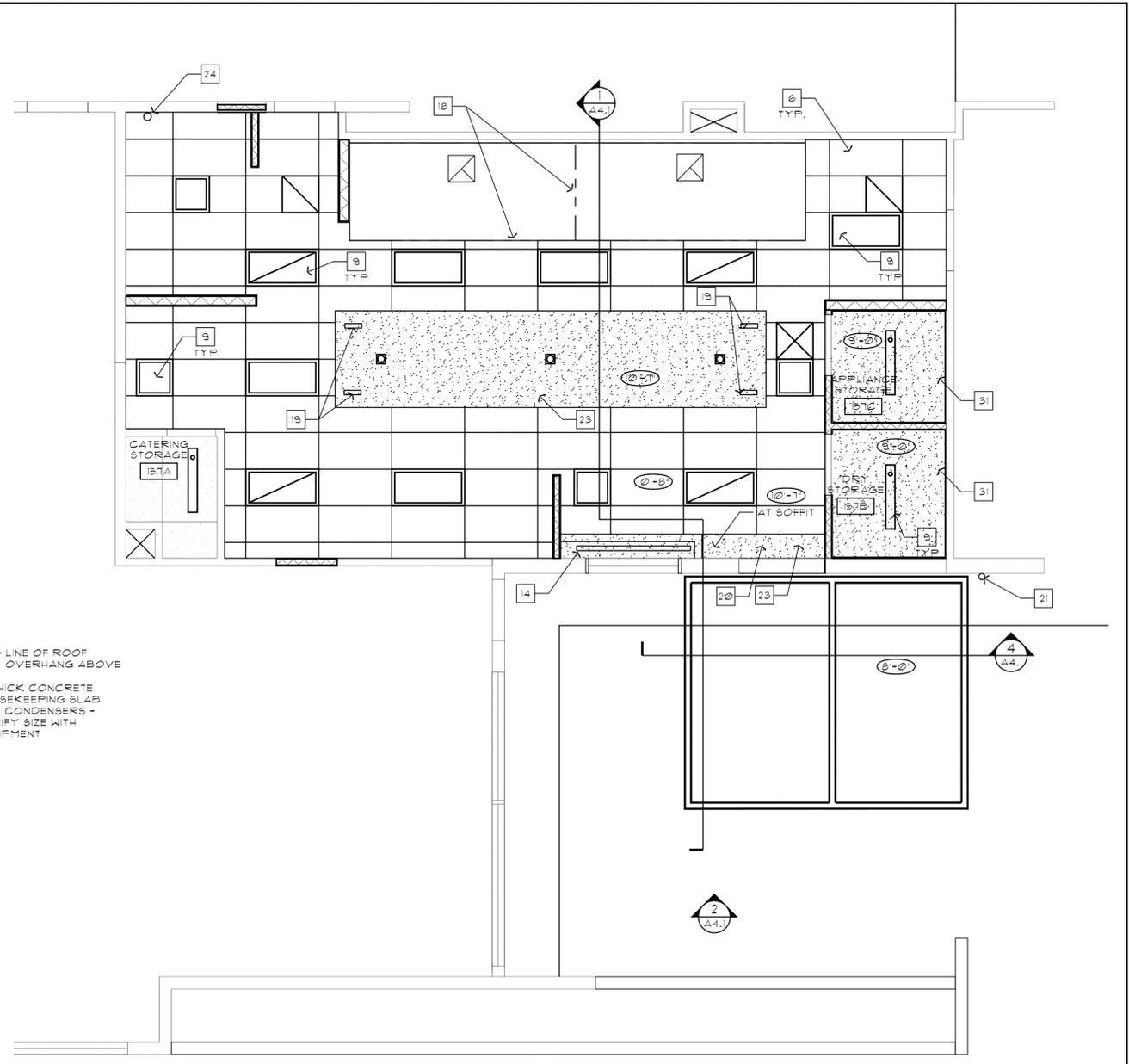


FLOOR PLAN
1/4" = 1'-0"



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

FLOOR PLAN LEGEND

- NEW WOOD DOOR(S) AND HOLLOW METAL FRAMES - PAINT
- NEW FRAMED WALL - PAINT
- NEW CMU WALL - PAINT
- NEW HOLLOW METAL RELIGHT (A) PAINT
- EXISTING WALL TO REMAIN - PROTECT
- EXISTING DOOR TO REMAIN - PAINT

SHEET NOTES

1. NEW KITCHEN EQUIPMENT - SEE FOOD SERVICE DRAWINGS.
2. RELOCATED KITCHEN EQUIPMENT - SEE FOOD SERVICE DRAWINGS
3. NEW WINDOW - SEE SCHEDULE
4. NEW DOOR AND FRAME - SEE SCHEDULE
5. PAINT EXISTING AND NEW WALLS
6. NEW 2' X 4' SUSPENDED CEILING TILE SYSTEM
7. NEW POLY CRETE INTEGRAL BASE - TYP. SEE SPECIFICATIONS
8. STAINLESS STEEL ENDGAP
9. NEW LIGHTING - SEE ELECTRICAL
10. PATCH WALL AT NEW PLUMBING LINES. COORDINATE WITH PLUMBING DRAWINGS
11. NEW SINK - SEE PLUMBING
12. FIRE EXTINGUISHER ON BRACKET
13. NEW FLOY CRETE FLOORING - SEE SPECIFICATIONS
14. NEW GYPSUM BOARD CEILING ATTACH TO UNDERSIDE OF ROOF FRAMING
15. PROVIDE AND INSTALL GYPSUM WALL BOARD AS REQUIRED AND PATCH AND REPAIR EXISTING WALL DAMAGED BY CASEWORK AND SOFFIT REMOVAL.
16. PAINT ALL DOORS AND TRIM - SEE SCHEDULE
17. NEW GRILLE - SEE MECHANICAL DRAWINGS
18. NEW HOOD - SEE ELEVATIONS AND MECHANICAL DRAWINGS
19. NEW CEILING MOUNTED GORD REEL POWER OUTLETS - SEE ELECTRICAL
20. NEW OPENING - SEE STRUCTURAL
21. NEW DOWNSPOUT - SEE PLUMBING DRAWINGS
22. NEW FLOOR STOP
23. NEW GYPSUM SOFFIT
24. NEW DRYER EXHAUST - SEE MECHANICAL
25. STAINLESS STEEL WALL PANELS - COORDINATE WITH ELECTRICAL DRAWINGS FOR OUTLET LOCATIONS
26. FRP WALL PANELS - COORDINATE WITH ELECTRICAL DRAWINGS FOR OUTLET LOCATIONS
27. STAINLESS STEEL CORNER GUARD
28. FLOOR DRAIN - SEE PLUMBING
29. FLOOR STUB POWER OUTLET - SEE ELECTRICAL
30. INFILL CONCRETE SLAB WHERE DAMAGED BY HALF-WALL REMOVAL - TO BE FLUSH WITH EXISTING.
31. NEW GYPSUM CEILING.
32. NEW FLOOR SINK - SEE PLUMBING DRAWINGS.

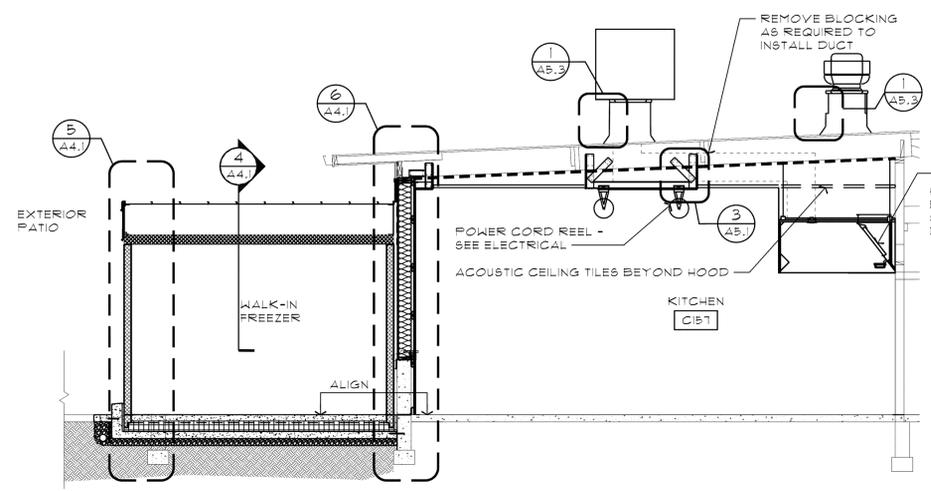
REFLECTED CEILING PLAN LEGEND

- NEW 2' X 4' ACOUSTIC CEILING TILE GRID
- NEW GYP. BD. CEILING
- NEW 2' X 4' LIGHT FIXTURE
- NEW EXHAUST GRILLE
- NEW SUPPLY AIR GRILLE
- NEW RETURN AIR GRILLE
- NEW FINISH CEILING HEIGHT ABOVE FINISH FLOOR
- NEW WALL TO STRUCTURE
- NEW BATTERY BACK-UP EMERGENCY LIGHT
- NEW LIGHT FIXTURE
- NEW 2' X 2' LIGHT FIXTURE
- NEW RECESSED LIGHT FIXTURE

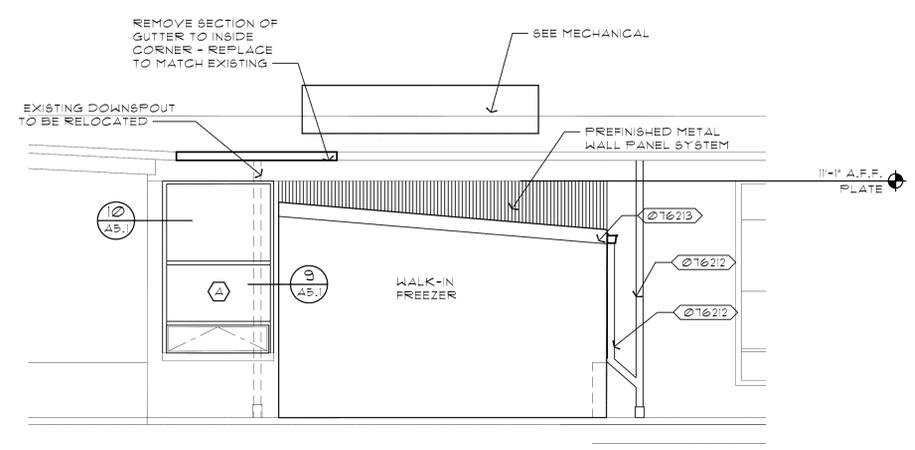
KEYNOTES

- 06452 PLASTIC LAMINATE SILL
- 074208 METAL WALL PANELS - TYPE 1
- 076212 METAL DOWNSPOUT
- 076213 METAL GUTTER
- 092920 GYPSUM BOARD
- 092918 METAL EDGES - TYP.
- 092925 SUSPENDED GYPSUM BOARD CEILING SYSTEM
- 09501 CEILING SUSPENSION SYSTEM
- 097202 FIBERGLASS REINFORCED PLASTIC WALL PANELS
- 102602 STAINLESS STEEL CORNER GUARDS
- 114009 EXHAUST HOOD
- 224204 SINK

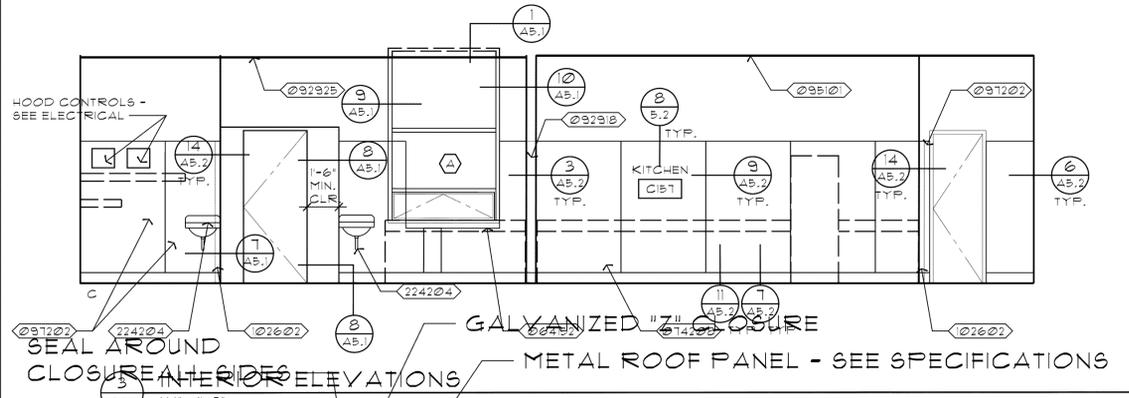
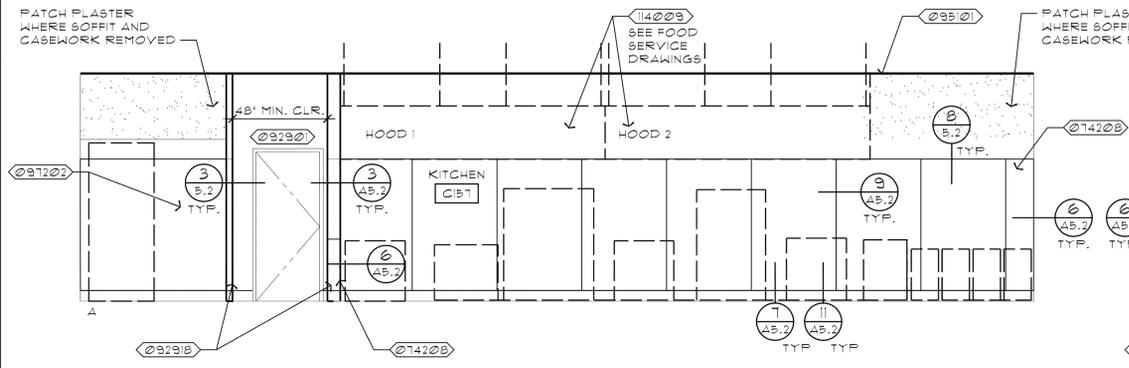
* KITCHEN EQUIPMENT SHOWN DASHED - SEE FOOD SERVICE DRAWINGS

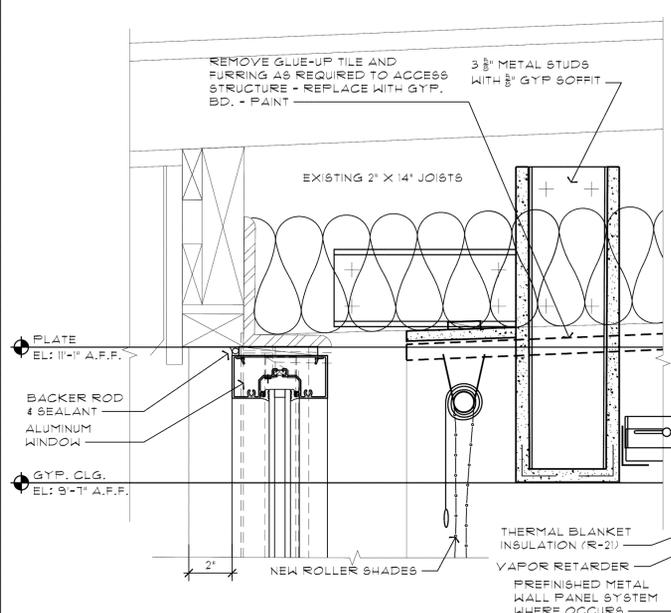


1 BUILDING SECTION
A4.1 1/4" = 1'-0"

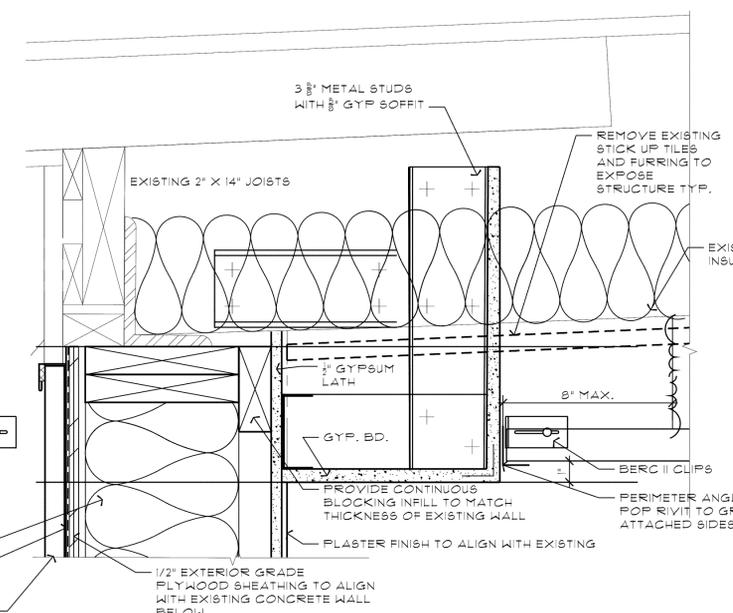


2 EXTERIOR ELEVATION
A4.1 1/4" = 1'-0"

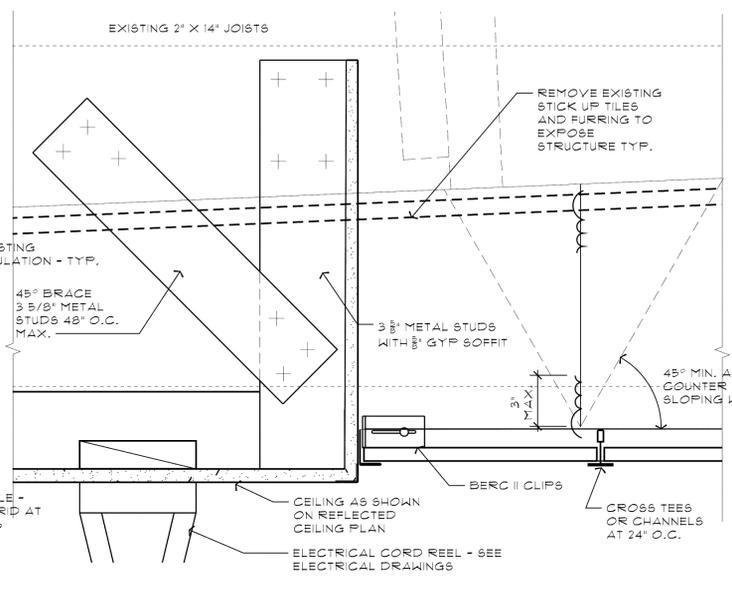




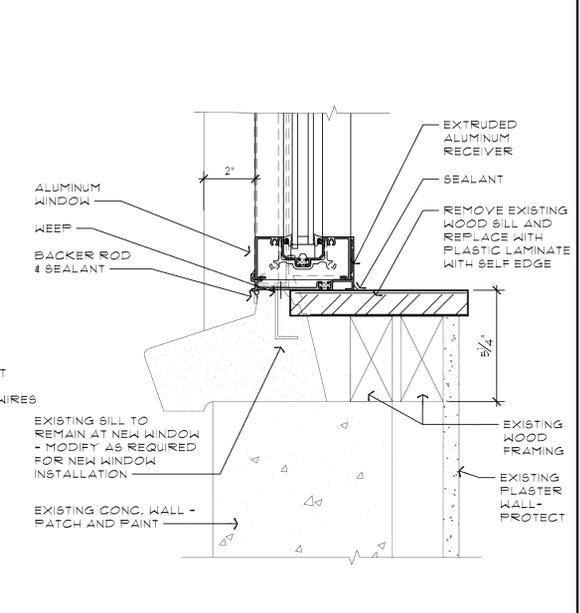
1 WINDOW HEAD
A5.1 3' x 1'-0"



2 NEW WALL AT ANGLE
A5.1 3' x 1'-0"

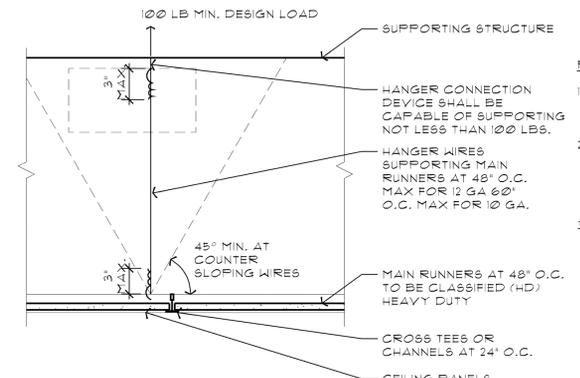


3 SOFFIT AT ACOUSTIC CEILING TILES
A5.1 3' x 1'-0"



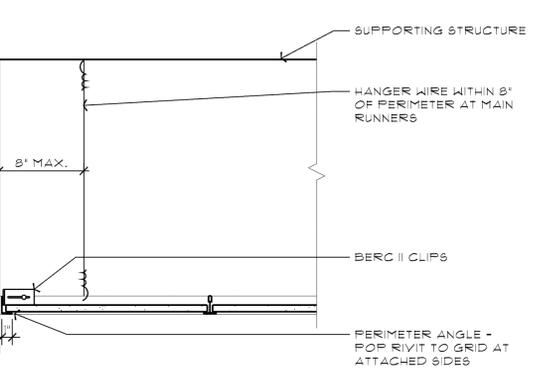
4 WINDOW SILL
A5.1 3' x 1'-0"

- GENERAL REQUIREMENTS**
1. INSTALL CEILINGS IN ACCORDANCE WITH THE REQUIREMENTS OF OSBC SECTIONS 808 AND 1105, ASCE 1-03, ASTM C635, AND ASTM C636, AND NACB 401-OREGON.
 2. TOTAL WEIGHT OF CLG INCLUDING LIGHTS AND AIR TERMINALS SHALL NOT EXCEED 4 P6F.
 3. PARTITIONS TIED TO THE CEILING SHALL BE LATERALLY BRACED TO STRUCTURE INDEPENDENT OF THE LATERAL BRACING FOR THE CEILING.
 4. HANGER WIRES TO BE PLUMB TO WITHIN 1 IN 6 UNLESS COUNTER SLOPING WIRES ARE PROVIDED.
 5. ALL WIRES TO BE TIED WITH (3) TIGHT TURNS AROUND ITSELF WITHIN 3'.

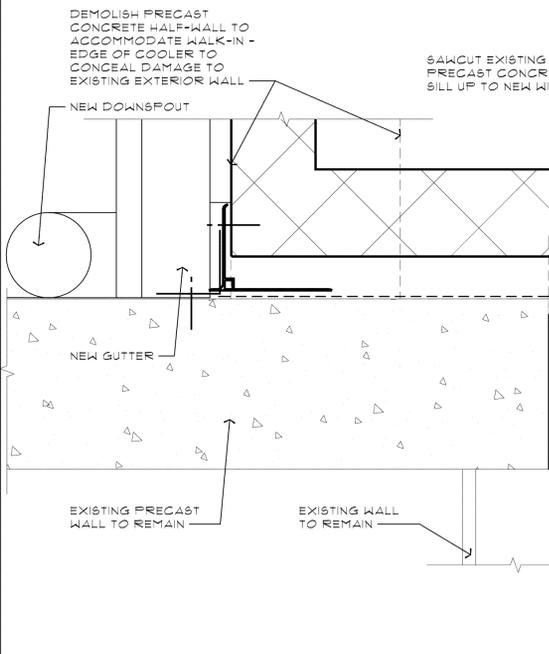
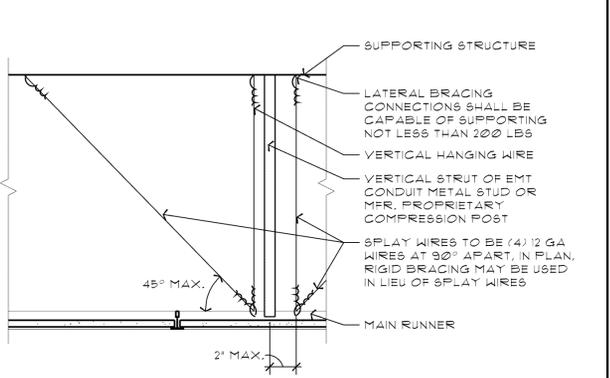


5 TYPICAL CONSTRUCTION FOR ACOUSTIC TILE CEILINGS
A5.1 1 1/2\"/>

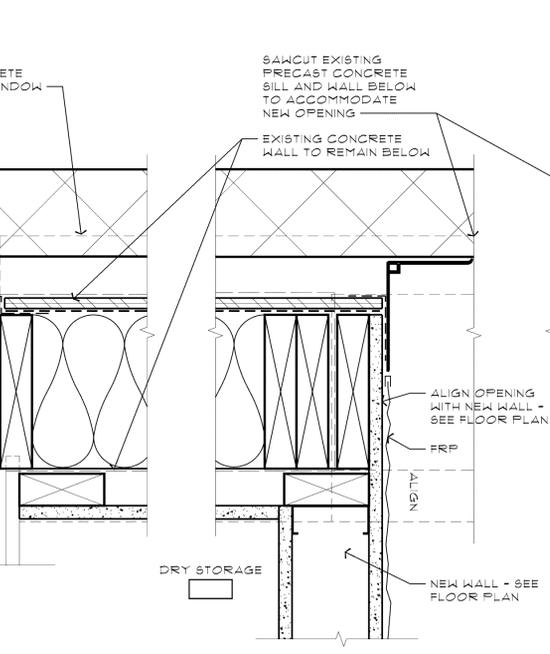
- PERIMETER ATTACHMENT**
1. THE GRID SHALL BE ATTACHED TO THE PERIMETER ANGLE AT TWO ADJACENT WALLS.
 2. ONE END OF THE CEILING GRID MEMBERS SHALL BE ATTACHED TO THE PERIMETER ANGLE, THE OTHER END SHALL HAVE 1/4\"/>
 - 3. SPREADER BARS ARE NOT REQUIRED WHERE MAIN GRID OR CROSS TEES ARE WITHIN 8' OF WALL.



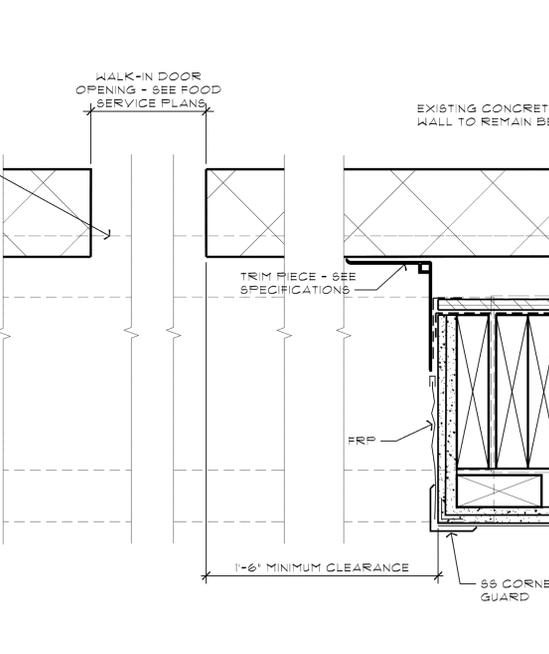
- LATERAL BRACING**
1. LATERAL BRACING IS REQUIRED FOR CEILINGS OVER 144 SF AND NOT REQUIRED FOR CEILINGS LESS THAN 144 SF WHEN SURROUNDED BY WALLS AT ALL PERIMETER AND BRACED TO STRUCTURE.
 2. LATERAL FORCE BRACING TO BE AT 12'-0\"/>
 - 3. CEILINGS WITH PLENUMS LESS THAN 12\"/>



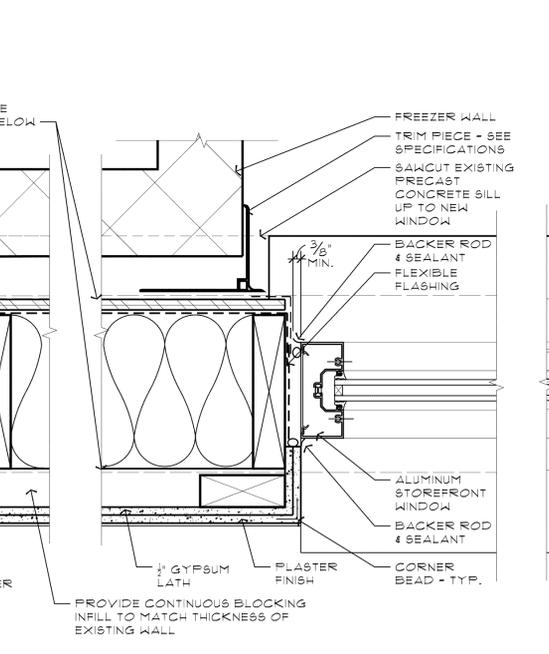
6 CORNER AT EXISTING WALL
A5.1 3' x 1'-0"



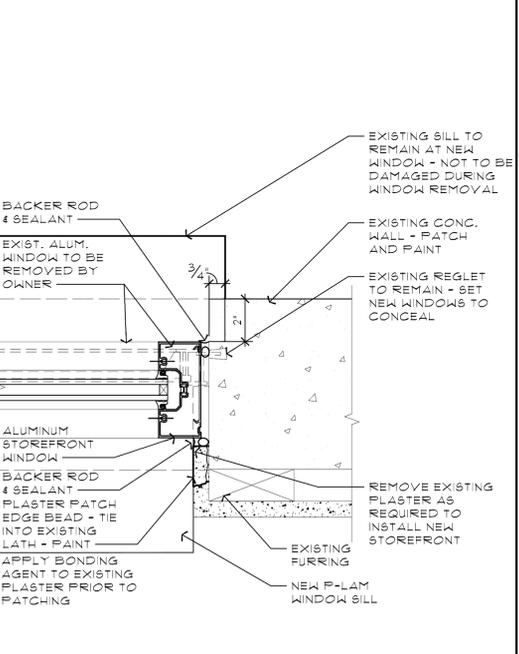
7 JAMB AT OPENING NEW WALL
A5.1 3' x 1'-0"



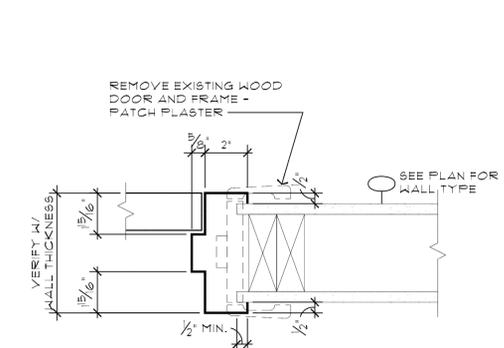
8 JAMB AT OPENING NEW WALL
A5.1 3' x 1'-0"



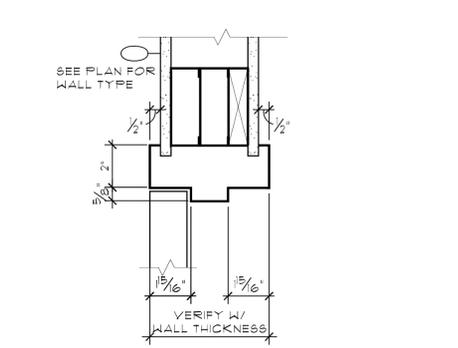
9 WINDOW JAMB AT NEW WALL
A5.1 3' x 1'-0"



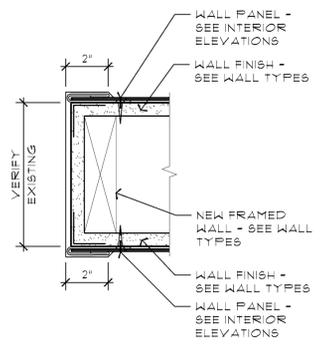
10 WINDOW JAMB AT EXISTING WALL
A5.1 3' x 1'-0"



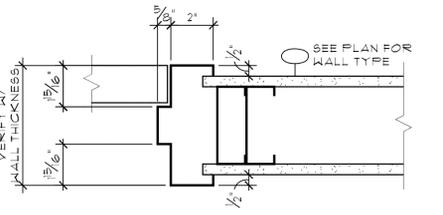
1 DOOR JAMB IN EXISTING WALL
A5.2 3' = 1'-0" (HEAD SIM.)



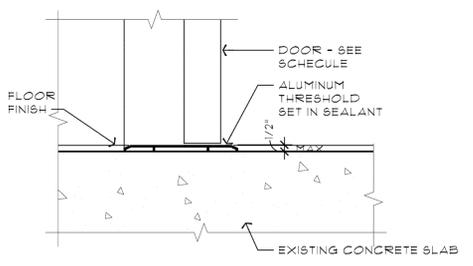
2 DOOR HEAD IN NEW WALL
A5.2 3' = 1'-0"



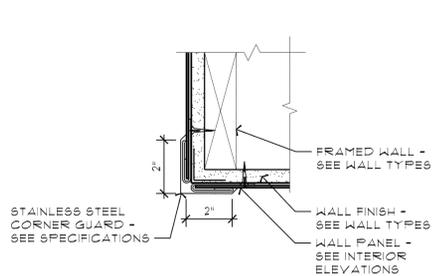
3 STAINLESS STEEL ENDCAP
A5.2 3' = 1'-0"



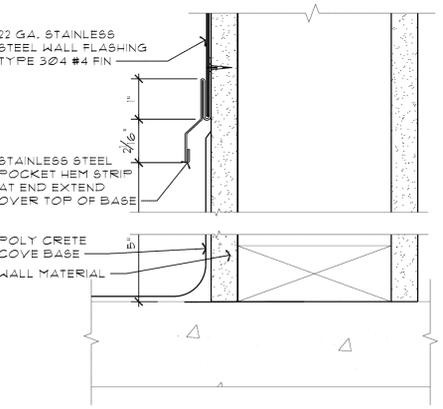
4 DOOR JAMB IN NEW WALL
A5.2 3' = 1'-0"



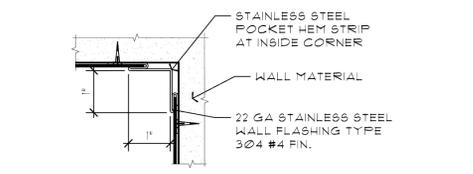
5 DOOR THRESHOLD
A5.2 3' = 1'-0"



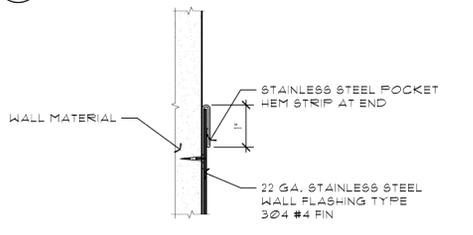
14 SS CORNER GUARD
A5.2 3' = 1'-0"



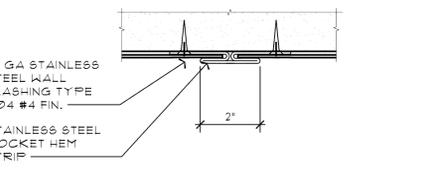
7 PANEL AT BASE
A5.2 3' = 1'-0"



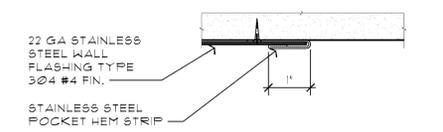
6 PANEL AT CORNER
A5.2 3' = 1'-0"



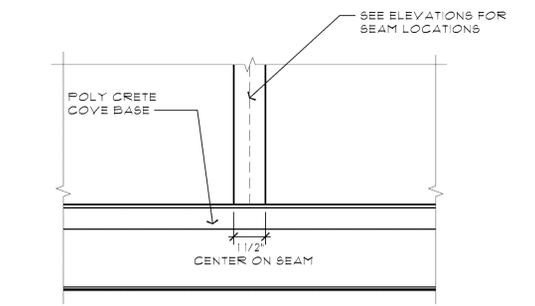
8 PANEL TOP CONNECTION
A5.2 3' = 1'-0"



9 JOINT CONNECTION
A5.2 3' = 1'-0"



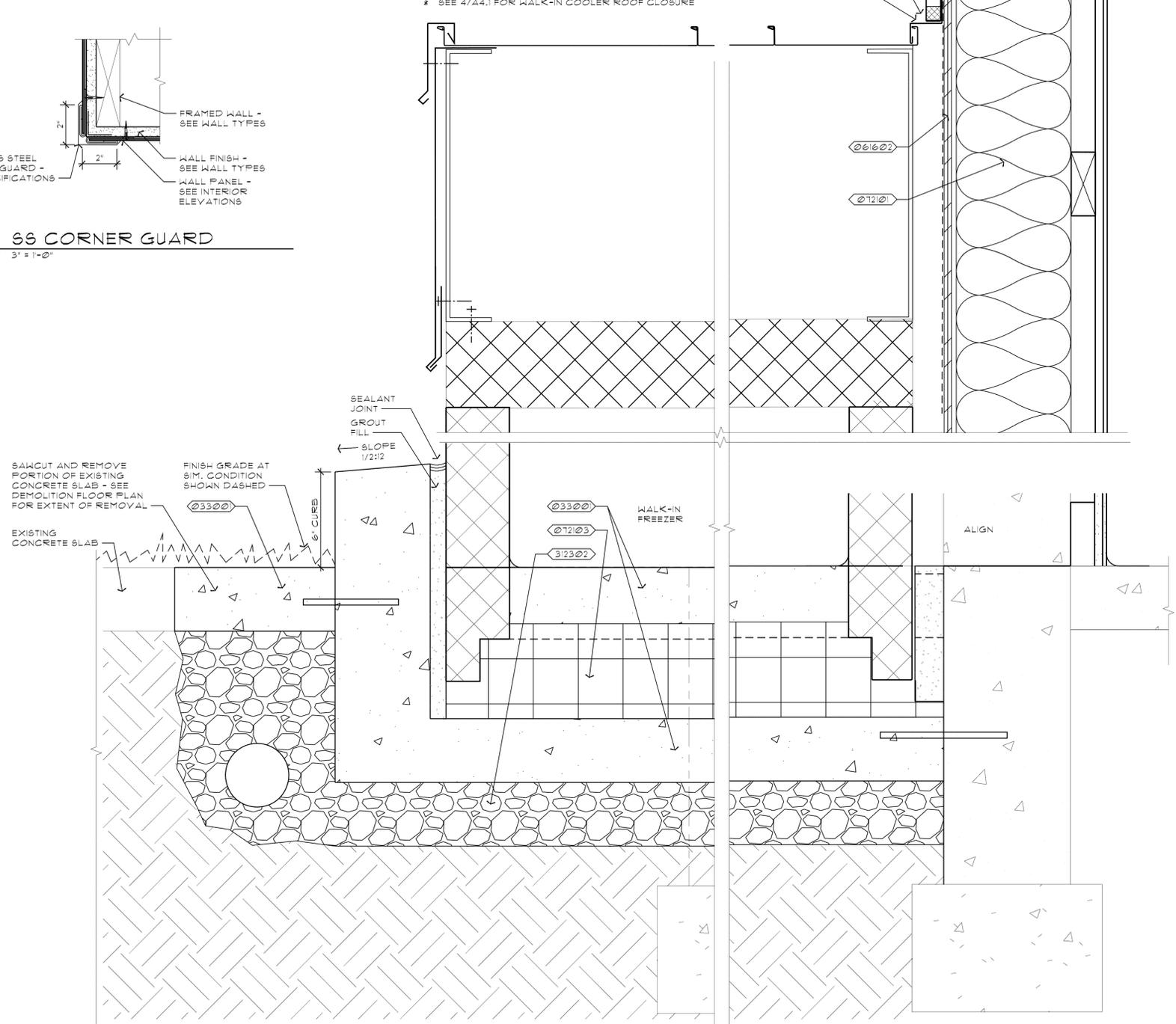
10 STAINLESS STEEL ENDCAP
A5.2 3' = 1'-0"



11 STAINLESS STEEL PANEL SEAM
A5.2 3' = 1'-0"

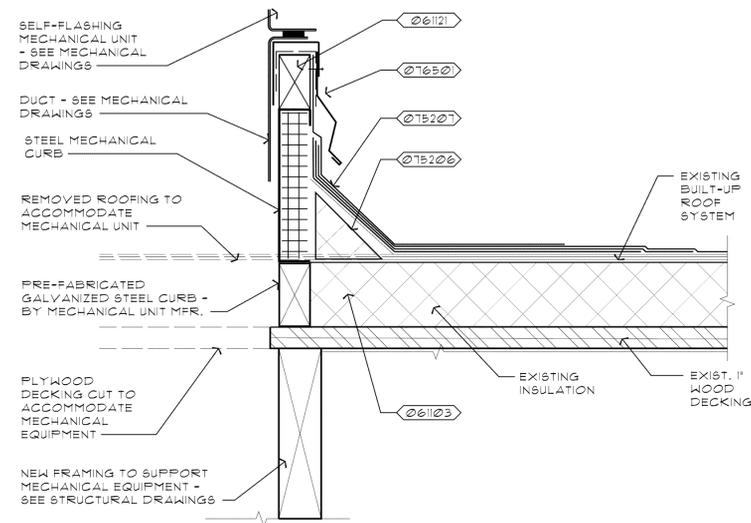
KEYNOTES

- 033001 CAST-IN-PLACE CONCRETE SLAB
- 061602 FLYWOOD WALL SHEATHING
- 07201 THERMAL BLANKET INSULATION
- 07203 RIGID INSULATION BOARD
- 076216 PREFINISHED SHEET METAL FLASHING
- 312302 COMPACTED BASE AGGREGATE



12 WALK-IN SECTION
A5.2 3' = 1'-0"

13 WALK-IN SECTION AT EXTERIOR WALL
A5.2 3' = 1'-0"



1 MECHANICAL CURB
 A5.3 3' x 1'-0"

KEYNOTES

- 061103 WOOD BLOCKING
- 061121 PRESSURE TREATED NAILER
- 075206 CANT STRIP
- 075207 BASE FLASHING
- 061650 FLEXIBLE FLASHING



BBL ARCHITECTS
 ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN

200 North State Street ■ Lake Oswego, Oregon 97034

DAVID DOUGLAS SCHOOL DISTRICT
 DAVID DOUGLAS HS SOUTH
 KILT KITCHEN MODIFICATIONS
 1001 SE 135TH AVENUE, PORTLAND, OREGON 97233

18039.00.1
 PROJECT NUMBER
 21 FEB 2019
 DATE

A5.3

BID SET

DETAILS

REVISIONS

ROOM FINISH SCHEDULE

NO.	ROOM NAME	FLOOR	BASE	WALLS						REMARKS	
				Z	III	B	I	CLNG.			
C5T	KITCHEN	PC	2	PP	PP	PP	PP	PP	PP	AT	#
157A	CATERING	-	-	PP	PP	PP	PP	PP	PP	PP	-
157B	DRY STORAGE	PC	2	PG	PG	PP	PG	PG	PG	-	-
157C	APPLIANCE STORAGE	PC	2	PG	PG	PP	PG	PG	PG	-	-
158	DINING ROOM	-	1	PP	-	-	-	-	-	-	-

SEE INTERIOR ELEVATION FOR SS AND FRP MAINSCOT

ROOM FINISH KEY

FLOORS	BASE
PC POLY CRETE	1. 4" COVED RUBBER BASE
	2. 6" INTEGRAL COVE
WALLS	
PG GYPSUM BOARD (PAINT)	
PP PLASTER (PAINT)	
CEILING	NOTES
AT 2'x4' SUSPENDED ACOUSTIC TILE	- NO WORK REQUIRED
PG GYPSUM BOARD (PAINT)	* SEE INT. ELEVATIONS
PP PLASTER (PAINT)	

DOOR SCHEDULE

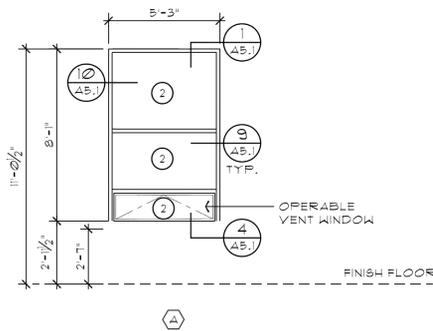
NO.	SIZE			TYPE	DOOR MATERIAL/ FINISH	FRAME MATERIAL/ FINISH	HARDWARE GROUP	RATING	REMARKS
	WIDTH	HEIGHT	TH.						
157A	3'-0"	7'-0"	-	-	-	-	-	20	EXISTING TO REMAIN
157B	3'-0"	7'-0"	1 3/4"	A	WD	HM	1	-	
157C	3'-0"	7'-0"	1 3/4"	-	-	-	2	-	EXISTING TO REMAIN
157D	3'-0"	7'-0"	1 3/4"	-	-	-	3	-	EXISTING TO REMAIN
157E	3'-0"	7'-0"	1 3/4"	B	WD	HM	4	-	
157F	3'-0"	7'-0"	1 3/4"	B	WD	HM	5	-	

NOTE: PROVIDE TEMPERED GLASS AT ALL DOOR LIGHTS UNLESS NOTED OTHERWISE.

DOOR SCHEDULE LEGEND

- HM/P - HOLLOW METAL - PAINT
- WD - WOOD
- S/F - STEEL / SEE FACTORY FINISH
- ALUM. - ALUMINUM
- P - PAINT
- FR - FRAME
- S&V - STAIN AND VARNISH
- SC. - SOLID CORE
- TEMP. - TEMPERED
- GL. - GLAZING
- MFR. - MANUFACTURED
- ANOD. - ANODIZED
- P&DF - PACKAGED STEEL DOOR FRAME
- 20M - 20 MINUTE SMOKE RATED
- 1HR - ONE HOUR RATED

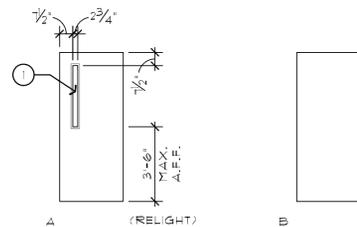
WINDOW TYPES



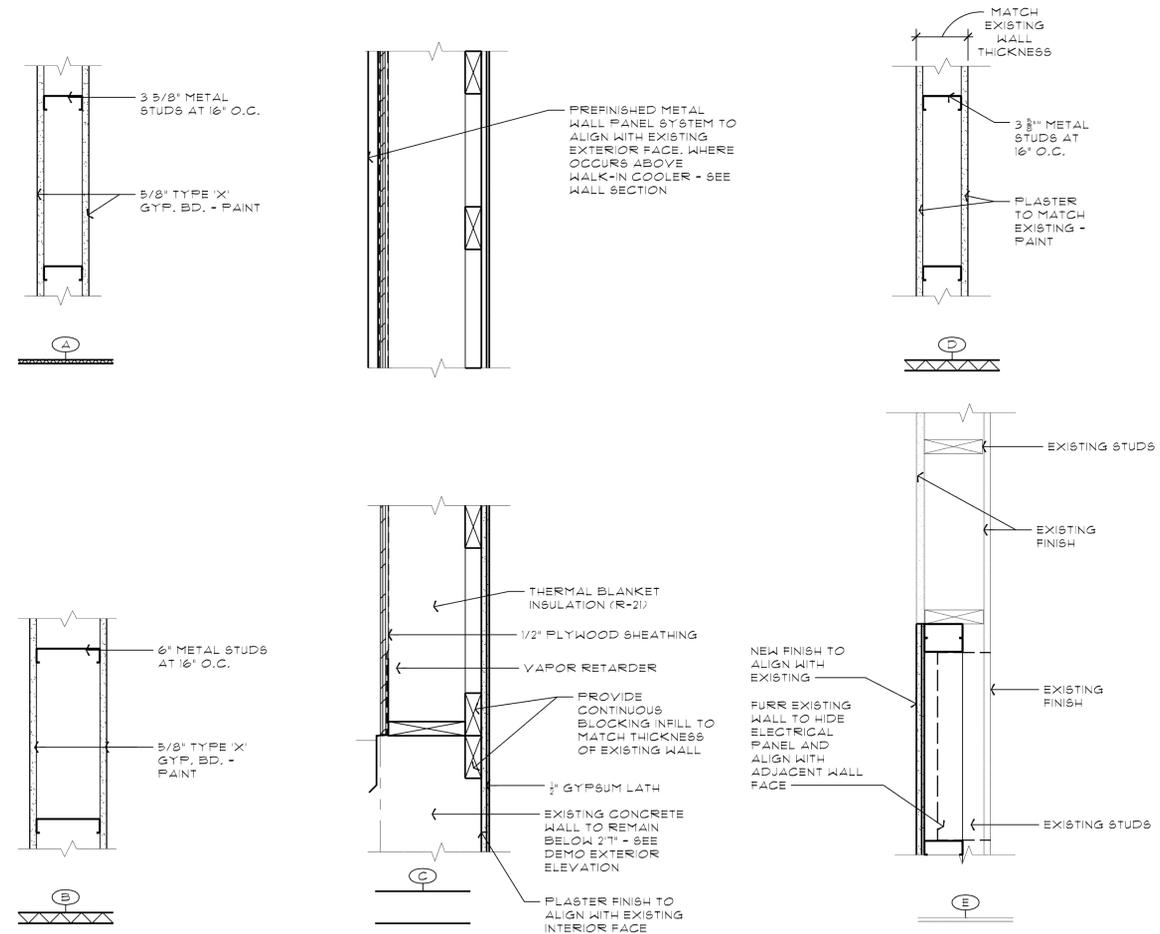
GLAZING TYPES

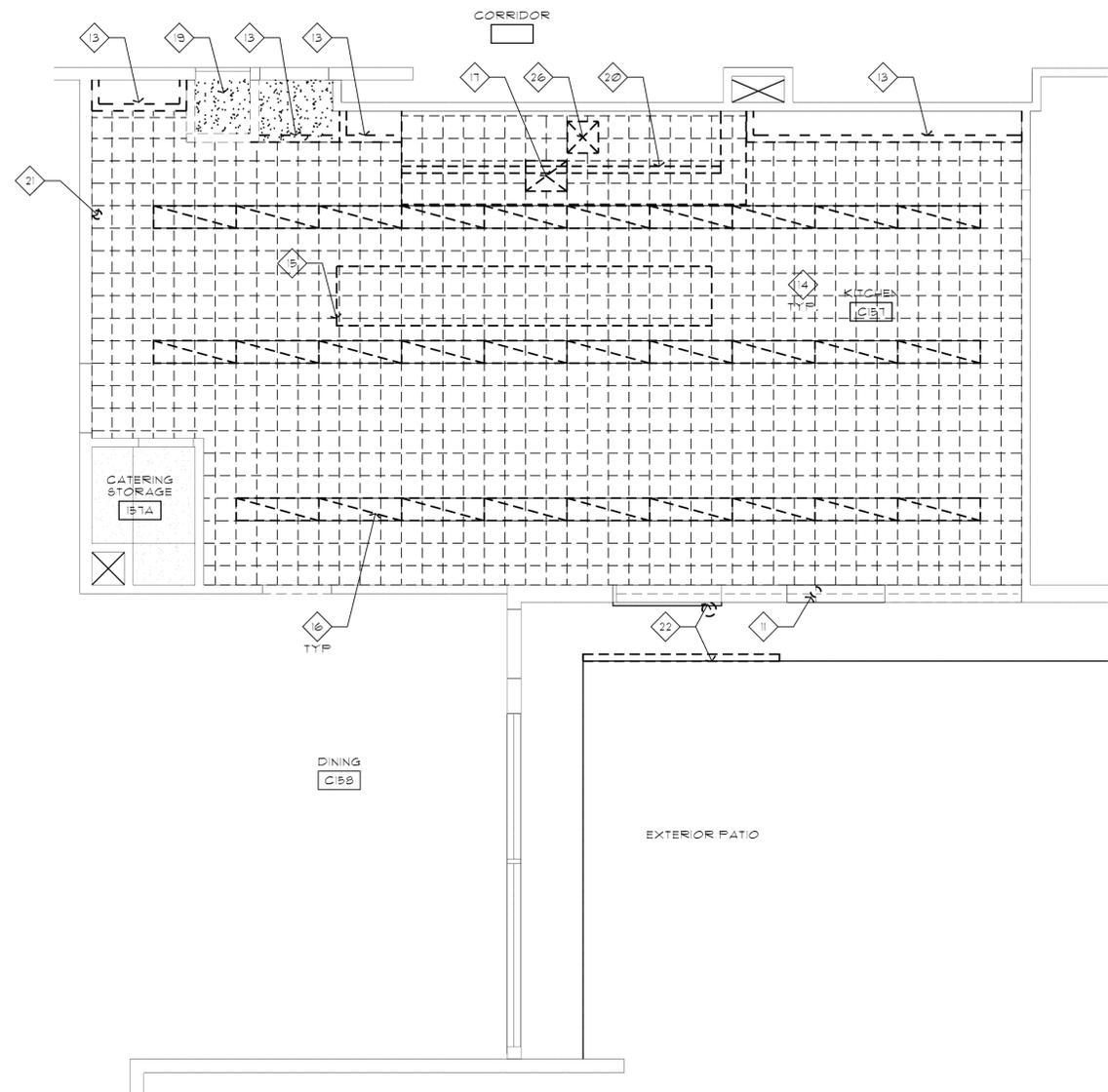
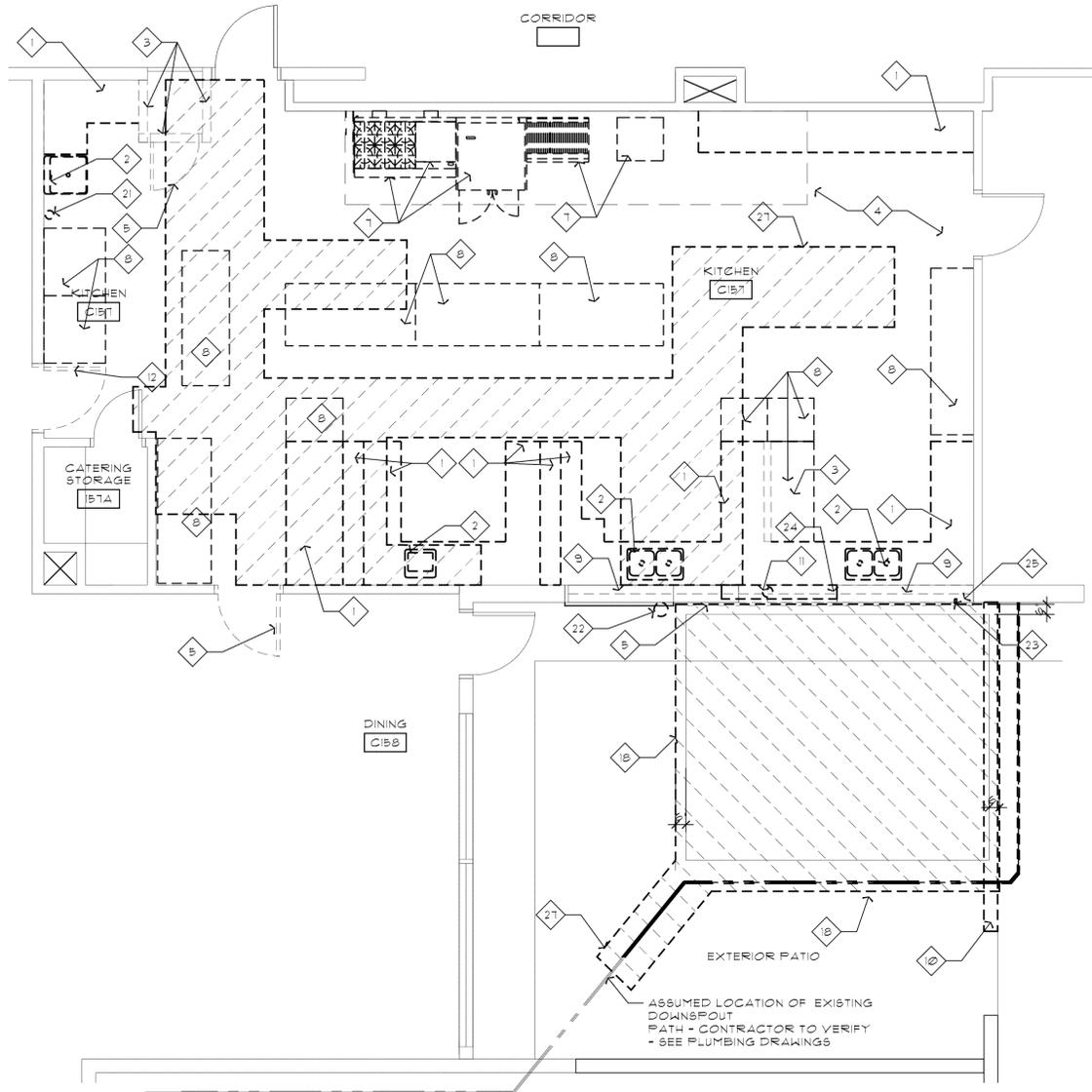
- 1 1/4" TEMPERED SAFETY GLASS
- 2 1" INSULATED GLASS

DOOR TYPES (PAIRS SHOWN DASHED)



WALL TYPES



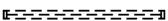
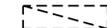


1 D.I.1 1/4" = 1'-0"

2 D.I.1 1/4" = 1'-0"

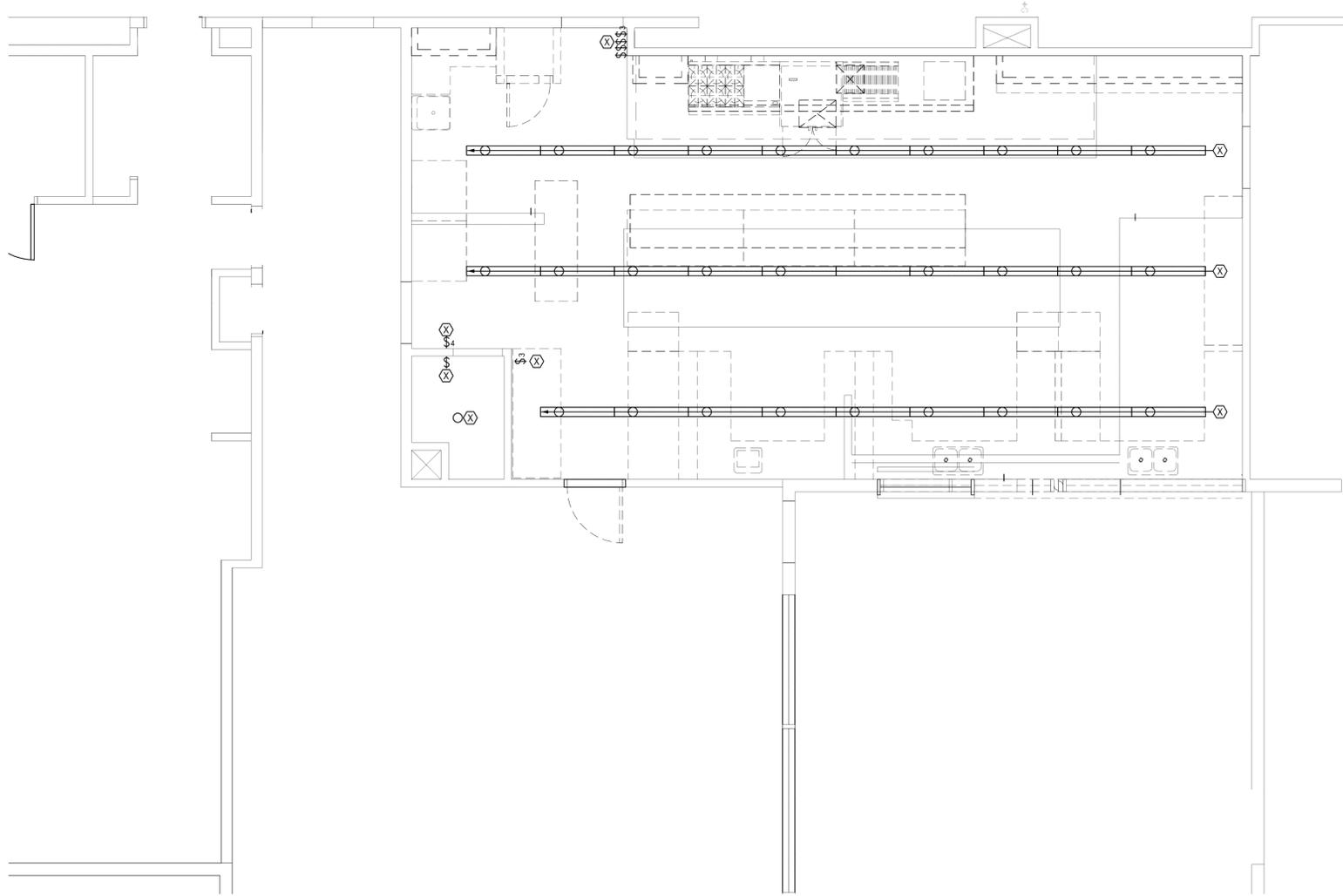
DEMOLITION PLAN LEGEND

DEMOLITION NOTES

-  EXISTING DOOR TO REMAIN - PROTECT
-  EXISTING WALL TO REMAIN - PROTECT
-  EXISTING DOOR(S) TO BE REMOVED
-  EXISTING WINDOWS TO BE REMOVED
-  EXISTING FLOOR DRAIN TO BE REMOVED - CAP PLUMBING
-  AREA OF CONCRETE SAWCUT DEMOLITION
-  EXISTING 12" x 12" ACOUSTIC CEILING TO BE REMOVED TO ROOF JOISTS
-  EXISTING LIGHT FIXTURE TO BE REMOVED

1. REMOVE EXISTING CASEWORK.
2. REMOVE EXISTING SINKS. SEE PLUMBING.
3. REMOVE EXISTING WALL.
4. REMOVE EXISTING FLOORING.
5. REMOVE EXISTING WINDOW SILL WHERE NO NEW WINDOW - SEE FLOOR PLAN AND ELEVATIONS.
6. REMOVE EXISTING DOOR AND ASSEMBLY. PATCH WALL TO MATCH EXISTING.
7. SALVAGE ALL EXISTING KITCHEN EQUIPMENT FOR REINSTALLATION - SEE FOOD SERVICE DRAWINGS.
8. ALL EXISTING PORTABLE EQUIPMENT TO BE REMOVED BY OWNER.
9. REMOVE EXISTING WINDOWS TO ACCOMMODATE NEW WINDOW AND OPENING TO WALK-IN. PATCH WALL TO MATCH EXISTING. SEE ELEVATIONS.
10. DEMO EXISTING CAST IN PLACE CONCRETE HALF-WALL TO FOOTING TO ACCOMMODATE NEW WALK-IN COOLER.
11. REMOVE EXISTING COLUMN, SHORE HEADER - SEE STRUCTURAL.
12. REMOVE EXISTING DOOR TO ACCOMMODATE NEW DOOR.
13. REMOVE EXISTING SOFFIT AND ATTACHED CASEWORK. REPAIR PLASTER FINISH WHERE EXPOSED.
14. REMOVE EXISTING CEILING TILES AND FURRING TO EXPOSE STRUCTURE.
15. SALVAGE EXISTING POTRACK AND SUPPORT ASSEMBLY TO OWNER.
16. REMOVE EXISTING LIGHT FIXTURES. SEE ELECTRICAL.
17. REMOVE EXISTING VENT GRILL.
18. SAWCUT AND REMOVE PORTION OF CONCRETE SLAB TO ACCOMMODATE NEW WALK IN COOLER - EXTENT OF 6" FROM ALL FACES.
19. REMOVE EXISTING GYP BOARD CEILING.
20. REMOVE EXISTING HOOD AND SUPPORT ASSEMBLY.
21. REMOVE DRYER VENT FOR RELOCATION. SEE MECHANICAL.
22. CONTRACTOR TO VERIFY LOCATION OF EXISTING DOWNSPOUT AND RELOCATE. REMOVE SECTION OF EXISTING GUTTER AND REPLACE TO MATCH EXISTING - SEE ELEVATIONS.
23. REMOVE EXISTING HOSE BIB AND CAP - SEE PLUMBING.
24. REMOVE WALL AND CONCRETE WINDOW SILL TO CREATE OPENING TO WALK-IN. SEE ELEVATIONS.
25. REMOVE CAST IN PLACE CONCRETE WINDOW SILL - SILL AT NEW WINDOW REMAIN PROTECT - SEE ELEVATIONS.
26. REMOVE EXHAUST DUCT.
27. SAWCUT EXISTING CONCRETE AS REQUIRED FOR NEW PLUMBING.





ENLARGED DEMO KITCHEN FLOOR PLAN
1/4" = 1'-0"

DEMOLITION SCOPE OF WORK

SCOPE: THE SCOPE OF WORK INCLUDES THE REMODEL OF THE EXISTING BUILDING. THE WORK WILL INCLUDE BUT NOT BE LIMITED TO DEMOLITION (SEE BELOW) OF THE LIGHTING, POWER, AND DISTRIBUTION EQUIPMENT SYSTEMS. THE DEMO OF ALL MECHANICAL EQUIPMENT AND EQUIPMENT PROVIDED BY OTHERS. ELECTRICAL CONTRACTOR WILL DISCONNECT ALL MECHANICAL EQUIPMENT.

DEMOLITION: ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. DEMOLITION INFORMATION HAS BEEN SHOWN ON THE CONSTRUCTION DRAWINGS, IN THE SPECIFICATIONS OR INDICATED BELOW. ELECTRICAL DEVICES AND EQUIPMENT ARE FROM EXISTING RECORD DRAWINGS AND / OR SITE OBSERVATIONS. THEIR ACCURACY IS NOT GUARANTEED. IT WILL BE THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO VISIT THE SITE PRIOR TO BID AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BID AND INCLUDE ALL LABOR AND MATERIAL REQUIRED FOR THE WORK INDICATED IN THE CONSTRUCTION SET

THE PURPOSE OF THE DEMOLITION INFORMATION IS TO OUTLINE A GENERAL DIRECTION OF WHAT NEEDS TO BE REMOVED TO ACCOMPLISH THE RENOVATION WORK. THE WORK IS DIAGRAMMATIC IN NATURE AND IS NOT INTENDED TO BE ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING CONDITIONS AT THE SITE AND INCLUDE ALL WORK EVIDENT BY SITE INSPECTION WHETHER OR NOT SHOWN ON THE DRAWINGS, TO ACHIEVE THE DESIRED RESULTS INDICATED ON THE DOCUMENTS FOR THE FINISHED SPACES.

LIGHTING - EXISTING INTERIOR LUMINAIRES AND ASSOCIATED CIRCUITING WILL BE REMOVED UNLESS NOTED OTHERWISE ON DRAWINGS. REMOVE EXISTING LUMINAIRES AND ASSOCIATED BRANCH CIRCUITING INCLUDING BUT NOT BE LIMITED TO LUMINAIRES, CONDUIT, WIRE, AND SUPPORTS BACK TO PANEL. CONTRACTOR TO FIELD VERIFY.

POWER & SIGNAL - EXISTING RECEPTACLES, KITCHEN EQUIPMENT, FIRE ALARM DEVICES AND ASSOCIATED CIRCUITING WILL BE REMOVED UNLESS NOTED OTHERWISE ON DRAWINGS. REMOVE EXISTING DEVICES AND ASSOCIATED BRANCH CIRCUITING INCLUDING BUT NOT BE LIMITED TO JUNCTION BOXES, CONDUIT, WIRE, AND SUPPORTS BACK TO PANEL. CONTRACTOR TO FIELD VERIFY. UPDATE ALL PANEL SCHEDULES

KITCHEN EQUIPMENT - ELECTRICAL CONTRACTOR TO DISCONNECT ALL HARD WIRE CONNECTIONS TO EXISTING KITCHEN EQUIPMENT FOR REMOVAL

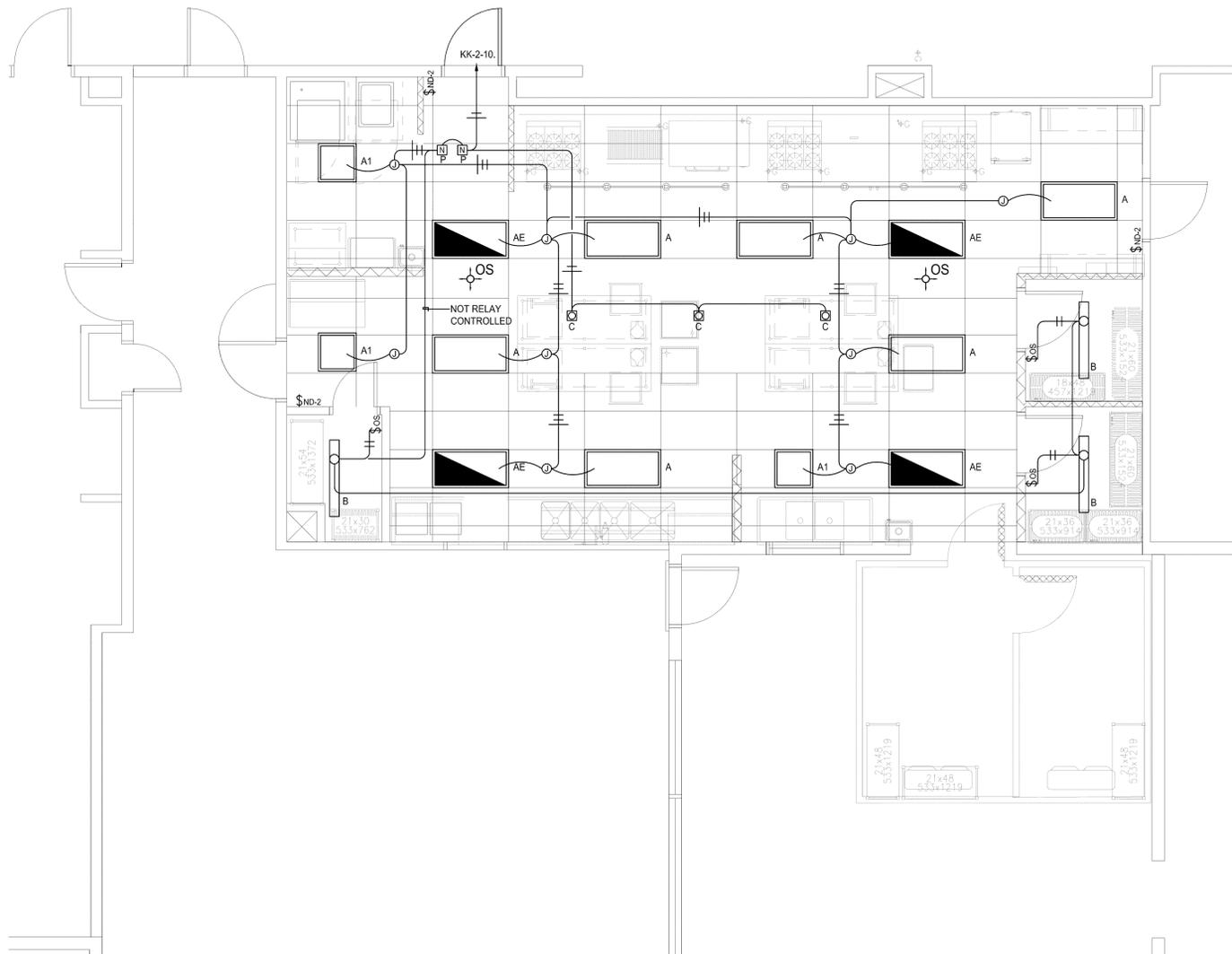
MECHANICAL - SEE MECHANICAL PLANS FOR ADDITIONAL DEMOLITION INFORMATION. MECHANICAL ROOF TOP EQUIPMENT WILL BE REMOVED UNLESS NOTED OTHERWISE. REMOVE EXISTING FEEDERS AND DISCONNECT SWITCHES INCLUDING BUT NOT BE LIMITED TO CONDUIT, WIRE, AND SUPPORTS BACK TO PANELS

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DAVID DOUGLAS SCHOOL DISTRICT
DAVID DOUGLAS HS SOUTH KILT
KITCHEN MODIFICATIONS
1001 SE 135TH AVE, PORTLAND, OR 97233
ENLARGED KITCHEN DEMO FLOOR PLAN

BBL1903
180319.00.1
PROJECT NUMBER
21 FEB 2019
DATE
REVISIONS

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1 ENLARGED NEW KITCHEN FLOOR PLAN
 E1.2 1/4" = 1'-0"

LUMINAIRE SCHEDULE

TYPE :	A	LED - SURFACE MOUNTED - 2x4	HOUSING :	STEEL
DESCRIPTION :	BALLAST :	ELECTRONIC DRIVER - 0-10V DIMMING	LENS / OPTICS :	ACRYLIC SATIN WHITE
VOLTAGE :	120-277V		REFLECTOR :	
LAMP TYPE :	LED - 4000K		DISTRIBUTION :	WHITE
LAMP QUANTITY :	1		FINISH :	47
EFFICIENCY :	MIN 6000 LUMENS		WATTAGE :	
OPTIONS :				
MANUFACTURER :	LITHONIA 2TL4-60L-FW-SWL-MV-EZ1-LP840 SERIES OR APPROVED EQUIVALENT			
TYPE :	AE	LED - SURFACE MOUNTED - 2x4	HOUSING :	STEEL
DESCRIPTION :	BALLAST :	ELECTRONIC DRIVER - 0-10V DIMMING	LENS / OPTICS :	ACRYLIC SATIN WHITE
VOLTAGE :	120-277V		REFLECTOR :	
LAMP TYPE :	LED - 4000K		DISTRIBUTION :	WHITE
LAMP QUANTITY :	1		FINISH :	47
EFFICIENCY :	MIN 6000 LUMENS		WATTAGE :	
OPTIONS :	1400 LUMEN BATTERY BACKUP			
MANUFACTURER :	LITHONIA 2TL4-60L-FW-SWL-MV-EZ1-LP840-EL14L SERIES OR APPROVED EQUIVALENT			
TYPE :	A1	LED - SURFACE MOUNTED - 2x2	HOUSING :	STEEL
DESCRIPTION :	BALLAST :	ELECTRONIC DRIVER - 0-10V DIMMING	LENS / OPTICS :	ACRYLIC SATIN WHITE
VOLTAGE :	120-277V		REFLECTOR :	
LAMP TYPE :	LED - 4000K		DISTRIBUTION :	WHITE
LAMP QUANTITY :	1		FINISH :	29
EFFICIENCY :	MIN 3300 LUMENS		WATTAGE :	
OPTIONS :				
MANUFACTURER :	LITHONIA 2TL2-33L-FW-SWL-MV-EZ1LP840 SERIES OR APPROVED EQUIVALENT			
TYPE :	B	LED - SURFACE OR CHAIN STRIP	HOUSING :	STEEL
DESCRIPTION :	BALLAST :	ELECTRONIC DRIVER	LENS / OPTICS :	ACRYLIC DROP LENS
VOLTAGE :	120-277V		REFLECTOR :	
LAMP TYPE :	LED - 4000K		DISTRIBUTION :	WHITE
LAMP QUANTITY :	1		FINISH :	42
EFFICIENCY :	MIN 3000 LUMENS		WATTAGE :	
OPTIONS :	SURFACE OR AIR CRAFT CABLE			
MANUFACTURER :	LITHONIA ZL1D-L48-3000LM-FST-MV-40K-90CRI-WH-ZACVH SERIES OR APPROVED EQUIVALENT			
TYPE :	C	LED - RECESSED DOWNLIGHT 6" ROUND	HOUSING :	DIE CAST ALUMINUM
DESCRIPTION :	BALLAST :	ELECTRONIC DRIVER - 0-10V DIMMING	LENS / OPTICS :	CLEAR
VOLTAGE :	120V		REFLECTOR :	SEMI-SPECULAR
LAMP TYPE :	LED - 4000K, 90 CRI		DISTRIBUTION :	MED WIDE
LAMP QUANTITY :	1		FINISH :	WHITE
EFFICIENCY :	MIN 1000 LUMENS		WATTAGE :	12
OPTIONS :	PROVIDE SHEET ROCK BOX FOR IC RATING			
MANUFACTURER :	GOTHAM EVO-40/10-6AR-MWD-LSS-EZ1 SERIES OR APPROVED EQUIVALENT			

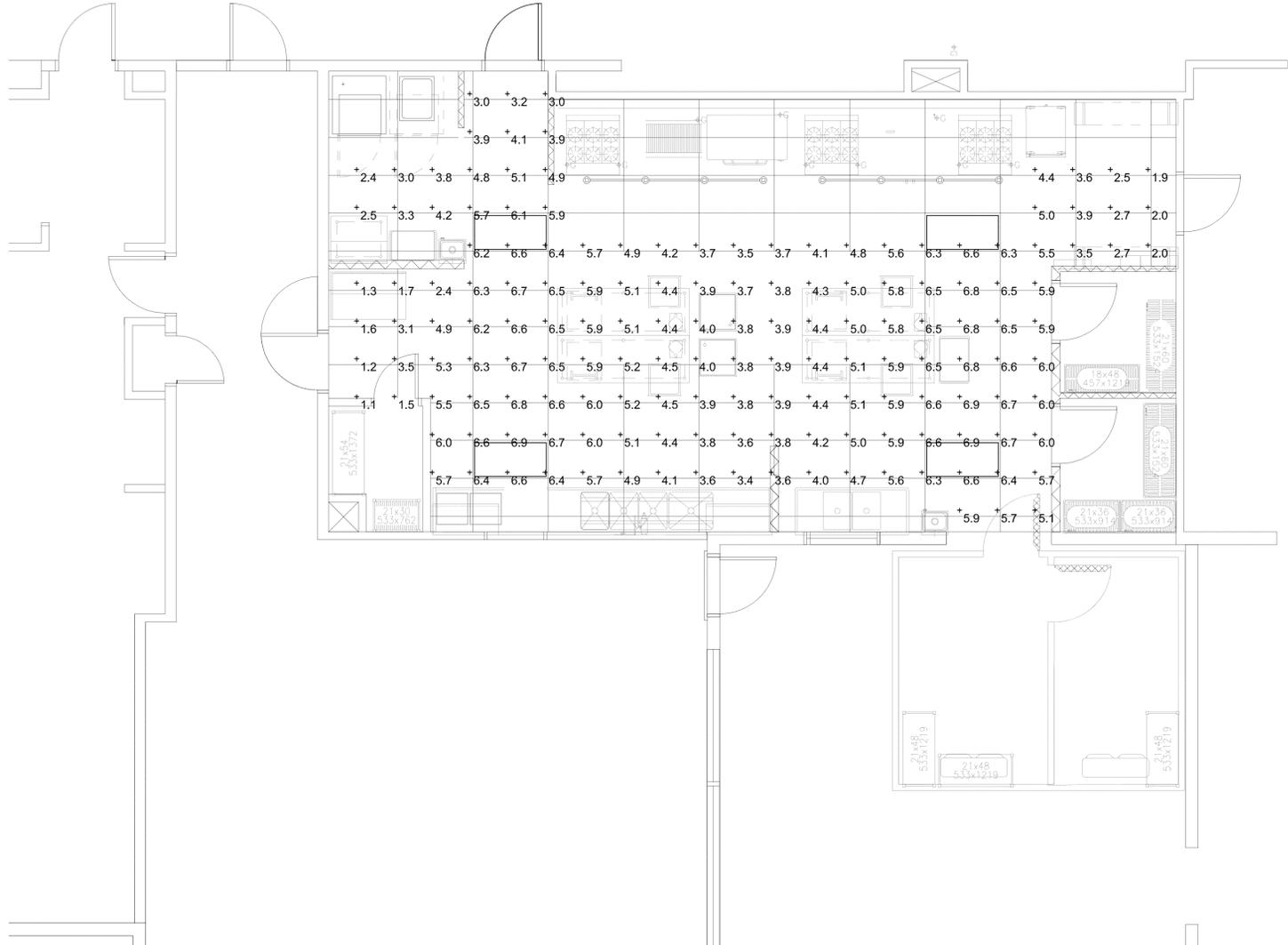
GENERAL NOTES

- ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REFERENCE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE FOR CONDUIT FILL FOR THE EXACT TYPE OF CONDUCTOR BEING INSTALLED AND SIZE THE CONDUIT AS REQUIRED BY CODE.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY VOLTAGE DROP FOR EXACT ROUTING AND LENGTH OF ALL CONDUCTORS.
- ALL MOUNTING HEIGHTS FOR LUMINAIRES ARE TO BOTTOM OF FIXTURE OR AS NOTED IN LUMINAIRE SCHEDULE.
- VERIFY AND CONFIRM ALL DIMENSIONS AND CONDITIONS PRIOR TO START OF WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO START OF WORK.
- PATCH AND REPAIR EXISTING WORK DAMAGED DURING CONSTRUCTION OF NEW CONDITION.
- PROJECT WILL COMPLY WITH STATE ENERGY CODE. LIGHTING CONTROLS WHICH INCLUDE DAYLIGHT AND / OR OCCUPANT SENSING AUTOMATIC CONTROLS, AUTOMATIC SHUT-OFF CONTROLS, OCCUPANCY SENSORS, OR AUTOMATIC TIME SWITCHES. THE LIGHTING CONTROLS SHALL BE TESTED TO ENSURE THAT CONTROL DEVICES, COMPONENTS, EQUIPMENT AND SYSTEMS ARE CALIBRATED, ADJUSTED AND OPERATE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS. SEQUENCES OF OPERATION SHALL BE FUNCTIONALLY TESTED TO ENSURE THEY OPERATE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS. A COMPLETE REPORT OF TEST PROCEDURES AND RESULTS SHALL BE PREPARED AND FILED WITH THE OWNER.
- SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL FIRE RATED WALLS. PROVIDE FIRE STOPPING AS REQUIRED FOR RATING.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE BRANCH CIRCUITING AND SWITCHING FOR A COMPLETE AND OPERATIONAL LIGHTING SYSTEM. PROVIDE ALL LABOR AND MATERIAL INCLUDING BUT NOT BE LIMITED TO CONDUIT, JUNCTION BOXES, SWITCHES, CAT 5 CONTROL CABLE TO EACH LUMINAIRE (WHERE APPLICABLE), CONDUCTORS AND SUPPORTS.
- ALL CONDUITS WILL BE CONCEALED. NO SURFACE MOUNTED CONDUIT WILL BE ALLOWED WITHIN THE KILT KITCHEN AREA. OTHER AREAS WILL REQUIRE OWNER'S PRIOR APPROVAL.

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STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Kilt Kitchen	+	4.9 fc	6.9 fc	1.1 fc	6.3:1	4.5:1

GENERAL NOTES

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- PATCH AND REPAIR EXISTING WORK DAMAGED DURING CONSTRUCTION OF NEW CONDITION.
- MEANS OF EGRESS ILLUMINATION SHALL BE NOT LESS THAN 1-FOOTCANDLE AT THE WALKING SURFACE WHERE REQUIRED IBC 1006.
- EXIT SIGNS SHALL BE ILLUMINATED AT ALL TIMES, IBC 1011.5.3.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE BRANCH CIRCUITING AND SWITCHING FOR A COMPLETE AND OPERATIONAL LIGHTING SYSTEM. PROVIDE ALL LABOR AND MATERIAL INCLUDING BUT NOT BE LIMITED TO CONDUIT, JUNCTION BOXES, SWITCHES, CAT 5 CONTROL CABLE TO EACH LUMINAIRE (WHERE APPLICABLE), CONDUCTORS AND SUPPORTS.
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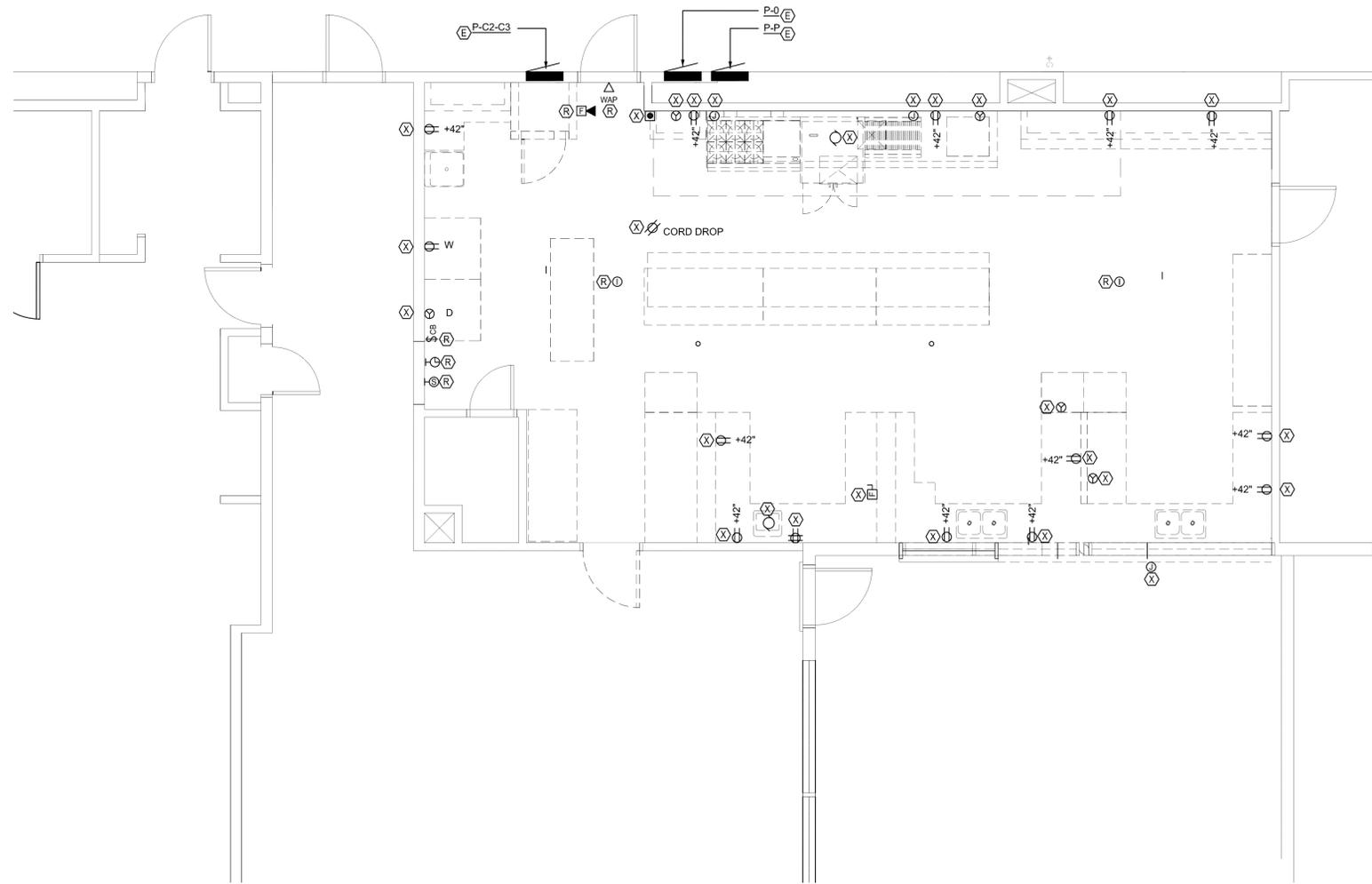
1 ENLARGED NEW KITCHEN FLOOR PLAN
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 EGRESS PHOTOMETRICS

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DEMOLITION SCOPE OF WORK

SCOPE: THE SCOPE OF WORK INCLUDES THE REMODEL OF THE EXISTING BUILDING. THE WORK WILL INCLUDE BUT NOT BE LIMITED TO DEMOLITION (SEE BELOW) OF THE LIGHTING, POWER, AND DISTRIBUTION EQUIPMENT SYSTEMS. THE DEMO OF ALL MECHANICAL EQUIPMENT AND EQUIPMENT PROVIDED BY OTHERS, ELECTRICAL CONTRACTOR WILL DISCONNECT ALL MECHANICAL EQUIPMENT.

DEMOLITION: ELECTRICAL DRAWINGS ARE DIAGRAMMATIC, DEMOLITION INFORMATION HAS BEEN SHOWN ON THE CONSTRUCTION DRAWINGS, IN THE SPECIFICATIONS OR INDICATED BELOW. ELECTRICAL DEVICES AND EQUIPMENT ARE FROM EXISTING RECORD DRAWINGS AND / OR SITE OBSERVATIONS. THEIR ACCURACY IS NOT GUARANTEED. IT WILL BE THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO VISIT THE SITE PRIOR TO BID AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BID AND INCLUDE ALL LABOR AND MATERIAL REQUIRED FOR THE WORK INDICATED IN THE CONSTRUCTION SET

THE PURPOSE OF THE DEMOLITION INFORMATION IS TO OUTLINE A GENERAL DIRECTION OF WHAT NEEDS TO BE REMOVED TO ACCOMPLISH THE RENOVATION WORK. THE WORK IS DIAGRAMMATIC IN NATURE AND IS NOT INTENDED TO BE ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING CONDITIONS AT THE SITE AND INCLUDE ALL WORK EVIDENT BY SITE INSPECTION WHETHER OR NOT SHOWN ON THE DRAWINGS, TO ACHIEVE THE DESIRED RESULTS INDICATED ON THE DOCUMENTS FOR THE FINISHED SPACES.

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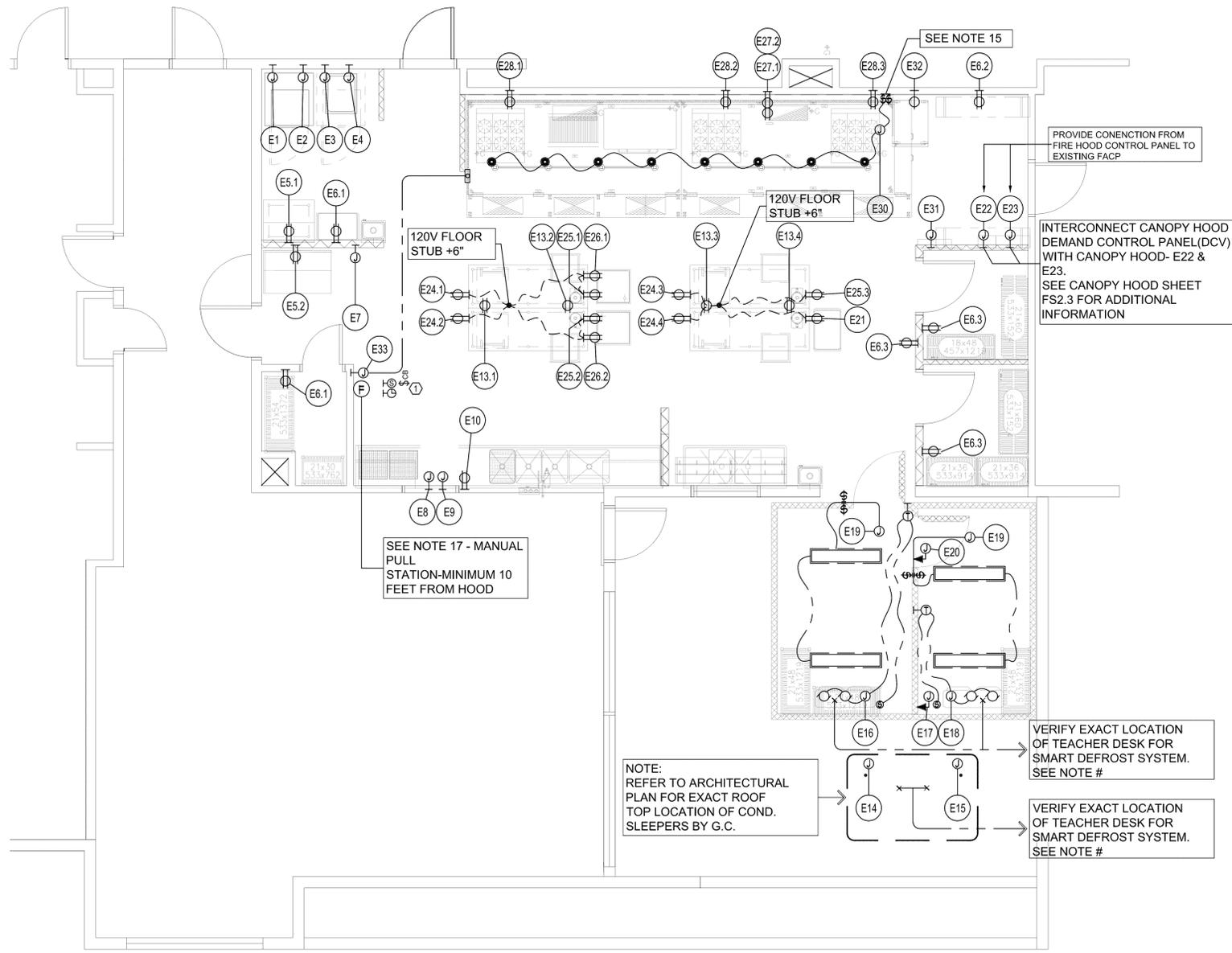
1 ENLARGED DEMO KITCHEN FLOOR PLAN
E2.1 1/4" = 1'-0"

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ENLARGED KITCHEN DEMO FLOOR PLAN -
FOAER

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GENERAL NOTES

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5. ALL CONDUITS WILL BE CONCEALED. NO SURFACE MOUNTED CONDUIT WILL BE ALLOWED WITHIN THE KILT KITCHEN AREA. OTHER AREAS WILL REQUIRE OWNER'S PRIOR APPROVAL.

SHEET NOTES

- ① RELOCATE CLOCK, INTERCOM SPEAKER AND CALL BACK SWITCH. TEST LV SYSTEMS PRIOR TO BEGINNING OF CONSTRUCTION TO VERIFY FUNCTIONALITY OF THE EXISTING DEVICES. EXTEND OR REPLACE CONDUCTORS TO NEW LOCATIONS SHOWN. TEST SYSTEM AGAIN FOR FUNCTIONALITY. CONTRACTOR IS RESPONSIBLE FOR A FULLY OPERATIONAL SYSTEM.

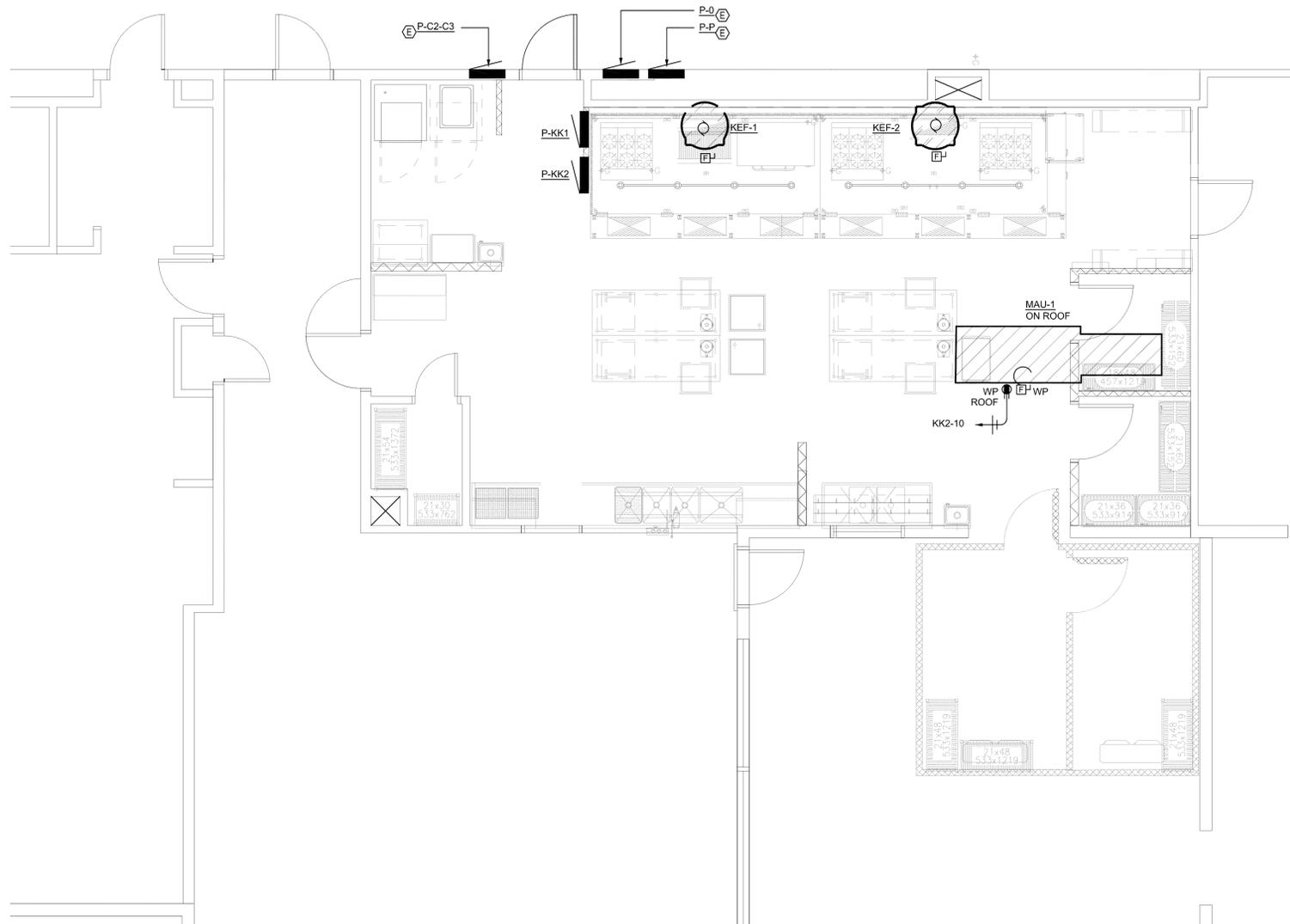
1 ENLARGED NEW KITCHEN FLOOR PLAN
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MECHANICAL EQUIPMENT CONNECTION SCHEDULE

Designation	Description	Voltage	Ph	Load	Kw/Hp/Amp	Panel	Circuit	Feeder (CU ONLY)			Notes
								Qty	Size	Conduit	
MUA-1	Make Up Air Unit	208	3	18.2	MCA	KK2	38.40.42.	3	#10	3/4	1
KEF-1	Exhaust Fan	120	1	9.2	MCA	KK2	44.46.48.	3	#12	3/4	1
KEF-2	Exhaust Fan	120	1	9.2	MCA	KK2	50.52.54.	3	#12	3/4	1

- General Notes:**
- 1 PROVIDE CONDUIT FOR ALL FEEDERS, SIZE AS REQUIRED PER THE CURRENT EDITION OF THE N.E.C. FOR CONDUCTORS SHOWN, ROUTE FROM UNIT TO PANEL DESIGNATED
 - 2 COORDINATE EXACT LOCATIONS AND CONNECTION REQUIREMENTS OF EQUIPMENT WITH MECHANICAL CONTRACTOR AND OTHER TRADES PRIOR TO ROUGH-IN.
 - 3 COORDINATE ELECTRICAL REQUIREMENTS AND INSTALLATION WITH EQUIPMENT SUPPLIER
 - 4 PROVIDE INSULATED GROUND WIRE IN ALL CONDUITS, NOT SHOWN IN CONDUCTOR QUANTITY
 - 5 CONNECT TO DUCT DETECTORS PROVIDED BY DIVISION 23 INSTALLED AND WIRED BY DIVISION 26.
 - 6 CONNECT TO MOTOR STARTERS PROVIDED BY DIVISION 23 INSTALLED AND WIRED BY DIVISION 26.
 - 7 RECEPTACLES ARE PROVIDED WITH MECHANICAL UNITS, CONNECT AS SHOWN

- Schedule Notes:**
- 1 PROVIDE DISCONNECT SWITCH FOR MECHANICAL EQUIPMENT. COORDINATE LOCATION WITH EQUIPMENT INSTALLER. SWITCH WILL BE INDEPENDANTLY MOUNTED FROM EQUIPMENT.

GENERAL NOTES

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E2.3 ENLARGED NEW KITCHEN FLOOR PLAN
 1/4" = 1'-0"

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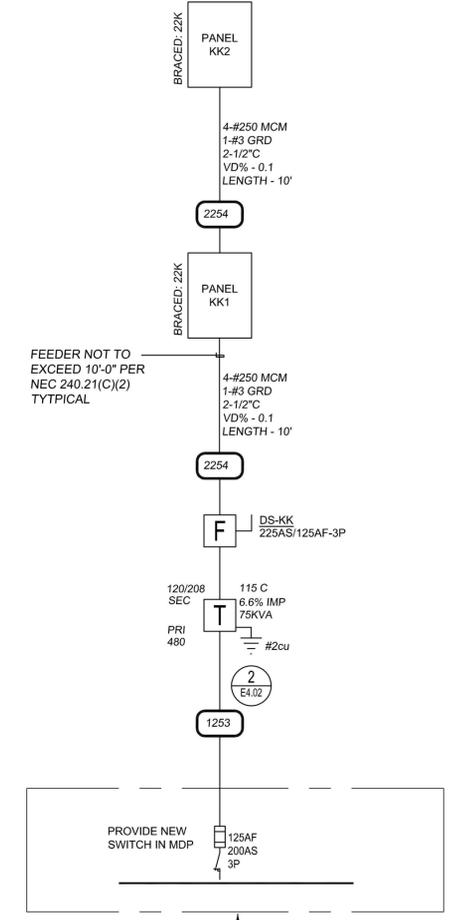
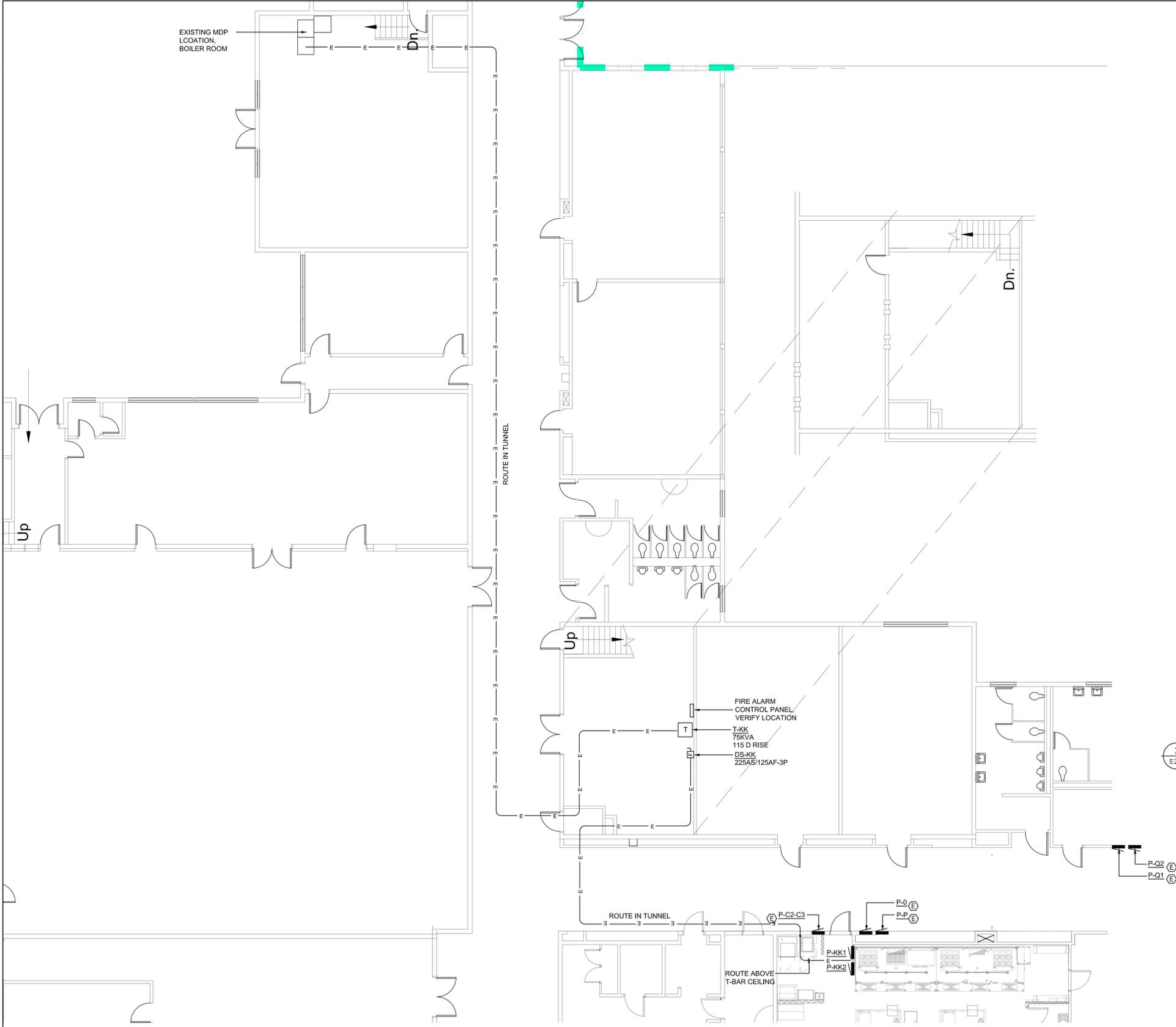
E2.3

BID SET

© COMPASS REAL ARCHITECTS

SYSTEM DESIGN CONSULTANTS INC.
333 SE SECOND AVE, SUITE 100
PORTLAND, OREGON 97214
503-248-0227 FAX 248-0240
CONTACT: JEFFREY DAVIS

REGISTERED PROFESSIONAL ENGINEER
18197
JOHN FRANK ROGERS
DEC. 6, 1995
EXPIRES 12/31/20



⑤ MAIN DISTRIBUTION PANEL - MDP
480Y/277 VOLT, 3 PHASE, 4 WIRE
1200 AMP BUS CU

② ONE LINE DIAGRAM - PARTIAL
E2.4 480 VOLT THREE PHASE, THREE WIRE

GENERAL NOTES

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① OVERALL FLOOR PLAN
E2.4 1/8" = 1'-0"

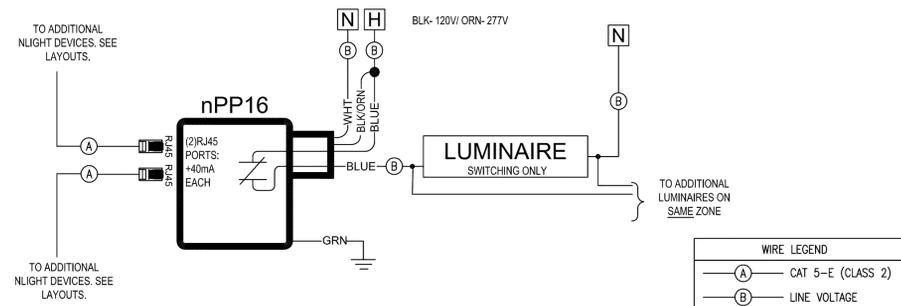
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OVERALL FLOOR PLAN - EQUIPMENT

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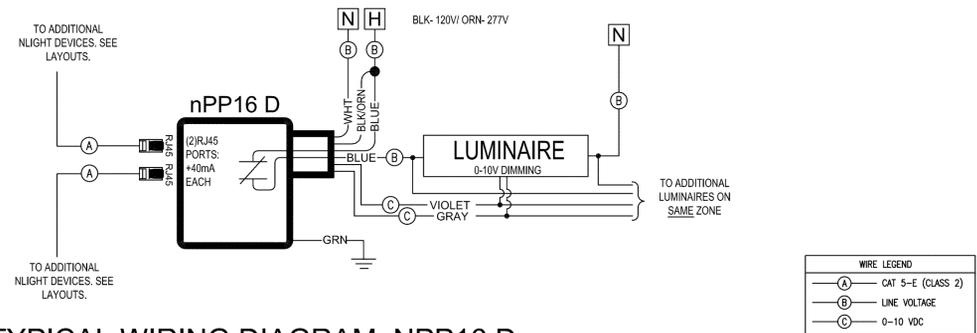
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TYPICAL WIRING DIAGRAM: NPP16

N. T. S.

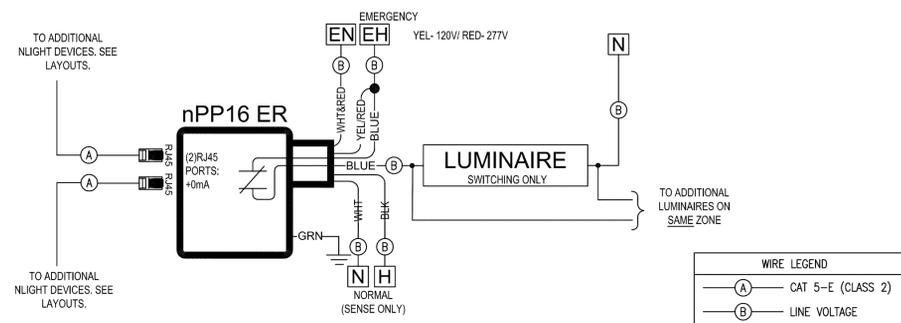
WIRE LEGEND	
(A)	CAT 5-E (CLASS 2)
(B)	LINE VOLTAGE



TYPICAL WIRING DIAGRAM: NPP16 D

N. T. S.

WIRE LEGEND	
(A)	CAT 5-E (CLASS 2)
(B)	LINE VOLTAGE
(C)	0-10 VDC

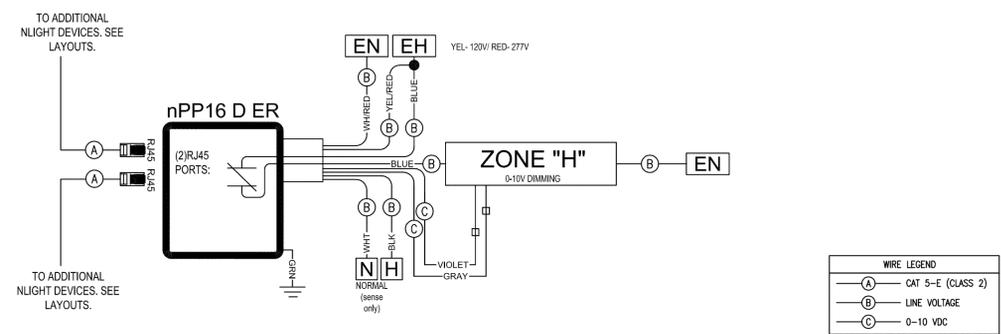


TYPICAL WIRING DIAGRAM: NPP16 ER

N. T. S.

WIRE LEGEND	
(A)	CAT 5-E (CLASS 2)
(B)	LINE VOLTAGE

EMERGENCY



TYPICAL WIRING DIAGRAM: NPP16 D ER

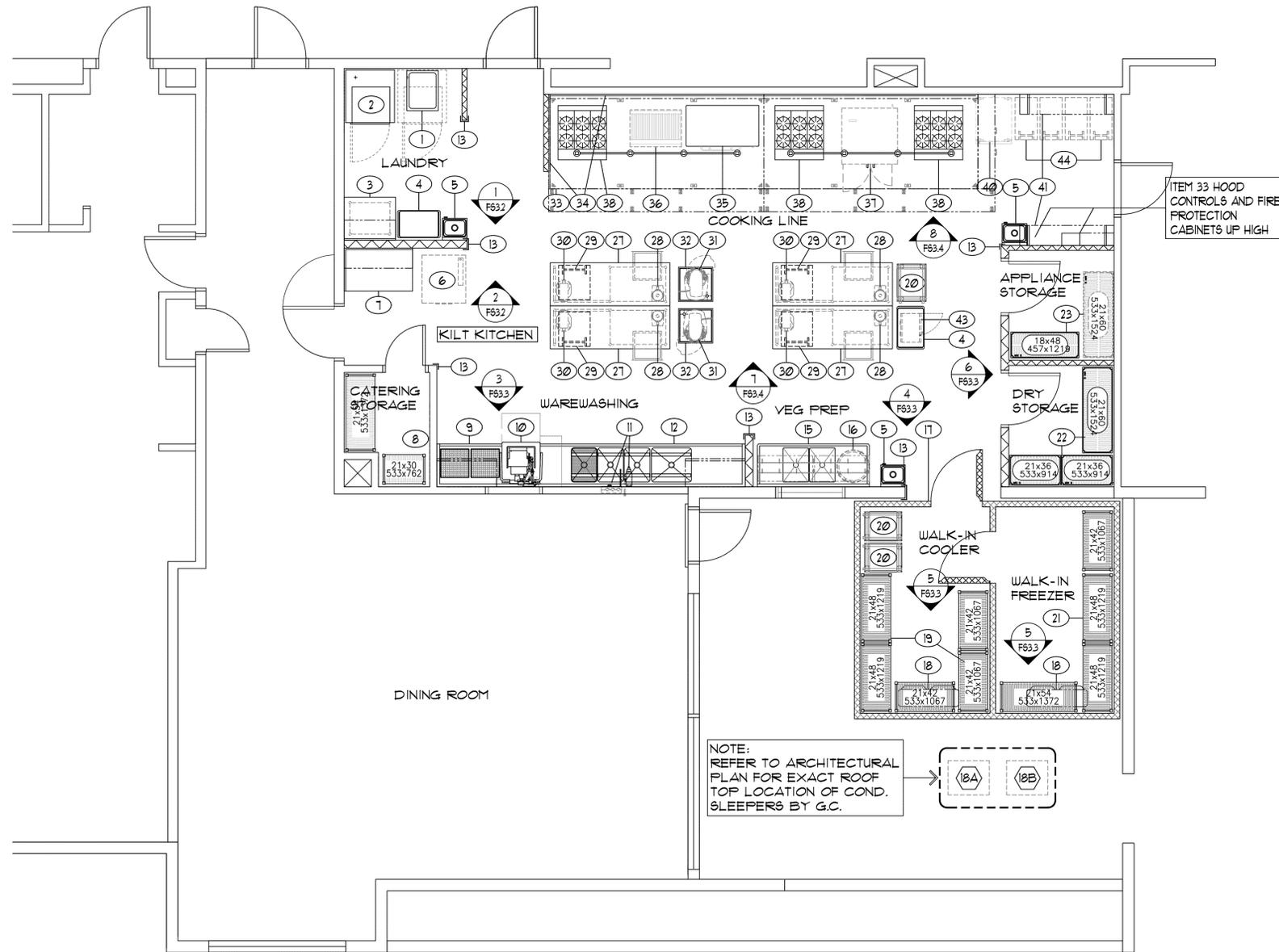
N. T. S.

WIRE LEGEND	
(A)	CAT 5-E (CLASS 2)
(B)	LINE VOLTAGE
(C)	0-10 VDC

PARTIAL LEGEND (LTG)

- Ⓢ₁₆ WSD-2P (SENSOR SWITCH) - WALL SWITCH
- Ⓢ₁₇ nPODM 1SB - WALL SWITCH (ON-OFF)
- Ⓢ₁₈ nPODM 2S - WALL SWITCH (2 POLE / ON-OFF)
- Ⓢ₁₉ nPODM DX - WALL SWITCH
- Ⓢ₂₀ nPODM DX - WALL SWITCH - ON/OFF - RAISE/LOWER - W/ 0-10V DIMMING
- Ⓢ₂₁₋₂₂ nPODM 2P DX
- Ⓢ₂₃ WSX-PDT-EZ-D-SA - WALL SWITCH W/ OCCUPANCY SENSOR W/ 0-10VAC DIMMING
- Ⓢ₂₄ nCM PDT 10
- Ⓢ₂₅ nCM ADCX - AUTOMATIC DIMMING CONTROL PHOTOCELL
- Ⓢ₂₆ nIO IS - CONTACT CLOSURE INPUT DEVICE
- Ⓢ₂₇ nPP16 D - POWER RELAY PACK, 16A, 120/277 VAC W/ 0-10VDC DIMMING
- Ⓢ₂₈ nPP16 D ER - POWER RELAY PACK, 16A, 120/277 VAC UL-924, W/ 0-10VDC DIMMING
- Ⓢ₂₉ nPOD GFX - GRAPHIC WALL POD
- Ⓢ₃₀ ECLYPSE W/ ENCLOSURE
- DENOTES CAT5E CABLE (VERIFY WITH MANUFACTUER)
- DENOTES 2 #18 DIMMING CONDUCTOR (VERIFY WITH MANUFACTUER)

NOTE:
 #1 - UNLESS OTHERWISE NOTED ALL MODEL NUMBERS REFER TO nLIGHT COMPONENTS
 #2 - CONNECT nLIGHT ENABLED FIXTURES AND nLIGHT CONTROL COMPONENTS VIA CAT5E CABLE PER MANUFACTURES RECOMMENDATION.
 #3 - CONNECT FIXTURES AND CONTROL COMPONENTS NOT nLIGHT ENABLE WITH LV CONDUCTORS, VERIFY QUANTITY WITH LUMINAIRE PROVIDED, VERIFY VOLTAGE DROP AND SIZE AS REQUIRED.
 #4 - PROVIDE FACTORY ENGINEERED DRAWINGS SHOWING EQUIPMENT, LAYOUT, SYSTEM RISER, WIRING AND COMPONENT DATA SHEETS.
 #5 - PROVIDE FACTORY AUTHORIZED SYSTEM START-UP AND OWNER TRAINING.
 #6 - ELECTRICAL CONTRACTOR WILL PROVIDE ALL LABOR AND MATERIAL REQUIRED FOR A COMPELTE AND OPERATIONAL LIGHTING AND CONTROL SYSTEMS INCLUDING BUT NOT BE LIMITED TO CONDUCTORS, LV CONDUCTORS, CONDUIT, JUNCTION BOXES, POWER SUPPLIES, SWITCHES AND SUPPORTS WEATHER SPECIFICALLY SHOWN

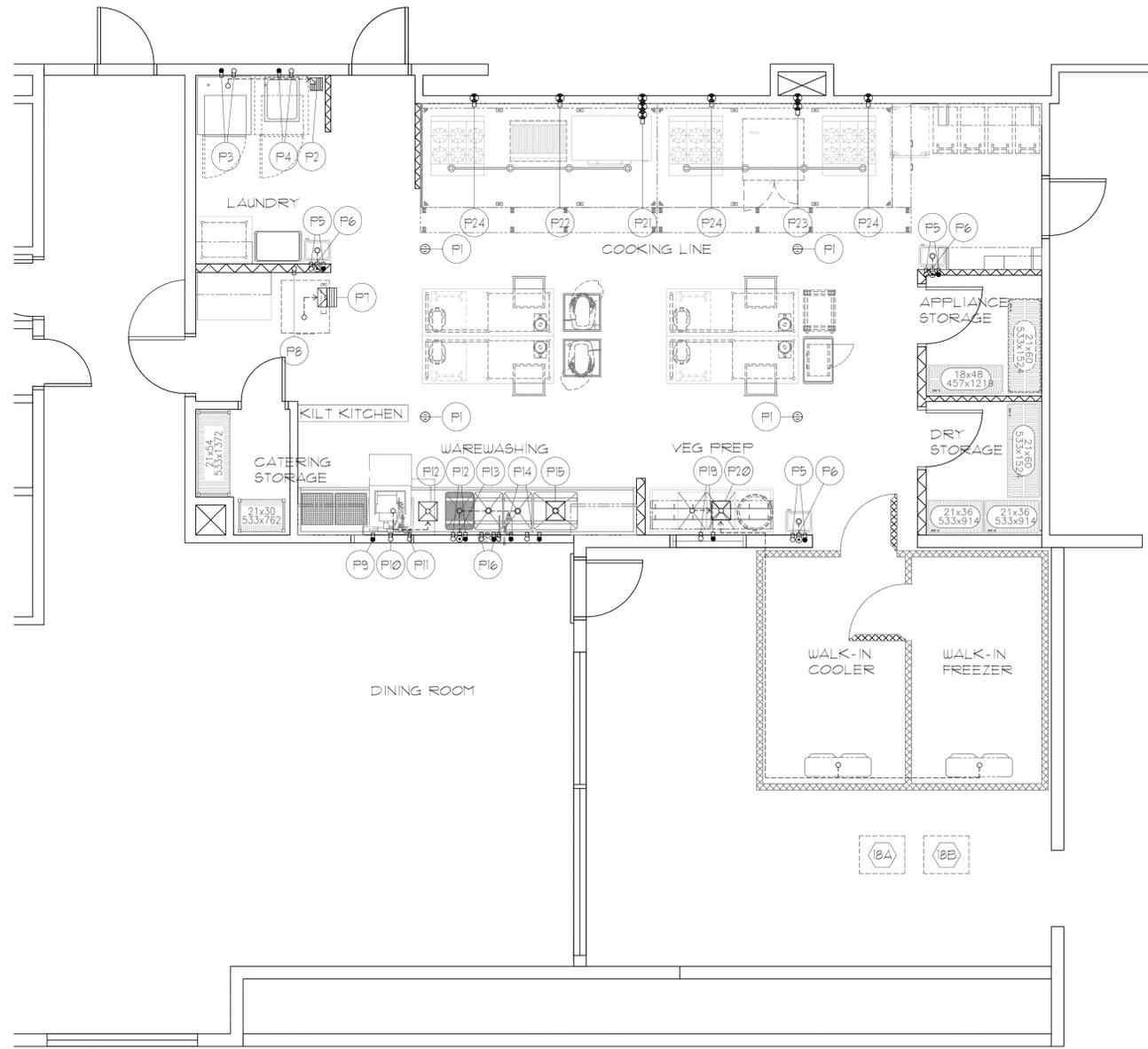


EQUIPMENT SCHEDULE

ITEM	DESCRIPTION	QUAN	REMARKS
1	SOILED LAUNDRY CART	1	---
2	STACKING COMMERCIAL WASHER/DRYERS	2	ONE IS FUTURE
3	FOLDING TABLE	1	---
4	MOBILE UTILITY CARTS	2	---
5	HAND WASHING SINKS	3	---
6	CUBE ICE MACHINE WITH STORAGE BIN	1	EXISTING EQUIPMENT - RELOCATE/REINSTALL
7	DINING SUPPORT COUNTER	1	---
8	CATERING SHELVING	LOT	---
9	CLEAN DISHTABLE	1	---
10	VENTLESS WAREWASHER WITH BOOSTER HEATER	1	---
11	HOSE REEL WITH CONTROL CABINET	1	---
12	SOILED DISHTABLE WITH POTWASHING SINKS	1	---
13	CORNER/CHANNEL GUARDS	LOT	NOT YET SHOWN
14	NOT USED	---	---
15	VEGETABLE PREP SINK TABLE	1	---
16	WASTE RECEPTACLE	1	EXISTING EQUIPMENT - RELOCATE/REINSTALL
17	WALK-IN COLD STORAGE ROOMS	2	---
18	REFRIGERATION SYSTEMS	2	---
19	WALK-IN COOLER SHELVING	LOT	---
20	MOBILE SHEET PAN RACKS	2	---
21	WALK-IN FREEZER SHELVING	LOT	---
22	DRY STORAGE SHELVING	LOT	---
23	APPLIANCE STORAGE SHELVING	LOT	ONE NEW AND ONE EXISTING
24	NOT USED	---	---
25	NOT USED	---	---
26	NOT USED	---	---
27	STUDENT WORK STATIONS	4	---
28	FOOD PROCESSORS	4	EXISTING EQUIPMENT - RELOCATE/REINSTALL
29	MOBILE INGREDIENT BINS	4	EXISTING EQUIPMENT - RELOCATE/REINSTALL
30	5-QUART MIXERS	4	EXISTING EQUIPMENT - RELOCATE/REINSTALL
31	20-QUART MIXERS	2	EXISTING EQUIPMENT - RELOCATE/REINSTALL
32	MOBILE MIXER CARTS	2	---
33	CANOPY HOOD WITH FIRE PROTECTION SYSTEM	1	---
34	STAINLESS STEEL WALL FLASHING	LOT	---
35	TRIPLE DECK OVENS	1	ON CASTERS
36	BROILER WITH STAND	1	EXISTING EQUIPMENT - RELOCATE/REINSTALL
37	DOUBLE STACK CONVECTION OVENS	1	TOP NEW/BOTTOM OVEN EXISTING - RELOCATE/REINSTALL
38	OPEN BURNER RANGES	3	ON CASTERS
39	NOT USED	---	---
40	MOBILE HOT HOLDING/PROOFING CABINET	1	EXISTING EQUIPMENT - RELOCATE/REINSTALL
41	WALL MOUNT SHELVES	2	CONFIRM HEIGHT WITH OWNER
42	NOT USED	---	---
43	MICROWAVE OVEN	1	EXISTING EQUIPMENT - RELOCATE/REINSTALL
44	MOBILE INGREDIENT BINS	4	EXISTING EQUIPMENT - RELOCATE/REINSTALL

1 FLOOR PLAN - FOOD SERVICE EQUIPMENT PLAN
1/4" = 1'-0"





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

PLUMBING SCHEDULE

ITEM NO.	P. NO.	SIZE	DESCRIPTION	LOCATION	HEIGHT	SERVICE TO :	REMARKS:
---	P1	---	FLOOR DRAIN	FLOOR	-1/2"	AREA DRAIN	---
2	P2	8" x 8"	FLOOR SINK	FLOOR	0"	STACKING COMMERCIAL WASHER/DRYER	THREE-QUARTER GRATE
2	P3	3/4"	HOT & COLD	WALL	24"	STACKING COMMERCIAL WASHER/DRYER	35 GPH HOT @ 120" . COLD FOR FIRE PROTECTION SYSTEM
2	P4	3/4"	HOT & COLD	WALL	24"	STACKING COMMERCIAL WASHER/DRYER	35 GPH HOT @ 120" . CAP FOR FUTURE EQUIPMENT
5	P5	1/2"	HOT & COLD	WALL	22"	HAND WASHING SINK	20 GPH HOT
5	P6	1-1/2"	WASTE	WALL	20"	HAND WASHING SINK	---
6	P7	12" x 12"	FLOOR SINK	FLOOR	0"	CUBE ICE MACHINE WITH BIN	HALF GRATE
6	P8	1/2"	COLD	WALL	VERIFY	CUBE ICE MACHINE WITH BIN	VERIFY REQUIREMENTS WITH EXISTING EQUIPMENT
10	P9	1/2"	HOT @ 110"	WALL	42"	VENTLESS WAREWASHER WITH BOOSTER HEATER	30 GPH HOT @ 20 PSI
10	P10	1/2"	COLD	WALL	73"	WAREWASHER INTERNAL CONDENSING SYSTEM	---
10	P11	1/2"	COLD	WALL	12"	WAREWASHER DRAIN WATER TEMPERING	---
10	P12	12" x 12"	FLOOR SINK	FLOOR	0"	VENTLESS WAREWASHER WITH BOOSTER HEATER	NO GRATE
12	P13	2"	WASTE	WALL	9"	(3) SINK DRAINS	CONNECT TO GREASE INTERCEPTOR
12	P14	1/2"	HOT & COLD	WALL	16"	SINK FAUCETS	20 GPH HOT
12	P15	12" x 12"	FLOOR SINK	FLOOR	0"	(1) SINK DRAIN	NO GRATE
11	P16	1/2"	HOT & COLD	WALL	78"	HOSE REEL WITH RECESSED CONTROL CABINET	40 GPH HOT
---	P17	---	NOT USED	---	---	---	---
---	P18	---	NOT USED	---	---	---	---
15	P19	1/2"	HOT & COLD	WALL	16"	SINK FAUCET	20 GPH HOT
15	P20	12" x 12"	FLOOR SINK	FLOOR	0"	(2) SINK DRAINS & WALK-IN EVAPORATOR DRAINS	NO GRATE
35	P21	3/4"	GAS	WALL	21"/49"/71"	TRIPPLE STACK DECK OVENS	20M BTU EACH CONNECTION- QUICK DISCONNECTS
36	P22	3/4"	GAS	WALL	26"	BROILER WITH STAND (EXISTING EQUIPMENT)	120M BTU TOTAL CONNECTION- QUICK DISCONNECT
37	P23	1/2"	GAS (STACKED)	WALL	22" 54"	DOUBLE STACK CONVECTION OVENS (ONE NEW)	60M BTU EACH CONNECTION- QUICK DISCONNECTS
38	P24	3/4"	GAS	WALL	34"	OPEN BURNER RANGE	184M BTU TOTAL CONNECTION- QUICK DISCONNECT
---	P25	---	NOT USED	---	---	---	---
---	P26	---	NOT USED	---	---	---	---

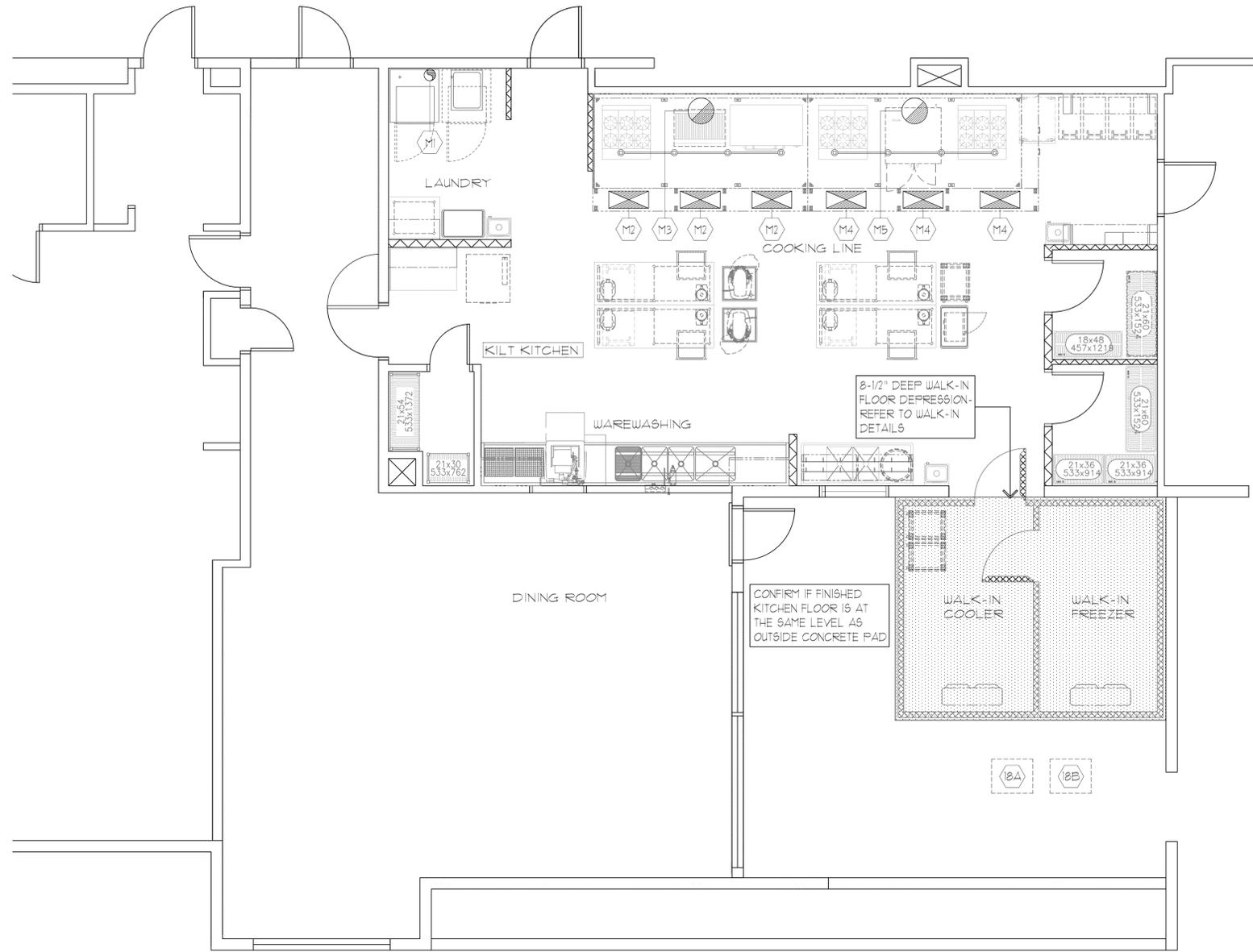
PLUMBING NOTES

- THIS DRAWING IS NOT TO BE USED FOR ESTABLISHING ROUGH-IN LOCATIONS. REFER TO DIMENSIONED DRAWING PREPARED BY THE KITCHEN EQUIPMENT CONTRACTOR.
- UNDER PLUMBING WORK OF DIVISION 22, MAKE ALL ROUGH-INS AND FINAL CONNECTIONS IN CONFORMANCE WITH LOCAL CODES. PROVIDE SHUT-OFF VALVES WITH PERMANENT NAME TAGS IDENTIFYING SUPPLY LINES TO EACH INDIVIDUAL PIECE OF EQUIPMENT. INCLUDE TRAPS, TAIL PIECES, AND LINE STRAINERS AS REQUIRED.
- UNDER PLUMBING WORK OF DIVISION 22, FURNISH AND INSTALL ALL FLOOR SINKS AND AREA DRAINS FLUSH WITH FINISHED FLOOR IF CODE ALLOWS.
- UNDER PLUMBING WORK OF DIVISION 22, FURNISH AND INSTALL GREASE TRAP OR INTERCEPTOR AS REQUIRED.
- UNDER PLUMBING WORK OF DIVISION 22, FURNISH AND INSTALL ALL SINK WASTE LINES. USE COPPER TUBING UNEXPOSED AND PAINTED WHERE LINES ARE VISIBLE. NO PVC PIPING IS ACCEPTABLE.
- UNDER KITCHEN EQUIPMENT WORK OF DIVISION 11, FURNISH AND INSTALL ALL INDIRECT WASTE LINES FROM EQUIPMENT LOCATED AT CUSTOM COUNTERS. USE COPPER TUBING AND PAINT VISIBLE LINES. NO PVC PIPING IS ACCEPTABLE.
- UNDER KITCHEN EQUIPMENT WORK OF DIVISION 11, PROVIDE FAUCETS AT EQUIPMENT. UNDER PLUMBING WORK OF DIVISION 22, INSTALL AND CONNECT FAUCETS.
- UNDER PLUMBING WORK OF DIVISION 22, FURNISH AND INSTALL CHROME PLATED VACUUM BREAKERS OR BACKSYPHONING DEVICES ON SUPPLY LINES TO EQUIPMENT AS REQUIRED BY CODES.
- UNDER PLUMBING WORK OF DIVISION 22, FURNISH AND INSTALL STAINLESS STEEL OR CHROME PLATED ESCUTCHEON PLATES FOR ALL WATER LINES PENETRATING COUNTER TOPS AND BACK SPLASHES.
- UNDER PLUMBING WORK OF DIVISION 22, FURNISH PRESSURE REDUCING VALVE FOR ALL GAS, STEAM, AND WATER LINES. MAXIMUM WATER PRESSURE AT BOOSTER HEATER AND DISHWASHER SHALL BE 20 PSI.
- UNDER KITCHEN EQUIPMENT WORK OF DIVISION 11, FURNISH AND INSTALL WALK-IN COLD STORAGE ROOM EVAPORATOR COPPER DRAIN LINES. TRAP AT OUTLET END.
- UNDER KITCHEN EQUIPMENT WORK OF DIVISION 11, FURNISH GAS QUICK DISCONNECT ASSEMBLIES WITH CABLE RESTRAINTS FOR EACH GAS FIRED COOKING APPLIANCE.
- UNDER PLUMBING WORK OF DIVISION 22, PROVIDE 110 DEGREE HOT WATER SUPPLY AT WAREWASHER/ BOOSTER HEATER AND HOSE REEL AS SHOWN. VERIFY REQUIRED TEMPERATURE FOR SUPPLY AT SINK FAUCETS WITH LOCAL AND NATIONAL CODES.
- UNDER PLUMBING WORK OF DIVISION 22, FURNISH AND INSTALL A SOLENOID VALVE ON PRIMARY GAS SUPPLY TO SHUT-OFF EQUIPMENT DURING FIRE SYSTEM ACTIVATION. SOLENOID SHALL BE ACCESSIBLE FOR SERVICING, TESTING, AND RESETING IN THE EVENT OF SYSTEM ACTIVATION.
- SEE PLUMBING AND MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

PLUMBING/MECHANICAL SYMBOL LEGEND

COLD WATER	⊖
HOT WATER	⊕
WASTE	⊗
FLOOR DRAIN	⊙
FLOOR SINK	⊠



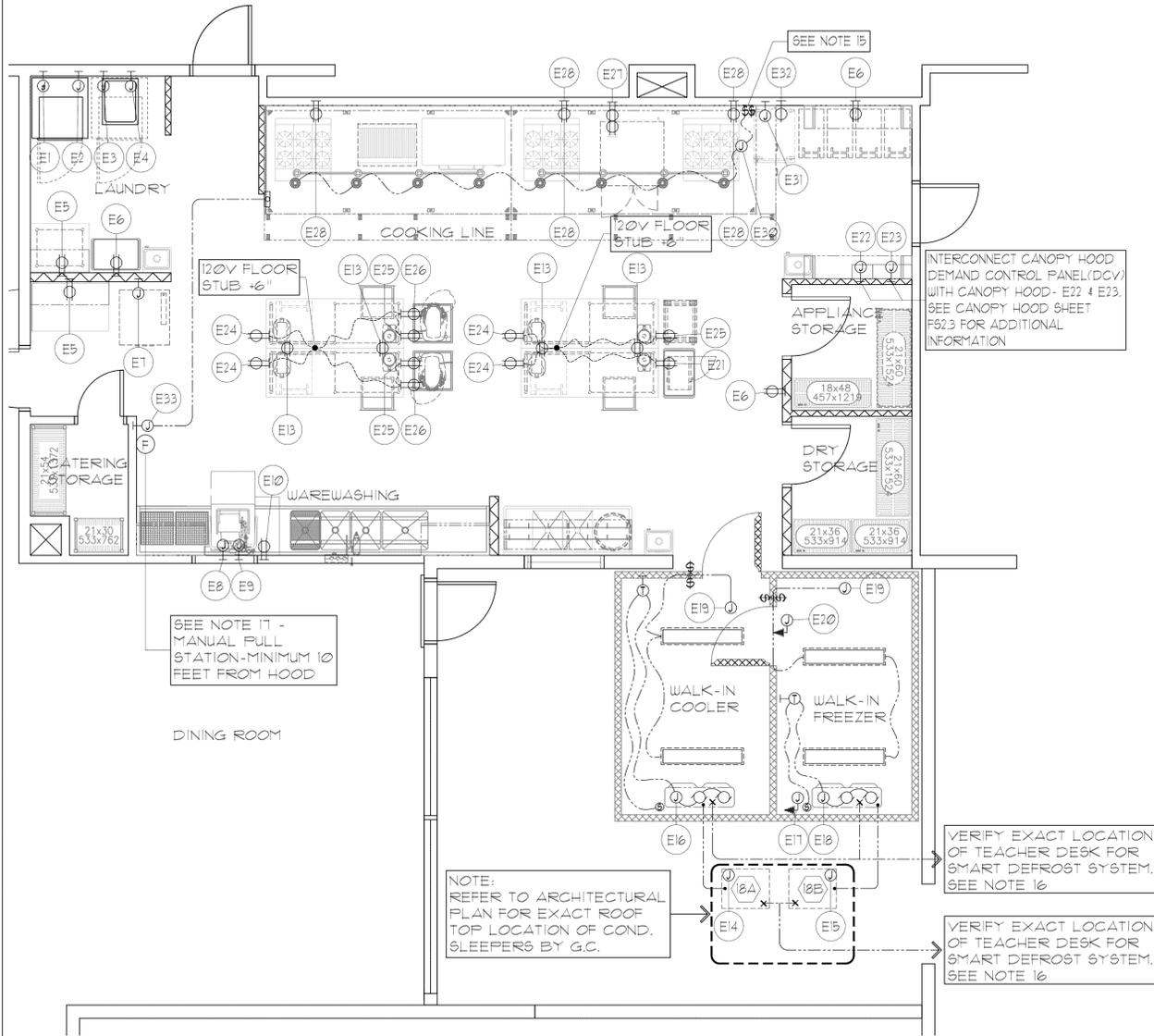


MECHANICAL NOTES	
M1.	ONE (1) 6" DIAMETER EXHAUST DUCT CONNECTION AT 20-LB. DRYER. 500 CFM WITH 0.5" STATIC PRESSURE AT DUCT COLLAR.
M2.	THREE (3) 28" X 12" SUPPLY DUCT CONNECTIONS AT CANOPY HOOD. 881 CFM EACH WITH 0.285" STATIC PRESSURE AT DUCT COLLARS.
M3.	ONE (1) 18" DIAMETER TYPE I EXHAUST DUCT CONNECTION AT CANOPY HOOD. 3312 CFM WITH -1.160" STATIC PRESSURE AT DUCT COLLAR.
M4.	THREE (3) 28" X 12" SUPPLY DUCT CONNECTIONS AT CANOPY HOOD. 900 CFM EACH WITH 0.251" STATIC PRESSURE AT DUCT COLLARS.
M5.	ONE (1) 18" DIAMETER TYPE I EXHAUST DUCT CONNECTION AT CANOPY HOOD. 3000 CFM WITH -0.951" STATIC PRESSURE AT DUCT COLLAR.

DEPRESS./MECHANICAL SYMBOL LEGEND	
SUPPLY DUCT	
EXHAUST DUCT	
DRYER DUCT	
FLOOR DEPRESSION	

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





1 FLOOR PLAN - FOOD SERVICE ELECTRICAL/REFRIGERATION PLAN
1/4" = 1'-0"

FIRE PROTECTION LEGEND

FIRE PROTECTION SYSTEM MANUAL PULL (F)

NOTE:
LOCATE MANUAL FIRE SUPPRESSION PULL STATIONS PER CODES - DEVICES TO BE LOCATED A MINIMUM OF 10 FEET AND A MAXIMUM OF 20 FEET FROM THE KITCHEN EXHAUST SYSTEM IT SERVES. E.C. TO PROVIDE OCTAGON BOX AND RUN EMPTY CONDUIT TO FIRE SUPPRESSION CONTROL HEAD. MINIMUM 12" RADIUS BENDS IN ANY CHANGE OF DIRECTION. SET FULL STATION BOX @ 48" AFF. TO CENTERLINE. TYPICAL ALL LOCATIONS

ELECTRICAL SYMBOL LEGEND

DCO (DUPLIX CONVENIENCE OUTLET)

J-BOX (JUNCTION BOX)

SCO

THERMOSTAT

SOLENOID

MOTOR

SWITCH(S)

LIGHT

FLOOR OR CEILING STUB (AS NOTED)

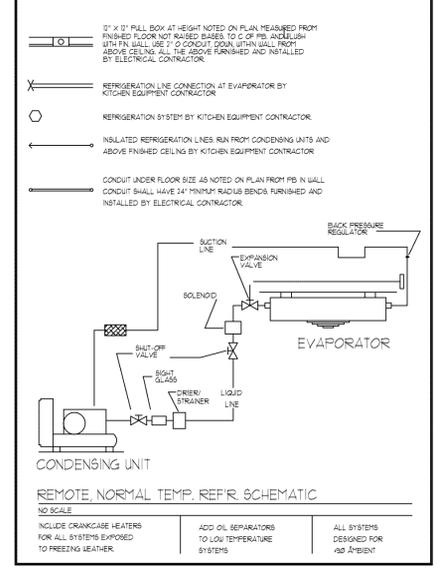
ELECTRICAL SCHEDULE

ITEM NO	NO	VOLTS	Ø	DESCRIPTION	LOCN	HEIGHT	SERVICE TO:	RATING	REMARKS
2	E1	208	3	J-BOX	WALL	36"	STACKING COMMERCIAL WASHER	6.2 AMP	---
2	E2	120	1	J-BOX	WALL	36"	STACKING COMMERCIAL DRYER	9.8 AMP	2-WIRE + GROUND
2	E3	208	3	J-BOX	WALL	36"	STACKING COMMERCIAL WASHER	6.2 AMP	PROVIDE COVER PLATE FOR FUTURE WASHER
2	E4	120	1	J-BOX	WALL	36"	STACKING COMMERCIAL DRYER	9.8 AMP	2-WIRE + GROUND. PROVIDE COVER PLATE FOR FUTURE DRYER
---	E5	120	1	DCO	WALL	48"	CONVENIENCE	1440 W	DEDICATED CIRCUIT
---	E6	120	1	DCO	WALL	18"	CONVENIENCE	1440 W	DEDICATED CIRCUIT
6	E7	120	1	J-BOX (VERIFY)	WALL	VERIFY	CUBE ICE MACHINE WITH BIN	VERIFY	VERIFY ALL REQUIREMENTS WITH EXISTING EQUIPMENT
10	E8	208	3	J-BOX	WALL	13"	VENTLESS WAREWASHER (TANK HEAT/MOTORS)	2 HP	4.5 KW (SINGLE POINT CONNECTION FOR MOTOR/CONTROLS)
10	E9	208	3	J-BOX	WALL	11"	VENTLESS WAREWASHER BOOSTER HEATER	8.5 KW	---
10	E10	120	1	DCO	WALL	66"	VENTLESS WAREWASHER DETERGENT FEED	1440 W	DEDICATED CIRCUIT
---	E11	---	---	NOT USED	---	---	---	---	---
---	E12	---	---	NOT USED	---	---	---	---	---
---	E13	120	1	CORD DROP	CEILING	---	CONVENIENCE	1440 W	DEDICATED CIRCUIT - CEILING DROP-CORD
18	E14	208	3	J-BOX	GROUND	VERIFY	W/ COOLER CONDENSING UNIT	1 HP	SYSTEM A - BEACON SYSTEM
18	E15	208	3	J-BOX	GROUND	VERIFY	W/ FREEZER CONDENSING UNIT	2 1/2 HP	SYSTEM B - BEACON SYSTEM
18	E16	120	1	J-BOX	CEILING	---	WALK-IN COOLER EVAPORATOR	2 AMP	SYSTEM A - BEACON SYSTEM
11	E17	120	1	J-BOX	CEILING	---	WALK-IN DRAIN LINE HEATER	500 W	---
10	E18	208	3	J-BOX	CEILING	---	WALK-IN FREEZER EVAPORATOR	10 AMP	SYSTEM B - BEACON SYSTEM
11	E19	120	1	J-BOX	CEILING	---	(2) WALK-IN LIGHTS	160 W	80 W EACH
11	E20	120	1	J-BOX	CEILING	---	WALK-IN DOOR HEATER	500 W	---
43	E21	120	1	DCO	FIXTURE	34"	MICROWAVE OVEN	13.4 AMP	FURN'D. WITH NEMA 5-15P. VERIFY REQ'S. W/ EXISTING EQUIPMENT. EXTEND FROM FLOOR STUB.
33	E22	120	1	J-BOX	WALL	VERIFY	CANOPY HOOD DEMAND CONTROL PANEL	15 AMP	MOUNT PANEL AT CLG - VERIFY HEIGHT. RUN CAT 5 CABLE TO WALL MOUNT SWITCH AT 48" AFF.
33	E23	120	1	J-BOX	WALL	VERIFY	CANOPY HOOD DEMAND CONTROL PANEL	15 AMP	MOUNT PANEL AT CLG - VERIFY HEIGHT. RUN CAT 5 CABLE TO WALL MOUNT SWITCH AT 48" AFF.
30	E24	120	1	DCO	FIXTURE	34"	5-QUART MIXER (EXISTING EQUIPMENT)	2.9 AMP	FURNISHED WITH NEMA 5-15P. EXTEND FROM FLOOR STUB
28	E25	120	1	DCO	FIXTURE	34"	FOOD PROCESSOR	7 AMP	FURNISHED W/ NEMA 5-15P. EXTEND FROM FLOOR STUB. DEDICATED CIRCUIT
31	E26	120	1	DCO	FIXTURE	34"	20-QUART MIXER (EXISTING EQUIPMENT)	8 AMP	FURNISHED WITH NEMA 5-15P. EXTEND FROM FLOOR STUB
37	E27	120	1	DCO'S (STACKED)	WALL	21" 53"	DOUBLE STACK CONVECTION OVENS	3.5 AMP	EACH CONNECTION FURNISHED W/ NEMA 5-15P
38	E28	120	1	DCO	WALL	30"	OPEN BURNER RANGE OVEN BASE	3.4 AMP	FURNISHED WITH NEMA 5-15P
---	E29	---	---	NOT USED	---	---	---	---	---
33	E30	120	1	J-BOX	CEILING	---	(8) CANOPY HOOD LIGHTS 4 HOOD CONTROLS	15 AMP	---
33	E31	120	1	J-BOX	WALL	102"	FIRE PROTECTION SYSTEM	1 KW	---
40	E32	120	1	SCO	WALL	36"	MOBILE HOT HOLDING/PROOFING CABINET	16 AMP	FURNISHED WITH NEMA 5-20P
33	E33	Ø	Ø	Ø	WALL	48"	CANOPY HOOD ROOM SENSOR CONTROL	---	WIRE TO HOOD SC CONTROL BOARD W/ PROVIDED 2-WIRE LOW VOLT. CABLE

ELECTRICAL NOTES

- THIS DRAWING IS NOT TO BE USED FOR ESTABLISHING ROUGH-IN LOCATIONS. REFER TO DIMENSIONED DRAWINGS PREPARED BY THE KITCHEN EQUIPMENT CONTRACTOR.
- UNDER ELECTRICAL WORK OF DIVISION 26, PROVIDE ALL ROUGH-INS AND FINAL CONNECTIONS IN CONFORMANCE WITH LOCAL CODES.
- HOOD LIGHTS ARE FURNISHED UNDER KITCHEN EQUIPMENT, DIVISION II. UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL SWITCHES AND FURNISH AND INSTALL ALL INTERCONNECTING CONDUIT AND WIRING CONCEALED FROM SIGHT.
- UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL ALL INTERCONNECTING WIRING ACROSS CEILING AS REQUIRED BETWEEN HOODS AND HOOD FIRE CONTROL PANEL.
- WALK-IN COLD STORAGE ROOMS, LIGHTS, AND CEILING MOUNT EVAPORATORS ARE FURNISHED AND INSTALLED UNDER KITCHEN EQUIPMENT, DIVISION II. UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL ALL INTERCONNECTING CONDUIT AND WIRING ABOVE CEILING CONCEALED FROM SIGHT.
- ALL ELECTRICAL RECEPTACLES SHALL BE MOUNTED HORIZONTALLY ON FIXTURES AND WALLS.
- ALL EVAPORATOR MOTOR CONNECTIONS SHALL BE MADE WITH CONDUIT TO A J-BOX. PLUG-IN TYPE CONNECTIONS WILL NOT BE ACCEPTED.
- COLD STORAGE ROOM EVAPORATOR DRAIN LINES (INCLUDING HEAT TAPE FOR FREEZER DRAIN) ARE FURNISHED AND INSTALLED UNDER KITCHEN EQUIPMENT, DIVISION II. TRAP AT OUTLET END.
- REFRIGERATION, HIGH PRESSURE WASH SYSTEM, AND BEVERAGE LINES SHOWN ARE SCHEMATIC ONLY AND SHALL BE ADJUSTED TO FIT BUILDING CONDITIONS.
- UNDER ELECTRICAL WORK OF DIVISION 26, PROVIDE ALL DISCONNECTS, INTERLOCKS, AND CONTRACTORS REQUIRED BY LOCAL CODES.
- UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL SHUNT TRIP CIRCUIT BREAKERS TO SHUT OFF POWER SUPPLY TO ALL ELECTRICAL COOKING EQUIPMENT DURING FIRE SYSTEM ACTIVATION.
- UNDER WORK OF KITCHEN EQUIPMENT, DIVISION II, FURNISH AND INSTALL STAINLESS STEEL OR CHROME PLATED ESCUTCHEON PLATES FOR ALL ELECTRICAL CONNECTIONS PENETRATING COUNTER TOPS FOR BELOW COUNTER PLUG-INS.
- UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL ALL INTERCONNECTING WIRING AS REQUIRED BETWEEN BOOSTER HEATER AND DISHWASHER.
- UNDER ELECTRICAL WORK OF DIVISION 26, FURNISH AND INSTALL ALL INTERCONNECTING WIRING BETWEEN WAREWASHER CONTROL PANEL AND EXHAUST FAN FOR AUTO FAN ON/OFF DURING EQUIPMENT OPERATION. SET FAN TO CONTINUE TO RUN AN EXTRA 20 MINUTES AFTER WAREWASHER IS TURNED-OFF.
- UNDER ELECTRICAL WORK OF DIVISION 26, PROVIDE POWER TO HOOD LIGHTS AND EXHAUST FAN ON ROOF-INTERLOCK WITH MAKE-UP AIR SUPPLY UNIT PER PER MECHANICAL ENG. PLANS. PROVIDE WALL SWITCH WITH PILOT LIGHT @ 48" ABOVE FINISHED FLOOR.
- REFRIGERATION BEACON SYSTEM CONTROLLER, FURNISHED BY DIVISION II, SHALL MONITOR WALK-IN EVAPORATORS & CONDENSING UNITS. UNDER ELECTRICAL WORK OF DIVISION 26 PROVIDE POWER FROM EVAPORATOR COILS USING 24V 18 GA. LOW VOLTAGE WIRING.
- UNDER KITCHEN WORK OF DIVISION II LOCATE MANUAL FIRE SUPPRESSION PULL STATION PER CODES. PROVIDE OCTAGON BOX AND RUN EMPTY CONDUIT TO FIRE SUPPRESSION CONTROL HEAD. MINIMUM 12" RADIUS BENDS IN ANY CHANGE OF DIRECTION. SET PULL STATION BOX @ 48" AFF. TO CENTER LINE.

SYMBOLS



18039-00-1
PROJECT NUMBER
21 FEB 2019
DATE

FSI.4

HOOD INFORMATION - Job#3719325

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP. Deg.	TOTAL EXH. CFM	EXHAUST PLENUM RISER(S)					TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG.			
						WIDTH	LENG.	HEIGHT	DIA.	CFM			VEL.	S.P.	END TO END	ROW
1		6630 ND-2-PSP-F	12' 6"	600 Deg.	3312			4'	18"	3312	1874	-1.160'	2650	304 SS 100%	LEFT	ALONE
2		6630 ND-2-PSP-F	12' 6"	600 Deg.	3000			4'	18"	3000	1698	-0.951'	2700	304 SS 100%	RIGHT	ALONE

PATENT NUMBERS

AC-PSP (United States) - US Patent 7963830 B2
 AC-PSP Wall (Canada) - CA Patent 2820509
 AC-PSP Island (Canada) - CA Patent 2520330

HOOD INFORMATION

HOOD NO.	TAG	FILTER(S)				LIGHT(S)		UTILITY CABINET(S)				FIRE PIPING	HOOD HANGING WGT				
		TYPE	QTY.	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY.	TYPE	WIRE GUARD	LOCATION	SIZE			FIRE SYSTEM	ELECTRICAL	SWITCHES	
1		Captrate Solo Filter	9	20"	16"	85% See Filter Spec.	4	Recessed	NO					YES	950 LBS		
2		Captrate Solo Filter	9	20"	16"	85% See Filter Spec.	4	Recessed	NO	Right	12"x66"x30"	Ansul R102	3.0/3.0	DCV-2111	1 Light 1 Fan	YES	1138 LBS

HOOD OPTIONS

HOOD NO.	TAG	OPTION
1		FIELD WRAPPER 18.00' High Front, Left LEFT END STANDOFF (FINISHED) 1' Wide 66' Long Insulated INSULATION FOR TOP OF HOOD STRUCTURAL FRONT PANEL INSULATION FOR BACK OF HOOD SENSOR-CV
2		FIELD WRAPPER 18.00' High Front, Right INSULATION FOR TOP OF HOOD STRUCTURAL FRONT PANEL INSULATION FOR BACK OF HOOD SENSOR-CV

PERFORATED SUPPLY PLENUM(S)

HOOD NO.	TAG	POS.	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG.	DIA.	CFM	S.P.
1		Front	151"	16"	6"	MUA	12"	28"		881	0.285'
						MUA	12"	28"		881	0.285'
						MUA	12"	28"		900	0.257'
2		Front	162"	16"	6"	MUA	12"	28"		900	0.257'
						MUA	12"	28"		900	0.257'

SPECIFICATION: CAPTRATE® GREASE-STOP® SOLID FILTER

THE CAPTRATE GREASE-STOP SOLID FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-Baffle DESIGN IN CONJUNCTION WITH A SLOTTED REAR Baffle DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

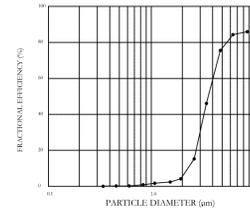
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

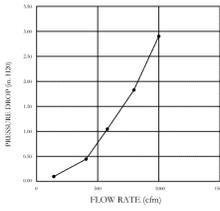
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLID WAS TESTED TO ASTM STANDARD ASTM F2519-05.

EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
 NFPA #96
 NSF STANDARD #2
 UL STANDARD #1046
 INT. MECH. CODE (IMC)
 ULC-S649



REVISIONS

DESCRIPTION	DATE



David Douglas HS - Portland OR R2
 PORTLAND, OR, 97233

DATE: 2/18/2019

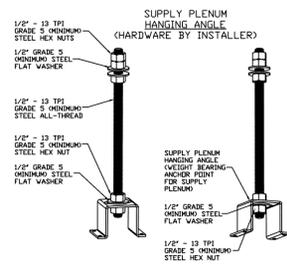
DWG.#: 3719325

DRAWN BY: ryan85

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

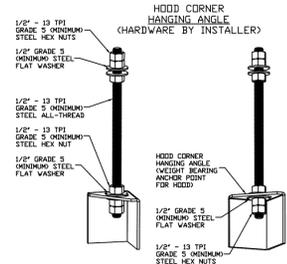
MASTER DRAWING

SHEET NO. 1



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 PSP HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



ASSEMBLY INSTRUCTIONS

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System Design Verification (SDV)

If ordered, CAS Service will perform a System Design Verification (SDV) once all equipment has had a complete start up per the Operation and Installation Manual. Typically, the SDV will be performed after all inspections are complete.

Any field related discrepancies that are discovered during the SDV will be brought to the attention of the general contractor and corresponding trades on site. These issues will be documented and forwarded to the appropriate sales office. If CAS Service has to resolve a discrepancy that is a field issue, the general contractor will be notified and billed for the work. Should a return trip be required due to any field related discrepancy that cannot be resolved during the SDV, there will be additional trip charges.

During the SDV, CAS Service will address any discrepancy that is the fault of the manufacturer. Should a return trip be required, the general contractor and appropriate sales office will be notified. There will be no additional charges for manufacturer discrepancies.



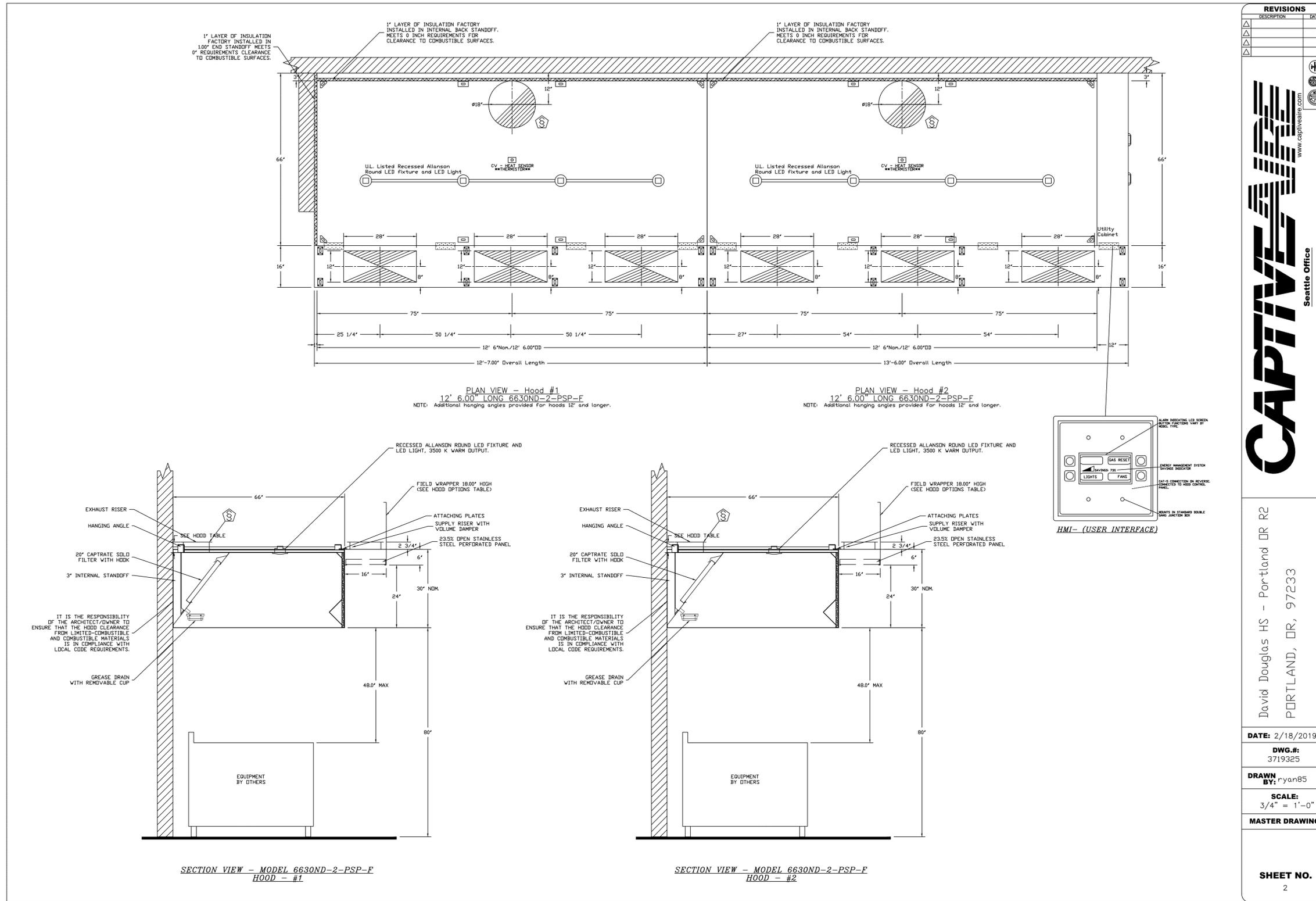
DAVID DOUGLAS SCHOOL DISTRICT
 DAVID DOUGLAS HS SOUTH KILT KITCHEN
 MODIFICATIONS
 1001 SE 135TH AVE, PORTLAND, OR 97233

BBL ARCHITECTS
 ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN
 200 North State Street ■ Lake Oswego, Oregon 97034

18039.00-1
 PROJECT NUMBER
 21 FEB 2019
 DATE

FS2.1

BID SET



David Douglas HS - Portland OR R2
 PORTLAND, OR, 97233

DATE: 2/18/2019
 DWG.#: 3719325
 DRAWN BY: ryan85
 SCALE: 3/4" = 1'-0"
 MASTER DRAWING
 SHEET NO. 2

1 FOOD SERVICE CANOPY HOOD DETAILS
 NO SCALE



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Fire System Information - Job#3719325

FIRE SYSTEM NO.	Tag	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		Ansul R102	3.0/3.0	18	Fire Cabinet Right	Right

GAS VALVE(S)

FIRE SYSTEM NO.	TAG	TYPE	SIZE	SUPPLIED BY
1		SC Electrical	2.000	CaptiveAir Systems

NOTES

- FIELD PIPE DROPS AS SHOWN
- SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY GAS
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- MAXIMUM 9 ELBOWS IN SUPPLY LINE.
- MINIMUM 72 INCHES OF AGENT LINE FROM TANK TO FIRST NOZZLE.
- IF APPLICABLE, PRE-PIPED CHARBROILER DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.
- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS

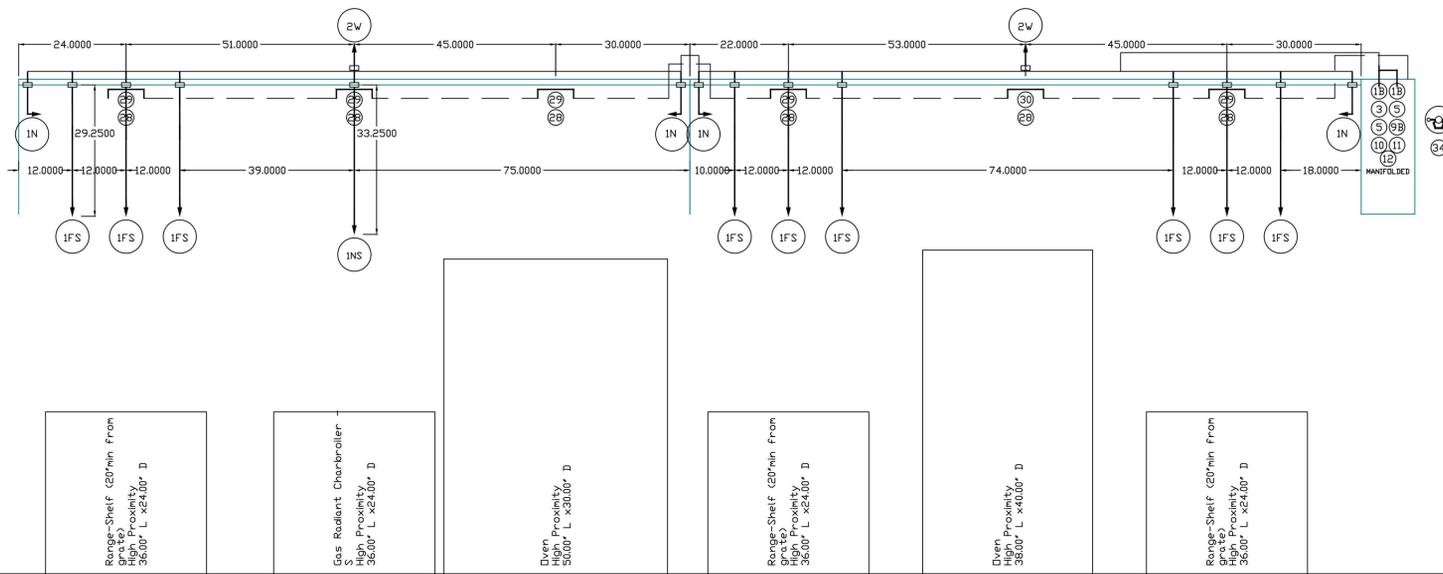
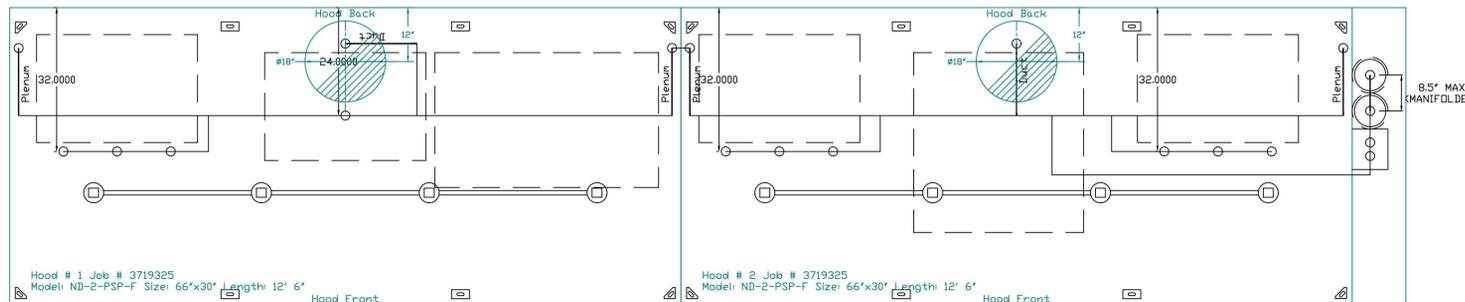
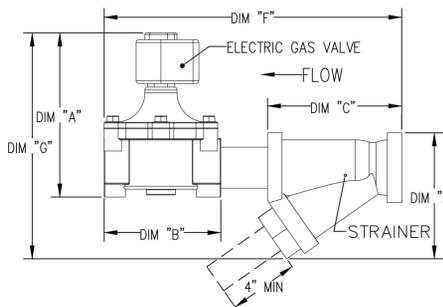
Job #: 3719325
 Job Name: David Douglas HS - Portland OR R2
 System Size: ANSUL-3.0/3.0-MANIFOLD Total FP required: 18
 Hood # 1 12' 6.00" Long x 66" Wide x 30" High
 Riser # 1 Size: 18" Dia.
 Hood # 1 Metal Blow-Off Caps included.
 Hood # 2 12' 6.00" Long x 66" Wide x 30" High
 Riser # 1 Size: 18" Dia.
 Hood # 2 Metal Blow-Off Caps included.

****SIZE TBD BY PLUMBER****

GAS VALVE SIZING												GAS VALVE DIMENSIONS											
TYPE	SIZE	VOLTAGE	MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	FLOW AT 1 IN.W.C. DROP PROPANE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"	DIM "F"	DIM "G"	INSTALLATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER KIT						
ELECTRICAL	2"	120 VAC	0 PSI (0 IN.W.C.)	5 PSI (1.38 IN.W.C.)	2,940,500 BTU/HR	1,908,048 BTU/HR	7-5/8"	6-3/8"	7-1/4"	7-13-16"	15-5/8"	13-15-16"	HORIZONTAL/VERTICAL	8214280	4417K68	(SC)E0VA2							

ALL GAS VALVES/STRAINERS
 PROPER CLEARANCE MUST BE PROVIDED IN ORDER TO SERVICE THE STRAINERS A MINIMUM OF 4" CLEARANCE DISTANCE MUST BE PROVIDED AT THE BASE OF THE STRAINER CUSTOMER MUST VERIFY BTU CONSUMPTION AS WELL AS PRESSURE RATING SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52

CALCULATIONS
 TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP NEW BTU/HR = (BTU/HR AT 1 IN.W.C. PRESSURE DROP) X NEW PRESSURE DROP^{0.5}
 TO CALCULATE GAS FLOW FOR OTHER THAN 0.64 SPECIFIC GRAVITY NEW BTU/HR = (BTU/HR AT 0.64) X (0.64 / NEW SPECIFIC GRAVITY)^{0.5}



LEGEND - FIRE CABINET ANSUL SYSTEM

- 1A 1.5 GALLON TANK
- 1B 3 GALLON TANK
- 2 DEM AUTOMAN RELEASE
- 3 DEM REGULATED RELEASE
- 4 DEM REGULATED ACTUATOR
- 5 ANSULEX LIQUID AGENT (3 GAL.)
- 6 ANSULEX LIQUID AGENT (1.5 GAL.)
- 7 CARTRIDGE (101-20)
- 8 CARTRIDGE (101-10)
- 9 CARTRIDGE (101-30)
- 9A CARTRIDGE (LT-A-101-30)
- 9B DOUBLE TANK CARTRIDGE
- 10 TEST LINK
- 11 DOUBLE MICROSWITCH
- 12 HOSE ASSEMBLY
- 1100 DUCT NOZZLE (430913)
- 2W DUCT NOZZLE (419337)
- 1W NOZZLE ASSEMBLY (419336)
- 1F NOZZLE ASSEMBLY (419333)
- 1N NOZZLE ASSEMBLY (419335)
- 1/2N NOZZLE ASSEMBLY (419334)
- 3N NOZZLE ASSEMBLY (419338)
- 245 NOZZLE ASSEMBLY (419340)
- 230 NOZZLE ASSEMBLY (419339)
- 2120 NOZZLE ASSEMBLY (419343)
- 290 NOZZLE ASSEMBLY (419342)
- 260 NOZZLE ASSEMBLY (419341)
- 28 DETECTOR BRACKET
- 29 LOW TEMP FUSIBLE LINK
- 30 HIGH TEMP FUSIBLE LINK
- MGV MECHANICAL GAS VALVE
- EGV ELECTRICAL GAS VALVE
- 34 REMOTE MANUAL PULL STATION
- S SWIVEL ADAPTOR

REVISIONS	
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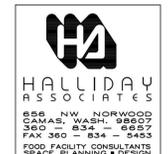


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 DRAWN BY: ryan85
 SCALE: 3/4" = 1'-0"
 MASTER DRAWING

SHEET NO. 3

1 FOOD SERVICE CANOPY HOOD DETAILS
 NO SCALE



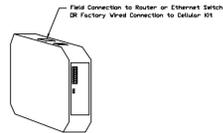
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 200 North State Street ■ Lake Oswego, Oregon 97034

DAVID DOUGLAS SCHOOL DISTRICT
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 BID SET

ELECTRICAL PACKAGE - Job#3719325

NO.	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	HP	VOLTS	FLA	
1		DCV-2111	Utility Cabinet Right	04 - Utility Cabinet Right	1 Light	Smart Controls DCV	KEF-1 KITCHEN LEFT	Exhaust	3	2,000	208	7.3
				Hood # 2	1 Fan		KEF-2 KITCHEN RIGHT	Exhaust	3	2,000	208	7.3
							MAU-1 KITCHEN	Supply	3	5,000	208	14.5

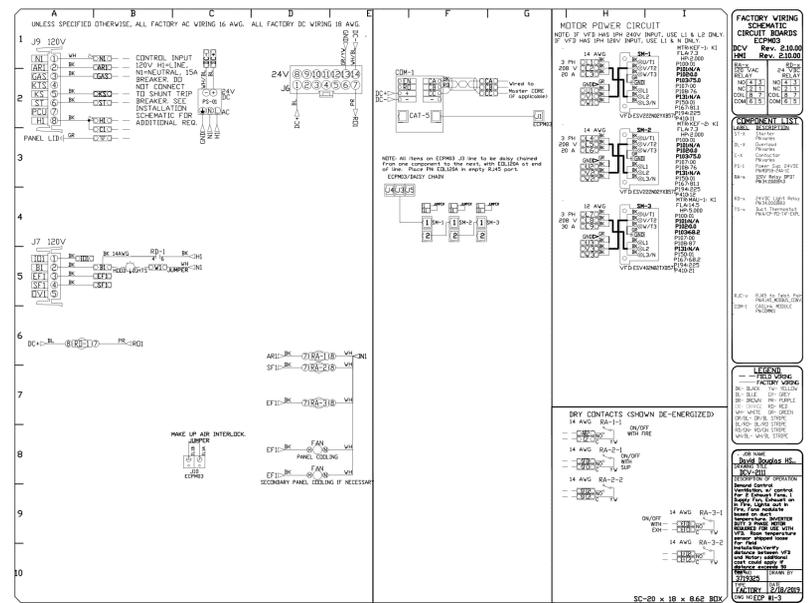
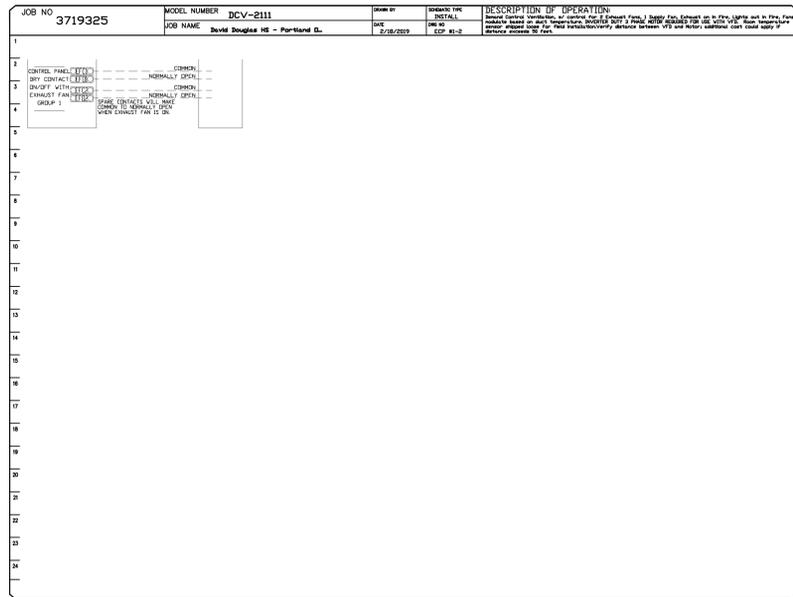
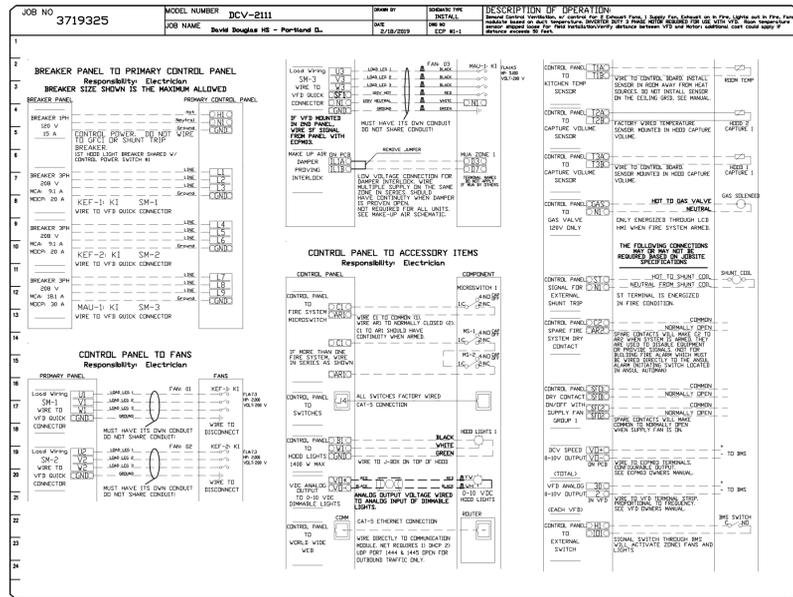


CASLink Monitor and Control

Hood control panel to support communications to cloud-based Building Management System.
Hood control panel to allow cloud-based Building Management System to monitor real time parameters outlined in the points list.
Hood control panel to allow cloud-based Building Management System to control parameters outlined in the points list.
Hood control panel to allow remote changes to system settings such as VFD Frequencies, ECM speeds, temperature set points, fan and wash schedules, etc.

MONITORING AND CONTROL POINTS LIST

DCV Packages	Function	SS Packages	Function
Room Temperature	MONITOR	Room Temperature	MONITOR
Duct Temperature	MONITOR	Duct Temperature	MONITOR
MMA Discharge Temperature	MONITOR	MMA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR	Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR	Controller Faults	MONITOR
Fan Amperage	MONITOR	Fan Faults	MONITOR
Fan Power	MONITOR	Fan Status	MONITOR
VFD Faults	MONITOR	PCU Faults	MONITOR
Controller Faults	MONITOR	PCU Filter Clog Percentages	MONITOR
Fan Faults	MONITOR	Fire Condition	MONITOR
Fan Status	MONITOR	COSE Fire System	MONITOR
PCU Faults	MONITOR	Building Pressure	MONITOR & CONTROL
PCU Filter Clog Percentages	MONITOR	Fane Buttons	MONITOR & CONTROL
Fire Condition	MONITOR	Light Buttons	MONITOR & CONTROL
COSE Fire System	MONITOR	Wash Buttons	MONITOR & CONTROL
Building Pressure	MONITOR		
Prep Top Button	MONITOR & CONTROL		
Fane Button	MONITOR & CONTROL		
Light Button	MONITOR & CONTROL		
Wash Button	MONITOR & CONTROL		



ATTENTION ELECTRICIAN:

****LOAD WIRING FOR EACH FAN MOTOR MUST BE IN SEPARATE STEEL CONDUIT (DO NOT SHARE CONDUITS)****

REVISIONS

NO.	DESCRIPTION	DATE
1		
2		
3		
4		

CAPTIVE
Seattle Office
1309 Pacific Ave., Everett, WA, 98201 PHONE: (425) 212-5986 FAX: (425) 212-5988 EMAIL: reg85@captivewa.com
www.captive.com

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SHEET NO. 4



H2 ASSOCIATES
656 NW NORWOOD
SUNAS, WASH. 98507
560 - 834 - 8857
FAX 360 - 834 - 8453
FOOD FACILITY CONSULTANTS
SPACE PLANNING • DESIGN

BBL ARCHITECTS
ARCHITECTURE • PLANNING • INTERIOR DESIGN
200 North State Street • Lake Oswego, Oregon 97034

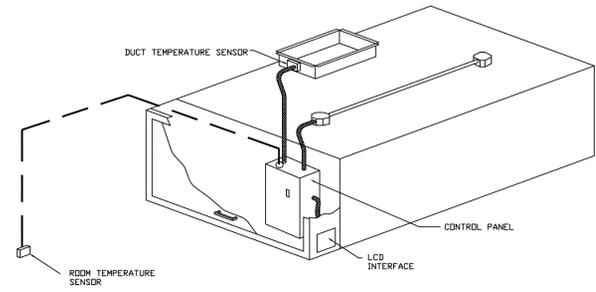
DAVID DOUGLAS SCHOOL DISTRICT
DAVID DOUGLAS HS SOUTH KILT KITCHEN
MODIFICATIONS
1001 SE 135TH AVE, PORTLAND, OR 97233
FOOD SERVICE CANOPY HOOD DETAILS

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Demand Control Ventilation Hood Control Panel Specifications:

- Controls shall be listed by ETL (UL 508A) and shall comply with demand ventilation system turndown requirements outlined in IECC 403.2.8 (2015).
- The control enclosure shall be NEMA 1 rated and listed for installation inside of the exhaust hood utility cabinet. The control enclosure may be constructed of stainless steel or painted steel.
- Temperature probe(s) located in the exhaust duct riser(s) shall be constructed of stainless steel.
- A digital controller shall be provided to activate the hood exhaust fans dynamically based on a fixed differential between the ambient and duct temperatures sensors. This function shall meet the requirements of IMC 507.1.1.
- A digital controller shall provide adjustable hysteresis settings to prevent cycling of the fans after the cooking appliances have been turned off and/or the heat in the exhaust system is reduced.
- A digital controller shall provide an adjustable minimum fan run-time setting to prevent fan cycling.
- Variable Frequency Drives (VFDs) shall be provided for fans as required. The digital controller shall modulate the VFDs between a minimum setpoint and a maximum setpoint on demand. The duct temperature sensor input(s) to the digital controller shall be used to calculate the speed reference signal.
- The VFD speed range of operation shall be from 0% to 100% for the system, with the actual minimum speed set as required to meet minimum ventilation requirements.
- An internal algorithm to the digital controller shall modulate supply fan VFD speed proportional to all exhaust fans that are located in the same fan group as the supply fan.
- The system shall operate in PREP MODE during light cooking load or COOL DOWN MODE when sufficient heat remains underneath the hood system after cooking operations have completed. Operation during either of these periods will disable the supply fans and provide an exhaust fan speed that is equal to the minimum ventilation requirement.
- A digital controller shall disable the supply fan(s), activate the exhaust fan(s), activate the appliance shunt trip, and disable an electric gas valve automatically when fire condition is detected on a covered hood.
- A digital controller shall allow for external BMS fan control via Dry Contact (external control shall not override fan operation logic as required by code).
- An LCD Interface shall be provided with the following features:
 - a. On/Off push button fan & light switch activation
 - b. Integrated gas valve reset for electronic gas valves (no reset relay required)
 - c. VFD Fault display with audible & visual alarm notification
 - d. Duct temperature sensor failure detection with audible & visual alarm notification
 - e. Mis-wired duct temperature sensor detection with audible & visual alarm notification
 - f. A single low voltage Cat-5 RJ45 wiring connection
 - g. An energy savings indicator that utilizes measured kWh from the VFDs



TYPICAL HOOD CONTROL PANEL INSTALLATION

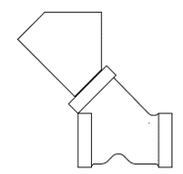
Sequence of Operations:

- The hood control panel is capable of operating in one or more of the following states at any given time:
- **Automatic:** The system operates based on the differential between room temperature and the temperature at the hood cavity or exhaust duct collar. Fans activate at a configurable temperature differential threshold. Depending on the job configuration each fan zone can be configured as static or dynamic. These terms refer to whether a variable motor (such as EC Motors or VFD driven motors) modulate with temperature. If the panel is equipped with variable speed fans and the zone is defined as 'dynamic', these will modulate within a user-defined range based on the temperature differential. Panels equipped with variable speed fans and a fan zone defined as 'static', fans will run at a set speed calculated for the drive. Demand control ventilation systems are capable of modulating exhaust and make up air fan speeds per the requirements outlined in IECC 403.2.8.
 - **Manual:** The system operates based on human input from an HMI.
 - **Schedule:** A weekly schedule can be set to run fans for a specified period throughout the day. There are three occupied times per day to allow for the user to set up a time that is suitable to their needs. Any time that is within the defined occupied time, the system will run at modulation mode and follow the fan procedure algorithm based on temperature during this time. During unoccupied time, the system will have an extra offset to prevent unintended activation of the system during a time where the system is not being occupied.
 - **Other:** The system operates based on the input from an external source (DDC, BMS or hard-wired interlock)

DCV CONTROL CABINET

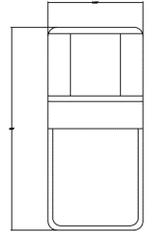
MOUNT CONTROL BOX IN WELL VENTILATED AREA NEAR HOOD SYSTEM. KEEP VENTS AND COOLING FAN CLEAR OF OBSTRUCTIONS.

LOW VOLTAGE WIRING CONNECTIONS ON LEFT SIDE OF PANEL. LINE VOLTAGE WIRING CONNECTIONS ON RIGHT SIDE.



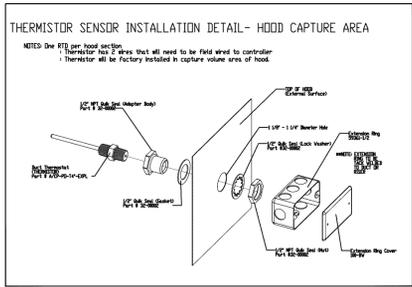
SC-ELECTRIC GAS VALVE

VALVE PROVIDED BY CAS. (CALL 888-338-5225 TO ORDER).
 INSTALLATION LOCATION PER PLUMBING DRAWINGS.
 WIRE TO SC PANEL (TERMINALS 'GAS' & 'N1'). GAS RESET ON USER HMI.



ROOM TEMPERATURE SENSOR

MOUNTS IN STANDARD SINGLE GANG ELECTRICAL BOX.
 INSTALL IN LOCATION TO PROVIDE MOST ACCURATE ROOM TEMPERATURE (NEAR RTU T-STAT OR RTU RETURN) AWAY FROM HEAT SOURCES.
 WIRE TO DCV CONTROL BOARD WITH PROVIDED 2 WIRE LOW VOLTAGE CABLE.



THERMISTOR- (1) PER HOOD SECTION

FACTORY INSTALLED IN HOOD CAPTURE VOLUME AREA
 FIELD WIRE TO DCV CONTROL BOARD WITH PROVIDED 2 WIRE LOW VOLTAGE CABLE.

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SHEET NO.
5

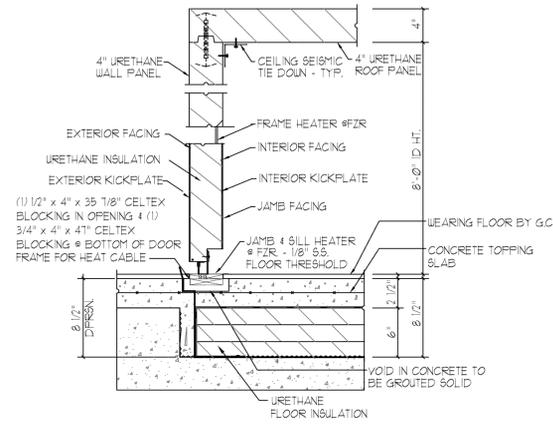


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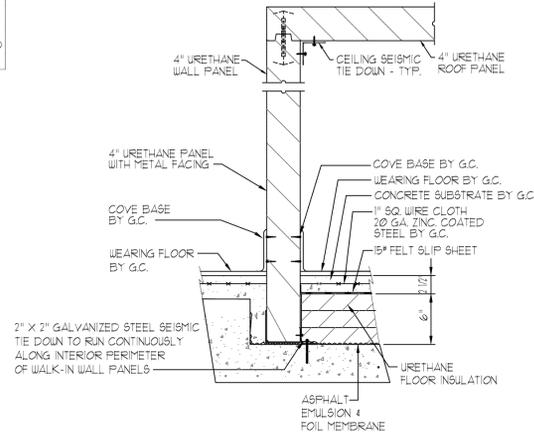
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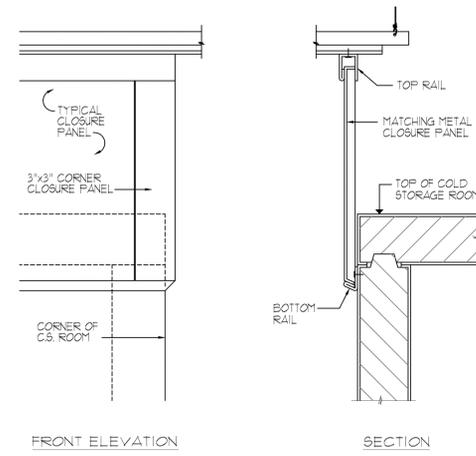


A DOOR/FLOOR SECTION
NO SCALE

NOTE: REFER TO IMPERIAL BROWN QUOTE #9-18-25068 FOR ADDITIONAL INFORMATION/DETAIL FOR EXTERIOR SLOPED 5.5\"/>



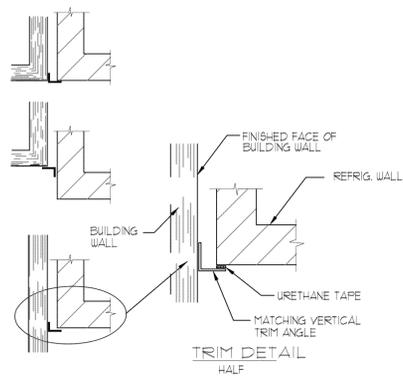
B WALL/FLOOR SECTION
NO SCALE



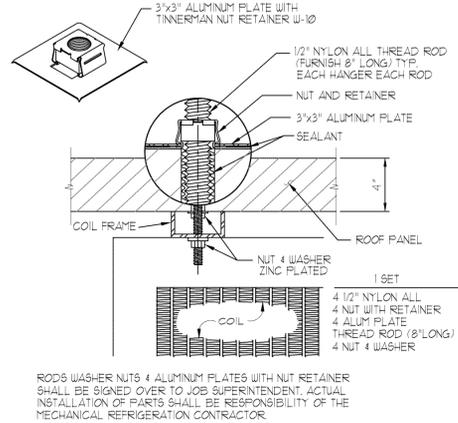
C CLOSURE PANEL DETAILS
NO SCALE

WALK-IN NOTES

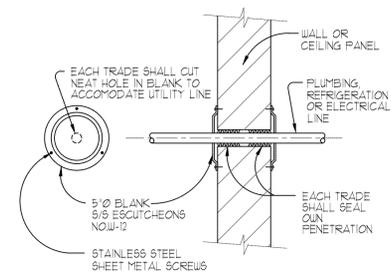
- REFER TO ARCHITECTURAL FINISH SCHEDULE FOR FINISHED FLOOR MATERIAL AT INTERIOR AND EXTERIOR OF WALK-IN COLD STORAGE ROOMS.
- WALL, CEILING, AND DOOR INSULATION SHALL BE AT LEAST R-25 FOR COOLERS AND R-32 FOR FREEZERS. FREEZER FLOOR INSULATION SHALL BE AT LEAST R-28. NOTE: SPECIFIED 4\"/>



D VERTICAL TRIM MOULDING DETAIL
NO SCALE



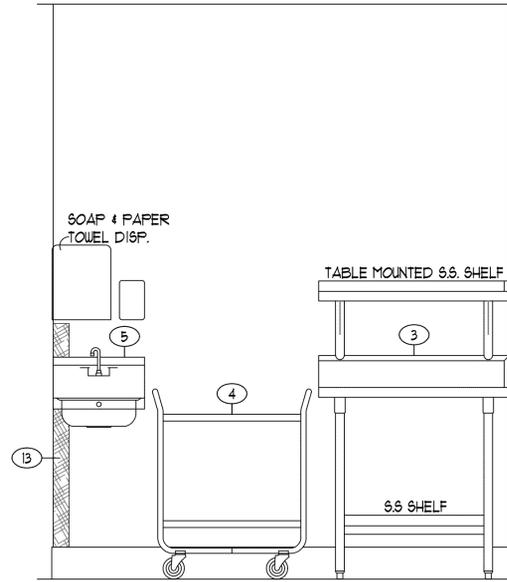
E NYLON ROD COIL HANGER DETAIL
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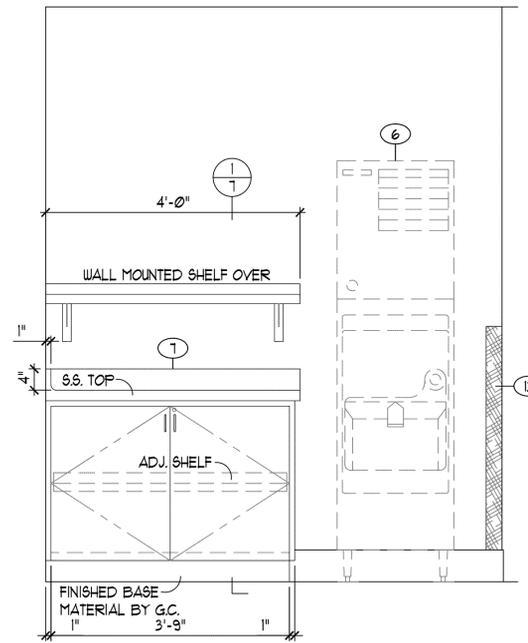
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NO SCALE

1 FOOD SERVICE WALK-IN DETAILS
NO SCALE

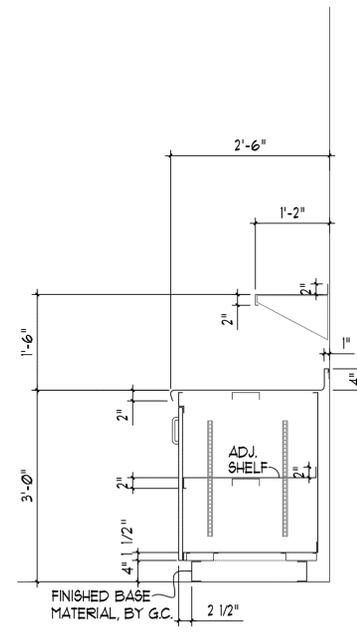




1 ELEVATION WORK TABLE, CART, & HAND SINK
3/4" = 1'-0"

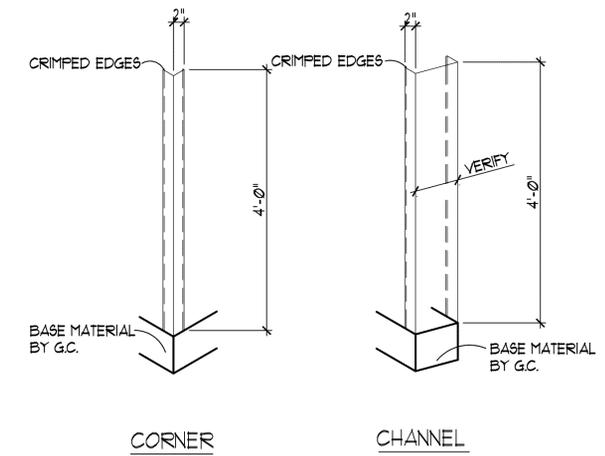


2 ELEVATION DINING COUNTER & ICE MACHINE
3/4" = 1'-0"

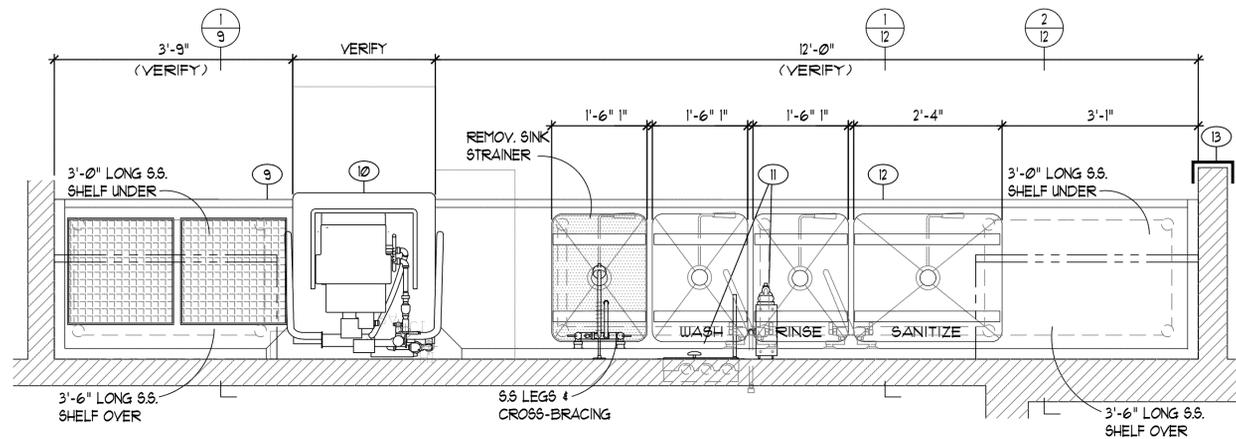


1 SECTION
3/4" = 1'-0"

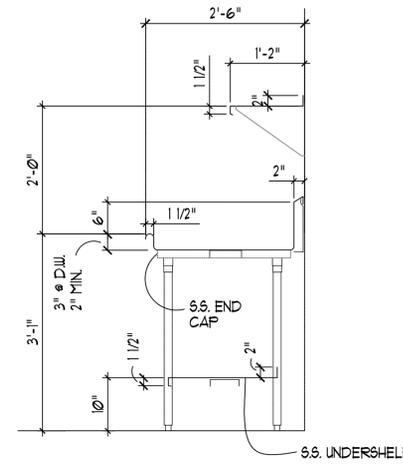
NOTE: SEE SHEET FS1.01 FOR LOCATIONS AND QUANTITIES OF THESE ITEMS



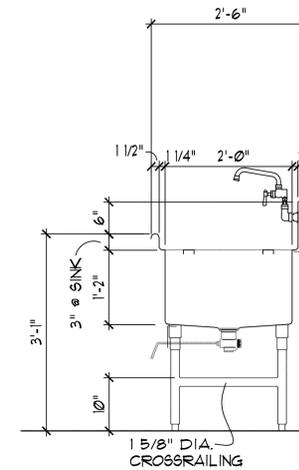
A DETAILS CORNER & CHANNEL GUARDS
3/4" = 1'-0"



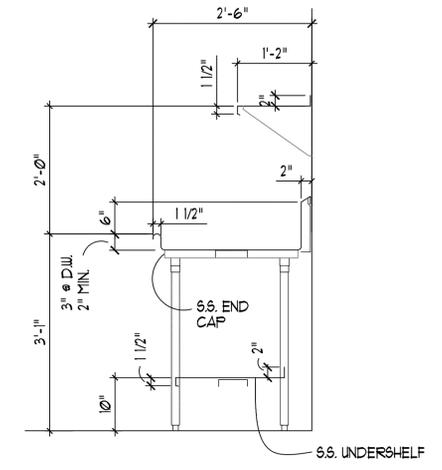
A PLAN VIEW WAREWASHING AREA
3/4" = 1'-0"



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



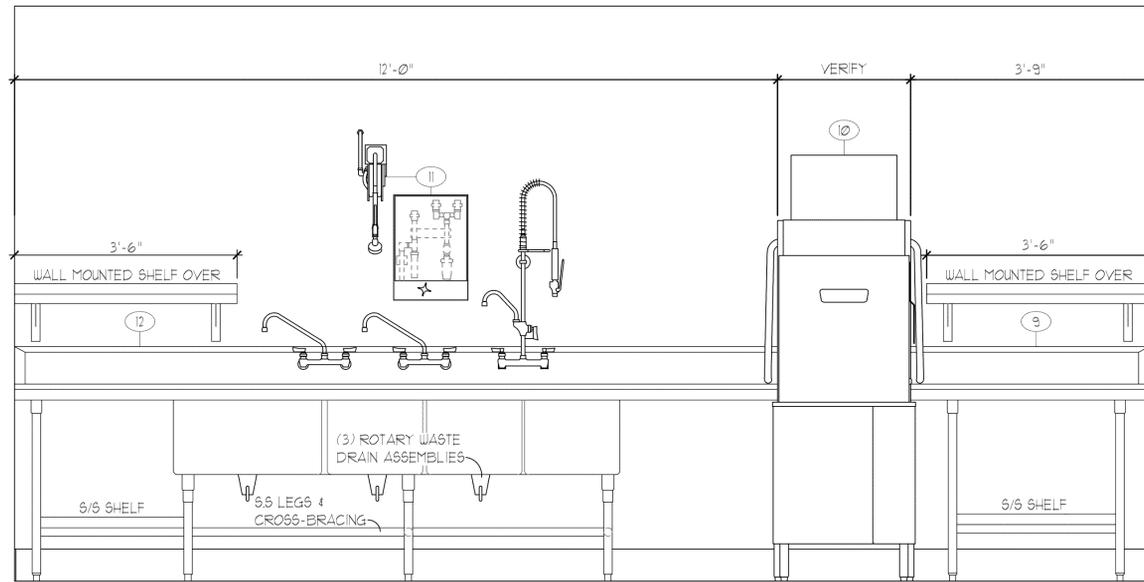
12 SECTION
3/4" = 1'-0"



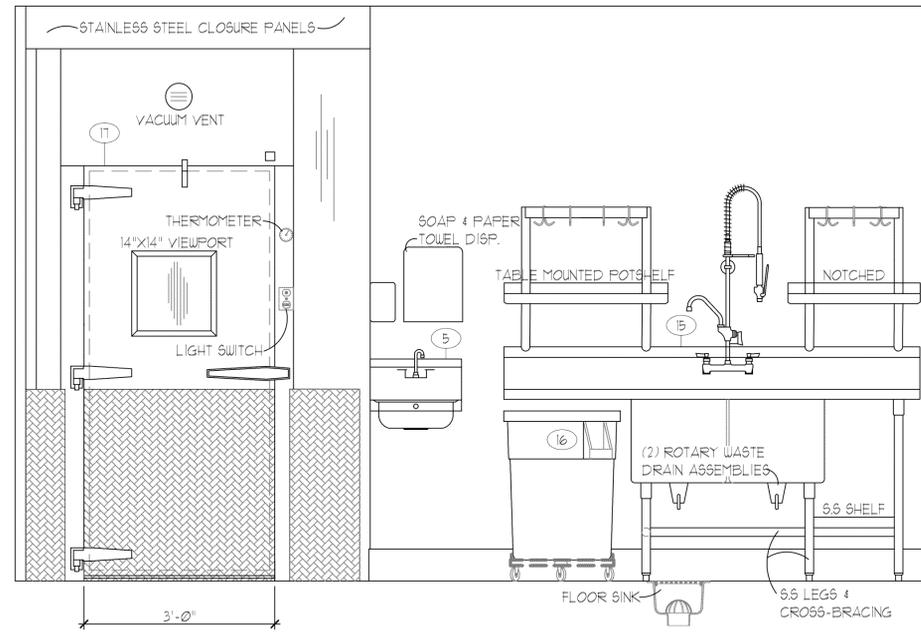
2 SECTION
3/4" = 1'-0"

1 FLOOR PLAN - FOOD SERVICE ELEVATION & FABRICATION DETAILS
AS NOTED

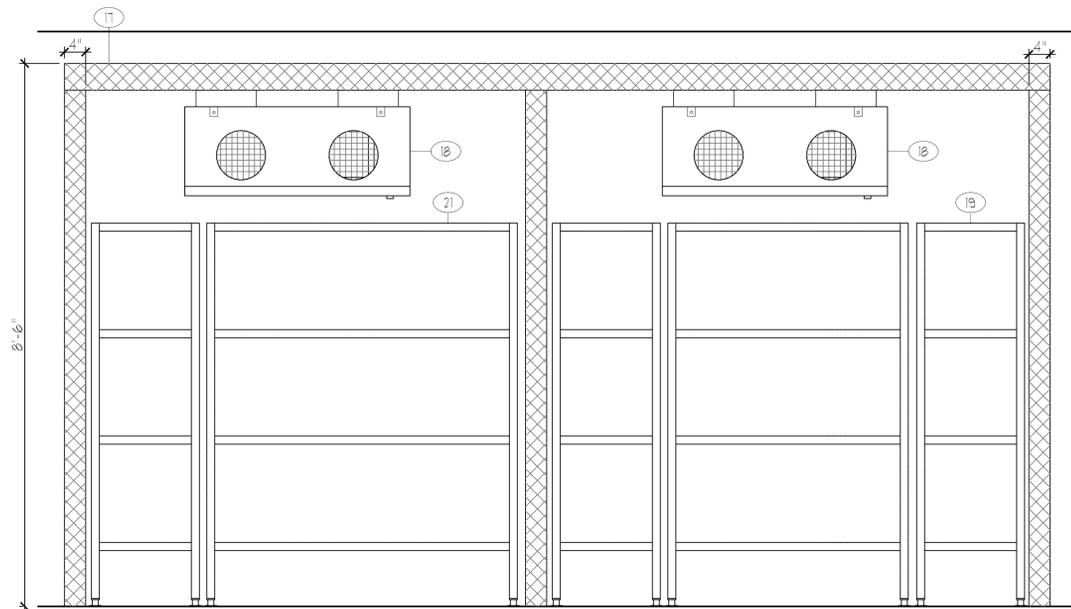




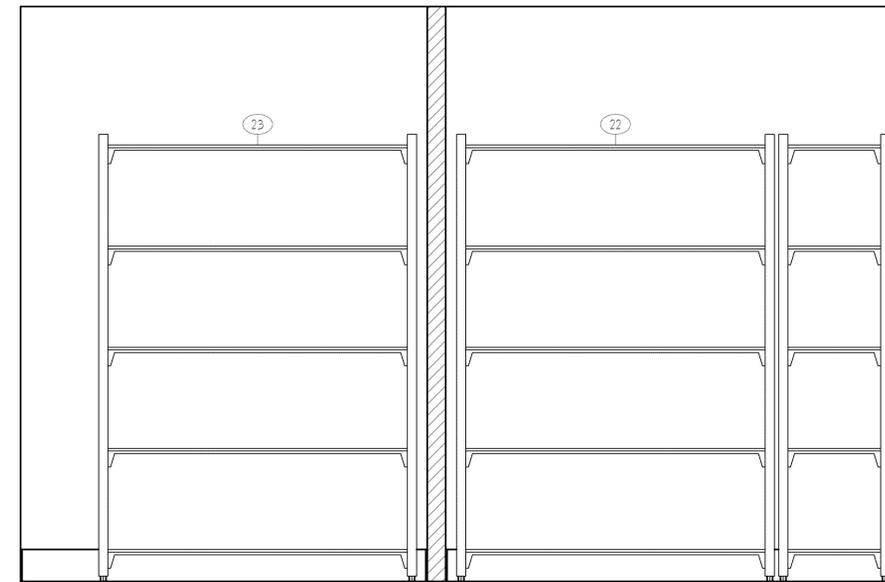
3 ELEVATION CLEAN/SOILED DISHTABLES & WAREWASHER
3/4"=1'-0"



4 ELEVATION VEGETABLE PREP SINK TABLE & COOLER
3/4"=1'-0"



5 ELEVATION WALK-IN COOLER/FREEZER BANK - (INTERIOR)
3/4"=1'-0"



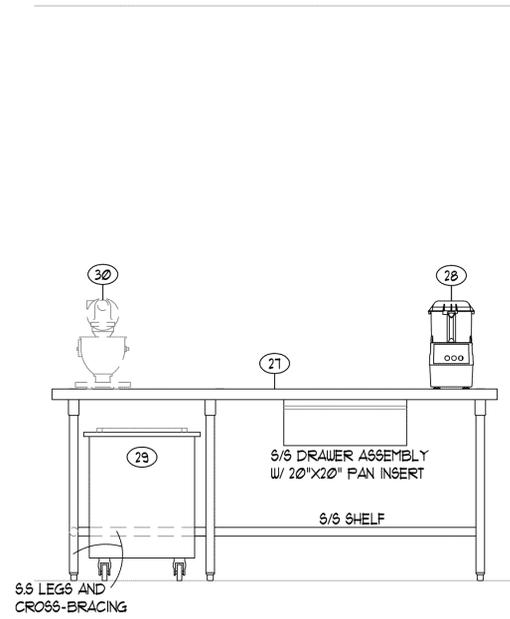
6 ELEVATION APPLIANCE & DRY STORAGE SHELVING
3/4"=1'-0"

1 FLOOR PLAN - FOOD SERVICE ELEVATION & FABRICATION DETAILS
AS NOTED

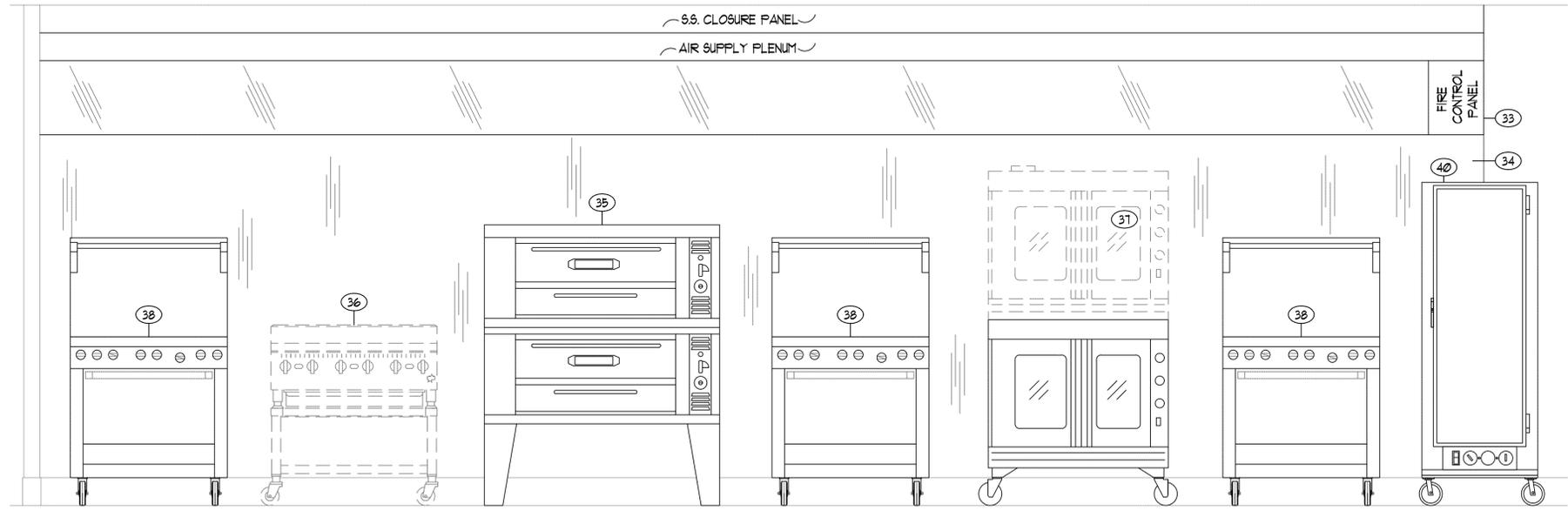


19039.00-1
PROJECT NUMBER
21 FEB 2019
DATE

FS3.3



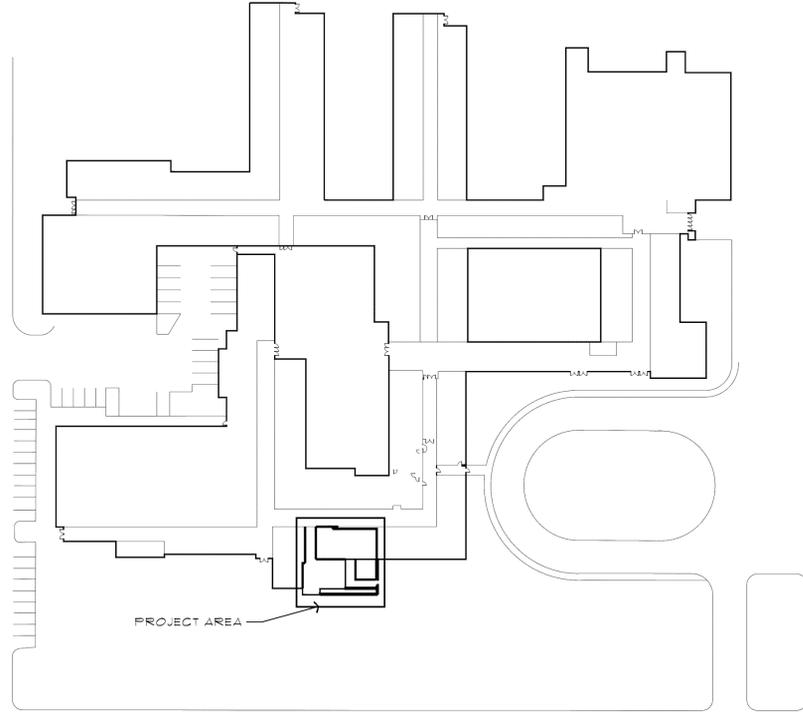
1 ELEVATION STUDENT WORK STATION
3/4" = 1'-0"



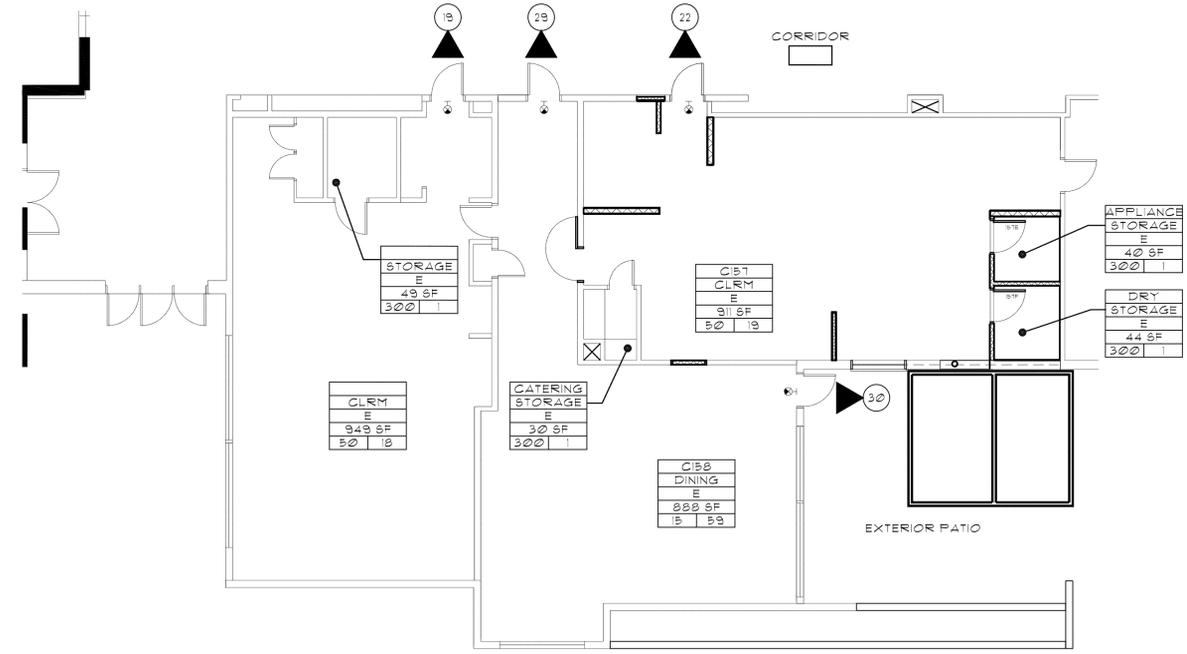
8 ELEVATION COOKING LINE
3/4" = 1'-0"

1 FLOOR PLAN - FOOD SERVICE ELEVATION & FABRICATION DETAILS
AS NOTED





1 SITE PLAN - EXISTING DAVID DOUGLAS HIGH SCHOOL SOUTH CAMPUS
1/64" = 1'-0"



2 CODE FLOOR PLAN
1/16" = 1'-0"

CODE PLAN LEGEND

121A	ROOM NUMBER
STORAGE	ROOM NAME / USE
5 OCC.	OCCUPANCY GROUP
120 SF	SQUARE FEET / AREA
300 1	NUMBER OF OCCUPANTS

← OCCUPANT LOAD FACTOR
CONSTRUCTION TYPE: VB
OCCUPANCY: E

→ EXIT ACCESS TRAVEL DISTANCE

⊕ EXIT SIGN INTERNALLY OR EXTERNALLY ILLUMINATED

MINIMUM CORRIDOR WIDTH 42"
RATED CORRIDORS NOT REQUIRED

EXISTING CLASSROOM REMODEL;
OCCUPANCY REMAINS THE SAME

STANDARD Q SPRINKLER SYSTEM

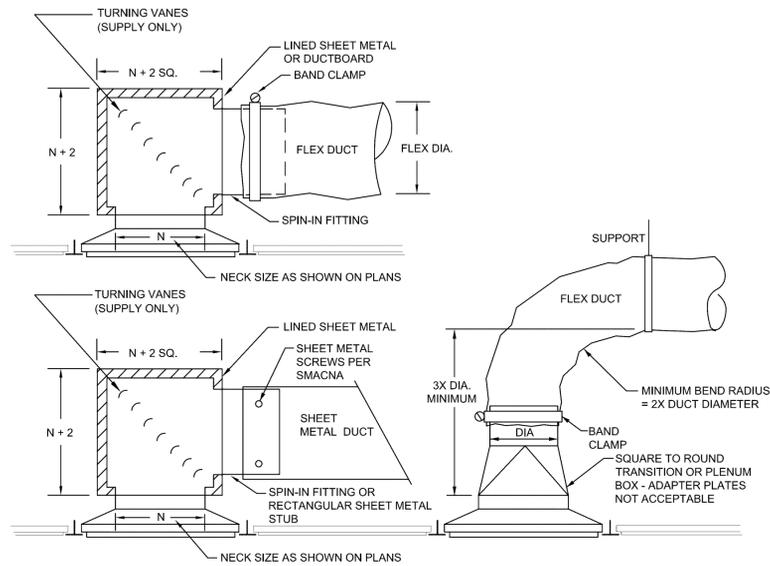
TRAVEL DISTANCE: < 250'-0" MAX.



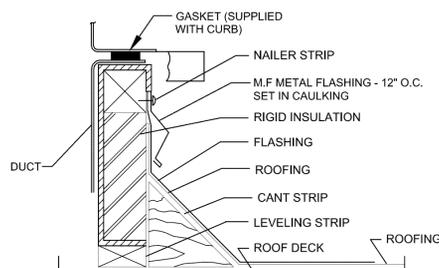
MECHANICAL VENTILATION SCHEDULE														
OCCUPANCY CATEGORY	ZONE	STANDARD CASE: 2014 OREGON MECHANICAL SPECIALTY CODE				DESIGN CASE FOR								
		AREA SQ. FT.	PEOPLE	AREA OUTDOOR	OCCUPANT DENSITY	BREATHING ZONE OSA	ABLE 403.3.1 ONE AIR DIS	ZONE OUTDOOR	TABLE 403.3.2.3.2	MINIMUM OSA INTAKE	ZONE PRIMARY	SYSTEM OSA CFM	EXH RATE	
		(Pa)	(Pz)	(Pa)	(Pa)	(Pa)	(Pa)	(Pa)	(Pa)	(Pa)	(Pa)	(Pa)	(Pa)	(Pa)
FOOD PREP	KITCHEN	0	940	0	0	0	0	0	0	0	0	0	0	0
	MUA-1	0	940	0	0	0	0	0	0	0	0	0	0	0

MECHANICAL EQUIPMENT SCHEDULE		
SYMBOL	DESCRIPTION	ELECTRICAL
MUA-1	MAKE UP AIR UNIT, DIRECT FIRED GAS HEATED - 5050 CFM SUPPLY AIR DESIGNED, 2500 CFM MINIMUM, 100% OUTSIDE AIR, 0.50 ESP, BELT DRIVE, 5.0 HP MOTOR, BACKDRAFT DAMPER, ECONOMIZER, HEATING: 38.5 MBH TOTAL INPUT / 35.4 MBH TOTAL OUTPUT BASIS OF DESIGN: CAPTIVEAIRE MODEL A2-D500-20D OPERATING WEIGHT = 1,250 LBS	18.2 MCA 30 MOCP 208V, 3 PH
KEF-1	ROOF EXHAUST FAN - BELT DRIVE, UPBLAST DISCHARGE 3,312 CFM AT 1.25" ESP. 1317 MAX RPM, 2.0 HP MOTOR, 20 SONES MAX. BASIS OF DESIGN: CAPTIVEAIRE MODEL DU180HFA OPERATING WEIGHT = 310 LBS	9.2 MCA 15 MOCP 208V, 3 PH
KEF-2	ROOF EXHAUST FAN - BELT DRIVE, UPBLAST DISCHARGE 3,312 CFM AT 1.25" ESP. 1317 MAX RPM, 2.0 HP MOTOR, 20 SONES MAX. BASIS OF DESIGN: CAPTIVEAIRE MODEL DU180HFA OPERATING WEIGHT = 310 LBS	9.2 MCA 15 MOCP 208V, 3 PH

MECHANICAL SEISMIC DESIGN CRITERIA			
BUILDING SYSTEM	OCCUPANCY CLASSIFICATION	SEISMIC DESIGN CATEGORY	COMPONENT IMPORTANCE FACTOR (Ip)
OTHER HVAC COMPONENTS	III	D	1.5



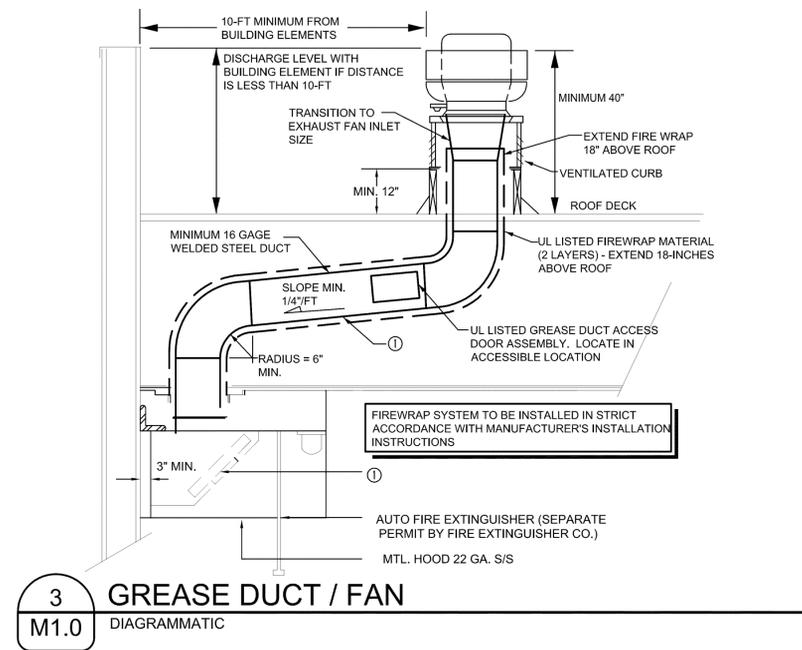
1 CEILING DIFFUSERS AND GRILLES
 M1.0 DIAGRAMMATIC TYPICAL DIFFUSERS AND GRILLES



2 RTU CURB DETAIL
 M1.0 DIAGRAMMATIC TYPICAL ROOFTOP UNITS

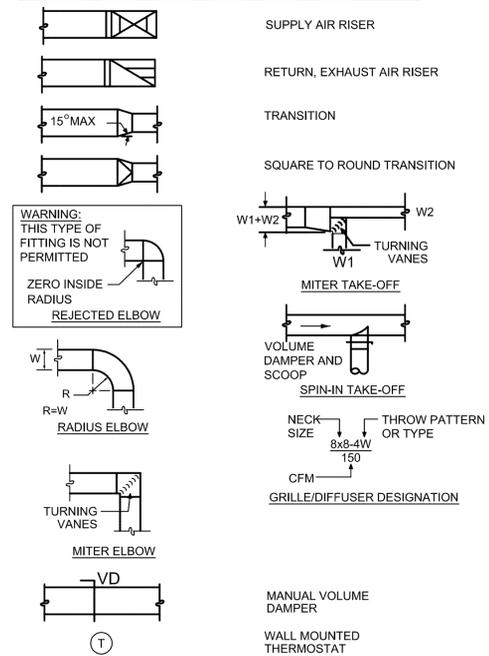
NOTE: MECHANICAL ROOF EQUIPMENT CURBS TO BE INSULATED WITH NOT LESS THAN R-5 INSULATION PER SECTION: 2014 OSSC 506.2.1.1

THIS DETAIL DENOTES GENERAL FLASHING AND CURB CONFIGURATION. VERIFY THE EXACT REQUIREMENTS OF THE EQUIPMENT CURBS AND THE ARCHITECTURAL ROOFING SYSTEM USED. INSTALL CURBS IN ACCORDANCE WITH THE ROOFING MANUFACTURER'S INSTRUCTIONS. COORDINATE WITH ARCHITECTURAL DETAILS AND SPECIFICATIONS



3 GREASE DUCT / FAN
 M1.0 DIAGRAMMATIC

MECHANICAL LEGEND



ABBREVIATIONS

- 8Ø ROUND DUCT DIAMETER, INCHES
- 12X8 RECTANGULAR DUCT SIZE, INCHES
- DN DOWN
- RA RETURN AIR
- SA SUPPLY AIR

SYMBOLS

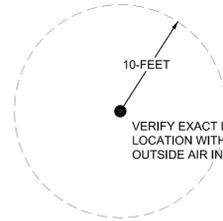
- ⓐ CONNECT TO EXISTING
- ⓔ EXISTING TO REMAIN
- Ⓡ RELOCATE EXISTING
- ⓧ REMOVE EXISTING

GENERAL NOTES

WORK UNDER THE MECHANICAL TEST AND BALANCE SCOPE INCLUDES SYSTEMS CONTROLS COMMISSIONING - REFER TO SPECIFICATION SECTION 23 05 93 FOR COMPLETE SYSTEMS TEST AND BALANCE SCOPE UNDER THIS CONTRACT

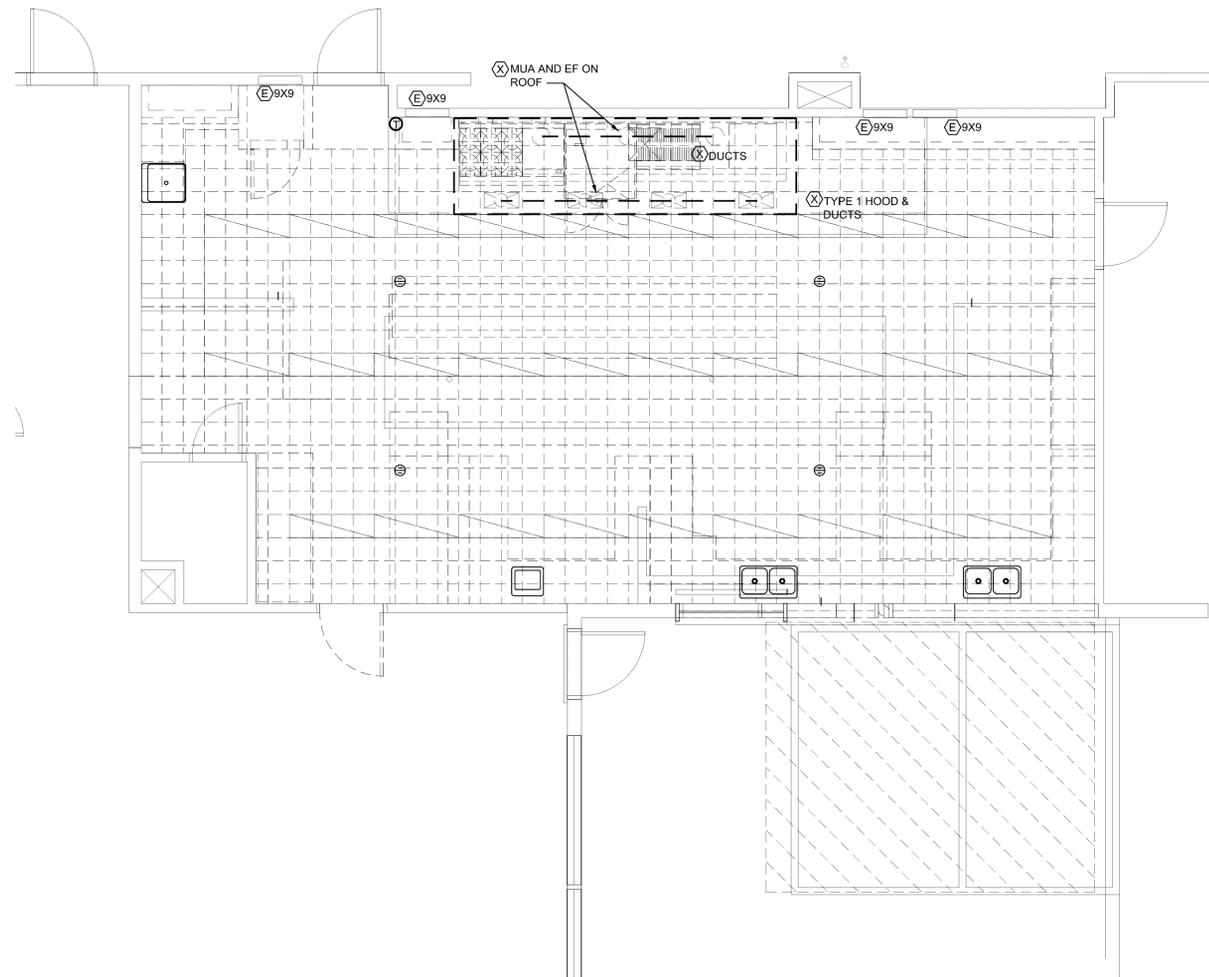
HORIZONTAL TRANSITIONS FROM DUCT DROPS AND MAIN TAKEOFFS TO BE WITH 90-DEGREE ELBOWS W/ VANES

VERTICAL AND HORIZONTAL DUCT TAKEOFFS FROM MAINS AND BRANCHES TO BE WITH BRANCH TAP TYPE TAKEOFFS (SEE LEGEND / SHEET M1.00)

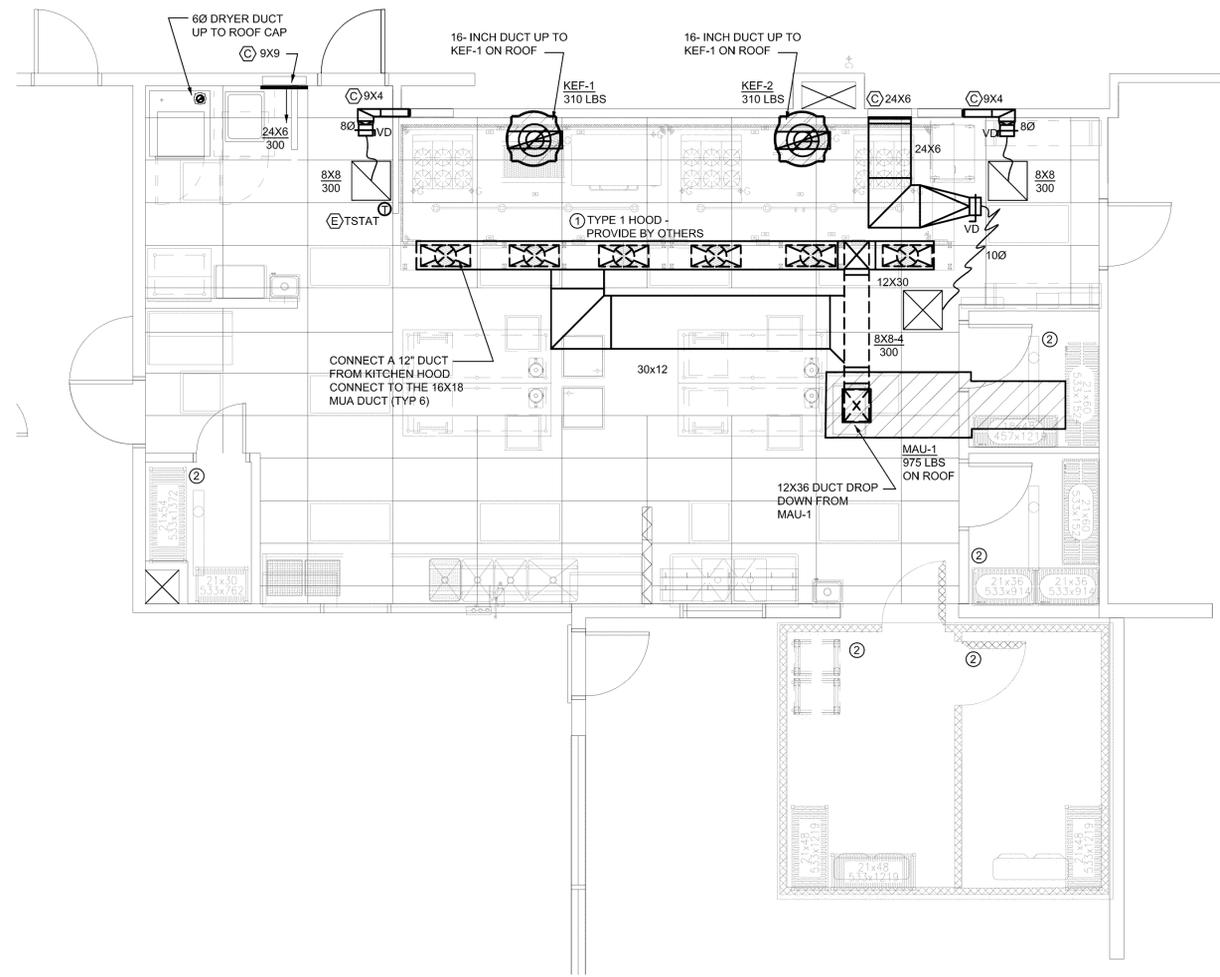


SHEET NOTES

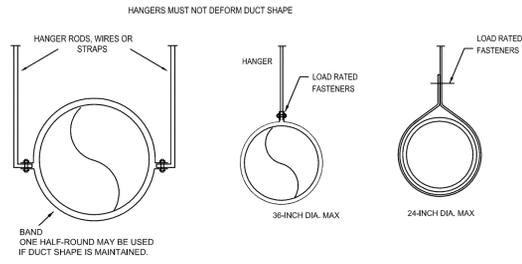
- ① GREASE DUCT TEST SHALL BE PERFORMED PRIOR TO CONCEALMENT; SECTION 2014 OSSC 506.3.2.5 - FURNISHED BY OTHERS - INSTALLED IN THIS MECHANICAL CONTRACT
- ② REFRIGERATED CASE EQUIPMENT - PROVIDED BY OTHERS
- ③ USE CAPTIVE AIRE EQUIPMENT SCHEDULE AND CONTROLS FOR KITCHEN EQUIPMENT



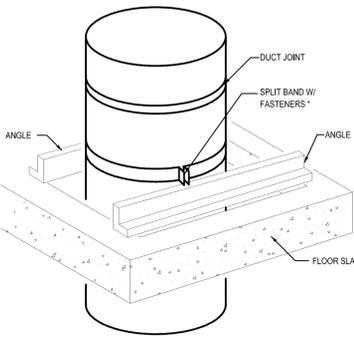
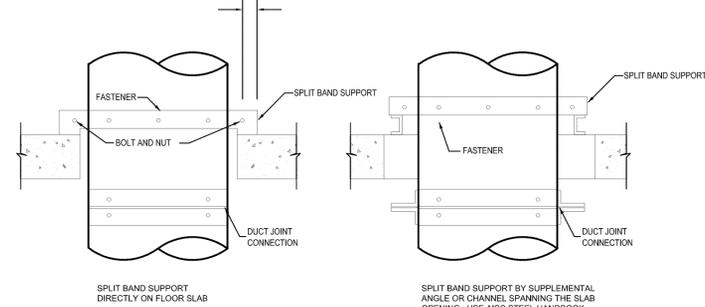
1 MECHANICAL ENLARGED DEMO KITCHEN FLOOR PLAN
 M1.1 1/4" = 1'-0"



2 MECHANICAL ENLARGED NEW KITCHEN FLOOR PLAN
 M1.2 1/4" = 1'-0"



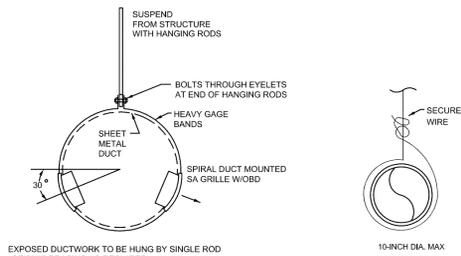
1 LOWER HANGER ATTACHMENTS
M3.1 DIAGRAMMATIC



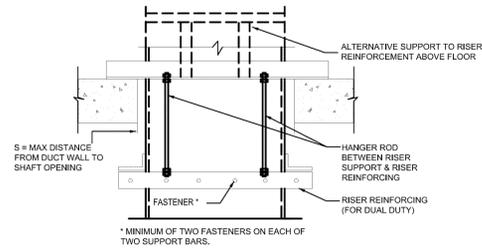
BOLT DIA	BAND SIZE	DUCT DIA
1/4"	1" X 16 GA	UP TO 12" DIA 24 GA
1/4"	1-1/2" X 16 GA	13" TO 24" DIA 20 GA
3/8"	2" X 16 GA	25" TO 36" DIA 20 GA
3/8"	2" X 10 GA	37" TO 60" DIA 18 GA

* MINIMUM OF TWO FASTENERS IN EACH HALF OF BAND. OTHERWISE SPACE THEM AT 8-INCH (200 MM) AND SO THAT THE LOAD SATISFIES MXXX

4 RISER SUPPORT FROM FLOOR
M3.1 DIAGRAMMATIC



2 EXPOSED DUCTWORK DETAIL
M3.1 DIAGRAMMATIC



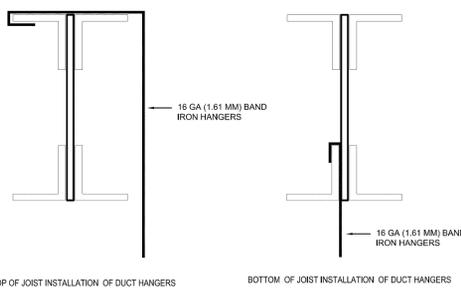
LARGEST DUCT DIM	MINIMUM NUMBER OF FASTENERS
16" AND DOWN	2
17" - 24"	3
OVER 24"	LARGEST DUCT DIM DIVIDED BY 8

DUCT SIZE	ANGLE
36X18	1-1/2X1-1/2X18"
48X24	1-1/2X1-1/2X18"
60X30	1-1/2X1-1/2X3/16
60X60	1-1/2X1-1/2X1/4 OR 2X2X1/8

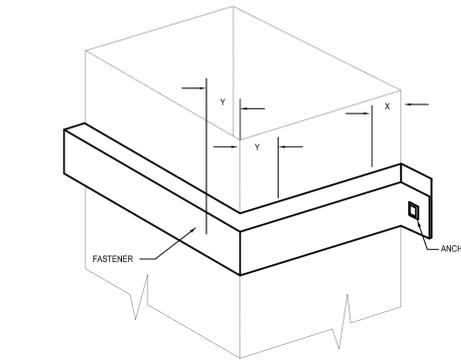
OVER 60-INCH - INCREASE ANGLE SIZE AS REQUIRED FOR SPACE & DUCT SIZE

SUPPORT RISERS SO THAT THEY ARE IN TENSION:
FOR DUCTS UP TO 90° - S = 6" MAX.
FOR DUCTS OVER 90° - S = 8" MAX.
SELECT A PAIR OF ANGLES FROM TABLE 5-3 OF WHICH HAS A CAPACITY OF AT LEAST 50 % OF THE DUCT WEIGHT BEING SUPPORTED.

5 RISER SUPPORT FROM FLOOR
M3.1 DIAGRAMMATIC



3 ALTERNATIVE JOIST ATTACHMENTS
M3.1 DIAGRAMMATIC

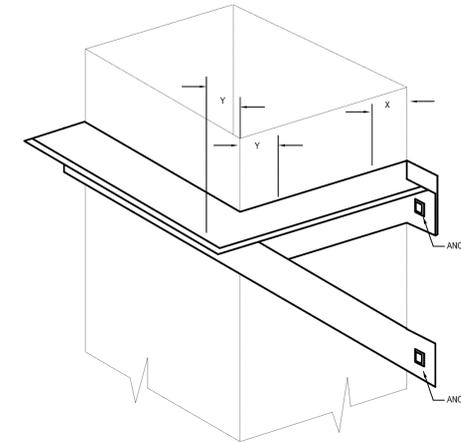


DUCT SIZE	BAND
18X12	1-1/2" X 16 GA
24X20	1X18

DUCT GAGE	LOAD PER FASTENER*
28.26	25 LB
24.22, 20	35 LB
18.16	50 LB

* WELD, BOLT OR NO. 8 SCREW (MIN.) DEVIATION PERMITTED BY OTHER ANALYSIS. X=1"-INCH, Y=2"-INCH; ADD OTHERS TO ACCOMMODATE LOAD. MINIMUM OF 3 ON 24" WIDTH AND UP. ADD ALONG SIDES NEAREST ANCHORS. MXXX

- BRACKETS ARE SIZED FOR 12 FEET OF DUCT, MAXIMUM.
- LOCATE DUCTS AGAINST WALL OR MAXIMUM OF 2" AWAY FROM WALL.
- EACH WALL ANCHOR SHALL SATISFY THE FOLLOWING CRITERIA UNLESS OTHER ANALYSIS IS MADE:
 - TENSILE LOAD = 3/8 X DUCT WEIGHT; SAFETY FACTOR 4.
 - SHEAR LOAD X 1/2 X DUCT WEIGHT; SAFETY FACTOR 4.



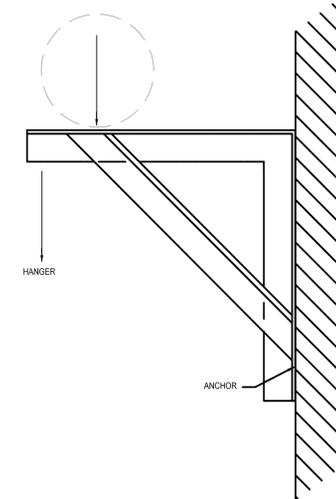
DUCT SIZE	BAND
18X12	1-1/2" X 16 GA
24X20	1X18

DUCT GAGE	LOAD PER FASTENER*
28.26	25 LB
24.22, 20	35 LB
18.16	50 LB

* WELD, BOLT OR NO. 8 SCREW (MIN.) DEVIATION PERMITTED BY OTHER ANALYSIS. X=1"-INCH, Y=2"-INCH; ADD OTHERS TO ACCOMMODATE LOAD. MINIMUM OF 3 ON 24" WIDTH AND UP. ADD ALONG SIDES NEAREST ANCHORS. MXXX

- BRACKETS ARE SIZED FOR 12 FEET OF DUCT, MAXIMUM.
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- EACH WALL ANCHOR SHALL SATISFY THE FOLLOWING CRITERIA UNLESS OTHER ANALYSIS IS MADE:
 - TENSILE LOAD = 3/8 X DUCT WEIGHT; SAFETY FACTOR 4.
 - SHEAR LOAD X 1/2 X DUCT WEIGHT; SAFETY FACTOR 4.

6 DUCT SUPPORT FROM WALL
M3.1 DIAGRAMMATIC



DUCT SIZE	ANGLE
36X12	1X1X18"
36X16	1X1X18"
42X24	1-1/4X1-1/4X18"
48X30	1-1/4X1-1/4X18"

- BRACKETS ARE SIZED FOR 12 FEET OF DUCT, MAXIMUM.
- LOCATE DUCTS AGAINST WALL OR MAXIMUM OF 2" AWAY FROM WALL.
- EACH WALL ANCHOR SHALL SATISFY THE FOLLOWING CRITERIA UNLESS OTHER ANALYSIS IS MADE:
 - TENSILE LOAD = 3/8 X DUCT WEIGHT; SAFETY FACTOR 4.
 - SHEAR LOAD X 1/2 X DUCT WEIGHT; SAFETY FACTOR 4.

7 DUCT SUPPORT FROM WALL - ROUND
M3.1 DIAGRAMMATIC

**TABLE 13-D
 MINIMUM PIPE INSULATION (INCHES)** ^{1,2}

FLUID DESIGN OPERATION TEMPERATURE RANGE, F °	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE DIAMETER (IN.)				
	CONDUCTIVITY RANGE (Btu-in)/(hr.-ft. °F)	MEAN RATING TEMPERATURE F °	1" AND LESS	1-1/4" TO 2"	2-1/2" TO 4"	5" AND 6"	8" AND UP
HEATING SYSTEMS (STEAM, STEAM CONDENSATE AND HOT WATER) ³							
ABOVE 350	0.20-0.34	250	2.5	3.0	4.0	4.0	4.0
251-350	0.29-0.31	200	2.0	2.5	3.0	3.5	3.5
201-250	0.27-0.30	150	1.5	1.5	2.0	2.0	3.5
141-200	0.25-0.29	125	1.5	1.5	1.5	1.5	1.5
105-140	0.24-0.28	100	1.0	1.0	1.0	1.5	1.5
DOMESTIC AND SERVICE HOT WATER SYSTEM ⁴							
105 AND GREATER	0.27-0.28	100	1.0 ⁵	1.0	1.5	1.5	1.5
COOLING SYSTEMS (CHILLED WATER, BRINE AND REFRIGERANT) ³							
40-55	0.22-0.27	100	0.5	0.75	1.0	1.0	1.0
BELOW 40	0.22-0.27	100	1.0	1.5	1.5	1.5	1.5

FOR SI: 1"-INCH 25.4 mm, 1 FIT=304.8 mm

1.) INSULATION OUTSIDE THE STATED CONDUCTIVITY RANGE, MINIMUM THICKNESS (T) SHALL BE DETERMINED AS FOLLOWS:
 $T = (1+T_R) \cdot I$

WHERE T = MINIMUM THICKNESS (IN)
 I = ACTUAL OUTSIDE RADIUS OF PIPE (IN)
 T_R = INSULATION THICKNESS IN THIS TABLE FOR APPLICABLE FLUID TEMPERATURE AND PIPE SIZE
 K = CONDUCTIVITY OF ALTERNATE MATERIAL AT MEAN RATING TEMPERATURE INDICATED FOR THE APPLICABLE FLUID TEMPERATURE (Btu-in)/(hr.-ft. °F) and
 k = THE UPPER VALUE OF THE CONDUCTIVITY RANGE LISTED IN THIS TABLE FOR THE APPLICABLE FLUID TEMPERATURE.

2.) THESE THICKNESS ARE BASED ON ENERGY EFFICACY CONSIDERATIONS ONLY. ISSUES SUCH AS WATER VAPOR PERMEABILITY, SURFACE CONDENSATION, OR SAFETY CONSIDERATIONS SOMETIMES REQUIRE VAPOR RETARDERS OR ADDITIONAL INSULATION.

3.) PIPING INSULATION IS NOT REQUIRED BETWEEN THE CONTROL VALVE AND COIL, IS LOCATED WITHIN 4-FEET OF THE COIL, AND PIPE DIAMETER IS 1-1/2-INCH OR LESS.

4.) APPLIES TO RECIRCULATION SECTIONS OF SERVICE OR DOMESTIC HOT WATER SYSTEMS AND FIRST 8-FEET (2.4 MM) FROM STORAGE TANK FOR NONCIRCULATING SYSTEMS.

5.) PIPING LESS THAN 1-1/2-INCH IN DIAMETER AND LESS THAN 12 FEET IN LENGTH SHALL BE INSULATED WITH 1/2-INCH INSULATION WITH A MINIMUM CONDUCTIVITY OF 0.24 (Btu-in)/(hr.-ft. °F) ⁵

**TABLE 13-S
 MINIMUM INSULATION R-VALUE FOR
 HVAC DUCT SYSTEMS IN OTHER BUILDINGS**

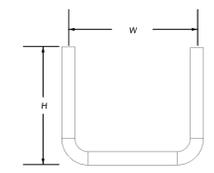
DUCT LOCATION:	CLIMATE ZONE	DUCT TYPE:		
		OUTSIDE AIR ¹	COOLING/RETURN ²	HEATING
EXTERIOR OF BUILDING	1	-	6.0	8.0
	2	-	8.0	12.0
VENTED SPACED ³	ALL	-	3.5	8.0
WITHIN OR BELOW SLABS ON GRADE	ALL	-	-	3.0
UNCONDITIONED SPACES & PLENUMS ⁴	ALL	1.9	1.9 ⁵	3.5
FULLY CONDITIONED SPACES	ALL	3.5	-	-

FOR SI: R = (F/42) / (1.8)

1.) OUTSIDE AIR DUCTS CONVEYING UNTEMPERED, OUTSIDE AIR
 2.) INCLUDES COOKING-ONLY, RETURN-AIR AND TEMPERED-AIR DUCTS. TEMPERED AIR IS WITHIN 15 FT OF CONDITIONED SPACE TEMPERATURE
 3.) INCLUDES UNCONDITIONED SPACES (ATTICS, CRAWL SPACES, VENTED MECHANICAL ROOMS) OUTSIDE THE BUILDING ENVELOPE
 4.) INCLUDES UNCONDITIONED, UNVENTED SPACES SUCH AS UNVENTED MECHANICAL ROOMS, SHAFTS, OR PLENUMS (WITH OR WITHOUT RETURN AIR) WITHIN THE BUILDING ENVELOPE
 5.) INSULATION IS NOT REQUIRED FOR RETURN-AIR AND TEMPERED-AIR DUCTWORK IN UNCONDITIONED SPACES.

**TABLE 5-3
 FRAMING CHANNEL (STRUT) MAY BE USED AS AN
 ALTERNATIVE TO THE TRAPEZE ANGLES SHOWN AS FOLLOWS:**

CHANNEL (STRUT)			SECTION MODULUS (Z)	MOMENT OF INERTIA (I)	TRAPEZE
H	W	GA	IN ³	IN ⁴	TABLE 5-3
1-INCH	1-5/8-INCH	12 GA	0.0923	0.0533	A, B, C
1-3/8-INCH	1-5/8-INCH	12 GA	0.1559	0.1209	D, E
1-5/8-INCH	1-5/8-INCH	12 GA	0.2042	0.1850	F, G
2-7/16-INCH	1-5/8-INCH	12 GA	0.3927	0.5203	H, I
3-1/4-INCH	1-5/8-INCH	12 GA	0.5772	0.9379	J, K



**TABLE 5-2
 MINIMUM HANGER SIZES FOR ROUND DUCT**

DIAMETER	MAXIMUM SPACING	WIRE DIAMETER	ROD	STRAP
10-INCH DN	12 FT	ONE 12 GA	1/4-INCH	1-INCH X 22 GA
11-15-INCH	12 FT	TWO 12 GA OR ONE 8 GA	1/4-INCH	1-INCH X 22 GA
19-24-INCH	12 FT	ONE 10 GA	1/4-INCH	1-INCH X 22 GA
25-36-INCH	12 FT	ONE 8 GA	3/8-INCH	1-INCH X 20 GA
37-50-INCH	12 FT	---	TWO 3/8-INCH	TWO 1-INCH X 20 GA
51-60-INCH	12 FT	---	TWO 3/8-INCH	TWO 1-INCH X 18 GA
61-84-INCH	12 FT	---	TWO 3/8-INCH	TWO 1-INCH X 16 GA
85-96-INCH	12 FT	---	TWO 1/2-INCH	TWO 1-1/2-INCH X 16 GA

A.) STRAPS ARE GALVANIZED STEEL. RODS ARE UNCOATED OR GALVANIZED STEEL. WIRE IS BLACK ANNEALED, BRIGHT BASIC OR GALVANIZED STEEL. ALL ARE ALTERNATIVES.
 B.) SEE FIGURE 5-4 FOR LOWER SUPPORTS.
 C.) SEE FIGURES 5-2, 5-3 AND 5-4 FOR UPPER ATTACHMENTS.
 D.) TABLE ALLOWS FOR CONVENTIONAL WALL THICKNESS, AND JOINT SYSTEMS PLUS ONE LB/FT INSULATION WEIGHT. IF HEAVIER DUCTS ARE TO BE INSTALLED, ADJUST HANGER SIZES TO BE WITHIN THEIR LOAD LIMITS; SEE ALLOWABLE LOADS WITH TABLE 5-1. HANGER SPACING MAY BE ADJUSTED BY SPECIAL ANALYSIS.
 E.) DESIGNERS: FOR INDUSTRIAL GRADE SUPPORTS, INCLUDING SADDLES, SINGLE POINT TRAPEZE LOADS, LONGER SPANS AND FLANGED JOINT LOADS, SEE SMACNA'S ROUND INDUSTRIAL DUCT CONSTRUCTION STANDARDS.
 F.) SEE FIGURES 3-9 AND 3-10 FOR FLEXIBLE DUCT SUPPORTS.

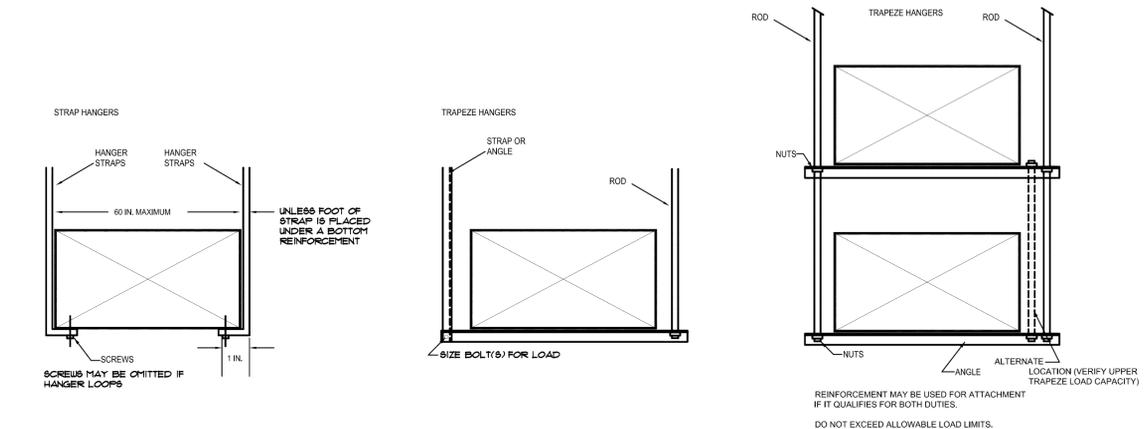
**TABLE 5-1
 RECTANGULAR DUCT HANGERS MINIMUM SIZE**

MAXIMUM HALF OF DUCT PERIMETER	PAIR AT 10-FT SPACING		PAIR AT 8-FT SPACING		PAIR AT 5-FT SPACING		PAIR AT 4-FT SPACING	
	STRAPS	WIRE/ROD	STRAPS	WIRE/ROD	STRAPS	WIRE/ROD	STRAPS	WIRE/ROD
P/2 = 30"	1" X 22 GA	10 GA	1" X 22 GA	10 GA	1" X 22 GA	12 GA	1" X 22 GA	12 GA
P/2 = 72"	1" X 18 GA	3/8-INCH	1" X 20 GA	1/4-INCH	1" X 22 GA	1/4-INCH	1" X 22 GA	1/4-INCH
P/2 = 96"	1" X 16 GA	3/8-INCH	1" X 18 GA	3/8-INCH	1" X 20 GA	3/8-INCH	1" X 22 GA	1/4-INCH
P/2 = 120"	1-1/2" X 16 GA	1/2-INCH	1" X 16 GA	3/8-INCH	1" X 18 GA	3/8-INCH	1" X 20 GA	1/4-INCH
P/2 = 168"	1-1/2" X 16 GA	1/2-INCH	1-1/2" X 16 GA	1/2-INCH	1" X 16 GA	3/8-INCH	1" X 18 GA	3/8-INCH
P/2 = 192"	NOT GIVEN	1/2-INCH	1-1/2" X 16 GA	1/2-INCH	1" X 16 GA	3/8-INCH	1" X 16 GA	3/8-INCH
P/2 = 193" UP	SPECIAL ANALYSIS REQUIRED							

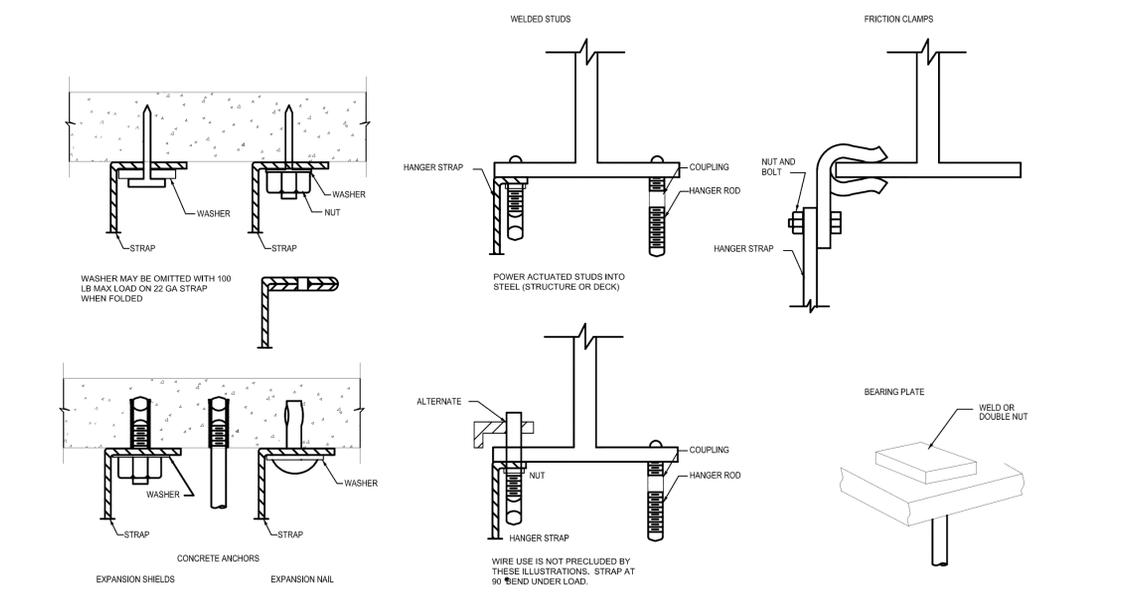
WHEN STRAPS ARE LAP JOINED USE THESE MINIMUM FASTENERS:

FASTENER	SINGLE HANGER MAXIMUM ALLOWABLE LOAD	
	STRAP	WIRE OR ROD (DIA.)
1" X 18, 20, 22 GA - TWO #10 OR ONE 1/4" BOLT	1" X 22 GA - 260 LBS	0.106" - 80 LBS
1" X 16 GA - TWO #14" DIA.	1" X 20 GA - 320 LBS	0.135" - 120 LBS
1-1/2" X 16 GA - TWO 3/8" DIA.	1" X 18 GA - 420 LBS	1/4" - 270 LBS
PLACE FASTENERS IN SERIES, NOT SIDE BY SIDE.	1" X 16 GA - 700 LBS	1/2" - 1250 LBS
	1-1/2" X 16 GA - 1100 LBS	5/8" - 2000 LBS
		3/4" - 3000 LBS

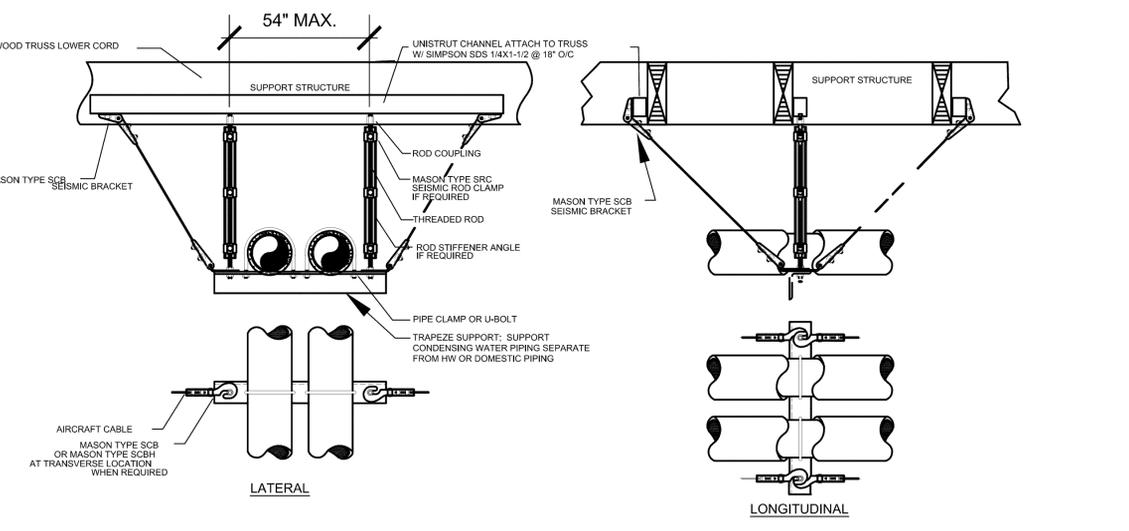
A.) DIMENSIONS OTHER THAN GAGE ARE IN INCHES.
 B.) TABLES ALLOW FOR DUCT WEIGHT, 1 LB/SF INSULATION WEIGHT AND NORMAL REINFORCEMENT AND TRAPEZE WEIGHT, BUT NO EXTERNAL LOADS.
 C.) FOR CUSTOM DESIGN OF HANGERS, DESIGNERS MAY CONSULT SMACNA'S RECTANGULAR DUCT CONSTRUCTION STANDARDS, THE AISI COLD FORMED STEEL DESIGN MANUAL AND THE AISI STEEL CONSTRUCTION MANUAL.
 D.) STRAPS ARE GALVANIZED STEEL; OTHER MATERIALS ARE UNCOATED STEEL.
 E.) ALLOWABLE LOADS FOR P/2 ASSUME THAT DUCTS ARE 16 GA MAXIMUM, EXCEPT THAT WHEN MAXIMUM DUCT DIMENSION (W) IS OVER 60 INCH THEN P/2 MAXIMUM IS 1.25 W.
 F.) FOR UPPER ATTACHMENTS SEE FIGS. 5-2, 5-3 AND 5-4.
 G.) FOR LOWER ATTACHMENTS SEE FIG. 5-5.
 H.) FOR TRAPEZE SIZES SEE TABLE 5-3 AND FIG. 5-6.
 I.) 12, 10, OR 8 GA WIRE IS STEEL OF BLACK ANNEALED, BRIGHT BASIC, OR GALVANIZED TYPE.
 J.) CABLE HANGING SYSTEMS WITH ADJUSTABLE MECHANICAL DEVICE.



1 LOWER HANGER ATTACHMENTS
 M3.2



2 UPPER ATTACHMENT DEVICES - TYPICAL
 M3.2



3 PIPING SUPPORTS - INCLUDES SEISMIC BRACKET
 M3.2

PLUMBING FIXTURE SCHEDULE						
MARK	FIXTURE	BRANCH PIPE SIZE				REMARKS
		CW	HW	W	V	
FD-1	FLOOR DRAIN	-	-	-	-	PRIME
FS-1	FLOOR SINK	-	-	2"	1-1/2"	1/2"GRATE
FS-2	FLOOR SINK	-	-	3"	2"	1/2"GRATE

GREASE INTERCEPTOR SIZING			
FIXTURE	QTY	SANITARY FIXTURE UNITS	TOTAL FIXTURE UNITS
FLOOR DRAIN	4	2	8
COMMERCIAL WASHER	2	4	8
HAND WASHING SINK	3	1	3
ICE MACHINE WITH BIN	1	1	1
WAREWASHER	3	1	3
SINK	2	3	6
			29

HYDROMECHANICAL GREASE INTERCEPTOR TO HAVE MINIMUM (HGI) FLOW OF 75 GPM PER TABLE 10-2 OREGON PLUMBING SPECIALTY CODE.

GREASE INTERCEPTOR BASIS OF DESIGN:
 MANUFACTURER= SCHIER PRODUCTS
 MODEL= GB3
 MAXIMUM FLOW RATE= 75 GPM FLOW RATE

19 GALLONS SOLIDS CAPACITY, 40 GALLONS LIQUID CAPACITY, INDOOR/OUTDOOR INSTALLATION, INTEGRAL FLOW CONTROL. PROVIDE MANUFACTURER'S 3" INLET AND OUTLET ADAPTORS AND RISER EXTENSIONS AS REQUIRED.

PLUMBING EQUIPMENT SCHEDULE		
SYMBOL	DESCRIPTION	ELECTRICAL
GI-1	GREASE INTERCEPTOR: GREASE INTERCEPTOR SIZING AND INFORMATION ON THIS SHEET.	-
MV-1	MIXING VALVE - POINT OF USE: THERMOSTATIC TYPE, LEAD FREE BODY CONSTRUCTION, COMPLETE WITH STOPS AND CHECKS. SET TO DELIVER 120° F HW, MINIMUM FLOW OF 0.5 GPM. BASIS OF DESIGN: WATTS LFMMV -1/2" INLETS AND OUTLETS	-

PLUMBING SEISMIC DESIGN CRITERIA			
BUILDING SYSTEM	RISK CATEGORY	SEISMIC DESIGN CATAGORY	COMPONENT IMPORTANCE FACTOR (I _p)
PLUMBING COMPONENTS	II	D	1.0
NATURAL GAS PIPING SYSTEM	II	D	1.5

KITCHEN EQUIPMENT PLUMBING SCHEDULE							
KITCH. P. NO.	SERVICE TO :	BRANCH PIPE SIZE					REMARKS:
		CW	HW	V	W	GAS	
P1	FLOOR DRAIN			1-1/2"	2"		(C)
P2	FLOOR SINK			2"	3"		(C)
P3	STACKING COMMERCIAL WASHER/DRYER	3/4"	3/4"		(A)		(B,C)
P4	STACKING COMMERCIAL WASHER/DRYER	3/4"	3/4"		(A)		(B,C)
P5	HAND WASHING SINK FAUCET	1/2"	1/2"				(B,C) TEMPERED HOT WATER FROM MV-1
P6	HAND WASHING SINK			1-1/2"	2"		(B,C)
P7	FLOOR SINK			1-1/2"	2"		(C)
P8	ICE MACHINE WITH BIN	1/2"			(A)		(B,C)
P9	VENTLESS WAREWASHER WITH BOOSTER HEATER		1/2"		(A)		(B,C)
P10	WAREWASHER INTERNAL CONDENSING SYSTEM	1/2"			(A)		(B,C)
P11	WAREWASHER DRAIN WATER TEMPERING	1/2"			(A)		(B,C)
P12	FLOOR SINK			2"	3"		(C)
P13	SINK			1-1/2"	2"	(A)	(B,C) 3 DRAINS DIRECT, ONE DRAIN INDIRECT
P14	SINK FAUCETS	1/2"	1/2"				(B,C)
P15	FLOOR SINK			2"	3"		(C)
P16	HOSE REEL WITH RECESSED CONTROL CABINET	1/2"	1/2"				(B,C)
P17	NOT USED						
P18	NOT USED						
P19	SINK	1/2"	1/2"		(A)		(B,C)
P20	FLOOR SINK			2"	3"		(C)
P21	TRIPPLE STACK DECK OVENS					3/4" (3x)	(B,C) 20 MBH EACH, 60 TOTAL, QUICK DISCONNECT
P22	BROILER					3/4"	(B,C) 120 MBH, QUICK DISCONNECT
P23	DOUBLE STACK OVENS					3/4"(2x)	(B,C) 60 MBH EACH, 120 TOTAL, QUICK DISCONNECT
P24	OPEN BURNER RANGE					3/4"	(B,C) 184 MBH TOTAL, QUICK DISCONNECT
P25	NOT USED						
P26	NOT USED						

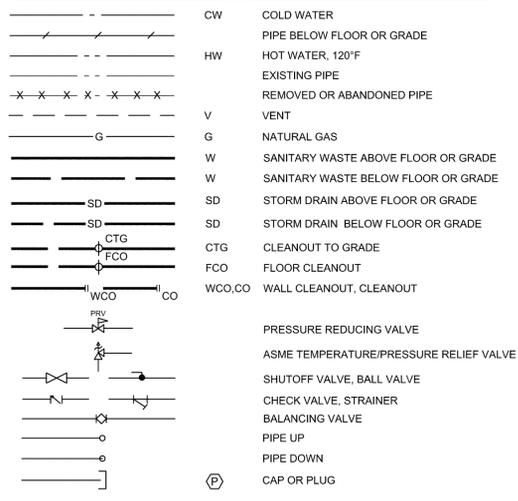
WATER SERVICE PRESSURE LOSS CALCULATION				
Static Pressure:	60			
Total Building Fixture Units	21.5			
Design gpm Flow Rate (Flush Tank)	15			
Elevation Loss - 10 ft. x .433 psi	5			
Flush Valve Required Operating Pressure - psi	15			
Water Meter Pressure Loss - psi	6			
Backflow Preventor Pressure Loss - psi	7			
Pressure Loss Available for Branch Piping - psi	27			
Design Friction Loss - psi/100 ft. 213 ft	12			
PIPE SIZE inches	GPM	FT FU*	FV FU*	VELOCITY
1/2"	3	3	-	5
3/4"	10	13	-	6
1"	19	28	-	8
1-1/4"	30	54	13	8
1-1/2"	40	86	26	8
2"	70	225	108	8
2-1/2"	110	431	295	8

* FROM THE UNIFORM PLUMBING CODE, APPENDIX A.

FIXTURE LOAD SCHEDULE					
FIXTURE	QTY	SAN. FU*	SAN. TOTAL	FULL H2O L*	H2O TOTAL
HOSE REEL	1	-	-	2.5 (1st) 1 (add.)	2.5
FLOOR DRAIN	4	2	8	-	-
HAND SINKS	3	1	3	1	3
DISHWASHER	1	3	3	3	3
SCULLERY SINK	1	3	3	3	3
PREP SINK	1	3	3	3	3
ICE MACHINE	1	1	1	1	1
CLOTHES WASHER	2	3	6	3	6
BUILDING TOTAL	-	-	30	-	21.5

* FROM THE UNIFORM PLUMBING CODE, APPENDIX A.

PLUMBING LEGEND



ABBREVIATIONS LEGEND

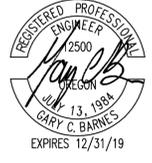
- AFF ABOVE FINISHED FLOOR
- BFF BELOW FINISHED FLOOR
- BV BALANCING VALVE
- DN DOWN
- IE INVERT ELEVATION
- TYP TYPICAL
- VTR VENT THROUGH ROOF

SYMBOLS

- (A) ABANDON
- (C) CONNECT TO EXISTING
- (E) EXISTING TO REMAIN
- (P) CAP OR PLUG
- (R) RELOCATE EXISTING
- (X) REMOVE EXISTING

GENERAL PLUMBING NOTES

- 1 OBTAIN EXACT LOCATIONS AND MOUNTING HEIGHTS OF PLUMBING FIXTURES FROM ARCHITECTURAL DRAWINGS.
- 2 SEE ARCHITECTURAL DRAWINGS FOR A.D.A. COMPLIANT FIXTURE LOCATIONS AND MOUNTING HEIGHTS.
- 3 INSTALL ALL PLUMBING WORK SO AS TO AVOID INTERFERENCE WITH ELECTRICAL AND MECHANICAL EQUIPMENT AND STRUCTURAL FRAMING
- 4 INSTALL ALL CLEANOUTS WHERE READILY ACCESSIBLE AND AS PER SECTION 707 AND 719 OF THE OREGON STATE PLUMBING SPECIALTY CODE. COORDINATE ALL CLEANOUT LOCATIONS WITH EQUIPMENT, CABINETS, ETC., AND THE ARCHITECT PRIOR TO ANY INSTALLATION.
- 5 ALL VALVES, UNIONS, ETC. TO BE SAME SIZE AS LINE SIZE UNLESS OTHERWISE INDICATED ON DRAWINGS.
- 6 PROVIDE UNIONS AFTER EACH SCREW TYPE VALVE AND PRIOR TO EQUIPMENT CONNECTIONS.
- 7 ALL WASTE PIPING SHALL SLOPE AT 2% UNLESS OTHERWISE INDICATED.
- 8 ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF ANY STATE OR LOCAL LAWS OR ORDINANCES. OBTAIN AND PAY FOR ALL REQUIRED PERMITS, LICENSES, CODE INSPECTIONS, ETC.
- 9 ROUTE ALL PIPING ON THE WARM SIDE OF BUILDING ENVELOPE INSULATION.
- 10 COORDINATE ALL REQUIREMENTS FOR ALL POINTS OF CONNECTION WITH THE GENERAL CONTRACTOR AND OTHER TRADES PRIOR TO BID.
- 11 PRIME ALL FLOOR DRAINS, DECK DRAINS, TRENCH DRAINS, FLOOR SINKS AND ALL OTHER SIMILAR FIXTURES.
- 12 COORDINATE THE LOCATION OF ALL CEILING ACCESS PANELS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND LIGHTING LAYOUT.
- 13 ALL PIPING DISCHARGING INTO FLOOR SINKS AND/OR FLOOR DRAINS TO HAVE A MINIMUM AIR GAP AS REQUIRED BY LOCAL CODES AND ARRANGED TO PERMIT EASY REMOVAL OF FLOOR SINK BASKET STRAINERS.
- 14 BEFORE FABRICATION OR INSTALLATION, VERIFY EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT AND OTHER EQUIPMENT PROVIDED UNDER OTHER SECTIONS OF THE SPECIFICATION. COORDINATE EXACT ROUGH-IN LOCATIONS AND REQUIREMENTS IN THE FIELD.
- 15 INSTALL ALL VALVES, TRAP PRIMERS, WATER HAMMER ARRESTORS AND OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS BEHIND AN ACCESS PANEL.

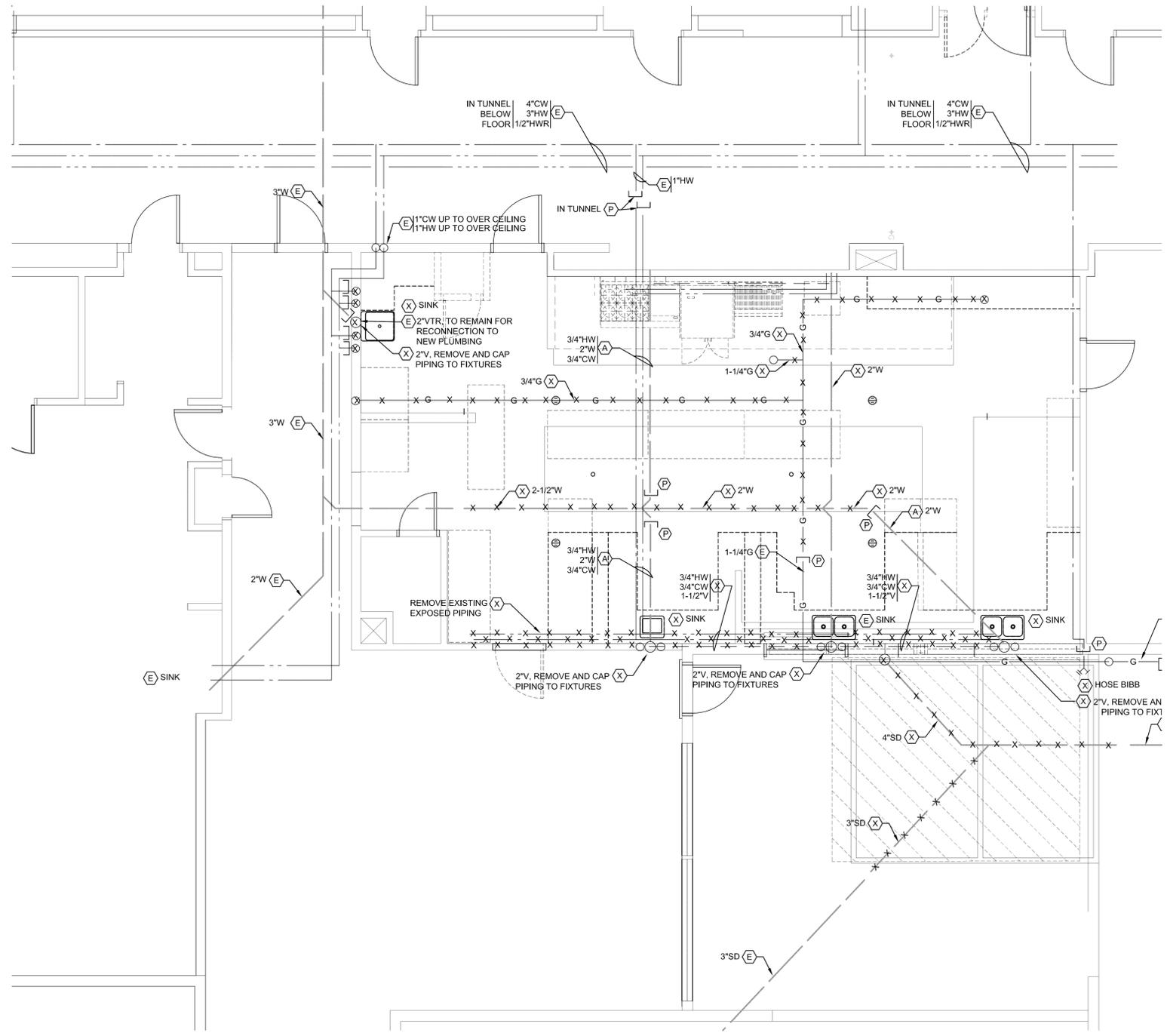


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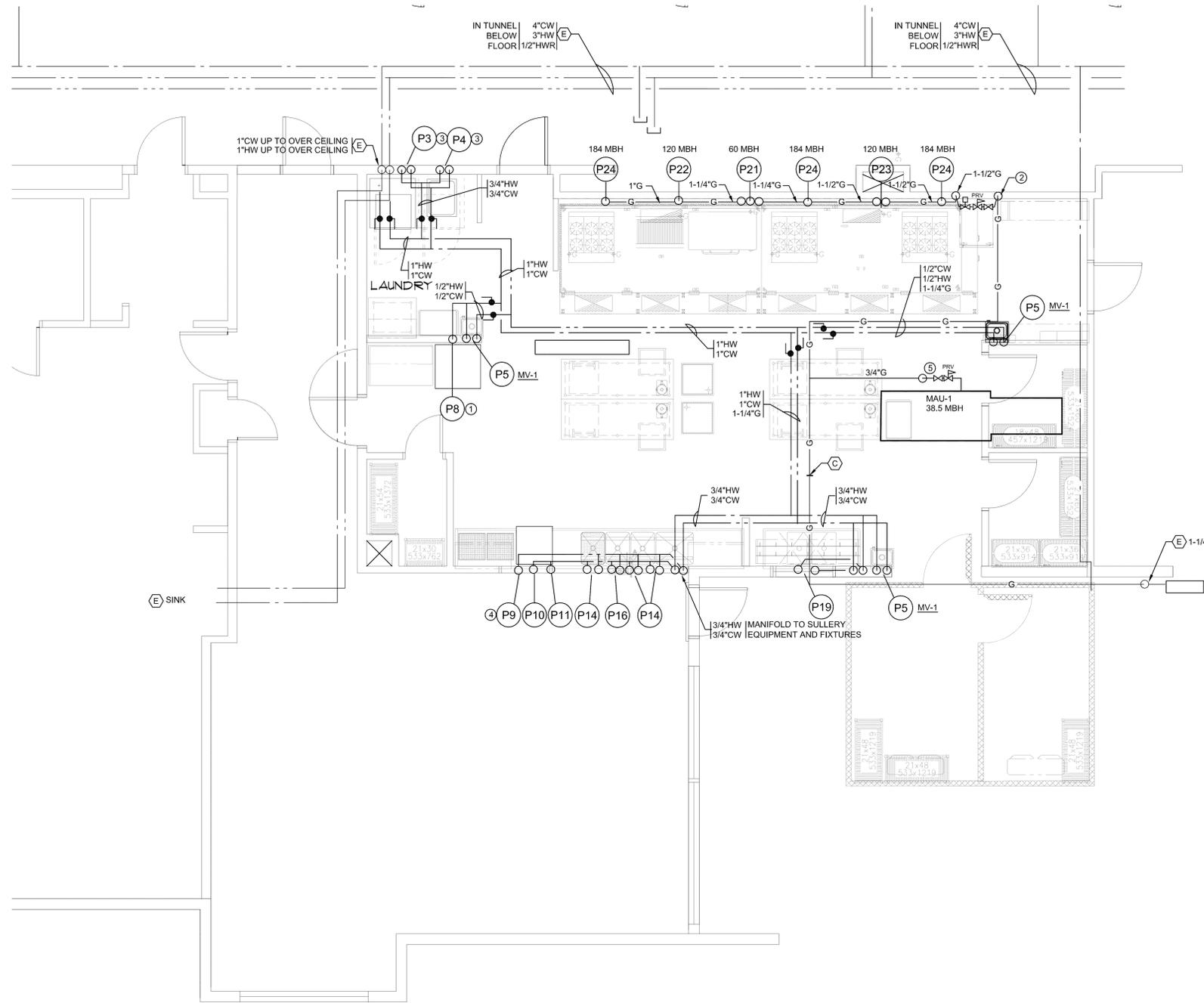
DAVID DOUGLAS SCHOOL DISTRICT
 DAVID DOUGLAS HS SOUTH KILT
 KITCHEN MODIFICATIONS
 100 SE 135TH AVE, PORTLAND, OR 97233
 PLUMBING LEGENDS, SCHEDULES AND NOTES

BBL1903
 10039.00.1
 PROJECT NUMBER
 21 FEB 2019
 DATE
 REVISIONS

P.I.Ø
 BID SET



1 PLUMBING ENLARGED DEMO KITCHEN FLOOR PLAN
P2.0 1/4" = 1'-0"



SHEET NOTES

- ① SEE ICE MACHINE DETAIL 3, SHEET P3.0.
- ② SEE KITCHEN APPLIANCE GAS PIPING DETAIL 1, SHEET P3.0.
- ③ PROVIDE WATER HAMMER ARRESTOR SIZED PER DETAIL 5, SHEET P3.0.
- ④ CONNECT DISHWASHING EQUIPMENT MANUFACTURER'S RECOMMENDATIONS, PROVIDE ALL SHUTOFF VALVES, STRAINERS, PRESSURE REDUCING VALVES, ETC REQUIRED.
- ⑤ ROUTE GAS THROUGH ROOF, CONNECT TO MAU-1. PROVIDE SHUTOFF VALVE, EQUIPMENT REGULATOR AND DIRT/DRIP LEG.

1 PLUMBING HW, CW & GAS ENLARGED NEW KITCHEN FLOOR PLAN
 P2.1 1/4" = 1'-0"

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DAVID DOUGLAS SCHOOL DISTRICT
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 KITCHEN MODIFICATIONS
 1001 SE 135TH AVE, PORTLAND, OR 97233
 PLUMBING HW, CW & GAS ENLARGED KITCHEN NEW FLOOR
 PLAN

BBL1903	REVISIONS
10039.00.1	
PROJECT NUMBER	
21 FEB 2019	
DATE	

P2.1

BID SET

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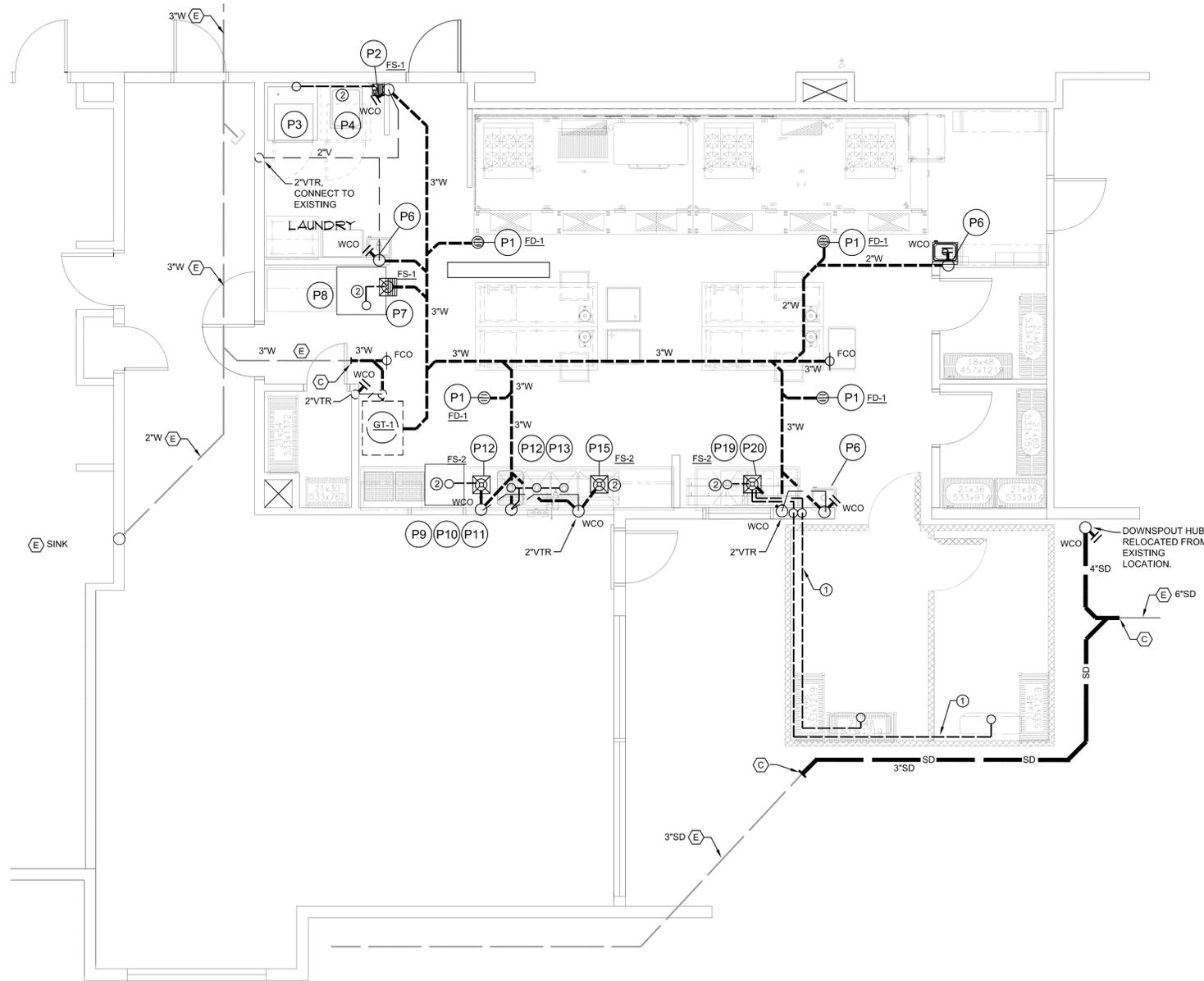
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DAVID DOUGLAS SCHOOL DISTRICT
DAVID DOUGLAS HS SOUTH KILT
KITCHEN MODIFICATIONS
1001 SE 135TH AVE, PORTLAND, OR 97233
PLUMBING WASTE & VENT ENLARGED KITCHEN NEW FLOOR PLAN

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PROJECT NUMBER
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DATE
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P2.2

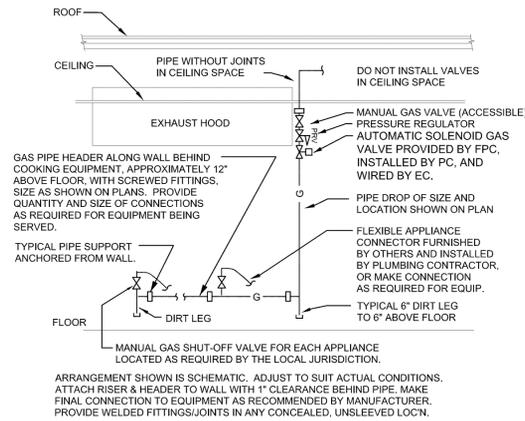
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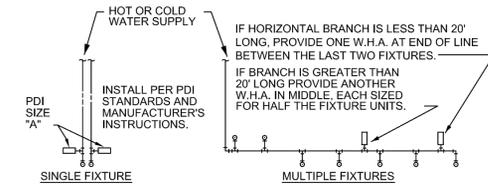
SHEET NOTES

- ① 3/4" CONDENSATE DRAIN FROM COOLER/FREEZER COILS. SEE DETAIL 5, SHEET P3.0
- ② INDIRECT WASTE FROM FIXTURE TO INDIRECT OVER FLOOR SINK. SEE DETAIL 2, SHEET 3.0.

PLUMBING WASTE AND VENT ENLARGED NEW KITCHEN FLOOR PLAN



1 KITCHEN APPLIANCE GAS PIPING
 P3.0 DIAGRAMMATIC

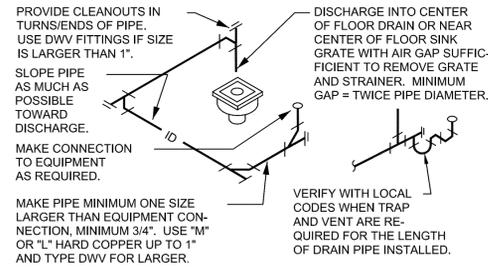


PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
A	1/2"	1-11
B	3/4"	12-32
C	1"	33-60
D	1-1/4"	61-113
E	1-1/2"	114-154
F	2"	154-330

FIXTURE UNIT TABULATION		
FIXTURE	COLD	HOT
WATER CLOSET	10	--
URINAL	5	--
LAVATORY/HAND SINK	1.5	1.5
SINK/JANITOR'S SINK	3	3

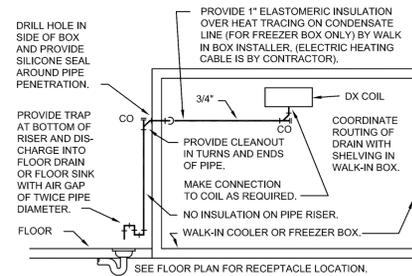
PC TO PROVIDE WATER HAMMER ARRESTORS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS OR WATTS WITH PISTON AND O-RING CONSTRUCTION, HAVING PDI #WH-201, ASSE # 1010 AND ANSI # A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. PROVIDE ACCESS DOOR FOR SERVICING.

5 WATER HAMMER ARRESTOR
 P3.0 SCALE: NONE



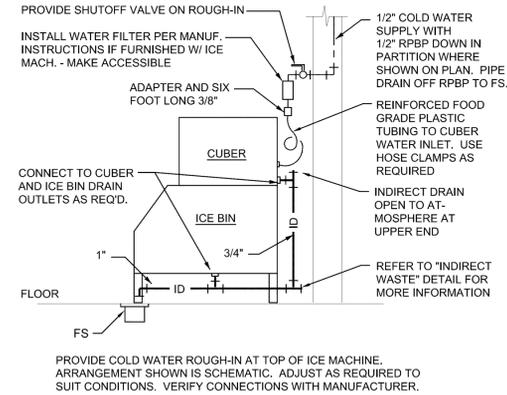
ROUTE PIPE INCONSPICUOUSLY AND UNOBTUSIVELY. HANG PIPE AS REQUIRED. DO NOT INSULATE INDIRECT DRAIN PIPE WHEN INSTALLED EXPOSED IN FOOD SERVICE FACILITY. REFER TO LOCAL CODES FOR FURTHER INFORMATION.

2 INDIRECT WASTE DETAIL
 P3.0 DIAGRAMMATIC



INSTALL PIPE HIGH AS POSSIBLE, ANCHORED TO WALL OF BOX WITH SUPPORTS AT MAXIMUM SIX FOOT CENTERS. USE TYPE "M" HARD COPPER TUBE AND FITTINGS WITH LEAD-FREE SOLDER JOINTS. SLOPE HORIZONTAL PIPE AT MINIMUM TWO PERCENT. REFER TO LOCAL CODE FOR INDIRECT DRAIN REQUIREMENTS.

5 WALK-IN COOLER/FREEZER CONDENSATE DETAIL
 P3.0 SCALE: NONE



PROVIDE COLD WATER ROUGH-IN AT TOP OF ICE MACHINE. ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST AS REQUIRED TO SUIT CONDITIONS. VERIFY CONNECTIONS WITH MANUFACTURER.

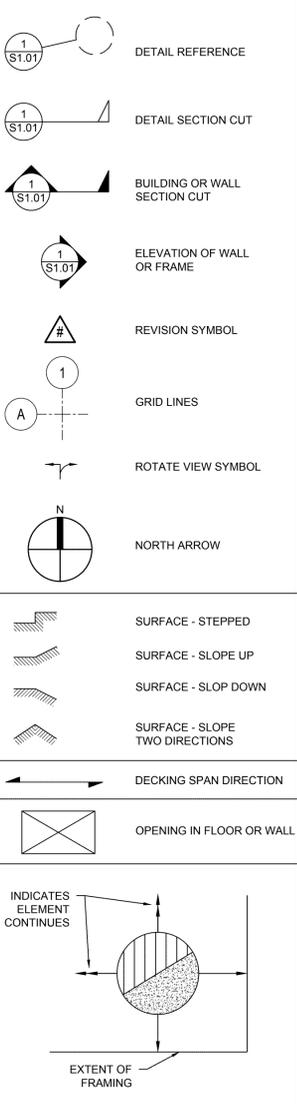
3 ICE MACHINE CONNECTION
 P3.0 DIAGRAMMATIC

STRUCTURAL ABBREVIATIONS

Table of structural abbreviations including # NUMBER OR POUNDS, AB ANCHOR BOLT, ACI AMERICAN CONCRETE INSTITUTE, etc.

Table of structural abbreviations including MAX MAXIMUM, MC MISCELLANEOUS CHANNEL, MECH MECHANICAL, etc.

STRUCTURAL DRAWING SYMBOLS



STRUCTURAL DRAWING INDEX table with columns for SHEET, DRAWING TITLE, and 90% SET.

STRUCTURAL NOTES:

GENERAL: THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND CORRELATION OF ALL ITEMS AND WORK NECESSARY FOR COMPLETION OF THE PROJECT... TEMPORARY SHORING: WHEREVER SHORING IS REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SHORING SYSTEM... SPECIAL INSPECTION / STRUCTURAL OBSERVATION: SPECIAL INSPECTION AND/OR TESTING IS REQUIRED IN ACCORDANCE WITH IBC SECTION 1704... DESIGN LOADS: LIVE LOAD REDUCTION FOR BEAMS AND COLUMNS WAS NOT USED... FOUNDATION CRITERIA: CONTRACTOR SHALL VERIFY SOIL CONDITIONS AT THE FOOTINGS AND MAKE ANY NECESSARY CORRECTIONS... CONCRETE: MIXING, BATCHING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE, ACI 318, ACI 301 AND IBC CHAPTER 19.

THE AIR-ENTRAINING ADMIXTURE SHALL CONFORM TO ASTM C260. ALL CONCRETE WITH REINFORCEMENT SHALL HAVE NO CHLORINE OR CHLORIDES. NO WATER MAY BE ADDED TO THE CONCRETE IN THE FIELD UNLESS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE SUPPLIER... SLEEVES, OPENINGS, CONDUIT, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER BEFORE PLACING CONCRETE... WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING CONCRETE SURFACE SHALL BE CLEANED AND ROUGHENED TO A MINIMUM 1/4" AMPLITUDE PER ACI 318 11.6.9... DESIGN OF FORMWORK, SHORING AND RE-SHORING DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO ACI 347R-14 AND ACI 347.2R-17... CONCRETE REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE DEFORMED BARS PER ASTM A615 OR A706, GRADE 60 UNLESS NOTED OTHERWISE... ALL REINFORCING STEEL SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS, PLASTIC CHAIRS OR APPROVED METAL CHAIRS, AS SPECIFIED BY THE CRSI MANUAL OF STANDARD PRACTICE, MSP-1 AND SECURELY TIED IN PLACE WITH #16 ANNEALED IRON WIRE PRIOR TO PLACING CONCRETE... CONCRETE COVER (UNLESS NOTED OTHERWISE): TABLE with columns for BAR SIZE, CONCRETE CAST AGAINST EARTH, TO EARTH / WEATHER, SLABS & JOISTS, WALLS, BEAMS & COLUMNS... SPECIFIED CONCRETE COVER SHALL BE MAINTAINED TO ALL REINFORCEMENT AT CONCRETE REVEALS AND INSETS... CONCRETE ANCHORS: POST INSTALLED CONCRETE ANCHORS SHALL CONSIST OF THE FOLLOWING UNLESS NOTED OTHERWISE... SCREW ANCHORS: HILTI KWIK HUS-EZ OR HILTI KWIK HUS-EZ P... ALL POST INSTALLED CONCRETE ANCHORS SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S INSTALLATION CRITERIA AND PER THE CURRENT ICC EVALUATION REPORT... STRUCTURAL STEEL STUD WELDING: ALL WELDED THREADED STUDS (WTS) SHALL BE WELDED WITH AUTOMATIC STUD WELDING EQUIPMENT... WOOD FRAMING: ALL STRUCTURAL WOOD COLUMNS AND BEAMS TO BE DOUGLAS FIR/LARCH (DF/L), #2 UNLESS NOTED OTHERWISE... WOOD FRAMING FASTENING SCHEDULE: TABLE with columns for ITEM, FASTENERS... PRESSURE TREATED LUMBER: ALL STRUCTURAL WOOD MEMBERS EXPOSED TO WEATHER OR AS NOTED ON DRAWINGS OR AS REQUIRED BY IBC SECTION 2303.1.8, SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH AMERICAN WOOD-PRESERVERS ASSOCIATION USING (ACC, CA-B, DOT) STANDARD U1 AND M4 FOR SPECIES, PRODUCT, PRESERVATIVE, AND END USE... ALL LAMINATED VENEER LUMBER, ORIENTED STRAND LUMBER, GLUE LAMINATED LUMBER EXPOSED TO WEATHER AND SUBJECT TO DECAY, SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR PRESERVATIVE MATERIALS, RETENTION RATES, AND END USE... ALL TRIMMED SECTIONS, CUTS, DAPS, OR HOLES IN PRESSURE TREATED MATERIALS SHALL BE TREATED WITH COPPER NAPHTHENE, IN ACCORDANCE WITH AWP STANDARD M4, FOR ADDITIONAL REQUIREMENTS, SEE IBC SECTION 2304.11 FOR PROTECTION AGAINST DECAY AND TERMITES.



DAVID DOUGLAS SCHOOL DISTRICT
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SPECIAL INSPECTION:

TABLE 2 REQUIRED STRUCTURAL SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	IBC CODE REFERENCE	INSPECTION CODE or STANDARD REFERENCE	FREQUENCY		REMARKS
			Continuous	Periodic	
CONCRETE					
INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE	*1909.1 TABLE 1705.3*	*ACI 318: 3.8.6, 8.1.3, 21.1.8*		X	SPECIAL INSPECTIONS APPLY TO ANCHOR PRODUCT NAME, TYPE, AND DIMENSIONS, HOLE DIMENSIONS, COMPLIANCE WITH DRILL BIT REQUIREMENTS, CLEANLINESS OF THE HOLE AND ANCHOR, ADHESIVE EXPIRATION DATE, ANCHOR/ADHESIVE INSTALLATION, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE
REINFORCING STEEL PLACEMENT	*1705.3 1910.4 1901.3.2*	*ACI 318: 3.5 ACI 318: 7.1-7.7*		X	*TOLERANCES AND REINFORCING PLACEMENT PER ACI 7.5; SPACING LIMITS FOR REINFORCING ACI 7.6 PROTECTION OF REINFORCEMENT PER ACI 7.7
VERIFYING USE OF REQUIRED MIX DESIGN(S)	*TABLE 1705.3 1904 1904.2 1910.2 1910.3*	*ACI 318: CHAPTER 4 ACI 318: 5.2-5.4*		X	
CONCRETE PLACEMENT	*TABLE 1705.3*	*ACI 318: 1.3.2.D ACI 318: 5.9 - 5.10*	X		
STEEL					
WELDING STUDS		*AISC 360 N6 AWS D1.1 SECTION 7*	X		*CONTINUOUS INSPECTION IS NOT REQUIRED WHEN WELDS INSTALLED WITH AN AUTOMATICALLY TIMED STUD WELDING MACHINE PER SECTION 7 OF AWS D1.1 (ONLY PERIODIC), 1705.2 (3) ALL WELDS VISUALLY INSPECTED PER AWS D1.1 7.8.1*

TABLE 5 REQUIRED TESTING for SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	IBC CODE REFERENCE	TESTING CODE or STANDARD REFERENCE	FREQUENCY		REMARKS
			Continuous	Periodic	
CONCRETE					
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	*TABLE 1705.3*	*ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8*		X	*FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED ONCE EACH DAY FOR A GIVEN CLASS OF CONCRETE, OR LESS THAN ONCE FOR EACH 150 YDS OF CONCRETE, OR LESS THAN ONCE FOR EACH 5,000 FT2 OF SURFACE AREA FOR SLABS/WALLS.
CONCRETE STRENGTH	*TABLE 1705.3*	ASTM C39	X		
CONCRETE SLUMP		ASTM C143	X		
CONCRETE AIR CONTENT	*TABLE 1705.3*	ASTM C231	X		
CONCRETE TEMPERATURE		ASTM C1064	X		
STEEL					
PRE-CONSTRUCTION TESTING OF WELDING STUDS	1705.2.2	AWS D1.1 7.7.1	EACH SIZE AND TYPE OF STUD EACH SHIFT		THIS TESTING PERFORMED BY CONTRACTOR AND CONFIRMED BY SPECIAL INSPECTOR.



EXPIRES: 12 - 31 - 2020

BBL ARCHITECTS
ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN

200 North State Street ■ Lake Oswego, Oregon 97034

DAVID DOUGLAS SCHOOL DISTRICT
DAVID DOUGLAS HS - KILT KITCHEN
1001 SE 135TH AVENUE, PORTLAND, OREGON 97233

MCE #181509
PROJECT NUMBER
21 FEB 2019
DATE
REVISIONS

S0.2

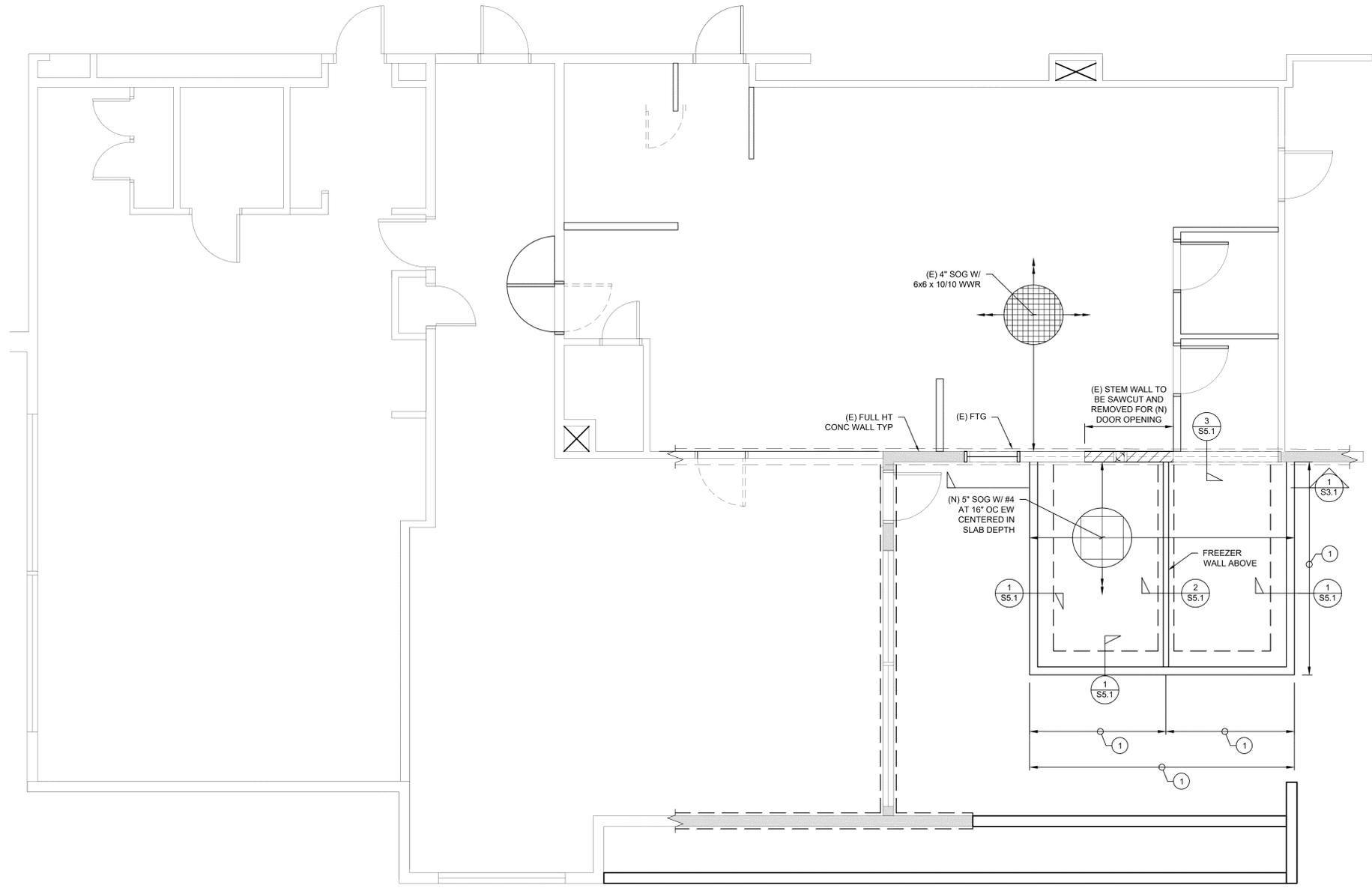
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MILLER
CONSULTING
ENGINEERS

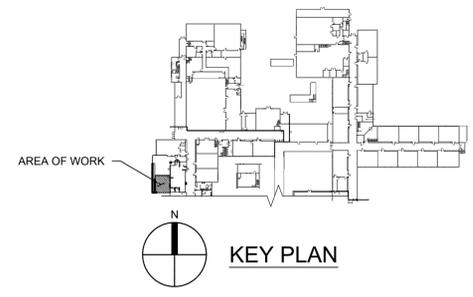
SPECIAL INSPECTION

KEYNOTES	
1	DIMENSIONS PER FREEZER / COOLER MANUF



1 FOUNDATION PLAN

1/4" = 1'-0"



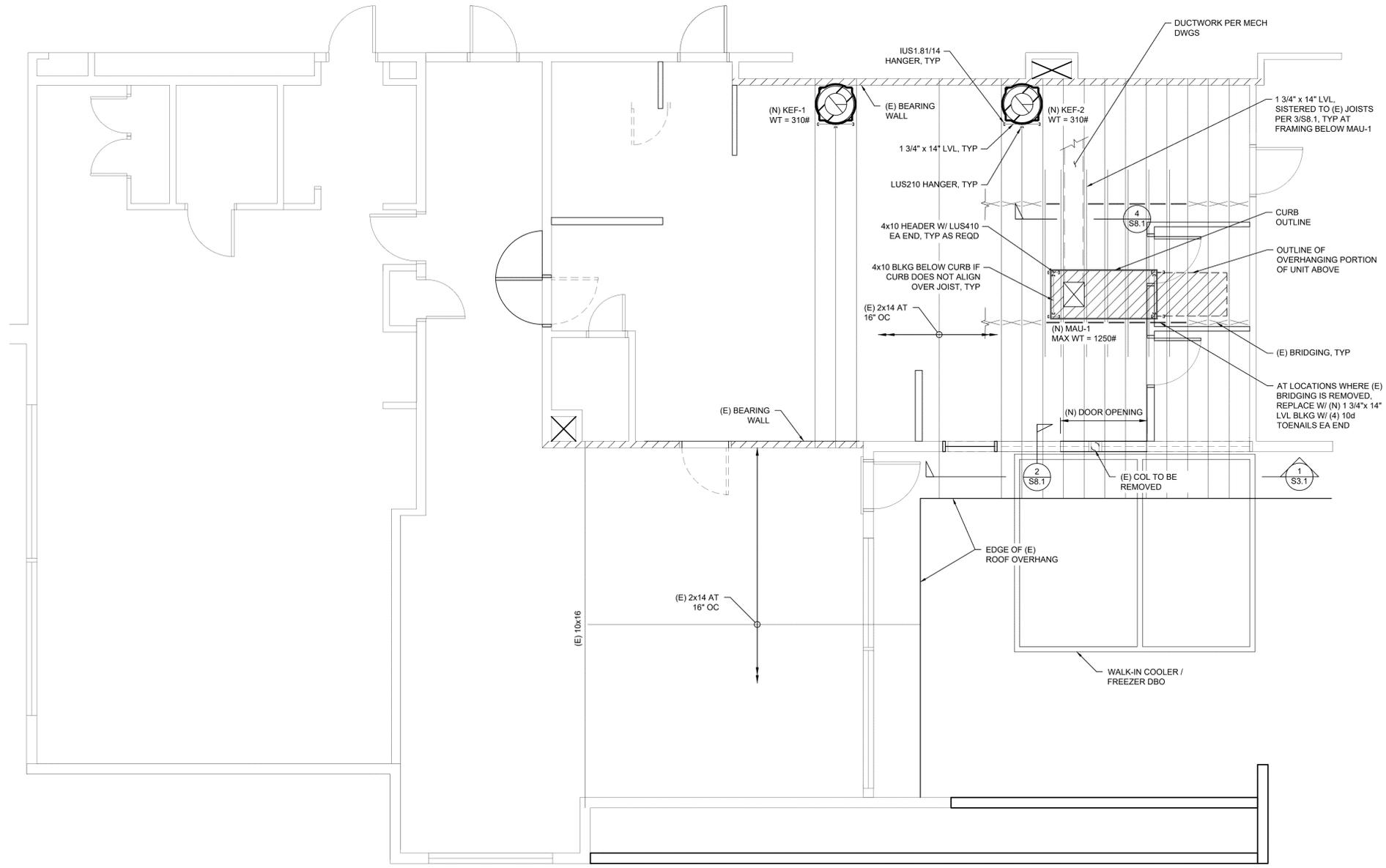
DAVID DOUGLAS SCHOOL DISTRICT
DAVID DOUGLAS HS - KILT KITCHEN
1000 SE 135TH AVENUE, PORTLAND, OREGON 97233

MCE #181509
PROJECT NUMBER
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DATE

S.1.1

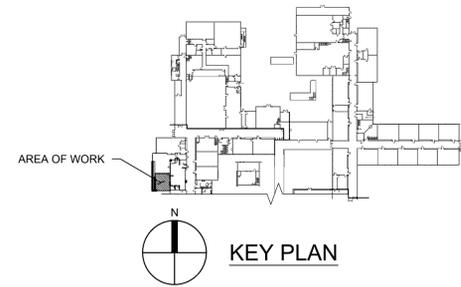
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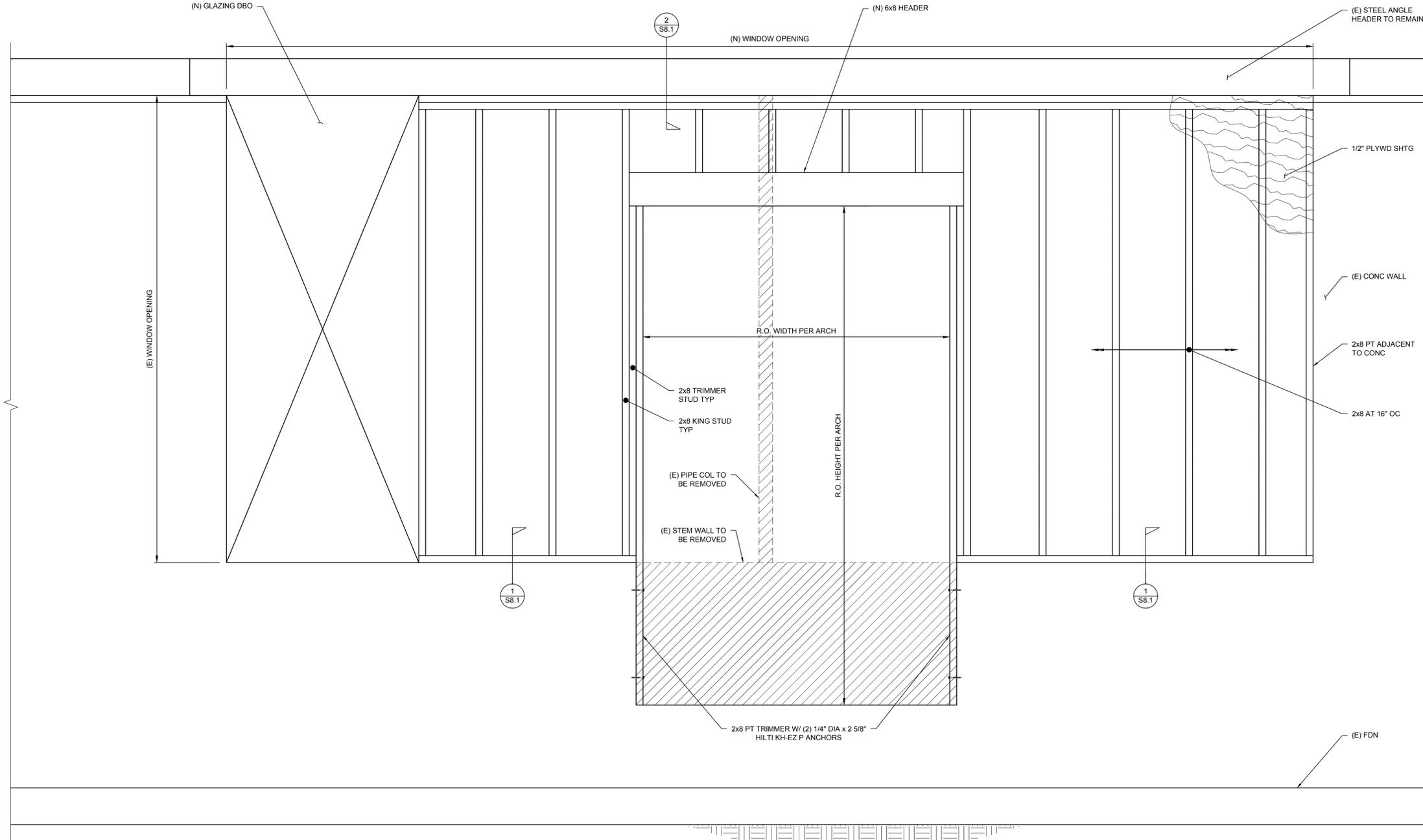


1 ROOF FRAMING PLAN

1/4" = 1'-0"

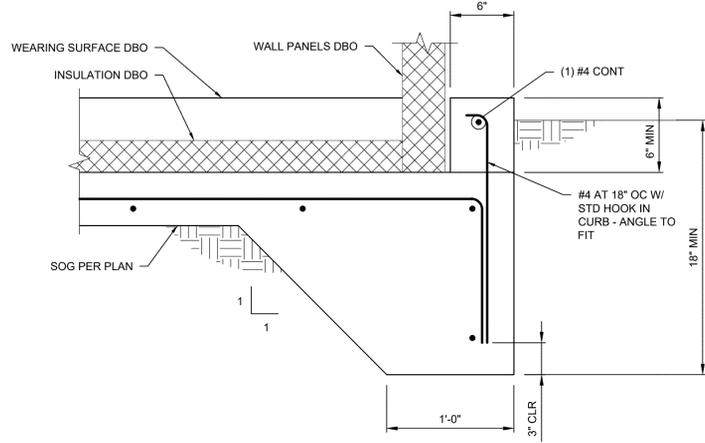


NOTE:
 WALK-IN COOLER / FREEZER NOT SHOWN

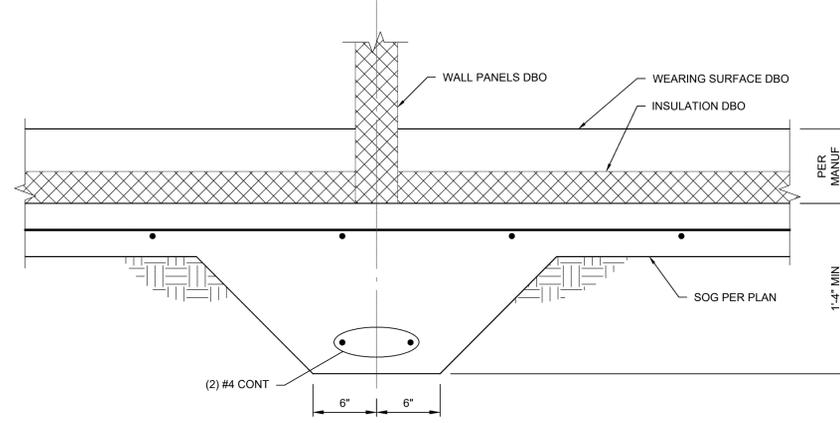


1 WALL FRAMING ELEVATION
 S3.1

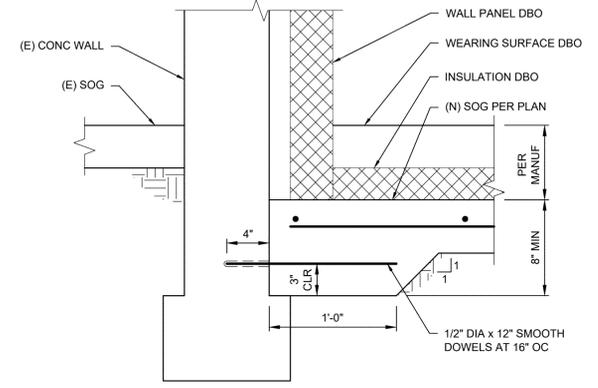
1" = 1'-0"



1 SECTION AT COOLER/FREEZER FDN
S5.1 1 1/2" = 1'-0"



2 SECTION AT THICKENED SLAB
S5.1 1 1/2" = 1'-0"



3 SECTION AT COOLER/FREEZER - (E) FDN
S5.1 1 1/2" = 1'-0"



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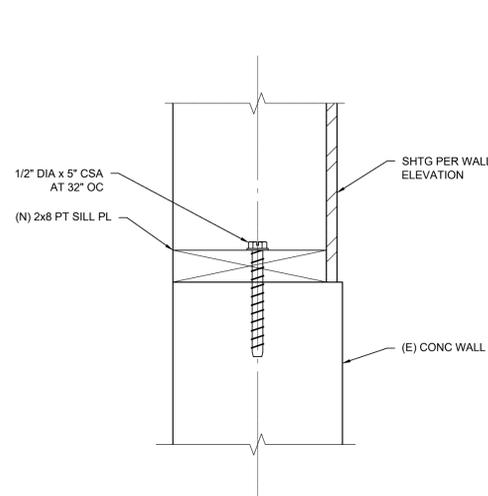
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PROJECT NUMBER
21 FEB 2019
DATE

S5.1

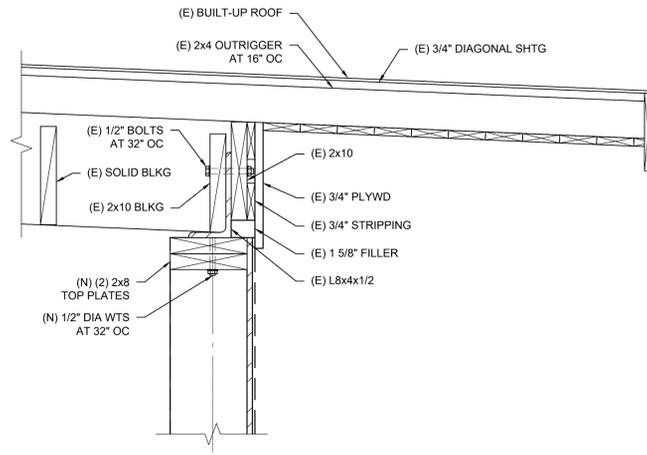
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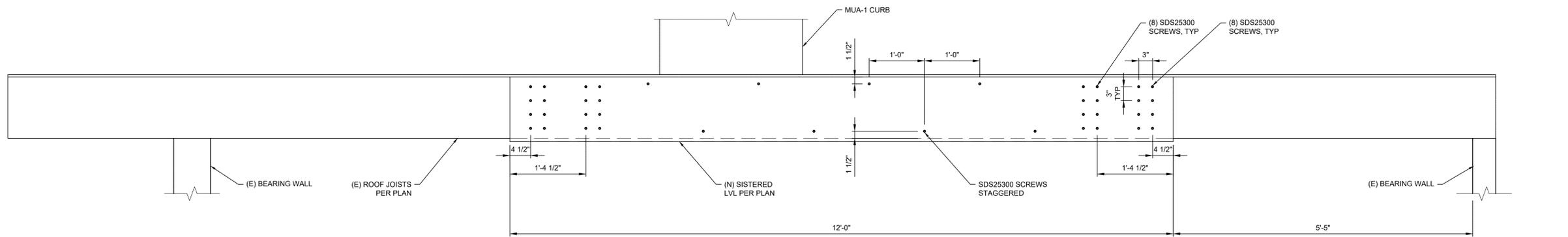
CONCRETE DETAILS



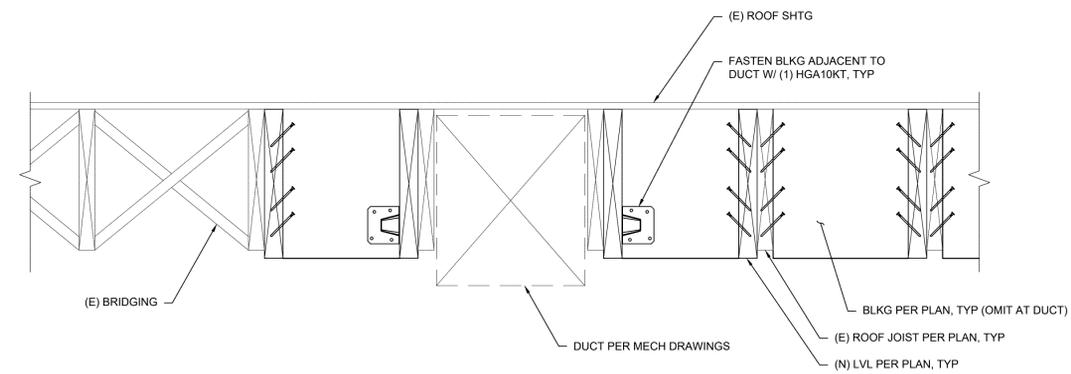
1 SECTION AT SILL PL
S8.1 3" = 1'-0"



2 SECTION AT TOP OF WALL
S8.1 1 1/2" = 1'-0"



3 SISTERED LVL DETAIL
S8.1 1" = 1'-0"



4 SECTION AT DUCT
S8.1 1 1/2" = 1'-0"

