# ALOHA HIGH SCHOOL

# MODULAR REROOFING 18550 SW KINNAMAN ROAD, BEAVERTON, OR 97007 PERMIT / BID SET

**AD-101** 

D: Demolition

Discipline

L: Landscape

S: Structural

P: Plumbina

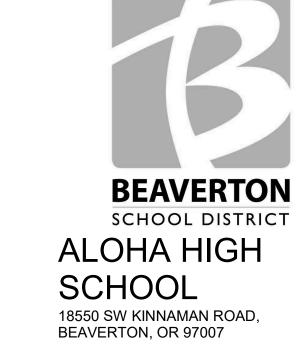
E: Electrical

M: Mechanical

A: Architectural

G: General

C: Civil





Consultants:

115 NW 1st Ave, Ste. 300 t 503.280.8000 f 503.224.5442

04/06/2021

90065

DET

Project Number: Drawn By:

Checked By:

Revision Schedule:

**COVER** 

SHEET

## **GENERAL CONSTRUCTION NOTES**

- 1. All work to comply with 2019 Oregon Structural Specialty Code. 2. All work shall conform to the contract documents which include the owner/contractor agreement, the drawings and specifications and all addenda
- and modifications issued by the designer. 3. The contractor shall review all documents and verify all dimensions and field conditions and shall confirm that work is buildable as shown. Any conflicts, discrepancies, or omissions, etc., within contract documents, drawings or between drawings and field conditions shall be immediately reported to the designer for clarification prior to the commencement of affected work.
- 4. All contract documents, including without limitation these general notes and the specifications shall apply not only to the general contractor but to all subcontractors and suppliers on this project. The word 'contractor' shall hereafter apply equally and without exception to all subs and suppliers. All contractors are responsible for familiarizing themselves with both these notes and specifications 5. No one drawing or specification section shall 'govern'. Contractor shall correlate work between architectural drawings and specifications and consultant drawings
- and specifications. Contractor shall also correlate work between drawings of different scales within each section. It is the explicit and specific responsibility of the contractor to examine the contract documents in their entirety, report all discrepancies encountered therein to the attention of the designer and await resolution before proceeding with any work affected by such discrepancies. Where the requirements of either the general notes or the specifications may be at variance with the general conditions, the more restrictive provision shall
- 6. Contractor shall field verify all existing construction and related conditions prior to starting demolition or new construction.
- 7. General notes are an aid to the contractor in understanding the work and should not be construed as being complete in every detail. It is the explicit and specific responsibility of the contractor to visit the site, verify the existing conditions and familiarize himself thoroughly with the scope of work, and report all discrepancies between the drawings and the assumed or actual conditions to the attention of the designer (architect).

8. Substitutions, revisions or changes must be submitted to the designer for review

- (in conformance with specified procedures) prior to purchase, fabrication or
- 9. The contractor shall maintain for the entire duration of the work all exits, exit lighting, fire protective devices and alarms in conformance with all applicable codes and ordinances.
- 10. Where interruption of the building's Life Safety System is required to perform the work as described in the construction documents, or to coordinate with owner's operations, the Contractor shall provide interim Life Safety measures to comply with local code and owner's requirements.
- 11. Protect the building, its systems, finishes and related and appurtenant items, so as not to cause damage derived from the work; comply with building rules and
- 12. Locate and verify existence and use of existing utilities. Take necessary measures to protect and preserve function and condition of any utilities to be repaired, replaced, or reused in new construction. Coordinate work with Architect,
- 13. Contractor to coordinate installation and scheduling of Owner or Owner's vendor
- provided or installed fixtures and equipment. 14. Contractor shall be solely responsible for the design and construction of all shoring and bracing required for construction of the Work. Contractor shall not store construction materials or equipment in a manner such that the design live
- loads of the structure are exceeded. 15. 'Typical' or 'typ' shall mean that the condition is representative for similar conditions throughout unless noted otherwise. Details are usually keyed and
- noted 'typ' only once, when they first occur. 16. 'Similar' or 'Sim' means comparable characteristics for the conditions noted, verify
- dimensions and orientation on plans and elevations. 17. The contractor shall not be relieved of responsibility for deviations from requirements of the contract documents by the designer's review of shop drawings, product samples, or similar submittals unless the contractor has specifically informed the designer in writing of such deviation at the time of submittal and the designer has reviewed the specific deviation for the compliance with the intent of the contract documents. The contractor shall not be relieved of responsibility for errors or omissions in shop drawing, product samples, or similar
- submittals by the designer's review thereof. 18. It is the responsibility of the contractor to coordinate, request and forward to the designer for review shop drawing, product data, samples and similar submittals required by the contract documents with reasonable promptness and in such sequence as to cause no delay in the work or in the activities of the Owner or of
- 19. All open joints, penetrations and other openings in the building envelope resulting from the remodel and alterations shall be caulked, sealed, gasketed or weather stripped to limit air leakage.
- 20. All manufactured articles, material and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer unless herein specified to the contrary. In case of difference between the manufacturer's instruction and the contract documents, the
- contractor shall notify the designer before proceeding. 21. All lines, symbols, notes, tones and other graphic devices contained in the contract documents carry specific or inferential meaning. Items indicated in these are a part of the scope of work and will be required by the owner and designer to be included in the scope of the contractor's work whether they have been included in the contractor's original bid or not. Any items which require further clarification by the designer for the specific benefit of the contractor shall be brought to the attention of the designer for such clarification before
- commencement of any work. 22. Design work is the responsibility of the designer. The contractor shall assume design liability and all responsibility for changes in the scope of work not brought
- 23. Dimensions are not adjustable without written approval from the designer. 24. The contractor shall pay specific attention to all dimensioned or inferential plan and sectional special relationships, and shall verify all alignments before
- 25. Dimensions marked 'verify' are to be checked for accuracy by the contractor as work proceeds, and all discrepancies are to be brought to the attention of the designer before proceeding.
- 26. Dimensions marked 'clear' or minimum are not adjustable without the authorization from the designer. 'Align' means to accurately locate finished faces in same plane as indicated. 27. Contractor shall not scale the drawings, figured dimensions only are to be used
- for all aspects of the work. Large scale details take precedence over smaller 28. Contractor is responsible for all waste removal and site clean up during
- performance of and at completion of the work. 29. All features of the Work not fully shown shall be of the same type and character
- shown for similar conditions. In the event that additional work is required to complete the Work as intended or required by governing codes and safety regulations, yet omitted or not fully shown on the drawings, the contractor must still provide carpentry, mechanical, electrical and/or plumbing work as necessary for Certificate of Occupancy.
- 30. Keynotes are not sheet specific, unless noted otherwise.

# **CONTACT INFORMATION**

Beaverton School District 16550 SW Merlo Road Beaverton, Oregon 97003 Contact: Kurt Meeuwsen, Construction Manager Email: kurt\_meeuwsen@beaverton.k12.or.us

#### ARCHITECT-OF-RECORD

Oh planning + design, architecture 115 NW First Avenue, Suite 300 Portland, OR 97209 Contact: Deb France, Principal Email: deb.france@ohpd.net Telephone: 503.280.8000 Fax: 503.224.5442

Telephone: 503.356.4552

#### STRUCTURAL ENGINEER

111 SW 5th Ave #2500. Portland, OR 97204 Contact: Nathan Ingraffea, Principal Email: nathan.ingraffea@kpff.com Telephone: 503.764.0513

KPFF Consulting Engineers

#### MECHANICAL/ELECTRICAL/PLUMBING ENGINEER

Interface Engineering 100 SW Main St #1600 Portland, OR 97204 Contact: Jim Sattem, Principal Email: jims@interfaceeng.com Telephone: 503.382.2266

#### **LOCATION PLAN**



## APPLICABLE CODES

2019 Oregon Structural Specialty Code (OSSC) 2017 Oregon Electrical Specialty Code (OESC) 2019 Oregon Zero Energy Ready Commercial Code (OZERCC) 2019 Oregon Fire Code (OFC) 2019 Oregon Mechanical Specialty Code (OMSC) 2017 Oregon Plumbing Specialty Code (OPSC) ICC A117.1-2009 Accessible and Usable Buildings and Facilities 2010 ADA Standards for Accessible Design National Fire Protection Association (NFPA)

## CITY/STATE CONTACTS

COUNTY JURISDICTION: Washington County

115 N 1st Ave, Suite 350 Hillsboro, OR 97124 Telephone: 503.846.3470

FIRE DISTRICT:

Tualatin Valley Fire & Rescue (TVF&R) 11945 SW 70th Avenue Tigard, OR 97223 Telephone: 503.649.8577

#### STATE FIRE MARSHAL:

Office of the State Fire Marshal 3565 Trelsted Avenue SE Salem, OR 97317 Telephone: 503.373.1540

#### PROJECT INFORMATION

**Construction Type** 

Type of Construction: VB & IIIB Modular: V

**Gross Building Area** Existing Building - 243,890 SF

Modular -6,760 SF

Refer to Code Sheet for more information

#### PROPERTY DATA

Address: 18550 SW Kinnaman Road Aloha, Oregon 97007

Assessor's Map: 1S213AD 03100, 03800

**INST** - Institutional Zoning: Washington County Planning Department

Site Area: 31.7 Acres

# GENERAL HAZARD COMMUNICATION NOTE

Hazardous materials are present in this building. Review District's Hazardous Material Abatement drawings, Management Plan, and Hazardous Materials Survey to become aware of any asbestos containing materials or lead containing painted surfaces that may be impacted prior to the execution of the Work. If suspected hazardous materials are encountered, do not disturb. Inform the District immediately and take corrective action as outlined in specification section 01 10 00, Summary of Work, before proceeding with the Work.

#### PROJECT DESCRIPTION

# Project scope includes replacement of roofing and rooftop mechanical units.

- a. Re-roof with single-ply roofing materials and rigid insulation full tear-off of existing roofing. b. Re-roof with single-ply roofing materials and rigid insulation -
- partial tear-off of existing roofing. c. Replace roof flashings and copings. d. Salvage and reinstall roof hatches.
- e. Modify & reinstall existing roof ladders.
- a. Replace (4) packaged rooftop heat pumps with new packaged
- gas/electric rooftop units. b. Install gas piping to new rooftop units from existing meter. c. Replace (2) packaged gas/electric rooftop units with new, including
- adapter curbs to fit on existing curbs. d. Air balancing for (6) rooftop units. e. New controls and thermostats for (6) rooftop units.
- 3. PLUMBING a. Demolish, relocate or install related plumbing items within areas of
- b. Extend plumbing roof vents as required to accommodate new roof assembly & insulation. c. Extend gas line to new rooftop units.
- a. Demolish, relocate or install related electrical items within areas of

#### SHEET INDEX KEY SHEET INDEX

Category

1: Site

2: Plans

4: Sections

0: General Info.

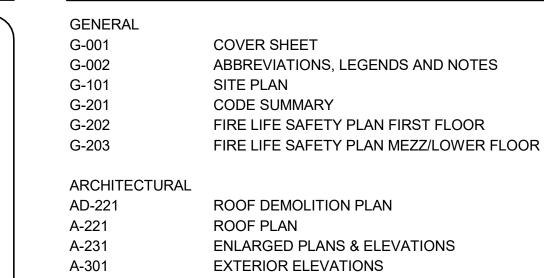
3: Exterior Elevations

5: Vertical Circulation

6: Interior Elevations

8: Schedules/Finishes

9: 3D Representations



**MECHANICAL** M-001 SYMBOLS LIST & GENERAL NOTES - MECHANICAL M-221 **ROOF PLANS - MECHANICAL** 

**PLUMBING** P-001 SYMBOL LIST & SCHEDULES - PLUMBING **ELECTRICAL** 

A-720 **ROOF DETAILS** A-721 **ROOF & LADDER DETAILS** 

E-001 SYMBOL LIST & GENERAL NOTES - ELECTRICAL E-221 **ROOF PLANS - POWER** 

Sheet Title:

Sheet Number:

DOWN

DOWEL

DRAWER

**EXISTING** 

**EXPANSION BOLT** 

**EXPANSION JOINT** 

ELEVATOR/ ELEVATION

ELECTRIC(AL)

**EMERGENCY** 

ENAMEL(ED)

**ENCLOSURE** 

**ENGINEER** 

ENTRANCE

EACH

INCANDESCENT

INDUSTRIAL

INFORMATION

INSULATE(D) (ING)

INSTALLATION/ INSTALL

INTERACTIVE/ INTERMEDIATE

INCL

INSUL

INV

JAN

JST

Α		EPFL	EPOXY FLOORING	K		PLYWD	PLYWOOD	SURF	SURFACE
AC	ACOUSTIC CEILING	EPP	EPOXY PAINT	KO	KNOCK OUT	PNEU	PNEUMATIC	SUSP	SUSPENDED
ACOUS	ACOUSTIC	EQ	EQUAL	KP	KICK PLATE	PNL	PANEL	SV	SHEET VINYL
ACT	ACOUSTICAL TILE	EQUIP	EQUIPMENT			PNT	PAINT(ED)	SWCG	SPECIAL WALL COATING
AD	AREA DRAIN	EST	ESTIMATE(D)	1		POL	POLISH(ED)	SYM	SYMMETRICAL
ADD	ADDENDUM	ETC	ET CETERA	L&P	LATH & PLASTER	PORT	PORTABLE	SYN	SYNTHETIC
ADDL	ADDITIONAL	EW	EACH WAY	LAB	LABORATORY	PP	PUSH PLATE	SYS	SYSTEM
ADJ	ADJUSTABLE/ADJACENT	EWC	ELECTRIC WATER COOLER	LAM	LAMIANTE	PR	PAIR/ PRINTER/ COMPUTER		
AFF	ABOVE FINISH FLOOR	EXAM	EXAMINATION/ EXAMINING	LAV	LAVATORY		PRINTER	Т	
AGGR	AGGREGATE	EXC	EXCAVATED/ EXCAVATION	LB (S)	LAG BOLT(S)/ POUND(S)	PREFAB	PREFABRICATE(D)	T	TOP, TREAD, TOILET
ALT	ALTERNATE/ALTERATION	EXH	EXHAUST	LBL	LABEL	PRELIM	PRELIMINARY	T&B	TOP & BOTTOM
ALUM	ALUMINUM	EXP	EXPOSED/ EXPANSION	LF	LINEAL FOOT/ LINEAR FOOT	PRESS	PRESSURE	T&G	TONGUE & GROOVE
ALX	AUXILIARY	EXT	EXTERIOR	LH	LEFT HAND	PROJ	PROJEC(TION)	T/C	TOP OF CURB/TOP OF
ANCH	ANCHOR		271211011	LHR	LEFT HAND REVERSE	PROP	PROPERTY	., •	CONCRETE
		_				PROT	PROTECT(IVE) (ION)	T/S	TOP OF SLAB
ANOD	ANODIZED (ANODIC COATING)	F		LIN	LINEAR	PSF	POUNDS PER SQUARE FOOT	T/ST	TOP OF STEEL
AP	ACCESS PANEL	FA	FIRE ALARM	LL	LIVE LOAD				
APPROX	APPROXIMATELY	FAB	FABRICATE/ FABRICATOR/	LT(G)	LIGHT (ING)	PSI	POUNDS PER SQUARE INCH	T/W	TOP OF WALL
ARCH	ARCHITECTURAL		FABRIC	LW	LIGHTWEIGHT	PTD	PAPER TOWEL DISPENSER	TB	TOWEL BAR
ARF	ABOVE REFERENCE FLOOR	FD	FLOOR DRAIN			PTD/R	COMBINATION PAPER TOWEL	TD	TOWEL DISPENSER
ASPH	ASPHALT (IC)	FDC	FIRE DEPARTMENT	М			DISPENSER & RECEPTACLE	TEL	TELEPHONE
ASST	ASSISTANT		CONNECTION	M&S	MIRROR & SHELF	PTN	PARTITION(S)	TEMP	TEMPERATURE/TEMPORARY
AST	ASTRAGAL	FDN	FOUNDATION	M.S.B.	MULTIPLE STUD BEARING	PTR	PAPER TOWEL RECEPTACLE	TERR	TERRAZZO
AUTO	AUTOMATIC	FDPR	FIRE DAMPER	MACH	MACHINE	PVC	POLYVINYL CHLORIDE	TG	TEMPERED GLASS
		FDV	FIRE DEPARTMENT VALVE		MAINTENANCE	PVMT	PAVEMENT	THB	TEMPERED HARDBOARD
AV	AUDIO VISUAL	FDVC	FIRE DEPARTMENT VALVE	MAINT				THERMO	
AVG	AVERAGE	1 5 7 0	CABINET	MAS	MASONRY	Q			` '
		FE	FIRE EXTINGUISHER	MAT	MATERIAL		OLIADDY TILE	THK	THICK(NESS)
В		FEC	FIRE EXTINGUISHER CABINET	MAX	MAXIMUM	QT	QUARRY TILE	THRES	THRESHOLD
B/C	BOTTOM OF CURB			MBR	MEMBER	QTR	QUARTER	THRU	THROUGH
BAL	BALANCE	FF	FACTORY FINISH	MC	MEDICINE CABINET	QUAN	QUANTITY	TJ	TELEPHONE JACK
BD	BOARD	FH	FIRE HYDRANT/ FUME HOOD	MCW	MINERAL CORE WOOD			TKBD	TACK BOARD
BLDG	BUILDING	FHC	FIRE HOSE CABINET	MECH	MECHANICAL	R		TOIL	TOILET
BLK	BLOCK(ING)	FHEC	FIRE HOSE & EXTINGUISHER	MED	MEDICAL/ MEDIUM	R	RADIUS/ RISER/ RESILIENT	TOP	TOPPING
	,		CABINET			R&S	ROD & SHELF	TOS	TOP OF STEEL
BM	BENCH MARK/ BEAM	FIN	FINISH(ED)	MET	METAL	RAD	RADIATOR/ RADIUS	TPD	TOILET PAPER DISPENSER
BSMT	BASEMENT	FL	FLOOR LINE/ FLOOR	MEZZ	MEZZANINE	RB	RUBBER BASE/ RESILIENT		
BULL	BULLETIN	FLASH	FLASHING	MFB	MINERAL FIBER BOARD	ΚĎ	BASE	TR	TREAD
		FLEX	FLEXIBLE	MFR	MANUFACTURE(ING)	DOMA		TRK	TRACK
С		FLR	FLOOR(ING)	MGR	MANAGER	RCWY	RACEWAY	TV	TELEVISION
C/C	CENTER TO CENTER		` ,	MH	MANHOLE	RD	ROOF DRAIN/ ROAD	TYP	TYPICAL
CAB	CABINET	FLUOR	FLUORESCENT	MIC	MICROPHONE	RECEP	RECEPTACLE/ RECEPTION		
CB	CATCH BASIN	FOS	FACE OF STUD	MIN	MINIMUM	RECIRC	RECIRCULATION	U	
		FP	FIREPROOF(ING)/ FULL			RECT	RECTANGULAR	UG	UNDERGROUND
CCTV	CLOSED CIRCUIT TV		PENETRATION	MIR	MIRROR	RECVD	RECEIVED (ING)	UH	
CEMPL	CEMENT PLASTER	FRAM(G)	FRAMING	MISC	MISCELLANEOUS	REF	REFERENCE		UNIT HEATER
CER	CERAMIC	FRT	FIRE RETARDANT	ML	METAL LATH	REFR	REFRIGERATOR	UL	UNDERWRITERS
CFCI	CONTRACTOR FURNISHED	FS	FULL SIZE/ FLOOR SINK	MLP	METAL LATH AND PLASTER				LABORATORIES INC.
	CONTRACTOR INSTALLED	FT	FOOT/ FEET	MMB	MEMBRANE	REG	REGULATOR/ REGLET/ REGISTER	UNFIN	UNFINISHED
CG	CORNER GUARD	FTG	FOOTING	MO	MASONRY OPENING	DEILIE		UNO	UNLESS NOTED OTHERWISE
CH	COAT HOOK			MOD	MODULAR/ MODIFIED/	REINF	REINFORCE(D) (ING) (MENT)	UR	URINAL
CHAM	CHAMFER	FURR	FURRING	MOB	MODIFICATION	REQ(D)	REQUIRE(D)	UTIL	UTILITY
CHAN	CHANNEL	FXD	FIXED	MP	MOVABLE PARTITION/METAL	RESIL	RESILIENT	UV	UNIT VENTILATOR
				IVII	PANEL	RET	RETURN	O V	OHIT VERTILE COR
CHKBD	CHALKBOARD	G		MR	MAT. RECESS./ MED RACK	REV	REVERSE/ REVISED/ REVISION	V	
CIP	CAST-IN-PLACE (CONCRETE)	GA	GAUGE/ GAGE			RFG	ROOFING	v VAP	VADOD
CJ	CONTROL JOINT	GALV	GALVANIZED	MT	MOUNT(ED) (ING)	RH	RIGHT HAND		VAPOR
CL	CENTER LINE/CLEARANCE	GB	GYPSUM BOARD	MTR	METER	RHR	RIGHT HAND REVERSE	VAR	VARIABLE/VARNISH/VARIES
CLG	CEILING	GC	GENERAL CONTRACTOR	MUL	MULLION			VB	VAPOR BARRIER
CLR	CLEAR	GEN	GENERAL/ GENERATOR			RM	ROOM	VCT	VINYL COMPOSITION TILE
CMT	CERAMIC MOSAIC TILE			Ν		RND	ROUND	VEH	VEHICLE
CMU	CONCRETE MASONRY UNIT	GL	GLASS/GLAZING/GLAZED	N	NORHT	RO	ROUGH OPENING	VEN	VENEER
CNTR	COUNTER	GLAM	GLUE LAMINATED	NEG	NEGATIVE	ROW	RIGHT OF WAY	VENT	VENTILATION/VENTILATE/VEN
CO	CLEAN OUT	GND	GROUND	NIC	NOT IN CONTRACT	RS	RESILIENT SHEET		TILATOR
		GYP	GYPSUM	NL	NIGHT LIGHT	RT	RESILIENT TILE	VERT	VERTICAL
COL	COLUMN				NUMBER	RTN	RETURN	VEST	VESTIBULE
COMB	COMBINATION/COMBUSTIBLE	Н		NO,#				VEST	VERTICAL GRAIN
COMP	COMPRESS(ED)/COMPOSITE	НВ	HOSE BIBB	NOM	NOMINAL NOME COMPLICATION	S		VG VIF	VERIFY IN FIELD
CONC	CONCRETE	HC	HOSE CABINET/ HANDICAP/		NON COMBUSTABLE	S&V	STAIN & VARNISH		
COND	CONDUIT/ CONDITION		HOLLOW CORE	NRC	NOISE REDUCTION	S&V SAB	SOUND ABSORPTION BATT	VOL	VOLUME
CONF	CONFERENCE	HCW	HOLLOW CORE WOOD/ HOT		COEFFICIENT			VP	VENEER PLASTER
CONN	CONNECT(ION)		AND COLD WATER	NS	NON SLIP	SAN	SANITARY		
CONST	CONSTRUCTION	HDBD	HARDBOARD	NTS	NOT TO SCALE	SC	SOLID CORE	W	
CONT	CONTINUE/ CONTINUOUS	HDR	HEADER			SCHED	SCHEDULE	W/	WITH
				0		SCN	SCREEN	W/O	WITHOUT
CONTR	CONTRACTOR	HDWD	HARDWOOD	OC	ON CENTER	SCW	SOLID CORE WOOD	WAIN	WAINSCOT
COORD	COORDINATOR	HDWR	HARDWARE	OD	OUTSIDE DIAMETER (DIM.)	SD	SOAP DISPENSER / SOAP DISH	WB	WHITE BOARD/WOOD BASE
CORR	CORRIDOR	HGT (HT)		OFCI	OWNER FURNISHED	SECT	SECTION	WC	WATER CLOSET
CPT	CARPET	HM	HOLLOW METAL	OFCI	CONTRACTOR INSTALLED	SET	SETTING		
CSWK	CASEWORK	HR	HOUR	OED				WCG	WALL COVERING
CT	CERAMIC TILE	HS	HOOK STRIP/ HIGH STRENGTH	OFD	OVERFLOW DRAIN	SF	SQUARE FOOT	WD	WOOD
CTR	CENTER	HSKG	HOUSEKEEPING	OFF	OFFICE	SFC	SPECIAL FLOOR COATING	WDW	WINDOW
CU	CUBIC	HTR	HEATER	OFOI	OWNER FURNISHED OWNER	SFP	SPRAYED ON FIREPROOFING	WF	WIDE FLANGE (STEEL)
<b>55</b>	302.0				INSTALLED	SHR	SHOWER	WG	WIRE GLASS/WALL GRILL
<b>D</b>		HVAC	HEATING, VENTILATION, AIR CONDITIONING	OFVI	OWNER FURNISHED VENDOR	SHT	SHEET	WL	WATER LINE
D	D 01/D: -	1 11 4 5 7			INSTALLED	SK	SINK/SKETCH	WP	WATERPROOFING/WEATHER
DBL	DOUBLE	HWY	HIGHWAY	ОН	OVERHEAD/ OVERHANG/	SLR	SEALER	V V I	PROOF
DEG	DEGREE(S)	HYD	HYDRANT		OPPOSITE HAND	SM	SHEET METAL	WR	WATER RESISTANT/ WASTE
DEM	DEMOLISH/DEMOLITION			OPER	OPERATING			V V I \	RECEPTACLE
DEPT	DEPARTMENT	I		OPH	OPPOSITE HAND	SND	SANITARY NAPKIN DISPENSER	\ <b>\</b> /T	
DF	DRINKING FOUNTAIN	ID	INSIDE DIAMETER (DIM.)	OPN (G)	OPEN(ING)	SNR	SANITARY NAPKIN	WT	WEIGHT
DIA	DIAMETER	ΙΕ	FOR EXAMPLE	OPP	OPPOSITE	<b>~</b>	RECEPTACLE		
DIAG	DIAGONAL	IG	INSULATING GLASS	OI I⁻	OI I COILE	SNT	SEALANT	Υ	
		IMP	INSULATING GLASS INSULATED METAL PANEL	<b>D</b>		SP	STANDPIPE/SHEER PLATE	YD	YARD DRAIN
DIM	DIMENSION			P		SPEC	SPECIFICATION/SPECIFIED		
DIV	DIVISION/ DIVIDER	IN	INCH	PA	PUBLIC ACCESS	SPK	SPEAKER		

PARTICLEBOARD

PRE-CAST

PEDESTAL

PERFORATED

PERPENDICULAR

PREFABRICATE(D)

PHASE/ PAN HEAD

PLATE/ PROPERTY LINE

PERIMETER

PLATE GLASS

PEGBOARD

PLUMBING

PFB

PLAS

PLBG

PARAGRAPH/ PARAPET

PANIC BOLT/ PUSH BUTTON

SPK

SPL

SPNT

SPR

STA

STD

STL

STOR

SUBFL

SUP

SPEAKER

SPECIAL

STATION

SPECIAL PAINT

SERVICE SINK

COEFFICIENT

SUBFLOOR(ING)

SUPP SUPPORT / SUPPLEMENT(AL)

STANDARD

STEEL

STRUC STRUCTURAL

STORAGE

SUPPLY

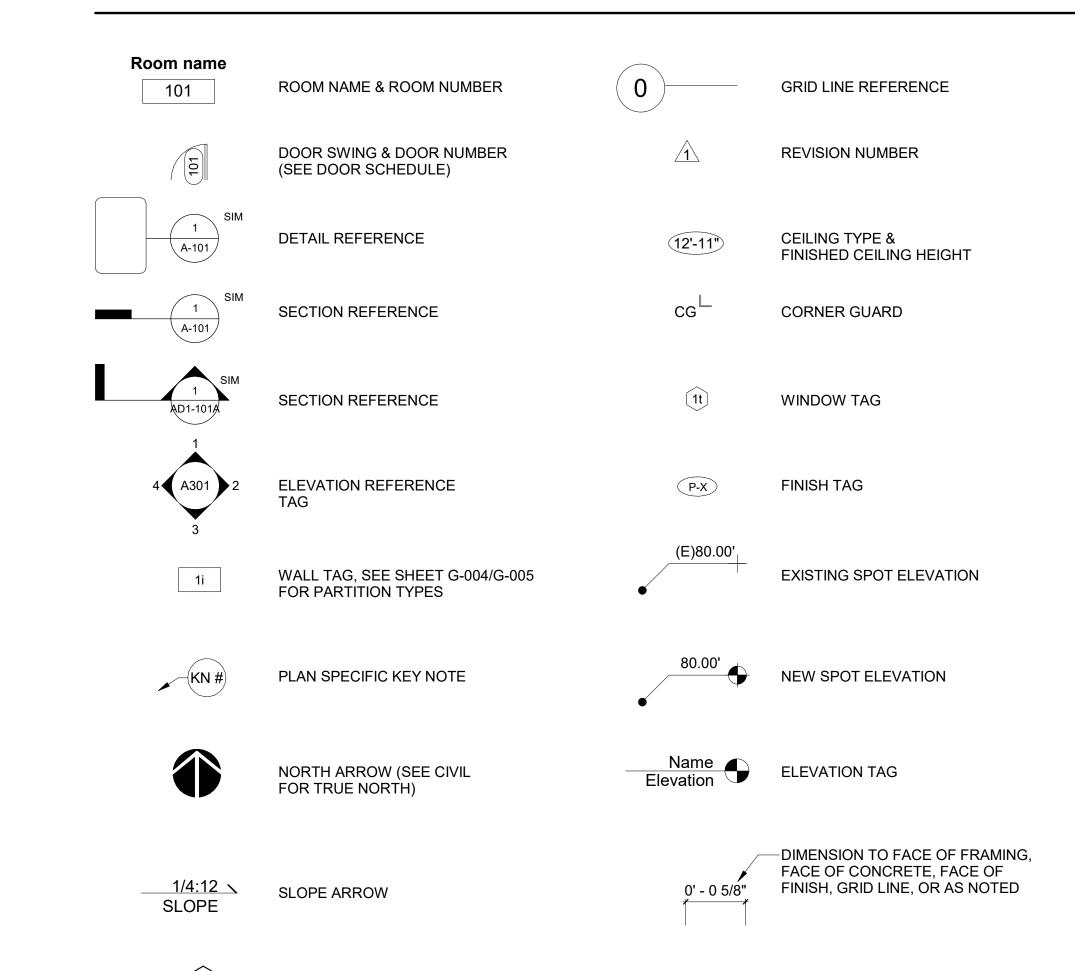
STAINLESS STEEL

STREET / STREAM

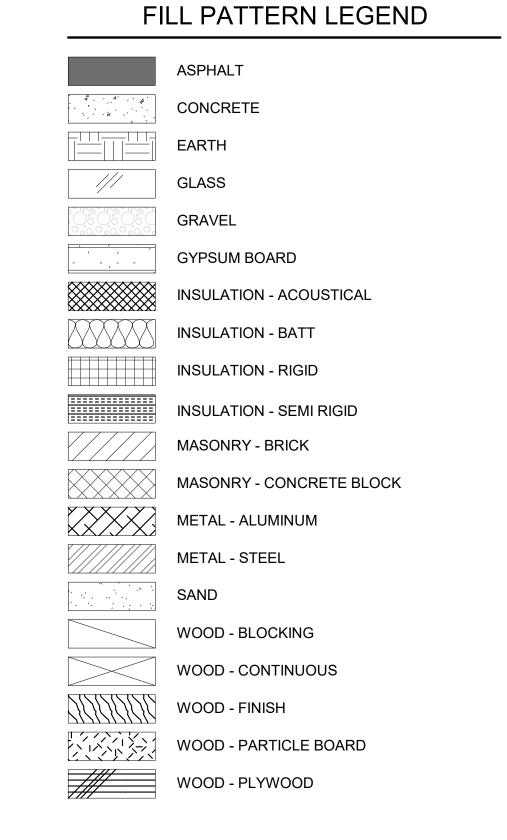
SOUND TRANSMISSION

SPRINKLER

# SYMBOLS LEGEND



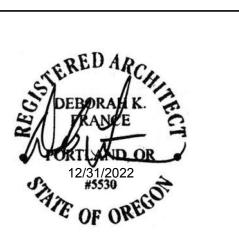
3D VIEW REFERENCE TAG



**BEAVERTON** SCHOOL DISTRICT **ALOHA HIGH** SCHOOL 18550 SW KINNAMAN ROAD, BEAVERTON, OR 97007



Consultants:



04/06/2021

90065

Project Number: Checked By:

Revision Schedule:

Sheet Title: ABBREVIATIONS, **LEGENDS** AND NOTES

Sheet Number:

G-002

PERMIT / BID SET

**ELEV** 

**EMER** 

**ENAM** 

**ENCL** 

ENTR

**ENGR** 

#### SITE PLAN SHEET NOTES

A. Site plan shown for reference only. No site work in project scope.

# s#) KEYNOTES

- S 1 Existing accessible entrance.
- S 2 Existing accessible parking.
- S 3 Existing accessible ramp.
- S 4 Existing accessible route. S 5 Existing crosswalk.
- S 6 Existing auxiliary building. No project scope. S 7 Existing emergency vehicle access point.
- S 8 Existing north parking lot 186 spaces 4 accessible parking stalls.
- S 9 Existing northeast parking lot 80 spaces 6 accessible
- S 10 Existing east parking lot 166 spaces 2 accessible
- S 11 Existing southeast parking lot 88 spaces 2 accessible
- S 12 Existing southwest parking lot 51 spaces 0 accessible parking stalls.



t 503.280.8000 f 503.224.5442

BEAVERTON SCHOOL DISTRICT

ALOHA HIGH

18550 SW KINNAMAN ROAD, BEAVERTON, OR 97007

SCHOOL

Consultants:



Revision Schedule:

Sheet Title: SITE PLAN

Sheet Number:

G-101

PERMIT / BID SET

1 SITE PLAN - FOR REFERENCE ONLY
1" = 60'-0"



#### **BUILDING CODE SUMMARY**

#### APPLICABLE CODES

- 2019 Oregon Structural Specialty Code (OSSC)
- 2017 Oregon Electrical Specialty Code (OESC) 2019 Oregon Zero Energy Ready Commercial Code (OZERCC)
- 2019 Oregon Fire Code (OFC) 2019 Oregon Mechanical Specialty Code (OMSC)
- 2017 Oregon Plumbing Specialty Code (OPSC) ICC A117.1-2009 Accessible and Usable Buildings and Facilities
- 2010 ADA Standards for Accessible Design National Fire Protection Association (NFPA)

#### **BUILDING CONSTRUCTION DATA**

- Type of construction: VB & IIIB
- Building use and occupancy: Educational Group E
- Maximum allowable height in stories and floor areas: Existing building, no modifications to overall height of building in stories or floor areas.
- Maximum proposed height of building: Existing building, no modifications to overall height
- of building. Number of stories: Existing building: 2 stories.
- Total floor area: Existing building: 243,890 SF.
- Floor area for each floor: Refer to FLS Key Plan: FIRST FLOOR
- Area 1: 33,165 SF Area 2: 23,660 SF 39,100 SF Area 3: 36,970 SF Area 4U:
- Area 6U: 45,110 SF 4,030 SF AREA OF WORK Area 7:
- TOTAL: 210,005 SF

Area 5U: 25,295 SF

- LOWER FLOOR
- Area 4L: 2,195 SF Area 5L: 13,450 SF
- Area 7L: 18,240 SF → AREA OF WORK TOTAL: 33,885 SF
- Existing basement located under existing stage. Minimum required setbacks to property line: Existing building, no modifications to the building square footage.

#### **BUILDING OCCUPANCY DATA**

- No occupancy change from current use. Primary building occupancy: Educational - Group E
- Occupancy for occupied spaces and building separations: Refer to G-202 & G-203.
- Total occupant load per floor.
- Main Floor: 8,206 Lower Level Floor: 792 C. Basement: 12
- Occupant load for each area or room on each floor: Refer to G-202 & G-203.

#### FIRE RESISTIVE BUILDING ELEMENTS

1. No occupancy change and no change to arrangement of existing fire resistive building

Square footage, occupant load and maximum floor area per occupant: Refer to code floor

- **BUILDING EXITING**
- plans G-202 & G-203. No changes to existing building exiting system are proposed.
- Minimum corridor exit width required: 44". Corridors are not rated as a full sprinkler system is provided. Refer to plans on G-202 & G-203.

#### **BUILDING FIRE DETECTION AND SUPPRESSION**

- Smoke detection and fire alarm system are required. Smoke detection and fire alarm system are provided.
- Type of system: Simplex 4020 Addressable Analog Control Panel Sprinkler system is required.
- Sprinkler system is provided.
- Type of sprinkler system: Wet system at interior, dry system at exterior Standpipe system is not required.
- Standpipe system is not provided.
- No functional changes to existing fire detection and suppression systems are proposed.

#### **ENERGY CODE REQUIREMENTS**

- Energy code analysis: Persciptive envelope requirements for new elements only.
- List of building components and R/U values: Refer to Energy Code Summary on this
- Lighting layout: No changes to lighting layout are proposed.
  Energy form for all HVAC: Refer to Mechanical drawings for like-for-like replacement of
- selected rooftop HVAC units. No other functional changes to HVAC systems are proposed.

# HAZARDOUS MATERIALS

Hazardous materials (asbestos and lead paint) are present in the existing building. Any work impacting hazardous materials must be performed under DEQ and OSHA regulations.

#### **ACCESSIBILITY**

- Site's exterior route of travel: Refer to site plan on G-101.
- Building interior consists of two floors, with level corridor systems, connected by an elevator and a stair lift.
- No changes to accessible routes of travel are proposed.

#### PLUMBING FIXTURE COUNT REQUIREMENTS

1. No change in occupancy or overall square footage of building. The scope of work of this project does not include the modification of any restrooms.

#### SPECIAL INSPECTION, STRUCTURAL OBSERVATION, AND DEFERRED SUBMITTALS

- Special inspections: Required, refer to sheets S-010 and S-012.
- Structural observations: Required, refer to sheet S-002.
- Deferred submittals: Refer to sheets G-001 and S-002.

OVERALL FIRE/LIFE/SAFETY PLAN REFERENCED FROM OWNER PROVIDED PERMITTED CODE **REVIEW FROM THE ADDITIONS AND REMODELING** OF ALOHA HIGH SCHOOL DATED JANUARY 2017

This sheet is for referece only. It has been prepared, in part, based on information furnished by others and on previous' as-built Contract Documents. The Architect does not ensure that all conditions have noted or accurately documented. Users of these documetrs should independently verify all pertinent information and conditions. Do not construe information contained within this sheet to allow work not conforming to applicable codes or requirements of authorites having jurisdiction.

# **BEAVERTON** SCHOOL DISTRICT **ALOHA HIGH** SCHOOL 18550 SW KINNAMAN ROAD, BEAVERTON, OR 97007



Consultants:

Envelope Element	Roof Areas	Required	Provided	Notes
Roof, full tear-off	A.4	R-30 ci or R-38 attic	R-10 ci + existing batt insulation below foor (R-22 effective total)	Existing R-30 batt insulation between joists is estimated to have an effective R value of R-12. Total effective R-value estimated at R-22.

No improvement provided

Unconditioned space.

Changes to the existing building envelope will conform to the 2014 Oregon Energy Efficiency Specialty Code, Table 502.1.1, Climate Zone Marine 4.

No improvement required

BUILDING ANALYSIS											
		E	BUILDING AR	EA			EXITS	5			
AREA	CONTRUCTION	BASE	FRONTAGE	SRINKLER	ALLOWED	ACTUAL	NUMBER OF	EXITS		WIDTH	
ANLA	CONTROCTION	AREA	INCREASE	SKIINKLLIK	AREA	AREA	OCCUPANTS	REQ.	ACTUAL	REQ.	ACTUAL
1	VB	9,500'	-	28,500'	38,000'	33,165'	906	3	6	182"	544"
2	VB	9,500'	-	28,500'	38,000'	23,660'	445	2	7	89"	238"
3	VB	9,500'	-	28,500'	38,000'	39,100'	827	4	4	165"	296"
4U	VB	9,500'	-	28,500'	38,000'	36,970'	1,451	4	5	290"	402"
4L	VB	9,500'	-	28,500'	38,000'	2,195'	N/A	N/A	1	N/A	136"
5U	VB	9,500'	-	19,000'	28,500'	25,295'	655	3	3	131"	136"
5L	VB	SEE NOTE 2	-	19,000'	28,500'	13,450'	371	2	2	75"	278"
6U	III B	14,500'	-	29,000'	43,500'	45,110'	3,627	4	7	625"	636"
6L	III B	SEE NOTE 2	-	29,000'	43,500'	18,240'	421	2	3	84"	184"
7	VB	9,500'	-	28,500'	38,000'	4,030'	179	4	8	36"	272"
8	VB	9,500'	-	28,500'	38,000'	2,675'	116	4	4	23"	136"
	·		· · · · · · · · · · · · · · · · · · ·			4			<u>'</u>		

AREA OF WORK

ENERGY CODE SUMMARY

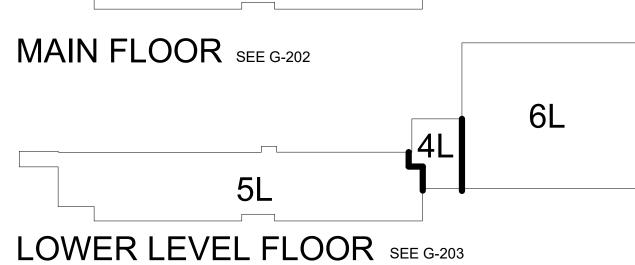
Roof, canopies

A.5, A.6, A.7

A FIRE SPRINKLER SYSTEM IS PROVIDED THROUGHOUT THE EXISTING BUILDING.

- A ONE STORY INCREASE PERMITTED IN HEIGHT FOR TYPE VB WITH AREA NOT TO EXCEED THE ALLOWABLE FOR ONE FLOOR. TWO STORIES PERMITTED FOR TYPE III B.
- A TWO HOUR FIRE WALL SEPARATES THE BUILDING AREAS
- THE MAXIMUM EXIT DISTANCE OF 250 FT IS NOT EXCEEDED.

				STATE
			•	Date: Project Number:
AREA OF WORK	1		2	Drawn By: Checked By: Revision Schedul
		<b>.</b> 4∪ [	_	
		L		
!	•	•		



5U

Sheet Title: CODE SUMMARY

Sheet Number:

PERMIT / BID SET

04/06/2021

90065

G-201

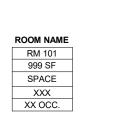
EXISTING 1 HR FIRE SEPARATION - 45 MIN DOORS

DOORS

EXISTING 2 HR OCCUPANCY

SEPARATION - 90 MIN DOORS

NON - RATED EGRESS CORRIDOR



ROOM NAME ROOM NUMBER AREA OF ROOM OCCUPANCY GROUP NUMBER OF OCCUPANTS



EXIT

EXIT PASSAGEWAY

NOTE:
OVERALL FIRE/LIFE/SAFETY PLAN REFERENCED FROM
OWNER PROVIDED PERMITTED CODE REVIEW FROM
THE ADDITIONS AND REMODELING OF ALOHA HIGH
SCHOOL DATED JANUARY 2017.

NOTE:
THIS SHEET IS FOR REFERENCE ONLY. IT HAS BEEN PREPARED, IN PART, BASED ON INFORMATION FURNISHED BY OTHERS AND ON PREVIOUS PROJECTS' AS-BUILT CONTRACT DOCUMENTS. THE ARCHITECT DOES NOT ENSURE THAT ALL CONDITIONS HAVE BEEN NOTED OR ACCURATELY DOCUMENTED. USERS OF THESE DOCUMENTS SHOULD INDEPENDENTLY VERIFY ALL PERTINENT INFORMATION AND CONDITIONS. DO NOT CONSTRUE INFORMATION CONTAINED WITHIN THIS SHEET TO ALLOW WORK NOT CONFORMING TO APPLICABLE CODES OR REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.

BEAVERTON
SCHOOL DISTRICT
ALOHA HIGH
SCHOOL
18550 SW KINNAMAN ROAD,



f 503.224.5442

Consultants:

ALOHA HIGH SCHOOL MODULAR REROOFING



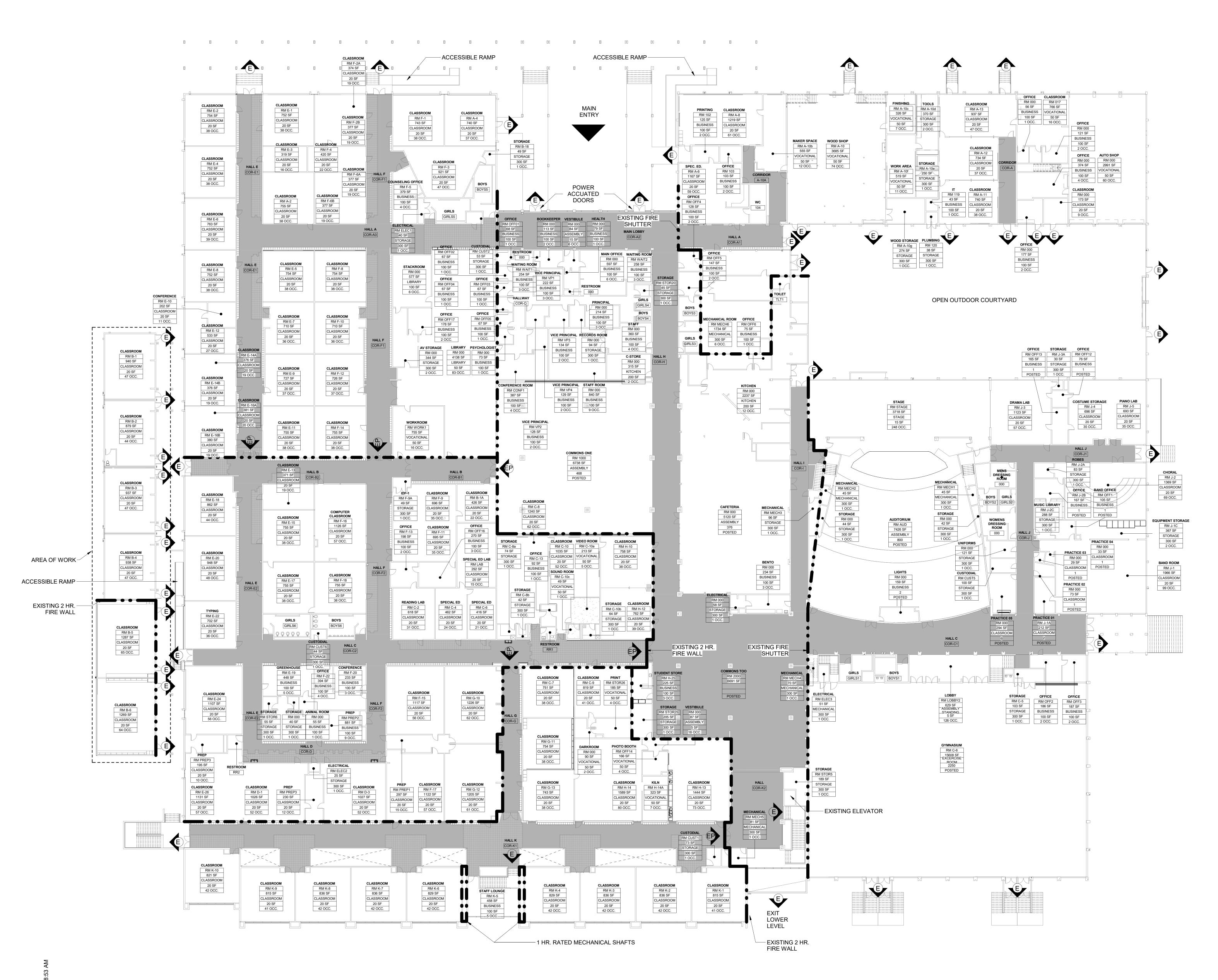
Date: 04/06/2021
Project Number: 90065
Drawn By: DET
Checked By: TA

Revision Schedule:

FIRE LIFE
SAFETY PLAN
FIRST FLOOR

Sheet Number:

G-202

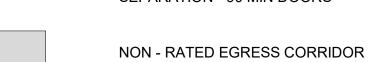


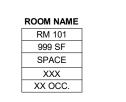
#### FIRE AND LIFE SAFETY LEGEND

EXISTING 1 HR FIRE

SEPARATION - 45 MIN DOORS

**EXISTING 2 HR OCCUPANCY** SEPARATION - 90 MIN DOORS





**ROOM NAME ROOM NUMBER** AREA OF ROOM OCCUPANCY GROUP NUMBER OF OCCUPANTS



EXIT

**EXIT PASSAGEWAY** 

OVERALL FIRE/LIFE/SAFETY PLAN REFERENCED FROM OWNER PROVIDED PERMITTED CODE REVIEW FROM THE ADDITIONS AND REMODELING OF ALOHA HIGH SCHOOL DATED JANUARY 2017.

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**BEAVERTON** SCHOOL DISTRICT **ALOHA HIGH** SCHOOL 18550 SW KINNAMAN ROAD,

> OHPLANNING+DESIGN, ARCHITECTURE 115 NW 1st Ave, Ste. 300 Portland, OR 97209

> > t 503.280.8000 f 503.224.5442

BEAVERTON, OR 97007

Consultants:

04/06/2021 Checked By:

Revision Schedule:

**KEY PLAN** -AREA OF WORK ZONE A ZONE B\_ ZONE C

Sheet Title: FIRE LIFE SAFETY PLAN MEZZ/LOWER FLOOR Sheet Number:

G-203

#### DEMOLITION ROOF PLAN SHEET NOTES

- A. Keynotes are not sheet specific.
- B. General Contractor is responsible for verifying all existing conditions and notifying Architect of any discrepancies.
- C. Coordinate all work with manufacturer requirements. D. Coordinate all work with other disciplines; see Mechanical, Plumbing
- and Electrical drawings for additional scope.
- E. See Plumbing drawings for plumbing vent and roof drain demolition. F. See Electrical drawings for additional details regarding conduit, cables and other electrical connections or equipment. G. Hazardous materials are present in this building. Coordinate
- demolition activities with District's Hazardous Material Abatement drawings, Management Plan, and Hazardous Materials Survey. See General Hazard Communication Note on cover sheet. H. Localized demolition as it pertains to new roof curbs to be coordinated with manufacturers requirements, new curb details.

I. Protect roof from water intrusion during demolition.

## DEMOLITION ROOF PLAN LEGEND

FULL DEMOLITION:
DEMOLISH BUILT-UP ROOFING SYSTEM DOWN
TO (E) WOOD DECK SUBSTRATE.

DEMOLISH EXISTING WOOD-FRAMED CRICKET

ROOF AREA REFERENCE

1/4" / 1'-0" 
EXISTING ROOF SLOPE / CRICKET SLOPE DEMOLISH SHEET METAL COPING AND

ASSOCIATED VERTICAL FLASHING ----- DEMOLISH REGLET FLASHING

(E) RD- (E) OD- EXISTING ROOF DRAIN OR OVERFLOW DRAIN TO REMAIN

SDS - REMOVE AND SALVAGE LEADERHEAD AND DOWNSPOUT. DEMOLISH THROUGH-WALL METAL SCUPPER & WALL TO

ACCOMODATE NEW SCUPPER PER 6 / A-720

REMOVE AND SALVAGE DOWNSPOUT

EXISTING DOWNSPOUT TO REMAIN - PROTECT DURING CONSTRUCTION

REMOVE HVAC FAN OR VENT, EXISTING WOOD CURBS TO REMAIN UNLESS OTHERWISE NOTED. ALL ASSOCIATED FLASHING TO BE DEMOLISHED.

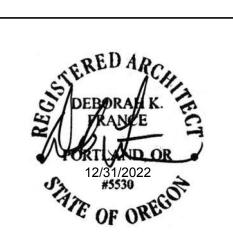
- DR 1 Remove & salvage existing ladder, modify height, see Ladder
- schedule and details sheet A-721. DR 2 Remove and salvage existing hatch, existing curb to remain.
- DR 3 Existing parapet brace to remain in place during construction -
- DR 4 Demolition of roofing, flashing and curb as indicated on plans to accommodate new mechanical curb.
- DR 5 Demolish plywood cant, Typ. at all curbs & parapet walls.
- DR 6 Demolish existing support for conduit and/or electrical cables where occurs, typical - see Electrical.
- DR 7 Demolish column cap flashing.
- DR 8 Remove and salvage sidewall vent grill, typical.
- DR 9 Existing curb to be reused for new mechanical unit. Localized demolition of flashing to accomodate new adapter curb.
- DR 10 Remove and salvage metal bar fastened between ladders.

**BEAVERTON** SCHOOL DISTRICT **ALOHA HIGH** SCHOOL 18550 SW KINNAMAN ROAD,



t 503.280.8000 f 503.224.5442

Consultants:



04/06/2021 90065 Project Number: DET Drawn By: Checked By:

Revision Schedule:

74 SF PLYWOOD DECK <1/8" / 1', NOTE 1 YES, 1/2" ISO YES, NOTE 4 BUR W/ BALLAST YES, NOTE 4

**ROOF DEMOLITION SCHEDULE - ZONE A** 

**INSULATION** 

(E) TO REMAIN (E) TO REMAIN NO

YES, 1/2" ISO YES, NOTE 4 BUR W/ BALLAST YES, NOTE 4

YES, 1/2" ISO YES, NOTE 4 BUR W/ BALLAST YES, NOTE 4

EXISTING DEMO

**ROOF DEMOLITION SCHEDULE NOTES:** 1. General Contractor to confirm existing slopes after demolition and notify Architect of any discrepancies.

179 SF PLYWOOD DECK 1/4" / 1', NOTE 1 NO

2. Existing slopes vary, see AD-222 for existing slopes. 3. Refer to legend, keynotes and plans for extents of full tear off demolition. 4. Full demolition of entire existing roofing system to expose plywood deck

3246 SF (E) TO REMAIN (E) TO REMAIN

3858 SF | PLYWOOD DECK | 1/4" / 1', NOTE 1

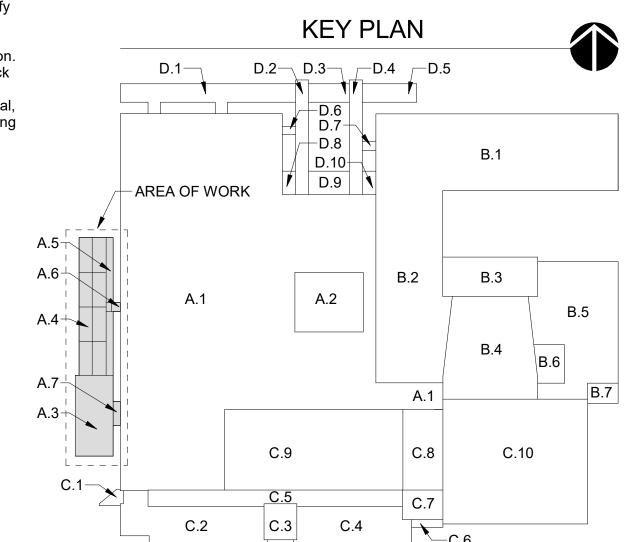
996 SF PLYWOOD DECK 1/4" / 1', NOTE 1

ROOF AREA

AREA SQ. FT. MATERIAL

5. Demolish all loose granules and membrane flashing around sheet metal, parapet and vertical surfaces. Additional demolition of damaged existing membrane per manufacturers requirements. See plan for areas of full demolition of existing built-up membrane to expose deck.

(E) SLOPE



ROOFING

DEMO

BUR W/ BALLAST YES, NOTE 4 1998 addition - canopy

COMMENTS

1986 addition - canopy

1967 original - canopy

1998 addition

1986 addition

(E) MATERIAL

Sheet Title: ROOF DEMOLITION PLAN

Sheet Number:

AD-221 PERMIT / BID SET

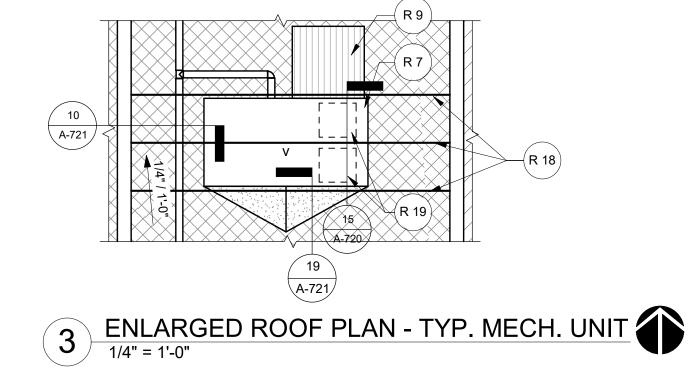
ROOF DEMOLITION PLAN - MODULAR

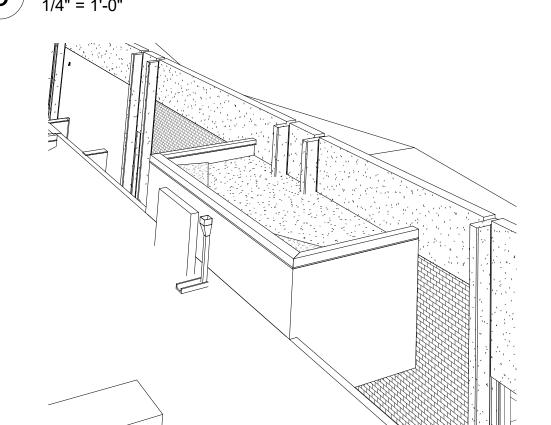
1/8" = 1'-0"

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ENLARGED ROOF PLAN - ROOF AREA A.6

A-721





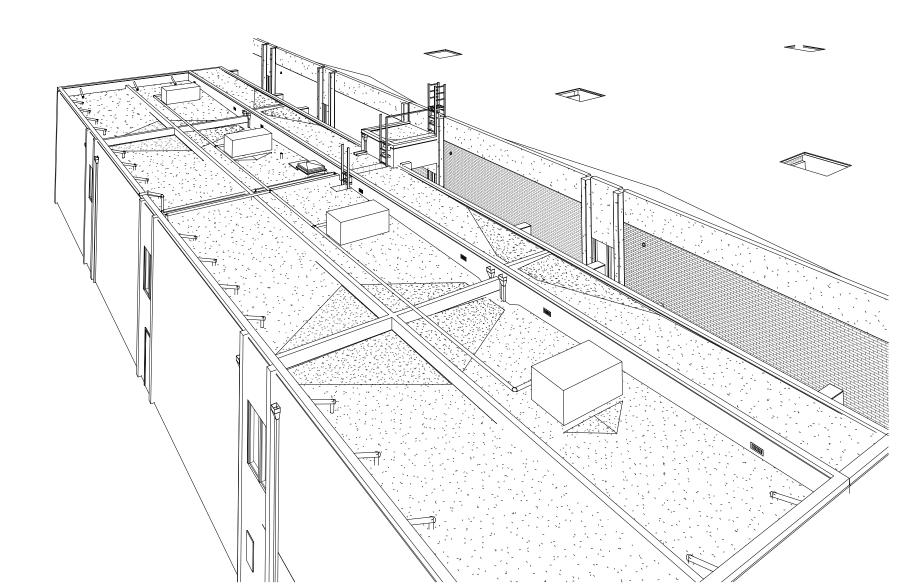
4 ENLARGED ROOF PLAN - ROOF AREA A.7

5 3D PERSPECTIVE - ROOF AREA A.7

1/4" = 1'-0"

A-721





6 3D PERSPECTIVE - ROOF AREA A.4, A.5, A.6

R#) KEYNOTES

 $\leftarrow P1 \rightarrow P4 \rightarrow$ 

A-720

**A-301** 

(A-301)

(A.1)

NO WORK

THIS ROOF

11 12 A-720 A-720

(R2)

(R8)

(R2)

(R4)

TYP.

(A-301)

(R2)

(R2)—

(R4)

(R8)<u></u>

- Reinstall modified leaderhead and downspout at A.5, A.6, A.7
- through-wall scupper flashing, see detail 2 / A-720 Reinstall modified leaderhead and downspout at roof A.4
- through-wall scupper flashing, see detail 3 / A-720
- Reinstall salvaged ladder after modifying to fit above new roof level, see Ladder Schedule. Existing parapet brace to remain in place, clean all surfaces
- and repaint Typ. at all braces. See detail 12 / A-720 for attachment to roof deck, and detail 11 / A-720 for flashing at parapet attachment.
- Reinstall salvaged hatch on modified existing curb per detail
- New loose laid pipe support frame for reinstalled conduit cable
- see Electrical. New mechanical unit on new curb, 650 lbs max - see
- Mechanical. See detail 10 / A-721 for curb requirements.
- R 8 New cap flashing at existing column. S-lock to adjacent roof edge cap flashing at standing seam. New PVC walkpad. Locate on operating side of mechanical
- units and hatches, Typ. R 10 New precast concrete splashblock at existing downspouts, see
- detail 8 / A-720 R 11 New vertical sheet metal panel flashing, see detail 7 / A-721
- per manufacturer's requirements, typical. See detail 13 / A-720 R 13 Continue reglet flashing around all column and wall protrusions per detail 11 / A-721. Height from finish roof surface to align across face of wall and set at 8" min. above highest point of

Reinstall salvaged sidewall vent grill and apply new flashing

- finish roof surface, typical. R 14 Pipe boot at pipe penetrations, see detail 10 / A-720
- R 15 New gas piping, Typ. see Mechanical.
- R 16 Raise (E) conduit as needed to sit on sleepers. Coordinate location with new gas pipe. See Electrical.
- New mechanical unit on (E) curb, 800lbs max see Mechanical. Refer to detail 9 / A-721 for curb requirements.
- R 18 Continuous 2x4 along entire length of (E) 2x8 joist. Patch in roof insulation flush against 2x4, no voids. Typ. at all joists under mechnical unit. See detail 19 / A-721
- R 19 Provide square pipe boot at metal duct roof penetrations per detail 15 / A-720, Typ.
- R 20 Provide new metal bar +/- 8' 11" in length, weld each end to ladder per detail 18 / A-721 Plug all holes in bar, Typ.

#### **ROOF PLAN SHEET NOTES**

- A. Keynotes are not sheet specific.
- B. General Contractor is responsible for verifying all existing conditions and notifying Architect of any discrepancies. C. Coordinate all work with other disciplines; see Mechanical, Plumbing
- and Electrical drawings for additional scope. D. See Plumbing drawings for plumbing vent locations; provide new
- pipe flashing per detail 10 / A-720

**BEAVERTON** 

SCHOOL DISTRICT

**ALOHA HIGH** 

18550 SW KINNAMAN ROAD,

ARCHITECTURE

Portland, OR 97209

t 503.280.8000

f 503.224.5442

Consultants:

115 NW 1st Ave, Ste. 300

BEAVERTON, OR 97007

SCHOOL

- E. Repair ceiling where new roof drains and overflow drains and piping are installed. See RCP for extents of ceiling scope. F. Roof drain and overflow drain tags are for identification purposes
- only, verify drain quantities; see Plumbing. G. Parapet tags are for identification purposes only, verify quantities;
- see 'Parapet Schedule' on this sheet. H. Ladder tags are for identification purposes only, verify quantities; see
- 'Ladder Schedule' sheet A-721. I. Remove corrosion from all (E) stormwater and roof drainage piping
- to remain, and apply high-performance coating. J. Hydro jet all roof drains within area of work at completion of project.
- K. Existing roof structure slope is shown on roof demolition plan.
- L. Where sheet metal coping terminates at walls, provide saddle
- flashing and counterflash per detail 15 / A-721. Verify all locations and conditions.

M. Tapered insulation to be installed as crickets at all mechanical

- equipment and rooftop penetrations that exceed 1'-0" in width. N. All crickets sloped to 1/4" / 12".
- O. Walkpads to be installed at top and bottom of all ladders and on the
- service side of all servicable rooftop mechanical units. P. Use pressure-treated lumber for wood construction on roofs,
- parapets, and walls. Q. All (E) mechanical unit wood curbs to remain unless otherwise noted.
- Modify and raise (E) wood curbs as required to meet 8" minimum height above finished roof surface, see detail 10 / A-721
- R. Column cap flashing to remain in place if possible U.N.O. S. Refer to Roof Layout Plans and Roof Schedule on those sheets for
- type and extent of each roofing system. T. Contractor to field verify (E) vents provide a total of 6.5 SF of ventilation opening.

#### ROOF PLAN LEGEND

TYPE 1A - NOT USED



TYPE 1B - (N) PVC ROOF ASSEMBLY:
(AT FULL DEMOLITION ROOFS) SINGLE PLY PVC MEMBRANE OVER 1/2" COVERBOARD WITH RIGID INSULATION ON (E) WOOD DECK. APPLY R-30 AT ALL LOCATIONS.



TYPE 1C - (N) PVC ROOF ASSEMBLY:
(AT FULL DEMOLITION CANOPIES) SINGLE PLY PVC MEMBRANE OVER 1/2" COVERBOARD, TAPERED INSULATION AS REQUIRED FOR SLOPE NEW CRICKET - TAPERED INSULATION. SLOPE

OF 1/4 PER FOOT ROOF AREA REFERENCE

ROOF PARAPET / EDGE REFERENCE TAG SEE PARAPET SCHEDULE THIS SHEET

1/4" / 1'-0" ► ROOF SLOPE / CRICKET SLOPE NEW SHEET METAL COPING, SEE PARAPET TYPES AND TYPICAL DETAIL 9 / A-720 NEW REGLET FLASHING

SDS - REINSTALL SALVAGED DOWNSPOUT AND LEADERHEAD. PROVIDE NEW MEMBRANE CLAD METAL SCUPPER

(E) DS - EXISTING DOWNSPOUT TO REMAIN

REINSTALL SALVAGED HVAC FAN OR VENT ON MODIFIED (E) WOOD CURB UNLESS OTHERWISE NOTED, SEE DETAIL 9 / A-721 AND 10 / A-721 FOR CURB REQUIREMENTS.

REINSTALL ROOF HATCH, SEE DETAIL 8 / A-721 LADDER TAG FOR REFERENCE ONLY, SEE SHEET A-721 FOR SCHEDULE AND DETAILS

NEW PVC WALKPAD

	PARAPET S	SCHEDULI	<b>E</b>
TYPE	DETAIL	TYPE	DETAIL
P1	2 / A-721	P2	3 / A-721
P3	4 / A-721	P4	5 / A-721
P5	6 / A-721		

#### **PARAPET SCHEDULE NOTES:**

- 1. Coordinate membrane securement methods at bottom of walls with structural work and manufacturer's requirements to avoid conflict.
- 2. Rigid insulation cricketing not shown on roof edge details for clarity. Refer to plans for locations. All crickets to be a minimum of 1/4"/12" slope.

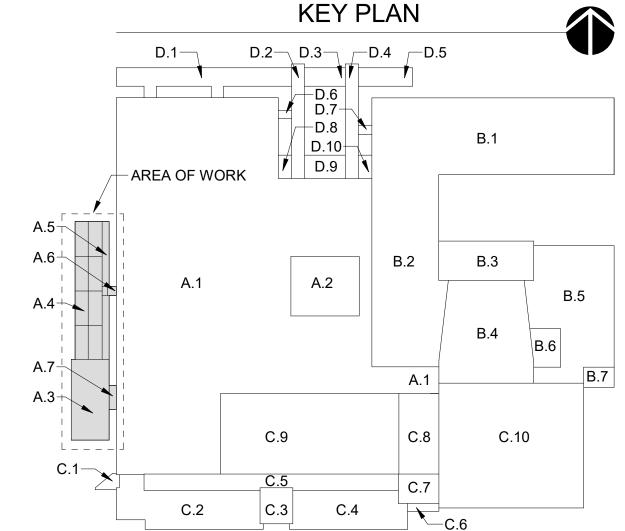
	ROOF SCHEDULE - ZONE A								
		DECK		INSULATION		ROOFING			
ROOF AREA	AREA SQ.FT.	DECK MATERIAL	NEW SHEATHING	(N) INSULATION VALUE *	TAPERED INSULATION	(N) MATERIAL	TYPE	UL CLASS	COMMENTS
A.3	3246 SF	(E) TO REMAIN	(E) TO REMAIN	(E) TO REMAIN	(E) TO REMAIN	(E) TO REMAIN	(E) TO REMAIN	Α	1998 addition
A.4	3862 SF	PLYWOOD DECK	NO	R-30 (6" ISO)	YES, NOTE 2	PVC SINGLE-PLY	TYPE 1B	Α	1986 addition
A.5	996 SF	PLYWOOD DECK	NO	NONE	YES, NOTE 2	PVC SINGLE-PLY	TYPE 1C	Α	1986 addition - canopy
A.6	74 SF	PLYWOOD DECK	NO	NONE	YES, NOTE 2	PVC SINGLE-PLY	TYPE 1C	Α	1967 original - canopy
A.7	179 SF	PLYWOOD DECK	NO	NONE	YES, NOTE 2	PVC SINGLE-PLY	TYPE 1C	Α	1998 addition - canopy

New Roof 5,111 SF (GC to verify square footages of all roof areas) \* Insulation R value includes rigid insulation plus coverboard

#### **SCHEDULE NOTES:** 1. New sheathing to be installed under demolished wood framed

crickets and at other locations.

2. Install tapered insulation crickets for drainage at all rooftop curbs, skylights, equipment greater than 1' wide and where indicated on plans and details. Tapered slopes to be a minimum of 1/4" / 12". B. New insulation levels vary, refer to plans for approximate areas



Sheet Title: **ROOF PLAN** 

04/06/2021

Sheet Number:

Project Number:

Revision Schedule:

Drawn By: Checked By:

A-221

PERMIT / BID SET

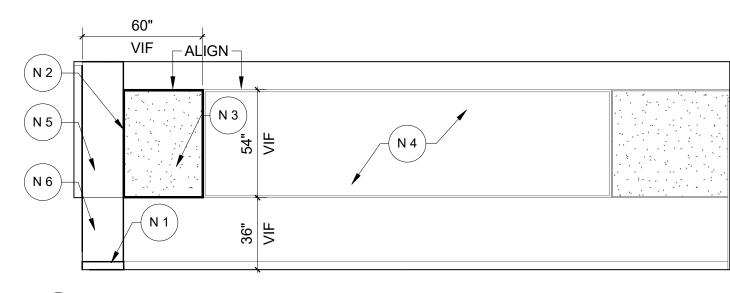
ROOF PLAN - MODULAR
1/8" = 1'-0"

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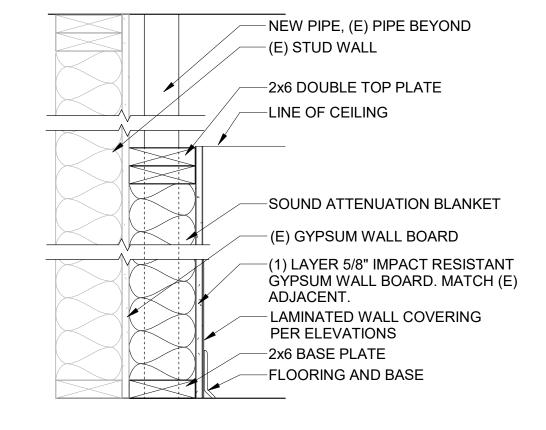
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3 CLASSROOM B-3 - WEST ELEVATION

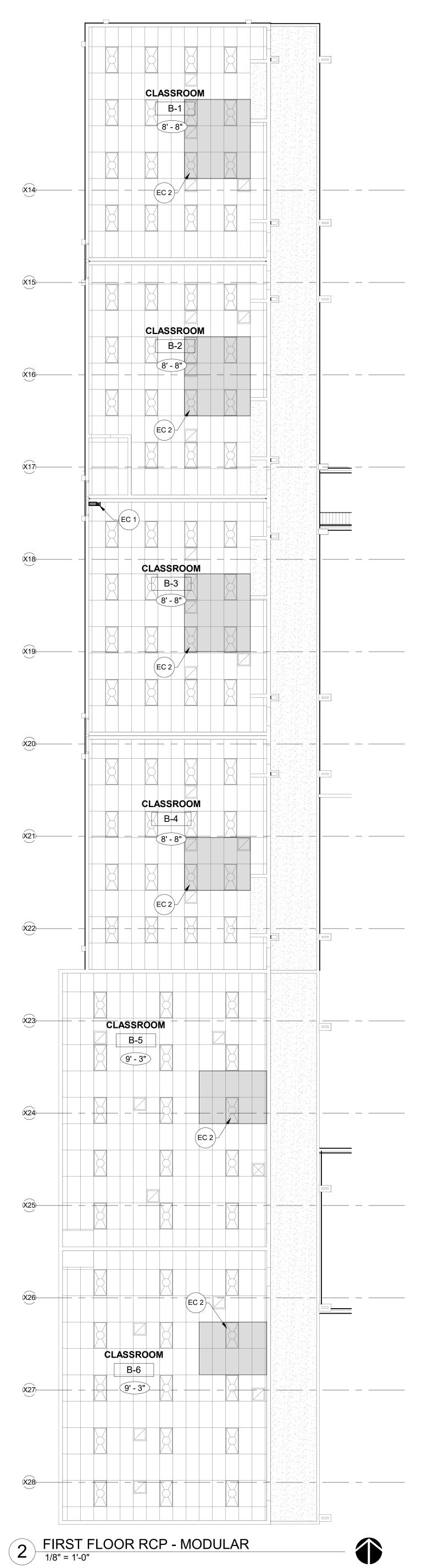
1/4" = 1'-0"

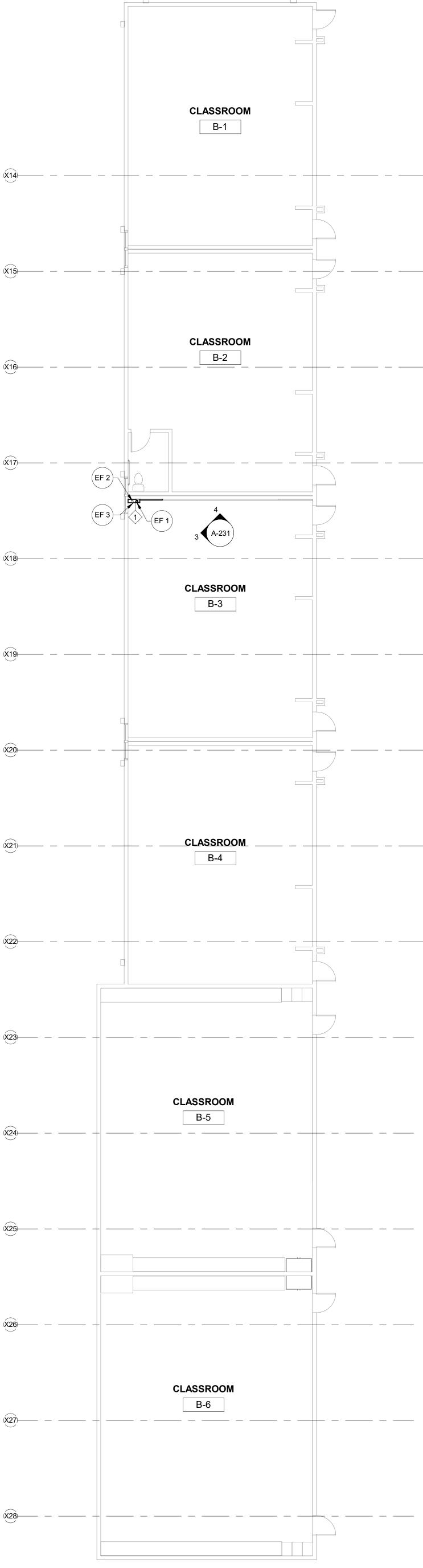


**CLASSROOM B-3 - NORTH ELEVATION** 



Partition Type 1





#### FLOOR PLAN SHEET NOTES

- A. All dimensions are to face of finish, U.N.O. Do not measure
- drawings to determine dimensions.
- B. All dimensions to be field verified.
- C. Keynotes are not sheet specific. D. Coordinate all work with other disciplines; see Mechanical, Plumbing and Electrical drawings for additional scope.

#### RCP SHEET NOTES

- A. Keynotes are not sheet specific.
- B. All heights shown are to bottom of grid system or gypsum board AFF, relative to the floor that the ceilng plan is shown on, UNO.

  C. Coordinate all work with other disciplines; see Mechanical,
- Plumbing and Electrical drawings for additional scope. D. Refer to electrical documents for electrical scope.
- E. Damaged acoustic ceiling tiles within areas of ceiling work to be replaced with new per specifications.

#### INTERIOR ELEVATION SHEET NOTES

- A. Interior Elevation Keynotes (N#) are consistent across all Interior Elevation Sheets. Not all keynotes are used on each sheet.
- B. For additional information, see Structural, Mechanical, Plumbing and Electrical drawings. C. All new elements to be painted or pre-finished to match (E); U.N.O.
- D. Penetrations and other above-ceiling items are based on existing drawings and have not been field verified. Locations are
- approximate. Additional penetrations may exist and are not shown on the drawings. Contractor to verfiy in field all shear wall penetrations and notify Architect of any discrepancies.

#### FLOOR PLAN LEGEND

NEW ARCHITECTURAL PARTITION OR SOFFIT WALL

EXISTING TO REMAIN - NO PROJECT SCOPE

#### RCP LEGEND

CEILING HEIGHT TAG (APPROXIMATE - VIF)

EXISTING GYPSUM BOARD OR PLASTER CEILING

EXISTING 2' X 4' LAY IN ACOUSTICAL CEILING TILE

REMOVE AND REINSTALL ACOUSTIC CEILING AS REQUIRED TO ACCESS AREA OF WORK. DAMAGED CEILING TILE AND GRID TO BE REPLACED AT CONTRACTORS EXPENSE.

EXISTING LAY-IN FLUORESCENT LIGHTING

NEW ARCHITECTURAL PARTITION OR SOFFIT

#### INTERIOR ELEVATION LEGEND

NEW SELF HEALING TACK BOARD SURFACE

# x#) KEYNOTES

- EF 1 New veritcal gas pipe, see Mechanical. EF 2 Existing veritcal pipe to remain, protect during
- EF 3 New wall, see Partition Type detail this sheet.
- Cut acoustic tile as required for new pipe penetration. Patch and repair disturbed ACT ceiling.
- Remove and reinstall light as required to access area of work, Typ. Damaged light to be replaced at Contractors
- Install new 4" rubber wall base to match (E) adjacent.
- Cut back (E) tackboard to edge of new wall.
- Provide new metal trim around tackboard. (E) whiteboard, protect during construction.
- Paint all exposed new gypsum board to match (E) adjacent
- Provide new laminate wall covering, color to match (E)

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Consultants:

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**ALOHA HIGH** 

18550 SW KINNAMAN ROAD,

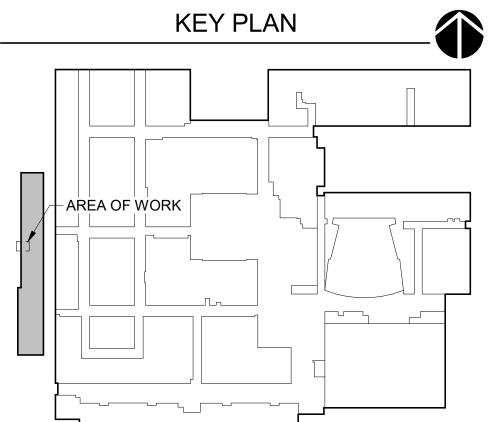
BEAVERTON, OR 97007

SCHOOL

04/06/2021 Project Number: Drawn By:

Checked By:

Revision Schedule:



**ENLARGED** PLANS & **ELEVATIONS** 

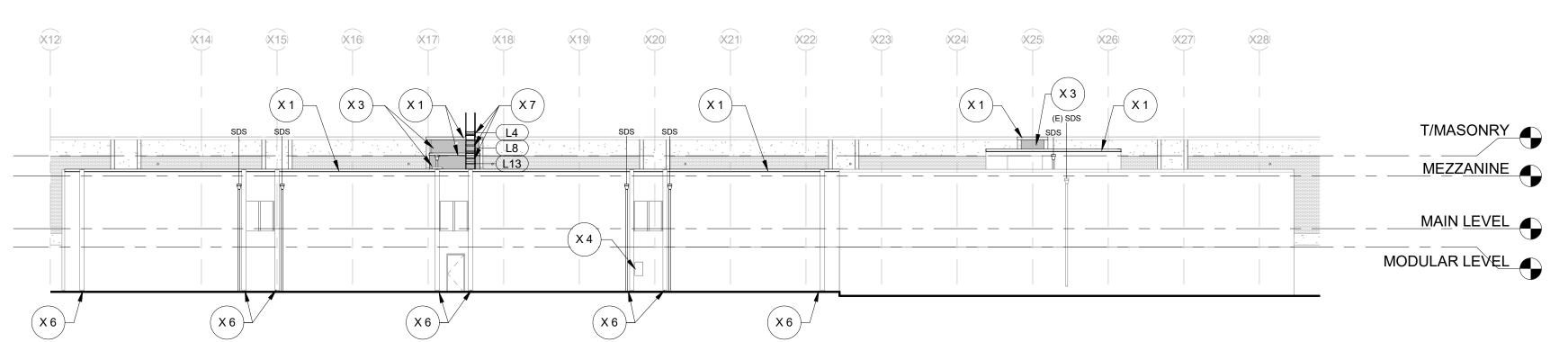
Sheet Number:

A-231

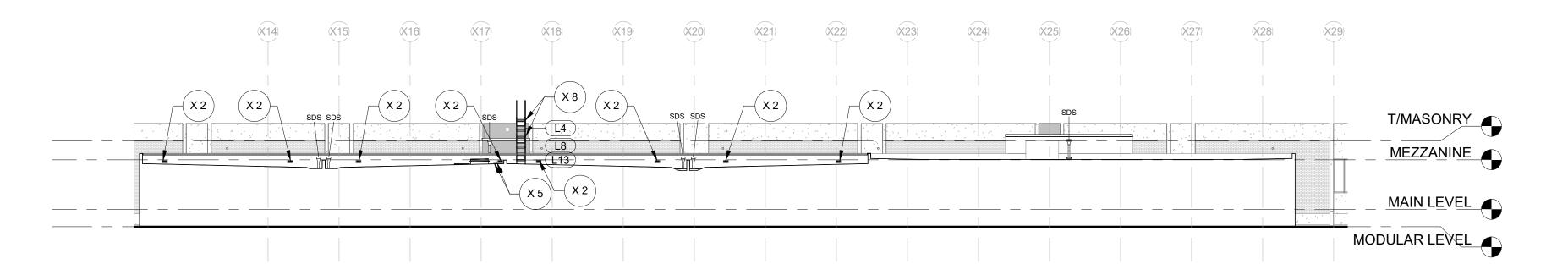
PERMIT / BID SET

1 FIRST FLOOR PLAN - MODULAR
1/8" = 1'-0"

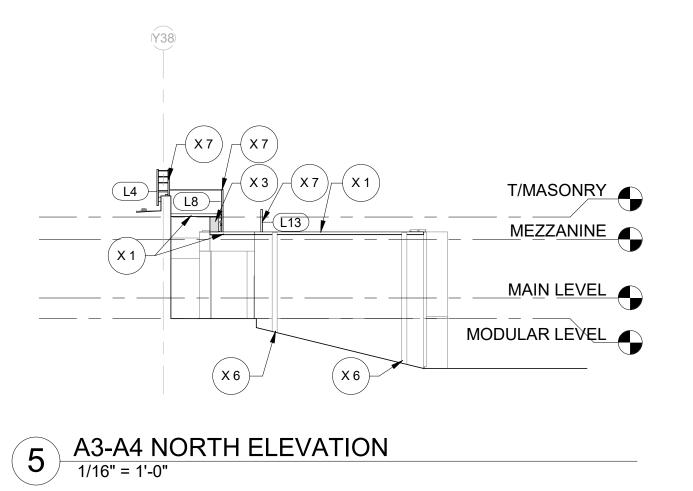
1 A3-A4 EAST ELEVATION
1/16" = 1'-0"

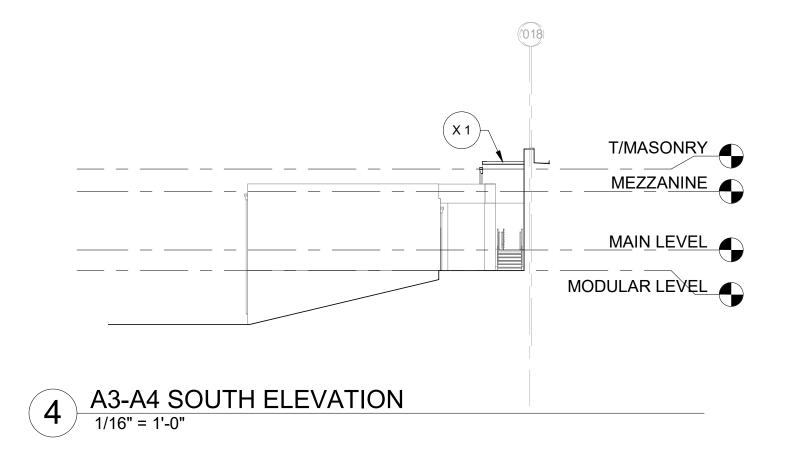


2 A3-A4 WEST ELEVATION
1/16" = 1'-0"



3 A3-A4 SECTION 1/16" = 1'-0"





#### **EXTERIOR ELEVATION SHEET NOTES**

- A. Exterior Elevations Keynotes (X#) are consistent across all Exterior Elevation Sheets. Not all keynotes are used on each sheet.
- B. For additional information, see Mechanical, Plumbing and Electrical
- C. All new elements to be painted or pre-finished to match (E); U.N.O.
- D. Mechanical Equipment not depicted for clarity. For more
- information on roof related mechanical scope see Mechanical. E. All elevations are existing and should be verified in field.

#### EXTERIOR ELEVATION LEGEND

LADDER TAG FOR REFERENCE ONLY, SEE SHEET A-722 FOR SCHEDULE AND DETAILS

DS - • REINSTALL SALVAGED DOWNSPOUT

SDS - REINSTALL MODIFIED SALVAGED DOWNSPOUT AND LEADERHEAD, PROVIDE MEMBRANE CLAD METAL THROUGH-WALL SCUPPER. SEE ROOF PLANS FOR MORE INFORMATION

(E) SDS - EXISTING LEADERHEAD AND DOWNSPOUT TO REMAIN - PROTECT.

NEW VERTICAL METAL PANELS

x#) KEYNOTES

- X 1 New sheet metal coping, paint to match (E). X 2 Raise attic vent 8" Min. above roof surface. Infill wall.
- X 3 New vertical sheet metal panels.
- X 4 (E) gas meter, see Mechanical.
- X 5 Liquid flash around pipe penetration through parapet wall, Typ. Similar to detail 12 / A-720.
- X 6 New metal cap on columns, Typ. X 7 Reinstall modified (E) ladder, see Ladder Schedule.
- X 8 Provide vertical steel tube bolted to ladder. Plug all holes. Connect to new metal bar per detail 18 / A-721

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04/06/2021

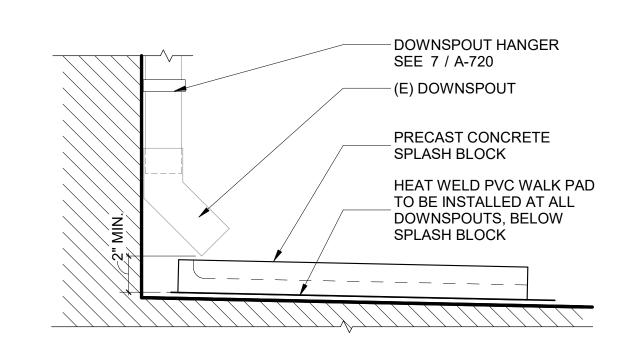
Revision Schedule:

Checked By:

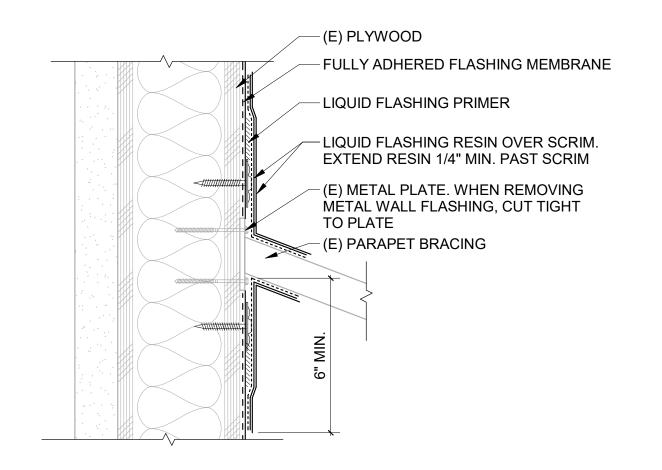
**EXTERIOR ELEVATIONS** 

A-301

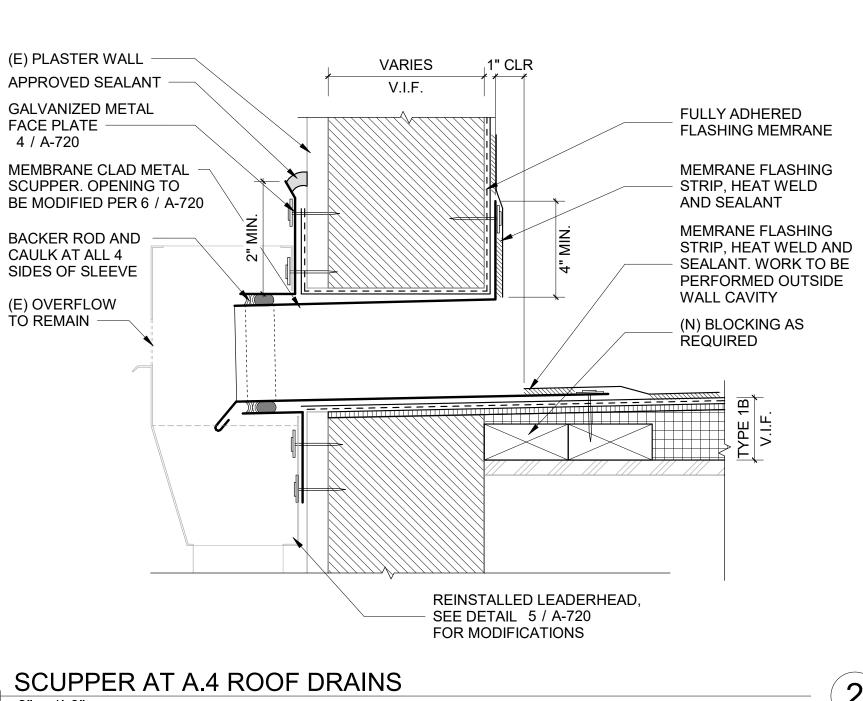
#### SCUPPER FACEPLATE FLASHING 4 SCUPPEI



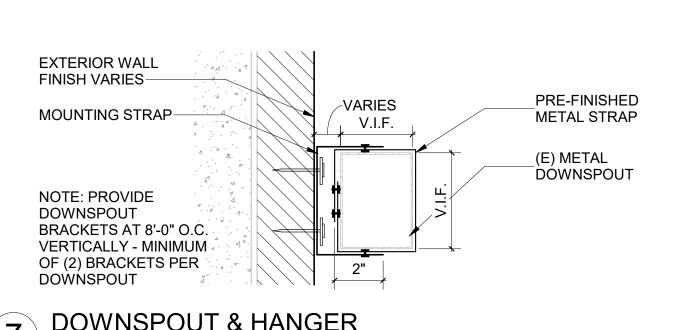
# 8 (N) SPLASHBLOCK AT (E) DOWNSPOUTS



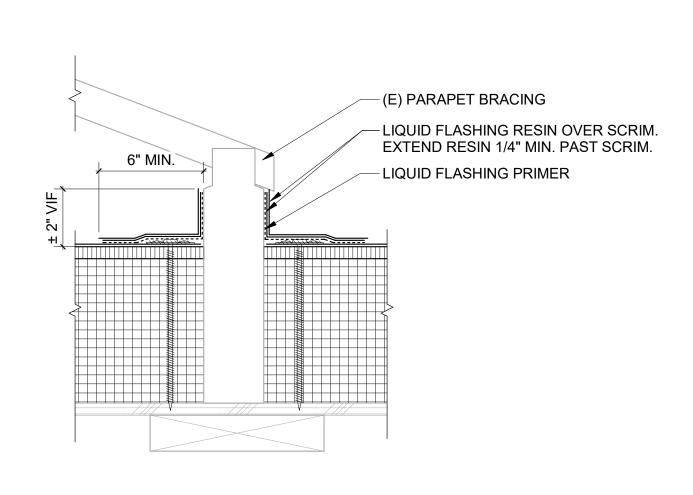
# STRUCTURAL BRACE AT PARAPET WALL 3" = 1'-0"



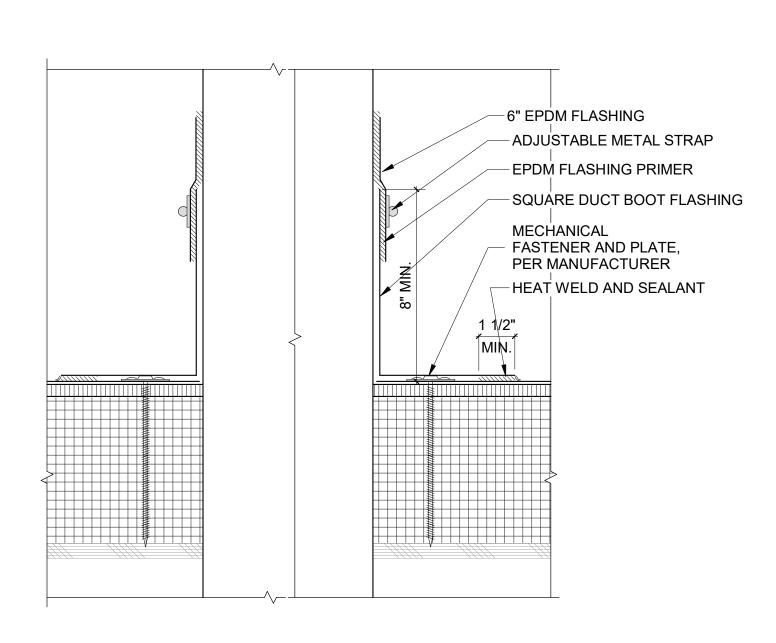
# SCUPPER AT A.4 ROOF DRAINS



#### DOWNSPOUT & HANGER / 3" = 1'-0"

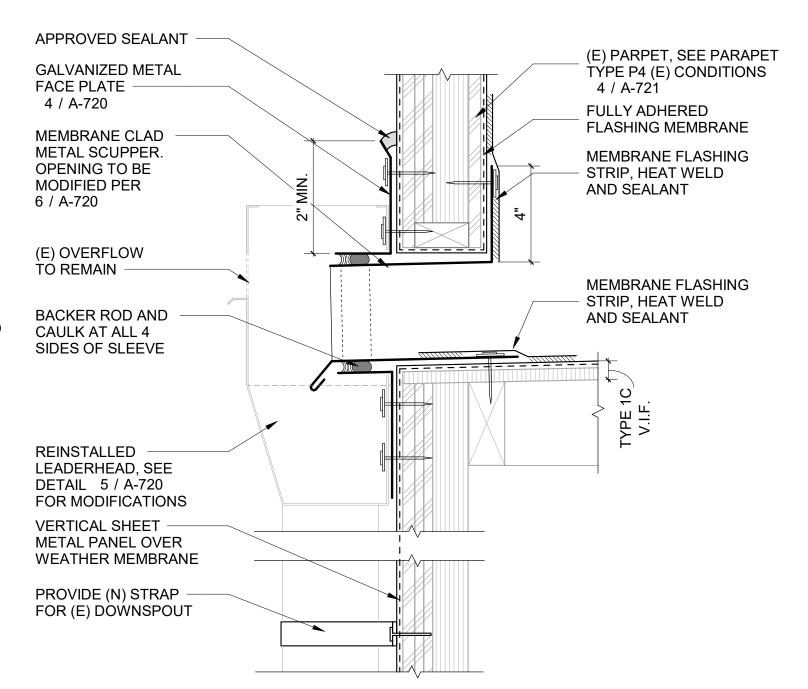


STRUCTURAL BRACE AT ROOF PENETRATION

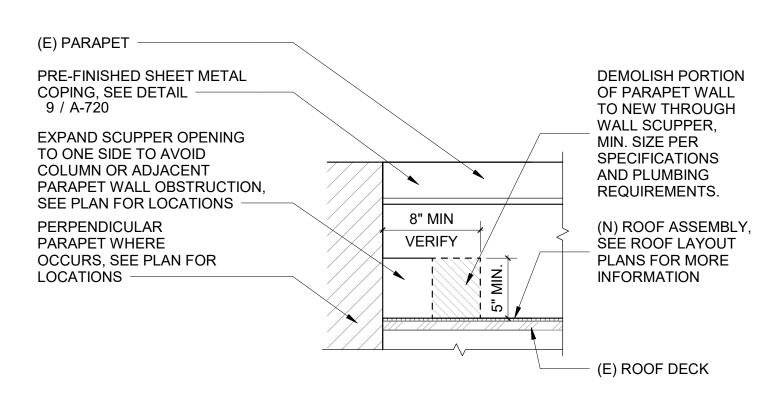


BOOT AT SQUARE DUCT PENETRATIONS

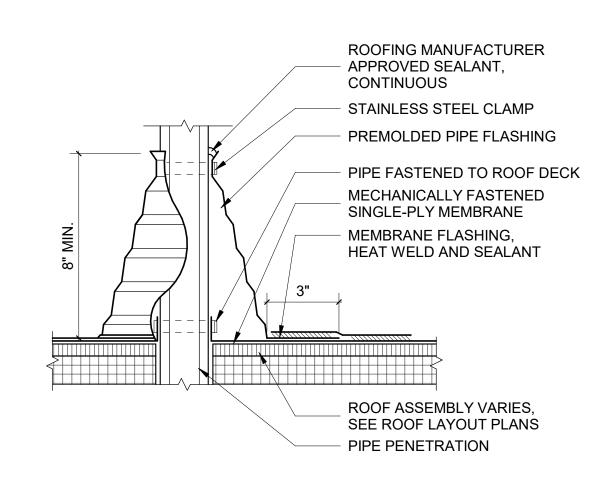
3" = 1'-0"



# 2 SCUPPER AT A.5, A.6, A.7 ROOF DRAINS 3" = 1'-0"

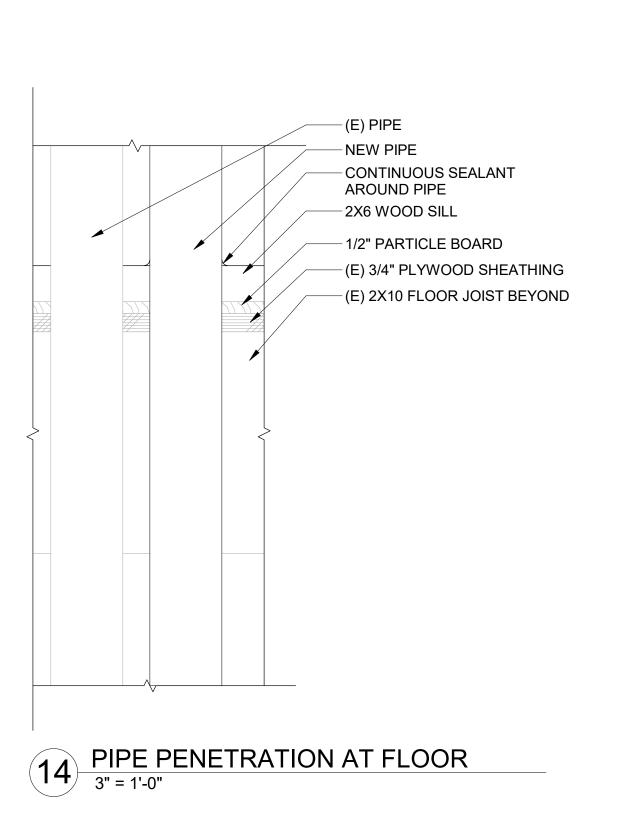


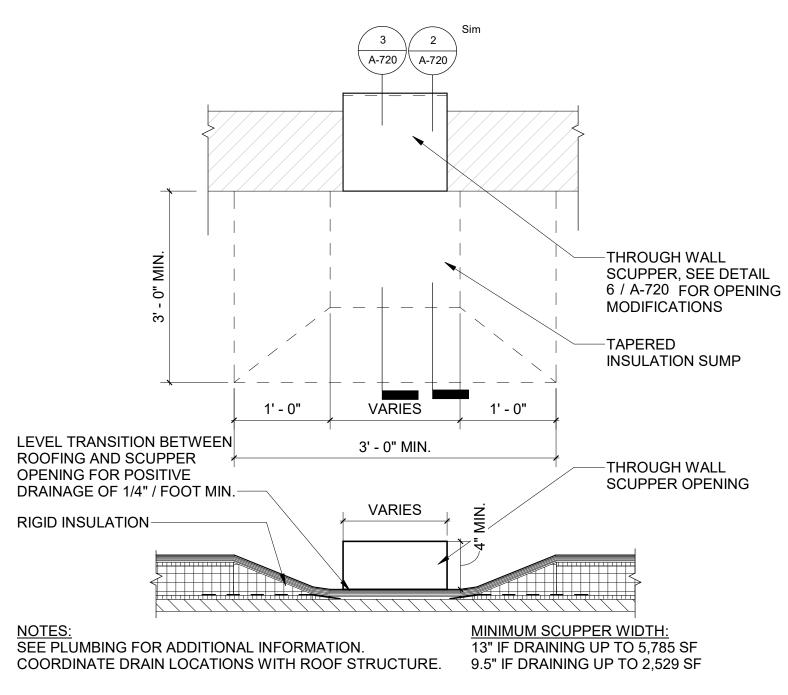
#### MODIFY SCUPPER OPENING ELEVATION 1 1/2" = 1'-0"



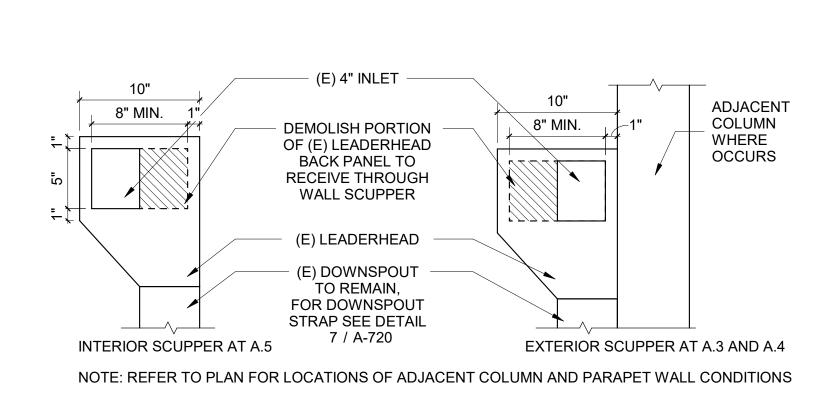
NOTE: PREFORMED PIPE BOOT TO BE APPLIED AT ALL PIPE PENETRATIONS PER MANUFACTURER'S REQUIREMENTS. SEE PLUMBING FOR ADDITIONAL INFORMATION

# TYPICAL PIPE FLASHING 3" = 1'-0"

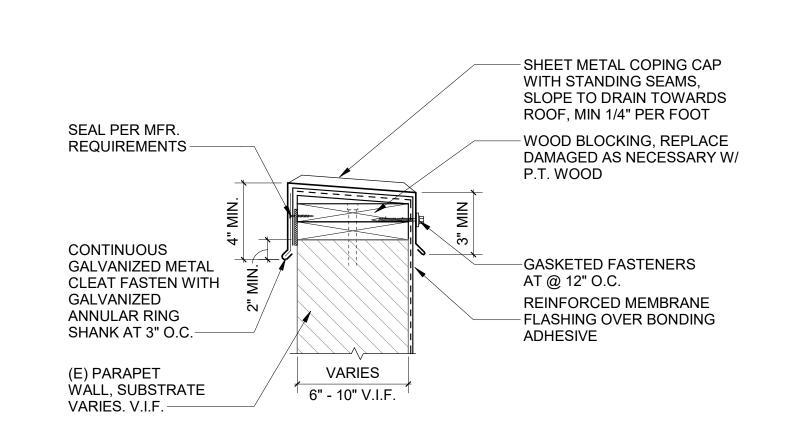




# SCUPPER SUMP AT ROOF DRAINS

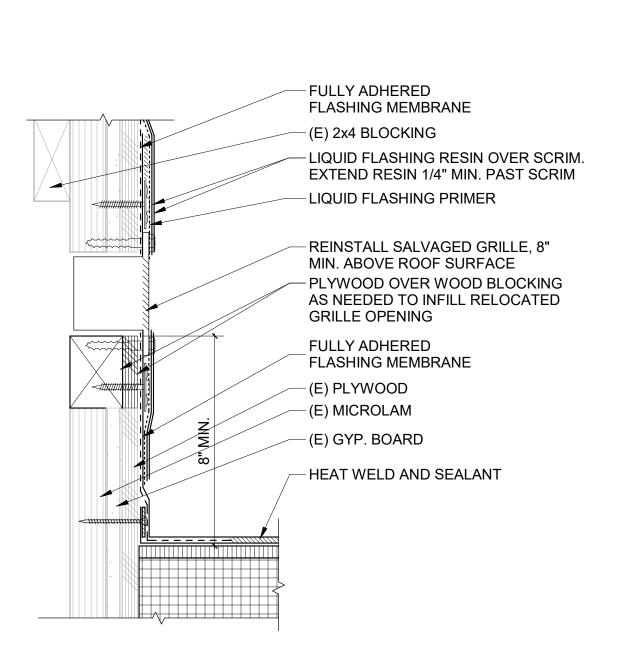


MODIFY LEADERHEAD



MAINTAIN A MINIMUM 8" PARAPET HEIGHT FROM FINISH SURFACE OF ROOF. APPLY BLOCKING TO INCREASE (E) HEIGHTS AS REQUIRED. DASHED LINE INDICATES ADHESIVÉ - TYPICAL.

#### 9 TYPICAL COPING DETAIL 1 1/2" = 1'-0"



13 FLASHING AT SIDEWALL VENT

HIGH SCHOOL AR REROOFING

**BEAVERTON** 

SCHOOL DISTRICT

**OH**PLANNING+DESIGN,

115 NW 1st Ave, Ste. 300

ARCHITECTURE

Portland, OR 97209

t 503.280.8000

f 503.224.5442

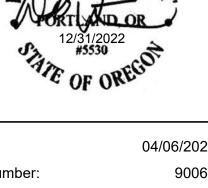
Consultants:

**ALOHA HIGH** 

18550 SW KINNAMAN ROAD,

BEAVERTON, OR 97007

SCHOOL



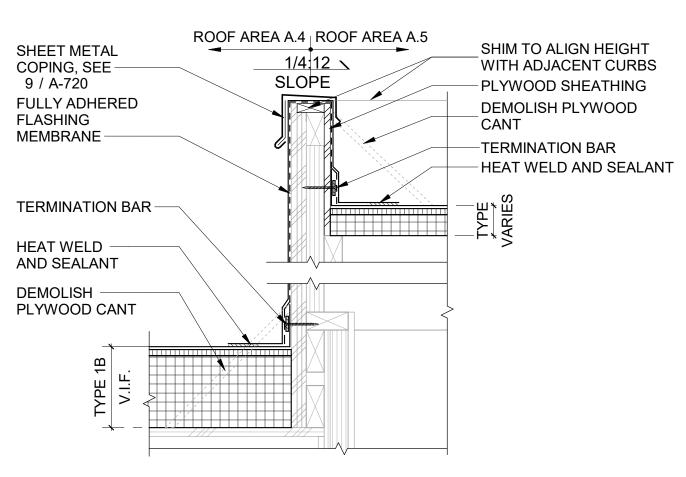
Date:	04/06/2
Project Number:	900
Drawn By:	
Checked By:	

Revision Schedule:

Sheet Title: ROOF **DETAILS** 

Sheet Number:

A-720



1/4:12 \ SHEET METAL FULLY ADHERED SLOPE COPING, SEE FLASHING MEMBRANE 9 / A-720 FASTENER SET IN SLEANT, TYP. 1/4:12 \ (E) PLYWOOD (E) PLYWOOD SLOPE SHEATHING, REPLACE SHEATHING. REPLACE DAMAGED SHEET METAL WHERE DAMAGED **FULLY ADHERED** COPING, SEE (E) WOOD - FASTENER & PLATE FLASHING MEMBRANE PARAPET, V.I.F. 9 / A-720 HEAT WELD AND SEALANT - DEMOLISH PLYWOOD CANT (E) WOOD -- DEMOLISH PLYWOOD CANT PARAPET, V.I.F. HEAT WELD AND SEALANT (E) SHEET METAL PANEL TO REMAIN, PROTECT (E) 2x8 -STEEL PARAPET SUPPORT NOT DEPICTED FOR CLARITY. PARAPET SUPPORT TO REMAIN IN PLACE DURING CONSTRUCTION. APPLY PIPE BOOT AND FLASH AROUND

requirements. Blocking is not required if adequate roofing membrane attachment can be achieved at existing roof deck/parapet substrates in accordance with roofing manufacturer's requirements. HEAT WELD LAP-SEAM -- MANUFACTURER APPROVED PER MANUFACTURER'S FASTENER & PLATE, TYP. AT INSTRUCTIONS ALL SEAMS MECHANICALLY FASTENED -RIGID INSULATION, SEE ROOF SCHEDULE FOR PVC SINGLE PLY MEMBRANE -LOCATIONS AND R-VALUE. EDGE SEALANT STAGGER ALL JOINTS TO AS REQUIRED -**ELIMINATE VERTICAL GAPS** \6" MIN. 1/2" COVERBOARD, STAGGER (E) WOOD ROOF SEAMS TO ELIMINATE ALL STRUCTURE VERTICAL GAPS

1 TYPICAL PVC SEAM
1 1/2" = 1'-0"

**ROOF DETAILS SHEET NOTES** 

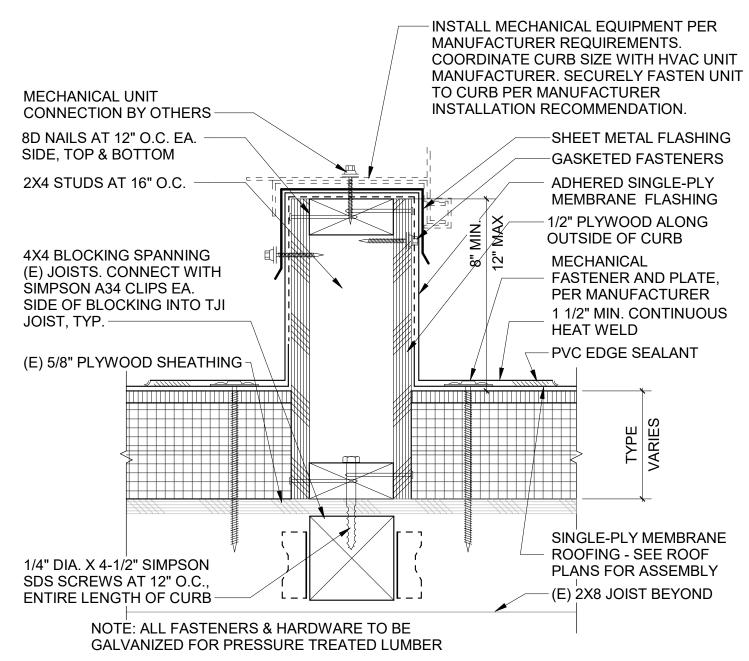
A. Blocking at base of parapet is based on manufacturer's

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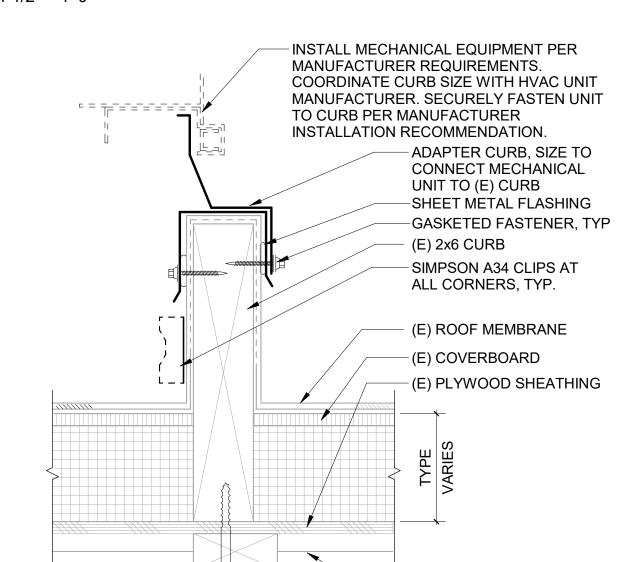
OHPLANNING+DESIGN ARCHITECTURE 115 NW 1st Ave, Ste. 300 Portland, OR 97209 t 503.280.8000 f 503.224.5442

Consultants:

ROOF EDGE - TYPE P4



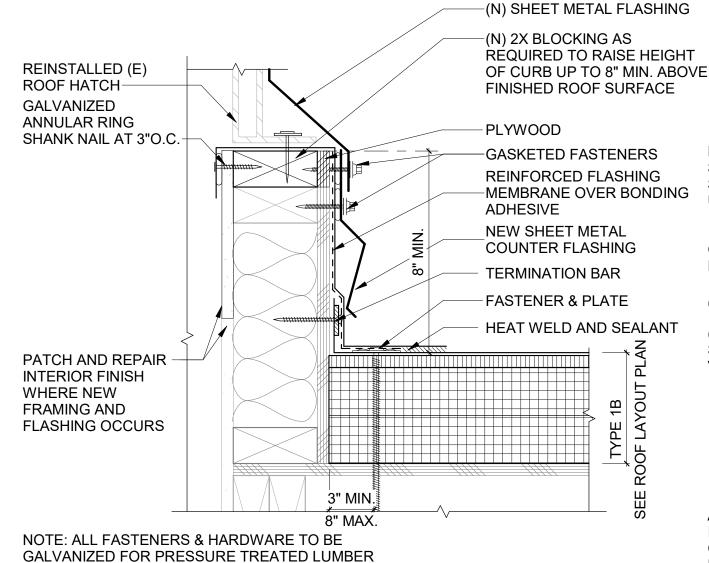


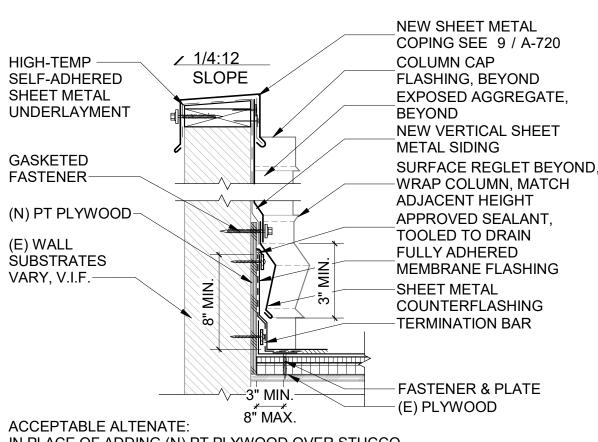


1/4" DIA. X 4-1/2" SIMPSON SDS SCREWS AT 12" O.C., (E) 2X4 BLOCKING, V.I.F. ENTIRE LENGTH OF CURB-NOTE: ALL FASTENERS & HARDWARE TO BE

FOAM BACKER WITH

**METAL FLANGES** 





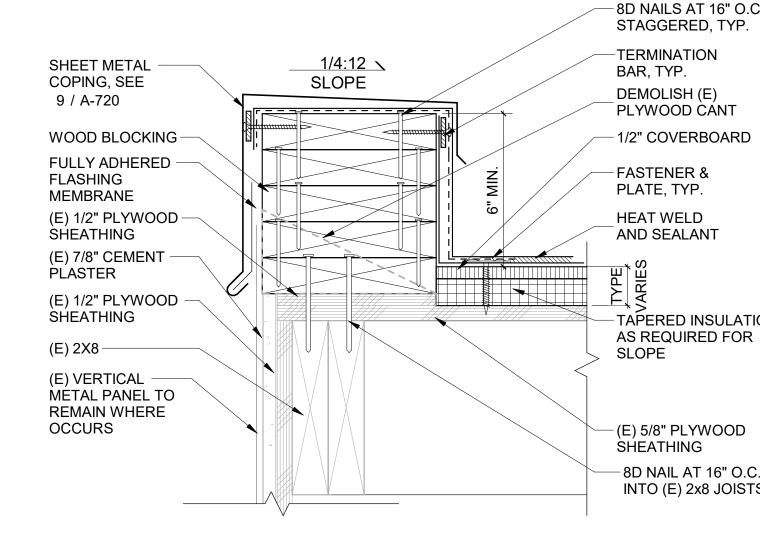
PER MANUFACTURERS REQUIREMENTS, SIMILAR TO DETAIL 10 / A-720

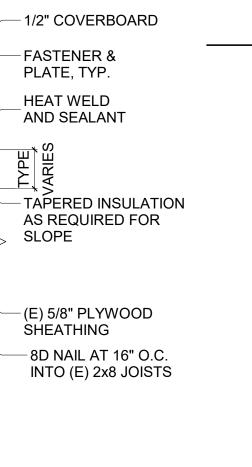
ROOF EDGE - TYPE P1

1 1/2" = 1'-0"

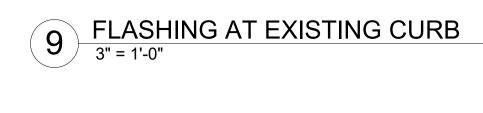
FASTENER SET IN SEALANT, TYP.

IN PLACE OF ADDING (N) PT PLYWOOD OVER STUCCO CONTRACTOR MAY CUT AND DEMOLISH AS NECESSARY CEMENT PLASTER & APPLY (N) REGLET SIM. TO DETAIL 12 / A-721





MECHANICAL CURB AT NEW BLOCKING



GALVANIZED FOR PRESSURE TREATED LUMBER



GALVANIZED ANNULAR RING

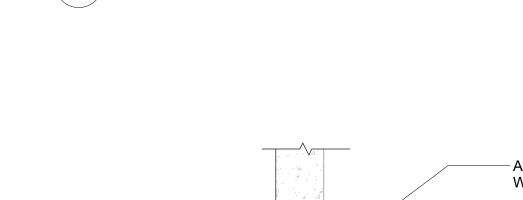
SHANK NAIL AT 6" O.C.-

13 CURB AT A.4

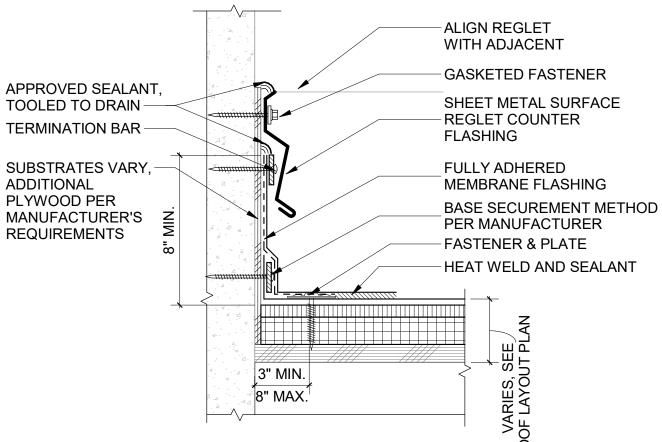
**ROOF EDGE - TYPE P2** 

1 1/2" = 1'-0"





ROOF EDGE - TYPE P5



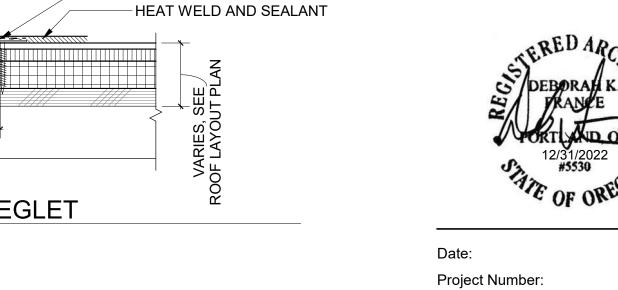


PL3/8X4X0'-4" (A36)

1/2" DIA. HILTI KWIK

MIN. EMBED OF 2"—

BOLT TZ ANCHOR WITH / MAX



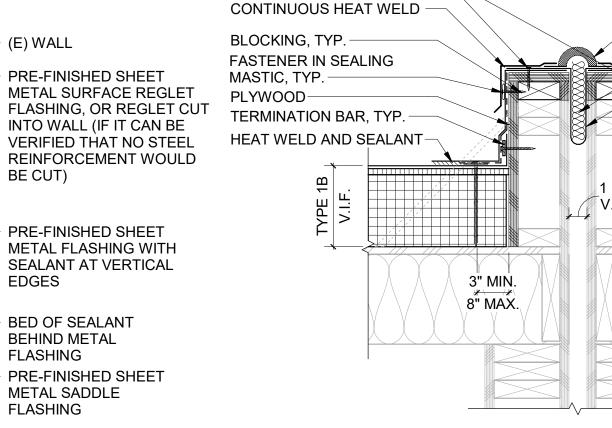
Drawn By: Checked By:

04/06/2021

90065

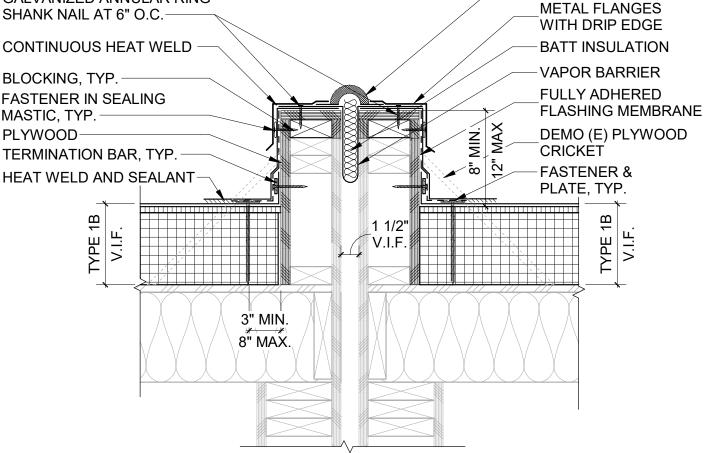
Revision Schedule:

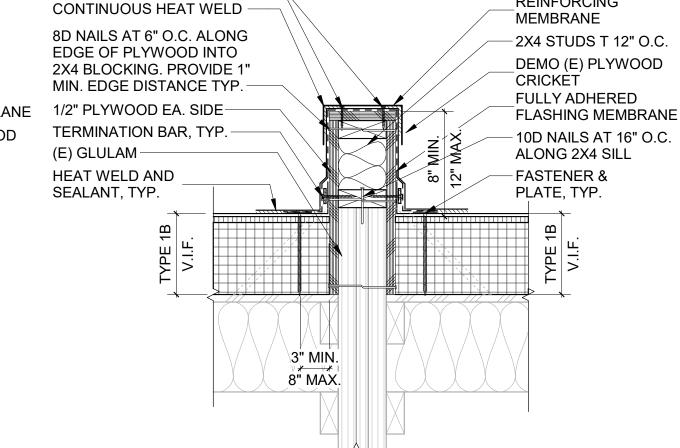
# BE CUT) **EDGES** FLASHING FLASHING



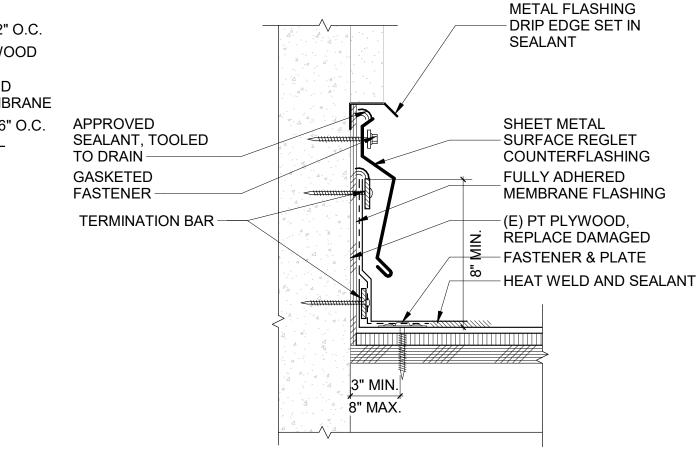
14 CURB AT MODULAR TIE

**GALVANIZED ANNULAR RING** 





REINFORCING



REGLET AT STUCCO EAVE
3" = 1'-0"

15	SADDLE FLASHING DETAIL 1 1/2" = 1'-0"	
	1 1/2" = 1'-0"	

			ROOF LADD	ER SCHEDULE					
LADDER TAG	NOTES	TYPE	ROOF AREAS	SUBSTRATE	LADDER DETAIL	Х	А	В	С
L4	NOTE 6, 10	(E) MODIFY	A.6 - A.1	CONCRETE	6/A-724, 7/A-724	7' - 3"	3' - 3"	2' - 0"	0' - 8"
L8	NOTE 6, 10	(E) MODIFY	A.5 - A.6	WOOD	6/A-724, 7/A-724	7' - 2"	3' - 2"	0' - 0"	0' - 8"
L13	NOTE 6, 10 (	(E) MODIFY	A.4 - A.5	WOOD	6/A-724, 7/A-724	5' - 9"	1' - 9"	0' - 0"	0' - 4"

USE NON-CLAD SHEET METAL

AT VISIBLE LOCATIONS

# **LADDER SCHEDULE AND DETAIL NOTES:**

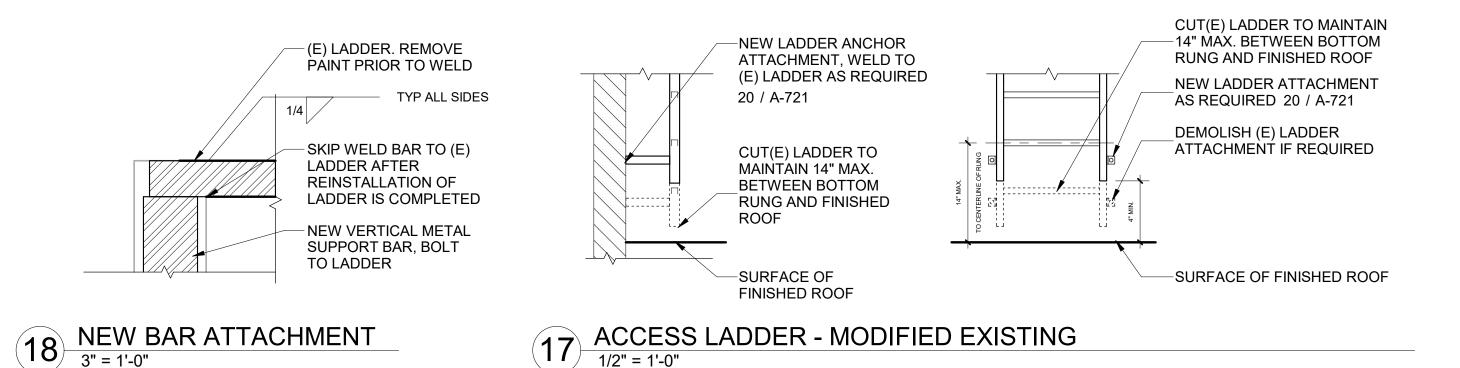
1. ALL DIMENSIONS APPROXIMATE - V.I.F. AND REFERENCE REQUIRED CLEARANCES.

#### 2. SCHEDULE LEGEND:

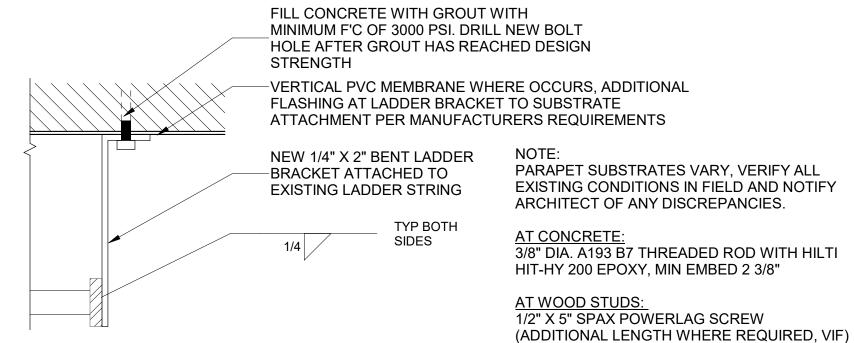
- X: OVERALL LADDER HEIGHT. A: BOTTOM OF LADDER TO TOP OF PARAPET - HIGH SIDE.
- B: BOTTOM OF LADDER TO TOP OF PARAPET LOW SIDE (APPLIES TO PARAPET LADDER ONLY). C: PARAPET WIDTH - INCLUDES WALL PROJECTIONS WHERE OCCURS, VERIFY IN FIELD.
- 3. FOR LADDER INFORMATION REFER TO SPECIFICATION SECTION 05 50 00 METAL FABRICATIONS.

#### 4. LADDER SUPPORT ANCHOR GUIDELINES:

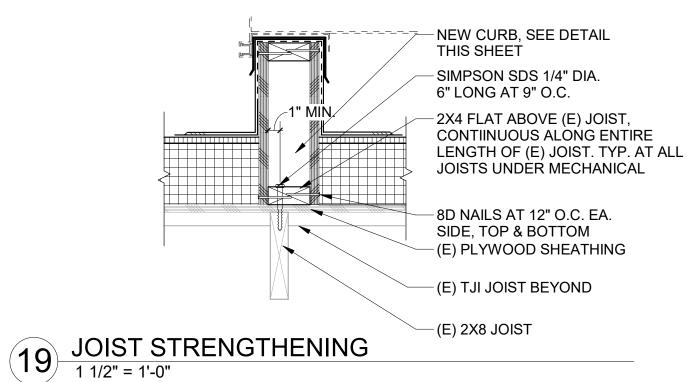
- CONFIRM SUBSTRATE CAPACITY PRIOR TO ATTACHING LADDER. CONNECT SUPPORTS WITH 1/2"Ø EPOXY ANCHOR WITH A 4" MINIMUM EFFECTIVE EMBEDMENT INTO CONCRETE WALL • CONNECT SUPPORTS WITH 3/4" Ø EPOXY ANCHOR INSTALLED AT 22.5 DEGREE ANGLE FROM VERTICAL. MAINTAIN 1" CLEARANCE TO
- BACKSIDE OF WALL PER ICC ESR 1772. EXISTING PRECAST PANELS HAVE PRE=STRESSING TENDONS. CONTRACTOR TO LOCATE EXISTING TENDONS AND ADJUST LADDER ANCHOR BRACKET PLACEMENT ACCORDINGLY. DO NOT CUT OR DAMAGE EXISTING REINFORCING.
- 5. LOCATE LADDER 7" FROM OUTERMOST PROJECTION. IF DIMENSION FROM ANCHOR POINT TO CENTERLINE OF LADDER EXCEEDS 12" NOTIFY ARCHITECT OF RECORD. 6. ALL MODIFIED EXISTING LADDERS ARE TO BE REMOVED AND STORED DURING CONSTRUCTION UNLESS OTHERWISE NOTED. COORDINATE
- BRACKET ATTACHMENT WITH ROOF MANUFACTURER FOR FLASHING MEMBRANE REQUIREMENTS. 7. MODIFY LADDER IN PLACE. CUT OFF LADDER RAIL BELOW BOTTOM RUNG TO ACCOMODATE 4" SPACE BETWEEN NEW FINISH ROOF SURFACE AND BOTTOM OF LADDER.
- 8. ALL EXPOSED STEEL SHALL BE PAINTED.
- 9. NO REBAR SHALL BE CUT. SCAN CONCRETE PRIOR TO DRILLING USING GROUND PENETRATING RADAR TO LOCATE REBAR.
- 10. 4" CLEAR ABOVE ROOF MAY NOT BE POSSIBLE WITH CURRENT CONFIGURATION OF LOWER RUNG. CONTRACTOR TO MODIFY LADDER PER DETAIL17 / A-721TO BE AS CLOSE TO 4" CLEAR ABOVE ROOF AS POSSIBLE WITHOUT COMPROMISING EXISTING BOTTOM RUNG.



ACCESS LADDER - MODIFIED EXISTING



20 ACCESS LADDER BRACKET - WALL MOUNTING 3" = 1'-0"
3" = 1'-0"

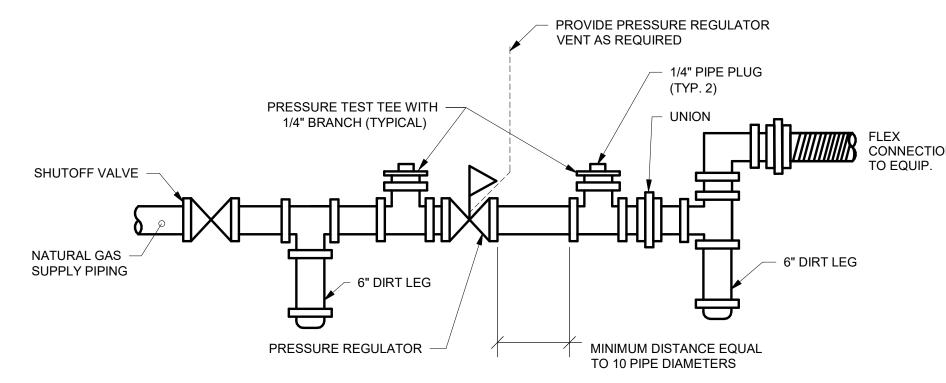


16 ACCESS LADDER BRACKET - WALL MOUNTING

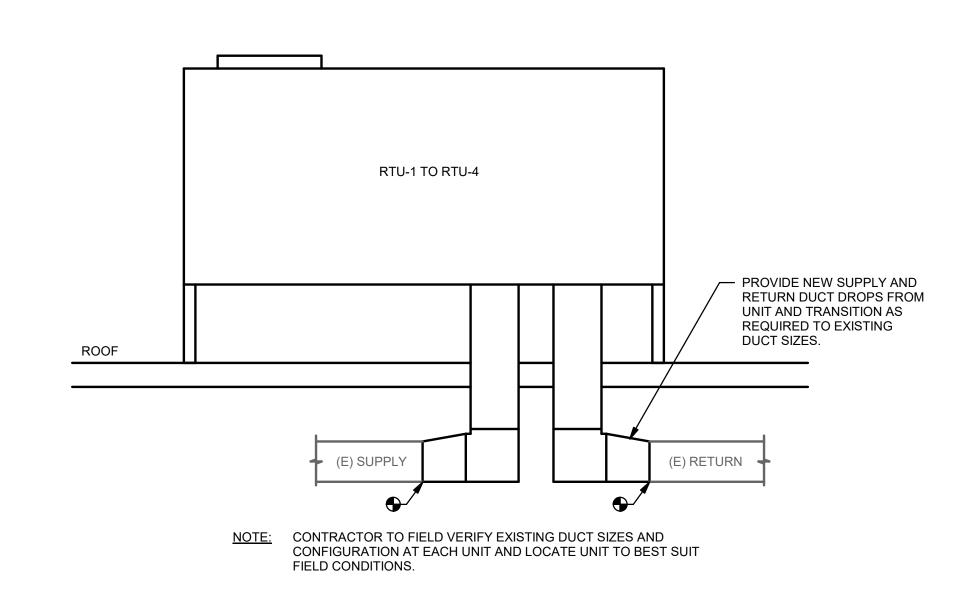
Sheet Title: ROOF & **LADDER** DETAILS

Sheet Number:

# PIPE CLAMP - GAS PIPE SADDLE STRUT INTEGRAL TO ROOF SUPPORT MIN. 3-1/2" RECTOR SEAL, ROOF BLOX MIRRO BLOCK OR EQUAL. ROOF MOUNTED PIPE SUPPORT SIZED 5 PSI LOAD MAX. NOTE: SUPPORT @ 48" ROOF MOUNTED GAS PIPING



2 GAS PIPING CONNECTION TO EQUIPMENT NO SCALE



3 DUCT CONNECTION NO SCALE

## **MECHANICAL SYMBOL LIST**

#### NOTE: This is a standard symbol list and not all items listed may be used. <u>Dampers</u> ABANDON IN PLACE MOTORIZED DAMPER AFF ABOVE FINISHED FLOOR ACCESS DOOR AIR CONDITION(ED) AIR HANDLING UNIT → → VOLUME DAMPER BACKDRAFT DAMPER COLD WATER <u>General</u> CONDENSING UNIT DEMOLISH DIAMETER DIRECT EXPANSION DRY BULB DETAIL NUMBER AND SHEET LOCATION **ELECT** ELECTRICAL **ENERGY EFFICIENCY RATING** EAT ENTERING AIR TEMPERATURE XX-X **EQUIPMENT IDENTIFICATION EWT** ENTERING WATER TEMPERATURE EXH **EXHAUST** EXHAUST FAN **EXISTING FAHRENHEIT** FEET LIMIT OF DEMOLITION FLA FULL LOAD AMPS **FUTURE** GAL GALLONS GPH GALLONS PER HOUR POINT OF CONNECTION GALLONS PER MINUTE HEAD Piping Fittings, Appurtenances and Equipment HTR HEATER HTG HEATING → PIPE DROP HORSEPOWER HOT WATER COIL INCHES — X X PIPE REMOVED IN DEMOLITION INSIDE DIAMETER INVERT ELEVATION KILOWATT LATENT HEAT LEAVING AIR TEMPERATURE MAX MAXIMUM TEE DOWN ON PIPE MIN MINIMUM MIXED AIR MOTORIZED DAMPER TEE UP ON PIPE NEW NOISE CRITERIA NORMALLY CLOSED ——→I—— UNION NORMALLY OPEN NOT APPLICABLE NOT IN CONTRACT Piping Systems NTS NOT TO SCALE NUMBER — -CHWR- — CHILLED WATER RETURN ON CENTER OPPOSED BLADE DAMPER OUTSIDE AIR ——CHWS—— CHILLED WATER SUPPLY OUTSIDE DIAMETER PH PHASE LBS. POUNDS ——CHWSR—— CHILLED WATER SUPPLY AND RETURN POUNDS PER SQUARE INCH PRESSURE DROP QUANTITY REFRIGERANT REFRIGERANT SUCTION RELIEF DAMPER RELOCATE/RELOCATED LOCATION RETURN

Piping Valves

CHECK VALVE

——

GLOBE VALVE

———— QUARTER TURN VALVE

PACKAGED AIR CONDITIONING UNIT SCHEDULE

DX COOLING COIL

1.5 50.8 36.7 80/67 58.8/56.9 120

80/67

MHP TOTAL SENS EDB LDB

ESP PER CAP CAP EWB

1.5 36.9 27.1

50.8 36.7

GAS FURNACE

80/67 59.1/57.3 100 80 81 3 1

80/67 59.1/57.3 100 80 81 3

58.8/56.9 120

LWB | INPUT | OUTPUT | MIN | NOM | OF

100 81 4

100 81 4

AIR SOURCE CONDENSER FILTER

(°F) | (MBH) | (MBH) | EFF. | TONS | STAGES | DB (°F) | SEER | MERV | VOLTS | PH | MCA | MOCP | (LxWxH) | (LBS) |

ELECTRICAL

208 1 44.2 60 82x44x32 728

────── VALVE, GENERAL

RETURN AIR

SUPPLY AIR TEMPERATURE

**TOTAL HEAT** TOTAL PRESSURE

WATER COLUMN

VOLT

WATT

BASIS OF DESIGN

PROVIDE NEW ADAPTER CURB TO TRANSITION TO EXISTING ROOF CURB. FIELD VERIFY EXISTING CURB SIZE.

MFR

JOHNSON CONTROLS

JOHNSON CONTROLS

JOHNSON CONTROLS

JOHNSON CONTROLS

JOHNSON CONTROLS

UNIT TO SIT ON FIELD FABRICATED WOOD CURB. SEE ARCHITECTURAL PLANS FOR DETAIL.

AREA SERVED

MODULAR CLASSROOM

RTU-2 MODULAR CLASSROOM

RTU-3 MODULAR CLASSROOM

RTU-4 MODULAR CLASSROOM AC-1 MODULAR CLASSROOM

AC-2 MODULAR CLASSROOM

WET BULB WITH

WB

SENSIBLE HEAT

SHUT OFF VALVE SQUARE FEET STATIC PRESSURE

REVOLUTIONS PER MINUTE

TEMPERATURE DIFFERENCE

THOUSAND BTU'S PER HOUR

PROVIDE UNIT WITH DRY BULB ECONOMIZER, BAROMETRIC RELIEF, POWERED CONVENIENCE OUTLET, SINGLE POINT POWER CONNECTION, UNIT CONTROLLER.

# **GENERAL MECHANICAL NOTES**

- A EQUIPMENT, HVAC DUCTS, PIPING AND OTHER DEVICES AND MATERIALS INSTALLED OUTDOORS OR EXPOSED TO WEATHER SHALL BE WEATHER PROOF.
- B INSTALL EQUIPMENT WITH SUFFICIENT ACCESS TO PANELS, CONTROLS, FILTERS, MOTORS, ETC. COORDINATE ACCESS TO ALL DAMPERS, VALVES, AND OTHER SERVICEABLE EQUIPMENT. REVIEW CEILING HEIGHTS AND COORDINATE ACCESS PANEL LOCATIONS.
- C COORDINATE LOCATION OF SENSORS AND THERMOSTATS WITH ARCHITECT. COMPLY WITH ADA REQUIREMENTS.
- D "DEMOLISH" OR "REMOVE" MEAN: REMOVE AND RETURN TO OWNER FOR ACCEPTANCE, AND DISPOSE OF ANY ITEMS NOT ACCEPTED BY THE OWNER.
- E COORDINATE WITH DIVISION 26 FOR LOCATION OF POWER AND LOCAL DISCONNECTS FOR MECHANICAL EQUIPMENT DEVICES. PROVIDE STARTERS FOR EQUIPMENT WITHOUT VFD'S, ECM MOTORS, OR EQUIPMENT WITHOUT INTEGRAL
- F MAINTAIN MINIMUM ELECTRICAL CODE AND UNIT MANUFACTURER'S CLEARANCES TO ADJACENT CONSTRUCTION OR EQUIPMENT, PER CEC OR THE FOLLOWING A. NOMINAL ONE-SIDE ACCESS-WAY FOR EXPOSED/LIVE B. VOLTAGE ACCESS PARTS ON BOTH SIDES C. 0-150 36 INCH 36 INCH D. 150-600 42 INCH 48 INCH
- G CONDITIONS SHOWN ON THE PLANS RELATIVE TO THE WORK TO BE PERFORMED ARE BASED ON THE BEST INFORMATION AVAILABLE BUT ARE SUBJECT TO FIELD VERIFICATION. VERIFY LOCATIONS AND ELEVATIONS OF DUCTWORK AND UTILITIES PRIOR TO INSTALLATION.

	BEAVERTON SCHOOL DISTRICT
<i>,</i> .— •	OHA HIGH
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04/06/2021 Project Number: Drawn By: Checked By:

Revision Schedule:

**SHEET INDEX** 

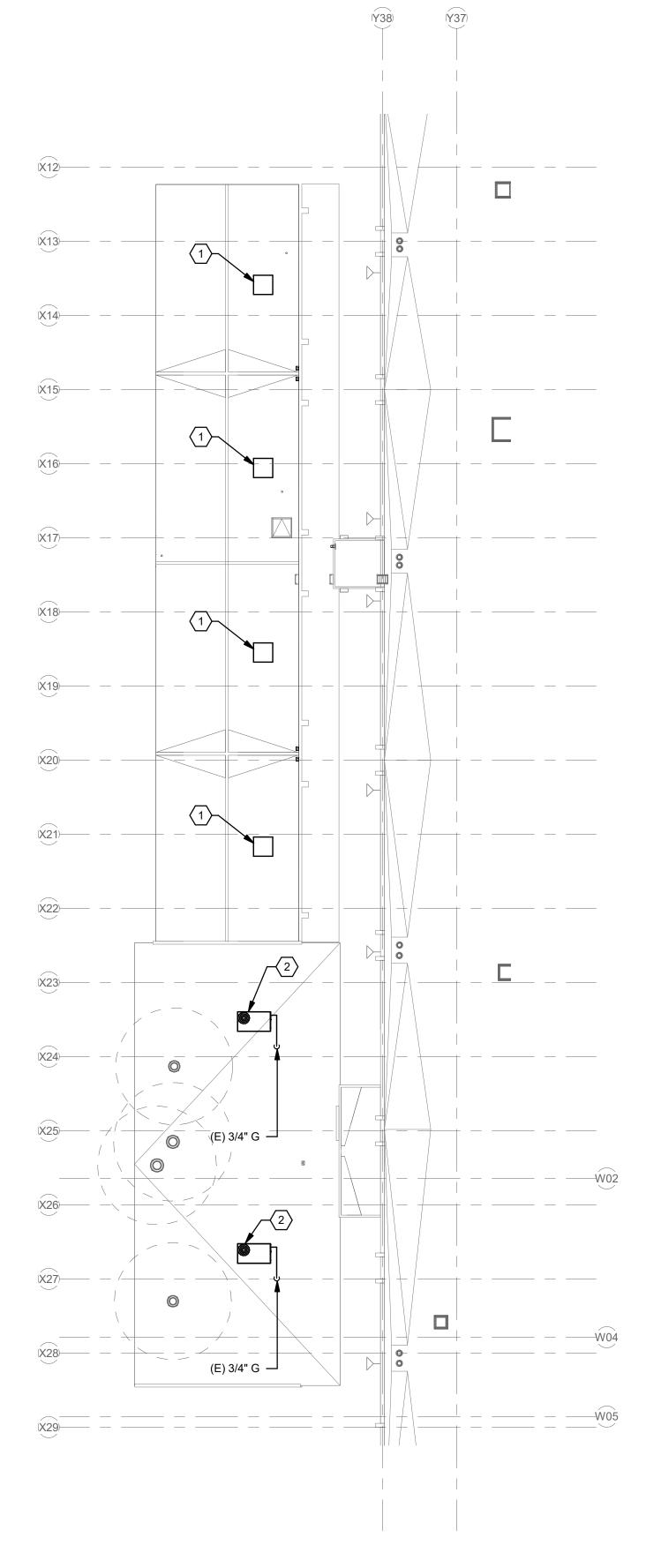
APPROX. | MAX |

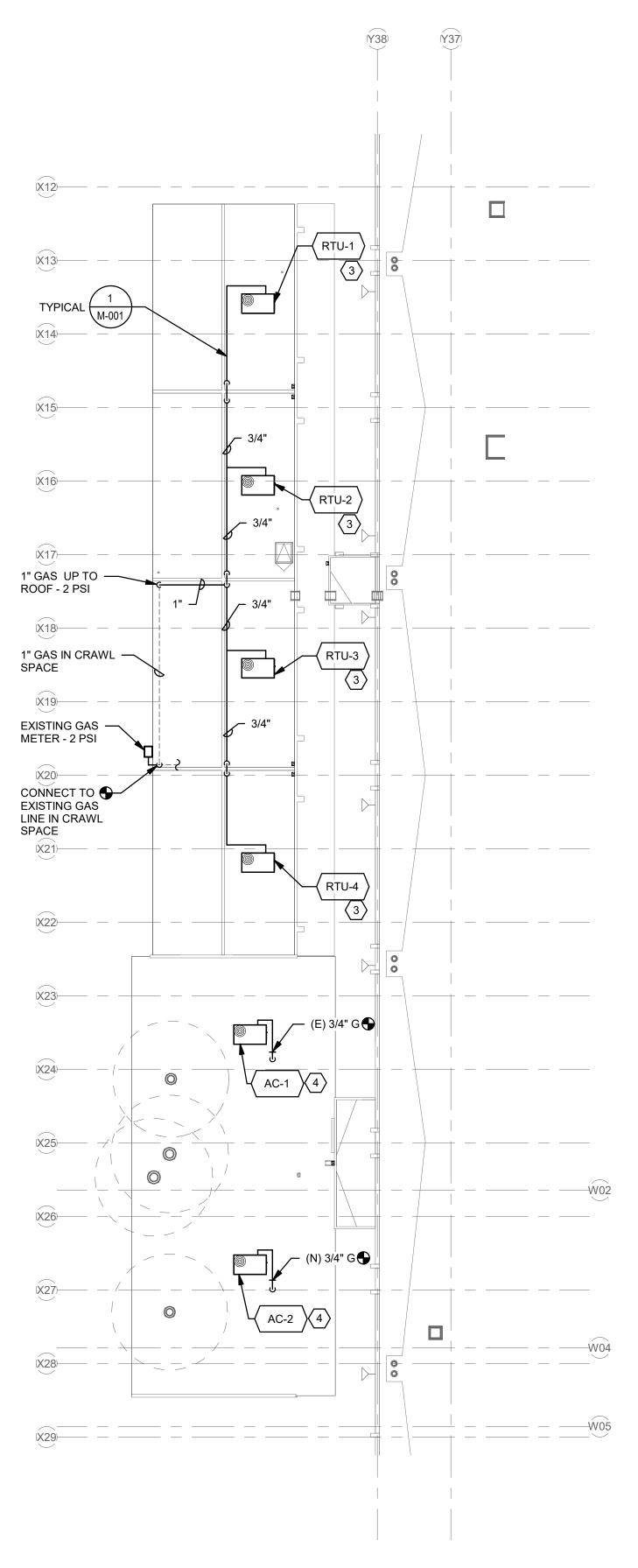
M-001 SYMBOL LIST & GENERAL NOTES - MECHANICAL

M-221 ROOF PLANS - MODULAR - MECHANICAL

SYMBOL LIST & GENERAL NOTES -**MECHANICAL** Sheet Number:

M-001





# **GENERAL MECHANICAL NOTES**

A EXISTING ROOFTOP UNITS TO BE PRE-BALANCED PRIOR TO REMOVAL. EXISTING AIRFLOWS TO BE RECORDED FOR SUPPLY AIR, RETURN AIR, AND OUTSIDE AIR QUANTITIES AT UNIT AND ALL GRILLES. PROVIDE REPORT FOR REVIEW PRIOR TO DEMOLITION

# ○ SHEET KEYNOTES

- ROOFTOP UNIT AND CURB TO BE REMOVED. CONTRACTOR TO EVACUATE REFRIGERANT PRIOR TO UNIT REMOVAL. DUCTWORK TO BE DISCONNECTED AT ROOF LEVEL AND LEFT FOR RECONNECTION TO NEW UNIT. COVER AND PROTECT DUCTWORK DURING CONSTRUCTION.
- ROOFTOP UNIT TO BE REMOVED. ROOF CURB TO REMAIN. GAS PIPING TO BE DISCONNECTED AND CAPPED FOR RECONNECTION TO NEW UNIT. DUCTWORK TO REMAIN AT ROOF LEVEL AND LEFT FOR RECONNECTION TO NEW UNIT. COVER AND PROTECT DUCTWORK DURING CONSTRUCTION.
- NEW ROOFTOP UNIT INSTALLATION TO INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

   A. NEW ROOF CURB INSTALLED PER DETAIL 3/M-001.
   B. CONNECTION TO NEW GAS PIPING PER DETAIL 2/M-001.
   C. NEW DUCT FITTINGS AND TRANSITIONS FROM NEW UNIT TO EXISTING DUCTWORK BELOW THE ROOF. CONTRACTOR TO EXAMINE EXISTING DUCT CONFIGURATION AND PROVIDE THE NECESSARY DUCTWORK FOR THE NEW UNIT INSTALLATION. SEE DETAIL 3/M-001.
   D. ELECTRICAL CONNECTION PER DIV. 26.
- 4. NEW ROOFTOP UNIT INSTALLATION TO INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

   A. NEW ADAPTER CURB INSTALLED ON THE EXISTING CURB TO TRANSITION DUCTWORK TO THE NEW UNIT.
   B. NEW GAS TRAIN AND CONNECTION TO THE EXISTING GAS PIPING PER DETAIL 2/M-001.
   C. ELECTRICAL CONNECTION PER DIV. 26.

# **CONTROL SYSTEM NOTES**

- OWNER TO PROVIDE NEW NETWORK CONTROLLER FOR CONTROL CONTRACTOR TO INSTALL IN EXISTING ELECTRICAL CLOSET ROOM B-6. COORDINATE LOCATION WITH OWNER PRIOR TO INSTALLATION.
- 2. PROVIDE NEW JCI TEC 7-DAY PROGRAMMABLE ROOM SENSOR FOR EACH UNIT AND CONNECT TO EXISTING ROOFTOP UNIT AND NEW BMS NETWORK
- 3. UPDATE SEQUENCES OF OPERATION AND SYSTEM GRAPHICS PER OWNER DIRECTION TO DISPLAY NEW UNITS AND THERMOSTATS.

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A HIGH SCHOOL LAR REROOFING



Date: 04/06/2
Project Number: 90
Drawn By: ...
Checked By:

Revision Schedule:

ROOF PLANS MODULAR MECHANICAL

Sheet Number

M-221

PERMIT / BID SET

ROOF PLAN - MODULAR - MECHANICAL - DEMOLITION

1/16" = 1'-0"

0' 8' 16' 32'

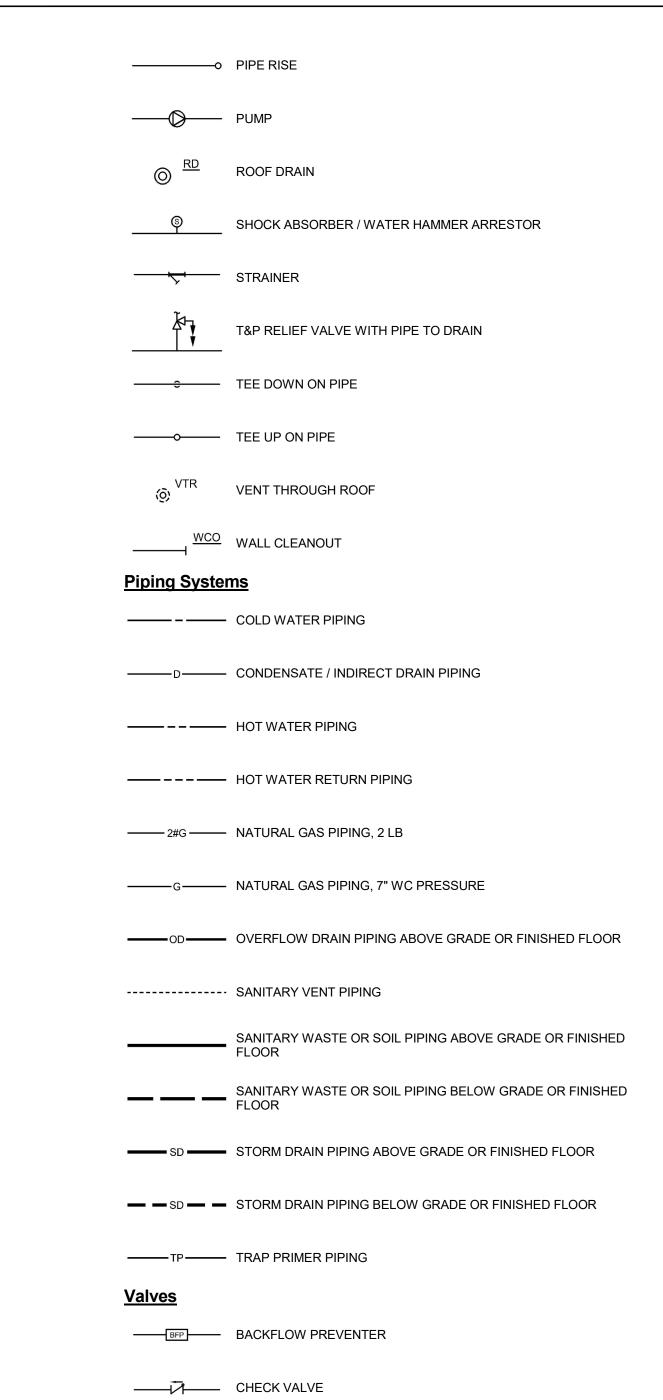
2 ROOF PLAN - MODULAR - MECHANICAL

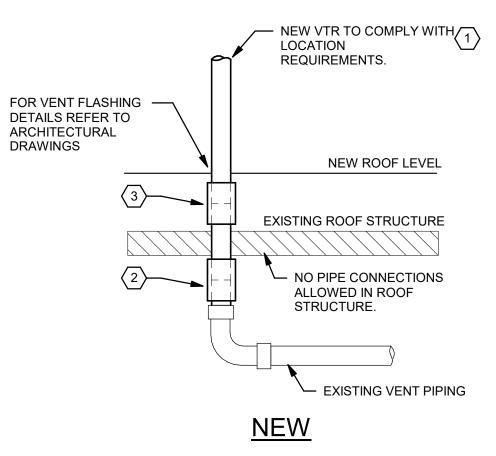
1/16" = 1'-0"

4/1/2021 1:17:31 PN

### PLUMBING SYMBOL LIST

#### NOTE: This is a standard symbol list and not all items listed may be used. <u>Abbreviations</u> ABANDON IN PLACE (A) AFF ABOVE FINISHED FLOOR ──────────────────────────── CONTINUATION ACCESS PANEL AQUASTAT, ARCHITECT, ANCHOR, AMPHERE **EQUIPMENT IDENTIFICATION** BFP BACKFLOW PREVENTER BFF BELOW FINISHED FLOOR EXTENT OF DEMOLITION BRITISH THERMAL UNITS PER HOUR BLDG BUILDING CV CHECK VALVE FIXTURE TAG (LEVEL BELOW FIXTURE) CLEANOUT CW COLD WATER CONDENSATE DRAIN KEYED NOTE CONT. CONTINUATION CFH CUBIC FEET PER HOUR CFS CUBIC FEET PER SECOND POINT OF CONNECTION DEMOLISH (X) DISHWASHER, DOMESTIC WATER DET DOMESTIC EXPANSION TANK —X—X— DEMOLISH DCVA DOUBLE CHECK VALVE ASSEMBLY DN DS DOWNSPOUT ----- EXISTING WORK DSN DOWNSPOUT NOZZLE DFU DRAINAGE FIXTURE UNIT ----- NEW WORK DRAINAGE, WASTE AND VENT DF DRINKING FOUNTAIN ELECTRIC WATER COOLER PIPE OR CONDUIT BELOW GRADE **EWH** ELECTRIC WATER HEATER **EXISTING Piping Fittings** FT FEET FFE FINISHED FLOOR ELEVATION FIRE, FAHRENHEIT ACCESS PANEL FLOOR FCO FLOOR CLEANOUT FLOOR DRAIN AQUASTAT FLUSH VALVE FOOT, FEET FUTURE GALLONS PER MINUTE GWH GAS WATER HEATER HVAC HEATING, VENTILATING AND AIR CONDITIONING ------ CAP HERTZ HB HOSE BIBB HW HOT WATER COTG CLEANOUT TO GRADE HOT WATER FIXTURE UNIT HOT WATER RETURN INCHES ───── CONCENTRIC REDUCER INDIRECT WASTE INVERT ELEVATION LAVATORY DSN DOWNSPOUT NOZZLE MINIMUM MIXING VALVE MOP SINK ECCENTRIC REDUCER NEW NORTH NIC NOT IN CONTRACT ────Ф <sub>FCO</sub> FLOOR CLEANOUT NTS NOT TO SCALE NUMBER NO. NUMBER ⊕ FLOOR DRAIN OVERFLOW DRAIN, OUTSIDE DIAMETER OWNER FURNISHED, CONTRACTOR INSTALLED OWNER FURNISHED, OWNER INSTALLED FLOOR SINK PLBG PLUMBING PLUMBING, PUMP POINT OF CONNECTION POUNDS PER SQUARE INCH FLOW DIRECTION PRESSURE DROP, PLUMBING DEMOLITION, PUMPED DISCHARGE PRESSURE REDUCING VALVE QTY QUANTITY HOSE BIBB / WALL HYDRANT RAINWATER LEADER REDUCED PRESSURE BACKFLOW PREVENTER RELOCATE / RELOCATED LOCATION OVERFLOW ROOF DRAIN ROOF DRAIN SERVICE BOX — PIPE DROP SHOCK ARRESTOR SHUT OFF VALVE S, SK SINK SQUARE FEET STORM DRAIN SUMP PUMP, STATIC PRESSURE TEMPERATURE TRAP PRIMER, TOTAL PRESSURE TYP TYPICAL





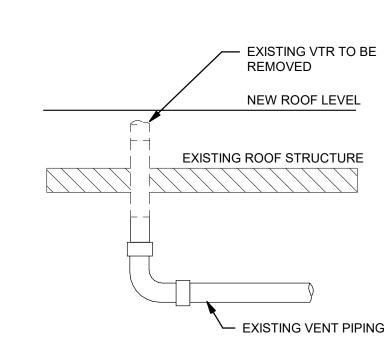
(1) VENT MAY REMAIN IN SAME LOCATION IF ALL LOCATION

REQUIREMENTS ARE MET. (2) PIPE EXTENSION SPLICE IS TO BE MADE BELOW THE ROOF DECK. ELBOW IS TO BE SUPPORTED VERTICALLY, AND THE PIPE EXTENSION IS TO BE BRACED AT THE ROOF DECK.

ALTERNATIVE SPLICE LOCATION. THIS LOCATION IS TO BE USED ONLY IF NO ACCESS FROM BELOW THE ROOF IS AVAILABLE. **CONNECTION NOTE:** A RIGID COUPLER IS TO BE USED TO CONNECT EXISTING PIPING TO THE NEW EXTENSION OF THE VENT PIPE. USE ONE OF THE FOLLOWING BASED ON

- FOR CONNECTING CAST IRON VENT PIPING, UTILIZE DUTY NO-HUB COUPLINGS.

- FOR CONNECTING PVC VENT PIPING, UTILIZE GLUED-ON ABS OR PVC COUPLINGS. - RUBBER PIPE ADAPTERS ARE NOT ACCEPTABLE.



──────────── SHUTOFF VALVE, GENERAL

**LOCATION REQUIREMENTS:** A. TERMINATE A MINIMUM OF 8 INCHES ABOVE FINISHED ROOF SURFACE. B. TERMINATE A MINIMUM OF 12 INCHES FROM A

VERTICAL SURFACE. C. TERMINATE A MINIMUM OF 10 FEET FROM, OR 3 FEET ABOVE OPERABLE WINDOWS, DOORS, OR AIR INTAKES.

1 VENT THROUGH ROOF
NO SCALE

# X27-

Y38

(X13)——————

X23-

X24-

1

(Y37)

ROOF PLAN - MODULAR - PLUMBING

# **GENERAL PLUMBING NOTES**

- A. CONDITIONS SHOW ON THE PLANS RELATIVE TO THE WORK TO BE PERFORMED ARE BASED ON THE BEST INFORMATION AVAIALBLE BUT ARE SUBJECT TO VERIFICATION. VERIFY LOCATIONS AND ELEVATIONS OF UTLITIES TO BE CROSSED OR CONNECTED. CORRECT DEFICIENCIES CAUSED BY FAILURE TO PERFORM SUCH VERIFICATIONS AT NO EXPENSE TO OWNER. IMMEDIATELY NOTIFY ARCHITECT AND ENGINEER OF CONDITION IN CONFLICT WITH THE DETAILS/PLANS.
- B. VERIFY LOCATIONS OF CONNECTIONS TO PIPING INSTALLED ON SITE.
- C. SEE ARCHITECTURAL PLANS FOR OVERFLOW SCUPPER LOCATIONS.

# ○ SHEET KEYNOTES

1 CONNECT TO EXISTING VENT PIPING BELOW THE ROOF LEVEL AND EXTEND NEW VTR 8" MINIMUM ABOVE NEW ROOF LEVEL AT LOCATIONS WHERE EXISTING VENTS ARE NOT AT 8" MINIMUM ABOVE NEW ROOF LEVEL. VTR'S SHALL BE FLASHED WHEN NEW ROOF IS INSTALLED. SEE DETAIL 1/P-001 AND ARCHITECTURAL FLASHING DETAIL.





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90045

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Sheet Title: SYMBOL LIST & SCHEDULES - PLUMBING

Sheet Number:

P-001

PERMIT / BID SET

U, UR

VTR WCO

VACUUM, VENT, VOLT VENT THRU ROOF

WATER COLUMN, WATER CLOSET

WATER HEATER, WALL HYDRANT WATER SUPPLY FIXTURE UNIT

WATER HAMMER ARRESTOR

WALL CLEANOUT

WASTE

WITH

P-001 SYMBOL LIST & SCHEDULES - PLUMBING

**SHEET INDEX** 

	MECHA	ANICAL EQUIP	MENT C	ONNEC.	TION :	SCHE	DULE		
ITEM	DESCRIPTION	LOCATION	VOLTS / PHASE	LOAD	MCA	MOCP	WIRE / CONDUIT	CIRCUIT	NOTES
RTU-1	PACKAGED AC UNIT	ROOF	208/1		39.5	50	402	P1-5,7.	1
RTU-2	PACKAGED AC UNIT	ROOF	208/1		39.5	50	402	P2-5,7.	1
RTU-3	PACKAGED AC UNIT	ROOF	208/1		39.5	50	402	P3-5,7.	1
RTU-4	PACKAGED AC UNIT	ROOF	208/1		39.5	50	402	P4-5,7.	1
AC-1	AIR CONDITIONING UNIT	ROOF	208/1		44.2	60	502	2A98-40,42.	1
AC-2	AIR CONDITIONING UNIT	ROOF	208/1		44.2	60	502	2A98-39,41.	1
1	1			I	1	1	I	1	1

#### GENERAL MECHANICAL EQUIPMENT CONNECTION SCHEDULE NOTES

- A. THE ABOVE INFORMATION IS FOR A SPECIFIC MANUFACTURER. ACTUAL MANUFACTURER FOR EQUIPMENT MAY BE DIFFERENT. COORDINATE WITH MECHANICAL EQUIPMENT SUBMITTALS FOR LOADS AND OVER CURRENT PROTECTION REQUIREMENTS PRIOR TO INSTALLATION OF WIRING.
- B. MOCP = MAXIMUM OVER CURRENT PROTECTION

MCA = MINIMUM CIRCUIT AMPACITY

PROVIDE DISCONNECTING MEANS FOR EACH ITEM OF EQUIPMENT LISTED IN THE SCHEDULE ABOVE, EXCEPT AS SPECIFICALLY NOTED OTHERWISE IN SCHEDULE NOTES, BELOW.

#### MECHANICAL EQUIPMENT CONNECTION SCHEDULE NOTES

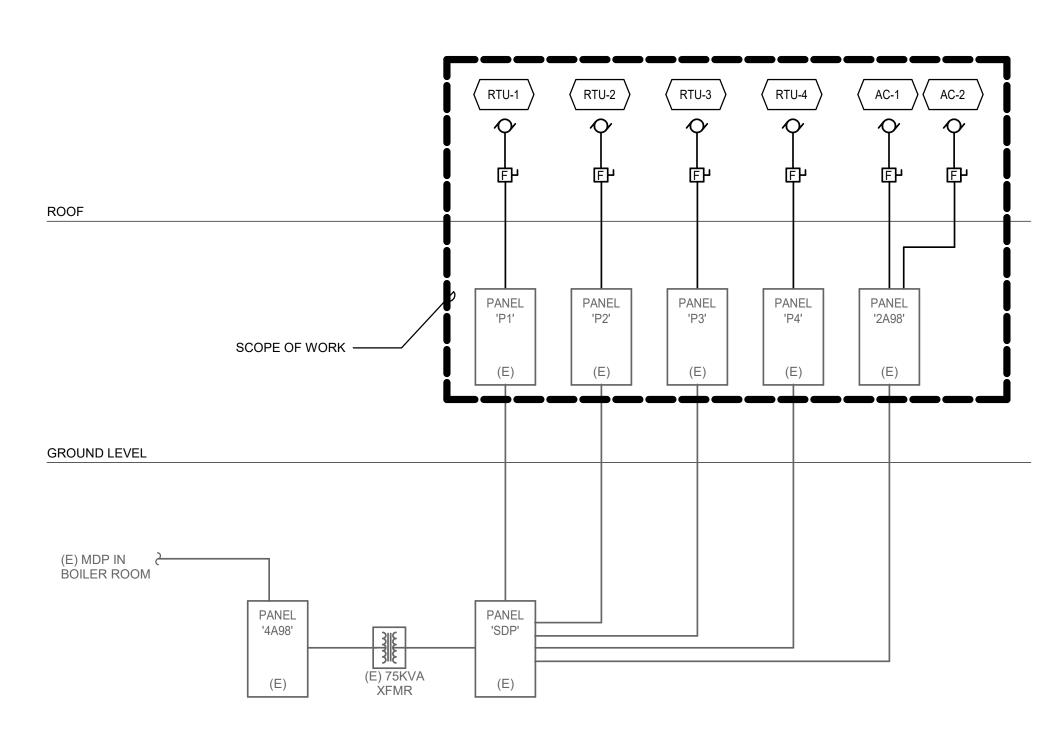
1 EXISTING RACEWAY FROM PANEL TO ROOF LOCATION TO BE REUSED.

#### WIRE / CONDUIT SCHEDULE

402 2 #8 CU, 1 #10 CU GND., IN EXISTING 3/4"C. 502 2 #6 CU, 1#10 CU GND., IN EXISTING 3/4"C.

												2021-0091 Aloha
	Panel '2A98'	120/208V	, 3 PI	h., 4 W.;	250A E	Bus w	ith Mair	Lug Only	/ Surface I	Mour	ited Panelboard	
Ckt.		Load		C.B.				C.B.	Load			Ckt
No.	Description / Location	(VA) Ty	ре	A/Pole	Note	Ph.	Note	A/Pole	(VA) Ty	ре	Description / Location	No.
1	SOUTH ROOM LIGHTS			20/1		Α		20/1			EXHAUST FAN #3	2
3	NORTH ROOM LIGHTS			20/1		В		20/1			EXIT LIGHTS	4
5	WATER HEATER #1			20/1		С		20/1			EXHAUST FAN #1	6
7	WATER HEATER #2			20/1		Α		20/1			EXHAUST FAN #2	8
9	WATER HEATER #3			20/1		В		20/1			EXHAUST FAN #4	10
11	WATER HEATER #4			20/1		С		20/1			OUTSIDE LIGHTS SOUTH	12
13	SOUTH ROOF RECEPTACLE			20/1		Α		20/1			GAS SOLENOID VALVE	14
15	NORTH ROOF RECEPTACLE			20/1		В		20/1			OUTSIDE LIGHTS NORTH	16
17	AC CONTROL TRANSFORMER #1			20/1		С		20/1			SPARE	18
19	AC CONTROL TRANSFORMER #2			20/1		Α		20/1			SPARE	20
21	HP-1 TO 4 CONTROL TRANSFORMER			20/1		В		20/1			SPARE	22
23	SPARE			20/1		С		20/1			SPARE	24
25	SPARE			20/1		Α		20/1			SPARE	26
27	SPARE			20/1		В		20/1			SPARE	28
29	SPARE			20/1		С		20/1			SPARE	30
31	SPARE			20/1		Α		20/1			SPARE	32
33	SPARE			20/1		В		20/1			SPARE	34
35	SPARE			20/1		С		20/1			SPARE	36
37	SPARE			20/1		Α		20/1			SPARE	38
39	AC-2 (SOUTH)	3,287	М	60/2	1	В	1	60/2	3,287	М	AC-1 (NORTH)	40
41		3,287	М	-		С		-	3,287	М		42

Total Connected Load:	Ph. A	0 VA	0 Amps	Panel Connected Load:	13.1 KVA	36.5 Amps
Total Connected Load:	Ph. B	6,574 VA	55 Amps	Sub-Fed Connected Load:	0.0 KVA	0.0 Amps
Total Connected Load:	Ph. C	6,574 VA	55 Amps	Total Demand Load:	14.8 <b>KVA</b>	41.1 <b>Amps</b>
Notes:						
1. REPLACE EXISTIN	G 50A/2P BREAKE	R WITH NEW 60A/2P BREA	KER, TO MATCH EXIS	STING MANUFACTURER AND AIC RAT	ING.	
2.						
3.						
4.						



BASEMENT

1 PARTIAL ONE-LINE POWER DISTRIBUTION DIAGRAM NO SCALE

Ckt.			Load	t	C.B.				C.B.	Load					
No. Description / Location		(VA) T	(VA) Type		Note	Ph.	Note A/Pole		(VA) Type	Description / Location					
1 LIGHTS					20/1		Α		20/1		RECEPTACLES				
3 WATER HEATER				20/1 <b>C</b> 20/1 RECEPTACLES				RECEPTACLES							
5	RTU-1				50/2	1	Α	2	30/2		SPARE				
7					-		С		-						
9	OUTSIDE RECEP	PTACLES			20/1		Α		20/1		COMPUTER RECEPTACLES				
11	SPACE						С				SPACE				
Conr	nected Load:	Ph. A	0	0 VA 0 Amps						Panel Connected Load: 0.0 KVA					
									S	ub-Fed Coni	nected Load: 0.0 KVA	0.0 Amps			
Onr	Connected Load: Ph. C		0	0 VA 0 Amps						Total De	mand Load: 0.0 KVA	0.0 <b>Amps</b>			

Pa	nel 'P2'	120/208	V, 1F	Ph, 3W.;	100A B	us wit	h Main	Lug Only	Flush Mo	ount	2021-0 ed Load Center	0091 Ald		
Ckt. No. Description / Loc	<b>=</b> 1.11 11 11		d ype	C.B. A/Pole	Note	Dh	Note	C.B. A/Pole	Load (VA) Type		Description / Location	C		
1 LIGHTS	<del></del>			20/1	11010	A	14010	20/1		-	RECEPTACLES			
				20/1		С		20/1			RECEPTACLES			
5 RTU-2	RTU-2			50/2	1	Α	2	30/2			SPARE			
7	·			-		С		-						
9 OUTSIDE RECE	OUTSIDE RECEPTACLES			20/1		Α		20/1			COMPUTER RECEPTACLES	•		
11 SPACE						С					SPACE	•		
Connected Load:	Ph. A	0	VA	0	Amps									
Connected Load:	Ph. C	0	VA	0	Amps				Total	Der	mand Load: 0.0 KVA 0.0 Am	ps		
	TING 30A/2P BREAKEF AKER MADE SPARE BY		'2P B	REAKER	, TO M	ATCH	I EXIST	TING MAN	NUFACTU	JREI	R AND AIC RATING.			

										20	21-0091 <i>A</i>	loha			
	<u> Panel 'P3'</u>	120/208V, 1	120/208V, 1Ph, 3W.; 100A Bus with Main Lug Only Flush Mounted Load Center												
Ckt.		Load	C.B.				C.B.	Load	d			Ck			
No.	Description / Location	(VA) Type	(VA) Type A/Pole Note Ph. Note A/Pole (VA) Type Description / Locat		Description / Location		No								
1	RECEPTACLES		20/1		Α		20/1			LIGHTS		2			
3	RECEPTACLES		20/1		С		20/1			LIGHTS		4			
5	RTU-3		50/2	1	Α	2	30/2			SPARE		6			
7			-		С		-					8			
9	OUTSIDE RECEPTACLES		20/1		Α		20/1			COMPUTER RECEPTACLES		10			
11	SPACE				С					SPACE		12			
Conn	nected Load: Ph. A	0 VA	0 VA 0 Amps						Panel Connected Load: 0.0 KVA						
							S	Sub-Fed (	Conn	ected Load: 0.0 KVA 0.0	Amps				
Conn	nected Load: Ph. C	0 VA	. 0	Amps				Total	Den	nand Load: 0.0 KVA 0.0	Amps				
Notes				•		I EXIST	ING MAN								
2.	EXISTING BREAKER MADE SPARE BY DEI	MOLITION.													
3.															
4.															
5.															

	<u>Pa</u>	<u>nel 'P4'</u>	120/208	V, 1F	Ph, 3W.;	100A B	us wit	h Main	Lug Only	Flush Mo	ounte	ed Load Center		2021-0091	Alo
Ckt.		Loa	d	C.B.				C.B.	Load					С	
No.	o. Description / Location		(VA) T	(VA) Type		A/Pole Note Ph.		Note	A/Pole	(VA) Type		e Description / Location			Ν
1	1 LIGHTS				20/1		Α		20/1			RECEPTACLES			
3					20/1		С		20/1			RECEPTACLES			4
5	RTU-4				50/2	1	Α	2	30/2			SPARE			$\top$
7					-		С		-						
9	OUTSIDE RECE	PTACLES			20/1		Α		20/1			COMPUTER RECEPTAC	LES		
11	SPACE						С					SPACE			
Conn	nected Load:	Ph. A	0	VA	0	Amps		•				ected Load: 0.0 KVA ected Load: 0.0 KVA		0.0 Amps 0.0 Amps	-
Conn	nected Load:	Ph. C	0	VA	0	Amps						nand Load: 0.0 KVA		0.0 <b>Amps</b>	
Note:	s: REPLACE EXIST	TING 30A/2P BREAKER KER MADE SPARE BY	WITH NEW 50A	-				I EXIST	ING MAN						

# **ELECTRICAL SYMBOL LIST**

NOTE: This is a standard symbol list and not all items listed may be used.

FBO

GFCI

GFI

GFP

IEEE

KV

KVA

KW

LED

LV

LFMC

MOCP

MCA

MISC

OC

OFCI

PNL

PH

PVC

PWR

QTY

RMC RM

SWBD

TBD

XFMR

TVSS

W/

G, GND GROUND

HEIGHT

KILOVOLT

KILOWATT

LOW VOLTAGE

IDENTIFICATION

ISOLATED GROUND

KILOVOLT AMPERES

LIGHT EMITTING DIODE

MINIMUM CIRCUIT AMPS

MOTOR CONTROL CENTER

NATIONAL ELECTRIC CODE

NATIONAL ELECTRIC SAFETY CODE

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

OWNER FURNISHED, CONTRACTOR INSTALLED

MISCELLANEOUS

MT, MTD MOUNT, MOUNTED

NEUTRAL N/A NOT APPLICABLE N.I.C. NOT IN CONTRACT NTS NOT TO SCALE

ON CENTER

POLY-VINYL-CHLORIDE

RIGID METAL CONDUIT

REQUEST FOR INFORMATION

SURGE PROTECTION DEVICE

UNDERWRITERS LABORATORIES UPS UNINTERRUPTIBLE POWER SUPPLY UNLESS OTHERWISE NOTED

TRANSIENT VOLTAGE SURGE SUPPRESSOR

PANEL

PHASE

POWER

ROOM

SWITCHBOARD

TRANSFORMER

VOLTS, VOLTAGE WEATHERPROOF

TO BE DETERMINED

REQD REQUIRED

SHT SHEET STD STANDARD

TYP TYPICAL

WITH W/O WITHOUT

QUANTITY

LIQUIDTIGHT FLEXIBLE METAL CONDUIT

MAXIMUM OVERCURRENT PROTECTION

FURNISHED BY OTHERS

GROUND FAULT PROTECTION

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

**Abbreviations Connections / Equipment** AFF ABOVE FINISHED FLOOR AMERICAN NATIONAL STANDARDS INSTITUTE HEAVY DUTY FUSED DISCONNECT SWITCH AWG AMERICAN WIRE GAUGE AMPERES, AMBER <u>General</u> AUTHORITY HAVING JURISDICTION AVAILABLE INTERRUPTING CAPACITY DETAIL NUMBER AND SHEET LOCATION BAS **BUILDING AUTOMATION SYSTEM** CA CABLE CAT (XX-X) CATEGORY **EQUIPMENT IDENTIFICATION** CLG CEILING CONDUIT, CLOSE, CONTROL COORD COORDINATE KEYED NOTE CU COPPER DECIBEL (X) DEMOLISH —X—X— DEMOLISH DTL DETAIL DIAMETER DIA DIM DIMENSION ----- EXISTING WORK DIV DIVISION DN DOWN DWG DRAWING ----- NEW WORK EA EACH EMT ELECTRICAL METALLIC TUBING **ELEVATION** <u>Miscellaneous</u> **EMERGENCY** EXHAUST FAN **BRANCH PANEL EXISTING** FIRE ALARM FMC FLEXIBLE METAL CONDUIT FLUSH WALL MOUNTED BRANCH PANEL FOOT, FEET

DUPLEX RECEPTACLE (MULTIPLE LETTERS INDICATE MULTIPLE GROUND FAULT CIRCUIT INTERRUPTER GROUND FAULT INTERRUPTER W = WEATHERPROOF CONTINUOUS USE COVER, GFCI PROTECTED, WITH WEATHER-RESISTANT RECEPTACLE

**Switches and Receptacles** 

INTERFACE ENGINEERING PROJECT 2021-0091

Consultants:

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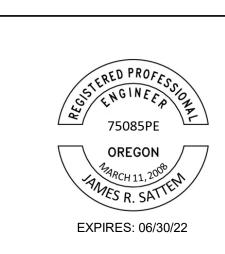
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SCHOOL

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04/06/2021

Project Number: Drawn By: Checked By:

Revision Schedule:

# **SHEET INDEX**

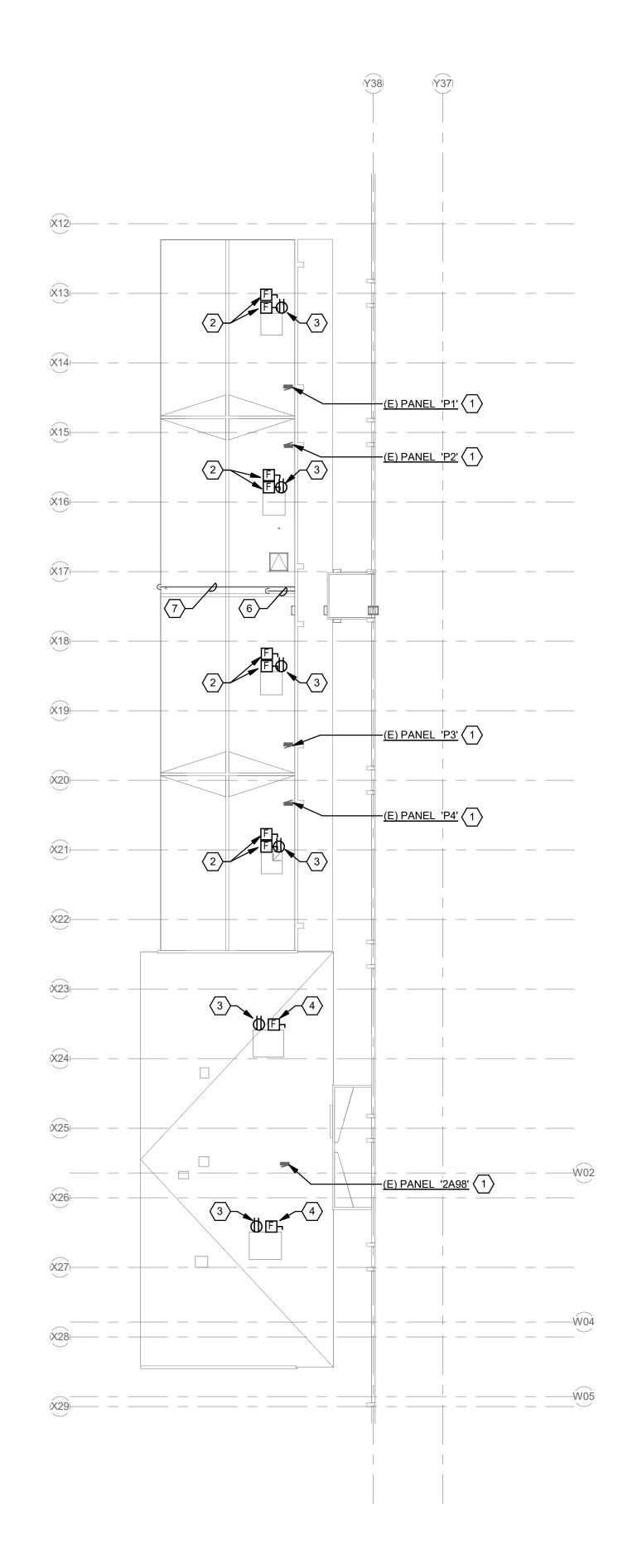
E-001 SYMBOL LIST & SCHEDULES - ELECTRICAL

E-221 ROOF PLANS - MODULAR - ELECTRICAL

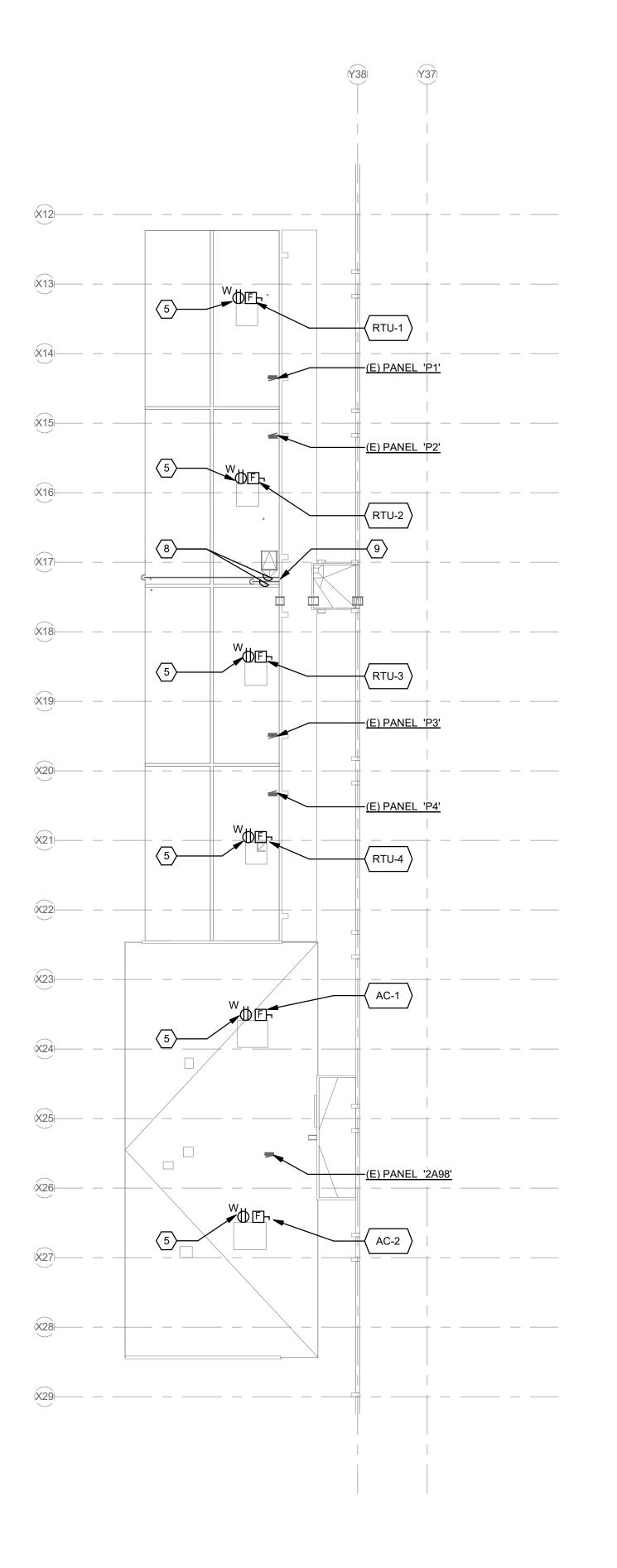
Sheet Title: SYMBOL LIST & SCHEDULES - ELECTRICAL

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E-001







2 ROOF PLAN - MODULAR - ELECTRICAL

1/16" = 1'-0"

0' 8' 16' 32'

# **GENERAL SHEET NOTES**

- A. NEW MECHANICAL EQUIPMENT TO BE PROVIDED WITH INTEGRAL DISCONNECTS BY DIVISION 23. COORDINATE REQUIREMENTS WITH DIVISION 23 PRIOR TO ROUGH-IN,
- B. REMOVE ABANDONED WIRING AND CONDUIT BACK TO SOURCE
- C. WHERE CHANGES ARE MADE IN EXISTING PANELS, PROVIDE NEW LABELING AND TYPEWRITTEN SCHEDULES TO ACCURATELY REFLECT THE CHANGES.
- D. DEMOLITION DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION. VERIFY THE ACCURACY OF THE INFORMATION SHOWN PRIOR TO BIDDING AND PROVIDE SUCH LABOR AND MATERIALS AS NECESSARY TO ACCOMPLISH THE WORK.

○ SHEET KEYNOTES

1. EXISTING PANEL LOCATED IN CLASSROOM BELOW.

FOR CONNECTION TO REPLACEMENT.

PANEL '2A98' TO BE REUSED.

PURPOSE RECEPTACLE CIRCUIT.

FOR ADDITIONAL INFORMATION.

2. EXISTING DUAL-POINT CONNECTION ROOFTOP UNIT TO BE

REPLACED WITH SINGLE POINT CONNECTION. REMOVE

3. EXISTING WEATHERPROOF RECEPTACLE MOUNTED TO UNIT

4. EXISTING SINGLE-POINT CONNECTION AC-UNIT TO BE

6. EXISTING 1-1/2"C. WITH UNISTRUT SUPPORT TO BE

EXISTING FUSED DISCONNECTS AND ASSOCIATED WIRING

COMPLETE. (1) EXISTING 3/4" CONDUIT TO REMAIN FOR RE-

TO BE REPLACED. MAINTAIN CONTINUITY OF EXISTING WIRING

REPLACED. REMOVED EXISTING FUSED DISCONNECT AND ASSOCIATED WIRING COMPLETE. EXISTING RACEWAY FROM

WITH PACKAGED AC UNIT. CONNECT TO EXISTING GENERAL

PROTECTED DURING RE-ROOFING. EXISTING SUPPORTS TO BE REMOVED, PROVIDE TEMPORARY SUPPORT PRIOR TO INSTALLATION OF NEW SUPPORT BASES. EXISTING ROOF PENETRATION TO BE PROTECTED. REFER TO DETAIL 10/A720

5. INTEGRAL GENERAL PURPOSE RECEPTACE TO BE PROVIDED





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 EXISTING 2"C. WITH UNISTRUT SUPPORT TO BE PROTECTED DURING RE-ROOFING. EXISTING SUPPORTS TO BE REMOVED, PROVIDE TEMPORARY SUPPORT PRIOR TO INSTALLATION OF NEW SUPPORT BASES.

8. PROVIDE NEW RUBBER AND POLYURETHANE PREPOLYMER CURB BASES FOR SUPPORT OF EXISTING CONDUITS.

9. EXISTING CONDUIT PENETRATIONS THROUGH PARAPET WALL TO BE PROTECTED AND PROVIDED WITH LIQUID FLASHING, REFER TO DETAIL 12/A720 FOR ADDITIONAL INFORMATION.

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ROOF PLANS -MODULAR -ELECTRICAL

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