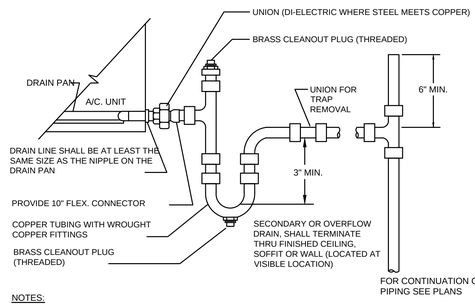
SCALE: NTS | 1



NOTE: EXTEND HARD METAL DUCT SO THAT MAXIMUM FLEXIBLE DUCT LENGTH DOES NOT EXCEED 5'-0". PROVIDE RIGID 90° ELBOW WHERE REQUIRED TO KEEP FLEXIBLE DUCT WITHIN 5'-0" LENGTH LIMITATION.

CEILING DIFFUSER DETAIL

SCALE: N.T.S. | 2

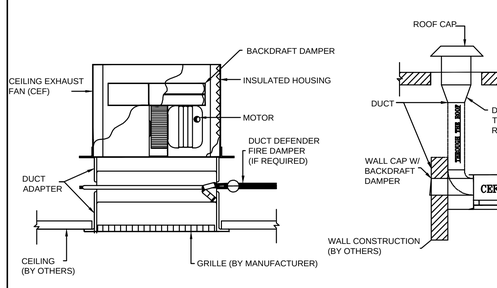


NOTES:

1. ALL CONDENSATE DRAIN LINES INSIDE BUILDING SHALL BE INSULATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLUMBING CODE.
2. TRAP DEPTH SHALL BE EQUAL TO THE UNIT TOTAL STATIC PRESSURE PLUS 1-INCH BUT NOT LESS THAN 3-INCHES.

CONDENSATE DRAIN DETAIL

SCALE: N.T.S. | 3

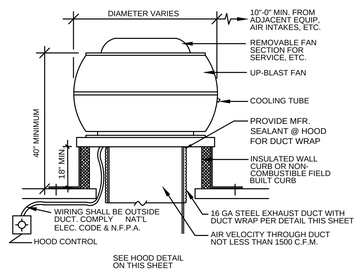


INSULATION NOTES:

1. WALL AND/OR ROOF PENETRATIONS SHALL BE PROVIDED WITH WEATHER TIGHT SEAL; COORDINATE WITH GENERAL CONSTRUCTION.
2. INSTALL MINIMUM 15 GAUGE SHEET STEEL SUPPORTS TO RIGIDLY ATTACH FAN HOUSING TO STRUCTURE; FIELD VERIFY EXACT REQUIREMENTS. INSURE ADEQUATE VIBRATION ISOLATION.
3. INSTALLATION SHALL BE NEAT AND COMPLETED TIMELY AND IN SUCH A MANNER TO ALLOW CONTRACTOR TO FINISH SURFACES UNIFORMLY.
4. ALL ELECTRICAL WIRING AND CONNECTIONS SHALL BE BY ELECTRICAL CONTRACTOR.

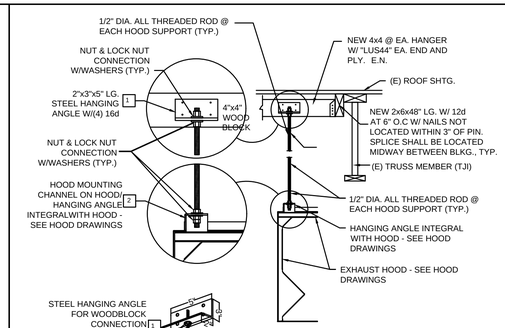
CEILING EXHAUST FAN DETAIL

SCALE: N.T.S. | 4



EXHAUST FAN DETAILS

SCALE: N.T.S. | 5

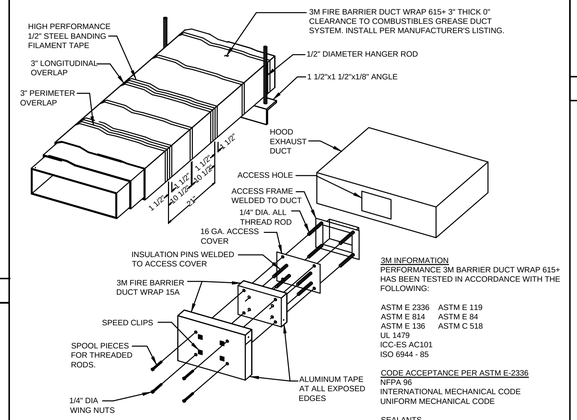


NOTES:

1. FIELD APPLIED GREASE DUCT ENCLOSURE SHALL BE INSTALLED PER THE LATEST MANUFACTURER'S INSTALLATION INSTRUCTIONS AND IN COMPLIANCE WITH TERMS OF ITS LISTING.
2. ALL END CUTS OR CUTS IN THE FOIL JACKET OF FIELD APPLIED GREASE DUCT ENCLOSURE SHALL BE SEALED PER THE MANUFACTURER'S RECOMMENDATIONS.
3. ALL INSTALLATIONS SHALL BE COMPLETELY ACCESSIBLE FOR VISUAL INSPECTION.
4. AT TIME OF INSPECTION, THE FIELD APPLIED GREASE DUCT ENCLOSURE INSTALLATION INSTRUCTIONS SHALL BE MADE AVAILABLE AT THE JOB SITE.
5. NON-LISTED GREASE DUCT - DUCTS SHALL BE CONSTRUCTED OF AND SUPPORTED BY CARBON STEEL NOT LESS THAN 0.060 OF AN INCH (NO. 16 MSG) IN THICKNESS OR STAINLESS STEEL NOT LESS THAN 0.048 OF AN INCH (NO. 18 MSG) IN THICKNESS.
6. WELDED DUCT CONNECTION SHALL BE TELESCOPING JOINT, BELL TYPE JOINT, FLANGE WITH EDGE WELD, AND FLANGE WITH FILLED WELD.
7. BUTT WELD CONNECTIONS SHALL NOT BE PERMITTED.

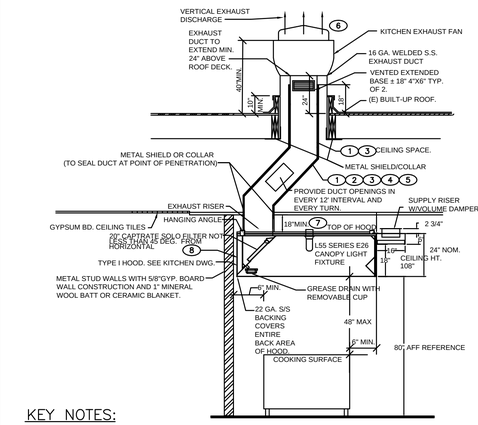
HOOD HANGING DETAIL

SCALE: N.T.S. | 6



HOOD EXHAUST (GREASE) DUCT WRAP DETAIL

SCALE: N.T.S. | 7



KEY NOTES:

1. EXH. DUCT. WITH 2 LAYER 3M FIRE BARRIER DUCT WRAP. SEE DUCT WRAP FROM TOP OF THE HOOD TO 18" ABOVE ROOF SURFACE. DETAIL SHOWN ON THIS SHEET.
2. CONTRACTOR SHALL SLOPE THE EXHAUST AIR DUCT NO LESS THAN 1/4" PER LINER FOOT.
3. GREASE DUCT SHALL BE CONSTRUCTED WITH 16 GAUGE GALVANIZED SHEET METAL WITH WELDED SEAMS.
4. EXTEND LIMITED COMBUSTIBLE OR NONCOMBUSTIBLE CEILING MATERIAL 18" BEYOND OUTER EDGE OF THE DUCT.
5. GREASE DUCT SYSTEM MUST BE ACCESSIBLE FROM DUCT ENTRY TO DISCHARGE; PROVIDE OPENINGS IN COMPLIANCE PER MECHANICAL CODE
6. THE EXHAUST OUTLET SHALL BE A MINIMUM 10 FEET FROM ADJACENT BUILDINGS, PROPERTY LINES OR AIR INTAKE, 3 FEET ABOVE ANY AIR INTAKE LOCATED WITHIN 10 FEET IS ALLOWED & 40 INCHES AWAY FROM ANY WALL.
7. MIN. 18" FROM GYP. BD. CEILING TO TOP OF HOOD.
8. THE HOOD SHALL HAVE A CLEARANCE OF AT LEAST 3" FROM METAL STUD WALLS WITH GYP. BD. (AS SHOWN). MATERIALS WITHIN 3" OF THE HOOD MUST BE NON-COMBUSTIBLE.

GENERAL NOTES:

1. LISTED GREASE HOOD ASSEMBLIES SHALL BE INSTALLED IN ACCORDANCE WITH THE TERMS OF THEIR LISTING AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. THE HOOD EXHAUST FAN SHALL CONTINUE TO OPERATE AFTER THE EXTINGUISHING SYSTEM IS ACTIVATED UNLESS SHUTDOWN IS REQUIRED AS A COMPONENT OF THE EXTINGUISHING SYSTEM.

KITCHEN HOOD SECTION DETAIL

SCALE: N.T.S. | 8

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LICENSED PROFESSIONAL ENGINEER — RICHARD W. CHEUNG — No. M 40911 — EXP. 12/31/25 — MECHANICAL — STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

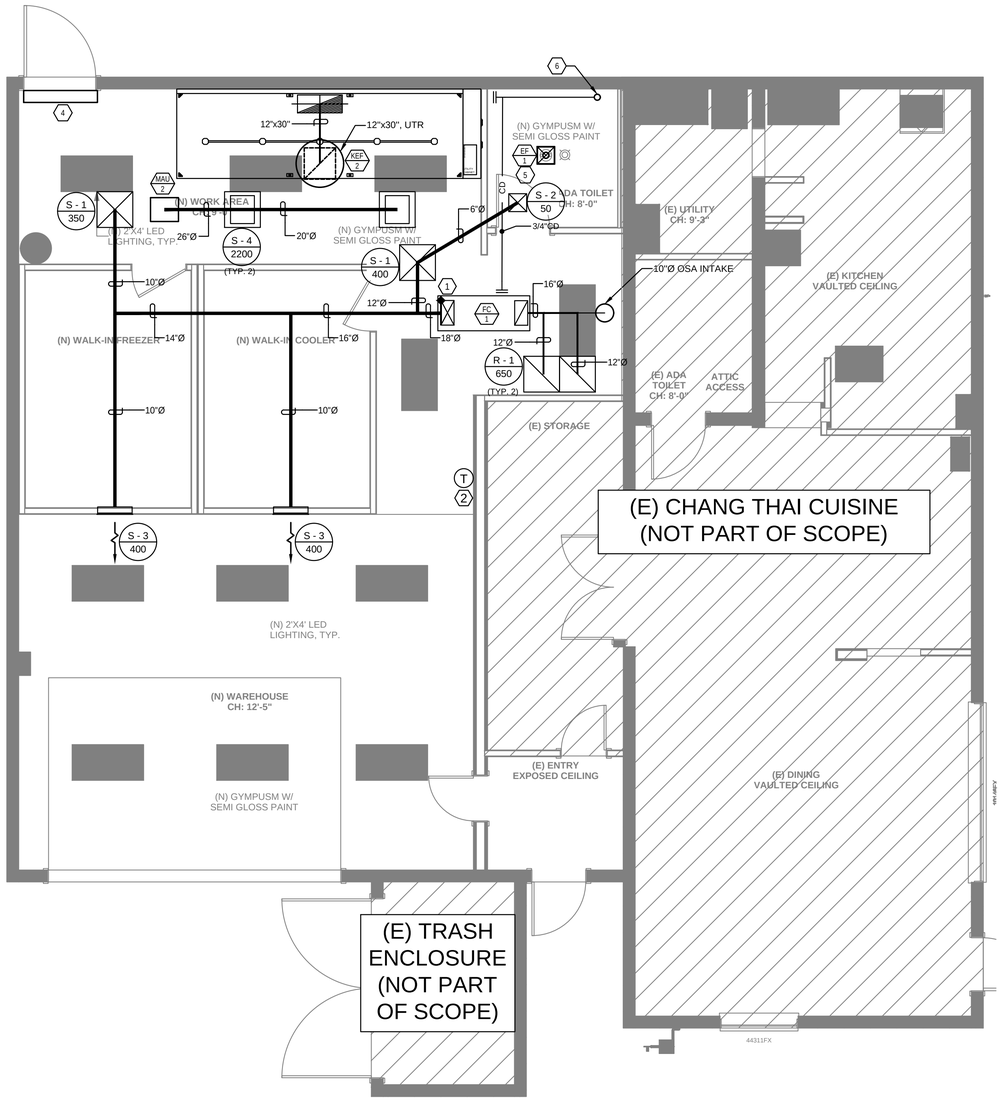
REVISION

DRAWN:	CHECKED:
K.T.	R.C.
DATE: 10/08/2024	SCALE:

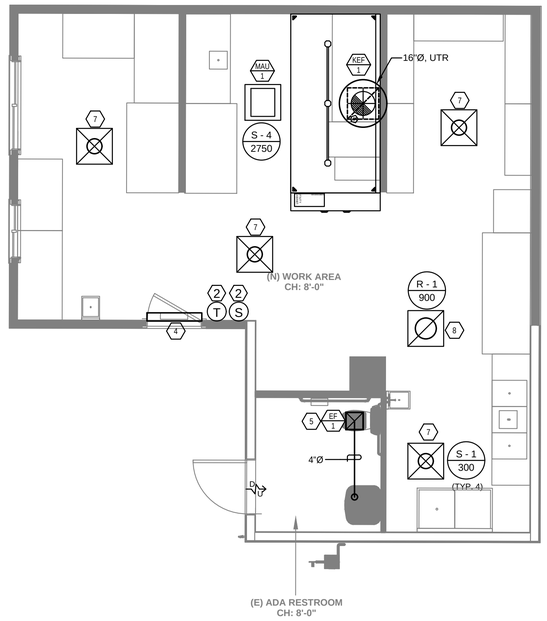
SHEET TITLE: MECHANICAL DETAILS

M002

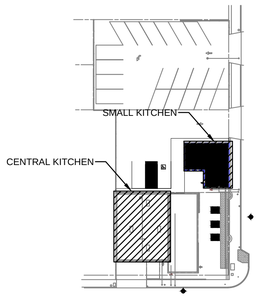
PLOT DATE: 12/10/2024 10:47:18 AM



CENTRAL KITCHEN



SMALL KITCHEN



KEYPLAN:

KEYED PLAN NOTES:

1. INSTALL DUCT SMOKE DETECTOR ON SUPPLY SIDE PLENUM.
2. INSTALL PROGRAMMABLE THERMOSTAT 48"AFF AND MOUNT REMOTE SENSORS HIGH ON WALL.
3. TYPE 1 HOOD; KITCHEN HOOD MUST OVERHANG MIN. 6" FROM EDGES OF KITCHEN EQUIPMENT BELOW. MAINTAIN GREASE DUCT SLOPE OF MIN 2%.
4. INSTALL AIR CURTAIN AT DELIVERY DOOR. THE AIR CURTAIN SHALL PROVIDE A DOWNWARD-OUTWARD FLOW NOT LESS THAN 8" WIDE NOZZLE AND AN AIRFLOW NOT LESS THAN 1600 FPM ACROSS THE ENTIRE OPENING AT A POINT MEASURED 3' ABOVE THE FLOOR. THE AIR CURTAIN MUST BE ON AUTOMATICALLY WHEN THE DOOR IS OPENED.
5. 4" EXHAUST VENT TO ROOF.
6. CONDENSATION PIPE DISCHARGE BY DIRECT CONNECTION TO LAV TAILPIECE.
7. SUPPLY DUCT FROM ABOVE.
8. RETURN DUCT FROM ABOVE.

GENERAL NOTES:

1. IF DRAWINGS ARE INCORRECT FROM THE ACTUAL SITE CONDITION, CONTRACTOR SHALL NOTIFY ENGINEER(S) AND PROVIDE INFORMATION REFLECTING ACTUAL CONDITIONS.
2. ENVIRONMENTAL EXHAUST TERMINATION TO BE MINIMUM 3 FEET FROM A PROPERTY LINE, 10 FEET FROM A FORCED AIR INLET, AND 3 FEET FROM OPENINGS INTO THE BUILDING.

MECHANICAL PLAN

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LICENSED PROFESSIONAL ENGINEER ROTH CHEN M 40913 EXP. 12/31/25 MECHANICAL STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

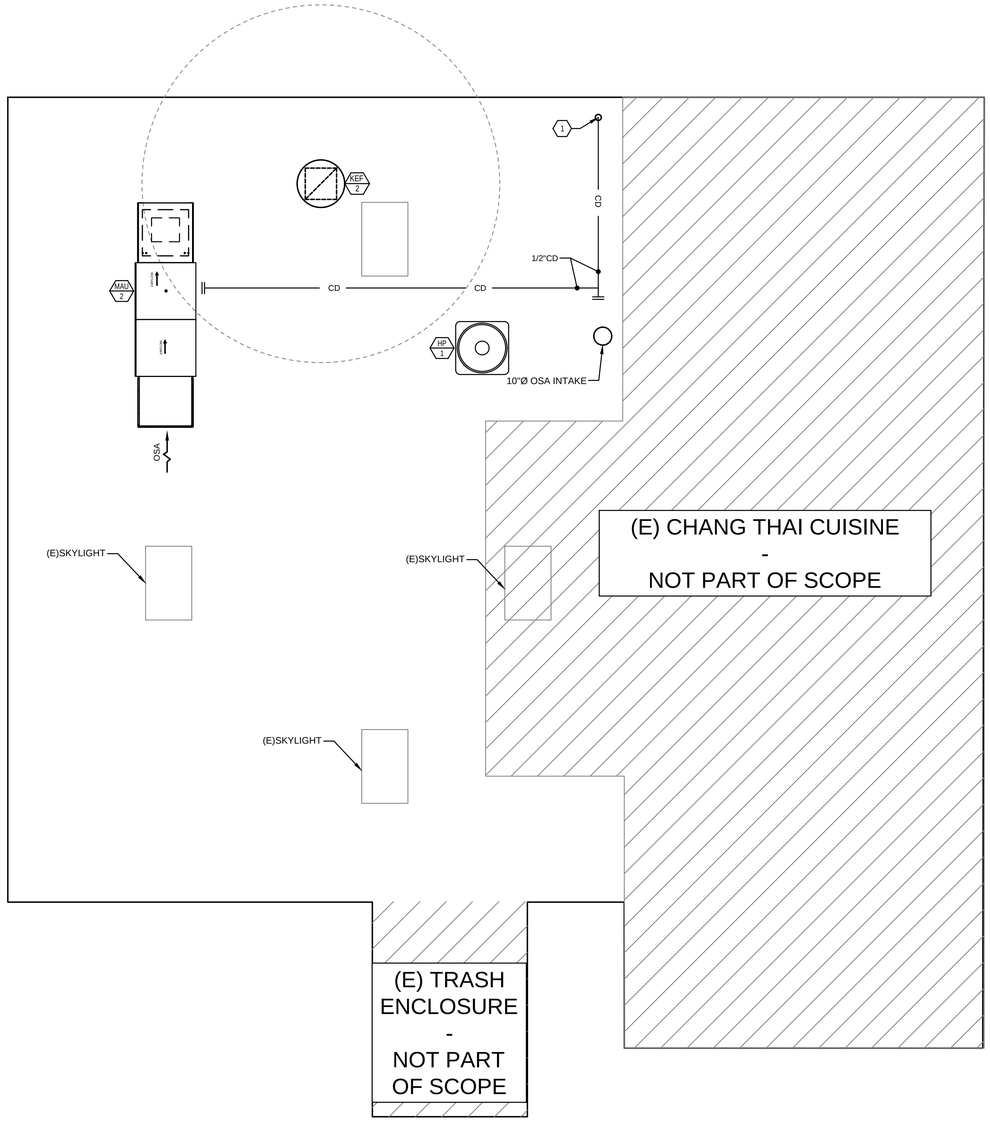
DRAWN:	CHECKED:
K.T.	R.C.
DATE:	SCALE:
10/08/2024	1/4" = 1'-0"

SHEET TITLE:

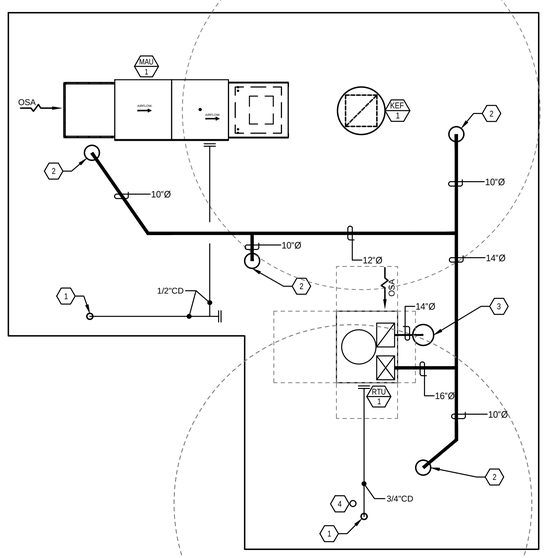
MECHANICAL PLAN

M100

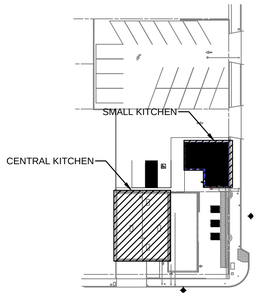
PLOT DATE: 12/10/2024 10:47:23 AM



CENTRAL KITCHEN



SMALL KITCHEN



KEYPLAN:

KEYED PLAN NOTES:

1. CONDENSATION PIPE DISCHARGE BY DIRECT CONNECTION TO LAV TAILPIECE. CONDENSATE DRAIN SLOPE AT MIN. 1%.
2. SUPPLY DUCT DOWN TO BELOW.
3. RETURN DUCT DOWN TO BELOW.
4. EXHAUST TERMINATION. MINIMUM 3 FEET FROM A PROPERTY LINE, 10 FEET FROM A FORCED AIR INLET, AND 3 FEET FROM OPENINGS INTO THE BUILDING.

GENERAL NOTES:

1. IF DRAWINGS ARE INCORRECT FROM THE ACTUAL SITE CONDITION, CONTRACTOR SHALL NOTIFY ENGINEER(S) AND PROVIDE INFORMATION REFLECTING ACTUAL CONDITIONS.

MECHANICAL PLAN - ROOF PLAN

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LICENSED PROFESSIONAL ENGINEER
ROTH CHEN
M 40917
EXP. 2/28/2026
MECHANICAL
STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

DRAWN:	CHECKED:
K.T.	R.C.
DATE:	SCALE:
10/08/2024	1/4" = 1'-0"

SHEET TITLE:
MECHANICAL PLAN
- ROOF PLAN

M101

PLOT DATE: 12/10/2024 10:47:28 AM

HOOD INFORMATION – JOB#7194561

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	H-1	6024 EX-2	ECON-AIR	10' 0"	600 DEG	I	HEAVY	275	2750			4"	16"	2750	1970	-0.551"	430 SS WHERE EXPOSED	ALONE	ALONE
2	H-2	6024 EX-2	ECON-AIR	16' 0"	600 DEG	I	HEAVY	275	4400	12"	30"	4"		4400	1760	-0.617"	430 SS WHERE EXPOSED	ALONE	ALONE

PATENT NUMBERS

EXHAUST HOODS ND-2/BD-2/SND-2 (CANADA) - CA PATENT 2520435 C.

HOOD INFORMATION

HOOD NO	TAG	FILTER(S)					LIGHT(S)			UTILITY CABINET(S)					FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM		ELECTRICAL	SWITCHES	
												TYPE	SIZE	MODEL #	QUANTITY	
1	H-1	SS BAFFLE WITH HANDLES	7	20"	16"	30%	3	L55 SERIES E26	NO	RIGHT	12"x60"x24"			SC-31111002	1 LIGHT 1 FAN	NO	525 LBS
2	H-2	SS BAFFLE WITH HANDLES	12	20"	16"	30%	5	L55 SERIES E26	NO	RIGHT	12"x60"x24"			SC-31111002	1 LIGHT 1 FAN	NO	741 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	H-1	LEFT END STANDOFF (FINISHED) 1" WIDE 60" LONG INSULATED.
		LEFT WALL AS END PANEL.
2	H-2	STRUCTURAL FRONT PANEL.

CLEARANCE TO COMBUSTIBLES

HOODS #	SURFACE	*CLEARANCE
1	TOP	18"
	FRONT	0"
	BACK	18"
	LEFT	0"
	RIGHT	0"
2	TOP	18"
	FRONT	0"
	BACK	18"
	LEFT	18"
	RIGHT	0"

- *0" CLEARANCE TO COMBUSTIBLES CONFORMS TO UL710 STANDARD.
- HOOD MOUNTED UTILITY CABINETS REQUIRE 36" SERVICE CLEARANCE.

GREASE DUCT & CHIMNEY SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO ECON-AIR MODEL "EDW"
ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "EDW"
IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING
CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "EDW"
DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER
THE MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURES LISTING MODEL "EDW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12".
DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN HORIZONTAL RUNS.

IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY EQUAL TO ECON-AIR MODEL "EDW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

ECON-AIR 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 _____

FOR QUESTIONS, CALL THE CAPTIVE-AIRE SYSTEMS CENTRAL CALIFORNIA OFFICE

Region 91

8 ADRIAN COURT
BURLINGAME, CA 94010
PHONE: (415) 956-2200
EMAIL: REG91@CAPTIVEAIRE.COM

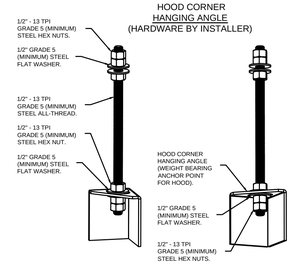
CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH

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

CAPTRATE & KLEEN-GARD FILTERS ARE BUILT IN COMPLIANCE WITH

NFPA #96
NSF STANDARD #2
UL STANDARD # 1046
INT. MECH. CODE (IMC)

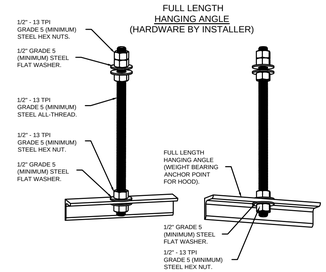
HOOD CORNER
HANGING ANGLE
(HARDWARE BY INSTALLER)



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

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 ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR FULL LENGTH HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

REVISIONS

	DESCRIPTION	DATE:
△		
△		
△		
△		

econ·air
www.econair.com
Central CA
8 Adrian Court, Burlingame, CA, 94010 PHONE: (415) 956 - 2200 FAX: 9192275940 EMAIL: reg91@econair.com

Central Kitchen and Detached Kitchen
2229 Dover Avenue,
San Pablo, CA, 94806

DATE: 12/9/2024
DWG.#: 7194561
DRAWN BY: T.Thai
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 1

CDI Circa Domini International, Inc.
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LICENSED PROFESSIONAL ENGINEER ROTH CHEN M 40913 EXP. 12/31/16 MECHANICAL STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

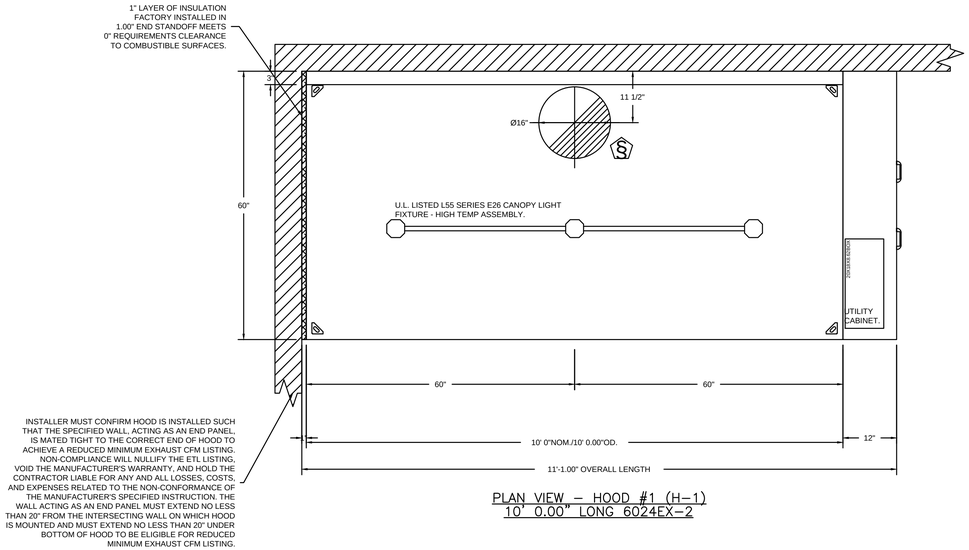
REVISION

DRAWN: K.T.
CHECKED: R.C.
DATE: 10/08/2024
SCALE:

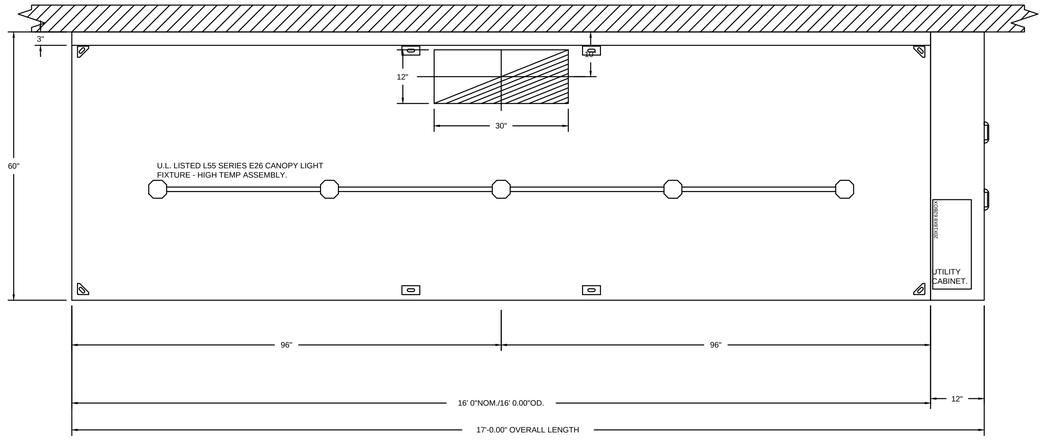
SHEET TITLE:
HOOD INFORMATION

M200

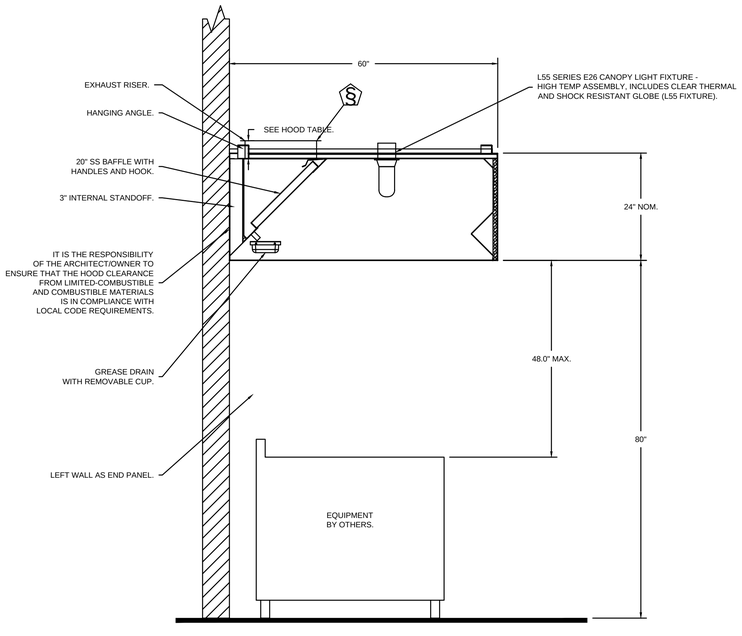
PLOT DATE: 12/10/2024 10:47:33 AM



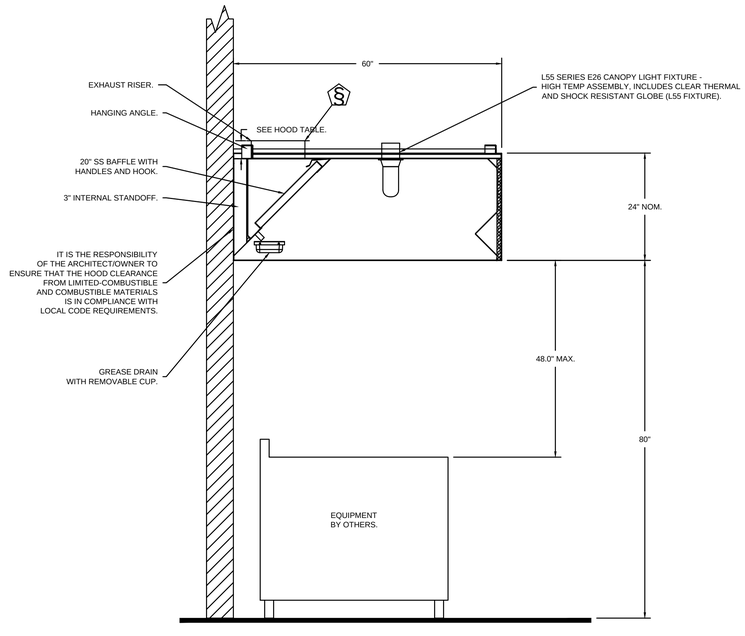
PLAN VIEW – HOOD #1 (H–1)
10' 0.00" LONG 6024EX–2



PLAN VIEW – HOOD #2 (H–2)
16' 0.00" LONG 6024EX–2
NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.



SECTION VIEW – MODEL 6024EX–2
HOOD – #1 (H–1)



SECTION VIEW – MODEL 6024EX–2
HOOD – #2 (H–2)

REVISIONS

	DESCRIPTION	DATE:
1		
2		
3		
4		

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2229 Dover Avenue,
San Pablo, CA, 94806

DATE: 12/9/2024

DWG.#: 7194561

DRAWN BY: T.Thai

SCALE: 3/4" = 1'–0"

MASTER DRAWING

SHEET NO. 2

CDI Circa Domini International, Inc.
Engineering - Consulting
9890 Research Dr. Suite 100, Irvine, CA 92618
Phone (949) 533-4117 | dkang@cdieng.com

LICENSED PROFESSIONAL ENGINEER
ROTH CHEN
M 40913
EXP. 03/31/2026
MECHANICAL
STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

DRAWN: K.T. | CHECKED: R.C.

DATE: 10/08/2024 | SCALE:

SHEET TITLE: HOOD INFORMATION

M201

PLOT DATE: 12/10/2024 10:47:38 AM

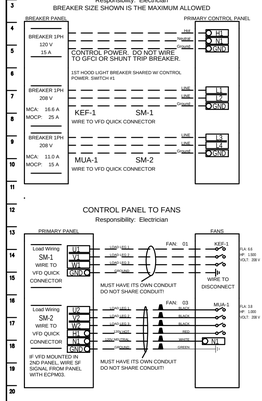
ELECTRICAL PACKAGE – JOB#7194561

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		FAN TAG	TYPE	ϕ	HP	VOLT	FLA
1	ECP-1	SC-31111002	UTILITY CABINET RIGHT	UTILITY CABINET RIGHT	1 LIGHT	SMART CONTROLS BASIC	KEF-1	EXHAUST	3	1.500	208	6.6
				HOOD # 1	1 FAN		MUA-1	SUPPLY	3	1.000	208	3.8
2	ECP-2	SC-31111002	UTILITY CABINET RIGHT	UTILITY CABINET RIGHT	1 LIGHT	SMART CONTROLS BASIC	KEF-2	EXHAUST	3	2.000	208	7.4
				HOOD # 2	1 FAN		MUA-2	SUPPLY	3	3.000	208	9.5

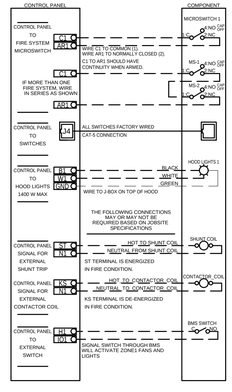
JOB NO 7194561 | MODEL NUMBER SC-31111002 | JOB NAME Central Kitchen and Detached ... | DRAWN BY | SCHEMATIC TYPE INSTALL | DWG NO ECP-#1-1 | DATE 12/9/2024

DESCRIPTION OF OPERATION:
3 Phase w/ control for 1 Exhaust Fan, 1 Supply Fan. Exhaust on in Fire, Lights out in Fire. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD.

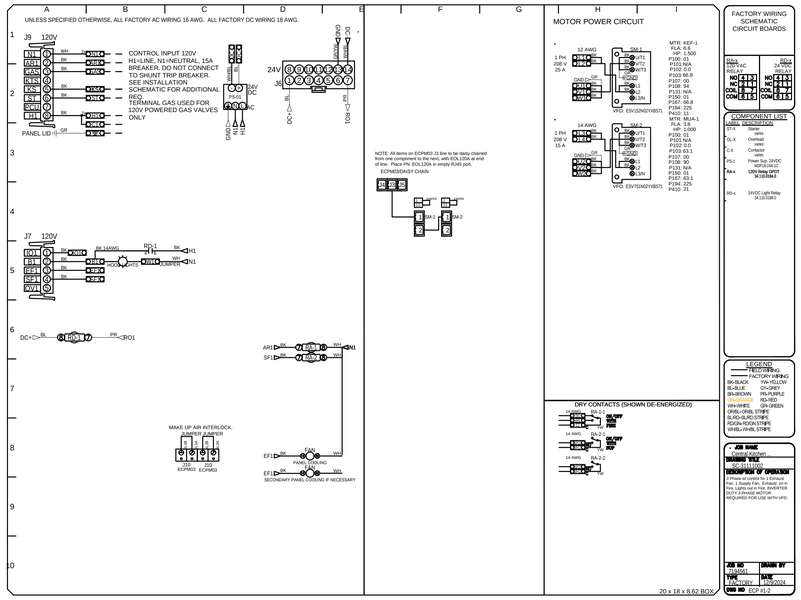
BREAKER PANEL TO PRIMARY CONTROL PANEL
Responsibility: Electrician
BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED



CONTROL PANEL TO ACCESSORY ITEMS
Responsibility: Electrician



CONTROL PANEL TO FANS
Responsibility: Electrician



JOB NO 7194561 | MODEL NUMBER SC-31111002 | JOB NAME Central Kitchen and Detached ... | DRAWN BY | SCHEMATIC TYPE INSTALL | DWG NO ECP-#2-1 | DATE 12/9/2024

DESCRIPTION OF OPERATION:
3 Phase w/ control for 1 Exhaust Fan, 1 Supply Fan. Exhaust on in Fire, Lights out in Fire. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD.

BREAKER PANEL TO PRIMARY CONTROL PANEL
Responsibility: Electrician
BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED

CONTROL PANEL TO ACCESSORY ITEMS
Responsibility: Electrician

CONTROL PANEL TO FANS
Responsibility: Electrician

UNLESS SPECIFIED OTHERWISE, ALL FACTORY AC WIRING 16 AWG. ALL FACTORY DC WIRING 18 AWG.

MOTOR POWER CIRCUIT

DRY CONTACTS (SHOWN DE-ENERGIZED)

REVISIONS

	DESCRIPTION	DATE:
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△		
△		
△		

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LICENSED PROFESSIONAL ENGINEER
No. M 40917
EXP. 2/31/2026
MECHANICAL
STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

Central Kitchen and Detached Kitchen
2229 Dover Avenue,
San Pablo, CA, 94806

DATE: 12/9/2024

DWG.#: 7194561

DRAWN BY: T.Thai

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 3

REVISION

DRAWN: K.T. | CHECKED: R.C.

DATE: 10/08/2024 | SCALE:

SHEET TITLE: HOOD INFORMATION

M202

PLOT DATE: 12/10/2024 10:47:43 AM

EXHAUST FAN INFORMATION – JOB#7194561

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	DU180HFA	CAPTIVEAIRE	2750	0.750	1045	ODP,PREMIUM	1.500	0.8150	3	208	6.6	635 FPM	178	12.4
2	KEF-2	1	DU240HFA	CAPTIVEAIRE	4400	1.000	799	TEFC,PREMIUM	2.000	1.4960	3	208	7.4	1000 FPM	335	12.7

MUA FAN INFORMATION – JOB#7194561

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MOCP	EVAP FLOW RATE (Gal/Hr)	EVAP COOLER ENTERING DB TEMP	EVAP COOLER ENTERING WB TEMP	EVAP COOLER LEAVING DB TEMP	EVAP COOLER LEAVING WB TEMP	WEIGHT (LBS)	SONES
3	MUA-1	1	A2-20D	20MF-2-MOD	A2	1500	2750	0.500	1134	ODP,PREMIUM	1.000	0.8240	3	208	3.8	4.8A	15A	3.95	90.0°F	63.0°F	70.0°F	63.0°F	790	11.5
4	MUA-2	1	A2-20D	20MF-2-MOD	A2	1500	4400	0.375	1569	ODP,PREMIUM	3.000	2.2460	3	208	9.5	11.9A	20A	6.12	90.0°F	63.0°F	71.0°F	63.0°F	819	20.7

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF-1	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	2 YEAR PARTS WARRANTY
2	KEF-2	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR240HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	2 YEAR PARTS WARRANTY
3	MUA-1	1	SIZE 2 UNTEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS
		1	EVAPORATIVE COOLER WIRING HARNESS
		1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) - THREE PHASE ONLY
		1	2 YEAR PARTS WARRANTY
4	MUA-2	1	SIZE 2 UNTEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS
		1	EVAPORATIVE COOLER WIRING HARNESS
		1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) - THREE PHASE ONLY
		1	2 YEAR PARTS WARRANTY

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF-1	YES						
2	KEF-2	YES						
3	MUA-1							
4	MUA-2							

CURB ASSEMBLIES

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF-1	43 LBS	CURB	26.500"W X 26.500"L X 20.000"H VENTED HINGED.
2	# 2	KEF-2	43 LBS	CURB	31.500"W X 31.500"L X 20.000"H VENTED HINGED.
3	# 3		55 LBS	CURB	31.000"W X 31.000"L X 20.000"H.
	# 3			RAIL	4.000"W X 4.000"L X 36.000"H.
	# 3			RAIL	4.000"W X 4.000"L X 36.000"H.
4	# 4		55 LBS	CURB	31.000"W X 31.000"L X 20.000"H.
	# 4			RAIL	4.000"W X 4.000"L X 36.000"H.
	# 4			RAIL	4.000"W X 4.000"L X 36.000"H.

FAN SOUND DATA

FAN UNIT NO	TAG	MOTOR	SOUND DATA			OCTAVE BAND SOUND DATA							
			LWA	SONES @ 5 FT	DBA @ 5 FT	DISTANCE (FT)	63 HZ	125 HZ	250 HZ	500 HZ	1 KHZ	2 KHZ	4 KHZ	8 KHZ
1	KEF-1	EXHAUST	75.8	12.3986241189282	64.3	5	75	83.1	80.5	71.5	67.6	65.1	58.5	52.1
2	KEF-2	EXHAUST	76.1	12.6592984451801	64.6	5	75.4	87.4	78.9	70.2	68.1	64.8	59.9	55.6
3	MUA-1	SUPPLY	74.7	11.4879083956192	63.2	5	72.6	80.2	74.8	72.2	68.6	65.9	62.6	58.7
4	MUA-2	SUPPLY	83.2	20.7140519087911	71.7	5	78.2	85.9	81.9	81.5	77.5	74.3	71.2	67.6

REVISIONS

	DESCRIPTION	DATE:
1		
2		
3		
4		

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Central Kitchen and Detached Kitchen
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DATE: 12/9/2024

DWG.#: 7194561

DRAWN BY: T.Thai

SCALE: 3/4" = 1'–0"

MASTER DRAWING

SHEET NO. 4

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LICENSED PROFESSIONAL ENGINEER
ROTH CHEN
M 40913
EXP. 09-30-26
MECHANICAL
STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

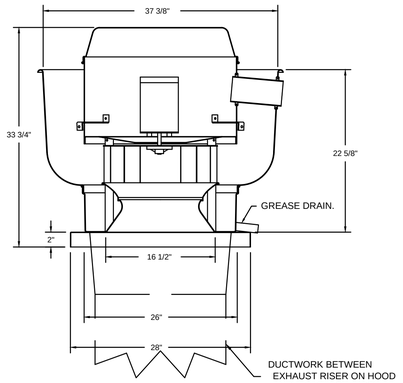
DRAWN: K.T.
CHECKED: R.C.
DATE: 10/08/2024
SCALE:

SHEET TITLE:
HOOD INFORMATION

M203

PLOT DATE: 12/10/2024 10:47:48 AM

FAN #1 DU180HFA - EXHAUST FAN (KEF-1)



FEATURES:

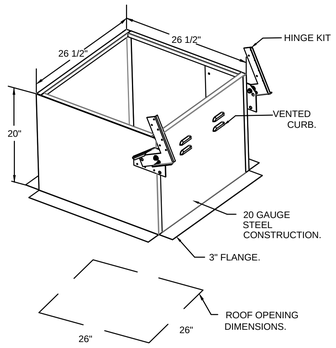
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

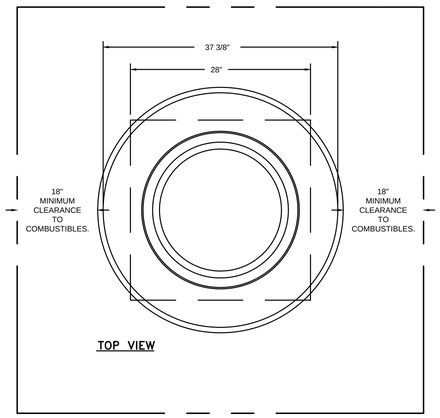
NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

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.

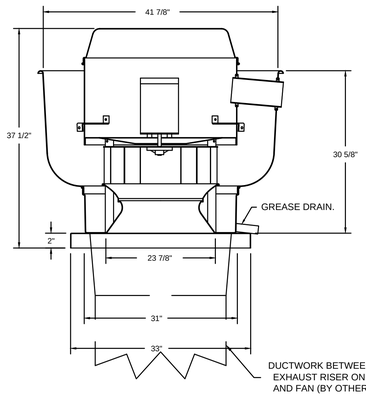
OPTIONS

- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS.
- 2 YEAR PARTS WARRANTY.





FAN #2 DU240HFA - EXHAUST FAN (KEF-2)



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).
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- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST
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ABNORMAL FLARE-UP TEST
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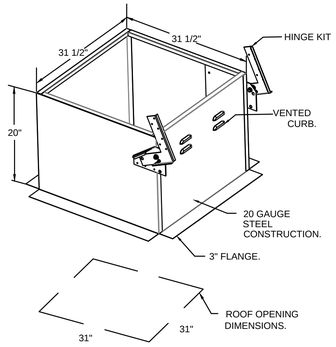
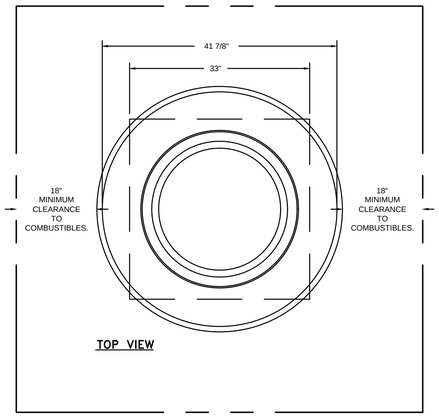
OPTIONS

- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR240HFA - INSTALLED AT PLANT - FOR GREASE DUCTS.
- 2 YEAR PARTS WARRANTY.





REVISIONS

	DESCRIPTION	DATE:
1		
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LICENSED PROFESSIONAL ENGINEER — ROTH CHEN — M 40917 — EXP. 09-30-26 — MECHANICAL — STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

Central Kitchen and Detached Kitchen
2229 Dover Avenue,
San Pablo, CA, 94806

DATE: 12/9/2024
DWG.#: 7194561
DRAWN BY: T.Thai
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 5

REVISION

DRAWN:	CHECKED:
K.T.	R.C.
DATE: 10/08/2024	SCALE:

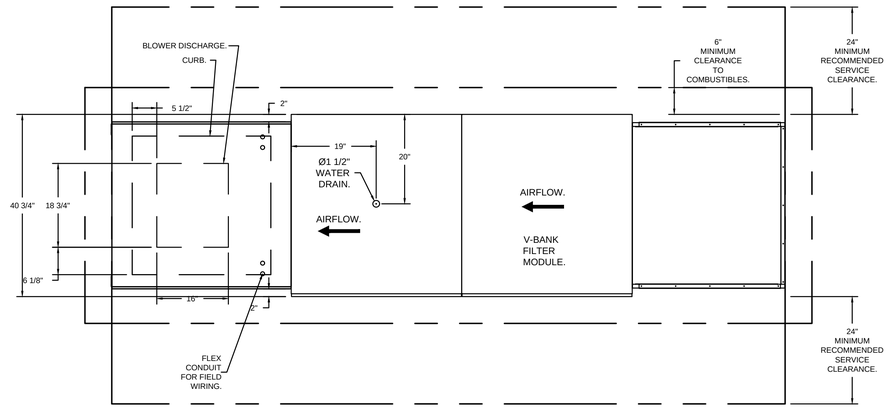
SHEET TITLE: HOOD INFORMATION

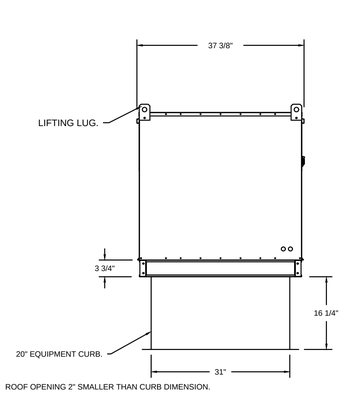
M204

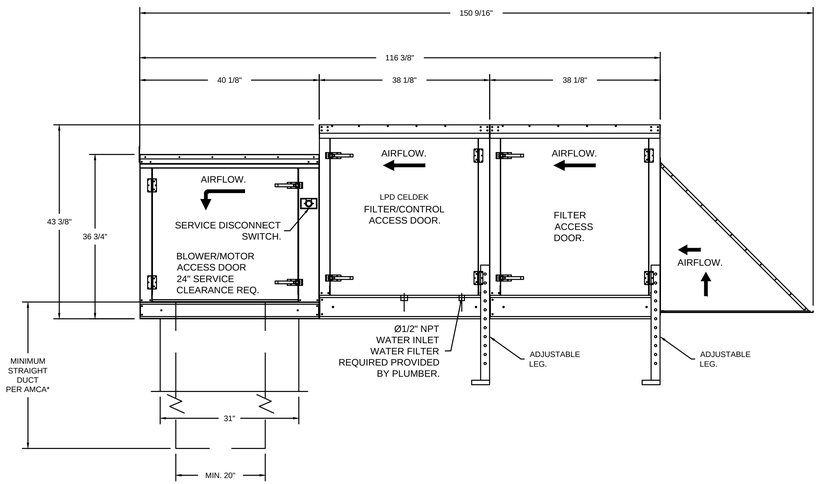
PLOT DATE: 12/10/2024 10:47:53 AM

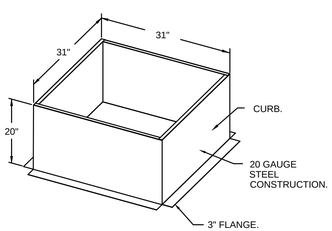
FAN #3 A2-20D - SUPPLY FAN (MUA-1)
1. UNTEMPERED SUPPLY UNIT WITH 20" MIXED FLOW DIRECT DRIVE FAN IN SIZE #2 HOUSING.
2. EVAP COOLER (LPD CELDEK) & V-BANK WITH 2" TA-13 FILTERS-OUTDOOR.
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
4. DOWN DISCHARGE CONSTRUCTION FOR SIZE 2 UNTEMPERED DIRECT DRIVE AHUS.
5. 120V WIRING CONNECTION TO ENERGIZE EVAPORATIVE COOLERS FROM UNTEMPERED SUPPLY FANS.
6. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.
7. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER/EVAP SECTION).
8. 2 YEAR PARTS WARRANTY.

*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 20" x 20".









REVISIONS

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1		
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DRAWN BY: T.Thai
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 6

REVISION

DRAWN:	CHECKED:
K.T.	R.C.
DATE: 10/08/2024	SCALE:

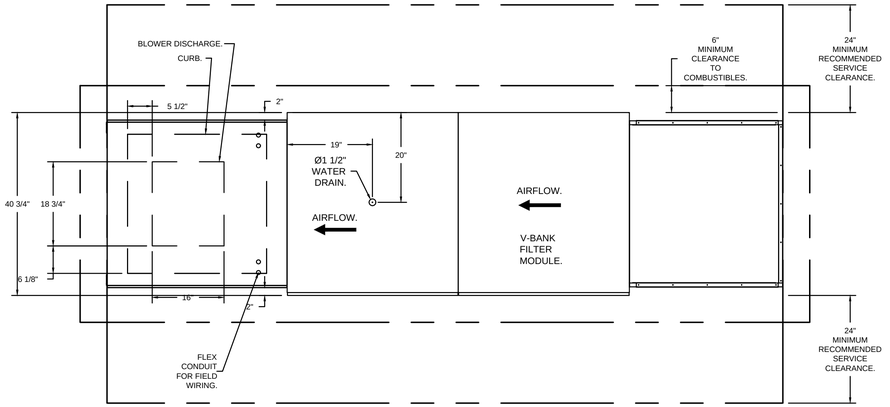
SHEET TITLE: HOOD INFORMATION

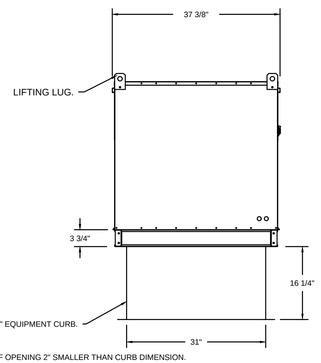
M205

PLOT DATE: 12/10/2024 10:47:58 AM

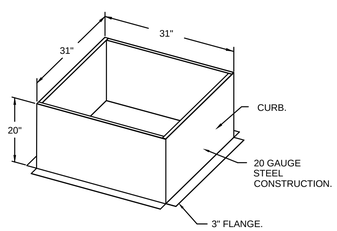
FAN #4 A2-20D - SUPPLY FAN (MUA-2)
1. UNTEMPERED SUPPLY UNIT WITH 20" MIXED FLOW DIRECT DRIVE FAN IN SIZE #2 HOUSING.
2. EVAP COOLER (LPD CELDEK) & V-BANK WITH 2" TA-13 FILTERS-OUTDOOR.
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
4. DOWN DISCHARGE CONSTRUCTION FOR SIZE 2 UNTEMPERED DIRECT DRIVE AHUS.
5. 120V WIRING CONNECTION TO ENERGIZE EVAPORATIVE COOLERS FROM UNTEMPERED SUPPLY FANS.
6. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.
7. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER/EVAP SECTION).
8. 2 YEAR PARTS WARRANTY.

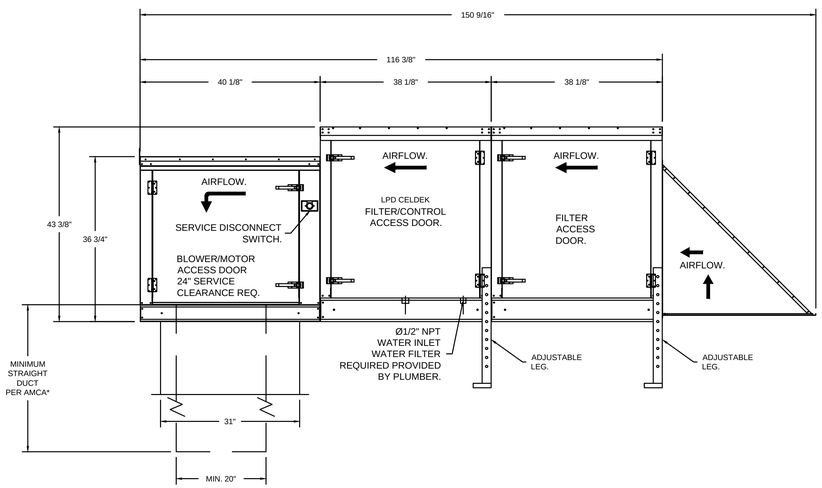
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE 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 20" x 20".





ROOF OPENING 2" SMALLER THAN CURB DIMENSION.





REVISIONS

	DESCRIPTION	DATE:
1		
2		
3		
4		

CAPTIVEAIRE
www.captiveaire.com
Central CA
8 Adrian Court, Burlingame, CA, 94010 PHONE: (415) 956 - 2200 FAX: 9192275940 EMAIL: regi91@econair.com

CDI Circa Domini International, Inc.
Engineering - Consulting
9890 Research Dr. Suite 100, Irvine, CA 92618
Phone (949) 533-4117 | dkang@cdieng.com

LICENSED PROFESSIONAL ENGINEER ROTH CHEN M 40917 EXP: 06/30/26 MECHANICAL STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

Central Kitchen and Detached Kitchen
2229 Dover Avenue,
San Pablo, CA, 94806

DATE: 12/9/2024
DWG.#: 7194561
DRAWN BY: T.Thai
SCALE: 3/4" = 1'-0"
MASTER DRAWING

REVISION

DRAWN:	CHECKED:
K.T.	R.C.
DATE: 10/08/2024	SCALE:

SHEET TITLE: HOOD INFORMATION

SHEET NO. 7

M206

PLOT DATE: 12/10/2024 10:48:03 AM

Exhaust Fan Wiring

JOB	7194561 - Central Kitchen and Detached ...		
DRAWING NUMBER	EXH7194561-1	SHIP DATE 12/9/2024	MODEL DU180HFA

Exhaust Fan Wiring

JOB	7194561 - Central Kitchen and Detached ...		
DRAWING NUMBER	EXH7194561-2	SHIP DATE 12/9/2024	MODEL DU240HFA

AirHandler Wiring

JOB	7194561 - Central Kitchen and Detached ...		
DRAWING NUMBER	A7194561-3	SHIP DATE 12/9/2024	MODEL AR-20D

Evaporative Cooler Wiring

JOB	7194561 - Central Kitchen and Detached ...		
DRAWING NUMBER	EC7194561-3	SHIP DATE 12/9/2024	MODEL AR-20D

AirHandler Wiring

JOB	7194561 - Central Kitchen and Detached ...		
DRAWING NUMBER	A7194561-4	SHIP DATE 12/9/2024	MODEL AR-20D

Evaporative Cooler Wiring

JOB	7194561 - Central Kitchen and Detached ...		
DRAWING NUMBER	EC7194561-4	SHIP DATE 12/9/2024	MODEL AR-20D

REVISIONS

DESCRIPTION	DATE:

CAPTIVE-AIRE

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LICENSED PROFESSIONAL ENGINEER — No. 24091 — EXP. 8/31/2026 — MECHANICAL — STATE OF CALIFORNIA

Central CA

8 Adrian Court, Burlingame, CA, 94010 PHONE: (415) 956 - 2200 FAX: 9192275940 EMAIL: rag81@econair.com

CONVERSION

STORAGE TO KITCHEN CONV

2229 DOVER AVE
SAN PABLO, CA 94806

Central Kitchen and Detached Kitchen
2229 Dover Avenue,
San Pablo, CA, 94806

DATE: 12/9/2024

DWG.#: 7194561

DRAWN BY: T.Thai

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 8

REVISION

DRAWN:	CHECKED:
K.T.	R.C.
DATE: 10/08/2024	SCALE:

SHEET TITLE: HOOD INFORMATION

M207

PLOT DATE: 12/10/2024 10:48:08 AM

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)2 for alterations.		
Project Name: CENTRAL KITCHEN IMPROVEMENT	**Report Page:**	**(Page 1 of 9)**
Project Address: 2229 DOVER AVE., SAN PABLO, CA 94806	**Date Prepared:**	2024-12-04T02:09:17-05:00

A. GENERAL INFORMATION

01	Project Location (city)	SAN PABLO	04	Total Conditioned Floor Area	1386
02	Climate Zone	3	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

● Restaurant

B. PROJECT SCOPE

This table Includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01 Air System(s)		02 Wet System Components		03 Dry System Components	
☒	Heating Air System	☐	Water Economizer	☒	Air Economizer
☒	Cooling Air System	☐	Pumps	☐	Electric Resistance Heat
	Mechanical Controls	☐	System Piping	☐	Fan Systems
☒	Mechanical Controls (existing to remain, altered or new)	☐	Cooling Towers	☒	Ductwork (existing to remain, altered or new)
		☐	Chillers	☒	Ventilation
		☐	Boilers	☐	Zonal Systems/ Terminal Boxes

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: CENTRAL KITCHEN IMPROVEMENT	**Report Page:**	**(Page 2 of 9)**
	Date Prepared:	2024-12-04T02:09:17-05:00

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.

01		02		03		04		05		06		07		08	09
System Summary 110.1, 110.2, 140.4, 170.2(c)	AND	Pumps 140.4(k), 170.2(c)4I	AND	Fans/ Economizers 140.4(c), 140.4(e), 170.2(c)	AND	System Controls 110.2, 120.2, 140.4(f), 170.2(c)	AND	Ventilation 120.1, 160.2	AND	Terminal Box Controls 140.4(d), 170.2(c)4B	AND	Distribution 120.3, 140.4(l), 160.2, 160.3	AND	Cooling Towers 110.2(e)2	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	
Yes	AND		AND	Yes	AND	Yes	AND	Yes	AND		AND	Yes	AND		COMPLIES with Exceptional Conditions
Mandatory Measures Compliance (See Table Q for Details)															COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

The permit applicant has indicated on Table J that ventilation calculations have been attached or included elsewhere on the plans.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01 System Name	02 Quantity	03 System Serving	04 System Status	05 Space Type	06 Utilizing Recovered Heat
HP-1	1	Single zone	New/ Addition	All Other Occupancies	☐

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: CENTRAL KITCHEN IMPROVEMENT	**Report Page:**	**(Page 3 of 9)**
	Date Prepared:	2024-12-04T02:09:17-05:00

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3aii	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available[1] 140.4(a) and 170.2(c)1	Equipment Sizing per Mechanical Schedule (kBtu/h) 140.4(a&b), 170.2(c)1 & 170.2(c)2						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
				Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
HP-1	Unitary Heat Pumps	Air-cooled, split (1phase)	Yes	48.5	48.5	0	35.8	47.5	47.5	47

[1] FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are excepted.
[2] It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.
[3] If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.
[4] Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Heating Mode				Cooling Mode		
		Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
HP-1	<65,000		HSPF2	7.5	8.1	SEER2	14.3	16

G. PUMPS

This section does not apply to this project.

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: CENTRAL KITCHEN IMPROVEMENT	**Report Page:**	**(Page 4 of 9)**
	Date Prepared:	2024-12-04T02:09:17-05:00

H. FAN SYSTEMS & AIR ECONOMIZERS

This table is used to demonstrate compliance with prescriptive requirements found in 140.4(c), 140.4(e), 140.4(m), 170.2(c)3, and 170.2(c)4A for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name	HP-1	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Non Serving Dwelling Units	Fan System Airflow (cfm)	1,600	Site Elevation	8	Economizer	Fixed Temperature
01	02	03	04			05		06	07	08	09			10	11
Fan Name or Item Tag	Fan Type	Qty	Component			Airflow through Component (%)		Water Gauge (w.g)	Allowance		Design				
									Component Allowance (watt/cfm)	Fan Allowance (watt/cfm)[1]	Design Electrical Input Power Method			Motor Nameplate Horsepower	Fan Electrical Input Power (kW)
HP-1	Supply	1	None used							0	Manufacturer provided				0.5
Supply Fan Base Allowance (watt/cfm)			Exhaust/Return/Relief/Transfer Fan Base Allowance(watt/cfm)						Fan System Allowance (kW)[3]				Fan System Electrical Input Power (kW)		0.5

[1] FOOTNOTES: Fans serving spaces with design background noise goals below NC35
[2] Low-turndown single-zone VAV fan system must be capable of and configured to reduce airflow to 50 percent of design airflow and use no more than 30 percent of the design wattage at that airflow. No more than 10 percent of the design load served by the equipment shall have fixed loads.
[3] Fan system allowance includes fan system base allowance.
[4] Filter pressure loss can only be counted once per fan system.
[5] Complex Fan System means a fan system that combines a single cabinet fan system with other supply fans, exhaust fans, or both.
[6] Computer room economizers must meet requirements of 140.9(a) and will be documented on the NRCC-PRC-E document..

Fan Energy Index (FEI)

01 Name or Item Tag	02 FEI Exception	03 FEI
HP-1	None Applies	1

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: CENTRAL KITCHEN IMPROVEMENT	**Report Page:**	**(Page 5 of 9)**
	Date Prepared:	2024-12-04T02:09:17-05:00

I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01 System Name	02 System Zoning	03 Conditioned Floor Area Being Served (ft²)	04 Thermostats 110.2(b) & (c)[1], 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	05 Shut-Off Controls 120.2(e) & 160.3(a)2D	06 Isolation Zone Controls 120.2(g) & 160.3(a)2F	07 Demand Response 110.12 120.2(b) & 160.3(a)2B	08 Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	09 Window Interlocks per 140.4(n) & 170.2(c)4D	10 Direct Digital Control (DDC) per 120.2
HP-1	Single zone	<= 25,000 ft²	Setback + DR Tstat per 110.12	Auto Timer Switch	NA: Single Zone	DR Tstat per 110.12	NA: Single Zone	NA: No operable windows	NA: Single Zone

[1] FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1 120.2(e)3B 140.4(p) and 140.4(q) for all nonresidential and hotel/motel and dt24refnolink/}160.2, 160.3(a)30, 170.2(a)4N, 170.2(a)4O for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☒	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☐	Check this box if the project included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces
03	☐	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)2.

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: CENTRAL KITCHEN IMPROVEMENT	**Report Page:**	**(Page 6 of 9)**
	Date Prepared:	2024-12-04T02:09:17-05:00

L. DISTRIBUTION (DUCTWORK and PIPING)

This table is used to show compliance with mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 120.4(g) for duct sealing.

01	☐	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints of which shall be sealed.

Duct Leakage Testing

The answers to the questions below apply to the following duct systems:	HP-1		
		NR/ Common Use: Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No
		Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	---
		Duct leakage testing per CMC Section 603.9.2 required for these systems?	Yes

11	No	The scope of the project includes only duct systems serving healthcare facilities
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17	Yes	All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A
18	No	All ductwork is an extension of an existing duct system
19	No	Ductwork serving individual dwelling unit
20		< 25 ft of new or replacement space conditioning ducts installed
21	Verified Duct System Design	Duct Insulation R-value
22	No	Ductwork Existing To Remain
23	No	Duct System Connected To Altered Space Conditioning System

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: CENTRAL KITCHEN IMPROVEMENT	**Report Page:**	**(Page 7 of 9)**
	Date Prepared:	2024-12-04T02:09:17-05:00

M. COOLING TOWERS

This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-4

Form/Title
NRCI-MCH-01-E - Must be submitted for all buildings

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-4

Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	
NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to 'Yes'. If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	HP-1
NRCA-MCH-05-A - Air Economizer Controls	HP-1
NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	HP-1

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: CENTRAL KITCHEN IMPROVEMENT	**Report Page:**	**(Page 8 of 9)**
	Date Prepared:	2024-12-04T02:09:17-05:00

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01		02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	No	Plan sheet or construction document location
03 **Mandatory Measure**		04 **Plan sheet or construction document location**
Heating Equipment Efficiency per 110.1		M001
Cooling Equipment Efficiency per 110.1		M001
Furnace Standby Loss Control per 110.2(d)		N/A
Duct Insulation per 120.4		N/A
Heat Pump with Supplemental electric Resistance Heater Controls per 110.2(b)		N/A
The air duct and plenum system is designed per 120.4(a)-(f)		M001
Kitchen range hoods shall be rated for sound in accordance with Section 7.2 of ASHRAE 62.2		M001

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: CENTRAL KITCHEN IMPROVEMENT	**Report Page:**	**(Page 9 of 9)**
Project Address: 2229 DOVER AVE., SAN PABLO, CA 94806	**Date Prepared:**	2024-12-04T02:09:17-05:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: RUTH CHEN	Documentation Author Signature:
Company: CDI	Signature Date: 12/04/2024
Address: 9890 RESEARCH DR. STE 100	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: IRVINE,CA,92618	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: RUTH CHEN	Responsible Designer Signature:
Company: CDI	Date Signed: 12/04/2024
Address: 9890 RESEARCH DR. STE 100	License: M40915
City/State/Zip: IRVINE,CA,92618	Phone:

MECHANICAL TITLE 24 - 1

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LICENSED PROFESSIONAL ENGINEER — ROH CHEN — M 40915 — EXP. 09-30-26 — MECHANICAL — STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

DRAWN:	CHECKED:
K.T.	R.C.
DATE: 10/08/2024	SCALE:

SHEET TITLE:
MECHANICAL
TITLE 24 - 1

TM00

PLOT DATE: 12/10/2024 10:48:13 AM

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-ENV-E

This document is used to demonstrate compliance with mandatory requirements in 110.8(g) and 120.7(b)/ 160.1 for newly constructed nonresidential, hotel/ motel, multifamily and mixed-use buildings, and 141.0(b)1/ 180.2 for alterations, related to roof, wall and floor assemblies. It is also used to demonstrate compliance with prescriptive requirements in 140.3/ 170.2 for newly constructed buildings, and 141.0/ 180.1/ 180.2 for additions and alterations, related to roof, wall, floor, door, fenestration and daylighting requirements.

Project Name: CENTRAL KITCHEN IMPROVEMENT **Report Page:** (Page 1 of 6)

Project Address: 2229 DOVER AVE., SAN PABLO, CA 94806 **Date Prepared:** 2024-12-04T02:11:14-05:00

A. GENERAL INFORMATION

01	Project Location (city)	SAN PABLO	05	# of Stories (Habitable Above Grade)	1
02	Zipcode	94806	06	Total Conditioned Floor Area (ft²)	1386
03	Climate Zone	3	07	Total Unconditioned Floor Area (ft²)	0
04	Occupancy Types Within Project: (select all that apply): If one occupancy constitutes >= 80% of the conditioned floor area, the entire building envelope may be designed to comply with the provisions of that occupancy per 100.0(f).		08	☐ Project includes unconditioned enclosed space(s) > 5,000 ft² under a roof with a ceiling height of at least 15 ft.[1]	

● Restaurant

[1] *FOOTNOTE: Enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15 ft in climate zones 2 through 15 are required to meet the minimum daylighting requirements defined in 140.3(c)/ 170.2(b). Compliance with 140.3(c)/ 170.2(b) is documented in Table L. This is the only prescriptive requirement which applies to unconditioned spaces.*

B. PROJECT SCOPE

This table specifies project envelope components within the permit application demonstrating compliance using the prescriptive paths outlined in 140.3/ 170.2 and 141.0(a)1/ 180.1 and 141.0(b)1 and 2/ 180.2 for additions and alterations.

My project consists of (check all that apply)		Component Types					
01		02					
☐	New Construction or Newly Conditioned Space	☐	Roof	☐	Walls	☐	Exterior Opaque Doors
☐	One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft			☐	Floors	☐	Fenestration/ Glazed Doors[1]
☐	Addition of conditioned space	☐	Roof	☐	Walls	☐	Exterior Opaque Doors
☐	One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft						
☐	Addition is <=700 ft²			☐	Floors	☐	Fenestration/ Glazed Doors[1]
☐	Addition is >700 ft²						
☒	Alteration of conditioned space	☐	Roof Assembly	☒	Walls		
☐	One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft and lighting system installed for the first time	☐	Roof Material[2]	☐	Floors	☐	Fenestration

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-ENV-E

Project Name: CENTRAL KITCHEN IMPROVEMENT **Report Page:** (Page 2 of 6)

Date Prepared: 2024-12-04T02:11:14-05:00

B. PROJECT SCOPE

[1] *FOOTNOTE: Doors that are more than 25% glass in area are considered Glazed Doors and should be documented on table K with fenestration.*
[2] *Roof recovers and replacements must also check "Roof Assembly" box and document compliance with insulation requirements in Table F. Roof recoats may document compliance with roof material only in Table G.*

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through L. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see the applicable table referenced below.

Opaque Envelope Components					Fenestration	Daylighting Spaces > 5,000ft²	Compliance Results
Roof Assembly	Roofing Materials	Walls	Floors	Doors			
01	02	03	04	05	06	07	08
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	COMPLIES
		Yes		Yes			

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. ROOF ASSEMBLY SCHEDULE

This section does not apply to this project.

G. RATED ROOFING MATERIAL (COOL ROOF)

This section does not apply to this project.

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-ENV-E

Project Name: CENTRAL KITCHEN IMPROVEMENT **Report Page:** (Page 3 of 6)

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H. WALL ASSEMBLY SCHEDULE

This table demonstrates compliance with prescriptive wall assembly requirements in 140.3(a)/ 170.2(a) for new constructions, 141.0(a)/ 180.1 for additions and 141.0(b)1B/ 180.2 for alterations.

01	Indicate wall types included in the project:[1]	☒ Framed	☐ Mass (new only)	☐ Concrete Sandwich Panel (new only)	☐ SIPS	☐ ICF (new only)
		☐ Metal Panels	☐ Metal Building	☐ Spandrel/ Curtain Wall	☐ Straw Bale	☐ Log Home (new only)

[1] *FOOTNOTES: Wall types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.*

Framed Walls

01	☐	Calculate Area-Weighted Average U-factor for Metal Framed Walls[1]
02	☐	Include Wood Framed Walls in Area-Weighted Average U-factor Calculation[1]

03	04	05	06	07	08	09	10	11	12		13
Tag/Plan Detail ID	Occupancy & Status	How Design U-factor was determined	Location/ Fire Rating	Frame Material, Spacing & Depth	Cavity Insulation per Design	Continuous Insulation per Design	Thermal Performance Unit	Required Thermal Performance	U-factor per Design		Net Area[3] ft²
WALL	Nonresidential/ Relocatable 1 CZ: New	JA4 Tables	Exterior wall	Wood 1/2" @vp 16" OC 2x4	R-13	None	U-factor	0.11	per JA4	0.102	
									per Software/ Other		

[1] *FOOTNOTES: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal framed walls may not be combined with other wall types. Wood framed walls are combined with SIPS, spandrel & curtain, metal panel and straw bale wall types. The area-weighted compliance option is not available for alterations demonstrating compliance with R-values in Table 141.0-C.*
[2] *If "R-value" is shown in cell 10 as the Thermal Performance Unit, the R-value shown here is for cavity insulation per 141.0(b)1B.*
[3] *Wall area minus any fenestration area*

I. FLOOR ASSEMBLY SCHEDULE

This section does not apply to this project.

STATE OF CALIFORNIA
Envelope Component Approach
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J. EXTERIOR DOOR SCHEDULE

This table demonstrates compliance with prescriptive exterior door requirements in 140.3(a)7/ 170.2(e)4 for new construction or additions. Doors which are being replaced (alterations) do not need to be documented in this table because there are no Title 24, Part 6 requirements that apply. Exterior doors separate conditioned space from unconditioned space or from ambient air. Doors that are more than 25% glass in area are considered Glazed Doors and should be documented on Table K with fenestration per Table B.

01	02	03	04	05	06	07	
Tag/Plan Detail ID	Name/Description	Occupancy Type	Door Type	Door Insulation	Maximum Allowed U-factor	U-factor per Design	
DOOR	DOOR SCHEDULE-PROPOSED FLOOR PLAN	Nonresidential	Swinging	NFRC rated	0.7	per JA4	0.2

K. FENESTRATION AND GLAZED DOOR SCHEDULE

This section does not apply to this project.

L. DAYLIGHT IN LARGE ENCLOSED SPACES

This section does not apply to this project.

M. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by the permit applicant, an explanation should be included in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-ENV-01-E - Must be submitted for all buildings

N. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-ENV-E

Project Name: CENTRAL KITCHEN IMPROVEMENT **Report Page:** (Page 5 of 6)

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O. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-ENV-E

Project Name: CENTRAL KITCHEN IMPROVEMENT **Report Page:** (Page 6 of 6)

Project Address: 2229 DOVER AVE., SAN PABLO, CA 94806 **Date Prepared:** 2024-12-04T02:11:14-05:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: RUTH CHEN		Documentation Author Signature:	
Company:	CDI	Signature Date:	12/04/2024
Address:	9890 RESEARCH DR. STE 100	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	IRVINE,CA,92618	Phone:	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: RUTH CHEN		Responsible Designer Signature:	
Company:	CDI	Date Signed:	12/04/2024
Address:	9890 RESEARCH DR. STE 100	License:	M40915
City/State/Zip:	IRVINE,CA,92618	Phone:	

MECHANICAL TITLE 24 - 2

CDI Circa Domini International, Inc.
Engineering - Consulting
9890 Research Dr. Suite 100, Irvine, CA 92618
Phone (949) 533-4117 | dkang@cdieng.com

LICENSED PROFESSIONAL ENGINEER RUTH CHEN M 40915 EXP 03/31/26 MECHANICAL STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

DRAWN:	CHECKED:
K.T.	R.C.
DATE: 10/08/2024	SCALE:

SHEET TITLE:
MECHANICAL
TITLE 24 - 2

TM01

PLOT DATE: 12/10/2024 10:48:18 AM

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)2 for alterations.	
Project Name: NEW DETACHED KITCHEN CONVERSION	**Report Page:** (Page 1 of 9)
Project Address: 2229 DOVER AVE., SAN PABLO, CA 94806	**Date Prepared:** 2024-12-04T02:10:13-05:00

A. GENERAL INFORMATION

01	Project Location (city)	SAN PABLO	04	Total Conditioned Floor Area	749
02	Climate Zone	3	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

- Restaurant

B. PROJECT SCOPE

This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01 Air System(s)	02 Wet System Components	03 Dry System Components
☒ Heating Air System	☐ Water Economizer	☒ Air Economizer
☒ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ System Piping	☐ Fan Systems
☐ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☒ Ductwork (existing to remain, altered or new)
	☐ Chillers	☒ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
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C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D_ or the table indicated as not compliant for guidance.

01 System Summary 110.1, 110.2, 140.4, 170.2(c)	AND	02 Pumps 140.4(k), 170.2(c)4I	AND	03 Fans/ Economizers 140.4(c), 140.4(e), 170.2(c)	AND	04 System Controls 110.2, 120.2, 140.4(f), 170.2(c)	AND	05 Ventilation 120.1, 160.2	AND	06 Terminal Box Controls 140.4(d), 170.2(c)4B	AND	07 Distribution 120.3, 140.4(l), 160.2, 160.3	AND	08 Cooling Towers 110.2(e)2	09 Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	
Yes	AND		AND	Yes	AND	Yes	AND	Yes	AND		AND	Yes	AND		COMPLIES with Exceptional Conditions
Mandatory Measures Compliance (See Table Q for Details)												COMPLIES			

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

The permit applicant has indicated on Table J that ventilation calculations have been attached or included elsewhere on the plans.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01 System Name	02 Quantity	03 System Serving	04 System Status	05 Space Type	06 Utilizing Recovered Heat
RTU-1	1	Single zone	New/ Addition	All Other Occupancies	☐

STATE OF CALIFORNIA
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F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)

01 Name or Item Tag	02 Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3aii	03 Equipment Type per Tables 110.2 and Title 20	04 Smallest Size Available[1] 140.4(a) and 170.2(c)1	Equipment Sizing per Mechanical Schedule (kBtu/h) 140.4(a&b), 170.2(c)1 & 170.2(c)2						
				05 Heating Output[2,3]	06	07	08 Cooling Output[2,3]	09	Load Calculations[3,4]	10
				Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
RTU-1	Unitary Heat Pumps	Air-cooled, pkg (1phase)	Yes	32.6	32.6	0	25.06	35.8	32.6	35.8

[1] FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are excepted.
[2] It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.
[3] If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.
[4] Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01 Name or Item Tag	02 Size Category (Btu/h)	Heating Mode 03 Rating Condition (°F)	04 Efficiency Unit	05 Minimum Efficiency Required per Tables 110.2 / Title 20	06 Design Efficiency	Cooling Mode 07 Efficiency Unit	08 Minimum Efficiency Required per Tables 110.2 / Title 20	09 Design Efficiency
RTU-1	<65,000		HSPF2	6.7	7	SEER2	13.4	13.4

G. PUMPS

This section does not apply to this project.

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Mechanical Systems
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H. FAN SYSTEMS & AIR ECONOMIZERS

This table is used to demonstrate compliance with prescriptive requirements found in 140.4(c), 140.4(e), 140.4(m), 170.2(c)3, and 170.2(c)4A for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name	RTU-1	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	1,200	Site Elevation	8	Economizer	Fixed Temperature
01	02	03	04			05		06	07	08	09			10	11
Fan Name or Item Tag	Fan Type	Qty	Component			Airflow through Component (%)		Water Gauge (w.g)	Allowance: Component Allowance (watt/cfm)	Allowance: Fan Allowance (watt/cfm)[1]	Design: Design Electrical Input Power Method			Motor Nameplate Horsepower	Fan Electrical Input Power (kW)
RTU-1	Supply	1	None used							0	Manufacturer provided				0.5
Supply Fan Base Allowance (watt/cfm)			Exhaust/Return/Relief/Transfer Fan Base Allowance(watt/cfm)						Fan System Allowance (kW)[3]					Fan System Electrical Input Power (kW)	0.5

[1] FOOTNOTES: Fans serving spaces with design background noise goals below NC35
[2] Low-turndown single-zone VAV fan system must be capable of and configured to reduce airflow to 50 percent of design airflow and use no more than 30 percent of the design wattage at that airflow. No more than 10 percent of the design load served by the equipment shall have fixed loads.
[3] Fan system allowance includes fan system base allowance.
[4] Filter pressure loss can only be counted once per fan system.
[5] Complex Fan System means a fan system that combines a single cabinet fan system with other supply fans, exhaust fans, or both.
[6] Computer room economizers must meet requirements of 140.9(a) and will be documented on the NRCC-PRC-E document.

Fan Energy Index (FEI)

01 Name or Item Tag	02 FEI Exception	03 FEI
RTU-1	None Applies	1

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Mechanical Systems
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I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01 System Name	02 System Zoning	03 Conditioned Floor Area Being Served (ft²)	04 Thermostats 110.2(b) & (c)[1], 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	05 Shut-Off Controls 120.2(e) & 160.3(a)2D	06 Isolation Zone Controls 120.2(g) & 160.3(a)2F	07 Demand Response 110.12 120.2(b) & 160.3(a)2B	08 Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	09 Window Interlocks per 140.4(n) & 170.2(c)4D	10 Direct Digital Control (DDC) per 120.2
RTU-1	Single zone	<= 25,000 ft²	Setback + DR Tstat per 110.12	Occ. Sensor	NA: Single Zone	DR Tstat per 110.12	NA: Single Zone	Provided	NA: Single Zone

[1] FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1 120.2(e)38 140.4(p) and 140.4(q) for all nonresidential and hotel/motel and d:\24refnolink\[160.2, 160.3(a)3D, 170.2(a)4N, 170.2(a)4O for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☒	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☐	Check this box if the project included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces
	☐	
03	☐	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)2.

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

STATE OF CALIFORNIA
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L. DISTRIBUTION (DUCTWORK and PIPING)

This table is used to show compliance with mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 120.4(g) for duct sealing.

01	☐	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints of which shall be sealed.

Duct Leakage Testing

The answers to the questions below apply to the following duct systems:	RTU-1
NR/ Common Use: Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No
Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	---
Duct leakage testing per CMC Section 603.9.2 required for these systems?	Yes

11	No	The scope of the project includes only duct systems serving healthcare facilities
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17	Yes	All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A
18	No	All ductwork is an extension of an existing duct system
19	No	Ductwork serving individual dwelling unit
20		< 25 ft of new or replacement space conditioning ducts installed
21	Verified Duct System Design	Duct Insulation R-value
22	No	Ductwork Existing To Remain
23	No	Duct System Connected To Altered Space Conditioning System

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Mechanical Systems
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	Date Prepared: 2024-12-04T02:10:13-05:00

M. COOLING TOWERS

This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-4

Form/Title
NRCI-MCH-01-E - Must be submitted for all buildings

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-4

Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	
NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes'. If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	RTU-1
NRCA-MCH-05-A - Air Economizer Controls	RTU-1
NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	RTU-1
NRCA-MCH-19-A Occupancy Sensor Controls	RTU-1

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
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Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01		02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	No	Plan sheet or construction document location
03		04
Mandatory Measure		**Plan sheet or construction document location**
Heating Equipment Efficiency per 110.1		N/A
Cooling Equipment Efficiency per 110.1		N/A
Furnace Standby Loss Control per 110.2(d)		N/A
Duct Insulation per 120.4		N/A
Heat Pump with Supplemental electric Resistance Heater Controls per 110.2(b)		N/A
The air duct and plenum system is designed per 120.4(a)-(f)		M001
Kitchen range hoods shall be rated for sound in accordance with Section 7.2 of ASHRAE 62.2		KITCHEN EQUIPMENT PLAN

STATE OF CALIFORNIA
Mechanical Systems
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CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: NEW DETACHED KITCHEN CONVERSION	**Report Page:** (Page 9 of 9)
Project Address: 2229 DOVER AVE., SAN PABLO, CA 94806	**Date Prepared:** 2024-12-04T02:10:13-05:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: RUTH CHEN	Documentation Author Signature:
Company: CDI	Signature Date: 12/04/2024
Address: 9890 RESEARCH DR. STE 100	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: IRVINE,CA,92618	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: RUTH CHEN	Responsible Designer Signature:
Company: CDI	Date Signed: 12/04/2024
Address: 9890 RESEARCH DR. STE 100	License: M40915
City/State/Zip: IRVINE,CA,92618	Phone:

MECHANICAL TITLE 24 - 3

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9890 Research Dr. Suite 100, Irvine, CA 92618
Phone (949) 533-4117 | dkang@cdieng.com

LICENSED PROFESSIONAL ENGINEER — RUTH CHEN — M 40915 — EXP. 09-30-26 — MECHANICAL — STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION
2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

DRAWN: K.T.	CHECKED: R.C.
DATE: 10/08/2024	SCALE:

SHEET TITLE:
MECHANICAL TITLE 24 - 3

TM02

PLOT DATE: 12/10/2024 10:48:23 AM

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ENV-E
This document is used to demonstrate compliance with mandatory requirements in 110.8(g) and 120.7(b)/ 160.1 for newly constructed nonresidential, hotel/ motel, multifamily and mixed-use buildings, and 141.0(b)1/ 180.2 for alterations, related to roof, wall and floor assemblies. It is also used to demonstrate compliance with prescriptive requirements in 140.3/ 170.2 for newly constructed buildings, and 141.0/ 180.1/ 180.2 for additions and alterations, related to roof, wall, floor, door, fenestration and daylighting requirements.	
Project Name: NEW DETACHED KITCHEN CONVERSION	**Report Page:** (Page 1 of 9)
Project Address: 2229 DOVER AVE., SAN PABLO, CA 94806	**Date Prepared:** 2024-12-08T22:28:39-05:00

A. GENERAL INFORMATION

01	Project Location (city)	SAN PABLO	05	# of Stories (Habitable Above Grade)	1
02	Zipcode	94806	06	Total Conditioned Floor Area (ft²)	749
03	Climate Zone	3	07	Total Unconditioned Floor Area (ft²)	0
04	Occupancy Types Within Project: (select all that apply): If one occupancy constitutes >= 80% of the conditioned floor area, the entire building envelope may be designed to comply with the provisions of that occupancy per 100.0(f).	08	☐	Project includes unconditioned enclosed space(s) > 5,000 ft² under a roof with a ceiling height of at least 15 ft.[1]	
● Restaurant					

[1] FOOTNOTE: Enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15 ft in climate zones 2 through 15 are required to meet the minimum daylighting requirements defined in 140.3(c)/ 170.2(b). Compliance with 140.3(c)/ 170.2(b) is documented in Table L. This is the only prescriptive requirement which applies to unconditioned spaces.

B. PROJECT SCOPE

This table specifies project envelope components within the permit application demonstrating compliance using the prescriptive paths outlined in 140.3/ 170.2 and 141.0(a)1/ 180.1 and 141.0(b)1 and 2/ 180.2 for additions and alterations.

My project consists of (check all that apply)	Component Types					
01	02					
☒ New Construction or Newly Conditioned Space	☒	Roof	☒	Walls	☒	Exterior Opaque Doors
☒ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft			☐	Floors	☒	Fenestration/ Glazed Doors[1]
☐ Addition of conditioned space	☐	Roof	☐	Walls	☐	Exterior Opaque Doors
☐ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft						
☐ Addition is <=700 ft²			☐	Floors	☐	Fenestration/ Glazed Doors[1]
☐ Addition is >700 ft²						
☐ Alteration of conditioned space	☐	Roof Assembly	☐	Walls		
☐ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft and lighting system installed for the first time	☐	Roof Material[2]	☐	Floors	☐	Fenestration

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B. PROJECT SCOPE

[1] FOOTNOTE: Doors that are more than 25% glass in area are considered Glazed Doors and should be documented on table K with fenestration.
[2] Roof recovers and replacements must also check "Roof Assembly" box and document compliance with insulation requirements in Table F. Roof recoats may document compliance with roof material only in Table G.

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through L. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see the applicable table referenced below.

Opaque Envelope Components					Fenestration	Daylighting Spaces > 5,000ft²	Compliance Results
Roof Assembly	Roofing Materials	Walls	Floors	Doors			
01	02	03	04	05	06	07	08
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	COMPLIES with Exceptional Conditions
Yes	Yes	Yes		Yes	Yes	Yes	

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Additional documentation for any assembly complying using "Approved Software" or "Other per JA4.1.2.1" to calculate design thermal performance may be requested by the plans examiner.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. ROOF ASSEMBLY SCHEDULE

This table demonstrates compliance for prescriptive roof assembly requirements in 140.3(a)1B/ 170.2(a)1B for new construction, 141.0(a)/ 180.1 for additions, or 141.0(b)2Bii/ 180.2 for alterations,

01	Indicate roof types included in the project:	☒ Framed	☐ Framed-Multifamily	☐ SIPS	☐ Span Deck & Concrete	☐ Metal Panels	☐ Metal Building

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F. ROOF ASSEMBLY SCHEDULE

Framed Roof Assemblies

01	☐	Include Framed Roof Assemblies in Area-Weighted Average U-factor Calculation[1]														
02	03		04	05												06
Tag/Plan Detail ID	Name/Description		Status	Exception to Roof Insulation Requirements in §141.0(b)2Biii (Alts. Only)												Occupancy Type
ROOF	ROOF		New													Nonresidential/ Relocatable 1 CZ
07	08	09	10	11	12	13	14	15								16
Tag/Plan Detail ID	How Design U-factor was determined	Roof Type & Frame Material	Frame Spacing Depth	Cavity Insulation per Design[2]	Continuous Insulation per Design[2]	Thermal Performance Unit	Required Thermal Performance[3]	U-factor per Design								Net Area[4] ft²
ROOF	Approved Software	RAFTER		15	0	U-factor	0.034	per JA4								
								per Software/ Other	0.034							

[1] FOOTNOTES: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal building roofs may not be combined with other roof types. The area-weighted compliance option is not available for alterations demonstrating compliance with R-values in Table 141.0-C.
[2] For alterations using U-factor as the Thermal Performance Unit, at least R-10 insulation must be above deck.
[3] If "R-value" is shown in cell 13 as the Thermal Performance Unit, the R-value shown here is for continuous insulation per Table 141.0-C.
[4] Roof area minus any fenestration/ skylight area

G. RATED ROOFING MATERIAL (COOL ROOF)

This table demonstrates compliance with prescriptive roof material requirements in 140.3(a)1A/ 170.2(a)1A for new construction, 141.0(a)/ 180.1 for additions, and 141.0(b)2B/ 180.2 for alterations. Roof recovers and replacements must also document compliance with insulation requirements in Table F. Roof recoats may document compliance with roof material only in Table G.

01	02	03	04	05	06	07	08	09	10
Tag/Plan Detail ID	Name/ Description/ Location	Status	Occupancy Type	Roof Slope	Roof Material	Compliance Method	Required Minimum Material Performance	Designed Material Performance	U-factor / R-value of Assembly

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G. RATED ROOFING MATERIAL (COOL ROOF)

ROOF	ROOF	New	Nonresidential	Low slope	To Be Determined	Aged solar reflectance and thermal emittance	Reflectance	0.63	Reflectance[1]	0.63	
							Emittance	0.75	Emittance	0.75	
							SRI		SRI		

H. WALL ASSEMBLY SCHEDULE

This table demonstrates compliance with prescriptive wall assembly requirements in 140.3(a)/ 170.2(a) for new constructions, 141.0(a)/ 180.1 for additions and 141.0(b)1B/ 180.2 for alterations.

01	Indicate wall types included in the project:[1]	☒ Framed	☐ Mass (new only)	☐ Concrete Sandwich Panel (new only)	☐ SIPS	☐ ICF (new only)
		☐ Metal Panels	☐ Metal Building	☐ Spandrel/ Curtain Wall	☐ Straw Bale	☐ Log Home (new only)

[1] FOOTNOTES: Wall types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.

Framed Walls

01	☐	Calculate Area-Weighted Average U-factor for Metal Framed Walls[1]
02	☐	Include Wood Framed Walls in Area-Weighted Average U-factor Calculation[1]

03	04	05	06	07	08	09	10	11	12		13
Tag/Plan Detail ID	Occupancy & Status	How Design U-factor was determined	Location/ Fire Rating	Frame Material, Spacing & Depth	Cavity Insulation per Design	Continuous Insulation per Design	Thermal Performance Unit	Required Thermal Performance	U-factor per Design		Net Area[3] ft²
WALL	Nonresidential/ Relocatable 1 CZ: New	JA4 Tables	Exterior wall	Wood 1/2" gyp 16" OC 2x4	R-13	None	U-factor	0.11	per JA4	0.102	
									per Software/ Other		

[1] FOOTNOTES: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal framed walls may not be combined with other wall types. Wood framed walls are combined with SIPS, spandrel & curtain, metal panel and straw bale wall types. The area-weighted compliance option is not available for alterations demonstrating compliance with R-values in Table 141.0-C.
[2] If "R-value" is shown in cell 10 as the Thermal Performance Unit, the R-value shown here is for cavity insulation per 141.0(b)1B.
[3] Wall area minus any fenestration area

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I. FLOOR ASSEMBLY SCHEDULE

This section does not apply to this project.

J. EXTERIOR DOOR SCHEDULE

This table demonstrates compliance with prescriptive exterior door requirements in 140.3(a)7/ 170.2(a)4 for new construction or additions. Doors which are being replaced (alterations) do not need to be documented in this table because there are no Title 24, Part 6 requirements that apply. Exterior doors separate conditioned space from unconditioned space or from ambient air. Doors that are more than 25% glass in area are considered Glazed Doors and should be documented on Table K with fenestration per Table B.

01	02	03	04	05	06	07
Tag/Plan Detail ID	Name/Description	Occupancy Type	Door Type	Door Insulation	Maximum Allowed U-factor	U-factor per Design
DOOR	DOOR SCHEDULE	Nonresidential	Swinging	NFRC rated	0.7	per JA4 0.2

K. FENESTRATION AND GLAZED DOOR SCHEDULE

This table demonstrates compliance with prescriptive fenestration requirements in 140.3(a)5/ 170.2(a)3 for new constructions, 141.0(a)/ 180.1 for additions, or 141.0(b)2A/ 180.2 for alterations. Exterior doors that are more than 25% glass in area are considered Glazed Doors and should be documented on this table with fenestration.

01	Indicate fenestration types included in the project:[1]	☐ Vertical (alterations)	☒ Vertical (new)	☐ Skylights	☒ Glazed Doors (new only)

[1] FOOTNOTES: Fenestration types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.

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K. FENESTRATION AND GLAZED DOOR SCHEDULE

Vertical Fenestration and Glazed Doors- Total Building & West Facing Area (New Construction & Additions Only)

01	02	03	04	05
Elevation Item Tag/ Description	Orientation (Azimuth)[1]	Gross Exterior Wall Area[2] (ft²)	Display Perimeter Length[3] (ft)	Vertical Fenestration Area per Design[3] (ft²)
WINDOW	West Facing	340	0	24

06	Maximum Allowed Vertical Fenestration (ft²)- All Orientations	136	07	Total Vertical Fenestration (ft²) per design- All Orientations	24
08	Maximum Allowed Vertical Fenestration (ft²)- West Facing	136	09	Total Vertical Fenestration (ft²) per design- West Facing	24

[1] FOOTNOTES: Orientation between 226 deg and 315 deg are considered "West Facing". A diagram has been provided in the Nonresidential Compliance Manual for visual reference.
[2] Do not include demising walls per 140.3(a)5 .
[3] Includes glazed door fenestration area .

Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmittance (VT)

01	☐	Calculate Area-Weighted Average U-factor for Vertical Fenestration and Glazed Doors[1]
02	☐	Calculate Area-Weighted Average (R)SHGC for Vertical Fenestration and Glazed Doors[1]
03	☐	Calculate Area-Weighted Average VT for Vertical Fenestration and Glazed Doors[1]

Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmittance (VT)

04	05	06	07	08	09		10	11	12	13
Tag/Plan Detail ID	Fenestration Type	Occupancy & Status	U-factor/ (R)SHGC Compliance Method	VT Compliance Method	Calculation Method for Performance Values per Design[2]		Product Performance Unit	Required Product Performance	Product Performance per Design	Area ft²
WINDOW	Fixed window	Nonresidential/ Relocatable 1 CZ: : New	Table 140.3-B/C/D	Table 140.3-B/C/D	NFRC Certified		U-factor (max)	0.36	0.36	24
					☐ Overhang/ Slats used for RSHGC		(R)SHGC (max)	0.25	0.25	
							VT (min)	0.42	0.42	

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K. FENESTRATION AND GLAZED DOOR SCHEDULE

[1] FOOTNOTES: If any individual fenestration product is non-compliant, products may show compliance using an area-weighted calculation. Chromogenic glazing is not included in area-weighted calculations. Area-weighted calculation shown in separate area-weighted table below.
[2] The NA6 Default Calculation can only be used for alterations or dwelling units in buildings with <= 3 habitable stories. Alterations are limited to 200ft² of site built glazing and dwelling units are limited to 250ft² or 5% of conditioned floor area. If the fenestration does not meet these conditions, the only options for determining fenestration values are NFRC Certification or the Default Tables in 110.6.
[3] Overhangs must extend past the left and right window the same distance as the depth of the overhang or greater to show an affect on the RSHGC. If an overhang does not meet this requirement, the affect of the overhang will be ignored.
[4]Projecting includes casement and awning windows.

L. DAYLIGHT IN LARGE ENCLOSED SPACES

This table demonstrates compliance with prescriptive daylight zone requirements in 140.3(c)/ 170.2(b) for new construction, additions, or alterations which install a new lighting system within climate zones 2-15. Enclosed space greater than 5,000 ft2 and under a roof with at least a 15 ft ceiling height must be included in the table.

01	Plan Sheet Showing Daylit Zones:											
02	03	04	05	06	07	08	09	10		11	
Space Name	Compliance Method	Total Area of Space (ft²)	Skylit Daylit Zone Area per Design (ft²)	Primary Sidelit Daylit Zone Area per Design[1] (ft²)	Compliance with 140.3(c)1/ 170.2(b)		Total Skylight Area per Design[2] (ft²)	Compliance with 140.3(c)4/ 170.2(b)	OR	Alternate Compliance with 140.3(c)4/ 170.2(b)	
					Required Minimum Daylit Area (ft²)	Daylit Area per Design (ft²)		Skylight Area to Skylit Daylit Zone Area Ratio[3] (%)		Skylight Weighted Average VT[2]	Skylight Area x VT to Skylit Daylit Zone Area Ratio[4] (%)

[1] FOOTNOTES: Any area which falls within the Skylit Daylit Zone may not be double counted for the Primary Sidelit Daylit Zone.
[2] May be calculated by Table K Fenestration Schedule.
[3] Must be at least 3% to comply with 140.3(c)4/ 170.2(b) .
[4] Must be at least 1.5% to comply with 140.3(c)4/ 170.2(b) .

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M. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by the permit applicant, an explanation should be included in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-ENV-01-E - Must be submitted for all buildings

N. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, form user must provide an explanation in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-4. Individuals who perform the field testing and verification work, and provide the information required for completion of the fenestration Certificate of Acceptance documentation are not required to be licensed professionals. However, the person who signs the Certificate of Acceptance document to certify compliance with the acceptance requirements shall be licensed as specified in Standards Section 10-103(a)4 and NA7.3.1

Form/Title	Systems/Spaces To Be Field Verified
NRCA-ENV-02-F must be submitted for all new, added or altered site built fenestration.	WINDOW

O. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

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Project Address: 2229 DOVER AVE., SAN PABLO, CA 94806	**Date Prepared:** 2024-12-08T22:28:39-05:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: RUTH CHEN	Documentation Author Signature:
Company: CDI	Signature Date: 12/09/2024
Address: 9890 RESEARCH DR. STE 100	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: IRVINE,CA,92618	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: RUTH CHEN	Responsible Designer Signature:
Company: CDI	Date Signed: 12/09/2024
Address: 9890 RESEARCH DR. STE 100	License: M40915
City/State/Zip: IRVINE,CA,92618	Phone:

MECHANICAL TITLE 24 - 4

CDI Circa Domini International, Inc.
Engineering - Consulting
9890 Research Dr. Suite 100, Irvine, CA 92618
Phone (949) 533-4117 | dkang@cdieng.com

LICENSED PROFESSIONAL ENGINEER — RUTH CHEN — M 40915 — EXP 03/31/26 — MECHANICAL — STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION
2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

DRAWN: K.T. | CHECKED: R.C.
DATE: 10/08/2024 | SCALE:

SHEET TITLE:
MECHANICAL
TITLE 24 - 4

TM03

PLOT DATE: 12/10/2024 10:48:28 AM

PLUMBING LEGEND

SYMBOL	ABBR.	DESCRIPTION
GW	GW	GREASE WASTE BELOW FLOOR
S OR W	S OR W	SOIL OR WASTE BELOW FLOOR
CWV	CWV	COMBINATION WASTE & VENT BELOW
V	V	VENT
CW	CW	DOMESTIC COLD WATER
HW	HW	DOMESTIC HOT WATER
HWR	HWR	DOMESTIC HOT WATER RETURN
GAS	G	LOW PRESSURE GAS
CD	CD	PRIMARY CONDENSATE DRAIN
XSS	XSS	EXISTING WASTE/SANITARY SEWER
XGW	XGW	EXISTING GREASE WASTE
XCW	XCW	EXISTING COLD WATER
XG	XG	EXISTING GAS
XHW	XHW	EXISTING HOT WATER
FW FW	FW	FILTERED WATER
	T&P	TEMPERATURE & PRESSURE
	WCO	WALL CLEANOUT
	FCO/COTG	FLOOR CLEANOUT/CLEANOUT TO GRADE
	DCO	DOUBLE CLEANOUT
	SOV	COLD WATER SHUT-OFF VALVE
	GSOV	GAS SHUT-OFF VALVE
	C.V.	CHECK VALVE
	PRV	PRESSURE REDUCING VALVE
	BLV	BALANCING VALVE
	BFP	BACKFLOW PREVENTER
	GSOV	AUTOMATIC GAS SHUT-OFF VALVE
	SOC	SHUT-OFF COCK (GAS)
	TMV	TEMPERATURE MIXING VALVE
	VTR	VENT TO ROOF
	POC	POINT OF CONNECTION
	CP	RECIRCULATION PUMP
	HB	HOSE BIBB
	CW	COLD WATER STUB-IN
	HW	HOT WATER STUB-IN
	(N)	NEW
	(E)	EXISTING
	(R)	RELOCATED, EXISTING
	CFH	CUBIC FEET PER HOUR
	DN	DOWN
	FF	FINISHED FLOOR ELEVATION
	FLR	FLOOR
	IE	INVERT ELEVATION
	NTS	NOT TO SCALE
	W/	WITH

PIPE MATERIAL SCHEDULE

SERVICE:		PIPE MATERIAL: COPPER-TYPE "K"	COPPER-TYPE "L"	COPPER-TYPE "M"	SCHED. 40 ABS, DWV	SCHED. 40 PVC, DWV	SCHED 40 CAST IRON SOIL PIPE W/ HUB & SPIGOT FITTINGS	CAST IRON SOIL W/ H.G. ONEPIECE FITTINGS	SCHEDULE 40 GALVANIZED STEEL	REMARKS:
DOMESTIC WATER	INSIDE		o							
	OUTSIDE	o								
SANITARY WASTE	INSIDE				o					
	OUTSIDE				o					
SANITARY VENT	CONCEALED				o					
	EXPOSED				o					
INDIRECT WASTE	INSIDE				o					
	INSIDE*			o						*USE COPPER TYPE "M" FOR CONDENSATE
NATURAL GAS	INSIDE						o			
	OUTSIDE						o			

NOTE:
1. ABS AND PVC INSTALLATIONS ARE LIMITED TO NOT MORE THAN TWO STORIES OF AREAS OF RESIDENTIAL ACCOMMODATION.
2. ABS/PVC VENT TERMINATIONS UP THROUGH THE ROOF EXPOSED TO SUNLIGHT ARE REQUIRED TO BE PROTECTED BY WATER BASED SYNTHETIC LATEX PAINTS.

SHEET INDEX

SCOPE OF WORK

- EXISTING RESTAURANT TENANT IMPROVEMENT.
- PROVIDE NEW PLUMBING FIXTURES/CONNECTIONS THROUGHOUT THE SPACE.
- EXISTING WATER HEATER TO BE RE-USED & NEW WATER HEATERS TO BE INSTALLED.

GENERAL NOTES

1. BEFORE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
2. THE PLUMBING SYSTEM DESIGN, INSTALLATION AND MATERIALS SHALL CONFORM TO THE 2022 CPC AND AUTHORITIES HAVING JURISDICTION, IN CASE OF CONFLICTS WITH CODES, DRAWINGS, OR SPECIFICATIONS, THE MOST STRINGENT SHALL PREVAIL.
3. THE DRAWINGS WERE PREPARED WITH THE BEST STRUCTURAL AND ARCHITECTURAL INFORMATION AVAILABLE. IT IS UNDERSTOOD THAT EQUIPMENT LOCATIONS AND ROUTING OF PIPING MAY VARY FROM THAT SHOWN ON THE PLANS AS CONSTRUCTION PROCEEDS. IT IS THE CONTRACTORS RESPONSIBILITY TO:
   a. NOTIFY THE MECHANICAL ENGINEER OF CONSTRUCTION RESTRAINTS WHICH MAKE VARIATIONS FROM THE PLANS NECESSARY.
   b. COMPLETE ALL WORK INCLUDING THE VARIATIONS WITHOUT CHARGING EXTRAS TO THE BID CONTRACT. COMPLETION OF WORK MEANS THE JOB IS WORKING AND MEETS ALL CITY, COUNTY AND UNIFORM MECHANICAL, PLUMBING AND BUILDING CODE REQUIREMENTS.
4. THESE DRAWINGS DO NOT INCLUDE ALL NECESSARY SAFETY REQUIREMENTS. CONTRACTOR TO COMPLY TO THE SAFETY REQUIREMENTS SET FORTH BY THE LOCAL AUTHORITIES HAVING JURISDICTION.
5. THESE DRAWINGS ARE FOR BIDDING PURPOSES ONLY. THEY ARE ESSENTIALLY DIAGRAMMATIC TO THE EXTENT THAT MANY OFFSETS, BONDS, UNIONS, SPECIFIC FITTINGS AND EXACT LOCATIONS ARE NOT INDICATED.
6. THE PLUMBING CONTRACTOR SHALL PROVIDE THE WATER, SEWER AND STORM DRAIN SYSTEMS AND CONNECT TO EACH DESIGNATED POINT OF CONNECTIONS 5'-0" OUTSIDE OF THE BUILDING. ALL SEWER SYSTEM SHALL MEET THE REQUIRED INVERT ELEVATION SHOWN ON THE CIVIL DRAWINGS. PIPING BEYOND THIS POINT IS SPECIFIED UNDER ANOTHER SECTION OF THE SPECIFICATION AND SHALL BE AS SHOWN ON THE CIVIL DRAWINGS.
7. THE OWNER SHALL MAKE ALL ARRANGEMENTS WITH UTILITY COMPANIES FOR SERVICE AND CONNECTION AND SHALL MAKE APPLICATION FOR SERVICE AND PERMITS AND SHALL PAY ALL FEES AND CHARGES INCLUDING THE COST OF VAULTS AND METERS.
8. ALL PLUMBING WORK SHALL BE INSTALLED SO AS TO AVOID INTERFERENCE WITH ELECTRICAL EQUIPMENT, MECHANICAL EQUIPMENT AND STRUCTURAL FRAMING, SKYLIGHT, ETC.
9. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING ACCESS PANELS WITH THE ARCHITECTURAL REFLECTED CEILING PLAN AND ELECTRICAL LIGHTING PLAN.
10. COORDINATE ALL LOCATIONS, SIZES AND ELEVATIONS OF ALL SLEEVES THROUGH WALLS, BEAMS, SLABS AND FOOTING WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS. ALL PIPES SLEEVING THROUGH FOOTINGS SHALL HAVE A SLEEVE DIAMETER OF TWO PIPE SIZES OVER THE PIPE PASSING THROUGH THE FOOTING.
11. CONTRACTOR MUST NOT CUT, RELOCATE, COMPROMISE, DAMAGE OR OTHERWISE ALTER THE ROOF STRUCTURE. THE JOISTS WHICH OCCUR THROUGHOUT ALL THE MECH. BAY AREAS LIKE WISE MUST NOT BE ALTERED.
12. BEFORE FABRICATION OR INSTALLATION, THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT AND EQUIPMENT PROVIDED UNDER ANOTHER SECTION OF SPECIFICATIONS. EXACT ROUGH-IN LOCATIONS AND REQUIREMENTS SHALL BE COORDINATED IN FIELD.
13. CONNECTION BETWEEN INCOMPATIBLE MATERIALS ABOVE GRADE AND INSIDE BUILDING SHALL BE MADE WITH TWO (2) DIELECTRIC UNIONS SEPARATED BY A TWELVE INCH (12") SECTION OF RED BRASS PIPE.
14. ALL FLOOR AND WALL PENETRATIONS MUST BE SEALED WATERTIGHT AND VERMIN PROOF.
15. ALL EXTERIOR GAS COCKS, WATER SHUTOFF VALVES AND/OR SEWER CLEAN OUTS BELOW GROUND SHALL BE INSTALLED IN YARD BOXES WITH THE COVERS CONSPICUOUSLY MARKED "GAS", "WATER", AND "SEWER" RESPECTIVELY.
16. EXACT LOCATIONS AND MOUNTING HEIGHTS OF PLUMBING FIXTURES SHALL BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS.
17. SEE ARCHITECTURAL DRAWINGS FOR HANDICAP FIXTURE LOCATIONS AND MOUNTING HEIGHTS. INSULATE ALL EXPOSED HOT WATER AND DRAIN PIPING BELOW HANDICAP LAVATORIES AND SINKS WITH INSULATING TAPE AND OFFSET P-TRAP AGAINST WALL. ALL FLUSH VALVES FOR HANDICAP SHALL BE LOCATED ON HANDICAP WHEELCHAIR ACCESS SIDE OF STALL.
18. ALL WASTE, SOIL AND VENT PIPING SHALL SLOPE AT 2% UNLESS OTHERWISE INDICATED.
19. ALL VALVES, TRAP PRIMERS, WATER HAMMER ARRESTORS OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS SHALL BE INSTALLED BEHIND AN ACCESS PANEL.
20. PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BASE BID. HE SHALL FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS AND FUTURE WORK TO BE DONE. HE SHALL INCLUDE ALL HIS SITE INFORMATION AND CONDITIONS WITHIN HIS BASE BID. HE SHALL BE RESPONSIBLE FOR COMPLETE AND FULLY FUNCTIONING PLUMBING SYSTEMS.
21. PLUMBING CONTRACTOR SHALL COORDINATE COMPLETE PLUMBING INSTALLATION AND REQUIREMENTS PRIOR TO BASE BID WITH ALL LOCAL DISTRICTS AND GOVERNING AUTHORITIES. INCLUDE ALL FINDINGS WITHIN THE BASE BID.
22. PROVIDE RECIRCULATION PUMP FOR HOT WATER WHEN THE HOT WATER PIPE IS OVER 50'.
23. PROVIDE TRAP SEAL PRIMER FOR FLOOR DRAIN SUBJECT TO INFREQUENT USE.
24. ALL PLUMBING, AND GAS LINES SHALL BE CONCEALED WITHIN THE BUILDING STRUCTURE TO AS GREAT EXTENT AS POSSIBLE. ALL EXPOSED CONDUITS, PLUMBING, ETC. SHALL BE INSTALLED AT LEAST 6" OFF FLOOR AND 3/4" FROM WALLS USING STANDOFF BRACKETS.
25. PLUMBING OR PIPING CANNOT BE INSTALLED ACROSS ANY AISLE WAY, TRAFFIC AREA OR DOOR OPENING.
26. MULTIPLE RUNS OR CLUSTERS OF PIPELINES SHALL BE FURRED IN OR ENCASED IN AN APPROVED SEALED ENCLOSURE.
27. APPROVED BACKFLOW PREVENTION DEVICES SHALL BE PROPERLY INSTALLED UPSTREAM OF ANY POTENTIAL HAZARD BETWEEN THE POTABLE WATER SUPPLY AND A SOURCE OF CONTAMINATION. HOSES SHALL NOT BE ATTACHED TO A FAUCET OR HOSE BIBB UNLESS AN APPROVED BACKFLOW PREVENTER IS PROVIDED.
28. ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
29. EACH VENT SHALL RISE VERTICALLY TO A POINT NOT LESS THAN SIX (6) INCHES ABOVE THE FLOOD-LEVEL RIM OF THE FIXTURE SERVED BEFORE OFFSETTING HORIZONTALLY OR BEFORE BEING CONNECTED TO ANY OTHER VENT.
30. EACH VENT SHALL TERMINATE NOT LESS THAN 10 FEET FROM, OR AT LEAST 3 FEET FROM, OR NOT LESS THAN 3 FEET ABOVE, ANY OPENABLE WINDOW, DOOR, OPENING, AIR INTAKE, OR VENT SHAFT, OR NOT LESS THAN 3 FEET IN EVERY DIRECTION FROM ANY LOT LINE.
31. FIELD VERIFY ALL EXISTING PLUMBING CONDITIONS AND EXISTING/NEW HVAC PLUMBING CONNECTIONS PRIOR TO BIDDING AND START OF WORK.
32. IN THE EVENT THAT THE PLANS DO NOT REPRESENT FIELD CONDITIONS, CONTACT THE OWNER, ARCHITECT, OR DESIGNATED ENGINEER DESIGNER PRIOR TO START OF ANY WORK.
33. CAP ALL DOMESTIC WATER PIPING THAT IS SERVING A PLUMBING FIXTURE THAT IS BEING DEMOLISHED.
34. NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE. CONTRACTOR SHALL PROVIDE A SIGNED WRITTEN DECLARATION TO THE INSPECTOR AT TIME OF INSPECTION THAT POTABLE WATER SYSTEM HAS BEEN DISINFECTED.
35. EXISTING BUILDING SEWERS AND BUILDING DRAINS MAY BE USED IF SUCH SEWERS HAVE BEEN PROPERLY MAINTAINED AND FOUND UPON EXAMINATION AND TEST PERFORMED BY THE OWNER OR OWNER'S DESIGNATED AGENT THAT THEY ARE IN WORKING CONDITION AND FREE FROM ANY DEFECT.
36. CLEANOUTS SHALL BE INSTALLED AS PER SEC. 707.0 & 719.0 OF THE PLUMBING CODE.

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	HW	CW	VENT	WASTE	DESCRIPTION
FD	FLOOR DRAIN	--	--	2"	2"	ZURN Z415B W/SEDIMENT BUCKET. TRAP PRIMER CONNECTION WHERE REQUIRED BY CODE. EQUIVALENT FIXTURE ACCEPTABLE.
FS	FLOOR SINK	--	--	2"	2"	ZURN Z-1901, 12" SQUARE TOP, HALF GRATE COVER AND 8" DEEP WITH DOME STRAINER. EQUIVALENT FIXTURE ACCEPTABLE.
(E)WH	WATER HEATER	--	--	--	--	EXISTING XG50T09HN38U2 GAS WATER HEATER TO REMAIN. 50 GAL. 38,000 BTUH INPUT.
WH-1	WATER HEATER	3/4"	3/4"	--	--	BRADFORD WHITE ULG2PDV50H503N LIGHT DUTY COMMERICAL GAS TANK TYPE WATER HEATER. 48 GAL. 50,000 BTUH INPUT, EXPANSION TANK (ZURN MODEL XT-8, 2.1 GAL, INSTALLED WITH WATER HEATER. INSTALL 3" POWER DIRECT VENT TO ROOF PER MANUFACTURER'S INSTRUCTIONS. EQUIVALENT FIXTURE ACCEPTABLE.
WH-2	WATER HEATER	3/4"	3/4"	--	--	BRADFORD WHITE ULG2PDV50H503N LIGHT DUTY COMMERICAL GAS TANK TYPE WATER HEATER. 48 GAL. 50,000 BTUH INPUT. EXPANSION TANK (ZURN MODEL XT-8, 2.1 GAL. INSTALLED WITH WATER HEATER. INSTALL 3" POWER DIRECT VENT TO ROOF PER MANUFACTURER'S INSTRUCTIONS. EQUIVALENT FIXTURE ACCEPTABLE.
GI	GREASE INTERCEPTOR	--	--	--	4"	JENSEN PRECAST 1500 GALLON GREASE INTERCEPTOR. MODEL JP1500G. INSTALL WITH SAMPLE BOX PER MANUFACTURER'S INSTRUCTIONS. EQUIVALENT FIXTURE ACCEPTABLE.
WCO	WALL CLEANOUT	--	--	--	LINE SIZE	ZURN Z1441 WALL CLEANOUT W/SMOOTH ACCESS COVER EQUIVALENT FIXTURE ACCPETABLE.
FCO	FLOOR CLEANOUT	--	--	--	LINE SIZE	ZURN Z1400-B FLOOR CLEANOUT EQUIVALENT FIXTURE ACCEPTABLE.

PLUMBING SPECIFICATION

1. CLEANOUTS
   PROVIDE CLEANOUTS WITH BRASS SCREW PLUG AT ALL CHANGES OF DIRECTION TO PERMIT ROUTING OF ALL SEWERS. ALL CLEAN OUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE. THE CONTRACTOR SHALL COORDINATE ALL CLEAN OUT LOCATIONS OF EQUIPMENT, CABINETS, ETC., WITH THE ARCHITECT PRIOR TO ANY INSTALLATION.
2. VALVES
   EVERY PLUMBING FIXTURE SHALL BE INDEPENDENTLY VALVED.
3. TESTING
   ALL SEWERS AND WATER PIPING SHALL BE PROPERLY TESTED TO THE SATISFACTION OF THE ARCHITECT AND THE LOCAL BUILDING INSPECTOR.
4. EXCAVATION AND BACK FILLING
   TRENCHES SHALL BE BACK FILLED AND SETTLED BY PUDDLING. NO PIPE SHALL BE LESS THAN 12" BELOW FINISH GRADE.
5. PIPING SUPPORTS
   ALL PIPING TO BE SUPPORTED WITH HANGERS AND BRACKETS WHICH PROVIDE ISOLATION FROM FRAMING. CONTACT BETWEEN PIPE AND SUPPORT TO BE LINED WITH PLASTIC OR FELT.

PIPE INSULATION

SPACE-CONDITIONING AND SERVICE WATER-HEATING SYSTEM SHALL BE INSULATED IN ACCORDANCE WITH THE FOLLOWING TABLE:

PIPE INSULATION THICKNESS							
FLUID TEMP. RANGE (°F)	CONDUCTIVITY RANGE (BTU-"/HR PER SQFT/°F)	INSULATION MEAN RATING TEMP. (°F)	NOMINAL PIPE DIAMETER (")				
			<1	1 TO <1.5	1.5 TO <4	4 TO <8	8 AND LARGER
			INSULATION THICKNESS REQUIRED (")				
SPACE HEATING, HOT WATER SYSTEMS AND SERVICE WATER HEATING SYSTEMS							
350<	0.32-0.34	250	4.5	5.0	5.0	5.0	5.0
251-350	0.29-0.31	200	3.0	4.0	4.5	4.5	4.5
201-250	0.27-0.30	150	2.5	2.5	2.5	3.0	3.0
141-200	0.25-0.29	125	1.5	1.5	2.0	2.0	2.0
105-140	0.22-0.28	100	1.0	1.5	1.5	1.5	1.5
SPACE COOLING SYSTEMS (CHILLED WATER, REFRIGERANT AND BRINE)							
40-60	0.21-0.27	75	NONRES 0.5 RES 0.75		1.0	1.0	1.0
<40	0.20-0.26	50	1.0	1.5	1.5	1.5	1.5

EXCEPTIONS:
(1) FACTORY-INSTALLED PIPING WITHIN SPACE CONDITIONING EQUIPMENT;
(2) PIPING THAT CONVEYS FLUIDS THAT HAVE A DESIGN OPERATING TEMPERATURE RANGE BETWEEN 60 DEGREES AND 105 DEGREES FAHRENHEIT;
(3) WHERE THE HEAT GAIN OR HEAT LOSS TO OR FROM PIPING WITHOUT INSULATION WILL NOT INCREASE BUILDING SOURCE ENERGY USE;
(4) PIPING THAT PENETRATES FRAMING MEMBERS SHALL NOT BE REQUIRED TO HAVE PIPE INSULATION FOR THE DISTANCE OF THE FRAMING PENETRATION. METAL PIPING THAT PENETRATES METAL FRAMING SHALL USE GROMMETS, PLUGS, WRAPPING OR OTHER INSULATING MATERIAL TO ASSURE THAT NO CONTACT IS MADE WITH THE METAL FRAMING.

NONRESIDENTIAL NOTES

LAVATORIES IN RESTROOMS OF PUBLIC FACILITIES SHALL BE EQUIPPED WITH OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.5 GPM OR WITH SELF-CLOSING FAUCETS THAT LIMIT DELIVERY TO A MAXIMUM OF 0.2 GALLONS OF HOT WATER FOR RECIRCULATING SYSTEMS, AND SHALL BE EQUIPPED WITH DEVICES THAT LIMIT THE OUTLET TEMPERATURE TO A MAXIMUM OF 110 °F.

CA GREEN BUILDING NOTES

5.303.2 PLUMBING FIXTURES SHALL MEET THE MAXIMUM FLOW RATE VALUES SHOWN IN TABLES A5.303.2.2.

5.303.3 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL COMPLY WITH THE FOLLOWING:

5.303.3.1 WATER CLOSETS. THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. TANK-TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATER SENSE SPECIFICATION FOR TANK-TYPE TOILETS.

NOTE: THE EFFECTIVE FLUSH VOLUME OF DUAL FLUSH TOILETS IS DEFINED AS THE COMPOSITE, AVERAGE FLUSH VOLUME OF TWO REDUCED FLUSHES AND ONE FULL FLUSH.

5.303.3.2 URINALS. THE EFFECTIVE FLUSH VOLUME OF WALL-MOUNTED URINALS SHALL NOT EXCEED 0.125 GALLONS PER FLUSH.THE EFFECTIVE FLUSH VOLUME OF FLOOR-MOUNTED URINALS SHALL NOT EXCEED 0.5 GALLONS PER FLUSH.

5.303.3.4.1 NONRESIDENTIAL LAVATORY FAUCETS. LAVATORY FAUCETS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 0.5 GALLONS PER MINUTE AT 60 PSI.

5.303.4.2 KITCHEN FAUCETS. KITCHEN FAUCETS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GALLONS PER MINUTE AT 60 PSI. KITCHEN FAUCETS MAY TEMPORARILY INCREASE THE FLOW ABOVE THE MAXIMUM RATE, BUT NOT TO EXCEED 2.2 GALLONS PER MINUTE AT60 PSI, AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GALLONS PER MINUTE AT 60 PSI.

5.303.6 PLUMBING FIXTURES AND FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE 2022 CALIFORNIA PLUMBING CODE, AND SHALL MEET THE APPLICABLE STANDARDS REFERENCED IN TABLE 1401.1 OF THE 2022 CALIFORNIA PLUMBING CODE AND IN CHAPTER 6 OF THIS CODE.

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Exp. 9-30-26
MECHANICAL
STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

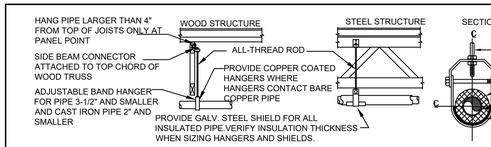
REVISION

DRAWN:	CHECKED:
H.D.	C.K.
DATE:	SCALE:
10/08/2024	N.T.S.

SHEET TITLE:
PLUMBING NOTES & SCHEDULES

P000

PLOT DATE: 12/10/2024 9:44:25 AM



WATER PIPE SUPPORT:	PIPE SIZE	COPPER PIPE HANGER SPACING
	1/2"	6'
	3/4"	6'
	1"	6'
	1-1/4"	8'
	1-1/2"	8'
	2"	10'
	2-1/2"	10'
	3"	10'
	4"	10'

PROVIDE UPPER ATTACHMENT AS REQUIRED FOR CASES NOT SHOWN HERE. DO NOT INSTALL HANGER INSIDE INSULATION OR OTHERWISE PENETRATE VAPOR BARRIER. DO NOT HANG ONE PIPE FROM ANOTHER EXCEPT IN CHASES. SLOPE ALL WATER PIPING SLIGHTLY TOWARD DRAINABLE LOCATIONS. HANGER SPACING FOR PIPE SIZES: AS INDICATED IN TABLE. CAST IRON: 10' AND WITHIN 1'-0" OF ALL JOINTS. ROD SIZES FOR PIPE SIZE: 1/2" TO 4" = 3/8", 5" TO 8" = 1/2", 10" TO 12" = 5/8". LOCATE HANGERS WITHIN 1'-0" OF VALVES AND FITTINGS. PROVIDE SUPPLEMENTAL STEEL STRUTS BETWEEN JOISTS IF REQUIRED. LOCATE HANGERS WITHIN 1'-0" OF EQUIPMENT CONNECTIONS. ANCHOR WATER PIPE AGAINST SWAYING DUE TO CHANGES IN WATER VELOCITY. CHAINS AND PERFORATED STRAP IRON AND STEEL ARE NOT ACCEPTABLE. DO NOT SUSPEND PIPE FROM JOIST BRACING MEMBERS. REFER TO CODES AND SPECIFICATIONS FOR FURTHER INFORMATION. PROVIDE SEISMIC BRACING AS REQUIRED BY LOCAL AUTHORITIES. PROVIDE FIBERGLASS INSULATION WITH ALL-SERVICE JACKET WITH VAPOR BARRIER ON ALL SIZES OF HOT AND COLD WATER AND CONDENSATE PIPING. GAS PIPING SHALL BE KEPT A MIN. OF 6" ABOVE GRADE OR STRUCTURE.

GAS PIPE SUPPORT			
STEEL PIPE, NOMINAL SIZE OF PIPE (INCHES)	SPACING OF SUPPORTS (FEET)	NOMINAL SIZE OF TUBING SMOOTH-WALL (INCHES O.D.)	SPACING OF SUPPORTS(FEET)
1/2	6	1/2	4
3/4 OR 1	8	5/8 OR 3/4	6
1-1/4 OR LARGER (HORIZONTAL)	10	7/8 OR 1 (HORIZONTAL)	8
1-1/4 OR LARGER (VERTICAL	EVERY FLOOR LEVEL	1 OR LARGER (VERTICAL)	EVERY FLOOR LEVEL

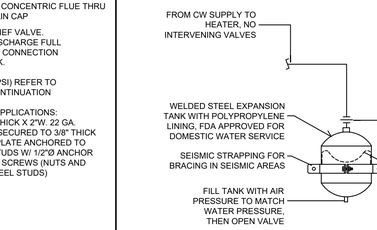
PIPE HANGER DETAIL (BELOW ROOF)

SCALE N.T.S 1

NOTE:
PROVIDE WCO WHERE SHOWN ON PLAN, AND ON SANITARY WASTE BRANCHES NOT SERVED WITH A FLOOR CLEANOUT; LOCATED ABOVE FIXTURE FLOOR RIM WITHIN 4'-0" OF FLOOR. CONSULT LOCAL CODES FOR OTHER WCO REQUIREMENTS.

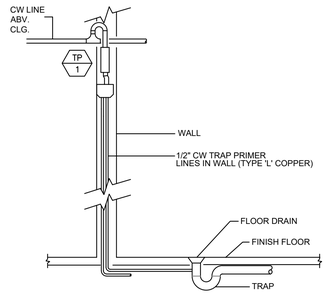
WALL CLEANOUT DETAIL

SCALE N.T.S 2



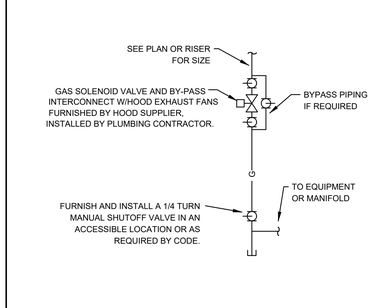
PIPING THRU ROOF DETAIL

SCALE N.T.S 3



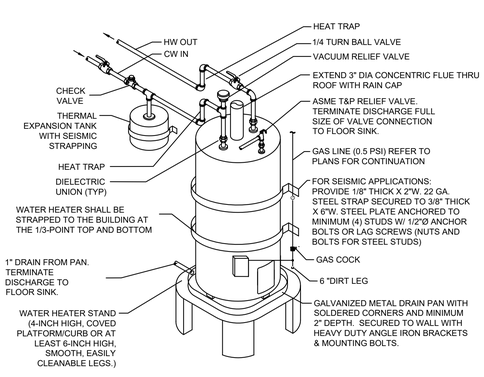
TRAP PRIMER DETAIL

SCALE N.T.S 4



AUTOMATIC GAS SOV

SCALE N.T.S 5



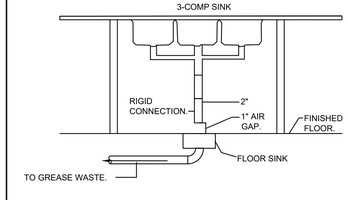
GAS WATER HEATER DETAIL

SCALE N.T.S 6

PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. MAKE PIPE SAME SIZE AS TANK FITTING. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION PROCEDURE. VERIFY PROPER OPERATION WHEN INSTALLED.

EXPANSION TANK DETAIL

SCALE N.T.S 7



3-COMPARTMENT SINK DETAIL

SCALE N.T.S 8

PLUMBING FIXTURE UNITS (CENTRAL KITCHEN)

FIXTURE TYPE	NO. OF FIXTURES	WATER LOAD: WATER FU PER FIXTURE	WATER LOAD: FIXTURE CW FU	WATER LOAD: FIXTURE HW FU	WASTE LOAD: WASTE FU PER FIXTURE	WASTE LOAD: TOTAL WASTE FU
TENANT IMPROVEMENT FIXTURES						
HAND SINK	1	2	2	2	2	2
PREP SINK	1	3	3	3	INDIRECT	INDIRECT
3-COMP SINK	1	3	3	3	INDIRECT	INDIRECT
FLOOR DRAIN	1				2	2
KITCHEN MAKE-UP AIR UNIT	1	1	1			
FLOOR SINK	3				4	12
EXISTING FIXTURES (V.I.F.)						
(E)WATER CLOSET (TANK)	2	2.5	5		6	12
(E)LAVATORY	2	1	2	2	1	2
(E)3-COMP SINK	1	3	3	3	INDIRECT	INDIRECT
(E)MOP SINK	1	3	3	3	3	3
(E)PREP SINK	1	3	3	3	INDIRECT	INDIRECT
(E)DISHWASHER	1	4		4	INDIRECT	INDIRECT
(E)HAND SINK	1	2	2	2	2	2
(E)HOSE BIBB	1	2.5	2.5			
T.I. TOTALS			9	8		16
EXISTING TOTALS			20.5	17		19
NEW TOTALS			**29.5**	**25**		**35**

WATER CALCULATIONS (CENTRAL KITCHEN)

STREET PRESSURE: 60 PSI MIN. (V.I.F.) / 70 PSI MAX (V.I.F.)
(E)METER SIZE: 1 INCH (V.I.F.)
TANK SYSTEM: 20 GPM FLOW
MATERIAL: COPPER TYPE L
MAX. VEL. (CW): 8 FPS
MAX. VEL. (HW): 5 FPS

	COLD WATER	
METER LOSS (PSI)	3.0	PSI
BACKFLOW PREVENTER (PSI)	0	PSI
PRESSURE REDUCING VALVE (PSI)	0	PSI
PRESSURE HEAD LOSS (PSI) HEIGHT: 10 FT	4.3	PSI
RESIDUAL PRESSURE REQUIRED (PSI)	25	PSI
TOTAL LOSSES (PSI)	32.3	PSI
MINIMUM WATER PRESSURE (PSI)	60	PSI
PRESSURE AVAILABLE FOR FRICTION (PSI)	27.7	PSI
ACTUAL LENGTH OF SYSTEM (FT)	105	FT
DEVELOPED LENGTH (130% OF ITEM 9) (FT)	136.5	FT
AVERAGE PRESSURE DROP (PSI/100 FT)	**20.3**	**PSI/100'**
[PRESSURE AVAIL. FOR FRIC./DEVELOPED LENGTH] X 100		

PIPE SIZE	CW SYSTEM TANK FU	CW SYSTEM F.V. FU	CW SYSTEM GPM	HW SYSTEM FU	HW SYSTEM GPM
1/2"	6	0	5	3	3
3/4"	16	0	12	8	7
1"	30	0	20	16	12
1-1/4"	56	14	31	28	19
1-1/2"	103	35	44	46	27
2"	254	132	76	119	48

TANK TYPE HOT WATER CALCULATION (WH-1)

EQUIPMENT	QTY.	GPH	TOTAL
LAVATORY	1	5	5
HAND SINK	1	5	5
PREP SINK	1	10	10
3-COMP SINK	1	42	42
		TOTAL GPH:	62

BTU/HR OUTPUT =
TOTAL GPH X 8.34 X DEGREE RISE / THERMAL EFF.

TOTAL GPH:	62
DEGREE RISE:	60
THERMAL EFF:	0.8
BTU/HR OUTPUT:	**38,781**
KW(=BTU/HR/3412):	**11**

PLUMBING FIXTURE UNITS (SMALL KITCHEN)

FIXTURE TYPE	NO. OF FIXTURES	WATER LOAD: WATER FU PER FIXTURE	WATER LOAD: FIXTURE CW FU	WATER LOAD: FIXTURE HW FU	WASTE LOAD: WASTE FU PER FIXTURE	WASTE LOAD: TOTAL WASTE FU
(E)WATER CLOSET (TANK)	1	2.5	2.5		6	6
(E)LAVATORY	1	1	1	1	1	1
(E)HOSE BIBB	1	2.5	2.5			
HAND SINK	2	2	4	4	2	4
PREP SINK	1	3	3	3	INDIRECT	INDIRECT
3-COMP SINK	1	3	3	3	INDIRECT	INDIRECT
MOP SINK	1	3	3	3	3	3
FLOOR DRAIN	2				2	4
FLOOR SINK	4				4	16
KITCHEN MAKE-UP AIR UNIT	1	1	1			
TOTAL			**20**	**14**		**34**

WATER CALCULATIONS (SMALL KITCHEN)

STREET PRESSURE: 60 PSI MIN. (V.I.F.) / 70 PSI MAX (V.I.F.)
(E)METER SIZE: 5/8 INCH
TANK SYSTEM: 14 GPM FLOW
MATERIAL: COPPER TYPE L
MAX. VEL. (CW): 8 FPS
MAX. VEL. (HW): 5 FPS

	COLD WATER	
METER LOSS (PSI)	6.0	PSI
BACKFLOW PREVENTER (PSI)	0	PSI
PRESSURE REDUCING VALVE (PSI)	0	PSI
PRESSURE HEAD LOSS (PSI) HEIGHT: 10 FT	4.3	PSI
RESIDUAL PRESSURE REQUIRED (PSI)	25	PSI
TOTAL LOSSES (PSI)	35.3	PSI
MINIMUM WATER PRESSURE (PSI)	60	PSI
PRESSURE AVAILABLE FOR FRICTION (PSI)	24.7	PSI
ACTUAL LENGTH OF SYSTEM (FT)	50	FT
DEVELOPED LENGTH (130% OF ITEM 9) (FT)	65	FT
AVERAGE PRESSURE DROP (PSI/100 FT)	**37.9**	**PSI/100'**
[PRESSURE AVAIL. FOR FRIC./DEVELOPED LENGTH] X 100		

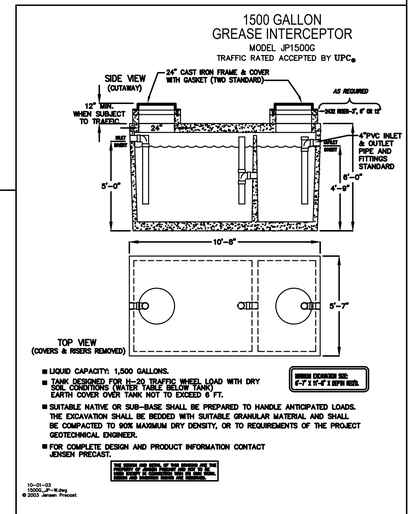
PIPE SIZE	CW SYSTEM TANK FU	CW SYSTEM F.V. FU	CW SYSTEM GPM	HW SYSTEM FU	HW SYSTEM GPM
1/2"	6	0	5	3	3
3/4"	16	0	12	8	7
1"	30	0	20	16	12
1-1/4"	56	14	31	28	19
1-1/2"	103	35	44	46	27
2"	254	132	76	119	48

TANK TYPE HOT WATER CALCULATION (WH-2)

EQUIPMENT	QTY.	GPH	TOTAL
LAVATORY	1	5	5
HAND SINK	2	5	10
PREP SINK	1	5	5
3-COMP SINK	1	42	42
MOP SINK	1	15	15
		TOTAL GPH:	77

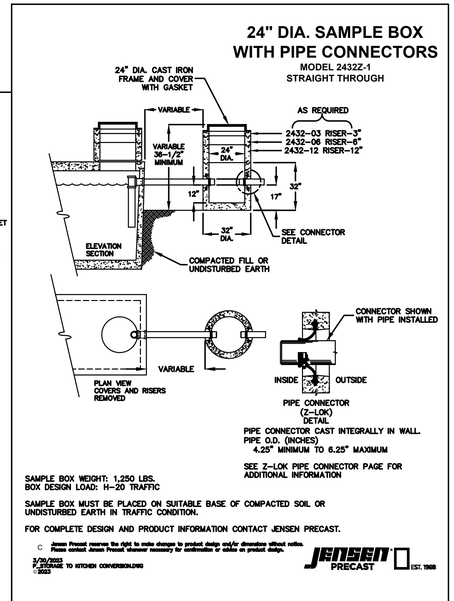
BTU/HR OUTPUT =
TOTAL GPH X 8.34 X DEGREE RISE / THERMAL EFF.

TOTAL GPH:	77
DEGREE RISE:	60
THERMAL EFF:	0.8
BTU/HR OUTPUT:	**48,164**
KW(=BTU/HR/3412):	**14**



GREASE INTERCEPTOR DETAIL

SCALE N.T.S 9



SAMPLE BOX DETAIL

SCALE N.T.S 10

CDI Circa Domini International, Inc.
Engineering - Consulting
9890 Research Dr. Suite 100, Irvine, CA 92618
Phone (949) 533-4117 | dkang@cdieng.com

REGISTERED PROFESSIONAL ENGINEER CHUNGSUN KANG M 37036 Exp. 9-30-26 MECHANICAL STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

DRAWN:	CHECKED:
H.D.	C.K.
DATE: 10/08/2024	SCALE: N.T.S.

SHEET TITLE:
PLUMBING DETAILS & CALCULATION

P001

PLOT DATE: 12/10/2024 9:44:26 AM

BRADFORD WHITE®
WATER HEATERS

Light-Duty Commercial Ultra Low NOx Power Direct Vent Gas Water Heater

Photo is of
ULG2PDV50H503N

The FVIR Eco-Defender Safety System® Models Feature:

- **Ultra Low NOx Burner with Primary and Secondary Air Distribution Devices**—Ensures proper air to gas ratio for reduction of NOx generated by the combustion process.
- **Closed Combustion Venting System**—Power Direct Vent closed combustion system utilizes external air for combustion and exhausts directly to the outside through a separate two-pipe system. The equivalent feet of intake venting cannot be greater than the equivalent feet of exhaust venting.
- **Bradford White ICON System™**—Intelligent gas control with spark to pilot ignition system eliminates the constant burning pilot. This results in savings of pilot gas during standby periods (120 VAC).
  - **Enhanced Performance**—Proprietary algorithms provide enhanced First Hour Rating and tighter temperature differential.
  - **Advanced Temperature Control System**—Microprocessor constantly monitors and controls burner operation to maintain consistent and accurate water temperature levels.
  - **Intelligent Diagnostics**—An exclusive green LED light prompts the installer during start-up and provides ten different diagnostic codes to assist in troubleshooting.
  - **Pilot On Indication**—Flashing green LED provides positive indication that pilot is on.
  - **Separate Immersed Thermowell**—High-strength advanced polymer composite thermowell provides isolation between electric temperature sensor and surrounding water. No need to drain the tank when removing gas valve.
- **Cast Aluminum Air Intake Boot**—A cast molded air intake boot design provides exceptional durability during installation and operation.
- **Flammable Vapor Sensor**—Electronic sensor prevents burner operation if flammable vapors are detected. The sensor will also prevent operation if there is ongoing flammable vapors burning inside the combustion chamber.
- **Factory-Installed Hydrojet® Total Performance System**—Sediment reducing device that also increases first hour rating of hot water while minimizing temperature build-up in tank.
- **Vitraglas® Lining**—An exclusively engineered enamel formula that provides superior tank protection from the highly corrosive effects of hot water. This formula (Vitraglas®) is fused to the steel surface by firing at a temperature of over 1600°F (871°C).
- **Optional Concentric Vent Kit Termination**—Concentric termination fitting provides for only one exit opening through a wall or roof. (Subtract 10ft. (3m) for intake pipe and 10ft. (3m) for exhaust pipe when calculating total vent length.)
- **Horizontal and Vertical Venting**—PVC, ABS, or CPVC (Maximum equivalent vent length for each pipe on reverse side).
- **Insulation System**—2" (51mm) Non-CFC foam insulation covers the sides and top of the tank, reducing heat loss. This results in less energy consumption, improved efficiencies, and jacket rigidity.
- **Water Connections**—¾" (19mm) NPT factory-installed true dielectric fittings.
- **Side Connections**—¾" (19mm) NPT tappings allow easy connections for space heating applications (Potable water only).
- **Protective Magnesium Anode Rod**.
- **T&P Relief Valve**—Installed.
- **Low Restrictive Brass Drain Valve**—Durable tamper proof design.
- **Complies with the latest Ultra Low NOx requirement (10 ng/J NOx limit)**.

FEATURING:

ICON System · Hydrojet · Vitraglas Ultra Low NOx Burner

ANSI CERTIFIED

3 or 5-Year Limited Tank Warranties / 1-Year Limited Warranty on Component Parts

For more information on warranty, please visit www.bradfordwhite.com

For products installed in USA, Canada, and Puerto Rico. Some states do not allow limitations on warranties. See complete copy of the warranty included with the heater.

1717-E-1020

Power Direct Vent Gas Water Heater

Power Direct Vent Models

NATURAL GAS

Meet or exceed ASHRAE 90.1b (current standard) C.E.C. Listed 78% Recovery Efficiency

Model Number	Nominal Gal. Capacity U.S. Gal.	Nominal Gal. Capacity Imp. Gal.	DOE Rated Storage Volume (Gal.)	BTU/Hr. Input	First Hour Rating (Gal.)	Uniform Energy Factor	Recovery at 100°F Rise* U.S. GPH	Recovery at 100°F Rise* Imp. GPH
ULG2PDV50H503N	48	40	46	50,000	82	0.68	48	40

Model Number	A Floor to Exhaust Conn. mm.	B Jacket Dia. in.	C Vent Size mm.	D Floor to T&P Conn. mm.	E Floor to Gas Conn. mm.	F Floor to Top of Heater mm.	G Floor to Water Conn. mm.	H Depth mm.	J Ctr. of Water Conn. in.
ULG2PDV50H503N	671¼	22	3 or 4	521½	131¾	1591¼	61¾	311¾	11

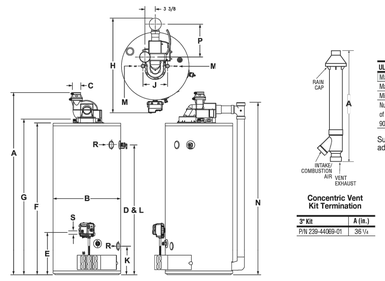
Model Number	A Floor to Exhaust Conn. mm.	B Jacket Dia. mm.	C Vent Size mm.	D Floor to T&P Conn. mm.	E Floor to Gas Conn. mm.	F Floor to Top of Heater mm.	G Floor to Water Conn. mm.	H Depth mm.	J Ctr. of Water Conn. mm.
ULG2PDV50H503N	1708	559	76or102	1327	352	1515	1573	805	279

Model Number	K Floor to Space Heating Inlet in.	L Floor to Space Heating Outlet in.	M Water Conn. NPT in.	N Floor to Air Intake in.	P Ctr. Distance From Intake to Exhaust in.	R Space Heating Conn. Size in.	S Gas Conn. Size in.	Approx. Shipping Weight lbs.
ULG2PDV50H503N	13½	52½	¾	63½	9½	¾	¾	201

Model Number	K Floor to Space Heating Inlet mm.	L Floor to Space Heating Outlet mm.	M Water Conn. NPT mm.	N Floor to Air Intake mm.	P Ctr. Distance From Intake to Exhaust mm.	R Space Heating Conn. Size mm.	S Gas Conn. Size mm.	Approx. Shipping Weight kg.
ULG2PDV50H503N	400	1327	19	1622	235	19	13	91

Available in Natural Gas only. For 5 year models change suffix from "3" to "5".

* Based on manufacturer's rated recovery efficiency.
110 VAC Required for Power Venting / 110 VAC, 60Hz., 3.1 Amperes.
Uniform Energy Factor and First Hour Rating is based on the latest AHRI directory listings.



Concentric Vent Kit Termination

3" Kit	A (in.)
P/N 239-44069-01	36 ½

ULG2PDV50H503N	3" Vent Pipe	4" Vent Pipe
Max. Intake Length	60 ft.	100 ft.
Max. Exhaust Length	60 ft.	100 ft.
Min. Vent Length	7 ft.	7 ft.
Number	1	55 ft.	95 ft.
of	2	50 ft.	90 ft.
90° Elbows	3	45 ft.	85 ft.

Subtract 5ft. (1.5m) for each additional 90° elbow.

General:
Meets NAECA Requirements.
All gas water heaters are certified at 300 PSI test pressure (2068 kPa) and 150 PSI working pressure (1034 kPa). All water connections are 3/4" NPT (19mm). All gas connections are 1/2" (13mm). All models design-certified by CSA International (formerly AGA/CGA), to meet ANSI standard Z21.10.1 and peak performance rated.

Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.
Suitable for Water (Potable) Heating and Space Heating. Toxic chemicals, such as those used for boiler treatment, shall NEVER be introduced into this system. This unit may NEVER be connected to any existing heating system or component(s) previously used with a non-potable water heating appliance.

-- BRADFORD WHITE IS --
AMERICAN STRONG

Sales: **800-523-2931** ▪ *Fax 215-641-1612*
24/7 Technical Support: **800-334-3393** ▪ *Email techserv@bradfordwhite.com*

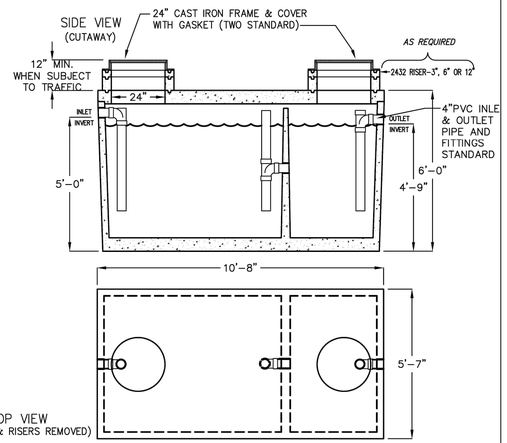
Built to be the Best

Printed in U.S.A.

1500 GALLON GREASE INTERCEPTOR

MODEL JP1500G

TRAFFIC RATED ACCEPTED BY UPC®



- LIQUID CAPACITY: 1,500 GALLONS.
- TANK DESIGNED FOR H–20 TRAFFIC WHEEL LOAD WITH DRY SOIL CONDITIONS (WATER TABLE BELOW TANK) EARTH COVER OVER TANK NOT TO EXCEED 6 FT.
- SUITABLE NATIVE OR SUB–BASE SHALL BE PREPARED TO HANDLE ANTICIPATED LOADS. THE EXCAVATION SHALL BE BEDDED WITH SUITABLE GRANULAR MATERIAL AND SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY, OR TO REQUIREMENTS OF THE PROJECT GEOTECHNICAL ENGINEER.
- FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PRECAST.

MINIMUM EXCAVATION SIZE:
6'–7" X 11'–8" X DEPTH REQ'D.

10–01–03
15000_JP–W.dwg
© 2003 Jensen Precast

JENSEN PRECAST®

Circa Domini International, Inc.
Engineering - Consulting
9890 Research Dr. Suite 100, Irvine, CA 92618
Phone (949) 533-4117 | dkang@cdieng.com

REGISTERED PROFESSIONAL ENGINEER
CHUNGSUN KANG
M 37036
Exp. 9-30-26
MECHANICAL
STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

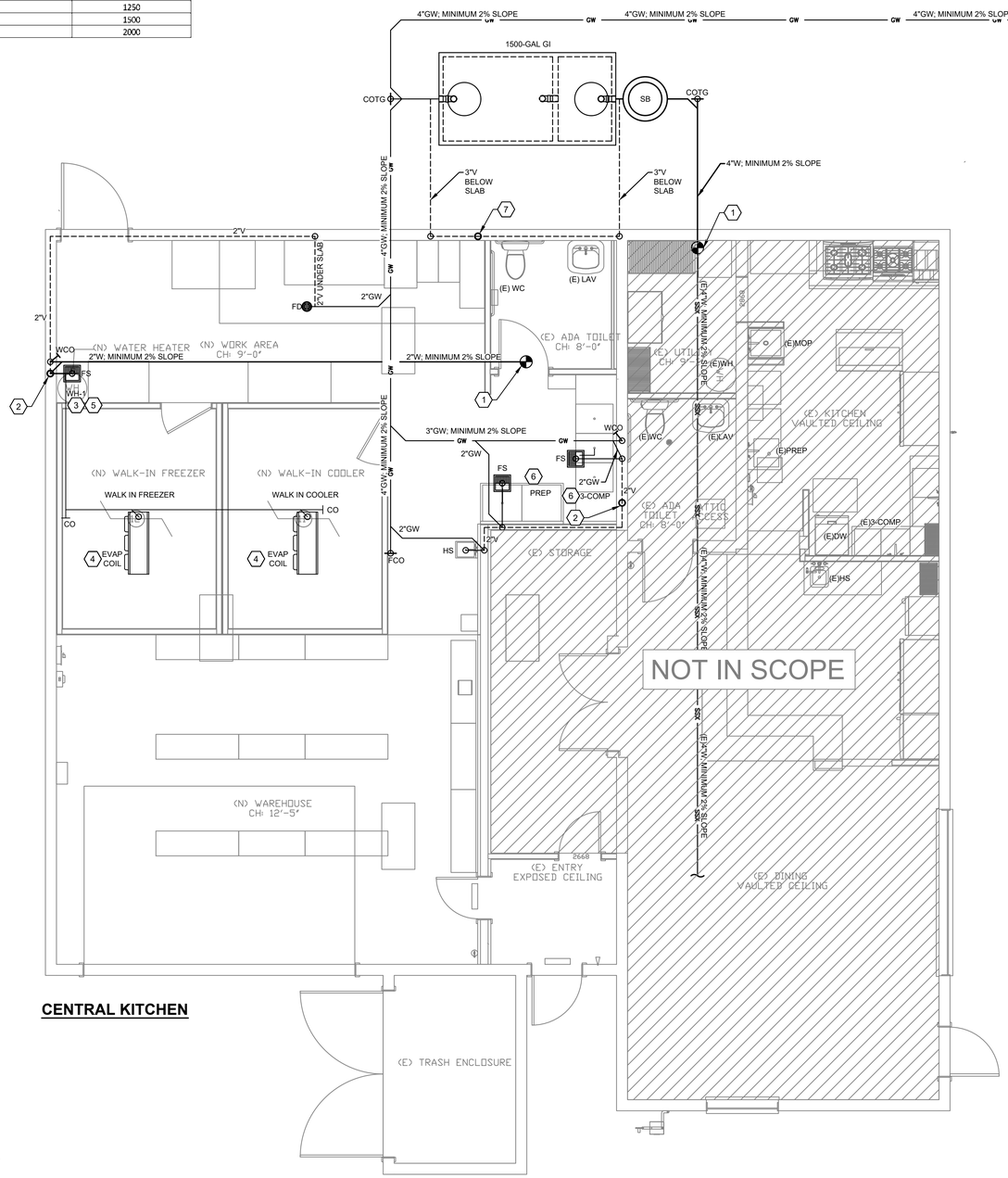
DRAWN:	CHECKED:
H.D.	C.K.
DATE:	SCALE:
10/08/2024	N.T.S.

SHEET TITLE:
PLUMBING SPECIFICATION SHEETS

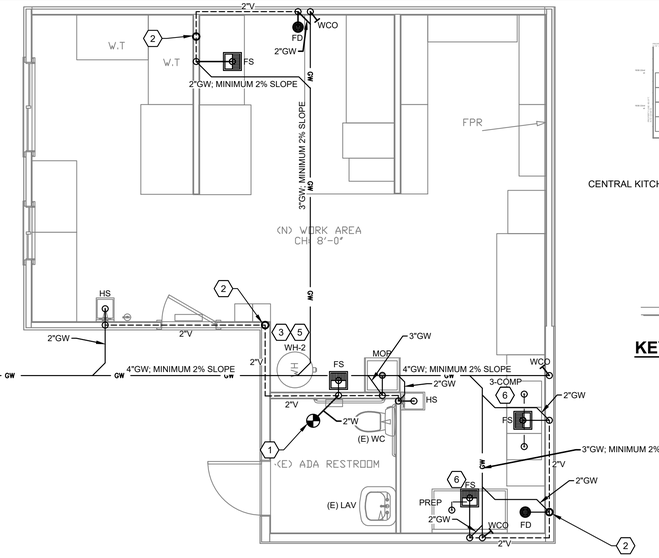
P002

PLOT DATE: 12/10/2024 9:44:27 AM

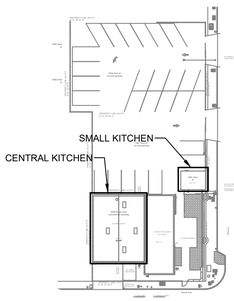
Gravity Grease Interceptor Sizing			
Grease Waste System	**DFU's**	**Quantity**	**Total**
CENTRAL KITCHEN			
3 Compartment Sink (F.S. for Indirect drain not counted)	4	1	4
Prep Sink (F.S. for indirect drain not counted)	4	1	4
Floor Drain	2	1	2
Hand Sink	2	1	2
SMALL KITCHEN			
3 Compartment Sink (F.S. for Indirect drain not counted)	4	1	4
Prep Sink (F.S. for indirect drain not counted)	4	1	4
Mop Sink	3	1	3
Hand Sink	2	2	4
Floor Drain	2	2	4
Floor Sink (2" Trap)	4	1	4
Grease Waste DFU Total			35
Total Estimated Flow (14 gal per DFU)			490
Equivelant Dwelling Units (EDU's)			**1.75**
Grease Interceptor Size Calculation			**1000**
DFU = Drainage Fixture Unit (Based on CPC Table 702.1)			
Gravity Grease Interceptor Sizing - CPC Table 1014.3.6			
Number of DFU's Connected to Interceptor	Grease Interceptor Volume		
0-8	500		
9-21	750		
22-35	1000		
36-90	1250		
91-172	1500		
173-216	2000		



CENTRAL KITCHEN



SMALL KITCHEN



KEYPLAN:

KEYED PLAN NOTES:

1. P.O.C. TO EXISTING 4" SANITARY WASTE WITH NEW PIPING. FIELD VERIFY ALL EXISTING CONDITIONS, SIZE, AND LOCATION PRIOR TO START OF THIS WORK.
2. INSTALL NEW 2" VENT THRU ROOF. FIELD VERIFY LOCATION PRIOR TO START OF THIS WORK.
3. WATER HEATER T&P VALVE DRAIN TO FLOOR SINK.
4. ROUTE 3/4" WALK-IN COOLER/FREEZER CONDENSATE DRAIN LINE AS HIGH AS POSSIBLE AND ALONG WALLS AS SHOWN. INSULATE ALL CONDENSATE PIPING AND PITCH A MIN. OF 1/4" PER FOOT IN THE DIRECTION OF FLOW. SEAL ALL COOLER WALL PENETRATIONS WATER TIGHT AND COVER EACH WITH AN ESCUTCHEON PLATE. PROVIDE FULL SIZE TRAP AND EXTEND ABOVE FLOOR AND BEHIND EQUIPMENT FOR AN INDIRECT CONNECTION TO A NEARBY FLOOR SINK.
5. INSTALL 3" EXHAUST/INTAKE CONCENTRIC VENT TO ROOF PER MANUFACTURER'S INSTRUCTION.
6. 3-COMP SINK, PREP SINK INDIRECTLY DRAIN TO ADJACENT FLOOR SINKS.
7. INSTALL NEW 3" VENT THRU ROOF. FIELD VERIFY LOCATION PRIOR TO START OF THIS WORK.

GENERAL NOTES:

1. IF DRAWINGS ARE INCORRECT FROM THE ACTUAL SITE CONDITION, CONTRACTOR SHALL NOTIFY ENGINEER(S) AND PROVIDE INFORMATION REFLECTING ACTUAL CONDITIONS.
2. ALL PLUMBING FIXTURES AND CONNECTIONS ARE NEW UNLESS NOTED AS EXISTING.
3. COORDINATE FLOOR SINK AND DRAIN LOCATIONS, IF ANY, WITH ARCHITECTURAL AND FOOD SERVICE PLAN PRIOR TO ROUGH-IN.
4. ALL UNDERGROUND WASTE PIPING SHALL BE SLOPED AT A 2% GRADE UNLESS OTHERWISE NOTED.
5. PROVIDE WALL CLEAN OUTS TO ALL SINK AND URINAL FIXTURES.

WASTE & VENT PLAN

CDI Circa Domini International, Inc.
Engineering - Consulting
9890 Research Dr. Suite 100, Irvine, CA 92618
Phone (949) 533-4117 | dkang@cdieng.com

REGISTERED PROFESSIONAL ENGINEER
CHUNGSUN KANG
M 37036
Exp. 9-30-26
MECHANICAL
STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

DRAWN:	CHECKED:
H.D.	C.K.
DATE:	SCALE:
10/08/2024	1/4" = 1'-0"

SHEET TITLE: WASTE & VENT PLAN

P100

PLOT DATE: 12/10/2024 9:44:31 AM

CONNECTED GAS LOAD SCHEDULE (CENTRAL KITCHEN)

MARK	ITEM	INPUT CFH	QTY.	TOTAL CFH
WH-1	WATER HEATER	50	1	50
(E)WH	EXISTING WATER HEATER	38	1	**38**
			WATER HEATING LOAD (CFH):	**88**
RANGE	GAS RANGE	160	1	160
FRYER	FRYER UNITS	120	2	240
GRIDDLE	COUNTERTOP GRIDDLE	180	1	180
POT	STOCKPOT RANGE	220	1	220
(E)6-BURN	EXISTING 6-BURNER RANGE	215	1	215
(E)FRYER	FRYER UNITS	120	1	120
(E)POT	EXISTING STOCKPOT RANGE	220	1	220
			COOKING LOAD (CFH):	**1355**
	TOTAL DEVELOPED LENGTH =	100 FEET	TOTAL CFH:	**1443**

CONNECTED GAS NOTES

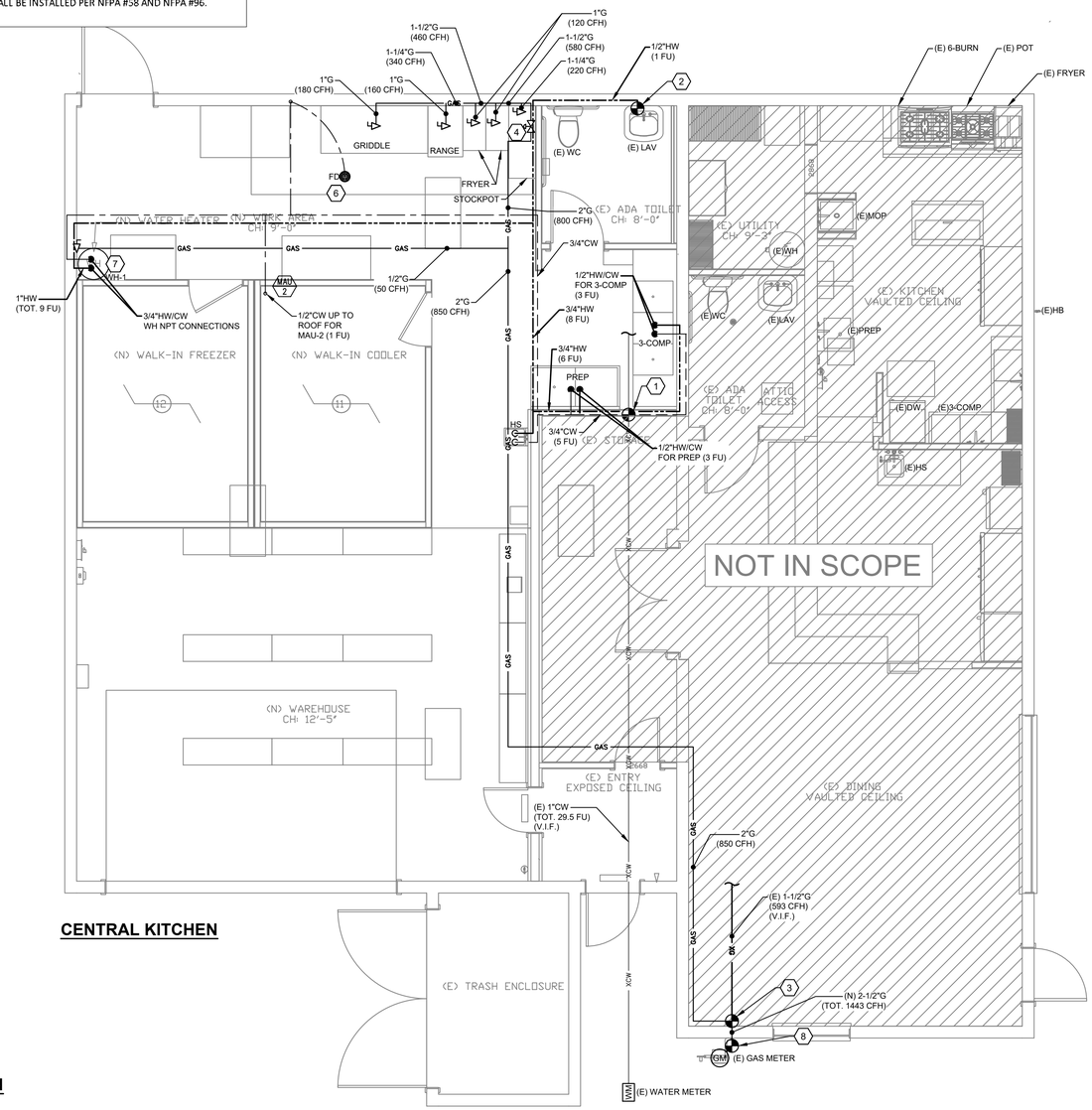
1. GAS PIPING SIZED FOR THE TOTAL CONNECTED LOAD 100 FT. FROM METER TO FARTHEST CONNECTION, 0.6 SPECIFIC GRAVITY, 7.0" W.C. INITIAL SUPPLY PRESSURE, AND 0.5" W.C. PRESSURE DROP IS TO BE MIN. PIPE SIZE OF 2-1/2 INCHES.
2. GAS PIPING SHALL BE THREADED UNLESS OTHERWISE REQUIRED BY CODE.
3. GAS PIPING SHALL BE TESTED IN ACCORDANCE WITH CPC SEC. 1213.3.
4. GAS BURNING EQUIP. SHALL BE INSTALLED PER NFPA #58 AND NFPA #96.

CONNECTED GAS LOAD SCHEDULE (SMALL KITCHEN)

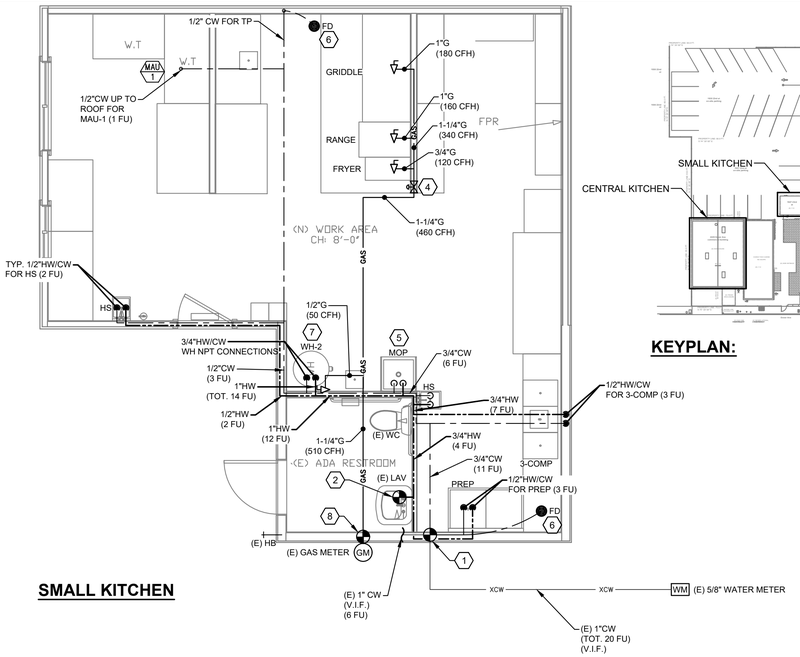
MARK	ITEM	INPUT CFH	QTY.	TOTAL CFH
WH-2	WATER HEATER	50	1	50
			WATER HEATING LOAD (CFH):	**50**
RANGE	GAS RANGE	160	1	160
FRYER	FRYER UNITS	120	1	120
GRIDDLE	COUNTERTOP GRIDDLE	180	1	180
			COOKING LOAD (CFH):	**460**
	TOTAL DEVELOPED LENGTH =	50 FEET	TOTAL CFH:	**510**

CONNECTED GAS NOTES

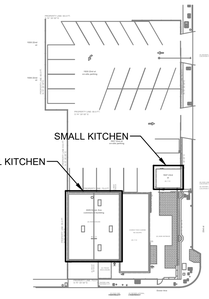
1. GAS PIPING SIZED FOR THE TOTAL CONNECTED LOAD 50 FT. FROM METER TO FARTHEST CONNECTION, 0.6 SPECIFIC GRAVITY, 7.0" W.C. INITIAL SUPPLY PRESSURE, AND 0.5" W.C. PRESSURE DROP IS TO BE MIN. PIPE SIZE OF 1-1/4 INCHES.
2. GAS PIPING SHALL BE THREADED UNLESS OTHERWISE REQUIRED BY CODE.
3. GAS PIPING SHALL BE TESTED IN ACCORDANCE WITH CPC SEC. 1213.3.
4. GAS BURNING EQUIP. SHALL BE INSTALLED PER NFPA #58 AND NFPA #96.



CENTRAL KITCHEN



SMALL KITCHEN



KEYPLAN:

WATER & GAS PLAN

KEYED PLAN NOTES:

1. P.O.C. TO EXISTING CW LINE WITH NEW PIPING. FIELD VERIFY ALL EXISTING CONDITIONS SIZE AND LOCATIONS PRIOR TO START OF THIS WORK.
2. P.O.C. TO EXISTING HW LINE WITH NEW PIPING. FIELD VERIFY ALL EXISTING CONDITIONS SIZE AND LOCATIONS PRIOR TO START OF THIS WORK
3. P.O.C. TO EXISTING GAS LINE WITH NEW PIPING. FIELD VERIFY ALL EXISTING CONDITIONS SIZE AND LOCATIONS PRIOR TO START OF THIS WORK.
4. AUTOMATIC GAS SHUT OFF VALVE INTERLOCK WITH HOOD FIRE SUPPRESSION SYSTEM, WITH ACCESS PANEL.
5. INSTALL MOP SINK W/ VACUUM BREAKER.
6. PROVIDE 1/2" TRAP PRIMER FOR FLOOR DRAIN.
7. INSTALL WATER HEATER WITH NEW PIPING. FIELD VERIFY LOCATION AND SIZE BEFORE START OF WORK. SEE PLUMBING SCHEDULE AND PLUMBING DETAILS ON P000 AND P001, RESPECTIVELY.
8. P.O.C. TO EXISTING GAS METER WITH NEW PIPING. FIELD VERIFY ALL EXISTING CONDITIONS SIZE AND LOCATIONS PRIOR TO START OF THIS WORK.

GENERAL NOTES:

1. IF DRAWINGS ARE INCORRECT FROM THE ACTUAL SITE CONDITION, CONTRACTOR SHALL NOTIFY ENGINEER(S) AND PROVIDE INFORMATION REFLECTING ACTUAL CONDITIONS.
2. ALL PLUMBING FIXTURES AND CONNECTIONS ARE NEW UNLESS NOTED AS EXISTING.

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REGISTERED PROFESSIONAL ENGINEER
CHUNGSUN KANG
M 37036
Exp. 9-30-26
MECHANICAL
STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

DRAWN:	CHECKED:
H.D.	C.K.
DATE:	SCALE:
10/08/2024	1/4" = 1'-0"

SHEET TITLE:
WATER & GAS PLAN

P200

PLOT DATE: 12/10/2024 9:44:33 AM

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: STORAGE TO KITCHEN CONVERSION	Report Page:	(Page 1 of 7)
Project Address: 2229 DOVER AVE, SAN PABLO, CA 94806	Date Prepared:	2024-10-03T13:58:34-04:00

This document is used to demonstrate compliance for nonresidential occupancies with requirements in 110.1, 110.3, 120.3, and 140.5, and with requirements in 141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in 110.1, 110.3, 160.4 and 170.2(d), and with requirements 180.1 for additions and 180.2 for alterations.

A. GENERAL INFORMATION

01	Project Location (city)	San Pablo	02	Climate Zone	3
03	Occupancy Types Within Project (select all that apply):				
● Restaurant					

B. PROJECT SCOPE

This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in 140./170.2(d) and 141.0(a)/ 180.1, or 141.0(b)2N / 180.2 for additions or alterations. Solar water heating systems are documented on the NRCC-SAB compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document.

01	02	03		
My project consists of (check all that apply):	System Type[1,2]	System Components		
☒ New system (DHW system being installed for the first time)	Individual System (serving nonresidential spaces)	☒ Equipment	☒ Distribution	☒ Controls
☐ System Alteration (equipment, distribution or controls)		☐ Equipment	☐ Distribution	☐ Controls

[1] *FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.*
[2] *Dwelling units refers to hotel/matel guest rooms and units in a multifamily residential occupancy.*
[3] *DHW systems serving 2 or more dwelling units are considered "Central Systems" for multifamily occupancies*

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. or the table indicated as not compliant for guidance.

01	02	03	04
Domestic Hot Water Equipment	Distribution Systems	Controls	**Compliance Results**
Table F	Table G	Table H	
Yes	Yes	Yes	COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: STORAGE TO KITCHEN CONVERSION	Report Page:	(Page 2 of 7)
2229 DOVER AVE, SAN PABLO, CA 94806	Date Prepared:	2024-10-03T13:58:34-04:00

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: STORAGE TO KITCHEN CONVERSION	Report Page:	(Page 3 of 7)
2229 DOVER AVE, SAN PABLO, CA 94806	Date Prepared:	2024-10-03T13:58:34-04:00

F. DOMESTIC HOT WATER EQUIPMENT

This table is used to demonstrate compliance with mandatory equipment requirements in 110.1 and 110.3. Compliance with prescriptive requirements in 140.5(c) / 170.2(d) must also be demonstrated and with 141.0 / 180.1/ 180.2 for addition and alteration scopes.

Equipment Schedule: Water Heating Efficiency and Standby Loss

03		04		05		06		
System Name	WH	Exception to 140.5(c)/ 170.2(d)3	Exceptions Do Not Apply	☐	Gas Service Water Heating System >= 1MMBtu/h[1]	Capacity-weighted Average Efficiency %		
07	08	09	10		11	12	13	14	15
Name or Item Tag	Equipment Type	Volume (gal)	Rated Input Capacity (Btu/h)	Max GPM/ First Hour Rating (FHR)	Rated Efficiency	Minimum Efficiency Required	Efficiency Unit	Designed Standby Loss	Maximum Standby Loss
WH	Commercial Gas Storage Water Heater	48	50,000		0.8	0.8	TE	2,702.5	2,702.5

[1] *FOOTNOTE: In systems >= 1MMBtu/h with multiple units, gas water heaters with input capacity > 100,000 Btu/h may meet 90% Et requirements via an input capacity-weighted average.*
[2] *FOOTNOTE: Compliant equipment may be found in the Modernized Appliance Efficiency Database System (MAEDBS) on the Energy Commission website: https://cacertappliances.energy.ca.gov/Pages/Search/AdvancedSearch.aspx*

Water Heating Equipment All Occupancies

	Yes	No	Not Applicable	Requirement
18	☐	☐	☒	Unfired storage tank insulation shall have Internal + External >=R-16 OR External >=R-3.5. Label required per 110.3(c)3
19	☐	☐	☒	New state buildings 60% of energy for service water heating from site solar energy or recovered energy per 110.3(c)5
20	☐	☐	☒	Isolation valves for instantaneous water heater with input rating >6.8 kBTUH or 2 kW has been specified per 110.3(c)6
21	☐	☐	☒	School buildings < 25,000 ft^2 and < 4 stories must install a heat pump water heating system per 140.5(a)1. Water heating systems serving an individual bathroom space may be an instantaneous electric water heater.

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

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G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in 120.3 and 140.5. For multifamily and hotel/motel occupancies, compliance is demonstrated with requirements 110.3(c), 160.4, 170.2(d).

Mandatory Pipe Insulation All Occupancies

13	☐	For systems serving dwelling units, pipe insulation must meet the minimum insulation requirements in Table 160.4-A (see blow) except: • Piping that penetrates framing members shall not be required to have pipe insulation for the distance of the framing penetration. Piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. Insulation shall abut securely against all framing members • Piping installed in interior or exterior walls shall not be required to have pipe insulation if all of the requirements are met for compliance with Quality Insulation Installation (QII) as specified in the Reference Residential Appendix RA3.5. • Piping surrounded with a minimum of 1 inch of wall insulation, 2 inches of crawlspace insulation, or 4 inches of attic insulation, shall not be required to have pipe insulation.
14	☒	For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per 120.3: • Recirculating system piping, including supply and return piping of the water heater • The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system • Pipes that are externally heated
15	☒	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per 120.3(b) / 160.4(f). Pipe insulation buried below grade must be installed in a water proof and non-crushable casing or sleeve.

TABLE 120.3-A / 160.4-A PIPE INSULATION THICKNESS

Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft^2 per °F)	Insulation Mean Rating Temp (°F)	Nominal Pipe Diameter (in)			
			< 1	1 to < 1.5	1.5 to < 4	1.5 to < 4 Multifamily & Hotel/Motel
			Minimum Insulation Required			
105-140	0.22 - 0.28	100	1.0 in or R-7.7	1.5 in or R-12.5	1.5 in or R-11	2.0 in or R-16

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H. DOMESTIC HOT WATER CONTROLS

This table is used to demonstrate compliance with control requirements in 110.3 for all occupancies. For multifamily residential and hotel/motel occupancies, compliance is also demonstrated with requirements in 160.4(e) / 170.2(d).

	Yes	No	Not Applicable	Requirement
01	☒	☐	☐	Construction documents require manufacturer certification that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per 110.3(a).
02	☐	☐	☒	Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per 110.3(c)1 unless covered by California Plumbing Code 613.0.
03	☐	☐	☒	Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless systems serves healthcare facility.
04	☐	☐	☒	For recirculation systems serving multiple dwelling units, design includes automatic pump controls per 170.2(d) or 180.1(b)3 for additions.
05	☐	☐	☒	For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA4.4.9 per 170.2(d).
06	☐	☐	☒	Combustion air positive shut-off shall be provided per 160.4(3).on all newly installed commercial boilers as follows: • Boilers with input capacity >= 2.5 MMBtu/h, in which the boiler is designed to operate with a nonpositive vent static pressure • Boilers where one stack serves two or more boilers with a total combined input capacity per stack of 2.5 MMBtu/h.
07	☐	☐	☒	Boiler combustion air fans with motor >= 10 hp shall meet one of the following • The fan motor shall be driven by a variable speed drive OR • The fan motor shall include controls that limit the fan motor demand to <=30% of the total design wattage at 50% of the design air volume.
08	☐	☐	☒	Newly installed boilers with an input capacity (d:gte/] 5MMBtu/h and a steady state full-load combustion efficiency < 90% shall maintain excess (stack-gas) oxygen concentrations <= 5% by volume on a dry basis over firing rates of 20-100%. Combustion air volume shall be controlled with respect to firing rate or flue gas oxygen concentration. Use of a common gas and combustion air control linkage or jack shaft is prohibited.

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I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-PLB-E - Must be submitted for all buildings

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

STATE OF CALIFORNIA
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Project Address: 2229 DOVER AVE, SAN PABLO, CA 94806	Date Prepared:	2024-10-03T13:58:34-04:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: David Kang	Documentation Author Signature:
Company:	Signature Date: 12/10/2024
Address: 9890 RESEARCH DR. SUITE 100	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: IRVINE, CA 92618	Phone: 949-533-4117

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Responsible Designer Signature:
Company:	Date Signed: 12/10/2024
Address: 9890 RESEARCH DR. SUITE 100	License: M37036
City/State/Zip: IRVINE, CA 92618	Phone: 949-533-4117

TITLE 24

CDI Circa Domini International, Inc.
Engineering - Consulting
9890 Research Dr. Suite 100, Irvine, CA 92618
Phone (949) 533-4117 | dkang@cdieng.com

REGISTERED PROFESSIONAL ENGINEER
CHUNGSUN KANG
M 37036
Exp. 9-30-26
MECHANICAL
STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION
2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

DRAWN:	CHECKED:
H.D.	C.K.
DATE: 10/08/2024	SCALE: N.T.S.

SHEET TITLE: TITLE 24

TP00

PLOT DATE: 12/10/2024 9:44:37 AM

ELECTRICAL SPECIFICATIONS (AS APPLICABLE)

DIVISION 16 - ELECTRICAL

SECTION 16000

BASIC ELECTRICAL REQUIREMENTS

A. NOTE

1. DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND ALL OTHER SPECIFICATION SECTIONS, APPLY TO THIS AND THE OTHER SECTIONS OF DIVISION 16.
2. THE CONTRACTOR FOR THIS DIVISION OF WORK IS REQUIRED TO READ THE SPECIFICATIONS AND REVIEW DRAWINGS FOR ALL DIVISIONS OF WORK AND IS RESPONSIBLE FOR THE COORDINATION OF THIS WORK AND THE WORK OF HIS SUBCONTRACTORS WITH ALL DIVISIONS OF WORK. IT IS THIS CONTRACTORS RESPONSIBILITY TO PROVIDE HIS SUBCONTRACTORS WITH A COMPLETE SET OF BID DOCUMENTS.
3. THIS ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR SCHEDULING THE COMPLETION AND INSPECTION OF THIS WORK TO COMPLY WITH TENANT/ARCHITECT'S SCHEDULE AND THE PROJECT COMPLETION DATE.
4. THIS CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTAL OF BID TO DETERMINE CONDITIONS AFFECTING THE WORK. ANY DISCREPANCIES OR ITEMS WHICH ARE NOT COVERED IN THE BID DOCUMENTS OR ANY PROPOSED SUBSTITUTIONS SHALL BE LISTED SEPARATELY AND QUALIFIED IN THE CONTRACTORS BID. SUBMITTAL OF BID SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS AND ANY MODIFICATIONS WHICH ARE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. FAILURE TO VISIT THE SITE DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY IN PERFORMANCE OF HIS WORK.
5. REFER TO RESPONSIBILITY SCHEDULE FOR INFORMATION IN REGARD TO RESPONSIBILITY OF WORK OR ITEMS WHICH MAY AFFECT THE BID.

B. GENERAL REQUIREMENTS

1. THIS CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION, INCIDENTALS AND DETAILS NECESSARY TO PROVIDE A COMPLETE ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS, AND AS REQUIRED BY JOB CONDITIONS. ALL WORK NOT SPECIFICALLY NOTED AS BEING BY THE LANDLORD OR ARCHITECTS SHALL BE PROVIDED BY THIS CONTRACTOR. CLOSELY COORDINATE THE ENTIRE INSTALLATION WITH THE LANDLORD AND ARCHITECTS, AS REQUIRED.
2. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER AND ANY MATERIAL OR LABOR CALLED FOR IN ONE SHALL BE FURNISHED AND INSTALLED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. ANY MATERIAL OR LABOR WHICH IS NEITHER SHOWN ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS, BUT WHICH IS OBVIOUSLY NECESSARY TO COMPLETE THE WORK, AND WHICH IS USUALLY INCLUDED IN WORK OF SIMILAR CHARACTER, SHALL BE FURNISHED AND INSTALLED AS PART OF THE CONTRACT.
3. WHERE THE DRAWINGS OR SPECIFICATIONS CALL FOR ITEMS WHICH EXCEED CODES OR THE LANDLORD'S TENANT CRITERIA, THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING THE SYSTEM WITH THE MORE STRINGENT REQUIREMENTS AS DESIGNED AND DESCRIBED ON THESE DRAWINGS, UNLESS SPECIFICALLY NOTED OTHERWISE.
4. ALL WORK IN THIS SECTION SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING, AND REPAIRING. THIS CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT SERVICE ACCESS TO ALL EQUIPMENT.
5. ALL WORK SHALL BE PERFORMED IN A NEAT PROFESSIONAL MANNER USING GOOD CONSTRUCTION PRACTICES.
6. UNLESS SPECIFICALLY NOTED OTHERWISE, MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW, UNDERWRITERS LABORATORIES LISTED AND LABELED AND SIZED IN CONFORMITY WITH REQUIREMENTS OF STATE AND LOCAL CODES, WHICHEVER IS MORE STRINGENT.
7. THIS CONTRACTOR SHALL DO ALL CUTTING, CHASING AND CHANNELING REQUIRED FOR ANY WORK UNDER THIS DIVISION. CUTTING SHALL HAVE PRIOR APPROVAL BY THE ARCHITECTS AND THE LANDLORD. ALL PATCHING SHALL BE BY G.C. AND SHALL MATCH THE SURROUNDING SURFACES.
8. THE ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.

C. TEMPORARY LIGHT AND POWER

1. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY WIRING AND RELATED GROUND FAULT INTERRUPTION PROTECTION FOR LIGHT AND POWER FOR ALL CONTRACTORS AND SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY WIRING.
2. THE GENERAL CONTRACTOR SETS UP ALL ELECTRICAL UTILITIES IN THE NAME OF THE TENANT. TENANT PAYS FOR ALL UTILITIES THROUGHOUT CONSTRUCTION.

D. CODES

1. ALL WORK SHALL CONFORM TO THE LANDLORD'S CRITERIA, THE STATE'S, COUNTY'S, CITY'S AND LOCAL CODES AND ORDINANCES, SAFETY AND HEALTH CODES, NFPA CODES, ENERGY CODES AND ALL OTHER APPLICABLE CODES AND REQUIREMENTS. THIS CONTRACTOR SHALL INQUIRE INTO AND COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS. THIS CONTRACTOR SHALL INCLUDE ANY CHANGES REQUIRED BY CODES IN THE BID AND IF THESE CHANGES ARE NOT INCLUDED IN THE BID, THEY MUST BE QUALIFIED AS A SEPARATE LINE ITEM IN THE BID. AFTER CONTRACT IS AWARDED, CHANGE ORDERS FOR INCREASED COSTS DUE TO CODE ISSUES WILL NOT BE ACCEPTED BY OWNER, UNLESS ALLOWANCES HAVE PREVIOUSLY BEEN AGREED UPON.

E. LICENSES, PERMITS, INSPECTIONS & FEES

1. THIS CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LICENSES, PERMITS, INSPECTIONS, AND FEES REQUIRED OR RELATED TO HIS WORK.
2. FURNISH TO ARCHITECTS ALL CERTIFICATES OF INSPECTION AND FINAL INSPECTION APPROVAL AT COMPLETION OF PROJECT.

F. TRADE NAMES, MANUFACTURERS AND SHOP DRAWINGS

1. WHERE TRADE NAMES AND MANUFACTURERS ARE USED ON THE DRAWINGS OR IN THE SPECIFICATIONS, THE EXACT EQUIPMENT SHALL BE USED AS A MINIMUM FOR THE BASE BID. MANUFACTURERS CONSIDERED AS AN EQUAL OR BETTER IN ALL ASPECTS TO THAT SPECIFIED WILL BE SUBJECT TO APPROVAL IN WRITING BY ARCHITECTS/ENGINEERS THROUGH SHOP DRAWING SUBMITTAL PROCESS FOR ACCEPTANCE PRIOR TO INSTALLATION. THE USE OF ANY UNAUTHORIZED EQUIPMENT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
2. GENERAL CONTRACTOR SHALL SUBMIT ONLY SUBSTITUTION REQUESTS TO ARCHITECTS/ENGINEERS FOR APPROVAL. SUBMISSIONS SHALL BE MADE EARLY ENOUGH IN PROJECT TO ALLOW FOUR (4) WORKING DAYS FOR ARCHITECTS/ENGINEERS REVIEW WITHOUT CAUSING DELAYS OR CONFLICTS TO THE JOB'S PROGRESS. SUBMITTALS SHALL BEAR THE STAMP AND/OR THE SIGNATURE OF THE GENERAL CONTRACTOR AND THE SUB-CONTRACTOR SHOWING THAT HE HAS REVIEWED AND CONFIRMED THAT THE SUBMITTALS ARE IN CONFORMANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS OR INDICATE WHERE EXCEPTIONS HAVE BEEN TAKEN.

G. GUARANTEE

1. THE EQUIPMENT MANUFACTURER SHALL PROVIDE A 12 MONTH GUARANTEE TO TENANT FROM THE DATE OF ACCEPTANCE. THIS CONTRACTOR SHALL WARRANTY THE INSTALLATION OF THIS EQUIPMENT AND WILL BE RESPONSIBLE FOR ANY DAMAGE AND/OR MALFUNCTION CAUSED BY THE INSTALLATION. THIS CONTRACTOR SHALL NOT BEAR ADDITIONAL WARRANTIES BEYOND A COMPLETE WORKING SYSTEM.

H. RECORD DRAWINGS

1. THIS CONTRACTOR SHALL MAINTAIN ONE SET OF DRAWINGS ON THE JOB SITE UPDATED WEEKLY TO RECORD ALL DEVIATIONS FROM CONTRACT DRAWINGS, SUCH AS:
   a. LOCATION OF CONCEALED CONDUIT AND EQUIPMENT.
   b. REVISIONS, ADDENDUMS, AND CHANGE ORDERS.
   c. SIGNIFICANT DEVIATIONS MADE NECESSARY BY FIELD CONDITIONS, APPROVED EQUIPMENT SUBSTITUTIONS, AND CONTRACTOR'S COORDINATION WITH OTHER TRADES.
2. AT COMPLETION OF THE PROJECT AND BEFORE FINAL APPROVAL, THIS CONTRACTOR SHALL MAKE ANY FINAL CORRECTIONS TO DRAWINGS AND CERTIFY THE ACCURACY OF EACH PRINT BY SIGNATURE THEREON. FAILURE TO KEEP THESE RECORDS WILL ALLOW TENANT/ARCHITECTS TO DIRECT THE GENERAL CONTRACTOR TO PROVIDE THESE RECORDS AT HIS EXPENSE PRIOR TO FINAL PAYMENT.

I. DISCREPANCIES IN DOCUMENTS

1. DRAWINGS (PLANS, SPECIFICATIONS, AND DETAILS) ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION AND INTENT OF THE ELECTRICAL SYSTEMS. WHERE DRAWINGS, EXISTING SITE CONDITIONS, SPECIFICATIONS OR OTHER TRADES CONFLICT OR ARE UNCLEAR, ADVISE THE GENERAL CONTRACTOR IN WRITING, PRIOR TO SUBMITTAL OF BID. THE GENERAL CONTRACTOR IS RESPONSIBLE TO ADVISE PROJECT MANAGER, IN WRITING, OF VARIATIONS TO CONTRACT DOCUMENTS PRIOR TO SUBMISSION OF BID. OTHERWISE, TENANT/ARCHITECT'S INTERPRETATION OF CONTRACT DOCUMENTS OR CONDITIONS SHALL BE FINAL WITH NO ADDITIONAL COMPENSATION PERMITTED.

J. PHASING REQUIREMENTS

1. THIS CONTRACTOR IS TO INCLUDE IN HIS BID ALL NECESSARY SERVICE REQUIRED TO KEEP THE OPERATING PHASE OF THE STORE'S ELECTRICAL SERVICE IN OPERATION. CONTRACTOR MUST SCHEDULE IN WRITING WITH TENANT/ARCHITECTS AND THE LANDLORD ONE WEEK PRIOR TO ANY SHUT DOWN OF THE ELECTRICAL SYSTEM.

K. DEMOLITION

1. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE DEMOLITION OF EXISTING WORK AND THE DEMOLITION PROVIDED BY THE GENERAL CONTRACTOR. COORDINATE WITH THE GENERAL CONTRACTOR ANY EXISTING EQUIPMENT REQUIRED TO BE LEFT INTACT.
2. THIS CONTRACTOR SHALL INCLUDE, AND WILL BE HELD RESPONSIBLE FOR, THE REMOVAL OF ALL EXISTING ELECTRICAL EQUIPMENT, CONDUITS, ETC. NOT TO BE REUSED ON THIS PROJECT, UNLESS SPECIFICALLY NOTED OTHERWISE. CONTRACTOR MUST VERIFY WITH THE LANDLORD ALL PRESUMED ABANDONED EQUIPMENT PRIOR TO REMOVAL. ALL EXTRANEOUS ITEMS IN THE SPACE OR ON THE ROOF NOT APPLICABLE TO THE NEW WORK MUST BE REMOVED AND ROOF/WALL/FLOOR PATCHED/REPAIRED TO MATCH EXISTING STRUCTURE. EXISTING ABANDONED CONDUIT OR EQUIPMENT IN THE FLOOR, EMBEDDED IN CONCRETE OR OTHERWISE INACCESSIBLE ARE TO BE CUT OFF AND SEALED BELOW OR WITHIN FLOOR OR WALL LEVEL WHEN THEY ARE NOT TO BE REUSED IN THIS PROJECT. IF REQUIRED BY LANDLORD OR CODES, ABANDONED CONDUIT MUST BE REMOVED TO POINT OF ORIGIN. CONFIRM THE EXTENT OF DEMOLITION PRIOR TO BID AND INCLUDE IN BID PROPOSAL.

L. SLEEVES

1. THIS CONTRACTOR SHALL PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH IT'S RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE EXCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2" ABOVE THE FLOOR. CONTRACTOR MUST COORDINATE THROUGH THE LANDLORD ANY CORE DRILLING OR CUTTING OF OPENINGS IN MASONRY FLOORS OR WALLS.
2. ALL SLEEVES AND OPENINGS THROUGH FIRE RATED WALLS AND/OR FLOORS SHALL BE FIRE SEALED WITH CALCIUM SILICATE, SILICONE "RTV" FOAM, "3M" FIRE RATED SEALANTS OR EQUAL, SO AS TO RETAIN THEIR FIRE RATING.
3. SLEEVES IN BEARING AND MASONRY WALLS, FLOORS, AND PARTITIONS SHALL BE STANDARD WEIGHT STEEL PIPE FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS, THROUGH SUSPENDED CEILINGS, OR FOR CONCEALED VERTICAL PIPING, SLEEVES SHALL BE NO. 22 U.S.G. GALVANIZED STEEL MINIMUM.

M. HANGERS

1. HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS ANGLE IRON, BANDS, C-CLAMPS WITH RETAINING CLIPS, CHANNELS, HANGER RODS, ETC., NECESSARY FOR THE INSTALLATION OF WORK.
2. HANGERS SHALL BE FASTENED TO BUILDING STEEL, CONCRETE, OR MASONRY, BUT NOT TO PIPING. HANGING FROM METAL DECK IS NOT PERMITTED. HANGERS MUST BE ATTACHED TO UPPER CHORD OF BAR JOIST. WHERE INTERFERENCES OCCUR, AND IN ORDER TO SUPPORT DUCTWORK OR PIPING, THE CONTRACTOR MUST INSTALL TRAPEZE TYPE HANGERS OR SUPPORTS WHICH SHALL BE LOCATED WHERE THEY DO NOT INTERFERE WITH ACCESS TO FIRE DAMPERS, VALVES, AND OTHER EQUIPMENT. HANGER TYPES AND INSTALLATION METHODS ARE ALSO SUBJECT TO LANDLORD CRITERIA.
3. HANGERS AND PIPING OF DISSIMILAR METALS SHALL BE DIELECTRICALLY SEPARATED.

N. FINAL ELECTRICAL INSPECTIONS

1. ASIDE FROM NORMAL INTERIM INSPECTIONS OF WORK IN PLACE, TENANT/ARCHITECTS MAY HAVE AN INDEPENDENT ELECTRICAL CONTRACTOR INSPECT THE FINISHED ELECTRICAL INSTALLATION UPON COMPLETION FOR COMPLIANCE WITH THE PLANS, SPECIFICATIONS AND CODES. THE INSTALLING CONTRACTOR WILL BE RESPONSIBLE TO BRING ALL ITEMS REPORTED BY THE INDEPENDENT ELECTRICAL CONTRACTOR UP TO PLANS AND SPECIFICATION REQUIREMENTS.

END OF SECTION 16000

SECTION 16050

BASIC ELECTRICAL MATERIAL AND METHODS

A. CONTRACTOR NOTES

1. IT IS CONTRACTOR/ELECTRICIANS' RESPONSIBILITY TO FIELD VERIFY ACTUAL SITE CONDITION AND SHALL NOTIFY EOR(S) ANY DISCREPANCIES WITH THE PLAN THAT IMPACTS ON THE BID PRIOR TO BIDDING.
2. THIS CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION, AND FACILITIES NECESSARY FOR, REASONABLY IMPLIED AND INCIDENTAL TO, THE FURNISHING, INSTALLATION, COMPLETION AND TESTING OF ALL THE WORK FOR THE ELECTRICAL SYSTEMS AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS, AND AS REQUIRED BY JOB CONDITIONS, TO INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   a. A COMPLETE ELECTRICAL DISTRIBUTION SYSTEM INCLUDING THE INSTALLATION OF SAFETY AND DISCONNECT SWITCHES, MOTOR STARTERS AND LIGHTING. IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO INCLUDE IN HIS BID FOR PROVIDING SERVICE EQUIPMENT NECESSARY FOR TIE-IN TO LANDLORD'S DISTRIBUTION EQUIPMENT OR TO OBTAIN SERVICE FROM LOCAL UTILITY COMPANY. REFER TO ELECTRICAL RESPONSIBILITY SCHEDULE AND ELECTRICAL POWER RISER DIAGRAM FOR ADDITIONAL INFORMATION.
   b. CONTRACTOR MUST ALSO INCLUDE IN BID ALL NECESSARY MATERIALS REQUIRED TO COMPLETE THE SYSTEM INCLUDING, BUT NOT LIMITED TO, FEEDERS, BRANCH CIRCUITS, JUNCTION BOXES, OUTLET BOXES, WIRING DEVICES, COVER PLATES, CONDUITS, ETC.
   c. METERING AND CURRENT TRANSFORMERS AS REQUIRED BY DRAWINGS, UTILITY COMPANY, AND/OR LANDLORD.
   d. THE WIRING OF MECHANICAL EQUIPMENT AS OUTLINED ON THE BID SET DRAWINGS AND IN THE SPECIFICATIONS. WORK SHALL INCLUDE WIRING OF ALL STARTERS, DISCONNECTS, AND POWER WIRING OF MECHANICAL EQUIPMENT EXCEPT AS SPECIFICALLY NOTED OTHERWISE. ALL LOW VOLTAGE (24 VOLT) EMS TEMPERATURE CONTROL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR UNLESS NOTED SPECIFICALLY ON DRAWING.
   e. INSTALLATION OF LIGHT FIXTURES AND LAMPS AS SHOWN ON THE DRAWINGS INCLUDING ALL DEVICES, EQUIPMENT, ETC. REQUIRED FOR MOUNTING.
   f. A COMPLETE CONDUIT SYSTEM FOR TELEPHONE/DATA INCLUDING BRANCH CONDUITS, OUTLET BOXES, PULL WIRES, GROUND CONDUCTORS, COVER PLATES, ETC. OR AS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
   g. A COMPLETE EMERGENCY AND EXIT LIGHTING SYSTEM AS SHOWN ON THE DRAWINGS.
   h. TEMPORARY SERVICE AS INDICATED IN THE SPECIFICATIONS, INCLUDING ITS REMOVAL.
   i. FINAL CONNECTIONS TO ALL SIGNS, CORNICE LIGHTING, CASE LIGHTING, ETC. AS SHOWN ON DRAWINGS.
   j. IF INDICATED ON DRAWINGS, INSTALLATION AND WIRING OF SPEAKERS, AMPLIFIERS, CONDUIT AND FINAL CONNECTIONS FOR SOUND SYSTEM AS SHOWN.
   k. SMOKE/FIRE ALARM WIRING, DEVICES AND CONDUIT, AS SHOWN OR DESCRIBED ON DRAWINGS OR AS NECESSARY TO MEET LANDLORD, STATE, LOCAL, INSURANCE AND FIRE DEPARTMENT REQUIREMENTS.
   l. INSTALLATION OF CONDUITS STUBBED TO ABOVE CEILING FOR HVAC. ALSO, ANY ADDITIONAL CONDUIT FOR HVAC CONTROL EQUIPMENT WHERE PLENUM RATED CABLES ARE NOT PERMITTED.
   m. BALANCING LOADS.
   n. AS-BUILTS, PANEL DESCRIPTION AND CIRCUIT BREAKER SPECIFIC LABELING.
3. THE FOLLOWING ITEMS OF ELECTRICAL CONSTRUCTION ARE NOT INCLUDED IN THIS CONTRACT:
   a. TELEPHONE INSTRUMENTS AND WIRING UNLESS NOTED OTHERWISE.
   b. DATA CABLE WIRING UNLESS NOTED OTHERWISE.
4. BEFORE STARTING WORK, THIS CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL, STRUCTURAL, FIRE PROTECTION, MECHANICAL AND PLUMBING PLANS, SHOP DRAWINGS AND SPECIFICATIONS TO SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF THE ELECTRICAL SYSTEM, MATERIALS AND EQUIPMENT WITH OTHER CONTRACTORS TO AVOID INTERFERENCES AND CONFRONTATIONS.

B. CONDUIT

1. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUITS SERVING ALL EQUIPMENT, INCLUDING BUT NOT LIMITED TO, LIGHTING, RECEPTACLES, HEATING, AIR CONDITIONING, PLUMBING EQUIPMENT, TELEPHONE, DATA, SPEAKERS, SECURITY, PAGER, TRAFFIC COUNTING SYSTEM AND ELECTRICAL EQUIPMENT.
2. ALL CONDUITS SHALL BE GALVANIZED IMC OR EMT UNLESS OTHERWISE SPECIFIED IN SPECIFICATIONS OR ON DRAWINGS. ALL CONDUIT IS TO BE UL LABELED. EMT CONNECTORS SHALL BE STEEL COMPRESSION OR SET SCREW TYPE. CONDUIT UNDER SLAB ON GRADE SHALL BE RIGID STEEL, OR SCHEDULE 40 PVC WITH RIGID STEEL ELLS WHERE PERMITTED BY LANDLORD OR CODE. EMT FOR WET LOCATIONS TO BE PERMITTED ONLY WHEN ALL SUPPORTS, BOLTS, STRAPS, SCREWS AND SO FORTH ARE CORROSION-RESISTANT MATERIALS PER 358.10.
3. MINIMUM SIZE OF CONDUIT SHALL BE:
   a. MAIN FEEDER CONDUIT 2" OR LARGER FOR ALL APPLICATIONS.
   b. 1/2" FOR INDIVIDUAL LIGHTING FIXTURE CONNECTIONS OR TO INDIVIDUAL LIGHT SWITCHES (IF ACCEPTABLE BY THE LANDLORD AND LOCAL CODE OFFICIALS) AND 3/4" FOR ALL OTHER LOCATIONS.
   c. IF HVAC CONTROL WIRING IS REQUIRED TO BE RUN IN CONDUIT, IT SHALL BE A MINIMUM OF 3/4", UNLESS NOTED OTHERWISE ON DRAWINGS.
   d. ALL IN/UNDER FLOOR CONDUIT SHALL BE OF MINIMUM 3/4" SIZE.
4. SUPPORT ALL CONDUIT, INCLUDING SEISMIC AND SWAY BRACING, IN ACCORDANCE WITH THE NEC AND LOCAL CODES.
5. GENERALLY, ALL CONDUIT SHALL BE CONCEALED EXCEPT FOR UNFINISHED AREAS, SUCH AS EQUIPMENT ROOMS. EXPOSED CONDUIT SHALL BE ALLOWED ONLY AS NOTED ON PLAN AND AS APPROVED BY PROJECT MANAGER. PAINTING OF CONDUITS, NOTED ON DRAWINGS OR SPECIFICATIONS WILL BE BY GENERAL CONTRACTOR.
6. FLEXIBLE METAL CONDUIT OR MC TYPE CABLE:
   a. FLEXIBLE CONDUIT OR MC TYPE CABLE SHALL BE USED FOR THE FOLLOWING APPLICATIONS ONLY:
      1. FINAL CONNECTIONS TO MOTORS.
      2. FINAL CONNECTIONS INTO AND OUT OF THE TRANSFORMER.
      3. FINAL CONNECTIONS TO VIBRATING EQUIPMENT.
      4. INTER-CONNECTIONS BETWEEN ALL LIGHT FIXTURES AND HOME RUNS TO PANELS WHERE CODE ALLOWS.
      5. FINAL CONNECTIONS WHERE RIGID CONDUIT IN NOT PRACTICAL.
      6. IN WALLS (FOR LIGHT SWITCHES AND 120 VOLT POWER RECEPTACLES AND HVAC CONTROL EQUIPMENT).
   b. FLEXIBLE METAL CONDUIT OR MC TYPE CABLE MUST BE THE SAME SIZE AS THE IMC OR EMT CONDUIT TO WHICH IT IS CONNECTED. BOTH THE FLEXIBLE METAL CONDUIT AND IT'S FITTINGS ARE TO BE LISTED FOR GROUNDING. A GREEN GROUNDING CONDUCTOR SHALL BE INSTALLED. ALL CONNECTORS ARE TO BE OF A NEMA APPROVED TYPE.
   c. THE USE OF ROMEX, BX, ETC. IS PERMITTED ONLY IN RESIDENTIAL CONSTRUCTION NOT HIGHER THAN THREE STORIES.
   d. CONNECTION TO ANY OUTDOOR EQUIPMENT MUST BE WEATHERPROOF.
7. PROVIDE PULL-WIRE IN ALL EMPTY CONDUITS EXCEPT AS NOTED OTHERWISE ON DRAWINGS.
8. HOME RUNS AND MAIN CONDUIT RUNS ARE TO BE HELD TIGHT TO STRUCTURE ABOVE OR AS REQUIRED TO ALLOW PROPER SERVICE ACCESS AND OTHER TRADES WORK. CONDUIT MUST BE TRAPEZED TO ALLOW 3 FEET MINIMUM CLEARANCE ABOVE CEILING.
9. ALL CONDUITS MUST BE SIZED PER NEC AND LOCAL CODES.
10. ALL SENSORMATIC WIRING MUST BE PLACED IN CONDUIT (PVC PIPE NOT PERMITTED).

C. OUTLET BOXES

1. ALL OUTLET BOXES SHALL BE GALVANIZED PRESSED STEEL OF THE STANDARD KNOCKOUT TYPE. NO ROUND OUTLET BOXES SHALL BE PERMITTED UNLESS INDICATED AND FOR LIGHTING THAT REQUIRE SUCH CONFIGURATION. CONCEALED BOXES SHALL NOT BE LESS THAN 4" SQUARE AND 1 1/2" DEEP, WITH PLASTER RINGS.
2. ALL KNOCKOUT BOXES, UPON WHICH LIGHTING FIXTURES ARE TO BE INSTALLED, SHALL BE EQUIPPED WITH 3/8" FIXTURE STUDS.
3. EXTERIOR BOXES SHALL BE CAST RUST-RESISTING METAL WITH GASKETED COVERS.
4. INSTALL BOXES RIGIDLY FROM BUILDING STRUCTURE AND SUPPORT INDEPENDENTLY OF THE CONDUIT SYSTEM. ALSO PROVIDE SUITABLE BOX EXTENSIONS TO EXTEND BOXES TO FINISHED FACES OF FLOORS, CEILINGS, WALLS ETC. ALL OUTLET BOXES TO BE PROVIDED WITH CADDY "QUICK-MOUNT BOX SUPPORT" TO MINIMIZE THE DEFLECTION THAT OCCURS WHEN PLUGGING/UNPLUGGING INTO THESE DEVICES.
5. UNLESS OTHERWISE NOTED ON DRAWINGS OR OTHERWISE REQUIRED BY THE NATIONAL ELECTRICAL CODE, HANDICAP CODES OR LOCAL CODES, OUTLET HEIGHTS SHALL BE AS FOLLOWS:
   a. SWITCH HEIGHT 48" FROM FINISHED FLOOR TO TOP OF OUTLET.
   b. CONVENIENCE OUTLETS:
      MOUNTED ON WALL NO MORE THAN 48-INCHES, MEASURED FROM TO TOP OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING AND; NO LESS THAN 15-INCHES, MEASURED FROM THE BOTTOM OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING, TO THE LEVEL OF THE FINISHED FLOOR OR WORKING PLATFORM UNLESS OTHERWISE INDICATED OR HORIZONTALLY MOUNTED IN BASEBOARD BENEATH CABINETS, AS SHOWN ON DRAWINGS, OR AS REQUIRED BY LOCAL CODES, SEE DRAWINGS.
   c. TELEPHONE OUTLETS SHALL BE LOCATED AS NOTED ON DRAWINGS.

D. JUNCTION AND PULL BOXES

1. THE PLANS INDICATE ONLY SCHEMATIC ROUTINGS FOR CONDUIT RUNS. THIS CONTRACTOR SHALL FURNISH AND INSTALL ADDITIONAL BOXES WHERE REQUIRED BY FIELD CONDITIONS OR BY CODE.
2. BOXES AND COVERS SHALL BE GALVANIZED STEEL OF CODE GAUGE SIZE.
3. INSTALL BOXES RIGIDLY SUPPORTED FROM THE BUILDING STRUCTURE AND SUPPORTED INDEPENDENT OF THE CONDUIT SYSTEM.
4. ARRANGE CIRCUITS TO AVOID THE USE OF JUNCTION BOXES IN INACCESSIBLE LOCATIONS. THE USE OF JUNCTION BOXES ABOVE DRYWALL CEILINGS SHOULD BE LIMITED TO LOCATIONS NEAR ACCESS FRAMES USED FOR DIFFUSERS AND RETURN AIR GRILLES OR ACCESS PANELS AS LOCATED ON PLANS.
5. JUNCTION AND PULL BOXES MUST BE LABELED WITH CIRCUIT NUMBER IDENTIFICATION AND SYSTEM TYPE ON COVER.

E. WIRING

1. CONDUCTORS FOR FEEDERS AND BRANCH CIRCUITS SHALL BE COPPER AND THE AWG SIZE AND TYPE AS SHOWN ON DRAWINGS. MINIMUM WIRE SIZE #12. THE CONDUCTORS SHALL BE 600 VOLT INSULATION, TYPE THW, THWN OR THHN.
2. MINIMUM WIRE SIZE - 20 AMP BRANCH CIRCUIT SHALL BE AWG LISTED SIZE PER DISTANCE SHOWN BELOW. DISTANCE SHALL BE MEASURED FROM THE PANELBOARD CIRCUIT BREAKER TO THE FURTHEST OUTLET.
   a. #12 LESS THAN 100 FEET
   b. #10 BETWEEN 100-150 FEET
   c. #8 BETWEEN 150 - 250 FEET
   d. #6 OVER 250 FEET
3. ON ALL 20 AMP BRANCH CIRCUITS, CONDUCTORS LARGER THAN #10 AWG SHALL BE REDUCED TO #10 AWG WITHIN 10 FEET OF PANEL BOARD AND DEVICE IN JUNCTION BOXES ON RATED TERMINAL STRIPS.
4. CONDUCTORS MAY BE STRANDED FOR SIZES #10 AWG AND LARGER. CONDUCTORS SIZE #12 SHALL BE SOLID (NOT STRANDED).
5. ALUMINUM CONDUCTORS ARE NOT PERMITTED, EXCEPT AT SERVICE ENTRANCE, WHERE REQUIRED BY LANDLORD. CONDUCTOR CONNECTION MUST BE PER MANUFACTURER'S REQUIREMENTS. CONTRACTOR MUST OBTAIN WRITTEN PERMISSION FROM GENERAL CONTRACTOR AND PROJECT MANAGER WHEN USED.
6. ALL WIRING (120V AND ABOVE) SHALL BE IN CONDUIT, UNLESS SPECIFICALLY NOTED OTHERWISE. ALL LOW VOLTAGE WIRING CONDUIT REQUIREMENTS TO BE COORDINATED WITH OWNER.
7. THE USE OF SHARED NEUTRALS IS REQUIRED FOR LIGHTING CIRCUITS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODES. ALL OTHER EQUIPMENT REQUIRING A NEUTRAL CONDUCTOR SHALL HAVE A DEDICATED FULL SIZE NEUTRAL.
8. THE USE OF ROMEX, BX, ETC. IS PERMITTED ONLY IN RESIDENTIAL CONSTRUCTION NOT HIGHER THAN THREE STORIES.
9. WIRE CONNECTORS SHALL BE EQUAL TO "SCOTCH LOCK" FOR #8 AWG WIRE AND SMALLER AND EQUAL TO T & B "LOCKTIGHT" FOR #6 AWG AND LARGER.
10. ALL WIRING TO BE COLOR-CODED AS FOLLOWS:

120/208 VOLT SYSTEM	277/480 VOLT SYSTEM
NEUTRAL - WHITE	NEUTRAL - GRAY
PHASE A OR L1 - BLACK	PHASE A OR L1 - BROWN
PHASE B OR L2 - RED	PHASE B OR L2 - ORANGE
PHASE C OR L3 - BLUE	PHASE C OR L3 - YELLOW
GROUND - GREEN	GROUND - GREEN WITH YELLOW TRACER

ELECTRICAL SYMBOLS LIST

CLG.	WALL	FLR.	DESCRIPTION
			DUPLEX RECEPTACLE AT +18" FOR WALL MOUNTED U.O.N.
			DOUBLE DUPLEX RECEPTACLE AT + 18" FOR WALL MOUNTED U.O.N.
			GROUND FAULT INTERRUPTING PROTECTED CIRCUIT DUPLEX RECEPTACLE AT + 18" U.O.N. PROVIDE GFCI BREAKER INSTEAD OF GFCI OUTLET AS NECESSARY
			DUPLEX RECEPTACLE WITH USB 2.0 PORT
			SPECIAL NEMA RECEPTACLE. SEE EQUIPMENT PLAN/INSTALLATION MANUAL FOR SPECS AND DETAILS.
			JUNCTION BOX
			COMBINATION TELEPHONE, DATA AND CABLE OUTLET AT +18" U.O.N. PROVIDE 1/2"C.O. STUBBED TO ACCESSIBLE CEILING SPACE
			TELEPHONE OUTLET; CAT5E CABLE. RJ11 TERMINATION MOUNTED AT +18" PROVIDE 1/2"C.O. STUBBED TO ACCESSIBLE CEILING SPACE
			DATA OUTLET; CAT5E CABLE, RJ45 TERMINATION MOUNTED AT +18" U.O.N. PROVIDE 1/2"C.O. STUBBED TO ACCESSIBLE CEILING SPACE
			CABLE OUTLET; RG-6 COAXIAL CABLE. MOUNTED AT +18" U.O.N. PROVIDE 1/2"C.O. STUBBED TO ACCESSIBLE CEILING SPACE
			LIGHTING FIXTURE WITH 90 MIN. EMER. BATTERY PACK OR ON INVERTER SEE LIGHT FIXTURE SCHEDULE FOR DETAILS AND SPECS
			CONDUIT STUB OUT,

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMP	VOLT	WATT
L1	2X4 LED TROFFER LIGHT, DIMMABLE LITHONIA 2GTL4 SERIES OR APPROVED EQUAL	LED	120	36
L2	LED SURFACE MOUNTED CAN LIGHT, DIMMABLE WAC LIGHTING FM-616G2 SERIES OR APPROVED EQUAL	LED	120	16
EE	LIGHT FIXTURE WITH 90 MINUTES EMERGENCY BATTERY PACK VERIFY WITH MANUFACTURER FOR OPTION/INVERTER IF NOT AVAILABLE	---	120	---
X	LED EXIT SIGN WITH 90 MINUTES BATTERY PACK LITHONIA EXR LED M6 OR EQUIVALENT	---	120	---

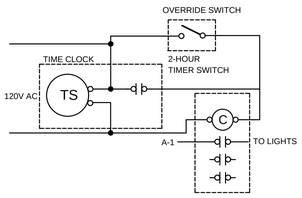
NOTES:
1. FIXTURE SHALL HAVE MIN. OF 10 YEARS MANUFACTURER WARRANTY ON ALL COMPONENTS.
2. FIXTURES SHALL HAVE APPROPRIATE U.L. LABEL (i.c., DAMP OR WET) AS REQUIRED BY CODES AND ORDINANCES.
3. FIXTURES SHALL INCLUDE ALL ACCESSORIES FOR INSTALLATION ACCORDING TO MANUFACTURER'S SHOP DRAWINGS AND AS REQUIRED BY CODES AND LOCAL ORDINANCES.
4. PRIOR TO ORDERING ANY LIGHTING EQUIPMENT, THE CONTRACT OR SHALL COORDINATE ALL FIXTURE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND CEILING CAVITY DEPTHS.
5. ALL LAMPS SHALL BE PROVIDED AND INSTALLED ACCORDING TO THE ATTACHED FIXTURE SCHEDULE AND SPECIFICATIONS. ENSURE COMPATIBILITY BETWEEN FIXTURE, LAMP(S) AND BALLAST(S).
6. CONTRACTOR SHALL VERIFY FIXTURE VOLTAGES AND CEILING TRIM COMPATIBILITY PRIOR TO ORDERING FIXTURE.
7. PROVIDE APPROVED FIRE-RATED ENCLOSURES FOR ALL LIGHTING FIXTURES LOCATED IN FIRE-RATED CEILINGS.
8. LIGHTING FIXTURE CATALOG NUMBERS ARE SERIES TYPE ONLY. PROVIDE ALL NECESSARY HARDWARE AS REQUIRED BY THE SPECIFICATIONS, DRAWINGS, AND PROJECT CONDITIONS FOR A COMPLETE INSTALLATION.
9. ALL FIXTURES SHALL BE ORDERED WITH APPROPRIATE BALLAST(S) THAT HAVE U.L. AND CBM LABELS. PROVIDE MULTIPLE BALLASTS FOR DUAL-LEVEL SWITCHING AND WIRING AS INDICATED ON THE PLANS.
10. ENSURE COMPATIBILITY OF ALL LIGHTING SYSTEM COMPONENTS, ESPECIALLY DIMMED SYSTEMS. FIXTURES, LAMPS, BALLAST(S), AND DIMMING SYSTEMS/INDIVIDUAL CONTROLS MUST BE FACTORY CERTIFIED COMPATIBLE FOR FULL RANGE OF DIMMING COMPATIBILITY.
11. LIGHTING FIXTURE MANUFACTURER & MODEL IS FOR REFERENCE ONLY. FIXTURE SHALL BE SELECTED BY ARCHITECT. POWER AND QUALITY SHALL BE SPECIFICATION GRADE.

120V, SINGLE POLE, MAX 3% VOLTAGE DROP

	LENGTH OF RUN					
	25'	50'	100'	150'	200'	AMP LOAD
COPPER	14	12	10	8	6	15 AMP
COPPER	12	12	8	6	4	20AMP
COPPER	10	10	6	4	4	30 AMP
COPPER	1	1	1	2/0	4/0	100 AMP
ALUMINUM	1/0	1/0	2/0	4/0	300	100 AMP
COPPER	3/0	3/0	3/0	300	500	200 AMP
ALUMINUM	250	250	300	600	900	200 AMP

NOTE:
THE MAXIMUM COMBINED VOLTAGE DROP ON BOTH INSTALLED FEEDER CONDUCTORS AND BRANCH CIRCUIT CONDUCTORS TO THE FARTHEST CONNECTED LOAD OR OUTLET SHALL NOT EXCEED 5 PERCENT.

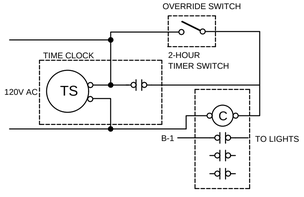
S(Override) = LIGHTING OVERRIDE SWITCH, AT FRONT DOOR.
TC = LIGHTS TIME CLOCK WITH OVERRIDE ON/OFF CONTROL
SPECIFIC NOTES:
DESIGNATED NON EMERGENCY LIGHTING CIRCUITS SHALL BE CONTROLLED BY 24 HR TIME CLOCK THROUGH MULTI-POLE CONTACTOR. TIME CLOCK SHALL INCORPORATE AN AUTOMATIC HOLIDAY "SHUT-OFF" FEATURE. INTERMATIC ET2800 SERIES (INDOOR)/ET8000 SERIES (OUTDOOR) OR EQUIV.



*EXISTING TIME CLOCK MAY BE UTILIZED.
CONTRACTOR TO VERIFY CONDITION IN FIELD.

LIGHTING CONTROL DIAGRAM A

S(Override) = LIGHTING OVERRIDE SWITCH, AT FRONT DOOR.
TC = LIGHTS TIME CLOCK WITH OVERRIDE ON/OFF CONTROL
SPECIFIC NOTES:
DESIGNATED NON EMERGENCY LIGHTING CIRCUITS SHALL BE CONTROLLED BY 24 HR TIME CLOCK THROUGH MULTI-POLE CONTACTOR. TIME CLOCK SHALL INCORPORATE AN AUTOMATIC HOLIDAY "SHUT-OFF" FEATURE. INTERMATIC ET2800 SERIES (INDOOR)/ET8000 SERIES (OUTDOOR) OR EQUIV.



*EXISTING TIME CLOCK MAY BE UTILIZED.
CONTRACTOR TO VERIFY CONDITION IN FIELD.

LIGHTING CONTROL DIAGRAM B

EMERGENCY EXIT ILLUMINATION NOTES

1. FIXTURES WITH 90 MIN. EMERGENCY BATTERY BACKUP SHALL BE WIRED AHEAD OF ANY CONTROL IN COMPLIANCE WITH [2022 CEC 700.12(I)(2)(3)(A)].
2. THE MEANS OF EGRESS SERVING A ROOM OR SPACE SHALL BE ILLUMINATED AT ALL TIMES THAT THE ROOM OR SPACE IS OCCUPIED. [2022 CBC 1008.2]
3. THE EMERGENCY POWER SYSTEM SHALL PROVIDE POWER FOR A DURATION OF NOT LESS THAN 90 MINUTES AND SHALL CONSIST OF STORAGE BATTERIES, UNIT EQUIPMENT OR AN ONSITE GENERATOR. [2022 CBC 1008.3.4]
4. EMERGENCY LIGHTING FACILITIES SHALL BE ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS NOT LESS THAN AN AVERAGE OF 1 FC, AND A MIN AT ANY POINT OF 0.1 FC MEASURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. ILLUMINATION LEVELS SHALL BE PERMITTED TO DECLINE TO 0.6 FC AVERAGE AND A MIN AT ANY POINT OF 0.06 FC AT THE END OF THE EMERGENCY LIGHTING TIME DURATION. A MAX-TO-MIN ILLUMINATION UNIFORMITY RATIO OF 40 TO 1 SHALL NOT BE EXCEEDED. [2022 CBC 1008.3.5]
5. EXITS AND EXIT ACCESS DOORS SHALL BE MARKED BY AN APPROVED EXIT SIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL. EXIT SIGN PLACEMENT SHALL BE SUCH THAT ANY POINT IN AN EXIT ACCESS CORRIDOR OR EXIT PASSAGEWAY IS WITHIN 100 FT OR THE LISTED VIEWING DISTANCE OF THE SIGN, WHICHEVER IS LESS, FROM THE NEAREST VISIBLE EXIT SIGN. [2022 CBC 1013.1]
6. TACTILE EXIT SIGNS SHALL BE PROVIDED WITH APPROPRIATE WORDS AT EXIT DOORS LEADING TO ENCLOSED EXIT STAIRWAYS AND EXIT DOORS LEADING TO OUTSIDE. [2022 CBC 1013.4]
7. EMERGENCY LIGHTING UNITS SHALL BE EQUIPPED WITH FACTORY INSTALLED INTEGRAL TEST SWITCHES.

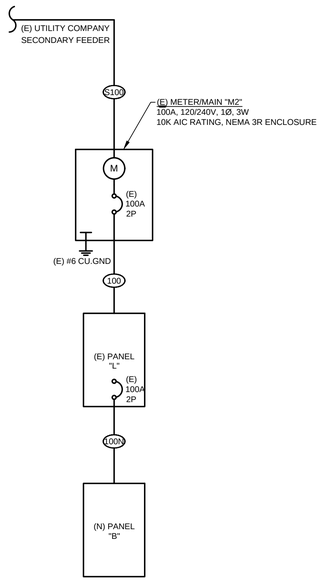
SINGLE LINE DIAGRAM NOTES

1. CONTRACTOR/ELECTRICIAN TO FIELD VERIFY ACTUAL SITE CONDITION /EXACT SERVICE ENTRANCE AND SHALL NOTIFY EOR(S) ANY DISCREPANCY WITH THE PLAN PRIOR TO BIDDING.
2. CONTRACTOR TO VERIFY ALL EQUIPMENT DIMENSIONS AND CLEARANCES WITH FIELD CONDITION PRIOR TO ORDERING EQUIPMENT.
3. ALL EQUIPMENT TO BE LISTED BY A RECOGNIZED TESTING AGENCY. TERMINALS TO BE RATED FOR ALUMINUM AND COPPER WIRE.
4. CONTRACTOR TO OBTAIN A FAULT CURRENT LETTER FROM UTILITY COMPANY PRIOR TO PURCHASE OF ANY EQUIPMENT (IF ANY) FOR AIC VERIFICATION. EQUIPMENT CUT SHEETS AND FAULT CURRENT LETTER TO BE PROVIDED UPON INSPECTION.
5. IF APPLICABLE, ALL NEW CIRCUIT BREAKERS INSTALLED ON EXISTING PANEL/SWITCHBOARD SHALL MATCH THE HIGHEST EXISTING AIC RATED BREAKER WITHIN THAT PANEL/BOARD. INSPECTOR TO VERIFY HIGHEST AIC RATING AT THE SITE.
6. MAIN SERVICE DISCONNECT AMPERAGE MUST BE PERMANENTLY MARKED
7. ALL SYSTEM TO BE FULLY RATED SYSTEM. IF SYSTEM IS SERIES RATED, ALL COMPONENTS MUST BE FROM THE SAME MANUFACTURER. LISTED BREAKER COMBINATIONS SHALL BE AVAILABLE TO THE AUTHORITY HAVING JURISDICTION UPON REQUEST.
8. IF APPLICABLE, ALL EQUIPMENT LABELED/IDENTIFIED AS EXISTING, ARE SUBJECT TO FIELD VERIFICATION.
9. ARC-FLASH HAZARD WARNING FIELD MARKING TO BE PROVIDED ON ELECTRICAL EQUIPMENT, SUCH AS SWITCHBOARDS, PANEL BOARDS, METER SOCKET ENCLOSURES AND MCC THAT ARE IN OTHER THAN DWELLING UNITS. [2022 CEC 110.16, 110.21(B)]
10. SERVICE EQUIPMENT SHALL BE FIELD MARKED WITH THE MAXIMUM AVAILABLE FAULT CURRENT. [2022 CEC 110.24]

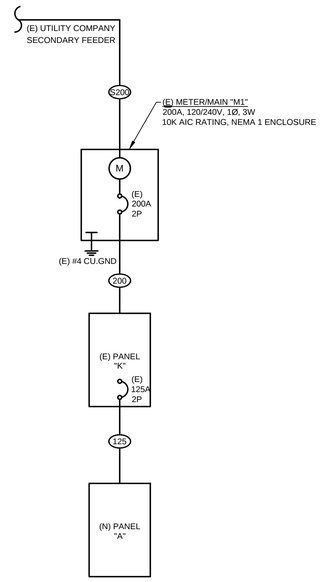
FEEDER CHART

#	(E)/(N)	FEEDER SIZE
S200	(E)	3#3/0 MID-SPAN DROP (BY UTILITY)
S100	(E)	3#1 MID-SPAN DROP (BY UTILITY)
200	(E)	3#3/0, #6GND- 2"C
125	(N)	3#1/0, #6GND- 1 1/2"C
100	(E)	3#1, #8GND- 1 1/2"C
100N	(N)	3#1, #8GND- 1 1/2"C

NOTE:
(E) FEEDERS TO BE FIELD VERIFIED AND REMAIN AS-IS U.O.N.

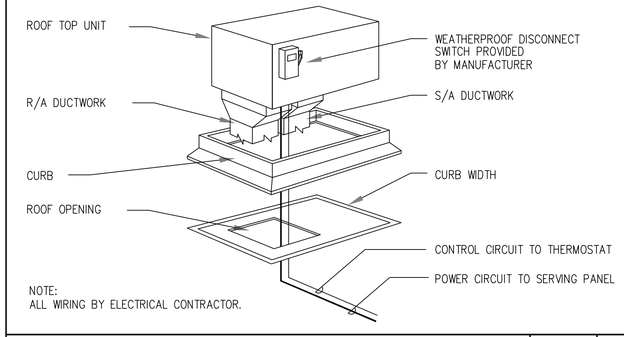


SINGLE LINE DIAGRAM - SMALL KITCHEN

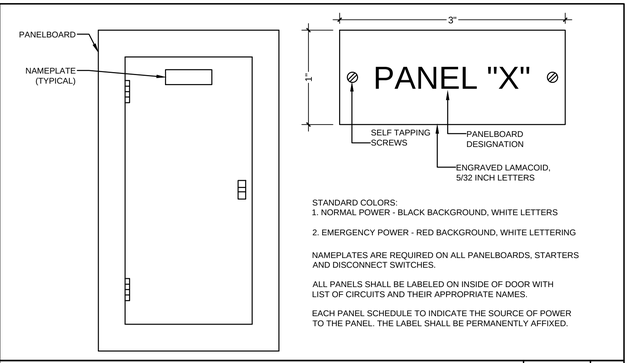


SINGLE LINE DIAGRAM - CENTRAL KITCHEN

SINGLE LINE DIAGRAM



ROOF HVAC UNIT WIRING/DISCONNECT DETAIL | SCALE NTS | 1



STANDARD COLORS:
1. NORMAL POWER - BLACK BACKGROUND, WHITE LETTERS

2. EMERGENCY POWER - RED BACKGROUND, WHITE LETTERING

NAMEPLATES ARE REQUIRED ON ALL PANELBOARDS, STARTERS AND DISCONNECT SWITCHES.

ALL PANELS SHALL BE LABELED ON INSIDE OF DOOR WITH LIST OF CIRCUITS AND THEIR APPROPRIATE NAMES.

EACH PANEL SCHEDULE TO INDICATE THE SOURCE OF POWER TO THE PANEL. THE LABEL SHALL BE PERMANENTLY AFFIXED.

PANEL BOARD NAMEPLATE DETAIL | SCALE NTS | 2

CDI Circa Domini International, Inc.
Engineering - Consulting
9890 Research Dr, Suite 100, Irvine, CA 92618
Phone (949) 533-4117 | dkang@cdieng.com

STATE OF CALIFORNIA — PROFESSIONAL ENGINEER — DAVID KANG — C 24049 — EXP. 06/30/2025 — ELECTRICAL

STORAGE TO KITCHEN CONVERSION

2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

DRAWN:	CHECKED:
H.N.	J.L.
DATE: 10/08/2024	SCALE: N.T.S.

SHEET TITLE:
SINGLE LINE DIAGRAM/ DETAILS

E001

PLOT DATE: 12/10/2024 9:25:52 AM

PANEL "K"

VOLTS:120/240V | PHASE: 1 | SHORT CIRCUIT RATING: 10000A | MAIN: LUGS ONLY
MOUNTING: SURFACE | WIRE: 3 | ENCLOSURE: NEMA 1 RATED MIN. | BUSSING: 200A MIN.

LOAD	*	A-VA	B-VA	BKR	CT	CT	BKR	A-VA	B-VA	*	LOAD
LIGHT LOAD.1	L	425		20/1	1	2					
LIGHT LOAD.2	L		525	20/1	3	4	20/1		1080	R	CONV.RECEPT.1
MOTOR LOAD.1	M	800		20/1	5	6	20/1	720		R	CONV.RECEPT.2
MOTOR LOAD.2	M		800	20/1	7	8	20/1		660	C	CONT.LOAD.1
PANEL "A"	P	13669		125/2	9	10	20/1	660		C	CONT.LOAD.2
-----	P		11662	---	11	12	15/1		500	N	NON.CONT.LOAD.
					13	14	100/2	4105		P	PANEL LOAD.
					15	16	---		3992	P	
					17	18	30/2	2054		M	KEF-2
					19	20	---		2054	M	-----
PHASE TOTALS:		22433	21273	43706 =TOTAL CONNECTED LOAD,VA (FOR DEMAND LOAD SEE BELOW)							
PHASE AMPERES:		186.9	177.3								

*DEMAND LOAD CALCULATION:

L=LIGHTING LOADS:	1.25	X	1505	=	1881 VA
C=CONTINUOUS LOADS, OTHER:	1.25	X	1720	=	2150 VA
M=MOTOR LOADS (INCL LGST):	1.00	X	27668	=	27668 VA
LARGEST, VA:	0.25	X	5184	=	1296 VA
R=RECEPTACLES: 1ST 10K:	1.00	X	3420	=	3420 VA
BALANCE:	0.50	X	0	=	0 VA
K=KITCHEN LOADS: QTY: 0	1.00	X	0	=	0 VA
N=NONCONTINUOUS LOADS, OTHER:	1.00	X	9393	=	9393 VA
(P=PANEL, INCL. IN ABOVE)	TOTAL N.E.C. DEMAND LOAD			=	45808 VA = 190.9 AMPERES

NOTES:
- **EMPTY LOAD: SPACE**
- SHADED GRAY TEXT: EXISITNG TO REMAIN

PANEL "L"

VOLTS:120/240V | PHASE: 1 | SHORT CIRCUIT RATING: 10000A | MAIN: LUGS ONLY
MOUNTING: SURFACE | WIRE: 3 | ENCLOSURE: NEMA 3R RATED MIN. | BUSSING: 100A MIN.

LOAD	*	A-VA	B-VA	BKR	CT	CT	BKR	A-VA	B-VA	*	LOAD
CONV.RECEPT.1	R	720		20/1	1	2	20/1	625		L	LIGHT LOAD.1
CONV.RECEPT.2	R		720	20/1	3	4	20/1		200	L	LIGHT LOAD.2
MOTOR LOAD.	M	800		15/1	5	6	100/2	8998		P	PANEL "B"
					7	8	---		8397	P	-----
PHASE TOTALS:		11143	9317	20460 =TOTAL CONNECTED LOAD,VA (FOR DEMAND LOAD SEE BELOW)							
PHASE AMPERES:		92.9	77.6								

*DEMAND LOAD CALCULATION:

L=LIGHTING LOADS:	1.25	X	1190	=	1488 VA
C=CONTINUOUS LOADS, OTHER:	1.25	X	500	=	625 VA
M=MOTOR LOADS (INCL LGST):	1.00	X	12074	=	12074 VA
LARGEST, VA:	0.25	X	0	=	0 VA
R=RECEPTACLES: 1ST 10K:	1.00	X	4860	=	4860 VA
BALANCE:	0.50	X	0	=	0 VA
K=KITCHEN LOADS: QTY: 0	1.00	X	0	=	0 VA
N=NONCONTINUOUS LOADS, OTHER:	1.00	X	1836	=	1836 VA
(P=PANEL, INCL. IN ABOVE)	TOTAL N.E.C. DEMAND LOAD			=	20883 VA = 87.0 AMPERES

NOTES:
- **EMPTY LOAD: SPACE**
- SHADED GRAY TEXT: EXISITNG TO REMAIN

PANEL "A"

VOLTS:120/240V | PHASE: 1 | SHORT CIRCUIT RATING: 10000A | MAIN: LUGS ONLY
MOUNTING: SURFACE | WIRE: 3 | ENCLOSURE: NEMA 1 RATED MIN. | BUSSING: 125A MIN.

LOAD	*	A-VA	B-VA	BKR	CT	CT	BKR	A-VA	B-VA	*	LOAD
WAREHOUSE/ KITCHEN LIGHTS	L	355		20/1	1	2	20/1	500		M	15. HOOD CONTROL SYSTEM
WH-1	C		200	20/1	3	4	20/1		316	N	2. 72" CHEF BASE
SPARE				20/1	5	6	20/1	288		M	AIR CURTAIN
ROOF RECEPT.	R		360	20/1	7	8	20/1		500	M	ROLL-UP DOOR
KITCHEN RECEPT.	R	540		20/1	9	10	20/1	480		N	13. PREP.TABLE
SPARE				20/1	11	12	20/1				SPARE
WAREHOUSE RECEPT.	R	720		20/1	13	14	20/1	100		L	WIC LIGHTS
T/C	C		200	20/1	15	16	20/1		500	M	WIC EVAP.
					17	18	20/2	1884		M	11. WIC CU
					19	20	---		1884	M	-----
					21	22	20/1	100		L	WIF LIGHTS
					23	24	20/1		500	M	WIF EVAP.
					25	26	20/2	1884		M	12. WIF CU
					27	28	---		1884	M	-----
					29	30	20/1	1500		M	FREEZER DOOR HEATER
MAU-2	M		2054	30/2	31	32					
-----	M	2054		---	33	34					
					35	36	45/2		2592	M	HP-1
					37	38	---	2592		M	-----
					39	40	15/2		672	M	FC-1
					41	42	---	672		M	-----
PHASE TOTALS:		13669	11662	25331 =TOTAL CONNECTED LOAD,VA (FOR DEMAND LOAD SEE BELOW)							
PHASE AMPERES:		113.9	97.2								

*DEMAND LOAD CALCULATION:

L=LIGHTING LOADS:	1.25	X	555	=	694 VA
C=CONTINUOUS LOADS, OTHER:	1.25	X	400	=	500 VA
M=MOTOR LOADS (INCL LGST):	1.00	X	21960	=	21960 VA
LARGEST, VA:	0.25	X	5184	=	1296 VA
R=RECEPTACLES: 1ST 10K:	1.00	X	1620	=	1620 VA
BALANCE:	0.50	X	0	=	0 VA
K=KITCHEN LOADS: QTY: 0	1.00	X	0	=	0 VA
N=NONCONTINUOUS LOADS, OTHER:	1.00	X	796	=	796 VA
(P=PANEL, INCL. IN ABOVE)	TOTAL N.E.C. DEMAND LOAD			=	26866 VA = 111.9 AMPERES

NOTES:
- **EMPTY LOAD: SPACE**

PANEL "B"

VOLTS:120/240V | PHASE: 1 | SHORT CIRCUIT RATING: 10000A | MAIN: LUGS ONLY
MOUNTING: SURFACE | WIRE: 3 | ENCLOSURE: NEMA 1 RATED MIN. | BUSSING: 100A MIN.

LOAD	*	A-VA	B-VA	BKR	CT	CT	BKR	A-VA	B-VA	*	LOAD
WORK AREA/RESTRM LIGHTS	L	365		20/1	1	2	20/1	576		N	2. SANDWICH PREP.TABLE
SPARE				20/1	3	4	20/1		316	N	4. 72" CHEF BASE
SPARE				20/1	5	6	20/1	404		N	7. 3 DOOR REF.
ROOF RECEPT.	R		360	20/1	7	8	20/1		288	M	AIR CURTAIN
WH-1	C	200		20/1	9	10	20/1	300		C	T/C
KITCHEN RECEPT.1	R		360	20/1	11	12	20/1		1000	M	17. KITCHEN HOOD.
KITCHEN RECEPT.2	R	900		20/1	13	14	20/1	540		N	8. 1 DOOR FREEZER
KITCHEN RECEPT.3	R		1080	20/1	15	16					
KITCHEN RECEPT.4	R	720		20/1	17	18					
					19	20					
					21	22					
					23	24					
					25	26					
					27	28					
					29	30					
					31	32	15/2		1056	M	MAU-1
					33	34	---	1056		M	-----
					35	36	40/2		2342	M	RTU-1
					37	38	---	2342		M	-----
					39	40	25/2		1595	M	KEF-1
					41	42	---	1595		M	-----
PHASE TOTALS:		8998	8397	17395 =TOTAL CONNECTED LOAD,VA (FOR DEMAND LOAD SEE BELOW)							
PHASE AMPERES:		75.0	70.0								

*DEMAND LOAD CALCULATION:

L=LIGHTING LOADS:	1.25	X	365	=	456 VA
C=CONTINUOUS LOADS, OTHER:	1.25	X	500	=	625 VA
M=MOTOR LOADS (INCL LGST):	1.00	X	11274	=	11274 VA
LARGEST, VA:	0.25	X	4684	=	1171 VA
R=RECEPTACLES: 1ST 10K:	1.00	X	3420	=	3420 VA
BALANCE:	0.50	X	0	=	0 VA
K=KITCHEN LOADS: QTY: 0	1.00	X	0	=	0 VA
N=NONCONTINUOUS LOADS, OTHER:	1.00	X	1836	=	1836 VA
(P=PANEL, INCL. IN ABOVE)	TOTAL N.E.C. DEMAND LOAD			=	18782 VA = 78.3 AMPERES

NOTES:
- **EMPTY LOAD: SPACE**

PANEL SCHEDULES

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STORAGE TO KITCHEN CONVERSION

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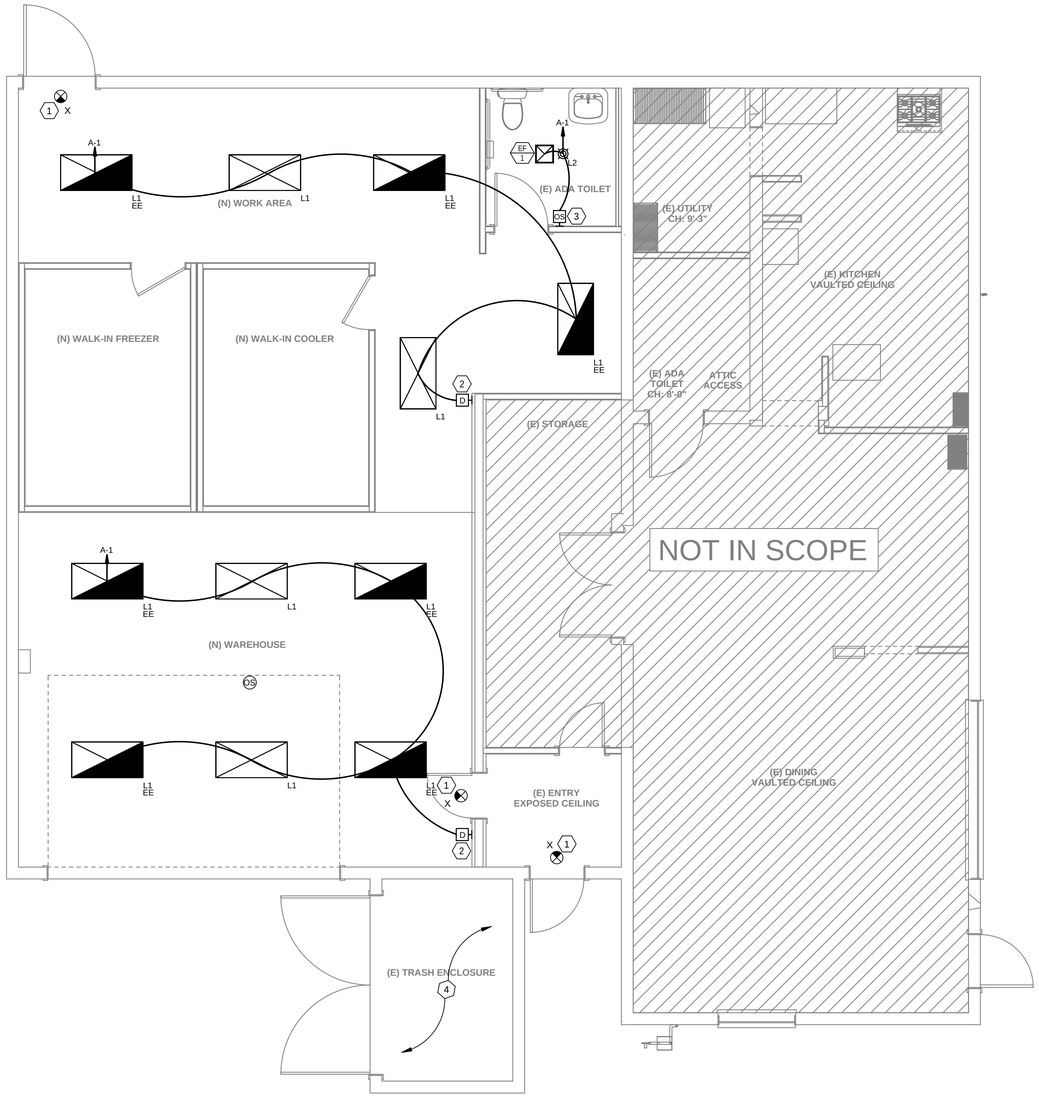
REVISION

DRAWN:	CHECKED:
H.N.	J.L.
DATE: 10/08/2024	SCALE: N.T.S.

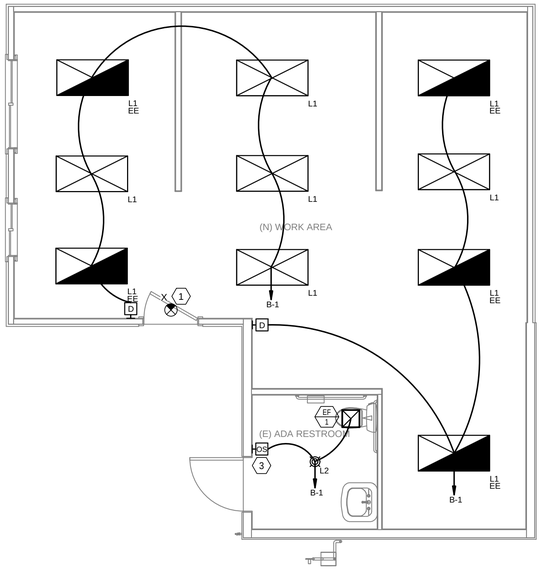
SHEET TITLE: PANEL SCHEDULES

E002

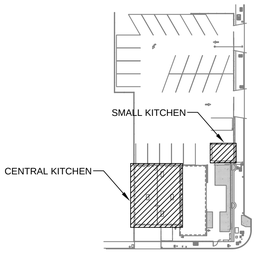
PLOT DATE: 12/10/2024 9:25:53 AM



LIGHTING PLAN - CENTRAL KITCHEN



LIGHTING PLAN - SMALL KITCHEN



KEY PLAN

DAYLIGHT CONTROL EXCEPTION NOTES:

DAYLIGHT CONTROL: COMBINED TOTAL GENERAL LIGHTING POWER IN PRIMARY/SECONDARY SIDELIT DAYLIT ZONE IS LESS THAN 120 WATTS. NO DAYLIGHT CONTROL REQUIRED. [2022 CENC130.1(D)EXCEPTION(3)]

KEYED PLAN NOTES:

1. EMERGENCY/NL AND EXIT FIXTURES TO BE CONNECTED TO NEARBY ROOM LIGHTING CIRCUIT AHEAD OF LOCAL SWITCH. [2022 CEC 700.12(I)(2)(3)(A)].
2. CONTRACTOR TO VERIFY FINAL LOCATION OF SWITCH/DIMMER/CONTROL PACK WITH THE ARCHITECT/OWNER PRIOR TO ROUGH-IN.
3. INTERLOCK RESTROOM LIGHT WITH EXHAUST FAN AND PROVIDE MANUAL MOTOR SWITCH IF NOT PLUG/BUILT-IN.
4. ALL EXISTING LIGHTING/CONTROL FIXTURES IN THIS AREA TO REMAIN U.O.N. NOT IN SCOPE.

GENERAL NOTES:

1. ELECTRICAL EQUIPMENT SHALL BE LISTED BY U.L. OR CITY RECOGNIZED ELECTRICAL TESTING LABORATORY OR APPROVED BY THE CITY DEPARTMENT.
2. ALL ELECTRICAL WORK SHALL COMPLY WITH THE [2022 CEC].
3. WIRE SIZE SHALL NOT BE LESS THAN CORRESPONDING CIRCUIT BREAKER RATING AS REQUIRED. [2022 CEC TABLE 310.16]
4. CONDUIT SHALL BE SIZED IN ACCORDANCE WITH THE [2022 CEC ANNEX C].
5. CONTRACTOR/ELECTRICIAN TO FIELD VERIFY ACTUAL SITE CONDITION /EXACT SERVICE ENTRANCE AND SHALL NOTIFY EOR(S) ANY DISCREPANCY WITH THE PLAN PRIOR TO BIDDING.
6. ALL ITEMS LABELED/IDENTIFIED AS EXISTING (IF ANY) ARE SUBJECT TO FIELD VERIFICATION. VERIFY EXISTING CONDITION AND RE-USE. IF NOT EXISTING, PROVIDE PER PLAN.
7. OBTAIN APPROVAL ON LOCATION OF SWITCH/DIMMER/SENSOR WITH ARCHITECT/OWNER AT SITE PRIOR TO ROUGH-IN.
8. SIGNAGE WILL REQUIRE SEPARATE PERMIT AND SUBMITTAL.
9. REFER TO EMERGENCY EXIT ILLUMINATION NOTES FOR EMERGENCY LIGHTING REQUIREMENTS.
10. IN OFFICES 250 SQUARE FEET OR SMALLER, MULTIPURPOSE ROOMS OF LESS THAN 1,000 SQUARE FEET, CLASSROOMS OF ANY SIZE, CONFERENCE ROOMS OF ANY SIZE, AND RESTROOMS OF ANY SIZE, LIGHTING SHALL BE CONTROLLED WITH OCCUPANT SENSING CONTROLS TO AUTOMATICALLY SHUT OFF ALL OF THE LIGHTING IN 20 MINUTES OR LESS AFTER THE CONTROL ZONE IS UNOCCUPIED. [2022 CENC 130.1(C)(5)]
    A. IN AREAS W/ MULTI-LEVEL LIGHTING CONTROLS, THE OCCUPANT SENSING CONTROLS SHALL FUNCTION AS A PARTIAL-ON OCCUPANT SENSING CONTROLS CAPABLE OF AUTOMATICALLY ACTIVATING BETWEEN 50 AND 70 PERCENT OF CONTROLLED LIGHTING POWER
    B. IN AREAS W/O MULTILEVEL LIGHTING CONTROLS, THE OCCUPANT SENSING CONTROLS SHALL FUNCTION AS A VACANCY SENSING CONTROLS, WHERE ALL LIGHTING RESPONDS TO A MANUAL ON INPUT ONLY.
11. IN AISLE WAYS AND OPEN AREAS IN WAREHOUSES, LIGHTING SHALL BE CONTROLLED WITH OCCUPANT SENSING CONTROLS THAT AUTOMATICALLY REDUCE LIGHTING POWER BY AT LEAST 50 PERCENT WHEN THE AREAS ARE UNOCCUPIED. THE OCCUPANT SENSING CONTROLS SHALL INDEPENDENTLY CONTROL LIGHTING IN EACH AISLE WAY, AND SHALL NOT CONTROL LIGHTING BEYOND THE AISLE WAY BEING CONTROLLED BY THE SENSOR. [2022 CENC 130.1(C)(6)(A)]

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STORAGE TO KITCHEN CONVERSION

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REVISION

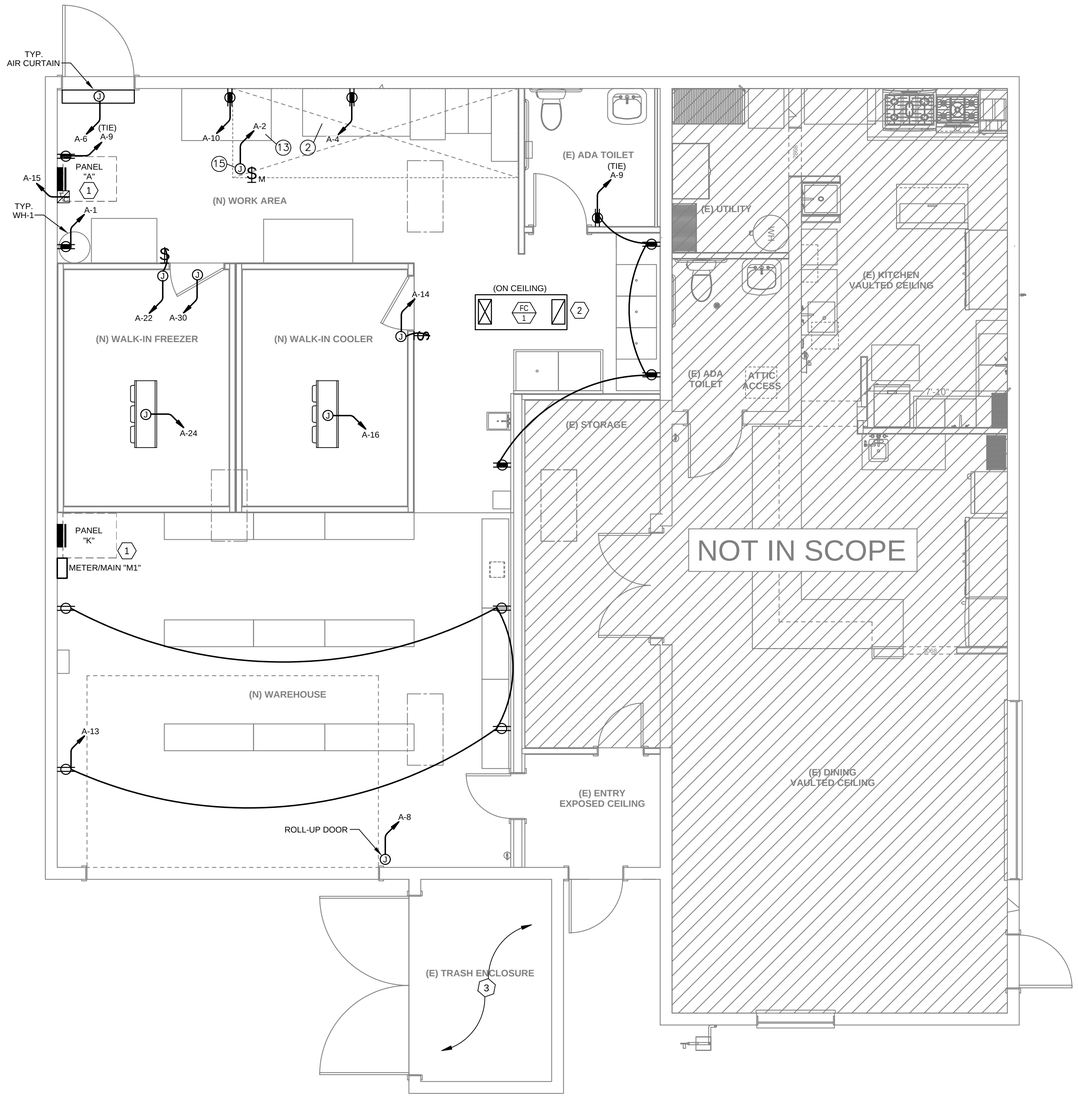
DRAWN:	CHECKED:
H.N.	J.L.
DATE:	SCALE:
10/08/2024	1/4" = 1'-0"

SHEET TITLE:

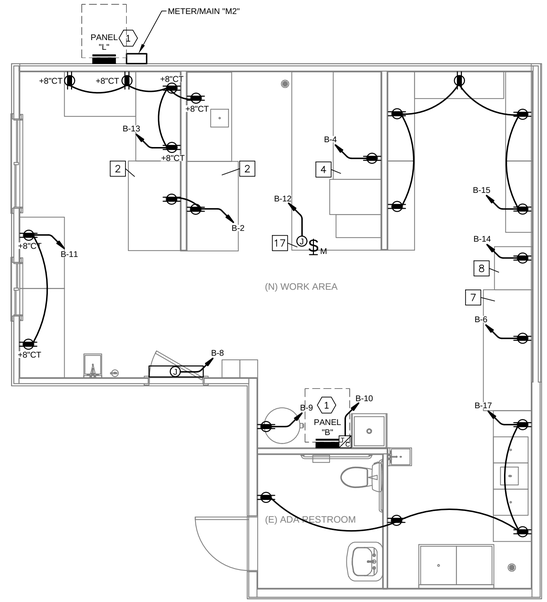
LIGHTING PLAN

E100

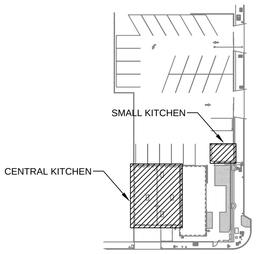
PLOT DATE: 12/10/2024 9:25:54 AM



POWER PLAN - CENTRAL KITCHEN



POWER PLAN - SMALL KITCHEN



KEY PLAN

KEYED PLAN NOTES:

1. VERIFY/COORDINATE EXACT LOCATION FOR ELECTRICAL EQUIPMENTS AND PROVIDE/MAINTAIN MINIMUM CLEARANCE. [2022 CEC 110.26]
2. REFER TO MECHANICAL PLAN AND HVAC SYSTEM CONNECTION SCHEDULE FOR EXACT LOCATIONS, SPECS AND INSTALLATION REQUIREMENTS.
3. ALL EXISTING EQUIPMENT/POWER DEVICES IN THIS AREA TO REMAIN U.O.N. NOT IN SCOPE.

GENERAL NOTES:

1. ELECTRICAL EQUIPMENT SHALL BE LISTED BY U.L. OR CITY RECOGNIZED ELECTRICAL TESTING LABORATORY OR APPROVED BY THE CITY DEPARTMENT.
2. ALL ELECTRICAL WORK SHALL COMPLY WITH THE [2022 CEC].
3. WIRE SIZE SHALL NOT BE LESS THAN CORRESPONDING CIRCUIT BREAKER RATING AS REQUIRED. [2022 CEC TABLE 310.16]
4. CONDUIT SHALL BE SIZED IN ACCORDANCE WITH THE [2022 CEC ANNEX C].
5. CONTRACTOR/ELECTRICIAN TO FIELD VERIFY ACTUAL SITE CONDITION /EXACT SERVICE ENTRANCE AND SHALL NOTIFY EOR(S) ANY DISCREPANCY WITH THE PLAN PRIOR TO BIDDING.
6. ALL ITEMS LABELED/IDENTIFIED AS EXISTING (IF ANY) ARE SUBJECT TO FIELD VERIFICATION. VERIFY EXISTING CONDITION AND RE-USE. IF NOT EXISTING, PROVIDE PER PLAN.
7. COORDINATE LOCATIONS/HEIGHTS OF RECEPTACLES FOR ELECTRICAL DEVICES WITH ARCHITECT AND EQUIPMENT VENDER PRIOR TO ROUGH-IN.
8. ALL NEW ELECTRICAL EQUIPMENT (IF ANY) DIMENSIONS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER/VENDER PRIOR TO PURCHASE.
9. GFCI PROTECTION: ALL 125V THROUGH 250V RECEPTACLES SUPPLIED BY 1-PHASE BRANCH CIRCUITS, 50 AMPERES OR LESS, AND ALL RECEPTACLES SUPPLIED BY 3-PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 100 AMPERES OR LESS, INSTALLED IN THE FOLLOWING LOCATIONS SHALL HAVE GFCI PROTECTION FOR PERSONNEL. [2022 CEC 210.8(B)]
   A. BATHROOMS
   B. KITCHENS OR AREAS WITH A SINK AND PREM. PROVISION FOR COOKING
   C. ROOFTOPS/OUTDOORS
   D. SINKS - WITHIN 6FT FROM THE TOP INSIDE EDGE OF THE SINK
   E. GARAGES, UNFINISHED AREAS OF BASEMENTS OR SIMILAR AREAS
10. FOR ALL PERMANENTLY CONNECTED APPLIANCES RATED OVER 300VA, THE CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN THE OPEN POSITION SHALL BE PROVIDED UNLESS LOCATION OF THE BREAKER IS WITHIN THE SIGHT OR SEPARATE DISCONNECTING MEANS IS PROVIDED. [2022 CEC 110.25, 422.31(B)]
11. VERIFY ALL KITCHEN EQUIPMENT (IF ANY) INSTALLATION REQUIREMENTS AND POWER CONNECTION TYPE WITH KITCHEN EQUIPMENT SUPPLIER AND MANUFACTURER SPEC SHEET PRIOR TO ROUGH-IN.

HVAC SYSTEM CONNECTION SCHEDULE

EQUIPMENT	CIRCUIT DESIGNATION	VOLT/PHASE	FEEDER	DISCONNECT
FC-1	A-40/42	240V/1PH	3#12, #12GND- 3/4"C	15AF/30AS/2P

MECHANICAL EQUIPMENT NOTES:

1. PROVIDE OVERCURRENT PROTECTION AND BRANCH CIRCUITS PER UL LISTED REQUIREMENTS FOR EQUIPMENT SERVED. REFER TO MANUFACTURER DATA AND EQUIPMENT CUT-SHEETS FOR ROUGH-IN LOCATIONS OF ELECTRICAL CONNECTIONS AND INTERCONNECTIONS FOR ALL EQUIPMENT. COORDINATE EXACT NAMEPLATE DATA OF EQUIPMENT BEING INSTALLED WITH MECHANICAL CONTRACTOR.
2. SWITCHES USED AS DISCONNECTING MEANS SHALL BE LOCATED WITHIN SIGHT OF EQUIPMENT. PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. NON-FUSED DISCONNECT IS ACCEPTABLE INSTEAD OF SPECIFIED FUSE TYPE.
3. ADJUST SIZE OF CONDUCTORS AS NEEDED COMPENSATE FOR VOLTAGE DROP. VOLTAGE DROP SHALL NOT EXCEED 3% FOR BRANCH CIRCUITS.
4. REFER TO MECHANICAL PLAN FOR MORE INFO.
5. IF EXISTING UNITS ARE RE-USED, EXISTING DISCONNECT/FUSE/BREAKER TO BE RE-USED OR REPLACED WITH SAME RATING. VERIFY EXISTING CONDITION IN FIELD.

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STORAGE TO KITCHEN CONVERSION

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SAN PABLO, CA 94806

REVISION

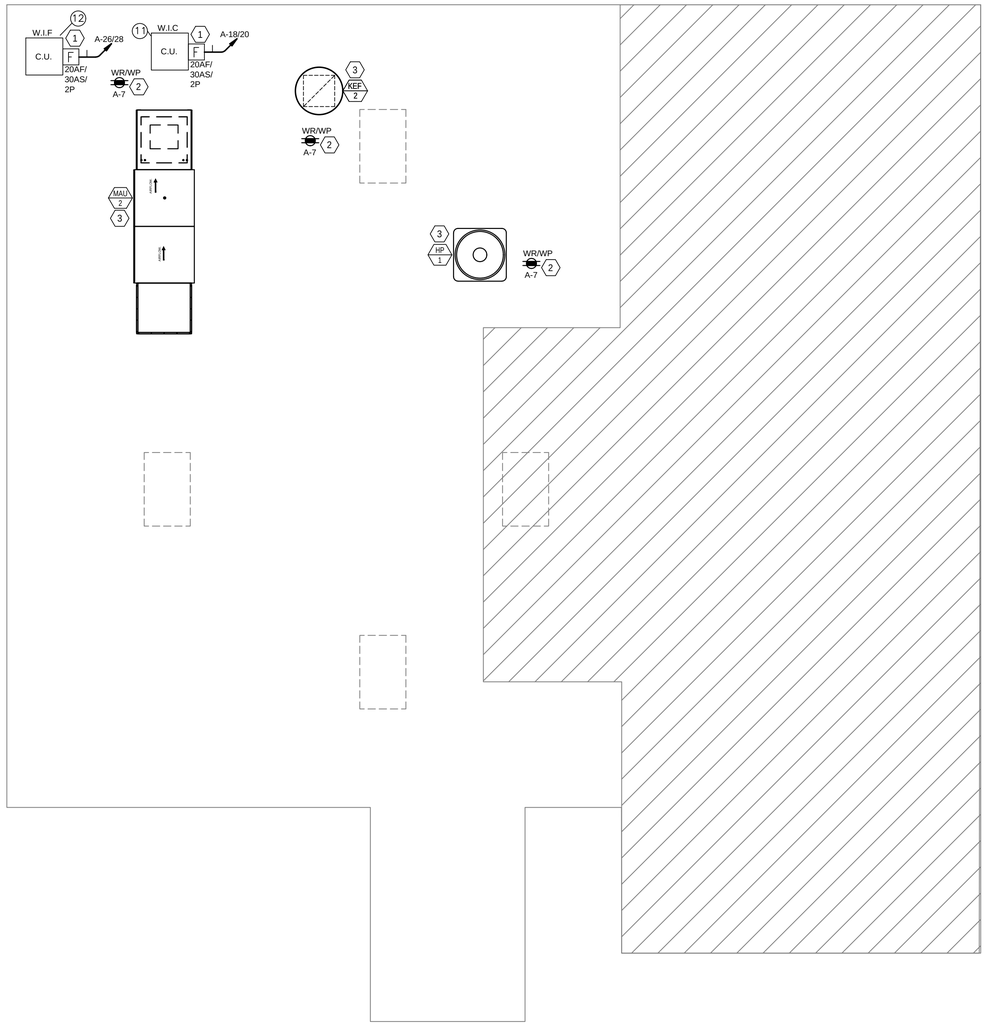
DRAWN:	CHECKED:
H.N.	J.L.
DATE:	SCALE:
10/08/2024	1/4" = 1'-0"

SHEET TITLE:

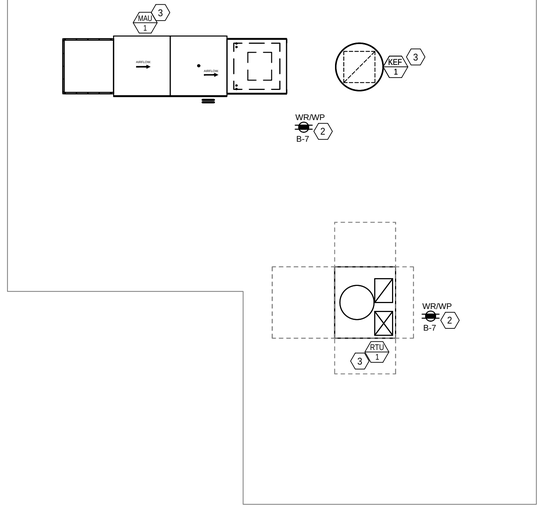
POWER PLAN

E200

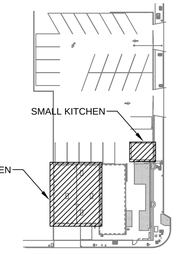
PLOT DATE: 12/10/2024 9:25:55 AM



POWER PLAN - ROOF - CENTRAL KITCHEN



POWER PLAN - ROOF - SMALL KITCHEN



KEY PLAN

HVAC SYSTEM CONNECTION SCHEDULE

EQUIPMENT	CIRCUIT DESIGNATION	VOLT/PHASE	FEEDER	DISCONNECT
RTU-1	B-36/38	240V/1PH	3#8, #10GND- 3/4"C	40AF/60AS/2P
KEF-1	B-40/42	240V/1PH	3#10, #10GND- 3/4"C	25AF/30AS/2P
MAU-1	B-32/34	240V/1PH	3#12, #12GND- 3/4"C	15AF/30AS/2P
MAU-2	A-31/33	240V/1PH	3#10, #10GND- 3/4"C	30AF/30AS/2P
HP-1	A-36/38	240V/1PH	3#6, #10GND- 1"C	45AF/60AS/2P
KEF-2	K-18/20	240V/1PH	3#10, #10GND- 3/4"C	30AF/30AS/2P

MECHANICAL EQUIPMENT NOTES:

1. PROVIDE OVERCURRENT PROTECTION AND BRANCH CIRCUITS PER UL LISTED REQUIREMENTS FOR EQUIPMENT SERVED. REFER TO MANUFACTURER DATA AND EQUIPMENT CUT-SHEETS FOR ROUGH-IN LOCATIONS OF ELECTRICAL CONNECTIONS AND INTERCONNECTIONS FOR ALL EQUIPMENT. COORDINATE EXACT NAMEPLATE DATA OF EQUIPMENT BEING INSTALLED WITH MECHANICAL CONTRACTOR.
2. SWITCHES USED AS DISCONNECTING MEANS SHALL BE LOCATED WITHIN SIGHT OF EQUIPMENT. PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. NON-FUSED DISCONNECT IS ACCEPTABLE INSTEAD OF SPECIFIED FUSE TYPE.
3. ADJUST SIZE OF CONDUCTORS AS NEEDED COMPENSATE FOR VOLTAGE DROP. VOLTAGE DROP SHALL NOT EXCEED 3% FOR BRANCH CIRCUITS.
4. REFER TO MECHANICAL PLAN FOR MORE INFO.
5. IF EXISTING UNITS ARE RE-USED, EXISTING DISCONNECT/FUSE/BREAKER TO BE RE-USED OR REPLACED WITH SAME RATING. VERIFY EXISTING CONDITION IN FIELD.

(#) KEYED PLAN NOTES:

1. VERIFY EXACT ELECTRICAL INSTALLATION REQUIREMENTS WITH MANUFACTURER AND PROVIDE PER RECOMMENDATION.
2. PROVIDE GFCI/WATERPROOF/WEATHER RESISTANT RECEPTACLE WITHIN 25FT OF HEATING, AC, AND REFRIGERATION EQUIPMENT.
3. REFER TO MECHANICAL PLAN AND HVAC SYSTEM CONNECTION SCHEDULE FOR EXACT LOCATIONS, SPECS AND INSTALLATION REQUIREMENTS.

GENERAL NOTES:

1. ELECTRICAL EQUIPMENT SHALL BE LISTED BY U.L. OR CITY RECOGNIZED ELECTRICAL TESTING LABORATORY OR APPROVED BY THE CITY DEPARTMENT.
2. ALL ELECTRICAL WORK SHALL COMPLY WITH THE [2022 CEC].
3. WIRE SIZE SHALL NOT BE LESS THAN CORRESPONDING CIRCUIT BREAKER RATING AS REQUIRED. [2022 CEC TABLE 310.16]
4. CONDUIT SHALL BE SIZED IN ACCORDANCE WITH THE [2022 CEC ANNEX C].
5. CONTRACTOR/ELECTRICIAN TO FIELD VERIFY ACTUAL SITE CONDITION /EXACT SERVICE ENTRANCE AND SHALL NOTIFY EOR(S) ANY DISCREPANCY WITH THE PLAN PRIOR TO BIDDING.
6. ALL ITEMS LABELED/IDENTIFIED AS EXISTING (IF ANY) ARE SUBJECT TO FIELD VERIFICATION. VERIFY EXISTING CONDITION AND RE-USE. IF NOT EXISTING, PROVIDE PER PLAN.
7. COORDINATE LOCATIONS/HEIGHTS OF RECEPTACLES FOR ELECTRICAL DEVICES WITH ARCHITECT AND EQUIPMENT VENDER PRIOR TO ROUGH-IN.
8. ALL NEW ELECTRICAL EQUIPMENT (IF ANY) DIMENSIONS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER/VENDER PRIOR TO PURCHASE.
9. GFCI PROTECTION: ALL 125V THROUGH 250V RECEPTACLES SUPPLIED BY 1-PHASE BRANCH CIRCUITS, 50 AMPERES OR LESS, AND ALL RECEPTACLES SUPPLIED BY 3-PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 100 AMPERES OR LESS, INSTALLED IN THE FOLLOWING LOCATIONS SHALL HAVE GFCI PROTECTION FOR PERSONNEL. [2022 CEC 210.8(B)]
   A. BATHROOMS
   B. KITCHENS OR AREAS WITH A SINK AND PREM. PROVISION FOR COOKING
   C. ROOFTOPS/OUTDOORS
   D. SINKS - WITHIN 6FT FROM THE TOP INSIDE EDGE OF THE SINK
   E. GARAGES, UNFINISHED AREAS OF BASEMENTS OR SIMILAR AREAS
10. FOR ALL PERMANENTLY CONNECTED APPLIANCES RATED OVER 300VA, THE CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN THE OPEN POSITION SHALL BE PROVIDED UNLESS LOCATION OF THE BREAKER IS WITHIN THE SIGHT OR SEPARATE DISCONNECTING MEANS IS PROVIDED. [2022 CEC 110.25, 422.31(B)]
11. RECEPTACLES OF 15 AND 20 AMPERES, 125 AND 250 VOLTS INSTALLED IN A WET LOCATION SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF (WP) AND IS LISTED/IDENTIFIED AS "EXTRA DUTY". THE RECEPTACLES SHALL BE GFCI PROTECTED. [CEC 2022 210.8(B)(4), 406.9(B)]

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REVISION

DRAWN:	CHECKED:
H.N.	J.L.
DATE:	SCALE:
10/08/2024	1/4" = 1'-0"

SHEET TITLE:

POWER PLAN - ROOF

E201

PLOT DATE: 12/10/2024 9:25:56 AM

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.			
Project Name:	STORAGE TO KITCHEN CONVERSION	**Report Page:**	**(Page 1 of 7)**
Project Address:	2229 DOVER AVE. SAN PABLO, CA 94806	**Date Prepared:**	2024-10-08T23:30:31-04:00

A. GENERAL INFORMATION

01	Project Location (city)	SAN PABLO	04	Total Conditioned Floor Area (ft²)	1,922
02	Climate Zone	3	05	Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	0

● Restaurant

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☒ New Lighting System	Area Category Method	1922	N/A	0
☐ New Lighting System - Parking Garage	N/A	0	N/A	0
Total Area of Work (ft²)	1922			

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C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(b)1 / 170.2(e)	Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)						Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)				Compliance Results
	01	02	03	04	05		06	07		08	09
	Complete Building 140.6(c)1	Area Category 140.6(c)2 / 170.2(e)4	Area Category Additional 140.6(c)2G / 170.2(e)4Av (+)	Tailored 140.6(c)3 / 170.2(e)4B (+)	=	**Total Allowed** (Watts)	≥	Total Designed (Watts)	Adjustments PAF Lighting Control Credits 140.6(a)2 / 170.2(e)1B (-)	=	**Total Adjusted** (Watts) *Includes Adjustments	**05 must be >= 08 140.6 / 170.2(e)**
	(See Table I)	(See Table I)	(See Table J)	(See Table K)				(See Table F)	(See Table P)			
Conditioned		1,515.45			=	1,515.45	≥	788		=	788	COMPLIES
Unconditioned					=		≥			=		
Controls Compliance (See Table H for Details)												COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)												

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

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F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ matel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
L1	2X4 LED TROFFER LIGHT	No	NA	36	Mfr. Spec	21	No	756	☐	☐
L2	LED SURFACE MOUNTED CAN LIGHT	No	NA	16	Mfr. Spec	2	No	32	☐	☐
							Total Designed Watts: CONDITIONED SPACES	788		

[1] *FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.*

[2] *Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
		Field Inspector	
		Pass	Fail
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C	☐	☐
NA < 4,000W subject to multilevel	See Area/Space Level Controls		

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H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) // 160.5(b)4C	Primary Sky lit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1/ 170.2(e)2A	Field Inspector	
								Pass	Fail
RESTROOM	Restroom	Readily Accessible	NA: Restrooms	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
KITCHEN	Kitchen/ Food Preparation	Readily Accessible	Dimmer	Auto. Time Switch	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
STORAGE	Commercial Industrial Storage Area	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
					13				
					Plan Sheet Showing Daylit Zones:				

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used .

Conditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
RESTROOM	Restroom	0.65	109	70.85	No	No
KITCHEN	Kitchen/ Food Preparation	0.95	1,308	1,242.6	No	No
STORAGE	Commercial Industrial Storage Area	0.4	505	202	No	No
		TOTALS:	1,922	1,515.45	See Tables J, or P for detail	

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J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

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R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTI-E - Must be submitted for all buildings

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	RESTROOM; KITCHEN; STORAGE

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Jake Lee	**Documentation Author Signature:**
Company: CDI	**Signature Date:** 12/9/2024
Address: 9890 RESEARCH DR. SUITE 100	**CEA/ HERS Certification Identification (if applicable):**
City/State/Zip: IRVINE, CA 92618	**Phone:** 949-533-4117

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provided to the building owner at occupancy.

Responsible Designer Name: Jake Lee	**Responsible Designer Signature:**
Company: CDI	**Date Signed:** 12/9/2024
Address: 9890 RESEARCH DR. SUITE 100	**License:** E24049
City/State/Zip: IRVINE, CA 92618	**Phone:** 949-533-4117

TITLE24 - INDOOR

CDI Circa Domini International, Inc.
Engineering - Consulting
9890 Research Dr, Suite 100, Irvine, CA 92618
Phone (949) 533-4117 | dkang@cdieng.com

PROFESSIONAL ENGINEER JUN C 24048 EXP. 06/30/25 CIVIL STATE OF CALIFORNIA

STORAGE TO KITCHEN CONVERSION
2229 DOVER AVE
SAN PABLO, CA 94806

REVISION

DRAWN: H.N.	CHECKED: J.L.
DATE: 10/08/2024	SCALE: N.T.S.

SHEET TITLE:
TITLE24 - INDOOR

TE00

PLOT DATE: 12/10/2024 9:25:58 AM