UNIVERSITY OF MAINE
FOOD INNOVATION LAB

CONSTRUCTION DOCUMENTS

OCTOBER 20, 2025

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Harriman

UNIVERSITY OF MAINE
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ORONO, MAINE

Harriman Project No.	24265

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

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OCTOBER 20, 2025

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Drawn by: JWA

COVER SHEET

G00-1

ENERGY CODE REQUIREMENTS

ENERGY CODE	2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) W/ AMENDMENTS / ASHRAE 90.1-2019		CLIMATE ZONE 6A	
DESCRIPTION	REQUIREMENTS		PROPOSED	
OPAQUE ELEMENTS	IECC TABLE C402.1.3			
	MINIMUM R-VALUES		DESIGNED R-VALUES	
	INSULATION ENTIRELY ABOVE DECK	R-30ci	ROOF TYPE R1 (INSULATION ENTIRELY ABOVE DECK)	R-30ci + TAPERED INSULATION
	ATTIC/OTHER	R-49	ROOF TYPE R2 (ATTIC)	R-48 BATT IN CEILING CAVITY + R-2.5ci (MIN) of TAPERED RIGID INSULATION
	METAL FRAMED WALL	R-13 + R-12.5ci	WALL TYPE W01/W03 (METAL FRAMED WALL W/ IMP)	R-32ci
	BELOW-GRADE WALL	R-10ci	WALL TYPE W02/W04 (METAL FRAMED WALL W/ RAINSCREEN)	R-12.6ci + R14.7 CAVITY INSULATION
	UNHEATED SLABS	R-20 BELOW FOR 24"	BELOW-GRADE WALL	R-10ci
	OPAQUE DOORS	0.37 U-VALUE	UNHEATED SLABS	R-20 BELOW 24"
	GARAGE DOORS	0.31 U-VALUE	OPAQUE DOORS	0.37 MAX U-VALUE
			OVERHEAD COILING DOOR:	0.82 U-VALUE
GLAZING	IECC TABLE C402.4			
	MAXIMUM U-FACTORS		DESIGNED U-FACTORS	
	FIXED FENESTRATION	U-VALUE 0.34	FIXED FENESTRATION	0.28 U-VALUE = COMPLIES
	OPERABLE FENESTRATION	U-VALUE 0.42		0.27 SHGC = COMPLIES
	ENTRANCE DOORS	U-VALUE 0.83	OPERABLE FENESTRATION	NONE
	SHGC — FIXED — OPERABLE		GLAZED ENTRANCE DOORS	0.63 U-VALUE = COMPLIES
	PF < 0.2 — 0.38 U-VALUE — 0.34 U-VALUE			0.34 SHGC = COMPLIES
	0.2 ≤ PF < 0.5 — 0.46 U-VALUE — 0.41 U-VALUE		PERCENTAGE OF VERTICAL FENESTRATION:	13.6% NORTH WALL = COMPLIES
	PF ≥ 0.5 — 0.61 U-VALUE — 0.54 U-VALUE			0% SOUTH, EAST AND WEST WALLS = COMPLIES
	IECC C402.4.1			
	PERCENTAGE OF VERTICAL FENESTRATION: 30%			

CODE ANALYSIS

APPLICABLE CODES

BUILDING CODE	2021 INTERNATIONAL BUILDING CODE (IBC) w/ AMENDMENTS	**PLUMBING CODE**	PLUMBING CODE, 2021 UNIFORM PLUMBING CODE
STRUCTURAL CODE	ASCE 7-10	**FIRE PROTECTION**	NFPA 13
LIFE SAFETY CODE	2018 NFPA 101 LIFE SAFETY CODE (LSC)	**MECHANICAL CODE**	2021 INTERNATIONAL MECHANICAL CODE w/ AMENDMENTS
FIRE CODE	2018 NFPA 1, FIRE CODE	**ELECTRICAL CODE**	2023 NFPA 70 NATIONAL ELECTRICAL CODE (NEC)
	2018 NFPA 220, STANDARDS ON TYPES OF BUILDING CONSTRUCTION		
	2018 NFPA 5000, BUILDING CONSTRUCTION AND SAFETY CODE		
ACCESSABILITY CODE	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN		
	2009 ICC A117.1 ACCESSIBLE AND USEABLE BUILDING AND FACILITIES		
EXISTING BUILDING	2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC) w/ AMENDMENTS		

PROJECT / CODE NARRATIVE

THE PROJECT WILL CONSTRUCT AN NEW, SINGLE-STORY ADDITION TO THE KEYO BUILDING AT THE UNIVERSITY OF MAINE'S ORONO CAMPUS. THE ADDITION WILL HOUSE THREE (3) COMMERCIAL KITCHENS THAT WILL BE USED FOR FOOD PRODUCTION AS WELL AS COOKING DEMONSTRATIONS. THE BUILDING ALSO INCLUDES ACCESSORY STORAGE, CIRCULATION AND RESTROOM AREAS. THE NEW LOBBY WILL SERVE AS A SHARED, ACCESSIBLE ENTRANCE FOR BOTH THE NEW ADDITION AND THE EXISTING KEYO BUILDING. THE ADDITION WILL BE CONSTRUCTED AS A SEPARATE BUILDING FROM THE EXISTING BUILDING AND WILL BE SEPARATED BY A FIRE WALL.

GENERAL

DESCRIPTION	CODE REF. IBC	CODE REF. NFPA	PROPOSED
CONSTRUCTION TYPE	IBC TABLE 601	NFPA 220 CONSTRUCTION TYPE NFPA 101 TABLE 602	CONSTRUCTION TYPE V-B (IBC) CONSTRUCTION TYPE V (000) (NFPA 101)
BUILDING AREA	IBC TABLE 506.1 ALLOWABLE: 9,000 SF FOR B OCCUPANCY, SINGLE STORY, NON-SPRINKLERED (NS), CONSTRUCTION TYPE V-B	NFPA 500 TABLE 7.4.1 ALLOWABLE: 9,000 SF FOR BUSINESS OCCUPANCY, NON-SPRINKLERED (N), CONSTRUCTION TYPE V (000)	3,767 SF = COMPLIES
BUILDING HEIGHT	IBC TABLES 504.3 & 504.4 ALLOWABLE HEIGHT = 40' ALLOWABLE STORIES = 2	NFPA 500 TABLE 7.4.1 ALLOWABLE: 2 STORIES AND 40' FOR BUSINESS OCCUPANCY, NON-SPRINKLERED (N), CONSTRUCTION TYPE V (000)	PROPOSED HEIGHT = 20' - 6" = COMPLIES PROPOSED STORIES = 1 = COMPLIES

OCCUPANCY

DESCRIPTION	CODE REF. IBC	CODE REF. NFPA	PROPOSED
CLASSIFICATION	IBC 304	NFPA 101 6.1.11	B OCCUPANCY (IBC) BUSINESS OCCUPANCY (NFPA 101) KITCHENS AND ACCESSORY STORAGE USES IN A HIGHER-EDUCATION FACILITY, WITH NET KITCHEN AREA LESS THAN 2,500 SF

EGRESS

DESCRIPTION	CODE REF. IBC	CODE REF. NFPA	PROPOSED
REQUIRED NUMBER OF EXITS	IBC 1006.3 2 EXITS REQUIRED	NFPA 101, 7.4.1.1 AND 38.2.4.1 2 EXITS REQUIRED	2 EXITS PROVIDED = COMPLIES
MAXIMUM TRAVEL DISTANCE	IBC 1017.2 200' WITHOUT SPRINKLER	NFPA 101, 38.2.6.2 200' WITHOUT SPRINKLER	MAX EATD = 76' = COMPLIES
COMMON PATH OF TRAVEL	IBC TABLE 1006.2.1 75' WITHOUT SPRINKLER 100' WITHOUT SPRINKLER FOR OCC LOAD < 30	NFPA 101, 38.2.5.3.2 75' WITHOUT SPRINKLER 100' WITHOUT SPRINKLER FOR OCC LOAD < 30	ALL REGULARLY OCCUPIED AREAS HAVE TWO MEANS OF EGRESS, CPET DOES NOT APPLY
DEAD END CORRIDOR	IBC 1020.5 20'-0" MAX. WITHOUT SPRINKLER	NFPA 101,38.2.5.2.2 20' MAX. WITHOUT SPRINKLER	15' - 10" MAX = COMPLIES
EXIT ACCESS DOOR ARRANGEMENT	IBC 1007.1.1 1/2 MAX DIAGONAL DISTANCE WITHOUT SPRINKLER	NFPA 101, 7.5.1.3.2 1/2 MAX DIAGONAL DISTANCE WITHOUT SPRINKLER	MAX DIAGONAL = 98' - 6 1/2" EXIT SEPARATION = 85' - 11" = COMPLIES
CORRIDOR WIDTH	IBC 1020.3 44" MIN. TYPICAL 36" MIN. FOR CORRIDORS SERVING < 50 OCCUPANTS	NFPA 101, 7.3.4.1 (2) AND 38.2.3.2 36" MIN 44" MIN. FOR CORRIDORS SERVING > 50 OCCUPANTS	60" MIN. = COMPLIES
DOOR WIDTH	IBC 1010.1.1 32" MIN. CLEAR WIDTH AND 80" MIN. CLEAR HEIGHT	NFPA 101 7.3.1.2.3.2 32" MIN. CLEAR WIDTH AND 80" MIN. CLEAR HEIGHT	ALL DOORS PROVIDE 32" MIN. CLEAR WIDTH AND 80" MIN. CLEAR HEIGHT = COMPLIES (REFER TO DOOR SCHEDULE FOR DOOR SIZES)
DESIGN OCCUPANT LOADS	IBC TABLE 1004.5 COMMERCIAL KITCHENS: 200 SF GROSS ACCESSORY STORAGE: 300 SF GROSS	NFPA 101 7.3.1.2 KITCHENS: 100 SF GROSS STORAGE: 500 SF GROSS	REFER TO G00-3 CODE ANALYSIS PLAN FOR OCCUPANT LOADS

FINISHES

DESCRIPTION	CODE REF. IBC	CODE REF. NFPA	PROPOSED
INTERIOR WALL / CEILING FINISH CLASSIFICATION	IBC TABLE 803.13 B OCCUPANCY, NON-SPRINKLERED CORRIDORS = CLASS B, MIN OTHER ROOMS AND SPACES = CLASS C, MIN	NFPA 101 7.1.4.1 AND 38.3.3.2 CLASS A OR B REQUIRED IN EXIT ENCLOSURES CLASS A, B OR C IN OTHER ROOMS OR SPACES	ALL WALL AND CEILING FINISHES ARE CLASS B OR BETTER = COMPLIES
INTERIOR FLOOR FINISH CLASSIFICATION	IBC TABLE 804.4.2 B OCCUPANCY, NON-SPRINKLERED CLASS II REQUIRED	NFPA 101 38.3.3.2.2 CLASS I OR CLASS II REQUIRED	ALL FLOOR FINISHES ARE CLASS II OR BETTER = COMPLIES

FIRE ALARM / SUPPRESSION

DESCRIPTION	CODE REF. IBC	CODE REF. NFPA	PROPOSED
FIRE ALARM	IBC 907.2.2 REQUIRED FOR B OCCUPANCY IF TOTAL OCCUPANT LOAD > 500, OCCUPANT LOAD ABOVE OR BELOW GRADE > 100 OR FOR AMBULATORY CARE FACILITIES	NFPA 101 38.3.4.1 AND NFPA 72 REQUIRED FOR B OCCUPANCY BUILDING EXCEEDS 3 STORIES IN HEIGHT, OCCUPANT LOAD ABOVE OR BELOW GRADE > 50 OR TOTAL OCCUPANT LOAD > 300	FIRE ALARM SYSTEM PROVIDED
FIRE SUPPRESSION	IBC 903.2 NOT REQUIRED FOR B OCCUPANCIES BY THIS SECTION	NFPA 101 38.3.5 AND NFPA 13 NOT REQUIRED FOR BUSINESS OCCUPANCIES BY THIS SECTION	FIRE SPRINKLER SYSTEM NOT PROVIDED = COMPLIES
FIRE EXTINGUISHERS	IBC 906, TABLE 906.3 MAXIMUM DISTANCE OF TRAVEL TO A FIRE EXSTINGUISHER: 75 FT MAX FLOOR AREA PER EXTINGUISHER: 11,250 SF	NFPA 101 38.3.5 AND NFPA 10, TABLE 6.2.1.1 REQUIRED FOR BUSINESS OCCUPANCY	3 FIRE EXTINGUISHERS PROVIDED, EXCEEDS REQUIREMENT

FIRE RESISTIVE SEPARATIONS

DESCRIPTION	CODE REF.	CODE REF.	PROPOSED
BUILDING ELEMENTS	IBC TABLE 601 CONSTRUCTION TYPE V-B 0 HR STRUCTURAL FRAME 0 HR EXTERIOR BEARING WALLS 0 HR INTERIOR BEARING WALLS 0 HR EXTERIOR NONBEARING WALLS AND PARTITIONS 0 HR INTERIOR NONBEARING WALLS AND PARTITIONS 0 HR FLOOR CONSTRUCTION 0 HR ROOF CONSTRUCTION	NFPA 5000 7.2.1.1 CONSTRUCTION TYPE V (000) 0 HR STRUCTURAL FRAME 0 HR EXTERIOR BEARING WALLS 0 HR INTERIOR BEARING WALLS 0 HR EXTERIOR NONBEARING WALLS AND PARTITIONS 0 HR INTERIOR NONBEARING WALLS AND PARTITIONS 0 HR FLOOR CONSTRUCTION 0 HR ROOF CONSTRUCTION	0 HR STRUCTURAL FRAME 0 HR EXTERIOR BEARING WALLS 0 HR INTERIOR BEARING WALLS 0 HR EXTERIOR NONBEARING WALLS AND PARTITIONS 0 HR INTERIOR NONBEARING WALLS AND PARTITIONS 0 HR FLOOR CONSTRUCTION 0 HR ROOF CONSTRUCTION
REQUIRED RATING OF BUILDING ELEMENTS BASED ON SEPARATION DISTANCE	IBC TABLE 705.5 0 TO 5 FEET: 1 HOURS FOR B 5 TO 10 FEET: 1 HOUR FOR B 10 TO 30 FEET: 0 HOURS FOR B, TYPE V-B CONSTRUCTION < 30 FEET: 0 HOURS	NFPA 5000 TABLE 7.3.2.1 0 TO 5 FEET: 1 HOURS FOR BUSINESS USE 5 TO 10 FEET: 1 HOUR FOR BUSINESS USE 10 TO 30 FEET: 0 HOURS FOR BUSINESS USE < 30 FEET: 0 HOURS FOR BUSINESS USE	SEPARATION = 11' - 0" 0 HOURS = COMPLIES
CORRIDOR FIRE SEPARTION	IBC TABLE 1020.1 1 HOUR FOR B OCCUPANCY WITHOUT SPRINKLER	NFPA 101 38.3.6.1 1 HOUR FOR BUSINESS OCCUPANCY WITHOUT SPRINKLER	1 HOUR FIRE RATING AT CORRIDOR WALLS = COMPLIES
SEPARATION OF OCCUPANCY	IBC TABLE 508.4	NFPA TABLE 6.1.14.4.1	BUILDING HAS SINGLE OCCUPANCY TYPE (B/BUSINESS) NO OCCUPANCY SEPARATIONS REQUIRED
BUILDING SEPARATION	IBC TABLE 706.4 3 HOURS FOR B OCCUPANCY, TYPICAL	NFPA 101 8.2.1.3 AND NFPA 221 2 HOURS	3 HOUR FIRE WALL PROVIDED AT SEPARATION BETWEEN NEW ADDITION AND EXISTING KEYO BUILDING = COMPLIES FIRE WALL IS COMPRISED OF EXISTING FULLY GROUTED CMU WALL WITH BRICK VENEER WHICH PROVIDES 3-HOUR FIRE RATING PER IBC TABLE 721.1(2).3

PLUMBING FACILITIES

DESCRIPTION	CODE REF.	REQUIREMENT	PROPOSED
WATERCLOSETS	MPC 2021 TABLE 422.1 B OCCUPANCY, 25 TOTAL OCCUPANTS	1 WC FOR 1-50 MEN 1 WC FOR 1-15 WOMEN	2 GENDER NEUTRAL WC
URINALS	MPC 2021 TABLE 422.1 B OCCUPANCY, 25 TOTAL OCCUPANTS	0 URINALS REQUIRED	0 URINALS
LAVATORIES	MPC 2021 TABLE 422.1 B OCCUPANCY, 25 TOTAL OCCUPANTS	1 LAV FOR 1-75 MEN 1 LAV FOR 1-50 WOMEN	2 GENDER NEUTRAL LAV
DRINKING FOUNTAINS	MPC 2021 TABLE 422.1 B OCCUPANCY, 25 TOTAL OCCUPANTS	1 DF FOR 1-250 OCCUPANTS	1 EXG DF IN KEYO BUILDING, SERVES LESS THAN 150 OCCUPANTS AND IS ACCESSIBLE FROM ADDITION
JANITOR SINK	MPC 2021 TABLE 422.1 B OCCUPANCY	1 SERVICE SINK OR LAUNDRY TRAY	1 SERVICE SINK PROVIDED IN MECHANICAL ROOM

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LICENSED ARCHITECT
DANIEL BACKMAN
5180
STATE OF MAINE

CONSTRUCTION DOCUMENTS

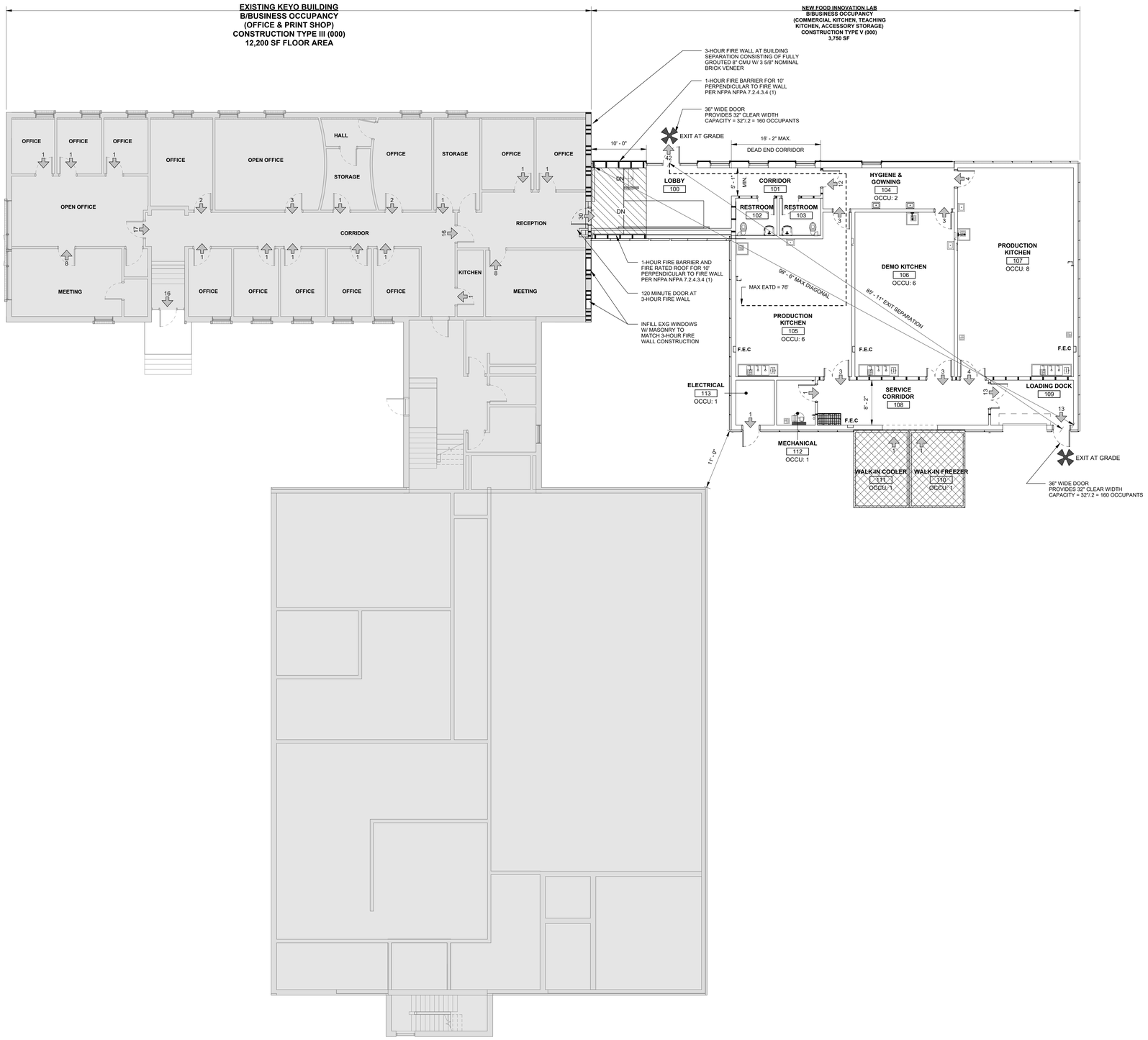
OCTOBER 20, 2025

Revision Date	Revision Description

Drawn by: JWA

CODE SUMMARY

G00-2



A1 CODE ANALYSIS PLAN - FIRST FLOOR
SCALE: 1/8" = 1'-0"

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GENERAL NOTES

1. CODE ANALYSIS PLAN IS FOR REFERENCE ONLY AND IS NOT TO BE USED FOR CONSTRUCTION
2. REFER TO A80-1 AND A81-2 FOR ACCESSIBLE CLEARANCES AT DOORS AND RESTROOMS
3. REFER TO ELECTRICAL DRAWINGS FOR EMERGENCY LIGHTING AND EXIT SIGNS

LEGEND

- EXIT AT GRADE
- 1 HOUR FIRE RESISTIVE RATED WALL OR PARTITION
- 2 HOUR FIRE RESISTIVE RATED WALL OR PARTITION
- 3 HOUR FIRE RESISTIVE RATED WALL OR PARTITION
- EXISTING BUILDING, NOT IN SCOPE EXCEPT AS NOTED
- KITCHEN AND ANCILLARY SPACE, B-OCCUPANCY
- ACCESSORY STORAGE SPACE <10% OF FLOOR AREA
- F.E.C. FIRE EXTINGUISHER CABINET

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

LICENSED ARCHITECT
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CODE ANALYSIS PLAN

G00-3

1. THE ACCURACY AND COMPLETENESS OF SUBSURFACE INFORMATION IS NOT GUARANTEED. VERIFY SITE CONDITIONS INCLUDING TEST PITS FOR LOCATIONS AND INVERTS OF UTILITIES AND REPORT ANY DISCREPANCIES TO ARCHITECT PRIOR TO PROCEEDING WITH THAT PORTION OF THE WORK.
2. CATCH BASIN GRATES SHALL BE SET SQUARE TO PAVEMENT/GRAVEL EDGES.
3. PLACE 2" THICK TRENCH POLYSTYRENE INSULATION OVER SEWER LINES WHERE DEPTH OF COVER OVER TOP OF PIPE IS LESS THAN 4'-6". PLACE INSULATION ALSO BETWEEN SEWER LINE AND STORM DRAIN OR BETWEEN WATER LINE AND STORM DRAIN WHERE SEPARATION IS LESS THAN 6'-0".
4. UNDERDRAINS, FOUNDATION DRAINS, AND SOIL GAS VENTS UNDER THE BUILDING FLOOR SLAB ARE PART OF DIVISION 33 WORK. PLACE TOP OF EXTERIOR UNDERDRAIN CLEANOUTS IN LAWN OR PLANT BEDS 2" BELOW GRADE.
5. SEDIMENT SHALL BE REMOVED FROM NEW STORM DRAINS AND CATCH BASINS, AND ALSO FROM EXISTING STORM DRAINS AND CATCH BASINS THAT DIRECTLY RECEIVE RUNOFF FROM THE WORK AREA.
6. COORDINATE WORK ON UTILITY LINES OR WITHIN ROAD RIGHT-OF-WAY WITH THE UTILITY COMPANIES, LOCAL ROAD DEPARTMENT, AND STATE DOT.
7. SLOPE CONDUITS AWAY FROM BUILDING TO HANDHOLE OR UTILITY POLE TO AVOID GROUND WATER SEEPAGE INTO BUILDING.
8. RESET RIMS OF EXISTING UTILITY STRUCTURES, MANHOLES & CATCH BASINS TO NEW GRADE.
9. PRIOR TO REMOVAL OF UTILITIES, VERIFY UTILITY FUNCTION, MATERIAL, USE, AND CURRENT ACTIVITY. REPORT DISCREPANCIES TO THE ARCHITECT FOR DIRECTION PRIOR TO COMMENCING THE WORK ON THAT UTILITY.

C1 UTILITY NOTES
SCALE: N.T.S

1. THE LANDSCAPE CONTRACTOR SHALL SUPPLY AND INSTALL ALL PLANTS IN SUFFICIENT QUANTITIES TO COMPLETE WORK AS SHOWN ON THE DRAWINGS. DISCREPANCIES BETWEEN QUANTITIES SHOWN ON THE DRAWING AND THE PLANT LIST SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT AND SHALL NOT ENTITLE THE CONTRACTOR TO ADDITIONAL COMPENSATION.
2. THE LANDSCAPE CONTRACTOR IS ADVISED THAT BOTH ABOVE AND BELOW GROUND UTILITIES MAY EXIST ON THE SITE, THE LOCATIONS OF WHICH SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF HIS OPERATIONS. SHOULD THE LOCATION OF ANY PROPOSED PLANTING CONFLICT WITH ANY UTILITY, THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY.
3. PAVING, CURBING, UTILITIES, GRASS, ETC., DAMAGED AS A RESULT OF THE LANDSCAPE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
4. AREAS RECEIVING PLANTINGS INCLUDING TREE PITS, AND SHRUB AND GROUND COVER BEDS, SHALL BE MULCHED TO A DEPTH OF 3" MINIMUM WITH AN APPROVED CLEAN, UNIFORMLY GROUND OR SHREDDED PINE OR HEMLOCK BARK MULCH OR AS OTHERWISE SPECIFIED. SAMPLE OF BARK MULCH TO BE USED SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO SITE DELIVERY.
5. THE LANDSCAPE CONTRACTOR SHALL RELOCATE PLANTS AS DIRECTED BY THE ARCHITECT.
6. IF SUBSTITUTIONS ARE NECESSARY, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF PROPOSED REPLACEMENT PLANT(S). SUBSTITUTIONS SHALL BE AS APPROVED BY THE ARCHITECT.
7. TREE STAKING SHOULD BE DONE AS DETAILED UNDER THE FOLLOWING CONDITIONS:
   - TREES 4" CALIPER AND LARGER OR 14-FT HEIGHT OR TALLER.
   - TREES LOCATED IN EXTREMELY WINDY LOCATIONS.
   - TREES LOCATED IN TREE WELLS.
   - TREES LOCATED IN PARKING LOT ISLANDS OR ADJACENT TO PARKING LOTS, DRIVEWAYS AND ROADWAYS.

C3 LANDSCAPING NOTES
SCALE: N.T.S

EXISTING		NEW
	BUILDING	
	DOOR	
BIT. PVMT	BIT. PAVEMENT	
CONC	CONCRETE	
	CURB	CURB FLUSH CURB
	CHAIN-LINK FENCE	
	HAND RAIL / OTHER FENCE	
	GUIDE RAIL / STOCKADE FENCE	
	STEEL GUARDRAIL	
	SIGN	
	PIPE BOLLARD	
	WETLAND LIMIT	
	STREAM CENTERLINE	
	TREES	
	TREE LINE	
-98-	CONTOUR	98
x 99.8	SPOT ELEVATION	688.2
	GRADE TO DRAIN	GTD
	SOIL BORING, TEST PIT	
	SILT FENCE	
	BARK / STONE CHECK DAM	
	RIP-RAP	
	CATCH BASIN / DRAIN INLET	
	STEAM MANHOLE	
	STORM DRAIN MANHOLE	
	SEWER MANHOLE	
	TELEPHONE MANHOLE	
	ELECTRIC MANHOLE / PULLBOX	
	WATER VALVE	
	CURB STOP VALVE	
	HYDRANT	
	UTILITY POLE	
	GUY WIRE	
	LIGHT POLE BASE	
	LIGHT BOLLARD	
	FLAG POLE	
T	TRANSFORMER PAD	T
	GEOTHERMAL WELL	
SD	STORM DRAIN LINE	NSD
UD	UNDER DRAIN LINE	NUD
S S	SANITARY SEWER LINE	NS
FM	FORCE MAIN LINE	NFM
W W	WATER LINE	NW
UG	GAS / PROPANE LINE	NUG
ST	STEAM LINE	
GT	GEOTHERMAL WATER LINE	NGT
UC	UNDERGROUND COMMUNICATION LINE	NUC
UE	UNDERGROUND ELECTRICAL LINE	NUE
	UNDERGROUND LIGHTING LINE	NUL
AE	AERIAL ELECTRICAL, TELEPHONE, AND CABLE LINE	NAE
	PROPERTY LINE	
	SETBACK LINE	
	EASEMENT LINE	
	NOT IN CONTRACT	N.I.C.

A1 STANDARD SITE LEGEND
SCALE: N.T.S

1. RELOCATE EXISTING TBM INFORMATION ONTO NEW TBM OF CONTRACTORS CHOICE, FOR CONSTRUCTION USE, PRIOR TO REMOVAL OF EXISTING TBM.
2. IF EXISTING ASBESTOS CEMENT PIPE IS ENCOUNTERED, HANDLE AND DISPOSE OF ASBESTOS MATERIALS WITH CARE AND IN ACCORDANCE WITH APPLICABLE CODES AND SAFETY STANDARDS.
3. EXCAVATE AND STOCKPILE ON-SITE TOPSOIL.TOPSOIL IS TO REMAIN THE PROPERTY OF THE OWNER DURING CONSTRUCTION. AFTER FINAL LOAM AND SEED EXCESS TOPSOIL SHALL BE REMOVED FROM SITE BY CONTRACTOR UNLESS INDICATED OTHERWISE.
4. DIMENSIONS ARE TO FACE OF CURB AND TO FACE OF FOUNDATION UNLESS OTHERWISE INDICATED.
5. PAVEMENT EDGES SHALL BE TRUE TO LINE. SAWCUT EXISTING PAVEMENT IN SMOOTH STRAIGHT LINE WHERE NEW PAVEMENT JOINS. PROVIDE TACK COAT LAYER AS SPECIFIED.
6. CONTRACTOR SHALL VERIFY SITE CONDITIONS, INCLUDING TEST PITS TO CONFIRM THE LOCATIONS AND INVERTS OF UTILITIES. REPORT DISCREPANCIES TO ARCHITECT PRIOR TO PROCEEDING WITH THAT PORTION OF THE WORK.
7. PROVIDE TRAFFIC CONTROL SIGNAGE AND STRIPING AS SHOWN, IN ACCORDANCE WITH THE CURRENT REVISION OF THE F.H.W.A MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

B2 GENERAL SITE NOTES
SCALE: N.T.S

1. PROVIDE 4" LOAM, SEED AND MULCH TO DISTURBED AREAS UNLESS OTHERWISE NOTED. PROVIDE EROSION CONTROL MESH ON ALL SLOPES 6:1 OR STEEPER, AND ALONG DITCH CHANNELS.
2. GRADE SURFACES TO DRAIN AWAY FROM BUILDING. PUDDLING OF WATER IN PAVED OR UNPAVED AREAS WILL NOT BE ACCEPTABLE EXCEPT FOR AREAS DESIGNATED AS PONDS.
3. MAINTAIN TEMPORARY EROSION CONTROL MEASURES FOR THE FULL DURATION OF CONSTRUCTION. INSPECT WEEKLY AND AFTER EACH STORM AND REPAIR AS NEEDED. REMOVE SEDIMENTS FROM THE SITE, PLACE IN AREA OF LOW EROSION POTENTIAL, AND STABILIZE WITH SEED AND MULCH.
4. PLACE TEMPORARY SOIL STABILIZATION WITHIN 30 DAYS OF INITIAL DISTURBANCE. PLACE PERMANENT SOIL STABILIZATION WITHIN 7 DAYS OF FINAL GRADING.

B3 GRADING NOTES
SCALE: N.T.S

PRIOR TO EXCAVATION, VERIFY THE UNDERGROUND UTILITIES, PIPES, STRUCTURES, AND FACILITIES. PROVIDE THE FOLLOWING MINIMUM MEASURES:

1. PRE-MARK THE BOUNDARIES OF YOUR PLANNED EXCAVATION WITH WHITE PAINT, FLAGS OR STAKES, SO UTILITY CREWS KNOW WHERE TO MARK THEIR LINES.
2. CALL DIG SAFE, AT EITHER 811 OR 1-888-DIGSAFE, AT LEAST 72 BUSINESS HOURS - BUT NO MORE THAN 30 CALENDAR DAYS - BEFORE STARTING WORK. DON'T ASSUME SOMEONE ELSE WILL MAKE THE CALL.
3. THE CONTRACTOR SHALL NOTIFY ALL NON-MEMBER MUNICIPALITIES AND UTILITIES THROUGH WWW.OKTODIG.COM OR AS OTHERWISE REQUIRED BY THE MAINE PUBLIC UTILITIES COMMISSION.
4. THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER(S) DIRECTLY TO LOCATE ANY UNDERGROUND UTILITIES LOCATED OUTSIDE OF THE PUBLIC RIGHT OF WAY ON PRIVATE PROPERTY.
5. IF BLASTING, NOTIFY DIG SAFE AT LEAST 24 BUSINESS HOURS IN ADVANCE.
6. WAIT 72 HOURS FOR LINES TO BE LOCATED AND MARKED WITH COLOR-CODED PAINT, FLAGS OR STAKES. NOTE THE COLOR OF THE MARKS AND THE TYPE OF UTILITIES THEY INDICATE. TRANSFER THESE MARKS TO THE AS-BUILT DRAWINGS.
7. CONTACT THE LANDOWNER AND OTHER "NON-MEMBER" UTILITIES (WATER, SEWER, GAS, ETC.), FOR THEM TO MARK THE LOCATIONS OF THEIR UNDERGROUND FACILITIES. TRANSFER THESE MARKS TO THE AS-BUILT DRAWINGS.
8. RE-NOTIFY DIG SAFE AND THE NON-MEMBER UTILITIES IF THE DIGGING, DRILLING OR BLASTING DOES NOT OCCUR WITHIN 30 CALENDAR DAYS, OR IF THE MARKS ARE LOST DUE TO WEATHER CONDITIONS, SITE WORK ACTIVITY OR ANY OTHER REASON.
9. HAND DIG WITHIN 18 INCHES IN ANY DIRECTION OF ANY UNDERGROUND LINE UNTIL THE LINE IS EXPOSED. MECHANICAL METHODS MAY BE USED FOR INITIAL SITE PENETRATION, SUCH AS REMOVAL OF PAVEMENT OR ROCK.
10. DIG SAFE REQUIREMENTS ARE IN ADDITION TO TOWN, CITY AND/OR STATE DOT STREET OPENING PERMIT REQUIREMENTS.
11. FOR COMPLETE DIG SAFE REQUIREMENTS, VISIT THEIR WEBSITE.
12. IF YOU DAMAGE, DISLOCATE OR DISTURB ANY UNDERGROUND UTILITY LINE, IMMEDIATELY NOTIFY THE AFFECTED UTILITY. IF DAMAGE CREATES SAFETY CONCERNS, CALL THE FIRE DEPARTMENT AND TAKE IMMEDIATE STEPS TO SAFEGUARD HEALTH AND PROPERTY.
13. ANY TIME AN UNDERGROUND LINE IS DAMAGED OR DISTURBED, OR IF LINES ARE IMPROPERLY MARKED, YOU MUST CALL DIGSAFE.

B4 UNDERGROUND UTILITY EXPLORATION NOTES
SCALE: N.T.S

CURB ABBREVIATIONS

VGC	NEW VERTICAL GRANITE CURB
SGC	NEW SLOPED GRANITE CURB
FGC	NEW GRANITE CURB FLUSH WITH PAVEMENT
TCE	NEW TAPERED CURB ENDS (TIP DOWNS)
TRC	NEW TRANSITIONAL CURB
BC	NEW BITUMINOUS CURB
CCBC	NEW CAPE COD BITUMINOUS CURB
PCC	NEW PRE-CAST CONCRETE CURB
CCC	NEW CAST-IN-PLACE CONCRETE CURB

PAINT STRIPING ABBREVIATIONS

SWSL	SINGLE WHITE SOLID LINE
SWDL	SINGLE WHITE DASHED LINE
SYSL	SINGLE YELLOW SOLID LINE
SYDL	SINGLE YELLOW DASHED LINE
DYSL	DOUBLED YELLOW SOLID LINE

GENERAL ABBREVIATIONS

NS	NEW SEWER
BIT.	BITUMINOUS
NSD	NEW STORM DRAIN
C.O.	CLEAN-OUT
NSFM	NEW SEWER FORCE MAIN
CONC.	CONCRETE
NSL	NEW SPOT LIGHT
DI.	DRAIN INLET
NUD	NEW UNDERDRAIN
ELEV.	ELEVATION
NUE	NEW UNDERGROUND ELECTRICAL
EXG.	EXISTING
NUG	NEW UNDERGROUND GAS
F.F.E.	FINISHED FLOOR ELEVATION
NUF	NEW UNDERGROUND FUEL
FT	FEET
IN.	INCHES
INV.	INVERT
NW	NEW WATER
MAX.	MAXIMUM
NWF	NEW WALL FIXTURE
MIN.	MINIMUM
P.C.	PRECAST
N.I.C.	NOT IN CONTRACT
R	RADIUS
NCB	NEW CATCH BASIN
S	STRUCTURAL PAD
NFO	NEW FIBER OPTIC
SQ	SQUARE
NGT	NEW GEOTHERMAL WATER
SF	SQUARE FEET
NLP	NEW LIGHT POLE
AC	ACRE
T	TRANSFORMER PAD
TBM	TEMPORARY BENCH MARK
TYP	TYPICAL
W/	WITH
UNO	UNLESS NOTED OTHERWISE

A2 STANDARD SITE ABBREVIATIONS
SCALE: N.T.S

Harriman

UNIVERSITY OF MAINE
FOOD INNOVATION LAB

ORONO, MAINE

Harriman Project No.	24265

Graphic Scale	Plan North	True North
0' 20' (line measures 1" when plotted at full size)		

STATE OF MAINE · DAVID P LATHAM · No. 17064 · LICENSED PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

OCTOBER 20, 2025

Revision Date	Revision Description

Drawn by: DPL

SITE NOTES

C00-1

1. GENERAL
   A. PLAN THE SEQUENCE OF CONSTRUCTION SO THAT THE SMALLEST PRACTICAL AREA OF LAND IS EXPOSED AT ANY ONE TIME DURING CONSTRUCTION. SCHEDULE THE WORK SUCH THAT SEDIMENTATION BARRIERS ARE INSTALLED EARLY IN THE CONSTRUCTION SEQUENCE, TO PREVENT SEDIMENTS FROM UPHILL AREAS REACHING STREAMS, WETLANDS OR PROPERTY LINES. THE AREA DISTURBED BY STRIPPING OF VEGETATION, SOIL REMOVAL, AND REGARDING SHALL BE THE MINIMUM NECESSARY AT ANY ONE TIME. THE DURATION OF EXPOSURE OF THE DISTURBED AREA SHALL BE KEPT TO A PRACTICAL MINIMUM. UNTIL A DISTURBED AREA IS STABILIZED, SEDIMENT IN RUN-OFF SHALL BE TRAPPED BY THE USE OF DEBRIS BASIN, SEDIMENT BASINS, SILT TRAPS OR OTHER ACCEPTABLE METHODS.
   B. TAKE NECESSARY STEPS TO PREVENT SOIL EROSION. REFER TO PUBLICATION OF MAINE DEP PARTICULARLY CHAPTER 500, AND THE MAINE SOIL AND WATER CONSERVATION COMMISSION FOR ADDITIONAL PREVENTION MEASURES TO STOP SOIL EROSION AND FOLLOW DEP MAINE EROSION AND SEDIMENT CONTROL BMP'S. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN CONFORMITY WITH ALL FEDERAL AND STATE PERMIT REQUIREMENTS CONCERNING WATER, AIR OR NOISE POLLUTION, OR THE DISPOSAL OF CONTAMINATED OR HAZARDOUS MATERIALS. EROSION CONTROL MEASURES SHOWN ON THE PLANS ARE MINIMUM ONLY. SATISFY THE CURRENT REQUIREMENTS OF THE REGULATORY AGENCIES. REPAIR ALL AREAS OF INSTABILITY AND EROSION IMMEDIATELY AND MAINTAIN UNTIL THE SITE IS FULLY STABILIZED.
   C. WHENEVER PRACTICABLE, NO DISTURBANCE ACTIVITIES SHOULD TAKE PLACE WITHIN 50 FEET OF ANY PROTECTED NATURAL RESOURCE. IF DISTURBANCE ACTIVITIES TAKE PLACE BETWEEN 30 FEET AND 50 FEET OF ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED. IF DISTURBANCE ACTIVITIES TAKE PLACE LESS THAN 30 FEET FROM ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED AND DISTURBED AREAS MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITH 7 DAYS.
   D. EROSION CONTROL MESH: INTENDED AS A TEMPORARY EROSION CONTROL MEASURE THAT WILL DECOMPOSE AFTER STABILIZATION. OPEN WEAVE, SINGLE JUTE YARN OF LOOSELY TWISTED CONSTRUCTION, NOT VARYING IN THICKNESS BY MORE THAN ½ ITS NORMAL DIAMETER. THE WOVEN MATERIALS SHALL WEIGH 0.9 POUNDS PER SQUARE YARD. SYNTHETIC MESH MATERIAL MAY BE USED AS APPROVED. STAPLES: NO. 11 (OR HEAVIER) PLAIN IRON WIRE, MADE 6 INCHES IN LENGTH.
   E. EROSION CONTROL BLANKET: INTENDED AS A PERMANENT EROSION CONTROL MEASURE THAT WILL REINFORCE THE TOPSOIL AND VEGETATION AGAINST EROSION AFTER CONSTRUCTION. SYNTHETIC FIBER MATRIX SANDWICHED BETWEEN HEAVY DUTY UV STABILIZED NETTING. BLANKET SHALL WEIGH NOT LESS THAN 0.9 POUNDS PER SQUARE YARD. NORTH AMERICAN GREEN P300 OR APPROVED EQUAL. STAPLES: NO. 11 (OR HEAVIER) PLAIN IRON WIRE, MADE 6 INCHES IN LENGTH.
   F. SILT FENCE:

      POST: 1"X1" HARDWOOD POST, 4.5 FEET IN LENGTH.

      FABRIC: PERVIOUS 36" WIDE SHEET OF SYNTHETIC POLYMER OF 12-MIL THICKNESS, SUCH AS MIRAFI 100X; TERRA TEX-SC OR APPROVED EQUAL. THE BOTTOM OF THE FABRIC SHALL BE TRENCHED INTO THE EXISTING GROUND A MINIMUM OF 6 INCHES. IN ADDITION, HAY BALES OR DITCH CHECKS SHALL BE INSTALLED ALONG THE SILT FENCE TO CREATE SEDIMENTATION POOLS IN LOW AREAS WHERE RUN-OFF CONCENTRATES.
   G. EROSION CONTROL SOIL/BARK MIX: SHALL CONSIST OF A MIX OF RECYCLED COMPOSTED BARK, FLUME GRIT, AND FRAGMENTED WOOD GENERATED FROM WATER-FLUME LOG HANDLING SYSTEMS. CONFORMING TO THE FOLLOWING:
      1. PH - 5.0 TO 6.0.
      2. SCREEN SIZE - 6 INCHES MINUS.
      3. NO LESS THAN 25 PERCENT ORGANIC MATERIAL.
      4. NO STONES LARGER THAN 2 INCHES IN DIAMETER.
   H. HAY BALES: BALES SHALL BE AT LEAST 14" X 18" X 30" IN SIZE, STAKED TWICE PER BALE. STAKES SHALL BE 1" X 1" X 36" WOODEN. PLACE BALES WITH TWINE ON SIDES OF BALE, NOT TOP OR BOTTOM.
   I. CATCH BASIN SEDIMENT FILTER SACK: A FILTER FABRIC BAG WHICH HANGS UNDER THE GRATE TO CATCH SEDIMENTS. PROVIDE "STREAMGUARD MODEL 3003," "BASIN BAG" BY EMCO DISTRIBUTION, "SILT SACKS HIGH FLOW" BY ACF ENVIRONMENTAL, OR APPROVED EQUAL. INSTALL THE BAG DEVICE PER MANUFACTURER'S RECOMMENDATION.
   J. BEFORE EARTHWORK IS STARTED, A SILT FENCE, FILTER BERM, OR STONE SEDIMENT DAM SHALL BE INSTALLED ALONG THE DOWN-SLOPE SIDE OF THE CONSTRUCTION SITE, AS NECESSARY, TO PREVENT SOIL SEDIMENT MIGRATION AWAY FROM THE SITE. INSTALL SILT FENCE OR FILTER BERM ALONG THE DOWN-SLOPE SIDE OF ALL TOP-SOIL AND SUBSOIL STOCKPILES.
   K. EROSION CONTROLS BARRIERS SHALL BE REMOVED AFTER CONSTRUCTION IS COMPLETE, BUT NOT UNTIL FINISH GRADING, FINAL SEEDING, AND MULCHING HAS BEEN COMPLETED AND THE ESTABLISHED GRASS HAS STABILIZED THE SOIL. MAINTAIN BARRIERS IN GOOD CONDITION UNTIL REMOVED.
   L. INSPECT EROSION AND SEDIMENTATION CONTROL WEEKLY AND AFTER STORM AND MAINTAIN IN GOOD WORKING CONDITION FOR PROJECT DURATION. REMOVE SILT DEPOSITS FROM THE SITE, PLACE IN AN AREA OF LOW EROSION POTENTIAL SO IT WILL NOT WASH INTO A WETLAND OR WATER BODY, SEED WITH EROSION CONTROL MIX, AND MULCH.
   M. FILTER BERM: PLACE UNCOMPACTED EROSION CONTROL MIX IN A WINDROW AT LOCATIONS SHOWN ON THE PLAN OR AS DIRECTED BY THE ARCHITECT. AT A MINIMUM THE BERM SHALL BE 3 FEET WIDE AT THE BASE AND 2 FEET HIGH AT THE CENTER OF ALL POINTS ALONG ITS LENGTH. BERM MATERIAL, WHERE THE BERM IS STILL REQUIRED, WHICH HAS DECOMPOSED, CLOGGED WITH SEDIMENT, ERODED, OR BECOMES INEFFECTIVE, SHALL BE REPLACED. THE BERM SHALL BE REMOVED FROM THE SITE OR RAKED INTO NEARBY WOODS TO A DEPTH NO GREATER THAN 1", WHEN NO LONGER REQUIRED, AS APPROVED BY THE ARCHITECT.
   N. TEMPORARY STABILIZATION: WITHIN 7 DAYS OF THE CESSATION OF CONSTRUCTION ACTIVITIES IN AN AREA THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS, STABILIZE EXPOSED SOIL WITH MULCH, OR OTHER NON-ERODIBLE COVER. STABILIZE AREAS WITHIN 75 FEET OF A WETLAND OR WATERBODY WITHIN 48 HOURS OF THE INITIAL DISTURBANCE OF THE SOIL OR PRIOR TO A STORM EVENT, WHICHEVER COMES FIRST. REMOVE TEMPORARY CONTROL MEASURES, SUCH AS SILT FENCE, WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE. MAINTAIN TEMPORARY EROSION CONTROL MEASURES FOR THE FULL DURATION OF CONSTRUCTION. INSPECT WEEKLY AND AFTER EACH STORM AND REPAIR AS NEEDED. REMOVE SEDIMENTS FROM THE SITE, PLACE IN AREA OF LOW EROSION POTENTIAL, AND STABILIZE WITH SEED AND MULCH.
   O. PERMANENT STABILIZATION: IF THE AREA WILL NOT BE WORKED FOR MORE THAN ONE YEAR OR HAS BEEN BROUGHT TO FINAL GRADE, THEN PERMANENTLY STABILIZE THE AREA WITHIN 7 DAYS BY PLANTING VEGETATION, SEEDING, SOD, OR THROUGH THE USE OF PERMANENT MULCH, OR RIPRAP, OR ROAD SUB-BASE. "IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, MOISTURE, AND SOIL CONDITIONS; AMEND AREAS OF DISTURBED SUBSOILS WITH TOPSOIL, COMPOST, OR FERTILIZERS; PROTECT SEEDED AREAS WITH MULCH OR, IF NECESSARY, EROSION CONTROL BLANKETS; AND SCHEDULE SODDING, PLANTING, AND SEEDING SO TO AVOID DIE-OFF FROM SUMMER DROUGHT AND FALL FROSTS." NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC, EXCESSIVE PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF UNTIL VEGETATION IS WELL-ESTABLISHED WITH 90% COVER BY HEALTHY VEGETATION. IF NECESSARY, AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE, PLANT COVERAGE IS SPOTTY, OR TOPSOIL EROSION IS EVIDENT. PERMANENT STABILIZATION IS DEFINED AS FOLLOWS:
      1. SEEDED AREAS: PERMANENT STABILIZATION MEANS A 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.
      2. SODDED AREAS: PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.
      3. PERMANENT MULCH: PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.
      4. RIPRAP: PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIPRAP. STONE MUST BE SIZED APPROPRIATELY. IT IS RECOMMENDED THAT ANGULAR STONE BE USED.
      5. PAVED AREAS: PERMANENT STABILIZATION MEANS PLACEMENT OF THE COMPACTED SUBBASE GRAVEL IS COMPLETED, PROVIDED IT IS FREE OF FINE MATERIALS THAT MAY RUNOFF WITH A RAIN EVENT.
      6. DITCHES, CHANNELS, AND SWALES: PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH A 90% COVER OF HEALTHY VEGETATION, WITH A WELL-GRADED RIPRAP LINING, TURF REINFORCEMENT MAT, OR WITH ANOTHER NON-EMSIVE LINING SUCH AS CONCRETE OR ASPHALT PAVEMENT. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE CHANNEL LINING, UNDERCUTTING OF THE CHANNEL BANKS OR DOWN-CUTTING OF THE CHANNEL.

2. TEMPORARY SEEDING AND MULCHING
   A. TOPSOIL STRIPPED AND STOCKPILED ON SITE SHALL BE IMMEDIATELY SEEDED WITH EROSION CONTROL SEED MIX AND MULCHED WITH HAY. MULCH SHALL BE CURED STRAW FREE FROM NOXIOUS WEED SEEDS AND ROUGH OR WOODY MATERIALS.
   B. EROSION CONTROL SEED:

Seed Type	% Weight	% Purity	% Germination
Domestic Rye	70	85	80
Perennial Rye	30	85	80

   C. EXPOSED EARTHWORK AREAS WHICH WILL NOT BE WORKED ON FOR ONE WEEK SHALL BE MULCHED WITH STRAW.
   D. UNFINISHED AREAS WHICH ARE NOT TO BE WORKED ON FOR ONE MONTH OR WILL BE WINTERED SHALL BE SEEDED WITH EROSION CONTROL MIX AT A RATE OF 3 POUNDS OF SEED PER 1,000 SQ. FT. AND MULCHED WITH STRAW. APPLY STRAW MULCH AT THE RATE OF 75 POUNDS PER 1,000 SQ. FT. ANCHOR MULCH TO PREVENT WIND BLOWN MOVEMENT.
   E. IN SENSITIVE AREAS (WITHIN 25 FT. OF STREAM OR WETLAND EDGE) TEMPORARY MULCH MUST BE APPLIED AT THE END OF EACH WORK DAY AND PRIOR TO ANY STORM EVENT. NO FILL SHALL BE PLACED ON HAY MULCH.

3. PERMANENT SEEDING AND MULCHING
   A. GRASS SEED SHALL BE FREE FROM NOXIOUS WEED SEEDS AND RECLEANED, GRADE A RECENT CROP SEED, TREATED WITH APPROPRIATE FUNGICIDE AT TIME OF MIXING, DELIVERED TO THE SITE IN SEALED CONTAINERS WITH DEALER'S GUARANTEED ANALYSIS AND EACH VARIETY OF SEED SHALL HAVE PERCENTAGES OF GERMINATION OF NOT LESS THAN 80% AND A PERCENTAGE OF PURITY OF NOT LESS THAN 85%.. SOW SEEDS AT A RATE OF 5lbs PER 1,000s.f.
   B. WEED SEED CONTENT SHALL NOT EXCEED 0.25%. WET, MOLDY OR OTHERWISE DAMAGED SEED WILL BE REJECTED.
   C. SEED MIX PROPORTIONS BY WEIGHT:

Seed Type	% Weight	% Purity	% Germination
Chewing Fesue	35	85	80
Creeping Red Fescue	35	85	80
Perennial Rye	30	85	80

4. WINTER CONSTRUCTION
   A. WINTER CONSTRUCTION" IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 15. IF DISTURBED AREAS ARE NOT STABILIZED WITH PERMANENT MEASURES BY NOVEMBER 1 OR NEW SOIL DISTURBANCE OCCURS AFTER NOVEMBER 1, BUT BEFORE APRIL 15, THEN THESE AREAS MUST BE PROTECTED AND RUNOFF FROM THEM MUST BE CONTROLLED BY ADDITIONAL MEASURES AND RESTRICTIONS.
   B. SITE STABILIZATION: FOR WINTER STABILIZATION, HAY MULCH IS APPLIED AT TWICE THE STANDARD TEMPORARY STABILIZATION RATE. AT THE END OF EACH CONSTRUCTION DAY, AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE STABILIZED. MULCH MAY NOT BE SPREAD ON TOP OF SNOW.
   C. SEDIMENT BARRIERS: ALL AREAS WITHIN 75 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIERS.
   D. DITCH: ALL VEGETATED DITCH LINES THAT HAVE NOT BEEN STABILIZED BY NOVEMBER 1 OR WILL BE WORKED DURING THE WINTER CONSTRUCTION PERIOD MUST BE STABILIZED WITH AN APPROPRIATE STONE LINING BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE UNLESS SPECIFICALLY RELEASED FROM THIS STANDARD BY THE DEPARTMENT.
   E. SLOPES: MULCH NETTING MUST BE USED TO ANCHOR MULCH ON ALL SLOPES GREATER THAN 8% UNLESS EROSION CONTROL BLANKETS OR EROSION CONTROL MIX IS BEING USED ON THESE SLOPES.

5. DRAINAGE DITCHES AND EMBANKMENTS
   A. DRAINAGE DITCHES SHALL BE PROVIDED WITH TEMPORARY STONE CHECK DAMS SPACED NO GREATER THAN 100 FEET APART. TEMPORARY DITCH CHECK DAMS SHALL BE CONSTRUCTED WHERE INDICATED. ADDITIONAL TEMPORARY DITCH DAMS SHALL BE INSTALLED DURING THE CONSTRUCTION, WHERE NECESSARY TO PREVENT SOIL FROM LEAVING THE WORK AREA.
   B. GRASSED DRAINAGE DITCHES AND SWALES SHALL BE LINED WITH A CONTINUOUS MAT OF EROSION CONTROL MESH FOR FULL BOTTOM WIDTH AND SIDE SLOPES TO 12" ABOVE BOTTOM, WITHIN 48 HOURS OF FINAL GRADING AND PRIOR TO A STORM EVENT, IN ORDER TO STABILIZE THE LOAM, SEED AND MULCH.
   C. WHERE EROSIVE VELOCITIES IN DITCHES OR EMBANKMENTS ARE ANTICIPATED OR EXPERIENCED AND SOIL CANNOT BE STABILIZED WITH MULCH AND MESH, SUBSTITUTE EROSION CONTROL SOIL/BARK MIX IN PLACE OF LOAM. SCREEN THE EROSION CONTROL SOIL/BARK MIX TO REMOVE WOOD, BARK AND STONES ONE INCH IN SIZE AND GREATER. IF EROSIVE VELOCITIES ARE EXCESSIVE, PROVIDE A 12" THICK STONE RIP-RAP LINING ALONG DITCH BOTTOM AND UP SIDE SLOPES TO ONE FOOT ABOVE THE BOTTOM ELEVATION. PLACE NON-WOVEN GEOTEXTILE BENEATH RIP-RAP.
   D. STABILIZE POND EMBANKMENT (INTERIOR AND EXTERIOR), SLOPES STEEPER THAN THREE HORIZONTAL TO ONE VERTICAL AND DRAINAGE DITCHES BY SEPTEMBER 15, CONSISTING OF PERMANENT SEEDING AND MULCH. IF THIS DATE CANNOT BE MET, PROVIDE ALTERNATIVE PERMANENT OR TEMPORARY STABILIZATION DESCRIBED AS FALL AND WINTER STABILIZATION.
   E. INSTALL EROSION CONTROL MESH OVER MULCH ON SLOPES STEEPER THAN SIX HORIZONTAL TO ONE VERTICAL (16%) AND IN CONFORMANCE TO DOT STANDARD SPECIFICATION, LATEST EDITION, SECTION 9.48, PARAGRAPHS 613.03 THROUGH 613.06. ANCHOR MESH AS RECOMMENDED BY MANUFACTURER.
   F. PERMANENTLY RIP-RAP INLETS AND OUTLETS OF CULVERTS AND PIPE OUTFALLS WITHIN 48 HOURS OF INSTALLATION, AS SPECIFIED IN SECTION 312000 - EARTH MOVING AND AS SHOWN ON THE DRAWINGS.
   G. INSTALL PERMANENT EROSION CONTROL BLANKET AROUND CULVERT INLETS AND OUTLETS AS SHOWN ON THE DRAWINGS AND ACCORDING TO MANUFACTURERS' RECOMMENDATIONS.
      4. PREPARE SOIL WITH LOAM, FERTILIZER AND SEED AS SPECIFIED IN SECTION 329200 PRIOR TO INSTALLING THE EROSION CONTROL BLANKET.
      5. INSTALL PERMANENT EROSION CONTROL BLANKET FIVE FEET MINIMUM IN ALL DIRECTIONS AROUND CULVERT INLETS.
      6. INSTALL PERMANENT EROSION CONTROL BLANKET FIVE FEET MINIMUM IN ALL DIRECTIONS AROUND CULVERT OUTLETS AND A SIX FOOT WIDTH CENTERED ALONG THE OUTLET CHANNEL FOR TEN FEET.
      7. INSTALL STAPLES AS SHOWN ON THE EROSION CONTROL BLANKET DETAIL ON THE DRAWINGS AND THROUGHOUT THE BLANKET IN AN 18 BY 18 INCH GRID.

6. PARKING AND DRIVES
   A. PLACE A TEMPORARY STABILIZED CONSTRUCTION EXITS WHERE VEHICLES LEAVE THE SITE AND ENTER EXISTING PAVED ROADS; CONSISTING OF A 6" LAYER OF 1 1/2" TO 3" CRUSHED STONE. TRACKING A SPILLING OF EARTH AND/OR DEBRIS ON PUBLIC STREETS SHALL BE AVOIDED TO THE MAXIMUM EXTENT POSSIBLE. CLEAN UP AND REMOVE SUCH SPILLAGE.
   B. AS THE CRUSHED STONE STABILIZED CONSTRUCTION EXITS CONTINUE TO SCRUB THE SOIL FROM THE TRUCKS, THE STONE LAYER WILL TEND TO FILL WITH SEDIMENTS. WHEN THIS OCCURS, REMOVE THE STONE AND SEDIMENT AND REPLACE IT WITH A CLEAN LAYER OF STONE.
   C. AS SOON AS POSSIBLE AFTER ROADS AND PARKING AREAS ARE CLEARED, GRUBBED AND GRADED TO THE REQUIRED SUBGRADE, THE BASE GRAVEL SHALL BE PLACED.

7. REMOVAL AND DISPOSAL

   WHEN PERMANENT SOIL STABILIZATION HAS BEEN ACHIEVED, TEMPORARY MATERIALS AND DEVICES THAT ARE NOT READILY DEGRADABLE SHALL BE REMOVED AND DISPOSED OF OFF SITE. SILT FENCES, FILTER BERMS AND CATCH BASIN SEDIMENT FILTERS MUST BE FULLY REMOVED. REUSABLE MATERIALS ARE AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

8. STONES FOR RIP-RAP
   A. SIZE THE STONE MIXTURE SUCH THAT 50% OF THE STONES, BY WEIGHT, ARE LARGER THAN THE SPECIFIED D50 SIZE. STONES SHALL NOT BE SCHISTOSIC.
   B. PLAIN RIP-RAP: 4" TO 12" DIAMETER, HARD, SOUND ANGULAR STONES, D50 = 6".
   C. SPECIAL RIP-RAP: 8" TO 18" WIDE SOUND STONES WITH FLAT TOP SURFACE, D50 = 11".
   D. THE STONES SHALL BE PLACED WITH THEIR BENDS AT RIGHT ANGLES TO THE SLOPE, THE LARGER STONES BEING USED IN BOTTOM COURSES.
   E. THE FINISHED WORK SHALL PRESENT AN EVEN, TIGHT AND REASONABLY SMOOTH SURFACE CONFORMING TO THE REQUIRED CONTOUR AND HAVE A NEAT ORDERLY APPEARANCE WITHOUT SCATTERED STONES.
   F. SPECIAL" RIP-RAP SHALL BE HAND-PLACED IN CLOSE CONTACT TO FORM AN EVEN, TIGHT AND REASONABLY SMOOTH SURFACE WITH RELATIVELY FLAT TOP SURFACES. USE NO SMALL STONES OR SPALL.

9. PLANTING TIME
   A. SEEDING: SEEDING SHALL BE DONE BETWEEN AUGUST 15TH TO SEPTEMBER 15TH AND/OR APRIL 15TH TO JUNE 15TH.
   B. SODDING: SODDING MAY BE DONE BETWEEN APRIL 15TH AND NOVEMBER 15TH.
   C. VARIANCE: IF SPECIAL CONDITIONS EXIST WHICH MAY WARRANT A VARIANCE IN THE ABOVE PLANTING DATES, A WRITTEN REQUEST SHALL BE SUBMITTED TO THE ARCHITECT STATING THE SPECIAL CONDITIONS FOR THE PROPOSED VARIANCE. PERMISSION FOR THE VARIANCE WILL BE GIVEN IF WARRANTED IN THE OPINION OF THE ARCHITECT. REGARDLESS OF THE TIME OF SEEDING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR A FULL GROWTH OF GRASS.
   D. PLACE PERMANENT SOIL STABILIZATION WITHIN 15 DAYS OF FINAL GRADING.

10. SPILL PREVENTION AND GROUNDWATER PROTECTION
   A. AREAS INSIDE AND OUTSIDE THE CONTRACT WORK LIMITS SHALL BE PROTECTED FROM LUBRICANTS, FUEL, SEDIMENT, LITTER, CONSTRUCTION DEBRIS, CHEMICALS AND OTHER POLLUTANTS.
   B. TAKE PRECAUTIONS AND CONFORM TO ALL FEDERAL, STATE AND LOCAL REGULATIONS TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. IMPLEMENT SPILL PREVENTION, CONTAINMENT AND RESPONSE.
   C. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BE DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. IMPERVIOUS LINERS OR MATERIALS MUST BE USED TO STORE OR CONTAIN THE HAZARDOUS MATERIALS AND PREVENT THEM FROM ENTERING THE GROUNDWATER.

11. FUGITIVE SEDIMENT AND DUST
   A. USE TRAFFIC CONTROL TO RESTRICT TRAFFIC TO PREDETERMINED ROUTES. MAINTAIN AS MUCH NATURAL VEGETATION AS IS PRACTICABLE. USE PHASING OF CONSTRUCTION TO REDUCE THE AREA OF LAND DISTURBED AT ANY ONE TIME. THE USE OF TEMPORARY MULCHING, PERMANENT MULCHING, TEMPORARY VEGETATIVE COVER, PERMANENT VEGETATIVE COVER, OR SODDING WILL REDUCE THE NEED FOR DUST CONTROL. USE MECHANICAL SWEEPERS ON PAVED SURFACES WHERE NECESSARY TO PREVENT DUST BUILDUP. STATIONARY SOURCES OF DUST, I.E. ROCK CRUSHERS, SHOULD UTILIZE FINE WATER SPRAYS TO CONTROL DUST.
   B. THE EXPOSED SOIL SURFACE SHOULD BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.
   C. CALCIUM CHLORIDE SHALL BE EITHER LOOSE DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH A SPREADER AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. LIQUID CALCIUM CHLORIDE CAN ALSO BE USED. TO REDUCE POTENTIAL FOR ENVIRONMENTAL DEGRADATION, USE ONLY WHEN OTHER METHODS ARE NOT PRACTICAL.
   D. COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL. IN AREAS ADJACENT TO WATERWAYS, USE CHEMICALLY STABLE AGGREGATE.
   E. WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

12. DEBRIS AND OTHER MATERIALS

   MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF.

13. EXCAVATION DE-WATERING
   A. WATER FROM CONSTRUCTION DEWATERING OPERATIONS SHALL BE CLEANED OF SEDIMENT BEFORE REACHING WETLANDS, WATER BODIES, STREAMS, OR SITE BOUNDARIES. UTILIZE TEMPORARY SEDIMENT BASINS, EROSION CONTROL SOIL FILTER BERMS BACKED BY STAKED HAY BALES, A DIRT BAG 55" SEDIMENT FILTER BAG BY ACF ENVIRONMENTAL, INC. OR OTHER APPROVED BEST MANAGEMENT PRACTICES (BMP's).
   B. IN SENSITIVE AREAS, NEAR STREAMS OR PONDS, DISCHARGE THE WATER FROM THE DE-WATERING OPERATION INTO A TEMPORARY SEDIMENT BASIN CREATED BY A SURROUNDING FILTER BERM OF UNCOMPACTED EROSION CONTROL MIX IMMEDIATELY BACKED BY STAKED HAY BALES (SEE THE SITE DETAILS). LOCATE THE TEMPORARY SEDIMENT BASIN AT LEAST 100 FEET FROM THE NEAREST WATER BODY, SUCH THAT THE FILTERED WATER WILL FLOW THROUGH UNDISTURBED VEGETATED SOIL AREAS PRIOR TO REACHING THE WATER BODY OR PROPERTY LINE.
   C. PREPARE A DE-WATERING PLAN TO ADDRESS EXCAVATION DE-WATERING FOLLOWING HEAVY RAINFALL EVENTS OR WHERE THE EXCAVATION MAY INTERCEPT THE GROUNDWATER TABLE DURING CONSTRUCTION. THE COLLECTED WATER NEEDS TREATMENT AND A DISCHARGE POINT THAT WILL NOT CAUSE DOWNGRADIENT EROSION AND OFFSITE SEDIMENTATION OR WITHIN A RESOURCE. FOLLOW THE DETAIL OF THE PLAN THROUGHOUT CONSTRUCTION DURATION.
   D. THE OWNER OR REGULATORY AGENCIES DO NOT AUTHORIZE A WATER DISCHARGE THAT IS MIXED WITH A SOURCE OF NON-STORMWATER, INCLUDING THE FOLLOWING: WASTEWATER FROM CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS; FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; SOAPS, SOLVENTS OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

14. UNAUTHORIZED NON-STORMWATER DISCHARGES

   THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:

   - WASTEWATER FROM THE WASHOUT OR CLEAN OUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS.
   - FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE.
   - SOAPS, SOLVENTS OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING.
   - TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

15. AUTHORIZED NON-STORMWATER DISCHARGES

   IMPLEMENT APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE FOLLOWING DISCHARGES:

   - FIREFIGHTING ACTIVITY.
   - FIRE HYDRANT FLUSHINGS.
   - VEHICLE WASH-WATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED.
   - DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND DEP CHAPTER 500 APPENDIX (C)(3)
   - ROUTINE EXTERNAL BUILDING WASH-DOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS.
   - PAVEMENT WASH-WATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOTE USED
   - UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE.
   - UNCONTAMINATED GROUNDWATER OR SPRING WATER.
   - FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED.
   - UNCONTAMINATED EXCAVATION DE-WATERING (SEE REQUIREMENTS IN DEP CHAPTER 500 APPENDIX C(5)).
   - POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS.
   - LANDSCAPING IRRIGATION.

16. CONSTRUCTION INSPECTION AND MAINTENANCE
   A. INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL BEST MANAGEMENT PRACTICES (BMP'S), MATERIALS STORAGE AREAS THAT ARE EXPOSED TO PRECIPITATION AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE A WEEK AS WELL AS BEFORE AND WITHIN 24 HOURS AFTER A RAIN EVENT AND PRIOR TO COMPLETING PERMANENT STABILIZATION. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL AND STANDARDS AND CONDITIONS OF ANY APPLICABLE PERMITS, SHALL CONDUCT THE INSPECTIONS.
   B. UPON DISCOVERY OF A PROBLEM, REPAIR BMPS NO LATER THAN THE END OF THE NEXT WORK DAY. IF ADDITIONAL BMPS OR SIGNIFICANT REPAIRS ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO A RAIN EVENT.
   C. KEEP A LOG (REPORT) SUMMARIZING THE INSPECTIONS AND CORRECTIVE ACTION TAKEN, INCLUDING THE NAME AND QUALIFICATIONS OF THE PERSON MAKING THE INSPECTIONS, THE DATE OF THE INSPECTIONS AND MAJOR OBSERVATIONS OF OPERATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS, MATERIALS STORAGE AREAS AND VEHICLES ACCESS POINTS TO THE PARCEL. MAJOR OBSERVATIONS MUST INCLUDE BMPS THAT NEED MAINTENANCE, BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED. NOTE IN THE LOG THE C

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Graphic Scale 0' 20' (line measures 1" when plotted at full size)

Plan North

True North

STATE OF MAINE
DAVID P LATHAM
No. 17064
LICENSED
PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

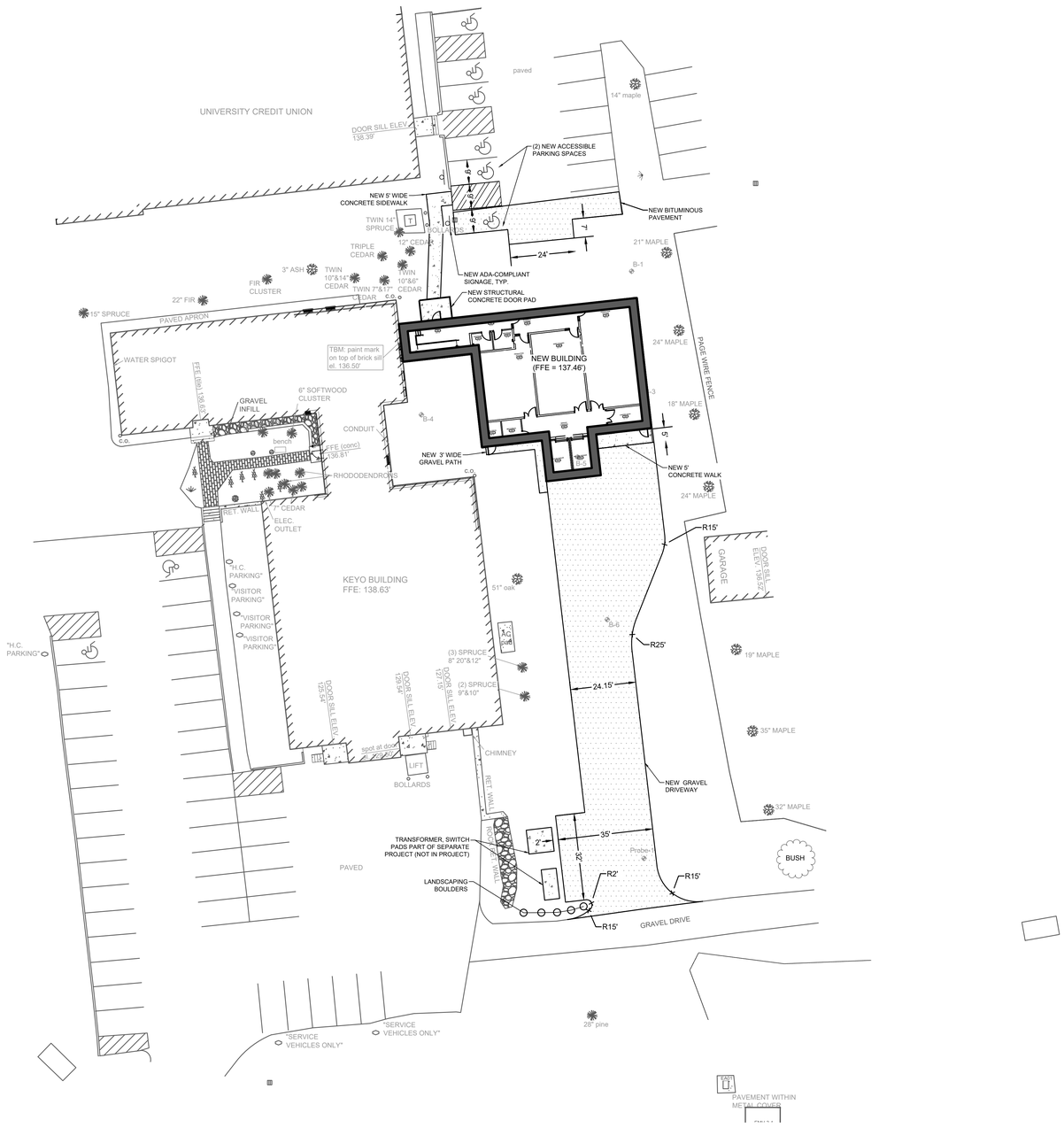
OCTOBER 20, 2025

Revision Date	Revision Description

Drawn by: DPL

EXISTING SITE CONDITIONS AND DEMOLITION PLAN

C10-1



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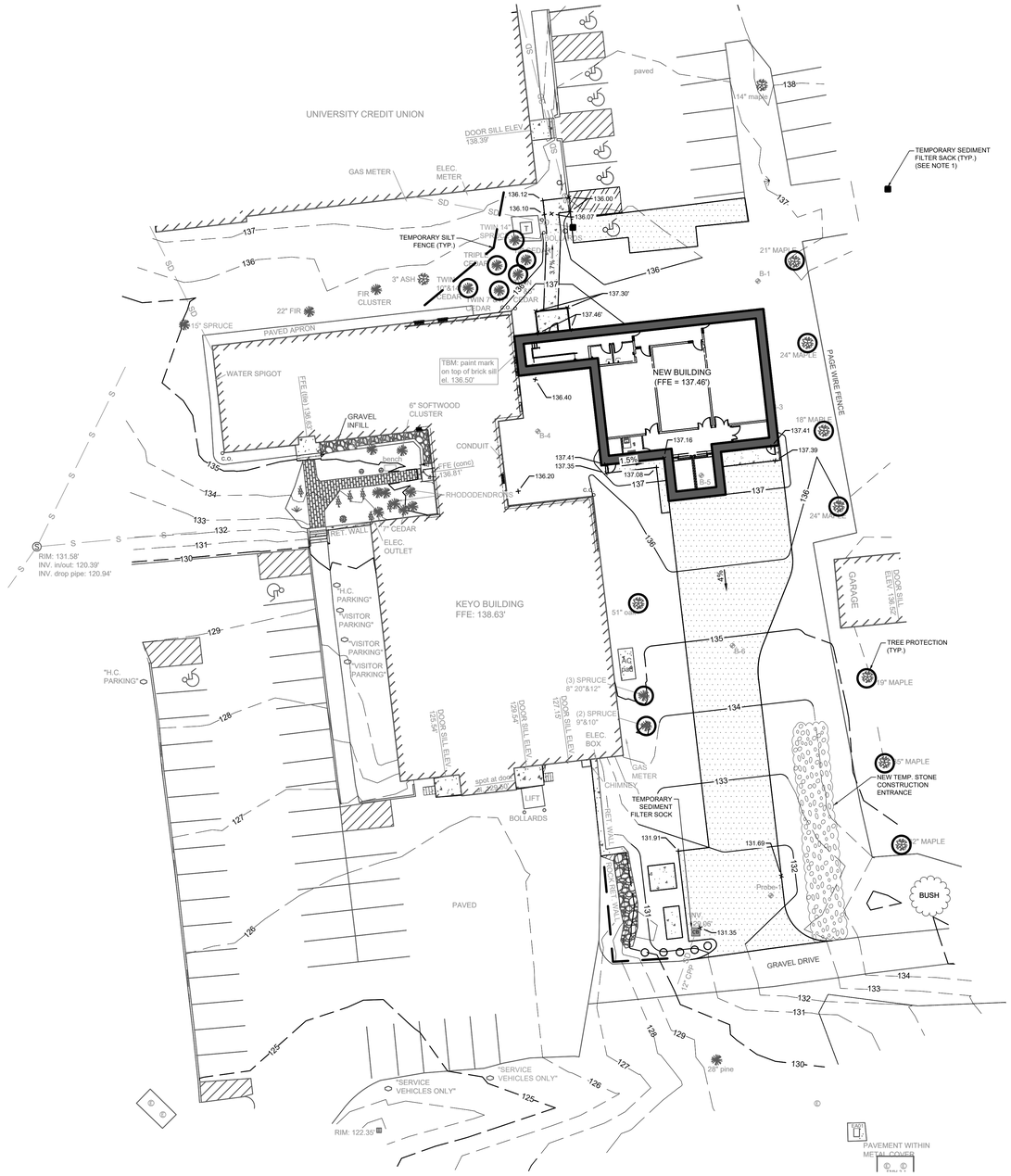
SITE LAYOUT PLAN

C20-1



NOTES:

1. CONTRACTOR SHALL INSTALL TEMPORARY SEDIMENT FILTER SACKS AT ALL NEW CATCH BASINS. CONTRACTOR SHALL INSPECT AND CLEAN AS NEEDED.
2. SILT FENCING, HAYBALES, AND PERIMTER CONTROLS SHALL BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS.
3. ALL DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
4. LIMIT THE LENGTH OF EXPOSURE OF UNSTABILIZED SOIL TO 45 DAYS OR LESS.
5. STABILIZED MEANS:
   - 5.1. A MINIMUM OF 85% OF VEGETATIVE COVER HAS BEEN ESTABLISHED.
   - 5.2. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIALS SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED, OR
   - 5.3. EROSION CONTROL BLACKETS HAVE BEEN INSTALLED
6. EROSION CONTROL PRACTICES ARE TO BE INSPECTED WEEKLY AND AFTER 0.5" OF RAINFALL.
7. CUT AND FILL SLOPES MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
8. ROADWAYS AND PARKING AREAS MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINAL GRADE.

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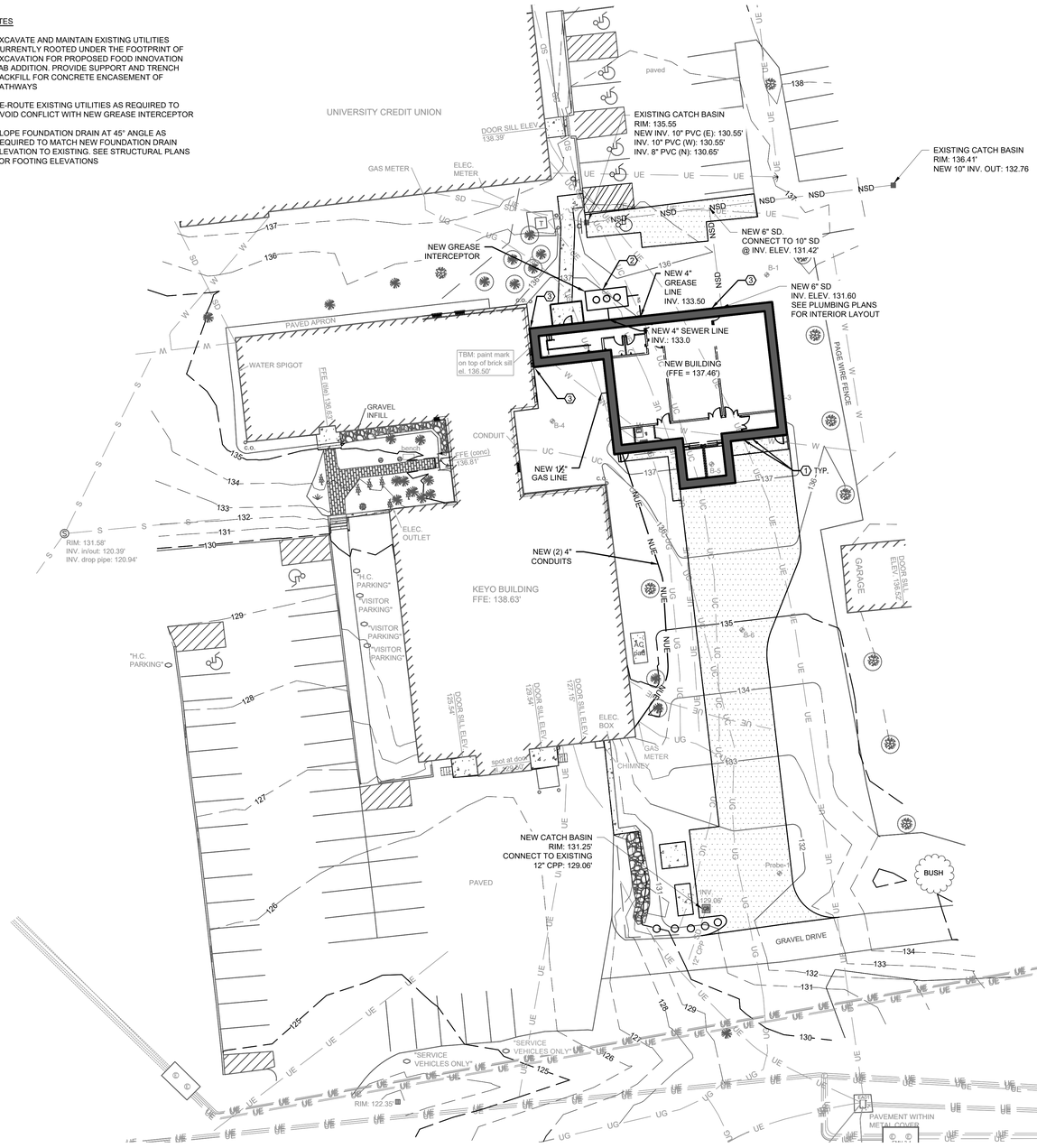
SITE GRADING AND EROSION CONTROL PLAN

C30-1

KEY NOTES

1. EXCAVATE AND MAINTAIN EXISTING UTILITIES CURRENTLY ROOTED UNDER THE FOOTPRINT OF EXCAVATION FOR PROPOSED FOOD INNOVATION LAB ADDITION. PROVIDE SUPPORT AND TRENCH BACKFILL FOR CONCRETE ENCASEMENT OF PATHWAYS
2. RE-ROUTE EXISTING UTILITIES AS REQUIRED TO AVOID CONFLICT WITH NEW GREASE INTERCEPTOR
3. SLOPE FOUNDATION DRAIN AT 45° ANGLE AS REQUIRED TO MATCH NEW FOUNDATION DRAIN ELEVATION TO EXISTING. SEE STRUCTURAL PLANS FOR FOOTING ELEVATIONS



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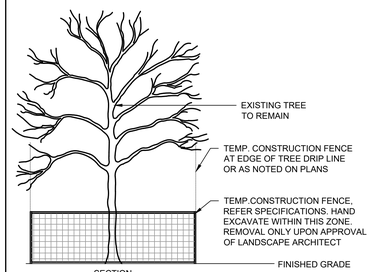
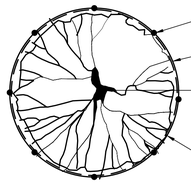
SITE UTILITY PLAN

C40-1



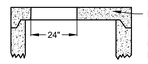
SECTION



PLAN

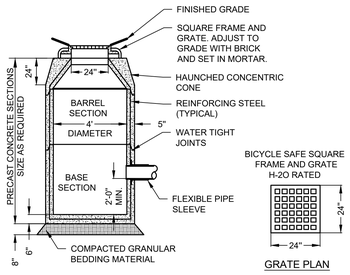
NOTE:
1. DO NOT STORE ANY MACHINERY OR MATERIALS WITHIN FENCED AREAS UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS

D1 EXISTING TREE PROTECTION
SCALE: N.T.S



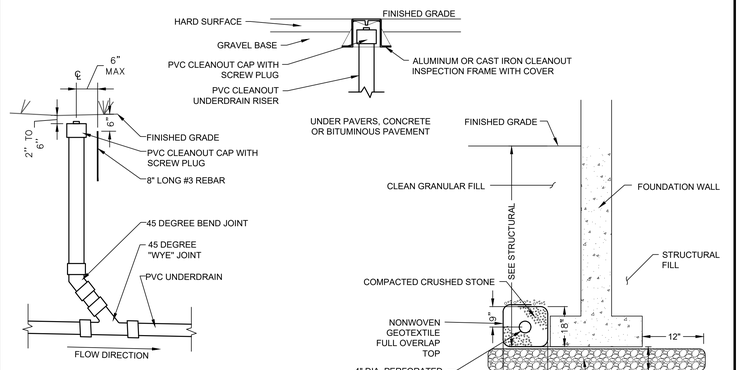
PRECAST REINFORCED CONCRETE FLAT COVER WITH ECCENTRIC 2' SQUARE ACCESS HOLE H-20 RATED USE IN LIEU OF CONE SECTION WHERE REQUIRED BY GRADE OR AS DIRECTED.

ALTERNATE FLAT COVER

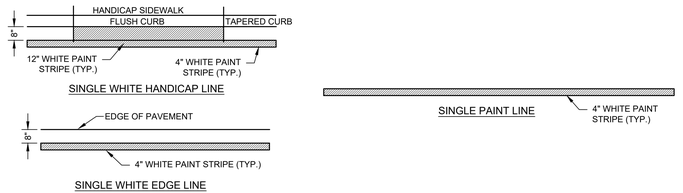


GRATE PLAN

D2 PRECAST CONCRETE CATCH BASIN
SCALE: N.T.S



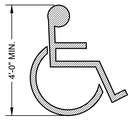
D3 FOUNDATION BEDDING & UNDERDRAIN
SCALE: N.T.S



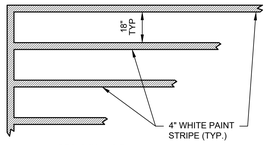
SINGLE WHITE HANDICAP LINE

SINGLE PAINT LINE

SINGLE WHITE EDGE LINE



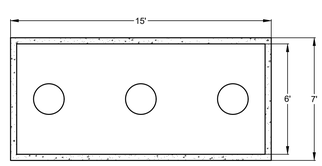
ACCESSIBLE SYMBOL

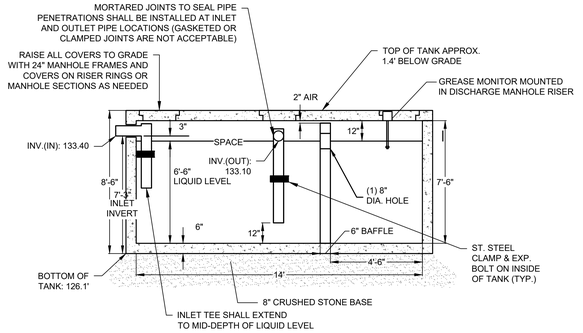


STRIPED AREA

C1 STANDARD PAINT STRIPING
SCALE: N.T.S

NOTES:
1. CONCRETE: 5,000 P.S.I.; MINIMUM STRENGTH @ 28 DAYS.
2. STEEL REINFORCING-ASTM A-615, GRADE 60.
3. COVER TO STEEL-1" MINIMUM.
4. TANKS ARE DESIGNED TO MEET ASTM C858 AND ACI 318 WITH AASHTO HS-20 LOADING.
5. EARTH COVER-0 TO 5 FEET MAX.
6. CONSTRUCTION JOINT-SEALED WITH 1" DIA. BUTYL RUBBER OR EQUIVALENT.
7. CONCRETE RISER ACCESS MANHOLE EXTENSIONS SHALL BE PROVIDED AND FITTED WITH FRAME AND COVER.
8. GREASE TRAP SHALL BE MANUFACTURED BY OLDCASTLE PRECAST, INC., 4,000 GALLON GREASE TRAP (6'x14'x7'-6" I.D.), OR APPROVED EQUAL.
9. GREASE MONITOR SHALL BE MOUNTED IN DISCHARGE MANHOLE RISER AND MANUFACTURED BY DRAIN NET TECHNOLOGIES, INC., OR APPROVED EQUAL (TO BE INSTALLED BY SITE CONTRACTOR).
10. DIVISION 22 (PLUMBING CONTRACTOR) SHALL BE RESPONSIBLE FOR PIPING TO GREASE INTERCEPTOR (SEWER PIPE AND VENT PIPE). DIVISION 33 (SITE CONTRACTOR) SHALL BE RESPONSIBLE FOR INSTALLATION OF GREASE INTERCEPTOR AND DOWNGRADIENT SEWER PIPING.





C3 PRECAST CONCRETE GREASE TRAP
SCALE: N.T.S

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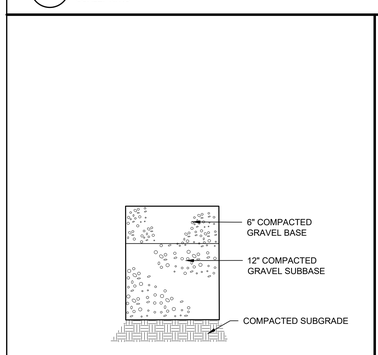
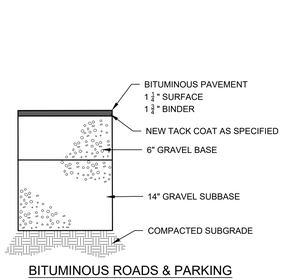
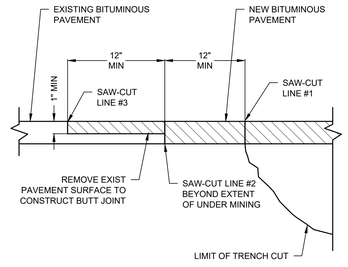


B1 GRAVEL DRIVE DETAIL
SCALE: N.T.S

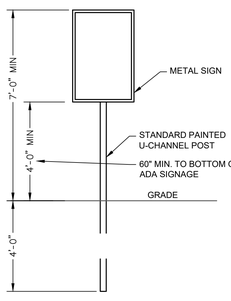


BITUMINOUS ROADS & PARKING

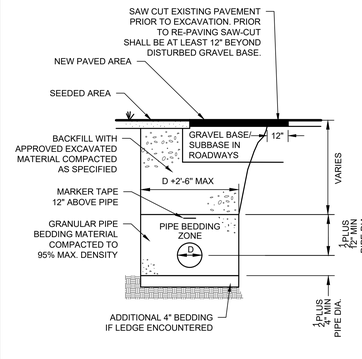
B2 BITUMINOUS PAVEMENT DETAIL
SCALE: N.T.S



B3 PAVEMENT SAW-CUT JOINT
SCALE: N.T.S



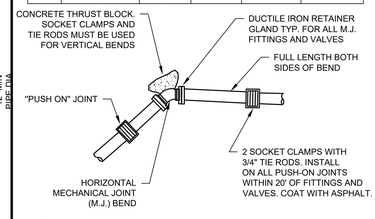
B4 TYPICAL SIGN DETAIL
SCALE: N.T.S



B5 TYP. UTILITY PIPE TRENCH DETAIL
SCALE: N.T.S

GENERAL DATA FOR BLOCKING STANDARD FITTINGS
MINIMUM SURFACE AREA OF CONCRETE BLOCK AGAINST UNDISTURBED EARTH (SQ.FT.)

PIPE SIZE	HYDRANT, PLUG, CAP, TEE	90° BEND	45° BEND	22.5° BEND	11.25° BEND
4"	4	4	4	3 6	2
6"	8	10	10	12	3
8"	12	16	14	16	4
10"	18	26	20	20	5
12"	26	36	28		7
14"	36	50	36		9
16"	46	64			12



B6 RESTRAINT AT WATER LINE FITTINGS
SCALE: N.T.S

Graphic Scale	Plan North	True North
0' 20' (one measures 1" when plotted at full size)		

CONSTRUCTION DOCUMENTS

OCTOBER 20, 2025

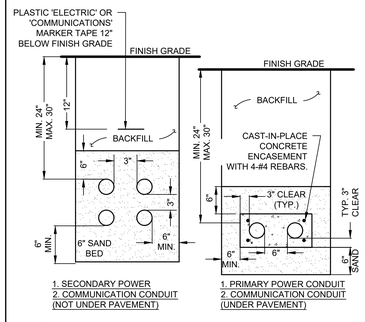
Revision Date	Revision Description

Drawn by: DPL

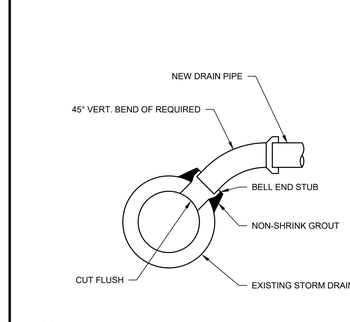
SITE DETAILS

C50-1

NOTES:
1. CONDUITS AND WIRING SUPPLIED AND INSTALLED BY DIV. 26.
2. DESIGNATION, NUMBER AND SIZE OF CONDUITS SHOWN ON ELECTRICAL PLANS.
3. COMPACT SAND BEDDING AND EXCAVATED SOIL BACKFILL TO 95% MAXIMUM DRY DENSITY.
4. PRIMARY CONDUIT SHALL BE CONCRETE ENCASED IN ALL LOCATIONS.



1. SECONDARY POWER
2. COMMUNICATION CONDUIT
(NOT UNDER PAVEMENT)

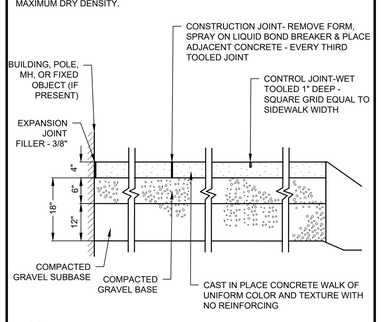


1. PRIMARY POWER CONDUIT
2. COMMUNICATION CONDUIT
(UNDER PAVEMENT)

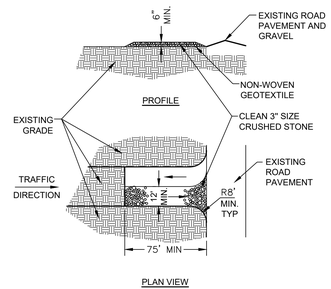
A1 (TYP) DUCT BANK SECTION
SCALE: N.T.S

A2 PIPE SADDLE
SCALE: N.T.S

NOTES:
1. CAST-IN-PLACE CONCRETE WALK MATERIAL, FORMING, AND PLACEMENT IS COVERED UNDER DIVISION 03, AND IS NOT INCLUDED IN DIVISION 32 WORK. SITE GRADING, SOIL FILL MATERIALS, AND COMPACTION IS INCLUDED IN DIVISIONS 31 & 32.
2. COMPACT SAND BEDDING AND EXCAVATED SOIL BACKFILL TO 95% MAXIMUM DRY DENSITY.



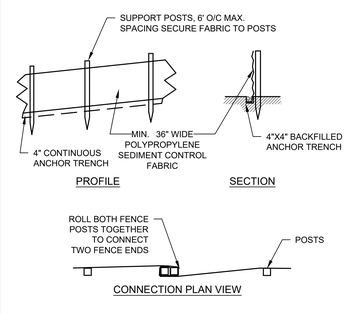
A3 C.I.P. CONCRETE SIDEWALK
SCALE: N.T.S



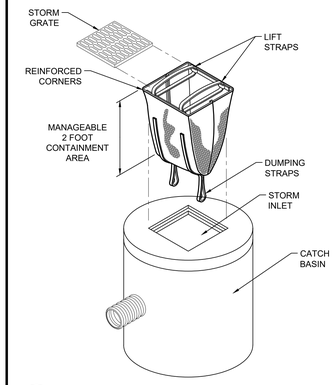
NOTE:
1. REMOVE TRACKED SEDIMENT FROM OFF-SITE ROADWAY WITH A VACUUM SWEEPER PRIOR TO A STORM EVENT.

A4 TEMP. STABILIZED CONSTRUCTION EXIT
SCALE: N.T.S

NOTE:
1. PLACE SILT FENCE OR FILTER BERMS ALONG UNIFORMLY SLOPED SURFACE.
2. EROSION CONTROL MIX FILTER BERM MAY BE SUBSTITUTED FOR A SILTFENCE. SEE THE SITE GRADING AND EROSION CONTROL PLAN.



A5 SILT FENCE
SCALE: N.T.S



A6 SEDIMENT FILTER SACK
SCALE: N.T.S

GENERAL NOTES:

1. STRUCTURAL DRAWINGS SHALL BE USED WITH ADDITION TO JOB SPECIFICATIONS, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, CIVIL, AND SITE DRAWINGS. THESE DRAWINGS SHALL BE USED TO COORDINATE LOCATIONS AND DIMENSIONS OF ITEMS SUCH AS OPENINGS, CHASES, INSERTS, SLEEVES, DEPRESSIONS, AND OTHER INFORMATION NOT PROVIDED IN THE STRUCTURAL DRAWINGS. ANY INCONSISTENCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO COMMENCING THE WORK AFFECTED.

2. CONTRACTOR SHALL REPORT ANY VARIATIONS FOUND AT THE SITE BEFORE PROCEEDING WITH THAT PART OF THE WORK.

3. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER ALL OF THE STRUCTURAL WORKED PROVIDED IN THE STRUCTURAL DRAWINGS HAVE BEEN COMPLETED. ALL ERECTION PROCEDURES, SEQUENCES, SHORING, ETC. REQUIRED TO ENSURE THE SAFETY OF THE BUILDING AND ITEMS ASSOCIATED WITH THE BUILDING DURING THE ERECTION/CONSTRUCTION PHASE IS MEANS-AND-METHODS AND IS SOLELY THE CONTRACTORS RESPONSIBILITY INCLUDING BUT NOT LIMITED TO SHORING, TEMPORARY BRACING, ETC.

4. SECTIONS AND DETAILS ON THE STRUCTURAL DRAWINGS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS AS DETERMINED BY THE STRUCTURAL ENGINEER.

5. ALL FEDERAL, STATE AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED AS APPLICABLE FOR THE PROJECT.

6. SPECIAL INSPECTIONS ARE REQUIRED FOR THIS PROJECT. REFERENCE SPECIFICATION SECTION 000200a, 014533a AND 014533b FOR ADDITIONAL INFORMATION.

DESIGN INFORMATION:

BUILDING CODE
2025 MAINE UNIFORM BUILDING AND ENERGY CODE
2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL EXISTING BUILDING CODE
ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

DEAD LOAD:
SELF-WEIGHT OF MEMBERS AND ASSEMBLIES

LIVE LOAD: UNIFORM / CONCENTRATED

KITCHENS =	150 PSF / -
LOBBIES =	100 PSF / -
STAIRS AND EXIT WAYS =	100 PSF / 300 #
MECHANICAL ROOMS =	200 PSF / -
TOILET ROOMS =	60 PSF / -
ROOF LIVE LOAD =	20 PSF

LIVE LOADS HAVE BEEN REDUCED WHERE ALLOWED IN ACCORDANCE WITH IBC 2021 SECTION 1607.12 AND ASCE 7-16 SECTION 4.7.

SNOW LOAD:

GROUND SNOW LOAD (P_g) =	80.0 PSF
EXPOSURE FACTOR (C_e) =	1.0
THERMAL FACTOR (C_t) =	1.1
IMPORTANCE FACTOR (I_s) =	1.0
FLAT ROOF SNOW LOAD (P_f) =	62.0 PSF
SLOPE FACTOR (C_s) =	1.0

SNOW DRIFTS AND WIDTHS HAVE BEEN INCLUDED IN ACCORDANCE WITH ASCE 7-16 SECTION 7.7.

WIND LOAD:

RISK CATEGORY =	II
BASIC WIND SPEED (V_{ULT}) =	108 MPH
BASIC WIND SPEED (V_{ASD}) =	84 MPH
EXPOSURE CATEGORY =	B
INT. PRESSURE COEF. (GCpi) =	+/- 0.18

COMPONENTS AND CLADDING: PER ASCE 7-16 (SEE TABLES ON THIS DWG)

SEISMIC LOAD:

RISK CATEGORY =	II
SOIL SITE CLASS =	C
IMPORTANCE FACTOR (Ie) =	1.0
Ss =	0.288
S1 =	0.076
SDS =	0.250
SD1 =	0.076
SEISMIC DESIGN CATEGORY =	B
S.F.R. SYSTEM =	LIGHT-FRAME (COLD-FORMED STEEL) WALL SYSTEMS USING FLAT STRAP BRACING
RESPONSE MOD. COEFF. (R) =	4
ANALYSIS PROCEDURE =	EQUIVALENT LATERAL FORCE
Cs =	0.06
BASE SHEAR (V) =	5.9 KIPS

RAIN LOAD:

RAIN INTENSITY (I) =	2.27 IN/HR (60 MIN)
	5.08 IN/HR (15 MIN)

IEBC:
THE ADDITION IS DESIGNED AS AN ISOLATED BUILDING WITH EXPANSION JOINTS BETWEEN THE NEW ADDITION AND EXISTING BUILDING.

FOUNDATIONS (SOIL SUPPORTED):

1. FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH A REPORT ENTITLED "REPORT 24-2450 S EXPLORATIONS AND GEOTECHNICAL ENGINEERING SERVICES, PROPOSED FOOD INNOVATION CENTER BUILDING ADDITION, RANGELEY ROAD, ORONO MAINE" PREPARED BY S.W. COLE ENGINEERING INC. DATED JANUARY 21, 2025.

2. WALL AND COLUMN FOOTINGS DESIGNED FOR A NET ALLOWABLE SOIL BEARING PRESSURE OF 4,000 PSF.

3. IF ADEQUATE SOIL BEARING IS NOT ENCOUNTERED AT THE INDICATED BOTTOM OF FOOTING LOCATION, CONTRACTOR IS TO REPORT TO THE GEOTECHNICAL ENGINEER BEFORE PROCEEDING WITH FOOTING PLACEMENT.

4. ALL EXCAVATIONS FOR THE FOUNDATION SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER BEFORE PLACING ANY CONCRETE FOOTINGS. COORDINATE INSPECTIONS W/ CONSTRUCTION DOCUMENTS AND SPECIAL INSPECTION REQUIREMENTS.

CONCRETE:

1. STRENGTH OF CONCRETE AT 28 DAYS SHALL BE:
   A. WALLS AND FOOTINGS - 3500 PSI
   B. EXTERIOR SLABS - 5000 PSI
   C. INTERIOR SLABS - 3000 PSI

2. ALL EXTERIOR FOOTINGS TO BE MIN. 5'-0" BELOW FINISH GRADE FOR FROST PROTECTION.

3. TOP OF ALL INTERIOR FOOTINGS TO BE MIN. 8" BELOW BOTTOM OF FLOOR SLAB UNLESS NOTED OTHERWISE.

4. BOTTOM OF ALL FOOTINGS TO BE ON ADEQUATE SOIL BEARING.

5. IF BASEMENT AND FIRST FLOOR SLABS ARE NOT POURED BEFORE BACKFILLING, FOUNDATION WALLS TO BE ADEQUATELY BRACED BEFORE BACKFILLING AND UNTIL ABOVE SLABS ARE PLACED AND SET.

6. SEE SPECIFICATIONS FOR SPECIAL REQUIREMENTS FOR ARCHITECTURAL EXPOSED CONCRETE, ANCHORING OF MASONRY TO CONCRETE WALLS AND COLUMNS, AND CHAMFER OF EXTERNAL CORNERS OF CONCRETE BEAMS, GIRDERS, COLUMNS, ETC. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS FOR SIZE AND LOCATION OF DOOR FRAMES, THRESHOLDS, ETC., AND CONCRETE PADS, PIERS, PIPE SLEEVES, ETC.

7. ALL REINFORCING STEEL TO BE ASTM-A615 GRADE 60, DETAILED AND FABRICATED IN ACCORDANCE WITH THE "ACI MANUAL OF STANDARD PRACTICE" (ACI-315-LATEST).

8. WELDED WIRE FABRIC SHALL CONFORM TO ASTM ASTM A-165.

9. REINFORCEMENT TO HAVE MIN. CONCRETE COVER AS FOLLOWS:
   A. CONCRETE DEPOSITED AGAINST GROUND, INCLUDING FOOTINGS - 3"
   B. CONCRETE EXPOSED TO EARTH OR WEATHER,INCLUDING WALKS, PIERS, WALLS, COLUMNS, AND EXTERIOR SLABS - 1 1/2" (#5 OR SMALLER AND 2" (#6 OR LARGER)
   C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
      1. SLABS, WALLS, AND JOISTS - 3/4"
      2. BEAMS AND COLUMNS, TIES, STIRRUPS, REINFORCEMENT - 1 1/2"

10. ALL ITEMS THAT ARE TO BE EMBEDDED INTO CONCRETE SHALL BE SECURED IN PLACE PRIOR TO THE CONCRETE PLACEMENT. UTILIZE ADDITIONAL REINFORCEMENT, TEMPLATES, OR OTHER APPROVED METHODS TO SECURELY PLACE ALL EMBEDMENTS AT PROPER LOCATIONS. "WET-SETTING" OF ANY EMBEDMENTS INTO PLASTIC CONCRETE IS NOT ALLOWED. EMBEDMENTS INCLUDE, BUT ARE NOT LIMITED TO, ANCHOR RODS, REBAR REINFORCEMENTS, DOWELS, ANGLES, PLATES, ANCHOR INSERTS, SLEEVES, AND SHELF BULKHEADS.

11. INSTALLATION AND SECURE PLACEMENT OF CONCRETE REINFORCEMENT SHALL BE INSPECTED BY AN INDEPENDENT TESTING AGENCY IN ACCORDANCE WITH THE REQUIREMENTS OF THIS PROJECT, INCLUDING THE STATEMENT OF SPECIAL INSPECTIONS. CONCRETE REINFORCEMENT SHALL BE PLACED AND SECURED WITHIN FORMS A MINIMUM OF 24 HOURS PRIOR TO THE SCHEDULED CONCRETE PLACEMENT TO CONDUCT THE INSPECTION.

COLD-FORMED STEEL NOTES:

1. COLD-FORMED STEEL DESIGN, DETAILING, FABRICATION, AND ERECTION, SHALL CONFORM TO THE FOLLOWING:
   A. AISI S100 "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS"
   B. AISI S202 "CODE OF STANDARD PRACTICE FOR COLD-FORMED STEEL FRAMING"
   C. AISI S240 "NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL STRUCTURAL FRAMING"

2. LOAD-BEARING COLD-FORMED STEEL FRAMING MEMBERS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM A1003 STRUCTURAL GRADES 33 TYPE H AND 50 TYPE H.
   A. ALL MEMBERS 16 GA AND THICKER: FY = 50 KSI.
   B. ALL MEMBERS 18 GA AND THINNER: FY = 33 KSI.
   C. COATING: G90 (Z275).

3. FABRICATE STEEL-FRAMING ACCESSORIES FROM STEEL SHEET, ASTM A 1003/A 1003M, STRUCTURAL GRADE, TYPE H, METALLIC COATED, OF SAME GRADE AND COATING WEIGHT USED FOR FRAMING MEMBERS.

4. PROVIDE ACCESSORIES OF MANUFACTURER'S STANDARD THICKNESS AND CONFIGURATION, UNLESS OTHERWISE INDICATED.

5. COLD FORMED NOMENCLATURE:

   600 S 162 - 54
   (DEPTH) (SHAPE) (FLANGE WIDTH) (THICKNESS)

6. ANCHORS, CLIPS, AND FASTENERS
   A. STEEL SHAPES AND CLIPS: ASTM A 36/A 36M, ZINC COATED BY HOT-DIP PROCESS ACCORDING TO ASTM A 123/A 123M.
   B. ANCHOR BOLTS: ASTM F 1554, THREADED CARBON-STEEL BOLTS, AND CARBON-STEEL NUTS; AND FLAT, HARDENED-STEEL WASHERS; ZINC COATED BY HOT-DIP PROCESS ACCORDING TO ASTM A 153/A 153M, CLASS C.
   C. EXPANSION ANCHORS: FABRICATED FROM CORROSION-RESISTANT MATERIALS, WITH CAPABILITY TO SUSTAIN, WITHOUT FAILURE, A LOAD EQUAL TO 5 TIMES DESIGN LOAD, AS DETERMINED BY TESTING PER ASTM E 488 CONDUCTED BY A QUALIFIED INDEPENDENT TESTING AGENCY.
   D. POWER-ACTUATED ANCHORS: FASTENER SYSTEMS WITH WORKING CAPACITY GREATER THAN OR EQUAL TO THE DESIGN LOAD, ACCORDING TO AN EVALUATION REPORT ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, BASED ON ICC-ES AC70.
   E. MECHANICAL FASTENERS: ASTM C 1513, CORROSION-RESISTANT-COATED, SELF-DRILLING, SELF-TAPPING STEEL DRILL SCREWS.
      A. HEAD TYPE: LOW-PROFILE HEAD BENEATH SHEATHING, MANUFACTURER'S STANDARD ELSEWHERE.

7. PROTECT COLD-FORMED METAL FRAMING FROM CORROSION, DEFORMATION, AND OTHER DAMAGE DURING DELIVERY, STORAGE, AND HANDLING.

8. STORE COLD-FORMED METAL FRAMING, PROTECT WITH A WATERPROOF COVERING, AND VENTILATE TO AVOID CONDENSATION.

9. INSTALL LOAD-BEARING SHIMS OR GROUT BETWEEN THE UNDERSIDE OF LOAD-BEARING WALL BOTTOM TRACK AND THE TOP OF FOUNDATION WALL OR SLAB AT LOCATIONS WITH A GAP LARGER THAN 1/4 INCH TO ENSURE A UNIFORM BEARING SURFACE ON SUPPORTING CONCRETE OR MASONRY CONSTRUCTION.
   A. NONSHRINK, NONMETALLIC GROUT: FACTORY-PACKAGED, NONSTAINING, NONCORROSIVE, NONGASEOUS GROUT COMPLYING WITH ASTM C 1107. PROVIDE GROUT SPECIFICALLY RECOMMENDED BY MANUFACTURER FOR INTERIOR AND EXTERIOR APPLICATIONS.
   B. SHIMS: LOAD BEARING, HIGH-DENSITY MULTIMONOMER, NONLEACHING PLASTIC; OR COLD-FORMED STEEL OF SAME GRADE AND METALLIC COATING AS FRAMING MEMBERS SUPPORTED BY SHIMS.

10. INSTALL SILL SEALER GASKETS, SPECIFIED IN SECTION 072700 - AIR BARRIERS, TO ISOLATE THE UNDERSIDE OF WALL BOTTOM TRACK OR RIM TRACK AND THE TOP OF FOUNDATION WALL OR SLAB AT STUD OR JOIST LOCATIONS.

11. GALVANIZING REPAIRS: PREPARE AND REPAIR DAMAGED GALVANIZED COATINGS ON FABRICATED AND INSTALLED COLD-FORMED METAL FRAMING WITH GALVANIZED REPAIR PAINT ACCORDING TO ASTM A 780 AND MANUFACTURER'S WRITTEN INSTRUCTIONS.
   A. GALVANIZING REPAIR PAINT: HIGH-ZINC-DUST-CONTENT (95% BY WEIGHT) PAINT FOR REGALVANIZING WELDS IN STEEL, COMPLYING WITH SSPC-PAINT 20.

12. PROVIDE FINAL PROTECTION AND MAINTAIN CONDITIONS, IN A MANNER ACCEPTABLE TO MANUFACTURER AND INSTALLER, THAT ENSURE THAT COLD-FORMED METAL FRAMING IS WITHOUT DAMAGE OR DETERIORATION AT TIME OF SUBSTANTIAL COMPLETION.

13. COLD-FORMED METAL FRAMING MAY BE SHOP OR FIELD FABRICATED FOR INSTALLATION, OR IT MAY BE FIELD ASSEMBLED.

14. INSTALL COLD-FORMED METAL FRAMING ACCORDING TO AISI'S "STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS" AND TO MANUFACTURER'S WRITTEN INSTRUCTIONS UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

15. INSTALL COLD-FORMED METAL FRAMING AND ACCESSORIES PLUMB, SQUARE, AND TRUE TO LINE, AND WITH CONNECTIONS SECURELY FASTENED.
   A. CUT FRAMING MEMBERS BY SAWING OR SHEARING; DO NOT TORCH CUT.
   B. FASTEN COLD-FORMED METAL FRAMING MEMBERS BY WELDING, SCREW FASTENING, CLINCH FASTENING, OR RIVETING. WIRE TYING OF FRAMING MEMBERS IS NOT PERMITTED.

16. INSTALL FRAMING MEMBERS IN ONE-PIECE LENGTHS UNLESS SPLICE CONNECTIONS ARE INDICATED FOR TRACK OR TENSION MEMBERS.

17. INSTALL TEMPORARY BRACING AND SUPPORTS TO SECURE FRAMING AND SUPPORT LOADS EQUAL TO THOSE FOR WHICH STRUCTURE WAS DESIGNED. MAINTAIN BRACES AND SUPPORTS IN PLACE, UNDISTURBED, UNTIL ENTIRE INTEGRATED SUPPORTING STRUCTURE HAS BEEN COMPLETED AND PERMANENT CONNECTIONS TO FRAMING ARE SECURED.

18. INSTALL INSULATION, SPECIFIED IN SECTION 072100 - THERMAL INSULATION, IN FRAMING-ASSEMBLY MEMBERS, SUCH AS HEADERS, SILLS, BOXED JOISTS, AND MULTIPLE STUDS AT OPENINGS, THAT ARE INACCESSIBLE ON COMPLETION OF FRAMING WORK.

19. FASTEN HOLE REINFORCING PLATE OVER WEB PENETRATIONS THAT EXCEED SIZE OF MANUFACTURER'S STANDARD PUNCHED OPENINGS.

20. ERECTION TOLERANCES: INSTALL COLD-FORMED METAL FRAMING LEVEL, PLUMB, AND TRUE TO LINE TO A MAXIMUM ALLOWABLE TOLERANCE VARIATION OF 1/8 INCH IN 10 FEET AND AS FOLLOWS:
   A. SPACE INDIVIDUAL FRAMING MEMBERS NO MORE THAN PLUS OR MINUS 1/8 INCH FROM PLAN LOCATION. CUMULATIVE ERROR SHALL NOT EXCEED MINIMUM FASTENING REQUIREMENTS OF SHEATHING OR OTHER FINISHING MATERIALS.

STEEL DECK NOTES:

1. ROOF DECK: 1 1/2" - 18 GAUGE, TYPE B (PAINTED)
   DECK ATTACHMENT: #12 TEK SCREWS
   PATTERN: 36/7
   SIDELAPS: #10 TEK SCREWS AT 12" O.C. (MIN 2 PER SPAN)

ABBREVIATIONS:

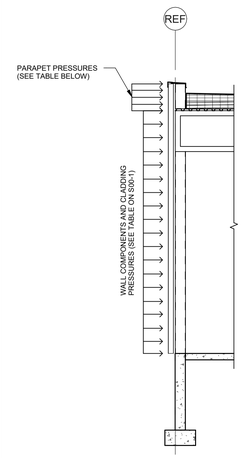
AB	ANCHOR BOLT
ABV	ABOVE
ACI	AMERICAN CONCRETE INSTITUTE
ACT	ACOUSTICAL CEILING TILE
ADDL	ADDITIONAL
AESS	ARCHITECTURAL EXPOSED STRUCT STEEL
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATIVE
ALUM	ALUMINUM
APA	AMERICAN PLYWOOD ASSOCIATION
APPROX	APPROXIMATE
AR	ANCHOR ROD
ARCH	ARCHITECT OR ARCHITECTURAL
BAL	BALANCE
BCX	BOTTOM CHORD EXTENSION
BF	BRACED FRAME
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BIT	BITUMINOUS
BO	BOTTOM OF/ BY OTHERS
BOT	BOTTOM
BP	BEAM POCKET
B-PL	BASE PLATE
BRG	BEARING
BS	BOTH SIDES
BSMT	BASEMENT
BTWN	BETWEEN
C/C OR c/c	CENTER TO CENTER
C	CHANNEL
CFMF	COLD FORM METAL FRAMING
CIP	CAST IN PLACE
CJ	CONTRACTION/CONST. JOINT
℄ OR CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNITS
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CTR(D)	CENTER(ED)
d	PENNY
DBL	DOUBLE
DIA OR ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DL	DEAD LOAD
DN	DOWN
do	DITTO
DP	DRILLED PIER OR DEEP
DTL(S)	DETAIL(S)
DWG(S)	DRAWING(S)
DWL(S)	DOWELS
(E) OR EXIST	EXISTING
EA	EACH
EE	EACH END
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEV	ELEVATOR
ELEC	ELECTRICAL
EMBED	EMBEDMENT
ENGR	ENGINEER
EOD	EDGE OF DECK
EOR	ENGINEER OF RECORD
EOS	EDGE OF SLAB
EQ	EQUAL
EQ SP	EQUALLY SPACED
EQUIP	EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
EWB	EACH WAY BOTTOM
EXIST/EX	EXISTING
EXP ANCHOR	EXPANSION ANCHOR
EXP	EXPANSION
EXT	EXTERIOR
FB	FLAT BAR
FD	FLOOR DRAIN
FDN	FOUNDATION
FIN FL	FINISHED FLOOR
FF	FINISH FLOOR/ FAR FACE
FLG	FLANGE
FLR	FLOOR
FFE	FINISH FLOOR ELEVATION
FOB	FACE OF BRICK
FO	FACE OF
FRMG	FRAMING
FS	FAR SIDE
FT	FOOT OR FEET
FTG	FOOTING
GA	GAGE/GAUGE
GALV	GALVANIZED
GL	GLU-LAM
GB	GRADE BEAM
GC	GENERAL CONTRACTOR
GR	GRADE OR GRIND
GWB	GYPSUM WALLBOARD
HD	HOLDOWN
HD GALV	HOT DIPPED GALVANIZED
HK	HOOK
HORIZ	HORIZONTAL
HT	HEIGHT
HVAC	HEATING VENTILATION AND COOLING
HSS	HOLLOW STRUCTURAL SECTION
I.F.	INSIDE FACE
IN	INCH
INSUL	INSULATION
INT	INTERIOR
JST	JOIST
JT	JOINT
L	ANGLE
LG	LENGTH
LB(S)	POUND(S)
LL	LIVE LOAD
LLBB	LONG LEGS BACK TO BACK
LLH	LONG LEG HORIZ
LLV	LONG LEG VERT
LOC(S)	LOCATION(S) OR LOCATE
LONG	LONGITUDINAL
LSL	LAMINATED STRAND LUMBER
LT	LIGHT
LTWT	LIGHTWEIGHT
LVL	LEVEL OR LAMINATE VENEER LUMBER
LWB	LONG WAY BOTTOM
LWT	LONG WAY TOP
MACH	MACHINE
MACH RM	MACHINE ROOM
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MEP	MECHANICAL/ELECTRICAL/PLUMBING
MANUF	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTL	METAL
N	NORTH
NIC	NOT IN CONTRACT
NO. OR #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
OH	OPPOSITE HAND / OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
PAF	POWDER ACTUATED FASTENER
PC	PILE CAP
PCA	PORTLAND CONCRETE ASSOCIATION
PEN	PENETRATION
PERP	PERPENDICULAR
PL	PLATE
PLCS	PLACES
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PREFAB	PREFABRICATION
PRELIM	PRELIMINARY
PT	PRESSURE TREATED
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
R	RADIUS
REF	REFERENCE
RD	ROOF DRAIN
REINF	REINFORCE(ING)(D)(MENT)
REQD	REQUIRED
REQMNTS	REQUIREMENTS
REQD	REQUIRED
REQMNTS	REQUIREMENT(S)
RO	ROUGH OPENING
RTU	ROOF TOP UNIT
S	SOUTH
SC	SLIP CRITICAL
SCHED	SCHEDULE
SECT	SECTION
SF	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
SLH	SHORT LEG HORIZONTAL
SLV	SHORT LEG VERTICAL
SOG	SLAB ON GROUND
SP @	SPACE AT
SP	SPACES
SPECS	SPECIFICATIONS
SK	SHEAR KEY
SL	SHEAR LUG
SS	STAINLESS STEEL
SSLT	SHORT SLOT
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
STIFF	STIFFENER
SW	SHEARWALL
SWB	SHORT WAY BOTTOM
SWT	SHORT WAY TOP
SYM	SYMMETRICAL
T	TOP
t	THICKNESS
T&B	TOP AND BOTTOM
TCX	TOP CHORD EXTENSION
THK	THICK
TL	TOTAL LOAD
TJ	TIE JOIST
T.O. OR T/	TOP OF/TOP OF STL ETC.
TRANS	TRANSVERSE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
U/S	UNDERSIDE
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WD	WIDTH OR WOOD

WALL COMPONENTS AND CLADDING ULTIMATE WIND PRESSURES (PSF)															
HEIGHT ABOVE PROJECT GRADE (FT)	WINDWARD					LEEWARD									
	ALL ZONES					ZONE 4 (FIELD)					ZONE 5 (CORNER)				
	EFFECTIVE WIND AREA (SF)					EFFECTIVE WIND AREA (SF)					EFFECTIVE WIND AREA (SF)				
	10	20	50	100	500	10	20	50	100	500	10	20	50	100	500
0-30	19.2	18.4	17.2	16.4	16.0	-20.8	-20.0	-18.8	-18.0	-16.0	-25.6	-23.9	-21.7	-20.0	-16.0

REFERENCE: ASCE 7-16, FIGURE 30.3-1

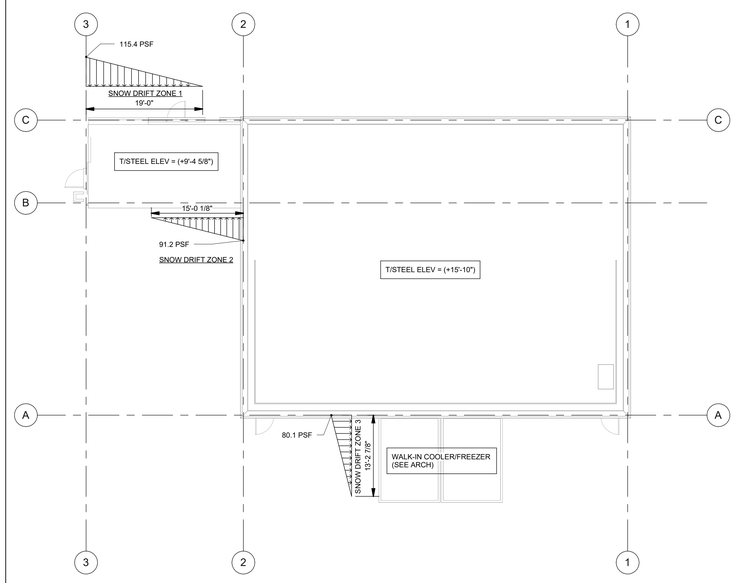
ROOF COMPONENTS AND CLADDING ULTIMATE WIND PRESSURES (PSF)															
HEIGHT ABOVE PROJECT GRADE (FT)	ZONE 1 (FIELD)					ZONE 2 (EDGE)					ZONE 3 (CORNER)				
	EFFECTIVE WIND AREA (SF)					EFFECTIVE WIND AREA (SF)					EFFECTIVE WIND AREA (SF)				
	10	20	50	100	500	10	20	50	100	500	10	20	50	100	500
0-30	-21.0	-20.5	-19.7	-19.2	-19.2	-35.2	-31.5	-26.5	-22.8	-22.8	-53.0	-43.9	-31.9	-22.8	-22.8

REFERENCE: ASCE 7-16, FIGURE 30.3-2A



PARAPET ULTIMATE WIND PRESSURES (PSF)				
HEIGHT ABOVE PROJECT GRADE (FT)	LOAD CASE A (WIND NORMAL TO RIDGE)		LOAD CASE B (WIND PARALLEL TO RIDGE)	
	FIELD	CORNER	FIELD	CORNER
20	46.7	58.2	31.4	35.2

A4 PARAPET WIND PRESSURES
SCALE: 1/4" = 1'-0"



A5 SNOW DRIFT KEY PLAN
SCALE: 1" = 10'-0"

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Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

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13451
REGISTERED PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

OCTOBER 20, 2025

Revision Date	Revision Description

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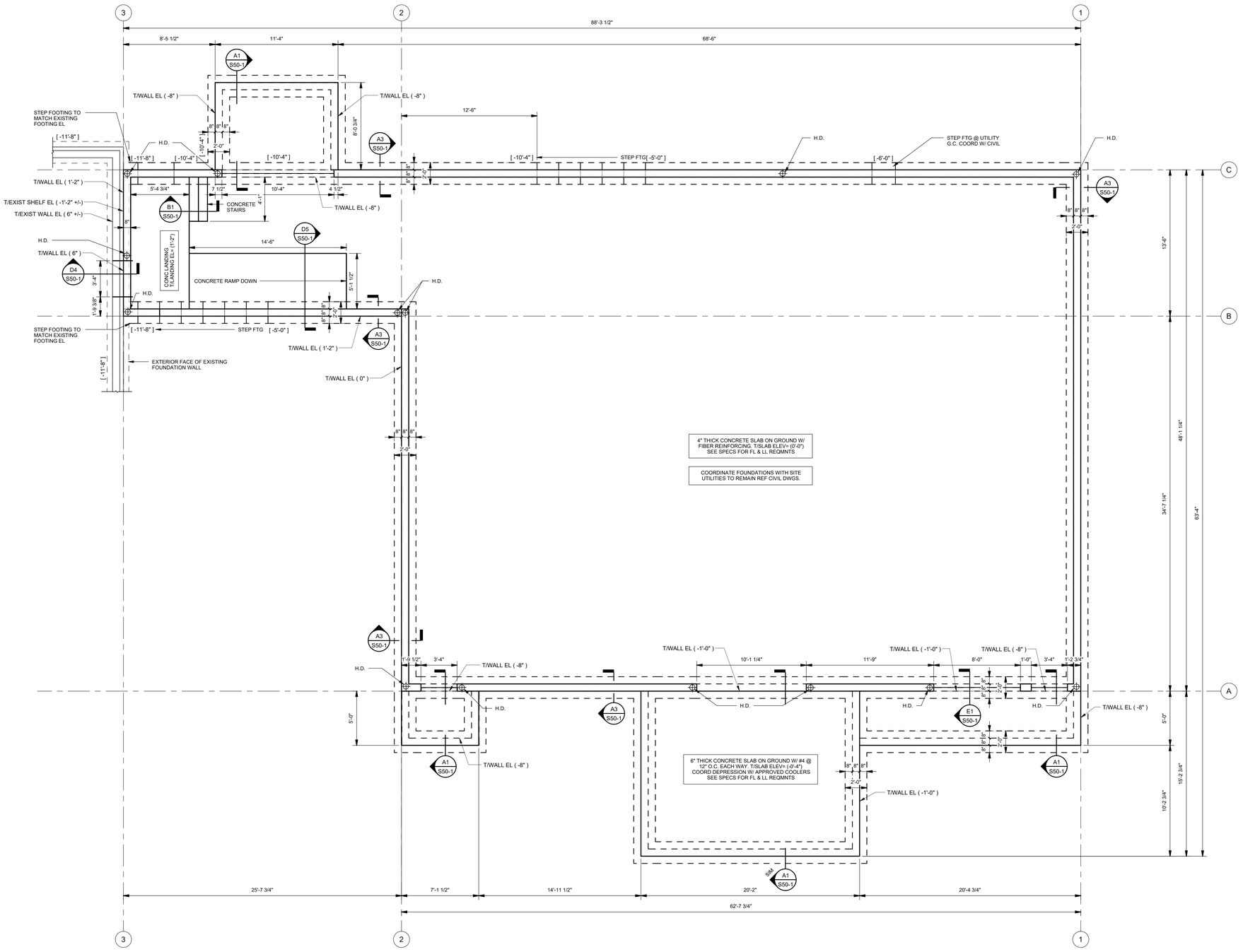
GENERAL NOTES

S00-1



A1 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

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FOUNDATION PLAN NOTES:

1. TOP OF CONCRETE ELEVATION IS REFERENCED (+/-) FROM FINISH FLOOR ELEVATION 137.46' (+0'-0").
2. SEE ADDITIONAL APPLICABLE FOUNDATION NOTES ON DRAWING S50-1.
3. (-X") INDICATES TOP OF CONCRETE ELEVATION T/WALL ELEVATION (0'-0") U.N.O
4. [-X'-X"] INDICATES TOP OF EXTERIOR WALL FOOTING ELEVATION [-5'-0"] U.N.O.
5. H.D. INDICATES HOLDOWN. SEE TYPICAL DETAILS ON S30-1 FOR ADDITIONAL INFORMATION.
6. SECTIONS AND DETAILS SHOWN ON STRUCTURAL DRAWINGS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS NOT SPECIFICALLY REFERENCED.
7. +/- DIMENSIONS SHALL BE CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY G.C. BEFORE PROCEEDING WITH WORK.
8. G.C TO SUBMIT CONSTRUCTION/CONTRACTION JOINT LAYOUTS. SEE TYPICAL DETAIL S50-1 FOR ADDITIONAL INFORMATION.

Graphic Scale
0" 1"
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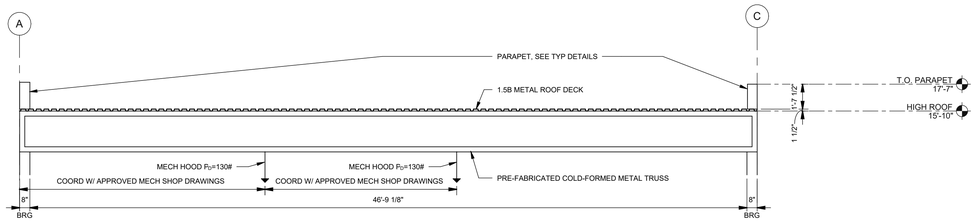
FOUNDATION PLAN

S10-1



E1 TYPICAL TRUSS SECTION
SCALE: 1/4" = 1'-0"

COLD-FORMED METAL FRAMING TRUSS DESIGN CRITERIA:

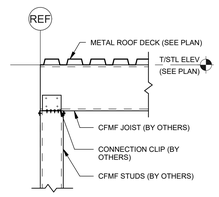
THE FOLLOWING DESIGN CRITERIA SHALL BE USED FOR THE DESIGN OF THE TRUSSES, UNLESS NOTED OTHERWISE

DESIGN LOADS

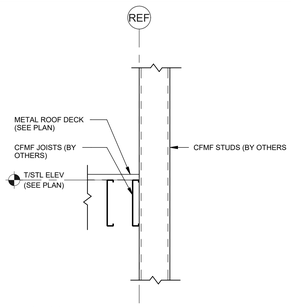
TOP CHORD DEAD LOAD:	15 PSF
BOTTOM CHORD DEAD LOAD:	10 PSF
TOP CHORD SNOW LOAD:	62 PSF
MECHANICAL LOAD:	SEE PLAN
WIND LOAD:	SEE S00-1 CCW TABLE

DEFLECTION CRITERIA
L/360 LIVE LOAD DEFLECTION
L/240 TOTAL LOAD DEFLECTION

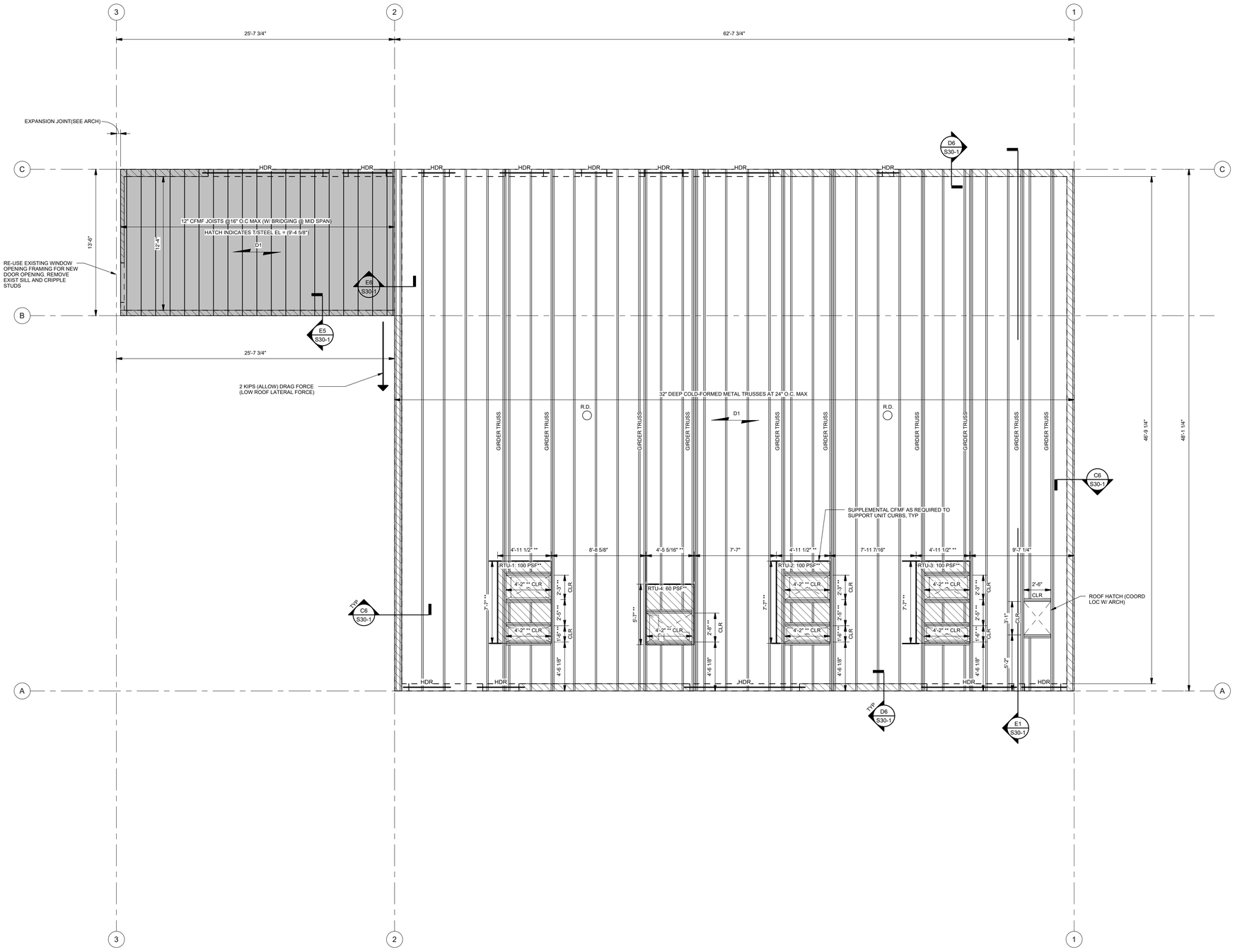
ALL TEMPORARY AND PERMANENT TRUSS BRACING TO BE PROVIDED BY THE TRUSS DESIGNER. PROVIDE BRIDGING AS REQUIRED BY DESIGN. SEE PROJECT SPECIFICATIONS.



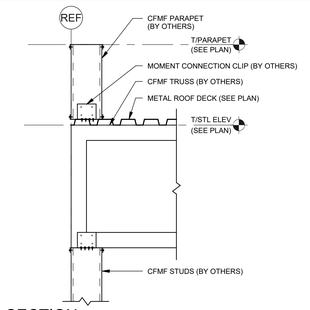
E5 SECTION
SCALE: 3/4" = 1'-0"



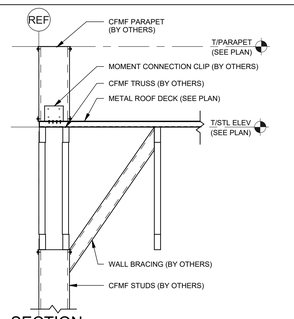
E6 SECTION
SCALE: 3/4" = 1'-0"



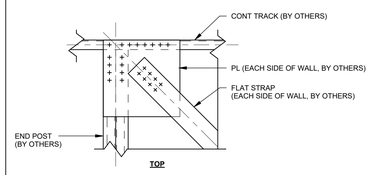
A1 ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

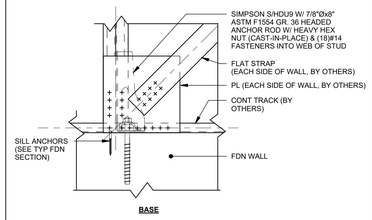


D6 SECTION
SCALE: 3/4" = 1'-0"



C6 SECTION
SCALE: 3/4" = 1'-0"





A6 TYPICAL FLAT STRAP BRACING ELEVATION DETAILS
SCALE: 1 1/2" = 1'-0"

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FRAMING PLAN NOTES:

1. TOP OF STEEL/UNDERSIDE OF DECK ELEVATION IS REFERENCED (+/-) FROM FINISH FLOOR ELEVATION T/STEEL EL = (15'-10") U.N.O.
2. SEE ADDITIONAL APPLICABLE FRAMING NOTES ON DRAWING S60-1.
3. ⎓ ⎓ ⎓ INDICATES COLD-FOMED METAL STUD BEARING WALL WITH BRIDGING AT 4'-0" O.C. MAX. STUDS SHALL ALIGN WITH TRUSS BEARING.
   A. 800S300-68 @24" O.C. ALONG GRID LINE A & C FROM GRID LINE 1 TO 2
   B. 800S162-43 @24" O.C. ALONG GRID LINE 1 & 2 FROM GRID LINE A TO C.
   C. 600S300-54 @16" O.C. ALONG GRID LINE B FROM GRID LINE 2 TO 3.
   D. 800S162-54 @16" O.C. ALONG GRID LINE C FROM GRID LINE 2 TO 3.
4. ⎓⎓⎓ INDICATES COLD-FOMED FLAT STRAP CROSS BRACING EACH SIDE OF WALL. DESIGN OF CONNECTIONS BY COLD FORMED DESIGNER.
5. COLD FORMED TRUSS BRIDGING BY COLD FORMED MANUFACTURER. BRIDGING NOT SHOWN FOR CLARITY.
6. D1 INDICATES SPAN OF 1 1/2" - 18 GAUGE, TYPE B (PAINTED) ROOF DECK.
7. "HDR" INDICATES COLD FORMED METAL FRAMED HEADER.
8. R.D. - INDICATES ROOF DRAIN. SEE ARCH FOR ADDITIONAL INFORMATION.
9. +/- DIMENSIONS SHALL BE CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY G.C. BEFORE PROCEEDING WITH WORK.
10. SECTIONS AND DETAILS SHOWN ON STRUCTURAL DRAWINGS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS NOT SPECIFICALLY REFERENCED.
11. ** INDICATES DIMENSION AND WEIGHTS TO BE COORDINATED W/ APPROVED MECHANICAL EQUIPMENT.

Graphic Scale
0" 1"
Scale measures 1" when plotted at full size.

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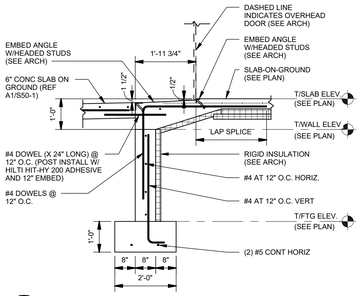
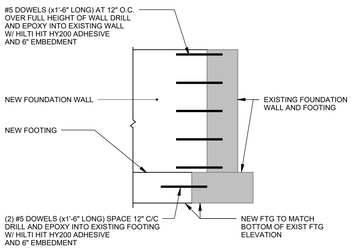
ROOF FRAMING PLAN

S30-1



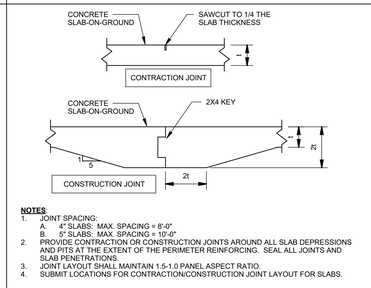
E1 SECTION AT OVERHEAD DOOR

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



D1 TYP SECTION AT NEW TO EXISTING FOUNDATION

NO SCALE

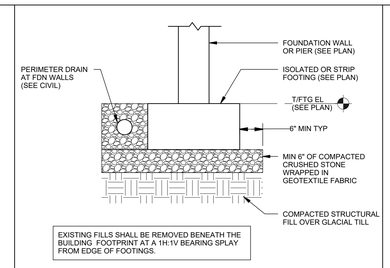


NOTES:

1. JOINT SPACING:
   A. 4" SLABS: MAX. SPACING = 8'-0"
   B. 5" SLABS: MAX. SPACING = 10'-0"
2. PROVIDE CONTRACTION OR CONSTRUCTION JOINTS AROUND ALL SLAB DEPRESSIONS AND PITS AT THE EXTENT OF THE PERIMETER REINFORCING. SEAL ALL JOINTS AND SLAB PENETRATIONS.
3. JOINT LAYOUT SHALL MAINTAIN 1.5-1.0 PANEL ASPECT RATIO.
4. SUBMIT LOCATIONS FOR CONTRACTION/CONSTRUCTION JOINT LAYOUT FOR SLABS.

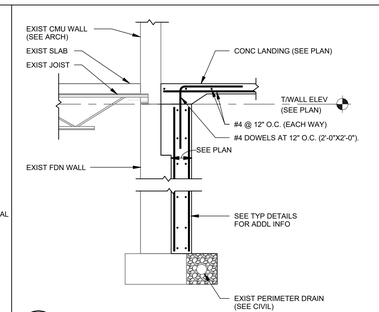
D2 TYP SLAB-ON-GROUND CONTRACTION/CONST JOINT DETAILS

NO SCALE



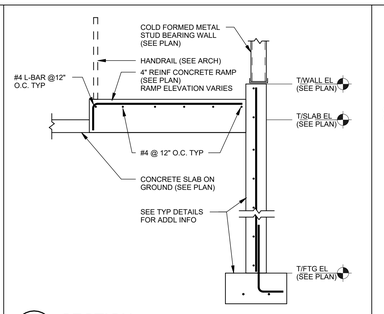
D3 TYPICAL FOUNDATION SUBGRADE DETAIL

NO SCALE



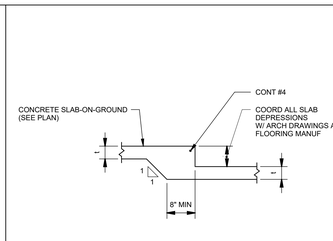
D4 SECTION

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



D5 SECTION

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



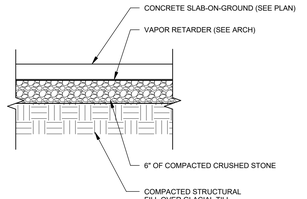
D6 TYP DEPRESSED SLAB DETAIL

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

REBAR SPLICE SCHEDULE		
REBAR SIZE	f'c (PSI)	
	3000/3500	5000
#3	28"	22"
#4	37"	29"
#5	47"	36"
#6	56"	43"
#7	81"	63"
#8	93"	72"

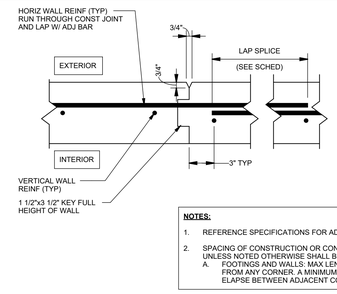
C1 TYP REBAR SPLICE SCHEDULE

NO SCALE



C2 TYP SLAB-ON-GROUND DETAIL

NO SCALE

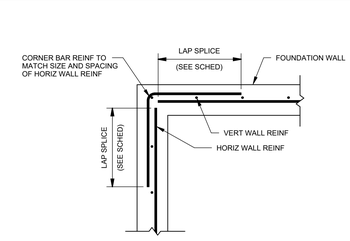


NOTES:

1. REFERENCE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. SPACING OF CONSTRUCTION OR CONTRACTION JOINTS, UNLESS NOTED OTHERWISE SHALL BE AS FOLLOWS:
   A. FOOTINGS AND WALLS: MAX LENGTH 40'-0" OR 15'-0" FROM ANY CORNER. A MINIMUM OF 72 HOURS SHALL ELAPSE BETWEEN ADJACENT CONCRETE PLACEMENTS.

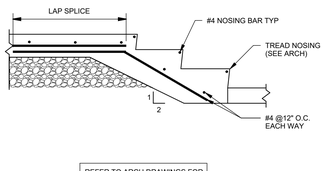
C3 TYP WALL CONTRACTION/CONSTRUCTION JOINT DETAIL

NO SCALE



C5 TYP WALL REINF DETAILS AT CORNERS & INTERSECTIONS

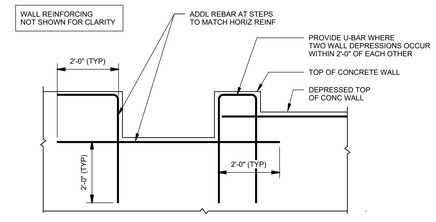
NO SCALE



REFER TO ARCH DRAWINGS FOR ADDITIONAL STAIR DETAILS

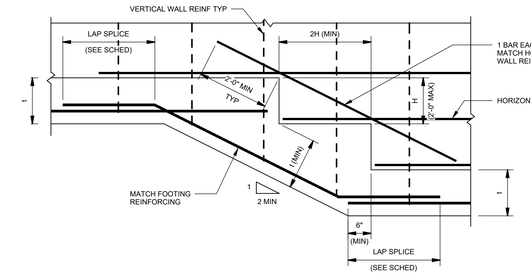
B1 TYP CONCRETE STAIR SECTION

NO SCALE



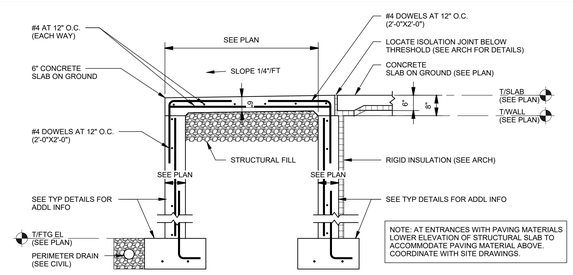
B3 TYP REINFORCING AT STEPS IN CONCRETE WALLS

NO SCALE



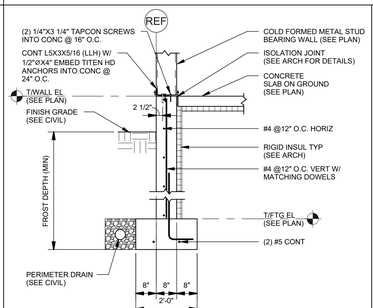
B5 TYP STEPPED FOOTING DETAIL

NO SCALE



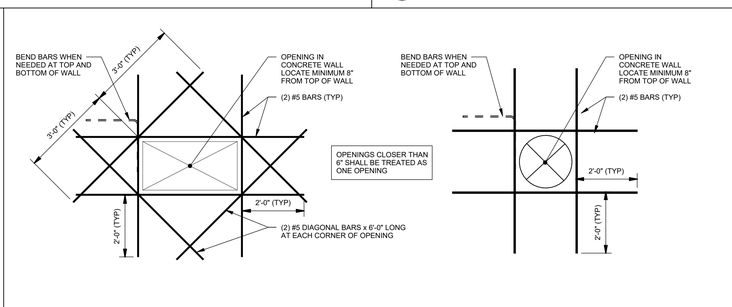
A1 TYP ENTRANCE SLAB DETAIL

NO SCALE



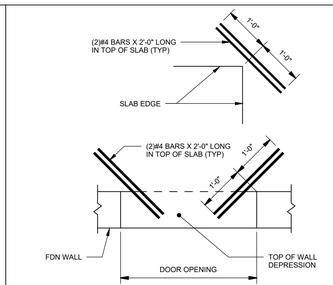
A3 TYP 8" FOUNDATION WALL

NO SCALE



A4 TYP REINFORCING AT OPENINGS IN CONCRETE WALLS OR SLABS

NO SCALE



A5 TYP SLAB RE-ENTRANT CORNER DETAIL

NO SCALE

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TYPICAL FOUNDATION DETAILS

S50-1

CONTRACT DRAWING ABBREVIATIONS

ABBRV	TERM
A/C	AIR CONDITIONING
AB	ANCHOR BOLT
AC	ACOUSTICAL
ACT	ACOUSTICAL TILE
AD	ACCESS DOOR
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AL	ALUMINUM
ALT	ALTERNATE
AP	ACCESS PANEL
APX	APPROXIMATE
ARCH	ARCHITECT (URAL)
AVB	AIR VAPOR BARRIER
BD	BOARD
BIT	BITUMINOUS
BJ	BAR JOIST
BLDG	BUILDING
BLKG	BLOCKING
BM	BENCH MARK
BOD	BOTTOM OF DECK
BOT	BOTTOM
BP	BASE PLATE
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
CAB	CABINET
CB	CATCHBASIN
CD	CEILING DIFFUSER
CEM	CEMENT (ITIOUS)
CER	CERAMIC
CF	CUBIC FEET
CG	CORNER GRILLE
CHBD	CHALKBOARD
CHT	CEILING HEIGHT
CI	CONTINUOUS INSULATION
CJT	CONTROL JOINT
CL	CLOSET
CLG	CEILING
CMPST	COMPOSITE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECT
CONST	CONSTRUCTION
CONT	CONTINUE (OUS)
CONTR	CONTRACT (OR)
CORR	CORRUGATED
CPT	CARPET (ED)
CT	CERAMIC TILE
CUH	CABINET UNIT HEATER
CV	CONVECTOR
CW	COLD WATER
CY	CUBIC YARD
DF	DRINKING FOUNTAIN
DG	DOOR GRILLE
DH	DOUBLE HUNG
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIV	DIVISION
DN	DOWN
DTL	DETAIL
DWG	DRAWING
E	EAST
EB	EXPANSION BOLT
EF	EXHAUST FAN
EIFS	EXTERIOR INSULATED FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION (S)
ELEC	ELECTRIC (AL)
EP	ELECTRIC PANEL
EQ	EQUAL
ER	EXHAUST REGISTER
ES	EACH SIDE
EST	ESTIMATE
EWC	ELECTRIC WATER COOLER
EXG	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FA	FIRE ALARM
FAI	FRESH AIR INTAKE
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDTN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FIN	FINISH (ED)
FLG	FLASHING
FLR	FLOOR (ING)
FO	FACE OF
FOC	FACE OF CONCRETE
FOS	FACE OF STUD
FRP	FIBERGLASS REINFORCED PANEL
FTG	FOOTING
GA	GAGE, GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACT (OR)
GL	GLASS
GPDW	GYPSUM DRY WALL

ABBRV	TERM
HB	HOSE BIB
HD	HUB DRAIN
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
HTG	HEATING
HVAC	HEATING - VENTILATING - AIR CONDITIONING
HYD	HYDRANT
ID	INSIDE DIAMETER
INS	INSULATE (D) (ION)
INT	INTERIOR
INV	INVERT
JC	JANITOR'S CLOSET
JT	JOINT
KIT	KITCHEN
LAB	LABORATORY
LAM	LAMINATE (D)
LAV (L)	LAVATORY
LB (S)	POUNDS
LD	LINEAR DIFFUSER
LF	LINEAL FEET
LG	LONG
LTG	LIGHTING
LTL	LINTEL
LW	LIMIT OF WORK
M	METER (S)
MAS	MASONRY
MAT	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MED	MEDIUM
MET	METAL
MFR	MANUFACTURE (R)
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MR	MOP RECEPTOR
MT	METAL THRESHOLD
MTD	MOUNTED
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
No	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER (S)
OD	OUTSIDE DIAMETER
OFF	OFFICE
OH	OVERHEAD
OPG	OPENING
OPH	OPPOSITE HAND
OPP	OPPOSITE
P	PLATE
PAR	PARALLEL
PERP	PERPENDICULAR
PFN	PREFINISHED
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLUMB	PLUMBING
PNL	PANEL
PNT	PAINT (ED)
PT	PRESSURE TREATED
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PWD	PLYWOOD
QT	QUARRY TILE
R	RISER
RAD	RADIUS
RB	RUBBER BASE
RD	ROOF DRAIN
REF	REFERENCE
REFR	REFRIGERATOR
REQ	REQUIRE (D)
REV	REVISION (S)
RL	ROOF LEADER
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
S	SOUTH
SAB	SOUND ATTENUATING BATTS
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SEC	SECTION
SHT	SHEET
SIM	SIMILAR
SK	SINK
SMU	SOLID MASONRY UNIT
SPEC	SPECIFICATION (S)
SQ	SQUARE
SS	STAINLESS STEEL
SSK	SERVICE SINK
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUC	STRUCTURAL
SYM	SYMMETRY (ICAL)
SYS	SYSTEM

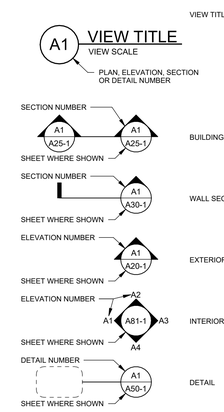
ABBRV	TERM
T	TREAD
T&G	TONGUE & GROOVE
TD	TRENCH DRAIN
TEL	TELEPHONE
THK	THICK (NESS)
TKBD	TACKBOARD
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOS	TOP OF STEEL
TPTN	TOILET PARTITION
TV	TELEVISION
TYP	TYPICAL
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
UV	UNIT VENTILATOR
V	VENT
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VF	VINYL FABRIC
VTR	VENT THRU ROOF
W	WEST, WIDTH, WIDE
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WCH	WATER CLOSET HANDICAP
WCO	WALL CLEANOUT
WD	WOOD
WG	WALL GRILLE
WH	WALL HUNG
WIN	WINDOW
WP	WORKING POINT
WWF	WELDED WIRE FABRIC

SYMBOLS USED AS ABBREVIATIONS

L	ANGLE
℄	CENTERLINE
⊏	CHANNEL
⌀	DIAMETER
ℙ	PLATE
□	SQUARE

GRAPHIC SYMBOLS

PLAN - SECTION



VIEW TITLE

BUILDING SECTION

WALL SECTION

EXTERIOR ELEVATION

INTERIOR ELEVATION

DETAIL

PLAN / TRUE NORTH

COLUMN REFERENCE GRID

LEVEL LINE

WALL OR PARTITION TYPE

ROOM NAME AND NUMBER

EQUIPMENT OR FURNITURE NUMBER

DOOR OR BORROWED LITE NUMBER

WINDOW OR ALUMINUM GLAZED FRAME TYPE

CEILING TYPE AND HEIGHT AFF

FLOOR FINISH

KEYNOTE OR MATERIAL TAG

REVISION CLOUD

MATERIAL INDICATIONS

PLAN - SECTION

EARTH

POROUS FILL (STONE OR GRAVEL, ETC)

ROCK

CONCRETE

BRICK (COMMON OR FACE)

CONCRETE MASONRY UNITS (CMU)

METAL (LARGE SCALE)

PLYWOOD (LARGE SCALE)

WOOD, FINISHED

WOOD, ROUGH

INSULATION (LOOSE OR BATT)

INSULATION (RIGID)

GLASS (LARGE SCALE)

CERAMIC TILE

GYPSUM WALL BOARD (FIBERBOARD, ETC)

PLASTER, SAND, CEMENT, GROUT

ACOUSTICAL TILE

RESILIENT FLOORING

METAL (SMALL SCALE)

ELEVATIONS

CONCRETE, PLASTER

SHEET METAL

GLAZING

BRICK

SPECIAL INDICATIONS

PARTITION CONSTRUCTION - PLAN

EXISTING PARTITIONS TO REMAIN

EXISTING PARTITIONS TO BE REMOVED

STEEL STUD PARTITION

WOOD STUD PARTITION

CMU PARTITION

SMOKE PARTITION

1 HOUR FIRE RESISTIVE RATED PARTITION

2 HOUR FIRE RESISTIVE RATED PARTITION

3 HOUR FIRE RESISTIVE RATED PARTITION

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ORONO, MAINE

Harriman Project No.	24265

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

LICENSED ARCHITECT
DANIEL BACKMAN
5180
STATE OF MAINE

CONSTRUCTION DOCUMENTS

OCTOBER 20, 2025

Revision Date	Revision Description

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ABBREVIATIONS AND LEGENDS

A00-1

A1 SITE PLAN
SCALE: 1" = 20'-0"

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GENERAL NOTES

1. REFER TO CIVIL DRAWINGS FOR SITE WORK

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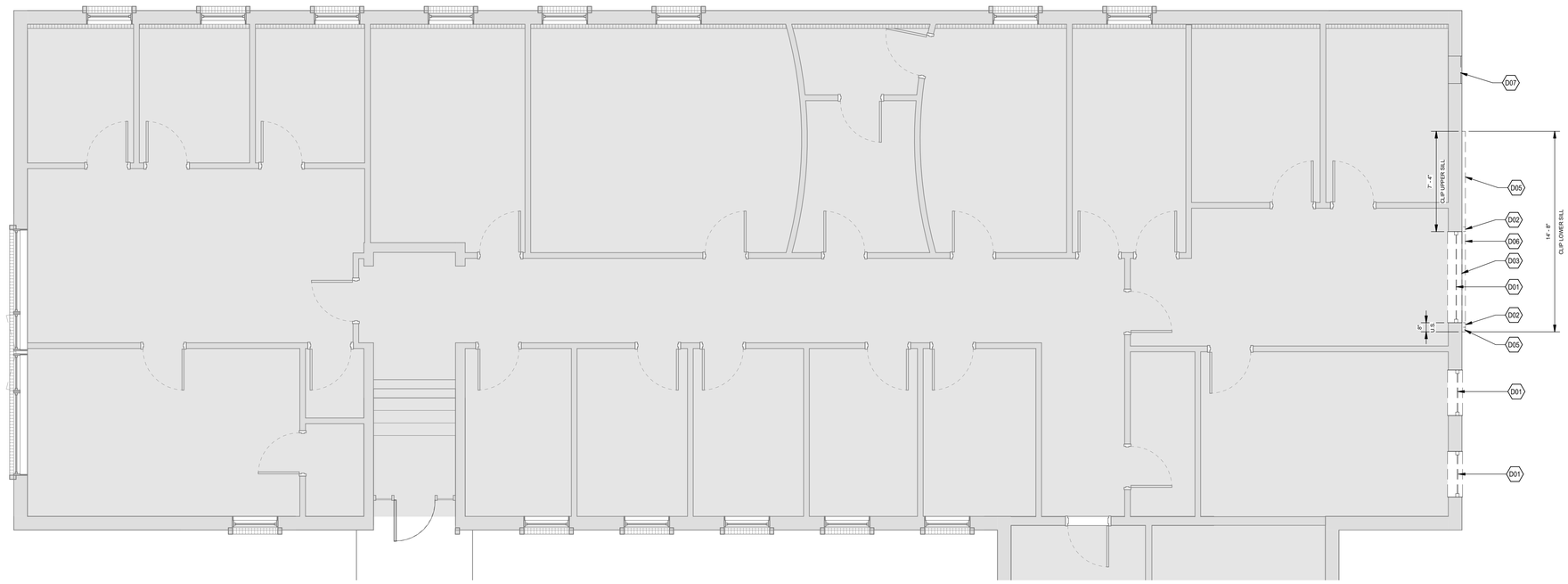
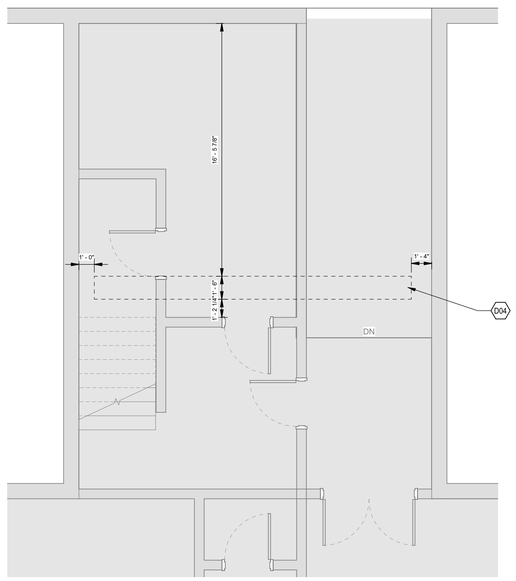
SITE PLAN

A01-1



B1 DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



A2 BASEMENT DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

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GENERAL NOTES

1. NOTE #1
2. NOTE #2

DEMOLITION KEY NOTES

CODE	DESCRIPTION
D01	REMOVE EXTERIOR WINDOW AND FRAME
D02	CLIP EXISTING BRICK WINDOW JAMB TO BE FLUSH WITH EXISTING BRICK VENEER
D03	SAW CUT AND REMOVE CMU AND BRICK VENEER BELOW EXG WINDOW
D04	TRENCH EXG SLAB AT BASEMENT LEVEL FOR INSTALLATION OF NEW DRAIN PIPE
D05	CLIP EXISTING BRICK SILL OVERHEAD TO BE FLUSH WITH EXISTING BRICK VENEER
D06	CLIP EXISTING BRICK SILL BELOW TO BE FLUSH WITH EXISTING BRICK VENEER
D07	PREPARE EXISTING OPENING FOR NEW RATED DAMPER, SEE MECH DRAWINGS

Graphic Scale
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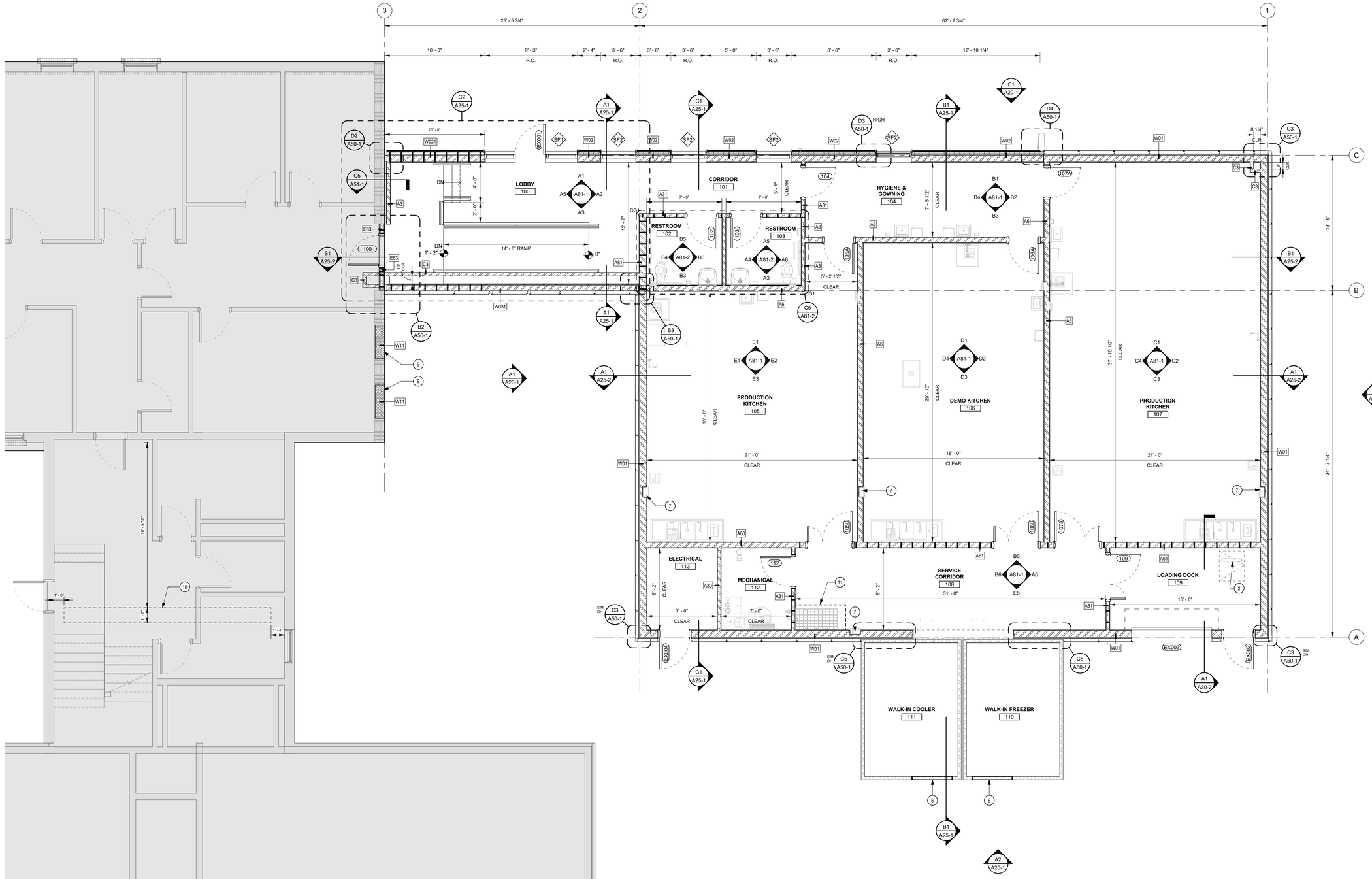
FIRST FLOOR
DEMOLITION PLAN

A05-1



A1 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

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GENERAL NOTES

1. SEE SHEET A50-1 FOR EXTERIOR WALL ASSMBLY TYPES
2. SEE SHEET A40-1 FOR INTERIOR PARTITION TYPES
3. SEE SHEET A80-1 FOR CORNER GUARD DETAILS
4. SEE SHEET A60-1 FOR DOOR SCHEDULE AND DETAILS

FLOOR PLAN KEYNOTES

	DESCRIPTION
2	ROOF ACCESS LADDER AND HATCH, SEE DETAIL B1/A51-1
6	FRAME WALK-IN ENCLOSURE FOR FUTURE OPENING
7	SEMI-RECESSED CLASS-K FIRE EXTINGUISHER CABINET
9	INFILL WINDOW OPENINGS WITH CMU BLOCK WITH BRICK VENEER
10	PATCH CONCRETE FLOOR AROUND NEW DRAIN PIPE AT BASEMENT LEVEL BELOW
11	CHAIN LINK FENCE ENCLOSURE AT CLEANING CHEMICALS

Graphic Scale
0" 1"
Note measure 1" when plotted at full size

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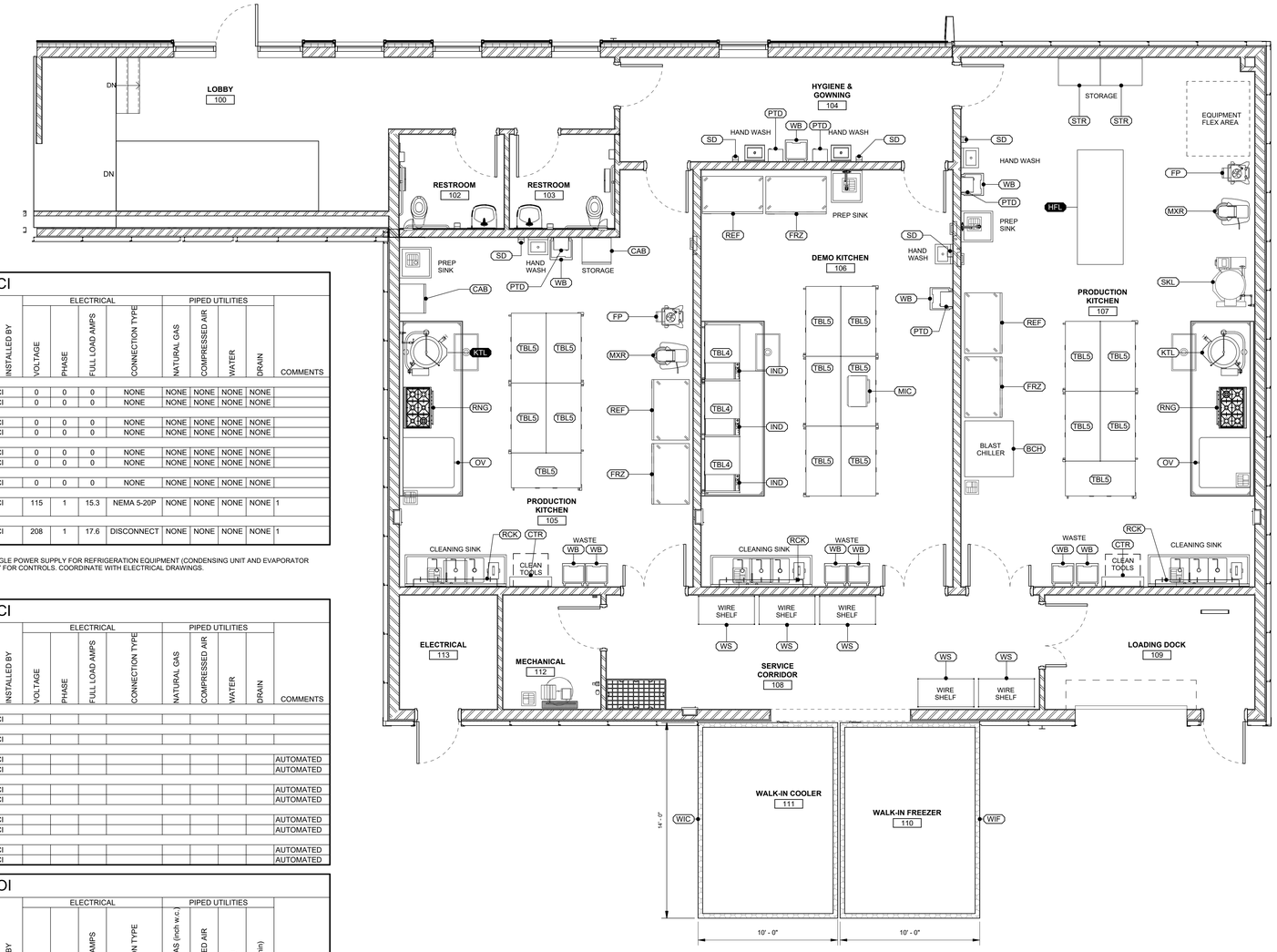
FIRST FLOOR PLAN

A10-1



FF&E SCHEDULE - CFCI

ROOM NUMBER	TAG	COMMON NAME	MANUFACTURER	MODEL	COUNT	FURNISHED BY	INSTALLED BY	ELECTRICAL				PIPED UTILITIES				COMMENTS
								VOLTAGE	PHASE	FULL LOAD AMPS	CONNECTION TYPE	NATURAL GAS	COMPRESSED AIR	WATER	DRAIN	
105	CTR	RACK, CLEANING TOOLS	ADVANCE TABCO	K-246	1	CF	CI	0	0	0	NONE	NONE	NONE	NONE	NONE	
105	RCK	RACK, POT	AREO MFG	SBGPR-72	1	CF	CI	0	0	0	NONE	NONE	NONE	NONE	NONE	
106	RCK	RACK, POT	AREO MFG	SBGPR-72	1	CF	CI	0	0	0	NONE	NONE	NONE	NONE	NONE	
106	TBL4	TABLE, 4FT MOBILE, SS	BK RESOURCES	VTT-4830	3	CF	CI	0	0	0	NONE	NONE	NONE	NONE	NONE	
107	CTR	RACK, CLEANING TOOLS	ADVANCE TABCO	K-246	1	CF	CI	0	0	0	NONE	NONE	NONE	NONE	NONE	
107	RCK	RACK, POT	AREO MFG	SBGPR-72	1	CF	CI	0	0	0	NONE	NONE	NONE	NONE	NONE	
108	WS	RACK, WIRE, 24X48	QUANTUM	2448GY	5	CF	CI	0	0	0	NONE	NONE	NONE	NONE	NONE	
110	WIF	WALK-IN FREEZER W. FLOOR, OUTDOOR	NORLAKE	FAST TRACK 10X14, CPF100PC-E-0	1	CF	CI	115	1	15.3	NEMA 5-20P	NONE	NONE	NONE	NONE	1
111	WIC	WALK-IN COOLER W. FLOOR, OUTDOOR	NORLAKE	FAST TRACK 10X14, CPF200JC-R-4-EV	1	CF	CI	208	1	17.6	DISCONNECT	NONE	NONE	NONE	NONE	1

COMMENTS:
1) ENVIRONMENTAL CHAMBERS (WALK-IN UNITS) POWER CONNECTIONS TO BE COORDINATED WITH SELECTED VENDOR. BASIS OF DESIGN IS SINGLE POWER SUPPLY FOR REFRIGERATION EQUIPMENT (CONDENSING UNIT AND EVAPORATOR SECTIONS). SINGLE POWER SUPPLY FOR LIGHTING. SINGLE POWER SUPPLY FOR INTERNAL CONVENIENCE RECEPTACLE. SINGLE POWER SUPPLY FOR CONTROLS. COORDINATE WITH ELECTRICAL DRAWINGS.

FF&E SCHEDULE - OFCI

ROOM NUMBER	TAG	COMMON NAME	MANUFACTURER	MODEL	COUNT	FURNISHED BY	INSTALLED BY	ELECTRICAL				PIPED UTILITIES				COMMENTS
								VOLTAGE	PHASE	FULL LOAD AMPS	CONNECTION TYPE	NATURAL GAS	COMPRESSED AIR	WATER	DRAIN	
102	SD	SOAP DISPENSER	TBD	TBD	1	OF	CI									
103	SD	SOAP DISPENSER	TBD	TBD	1	OF	CI									
104	PTD	PAPER TOWEL DISPENSER	TBD	TBD	2	OF	CI									AUTOMATED
104	SD	SOAP DISPENSER	TBD	TBD	2	OF	CI									AUTOMATED
105	PTD	PAPER TOWEL DISPENSER	TBD	TBD	1	OF	CI									AUTOMATED
105	SD	SOAP DISPENSER	TBD	TBD	1	OF	CI									AUTOMATED
106	PTD	PAPER TOWEL DISPENSER	TBD	TBD	1	OF	CI									AUTOMATED
106	SD	SOAP DISPENSER	TBD	TBD	1	OF	CI									AUTOMATED
107	PTD	PAPER TOWEL DISPENSER	TBD	TBD	1	OF	CI									AUTOMATED
107	SD	SOAP DISPENSER	TBD	TBD	1	OF	CI									AUTOMATED

FF&E SCHEDULE - OFOI

ROOM NUMBER	TAG	COMMON NAME	MANUFACTURER	MODEL	COUNT	FURNISHED BY	INSTALLED BY	ELECTRICAL				PIPED UTILITIES				COMMENTS
								VOLTAGE	PHASE	FULL LOAD AMPS	CONNECTION TYPE	NATURAL GAS (inch w.c.)	COMPRESSED AIR	WATER (psi)	DRAIN (gal/min)	
105	OV	COMBI OVEN	RATIONAL	ICP 20 FULL NG	1	OF	OI	480	3	81.7	DISCONNECT	6.5-10	NONE	14.58	3.17	
105	FP	FOOD PROCESSOR	ROBOT COUPE	R23T	1	OF	OI	208	3	12.42	NEMA L15-30P	NONE	NONE	NONE	NONE	
105	FRZ	FREEZER, 2 DOOR	ARTIC AIR	AF49	1	OF	OI	120	1	12	NEMA 5-15P	NONE	NONE	NONE	NONE	
105	MXR	MIXER, FLOOR, 40QT	EURODIB USA	M40A 220ETL	1	OF	OI	208	3	5	DISCONNECT	NONE	NONE	NONE	NONE	
105	RNG	RANGE & OVEN, GAS	ATOSA USA, INC	AGR-6B-NG	1	OF	OI	0	0	0	NA	4-5	NONE	NONE	NONE	
105	REF	REFRIGERATOR, 2 DOOR	ARTIC AIR	AR49	1	OF	OI	120	1	4.5	NEMA 5-15P	NONE	NONE	NONE	NONE	
105	TBL5	TABLE, 5FT MOBILE, SS	BK RESOURCES	VTT-6030	5	OF	OI	0	0	0	NA	NONE	NONE	NONE	NONE	
105	WB	WASTE BIN	TBD	TBD	3	OF	OI	0	0	0	NA	NONE	NONE	NONE	NONE	
106	FRZ	FREEZER, 2 DOOR	ARTIC AIR	AF49	1	OF	OI	120	1	12	NEMA 5-15P	NONE	NONE	NONE	NONE	
106	IND	INDUCTION COOKTOP	HATCO	IRNG-PC2F-24-IA	3	OF	OI	208	1	8.66	NEMA 6-20P	NONE	NONE	NONE	NONE	
106	MIC	MICROWAVE	SHARP	R-21LCFS	1	OF	OI	120	1	14	NEMA 5-15P	NONE	NONE	NONE	NONE	
106	REF	REFRIGERATOR, 2 DOOR	ARTIC AIR	AR49	1	OF	OI	120	1	4.5	NEMA 5-15P	NONE	NONE	NONE	NONE	
106	TBL5	TABLE, 5FT MOBILE, SS	BK RESOURCES	VTT-6030	6	OF	OI	0	0	0	NA	NONE	NONE	NONE	NONE	
106	WB	WASTE BIN	TBD	TBD	3	OF	OI	0	0	0	NA	NONE	NONE	NONE	NONE	
107	BCH	BLAST CHILLER	AMERICAN PANEL	AP20BCF200-3	1	OF	OI	208	3	19.5	DISCONNECT	NONE	NONE	NONE	NONE	
107	OV	COMBI OVEN	RATIONAL	ICP 20 FULL NG	1	OF	OI	480	3	81.7	DISCONNECT	6.5-10	NONE	14.58	3.17	
107	FP	FOOD PROCESSOR	ROBOT COUPE	R23T	1	OF	OI	208	3	12.42	NEMA L15-30P	NONE	NONE	NONE	NONE	
107	FRZ	FREEZER, 2 DOOR	ARTIC AIR	AF49	1	OF	OI	120	1	12	NEMA 5-15P	NONE	NONE	NONE	NONE	
107	KTL	KETTLE, ELECTRIC, 40 GAL	GROEN	TDBC-40C	1	OF	OI	208	3	30	DISCONNECT	NONE	NONE	40	8	
107	MXR	MIXER, FLOOR, 40QT	EURODIB USA	M40A 220ETL	1	OF	OI	208	3	5	DISCONNECT	NONE	NONE	NONE	NONE	
107	RNG	RANGE & OVEN, GAS	ATOSA USA, INC	AGR-6B-NG	1	OF	OI	0	0	0	NA	4-5	NONE	NONE	NONE	
107	REF	REFRIGERATOR, 2 DOOR	ARTIC AIR	AR49	1	OF	OI	120	1	4.5	NEMA 5-15P	NONE	NONE	NONE	NONE	
107	STR	STORAGE CABINET	ADVANCE TABCO	HK-SS-243	2	OF	OI	0	0	0	NA	NONE	NONE	NONE	NONE	
107	TBL5	TABLE, 5FT MOBILE, SS	BK RESOURCES	VTT-6030	5	OF	OI	0	0	0	NA	NONE	NONE	NONE	NONE	
107	SKL	TILTING SKILLET, ELECTRIC, 18GAL	FIREX	UCBTE018V1	1	OF	OI	208	3	24.5	DISCONNECT	NONE	NONE	40	8	
107	WB	WASTE BIN	TBD	TBD	3	OF	OI	0	0	0	NA	NONE	NONE	NONE	NONE	

FF&E SCHEDULE - OUT OF SCOPE - FUTURE

ROOM NUMBER	TAG	COMMON NAME	MANUFACTURER	MODEL	COUNT	FURNISHED BY	INSTALLED BY	ELECTRICAL				PIPED UTILITIES				COMMENTS
								VOLTAGE	PHASE	FULL LOAD AMPS	CONNECTION TYPE	NATURAL GAS (inch w.c.)	COMPRESSED AIR	WATER (psi)	DRAIN (gal/min)	
105	KTL	KETTLE, ELECTRIC, 40 GAL	GROEN	TDBC-40C	1	OF	OI	208	3	30	DISCONNECT	NONE	NONE	40	8	
107	HFL	HOT FILL LINE	APEX FILLING SYSTEMS	TABLETOP PISTON FILLER	1	OF	OI	0	0	0	NA	NONE	2-4	NONE	NONE	

A2 FIRST FLOOR PLAN - FF&E
SCALE: 1/4" = 1'-0"

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ORONO, MAINE

Harriman Project No.	24265

GENERAL NOTES

1. SEE SHEET A50-1 FOR EXTERIOR WALL ASSMBLY TYPES
2. SEE SHEET A40-1 FOR INTERIOR PARTITION TYPES
3. SEE SHEET A80-1 FOR CORNER GUARD DETAILS
4. SEE SHEET A60-1 FOR DOOR SCHEDULE AND DETAILS

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

LICENSED ARCHITECT
DANIEL BACKMAN
5180
STATE OF MAINE

CONSTRUCTION DOCUMENTS

OCTOBER 20, 2025

Revision Date	Revision Description

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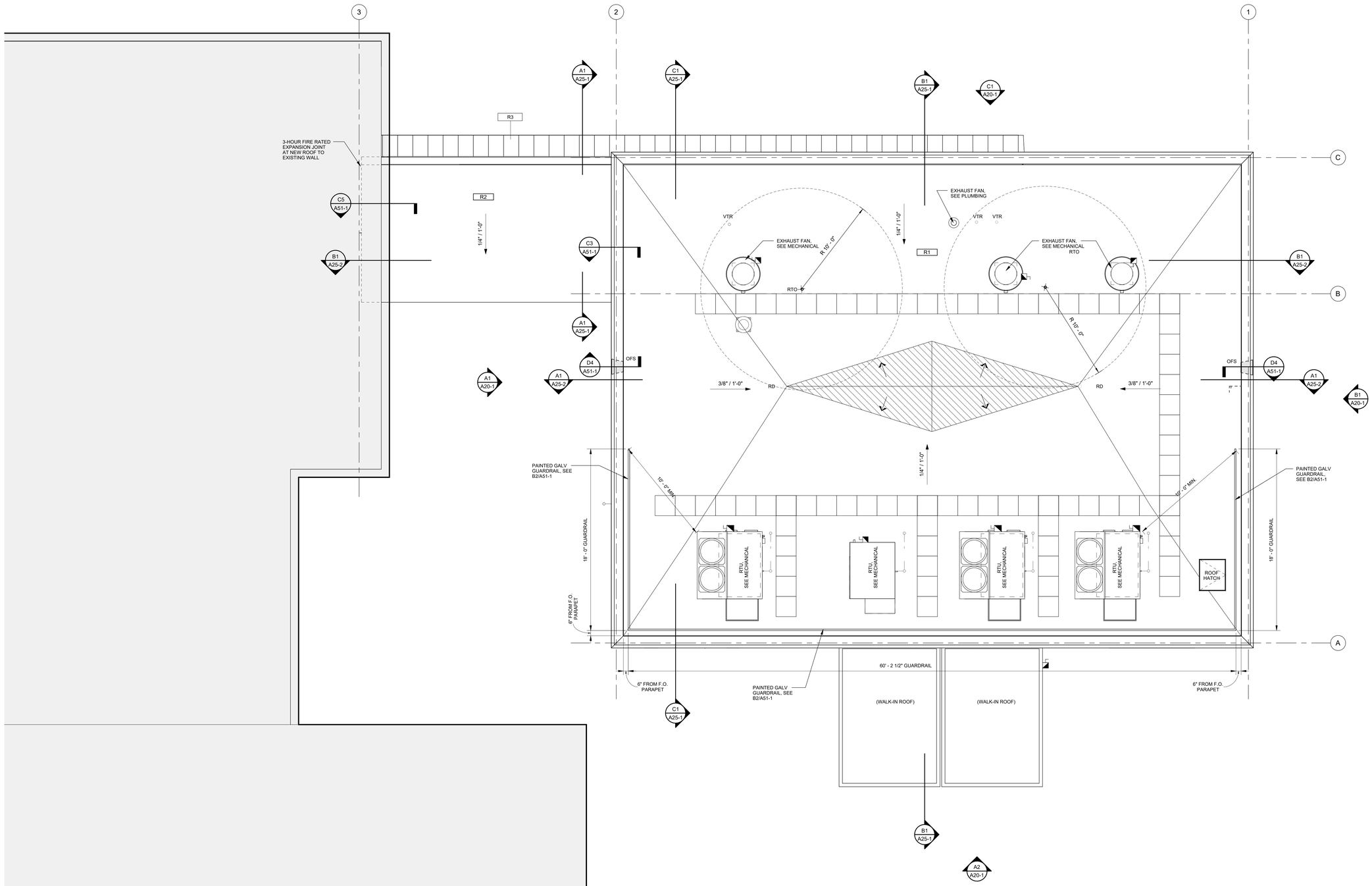
FIRST FLOOR FF&E PLAN

A10-2



A1 ROOF PLAN
SCALE: 1/4" = 1'-0"

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Harriman Project No.	24265

GENERAL NOTES

1. SEE MECHANICAL, ELECTRICAL, PLUMBING AND STRUCTURAL DRAWINGS FOR ADDITIONAL SCOPE
2. REFER TO SHEET A51-1 FOR ROOF TYPES AND ROOFING DETAILS
3. SEE MECHANICAL CURB DETAIL B3/A51-1

SYMBOLS LEGEND

- R# — ROOF TYPE MARKER
- DIRECTION OF SLOPE
- VTR — VENT THRU ROOF SEE DETAIL A3/A51-1
- RD — ROOF DRAIN SEE DETAIL A5/A51-1
- OFS — OVER FLOW SCUPPER SEE DETAIL D4/A51-1
- HP — HIGH POINT / RIDGE LINE
- 30x36 ROOF HATCH AND ACCESS LADDER SEE DETAIL B1/A51-1
- ROOF WALK-WAY PADS
- TAPERED INSULATION CRICKET
- RTO — ROOF TIE OFF SEE DETAIL A2/A51-1

Graphic Scale
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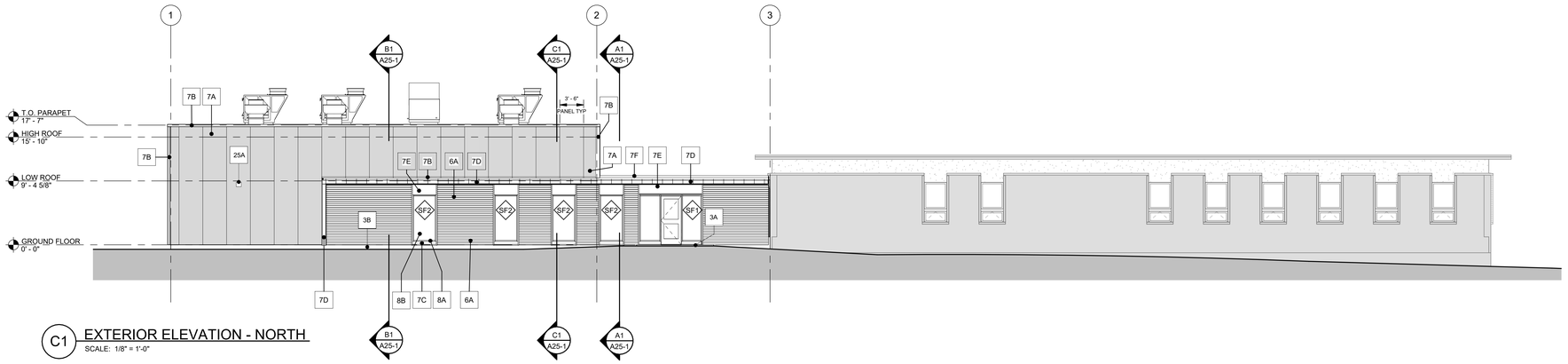
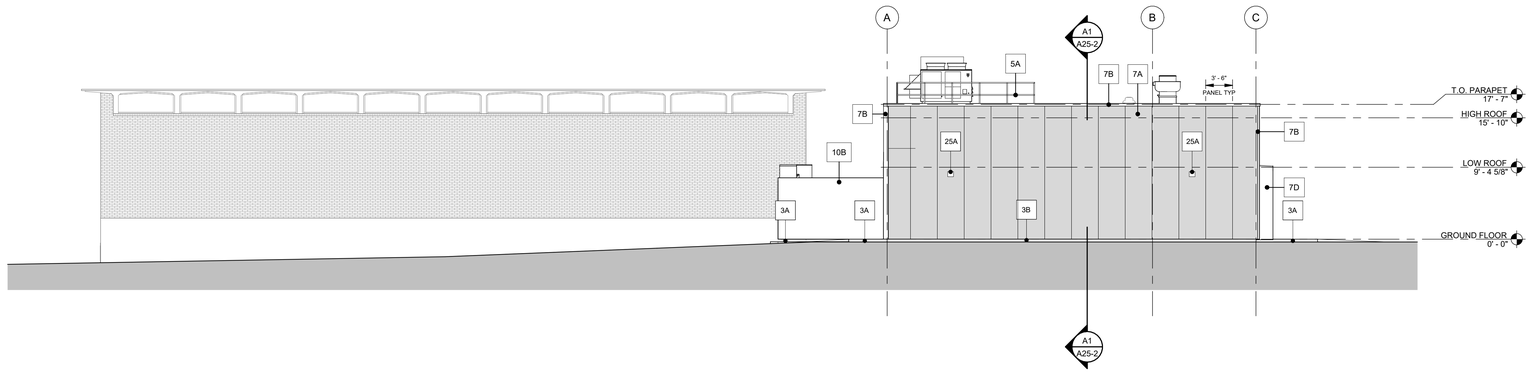
ROOF PLAN

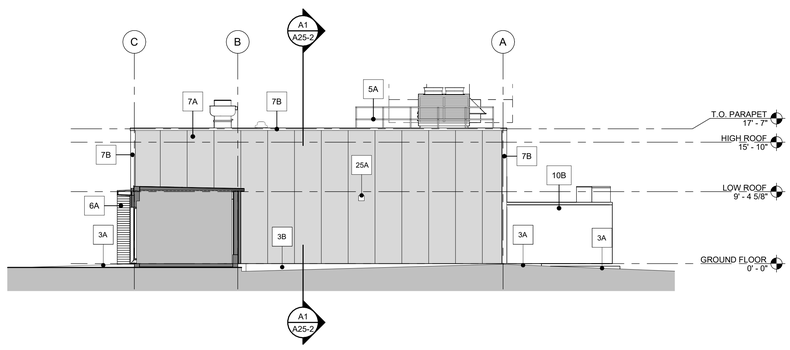
A15-1



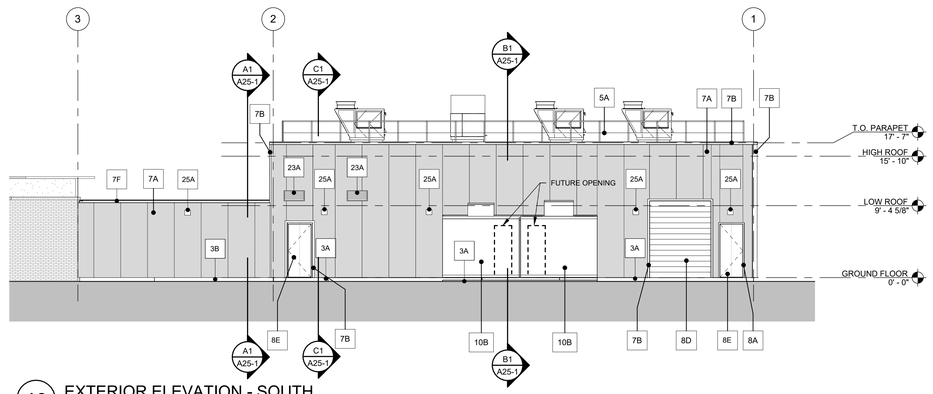
C1 EXTERIOR ELEVATION - NORTH
SCALE: 1/8" = 1'-0"



B1 EXTERIOR ELEVATION - EAST
SCALE: 1/8" = 1'-0"



A1 EXTERIOR ELEVATION - WEST
SCALE: 1/8" = 1'-0"



A2 EXTERIOR ELEVATION - SOUTH
SCALE: 1/8" = 1'-0"

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EXTERIOR MATERIALS LEGEND		
#	MATERIAL	MFR / COLOR
3A	STRUCTURAL ENTRY SLAB, SEE STRUCT	SEE STRUCTURAL
3B	CAST IN PLACE CONC WALL	SEE STRUCTURAL
5A	GALV STEEL GUARDRAIL	GREY GALV.
6A	THERMALLY MODIFIED WOOD SIDING	LUNAWOOD LUNA PANEL SYSTEM HN SPECIES: YELLOW POPLAR
7A	INSULATED METAL PANEL	KINGSPAN QUADCORE MICRO-RIB COLOR: ZINC GRAY
7B	PREFINISHED METAL TRIM / FLASHING BY IMP MANUFACTURER	CUSTOM COLOR TO MATCH: 7A
7C	PREFIN METAL SILL PAN & FLASHING	CUSTOM COLOR TO MATCH: 8A
7D	PREFIN STANDING SEAM METAL ROOF	PAC-CLAD TITE-LOC PLUS COLOR: GRAPHITE
7E	PREFIN HEAVY GAUGE BRAKE METAL PANEL	CUSTOM COLOR TO MATCH: 8A
7F	PREFIN METAL ROOF EDGE STRIP	CUSTOM COLOR TO MATCH: 7D
8A	ALUMINUM STOREFRONT	KAWNEER: 451T COLOR: CHARCOAL
8B	INSULATED GLASS	VITRO: SOLARBAN 70
8D	OVERHEAD DOOR	CORNELL THERMISER COLOR: CHARCOAL
8E	HM DOORS AND FRAMES	SHERWIN WILLIAMS: SW 7019 GUANTLET GRAY
10A	EXTERIOR ALUM SIGNAGE	BY ALLOWANCE COLOR: TBD
10B	WALK-IN COOLER METAL PANEL	MANUFACTURER STANDARD
23A	MECHANICAL LOUVER	SEE MECHANICAL DRAWINGS
25A	WALL PACK LIGHT FIXTURE	SEE ELECTRICAL DRAWINGS

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OCTOBER 20, 2025

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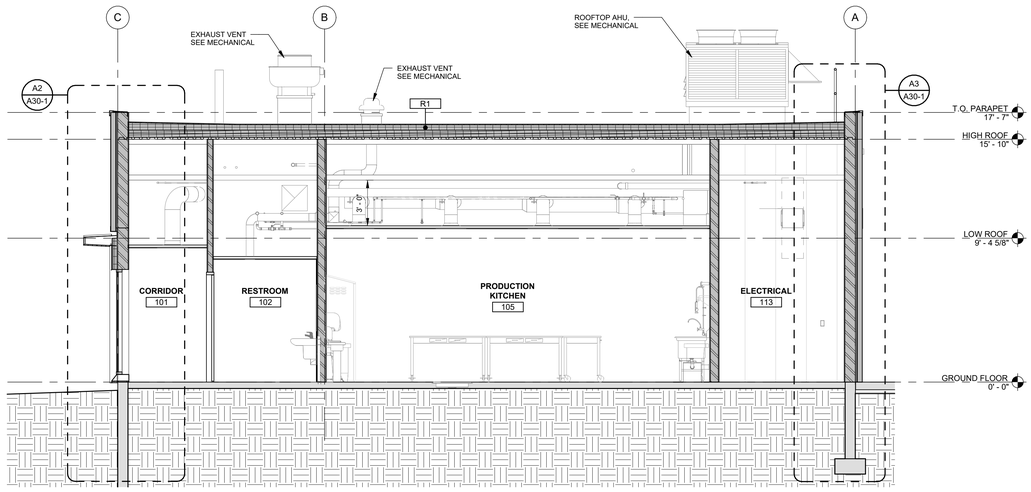
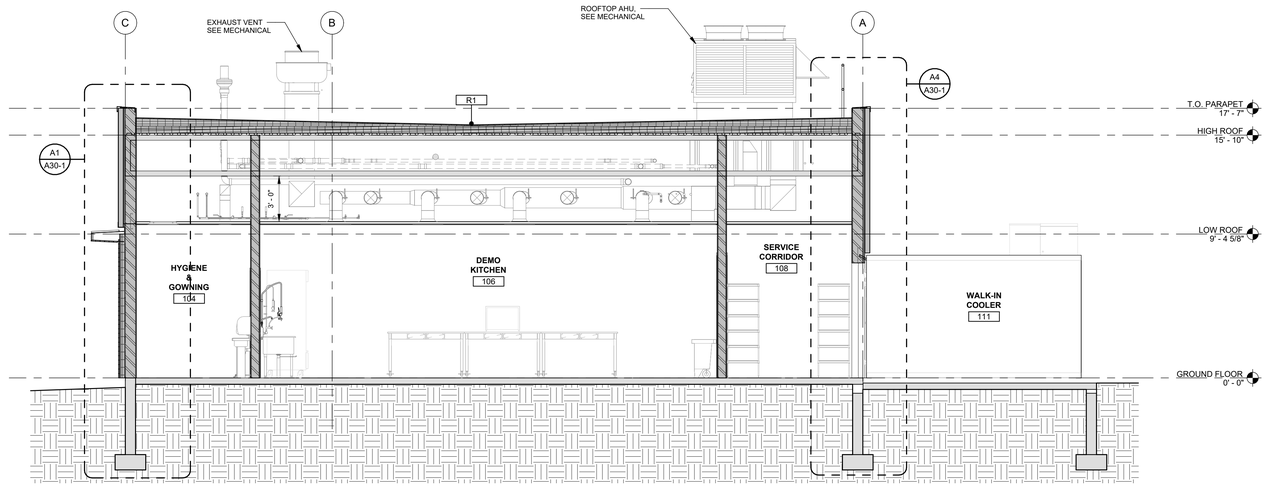
EXTERIOR ELEVATIONS

A20-1



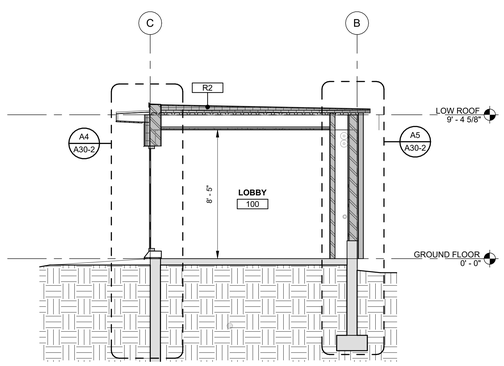
C1 N/S SECTION AT PRODUCTION KITCHEN

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



B1 N/S SECTION AT DEMO KITCHEN

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



A1 N/S SECTION AT LOBBY

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

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ORONO, MAINE

Harriman Project No.	24265

GENERAL NOTES

1. RFER TO SHEET A51-1 FOR ROOF TYPES AND ROOFING DETAILS

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

LICENSED ARCHITECT
DANIEL BACKMAN
5180
STATE OF MAINE

CONSTRUCTION DOCUMENTS

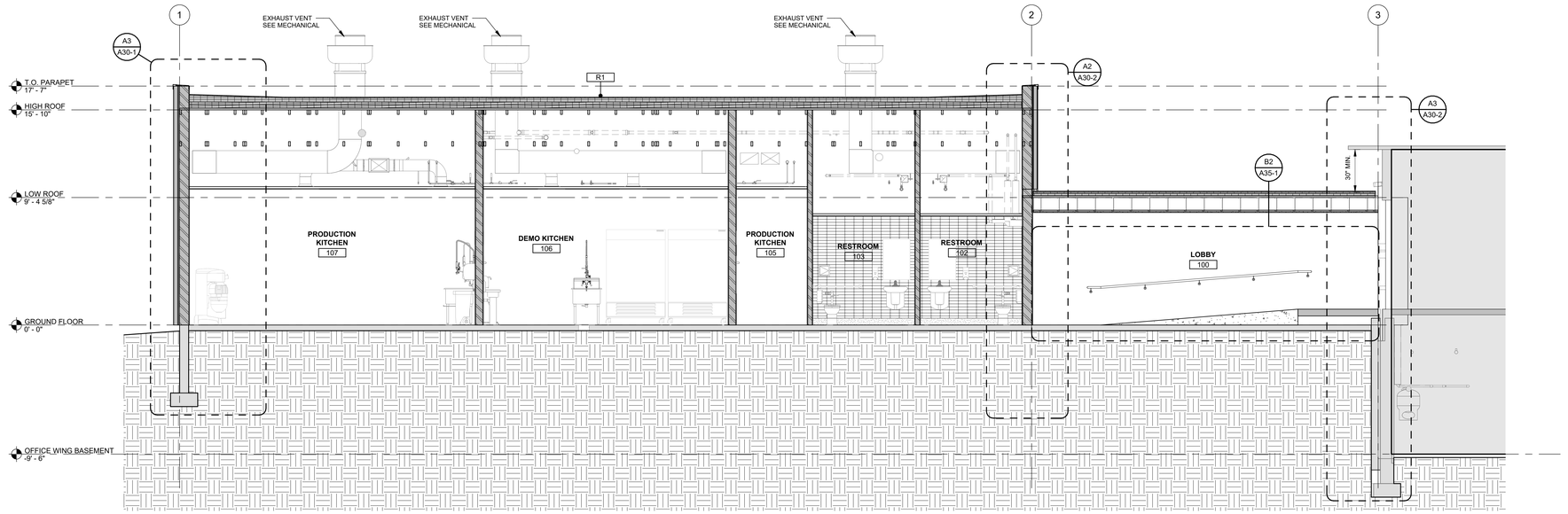
OCTOBER 20, 2025

Revision Date	Revision Description

Drawn by: JWA

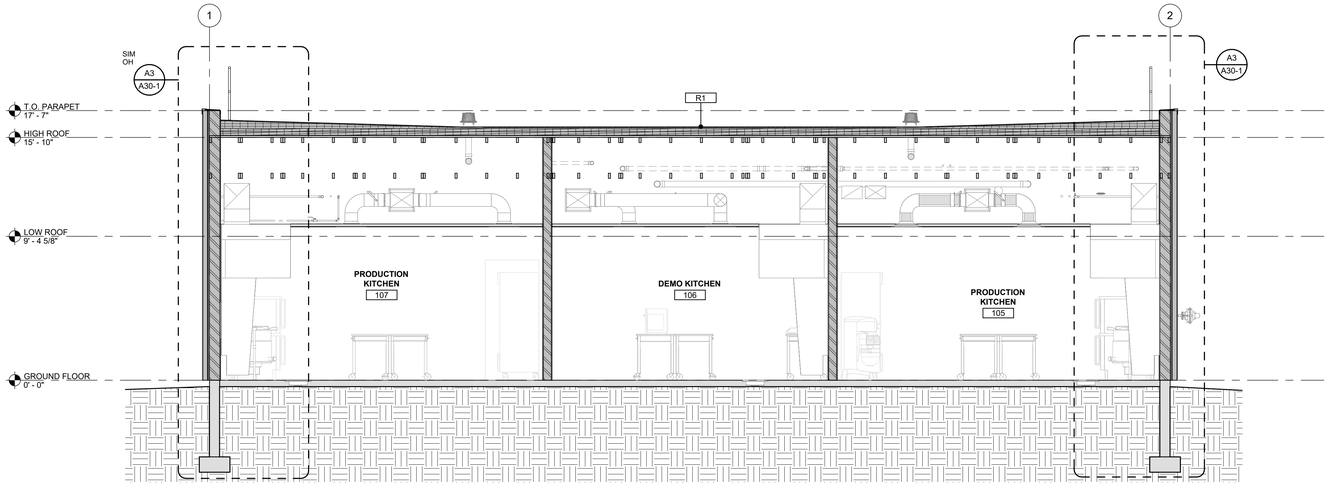
BUILDING SECTIONS

A25-1



B1 E/W SECTION AT CONNECTOR

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



A1 E/W SECTION AT KITCHENS

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

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GENERAL NOTES

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STATE OF MAINE

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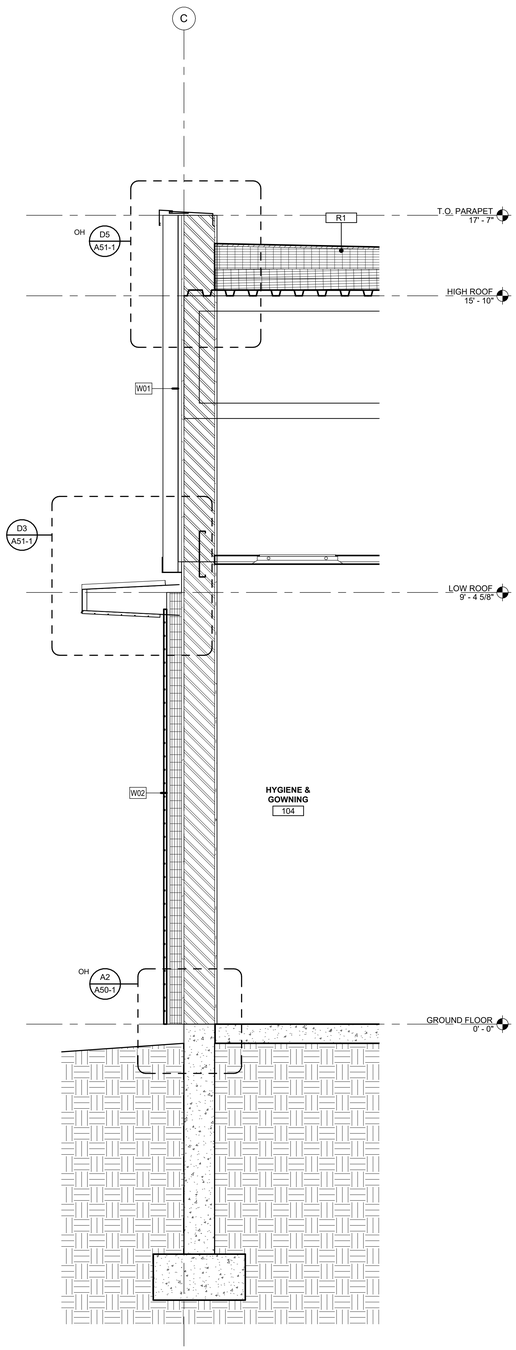
OCTOBER 20, 2025

Revision Date	Revision Description

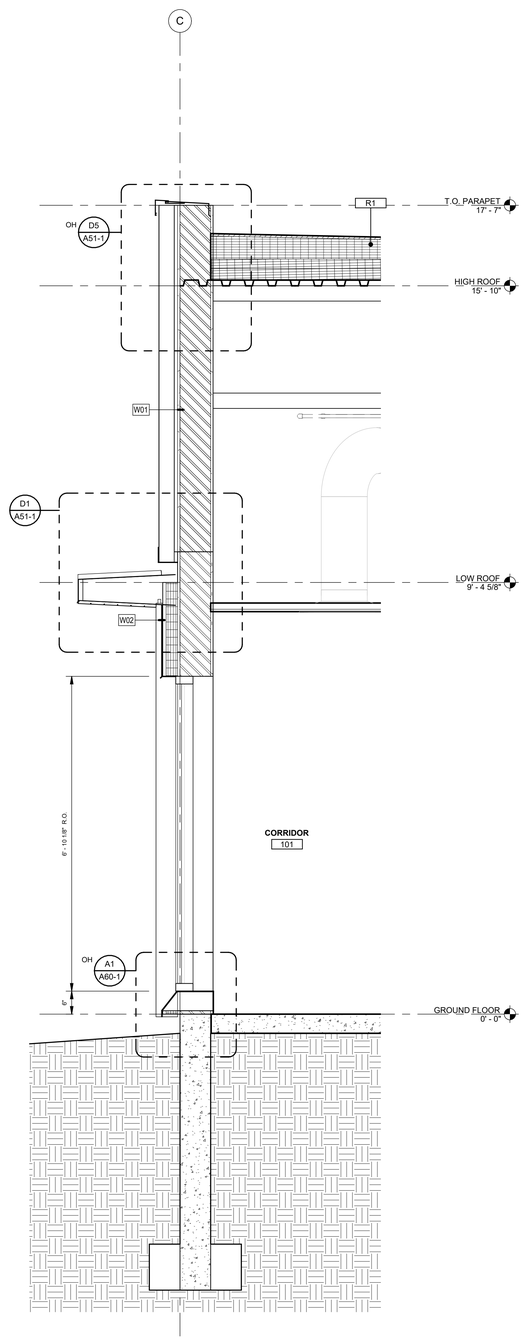
Drawn by: JWA

BUILDING SECTIONS

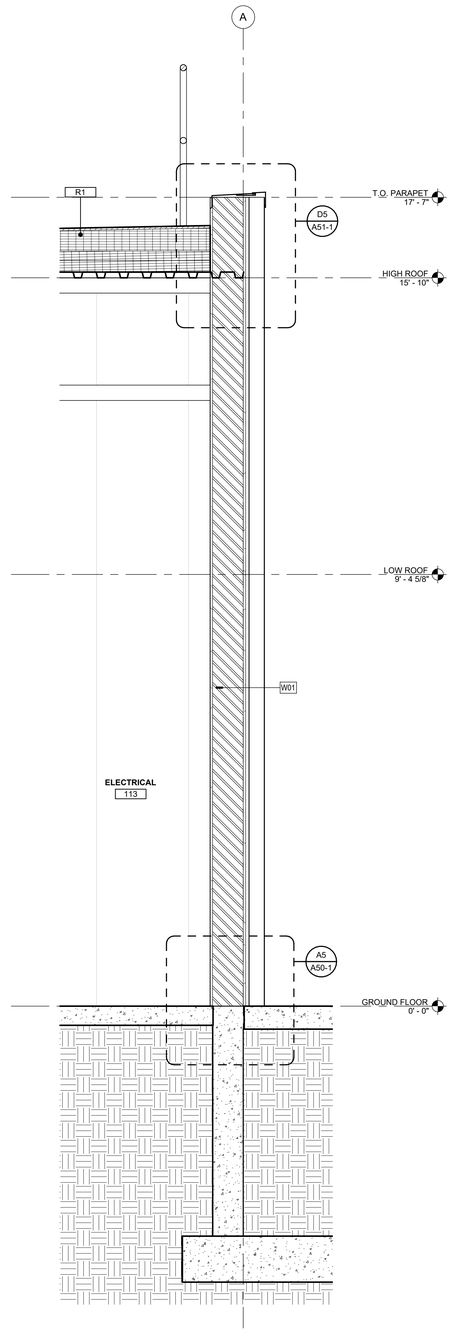
A25-2



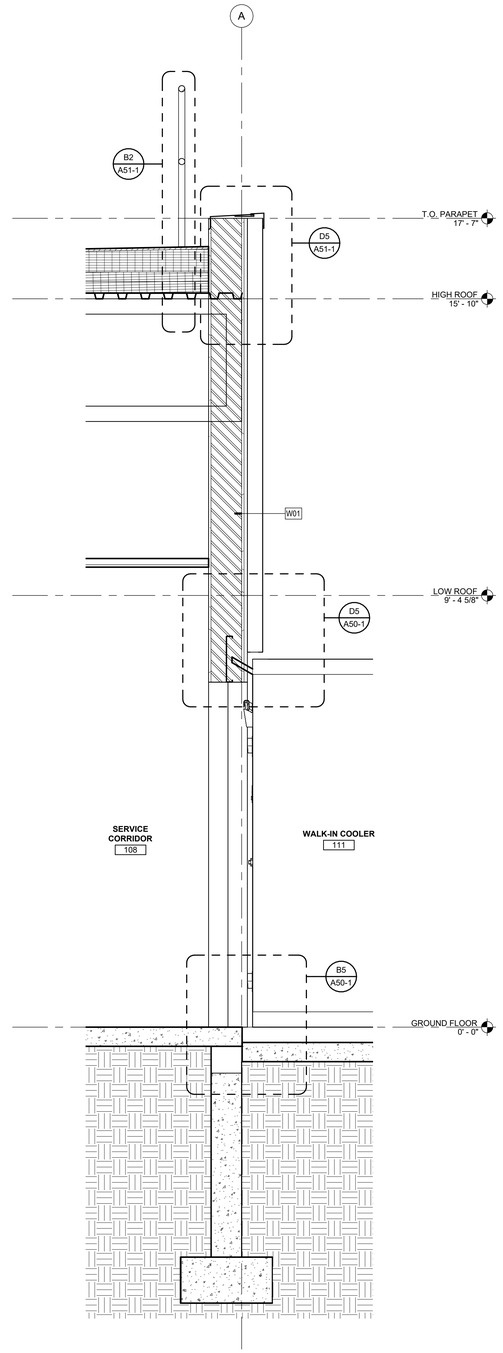
A1 WALL SECTION AT WOOD RAINSCREEN
SCALE: 3/4" = 1'-0"



A2 WALL SECTION AT STOREFRONT
SCALE: 3/4" = 1'-0"



A3 WALL SECTION
SCALE: 3/4" = 1'-0"



A4 WALL SECTION AT WALK-IN
SCALE: 3/4" = 1'-0"

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GENERAL NOTES

1. SEE SHEET A40-1 FOR INTERIOR PARTITION TYPES AND EXTERIOR WALL ASSEMBLY TYPES

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

LICENSED ARCHITECT
DANIEL BACKMAN
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STATE OF MAINE

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OCTOBER 20, 2025

Revision Date	Revision Description

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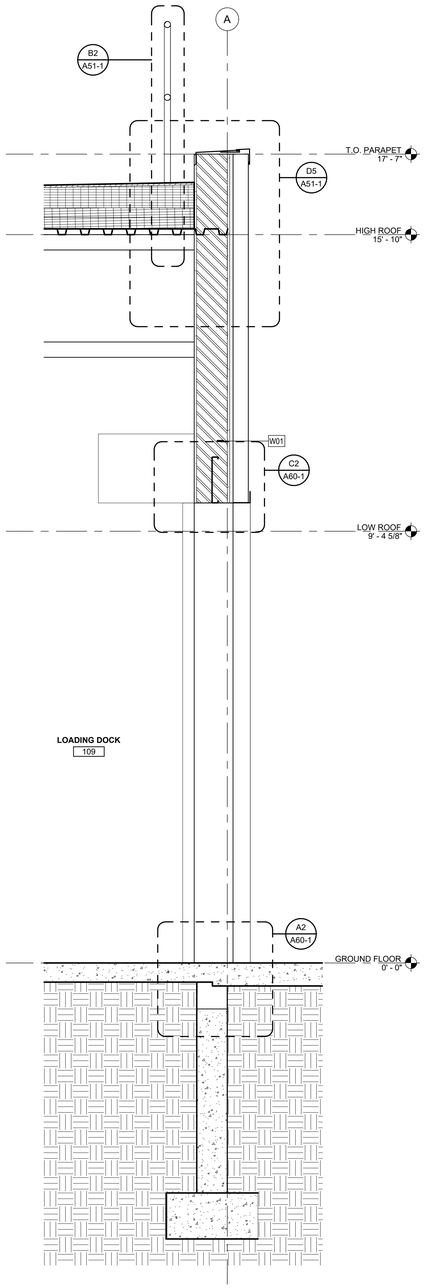
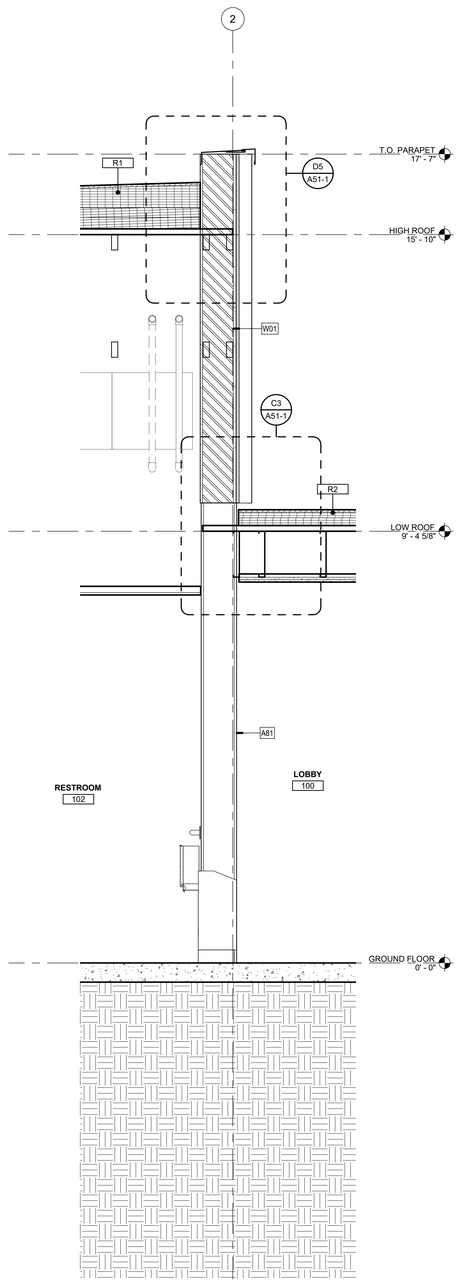
WALL SECTIONS

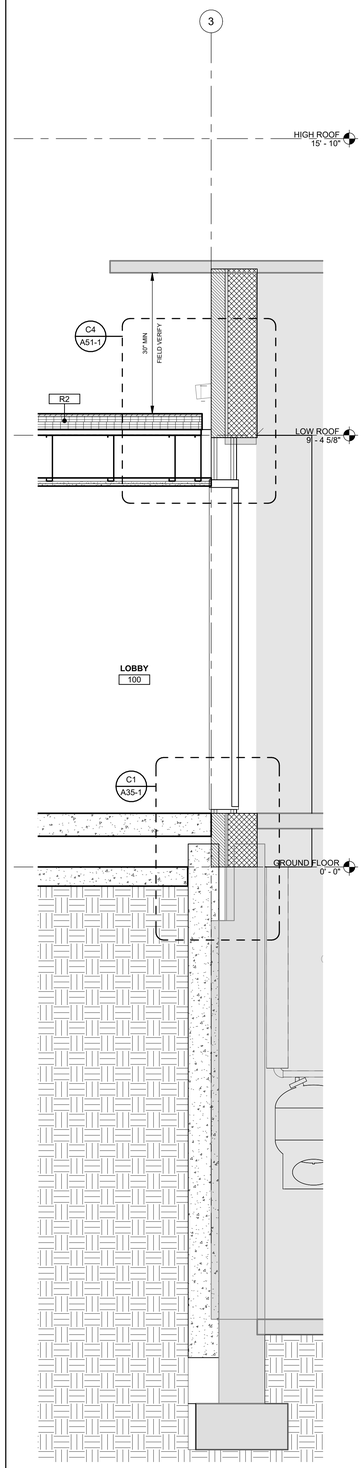
A30-1



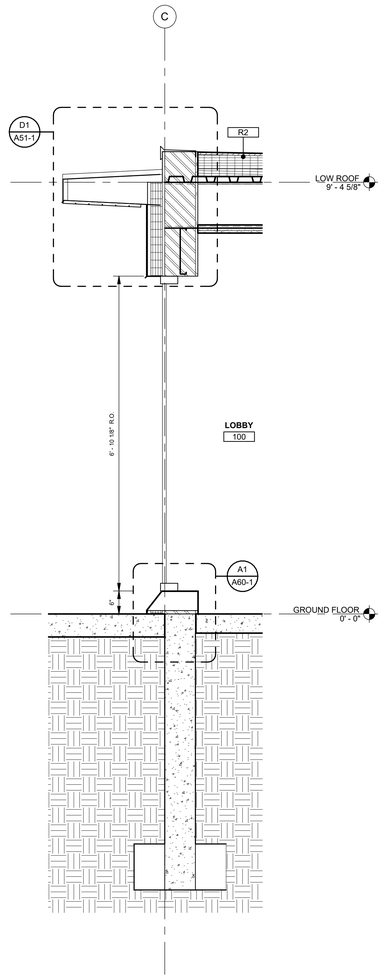
A1 WALL SECTION AT OVERHEAD DOOR
SCALE: 3/4" = 1'-0"



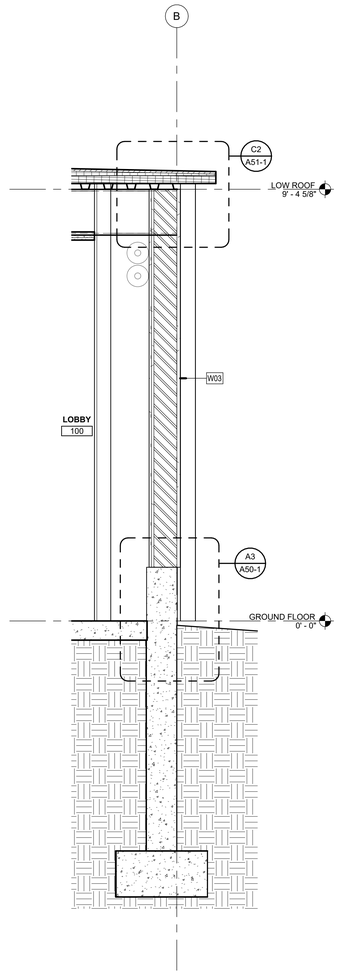
A2 WALL SECTION AT HIGH TO LOW ROOF
SCALE: 3/4" = 1'-0"



A3 WALL SECTION AT KEYO BUILDING
SCALE: 3/4" = 1'-0"



A4 WALL SECTION AT LOBBY
SCALE: 3/4" = 1'-0"



A5 WALL SECTION AT LOBBY1
SCALE: 3/4" = 1'-0"

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GENERAL NOTES

1. SEE SHEET A40-1 FOR INTERIOR PARTITION TYPES AND EXTERIOR WALL ASSEMBLY TYPES

Graphic Scale
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LICENSED ARCHITECT
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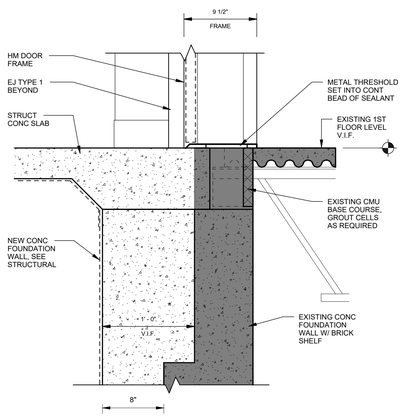
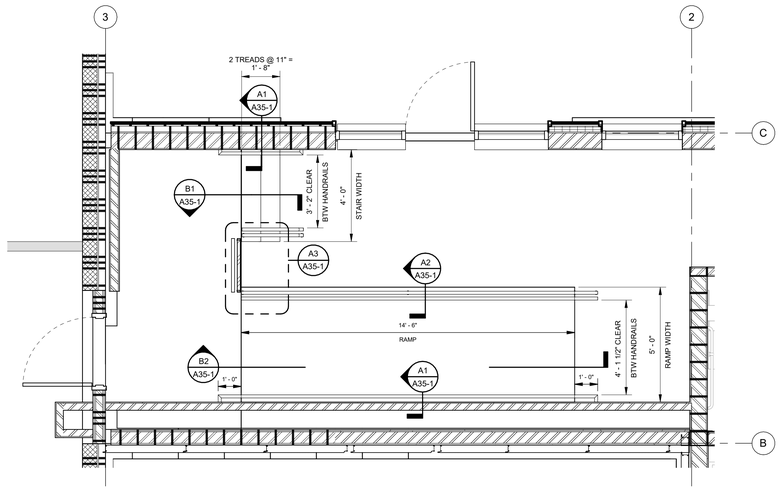
WALL SECTIONS

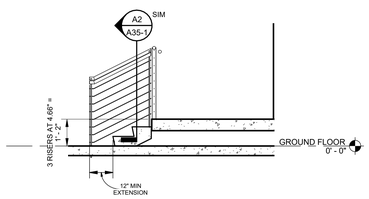
A30-2



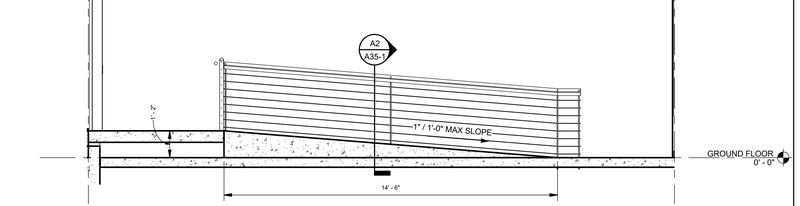
C1 SILL DETAIL AT STRUCTURAL SLAB
SCALE: 1 1/2" = 1'-0"



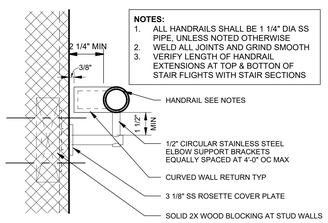
C2 STAIR AND RAMP PLAN
SCALE: 3/8" = 1'-0"



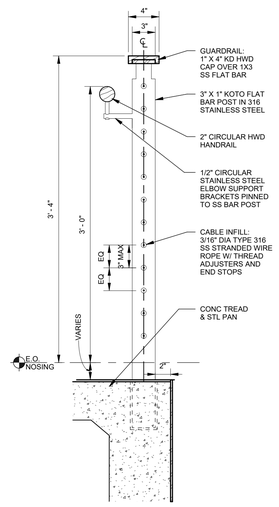
B1 STAIR SECTION
SCALE: 3/8" = 1'-0"



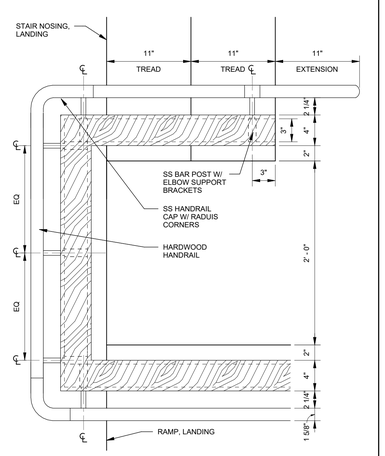
B2 RAMP SECTION
SCALE: 3/8" = 1'-0"



A1 HANDRAIL DETAIL AT WALL
SCALE: 3" = 1'-0"



A2 TYP GUARDRAIL DETAIL
SCALE: 1 1/2" = 1'-0"



A3 HANDRAIL PLAN DETAIL
SCALE: 1 1/2" = 1'-0"

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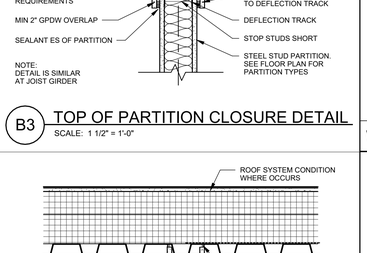
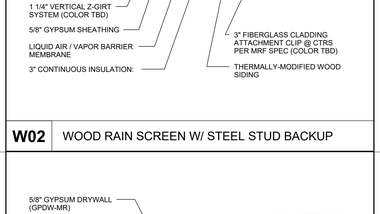
STAIR & RAMP PLANS, SECTIONS & DETAILS

A35-1



D3 TYPICAL BASE OF WALL DETAIL
SCALE: 6" = 1'-0"



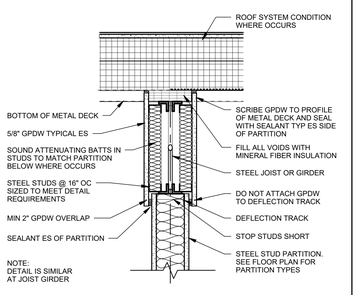
1 HOUR RATED : UL#_____

W11 BRICK VENEER W/ CMU BACKUP INFILL @ WINDOW

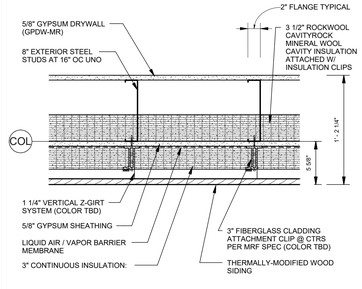
C3 FIRESTOP TOP WALL SYSTEM F1 (1HR)
SCALE: 1 1/2" = 1'-0"

1 HOUR RATED : UL#_____

W03 INSULATED METAL PANEL W/ STEEL STUD BACKUP



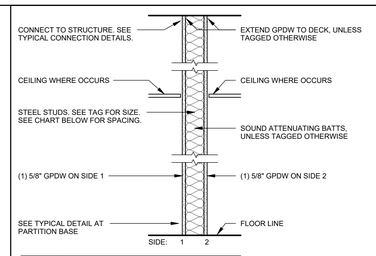
B3 TOP OF PARTITION CLOSURE DETAIL
SCALE: 1 1/2" = 1'-0"



W02 WOOD RAIN SCREEN W/ STEEL STUD BACKUP

A3 TOP OF PARTITION CLOSURE DETAIL
SCALE: 1 1/2" = 1'-0"

W01 INSULATED METAL PANEL W/ STEEL STUD BACKUP

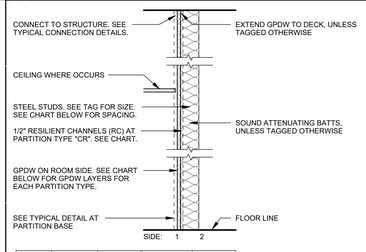


TYPE PREFIX	STUD SPACING	MIN STC	GPDW SIDE 1	GPDW SIDE 2
A	16" OC	44	(1) 5/8"	(1) 5/8"

AT RATED PARTITIONS, USE THE FOLLOWING UL SYSTEMS:

1 HR = U465

A TYPE A - STEEL STUD PARTITION



TYPE PREFIX	STUD SPACING	MIN STC	GPDW SIDE 1	GPDW SIDE 2
C	16" OC	34	(1) 5/8"	---
CA	16" OC	38	(2) 5/8"	---
CR	24" OC	40	(1) 5/8" ON RC	---

AT RATED PARTITIONS, USE THE FOLLOWING UL SYSTEMS:

1 HR = V497 ("CA" ONLY)

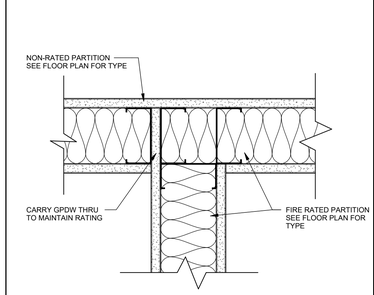
C TYPE C - CHASE PARTITION WITH STEEL STUDS

TYPE PREFIX	STUD SPACING	MIN STC	GPDW SIDE 1	GPDW SIDE 2
E63	16" OC		(2) 3/4"	(2) 3/4"

AT RATED PARTITIONS, USE THE FOLLOWING UL SYSTEMS:

3 HR = U419

E TYPE E - STEEL STUD PARTITION WITH EXTRA GPDW



B5 TYP FIRE RATED CORNER #1 (1 HR)
SCALE: 3" = 1'-0"

A5 TYP FIRE RATED CORNER #2 (1 HR)
SCALE: 3" = 1'-0"

PARTITION TAG KEY

1. PARTITION TYPE / SUBTYPE

   ONE OR TWO LETTER PREFIX INDICATING TYPE DIAGRAM AND VARIATIONS:
   1ST LETTER: REFERS TO PARTITION TYPE DIAGRAM FOR WALL COMPOSITION
   2ND LETTER *(OPTIONAL)*: REFERS TO A VARIATION OF THE BASIC TYPE

2. PARTITION SIZE DESIGNATOR

   FOR STEEL STUDS:
   1 = 1 5/8" STUD
   2 = 2 1/2" STUD
   3 = 3 5/8" STUD
   6 = 6" STUD
   8 = 8" STUD
   X = 10" STUD

   FOR METAL FURRING
   0 = 7/8" METAL HATS
   1 = 1 1/2" ZEE FURRING
   2 = 2" ZEE FURRING
   3 = 3" ZEE FURRING

   FOR SHAFTWALL:
   2 = 2 1/2" SHAFTWALL STUDS
   4 = 4" SHAFTWALL STUDS
   6 = 6" SHAFTWALL STUDS

   FOR WOOD STUDS:
   4 = 2 x 4 STUD
   6 = 2 x 6 STUD
   8 = 2 x 8 STUD

   FOR WOOD FURRING
   1 = 1x FURRING
   2 = 2x FURRING

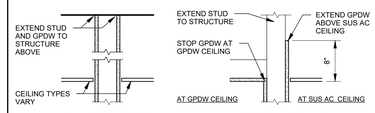
   FOR MASONRY (SINGLE UNIT SIZE)
   2 = 11 5/8" CMU
   4 = 3 5/8" CMU OR BRICK
   6 = 5 5/8" CMU
   8 = 7 5/8" CMU

3. FIRE-RATING / SMOKE / HEIGHT OF GPDW (TOW) *(OPTIONAL TAG MODIFIER)*:

VALUE	RATING	GPDW SIDE 1	GPDW SIDE 2 *(IF APPLIES)*	
BLANK	NO RATING	TO DECK	TO DECK	
1	1 HOUR	TO DECK	TO DECK	← *SEE DIAGRAMS BELOW WHICH ILLUSTRATE THE HEIGHT OF GPDW CONDITIONS "TO DECK" AND "TO CEILING".*
2	2 HOUR	TO DECK	TO DECK	
3	3 HOUR	TO DECK	TO DECK	
4	4 HOUR	TO DECK	TO DECK	
5	20 MINUTE	TO DECK	TO DECK	
6	30 MINUTE	TO DECK	TO DECK	
7	NO RATING	TO DECK	TO CEILING	
8	NO RATING	TO CEILING	TO CEILING	
9	UNDEFINED	---	---	
S	0 HR SMOKE	TO DECK	TO DECK	

4. ADDITIONAL CONDITIONS *(OPTIONAL TAG MODIFIER)*:

   A = SUBSTITUTE ABUSE BOARD FOR GPDW
   B = SUBSTITUTE ABUSE BOARD FOR GPDW AND OMIT SAB FROM CAVITY
   H = SUBSTITUTE HIGH-IMPACT BOARD FOR GPDW
   J = SUBSTITUTE HIGH-IMPACT BOARD FOR GPDW AND OMIT SAB FROM CAVITY
   N = OMIT SOUND ATTENUATING BATTS (SAB) FROM CAVITY
   T = THERMAL INSULATION IN CAVITY



THESE DIAGRAMS ILLUSTRATE WHAT THE DIAGRAMS AND PARTITION TAG KEY MEAN WHEN THE GPDW HEIGHT IS CALLED OUT TO EXTEND "TO DECK" OR "TO CEILING".

NOTE: IF THE GPDW HEIGHT IS NOTED AS EXTENDING "TO CEILING" AND THE ROOM HAS NO CEILING, EXTEND THE GPDW "TO DECK".

PARTITION GENERAL NOTES:

1. **GENERAL:**
   A. SEE PARTITION DIAGRAM NOTES FOR ADDITIONAL INFORMATION.
2. **FRAMING:**
   A. USE 20 ga STEEL STUDS IN PARTITIONS WITH ABUSE RESISTANT GPDW, TILE BACKER BOARD, STC RATED WALLS AND AS OTHERWISE SPECIFIED.
3. **GYPSUM BOARD:**
   A. ALL GPDW TO BE TYPE-X GPDW.
   B. IN TOILET ROOMS, KITCHENS AND DIRTY DISH WASHING AREAS, WITH GPDW WALLS, PROVIDE 5/8" MOLD RESISTANT GPDW IN LIEU OF GPDW ON ALL STUD PARTITIONS WITHIN THE ROOM. WHERE THE GPDW EXTENDS ABOVE THE ROOM CEILING, PROVIDE MOLD RESISTANT GPDW TO A MIN 8" ABOVE THE CEILING AND USE 5/8" GPDW TO THE TOP OF THE PARTITION.
   C. IN TOILET ROOMS WHERE GPDW CEILINGS ARE CALLED FOR, PROVIDE 5/8" MOLD RESISTANT GPDW ON STEEL STUD FRAMING.
   D. PROVIDE 5/8" MOLD RESISTANT GPDW FROM FLOOR TO ROOF OR FLOOR DECK ABOVE ON INSIDE FACE OF EXTERIOR WALLS AND AT ALL KITCHEN AREAS, HYGIENE & GOWNING AREAS AND SERVICE CORRIDORS.
   E. AT PARTITIONS WHERE 5/8" ABUSE RESISTANT GPDW IS NOTED SUCH AS IN CORRIDORS, STAIRS, HALLS, LOBBIES AND STORAGE ROOMS. THE INTENT IS FOR THE ABUSE BOARD TO BE ON THE TRAFFIC SIDE OF THE ROOM. THE ROOM SIDE OF THE PARTITION PROVIDE 5/8" GPDW OR 5/8" MOISTURE GPDW AS NOTED ELSEWHERE IN THESE NOTES.
   F. WHERE 5/8" ABUSE RESISTANT GPDW IS NOTED, EXTEND UP TO 8" ABOVE CEILING THEN USE 5/8" GPDW UP TO DECK AND SEAL TIGHT.
4. **FIRE-RATED PARTITIONS:**
   A. ALL FIRE-RATED PARTITIONS SHALL BE STENCILED ON THE WALL SURFACE JUST ABOVE THE CEILING LINE INDICATING THE PARTITIONS FIRE-RATING; "1 HR", "2 HR", ETC IN RED OR ORANGE PAINT ON EACH SIDE OF THE PARTITION. SMOKE PARTITIONS "SMOKE" IN GREEN PAINT.
   B. ALL PARTITIONS EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK. SEAL ALL PARTITIONS TO DECK FOR SMOKE & SOUND CONTROL. FILL ALL VOIDS BETWEEN TOP OF PARTITION AND DECK AS SPECIFIED AND DETAILED IN THE A40 SERIES SHEETS.
5. **SOUND RESISTANT PARTITIONS:**
   A. PROVIDE INSULATION FOR THE FULL DEPTH OF THE STUD CAVITY UNLESS OTHERWISE SHOWN OR SPECIFIED.
   B. PROVIDE INSULATION SUPPORT ANCHORS.
   C. STC VALUES IN THE PARTITION TYPE DIAGRAMS ARE THE MINIMUM REQUIRED FOR THE ASSEMBLY. ACTUAL STC WILL VARY WITH THE STUD CAVITY SIZE.
6. **MISCELLANEOUS:**
   A. WHERE GPDW & STUD PARTITIONS INTERSECT BEAMS OR JOIST, FRAME AROUND BOTH SIDES OF BEAMS & JOIST WITH METAL STUDS AND GPDW TO MAINTAIN CONTINUITY OF PARTITION TO UNDERSIDE OF DECK.
   B. WHERE CMU WALLS, RATED AND NON-RATED, INTERSECT BEAMS OR JOISTS, FRAME AROUND BOTH SIDES OF BEAMS OR JOIST WITH METAL STUDS AND GPDW TO MAINTAIN CONTINUITY OF PARTITION TO UNDERSIDE OF DECK.
   C. TOP OF PARTITION CLOSURE DETAILS SHOWN ARE TYPICAL. ACTUAL FIELD CONDITIONS MAY VARY. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ACTUAL CONDITIONS AND MODIFYING CLOSURE DETAILS TO MEET ACTUAL CONDITIONS AND MAINTAINING CONTINUITY OF PARTITIONS FROM FLOOR TO DECK ABOVE.
   D. PROVIDE 3/8" ACOUSTICAL SEALANT JOINT WITH CASING BEAD AROUND PERIMETER OF GPDW ASSEMBLIES WHEN ABUTTING DISSIMILAR MATERIALS UNLESS NOTED OR DETAILED ELSEWHERE IN THIS SET.

B6 PARTITION KEY & GENERAL NOTES
NO SCALE

PARTITION DIAGRAM NOTES:

1. **GENERAL:**
   A. NOT ALL PARTITION TYPES SHOWN ARE APPLICABLE TO THIS PROJECT. SEE PLANS FOR TYPES USED.
   B. SEE THE A40 SERIES SHEETS FOR TYPICAL PARTITION CONNECTION DETAILS AND PARTITION FIRE STOP DETAILS.
   C. SEE SECTIONS AND DETAILS FOR CONNECTIONS OTHER THAN THOSE SHOWN.
   D. IN THE PARTITION TYPE DIAGRAMS, SIDE "1" REFERS TO THE MAJOR TRAFFIC (CORRIDOR) OR ROOM SIDE OF A PARTITION. SIDE "2" REFERS TO THE MINOR TRAFFIC, ROOM OR CHASE SIDE.
   E. WHERE REFERRED TO IN THE NOTES AND DIAGRAMS, THE OVERALL WIDTH OF A STUD PARTITION IS TAKEN FROM THE OUTSIDE FACE OF GPDW TO OUTSIDE FACE OF GPDW (OR FACE OF FRAMING MEMBER WHERE EXPOSED ON THE CHASE SIDE). THE OVERALL WIDTH OF A MASONRY PARTITION IS THE UNIT WIDTH FOR SINGLE WYTHE WALLS, AND THE IS FROM THE OUTSIDE FACE OF MASONRY TO THE OUTSIDE FACE OF MASONRY FOR MULTIPLE WYTHE WALLS.

A6 PARTITION TYPE DIAGRAMS
SCALE: 1" = 1'-0"

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Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

LICENSED ARCHITECT
DANIEL BACKMAN
5180
STATE OF MAINE

CONSTRUCTION DOCUMENTS

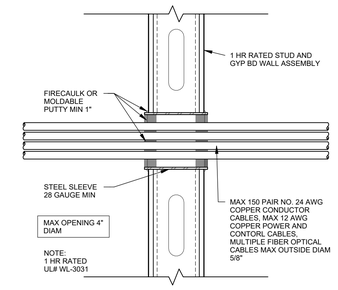
OCTOBER 20, 2025

Revision Date	Revision Description

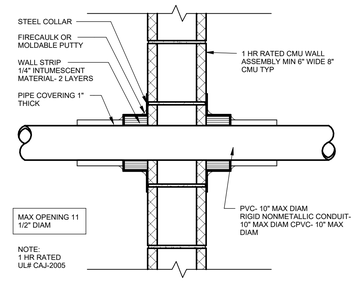
Drawn by: JWA

PARTITION/WALL TYPES AND DETAILS

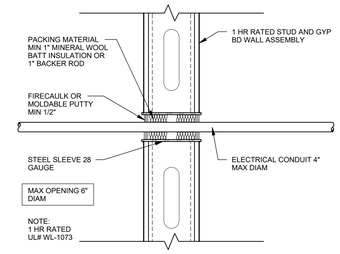
A40-1



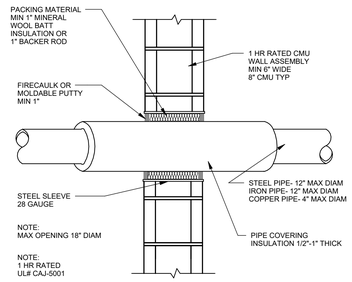
E4 FIRESTOP WALL SYSTEM F1 05 (1HR)
SCALE: 1 1/2" = 1'-0"



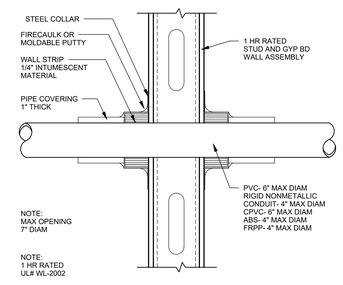
E5 FIRESTOP WALL SYSTEM F1 17(1HR)
SCALE: 1 1/2" = 1'-0"



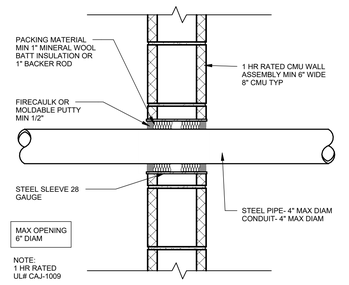
D4 FIRESTOP WALL SYSTEM F1 04 (1HR)
SCALE: 1 1/2" = 1'-0"



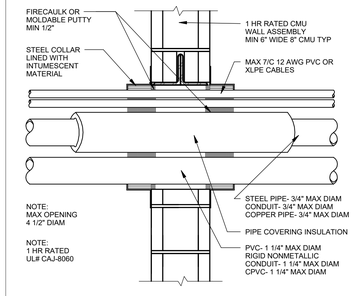
D5 FIRESTOP WALL SYSTEM F1 16 (1HR)
SCALE: 1 1/2" = 1'-0"



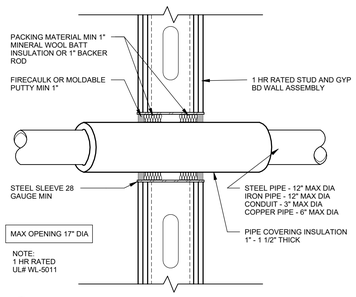
C4 FIRESTOP WALL SYSTEM F1 03 (1HR)
SCALE: 1 1/2" = 1'-0"



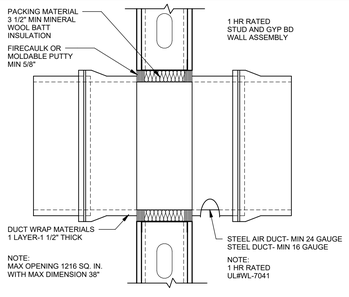
C5 FIRESTOP WALL SYSTEM F1 15 (1HR)
SCALE: 1 1/2" = 1'-0"



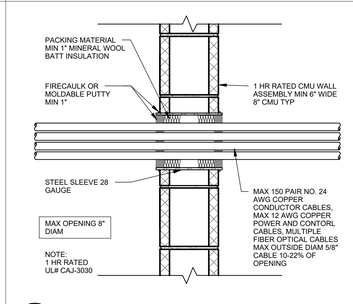
C6 FIRESTOP WALL SYSTEM F1 20 (1HR)
SCALE: 1 1/2" = 1'-0"



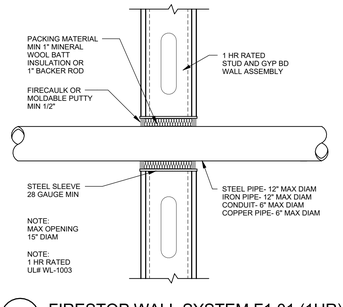
B4 FIRESTOP WALL SYSTEM F1 02 (1HR)
SCALE: 1 1/2" = 1'-0"



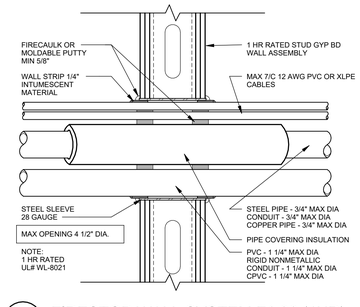
B5 FIRESTOP WALL SYSTEM F1 07 (1HR)
SCALE: 1 1/2" = 1'-0"



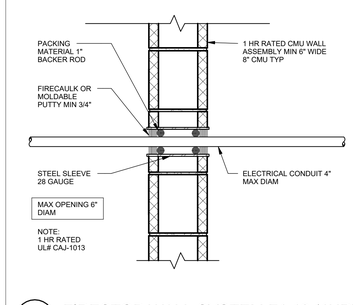
B6 FIRESTOP WALL SYSTEM F1 19 (1HR)
SCALE: 1 1/2" = 1'-0"



A4 FIRESTOP WALL SYSTEM F1 01 (1HR)
SCALE: 1 1/2" = 1'-0"



A5 FIRESTOP WALL SYSTEM F1 06 (1HR)
SCALE: 1 1/2" = 1'-0"



A6 FIRESTOP WALL SYSTEM F1 18 (1HR)
SCALE: 1 1/2" = 1'-0"

Harriman

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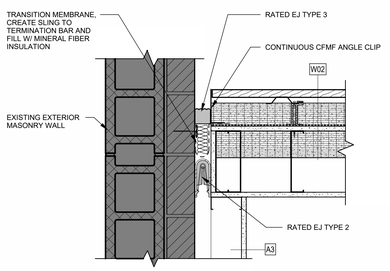
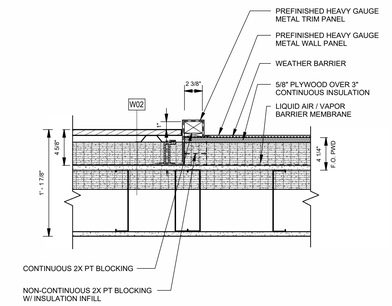
CONSTRUCTION SYSTEMS

A40-2

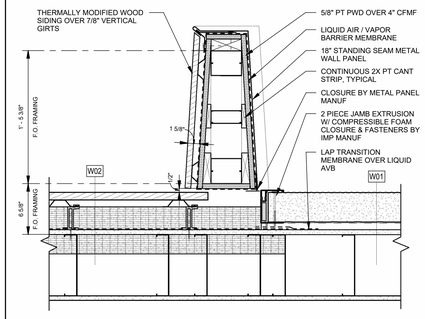
EXPANSION JOINT LEGEND					
TYPE	MANUF #	LOCATION	SIZE	RATING	COLOR
1	114-A09-050	WALL/CEILING	2"	0HR	PAINTED
2	F140-2IM-2WL	WALL/CEILING	2"	1HR	N/A
3	1200-200	EXT WALL	2"	1HR	'GREY'



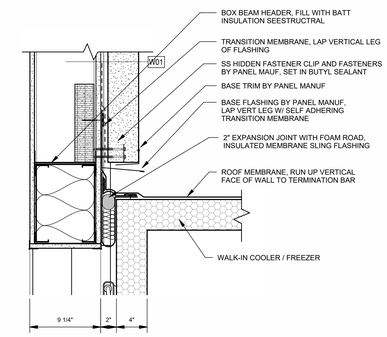
D2 PLAN DETAIL AT EJ
SCALE: 1 1/2" = 1'-0"



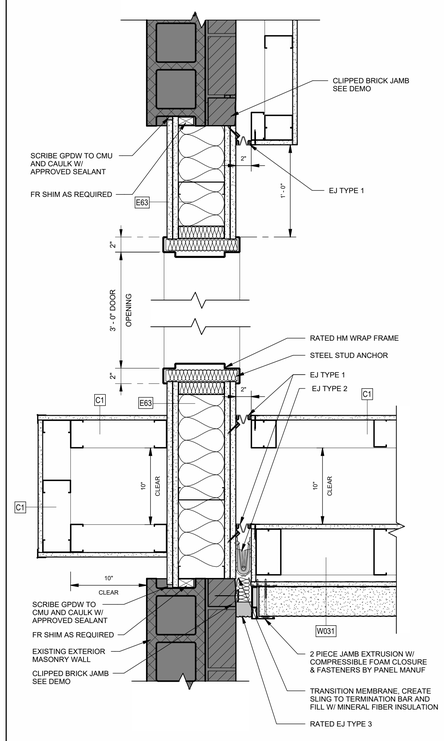
D3 PLAN DETAIL AT BRAKE METAL PANEL
SCALE: 1 1/2" = 1'-0"



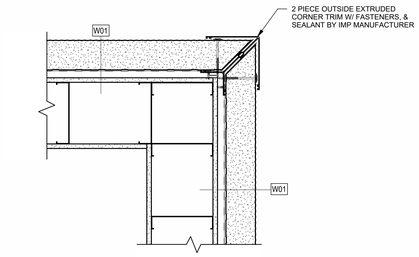
D4 PLAN DETAIL AT PILASTER
SCALE: 1 1/2" = 1'-0"



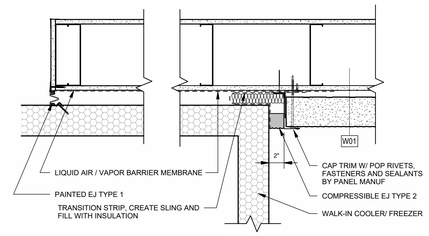
D5 WALK-IN AT ROOF
SCALE: 1 1/2" = 1'-0"



B2 PLAN DETAIL AT INFILL
SCALE: 1 1/2" = 1'-0"

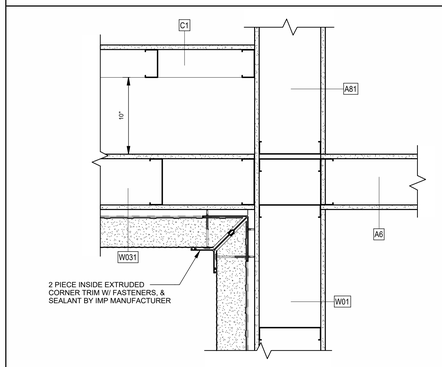


C3 OUTSIDE CORNER PLAN DETAIL
SCALE: 1 1/2" = 1'-0"

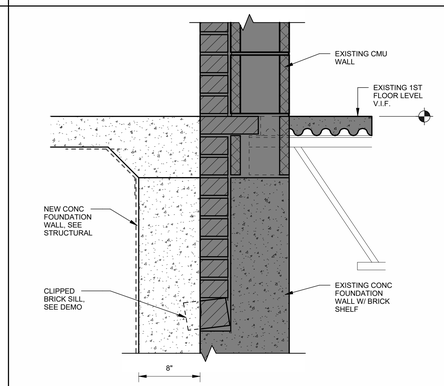


C5 EXTERIOR DETAIL
SCALE: 1 1/2" = 1'-0"

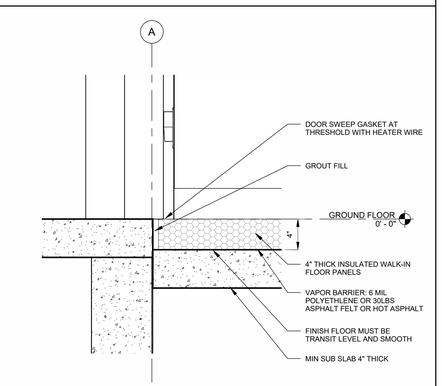
B2 PLAN DETAIL AT INFILL
SCALE: 1 1/2" = 1'-0"



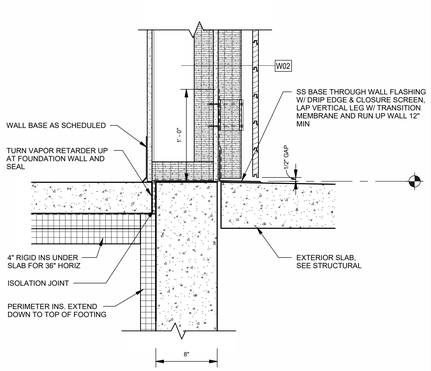
B3 INSIDE CORNER PLAN DETAIL
SCALE: 1 1/2" = 1'-0"



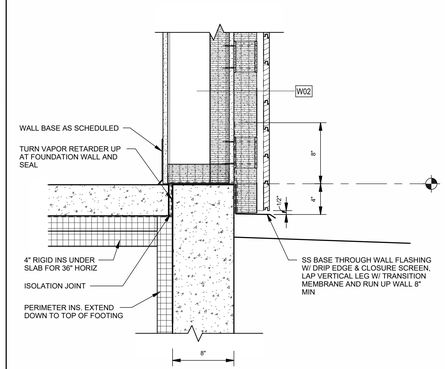
B4 FOUNDATION AT EXISTING WALL DETAIL
SCALE: 1 1/2" = 1'-0"



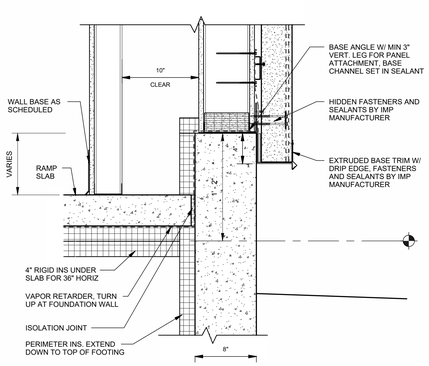
B5 WALK-IN AT FLOOR
SCALE: 1 1/2" = 1'-0"



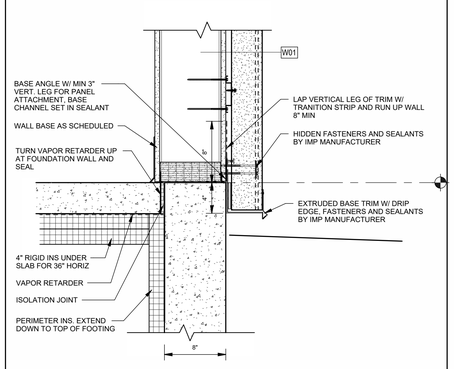
A1 RAIN SCREEN AT EXERIOR SLAB
SCALE: 1 1/2" = 1'-0"



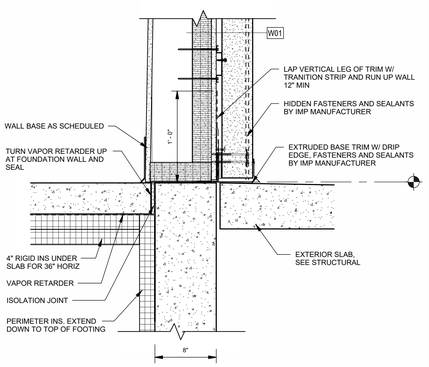
A2 FOUNDATION AT RAIN SCREEEN
SCALE: 1 1/2" = 1'-0"



A3 IMP AT EXTERIOR SLAB DETAIL
SCALE: 1 1/2" = 1'-0"



A4 FOUNDATION AT IMP
SCALE: 1 1/2" = 1'-0"



A5 IMP AT EXTERIOR SLAB
SCALE: 1 1/2" = 1'-0"

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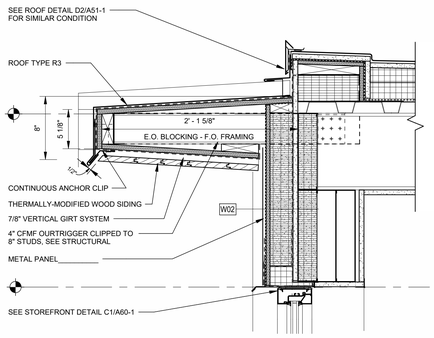
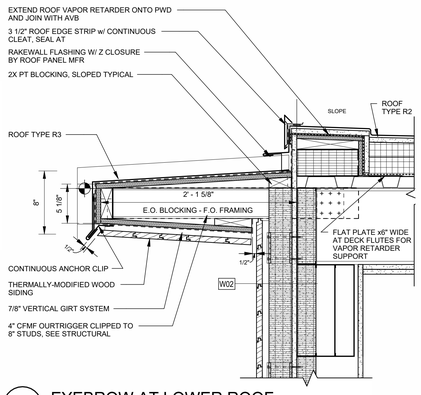
EXTERIOR DETAILS

A50-1



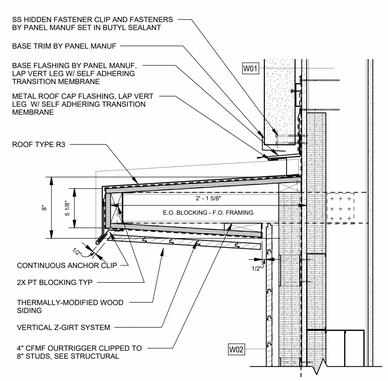
D1 EYEBROW AT STOREFRONT

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



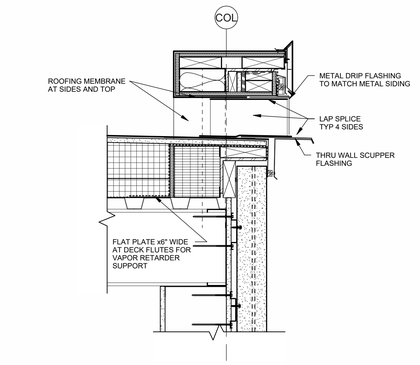
D2 EYEBROW AT LOWER ROOF

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



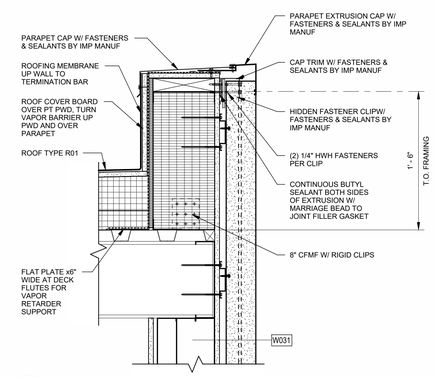
D3 EYEBROW AT RAINSCREEN

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



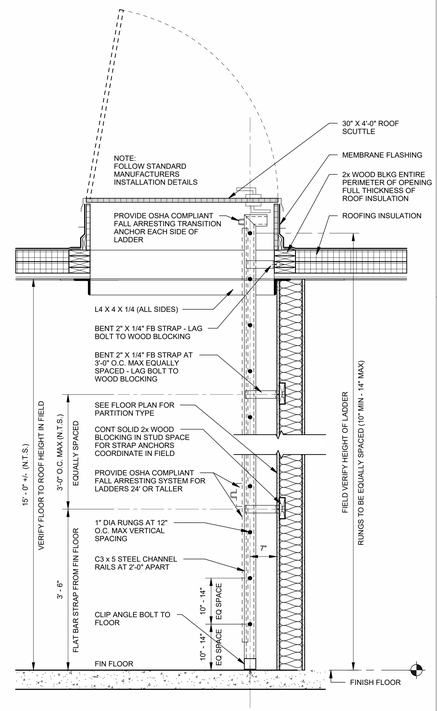
D4 SCUPPER AT IMP DETAIL

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



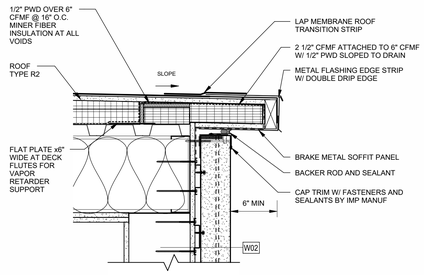
D5 TYP UPPER ROOF EDGE

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



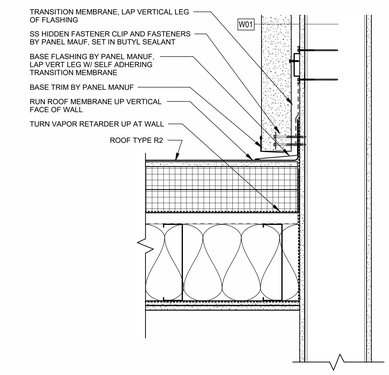
B1 ROOF SCUTLE AND ACCESS LADDER DETAIL

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



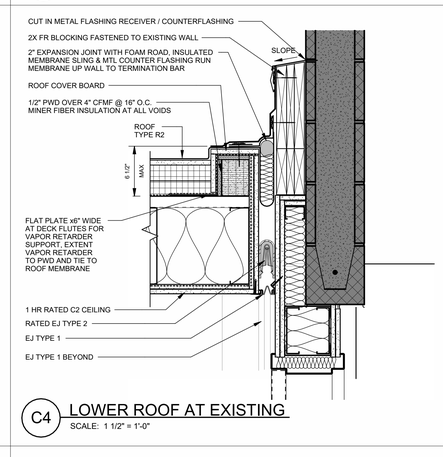
C2 LOWER ROOF EDGE

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



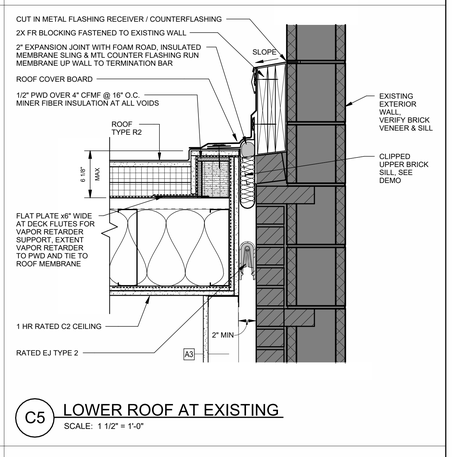
C3 LOW ROOF AT IMP

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



C4 LOWER ROOF AT EXISTING

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

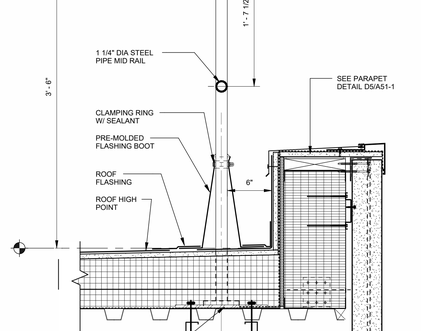


C5 LOWER ROOF AT EXISTING

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

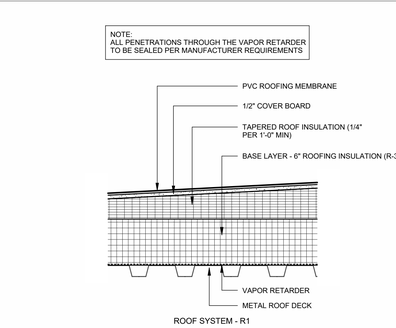
B4 ROOF TYPE R2 - LOW ROOF

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



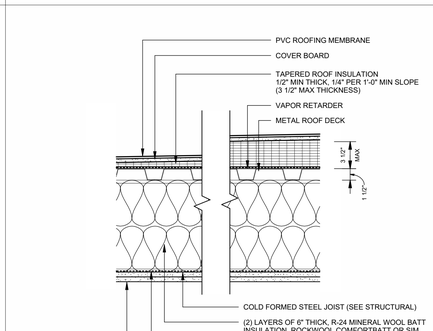
B2 GUARDRAIL AT ROOF

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



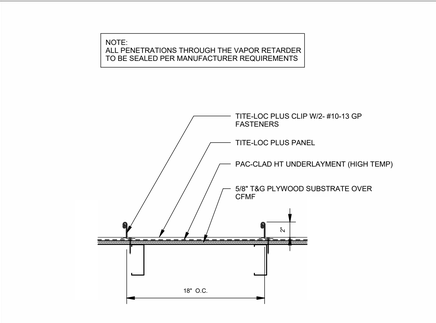
B3 ROOF TYPE R1 - MAIN ROOF

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



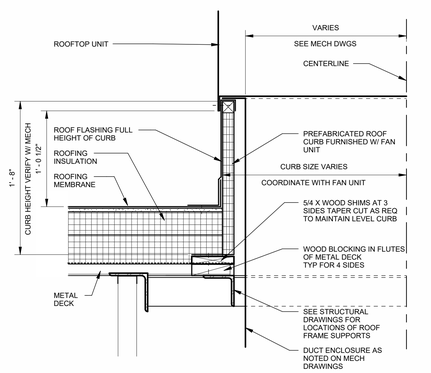
B4 ROOF TYPE R2 - LOW ROOF

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



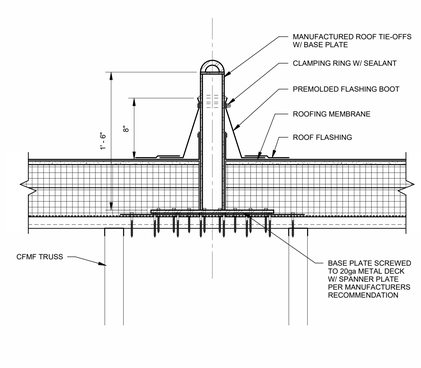
B5 ROOF TYPE R3 - ROOF OVERHANG

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



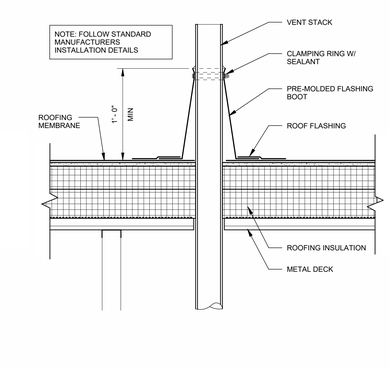
A1 ROOFTOP UNIT CURB DETAIL

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



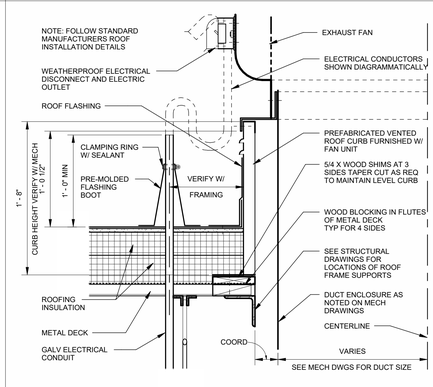
A2 TYPICAL ROOF TIE OFF DETAIL

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



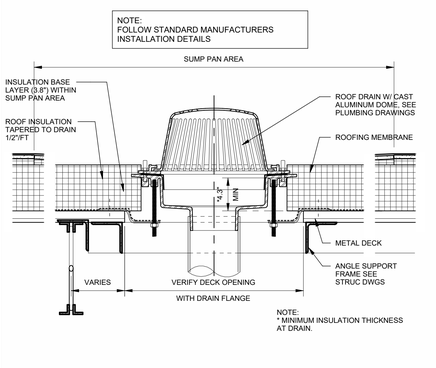
A3 TYPICAL VENT STACK DETAIL

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



A4 TYP KITCHEN EXHAUST FAN ROOF CURB

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



A5 TYPICAL ROOF DRAIN DETAIL

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

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Harriman Project No.	24265

GENERAL NOTES

1. SEE SHEET A40-1 FOR INTERIOR PARTITION TYPES AND EXTERIOR WALL ASSEMBLY TYPES
2. SEE SHEET A50-1 FOR EXPANSION JOINT LEGEND

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

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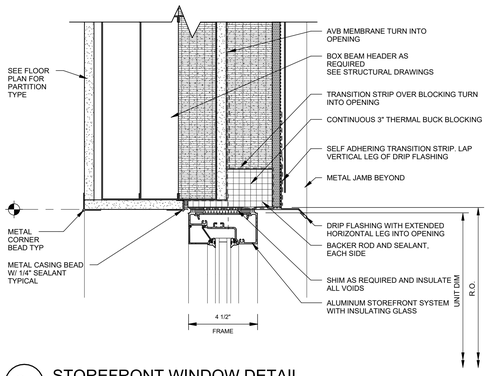
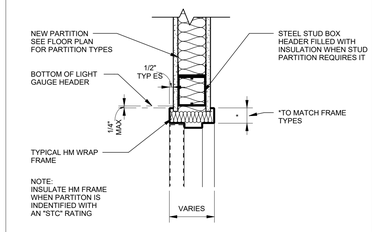
ROOF DETAILS

A51-1

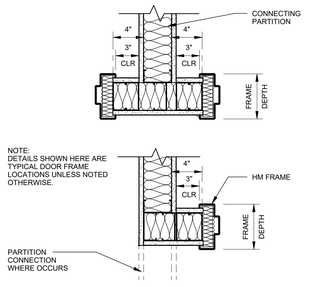


C1 STOREFRONT WINDOW DETAIL
SCALE: 3" = 1'-0"

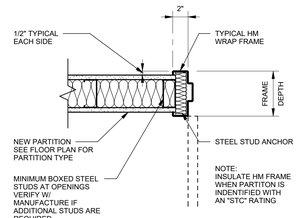


6

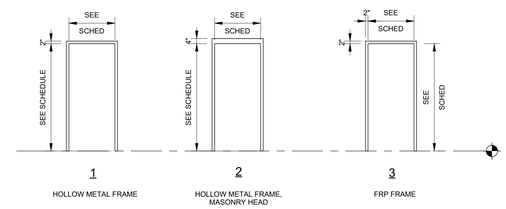
E3 TYPICAL HM FRAME HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



D2 TYP HM FRAME LOCATION DETAIL
SCALE: 1 1/2" = 1'-0"



D3 TYPICAL HM FRAME JAMB DETAIL
SCALE: 1 1/2" = 1'-0"



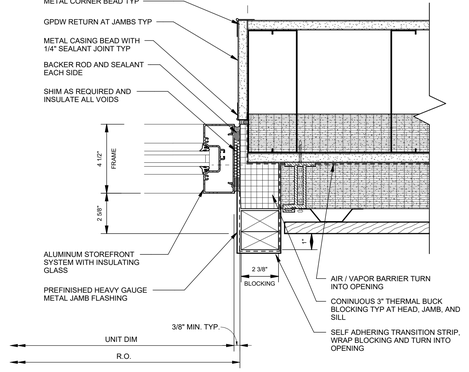
D4 DOOR FRAME TYPES
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. FRAMES SHALL BE HOLLOW METAL UNLESS NOTED OTHERWISE
2. FRAME HEADS SHALL BE 2" UNLESS NOTED OTHERWISE
3. JAMBS AND MULLIONS SHALL BE 2" UNLESS NOTED OTHERWISE.
4. BASES OF SIDELITES SHALL BE 6" UNLESS NOTED OTHERWISE
5. GLAZING WITHIN FRAMES INCLUDING TRANSOMS SHALL BE TEMPERED UNLESS NOTED OTHERWISE

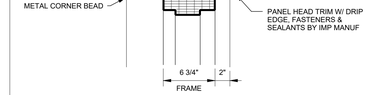
DOOR AND FRAME SCHEDULE

DOOR MARK	OPENING SIZE		THK	DOOR LEAVES	TYPE	MAT	GLASS	FRAME TYPE	FRAME MAT	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS SILL	FIRE RATING	DOOR HARDWARE	REMARKS
	WIDTH	HEIGHT													
GROUND FLOOR															
100	3' - 0"	7' - 0"	1 3/4"	(1)	F	HM	-	1	HM	C4/A51-1	B2/A50-1	C1/A35-1	180 MIN	4	
102	3' - 0"	7' - 0"	1 3/4"	(1)	F	HM	-	1	HM	E3/A60-1	D3/A60-1		20 MIN	5	
103	3' - 0"	7' - 0"	1 3/4"	(1)	F	HM	-	1	HM	E3/A60-1	D3/A60-1		20 MIN	5	
104	3' - 0"	7' - 0"	1 3/4"	(1)	FG2	FRP	D20	3	FRP	E3/A60-1	D3/A60-1		20 MIN	6	ACCESS CONTROL
105A	3' - 0"	7' - 0"	1 3/4"	(1)	FG2	FRP	-	3	FRP	E3/A60-1	D3/A60-1		-	7	
105B	4' - 6"	8' - 0"	1 3/4"	(2 UN)	V	FRP	D20	3	FRP	E3/A60-1	D3/A60-1		20 MIN	8	ACTIVE LEAF AT 36" WIDTH
106A	3' - 0"	7' - 0"	1 3/4"	(1)	FG2	FRP	-	3	FRP	E3/A60-1	D3/A60-1		-	7	
106B	4' - 6"	8' - 0"	1 3/4"	(2 UN)	V	FRP	D20	3	FRP	E3/A60-1	D3/A60-1		20 MIN	8	ACTIVE LEAF AT 36" WIDTH
107A	3' - 0"	7' - 0"	1 3/4"	(1)	FG2	FRP	-	3	FRP	E3/A60-1	D3/A60-1		-	7	
107B	4' - 6"	8' - 0"	1 3/4"	(2 UN)	V	FRP	D20	3	FRP	E3/A60-1	D3/A60-1		20 MIN	8	ACTIVE LEAF AT 36" WIDTH
109	4' - 6"	8' - 0"	1 3/4"	(2 UN)	V	FRP	D20	3	FRP	E3/A60-1	D3/A60-1		20 MIN	10	ACTIVE LEAF AT 36" WIDTH
112	3' - 0"	7' - 0"	1 3/4"	(1)	F	FRP	D20	1	FRP	E3/A60-1	D3/A60-1		20 MIN	9	
EX001	3' - 0"	7' - 2"	2"	(1)	SF2	ALUM	INSUL	SF1	ALUM	C1/A60-1	B1/A60-1	A3/A60-1	-	1	ACCESS CONTROL
EX002	3' - 0"	7' - 0"	1 3/4"	(1)	F	HM	-	1	HM	C3/A60-1	B3/A60-1	A3/A60-1	-	2	ACCESS CONTROL
EX003	8' - 0"	10' - 0"	3"	(1)	OH	INSUL STL	-	-	STL	C2/A60-1	B2/A60-1	A2/A60-1	-		CORNELL THERMISER ROLLING SERVICE DOOR
EX004	3' - 0"	7' - 0"	1 3/4"	(1)	F	HM	-	1	HM	C3/A60-1	B3/A60-1	A3/A60-1	-	3	



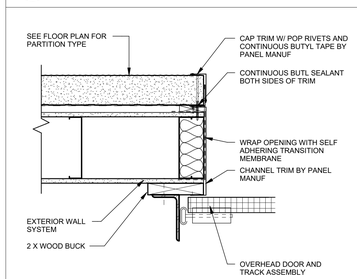
B1 STOREFRONT WINDOW DETAIL
SCALE: 3" = 1'-0"

C2 HEAD DETAIL AT OVERHEAD DOOR
SCALE: 1 1/2" = 1'-0"

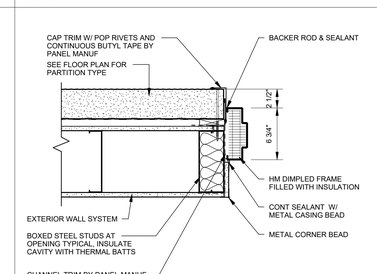


C3 HM HEAD AT IMP DETAIL
SCALE: 1 1/2" = 1'-0"

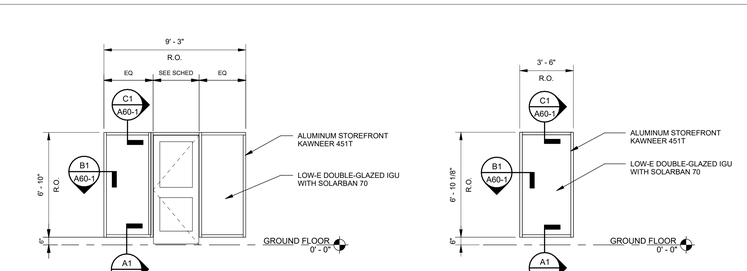
C4 DOOR TYPES
SCALE: 1/4" = 1'-0"



B2 JAMB DETAIL AT OVERHEAD DOOR
SCALE: 1 1/2" = 1'-0"

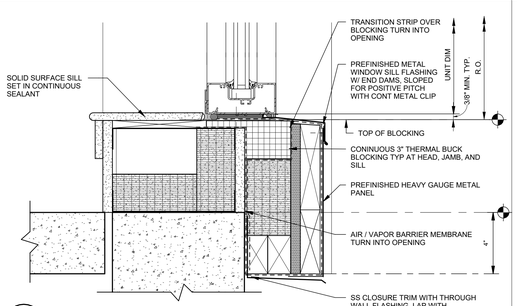


B3 HM JAMB @ IMP DETAIL
SCALE: 1 1/2" = 1'-0"

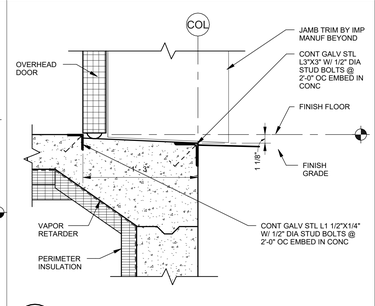


B4 STOREFRONT SF1
SCALE: 1/4" = 1'-0"

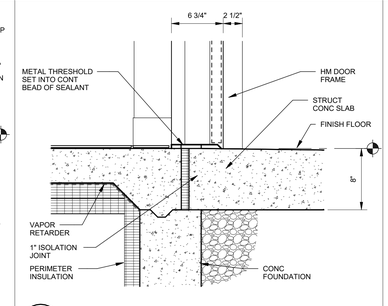
B5 STOREFRONT SF2
SCALE: 1/4" = 1'-0"



A1 WINDOW DETAIL
SCALE: 3" = 1'-0"



A2 SILL DETAIL AT OVERHEAD DOOR
SCALE: 1 1/2" = 1'-0"



A3 SILL DETAIL AT STRUCTURAL SLAB
SCALE: 1 1/2" = 1'-0"

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GENERAL NOTES

1. SEE DETAIL D2/A60-1 FOR TYPICAL DOOR FRAME PLACEMENT UNLESS DIMENSIONS ARE NOTED ELSWEHERE ON DRAWINGS

MATERIAL ABBREVIATIONS

HM	HOLLOW METAL
ALUM	ALUMINUM STOREFRONT
FRP	FIBERGLASS
SSTL	STAINLESS STEEL
INS STL	INSULATED STEEL
WD	SOLID WOOD

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

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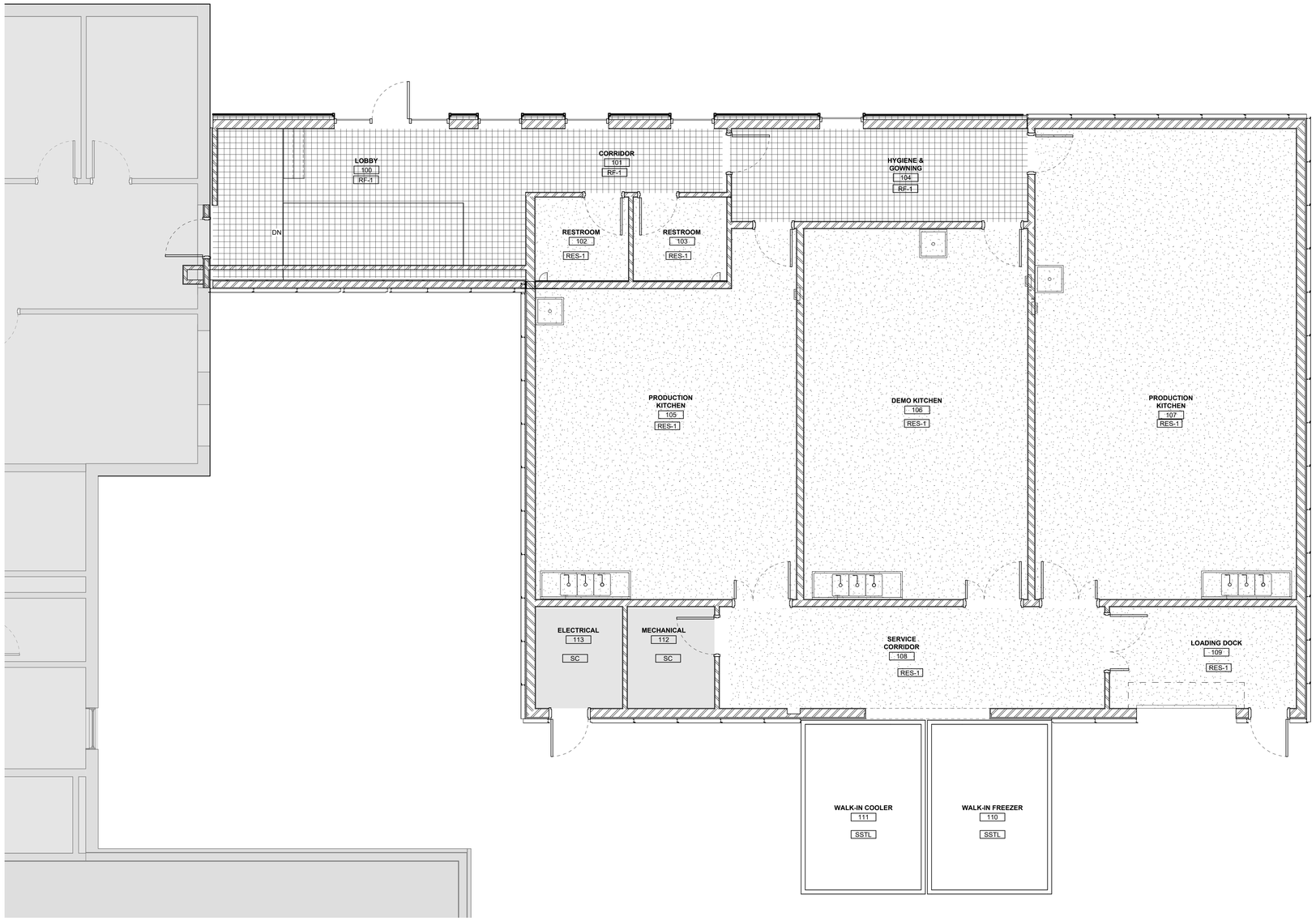
DOOR & STOREFRONT SCHEDULE AND DETAILS

A60-1



A1 FIRST FLOOR MATERIALS PLAN

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

ROOM FINISH SCHEDULE

ROOM No.	ROOM NAME	FLOOR	BASE	WAINSCOT CODE	WAINSCOT HT	WALLS N	WALLS E	WALLS S	WALLS W	REMARKS
GROUND FLOOR										
100	LOBBY	RF-1	RF-1			P1	P1	P1	P1	
101	CORRIDOR	RF-1	RF-1			P1	P1	P1	P1	
102	RESTROOM	RES-1	RES-1	CT-1	7' - 0"	P1	P1	P1	P1	WAINSCOT ON WET WALL ONLY
103	RESTROOM	RES-1	RES-1	CT-1	7' - 0"	P1	P1	P1	P1	WAINSCOT ON WET WALL ONLY
104	HYGIENE & GOWNING	RF-1	RB-1			P1	P1	P1	P1	
105	PRODUCTION KITCHEN	RES-1	RES-1			FRP	FRP	FRP	FRP	
106	DEMO KITCHEN	RES-1	RES-1			FRP	FRP	FRP	FRP	
107	PRODUCTION KITCHEN	RES-1	RES-1			FRP	FRP	FRP	FRP	
108	SERVICE CORRIDOR	RES-1	RES-1			FRP	FRP	FRP	FRP	
109	LOADING DOCK	RES-1	RES-1			FRP	FRP	FRP	FRP	
110	WALK-IN FREEZER	SSTL				SSTL	SSTL	SSTL	SSTL	FINISHES BY WALK-IN MANUFACTURER
111	WALK-IN COOLER	SSTL				SSTL	SSTL	SSTL	SSTL	FINISHES BY WALK-IN MANUFACTURER
112	MECHANICAL	SC	RB-1			FRP	FRP	FRP	FRP	
113	ELECTRICAL	SC	RB-1			FRP	FRP	FRP	FRP	

MATERIALS LEGEND

MATERIAL	CODE No.	MANUFACTURER / SERIES	COLOR / FINISH
SEALED CONCRETE	SC-1	SEALED CONCRETE	
CERAMIC TILE	CT-1	DALTILE COLOR WHEEL CLASSIC	GALAXY 1469
RUBBER TILE	RF-1	ROPPE RUBBER TILE	SYMMETRY, S627 MARINER
RUBBER BASE	RB-1	ROPPE PINNACLE RUBBER BASE	627 MARINER
FIBER REINFORCED PANEL	FRP	MARLITE STANDARD FRP	SMOOTH, WHITE
RESINOUS FLOORING	RES-1	STONHARD STONCLAD UT	STEEL GREY
STAINLESS STEEL	SSTL	STAINLESS STEEL FINISH PROVIDED BY WALK-IN MANUFACTURER	

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GENERAL NOTES

1. NOTE #1
2. NOTE #2

SYMBOLS LEGEND

PLACEHOLDER DESCRIPTION

Graphic Scale
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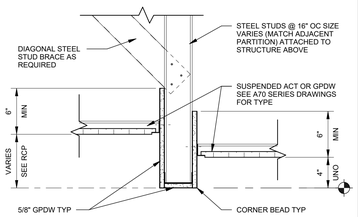
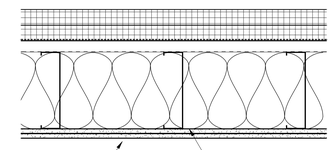
ROOM FINISH SCHEDULE & PLAN

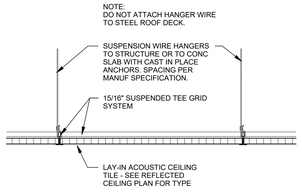
A61-1



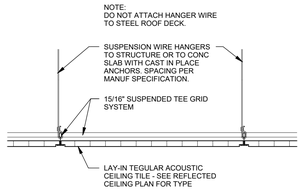
C1 TYPICAL SOFFIT DETAIL
SCALE: 1 1/2" = 1'-0"



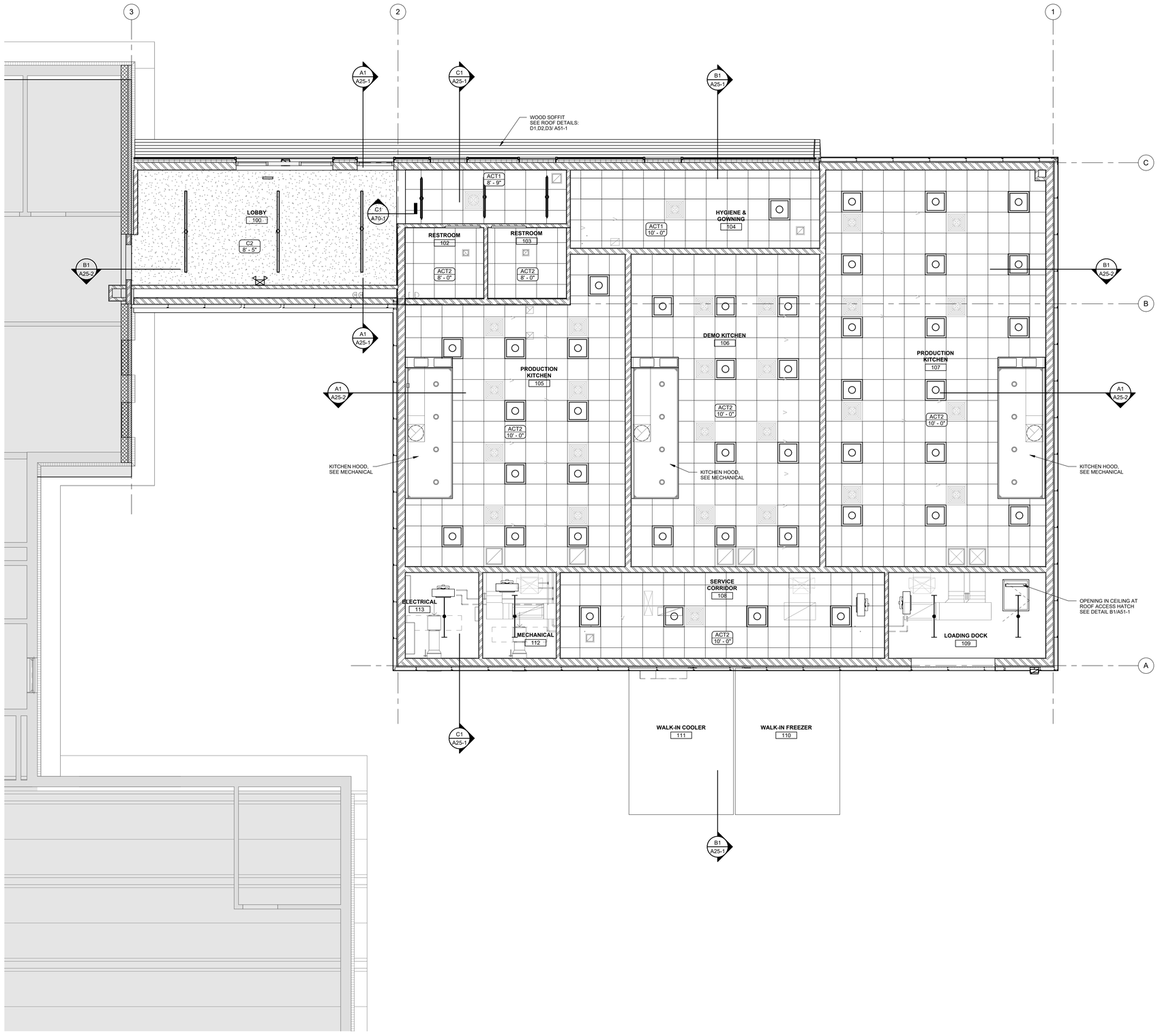
RATED HUNG CEILING	C3
1 HOUR FIRE RATED	UL NO. ?



SUSPENDED ACOUSTICAL CEILING DETAIL	C2
NON-RATED	UL No.



SUSPENDED ACOUSTICAL CEILING DETAIL	C1
NON-RATED	UL No.



A2 FIRST FLOOR CEILING PLAN
SCALE: 1/4" = 1'-0"

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GENERAL NOTES

1. SEE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION
2. NOTE #2

SYMBOLS LEGEND

- ACT1 X' - X" — SUSPENDED ACOUSTIC CEILING ARMSTRONG ULTIMA TEGULAR
- ACT2 X' - X" — SUSPENDED ACOUSTIC CEILING ARMSTRONG KITCHEN ZONE
- C2 X' - X" — RATED SUSPENDED GPDW CEILING
- LIGHT FIXTURE
- LIGHT FIXTURE
- LIGHT FIXTURE
- MECHANICAL SUPPLY DIFFUSER
- MECHANICAL SUPPLY DIFFUSER
- MECHANICAL RETURN FAN

Graphic Scale
0" 1"
(Scale measures 1" when plotted at full size)

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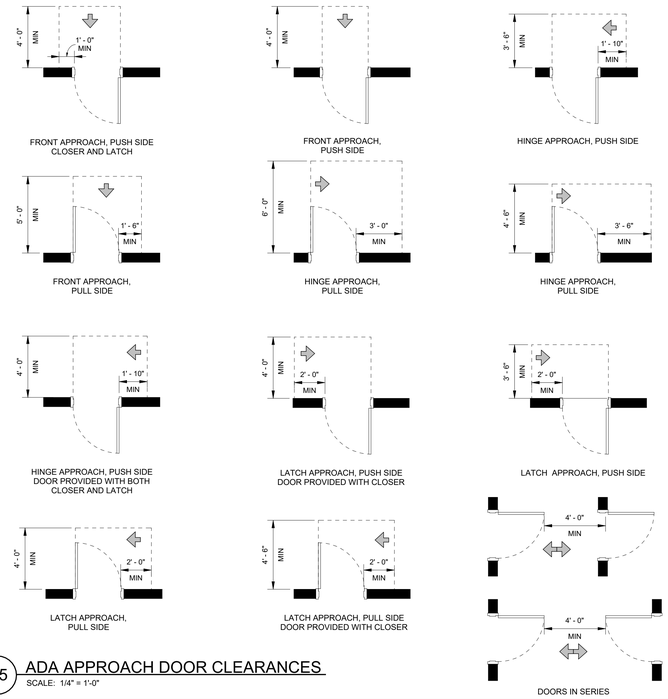
REFLECTED CEILING PLAN

A70-1



D5 ADA APPROACH DOOR CLEARANCES

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

NOTES:

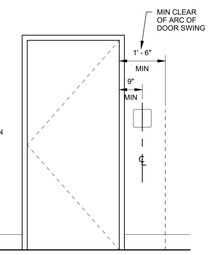
SINGLE DOORS:
TACTILE SIGNS TO BE ON THE LATCH SIDE OF THE DOORS.

DOUBLE DOOR WITH (1) ACTIVE LEAF:
LOCATE ON INACTIVE LEAF.

DOUBLE DOOR WITH (2) ACTIVE LEAFS:
LOCATE TO RIGHT OF RIGHT DOOR.

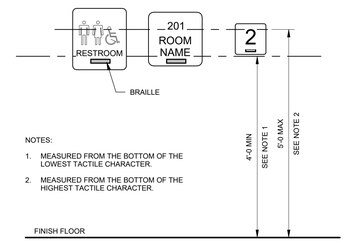
IF NO WALL SPACE ADJACENT TO LATCH SIDE OF DOOR, LOCATE SIGN TO NEAREST ADJACENT WALL.

SEE DETAIL XX / A80.1 FOR HEIGHT OF SIGN FROM FINISH FLOOR



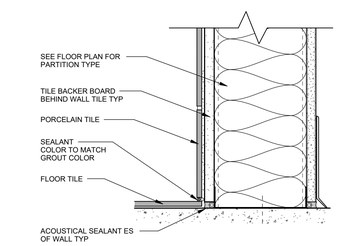
C5 ACCESSIBLE SIGNAGE LOCATION

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



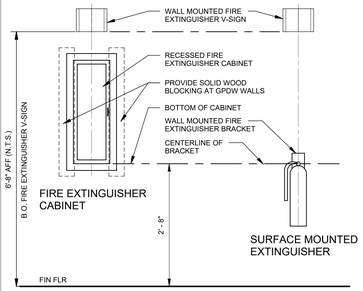
C6 ACCESSIBLE SIGNAGE

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



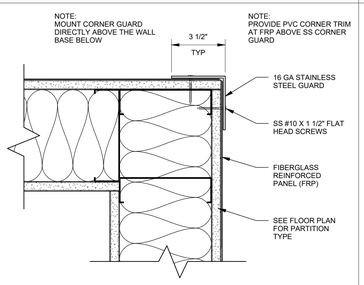
B4 PT WAINSCOT BASE DETAIL

SCALE: 3" = 1'-0"



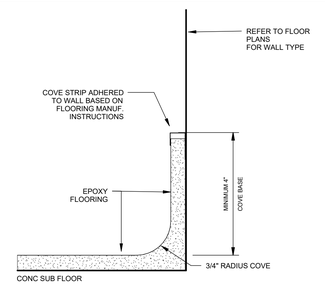
B5 FIRE EXTINGUISHER MOUNTING

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



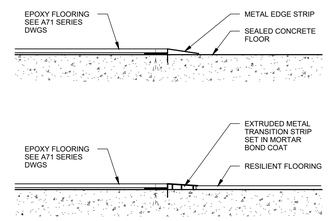
A4 STAINLESS STEEL CORNER GUARD

SCALE: 3" = 1'-0"



A5 EPOXY FLOOR COVING DETAIL

SCALE: 6" = 1'-0"



A6 FLOORING TRANSITIONS

SCALE: 3" = 1'-0"

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Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

LICENSED ARCHITECT
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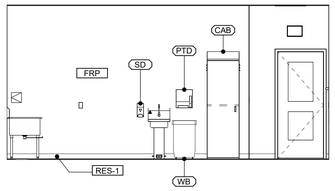
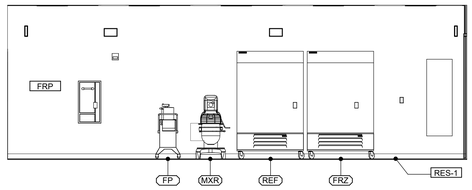
INTERIOR DETAILS

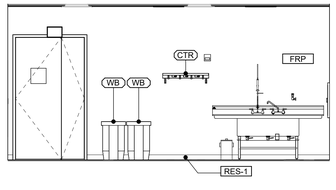
A80-1



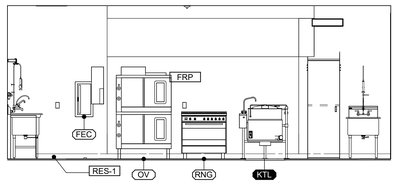
E1 PRODUCTION KITCHEN 124 - N
SCALE: 1/4" = 1'-0"



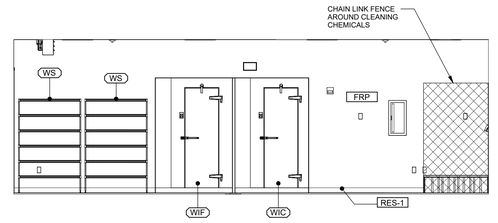
E2 PRODUCTION KITCHEN 124 - E
SCALE: 1/4" = 1'-0"



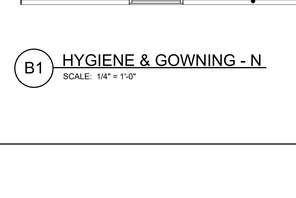
E3 PRODUCTION KITCHEN 124 - S
SCALE: 1/4" = 1'-0"



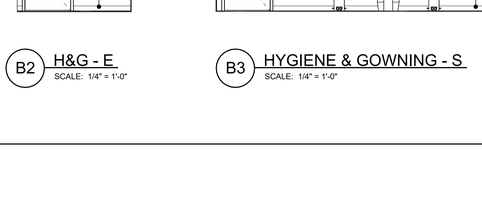
E4 PRODUCTION KITCHEN 124 - W
SCALE: 1/4" = 1'-0"



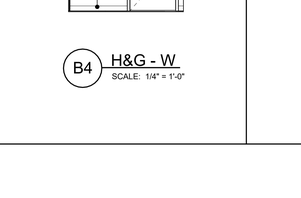
E5 SERVICE CORRIDOR - S
SCALE: 1/4" = 1'-0"



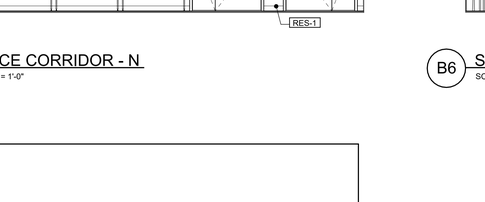
D1 DEMO KITCHEN - N
SCALE: 1/4" = 1'-0"



D2 DEMO KITCHEN - E
SCALE: 1/4" = 1'-0"



D3 DEMO KITCHEN - S
SCALE: 1/4" = 1'-0"



D4 DEMO KITCHEN - W
SCALE: 1/4" = 1'-0"

C1 PRODUCTION KITCHEN 128 - N
SCALE: 1/4" = 1'-0"

C2 PRODUCTION KITCHEN 128 - E
SCALE: 1/4" = 1'-0"

C3 PRODUCTION KITCHEN 128 - S
SCALE: 1/4" = 1'-0"

C4 PRODUCTION KITCHEN 128 - W
SCALE: 1/4" = 1'-0"

B1 HYGIENE & GOWNING - N
SCALE: 1/4" = 1'-0"

B2 H&G - E
SCALE: 1/4" = 1'-0"

B3 HYGIENE & GOWNING - S
SCALE: 1/4" = 1'-0"

B4 H&G - W
SCALE: 1/4" = 1'-0"

B5 SERVICE CORRIDOR - N
SCALE: 1/4" = 1'-0"

B6 SERVICE CORRIDOR - W
SCALE: 1/4" = 1'-0"

A1 LOBBY - N
SCALE: 1/4" = 1'-0"

A2 LOBBY - E
SCALE: 1/4" = 1'-0"

A3 LOBBY - S
SCALE: 1/4" = 1'-0"

A5 LOBBY - W
SCALE: 1/4" = 1'-0"

A6 SERVICE CORRIDOR - E
SCALE: 1/4" = 1'-0"

Harriman

UNIVERSITY OF MAINE
FOOD INNOVATION LAB

ORONO, MAINE

Harriman Project No.	24265

GENERAL NOTES

1. REFER TO A10-2 FOR EQUIPMENT LIST

SYMBOLS LEGEND

PLACEHOLDER DESCRIPTION

Graphic Scale
0" 1"
(Scale measures 1" when plotted at full size)

LICENSED ARCHITECT
DANIEL BACKMAN
5180
STATE OF MAINE

CONSTRUCTION DOCUMENTS

OCTOBER 20, 2025

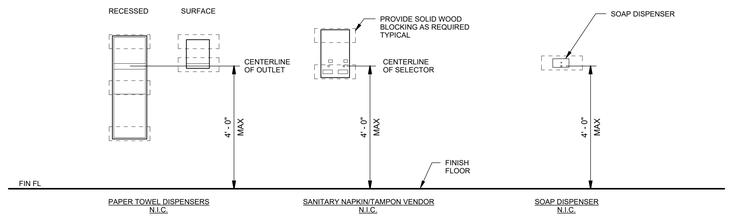
Revision Date	Revision Description

Drawn by: JWA

INTERIOR ELEVATIONS

A81-1

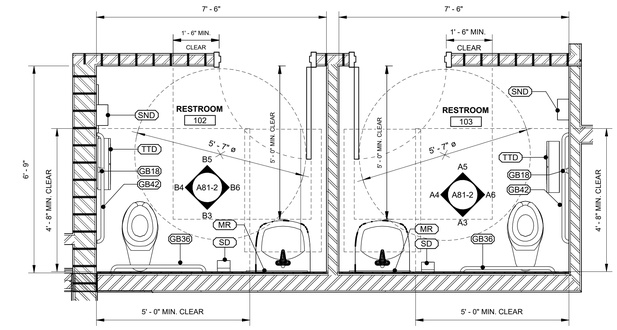
NOTE : DISPENSERS INDICATED AS "N.I.C." ARE NOT IN CONTRACT AND
WILL BE FURNISHED BY OWNER AND INSTALLED BY GC.
GC TO PROVIDE SOLID WOOD BLOCKING AT LOCATIONS OF THESE NIC ITEMS.



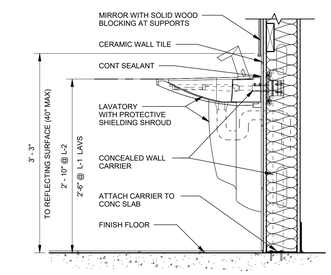
C1 DISPENSER HEIGHTS
SCALE: 1/2" = 1'-0"

MISCELLANEOUS ITEMS SCHEDULE

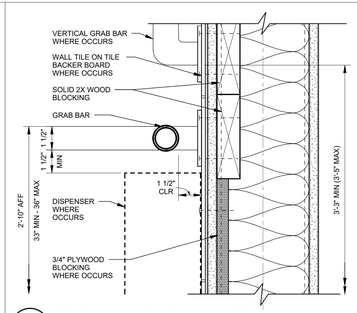
CODE	DESCRIPTION	DETAIL	REMARKS
GB18	VERTICAL GRAB BAR 18" HIGH		CFCI
GB36	GRAB BAR 36" LONG		CFCI
GB42	ADA GRAB BAR 42" LONG		CFCI
PTD	PAPER TOWEL DISPENSER		OFOI
SD	SOAP DISPENSER		OFOI
SND	SANITARY NAPKIN DISPOSAL		CFCI
TTD	TOILET PAPER DISPENSER		OFOI



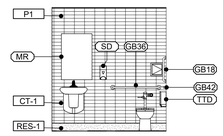
C5 ENLARGED PLAN OF RESTROOMS
SCALE: 1/2" = 1'-0"



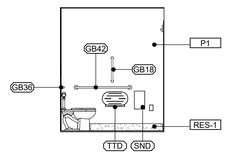
B1 LAVATORY MOUNTING DETAIL
SCALE: 1" = 1'-0"



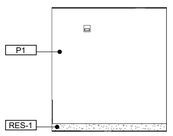
B2 TYPICAL GRAB BAR DETAIL
SCALE: 3" = 1'-0"



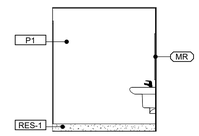
B3 RESTROOM 102 - S
SCALE: 1/4" = 1'-0"



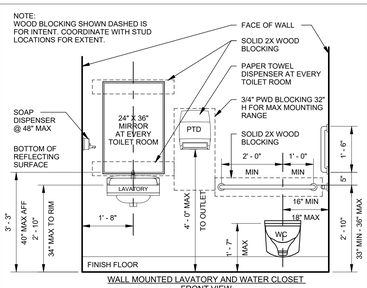
B4 RESTROOM 102 - W
SCALE: 1/4" = 1'-0"



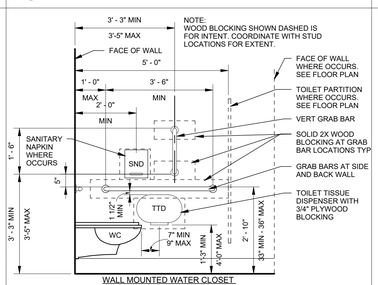
B5 RESTROOM 101 - N
SCALE: 1/4" = 1'-0"



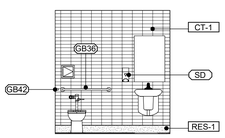
B6 RESTROOM 101 - E
SCALE: 1/4" = 1'-0"



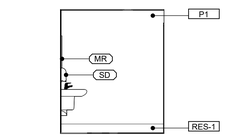
A1 TOILET ACCESSORY MOUNTING
SCALE: 1/2" = 1'-0"



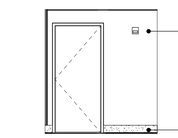
A2 TOILET ACCESSORY MOUNTING
SCALE: 1/2" = 1'-0"



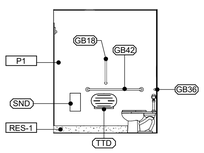
A3 RESTROOM 103 - S
SCALE: 1/4" = 1'-0"



A4 RESTROOM 103 - W
SCALE: 1/4" = 1'-0"



A5 RESTROOM 103 - N
SCALE: 1/4" = 1'-0"



A6 RESTROOM 103 - E
SCALE: 1/4" = 1'-0"

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ORONO, MAINE

Harriman Project No.	24265

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

LICENSED ARCHITECT
DANIEL BACKMAN
5180
STATE OF MAINE

CONSTRUCTION DOCUMENTS

OCTOBER 20, 2025

Revision Date	Revision Description

Drawn by: JWA

RESTROOM PLANS, ELEVATIONS & DETAILS

A81-2

EXISTING PIPE LEGEND

XGW	EXISTING GREASE WASTE PIPING BELOW FINISHED FLOOR
XGWV	EXISTING GREASE WASTE VENT PIPING BELOW FINISHED FLOOR
XS	EXISTING SANITARY PIPING BELOW FINISHED FLOOR
XSD	EXISTING STORM DRAIN PIPING BELOW FINISHED FLOOR
XSG	EXISTING SOIL GAS PIPING BELOW FINISHED FLOOR
XV	EXISTING VENT PIPING BELOW FINISHED FLOOR
XCA	EXISTING COMPRESSED AIR PIPING ABOVE FINISHED FLOOR
XCD	EXISTING CONDENSATE PIPING ABOVE FINISHED FLOOR
XCD	EXISTING HEAT TRACED CONDENSATE PIPING ABOVE FINISHED FLOOR
XCW	EXISTING COLD WATER PIPING ABOVE FINISHED FLOOR
XG	EXISTING GAS PIPING ABOVE FINISHED FLOOR
XGV	EXISTING GAS VENT PIPING ABOVE FINISHED FLOOR
XGW	EXISTING GREASE WASTE PIPING ABOVE FINISHED FLOOR
X85°TW	EXISTING 85°F TEMPID WATER PIPING ABOVE FINISHED FLOOR
X120°HW	EXISTING 120°F HOT WATER PIPING ABOVE FINISHED FLOOR
X140°HW	EXISTING 140°F HOT WATER PIPING ABOVE FINISHED FLOOR
X120°HWR	EXISTING 120°F WATER RETURN PIPING ABOVE FINISHED FLOOR
X140°HWR	EXISTING 140°F WATER RETURN PIPING ABOVE FINISHED FLOOR
XOD	EXISTING OVERFLOW STORM DRAIN PIPING ABOVE FINISHED FLOOR
XS	EXISTING SANITARY PIPING ABOVE FINISHED FLOOR
XSD	EXISTING STORM DRAIN PIPING ABOVE FINISHED FLOOR
XSG	EXISTING SOIL GAS PIPING ABOVE FINISHED FLOOR
XTP	EXISTING TRAP PRIMER PIPING
XV	EXISTING VENT PIPING ABOVE FINISHED FLOOR

PIPE LEGEND

GW	PROPOSED GREASE WASTE PIPING BELOW FINISHED FLOOR
GWV	PROPOSED GREASE WASTE VENT PIPING BELOW FINISHED FLOOR
S	PROPOSED SANITARY PIPING BELOW FINISHED FLOOR
SD	PROPOSED STORM DRAIN PIPING BELOW FINISHED FLOOR
SG	PROPOSED SOIL GAS PIPING BELOW FINISHED FLOOR
V	PROPOSED VENT PIPING BELOW FINISHED FLOOR
CA	PROPOSED COMPRESSED AIR PIPING ABOVE FINISHED FLOOR
CD	PROPOSED CONDENSATE PIPING ABOVE FINISHED FLOOR
CD	PROPOSED HEAT TRACED CONDENSATE PIPING ABOVE FINISHED FLOOR
CW	PROPOSED COLD WATER PIPING ABOVE FINISHED FLOOR
G	PROPOSED GAS PIPING ABOVE FINISHED FLOOR
GV	PROPOSED GAS VENT PIPING ABOVE FINISHED FLOOR
GW	PROPOSED GREASE WASTE PIPING ABOVE FINISHED FLOOR
85°TW	PROPOSED 85°F TEMPID WATER PIPING ABOVE FINISHED FLOOR
120°HW	PROPOSED 120°F HOT WATER PIPING ABOVE FINISHED FLOOR
140°HW	PROPOSED 140°F HOT WATER PIPING ABOVE FINISHED FLOOR
120°HWR	PROPOSED 120°F WATER RETURN PIPING ABOVE FINISHED FLOOR
140°HWR	PROPOSED 140°F WATER RETURN PIPING ABOVE FINISHED FLOOR
OD	PROPOSED OVERFLOW STORM DRAIN PIPING ABOVE FINISHED FLOOR
S	PROPOSED SANITARY PIPING ABOVE FINISHED FLOOR
SD	PROPOSED STORM DRAIN PIPING ABOVE FINISHED FLOOR
SG	PROPOSED SOIL GAS PIPING ABOVE FINISHED FLOOR
TP	PROPOSED TRAP PRIMER PIPING
V	PROPOSED VENT PIPING ABOVE FINISHED FLOOR
	CAP
	CLEANOUT
	PIPE DROP
	PIPE RISE
	PIPE TEE

PIPE ACCESSORY LEGEND

	BACKFLOW PREVENTER
	CIRCULATING PUMP
	CHECK VALVE
	FLOW ARROW
	GAS SOLENOID VALVE
P	PRESSURE GAUGE
	PRESSURE RELIEF VALVE
	SHUT-OFF VALVE
	SHUT-OFF VALVE WITH THREADED HOSE END
	THERMOMETER
	UNION
TFC	THERMOSTATIC FLOW CONTROL VALVE

FIXTURE CARRIER LEGEND

SINGLE HORIZONTAL ADJUSTABLE CARRIER
BACK TO BACK HORIZONTAL ADJUSTABLE CARRIER
SINGLE VERTICAL ADJUSTABLE CARRIER
BACK TO BACK VERTICAL ADJUSTABLE CARRIER
LAVATORY CARRIER
URINAL CARRIER

PLUMBING FIXTURE LEGEND

	FLOOR CLEANOUT
	FLOOR DRAIN
	FLOOR SINK
	FREEZE PROOF WALL HYDRANT
	HOT WATER HOSE BIBB
	ROOF DRAIN
	ROOF DRAIN WITH OVERFLOW
	SOIL GAS FAN
	SUMP PUMP
	ELECTRONIC TRAP PRIMER
	WATER METER
	WALL CLEANOUT

ABBREVIATIONS LEGEND

AP	ACCESS PANEL
BP-X	BOOSTER PUMP
CW	CLOTHES WASHER
CO	CLEANOUT
DCP-X	DOMESTIC CIRCULATING PUMP
DW	DISH WASHER
EEW-X	EMERGENCY EYEWASH
EEWS-X	EMERGENCY EYEWASH & SHOWER
ET-X	EXPANSION TANK
EWC-X	ELECTRIC WATER COOLER
FCO-X	FLOOR CLEANOUT
FD-X	FLOOR DRAIN
FH	FUME HOOD
FS-X	FLOOR SINK
HB-X	HOSE BIBB
HR-X	HOSE REEL
L-X	LAVATORY
LSK-X	LAB SINK
MB-X	MOP BASIN
RD-X	ROOF DRAIN
SA "X"	SHOCK ARRESTOR (P.D.I RATING)
SH-X	SHOWER
SI-X	SOLIDS INTERCEPTOR
SK-X	SINK
SOI-X	SAND & OIL INTERCEPTOR
SP-X	SUMP PUMP
TP-X	TRAP PRIMER
UR-X	URINAL
WC-X	WATER CLOSET
WCO	WALL CLEANOUT
WF-X	WASH FOUNTAIN
WH-X	WALL HYDRANT
AFF	ABOVE FINISHED FLOOR
BFF	BELOW FINISHED FLOOR
CW	COLD WATER
DN	DOWN
GWVTR	GREASE WASTE VENT THROUGH ROOF
HW	HOT WATER
HWR	HOT WATER RETURN
INV. EL	INVERT ELEVATION
N.C	NORMALLY CLOSED
N.O	NORMALLY OPEN
S	SANITARY
SGTR	SOIL GAS THRU ROOF
TYP.	TYPICAL
V	VENT
VTR	VENT THROUGH ROOF
W	WASTE
	CONNECT NEW TO EXISTING

GENERAL NOTES

1 REFER TO INSTALLATION SCHEDULES FOR THE SIZE OF PIPING CONNECTIONS AND MOUNTING HEIGHTS OF EACH FIXTURE.

2 SANITARY WASTE PIPING 4" & LARGER SHALL BE INSTALLED WITH A PITCH OF 1/4" PER 1'-0".

3 STORM, INDIRECT WASTE & GREASE PIPING SHALL BE INSTALLED WITH A PITCH OF 1/8" PER 1'-0" EXCEPT WHERE NOTED.

4 PLUMBING CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF UTILITIES AT ALL POINTS OF CONNECTION INDICATED ON DRAWINGS BEFORE START OF PROJECT.

5 PROVIDE ISOLATION VALVES ON BRANCH PIPING TO FIXTURE GROUPS & REMOTE FIXTURES AND WHERE INDICATED ON PLANS, VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.

6 PIPING IN FINISHED AREAS SHALL BE ROUTED CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO WALLS.

7 COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS. COORDINATE PIPING INSTALLATION WITH STRUCTURAL GRADE BEAMS, FOOTINGS, COLUMN PIERS, ETC. SLEEVE PIPING THROUGH GRADE BEAMS, FOOTING, ETC. WHERE REQUIRED AND AS NOTED ON PLANS. COORDINATE SLEEVE INSTALLATIONS WITH THE ARCHITECT, STRUCTURAL ENGINEER, STRUCTURAL CONTRACTOR AND GENERAL CONTRACTOR BEFORE CONCRETE IS INSTALLED. PIPING INVERTS AND SLOPE SHALL BE CLOSELY COORDINATED TO AVOID CONFLICTS WITH ALL OTHER TRADES BELOW SLAB WORK.

8 CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.

9 COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT ROUTE PIPING OVER ELECTRICAL PANELS.

10 ALL PLUMBING FIXTURE SHUT-OFF AND/OR BALANCING VALVES INSTALLED IN PIPE CHASES SHALL BE ACCESSIBLE FROM JUST ABOVE THE CEILING LINE OR ACCESS DOORS PROVIDED LOW IN CHASE WALL ALL PLUMBING FIXTURE SHUT-OFF AND/OR BALANCING VALVES INSTALLED IN PIPE CHASES SHALL BE ACCESSIBLE FROM JUST ABOVE THE CEILING LINE OR ACCESS DOORS PROVIDED LOW IN CHASE WALL.

11 ALL UNDERSLAB PIPING SHALL BE INSTALLED TO PROVIDE NO LESS THAN 2" OF COVER BETWEEN THE PIPING AND THE FLOOR SLAB.

12 OSHA RULES, REGULATIONS AND REQUIREMENTS, AND ANY STATE AND LOCAL REQUIREMENTS FOR SAFETY SHALL BE FOLLOWED BY THE CONTRACTOR

13 PROVIDE FIXTURE STOPS ON ANY WATER SUPPLY IMMEDIATELY ADJACENT TO PLUMBING FIXTURES.

14 THE TERM "PROVIDE" SHALL MEAN "TO FURNISH, INSTALL AND CONNECT COMPLETELY".

15 ENTIRE PLUMBING INSTALLATION SHALL BE IN COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL CODES AND STANDARDS.

16 INDIRECT WASTES SHALL HAVE AN AIR GAP OF AT LEAST TWICE THE DIAMETER OF THE PIPE BUT NOT LESS THAN 1"

17 THE CONTRACTOR SHALL OBTAIN REQUIRED PERMITS AND ARRANGE FOR INSPECTIONS IN ACCORDANCE WITH STATE & LOCAL ATHORITIES HAVING JURISDICTION

18 VOIDS BETWEEN PIPE SLEEVES AND PIPES SHALL BE FILLED WITH FIRE STOPPING WITH AN HOURLY RATING EQUAL TO THAT OF THE WALL

19 PLUMBING CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO THE INSTALLATION OF SYSTEMS WHICH ARE INTENDED TO TIE INTO OR REUSE ANY PART OF THE EXISTING PIPING OR EQUIPMENT

20 PROVIDE VACUUM BREAKERS ON HOSE CONNECTIONS AND WHERE INDICATED ON PLANS AND DETAILS

21 DOMESTIC WATER PIPING ROUTED UNDER SLAB SHALL BE IN A CONTINUOUS NON METALLIC CONDUIT, SEALED AT THE TOP WITH NON SHRINK GROUT

22 ALL PROPOSED SUPPLY PIPING SHALL BE INSULATED, REFER TO SPECIFICATIONS FOR INSULATION THICKNESS & ACCEPTED PRODUCTS

23 STORM DRAINAGE PIPING ABOVE SLAB SHALL BE INSULATE, REFER TO SPECIFICATIONS FOR INSULALTION THICKNESS. EXPOSED STORM DRAINAGE SHALL BE PVC JACKETED

24 ISOLATION VALVES ON GAS PIPING SHALL BE AGA RATED BALL VALVES, PLUG VALVES WILL NOT BE ACCEPTED

25 DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY THE ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.

26 PROVIDE ALL REQUIRED PENETRATIONS IN RATED ASSEMBLIES, INCLUDING BUT LIMITED TO WALLS AND FLOORS WITH A UL APPROVED FIRESTOPPING ASSEMBLY INCLUDING LISTING LABEL OF PENETRATION AFTER PASSING THROUGH UTILITIES.

27 UNLESS SPECIFICALLY NOTED ON DRAWINGS PIPING SHALL ONLY BE ATTACHED TO TOP OF STEEL BAR JOISTS AT PANEL POINTS, TOP OR BOTTOM FLANGES OF STEEL BEAMS AND SIDE OF WODEN BEAMS. PIPING SHALL NOT BE ATTACHED TO STEEL DECK UNDER ANY CIRCUMSTANCES

PLUMBING DEMOLITION NOTES

1 DURING DEMOLITION PROPERLY CAP AND PROTECT ALL PIPING THAT WILL REMAIN IN OPERATION

2 WHERE EXISTING INSULATION TO REMAIN IS DAMAGED BY THE REQUIREMENTS OF WORK, REPLACE ANY DAMAGED INSULATION

3 PLUMBING CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR DISTRIBUTION OF RESPONSIBILITY AMONGST CONTRACTORS FOR SPECIFIC PORTIONS OF CUTTING AND PATCHING WORK. PLUMBING CONTRACTOR SHALL COORDINATE ALL CUTTING AND PATCHING WORK WITH ALL OTHER CONTRACTORS INVOLVED AS DEFINED IN THE SPECIFICATIONS

4 LOCATION OF EXISTING PIPING AS SHOWN ON DRAWINGS IS APPROXIMATE

5 COMPLETELY REMOVE ALL EQUIPMENT AS INDICATED, FIXTURES & OR MISCELLANEOUS ARTICLES IN THEIR ENTIRETY INCLUDING AUXILLARY EQUIPMENT, PIPING, WIRING & CONDUIT

6 INCLUDE ALL DEMOLITION OF SYSTEMS AND COMPONENTS WHERE SYSTEMS SHALL BE REPLACED BY NEW WORK. REFER TO THE DRAWINGS & SPECIFICATIONS FOR SCOPE OF NEW & RECONNECTED WORK. THE INTENT OF THIS REQUIREMENT IS TO HAVE THE CONTRACTOR DISCONNECT, DEMOLISH & REMOVE ALL EXPOSED & CONCEALED WORK WHERE BEING REPLACED OR CONNECTED TO THE PROPOSED LAYOUTS

7 COORDINATE ELECTRICAL POWER DISCONNECTION PRIOR TO DEMOLITION WITH ELECTRICAL CONTRACTOR

8 PROTECT ALL FIXTURES, PLUMBING AND WORK OF OTHER TRADES WHICH IS TO REMAIN, FROM DAMAGE DURING DEMOLITION

9 ALL PIPING TO REMAIN SHALL HAVE ENDS TERMINATED IN A NEAT MANNER READY FOR CONNECTION OF NEW WORK. ALL EXPOSED ENDS OF PIPING SHALL BE CAPPED

10 NO DEAD LEGS LONGER THAN 12" SHALL BE LEFT ON ANY PIPING UPON COMPLETION OF JOB

11 EXISTING PIPING NOT TO BE REUSED, NOT SUPPLYING ANY FIXTURE AND NOT SPECIFICALLY NOTED OR SHOWN ON DRAWINGS TO BE ABANDONED, SHALL BE COMPLETELY REMOVED

12 CONTRACTOR SHALL CLEAN UP, REMOVE AND DISPOSE OF ALL DEBRIS AND DISCARDED ITEMS UPON COMPLETION OF CONSTRUCTION TO BE READY FOR A NEW OCCUPANCY CONDITION

13 DEMOLISH & COMPLETLY REMOVE EXISTING CONDITIONS DESIGNATED BY A HEAVY DASHED LINE UNLESS NOTED OTHERWISE. REFER TO LEGEND AND DEMOLITION PLANS FOR SCOPE OF WORK

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Graphic Scale
0" 1"
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STATE OF MAINE
DAVID W. STORY
NO. 12053
LICENSED PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

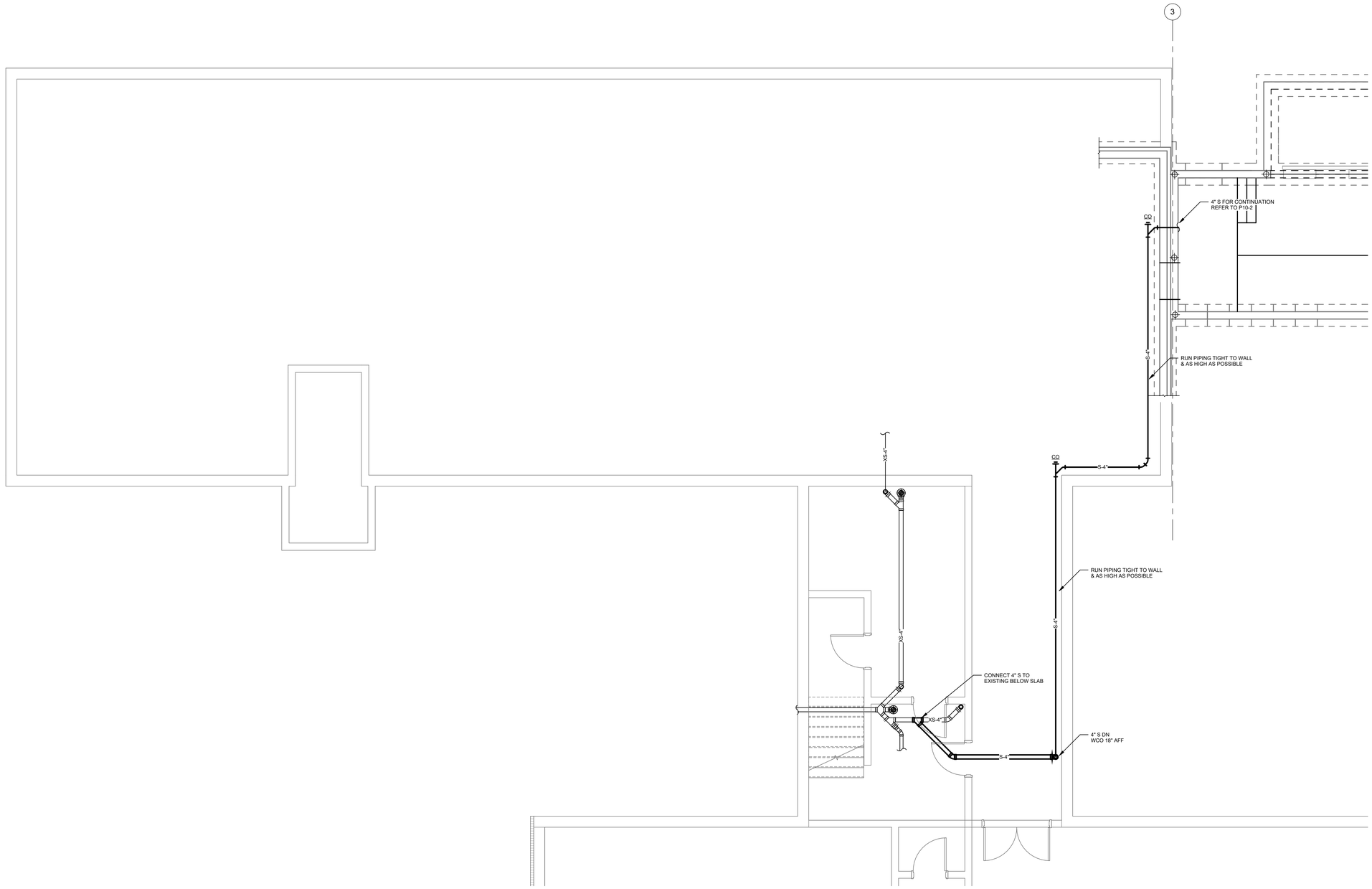
OCTOBER 20, 2025

Revision Date	Revision Description

Drawn by: MAM

LEGEND, GENERAL NOTES & DETAILS

P00-1



A1 BASEMENT DRAINAGE
SCALE: 1/4" = 1'-0"

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Revision Date	Revision Description

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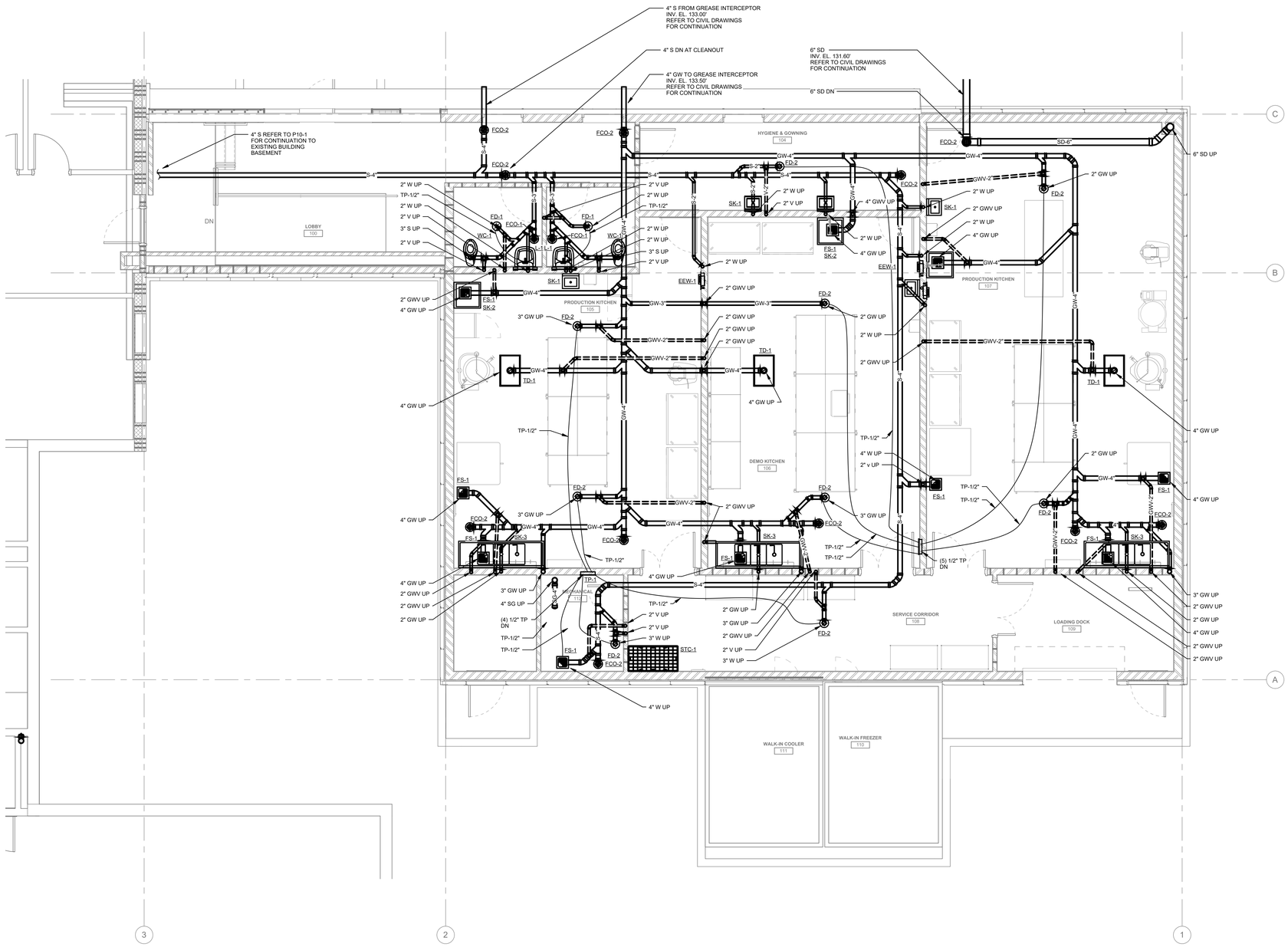
BASEMENT FLOOR PLAN
DRAINAGE

P10-1



A1 BELOW SLAB DRAINAGE
SCALE: 1/4" = 1'-0"

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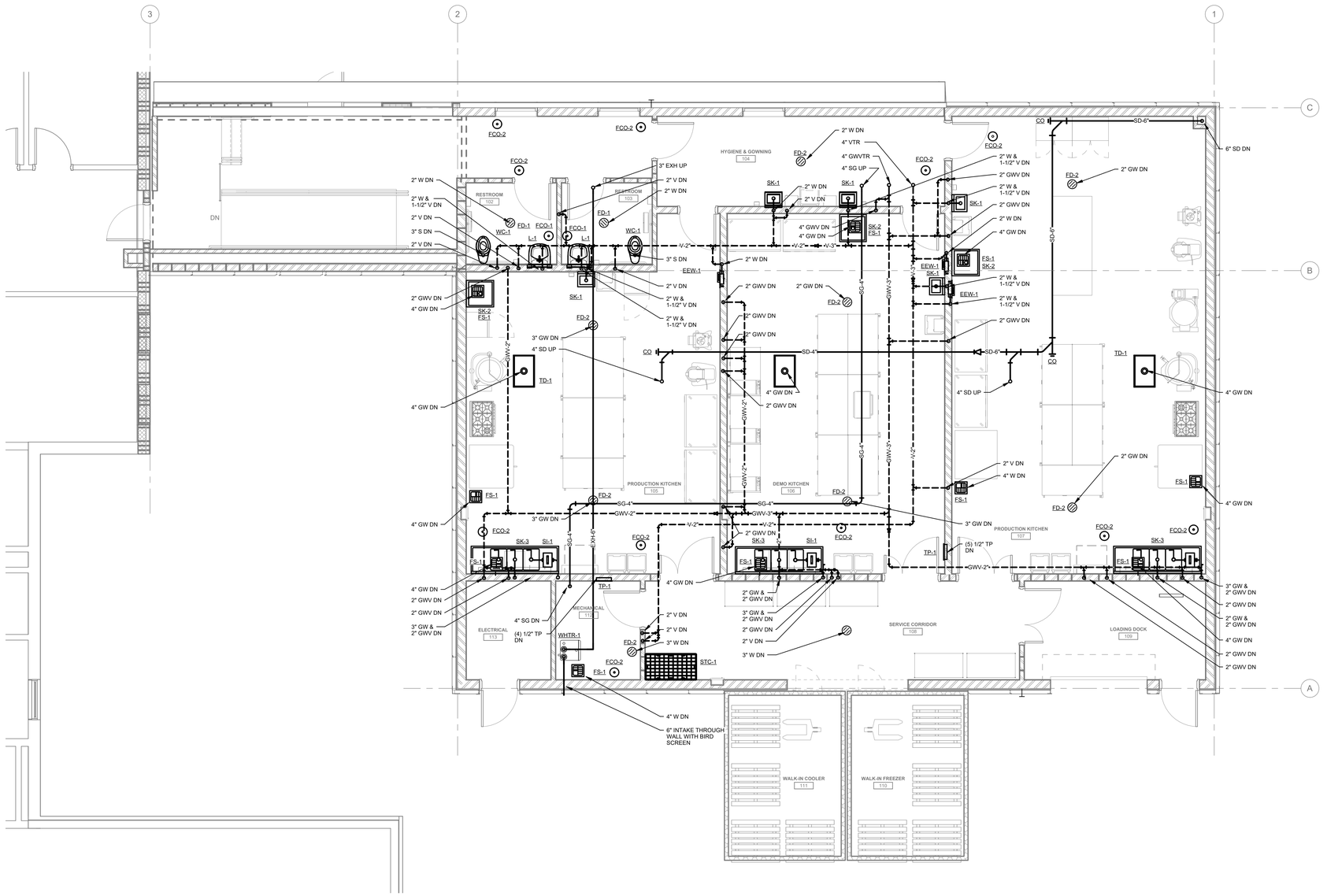
FIRST FLOOR BELOW
SLAB PLAN DRAINAGE

P10-2



A1 FIRST FLOOR PLUMBING
SCALE: 1/4" = 1'-0"

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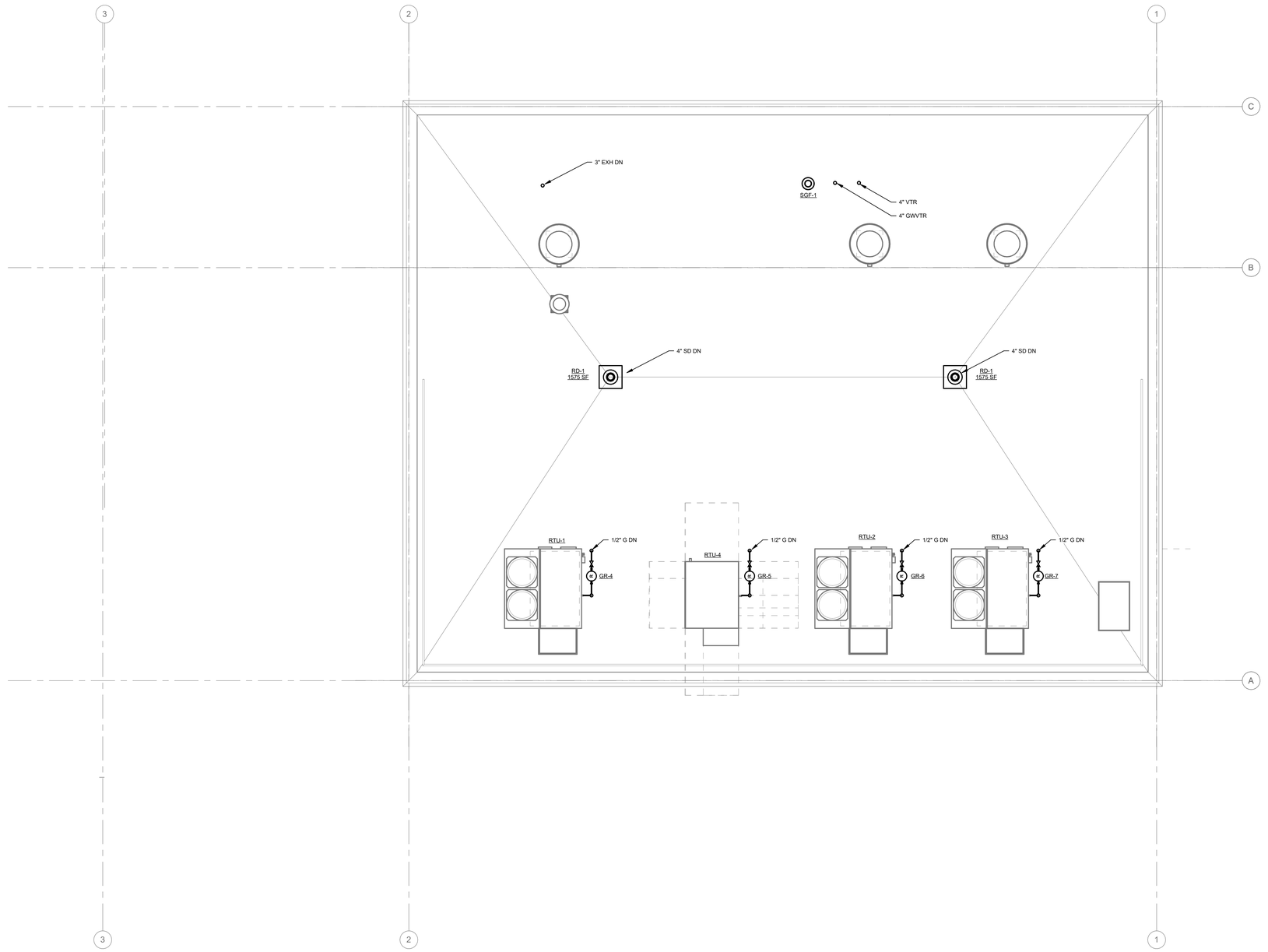
FIRST FLOOR PLAN
DRAINAGE

P10-3



A1 ROOF PLAN
SCALE: 1/4" = 1'-0"

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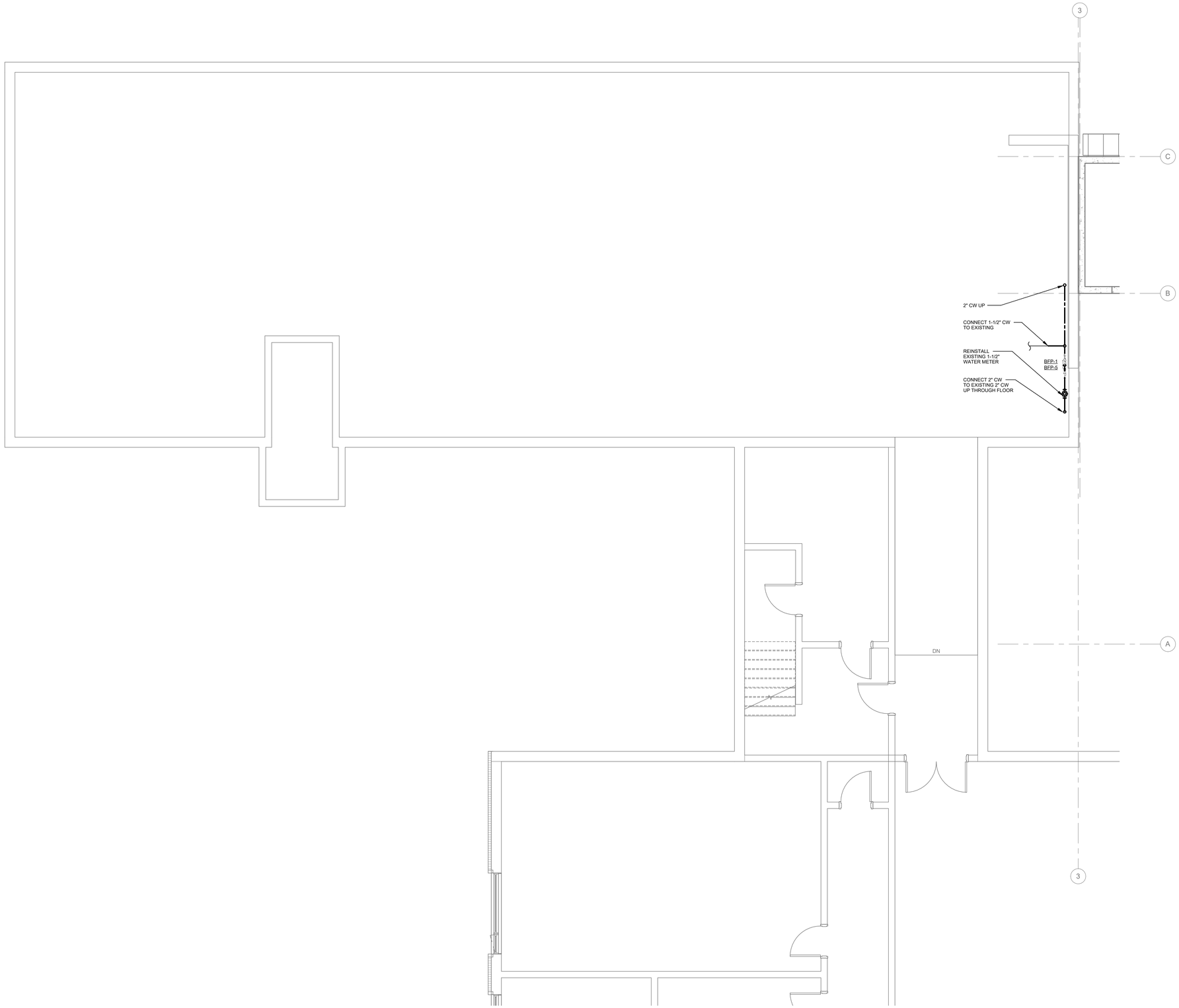
ROOF PLAN

P15-1



A1 BASEMENT FLOOR PLAN SUPPLY
SCALE: 1/4" = 1'-0"

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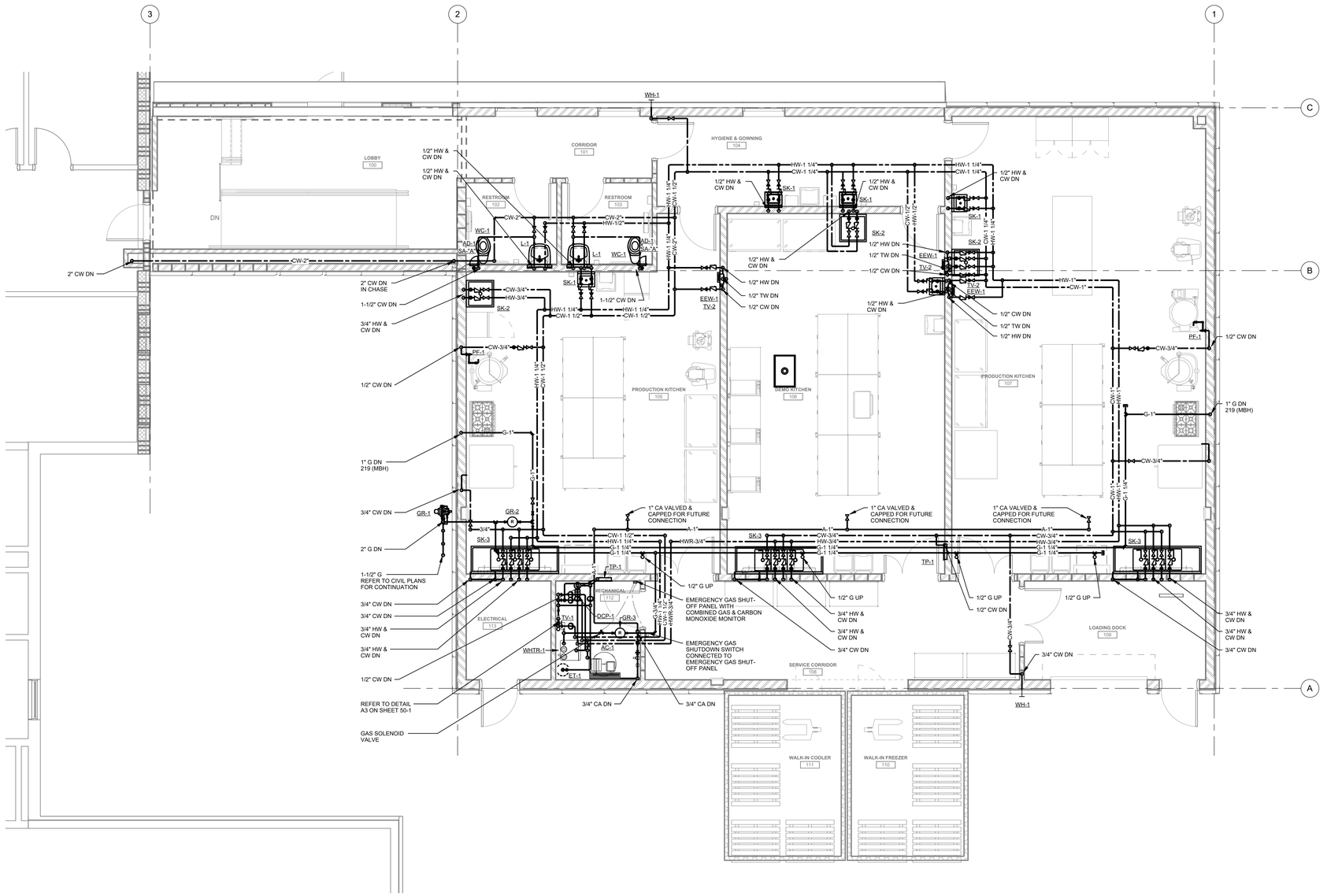
BASEMENT FLOOR PLAN
SUPPLY

P20-1



A1 FIRST FLOOR SUPPLY
SCALE: 1/4" = 1'-0"

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Revision Date	Revision Description

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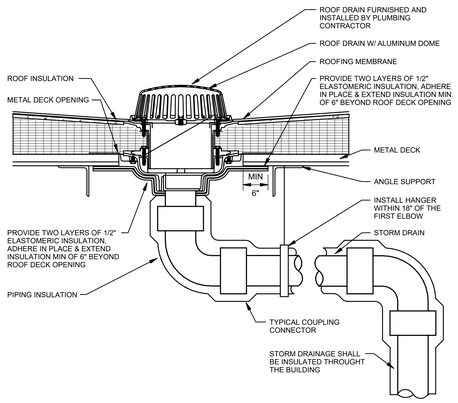
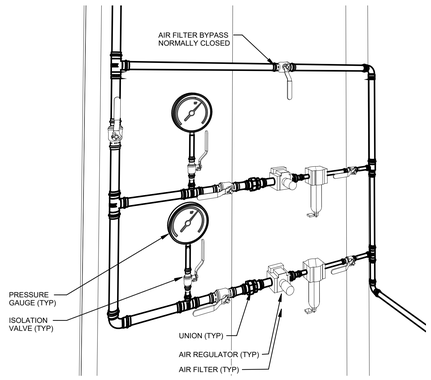
FIRST FLOOR PLAN SUPPLY

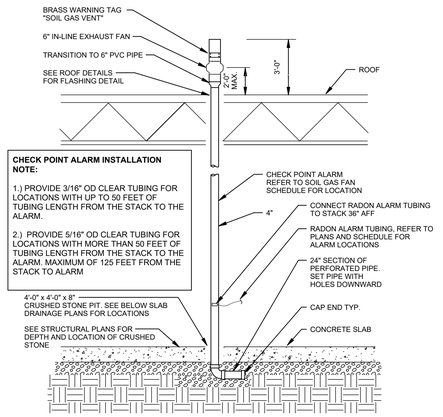
P20-2



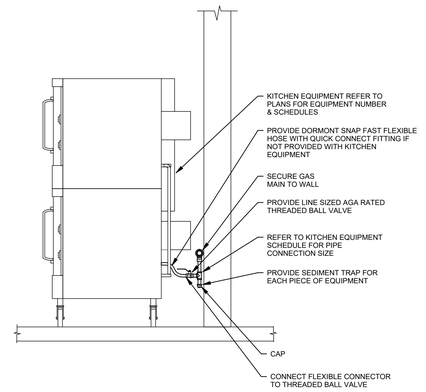
C1 ROOF DRAIN PIPING DETAIL
NO SCALE



C2 COMPRESSED AIR PIPING DETAIL
NO SCALE



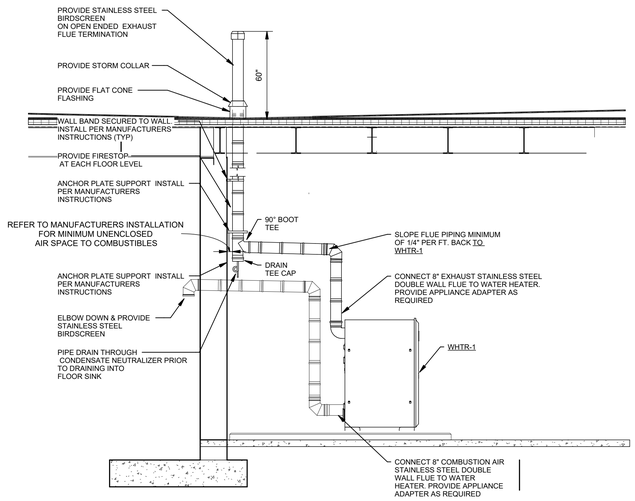
C3 SOIL GAS VENT PIPING DETAIL
NO SCALE



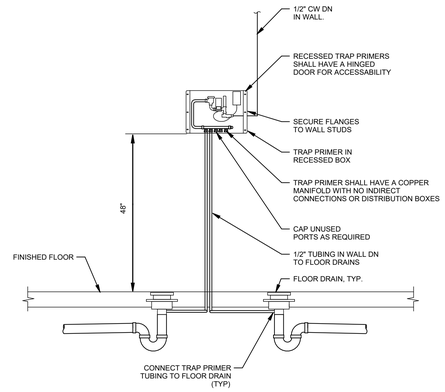
C4 TYP GAS CONNECTION TO KITCHEN EQUIPMENT
NO SCALE

NOTE:
1. COMBUSTION AIR & EXHAUST SHALL BE MINIMUM OF 10'-0" FROM ALL ROOF EDGES

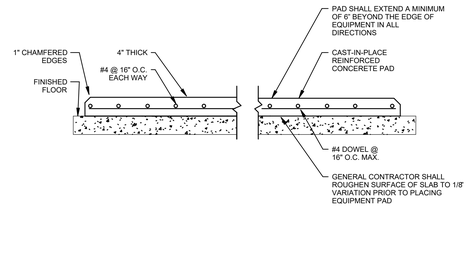
2. EXHAUST SHALL BE MINIMUM OF 15'-0" FROM ALL MECHANICAL FRESH AIR INTAKES.



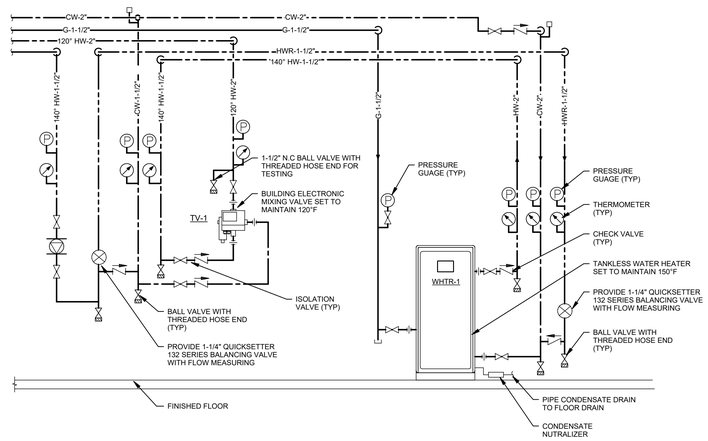
A1 WATER HEATER FLUE DETAIL
NO SCALE



B3 TRAP PRIMER-ELECTRONIC
NO SCALE



B4 EQUIPMENT PAD DETAIL
NO SCALE



A3 DOMESTIC WATER HEATING SYSTEM DETAIL
NO SCALE

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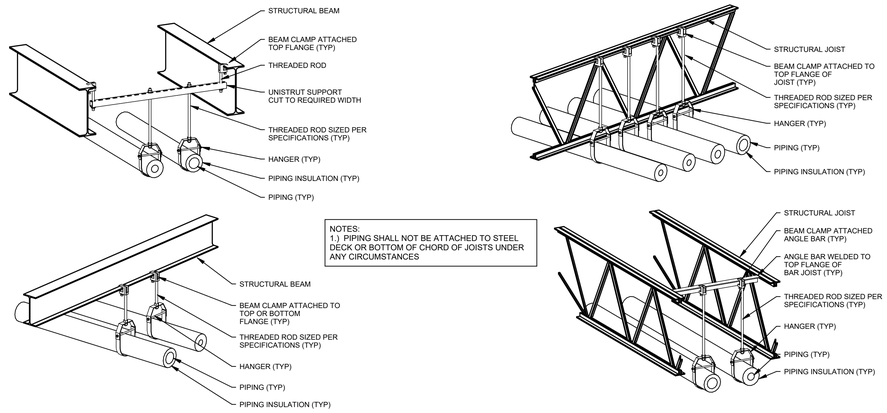
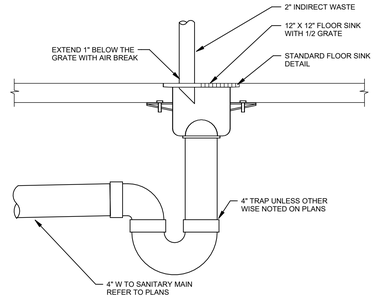
DETAILS

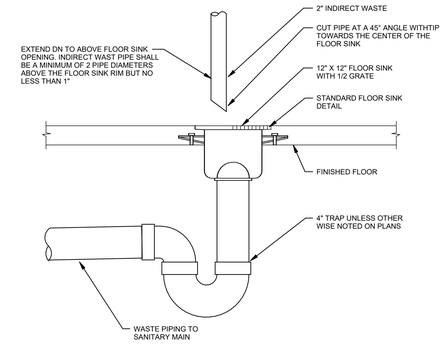
P50-1



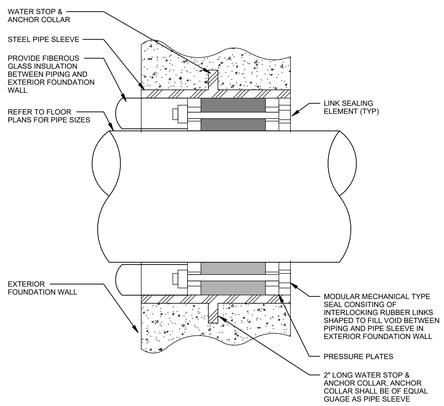
C1 HANGER ATTACHMENTS TO STRUCTURES
NO SCALE



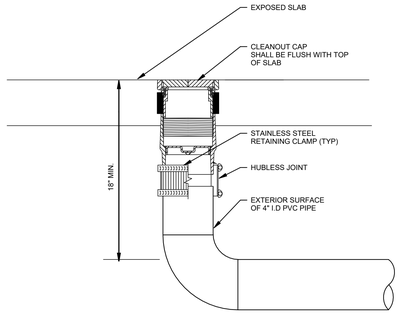
C3 INDIRECT WASTE RECEPTOR WITH AIR BREAK
NO SCALE



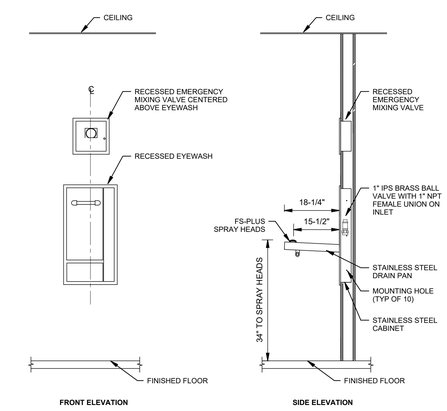
C4 INDIRECT WASTE RECEPTOR WITH AIR GAP
NO SCALE



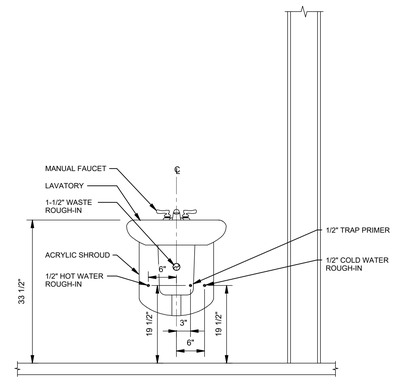
B1 WATER TIGHT PIPE SEAL AT EXTERIOR FOUNDATION WALLS
NO SCALE



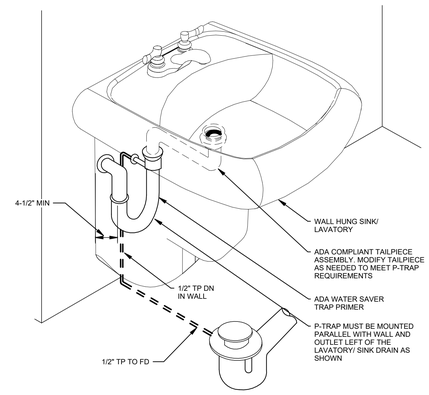
B2 FLOOR CLEANOUT AT END OF BRANCH
NO SCALE



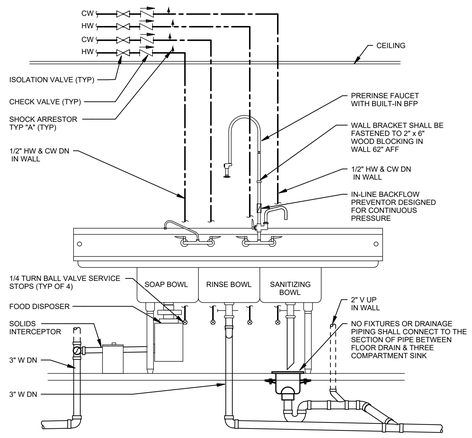
B3 EMERGENCY EYEWASH MOUNTING DETAIL
NO SCALE



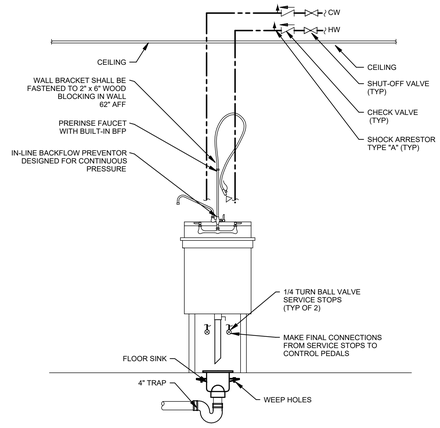
B4 ADA LAVATORY ROUGH-IN DETAIL
NO SCALE



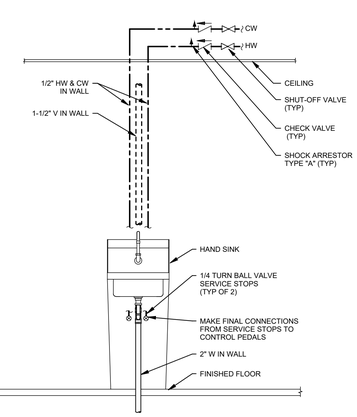
A1 P-TRAP TRAP PRIMER DETAIL
NO SCALE



A2 THREE COMPARTMENT SINK PIPING DETAIL
NO SCALE



A3 TYP. SCULLERY SINK PIPING DETAIL
NO SCALE



A4 HAND SINK PIPING DETAIL
NO SCALE

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CONSTRUCTION DOCUMENTS

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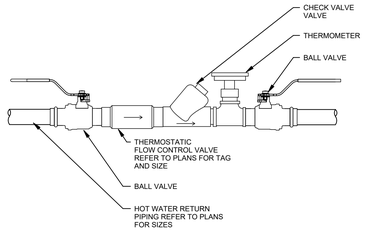
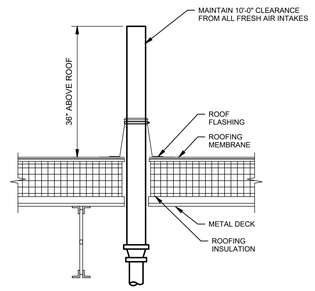
DETAILS

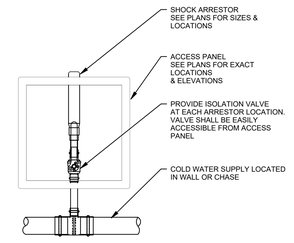
P50-2



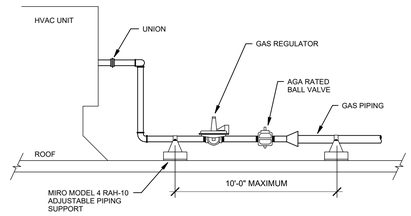
A1 THERMOSTATIC FLOW CONTROL VALVE
NO SCALE



A2 TYPICAL REGULATOR VENT DETAIL
NO SCALE



A3 SHOCK ARRESTOR DETAIL
NO SCALE



A4 GAS CONNECTION-ROOFTOP
NO SCALE

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DETAILS

P50-3

PLUMBING FIXTURE INSTALLATION SCHEDULE

FURNISHED AND INSTALLED BY PLUMBING CONTRACTOR

TAG	DESCRIPTION	BRANCH CONNECTION					BASIS OF DESIGN FIXTURE SPECIFICATIONS REFER TO THE SPECIFICATIONS FOR APPROVED EQUALS AND DETAILED DESCRIPTIONS	BASIS OF DESIGN FIXTURE SPECIFICATIONS REFER TO THE SPECIFICATIONS FOR APPROVED EQUALS AND DETAILED DESCRIPTIONS	MOUNTING HEIGHT TO RIM UNLESS NOTED OTHERWISE
		WASTE	VENT	COLD WATER	HOT WATER	TEMPERED WATER			
WC-1	ADA COMPLIANT WATER CLOSET FLOOR MOUNTED	4"	2"	1"	-	-	AMERICAN STANDARD MADERA EVERCLEAN MODEL 3461.001, PROVIDE CHURCH MODEL 9500CT TOILET SEAT	SLOAN CROWN MODEL 111-1.28	16 1/2"
L-1	ADA COMPLIANT WALL HUNG LAVATORY	2"	1 1/2"	1/2"	1/2"	-	AMERICAN STANDARD MURRO WITH ACRYLIC SHROUD MODEL 0954.004EC-0062.00EC, PROVIDE TRAP PRIMER JAY R. SMITH MODEL 2699-ADA,TRAP PRIMER SHALL BE INSTALLED PER DETAIL.PROVIDE WATTS CONCEALED ARM CARRIER	CHICAGO FAUCET MANUAL FAUCET MODEL 410-T41E64VPABCP	34"
SK-1	HAND SINK	2"	1 1/2"	1/2"	1/2"	-	AERO MANUFACTURING HAND SINK WITH FOOT PEDALS & SPOUT MODEL HSB	PROVIDED WITH HAND SINK	34"
SK-2	ONE COMPARTMENT SINK	2"	1 1/2"	3/4"	3/4"	-	AERO MANUFACTURING MODEL 3F1-2424	T & S BRASS AND BRONZE WORKS MODEL B-0133-08C LOW-FLOW PRE-RINSE WITH B-WH-4 WRIST BLADE HANDLES, MODEL B-109 WALL BRACKET, MODEL B-156 ADD ON FAUCET, WITH B-0199-01 AERATOR AND B-WH-4 WRIST BLADE HANDLES	36"
SK-3	THREE COMPARTMENT SINK WITH LEFT AND RIGHT DRAINBOARDS	2"	2"	3/4"	3/4"	-	AERO MANUFACTURING MODEL 2F3-2020-20LR.SINK SHALL BE PROVIDED WITH TWO SETS OF 8" ON CENTER HOLE FOR FAUCETS PROVIDE INSINKERATOR DISPOSER MODEL SS-300-CUL ON LEFT BOWL	T & S BRASS AND BRONZE WORKS (TWO FAUCET SETS) ONE SHALL BE MODEL B-0133-08C LOW-FLOW PRE-RINSE WITH B-WH-4 WRIST BLADE HANDLES, MODEL B-109 WALL BRACKET, MODEL B-156 ADD ON FAUCET, WITH B-0199-01 AERATOR AND B-WH-4 WRIST BLADE HANDLES, THE SECOND SHALL BE MODEL B-231, 12 INCH SWING SPOUT, WITH B-0199-01 AERATOR, AND B-WH-4 WRIST BLADE HANDLES	36"
PF-1	GLASS AND POT FILLER	-	-	1/2"	-	-		CHICAGO FAUCET GLASS AND POT FILLER MODEL 332-DJ26ABCP	42"
EEW-1	ADA COMPLIANT RECESSED EMERGENCY EYEWASH	2"	1 1/2"	-	-	1"	GUARDIAN MODEL GBF1735DP	-	34" TO SPRAY NOZZLES
HB-1	HOSE BIBB	-	-	-	1/2"	-	CHICAGO FAUCET MECHANICAL FAUCET MODEL 952-XKCP	-	60"
WH-1	WALL HYDRANT	-	-	3/4"	-	-	WATTS MODEL HY-725	-	36"
AD-1	SHOCK ARRESTOR ACCESS PANEL	-	-	-	-	-	8"x 8" ACCESS PANEL	-	42"
SI-1	SOLIDS INTERCEPTOR	3"	2"	-	-	-	ZURN ZS 1183 STAINLESS STEEL SOLIDS INTERCEPTOR	-	FLOOR MOUNTED
STC-1	SPILL CONTAINMENT TANK	-	-	-	-	-	EAGLE MANUFACTURING MODEL 1645B	-	FLOOR MOUNTED

WATER HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	INPUT HEAT (MBH)	FUEL SOURCE	GAS PRESSURE (MIN / MAX)	RECOVERY (GAL/HR)	CONNECTION SIZES					ELECTRICAL		WEIGHT (LBS)	NOTES
							COLD WATER	HOT WATER	GAS	COMBUSTION AIR	EXHAUST AIR	VOLTS	PHASE		
WHTR-1	Intellihot Inc	iN401	399	NATURAL GAS	2.5"/14"	660	1 1/2"	1 1/2"	1 1/2"	6"	6"	120	1	345	

TEMPERING VALVE SCHEDULE

BASIS OF DESIGN TEMPERING VALVE SPECIFICATIONS REFER TO THE SPECIFICATIONS FOR APPROVED EQUALS AND DETAILED DESCRIPTIONS

TAG	MANUFACTURER	MODEL	COLD WATER	HOT WATER	TEMPERED WATER	MAXIMUM OPERATING PRESSURE (PSI)	MAXIMUM OPERATING TEMPERATURE (DEG. F)	MAXIMUM FLOW @ 10 PSI LOSS (GPM)	MINIMUM FLOW (GAL)	TEMPERATURE SETPOINT (DEG.F)	ELECTRICAL		NOTES
											VOLTS	PHASE	
TV-1	WATTS-POWER	IS2100VL	1"	1"	1 1/4"	200.00	200	73	1	120°	120	1	
TV-2	LEONARD	6020-LF-STSTL-REC	1/2"	1/2"	1/2"	125.00	90	4	2	85°			EMERGENCY FIXTURES

PUMP SCHEDULE

BASIS OF DESIGN PUMP SPECIFICATIONS REFER TO THE SPECIFICATIONS FOR APPROVED EQUALS AND DETAILED DESCRIPTIONS

TAG	MANUFACTURER	MODEL	FLOW (GPM)	HEAD	CONNECTION SIZE	ELECTRICAL			NOTES
						VOLT	PHASE	WATTS	
DCP-1	GRUNDFOS	MAGNA 3 32-100F-N	5	10.00	3/4"	120	1	88.0	SET PUMPS TO CONSTANT SPEED

RADON FAN SCHEDULE

BASIS OF DESIGN RADON FAN SPECIFICATIONS REFER TO THE SPECIFICATIONS FOR APPROVED EQUALS AND DETAILED DESCRIPTIONS

TAG	MANUFACTURER	MODEL	PIPE CONNECTION	ELECTRICAL			NOTES
				VOLTS	PHASE	WATTS	
SGF-1	FANTECH	RN4EC	6"	0	0	0	ALARM SHALL ME MOUNTED IN MECHANICAL ROOM

GAS REGULATOR SCHEDULE

TAG	MANUFACTURER	MODEL	GAS CONNECTION SIZE	GAS LOAD (MBH)	OUTLET PRESSURE SET POINT	SERVICE	NOTES
GR-1	BY UTILITY	-	2"	1995	2 PSI	UTILITY REGULATOR	
GR-2	MAXITROL	325-5L	1"	438	11"	KITCHEN EQUIPMENT	
GR-3	MAXITROL	325-5L	1"	499	11"	WATER HEATER	
GR-4	MAXITROL	325-5L	1"	326	11"	RTU-1	
GR-5	MAXITROL	325-5L	1"	80	11"	RTU-4	
GR-6	MAXITROL	325-5L	1"	326	11"	RTU-2	
GR-7	MAXITROL	325-5L	1"	326	11"	RTU-3	

TANK SCHEDULE

BASIS OF DESIGN EXPANSION TANK SPECIFICATIONS REFER TO THE SPECIFICATIONS FOR APPROVED EQUALS AND DETAILED DESCRIPTIONS

TAG	MANUFACTURER	MODEL	AREA SERVED	VOLUME (GAL)	MAX ACCEPTANCE VOLUME (GAL)	MAX OPORATING TEMPERATURE (DEG. F)	NOTES
ET-1	AMTROL	ST-20V-C		8.0 gal	3.2 gal	240 °F	

PLUMBING PIPING MATERIALS SCHEDULE

SYSTEM	MATERIAL
SANITARY WASTE & VENT (UNDERGROUND)	SCHEDULE 40 POLYVINYL CHLORIDE (PVC)
SANITARY WASTE & VENT (ABOVE GROUND)	SCHEDULE 40 POLYVINYL CHLORIDE (PVC)
GREASE WASTE & VENT (UNDERGROUND)	SCHEDULE 40 POLYVINYL CHLORIDE (PVC)
GREASE WASTE & VENT (ABOVE GROUND)	SCHEDULE 40 POLYVINYL CHLORIDE (PVC)
CONDENSATE (INSIDE BUILDING)	SCHEDULE 40 POLYVINYL CHLORIDE (PVC)
CONDENSATE (WITHIN A COOLER OR FREEZER)	DWV WEIGHT COPPER WITH HEAT TRACE FOR ENTIRE LENGTH
DOMESTIC WATER SUPPLY (UNDERGROUND)	SINGLE SEGMENT OF PEX TYPE "A" IN A CONTINUOUS NON METALLIC CONDUIT, SEALED AT THE TOP WITH NON SHRINK GROUT
DOMESTIC WATER SUPPLY (ABOVE GROUND)	TYPE "L" COPPER WITH PRESS FITTINGS
NATURAL GAS PIPING	SCHEDULE 40 BLACK STEEL WITH MEGA PRESS, THREADED OR WELDED FITTINGS
WATER HEATER EXHAUST & INTAKE FLUES	AL 29-4C STAINLESS STEEL WITH STAINLESS STEEL OUTER JACKET, POLYPROPYLENE (CONTRACTORS OPTION)

AIR COMPRESSOR SCHEDULE

TAG	MANUFACTURER	MODEL	COMPRESSED AIR BRANCH SIZE (IN)	CFM RATING	TANK VOLUME	HP	PHASE	VOLTAGE	NOTES
AC-1	QUINCY	QT-7.5-230V, PART NUMBER 273DS80IVCB23	3/4"	22.6	80.0	8	3	230	

EMERGENCY GAS SHUT-OFF PANEL

TAG	MANUFACTURER	MODEL	FUEL TYPE CONTROLLED	ELECTRICAL		NOTES
				VOLTS	PHASE	
EGP-1	AMERICAN GAS SAFETY, LLC.	AGS MINI MERLIN MODEL AGSSLPGCO-50, PROVIDE 2" GAS SOLENOID MODEL AGS-GSV & EMERGENCY GAS SHUT-OFF BUTTON MOEL AGSEGOTW	NATURAL GAS	120	1	

TRAP PRIMER SCHEDULE

BASIS OF DESIGN TRAP PRIMER SPECIFICATIONS REFER TO THE SPECIFICATIONS FOR APPROVED EQUALS AND DETAILED DESCRIPTIONS

TAG	MANUFACTURER	MODEL	COLD WATER	TRAP PRIMER	NUMBER OF PORTS	ELECTRICAL		NOTES
						VOLTS	PHASE	
TP-1	MIFAB	MI-100-10-ENC-120VAC	1/2"	1/2"	5	120	1	

FIXTURE CARRIER SCHEDULE

BASIS OF DESIGN FIXTURE CARRIER SPECIFICATIONS REFER TO THE SPECIFICATIONS FOR APPROVED EQUALS AND DETAILED DESCRIPTIONS

MANUFACTURER	DESCRIPTION	MODEL	WASTE	VENT
WATTS	FLOOR MOUNTED LAVATORY CARRIER WITH CONCEALED ARMS	WC-411	-	

DRAIN SCHEDULE

BASIS OF DESIGN DRAIN SPECIFICATIONS REFER TO THE SPECIFICATIONS FOR APPROVED EQUALS AND DETAILED DESCRIPTIONS

TAG	DESCRIPTION	BRANCH SIZE		SPECIFICATIONS BASIS OF DESIGN	NOTES
		W	V		
FCO-1	FLOOR CLEANOUT	3"	-	WATTS MODEL CO1200-3	
FCO-2	FLOOR CLEANOUT	4"	-	WATTS MODEL CO1200-4	
FD-1	FLOOR DRAIN	2"	2"	WATTS ROUND HEAVY DUTY STAINLESS STEEL STRAINER MODEL FD-1100-2-B6-5-7	
FD-2	FLOOR DRAIN	3"	2"	WATTS HEAVY DUTY STAINLESS STEEL STRAINER MODEL FD-1100-3-B8-5-7	
FS-1	FLOOR SINK	4"	2"	WATTS STAINLESS STEEL FLOOR SINK MODEL FS-780-4-5-175-HD	
RD-1	ROOF DRAIN	4"	-	WATTS MODEL RD-300-F-4-K80	
TD-1	FLOOR TROUGH	4"	2"	EAGLE FOOD SERVICE MODEL ASFT-1836-SG	

PIPING ACCESSORY SCHEDULE

BASIS OF DESIGN PIPE ACCESSORIES SPECIFICATIONS REFER TO THE SPECIFICATIONS FOR APPROVED EQUALS AND DETAILED DESCRIPTIONS

TAG	DESCRIPTION	MANUFACTURER	MODEL	PIPE CONNECTION SIZE
BFP-1	BACKFLOW PREVENTOR	WATTS	LF909M1-QT-S	2"
BFP-2	BACKFLOW PREVENTOR	WATTS	LF909M1-QT-S	3/4"
BFP-3	BACKFLOW PREVENTOR	WATTS	LF909M1-QT-S	3/4"
BFP-4	BACKFLOW PREVENTOR	WATTS	LF909M1-QT-S	3/4"
BFP-5	BACKFLOW PREVENTOR	WATTS	LF909M1-QT-S	3/4"

SHOCK ARRESTOR SCHEDULE

TAG	MANUFACTURER	MODEL	BRANCH CONNECTION	SUPPORTED FIXTURE UNITS
SA-"A"	OATEY	QUIET PIPE MODEL 34486	1/2"	1-11

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SCHEDULES

P60-1

ABBREV / DESCRIPTION

ABBREV	DESCRIPTION
ACV	AUTOMATIC CONTROL VALVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALD	ACOUSTICAL LINED DUCT
AMS	AIRFLOW MEASURING STATION
APD	AIR PRESSURE DROP
ATC	AUTOMATIC TEMPERATURE CONTROL
B	BAROMETRIC DAMPER
BD	BACKDRAFT DAMPER
BHP	BRAKE HORSEPOWER
BPD	BYPASS DAMPER
BTU	BRITISH THERMAL UNITS
CBD	COUNTERBALANCED BACKDRAFT DAMPER
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CO	CLEANOUT
CTE	CONNECT TO EXISTING
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
DCW	DOMESTIC COLD WATER
DEG.F	DEGREES FAHRENHEIT
DHW	DOMESTIC HOT WATER
DIA	DIAMETER
DN	DOWN
DTR	DUAL TEMPERATURE RETURN
DTS	DUAL TEMPERATURE SUPPLY
EAT	ENTERING AIR TEMPERATURE
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EXG	EXISTING
EXH	EXHAUST
F&T	FLOAT & THERMOSTATIC TRAP
F/S	FIRE AND SMOKE COMBINATION DAMPER
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FL	FINNED LENGTH OF RADIATION
FM	FLOW METER
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FPF	FINS PER FOOT
FPI	FINS PER/INCH
FPM	FEET PER MINUTE
FT	FEET
FT-HD	FEET OF HEAD
FT-WG	FEET WATER GAUGE
FTR	FIN TUBE RADIATOR
GAL	GALLONS
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HPCR	HIGH PRESSURE CONDENSATE RETURN (OVER 30 PSIG)
HPS	HIGH PRESSURE STEAM (OVER 30PSIG)
HRR	HEAT RECOVERY RETURN
HRS	HEAT RECOVERY SUPPLY
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY

ABBREV / DESCRIPTION

ABBREV	DESCRIPTION
IN	INCHES
LAT	LEAVING AIR TEMPERATURE
LPCR	LOW PRESSURE CONDENSATE RETURN (LESS THAN 15 PSI)
LPS	LOW PRESSURE STEAM(LESS THAN 15 PSI)
LRA	LOCKED ROTOR AMPS
LSGV	LOCK & SHIELD GATE VALVE
LWT	LEAVING WATER TEMPERATURE
M	MOTORIZED DAMPER
MAX	MAXIMUM
MBH	1000 BRITISH THERMAL UNITS
MCA	MINIMUM CIRCUIT AMPS
MIN	MINIMUM
MOPD	MAXIMUM OVERCURRENT PROTECTIVE DEVICE
MPCR	MEDIUM PRESSURE CONDENSATE RETURN(16-30 PSIG)
MPS	MEDIUM PRESSURE STEAM (16-30 PSIG)
NA	NOT APPLICABLE
NC	NOISE CRITERIA
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OC	ON CENTER
OED	OPEN END DUCT
OS&Y	OUTSIDE SCREW & YOKE GATE VALVE
PD	PRESSURE DROP
PRD	PRESSURE RELIEF DAMPER
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
RET	RETURN
RL	REFRIGERANT LIQUID
RLA	RATED LOAD AMPERES
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
S	SMOKE DAMPER
SP	STATIC PRESSURE
SS	STAINLESS STEEL
SUP	SUPPLY
TEMP	TEMPERATURE
TT	THERMOSTATIC TRAP
TYP	TYPICAL
V	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
W/	WITH
W/O	WITHOUT
WC	WATER COLUMN
WG	WATER GAUGE
WMS	WELDED WIRE MESH SCREEN
WPD	WATER PRESSURE DROP
Z	ZONE DAMPER
PREFIX OF X	EXISTING

PIPING LEGEND

SYMBOL	DESCRIPTION
	EXISTING SUPPLY PIPING TO REMAIN
	EXISTING RETURN PIPING TO REMAIN
	NEW SUPPLY PIPING
	NEW RETURN PIPING
	ACV 2 - WAY
	ACV 3 - WAY
	BUTTERFLY VALVE
	CAP - PIPE
	CHECK VALVE
	COMBINATION BALANCING, FLOW MEASURING & TIGHT SHUT-OFF VALVE
DPS	DIFFERENTIAL PRESSURE SENSOR
	FLOAT & THERMOSTATIC TRAP
	ISOLATION VALVE
	GLOBE VALVE
	INVERTED BUCKET TRAP
	LOCKSHIELD GATE VALVE
V	MANUAL AIR VENT
	OS&Y GATE VALVE
	PETCOCK FOR GAUGE CONNECTION
	PIPE ANCHOR
	PIPE DOWN
	PIPE UP
	PIPE GUIDE
	PLUG VALVE
P	PRESSURE GAUGE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	REDUCER - CONCENTRIC
	REDUCER - ECCENTRIC
	STRAINER
	TAKE - OFF FROM BOTTOM OF PIPE
	TAKE - OFF FROM TOP OF PIPE
	THERMOMETER
	THERMOMETER WELL
T	THERMOSTATIC TRAP
	UNION
A 10'-0" FL/D 1.2 GPM	RADIATION I.D. (TYPE A, 10'-0" FINNED LENGTH, BALANCED TO 1.2 GPM) WITH DAMPER
A 10'-0" FL 1.2 GPM	RADIATION I.D. (TYPE A, 10'-0" FINNED LENGTH, BALANCED TO 1.2 GPM) WITHOUT DAMPER

DUCTWORK LEGEND

SYMBOL	DESCRIPTION
	EXISTING DUCTWORK TO REMAIN
	NEW DUCTWORK
	ACOUSTICALLY LINED DUCT
AMS	AIRFLOW MEASURING STATION
BD	BACKDRAFT DAMPER
CB	COUNTERBALANCED DAMPER
Ø	SPIRAL DUCT DIAMETER
	DUCT SECTION - SUPPLY/OUTDOOR AIR
	DUCT SECTION - RETURN AIR
	DUCT SECTION - EXHAUST AIR
	DUCT TURNING VANES
F	FIRE DAMPER (1 1/2 HOUR RATED)
F/S	FIRE AND SMOKE DAMPER (1 1/2 HOUR RATED)
FD (3 HR)	FIRE DAMPER (3 HOUR RATED)
	FLEXIBLE DUCT
	LOUVER
M	MOTORIZED DAMPER
PRD	PRESSURE RELIEF DAMPER
	RETURN OR EXHAUST AIR
S	SMOKE DAMPER
SD	DUCT MOUNTED SMOKE DETECTOR
SPS	STATIC PRESSURE SENSOR
	SUPPLY OR OUTSIDE AIR
V	VOLUME DAMPER

S (SUPPLY) R (RETURN)
E (EXHAUST) T (TRANSFER)
SUPPLY DIFFUSER (TYPE 2)
DIFFUSER DESCRIPTION (SEE REG., GRILLES & DIFF SCHEDULE)
S2 4 — QUANTITY
400 — 400 CFM EA

CONTROLS LEGEND

SYMBOL	DESCRIPTION
H	HUMIDISTAT
HS	HUMIDITY SENSOR
TS	TEMPERATURE SENSOR
T	THERMOSTAT
T_c	THERMOSTAT COOLING
T_h	THERMOSTAT HEATING
T_n	THERMOSTAT - NIGHT
T_{ch}	THERMOSTAT - HEATING/COOLING

GENERIC LEGEND

SYMBOL	DESCRIPTION
	CONNECT NEW TO EXISTING
	COMPLETELY REMOVE EQUIPMENT, DUCTWORK, OR PIPING
	EXISTING EQUIPMENT TO REMAIN
	NEW EQUIPMENT
A M10.1	SECTION I.D. (SECTION A SHOWN ON DWG. M10.1)

GENERAL NOTES

1 VISIT THE BUILDING SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS, AND TO TAKE MEASUREMENTS AS NECESSARY FOR COMPLETION OF THE WORK ASSOCIATED WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS.
2 COORDINATE WORK OF MECHANICAL SUBCONTRACTOR WITH WORK OF OTHER TRADES.
3 DUCTWORK, PIPING AND EQUIPMENT ARE INDICATED DIAGRAMMATICALLY. FIELD-VERIFY LOCATIONS.
4 PRIOR TO FABRICATING DUCTWORK, COORDINATE WITH OTHER TRADES TO ENSURE THAT THE DUCTWORK CAN BE INSTALLED WITH THE INDICATED SIZES AND LOCATIONS.FIELD-VERIFY EXISTING DUCT SIZES AND CONDITIONS.SUBMIT ANY DISCREPANCIES OR PROPOSED CHANGES.
5 REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR LOCATIONS OF CEILING DIFFUSERS AND REGISTERS.
6 DUCT ELBOWS SHALL BE LONG-RADIUS TYPE (THROAT RADIUS EQUAL TO OR GREATER THAN DUCT WIDTH IN THE PLANE OF THE TURN) WHEREVER SPACE ALLOWS. IF SPACE IS NOT ADEQUATE, PROVIDE MITERED ELBOWS WITH TURNING VANES.
7 PROVIDE 16 GAUGE SINGLE-THICKNESS TURNING VANES AT MITERED DUCT ELBOWS. VANE EDGES (LEADING AND TRAILING) SHALL BE TANGENTIAL TO AIRFLOW.
8 FLEXIBLE DUCT LENGTHS SHALL NOT EXCEED 5'-0"
9 PAINT DUCTWORK VISIBLE THRU CEILING OPENINGS, DUCT OPENINGS, AND REGISTERS, GRILLES, AND DIFFUSERS WITH BLACK PAINT IN ACCORDANCE WITH DIVISION 09 SECTION "PAINTING."
10 MOUNT THERMOSTATS AND TEMPERATURE AND HUMIDITY SENSORS AT 48 INCHES AFF TO TOP OF ITEM. PROVIDE ELECTRICAL WALL BOX ATTACHED TO FRAMING.
11 WHERE THERMOSTATS/TEMPERATURE SENSORS ARE LOCATED NEAR LIGHT SWITCHES, INSTALL SO THAT LIGHT SWITCHES ARE NEARER TO THE DOOR JAMBS. THE INTENT IS TO LOCATE THERMOSTATS/ TEMPERATURE SENSORS SO THEY WILL NOT INTERFERE WITH ACCESSIBILITY OF LIGHT SWITCHES.
12 PIPING INDICATED IN OUTSIDE WALLS SHALL BE RUN ON THE WARM SIDE OF BUILDING INSULATION AND VAPOR BARRIER. BUILDING INSULATION BEHIND SUCH PIPING SHALL BE CONTINUOUS, WITHOUT JOINTS OR GAPS.
13 PIPING SHALL BE CONCEALED EXCEPT IN MECHANICAL ROOMS AND AS INDICATED. WHERE PIPES DROP IN BLOCK WALLS, PROVIDE 1/2" THICK INSULATION MINIMUM.
14 SEAL DUCTWORK AND PIPING THRU MECHANICAL ROOM FLOORS AND PARTITIONS, AND THRU FIRE-RATED ASSEMBLIES, WITH FIRESTOP MATERIAL AS SPECIFIED.
15 PROVIDE ALL REQUIRED PENETRATIONS IN RATED ASSEMBLIES, INCLUDING BUT LIMITED TO WALLS AND FLOORS WITH A UL APPROVED FIRESTOPPING ASSEMBLY INCLUDING LISTING LABEL OF PENETRATION AFTER PASSING THROUGH UTILITIES.
16 UNLESS SPECIFICALLY NOTED ON DRAWINGS PIPING SHALL ONLY BE ATTACHED TO TOP OF STEEL BAR JOISTS AT PANEL POINTS, TOP OR BOTTOM FLANGES OF STEEL BEAMS AND SIDE OF WODEN BEAMS. PIPING SHALL NOT BE ATTACHED TO STEEL DECK UNDER ANY CIRCUMSTANCES

DEMOLITION NOTES

1 DURING DEMOLITION PROPERLY CAP AND PROTECT ALL PIPING & DUCTWORK THAT WILL REMAIN IN OPERATION
2 WHERE EXISTING INSULATION TO REMAIN IS DAMAGED BY THE REQUIREMENTS OF WORK, REPLACE ANY DAMAGED INSULATION IN KIND
3 MECHANICAL CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR DISTRIBUTION OF RESPONSIBILITY AMONGST CONTRACTORS FOR SPECIFIC PORTIONS OF CUTTING AND PATCHING WORK. PLUMBING CONTRACTOR SHALL COORDINATE ALL CUTTING AND PATCHING WORK WITH ALL OTHER CONTRACTORS INVOLVED AS DEFINED IN THE SPECIFICATIONS
4 LOCATION OF EXISTING PIPING & DUCTWORK AS SHOWN ON DRAWINGS IS APPROXIMATE
5 COMPLETELY REMOVE ALL EQUIPMENT AS INDICATED & OR MISCELLANEOUS ARTICLES IN THEIR ENTIRETY INCLUDING AUXILLARY EQUIPMENT, PIPING, WIRING & CONDUIT
6 INCLUDE ALL DEMOLITION OF SYSTEMS AND COMPONENTS WHERE SYSTEMS SHALL BE REPLACED BY NEW WORK. REFER TO THE DRAWINGS & SPECIFICATIONS FOR SCOPE OF NEW & RECONNECTED WORK. THE INTENT OF THIS REQUIREMENT IS TO HAVE THE CONTRACTOR DISCONNECT, DEMOLISH & REMOVE ALL EXPOSED & CONCEALED WORK WHERE BEING REPLACED OR CONNECTED TO THE PROPOSED LAYOUTS
7 COORDINATE ELECTRICAL POWER DISCONNECTION PRIOR TO DEMOLITION WITH ELECTRICAL CONTRACTOR
8 ALL PIPING & DUCTWORK TO REMAIN SHALL HAVE ENDS TERMINATED IN A NEAT MANNER READY FOR CONNECTION OF NEW WORK. ALL EXPOSED ENDS OF PIPING SHALL BE CAPPED
9 EXISTING PIPING NOT TO BE REUSED, NOT SUPPLYING ANY EQUIPMENT AND NOT SPECIFICALLY NOTED OR SHOWN ON DRAWINGS TO BE ABANDONED, SHALL BE COMPLETELY REMOVED
10 CONTRACTOR SHALL CLEAN UP, REMOVE AND DISPOSE OF ALL DEBRIS AND DISCARDED ITEMS UPON COMPLETION OF CONSTRUCTION TO BE READY FOR A NEW OCCUPANCY CONDITION
11 DEMOLISH & COMPLETLY REMOVE EXISTING CONDITIONS DESIGNATED BY A HEAVY DASHED LINE UNLESS NOTED OTHERWISE. REFER TO LEGEND AND DEMOLITION PLANS FOR SCOPE OF WORK

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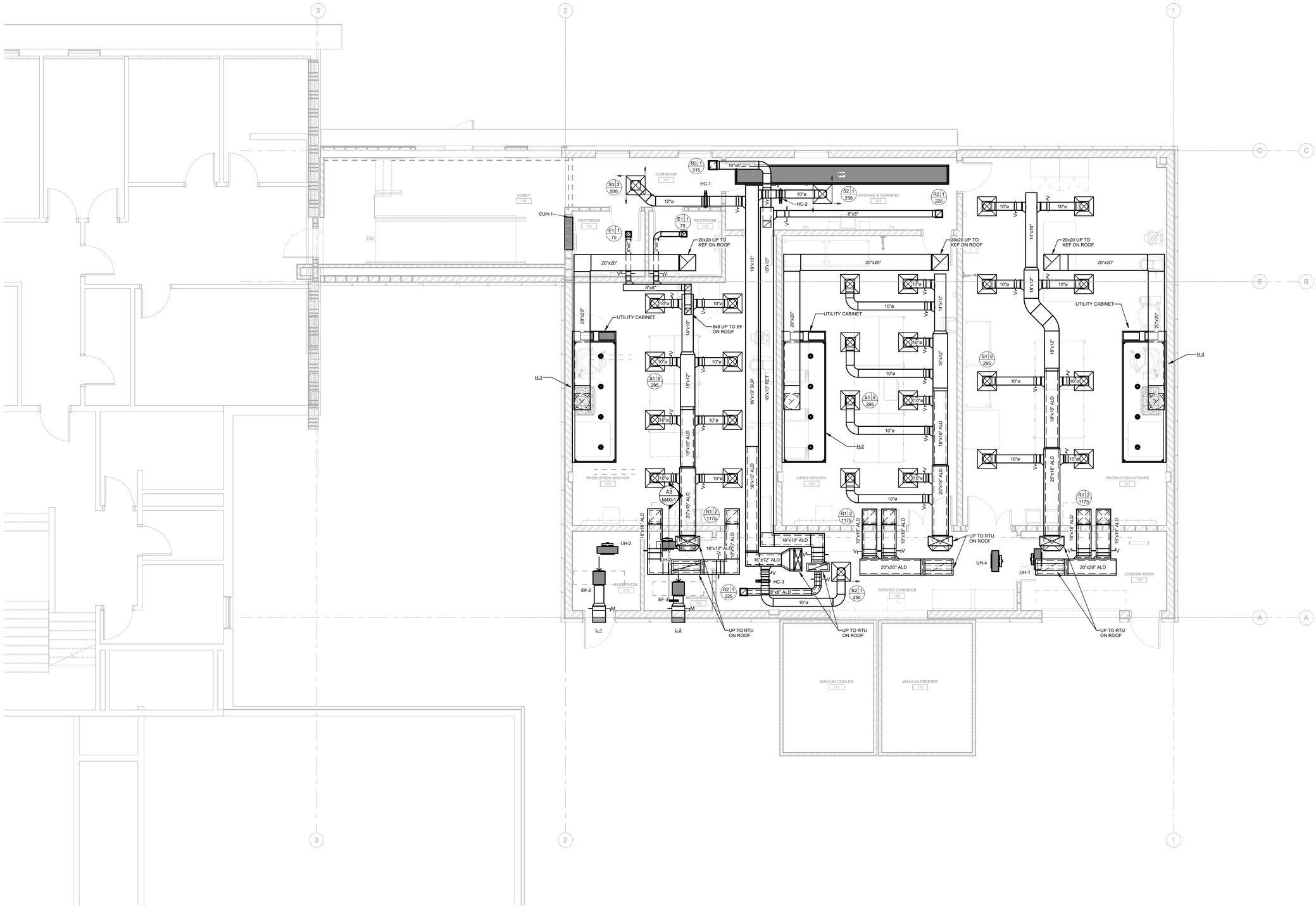
LEGEND & GENERAL NOTES

M00-1



A1 FIRST FLOOR DUCTWORK
SCALE: 1/4" = 1'-0"

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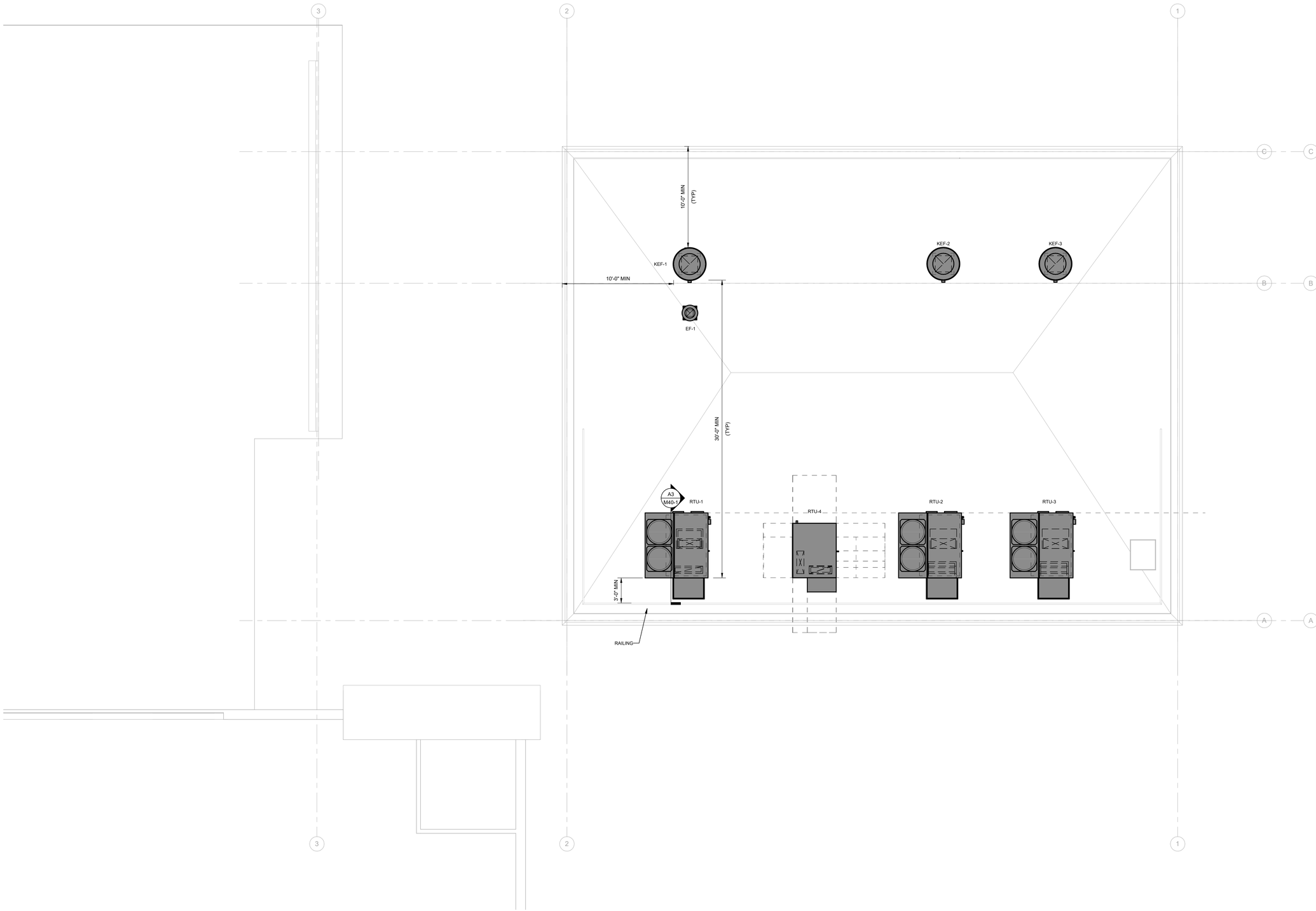
FIRST FLOOR DUCTWORK

M10-1



A1 Ductwork - Roof
SCALE: 1/4" = 1'-0"

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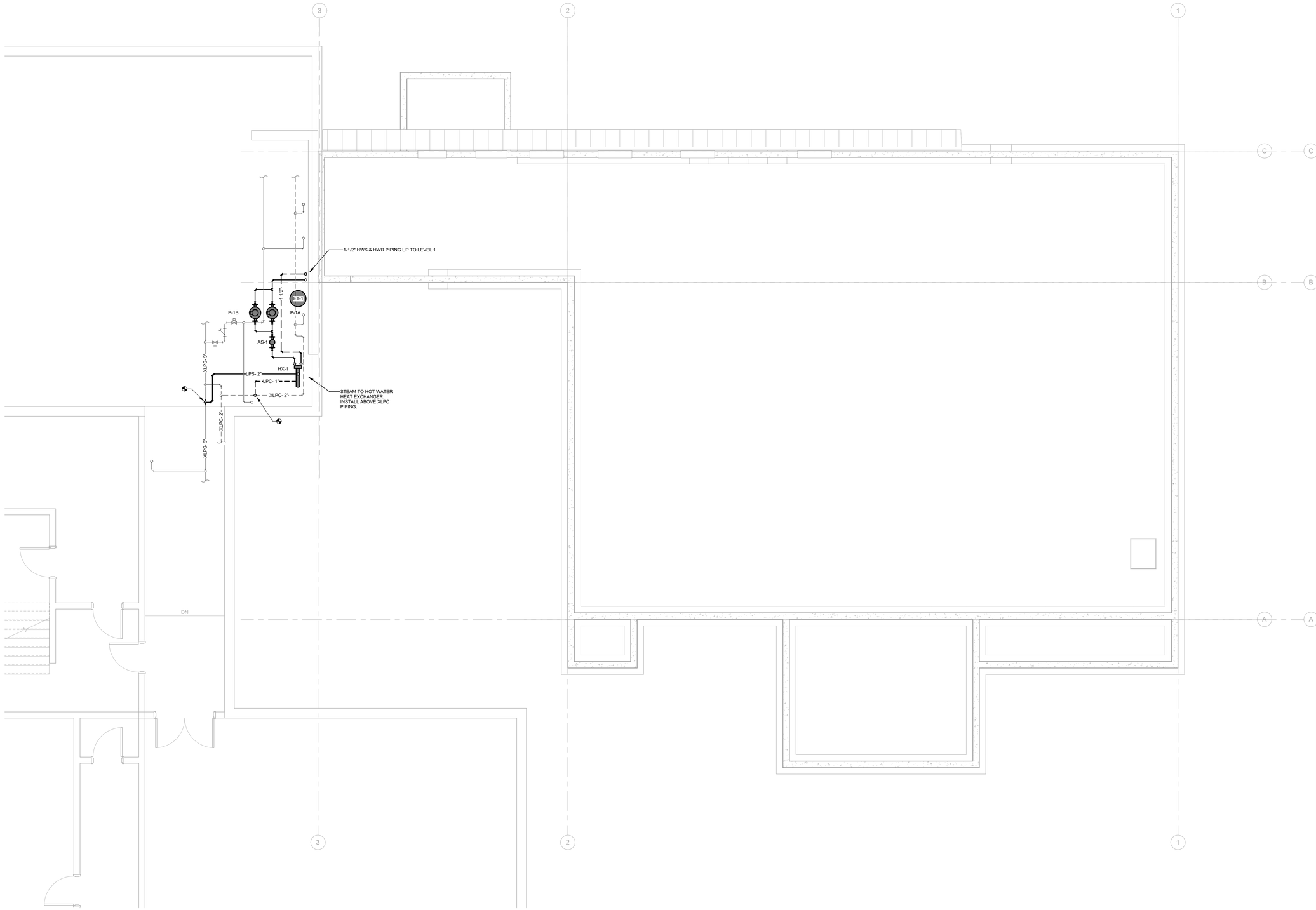
ROOF PLAN

M15-1



A1 BASEMENT PIPING
SCALE: 1/4" = 1'-0"

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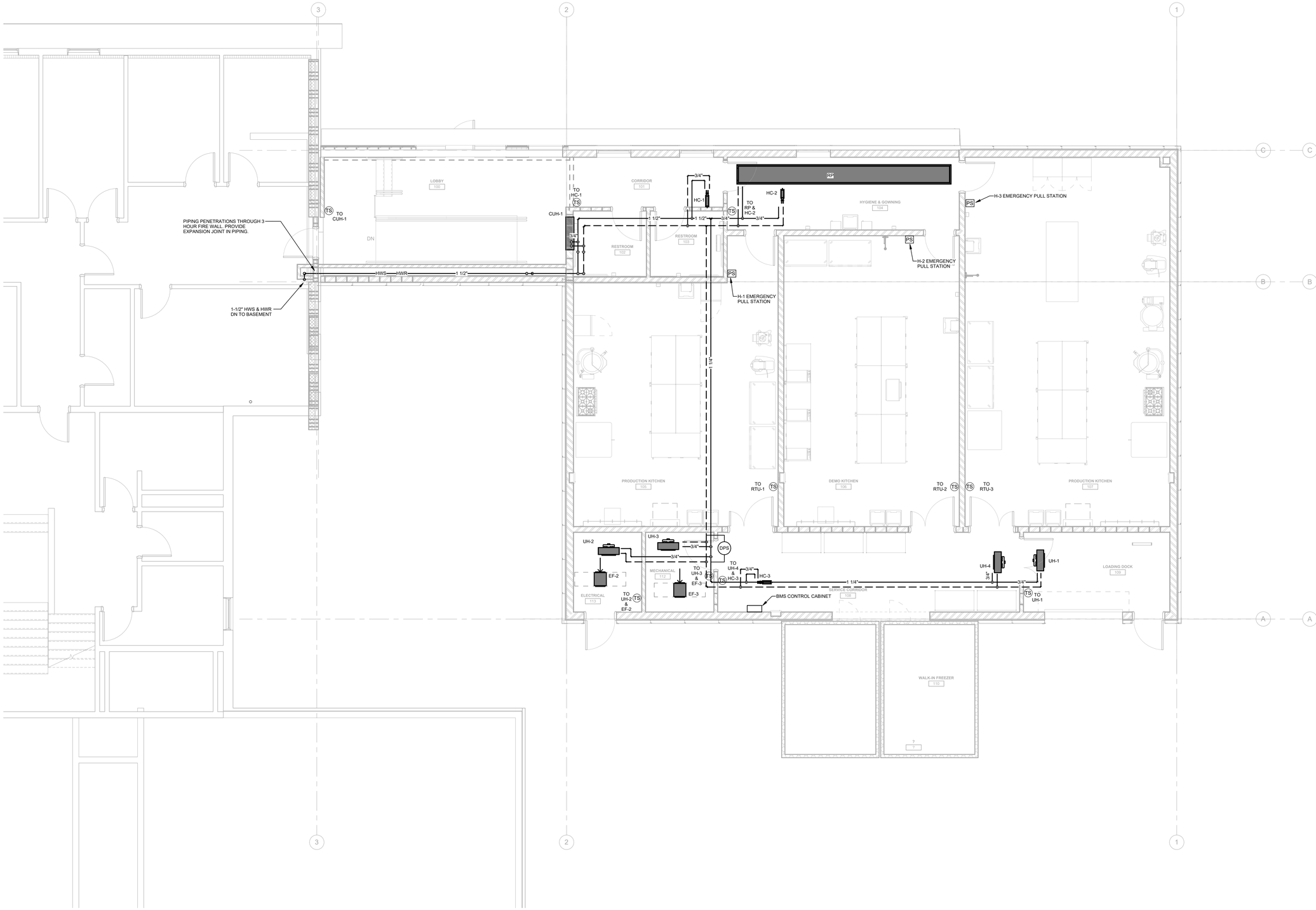
BASEMENT PIPING

M20-0



A1 FIRST FLOOR PIPING
SCALE: 1/4" = 1'-0"

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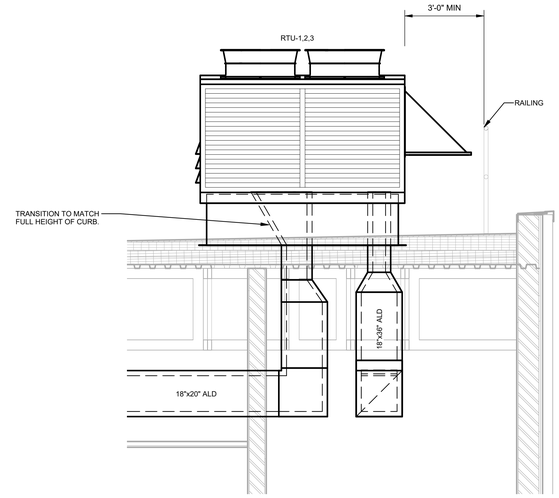
FIRST FLOOR PIPING

M20-1



A3 RTU-1,2,3 SECTION

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

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CONSTRUCTION DOCUMENTS

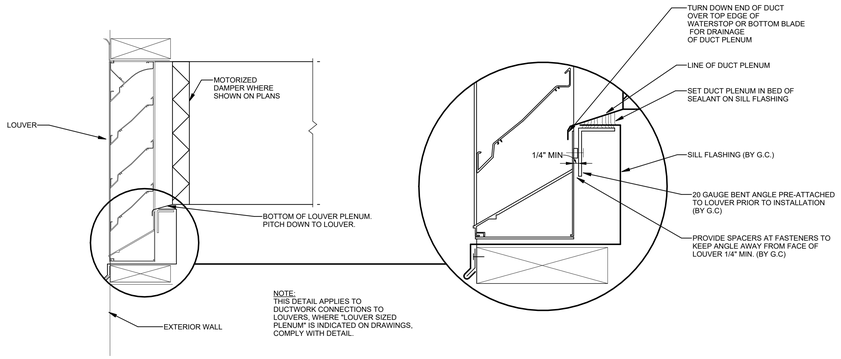
OCTOBER 20, 2025

Revision Date	Revision Description

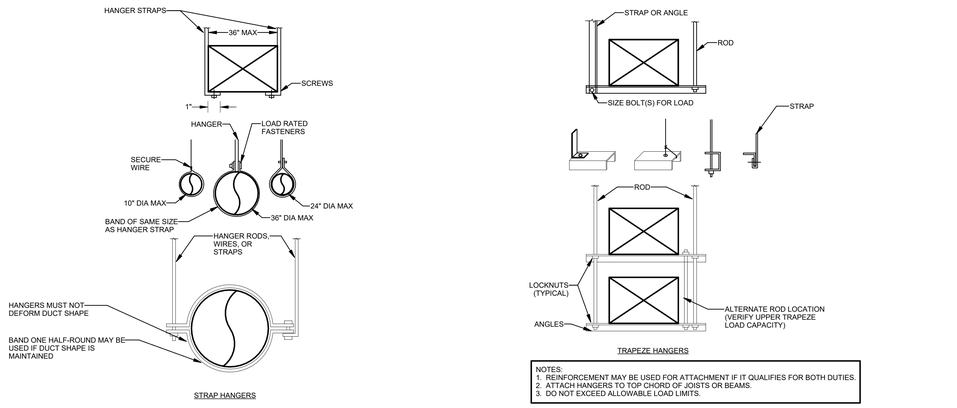
Drawn by: ERD

SECTIONS

M40-1

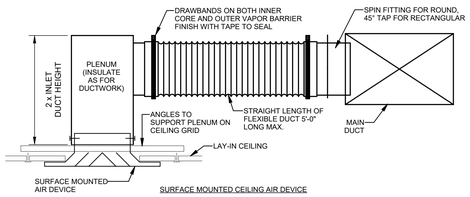


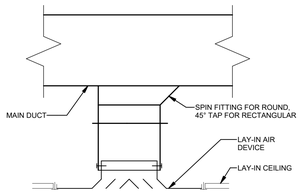
C1 LOUVER CONNECTION
NO SCALE

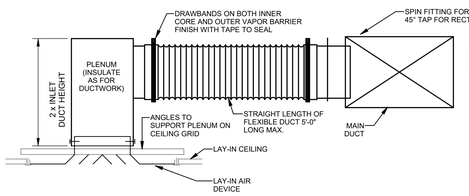


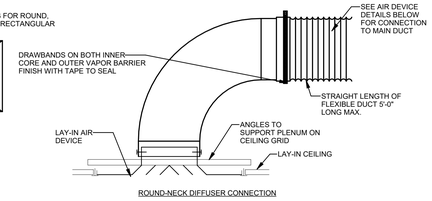
NOTES:
1. REINFORCEMENT MAY BE USED FOR ATTACHMENT IF IT QUALIFIES FOR BOTH DUTIES.
2. ATTACH HANGERS TO TOP CHORD OF JOISTS OR BEAMS.
3. DO NOT EXCEED ALLOWABLE LOAD LIMITS.

C3 LOWER HANGER ATTACHMENT
NO SCALE

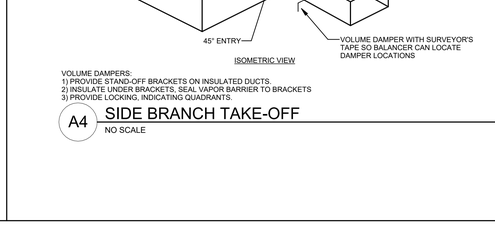




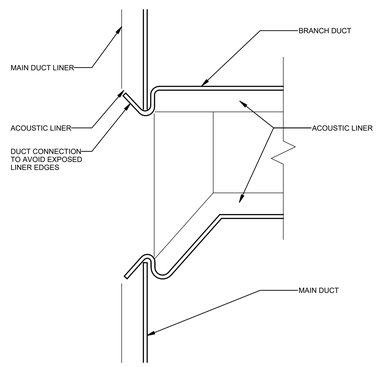




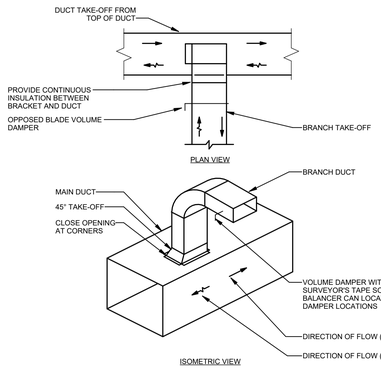
B1 CEILING AIR DEVICE
NO SCALE



B4 FLEXIBLE CONNECTION
NO SCALE

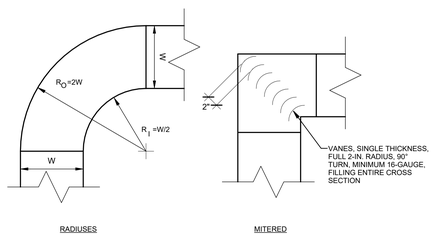


A1 LINED DUCT CONNECTION
NO SCALE



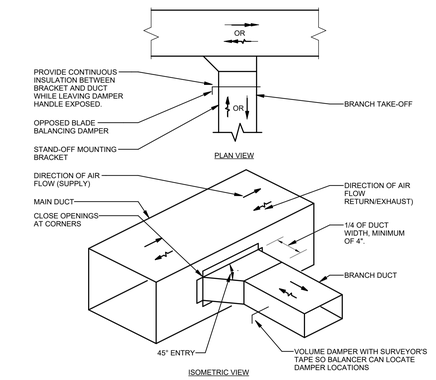
NOTE: INSULATED SUPPLY AND RETURN DUCTWORK SHALL BE INSTALLED WITH STAND-OFF MOUNTING BRACKETS FOR VOLUME/BALANCING DAMPER OPERATORS. ALLOW CLEARANCE BETWEEN DUCT AND OPERATOR OF NOT LESS THAN INSULATION THICKNESS.

A2 TOP OR BOTTOM BRANCH TAKE-OFF
NO SCALE



NOTE: USE MITERED ONLY WHERE SPACE IS TOO TIGHT FOR RADIUS, OR WHERE INDICATED ON DRAWINGS.

A3 DUCT ELBOW
NO SCALE



VOLUME DAMPERS:
1) PROVIDE STAND-OFF BRACKETS ON INSULATED DUCTS.
2) INSULATE UNDER BRACKETS, SEAL VAPOR BARRIER TO BRACKETS
3) PROVIDE LOCKING, INDICATING QUADRANTS.

A4 SIDE BRANCH TAKE-OFF
NO SCALE

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FOOD INNOVATION LAB

ORONO, MAINE

Harriman Project No.	24265

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0" 1"
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STATE OF MAINE
DAVID W. STORY
No. 12653
LICENSED
PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

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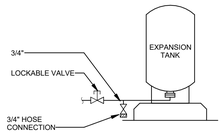
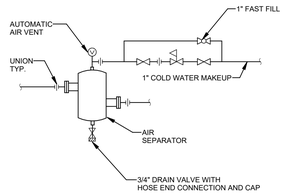
DETAILS

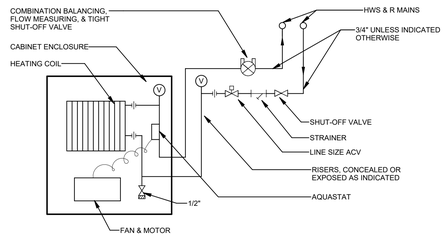
M50-1



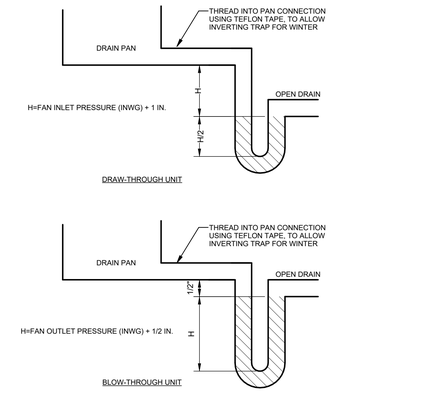
C1 EXPANSION TANK
NO SCALE



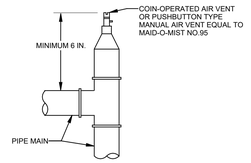
C2 AIR SEPARATOR
NO SCALE



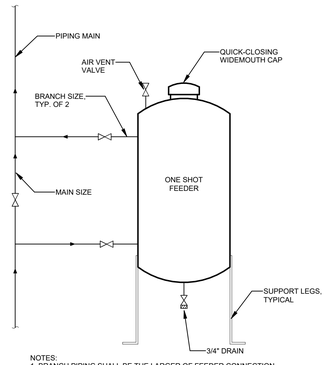
C3 HOT WATER CUH 2 WAY VALVE DN FEED PIPING
NO SCALE



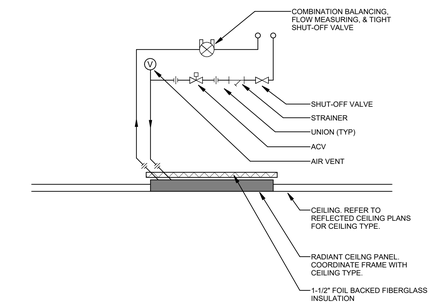
C4 CONDENSATE DRAIN TRAP ROOFTOP UNITS
NO SCALE



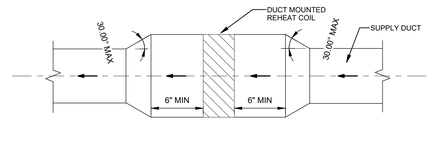
B1 MANUAL AIR VENT
NO SCALE



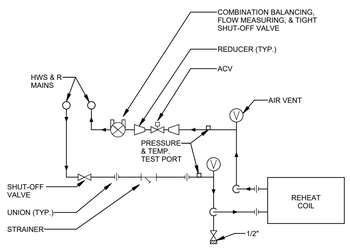
B2 BY-PASS 'POT' FEEDER
NO SCALE



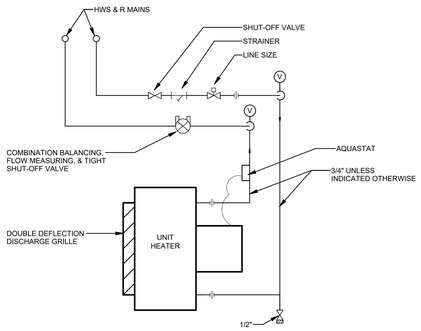
B3 CEILING RADIANT PANEL PIPING DIAGRAM
NO SCALE



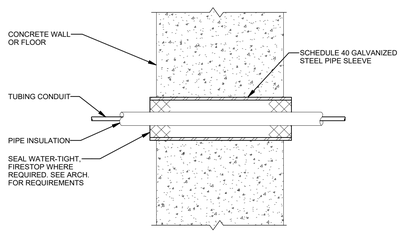
B4 STAND ALONE REHEAT COIL DUCT CONNECTION
NO SCALE



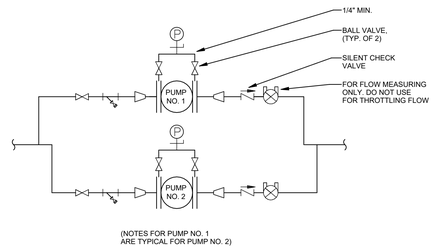
A1 HW RHC - 2-WAY VALVE
NO SCALE



A2 HOT WATER UNIT HEATER-2 WAY
NO SCALE



A3 TYPICAL WALL OR FLOOR SLEEVE
NO SCALE



A4 IN LINE PARALLEL PUMP
NO SCALE

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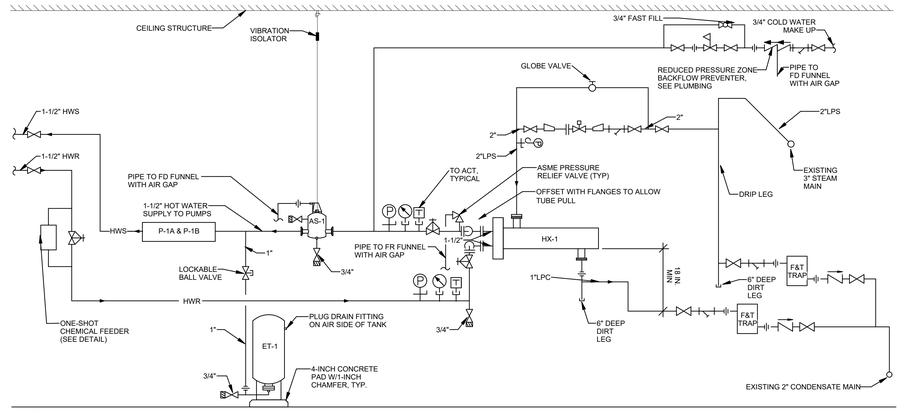
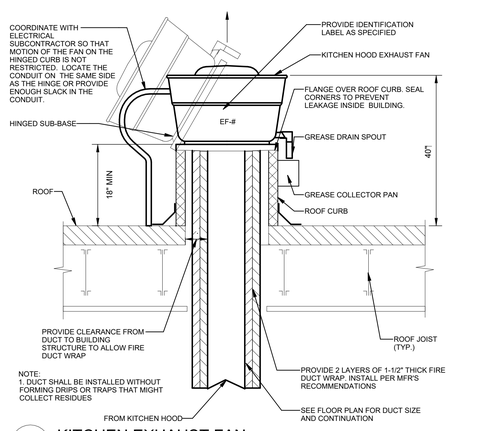
DETAILS

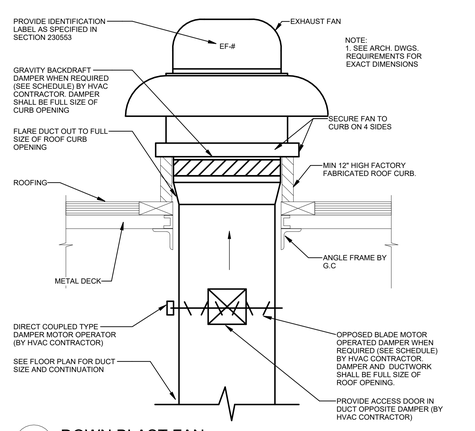
M50-2



B3 HX-1 HOT WATER AND STEAM PIPING
NO SCALE



A3 KITCHEN EXHAUST FAN
NO SCALE



A4 DOWN BLAST FAN
NO SCALE

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DETAILS

M50-3

HOOD INFORMATION – JOB#8254256

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1	H-1	5430 ND-2	CAPTIVEAIRE	12' 6"	600 DEG	I	HEAVY	200	2500			4"	18"	2500	1415	-0.660"	304 SS 100%	ALONE	ALONE
2	H-2	5430 ND-2	CAPTIVEAIRE	12' 6"	600 DEG	I	HEAVY	200	2500			4"	18"	2500	1415	-0.660"	304 SS 100%	ALONE	ALONE
3	H-3	5430 ND-2	CAPTIVEAIRE	12' 6"	600 DEG	I	HEAVY	200	2500			4"	18"	2500	1415	-0.660"	304 SS 100%	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY	TYPE	WIRE GUARD	UTILITY CABINET(S) LOCATION	SIZE	FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1	H-1	CAPTRATE SDLO FILTER	9	20"	16"	85% SEE FILTER SPEC	4	RECESSED ROUND	NO	RIGHT	12"x54"x30"	TANK FS	4.0/4.0	DCV-1111	1 LIGHT 1 FAN	YES	1386 LBS
2	H-2	CAPTRATE SDLO FILTER	9	20"	16"	85% SEE FILTER SPEC	4	RECESSED ROUND	NO	RIGHT	12"x54"x30"	TANK FS	4.0/4.0	DCV-1111	1 LIGHT 1 FAN	YES	1386 LBS
3	H-3	CAPTRATE SDLO FILTER	9	20"	16"	85% SEE FILTER SPEC	4	RECESSED ROUND	NO	LEFT	12"x54"x30"	TANK FS	4.0/4.0	DCV-1111	1 LIGHT 1 FAN	YES	1386 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	H-1	FIELD WRAPPER 12.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 80.00" HIGH X 162.00" LONG 304 SS VERTICAL.
		INSULATION FOR TOP OF HOOD.
		INSULATION FOR BACK OF HOOD.
		MIN 18 GAUGE HOOD.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 304 SS.
		RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 304 SS.
		DI-PSP 8" 294CFM (QTY. 8).
2	H-2	FIELD WRAPPER 12.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 80.00" HIGH X 162.00" LONG 304 SS VERTICAL.
		INSULATION FOR TOP OF HOOD.
		INSULATION FOR BACK OF HOOD.
		MIN 18 GAUGE HOOD.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 304 SS.
		RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 304 SS.
		DI-PSP 8" 294CFM (QTY. 8).
3	H-3	FIELD WRAPPER 12.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 80.00" HIGH X 162.00" LONG 304 SS VERTICAL.
		INSULATION FOR TOP OF HOOD.
		INSULATION FOR BACK OF HOOD.
		MIN 18 GAUGE HOOD.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 304 SS.
		RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 304 SS.
		DI-PSP 8" 294CFM (QTY. 8).

DIFFUSER SCHEDULE

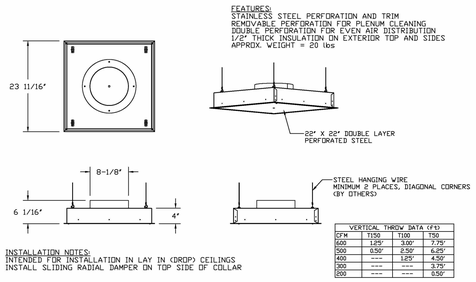
TAG	MODEL	CEILING HEIGHT	NOMINAL FACE SIZE	RISER DIA	CFM	DUCT VELOCITY (FPM)	FACE DISCHARGE VELOCITY (FPM)	TSO AFF	SP	NOISE CRITERIA	LINKED FAN	LINKED HOOD	QTY
	DI-PSP-08-24X24	10'	24 X 24	8	294	843	87	7.25'	0.128"	36		5430ND-2	8
	DI-PSP-08-24X24	10'	24 X 24	8	294	843	87	7.25'	0.128"	36		5430ND-2	8
	DI-PSP-08-24X24	10'	24 X 24	8	294	843	87	7.25'	0.128"	36		5430ND-2	8

CLEARANCE TO COMBUSTIBLES

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

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

QTY 24-DROP-IN PERFORATED SUPPLY PLENUM DIFFUSER (DI-PSP)



INSTALLATION NOTES:
INTENDED FOR INSTALLATION IN LAY IN (DROP) CEILINGS
INSTALL SLIDING RADIAL DAMPER ON TOP SIDE OF COLLAR

VERTICAL THROW DATA (FT)			
CFM	T150	T100	T50
600	1.25'	3.00'	7.75'
500	0.50'	2.50'	6.25'
400	---	1.25'	4.50'
300	---	---	3.75'
200	---	---	0.50'

DIFFUSER SPECIFICATION

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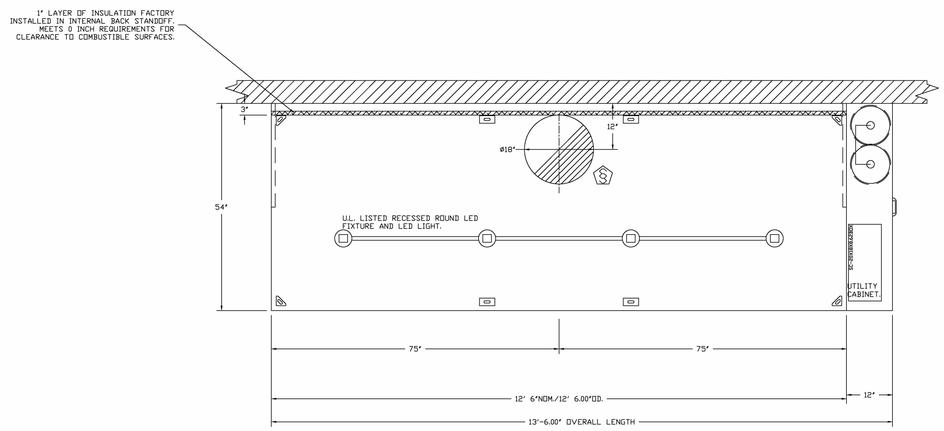
KITCHEN VENTILATION DETAILS

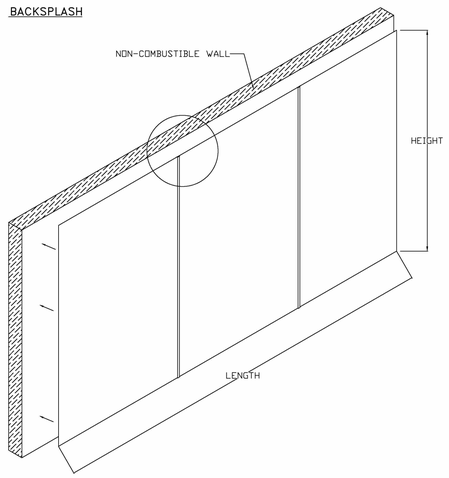
M50-4



PLAN VIEW – HOOD #1 (H–1), #2 (H–2)
12' 6.00" LONG 5430ND–2

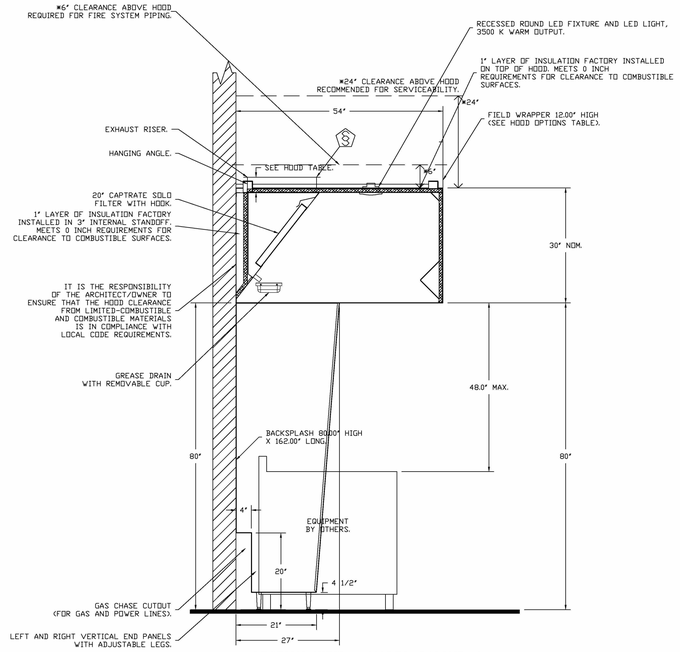
NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.

BACKSPLASH



BACKSPLASH PANELS SLIDE INTO DIVIDER BAR

- BACKSPLASH IS NOT INSULATED AND IS UNSUITABLE FOR INSTALL AGAINST COMBUSTIBLE WALLS



SECTION VIEW – MODEL 5430ND–2
HOOD – #1 (H–1), #2 (H–2)

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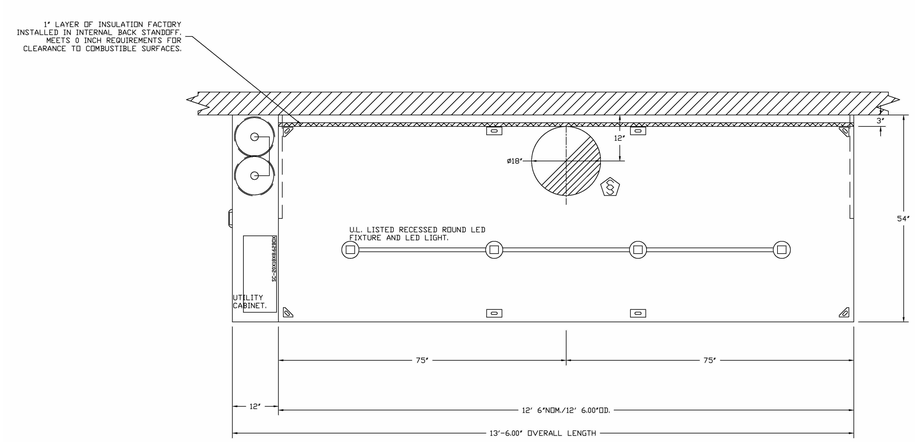
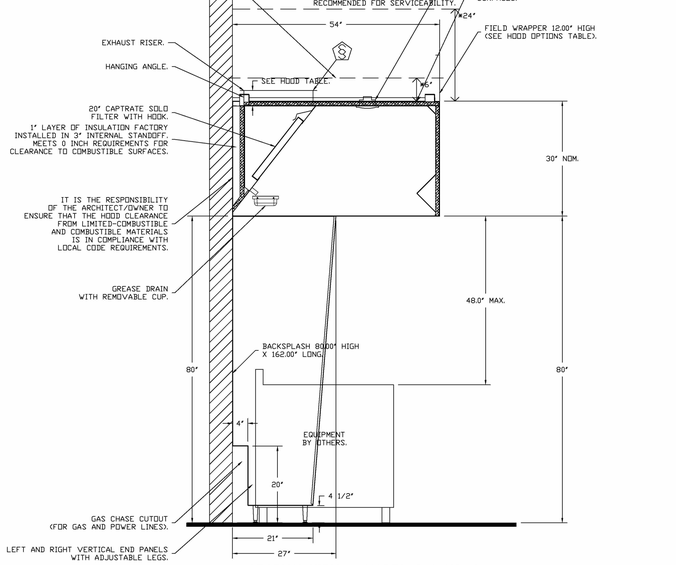
KITCHEN VENTILATION DETAILS

M50-5



PLAN VIEW – HOOD #3 (H-3)
12' 6.00" LONG 5430ND-2

NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.



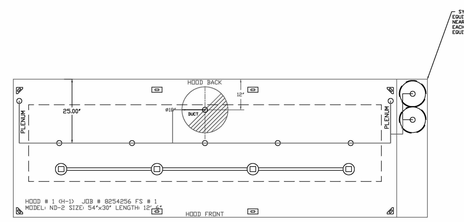
SECTION VIEW – MODEL 5430ND-2
HOOD – #3 (H-3)

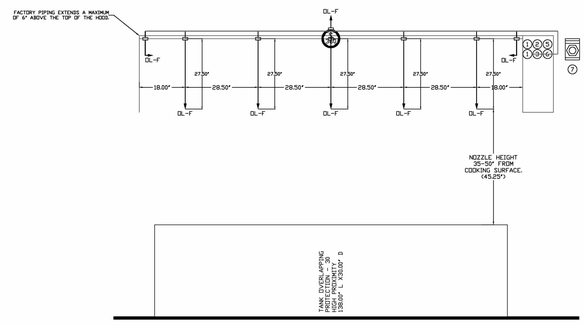
FIRE SYSTEM INFORMATION – JOB#8254256

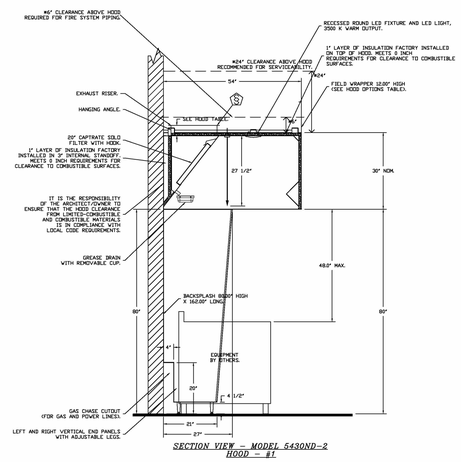
FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1	H-1	TANK FS	4.0/4.0	40	37	FIRE CABINET RIGHT	RIGHT, HOOD 1
2	H-2	TANK FS	4.0/4.0	40	37	FIRE CABINET RIGHT	RIGHT, HOOD 2
3	H-3	TANK FS	4.0/4.0	40	37	FIRE CABINET LEFT	LEFT, HOOD 3

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1	H-1	SC ELECTRICAL	1.250	CAPTIVEAIRE SYSTEMS
2	H-2	SC ELECTRICAL	1.250	CAPTIVEAIRE SYSTEMS
3	H-3	SC ELECTRICAL	1.250	CAPTIVEAIRE SYSTEMS







SECTION VIEW – MODEL 5430ND-2
HOOD – #1

NOTES
- FIELD PIPE DROPS AS SHOWN.
  PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED 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 PRE-ENGINEERED FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

- DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 8254256.
JOB NAME: UMO FOOD INNOVATION CENTER R3.

SYSTEM SIZE: TANK-SP-2 DESIGN FP: 37, MAXIMUM FP: 40.
HOOD # 1 12' 6.00" LONG x 54" WIDE x 30" HIGH.
RISER # 1 SIZE: 1Ø" DIA.
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

AGENT DISTRIBUTION PIPING LIMITATIONS	
PIPE SECTION	MAX PIPE LENGTH (FT)
MAX SUPPLY LINE TO FIRST OVERLAPPING NOZZLE	42
OVERLAPPING NOZZLE APPLIANCE BRANCH	10
DEDICATED NOZZLE APPLIANCE BRANCH	10

LEGEND – FIRE CABINET TANK SYSTEM

1 4 GALLON TANK.
2 PRIMARY ACTUATOR RELEASE.
3 SECONDARY ACTUATOR RELEASE.
4 PRESSURE SUPERVISION SWITCH.
5 PRIMARY HOSE ASSEMBLY.
6 SECONDARY HOSE ASSEMBLY.
7 REMOTE MANUAL ACTUATION DEVICE.

Harriman

UNIVERSITY OF MAINE
FOOD INNOVATION LAB

ORONO, MAINE

Harriman Project No.	24265

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

STATE OF MAINE
DAVID W. STORY
NO. 12053
LICENSED PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

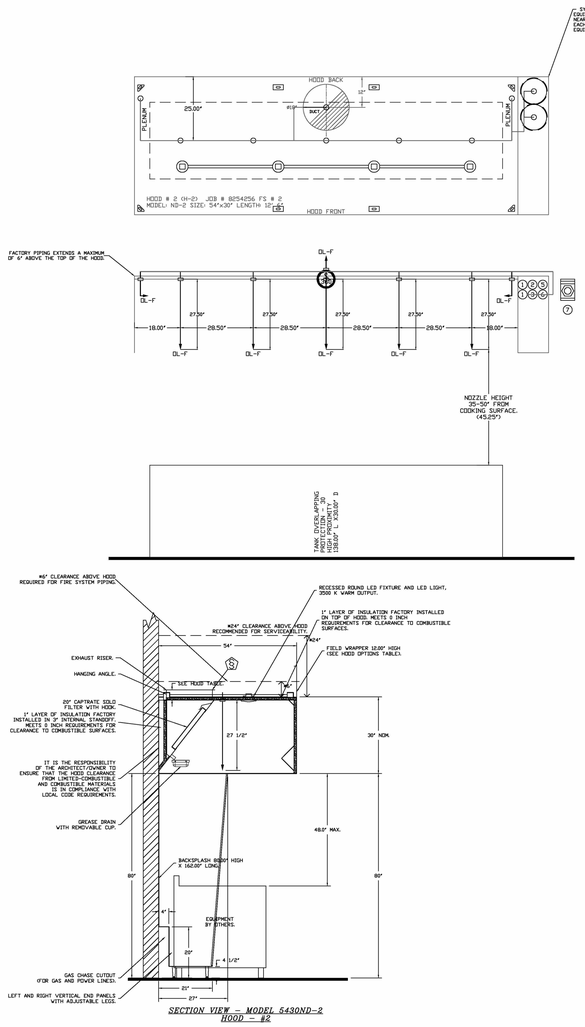
OCTOBER 20, 2025

Revision Date	Revision Description

Drawn by: ERD

KITCHEN VENTILATION DETAILS

M50-6



SECTION VIEW – MODEL 5430ND-2
HOOD – #2

NOTES
- FIELD PIPE DROPS AS SHOWN
  PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED 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 PRE-ENGINEERED FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

- DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 8254256.
JOB NAME: UMO FOOD INNOVATION CENTER R3.

SYSTEM SIZE: TANK-SP-2 DESIGN FP: 37. MAXIMUM FP: 40.
HOOD # 2 12' 6.00" LONG x 54" WIDE x 30" HIGH.
RISER # 1 SIZE: 18" DIA.
HOOD # 2 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

AGENT DISTRIBUTION PIPING LIMITATIONS	
PIPE SECTION	MAX PIPE LENGTH (FT)
MAX SUPPLY LINE TO FIRST OVERLAPPING NOZZLE	40
OVERLAPPING NOZZLE APPLIANCE BRANCH	10
DEDICATED NOZZLE APPLIANCE BRANCH	10

LEGEND – FIRE CABINET TANK SYSTEM

1 4 GALLON TANK.
2 PRIMARY ACTUATOR RELEASE.
3 SECONDARY ACTUATOR RELEASE.
4 PRESSURE SUPERVISION SWITCH.
5 PRIMARY HOSE ASSEMBLY.
6 SECONDARY HOSE ASSEMBLY.
7 REMOTE MANUAL ACTUATION DEVICE.

Harriman

UNIVERSITY OF MAINE
FOOD INNOVATION LAB

ORONO, MAINE

Harriman Project No.	24265

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

STATE OF MAINE
DAVID W STORY
NO 12653
LICENSED
PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

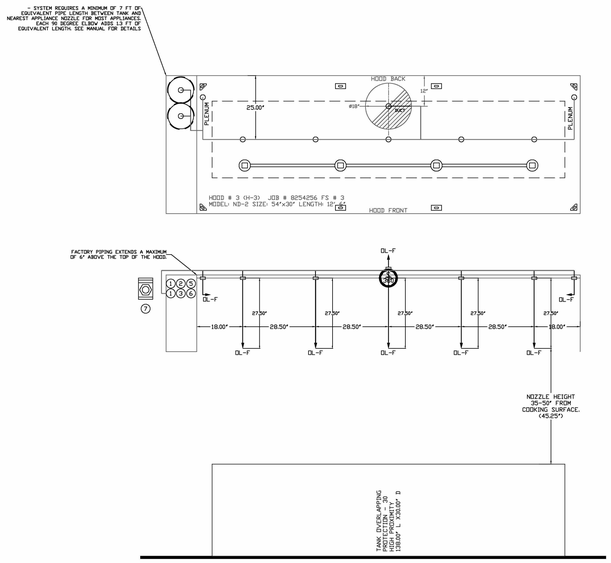
OCTOBER 20, 2025

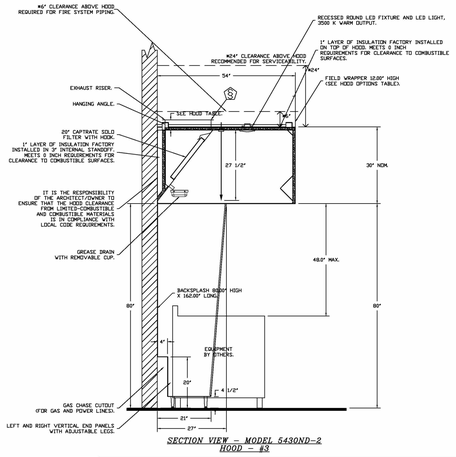
Revision Date	Revision Description

Drawn by: ERD

KITCHEN VENTILATION DETAILS

M50-7





SECTION VIEW – MODEL 5430ND-2 HOOD – #3

NOTES
- FIELD PIPE DROPS AS SHOWN
- PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED 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 PRE-ENGINEERED FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

- DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 8254256
JOB NAME: UMD FOOD INNOVATION CENTER R3.

SYSTEM SIZE: TANK-SP-2 DESIGN FP: 37. MAXIMUM FP: 40.
HOOD # 3 12' 6.00" LONG x 54" WIDE x 30" HIGH.
RISER # 1 SIZE: 18" DIA.
HOOD # 3 METAL BLOW-OFF CAPS INCLUDED.

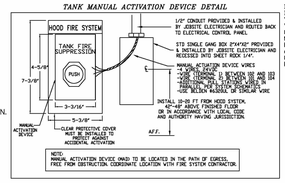
- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

AGENT DISTRIBUTION PIPING LIMITATIONS	
PIPE SECTION	MAX PIPE LENGTH (FT)
MAX SUPPLY LINE TO FIRST OVERLAPPING NOZZLE	42
OVERLAPPING NOZZLE APPLIANCE BRANCH	10
DEDICATED NOZZLE APPLIANCE BRANCH	10

LEGEND – FIRE CABINET TANK SYSTEM

1 4 GALLON TANK.
2 PRIMARY ACTUATOR RELEASE.
3 SECONDARY ACTUATOR RELEASE.
4 PRESSURE SUPERVISION SWITCH.
5 PRIMARY HOSE ASSEMBLY.
6 SECONDARY HOSE ASSEMBLY.
7 REMOTE MANUAL ACTUATION DEVICE.

TANK MANUAL ACTIVATION DEVICE DETAIL



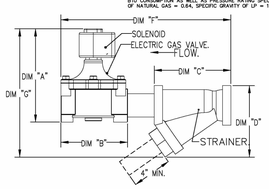
INCLUDES: FIELD INSTALLATION AND HOOKUP DURING NORMAL BUSINESS HOURS BY CERTIFIED INSTALLERS ONLY IN THE LOCATION NOTED ABOVE. TWO SITE VISITS ONLY (ONE VISIT TO SET PULL STATION & SYSTEM HOOKUP AND ONE VISIT FOR ONE TEST) ADDITIONAL VISITS WILL RESULT IN ADDITIONAL CHARGE(S). ONE MECHANICAL OR ELECTRICAL GAS VALVE PER SYSTEM AT A MAXIMUM SIZE OF 2", PERMIT, AND SYSTEM TEST.
EXCLUDES: UNION LABOR & PREVAILING WAGE (LABOR & WAGES WILL BE ADDED IF APPLICABLE), GAS VALVE INSTALLATION, ELECTRICAL HOOKUP AND CONNECTIONS, HANGING OF FIRE CABINET, SHUNT TRIP, HANDHELD EXTINGUISHER(S), ON-SITE RE-PIPING DUE TO EQUIPMENT LAYOUT CHANGES.

GAS VALVES AND STRAINERS															
GAS VALVE SIZING						GAS VALVE DIMENSIONS						INSTALLATION	PART NUMBERS		
	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 "F"	DIM "G"	PIPE ORIENTATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER KIT
GAS VALVE FOR FS@1, FS@2, FS@3	ELECTRICAL	1-1/4"	120 VAC	0 PSI (0 IN.W.C.)	5 PSI (138 IN.W.C.)	1,925,000 BTU/HR	1,249,105 BTU/HR	7-5/8"	6-3/8"	5-1/8"	5-15/16"	13-1/2"	12-1/16"	HORIZONTAL/VERTICAL	8214355	4417666	DCSDGV41-1/4

ELECTRIC GAS VALVES ONLY SOLENOID ORIENTATION
3/4"-2" 120VAC GAS VALVES CAN BE MOUNTED WITH THE SOLENOID IN ANY POSITION AT OR ABOVE HORIZONTAL. 2 1/2"-3" 120VAC GAS VALVES MUST BE MOUNTED WITH THE SOLENOID VERTICAL AND UPRIGHT. 240DC GAS VALVES MUST BE MOUNTED WITH THE SOLENOID VERTICAL AND UPRIGHT.

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)$^{0.5}$.



Harriman

UNIVERSITY OF MAINE
FOOD INNOVATION LAB

ORONO, MAINE

Harriman Project No.	24265

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

STATE OF MAINE
DAVID W. STORY
No. 12653
LICENSED
PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

OCTOBER 20, 2025

Revision Date	Revision Description

Drawn by: ERD

KITCHEN VENTILATION DETAILS

M50-8

EXHAUST FAN INFORMATION – JOB#8254256

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	H-2	1	DU180HFA	CAPTIVEAIRE	2500	1.500	1228	TEFC,PREMIUM	2.000	1.2950	3	460	3.3	577 FPM	249	16.7
2	H-3	1	DU180HFA	CAPTIVEAIRE	2500	1.500	1228	TEFC,PREMIUM	2.000	1.2950	3	460	3.3	577 FPM	249	16.7
3	H-1	1	DU180HFA	CAPTIVEAIRE	2500	1.500	1228	TEFC,PREMIUM	2.000	1.2950	3	460	3.3	577 FPM	249	16.7

DOAS/RTU FAN SCHEDULE – JOB#8254256

FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	BLOWER	TOTAL CFM	MAX OUTSIDE AIR CFM	RETURN AIR CFM	WEIGHT (LBS)	ESP	HP	PHASE	VOLT	MCA	MOCP
4	H-1	1	CAS-HVAC2-1.440-18-13T	CAPTIVEAIRE	182-2	2350	2350	0	2310	1.000	5.00	3	460	40.2A	45A
5	H-2	1	CAS-HVAC2-1.440-18-13T	CAPTIVEAIRE	182-2	2350	2350	0	2310	1.000	5.00	3	460	40.2A	45A
6	H-3	1	CAS-HVAC2-1.440-18-13T	CAPTIVEAIRE	182-2	2350	2350	0	2310	1.000	5.00	3	460	40.2A	45A

FAN UNIT NO	COOLING INFORMATION										REHEAT INFORMATION				GAS HEAT INFORMATION					HEAT PUMP INFORMATION					AZL MINIMUM ROOM VOLUME			
	OUTSIDE AIR		MIXED AIR		LEAVING AIR			CAPACITY			DISCHARGE	CAPACITY		MOISTURE REMOVAL RATE	GAS TYPE	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	ENTERING TEMP	MAX TEMP RISE	DISCHARGE TEMP	COP	CAPACITY	ROOM AREA (FT2)	AIRFLOW (CFM)	HEIGHT (FT)	NOTES
	DB	WB	DB	WB	DB	WB	DP	TOTAL	SENS.	ICER	ISMRE2	DB	WB	DESIRED	MAX													
4	82.0°F	69.0°F	82.0°F	69.0°F	52.6°F	51.2°F	50.1°F	124.0 MBH	73.8 MBH	14.2	5.8	70.0°F	58.5°F	45.8 MBH	103.2 MBH	45.8 LBS/HR	NATURAL	325972	264037	90°F	7 IN. W.C. – 14 IN. W.C.	40.0°F	43.0°F	83.0°F	3.2	106.2 MBH	418.5	753	7.2	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19
5	82.0°F	69.0°F	82.0°F	69.0°F	52.6°F	51.2°F	50.1°F	124.0 MBH	73.8 MBH	14.2	5.8	70.0°F	58.5°F	45.8 MBH	103.2 MBH	45.8 LBS/HR	NATURAL	325972	264037	90°F	7 IN. W.C. – 14 IN. W.C.	40.0°F	43.0°F	83.0°F	3.2	106.2 MBH	418.5	753	7.2	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19
6	82.0°F	69.0°F	82.0°F	69.0°F	52.6°F	51.2°F	50.1°F	124.0 MBH	73.8 MBH	14.2	5.8	70.0°F	58.5°F	45.8 MBH	103.2 MBH	45.8 LBS/HR	NATURAL	325972	264037	90°F	7 IN. W.C. – 14 IN. W.C.	40.0°F	43.0°F	83.0°F	3.2	106.2 MBH	418.5	753	7.2	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19

NOTES:
1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
5. EC MOTOR CONDENSING FANS
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
7. SUCTION LINE ACCUMULATOR
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BASE
11. VFD MODULATING COMBUSTION AIR BLOWER MATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 6:1 TURNDOWN WITH NG AND 5:1 TURNDOWN WITH LP
12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
13. FULLY MODULATING HOT GAS REHEAT
14. 15 DEGREE LOW AMBIENT OPERATION
15. FACTORY INSTALLED COMPRESSOR SOUND BLANKET
16. DOWN DISCHARGE/DOWN RETURN
17. DIRECT DRIVE ECM PLENUM BLOWER. BELT DRIVEN AND NON-ECM BLOWERS ARE NOT ACCEPTABLE
18. MINIMUM ROOM AREA ASSUMED 7.2' SUPPLY DIFFUSER HEIGHT AND IS CALCULATED PER UL60335-2-40 4TH ED. VALUES BASED ON FACTORY CHARGE. ACTUAL SITE CHARGE MAY DIFFER.
19. SCCR RATING OF 10kAMP

FAN ACCESSORIES

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

CURB ASSEMBLIES

NO	ON FAN	TAG	R-VALUE	WEIGHT	ITEM	SIZE
1	# 1	H-2		48 LBS	CURB	26.500"W X 26.500"L X 24.000"H VENTED HINGED.
2	# 2	H-3		48 LBS	CURB	26.500"W X 26.500"L X 24.000"H VENTED HINGED.
3	# 3	H-1		48 LBS	CURB	26.500"W X 26.500"L X 24.000"H VENTED HINGED.
4	# 4	H-1	4.3	125 LBS	CURB	49.500"W X 75.000"L X 24.000"H INSULATED.
5	# 5	H-2	4.3	125 LBS	CURB	49.500"W X 75.000"L X 24.000"H INSULATED.
6	# 6	H-3	4.3	125 LBS	CURB	49.500"W X 75.000"L X 24.000"H INSULATED.

1" R4.3 FOIL FACED FIBERGLASS INSULATION. COMPLIES WITH UL/ULC,ASTM, & ASHRAE STANDARDS.

FAN SOUND DATA

FAN UNIT NO	TAG	MOTOR	SOUND DATA			OCTAVE BAND SOUND DATA							
			LWA	SONES @ 5 FT	DBA @ 5 FT	DISTANCE (FT)	63 HZ	125 HZ	250 HZ	500 HZ	1 KHZ	2 KHZ	4 KHZ	8 KHZ
1	H-2	EXHAUST	80.1	16.706734319954328	68.6	5	75.1	78.8	86.8	75.9	69.1	67.1	61.1	55.6
2	H-3	EXHAUST	80.1	16.706734319954328	68.6	5	75.1	78.8	86.8	75.9	69.1	67.1	61.1	55.6
3	H-1	EXHAUST	80.1	16.706734319954328	68.6	5	75.1	78.8	86.8	75.9	69.1	67.1	61.1	55.6

UNIT SOUND DATA

FAN UNIT NO	TAG	MOTOR	SOUND DATA			OCTAVE BAND SOUND DATA							
			LWA	SONES @ 5 FT	DBA @ 5 FT	DISTANCE (FT)	63 HZ	125 HZ	250 HZ	500 HZ	1 KHZ	2 KHZ	4 KHZ	8 KHZ
4	H-1	SUPPLY	83.1	20.5	72.1	5	84.8	86.6	84	80.3	78.4	72.2	70.1	68.9
5	H-2	SUPPLY	83.1	20.5	72.1	5	84.8	86.6	84	80.3	78.4	72.2	70.1	68.9
6	H-3	SUPPLY	83.1	20.5	72.1	5	84.8	86.6	84	80.3	78.4	72.2	70.1	68.9

Note: Sound data across operational range. Tested in accordance to AHRI Standard 270/370.

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	H-2	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL – DU/DR180HFA – INSTALLED AT PLANT – FOR GREASE DUCTS
		1	FULL CRATING FOR EXHAUST FANS
		1	UPBLAST FAN WHEEL ACCESS PORT
		1	3 YEAR EXTENDED MOTOR WARRANTY
		1	LOAD REACTOR MOUNTED IN FAN
		1	UNIT MOUNTED VFD FOR USE WITH ECPM03
		1	VFD MOUNTING BRACKET FOR DU/DR 180 – 200
		1	EXHAUST FAN HEAT BAFFLE
		1	2 YEAR PARTS WARRANTY
2	H-3	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL – DU/DR180HFA – INSTALLED AT PLANT – FOR GREASE DUCTS
		1	FULL CRATING FOR EXHAUST FANS
		1	UPBLAST FAN WHEEL ACCESS PORT
		1	3 YEAR EXTENDED MOTOR WARRANTY
		1	LOAD REACTOR MOUNTED IN FAN
		1	UNIT MOUNTED VFD FOR USE WITH ECPM03
		1	VFD MOUNTING BRACKET FOR DU/DR 180 – 200
		1	EXHAUST FAN HEAT BAFFLE
		1	2 YEAR PARTS WARRANTY
3	H-1	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL – DU/DR180HFA – INSTALLED AT PLANT – FOR GREASE DUCTS
		1	FULL CRATING FOR EXHAUST FANS
		1	UPBLAST FAN WHEEL ACCESS PORT
		1	3 YEAR EXTENDED MOTOR WARRANTY
		1	LOAD REACTOR MOUNTED IN FAN
		1	UNIT MOUNTED VFD FOR USE WITH ECPM03
		1	VFD MOUNTING BRACKET FOR DU/DR 180 – 200
		1	EXHAUST FAN HEAT BAFFLE
		1	2 YEAR PARTS WARRANTY

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
4	H-1	1	CONTROL PANEL ENCLOSURE HEATER 100W – RECOMMENDED FOR WINTER DESIGN TEMPERATURES LESS THAN 0°F
		1	RTU HEATED FURNACE CONDENSATE DRAIN KIT. REQUIRED FOR WINTER DESIGN TEMP OF 0 DEGREES F AND LOWER
		1	INLET PRESSURE GAUGE, 0–35"
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	COOLING OVERRIDE
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREVIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "CP" PREVIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREVIRE
		1	RTU BLOWER DOOR SWITCH
		1	RTU2 DOWN DISCHARGE, 440 MBH
		1	2" MERV 13 FILTERS FOR RTU2 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU2 (QTY. 4)
		1	OVERHEAT STAT
		1	TOTAL CFM MONITORING
		1	OCCUPIED SCHEDULING
		1	INTAKE FIRESTAT SET TO 135°F
		1	FREEZESTAT
		1	DISCHARGE FIRESTAT SET TO 240°F
		1	CASLINK BUILDING MONITORING SYSTEM – INTERNET OR CELLULAR CONNECTION REQUIRED
		1	RTU2 CURB DUCT HANGER
		1	COMMERCIAL SMOKE DETECTOR/ALARM INTERLOCK – ALARM SUPPLIED BY OTHERS
		1	24VAC FIRE INPUT
		1	SHIP LOOSE GAS STRAINER 3/4"
		1	DDC IP BACNET REMOTE UNIT MONITORING
		1	CLOGGED FILTER SWITCH – NOTIFICATION ON HMI
		1	RTU2 CONVENIENCE OUTLET (GFCI), 15 AMP – REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX
		1	13 TON MODULATING COOLING OPTION WITH HEAT PUMP, 460/480V. R454B REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	LOW AMBIENT COOLING OPERATION – DOWN TO 0F AMBIENT
		1	ECM FAN DOAS – 3 PHASE
		1	R454B LEAK DETECTOR OPTION FOR RTUS
		1	13 TON MODULATING REHEAT OPTION WITH HEAT PUMP – SPACE DEWPOINT CONTROL – R454B
		1	2" METAL MESH FILTERS FOR RTU2 OUTDOOR INTAKE
		1	RTU INTAKE/RETURN DAMPER – MANUAL CONTROL VIA HMI
		1	RTU SIZE 2 INTAKE HOOD, SHIPPED LOOSE
		1	RTUVZH088 COMPRESSOR SOUND BLANKET 460/575V – FACTORY INSTALLED
		1	RTU2 DOWN RETURN
		1	ECM 0-10V SUPPLY FAN CONTROL – RTU MUA BOARD (ZIEHL MOTOR)
		1	BLOWER STOP DELAY. ALLOWS RESIDUAL HEAT TO BE TRANSFERRED INTO THE SUPPLY AIR AFTER HEATING HAS STOPPED. FACTORY SET AT: 90 SECS FOR 1BT, 30 SECS FOR 2F
		1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)
		1	EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
5	H-2	1	CONTROL PANEL ENCLOSURE HEATER 100W – RECOMMENDED FOR WINTER DESIGN TEMPERATURES LESS THAN 0°F
		1	RTU HEATED FURNACE CONDENSATE DRAIN KIT. REQUIRED FOR WINTER DESIGN TEMP OF 0 DEGREES F AND LOWER
		1	INLET PRESSURE GAUGE, 0–35"
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	COOLING OVERRIDE
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREVIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "CP" PREVIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREVIRE
		1	RTU BLOWER DOOR SWITCH
		1	RTU2 DOWN DISCHARGE, 440 MBH
		1	2" MERV 13 FILTERS FOR RTU2 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU2 (QTY. 4)
		1	OVERHEAT STAT
		1	TOTAL CFM MONITORING
		1	OCCUPIED SCHEDULING
		1	INTAKE FIRESTAT SET TO 135°F
		1	FREEZESTAT
		1	DISCHARGE FIRESTAT SET TO 240°F
		1	CASLINK BUILDING MONITORING SYSTEM – INTERNET OR CELLULAR CONNECTION REQUIRED
		1	RTU2 CURB DUCT HANGER
		1	COMMERCIAL SMOKE DETECTOR/ALARM INTERLOCK – ALARM SUPPLIED BY OTHERS
		1	24VAC FIRE INPUT
		1	SHIP LOOSE GAS STRAINER 3/4"
		1	DDC IP BACNET REMOTE UNIT MONITORING
		1	CLOGGED FILTER SWITCH – NOTIFICATION ON HMI
		1	RTU2 CONVENIENCE OUTLET (GFCI), 15 AMP – REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX
		1	13 TON MODULATING COOLING OPTION WITH HEAT PUMP, 460/480V. R454B REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	LOW AMBIENT COOLING OPERATION – DOWN TO 0F AMBIENT
		1	ECM FAN DOAS – 3 PHASE
		1	R454B LEAK DETECTOR OPTION FOR RTUS
		1	13 TON MODULATING REHEAT OPTION WITH HEAT PUMP – SPACE DEWPOINT CONTROL – R454B
		1	2" METAL MESH FILTERS FOR RTU2 OUTDOOR INTAKE
		1	RTU INTAKE/RETURN DAMPER – MANUAL CONTROL VIA HMI
		1	RTU SIZE 2 INTAKE HOOD, SHIPPED LOOSE
		1	RTUVZH088 COMPRESSOR SOUND BLANKET 460/575V – FACTORY INSTALLED
		1	RTU2 DOWN RETURN
		1	ECM 0-10V SUPPLY FAN CONTROL – RTU MUA BOARD (ZIEHL MOTOR)
		1	BLOWER STOP DELAY. ALLOWS RESIDUAL HEAT TO BE TRANSFERRED INTO THE SUPPLY AIR AFTER HEATING HAS STOPPED. FACTORY SET AT: 90 SECS FOR 1BT, 30 SECS FOR 2F
		1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)
		1	EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
6	H-3	1	CONTROL PANEL ENCLOSURE HEATER 100W – RECOMMENDED FOR WINTER DESIGN TEMPERATURES LESS THAN 0°F
		1	RTU HEATED FURNACE CONDENSATE DRAIN KIT. REQUIRED FOR WINTER DESIGN TEMP OF 0 DEGREES F AND LOWER
		1	INLET PRESSURE GAUGE, 0–35"
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	COOLING OVERRIDE
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREVIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "CP" PREVIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREVIRE
		1	RTU BLOWER DOOR SWITCH
		1	RTU2 DOWN DISCHARGE, 440 MBH
		1	2" MERV 13 FILTERS FOR RTU2 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU2 (QTY. 4)
		1	OVERHEAT STAT
		1	TOTAL CFM MONITORING
		1	OCCUPIED SCHEDULING
		1	INTAKE FIRESTAT SET TO 135°F
		1	FREEZESTAT
		1	DISCHARGE FIRESTAT SET TO 240°F
		1	CASLINK BUILDING MONITORING SYSTEM – INTERNET OR CELLULAR CONNECTION REQUIRED
		1	RTU2 CURB DUCT HANGER
		1	COMMERCIAL SMOKE DETECTOR/ALARM INTERLOCK – ALARM SUPPLIED BY OTHERS
		1	24VAC FIRE INPUT
		1	SHIP LOOSE GAS STRAINER 3/4"
		1	DDC IP BACNET REMOTE UNIT MONITORING
		1	CLOGGED FILTER SWITCH – NOTIFICATION ON HMI
		1	RTU2 CONVENIENCE OUTLET (GFCI), 15 AMP – REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX
		1	13 TON MODULATING COOLING OPTION WITH HEAT PUMP, 460/480V. R454B REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	LOW AMBIENT COOLING OPERATION – DOWN TO 0F AMBIENT
		1	ECM FAN DOAS – 3 PHASE
		1	R454B LEAK DETECTOR OPTION FOR RTUS
		1	13 TON MODULATING REHEAT OPTION WITH HEAT PUMP – SPACE DEWPOINT CONTROL – R454B
		1	2" METAL MESH FILTERS FOR RTU2 OUTDOOR INTAKE
		1	RTU INTAKE/RETURN DAMPER – MANUAL CONTROL VIA HMI
		1	RTU SIZE 2 INTAKE HOOD, SHIPPED LOOSE
		1	RTUVZH088 COMPRESSOR SOUND BLANKET 460/575V – FACTORY INSTALLED
		1	RTU2 DOWN RETURN
		1	ECM 0-10V SUPPLY FAN CONTROL – RTU MUA BOARD (ZIEHL MOTOR)
		1	BLOWER STOP DELAY. ALLOWS RESIDUAL HEAT TO BE TRANSFERRED INTO THE SUPPLY AIR AFTER HEATING HAS STOPPED. FACTORY SET AT: 90 SECS FOR 1BT, 30 SECS FOR 2F
		1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)
		1	EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET

CONNECTED COMMISSIONING SERVICES(CCX)

IF ORDERED, THE CCX ENGINEER WILL PERFORM REMOTE ENGINEERING ANALYSIS OF CAPTIVEAIRE EQUIPMENT AND BUILDING INTEGRATION, TYPICALLY, THE MONITORING SYSTEM.TYPICALLY, THE ANALYSIS WILL BE PERFORMED AFTER SERVICE DESIGN VERIFICATION(SDV) HAS BEEN COMPLETED ON-SITE. ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE ANALYSIS WILL BE DOCUMENTED AND BROUGHT TO THE ATTENTION OF THE SALES OFFICE. IF THE CCX ENGINEER HAS TO RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL TRIP CHARGES. THE DISCREPANCY WILL BE RESOLVED AND THE SALES OFFICE WILL BE NOTIFIED.SHOULD A RETURN TRIP FROM CAS SERVICE BE REQUIRED TO RESOLVE A FIELD ISSUE, THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL CHARGES.SHOULD THE CCX ENGINEER DISCOVER A DISCREPANCY DURING THE ANALYSIS THAT IS THE FAULT OF THE MANUFACTURER AND THAT CANNOT BE RESOLVED REMOTELY, THE ISSUE WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE AND CAS SERVICE REGION THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.

FIELD COMMISSIONING SERVICES (FCX)

IF ORDERED, THE FCX ENGINEER WILL PERFORM ON-SITE ENGINEERING ANALYSIS OF CAPTIVEAIRE EQUIPMENT AND BUILDING INTEGRATION, TYPICALLY, THE ANALYSIS WILL BE PERFORMED AFTER THE SPACE HAS BEEN OCCUPIED FOR AN EXTENDED PERIOD OF TIME. ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE ANALYSIS WILL BE BROUGHT TO THE ATTENTION OF THE SALES OFFICE. IF THE FCX ENGINEER HAS TO RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL TRIP CHARGES. THE DISCREPANCY WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE AND CAS SERVICE REGION. THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.

HMI SCHEDULE

UNIT NUMBER	HMI #	HMI LOCATION	TEMP AVERAGING	MODBUS ADDRESS
FAN #4	HMI #1 – UNIT	IN UNIT	NOT AVERAGED	55
FAN #4	HMI #2 – SPACE		AVERAGED	56
FAN #5	HMI #1 – UNIT	IN UNIT	NOT AVERAGED	55
FAN #5	HMI #2 – SPACE		AVERAGED	56
FAN #6	HMI #1 – UNIT	IN UNIT	NOT AVERAGED	55
FAN #6	HMI #2 – SPACE		AVERAGED	56

Harriman

UNIVERSITY OF MAINE
FOOD INNOVATION LAB

ORONO, MAINE

Harriman Project No. 24265

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

STATE OF MAINE
DAVID W. STORY
NO 12653
LICENSED PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

OCTOBER 20, 2025

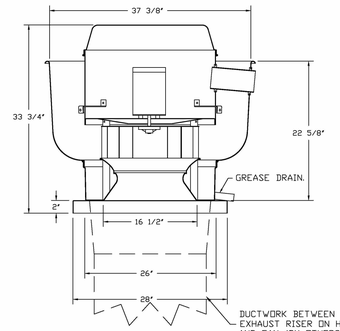
Revision Date	Revision Description

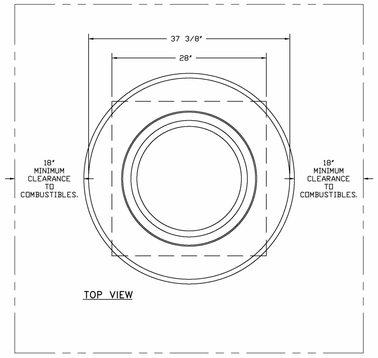
Drawn by: ERD

KITCHEN VENTILATION DETAILS

M50-9

FANS #1 (H-2), #2 (H-3), #3 (H-1) - DU180HFA EXHAUST FAN





FEATURES:

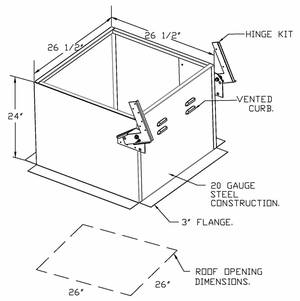
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT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

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

ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS.
- FULL CRATING FOR EXHAUST FANS.
- UP-BLAST FAN WHEEL ACCESS PORT.
- 3 YEAR EXTENDED MOTOR WARRANTY.
- LOAD REACTOR MOUNTED IN FAN.
- UNIT MOUNTED VFD FOR USE WITH ECPM03.
- VFD MOUNTING BRACKET FOR DU/DR 180 - 200.
- EXHAUST FAN HEAT BAFFLE.
- 2 YEAR PARTS WARRANTY.



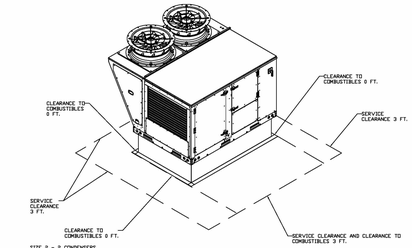
FAN #4 (H-1), #5 (H-2), #6 (H-3) - CAS-HVAC2-I.440-18-13T HEATER

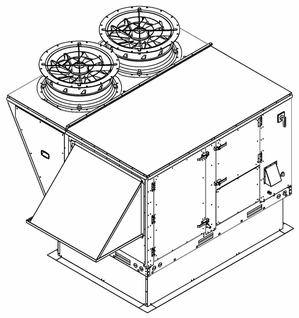
NOTES:
1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
2. ( ) DENOTES CORNER WEIGHT.
3. ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.
4. CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.
5. EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET.

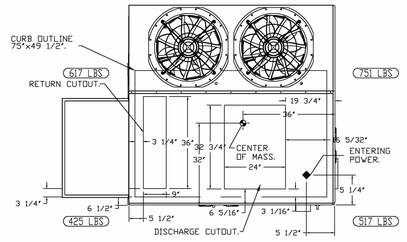
*NOTE: INTEGRAL CO2 MONITORING AND CONTROL CAPABILITIES FOR ALL SPACE MOUNTED THERMOSTATS.

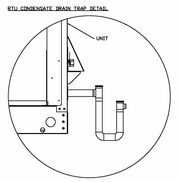
***NOTE: THIS UNIT IS INTENDED TO SERVE IN PLACE OF THE KITCHEN HVAC ROOF TOP UNIT (RTU) IN ADDITION TO PROVIDING APPROPRIATE MAKE-UP AIR FOR THE KITCHEN HOOD(S). RTU AND ASSOCIATED DUCTWORK SHALL BE REMOVED FROM SCOPE UNLESS REQUIRED FOR INTERNAL LOAD ESTIMATES. FINAL DESIGN SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD.**

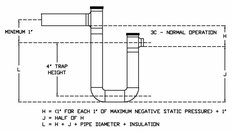
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT.
SUGGESTED SUPPLY STRAIGHT DUCT SIZE IS 24" x 30-1/4".
SUGGESTED RETURN STRAIGHT DUCT SIZE IS 36" x 9".

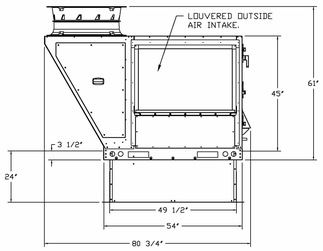


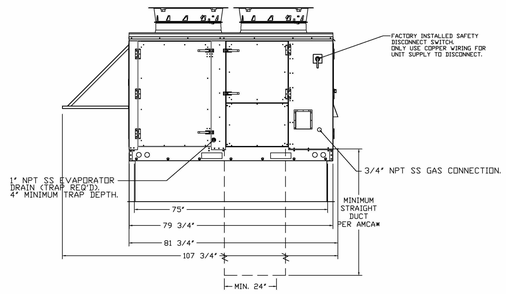


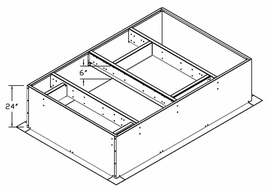


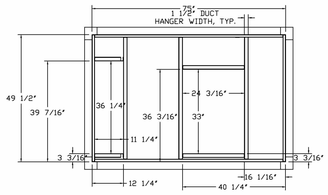












Harriman

UNIVERSITY OF MAINE
FOOD INNOVATION LAB

ORONO, MAINE

Harriman Project No.	24265

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

STATE OF MAINE
DAVID W. STORY
NO 12653
LICENSED
PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

OCTOBER 20, 2025

Revision Date	Revision Description

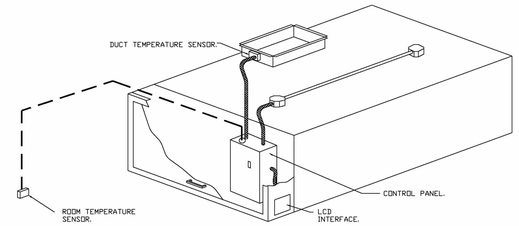
Drawn by: ERD

KITCHEN VENTILATION DETAILS

M50-10

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 403.7.5 (2021).
- 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 403.7.5 (2021).
- 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).
- FIRE: UPON ACTIVATION OF THE HOOD FIRE SUPPRESSION SYSTEM, THE EXHAUST FAN WILL COME ON OR CONTINUE TO RUN, THE HOOD MAKEUP AIR WILL SHUTDOWN, AND A SIGNAL WILL BE SENT FOR ACTIVATING THE SHUNT TRIP BREAKER PROVIDED BY THE ELECTRICIAN. FUEL GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRICAL GAS VALVE ACTUATED BY THE HOOD FIRE SUPPRESSION SYSTEM.

Harriman

UNIVERSITY OF MAINE
FOOD INNOVATION LAB

ORONO, MAINE

Harriman Project No.	24265

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

STATE OF MAINE
DAVID W STORY
No. 12653
LICENSED
PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

OCTOBER 20, 2025

Revision Date	Revision Description

Drawn by: ERD

KITCHEN VENTILATION DETAILS

M50-11

PACKAGED ROOFTOP HVAC UNIT SCHEDULE

UNIT			SUPPLY FAN											DX COIL										GAS HEATING SECTION				FILTERS						UNIT GEOMETRY				
								ELECTRICAL						AIR														PREFILTER			PRIMARY			DIMENSIONS				
TAG	MANUFACTURER	MODEL	MINIMUM OUTSIDE AIR (CFM)	AIR FLOW (CFM)	QTY.	ESP (IN-WG)	TSP (IN-WG)	POWER (HP)	BRAKE POWER (BHP)	VOLTAGE	PHASE	MCA	MOPD	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EDB (DEG.F)	EWB (DEG.F)	LDB (DEG.F)	LWB (DEG.F)	APD (IN.WG)	REFRIGERANT	ROWS	FINS PER FOOT	FUEL TYPE	STAGES	INPUT (MBH)	OUTPUT (MBH)	MERV RATING	DEPTH (INCHES)	AREA (SF)	MERV RATING	DEPTH (INCHES)	AREA	HEIGHT (FT - IN)	LENGTH (FT - IN)	WIDTH (FT - IN)	WEIGHT (LBS)	NOTES
RTU-4	DAIKIN	DPSH03B	200	1000	1	1.5	1.9	1.2	0.54	460	3	15.9	20	36.8	26.5	80	67	54.5	54.5	0.15	R32	4	192	NG	5	80	64.5	8	2"	7.1	14	4"	7.1	69.5	84.5	53.3	1119	

HYDRONIC UNIT HEATER SCHEDULE

						HOT WATER COIL				ELECTRICAL				UNIT GEOMETRY				
														DIMENSIONS				
TAG	MANUFACTURER	MODEL	SERVICE	CAPACITY (MBH)	AIR FLOW (CFM)	FLOW (GPM)	EWT (DEG.F)	LWT (DEG.F)	WPD (FT-HD)	PHASE	VOLTAGE	MCA	HP	HEIGHT (IN)	LENGTH (IN)	WIDTH (IN)	WEIGHT (LBS)	NOTES
UH-1	DAIKIN	UHH-47	LOADING DOCK	29.0	730	3.4	180		0.21	1	115	0.72	1/15	19	19.75	12	36	
UH-2	DAIKIN	UHH-18	ELECTRICAL	11.1	400	1.3	180		0.49	1	115	0.70	1/30	15	17	12	18	
UH-3	DAIKIN	UHH-18	MECHANICAL	11.1	400	1.3	180		0.49	1	115	0.70	1/30	15	17	12	18	
UH-4	DAIKIN	UHH-47	SERVICE CORRIDOR	29.0	730	3.4	180		0.21	1	115	0.72	1/15	19	19.75	12	36	

HEATING COIL

														GEOMETRY		
TAG	MANUFACTURER	MODEL	SERVICE	FINNED LENGTH (IN)	ROWS	CAPACITY (MBH)	EWT (DEG.F)	LWT (DEG.F)	AIR FLOW (CFM)	EAT (DEG.F)	LAT DB (DEG.F)	APD (IN.WG)	FLOW (GPM)	WIDTH	HEIGHT (IN)	NOTES
HC-1	**DAIKIN**	**5BS0702B**	CORRIDOR	**12**	**2**	**22**	**180**	**160**	**500**	**55**	**95.2**	**0.25**	**2.2**	**12**	**9**	
HC-2	**DAIKIN**	**5SB0302B**	HYGEINE & GOWNING	**9**	**2**	**11.0**	**180**	**160**	**250**	**55**	**95.2**	**0.27**	**1.1**	**9**	**6**	
HC-3	**DAIKIN**	**5BS0802B**	SERVICE CORRIDOR	**9**	**2**	**11.0**	**180**	**160**	**250**	**55**	**95.2**	**0.27**	**1.1**	**9**	**6**	

FAN SCHEDULE

															ELECTRICAL		
TAG	MANUFACTURER	MODEL	SERVICE	AIRFLOW (CFM)	ESP (IN.WG)	RPM	POWER (HP)	BRAKE POWER (BHP)	DRIVE TYPE	DISCHARGE	OUTLET VELOCITY (FPM)	DAMPER	SOUND (SONES)	VOLTAGE	PHASE	NOTES
EF-1	**GREENHECK**	**G-070-VG**	BATHROOMS	150	0.3	1360	1/15	0.02	DIRECT	INLINE	385	NO	3.1	115	1	
EF-2	**GREENHECK**	**SQ-90-G**	ELECTRICAL	400	0.3	1375	1/6	0.05	DIRECT	INLINE	400	NO	6.0	115	1	
EF-3	**GREENHECK**	**SQ-90-G**	MECHANICAL	250	0.3	1193	1/6	0.03	DIRECT	INLINE	250	NO	4.8	115	1	

CABINET UNIT HEATER SCHEDULE

							HOT WATER COIL					ELECTRICAL			
TAG	MANUFACTURER	MODEL	SERVICE	CAPACITY (MBH)	AIR FLOW (CFM)	ESP (IN-WG)	EAT (DEG.F)	FLOW (GPM)	EWT (DEG.F)	LWT (DEG.F)	WPD (FT.HD)	FAN POWER (HP)	PHASE	VOLTAGE	NOTES
CUH-1	DAIKIN	FHVH106	LOBBY-100	38.8	525	0	65	2.6	180	150	1.23	1/12	1	120	

REGISTERS, GRILLES & DIFFUSERS SCHEDULE

			INLET SIZE							
			SQUARE		ROUND			MAX NOICE CRITERIA	MAX STATIC PRESSURE		
TAG	MANUFACTURER	MODEL	LENGTH (IN)	WIDTH (IN)	DIAMETER (IN)	DIRECTION OF BLOW	DAMPER	(NC)	(IN-WG)	FINISH	NOTES
E1	PRICE	80	6	6		N/A	NO	25	0.1	WHITE	
R1	PRICE	80	18	18		N/A	NO	25	0.1	WHITE	
R2	PRICE	80	8	8		N/A	NO	25	0.1	WHITE	
R3	PRICE	80	10	10		N/A	NO	25	0.1	WHITE	
S1	CAPTIVEAIRE	DI-PSP-08-24X24			8	LAMINAR	NO	36	0.128	WHITE	
S2	PRICE	SMD	9	9		SEE PLANS	NO	30	0.1	WHITE	
S3	PRICE	SMD	9	9		SEE PLANS	NO	30	0.1	WHITE	

HEAT EXCHANGER SCHEDULE

				LOAD SIDE (WATER)					SOURCE SIDE (STEAM)			
TAG	MANUFACTURER	MODEL	CAPACITY (MBH)	EWT (DEG.F)	LWT (DEG.F)	FLOW (GPM)	WPD (FT.HD)	FLUID TYPE	PRESSURE (PSI)	LBS PER HOUR (PPH)	FLUID TYPE	NOTES
HX-1	**TACO**	**G4206S**	**175.7**	**160**	**180**	**18**	**0.26**	**WATER**	**5**	**182.9**	**STEAM**	

PUMP SCHEDULE

								ELECTRICAL				
TAG	MANUFACTURER	MODEL	FLOW (GPM)	HEAD (FT.WG)	EFF'Y (%)	MOTOR CONTROL	RPM	POWER (BHP)	POWER (HP)	VOLTAGE	PHASE	NOTES
P-1A	**TACO**	**VR15H-F**	**18**	**46**	**32**	INTEGRAL VFD	**4900**	**0.56**	**0.75**	**208**	**1**	
P-1B	**TACO**	**VR15H-F**	**18**	**46**	**32**	INTEGRAL VFD	**4900**	**0.56**	**0.75**	**208**	**1**	

EXPANSION TANK SCHEDULE

								UNIT GEOMETRY			
								DIMENSIONS			
TAG	MANUFACTURER	MODEL	SERVICE	VOLUME (GAL.)	ESTIMATED SYSTEM VOLUME (GAL.)	MIN TEMP (DEG.F)	MAX TEMP (DEG.F)	DIAMETER (IN)	HEIGHT (IN)	WEIGHT (LBS)	NOTES
ET-1	**TACO**	**CBX30-125**	**HOT WATER**	**8**	**120**	**40**	**200**	**14**	**22**	**90**	

LOUVER SCHEDULE

							GEOMETRY			
TAG	MANUFACTURER	MODEL	AIR FLOW (CFM)	MIN. FREE AREA (SF)	APD (IN-WG)	VELOCITY (FPM)	HEIGHT (IN)	WIDTH (IN)	DEPTH (IN)	NOTES
L-1	GREENHECK	ESD-403	500	0.7	0.05	607	16	16	4	
L-2	GREENHECK	ESD-403	250	0.7	0.02	379	16	16	4	

RADIANT PANEL SCHEDULE

							DIMENSIONS		
TAG	MANUFACTURER	MODEL	SERVICE	CAPACITY (BTU/FT)	AWT (DEG.F)	PASSES	WIDTH	LENGTH	NOTES
RP	**STERLING**	**LINEAR RADIANT PANEL**	**SEE PLANS**	**413**	**170**	**4**	**2**	**22**	

AIR SEPARATOR SCHEDULE

						DIMENSIONS		
TAG	MANUFACTURER	MODEL	SERVICE	FLOW (GPM)	PIPE SIZE (IN)	DIAMETER (IN)	HEIGHT (IN)	NOTES
AS-1	**TACO**	**49-150**	**HOT WATER**	**18**	**1-1/2"**	**4-1/2"**	**7-1/2"**	

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SCHEDULES

M60-1

ABBREVIATIONS LIST

1P	1 POLE (2P, 3P, 4P, ETC.)
A	AMPERE
AC	ABOVE COUNTER OR AIR CONDITIONAR
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFI/AFCI	ARC FAULT CIRCUIT INTERRUPTER
AHU	AIR HANDLING UNIT
AIC	APMERE INTERRUPTING CAPACITY
AL	ALUMINUM
ALT	ALTERNATE
AMP	AMPERE
AMPL	AMPLIFIER
ANN	ANNUNCIATOR
ARCH	ARCHITECT, ARCHITECTURAL
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GUAGE
BATT	BATTERY
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CAB	CABINET
CAT	CATALOG
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
COMB	COMBINATION
CONT	CONTINUATION / CONTINUOUS
CP	CIRCUILATING PUMP/CONTROL PANEL
CRT	CATHODE-RAY TUBE
CT	CURRENT TRANSFORMER
CTR	CENTER
CU	COPPER
DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER
DB	DECIBEL
DC	DIRECT CURRENT
DCP	DOMESTIC WATER CIRCULATING PUMP
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
DISC	DISCONNECT/SAFETY SWITCH
DIST	DISTRIBUTION
DN	DOWN
DT	DOUBLE THROW
DWG	DRAWINGEGC ELECTRICAL GROUND CONDUCTOR
ELEC	ELECTRIC / ELECTRICAL
ELEV	ELEVATOR
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
EV	ELECTRIC VEHICLE
EWC	ELECTRIC WATER COOLER
EX / EXIST	EXISTING
EXH	EXHAUST
FA	FIRE ALARM
FACP	FIRE ALARM SYSTEM CONTROL PANEL
FAPS	FIRE ALARM SYSTEM POWER SUPPLY
FCU	FAN COIL UNIT
FC	FOOT CANDLE
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLR	FLOOR
FU	FUSE
FT	FOOT

GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GEC	GROUND ELECTRODE CONDUCTOR
GEN	GENERATOR
GFI / GFCI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTOR
GND	GROUND
GRS	GALVANIZED RIGID STEEL (CONDUIT)
GWPD /	
GYP BD	GYPSUM BOARD
HDPG	HIGH DENSITY POLYETHYLENE
HOA	HANDS-OFF-AUTO SWITCH
HP	HORSEPOWER
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR-CONDITIONING
HWP	HYDRONIC WATER PUMP
IC	INTERRUPTING CAPACITY
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IR	INFRARED
IT	INFORMATION TECHNOLOGY
I/W	INTERLOCK WITH
JB	JUNCTION BOX
KCMIL	ONE THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KVAR	KILOVOLT-AMPERE REACTIVE
KW	KILOWATT
KWH	KILOWATT HOUR
LTG	LIGHTING
LV	LOW-VOLTAGE
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	MANHOLE
MI	MINERAL INSULATED
MIC	MICROPHONE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LOGS ONLY
MOCP	MAXIMUM OVER CURRENT PROTECTION
MSBD	MAIN SWITCHBOARD
MT	MOUNT
MT.C	EMPTY CONDUIT
MTS	MANUAL TRANSFER SWITCH
MTR	MOTOR / MOTORIZED
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OH	OVERHEAD
OL	OVERLOADS
PA	PUBLIC ADDRESS
PB	PULL BOX / PUSHBUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL / PANELBOARD
PR	PAIR
PRI	PRIMARY
PRV	POWER ROOF VENTILATOR
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE (CONDUIT)
PWR	POWER

QTY / QUAN	QUANTITY
RCPT	RECEPTACLE
REQD	REQUIRED
RM	ROOM
RSC	RIGID STEEL CONDUIT
RTU	ROOF TOP UNIT
SC	SURFACE
SEC	SECONDARY
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION
SPKR	SPEAKER
SP	SPARE
SPD	SURGE PROTECTION DEVICE
SS	STAINLESS STEEL
S/S	STOP / START PUSHBUTTONS
STA	STATION
STD	STANDARD
SW	SWITCH
SWBD	SWITCHBOARD
SYM	SYMETRICAL
SYS	SYSTEM
TEL	TELEPHONE
TL	TWIST LOCK
TR	TAMPER RESISTANT
T-STAT	THERMOSTAT
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESOR
TYP	TYPICAL
UC	UNDER COUNTER
UE	UNDERGROUND ELECTRICAL
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
UPS	UNINTERUPTABLE POWER SUPPLY
USB	UNIVERSAL SERIAL BUS
UT	UNDERGROUND TELEPHONE
UTIL	UTILITY
UV	ULTRAVILOT
V	VOLT
VA	VOLT-AMPERES
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
WAP	WIRELESS ACCESS POINT
W	WATT
W/	WITH
WG	WIRE GUARD
WH	WATER HEATER
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
∠	ANGLE
@	AT
Δ	DELTA
Y	WYE
'	FEET
"	INCHES
#	NUMBER
Ø	PHASE
C/L / ℄	CENTER LINE
&	AND
P	PLATE

DEMOLITION NOTES

*** NOTES APPLY TO ALL DRAWINGS ***

1. ALL KEYO BUILDING SYSTEMS SHALL REMAIN OPERATIONAL IN OCCUPIEDPORTIONS OF THE BUILDING THROUGH ALL PHASES, WITH THE EXCEPTION OF SCHEDULED OUTAGES.
2. PROVIDE ALL WORK NECESSARY TO ALLOW FOR PHASING. REFER TO PHASING PLANS ON THE "A" SERIES OF DRAWINGS AND COORDINATE WITH DIVISION 01.
3. REFER TO AND COORDINATE REMOVAL OF EQUIPMENT REMOVED BY OTHER DIVISIONS AS REQUIRED.
4. IN AREAS OUT OF THE CURRENT PHASE OF CONSTRUCTION, VERIFY THAT ELECTRICAL POWER SYSTEMS ARE NOT AFFECTED BY THE ALTERATIONS. PROVIDE ALL WORK REQUIRED TO MAINTAIN POWER AND PROPER OPERATION OF ALL SYSTEMS.
5. ALL EXISTING ITEMS INTENDED FOR REMOVAL SHALL BE COMPLETELY REMOVED WITH ALL ASSOCIATED HARDWARE INCLUDING, BUT NOT LIMITED TO: CONDUIT, BOXES, WIRING, CABLES, HANGERS. ETC...
6. CONDUIT IN GOOD CONDITION AND PROPERLY LOCATED MAY BE REUSED WHERE APPLICABLE, UNLESS NOTED OTHERWISE.
7. REFER TO PLANS FOR ADDITIONAL ITEMS/ROOM SPECIFIC NOTES.

SYMBOL LEGEND

HEIGHT AFF	SYMBOL	DESCRIPTION
	LP-1,3	CIRCUIT HOMERUN TO PANELBOARD - CROSS LINES INDICATE NUMBER OF CONDUCTORS OTHER THAN TWO (PROVIDE NUMBER OF CONDUCTORS REQUIRED TO ALLOW SWITCHING SHOWN ON E10 SERIES DRAWING)
		CIRCUIT NUMBER(S)
		PANELBOARD NAME
		WIRING CONCEALED IN WALL OR CEILING
		WIRING IN RACEWAY CONCEALED UNDERFLOOR / UNDERGROUND
		CABLE TRAY WITH FITTINGS AS SHOWN (TYPE AS DENOTED)
46"	$	TOGGLE SWITCH - SINGLE POLE - WHERE SHOWN SERVING EQUIPMENT, LOCATE ABOVE ACCESSIBLE CEILING DIRECTLY ABOVE EQUIPMENT
46"	$2	TOGGLE SWITCH - DOUBLE POLE
46"	$3	TOGGLE SWITCH - THREE-WAY
46"	$4	TOGGLE SWITCH - FOUR-WAY
46"	$P	TOGGLE SWITCH - PILOT LIGHT
46"	$T	TOGGLE SWITCH - TIMMER
46"	$K	TOGGLE SWITCH - KEY OPERATED
46"	$D	DIMMER SWITCH
46"	$OC	OCCUPANT SENSOR SWITCH
46"	$M	MOMENTARY-CONTACT SWITCH
46"	$MD	MOMENTARY-CONTACT DIMMER SWITCH
46"	$MOC	MOMENTARY OCCUPANT SENSOR SWITCH
46"	$MK	MOMENTARY KEY OPERATED SWITCH
		OCCUPANT SENSOR AND POWER PACK/S - WALL MOUNTED - PROVIDE NUMBER OF POWER PACKS REQUIRED TO ALLOW FOR NUMBER OF OCCUPANT SENSORS AND ZONES OF CONTROL - REFER TO OCCUPANT SENSOR CONTROL DETAIL ON E70 SERIES DRAWING
		OCCUPANT SENSOR AND POWER PACK/S - CEILING MOUNTED - PROVIDE NUMBER OF POWER PACKS REQUIRED TO ALLOW FOR NUMBER OF OCCUPANT SENSORS AND ZONES OF CONTROL - REFER TO OCCUPANT SENSOR CONTROL DETAIL ON E70 SERIES DRAWING
46"	$LC	LIGHTING CONTROL STATION - REFER TO TYPICAL DAYLIGHT HARVESTING DIMMING CONTROL DETAIL ON E70 SERIES DRAWING
		DAYLIGHT SENSOR - CEILING MOUNTED - REFER TO TYPICAL DAYLIGHT HARVESTING DIMMING CONTROL DETAIL ON E70 SERIES DRAWING
		OUTDOOR PHOTOELECTRONIC SWITCH
	LC	ROOM LIGHTING CONTROLLER - REFER TO TYPICAL DAYLIGHT HARVESTING DIMMING CONTROL DETAIL ON E70 SERIES DRAWING
		NETWORKED LIGHTING CONTROL SYSTEM (RELAY) PANEL - REFER TO LOW-VOLTAGE LIGHTING CONTROL DETAL ON E70 SERIES DRAWING AND LOW-VOLTAGE RELAY SCHEDULES ON E9# SERIES DRAWINGS
46"	$LV	NETWORKED LIGHTING CONTROL SYSTEM MANUAL SWITCH - REFER TO LOW-VOLTAGE LIGHTING CONTROL DETAIL ON E70 SERIES DRAWINGS
	E	EMERGENCY SHUNT (U.L. 924 BY-PASS) RELAY - REFER TO LIGHTING BY-PASS DETAIL ON E70 SERIES DRAWING
	TC	ELECTRONIC TIME SWITCH
		EXIT SIGN WITH ARROWS AS INDICATED AND HATCH INDICATING FACE - CEILING MOUNTED / PENDANT WHERE NOTED
102" / *		EXIT SIGN WITH ARROWS AS INDICATED AND HATCH INDICATING FACE - WALL MOUNTED
102"		EMERGENCY LIGHTING UNIT WITH TWO HEADS - SELF-CONTAINED - WALL MOUNTED
		EMERGENCY LIGHTING UNIT WITH TWO HEADS - SELF-CONTAINED - CEILING MOUNTED
102"		REMOTE EMERGENCY LIGHTING UNIT WITH TWO HEADS - WALL MOUNTED
102"	BATT	INTERNAL TYPE EMERGENCY POWER UNIT - WALL MOUNTED
		LIGHTING FIXTURE ON EMERGENCY / NIGHT LIGHT CIRCUIT (ALL FIXTURE TYPES)
		LIGHTING FIXTURE - SURFACE MOUNT - REFER TO LIGHTING FIXTURE SCHEDULE
		LIGHTING FIXTURE - PENDANT MOUNT - REFER TO LIGHTING FIXTURE SCHEDULE
		LIGHTING FIXTURE - INDUSTRIAL / STRIP - REFER TO LIGHTING FIXTURE SCHEDULE
		LIGHTING FIXTURE - RECESSED - REFER TO LIGHTING FIXTURE SCHEDULE
		LIGHTING FIXTURE - RECESSED DOWNLIGHT - REFER TO LIGHTING FIXTURE SCHEDULE
		LIGHTING FIXTURE - WALL PACK - REFER TO LIGHTING FIXTURE SCHEDULE
		LIGHTING FIXTURE - WALL SCONCE - REFER TO LIGHTING FIXTURE SCHEDULE
		LIGHTING FIXTURE - POLE MOUNTED SITE LIGHT - REFER TO LIGHTING FIXTURE SCHEDULE
	VFD	VARIABLE FREQUENCY DRIVE (VFD) PROVIDED BY DIVISION 23 - LINE-VOLTAGE CONNECTIONS PROVIDED BY DIVISION 26 - CARRY WIRE SIZE BETWEEN VFD AND MOTOR
		NONFUSIBLE SWITCH
		FUSIBLE SWITCH
	CB	MOLDED CASE ENCLOSED CIRCUIT BREAKER
		PANELBOARD - 208/120V (REFER TO PANELBOARD SCHEDULES ON E6# SERIES DRAWINGS)
		PANELBOARD - 480/277V (REFER TO PANELBOARD SCHEDULES ON E6# SERIES DRAWINGS)
	"T-##"	DRY-TYPE TRANSFORMER - LABELED "T-##" - REFER TO POWER RISER FOR SIZE
	ATS-##	AUTOMATIC TRANSFER SWITCH (ATS) WHERE LABELED AS "ATS-##"
	VSS / SPD	TRANSIENT VOLTAGE SURGE SUPPRESSOR / SURGE PROTECTIVE DEVICE
	M	UTILITY COMPANY METER - COORDINATE ALL REQUIREMENTS WITH LOCAL UTILITY COMPANY

HEIGHT AFF/GRADE	SYMBOL	DESCRIPTION
	CP	CONTROL PANEL - TYPE AS NOTED ON DRAWINGS
	M	ELECTRICAL MOTOR - HORSE POWER AND EQUIPMENT SERVED AS NOTED ON PLANS
		EMERGENCY POWER OFF (EPO) STATION - REFER TO APPLICABLE KEY NOTES
	J	JUNCTION BOX - SURFACE MOUNT AT 42" WHEN SHOWN ON WALL
	R	RELAY
	A	COOKING HOOD SUPPRESSION SYSTEM (ANSUL) PULL STATION - REFER TO ANSUL SYSTEM MANUAL PULL BOX DETAIL ON E70 SERIES DRAWING
		FLOOR / SURFACE MOUNTED - DUPLEX STRAIGHT BLADE RECEPTACLE SHOWN
		PENDANT / CEILING MOUNTED RECEPTACLE - DUPLEX STRAIGHT BLADE RECEPTACLE SHOWN - REFER TO PENDANT RECEPTACLE DETAIL ON E70 SERIES DRAWINGS
18"		SINGLE STRAIGHT BLADE RECEPTACLE
18"		DUPLEX STRAIGHT BLADE RECEPTACLE
18"		ISOLATED GROUND DUPLEX STRAIGHT BLADE RECEPTACLE
18"		CONTROLLED DUPLEX STRAIGHT BLADE RECEPTACLE
18"		GROUND FAULT CIRCUIT INTERRUPTER (GFCI) DUPLEX STRAIGHT BLADE RECEPTACLE
18"		CONTROLLED GROUND FAULT CIRCUIT INTERRUPTER (GFCI) DUPLEX STRAIGHT BLADE RECEPTACLE
18"	USB	DUPLEX STRAIGHT BLADE RECEPTACLE WITH DUPLEX USB PLUGS
18"		DOUBLE DUPLEX STRAIGHT BLADE RECEPTACLE
18"		ISOLATED GROUND DOUBLE DUPLEX STRAIGHT BLADE RECEPTACLE
18"		CONTROLLED DOUBLE DUPLEX STRAIGHT BLADE RECEPTACLE
18"		GROUND FAULT CIRCUIT INTERRUPTER (GFCI) DOUBLE DUPLEX STRAIGHT BLADE RECEPTACLE
18"		CONTROLLED GROUND FAULT CIRCUIT INTERRUPTER (GFCI) DOUBLE DUPLEX STRAIGHT BLADE RECEPTACLE
18"	USB	DOUBLE DUPLEX STRAIGHT BLADE RECEPTACLE WITH DUPLEX USB PLUGS
VARIES		LOCKING / SPECIAL PURPOSE RECEPTACLE - UNLESS NOTED OTHERWISE COORDINATE NEMA CONFIGURATION AND MOUNTING HEIGHT WITH EQUIPMENT FURNISHED
18"		DATA OUTLET - 4 11/16" SQUARE JUNCTION BOX WITH SINGLE GANG RAISED RING / FACEPLATE, SINGLE DATA JACK AND TWO 1" CONDUITS TO ABOVE AN ACCESSIBLE CEILING - SINGLE JACK UNLESS INDICATED OTHERWISE
18"		VOICE OUTLET - 4 11/16" SQUARE JUNCTION BOX WITH SINGLE GANG RAISED RING / FACEPLATE, SINGLE VOICE JACK AND TWO 1" CONDUITS TO ABOVE AN ACCESSIBLE CEILING - SINGLE JACK UNLESS INDICATED OTHERWISE
18"		VOICE / DATA OUTLET - 4 11/16" SQUARE JUNCTION BOX WITH SINGLE GANG RAISED RING / FACEPLATE, SINGLE DATA / SINGLE VOICE JACK AND TWO 1" CONDUITS TO ABOVE AN ACCESSIBLE CEILING - SINGLE JACK UNLESS INDICATED OTHERWISE
46"		AI PHONE AND CALL BUTTON - 4 11/16" SQUARE JUNCTION BOX WITH SINGLE GANG RAISED RING / FACEPLATE, CALL BUTTON AND ONE 3/4" CONDUIT TO ABOVE AN ACCESSIBLE CEILING
		CEILING MOUNTED PUBLIC ADDRESS SYSTEM SPEAKER - BACK BOX FURNISHED WITH SPEAKER, PROVIDE ONE 3/4" CONDUIT FROM BACK BOX TO ABOVE AN ACCESSIBLE CEILING
102"		WALL MOUNTED PUBLIC ADDRESS SYSTEM SPEAKER - BACK BOX FURNISHED WITH SPEAKER, PROVIDE ONE 3/4" CONDUIT FROM BACK BOX TO ABOVE AN ACCESSIBLE CEILING
102" / *		WALL MOUNTED CENTRAL CLOCK - 4 11/16" SQUARE JUNCTION BOX WITH SINGLE GANG RAISED RING / FACEPLATE, JACK AND ONE 3/4" CONDUIT TO ABOVE AN ACCESSIBLE CEILING - CENTER ON DOOR OPENING
VARIES		CCTV SYSTEM CAMERA - 4 11/16" SQUARE JUNCTION BOX WITH SINGLE GANG RAISED RING / COVER PLATE, JACK AND ONE 3/4" CONDUIT TO ABOVE AN ACCESSIBLE CORRIDOR CEILING - MOUNTING HEIGHT AS INDICATED / "CLG" INDICATES CEILING MOUNTED
VARIES		PAN / TILT / ZOOM CCTV SYSTEM CAMERA - 4 11/16" SQUARE JUNCTION BOX WITH SINGLE GANG RAISED RING / COVER PLATE, JACK AND ONE 3/4" CONDUIT TO ABOVE AN ACCESSIBLE CORRIDOR CEILING - MOUNTING HEIGHT AS INDICATED / "CLG" INDICATES CEILING MOUNTED
TOP UP 48"	SEC	INTRUSION DETECTION SYSTEM (SECURITY) PANEL - BACK BOX FURNISHED WITH PANEL, DIVISION 26 SHALL PROVIDE ONE 3/4" CONDUIT FROM BACKBOX TO ABOVE AN ACCESSIBLE CEILING
46"	KP	INTRUSION DETECTION SYSTEM KEY PAD - 4 11/16" SQUARE JUNCTION BOX WITH SINGLE GANG RAISED RING AND ONE 3/4" CONDUIT TO ABOVE AN ACCESSIBLE CORRIDOR CEILING
DOOR FRAME	DC	INTRUSION DETECTION SYSTEM DOOR CONTACT / SWITCH - PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ABOVE AN ACCESSIBLE CORRIDOR CEILING - REFER TO TYPICAL DOOR WITH MAGNETIC DOOR SWITCH DETAIL
96"	MS	INTRUSION DETECTION SYSTEM MOTION SENSOR - 4 11/16" SQUARE JUNCTION BOX WITH SINGLE GANG RAISED RING AND ONE 3/4" CONDUIT TO ABOVE AN ACCESSIBLE CORRIDOR CEILING
46"	CR	ACCESS CONTROL SYSTEM CARD READER - 4 11/16" SQUARE JUNCTION BOX WITH SINGLE GANG RAISED RING AND ONE 3/4" CONDUIT TO ABOVE AN ACCESSIBLE CORRIDOR CEILING
DOOR FRAME	ES	ACCESS CONTROL SYSTEM ELECTRIC STRIKE / LATCH - PROVIDE 3/4" CONDUIT FROM STRIKE / LATCH TO ABOVE AN ACCESSIBLE CORRIDOR CEILING - COORDINATE WITH DIVISION 08
DOOR FRAME	ML	ACCESS CONTROL SYSTEM MAGNETIC LOCK - PROVIDE 3/4" CONDUIT FROM LOCK TO ABOVE AN ACCESSIBLE CORRIDOR CEILING - COORDINATE WITH DIVISION 08
	REX	ACCESS CONTROL REQUEST TO EXIT DEVICE - JUNCTION BOX WITH SINGLE GANG RAISED RING AND ONE 3/4" CONDUIT TO ABOVE AN ACCESSIBLE CORRIDOR CEILING - COORDINATE WITH DIVISION 08
	DH	ELECTRIC DOOR HOLDER / CLOSER - BY DIVISION 08 JUNCTION BOX WITH ONE 3/4" CONDUIT TO ABOVE AN ACCESSIBLE CEILING, MOUNTING AND WIRING BY DIVISION 26 COORDINATE EXACT LOCATION WITH DIVISION 08
46"	IC	INTERCOM STATION - JUNCTION BOX WITH SINGLE GANGE RAISED RING AND ONE 3/4" CONDUIT TO ABOVE AN ACCESSIBLE CORRIDOR CEILING

HEIGHT AFF	SYMBOL	DESCRIPTION
	FACP	FIRE ALARM SYSTEM - CONTROL PANEL AND GRAPHIC MAP - REFER TO FIRE ALARM SYSTEM DETAILS AND NOTES DETAIL ON E70 SERIES DRAWING
		FIRE ALARM SYSTEM REMOTE ANNUNCIATOR AND GRAPHIC ANNUNCIATOR
46"	F	FIRE ALARM SYSTEM - MANUAL FIRE-ALARM BOX (PULL STATION)
		FIRE ALARM SYSTEM - SMOKE DETECTOR - CEILING MOUNTED - COORDINATE EXACT LOCATION WITH DIVISION 23 DIFFUSERS / GRILLES - DO NOT LOCATE WITHIN FIVE FEET OF A MECHANICAL DIFFUSER OR GRILLE
		FIRE ALARM SYSTEM - DUCT SMOKE DETECTOR WITH SAMPLING TUBE - HOUSING AND TUBE MOUNTED TO DUCT BY DIVISION 23
		FIRE ALARM SYSTEM - DUCT SMOKE DETECTOR REMOTE TESTING AND INDICATING STATION
	HS	FIRE ALARM SYSTEM - HEAT DETECTOR - CEILING MOUNTED
	CO	FIRE ALARM SYSTEM - CARBON MONOXIDE DETECTOR - CEILING MOUNTED - COORDINATE EXACT LOCATION WITH DIVISION 23 DIFFUSERS / GRILLES - DO NOT LOCATE WITHIN FIVE FEET OF A MECHANICAL DIFFUSER OR GRILLE
	GD	GAS DETECTOR - MONITORED BY FIRE ALARM SYSTEM - MOUNT AS DIRECTED BY MANUFACTURER TO MONITOR DESIRED GAS
94"		FIRE ALARM SYSTEM - AUDIBLE NOTIFICATION APPLIANCE (HORN / STROBE UNIT). ADJUSTABLE CANDELA RATING 15-75. ADJUST IN FIELD.
94"		FIRE ALARM SYSTEM - VISIBLE NOTIFICATION APPLIANCE (STROBE UNIT). ADJUSTABLE CANDELA RATING 15-75. ADJUST IN FIELD.
	AI	FIRE ALARM SYSTEM - ADDRESSABLE INTERFACE DEVICE
		TAMPER SWITCH - MONITORED BY THE FIRE ALARM SYSTEM VIA ADDRESSABLE INTERFACE DEVICE - COORDINATE WITH DIVISION 21
		FLOW SWITCH - MONITORED BY THE FIRE ALARM SYSTEM VIA ADDRESSABLE INTERFACE DEVICE - COORDINATE WITH DIVISION 21
		PRESSURE SWITCH - MONITORED BY THE FIRE ALARM SYSTEM VIA ADDRESSABLE INTERFACE DEVICE - COORDINATE WITH DIVISION 21

NOTES:
1. MOUNTING HEIGHTS ARE C/L UP UNLESS NOTED OTHERWISE.
2. ALL MOUNTING HEIGHTS ARE AS NOTED ABOVE UNLESS OTHERWISE CALLED OUT ON PLANS.
3. " = MOUNT 12" ABOVE FRAME WHERE FRAME DOES NOT ALLOW 102" MOUNTING HEIGHT.

SYMBOL NOTES

A4 / d — THE LIGHTING FIXTURE TYPE IS INDICATED BY AN UPPER CASE LETTER.
THE SWITCH DESIGNATION IS INDICATED BY A LOWER CASE LETTER.
- EXAMPLE: LIGHTING FIXTURE TYPE IS "A4" AND IS CONTROLLED BY SWITCH LEG "d".

$Me — CONTROL DEVICE SWITCH LEG (CONTROL) INDICATED BY A LOWER CASE LETTER.
- EXAMPLE: SINGLE POLE MOMENTARY SWITCH CONTROLLING SWITCH LEG "e".

3/1 — QUANTITY OF DROPS (JACKS) AT DATA, VIOCE AND VOICE DATA SYMBOL.
EXAMPLE: NO NUMBER INDICAES QUANTITY OF DROPS AS DEFINED IN SYMBOL LEGEND.
NUMBER INDICATES QUANTITY OTHER THAN AS DEFINED IN SYMBOL LEGEND.
AT VOICE / DADA SYMBOL - FIRST NUMBER INDICATES QUANTITY OF VOICE DROPS, SECOND NUMBER INSIDCATES QUANTITY OF DATA DROPS. THE EXAMPLE SHOWS THREE VOICE / ONE DATA DROP.

P01 — KEY NOTE AS DEFINED ON EACH DRAWING.

WR — WEATHER RESISTANT / WHILE IN USE COVER WITH WEATHER RESISTANT GFCI RECEPTACLE WHERE INDICATED AT RECEPTACLE

LINE WEIGHT INDICATES DEMOLISH.

LINE WEIGHT INDICATES NEW WORK.

LINE WEIGHT INDICATES EXISTING TO REMAIN.

SPECIFIC CODE NOTES

1. 2-HOUR FIRE WALLS SHALL NOT BE PENETRATED BY ANY CONDUIT, WIRE / CABLE PATHWAY, BOX OR SLEEVE EXCEPT FOR THE SLEEVES INDICATED ON THE E30 SERIES CABLE TRAY DRAWINGS. REFER TO UTILITIES PASSING 2-HOUR FIRE WALL DETAIL ON E 70 SERIES DRAWING.
2. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS (DIVISION 10) FOR RESPONSIBILITIES REQUIRED AT PENETRATIONS IN RATED ASSEMBLIES, INCLUDING BUT NOT LIMITED TO WALLS AND FLOORS WITH A U.L. APPROVED FIRESTOPPING ASSEMBLY INCLUDING LISTING LABEL OF PENETRATION AFTER PASSING THROUGH UTILITY. UTILITY CONTRACTOR SHALL COORDINATE WITH THE FIRESTOPPING CONTRACTOR FOR THE PENETRATION SIZE AND LOCATION.

GENERAL NOTES

1. COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND DETAILS. ALERT ARCHITECT WHERE DISCREPANCY EXIST PRIOR TO ROUGH-IN.
2. VERIFY LOCATIONS AND ROUGH-IN REQUIREMENTS OF EQUIPMENT FURNISHED / PROVIDED BY OTHER DIVISIONS AND OWNER PRIOR TO ROUGH-IN.
3. NOT ALL DETAILS ARE SPECIFICALLY REFEREED TO, REVIEW ALL DETAILS ON E70 SERIES DRAWINGS AND APPLY TO THE DOCUMENTS.
4. COORDINATE LOCATION OF ALL MECHANICAL AND PLUMBING (DIVISION 21, 22 AND 23) EQUIPMENT WITH EACH DIVISION PRIOR TO ROUGH-IN.
5. ROOM NAMES AND NUMBERS IN THE CONSTRUCTION DOCUMENTS ARE FOR COORDINATION OF THE CONSTRUCTION DOCUMENTS AND ARE NOT TO BE APPLIED TO NAMEPLATES OR LABELS. REQUEST OWNER DESIGNATED ROOM NAMES AND NUMBERS PRIOR TO GENERATING ANY NAMEPLATES OR LABELS.

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No. 17097
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CONSTRUCTION DOCUMENTS

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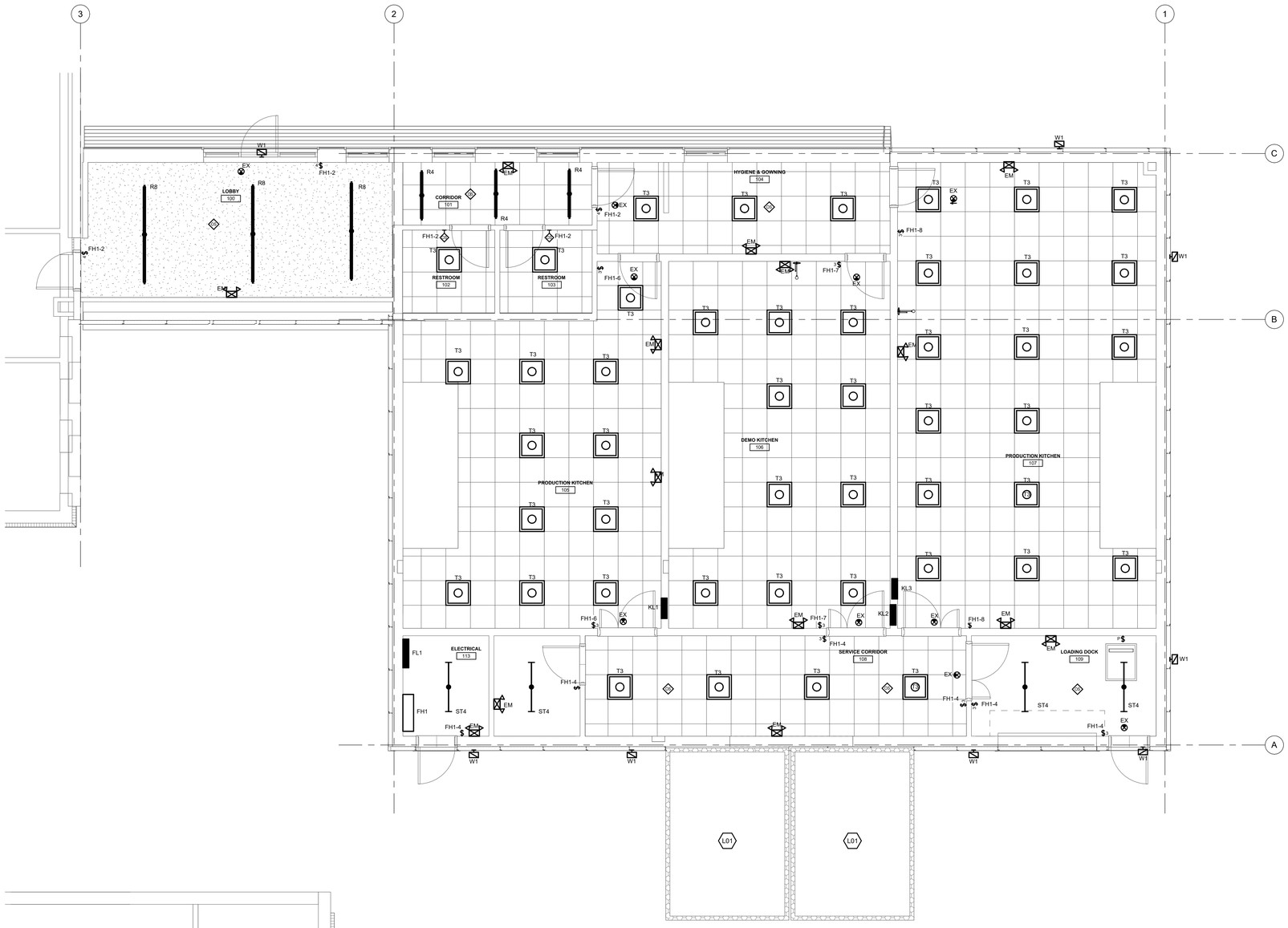
SYMBOLS AND ABBREVIATIONS

E00-1



1 FIRST FLOOR PLAN - LIGHTING

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

GENERAL NOTES

1. ALL RECESSED LIGHTING FIXTURES IN LAY-IN CEILINGS SHALL BE INSTALLED WITH MAXIMUM 6' LONG FLEXIBLE METAL CONDUIT.
2. ALL MOUNTING HEIGHTS FOR LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURES UNLESS INDICATED OTHERWISE.
3. SEE ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHTS OF EXTERIOR LIGHTING FIXTURES.
4. WIRE COUNTS FOR CIRCUIT CONDUCTORS ARE NOT SHOWN. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUIT AND SWITCHING CONNECTIONS SHOWN.
5. MODIFICATIONS TO NUMBER OF CONDUCTORS IN HOME RUNS IN ADDITION TO CIRCUITS INDICATED ON THIS DRAWING ARE PROHIBITED. THE SHARING OF NEUTRALS IS PROHIBITED.
6. CIRCUIT WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES.
7. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN. THE SHARING OF NEUTRALS IS PROHIBITED.
8. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS (SEE PANELBOARD SCHEDULE). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.
9. PROVIDE OCCUPANT SENSOR CONTROL FOR BATHROOMS TO TURN OFF LIGHTS WITHIN 20 MINS OF ALL OCCUPANTS LEAVING THE SPACE. AUTOMATIC ON TO 50% OF FULL LIGHT LEVEL AND MANUAL OVERRIDE TO BE PROVIDED WITH WALL SWITCH. IN CORRIDORS, PROVIDE OCCUPANT SENSING CONTROL TO DIM LIGHTS TO NO MORE THAN 50% POWER WITHIN 20 MINS OF ALL OCCUPANTS LEAVING THE SPACE. AUTOMATIC ON TO 100% OF FULL LIGHT LEVEL AND WALL SWITCH TO PROVIDE MANUAL OVERRIDE. PROVIDE AOM MODULES AS REQUIRED TO BRING ALL CORRIDOR LIGHTS TO 100% UPON A FIRE ALARM EVENT.

KEY NOTES

L01 COORDINATE LIGHTING FOR INTERIOR OF FREEZER AND COOLER WITH MANUFACTURER. PROVIDE REQUIRED NUMBER OF PENETRATIONS TO SERVE ALL LIGHT FIXTURES.

LIGHTING FIXTURE SCHEDULE

NOTES:
1. ALL FIXTURES SHALL BE FURNISHED COMPLETE WITH ALL HARDWARE, LAMPS, HANGERS, FITTINGS, ETC. FOR A COMPLETE AND PROPER INSTALLATION.
2. ALL FIXTURES SHALL BE BABA COMPLIANT.

TYPE	DESCRIPTION	LENS	MOUNTING	LAMP	VOLT	WATT	MFR	CATALOG SERIES	NOTES	APPROVED MANUFACTURERS
EM	SURFACE MOUNT LED EMERGENCY BATTERY PACK		SURFACE	LED	120 V	20 W	ELITE	ELM-LED-961-BABA		
EX	CONTEMPORARY LED DOUBLE FACED EXIT SIGN WITH BLACK POWDER PAINT ALUMINUM HOUSING, BRUSHED ALUMINUM FACE, RED LETTERS, AND CHEVRON ARROWS AS SHOWN ON PLANS.	RED	UNIVERSAL	LED	120 V	4 W	COLE	KWRL-612-RED		APPROVED EQUALS
R4	RECESSED - 4'-0" T-BAR LINEAR - 932 LM/FT DOWNLIGHT, 80CRI, 3500K, FLUSH DOWNLIGHT OPTICS, 0-10 DIMMING DOWN TO 10%, WHITE FINISH	LOW GLOSS WHITE	RECESSED	LED	277 V	45 W	ELITE	4-LB-LED-2400L-DIM10-MVOLT-35K-85-TB-SG-BABA		APPROVED EQUALS
R8	RECESSED - 8'-0" LINEAR - 630 LM/FT DOWNLIGHT, 80CRI, 3500K, FLUSH DOWNLIGHT OPTICS, 0-10 DIMMING DOWN TO 10%, WHITE FINISH	LOW GLOSS WHITE	RECESSED	LED	277 V	49 W	ELITE	SVELT-R-LED-1-S8-RTL-600DF-90-35K-WH-MVOLT-DF-DIM10-BABA		APPROVED EQUALS
ST1	EXTERIOR LED LIGHT FIXTURE MOUNTED ON 12' POLE. FULL CUT OFF, 0-10V DIMMING, 3000K	CLEAR POLYCARBONATE	POLE	LED	277 V	19 W	KIM LIGHTING	1SA-WP9SA2-27L-350-3K7-4W-CP-BC-UNV-BLS	MATCH STANDARD CAMPUS FINISH	
ST4	4' INDUSTRIAL LED STRIP, 5000 LUMENS, 80CRI, 3500K, SYMMETRIC REFLECTOR, WHITE FINISH.	FROSTED	PENDANT	LED	277 V	39 W	ELITE	4-OC1-LED-5000L-DIM10-MVOLT-35K-85-BABA		APPROVED EQUALS
T3	2'X2' LED FLAT PANEL, 3000 LUMENS, 80CRI, 4000K, 0-10 DIMMING DOWN TO 0-10V DIMMING	ACRYLIC LINEAR PRISMATIC	RECESSED	LED	277 V	31 W	ELITE	22-FPL1-LED-3000-DIM10-MVOLT-40K-85-BABA		APPROVED EQUALS
W1	SURFACE MOUNT LED WALL PACK	ACRYLIC LENS	SURFACE	LED	277 V	47 W	LITHONIA	WDGE2-LED-P4-40K-80CRI-T1S-MVOLT-SRM-BAA-DBLXD	MOUNT 8' ABOVE TOP OF DOOR FRAME UNLESS OTHERWISE NOTED. COORDINATE FINAL HEIGHTS WITH ARCHITECT.	APPROVED EQUALS

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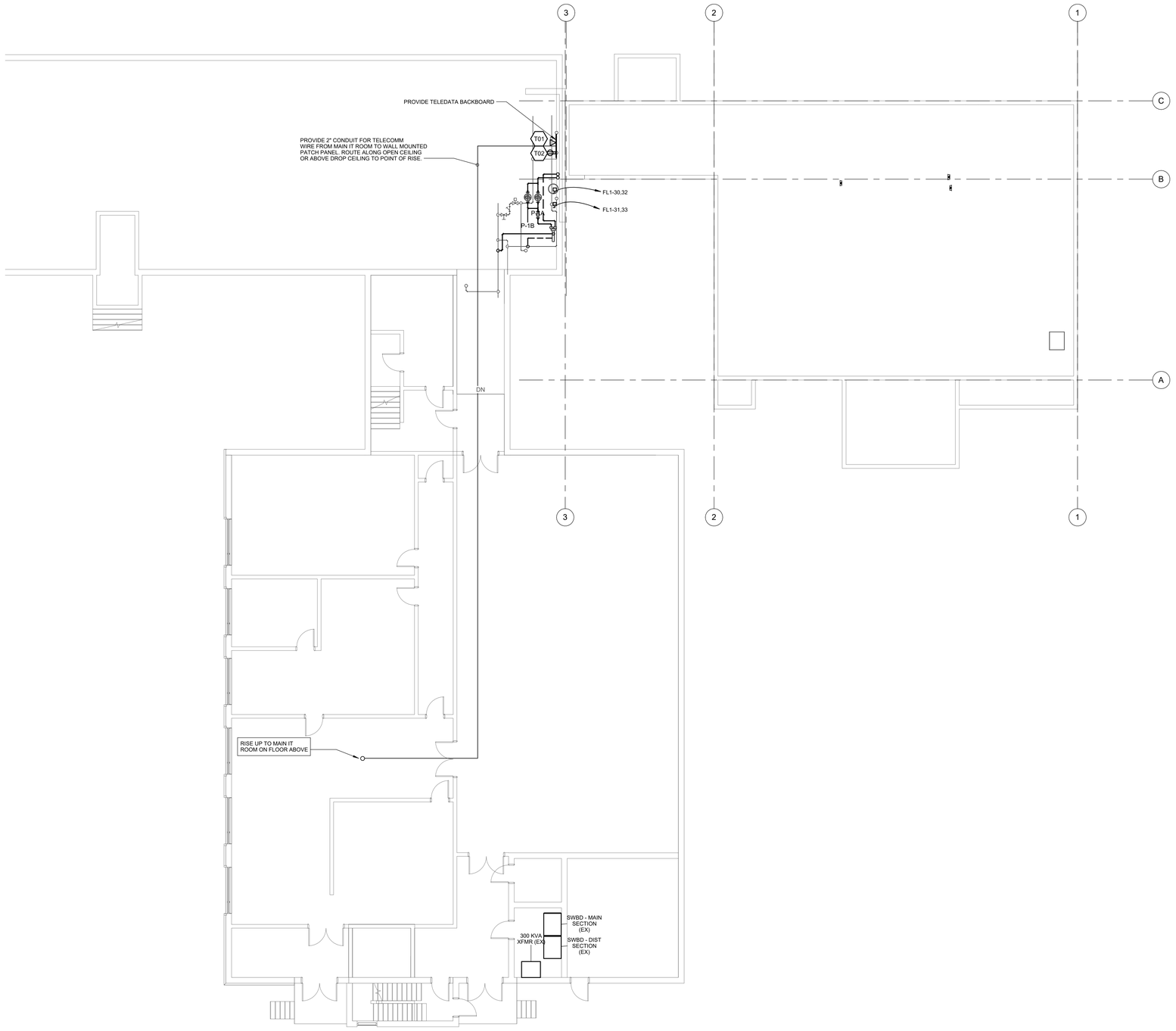
FIRST FLOOR PLAN
LIGHTING

E10-1



1 BASEMENT FLOOR PLAN - POWER AND SYSTEMS
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1 WHERE CONNECTED TO A 20A BRANCH CIRCUIT SUPPLYING AN INDIVIDUAL RECEPTACLE (SIMPLEX OR DUPLEX), THE RECEPTACLE SHALL BE RATED AT 20A.

2 WIRE COUNTS FOR CIRCUIT CONDUCTORS ARE NOT SHOWN. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUIT AND SWITCHING CONNECTIONS SHOWN.

3 ALL TELECOMM CONNECTIONS ARE TO BE ROUTED IN OVERHEAD SPACE BACK TO EXISTING BUILDING TO NEW IT RACK LOCATED ON BASEMENT LEVEL. PROVIDE BACK BOX, CONDUIT, AND PULL STRING ABOVE CEILING FOR OWNER'S USE.

4 PROVIDE WEATHER PROOF RECEPTACLES IN ALL KITCHEN, WALK IN, AND EXTERIOR AREAS. PROVIDE IN USE COVER. HUBBELL TAYMAC MODEL MM410C OR APPROVED EQUAL.

KEY NOTES

T01 PROVIDE POWER FOR PROPOSED WALL MOUNTED PATCH PANEL. UTILIZE CLOSEST AVAILABLE 20A, 1PH, 120V CIRCUIT BREAKER AVAILABLE IN EXISTING PANEL IN KEYO BUILDING. COORDINATE EXACT LOCATION FOR MOUNTING WITH OWNER AND ARCHITECT PRIOR TO INSTALLING.

T02 PROVIDE NEW PATCH PANEL PER UMAINE STANDARDS. TYPE SIEMON #HD6-24 CAT6 RATED WITH RJ45 FACEPLATES AND 110 TERMINATIONS ON BACK. SIZE PATCH PANEL TO ACCOMODATE REQUIRED CONNECTIONS FOR PROPOSED BUILDING ADDITION +20%.

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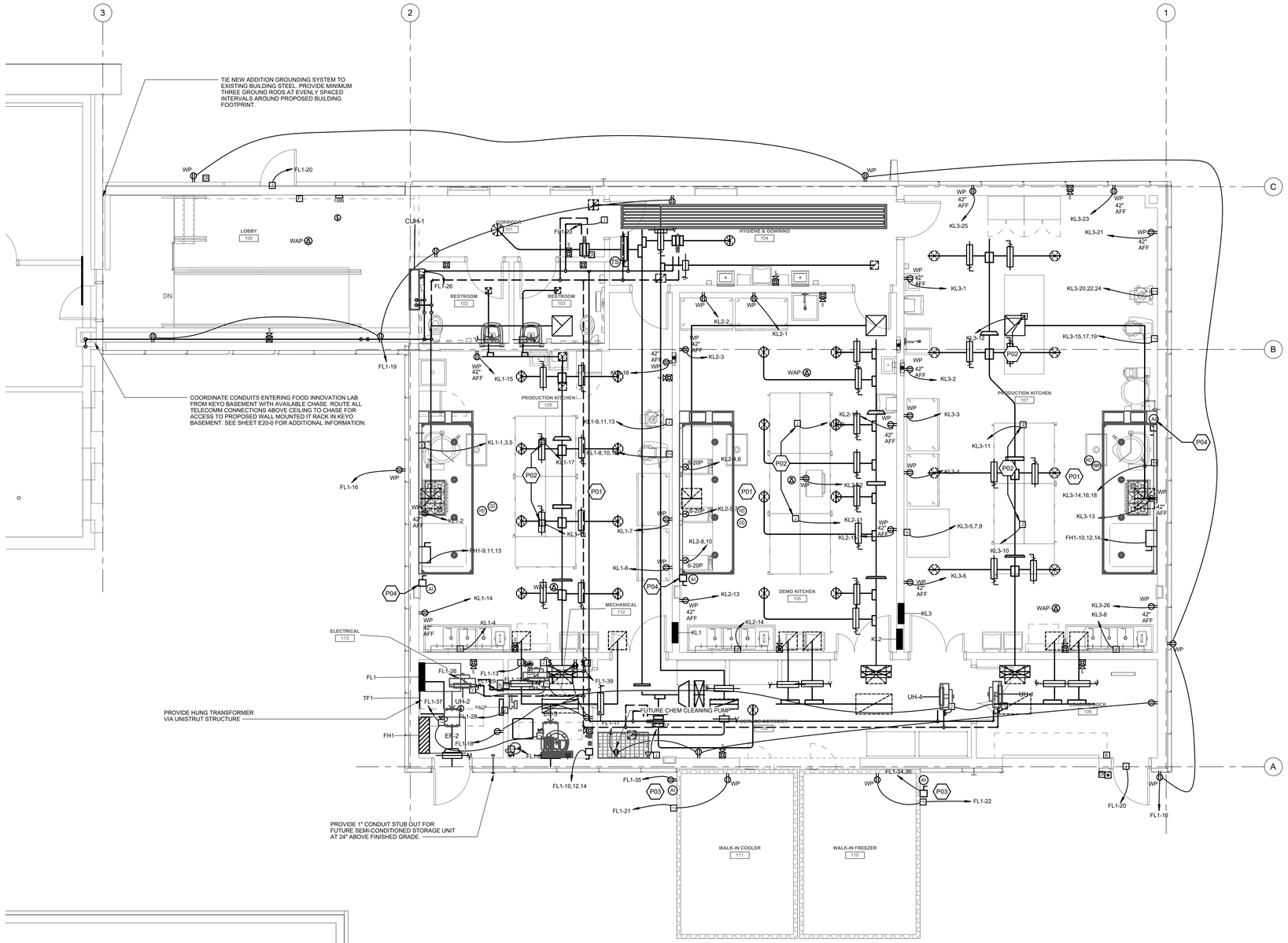
BASEMENT FLOOR PLAN
POWER AND SYSTEMS

E20-0



1 FIRST FLOOR PLAN - POWER AND SYSTEMS
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1 WHERE CONNECTED TO A 20A BRANCH CIRCUIT SUPPLYING AN INDIVIDUAL RECEPTACLE (SIMPLEX OR DUPLEX), THE RECEPTACLE SHALL BE RATED AT 20A.

2 WIRE COUNTS FOR CIRCUIT CONDUCTORS ARE NOT SHOWN. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUIT AND SWITCHING CONNECTIONS SHOWN.

3 ALL TELECOMM CONNECTIONS ARE TO BE ROUTED IN OVERHEAD SPACE BACK TO EXISTING BUILDING TO NEW IT RACK LOCATED ON BASEMENT LEVEL. PROVIDE BACK BOX, CONDUIT, AND PULL STRING ABOVE CEILING FOR OWNER'S USE.

4 PROVIDE WEATHER PROOF RECEPTACLES IN ALL KITCHEN, WALK IN, AND EXTERIOR AREAS. PROVIDE IN USE COVER. HUBBELL TAYMAC MODEL MM410C OR APPROVED EQUAL.

KEY NOTES

P01 ALL EXPOSED ELECTRICAL EQUIPMENT IN KITCHEN AREAS SHALL BE STAINLESS STEEL.

P02 PROVIDE OVERHEAD CORD REEL.

P03 COORDINATE CONNECTIONS FOR WALK IN COOLER AND FREEZER COMPRESSORS, EVAPORATOR COILS, AND OTHER ANCILLARY POWER REQUIREMENTS WITH OWNER'S MANUFACTURER.

P04 PROVIDE POWER AND FIRE ALARM INPUT MODULE FOR HOOD FIRE SUPRESSION SYSTEM. PROVIDE ADDITION MODULES AS REQUIRED FOR ALL EQUIPMENT LOCATED UNDER HOOD. COORDINATE WITH DIVISION 23 FOR FINAL CONNECTION AND SHUT DOWN REQUIREMENTS.

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FIRST FLOOR PLAN
POWER AND SYSTEMS

E20-1

GENERAL NOTES

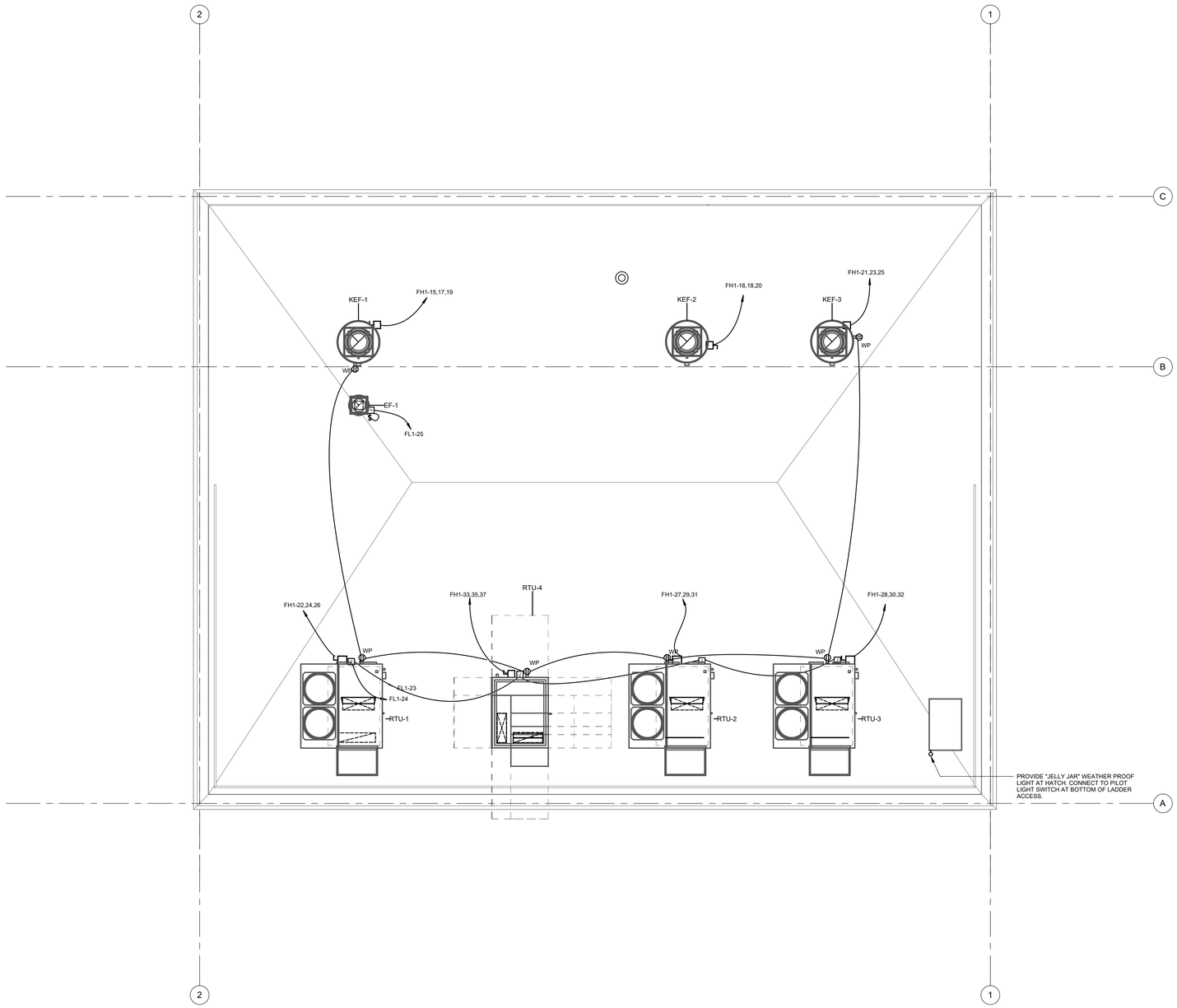
1 WHERE CONNECTED TO A 20A BRANCH CIRCUIT SUPPLYING AN INDIVIDUAL RECEPTACLE (SIMPLEX OR DUPLEX), THE RECEPTACLE SHALL BE RATED AT 20A.

2 WIRE COUNTS FOR CIRCUIT CONDUCTORS ARE NOT SHOWN. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUIT AND SWITCHING CONNECTIONS SHOWN.

3 ALL TELECOMM CONNECTIONS ARE TO BE ROUTED IN OVERHEAD SPACE BACK TO EXISTING BUILDING TO NEW IT RACK LOCATED ON BASEMENT LEVEL. PROVIDE BACK BOX, CONDUIT, AND PULL STRING ABOVE CEILING FOR OWNER'S USE.

4 PROVIDE WEATHER PROOF RECEPTACLES IN ALL KITCHEN, WALK IN, AND EXTERIOR AREAS. PROVIDE IN USE COVER. HUBBELL TAYMAC MODEL MM410C OR APPROVED EQUAL.

KEY NOTES



1 ROOF PLAN - POWER AND SYSTEMS
SCALE: 1/4" = 1'-0"

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ROOF PLAN POWER AND SYSTEMS

E20-2

KEY NOTES

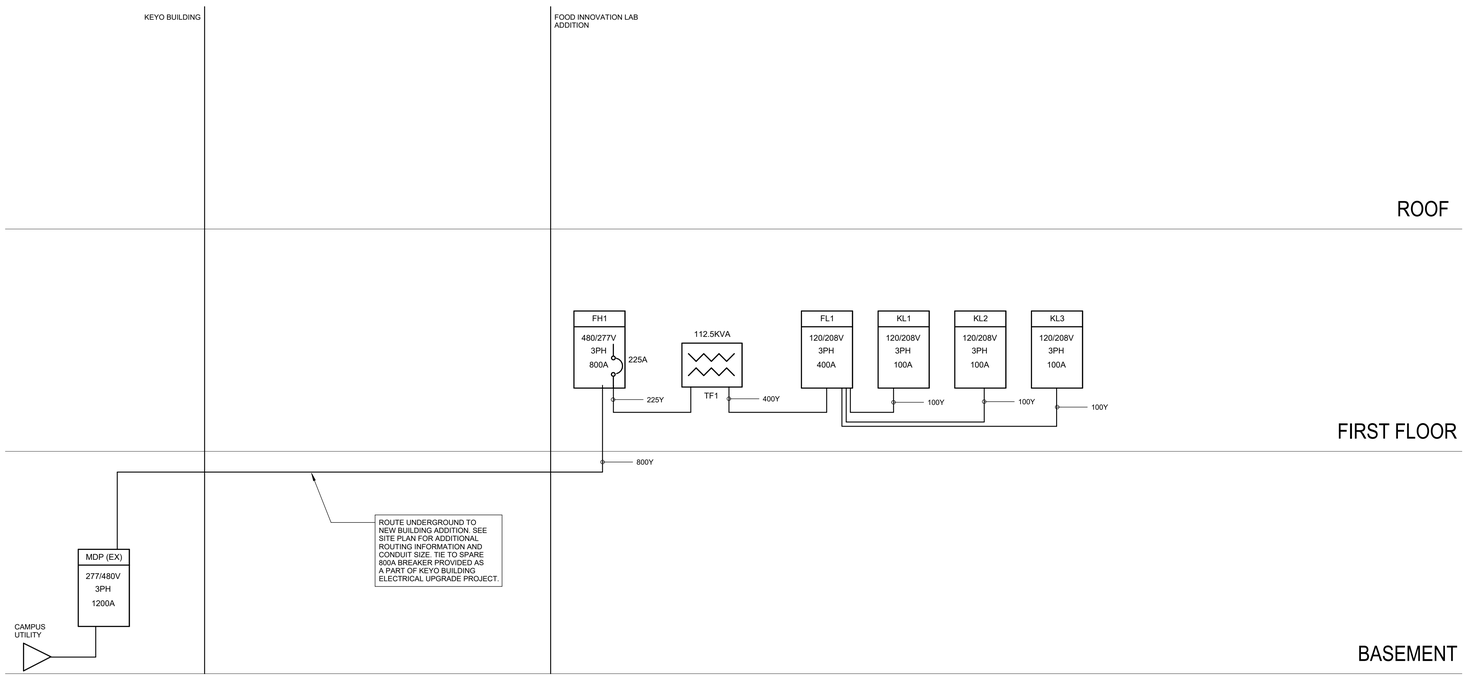
FEEDER SCHEDULE: 3 WIRE			
SYMBOL	PHASE CONDUCTOR	EGC	CONDUIT
20A	(3) #12	(1) #12	3/4"
30A	(3) #10	(1) #10	3/4"
40A	(3) #8	(1) #10	1"
50A	(3) #6	(1) #10	1"
60A	(3) #4	(1) #10	1"
70A	(3) #4	(1) #8	1"
80A	(3) #3	(1) #8	1"
90A	(3) #2	(1) #8	1-1/2"
100A	(3) #2	(1) #8	1-1/2"
125A	(3) #1	(1) #6	2"
150A	(3) #1/0	(1) #6	2"
175A	(3) #2/0	(1) #6	2"
200A	(3) #3/0	(1) #6	2"
225A	(3) #4/0	(1) #4	2-1/2"
250A	(3) #250 KCMIL	(1) #4	2-1/2"
300A	(3) #350 KCMIL	(1) #4	3"
350A	(3) #500 KCMIL	(1) #3	3"
400A	(3) #600 KCMIL	(1) #3	3-1/2"
500A	(2) SETS OF (3) #250 KCMIL	(1) #2	(2) 2-1/2"
600A	(2) SETS OF (3) #350 KCMIL	(1) #1	(2) 3"
800A	(3) SETS OF (3) #300 KCMIL	(1) #1/0	(3) 3"
1000A	(3) SETS OF (3) #400 KCMIL	(1) #2/0	(3) 3"
1200A	(4) SETS OF (3) #350 KCMIL	(1) #3/0	(4) 3"
1600A	(5) SETS OF (3) #400 KCMIL	(1) #4/0	(5) 3"
2000A	(6) SETS OF (3) #500 KCMIL	(1) #250 KCMIL	(6) 3"
2500A	(7) SETS OF (3) #500 KCMIL	(1) #350 KCMIL	(7) 3"
3000A	(8) SETS OF (3) #500 KCMIL	(1) #400 KCMIL	(8) 3"
4000A	(10) SETS OF (3) #600 KCMIL	(1) #500 KCMIL	(10) 4"
5000A	(12) SETS OF (3) #600 KCMIL	(1) #700 KCMIL	(12) 4"

FEEDER SCHEDULE: 4 WIRE			
SYMBOL	PHASE CONDUCTOR	EGC	CONDUIT
20Y	(4) #12	(1) #12	3/4"
30Y	(4) #10	(1) #10	3/4"
40Y	(4) #8	(1) #10	1"
50Y	(4) #6	(1) #10	1"
60Y	(4) #4	(1) #10	1-1/4"
70Y	(4) #4	(1) #8	1-1/4"
80Y	(4) #3	(1) #8	1-1/4"
90Y	(4) #2	(1) #8	1-1/2"
100Y	(4) #2	(1) #8	1-1/2"
125Y	(4) #1	(1) #6	2"
150Y	(4) #1/0	(1) #6	2"
175Y	(4) #2/0	(1) #6	2"
200Y	(4) #3/0	(1) #6	2"
225Y	(4) #4/0	(1) #4	2-1/2"
250Y	(4) #250 KCMIL	(1) #4	2-1/2"
300Y	(4) #350 KCMIL	(1) #4	3"
350Y	(4) #500 KCMIL	(1) #3	3"
400Y	(4) #600 KCMIL	(1) #3	4"
500Y	(2) SETS OF (4) #250 KCMIL	(1) #2	(2) 2-1/2"
600Y	(2) SETS OF (4) #350 KCMIL	(1) #1	(2) 3"
800Y	(3) SETS OF (4) #300 KCMIL	(1) #1/0	(3) 3"
1000Y	(3) SETS OF (4) #400 KCMIL	(1) #2/0	(3) 3"
1200Y	(4) SETS OF (4) #350 KCMIL	(1) #3/0	(4) 3"
1600Y	(5) SETS OF (4) #400 KCMIL	(1) #4/0	(5) 3"
2000Y	(6) SETS OF (4) #500 KCMIL	(1) #250 KCMIL	(6) 4"
2500Y	(7) SETS OF (4) #500 KCMIL	(1) #350 KCMIL	(7) 4"
3000Y	(8) SETS OF (4) #500 KCMIL	(1) #400 KCMIL	(8) 4"
4000Y	(10) SETS OF (4) #600 KCMIL	(1) #500 KCMIL	(10) 4"
5000Y	(12) SETS OF (4) #600 KCMIL	(1) #700 KCMIL	(12) 4"

DRY-TYPE TRANSFORMER SCHEDULE			
KVA	480V OCPD RATING	208V OCPD RATING	GROUNDING SIZE
15	40A-3P	50A-3P	(1) #8AWG
30	70A-3P	100A-3P	(1) #6AWG
45	100A-3P	150A-3P	(1) #4AWG
75	175A-3P	225A-3P	(1) #2AWG
112.5	225A-3P	400A-3P	(1) #1/0AWG
150	300A-3P	500A-3P	(1) #1/0AWG
225	500A-3P	800A-3P	(1) #2/0AWG
300	800A-3P	1200A-3P	(1) #3/0AWG

TRANSFORMER SCHEDULE NOTES

1. PROVIDE SECONDARY CIRCUIT BREAKER IN NEMA 1 ENCLOSURE AT TRANSFORMER, EXCEPT, IF PANEL IS LESS THAN 10 FEET FROM TRANSFORMER, PROVIDE THE SECONDARY BREAKER AS A MAIN IN THE PANELBOARD.
2. DRY TYPE TRANSFORMER SECONDARIES SHALL BE GROUNDED TO BUILDING STEEL & PER NFPA 70 AS A SEPARATELY DERIVED SOURCE.



1 ELECTRICAL RISER DIAGRAM
NO SCALE

Harriman

UNIVERSITY OF MAINE
FOOD INNOVATION LAB

ORONO, MAINE

Harriman Project No.	24265

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

STATE OF MAINE
CHELSEA L. HADSEL
No. 17097
LICENSED PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

OCTOBER 20, 2025

Revision Date	Revision Description

Drawn by: CLH

DIAGRAMS

E50-1

Branch Panel: FH1

Location: ELECTRICAL 113
Supply From: SWBD - MAIN SECTION (EX)
Mounting: Surface
Enclosure: Type 1

Volts: 480Y/277
Phases: 3
Wires: 4

A.I.C. Rating: 14 KAIC
Mains Type: MCB
Mains Rating: 800 A
MCB Rating: 800 A

Notes:

CKT	Load Name	Wire Size	Trip	Poles	A	B	C	Poles	Trip	Wire Size	Load Name	CKT
1					28548... 465 VA			1	20 A	2#12, 1#12G, 3/4"C	LIGHTING - LOBBY, CORR,...	2
3	TF1	3#12, 1#12G, 3/4"C	20 A	3		26845... 295 VA		1	20 A	2#12, 1#12G, 3/4"C	LIGHTING - SERVICE CORR,...	4
5							29613... 344 VA	1	20 A	2#12, 1#12G, 3/4"C	LIGHTING - PRODUCTION...	6
7	LIGHTING - DEMO KITCHEN 106	2#12, 1#12G, 3/4"C	20 A	1	344 VA 517 VA			1	20 A	2#12, 1#12G, 3/4"C	LIGHTING - PRODUCTION...	8
9						22633... 22633...						10
11	COMBI OVEN - PRODUCTION KITCHEN 105*	4#1, 1#8G, 1-1/2"C	125 A	3			22633... 22633...	3	125 A	4#1, 1#8G, 1-1/2"C	COMBI OVEN - PRODUCTION KITCHEN 107*	12
13					22633... 22633...							14
15						914 VA 914 VA						16
17	KEF-1 - ROOF	4#12, 1#12G, 3/4"C	20 A	3			914 VA 914 VA	3	20 A	4#12, 1#12G, 3/4"C	KEF-2 - ROOF	18
19					914 VA 914 VA							20
21						914 VA 9007 VA						22
23	KEF-3 - ROOF	4#12, 1#12G, 3/4"C	20 A	3			914 VA 9007 VA	3	50 A	4#6, 1#10G, 1"C	RTU-1 - ROOF	24
25					914 VA 9007 VA							26
27						9007 VA 9007 VA						28
29	RTU-2 - ROOF	4#6, 1#10G, 1"C	50 A	3			9007 VA 9007 VA	3	50 A	4#6, 1#10G, 1"C	RTU-3 - ROOF	30
31					9007 VA 9007 VA							32
33						441 VA --		1	--		BUSSED SPACE	34
35	RTU-4 - ROOF	4#12, 1#12G, 3/4"C	20 A	3			441 VA --	1	--		BUSSED SPACE	36
37					441 VA --			1	--		BUSSED SPACE	38
39	BUSSED SPACE		--	1		-- --		1	--		BUSSED SPACE	40
41	BUSSED SPACE		--	1			-- --	1	--		BUSSED SPACE	42
			Total Load:		105245 VA	102560 VA	105298 VA					
			Total Amps:		381 A	370 A	382 A					

Legend:
*PROVIDE SHUNT TRIP BREAKER.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	90867 VA	100.00%	90867 VA		
KTCH EQUIP - NON DWELLING UNIT	129961 VA	65.00%	84475 VA	**Total Conn. Load:**	313099 VA
Other	67900 VA	100.00%	67900 VA	**Total Est. Demand:**	267613 VA
POWER	4661 VA	100.00%	4661 VA	**Total Conn.:**	377 A
MTR	8369 VA	100.00%	8369 VA	**Total Est. Demand:**	322 A
RCPT	8660 VA	100.00%	8660 VA		
LIGHTING	1962 VA	100.00%	1962 VA		
ELECTRIC HEAT	1320 VA	100.00%	1320 VA		
MISCELLANEOUS	246 VA	100.00%	246 VA		

Notes:
WIRE SIZE AND QUANTITY SHALL BE (2) #12AWG + (1) #12AWG EGC UNLESS OTHERWISE NOTED.

Branch Panel: FL1

Location: ELECTRICAL 113
Supply From: TF1
Mounting: Surface
Enclosure: Type 1

Volts: 208Y/120
Phases: 3
Wires: 4

A.I.C. Rating: 10 KAIC
Mains Type: MLO
Mains Rating: 400 A
MCB Rating: 400 A

Notes:

CKT	Load Name	Wire Size	Trip	Poles	A	B	C	Poles	Trip	Wire Size	Load Name	CKT
1					7414 VA 5154 VA							2
3	KL1 - PRODUCTION KITCHEN 105	4#12, 1#12G, 3/4"C	20 A	3		7473 VA 2899 VA		3	20 A	4#12, 1#12G, 3/4"C	KL2 - DEMO KITCHEN 106	4
5							8347 VA 3983 VA					6
7					10930... 1140 VA			1	20 A	2#12, 1#12G, 3/4"C	WHTR-1 - MECH 112	8
9	KL3 - PRODUCTION KITCHEN 107	4#12, 1#12G, 3/4"C	20 A	3		10622... 1833 VA						10
11							9562 VA 1833 VA	3	20 A	4#12, 1#12G, 3/4"C	AC-1 - MECH 112	12
13	TP-1 - MECH 112	2#12, 1#12G, 3/4"C	20 A	1	1000 VA 1833 VA							14
15	DCP-1 - MECH 112	2#12, 1#12G, 3/4"C	20 A	1		178 VA 900 VA		1	20 A	2#12, 1#12G, 3/4"C	EXTERIOR RCPTS	16
17	RCPT - SERV. CORR. 108	2#12, 1#12G, 3/4"C	20 A	1			540 VA 540 VA	1	20 A	2#12, 1#12G, 3/4"C	RCPT - ELEC 113/MECH 112	18
19	RCPT - LOBBY 100/CORR 101	2#12, 1#12G, 3/4"C	20 A	1	720 VA 0 VA			1	20 A	2#12, 1#12G, 3/4"C	DOOR CONTROLS	20
21	COOLER - LIGHTING & RECP	2#12, 1#12G, 3/4"C	20 A	1		180 VA 180 VA		1	20 A	2#12, 1#12G, 3/4"C	FREEZER - LIGHTING & RECP	22
23	RCPT - ROOF	2#12, 1#12G, 3/4"C	20 A	1			1080 VA 720 VA	1	20 A	2#12, 1#12G, 3/4"C	BMS POWER - ROOF	24
25	EF-1 - ROOF	2#12, 1#12G, 3/4"C	20 A	1	46 VA 98 VA			1	20 A	2#12, 1#12G, 3/4"C	UH-1, UH-2, UH-3, UH-4, CUIH-1	26
27	BMS CONT PNL - CORR 108	2#12, 1#12G, 3/4"C	20 A	1		9 VA 1020 VA		1	20 A	2#12, 1#12G, 3/4"C	FACP - ELECTRICAL 113**	28
29	DOOR CONT. PNL - ELEC 113	2#12, 1#12G, 3/4"C	20 A	1			0 VA 28 VA	2	20 A	2#12, 1#12G, 3/4"C	P1-B - KEYO BASEMENT	30
31	P1-A - KEYO BASEMENT	2#12, 1#12G, 3/4"C	20 A	2	28 VA 28 VA							32
33						28 VA 1456 VA		2	20 A	2#12, 1#12G, 3/4"C	WALK-IN FREEZER	34
35	WALK IN COOLER	2#12, 1#12G, 3/4"C	20 A	1			1836 VA 1456 VA					36
37	EF-2, EF-3 - ELEC 113/MECH 112	2#12, 1#12G, 3/4"C	20 A	1	246 VA --			1	--		BUSSED SPACE	38
39	EG-1 - MECH 112	2#12, 1#12G, 3/4"C	20 A	1		180 VA --		1	--		BUSSED SPACE	40
41	SPARE		20 A	1			0 VA --	1	--		BUSSED SPACE	42
			Total Load:		28548 VA	26845 VA	29613 VA					
			Total Amps:		240 A	224 A	249 A					

Legend:
*PROVIDE GFCI BREAKER
**PROVIDE RED BREAKER LOCKABLE IN ON OR OFF POSITION.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	256 VA	100.00%	256 VA		
KTCH EQUIP - NON DWELLING UNIT	62108 VA	65.00%	40370 VA	**Total Conn. Load:**	84994 VA
Other	0 VA	0.00%	0 VA	**Total Est. Demand:**	63279 VA
POWER	4661 VA	100.00%	4661 VA	**Total Conn.:**	236 A
MTR	8369 VA	100.00%	8369 VA	**Total Est. Demand:**	176 A
RCPT	8660 VA	100.00%	8660 VA		
ELECTRIC HEAT	1320 VA	100.00%	1320 VA		
MISCELLANEOUS	246 VA	100.00%	246 VA		

Notes:
WIRE SIZE AND QUANTITY SHALL BE (2) #12AWG + (1) #12AWG EGC UNLESS OTHERWISE NOTED.

Branch Panel: KL3

Location: PRODUCTION KITCHEN 107
Supply From: FL1
Mounting: Recessed
Enclosure: Type 1

Volts: 208Y/120
Phases: 3
Wires: 4

A.I.C. Rating: 10 KAI
Mains Type: MCB
Mains Rating: 100 A

Notes:

CKT	Load Name	Wire Size	Trip	Poles	A	B	C	Poles	Trip	Wire Size	Load Name	CKT
1	RCPT - DEDICATED	2#12, 1#12G, 3/4"C	20 A	1	180 VA 180 VA			1	20 A	2#12, 1#12G, 3/4"C	RCPT - DEDICATED	2
3	FREEZER	2#12, 1#12G, 3/4"C	20 A	1		1440 VA 540 VA		1	20 A	2#12, 1#12G, 3/4"C	REFRIGERATOR	4
5							2342 VA 180 VA	1	20 A	2#12, 1#12G, 3/4"C	RCPT - DEDICATED	6
7	BLAST CHILLER**	2#10, 1#10G, 3/4"C	30 A	3	2342 VA 1320 VA			1	20 A	2#12, 1#12G, 3/4"C	DISPOSAL	8
9						2342 VA 600 VA		1	20 A	2#12, 1#12G, 3/4"C	OVERHEAD CORD REEL	10
11	OVERHEAD CORD REEL	2#12, 1#12G, 3/4"C	20 A	1			600 VA 600 VA	1	20 A	2#12, 1#12G, 3/4"C	OVERHEAD CORD REEL	12
13	RCPT - DEDICATED	2#12, 1#12G, 3/4"C	20 A	1	1000 VA 3602 VA							14
15						600 VA 3602 VA		3	40 A	4#8, 1#10G, 1"C	KETTLE/TILT SKILLET*,**	16
17	MIXER**	4#12, 1#12G, 3/4"C	20 A	3			600 VA 3602 VA					18
19					600 VA 1492 VA							20
21	RCPT - DEDICATED	2#12, 1#12G, 3/4"C	20 A	1		180 VA 1492 VA		3	20 A	4#12, 1#12G, 3/4"C	FOOD PROCESSOR**	22
23	RCPT - DEDICATED	2#12, 1#12G, 3/4"C	20 A	1			180 VA 1492 VA					24
25	RCPT - DEDICATED	2#12, 1#12G, 3/4"C	20 A	1	180 VA 180 VA			1	20 A	2#12, 1#12G, 3/4"C	RCPT - DEDICATED	26
27	SPARE		20 A	1		0 VA 0 VA		1	20 A		SPARE	28
29	BUSSED SPACE		--	1			-- --	1	--		BUSSED SPACE	30
31	BUSSED SPACE		--	1	-- --			1	--		BUSSED SPACE	32
33	BUSSED SPACE		--	1		-- --		1	--		BUSSED SPACE	34
35	BUSSED SPACE		--	1			-- --	1	--		BUSSED SPACE	36
			Total Load:		10930 VA	10622 VA	9562 VA					
			Total Amps:		92 A	90 A	80 A					

Legend:
*PROVIDE SHUNT TRIP BREAKER
**PROVIDE BREAKER HANDLE LOCKABLE IN OFF POSITION

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
KTCH EQUIP - NON DWELLING UNIT	29024 VA	65.00%	18865 VA		
RCPT	2260 VA	100.00%	2260 VA	**Total Conn. Load:**	31100 VA
				Total Est. Demand:	20948 VA
				Total Conn.:	86 A
				Total Est. Demand:	58 A

Notes:
WIRE SIZE AND QUANTITY SHALL BE (2) #12AWG + (1) #12AWG EGC UNLESS OTHERWISE NOTED.

Branch Panel: KL1

Location: PRODUCTION KITCHEN 105
Supply From: FL1
Mounting: Recessed
Enclosure: Type 1

Volts: 208Y/120
Phases: 3
Wires: 4

A.I.C. Rating: 10 KAIC
Mains Type: MCB
Mains Rating: 100 A

Notes:

CKT	Load Name	Wire Size	Trip	Poles	A	B	C	Poles	Trip	Wire Size	Load Name	CKT
1					3602 VA 1000 VA			1	20 A	2#12, 1#12G, 3/4"C	RCPT - DEDICATED	2
3	KETTLE*,**	4#8, 1#10G, 1"C	40 A	3		3602 VA 1320 VA		1	20 A	2#12, 1#12G, 3/4"C	DISPOSAL	4
5							3602 VA 1440 VA	1	20 A	2#12, 1#12G, 3/4"C	FREEZER	6
7	REFRIGERATOR	2#12, 1#12G, 3/4"C	20 A	1	540 VA 733 VA							8
9						1492 VA 733 VA		3	20 A	4#12, 1#12G, 3/4"C	MIXER**	10
11	FOOD PROCESSOR**	4#12, 1#12G, 3/4"C	20 A	3			1492 VA 733 VA					12
13					1492 VA 180 VA			1	20 A	2#12, 1#12G, 3/4"C	RCPT - DEDICATED	14
15	RCPT - DEDICATED	2#12, 1#12G, 3/4"C	20 A	1		180 VA 180 VA		1	20 A	2#12, 1#12G, 3/4"C	RCPT - DEDICATED	16
17	OVERHEAD CORD REEL	2#12, 1#12G, 3/4"C	20 A	1			600 VA 600 VA	1	20 A	2#12, 1#12G, 3/4"C	OVERHEAD CORD REEL	18
19	SPARE		20 A	1	0 VA 0 VA			1	20 A		SPARE	20
21	SPARE		20 A	1		0 VA 0 VA		1	20 A		SPARE	22
23	SPARE		20 A	1			0 VA 0 VA	1	20 A		SPARE	24
25	SPARE		20 A	1	0 VA 0 VA			1	20 A		SPARE	26
27	BUSSED SPACE		--	1		-- --		1	--		BUSSED SPACE	28
29	BUSSED SPACE		--	1			-- --	1	--		BUSSED SPACE	30
31	BUSSED SPACE		--	1	-- --			1	--		BUSSED SPACE	32
33	BUSSED SPACE		--	1		-- --		1	--		BUSSED SPACE	34
35	BUSSED SPACE		--	1			-- --	1	--		BUSSED SPACE	36
			Total Load:		7414 VA	7473 VA	8347 VA					
			Total Amps:		62 A	62 A	70 A					

Legend:
*PROVIDE SHUNT TRIP BREAKER
**PROVIDE BREAKER HANDLE LOCKABLE IN OFF POSITION

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
KTCH EQUIP - NON DWELLING UNIT	21802 VA	65.00%	14171 VA		
RCPT	1540 VA	100.00%	1540 VA	**Total Conn. Load:**	23222 VA
				Total Est. Demand:	15595 VA
				Total Conn.:	64 A
				Total Est. Demand:	43 A

Notes:
WIRE SIZE AND QUANTITY SHALL BE (2) #12AWG + (1) #12AWG EGC UNLESS OTHERWISE NOTED.

Branch Panel: KL2

Location: DEMO KITCHEN 106
Supply From: FL1
Mounting: Recessed
Enclosure: Type 1

Volts: 208Y/120
Phases: 3
Wires: 4

A.I.C. Rating: 10 KAIC
Mains Type: MCB
Mains Rating: 100 A

Notes:

CKT	Load Name	Wire Size	Trip	Poles	A	B	C	Poles	Trip	Wire Size	Load Name	CKT
1	FREEZER	2#12, 1#12G, 3/4"C	20 A	1	1440 VA 540 VA			1	20 A	2#12, 1#12G, 3/4"C	REFRIGERATOR	2
3	RCPT - DEDICATED	2#12, 1#12G, 3/4"C	20 A	1		180 VA 902 VA						4
5	INDUCTION TOP #2*	2#12, 1#12G, 3/4"C	20 A	2			902 VA 902 VA	2	20 A	2#12, 1#12G, 3/4"C	INDUCTION TOP #1*	6
7					902 VA 902 VA							8
9	OVERHEAD CORD REEL	2#12, 1#12G, 3/4"C	20 A	1		600 VA 902 VA		2	20 A	2#12, 1#12G, 3/4"C	INDUCTION TOP #3*	10
11	OVERHEAD CORD REEL	2#12, 1#12G, 3/4"C	20 A	1			600 VA 1680 VA	1	20 A	2#12, 1#12G, 3/4"C	MICROWAVE	12
13	RCPT - DEDICATED	2#12, 1#12G, 3/4"C	20 A	1	180 VA 1320 VA			1	20 A	2#12, 1#12G, 3/4"C	DISPOSAL	14
15	RCPT - DEDICATED	2#12, 1#12G, 3/4"C	20 A	1		180 VA 180 VA		1	20 A	2#12, 1#12G, 3/4"C	RCPT - DEDICATED	16
17	SPARE		20 A	1			0 VA 0 VA	1	20 A		SPARE	18
19	SPARE		20 A	1	0 VA 0 VA			1	20 A		SPARE	20
21	SPARE		20 A	1		0 VA 0 VA		1	20 A		SPARE	22
23	SPARE		20 A	1			0 VA 0 VA	1	20 A		SPARE	24
25	SPARE		20 A	1	0 VA 0 VA			1	20 A		SPARE	26
27	BUSSED SPACE		--	1		-- --		1	--		BUSSED SPACE	28
29	BUSSED SPACE		--	1			-- --	1	--		BUSSED SPACE	30
31	BUSSED SPACE		--	1	-- --			1	--		BUSSED SPACE	32
33	BUSSED SPACE		--	1		-- --		1	--		BUSSED SPACE	34
35	BUSSED SPACE		--	1			-- --	1	--		BUSSED SPACE	36
			Total Load:		5154 VA	2899 VA	3983 VA					
			Total Amps:		44 A	24 A	35 A					

Legend:
*PROVIDE GFCI BREAKER AND CONTACTOR TIED TO HOOD SUPRESSION SYSTEM.
**PROVIDE BREAKER HANDLE LOCKABLE IN OFF POSITION

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
KTCH EQUIP - NON DWELLING UNIT	11336 VA	65.00%	7368 VA		
RCPT	720 VA	100.00%	720 VA	**Total Conn. Load:**	12024 VA
				Total Est. Demand:	8057 VA
				Total Conn.:	33 A
				Total Est. Demand:	22 A

Notes:
WIRE SIZE AND QUANTITY SHALL BE (2) #12AWG + (1) #12AWG EGC UNLESS OTHERWISE NOTED.

Harriman

UNIVERSITY OF MAINE
FOOD INNOVATION LAB

ORONO, MAINE

Harriman Project No. 24265

Graphic Scale
0" 1"
(scale measures 1" when plotted at full size)

STATE OF MAINE
CHELSEA L HADSEL
No. 17097
LICENSED PROFESSIONAL ENGINEER

CONSTRUCTION DOCUMENTS

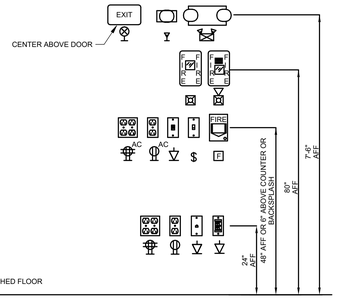
OCTOBER 20, 2025

Revision Date	Revision Description

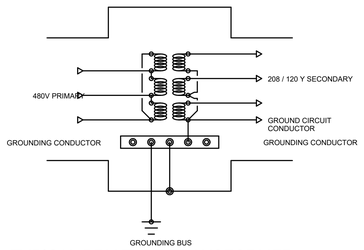
Drawn by: CLH

SCHEDULES

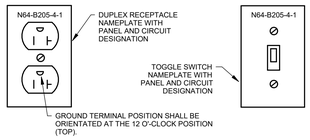
E60-1



A13 TYPICAL INTERIOR MOUNTING HEIGHTS
SCALE: 1 1/2" = 1'-0"

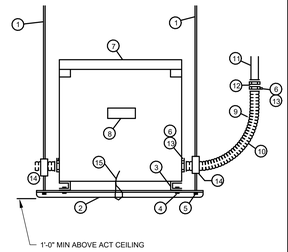


A12 TYPICAL DRY-TYPE TRANSFORMER GROUNDING DETAIL
SCALE: 1" = 1'-0"



NOTES:
1. ABBREVIATED PANEL DESIGNATIONS SHALL NOT BE USED.
2. DETAIL APPLIES TO ALL DEVICES, ALL AREAS.
3. DETAIL APPLIES TO ALL LIGHT SWITCHES AND LIGHT FIXTURES, ALL AREAS.

A11 TYP ELEC DEVICE LABELING DETAIL
SCALE: 1" = 1'-0"



NOTES:
1. * D. THREADED STEEL ROD SUPPORTED FROM STRUCTURE ABOVE. PROVIDE MISCELLANEOUS STEEL AS REQ'D. TO ATTACH TO STRUCTURE
2. 3" X 3" ANGLE IRON SUPPORT TWO REQ'D. , LENGTH AS REQ'D.
3. TRANSFORMER BASE CHANNEL PROVIDED WITH UNIT.
4. * D. NUT, BOLT AND LOCKWASHER, FOUR REQ'D.
5. * D. NUT, LOCKNUT AND LOCKWASHER, FOUR REQ'D.
6. SECONDARY CONNECTION DETAIL (PRIMARY CONNECTION SIMILAR)
7. TRANSFORMER
8. NAMEPLATE AND CONNECTION DIAGRAM TO FACE CLOSET ENTRANCE
9. EXTERNAL COPPER BONDING WIRE TO MATCH FEEDERS
10. LIQUIDTIGHT FLEXIBLE METAL CONDUIT SIZED TO MATCH FEEDER CONDUIT
11. RIGID CONDUIT AS REQ'D.
12. COMBINATION COUPLING
13. GROUND CONNECTOR
14. VIBRATION ISOLATOR, FOUR REQ'D.
15. * DIA. WIRE ROPE W/ 2 CLAMPS EA. END, 4 SIDES OF UNIT AND ANCHOR TO ROOF TRUSS TOP CHORD.

A10 TRANSFORMER SUSPENSION DETAIL
SCALE: 1 1/2" = 1'-0"

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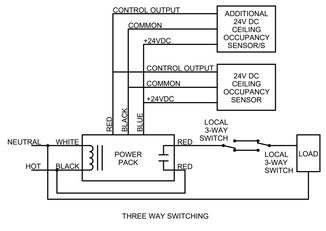
PATHWAYS INSTALLED TO CARRY TELECOMMUNICATIONS CABLES SHALL GIVE CONSIDERATION TO NOISE SOURCES SUCH AS POWER WIRING, RADIO FREQUENCY (RF) SOURCES, MOTORS, GENERATORS, INDUCTION HEATERS, ARC WELDERS, TRANSFORMERS, LIGHTING FIXTURE BALLAST/DRIVER, ETC...

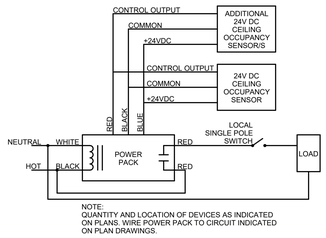
1. TELECOMMUNICATIONS CABLES SHALL CROSS POWER CONDUCTORS IN A PERPENDICULAR ORIENTATION AND AT A MINIMUM DISTANCE OF 6 INCHES.
2. TELECOMMUNICATIONS PATHWAYS SHALL RUN A MINIMUM OF 6" FROM A LIGHTING FIXTURE BALLAST/DRIVER UNLESS OTHERWISE INDICATED.
3. TELECOMMUNICATIONS PATHWAYS WHICH RUN PARALLEL TO POWER CONDUCTORS SHALL MAINTAIN THE FOLLOWING MINIMUM DISTANCE SEPARATION:

CONDITION	MINIMUM REQ'D SEPARATION			
	120V <20A	120/208V <20A	120/208V >20A	277/480V
POWER CONDUCTORS IN TRAY, TELECOM CONDUCTORS IN TRAY OR AIR	12"	18"	24"	36"
POWER CONDUCTORS IN TRAY, TELECOM CONDUCTORS IN METAL CONDUIT	9"	12"	18"	24"
POWER CONDUCTORS IN METAL CONDUIT, TELECOM CONDUCTORS IN TRAY OR AIR	9"	12"	18"	24"
POWER CONDUCTORS IN METAL CONDUIT, TELECOM CONDUCTORS IN METAL CONDUIT OR WIREWAY	4"	9"	12"	24"

A9 SEPARATION OF TELE/COMM CABLES FROM ELECTRICAL ITEMS
SCALE: 1 1/2" = 1'-0"

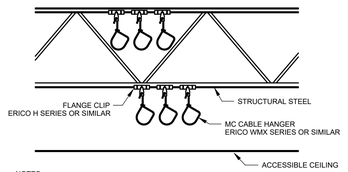


THREE WAY SWITCHING



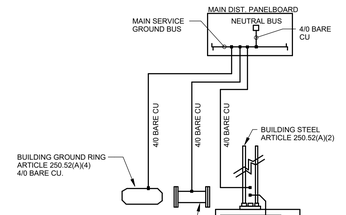
NOTE:
QUANTITY AND LOCATION OF DEVICES AS INDICATED ON PLANS. WIRE POWER PACK TO CIRCUIT INDICATED ON PLAN DRAWINGS.

A8 OCCUPANCY SENSOR CONTROL DETAIL
SCALE: 1" = 1'-0"

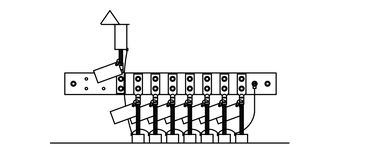


NOTES:
1. SUPPORT CABLES ABOVE ACCESSIBLE CEILING USING SPRING METAL CLIPS OR APPROVED CABLE TIES TO SUPPORT CABLES FROM STRUCTURE.
   - DO NOT SUPPORT FROM CEILING SUSPENSION SYSTEM.
   - DO NOT DRAPE OVER DUCTWORK OR BETWEEN/THROUGH BAR JOIST.
   - DO NOT REST CABLE ON CEILING PANELS.
2. CABLING SHALL BE RUN PARALLEL AND PERPENDICULAR TO STRUCTURE AND SHALL BE CABLED NEATLY.

A7 MC CABLE MOUNTING SUPPORT DETAIL
SCALE: 3/4" = 1'-0"



A6 GROUNDING SYSTEM
SCALE: 1 1/2" = 1'-0"

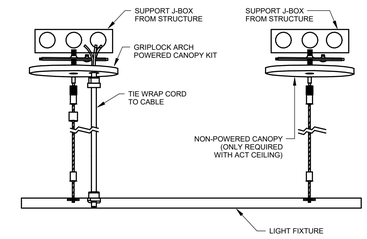


A5 GROUNDING BUS DETAIL
SCALE: 3/4" = 1'-0"

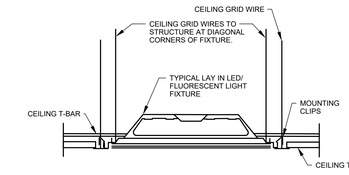
NOT USED.

NOT USED.

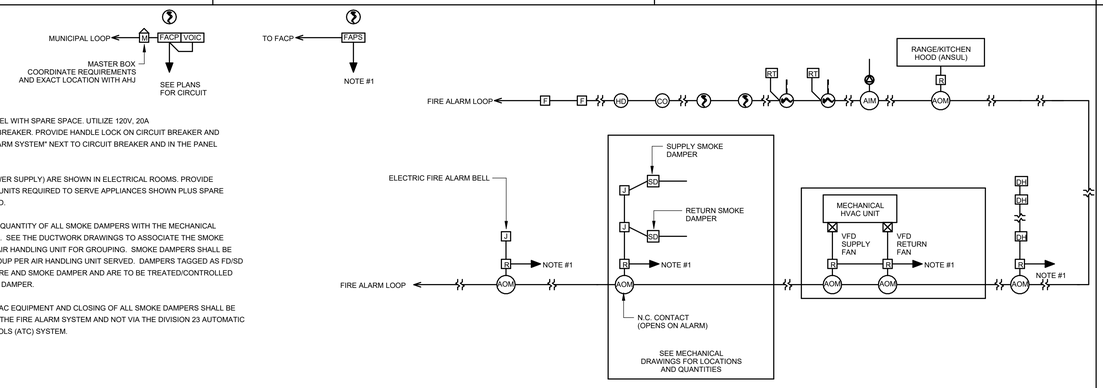
NOT USED.



A4 FIXTURE SUSPENSION DETAIL
SCALE: 1 1/2" = 1'-0"

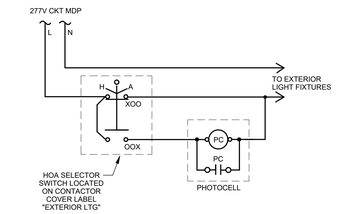


A3 FIXTURE SUPPORT
SCALE: 1" = 1'-0"



NOTES:
1. WIRE TO NEAREST PANEL WITH SPARE SPACE. UTILIZE 120V, 20A SINGLE POLE CIRCUIT BREAKER. PROVIDE HANDLE LOCK ON CIRCUIT BREAKER AND LABEL IN RED "FIRE ALARM SYSTEM" NEXT TO CIRCUIT BREAKER AND IN THE PANEL DIRECTORY.
2. FAPS (FIRE ALARM POWER SUPPLY) ARE SHOWN IN ELECTRICAL ROOMS. PROVIDE THE NUMBER OF FAPS UNITS REQUIRED TO SERVE APPLIANCES SHOWN PLUS SPARE CAPACITY AS SPECIFIED.
3. VERIFY LOCATION AND QUANTITY OF ALL SMOKE DAMPERS WITH THE MECHANICAL DUCTWORK DRAWINGS. SEE THE DUCTWORK DRAWINGS TO ASSOCIATE THE SMOKE DAMPERS WITH EACH AIR HANDLING UNIT FOR GROUPING. SMOKE DAMPERS SHALL BE CONTROLLED AS A GROUP PER AIR HANDLING UNIT SERVED. DAMPERS TAGGED AS FD/SD ARE A COMBINATION FIRE AND SMOKE DAMPER AND ARE TO BE TREATED/CONTROLLED THE SAME AS A SMOKE DAMPER.
4. THE SHUTDOWN OF HVAC EQUIPMENT AND CLOSING OF ALL SMOKE DAMPERS SHALL BE DONE DIRECTLY FROM THE FIRE ALARM SYSTEM AND NOT VIA THE DIVISION 23 AUTOMATIC TEMPERATURE CONTROLS (ATC) SYSTEM.

A2 FIRE ALARM SYSTEM DETAILS AND NOTES
SCALE: 1 1/2" = 1'-0"



A1 EXTERIOR LIGHTING WIRING DIAGRAM
SCALE: 1 1/2" = 1'-0"

Graphic Scale
0" 1"
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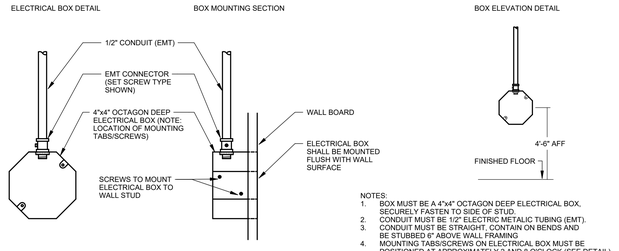
DETAILS

E70-1

NOT USED.

NOT USED.

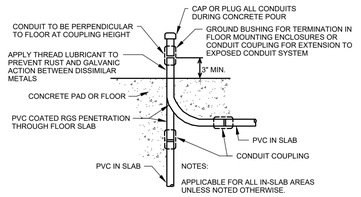
NOT USED.



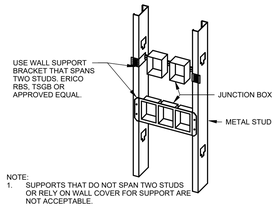
NOTES:
1. BOX MUST BE A 4"x4" OCTAGON DEEP ELECTRICAL BOX, SECURELY FASTEN TO SIDE OF STUD.
2. CONDUIT MUST BE 1/2" ELECTRIC METALIC TUBING (EMT).
3. CONDUIT MUST BE STRAIGHT, CONTAIN ON BENDS AND BE STUBBED 6" ABOVE WALL FRAMING
4. MOUNTING TABS/SCREWS ON ELECTRICAL BOX MUST BE POSITIONED AT APPROXIMATELY 2 AND 8 O'CLOCK (SEE DETAIL).
5. PER BOCA/INTERNATIONAL MECHANICAL CODE, BOX MUST BE LOCATED AT OR NEAR MEAN OF EGRESS AT A MINIMUM OF 10' AND A MAXIMUM OF 20' FROM THE EXHAUST SYSTEM. THE BOX SHALL BE MOUNTED AT A MINIMUM OF 4'-6" TO A MAXIMUM OF 5'-0"FROM THE CENTERLINE OF THE BOX TO THE FINISHED FLOOR.
6. CONDUIT MUST BE SECURELY FASTENED TO THE ELECTRICAL BOX USING EMT CONNECTOR WITH SET SCREW OR COMPRESSION TYPE CONNECTION.

A11 ANSUL SYSTEM MANUAL PULL BOX DETAIL
SCALE: 1" = 1'-0"

NOT USED.

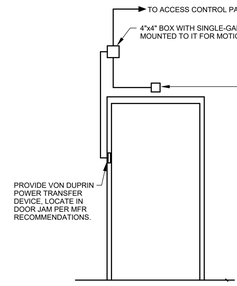


A10 TYPICAL IN-SLAB CONDUIT STUB-UP DETAIL
SCALE: 1" = 1'-0"



NOTE:
1. SUPPORTS THAT DO NOT SPAN TWO STUDS OR RELY ON WALL COVER FOR SUPPORT ARE NOT ACCEPTABLE.

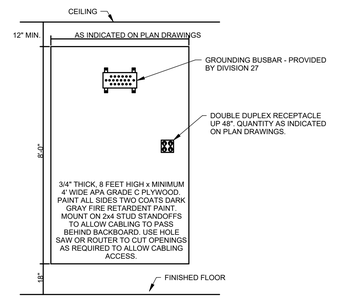
A9 BOX MOUNTING DETAIL
SCALE: 3/4" = 1'-0"



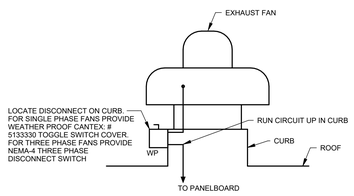
NOTES:
1. COORDINATE EXACT LOCATIONS AND MOUNTING REQUIREMENTS OF ALL DEVICES WITH ARCHITECTURAL DRAWINGS.
2. PROVIDE INSULATED BUSHINGS ON ALL CONDUITS.
3. ELECTRIC DOOR STRIKES AND HINGES SHALL BE PROVIDED BY DIVISION 08.
4. VERIFY DOOR HARDWARE CONNECTIONS WITH MANUFACTURER'S INSTALLATION MANUAL.
5. ALL CONDUIT SHALL BE 3/4" UNLESS NOTED OTHERWISE.
6. ALL SINGLE-GANG BOXES SHALL HAVE S.S. GASKETTED COVERS FOR FUTURE.

A8 SECURITY CARD READER DETAIL
SCALE: 1" = 1'-0"

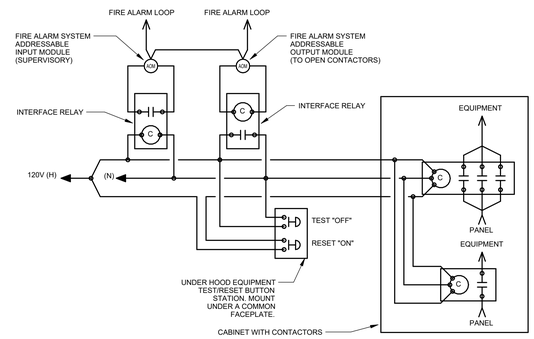
NOT USED.



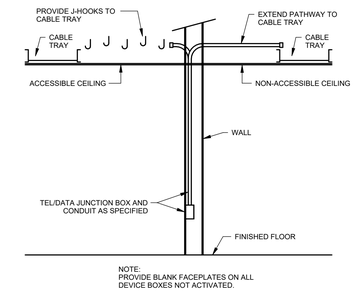
A4 TYPICAL TEL/DATA BACKBOARD
SCALE: 1" = 1'-0"



A3 TYPICAL ROOF MTD EF CONNECTION
SCALE: 1" = 1'-0"

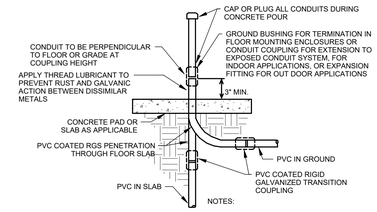


A7 UNDER HOOD KITCHEN EQUIPMENT SHUTDOWN DETAIL
SCALE: 1 1/2" = 1'-0"

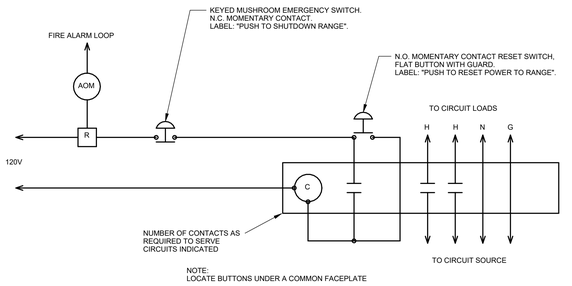


NOTE:
PROVIDE BLANK FACEPLATES ON ALL DEVICE BOXES NOT ACTIVATED.

A6 TYPICAL WALL OUTLET DETAIL
SCALE: 1" = 1'-0"

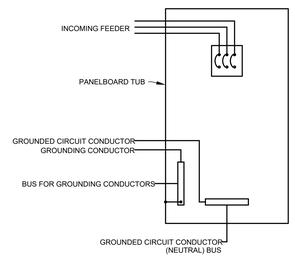


A5 TYPICAL U/G CONDUIT STUB-UP DETAIL
SCALE: 1" = 1'-0"



NOTE:
LOCATE BUTTONS UNDER A COMMON FACEPLATE

A2 TYPICAL RANGE SHUTDOWN WITH RESET
SCALE: 1 1/2" = 1'-0"



A1 TYPICAL PANELBOARD SERVED SECONDARY DRY-TYPE TRANSFORMER
SCALE: 1" = 1'-0"

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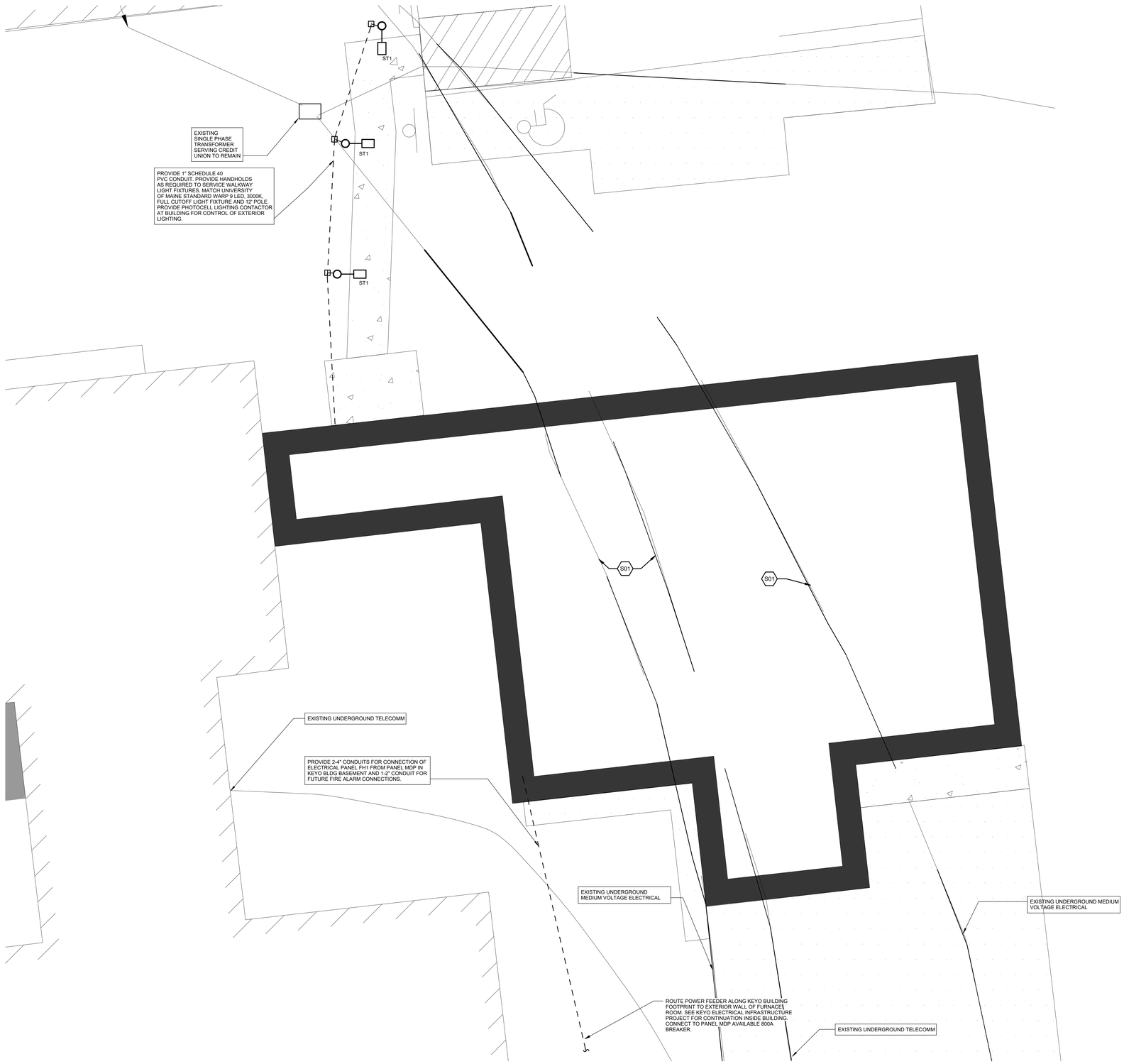
DETAILS

E70-2



1 SITE PLAN
SCALE: 3/16" = 1'-0"

GENERAL NOTES

1 ALL LIGHTING AND POWER CONDUCTORS SHALL BE INSTALLED BETWEEN 24" (MINIMUM) AND 36" (MAXIMUM) BELOW FINISHED GRADE.

2 ALL COMMUNICATIONS CONDUIT AND CABLES SHALL BE INSTALLED 36" (MINIMUM) BELOW FINISHED GRADE.

3 ALL CONDUCTORS FOR EXTERIOR LIGHTING AND POWER CIRCUITS SHALL BE #10 AWG MINIMUM.

4 PROVIDE TRANSFORMER BASE AT ALL POLE MOUNTED FIXTURES. TAP 2 LEGS OF THREE PHASE FEEDER (CIRCUITS DENOTED). PROVIDE BALLAST FUSES AT TAP, AND PROVIDE BRANCH CIRCUITS TO FIXTURES.

5 ALL EXTERIOR UNDERGROUND CONDUIT TO BE SCHEDULE 40 PVC, EXCEPT WHERE CROSSING UNDER DRIVEWAYS OR AREAS THAT ARE EXPECTED TO RECEIVE VEHICULAR TRAFFIC, WHERE SCHEDULE 80 PVC SHALL BE PROVIDED.

KEY NOTES

S01 EXCAVATE AND MAINTAIN EXISTING ELECTRICAL AND TELECOMMUNICATIONS PATHWAYS CURRENTLY ROUTED UNDER THE FOOTPRINT OF EXCAVATION FOR PROPOSED FOOD INNOVATION LAB ADDITION. PROVIDE SUPPORTS AND TRENCH BACKFILL FOR CONCRETE ENCASEMENT OF PATHWAYS.

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SITE PLAN

E80-1