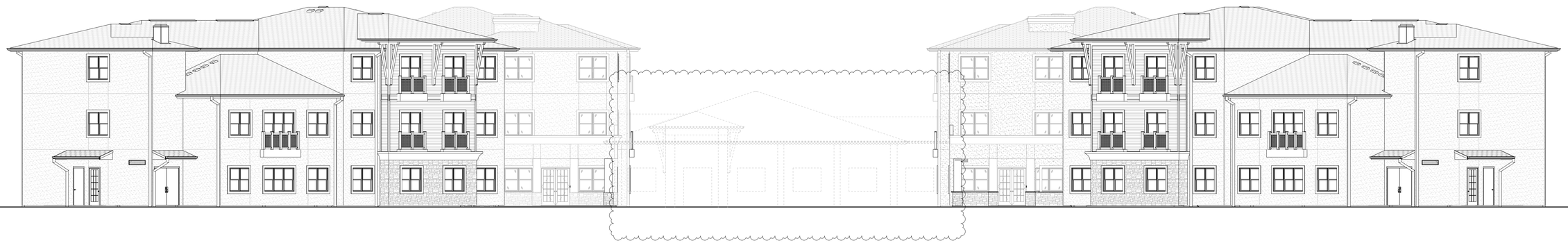
MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901
HUD #
PHASE II - BUILDING 1



DESIGN ARCHITECT: BESSOLO DESIGN GROUP, INC.

CONTRACT ARCHITECT:

OWNER:

CONTRACTOR:

LENDER:

BONDING COMPANY:

BESSOLO DESIGN GROUP, INC
ARCHITECTURE ■ DEVELOPMENT
License #AA-C002117
7901 4th St. N., Ste 200
ST. PETERSBURG, FL 33702
727-894-4453 www.bessolo.com

BUILDING '1' SUMMARY

FLOOR	TOTAL SQ.FT (GROSS)
FIRST FLOOR	20,756
FUTURE FIRST FLOOR 'C'	3,804
SECOND FLOOR	19,078
THIRD FLOOR	17,392
TOTAL BUILDING	61,010

UNIT TABULATION

UNIT TYPE	QUANTITY
ONE BEDROOM 'A'	48
ONE BEDROOM 'B'	2
TWO BEDROOM 'C'	10
TOTAL UNITS	60

BUILDING '1' UNIT DISTRIBUTION

UNIT TYPE	QUANTITY	UNIT SQ. FT.	TOTAL SQ. FT.
FIRST FLOOR			
ONE BEDROOM 'A'	16	603	9,744
ONE BEDROOM 'B'	02	600	1,200
TWO BEDROOM 'C'	04	791	3,164
FIRST FLOOR	22		14,108
SECOND FLOOR			
ONE BEDROOM 'A'	16	603	9,744
ONE BEDROOM 'B'	–	600	–
TWO BEDROOM 'C'	04	791	3,164
SECOND FLOOR	20		12,908
THIRD FLOOR			
ONE BEDROOM 'A'	16	603	9,744
ONE BEDROOM 'B'	–	600	–
TWO BEDROOM 'C'	02	791	1,582
THIRD FLOOR	18		11,326

BUILDING '1' PARKING SUMMARY

PARKING TYPE	QUANTITY
PARKING SPACE - ADA (5' AISLE) 12' X 18'	04
PARKING SPACE S (90 DEG.) 10' X 18'	86
TOTAL PHASE BUILDING '1' PARKING SPACES	90

BDG PROJECT NUMBER: 15083.00

PROJECT MANUAL VOLUME I OCTOBER 12, 2017

CLIENT
MELBOURNE HOUSING AUTHORITY
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MELBORNE, FLORIDA 32935
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CONTACT: MIKE L. BEAN, EXECUTIVE DIRECTOR

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CONTACT: ROBERT (BOB) HASICK

CLIENT APPROVAL:

DATE

INDEX OF DRAWINGS PHASE II

GENERAL

	SHEET NO.	SHEET TITLE	06-07-17 SCHEMATIC DESIGN	10-12-17 CONSTRUCTION DOCUMENTS	12-29-17 BUILDING PERMIT	08-23-18 HUD COMMENTS	10-11-18 HUD COMMENTS	12-13-18 VE COMMENTS
		COVER SHEET						
	G001-2	INDEX OF DRAWINGS						
	G002	ARCHITECTURAL GENERAL INFORMATION						

CIVIL (MID-FLORIDA ENGINEERING CONSULTANTS)

	SHEET NO.	SHEET TITLE	06-07-17 SCHEMATIC DESIGN	10-12-17 CONSTRUCTION DOCUMENTS	12-29-17 BUILDING PERMIT	08-23-18 HUD COMMENTS	10-11-18 HUD COMMENTS	12-13-18 VE COMMENTS
	C-0	COVER SHEET & NOTES						
	C-1	EROSION AND SEDIMENTATION PLAN						
	C-2	EXISTING SITE PLAN						
	C-3	SITE PLAN						
	C-4	DRAINAGE, GRADING & UTILITIES PLAN						
	C-5	SECTIONS						
	C-6	DRAINAGE & GRADING DETAILS						
	C-7	UTILITY DETAILS						
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	C-9	FDOT INDEX						
	C-9A	FDOT INDEX						
	C-10	SURVEY		1				
	L-1	EXISTING TREE/SITE OVERLAY						
	L-2	LANDSCAPE PLAN						
	PH-1	PHOTOMETRIC LIGHTING PLAN						

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ARCHITECTURAL (BESSOLO DESIGN GROUP, INC.)

	SHEET NO.	SHEET TITLE	06-07-17 SCHEMATIC DESIGN	10-12-17 CONSTRUCTION DOCUMENTS	12-29-17 BUILDING PERMIT	08-23-18 HUD COMMENTS	10-11-18 HUD COMMENTS	12-13-18 VE COMMENTS
	AS101	ARCHITECTURAL SITE PLAN						
	AL101	BUILDING '1' AND '2' FIRST FLOOR LIFE SAFETY PLAN						
	AL102	BUILDING '1' SECOND FLOOR LIFE SAFETY PLAN						
	AL103	BUILDING '1' THIRD FLOOR LIFE SAFETY PLAN						
	A101	BUILDING '1' AND '2' OVERALL FIRST FLOOR PLAN						
	A101A	BUILDING '1' PARTIAL FIRST FLOOR PLAN 'A'						
3	A101B	BUILDING '1' PARTIAL FIRST FLOOR PLAN 'B'						
DELETED	~~A101C~~	~~BUILDING '1' PARTIAL FIRST FLOOR PLAN 'C'~~						
	A102	BUILDING '1' OVERALL SECOND FLOOR PLAN						
	A102A	BUILDING '1' PARTIAL SECOND FLOOR PLAN 'A'						
	A102B	BUILDING '1' PARTIAL SECOND FLOOR PLAN 'B'						
	A103	BUILDING '1' OVERALL THIRD FLOOR PLAN						
	A103A	BUILDING '1' PARTIAL THIRD FLOOR PLAN 'A'						
	A103B	BUILDING '1' PARTIAL THIRD FLOOR PLAN 'B'						
3	A104	BUILDING '1' OVERALL ROOF PLAN						
DELETED	~~A105~~	~~BUILDING '1' PORTE COCHERE PLANS~~						
	AR101A	BUILDING '1' PARTIAL FIRST FLOOR REFLECTED CEILING PLAN 'A'						
3	AR101B	BUILDING '1' PARTIAL FIRST FLOOR REFLECTED CEILING PLAN 'B'						
DELETED	~~AR101C~~	~~BUILDING '1' PARTIAL FIRST FLOOR REFLECTED CEILING PLAN 'C'~~						
	AR102A	BUILDING '1' PARTIAL SECOND FLOOR REFLECTED CEILING PLAN 'A'						
	AR102B	BUILDING '1' PARTIAL SECOND FLOOR REFLECTED CEILING PLAN 'B'						
	AR103A	BUILDING '1' PARTIAL THIRD FLOOR REFLECTED CEILING PLAN 'A'						
	AR103B	BUILDING '1' PARTIAL THIRD FLOOR REFLECTED CEILING PLAN 'B'						
	AR401	BUILDING '1' UNIT REFLECTED CEILING PLANS						
	AR501	BUILDING '1' CEILING DETAILS						
	A201	BUILDING '1' EXTERIOR ELEVATIONS						
	A202	BUILDING '1' PARTIAL EXTERIOR ELEVATIONS						
	A203	BUILDING '1' PARTIAL EXTERIOR ELEVATIONS						
3	A204	BUILDING '1' PARTIAL EXTERIOR ELEVATIONS						
DELETED	~~A205~~	~~BUILDING '1' PARTIAL EXTERIOR ELEVATIONS~~						
	A301	BUILDING '1' BUILDING SECTIONS						
3	A302	BUILDING '1' BUILDING SECTIONS						
DELETED	~~A303~~	~~BUILDING '1' BUILDING SECTIONS~~						
	A311	BUILDING '1' WALL SECTIONS						
	A312	BUILDING '1' WALL SECTIONS						
	A331	BUILDING '1' STAIR PLANS, SECTIONS, & DETAILS						
	A332	BUILDING '1' ELEVATOR PLANS AND SECTIONS						
	A333	BUILDING '1' CHUTE PLANS & SECTIONS						
	A401	BUILDING '1' UNIT PLANS						
3	A421	BUILDING '1' INTERIOR ELEVATIONS						
DELETED	~~A422~~	~~BUILDING '1' INTERIOR ELEVATIONS~~						
DELETED	~~A423~~	~~BUILDING '1' INTERIOR ELEVATIONS~~						
	A441	BUILDING '1' UNIT INTERIOR ELEVATIONS						
	A442	BUILDING '1' UNIT INTERIOR ELEVATIONS						
	A451	BUILDING '1' MILLWORK DETAILS						
	A452	BUILDING '1' MILLWORK DETAILS						
3	A455	BUILDING '1' PLAN DETAILS						
DELETED	~~A456~~	~~BUILDING '1' PLAN DETAILS~~						
DELETED	~~A457~~	~~BUILDING '1' PLAN DETAILS~~						
	A501	COPING, REGLET & EDGE ROOFING DETAILS						
	A502	FIBERGLASS SHINGLES ROOFING DETAILS						
	A503	SINGLE-PLY MEMBRANE ROOFING DETAILS						
	A504	STANDING SEAM ROOFING DETAILS						
	A505	SCUPPER, DOWNSPOUT AND COPING ROOFING DETAILS						
	A521	MISCELLANEOUS DETAILS						
	A522	MISCELLANEOUS DETAILS						
	A523	MISCELLANEOUS DETAILS						
	A601	BUILDING '1' DOOR SCHEDULE						
	A602	BUILDING '1' DOOR DETAILS						
	A611	BUILDING '1' WINDOW SCHEDULE AND DETAILS						
	A612	BUILDING '1' WINDOW DETAILS						
	A701	BUILDING '1' & '2' PARTITION & WALL DETAILS						
	A702	BUILDING '1' & '2' FIRESTOPPING DETAILS						
	A703	BUILDING '1' & '2' FIRESTOPPING DETAILS						
	A704	BUILDING '1' & '2' FIRESTOPPING DETAILS						
	A705	BUILDING '1' & '2' UL DESIGN U499						
	A706	BUILDING '1' & '2' UL DESIGN U344						
	A707	BUILDING '1' & '2' UL DESIGN P522						
	A708	BUILDING '1' & '2' UL DESIGN U469						
	A709	BUILDING '1' & '2' UL DESIGN L546						
	A710	BUILDING '1' & '2' UL DESIGN L546						
	A711	BUILDING '1' & '2' UL DESIGN L513						
	A712	BUILDING '1' & '2' UL DESIGN L513						
	A713	BUILDING '1' & '2' UL DESIGN U301						
	A714	BUILDING '1' & '2' UL DESIGN U305						
	A715	BUILDING '1' & '2' UL DESIGN U305						
	A716	BUILDING '1' & '2' UL DESIGN U356						
	RM101	RADON MITIGATION						

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	ID001	BUILDING '1' INTERIOR DESIGN GENERAL INFORMATION						
	ID101A	BUILDING '1' PARTIAL FIRST FLOOR FURNITURE PLAN 'A'						
3	ID101B	BUILDING '1' PARTIAL FIRST FLOOR FURNITURE PLAN 'B'						
DELETED	~~ID101C~~	~~BUILDING '1' PARTIAL FIRST FLOOR FURNITURE PLAN 'C'~~						
	ID102A	BUILDING '1' PARTIAL SECOND FLOOR FURNITURE PLAN 'A'						
	ID102B	BUILDING '1' PARTIAL SECOND FLOOR FURNITURE PLAN 'B'						
	ID103A	BUILDING '1' PARTIAL THIRD FLOOR FURNITURE PLAN 'A'						
	ID103B	BUILDING '1' PARTIAL THIRD FLOOR FURNITURE PLAN 'B'						
	ID201A	BUILDING '1' PARTIAL FIRST FLOOR FLOOR FINISH PLAN 'A'						
3	ID201B	BUILDING '1' PARTIAL FIRST FLOOR FLOOR FINISH PLAN 'B'						
DELETED	~~ID201C~~	~~BUILDING '1' PARTIAL FIRST FLOOR FLOOR FINISH PLAN 'C'~~						
	ID202A	BUILDING '1' PARTIAL SECOND FLOOR FLOOR FINISH PLAN 'A'						
	ID202B	BUILDING '1' PARTIAL SECOND FLOOR FLOOR FINISH PLAN 'B'						
	ID203A	BUILDING '1' PARTIAL THIRD FLOOR FLOOR FINISH PLAN 'A'						
	ID203B	BUILDING '1' PARTIAL THIRD FLOOR FLOOR FINISH PLAN 'B'						
	ID301A	BUILDING '1' PARTIAL FIRST FLOOR WALL FINISH PLAN 'A'						
3	ID301B	BUILDING '1' PARTIAL FIRST FLOOR WALL FINISH PLAN 'B'						
DELETED	~~ID301C~~	~~BUILDING '1' PARTIAL FIRST FLOOR WALL FINISH PLAN 'C'~~						
	ID302A	BUILDING '1' PARTIAL SECOND WALL FINISH PLAN 'A'						
	ID302B	BUILDING '1' PARTIAL SECOND FLOOR WALL FINISH PLAN 'B'						
	ID303A	BUILDING '1' PARTIAL THIRD FLOOR WALL FINISH PLAN 'A'						
	ID303B	BUILDING '1' PARTIAL THIRD FLOOR WALL FINISH PLAN 'B'						
	ID401	BUILDING '1' UNIT FURNITURE PLANS						
	ID402	BUILDING '1' UNIT FLOOR FINISH PLANS						
	ID403	BUILDING '1' UNIT WALL FINISH PLANS						
	ID601	BUILDING '1' ROOM FINISH SCHEDULE						
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	S002	BUILDING '1' WIND DESIGN PRESSURES						
	S101	BUILDING '1' OVERALL FOUNDATION & FIRST FLOOR PLAN						
	S101A	BUILDING '1' PARTIAL FOUNDATION & FIRST FLOOR PLAN 'A'						
3	S101B	BUILDING '1' PARTIAL FOUNDATION & FIRST FLOOR PLAN 'B'						
DELETED	~~S101C~~	~~BUILDING '1' PARTIAL FOUNDATION & FIRST FLOOR PLAN 'C'~~						
	S102	BUILDING '1' OVERALL SECOND FLOOR FRAMING PLAN						
	S102A	BUILDING '1' PARTIAL SECOND FLOOR FRAMING PLAN 'A'						
3	S102B	BUILDING '1' PARTIAL SECOND FLOOR FRAMING PLAN 'B'						
DELETED	~~S102C~~	~~BUILDING '1' PARTIAL SECOND FLOOR FRAMING PLAN 'C'~~						
	S103	BUILDING '1' OVERALL THIRD FLOOR FRAMING PLAN						
	S103A	BUILDING '1' PARTIAL THIRD FLOOR FRAMING PLAN 'A'						
	S103B	BUILDING '1' PARTIAL THIRD FLOOR FRAMING PLAN 'B'						
	S104	BUILDING '1' OVERALL ROOF FRAMING PLAN						
	S104A	BUILDING '1' PARTIAL ROOF FRAMING PLAN 'A'						
3	S104B	BUILDING '1' PARTIAL ROOF FRAMING PLAN 'B'						
DELETED	~~S105~~	~~BUILDING '1' PORTE COCHERE PLANS~~						
	S401	BUILDING '1' BEAM, FOOTING & COLUMN SCHEDULE						
	S402	BUILDING '1' COLUMN & SHEARWALL FRAMING SCHEDULES AND DETAILS						
	S403	BUILDING '1' FOUNDATION DETAILS						
	S404	BUILDING '1' FOOTING DETAILS						
	S405	BUILDING '1' WALL FRAMING DETAILS						
	S406	BUILDING '1' FLOOR FRAMING DETAILS						
	S407	BUILDING '1' ROOF FRAMING DETAILS						
	S408	BUILDING '1' ROOF TOP UNIT & MISCELLANEOUS DETAILS						

MECHANICAL (KEM ENGINEERS, INC.)

	SHEET NO.	SHEET TITLE	06-07-17 SCHEMATIC DESIGN	10-12-17 CONSTRUCTION DOCUMENTS	12-29-17 BUILDING PERMIT	08-23-18 HUD COMMENTS	10-11-18 HUD COMMENTS	12-13-18 VE COMMENTS
	M001	BUILDING '1' MECHANICAL GENERAL INFORMATION						
	M101A	BUILDING '1' PARTIAL FIRST FLOOR MECHANICAL PLAN 'A'						
3	M101B	BUILDING '1' PARTIAL FIRST FLOOR MECHANICAL PLAN 'B'						
DELETED	~~M101C~~	~~BUILDING '1' PARTIAL FIRST FLOOR MECHANICAL PLAN 'C'~~						
	M102A	BUILDING '1' PARTIAL SECOND FLOOR MECHANICAL PLAN 'A'						
	M102B	BUILDING '1' PARTIAL SECOND FLOOR MECHANICAL PLAN 'B'						
	M103A	BUILDING '1' PARTIAL THIRD FLOOR MECHANICAL PLAN 'A'						
	M103B	BUILDING '1' PARTIAL THIRD FLOOR MECHANICAL PLAN 'B'						
	M301	BUILDING '1' MECHANICAL SECTIONS						
	M302	BUILDING '1' MECHANICAL SECTIONS						
	M303	BUILDING '1' MECHANICAL SECTIONS						
	M401	BUILDING '1' MECHANICAL UNIT PLANS						
	M501	BUILDING '1' MECHANICAL CONTROLS						
	M601	BUILDING '1' MECHANICAL DETAILS						
	M602	BUILDING '1' MECHANICAL DETAILS						
	M603	BUILDING '1' MECHANICAL DETAILS						
	M701	BUILDING '1' MECHANICAL SCHEDULES						
	M702	BUILDING '1' MECHANICAL SCHEDULES						
	FP001	BUILDING '1' FIRE PROTECTION GENERAL INFORMATION						

PLUMBING (KEM ENGINEERS, INC.)

	SHEET NO.	SHEET TITLE	06-07-17 SCHEMATIC DESIGN	10-12-17 CONSTRUCTION DOCUMENTS	12-29-17 BUILDING PERMIT	08-23-18 HUD COMMENTS	10-11-18 HUD COMMENTS	12-13-18 VE COMMENTS
	P001	BUILDING '1' PLUMBING GENERAL INFORMATION						
	PS101	BUILDING '1' PLUMBING SITE PLAN						
	P101A	BUILDING '1' PARTIAL FIRST FLOOR SANITARY PLAN 'A'						
3	P101B	BUILDING '1' PARTIAL FIRST FLOOR SANITARY PLAN 'B'						
DELETED	~~P101C~~	~~BUILDING '1' PARTIAL FIRST FLOOR SANITARY PLAN 'C'~~						
	P102A	BUILDING '1' PARTIAL SECOND FLOOR SANITARY PLAN 'A'						
	P102B	BUILDING '1' PARTIAL SECOND FLOOR SANITARY PLAN 'B						
	P103A	BUILDING '1' PARTIAL THIRD FLOOR SANITARY PLAN 'A'						
	P103B	BUILDING '1' PARTIAL THIRD FLOOR SANITARY PLAN 'B'						
	P104	BUILDING '1' PLUMBING ROOF PLAN						
	P201A	BUILDING '1' PARTIAL FIRST FLOOR DOMESTIC WATER PLAN 'A'						
3	P201B	BUILDING '1' PARTIAL FIRST FLOOR DOMESTIC WATER PLAN 'B'						
DELETED	~~P201C~~	~~BUILDING '1' PARTIAL FIRST FLOOR DOMESTIC WATER PLAN 'C'~~						
	P202A	BUILDING '1' PARTIAL SECOND FLOOR DOMESTIC WATER PLAN 'A'						
	P202B	BUILDING '1' PARTIAL SECOND FLOOR DOMESTIC WATER PLAN 'B'						
	P203A	BUILDING '1' PARTIAL THIRD FLOOR DOMESTIC WATER PLAN 'A'						
	P203B	BUILDING '1' PARTIAL THIRD FLOOR DOMESTIC WATER PLAN 'B'						
	P401	BUILDING '1' UNIT SANITARY PLANS						
	P402	BUILDING '1' UNIT DOMESTIC WATER PLANS						
	P501	BUILDING '1' UNIT SANITARY AND DOMESTIC WATER ISOMETRICS						
	P502	BUILDING '1' SANITARY ISOMETRICS						
	P503	BUILDING '1' DOMESTIC WATER ISOMETRICS						
	P504	BUILDING '1' SANITARY AND DOMESTIC WATER ISOMETRICS						
	P601	PLUMBING DETAILS						
	P602	PLUMBING DETAILS						
	P603	PLUMBING DETAILS						

ELECTRICAL (KEM ENGINEERS, INC.)

	SHEET NO.	SHEET TITLE	06-07-17 SCHEMATIC DESIGN	10-12-17 CONSTRUCTION DOCUMENTS	12-29-17 BUILDING PERMIT	08-23-18 HUD COMMENTS	10-11-18 HUD COMMENTS	12-13-18 VE COMMENTS
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	E002	ELECTRICAL DETAILS						
	E003	ELECTRICAL DETAILS						
	ES101A	ELECTRICAL SITE PLAN						
	E101A	BUILDING '1' PARTIAL FIRST FLOOR COMMUNICATION AND POWER PLAN 'A'						
3	E101B	BUILDING '1' PARTIAL FIRST FLOOR COMMUNICATION AND POWER PLAN 'B'						
DELETED	~~E101C~~	~~BUILDING '1' PARTIAL FIRST FLOOR COMMUNICATION AND POWER PLAN 'C'~~						
	E102A	BUILDING '1' PARTIAL SECOND FLOOR COMMUNICATION AND POWER PLAN 'A'						
	E102B	BUILDING '1' PARTIAL SECOND FLOOR COMMUNICATION AND POWER PLAN 'B'						
	E103A	BUILDING '1' PARTIAL THIRD FLOOR COMMUNICATION AND POWER PLAN 'A'						
	E103B	BUILDING '1' PARTIAL THIRD FLOOR COMMUNICATION AND POWER PLAN 'B'						
	E201A	BUILDING '1' PARTIAL FIRST FLOOR LIGHTING PLAN 'A'						
3	E201B	BUILDING '1' PARTIAL FIRST FLOOR LIGHTING PLAN 'B'						
DELETED	~~E201C~~	~~BUILDING '1' PARTIAL FIRST FLOOR LIGHTING PLAN 'C'~~						
	E202A	BUILDING '1' PARTIAL SECOND FLOOR LIGHTING PLAN 'A'						
	E202B	BUILDING '1' PARTIAL SECOND FLOOR LIGHTING PLAN 'B'						
	E203A	BUILDING '1' PARTIAL THIRD FLOOR LIGHTING PLAN 'A'						
	E203B	BUILDING '1' PARTIAL THIRD FLOOR LIGHTING PLAN 'B'						
	E401	BUILDING '1' ELECTRICAL UNIT PLANS						
	E506	BUILDING '1' ELECTRICAL LUMINARE SCHEDULE						
	E507	BUILDING '1' TELEPHONE AND FIRE ALARM SCHEMATIC DIAGRAMS						
	E601	BUILDING '1' ELECTRICAL ONE-LINE DIAGRAM						
	E602	BUILDING '1' ELECTRICAL PANELBOARD SCHEDULES						
	E603	BUILDING '1' ELECTRICAL PANELBOARD SCHEDULES						
	E604	BUILDING '1' ELECTRICAL PANELBOARD SCHEDULES						

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PROFESSIONAL SEAL

KEVIN J. BESSOLO
AR12069

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MHA - PALMS AT UNIVERSITY APARTMENTS
PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED

DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS
2	10-11-18	HUD COMMENTS
3	12-13-18	VE CHANGES

PROJECT NO: 15083.00
DRAWN BY: JMS
PROJECT MANAGER: AW
CHECKED BY: KJB
DATE: 12-29-17
SCALE: NOT TO SCALE

G001-2
INDEX OF DRAWINGS

12/13/2018 5:13:47 PM

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	INT	INTERIOR
AP	ACCESS PANEL	INTERM	INTERMEDIATE
APC	ACOUSTICAL PANEL CEILING	INV	INVERT
ADJ	ADJUSTABLE	J/JAN	JANITOR
ADMIN	ADMINISTRATOR	JT	JOINT
ALF	ASSISTED LIVING FACILITY	JST	JOIST
ALUM	ALUMINUM	JB	JUNCTION BOX
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	KIT	KITCHEN
		KO	KNOCKOUT
ADA	AMERICAN WITH DISABILITIES ACT	KP	KICK PLATE
AHU	AIR HANDLING UNIT	LAM	LAMINATE
ALT	ALTERNATE	LDRY	LAUNDRY
APPROX	APPROXIMATE	LAV	LAVATORY
A/ARCH	ARCHITECT(URE) (URAL)	LR	LEAN RAIL
AUX	AUXILIARY	LB	POUND
AVG	AVERAGE	LBS	POUNDS
BLDG	BUILDING	LH	LEFT HAND
BFF	BELOW FINISH FLOOR	LHR	LEFT HAND REVERSE
BITUM	BITUMINOUS	LF	LINEAR FOOT/FEET
BTW	BETWEEN	LP	LOW POINT
BWC	BOTTLELESS WATER COOLER	MDH	MAGNETIC DOOR HOLDER
BD	BOARD	MAINT	MAINTENANCE
B.U.R	BUILT UP ROOF	MFR	MANUFACTURER
BUS	BUSINESS	MKTG	MARKETING
CAB	CABINET	MO	MASONRY OPENING
CPT	CARPET	MATL	MATERIAL
CPTB	CARPET BASE	MAX	MAXIMUM
CB	CATCH BASIN/COVE BASE	M/MECH	MECHANICAL
CLG	CEILING	MTG	MEETING
CEM	CEMENT	MC	MEMORY CARE
℄	CENTERLINE	MTL	METAL
CER	CERAMIC	MW	MICROWAVE
CT	CERAMIC TILE	MPH	MILES PER HOUR
CTB	CERAMIC TILE BASE	MIN	MINIMUM
CWT	CERAMIC WALL TILE	MISC	MISCELLANEOUS
CR	CHAIR RAIL	MOD	MODIFY
CHEM	CHEMICAL	MLDG	MOLDING
CU	CLEAN UTILITY	MTD	MOUNTED
CL	CLEAN LINEN	NOM	NOMINAL
CLR	CLEAR	NC	NONCOMBUSTIBLE
CLO	CLOSET	N	NORTH
COL	COLUMN	N/A	NOT APPLICABLE
COMM	COMMUNICATION	N.I.C	NOT IN CONTRACT
CONN	CONNECTION	N/R	NOT REQUIRED
CONC	CONCRETE	NOA	NOTICE OF APPROVAL
CMU	CONCRETE MASONRY UNIT	NO.	NUMBER
CONST	CONSTRUCTION	OC	ON CENTER
CONT	CONTINUOUS	OPNG	OPENING
CJ	CONTROL JOINT	OPP. HAND	OPPOSITE HAND
CG	CORNER GUARD	OD	OUTSIDE DIAMETER
CORR	CORRIDOR	OA	OVERALL
CM	CROWN MOLDING	OS	OVERFLOW SCUPPER
DEMO	DEMOLITION	OH	OVERHEAD
DEPT	DEPARTMENT	P	PANTRY
DTL	DETAIL	PASS	PASSAGE
DIA	DIAMETER	PT-#	PAINT-NUMBER
DIM	DIMENSION	PLAS	PLASTIC
D.O.N.	DIRECTOR OF NURSING	P. LAM.	PLASTIC LAMINATE
DISC	DISCOVERY	PLYWD	PLYWOOD
DISP	DISPENSER	PVC	POLYVINYLCHLORIDE
DISTR	DISTRIBUTION	PSI	POUNDS PER SQUARE INCH
DIV	DIVISION	PT	PRESSURE TREATED
DBL	DOUBLE	PL	PROPERTY LINE
DN	DOWN	QTY	QUANTITY
DS	DOWNSPOUT	QT	QUARRY TILE
DST	DRAFTSTOPPING	RAD	RADIUS
DWG	DRAWING	RTD	RATED
DF	DRINKING FOUNTAIN	RCPT	RECEPTIONIST
D	DRYER	RCP	REFLECTED CEILING PLAN
EA	EACH	REF	REFRIGERATOR
E/ELEC	ELECTRICAL	REINF	REINFORCED
EF	EXHUST FAN	REQ	REQUIRED
EP	ELECTRIC PANEL	RES	RESILIENT
EWC	ELECTRIC WATER COOLER	REV	REVISION
EWH	ELECTRIC WATER HEATER	RH	RIGHT HAND
EL	ELEVATION	RHR	RIGHT HAND REVERSE
ELEV	ELEVATOR	R	RISER
EMER	EMERGENCY	RD	ROOF DRAIN
ENCL	ENCLOSURE	RM	ROOM
EQUIP	EQUIPMENT	RO	ROUGH OPENING
EQ	EQUAL	SCHED	SCHEDULE(D)
ETC	ETCETERA	SECT	SECTION
EXIST	EXISTING	SHT	SHEET
EPS	EXPNDED POLYSTYRENE	SIM	SIMILAR
EJ	EXPANSION JOINT	SU	SOILED UTILITY
EXP	EXPOSED/EXPANSION	STC	SOUND TRANSMISSION COEFFICIENT
EXT	EXTERIOR	SPEC	SPECIFICATION
FT	FEET	SQ	SQUARE
FV	FIELD VERIFY	SQ FT	SQUARE FOOT
F	FILLER	SS	STAINLESS STEEL
FIN	FINISH	STD	STANDARD
FF	FINISH FLOOR	STL	STEEL
FO	FINISHED OPENING	ST	STONE TILE
FP	FIREPLACE	STG	STORAGE
FE	FIRE EXTINGUISHER	S/STRUCT	STRUCTURAL
FEC	FIRE EXTINGUISHER CABINET	SUSP	SUSPENDED
FIXT	FIXTURE	TELE	TELEPHONE
FLR	FLOOR	TEMP	TEMPERATURE
FD	FLOOR DRAIN	THK	THICKNESS
FPA	FLORIDA PRODUCT APPROVAL	TLT	TOILET
FLUOR	FLUORESCENT	TOS	TOP OF SLAB
FTG	FOOTING	TOJ	TOP OF JOIST
FDN	FOUNDATION	TYP	TYPICAL
FR	FRAME	UCR	UNDECOUNTER REFRIDGERATOR
GAL	GALLON(S)	U	UNDERCUT
GALV	GALVANIZED	UL	UNDERWRITER'S LABORATORY
GA	GAUGE	U.O.N.	UNLESS OTHERWISE NOTED
GEN	GENERATOR	UTIL	UTILITY
GB	GRAB BAR	VERT	VERTICAL
GYP	GYPSUM	VEST	VESTIBULE
GWB	GYPSUM WALL BOARD	V.I.F.	VERIFY IN FIELD
HDCP	HANDICAP	VCT	VINYL COMPOSITION TILE
HR	HANDRAIL	VT	VINYL TILE
HDW	HARDWARE	VWB	VINYL WALL BASE
HLTH	HEALTH	W	WASHER
HVAC	HEATING,VENTILATING, AIR CONDITIONING	WP	WATERPROOF
		WR	WATER RESISTANT
HT	HEIGHT	WRB	WEATHER RESISTANT BARRIER
HP	HIGH POINT	WWM	WELDED WIRE MESH
HM	HOLLOW METAL	WC	WHEEL CHAIR
HORIZ	HORIZONTAL	W/	WITH
HW	HOT WATER	W/O	WITHOUT
HSKP	HOUSEKEEPING	WD	WOOD
ILF	INDEPENDENT LIVING FACILITY	WDB	WOOD BASE
INSUL	INSULATION	WDM	WOOD MOLDING
ID	INTERIOR DESIGN	XPS	EXTRUDED POLY STYRENE

LEGENDS

MATERIAL LEGEND

- FINISH WOOD
- ROUGH WOOD
- BATT INSULATION
- RIGID INSULATION
- CERAMIC TILE
- GYPSUM WALLBOARD
- METAL(LARGE SCALE)
- METAL(SMALL SCALE)
- ACOUSTICAL TILE
- EARTH
- POROUS FILL
- PRECAST CONCRETE
- STRUCTURAL CONCRETE
- BRICK
- CONCRETE MASONRY UNITS
- PLYWOOD
- TILE ON CONCRETE
- RESILIENT FLOORING

SYMBOL LEGEND

- AXXX — INDICATES SECTION NUMBER / INDICATES SHEET WHERE SECTION IS DRAWN
- AXXX — INDICATES INTERIOR ELEVATION NUMBER / INDICATES SHEET WHERE INTERIOR ELEVATION IS DRAWN
- AXXX — INDICATES DETAIL NUMBER / INDICATES SHEET WHERE DETAIL IS DRAWN
- X/XXX — INDICATES NUMBER AND SHEET WHERE EXTERIOR ELEVATION IS DRAWN
- TOP OF SLAB 0'-0" — ELEVATION LINE FLOOR/DATUM
- A — WINDOW TAG
- 100 — DOOR TAG
- A — TOILET ACCESSORIES
- X — PARTITION TYPE
- X X — INTERIOR FINISH TAG
- AREA/ITEM REVISED — REVISION

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GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE BUILDING CODE OF THE STATE OF FLORIDA, AND ALL OTHER LOCAL, COUNTY, STATE AND FEDERAL AGENCIES HAVING JURISDICTION OVER THE WORK. THE MORE STRINGENT CODE SHALL APPLY IF CONFLICT EXISTS IN OR BETWEEN CODES.
2. IN GENERAL, THE CONTRACTOR(S) SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY AND/OR REQUIRED TO PERFORM AND COMPLETE THE ENTIRE PROJECT.
3. ALL WORK SHALL BE TRUE, LEVEL, AND OF THE BEST WORKMANSHIP FOR EACH TRADE. ALL MECHANICS SHALL BE SKILLED AND/OR APPROPRIATELY LICENSED BY THE AUTHORITIES HAVING JURISDICTION OVER SUCH.
4. ALL DIMENSIONS SHOWN ARE ACTUAL FACE METAL STUD DIMENSIONS, UNLESS OTHERWISE INDICATED.
5. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.
6. ANY VARIATIONS FROM CONDITIONS SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. WORK SHALL NOT PROCEED UNTIL CLARIFICATION HAS BEEN RECEIVED.
7. SHOP DRAWINGS, WHERE APPLICABLE, MUST BE SUBMITTED FOR APPROVAL, PRIOR TO FABRICATION.
8. DISCREPANCIES AND OMISSIONS ON DRAWINGS AND SPECIFICATIONS SHALL BE REPORTED TO THE ARCHITECT IN WRITING FOR CLARIFICATION.
9. ALL EXISTING WORK SCHEDULED TO REMAIN, WHICH IS DAMAGED OR MADE IMPERFECT, SHALL BE REPLACED OR REPAIRED TO THE ORIGINAL CONDITION, AS DETERMINED BY THE ARCHITECT.
10. NO WORK SHALL COMMENCE UNTIL A BUILDING PERMIT HAS BEEN ISSUED.
11. SEPARATE PERMITS ARE TO BE OBTAINED FOR ELECTRICAL AND PLUMBING WORK.
12. ALL SUBCONTRACTORS SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND LICENSES AND BE RESPONSIBLE FOR HAVING THEIR WORK INSPECTED BY THE AUTHORITIES HAVING JURISDICTION.
13. EACH CONTRACTOR AND/OR SUBCONTRACTOR SHALL COORDINATE HIS OWN WORK WITH OTHER TRADES.
14. ALL CONTRACTORS AND/OR SUBCONTRACTORS ARE TO USE APPROVED STANDARD: A.I.S.C., FEDERAL. US, ETC., JCAHO INTERIM SAFETY MEASURES, STANDARDS OF THEIR TRADES. ALL CONSTRUCTION SHALL BE PERFORMED TO THESE STANDARDS.
15. ALL LUMBER, IN CONTACT WITH CONCRETE OR MASONRY, SHALL BE PRESSURE PRESERVATIVE TREATED.
16. IF AMBIGUITIES EXIST IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL INCLUDE IN HIS BID THE MORE EXPENSIVE METHOD OF WORK.
17. EACH CONTRACTOR SHALL REMOVE AND DISPOSE OF HIS OWN DEBRIS AS PER CONTRACT SPECIFICATIONS AND PREMISES SHALL BE LEFT BROOM CLEANED ON A DAILY BASIS. ALL AREAS NOT INVOLVED IN THE WORK SHALL BE PROTECTED FROM DAMAGE, DUST, DEBRIS. ANY DAMAGE TO ADJACENT AREAS OCCASIONED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR.
18. LARGE SCALE DETAILS HAVE PRECEDENCE. HOWEVER , WORK INDICATED ON SMALL SCALE DRAWINGS SHALL NOT BE OMITTED. SIMILARLY, NOTES TAKE PRECEDENCE OVER SCHEDULES, PIPING AND WIRING DIAGRAMS, HOWEVER, WORK SHOWN OR DESCRIBED BY OTHER METHODS SHALL NOT BE OMITTED.
19. CUT AND PATCH ALL EXISTING FINISHES AS REQUIRED BY NEW WORK. MATCH AND FINISH TO PRESENT FINISHED SURFACES OR AS INDICATED.
20. ALL WALLS TO BE CARRIED UP AND SECURED TO ROOF DECK, FLOOR DECK OR SLAB UNLESS OTHERWISE SPECIFIED.
21. CONTRACT LIMIT LINES ARE SHOWN ONLY FOR GENERAL PURPOSES. THEY DO NOT LIMIT THE WORK UNDER CONTRACT FOR ISOLATED ITEMS BEYOND SUCH LIMIT LINES.
22. ALL WORK LET UNDER THIS CONTRACT SHALL BE GUARANTEED AND HONORED BY THE G.C. FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM THE DATE OF FINAL PAYMENT, WHICH SHALL CONSTITUTE FINAL ACCEPTANCE. THE GRANTING OF A CERTIFICATE OF OCCUPANCY SHALL NOT CONSTITUTE FINAL ACCEPTANCE.
23. EACH CONTRACTOR SHALL DO THE NECESSARY CUTTING, PATCHING. REMOVAL. ETC. AS REQUIRED BY THEIR WORK. EACH INDIVIDUAL CONTRACTOR (TRADE) SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING WORK, WHICH SHALL BE REPLACED BY NEW, WHERE REQUIRED. UPON COMPLETION OF ALL WORK, THE CONTRACTORS SHALL REPAIR IMPROPER WORK TO THE SATISFACTION OF THE CODE ENFORCEMENT OFFICIAL AND ARCHITECT AND/OR OWNERS AT THE CONTRACTOR'S EXPENSE.
24. HOURS OF WORK, NOISE, USE OF BUILDING GROUNDS, ACCESS TO ADJACENT AREAS, SERVICES, ETC. SHALL ALL BE COORDINATED AND APPROVED BY THE BUILDING MANAGEMENT, PRIOR TO SUBMISSION OF A PROPOSAL. THE USE OF BUILDING SERVICES AND INTERRUPTION OF BUILDING UTILITIES SHALL BE COORDINATED WITH BUILDING MANAGEMENT, PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY COSTS INCURRED TO COORDINATE AND SEEK BUILDING APPROVAL OF WORK ASSOCIATED WITH HIS CONTRACT.
25. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR THE PERFORMANCE OF THE GENERAL CONTRACTOR, NOR ANY ASSOCIATED SUBCONTRACTORS PERFORMING WORK UNDER THIS CONTRACT.
26. ALL CONTRACTORS BIDDING ON THIS PROJECT SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS, PRIOR TO SUBMISSION OF A BID. FURTHERMORE, WHERE NO SPECIFIC BRAND OR MODEL IS SPECIFIED, THE CONTRACTORS SHALL PROVIDE SUCH, INCLUDING MANUFACTURERS' CUT SHEETS AS A PART OF THEIR BID.
27. PROVIDE EXIT TACTILE SIGNAGE IN ACCORDANCE WITH NFPA-101:7.10.3, FFPC, 5TH EDITION AND ANSI A117.1, 2009 EDITION.
28. PROVIDE STAIRWAY SIGNAGE IN ACCORDANCE WITH NFPA-101:7.2.2.5.4, FFPC,5TH EDITION. PROVIDE BRAILLE EXIT SIGN AT ALL EXIT STAIRWAYS PER FBC 1011.4.
29. FIRE ALARM SYSTEMS WILL BE PROVIDED IN ACCORDANCE WITH NFPA-101:10.3.4, FFPC, 5TH EDITION: NFPA-101:32.3.3.4, FFPC, 5TH EDITION.
30. CONTRACTOR TO PROVIDW THIRD PARTY INSPECTOR FOR PENETRATION INSPECTIONS
31. DEFERRED SUBMITTALS: PROVIDE ENGINEERED TRUSS DRAWINGS FOR REVIEW AND SEPARATE PERMITTING SUBMITTAL (1)
32. DEFERRED SUBMITTAL: CONTRACTOR TO PROVIDE COMPLETE DRAWINGS, SPECIFICATIONS, & PRODUCT LITERATURE BY CERTIFIED & LICENSED ENGINEER FOR ENTIRE RADON GAS MITIGATION SYSTEM TO BE INSTALLED PER SPEC SECTION 02368. DRAWINGS TO BE SIGNED SIGNED & SEALED BY LICENSED STATE OF FLORIDA ENGINEER. SYSTEM TO BE APPROVED BY ARCHITECT & OWNER. FINAL RADON REPORT DOCUMENTING POST. CONSTRUCTION TESTING BY CERTIFIED RADON PROFESSIONAL REQUIRED FOR FINAL ENDORSEMENT. (3)

CODES REFERENCED

2014 - FLORIDA BUILDING CODE FIFTH EDITION OR FLORIDA BUILDING CODE (2014)
2014 - FLORIDA MECHANICAL CODE - FIFTH EDITION
2014 - FLORIDA PLUMBING CODE - FIFTH EDITION
2012 - NFPA 101 LIFE SAFETY CODE
1984 - UNIFORM FEDERAL ACCESSIBILITY STANDARDS
2012 - AMERICANS WITH DISABILITIES ACT
2007 - NFPA 10 STANDARD FOR PORTABLE FIRE EXTINGUISHERS
2007 - NFPA 13 STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEM (NON-RESIDENTIAL)
2007 - NFPA 13R STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEM LOW RISE RESIDENTIAL
2007 - NFPA 14 STANDARD FOR THE INSTALLATION OF STANDPIPE SYSTEM
2006 - NFPA 37 STANDARD FOR THE INSTALLATION AND USE OF D USE OF STATIONARY COMBUSTION ENGINES AND GAS TURBINES
2011 - NFPA 70 NATIONAL ELECTRIC CODE
2009 - NFPA 70E STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE
2010 - NFPA 72 NATIONAL FIRE ALARM CODE
2011 - NFPA 80 STANDARD FOR FIRE DOORS AND FIRE WINDOWS
2010 - NFPA 90A STANDARD FOR THE INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEM
2007 - NFPA 105 STANDARD FOR THE INSTALLATION OF SMOKE-CONTROL DOOR ASSEMBLIES
2005 - NFPA 110 STANDARD FOR EMERGENCY AND STANDBY POWER SYSTEMS
2009 - NFPA 221 STANDARD FOR FIRE WALLS AND FIRE BARRIERS
2004 - NFPA 241 STANDARD FOR SAFE GUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS
2006 - NFPA 251 STANDARD METHODS OF TEST OF FIRE ENDURANCE OF BUILDING CONSTRUCTION AND MATERIALS
2008 - NFPA 252 STANDARD METHODS OF FIRE TEST OF DOOR ASSEMBLIES
2006 - NFPA 253 STANDARD METHODS OF TEST FOR CRITICAL FLUX OF FLOOR COVERING SYSTEMS USING A RADIANT HEAT ENERGY SOURCE
2006 - NFPA 255 STANDARD METHODS OF TEST OF SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS
2007 - NFPA 257 STANDARD FOR FIRE TEST FOR WINDOWS AND GLASS BLOCK ASSEMBLIES
2006 - NFPA 286 STANDARD METHODS OF FIRE TEST FOR EVALUATING CONTRIBUTION OF WALL AND CEILING INTERIOR FINISH TO ROOM FIRE GROWTH
1998 - HUD FAIR HOUSING ACCESSIBILITY GUIDELINES (1)

PRODUCT APPROVALS

MANUFACTURER	PRODUCT CATEGORY	APPROVAL NUMBER/SEQ.#	PRODUCT MODEL # OR NAME	SERIES	GLASS TYPE/SIZE	APPROVAL ENTITY	EXPIRATION DATE
EXTERIOR DOORS							
LAWSON INDUSTRIES	SWINGING	FL 15443.1	LAPORTE - OUTSWING	SERIES 2000			09/13/2018
CECO	SWINGING	FL 10723.1	HOLLOW METAL	TRIO-E			07/01/2018
SCHLAGE	HOLLOW METAL	FL 1591.RT	STEEL CRAFT	"H" SERIES			12/31/2018
WINDOWS							
DOERS WINDOWS	SINGLE HUNG WINDOW	FL 16854.8	MODEL 4450 (1)	SERIES 4400			12/31/2017
DOERS WINDOWS	FIXED WINDOW	FL 15099.2	FIXED WINDOW	DURA GUARD			12/31/2017
WALL PANELS							
JAMES HARDI SIDING	SIDING	FL 13223.2 (1)	HARDI PANEL SIDING				01/01/2018
JAMES HARDI SIDING	PANELS	FL 13265.1	HARDI PANEL PANELS				01/01/2018
ROOFING PRODUCTS							
GAF	FIBERGLASS SHINGLES	FL 10124.1	TIMBERLINE				03/03/2018
PETERSON ALUMINUM	METAL ROOF	FL 15839.3	SNAP CLAD				04/18/2018
FIRESTONE	SINGLE PLY TPO	FL 10264.1	ULTRA PLY	SINGLE PLY			12/05/2019

VICINITY MAP - PALMS AT UNIVERSITY

LOCATION MAP - PALMS AT UNIVERSITY

BUILDING CODE ANALYSIS - BUILDING '1' & '2'

DESCRIPTION	FBC SECTION	FBC REQUIRED	FBC REQUIRED	NFPA 1 SECTION	NFPA 1 REQUIRED	NFPA 101 SECTION	NFPA 101 REQUIRED	REQUIRED	PROPOSED
STATE OF FLORIDA BUILDING CODE	PROJECT:PALMS AT UNIVERSITY								
2014 EDITION	PROJ. NO. 15083.00								
BUILDING CODE ANALYSIS	DATE: 11-22-16								
DESCRIPTION	FLORIDA BUILDING CODE 2014 - 5TH EDITION			FLORIDA FIRE PREVENTION CODE- FIFTH EDITION				REQUIRED	PROPOSED
	SECTION	REQUIRED		NFPA 1- 2012		NFPA 101- 2012			
				SECTION	REQUIRED	SECTION	REQUIRED		
USE AND OCCUPANCY CLASSIFICATIONS- CHAPTER 3									
OCCUPANCY CLASSIFICATION-				CHAPTER 6					
RESIDENTIAL BUILDING 1	310.4	R-2 RESIDENTIAL		6.1.8.1.5	RESID. BOARD /CARE	CHAPTER 30	NEW APARTMENT (1)	R-2	R-2 RESIDENTIAL
BUSINESS BUILDING 2	304.1	B BUSINESS			BUSINESS	CHAPTER 26	NEW BUSINESS	B	B BUSINESS
SPECIAL DETAILED REQUIREMENTS- CHAPTER 4									
SECTION 420									
GENERAL BUILDING HEIGHT AND AREA- CHAPTER 5									
OCCUPANCY GROUP (SEPARATED OCCUPANCIES)	508.1	R2-RESIDENTIAL	BUSINESS						
HEIGHT (FEET)	TABLE 503	50 FEET	50 FEET					50	38.2 FT +/-
STORIES	TABLE 503	3 STORY	3 STORY					3 STORY	3 STORY
AREA	TABLE 503	12,000 SF	18,000 SF					39,840 SF	20,796 SF
SPRINKLER INCREASE- HEIGHT - NOT USED								NOT USED	_
AREA - TYPE V-A - A2 ASSEMBLY	506.3	200%=24,000 SF						200%=23,000 SF	23,000 SF
INCREASE SPRINKLER FRONTS ON PUBLIC WAY	506.2	3,840 SF							
TOTAL ALLOWABLE AREA	506.1	39,840						<38,180	24,600
INCIDENTAL SPACES	TABLE 509								
LAUNDRY MORE THAN 100 S.F.	TABLE 509	1 HR OR SPRINKLER						1 HOUR	1 HOUR &SPRINKLER
STORAGE MORE THAN 100 S.F.	TABLE 509					TABLE 30.3.2.1.1	1 HR &SPRINKLER	1 HR &SPRINKLER	1 HOUR & SPRINKLER
WASTE/ LINEN ROOMS	TABLE 509	1 HR OR SPRINKLER				TABLE 30.3.2.1.1	1 HR &SPRINKLER	1 HR &SPRINKLER	1 HOUR &SPRINKLER
SEPARATION BETWEEN OCCUPANCIES - BUILDING 1	TABLE 508.4	A3 - R2 - 1HR		TABLE 6.1.14.4.1	1 HOUR	TABLE 6.1.14.4.1	1 HOUR	1 HOURS	1 HOURS
SUBDIVISION OF BUILDING AREAS- (SMOKE COMPARTMENTS)						32.3.3.7.8	1 HOUR	1 HOUR	1 HOUR
TYPE OF CONSTRUCTION- CHAPTER 6									
CONSTRUCTION CLASSIFICATION	TABLE 602.5	V-A						V-A	V-A
FIRE RESISTANCE RATING FOR BLDG ELEMENTS	TABLE 601								
STRUCTURAL FRAME		1 HRS						1 HOURS	1 HOURS
BEARING WALLS- EXTERIOR		1HRS						1 HOURS	1 HOURS
INTERIOR		1HRS						1 HOURS	1 HOURS
NON-BEARING WALLS- EXTERIOR	TABLE 601	0 HRS						0 HOURS	0 HOURS
INTERIOR		0 HRS						0 HOURS	0 HOURS
FLOOR CONSTRUCTION		1HRS						1 HOURS	1 HOURS
ROOF CONSTRUCTION		1HRS						1 HOURS	1 HOURS
FIRE AND SMOKE PROTECTION FEATURES-CHAPTER 7									
PARAPETS- HEIGHT ABOVE ROOF	705.11.1	2'-6"							
FIRE WALLS	TABLE 706.4	SEE - AL100 2 HOURS						2 HOURS	2 HOURS
FIRE BARRIERS	707.3.9	1 HOUR				8.3.1	1 HOUR	1 HOURS	1 HOURS
SHAFT ENCLOSURES	713.4	1 HOUR				8.6.5	1 HOUR	1 HOUR	1 HOUR
FIRE PARTITIONS-DEMISING PARTITIONS	708.3	1 HOUR						1 HOUR	1 HOUR
SMOKE BARRIERS	709.3	1 HOUR		12.9	SMOKE TIGHT	32.3.3.7.8	1 HOUR	1 HOUR	1 HOUR
SMOKE PARTITIONS	710.3	NO RATING		12.8	SMOKE TIGHT	8.4	NO RATING	NO RATING	0 HOUR
OPENING PROTECTIVE	TABLE 716.5	SAME AS PTN		TABLE 12.7.4.2	SAME AS PTN	TABLE 8.3.4.2	SAME AS PTN	SAME AS PTN	SAME AS PTN
REFUSE AND LAUNDRY CHUTES	713.13	1 HOUR						1 HOUR	1 HOUR
SMOKE BARRIERS- LOCATIONS WHERE REQUIRED-I1	709	NA		12.9	ALL	32.3.3.7.1	2 SPACES MIN.	2 SPACES	2 SPACES
						32.3.3.2	< 22,500 SF.	< 22,500 SF.	VARIES, SEE LIFE SAFETY
						32.3.3.3	TRAVEL DIS. 200 FT.	TRAVEL DIS. 200 FT.	TRAVEL DIS. 200 FT.
INTERIOR FINISHES- CHAPTER 8 - MOST RESRICTIVE		R2	B						
EXITS ENCLOSURES AND EXIT PASSAGEWAYS	TABLE 803.9	C	B			7.1.4	CLASS A OR B	CLASS B	CLASS B
CORRIDORS	TABLE 803.9	C	C			7.1.4	CLASS B OR C	CLASS B	CLASS B
ROOMS AND ENCLOSED SPACES	TABLE 803.9	C	C					CLASS C	CLASS C
FIRE PROTECTION SYSTEMS- CHAPTER 9									
SPRINKLER SYSTEM	903.2	NFPA 13		13.3.2.19.1.1	REQUIRED	32.3.3.5.1	REQUIRED	REQUIRED	PROVIDED
STANDPIPE SYSTEM	905.3	NA						NA	NA
FIRE ALARM AND DETECTION SYSTEM	907.2	REQUIRED		13.7.2.15.2.1	REQUIRED	32.3.3.4.1	REQUIRED	REQUIRED	PROVIDED
SMOKE CONTROL SYSTEM	909	NA						NA	NA
CARBON MONOXIDE ALARMS	908.7	REQUIRED						REQUIRED	PROVIDED
PROTABLE FIRE EXTINGUISHERS	906	REQUIRED - A,I						REQUIRED	PROVIDED
MEANS OF EGRESS- CHAPTER 10									
FLOOR AREA PER OCCUPANT	TAB 1004.1.2			TABLE 14.8.1.2		TABLE 7.3.1.2			(2)
ASSEMBLY (UNCONCENTRATED)		15 SF			15 SF		15 SF	15 SF	15 SF NET
RESIDENTIAL		200 SF			200 SF		200 SF	200 SF	200 SF
SLEEPING		120 SF			120 SF		120 SF	120 SF	120 SF
KITCHEN		200 SF			100 SF		100 SF	100 SF	100 SF
BUSINESS		100 SF			100 SF		100 SF	100 SF	100 SF
EGRESS WIDTH PER OCCUPANT- STAIRWAYS	1005.3.1	0.3"		TABLE 14.8.3.1	0.4"	TABLE 7.3.3.1	0.4"	0.4"	0.4"
OTHER COMPONENTS	1005.3.1	0.2"			0.2"		0.3"	0.2"	0.2"
DOOR- MIN CLEAR WIDTH	1008.1.1.1	2'-8"				7.2.1.2.3	2'-8"	2'-8"	2'-8"
STAIRWAYS- MIN WIDTH	1009.4	3'-8"				TABLE 7.2.2.2.1	3'-8"	3'-8"	3'-8"
MIN HEADROOM	1009.5	6'-8"				TABLE 7.2.2.2.1	6'-8"	6'-8"	6'-8"
TREADS- MINIMUM	1009.7	11"				TABLE 7.2.2.2.1.2	11"	11"	11"
RISERS-MAXIMUM	1009.7	7"				TABLE 7.2.2.2.1	7"	7"	7"
MAXIMUM VERTICAL RISE- SINGLE RUN	1009.1	12'-0"				TABLE 7.2.2.2.1	12'-0"	12'-0"	12'-0"
HANDRAILS- HEIGHT	1012.2	34-38"				7.2.2.4.4.1	34-38"	34-38"	34-38"
CLEARANCE TO WALL	1012.7	1 1/2"	(2)			7.2.2.4.4.5	1 1/2"	1 1/2"	1 1/2"
HANDRAIL EXTENSION-TOP	1012.6	12"				7.2.2.4.4.10	12"	12"	12" (2)
BOTTOM	1012.6	1 TREAD DEPTH				7.2.2.4.4.10	1 TREAD DEPTH	1 TREAD DEPTH	1 TREAD DEPTH
EXIT SIGNAGE	1011.1	<100 FT.							<100FT.
RAMPS- MAXIMUM SLOPE	1010.3	1:12 = 8%				TABLE 7.2.5.2	1:12	1:12	
MINIMUM WIDTH BEWTEEN HANDRAILS	1010.6.1	3'-0"					3'-0"	3'-0"	
GUARDS- MINIMUM HEIGHT	1013.3	42"				7.2.2.4.5.2	42"	42"	42"
SPACE BETWEEN OPENINGS	1013.4	4" MAX				7.2.2.4.5.3	4" MAX	4" MAX	4" MAX
TWO EXITS- EXIT ACCESS DOORWAYS	1015.2.1	1/3 DIST. - SPRINKLERED						306 / 3 = 103	103
EXIT ACCESS- TRAVEL DISTANCE TO EXIT - SPRINKLERED	TABLE 1016.2								
RESIDENTAIL		250 FEET				32.3.2.6	250 FEET	250 FEET	250 FEET
ASSEMBLY		250 FEET				12.2.6	250 FEET	250 FEET	250 FEET
CORRIDOR WALLS- FIRE RATING	TABLE 1018.1	1 HOUR - I1		14.2	1 HOUR	32.3.3.6.3	1/2 HOUR	1 HOUR	1 HOUR
MAXIMUM DEAD END CORRIDOR	1018.4	50 FEET				32.3.2.5.4	20 FEET	20 FEET	20 FEET
MINIMUM WIDTH	1018.2	3'-8"				32.3.2.3.3	5'-0"	5'-0"	5'-0"
MINIMUM NUMBER OF EXITS	TABLE 1021.1	2				7.4.1.1	2	2	2
EXIT ENCLOSURES	1022.2	1 HOUR		14.3.1	1 HOUR	7.1.3.2.1	1 HOUR	1 HOUR	1 HOUR
EXIT PASSAGEWAYS	1023.3	1 HOUR						1 HOUR	1 HOUR
HORIZONTAL EXITS	1025.2	2 HOURS						2 HOURS	2 HOURS
EMERGENCY ESCAPE AND RESCUE (EXCEPTION 1 & 2)	1029	NOT REQUIRED						NOT REQUIRED	PROVIDED
MINIMUM SIZE	1029.2	20" X 24" - 5.75 SF						20" X 24"	20" X 24"
ACCESSIBILITY- CHAPTER 11			R-2 / B					FG	TOTAL PROVIDED
PARKING SPACES REQUIRED (115 PROVIDED TOTAL)	TABLE 208.2	5 FOR 115	4 / 2					5	6
PARKING SPACE SIZE- WIDTH	502.2	12'-0"	8'-0"					12'-0"	12'-0"
ACCESS AISLE	502.3.1	5'-0"	5'-0" (1)					5'-0"	5'-0"
WATER CLOSET- CLEAR FLOOR SPACE	604.3.1	60" X 56"	60" X 56"					60" X 56"	60" X 56"
LOCATION & HEIGHT	604.2	LOC. 16'-18"/ HT. 17-19"	LOC. 16'-18"/ HT. 17-19"					17-19"	17-19"
GRAB BARS HEIGHT	609.4	33-36"	33-36"					33-36"	33-36"
URINALS- HEIGHT	605.2	17"	17"					17"	17"
LAVATORIES-HEIGHT	606.3	2'-10"	2'-10"					2'-10"	2'-10"
FLOOR SPACE	305	30" X 48"	30" X 48"					30" X 48"	30" X 48"
MIRRORS- HEIGHT TO GLASS	603.3	3'-4"	3'-4" (2)					3'-4"	3'-4" (3)
SHOWER STALLS- SIZE	608.2	36" X 36"/36" X 60"	36" X 36"/36" X 60"					36" X 36"/36" X 60"	36" X 36"/36" X 60"
NUMBER ACCESSIBLE UNITS REQUIRED	233.3	5% (3 UNITS)	5% (3 UNITS)					5%	3
NUMBER OF UNITS W/ COMMUNICATION FEATURES	233.3.1.2	2% (2 UNITS)	2% (2 UNITS)					2%	2
INTERIOR ENVIRONMENT- CHAPTER 12									
NATURAL VENTILATION-HABITABLE ROOMS	1203.4.1	4% FLOOR AREA						4% FLOOR AREA	4%
NATURAL LIGHTING- HABITABLE ROOMS	1205.2	8% FLOOR AREA						8% FLOOR AREA	8%
STC RATING BETWEEN UNITS-FLOOR/CEILING	1207.2	50 STC						50 STC	50 STC
MINIMUM CEILING HEIGHT-HABITABLE ROOMS	1208.2	7'-6"						7'-6"	7'-6"
WIND BORNE DEBRIS REGION - CHAPTER 16									
BUILDING RISK CATEGORY	TABLE 1604.5	II						II	II
WIND SPEED	FIG. 1609	160						160 MPH	160 MPH
DEFINITION - WIND BORNE DEPRIS REGION	1+2 PAGE 230								
GLAZING- UP TO 30'-0"- LARGE MISSLE IMPACT	1609.1.2	REQUIRED						PROVIDED	PROVIDED
ABOVE 30'-0"-SMALL MISSLE IMPACT	1609.1.2	REQUIRED						PROVIDED	PROVIDED
MASONRY- CHAPTER 21									
CHIMNEY- HEIGHT ABOVE ROOF	2113.9	3'-0"						NA	NA
ELEVATORS AND CONVEYING SYSTEMS- CHAPTER 30									
SHAFT VENT AREA- PER CAR - 3 STOREY BUILDING	3004.3	NR (3 STORY OR LESS)						NR 3 STOREY OR LESS	NA

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MHA - PALMS AT UNIVERSITY APARTMENTS
PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED

DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

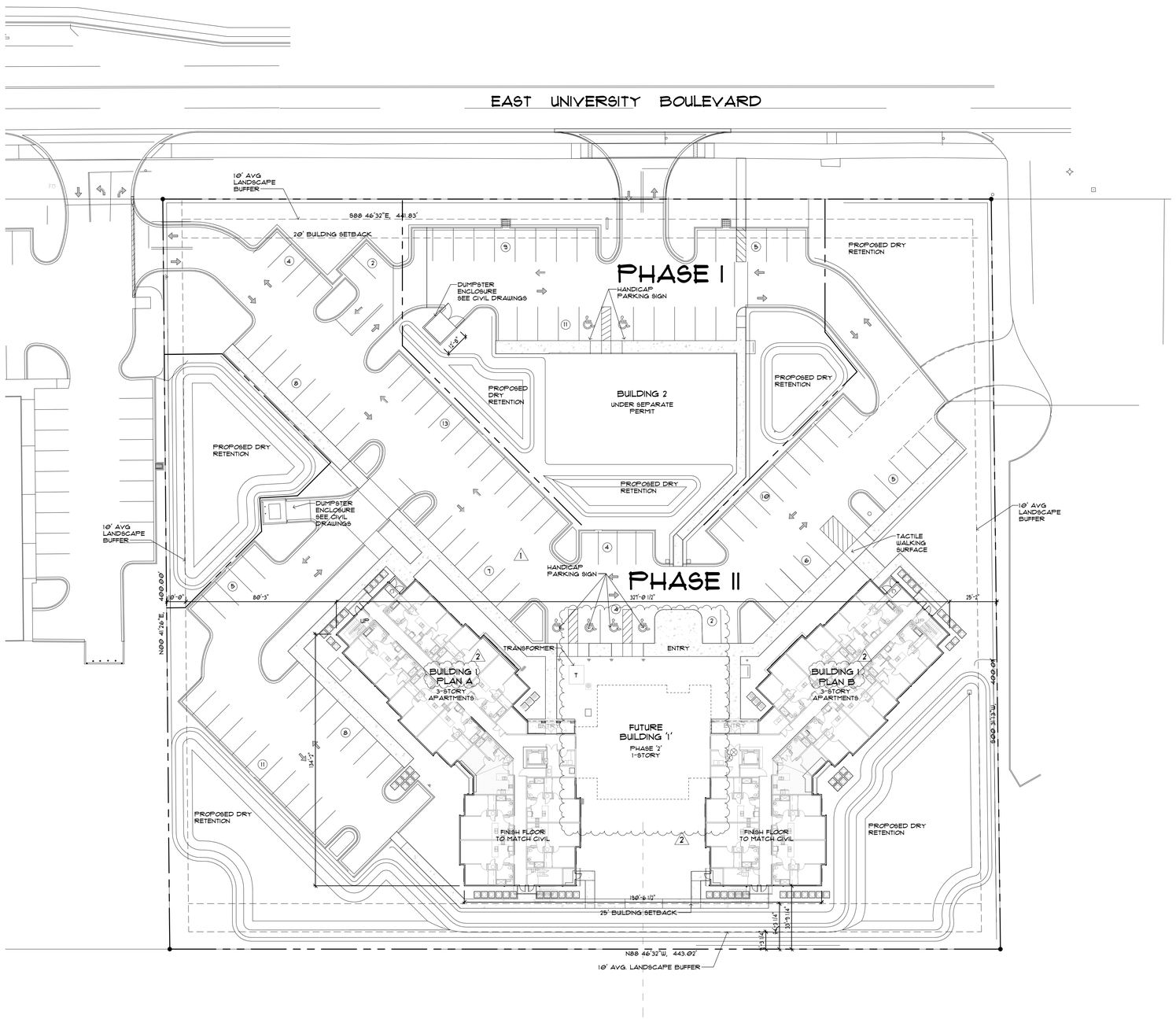
REVISIONS

NO:	DATE:	DESCRIPTION
1	02-20-18	BLDG. DEPT. COMM.
2	08-23-18	HUD COMMENTS
3	10-11-18	HUD COMMENTS

PROJECT NO:	15083.00
DRAWN BY:	RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

G002

ARCHITECTURAL GENERAL INFORMATION



1 ARCHITECTURAL SITE PLAN
SCALE: 1" = 30'-0"

GENERAL NOTES:

1. COORDINATE THIS DRAWING WITH CIVIL ENGINEERING DRAWINGS PREPARED BY MID-FLORIDA ENGINEERING CONSULTANTS, DBA FOR ALL SITE LAYOUT DIMENSIONS AND LOCATIONS.

2

BUILDING '1' SUMMARY

FLOOR	TOTAL SQ.FT (GROSS)
FIRST FLOOR	24,600
FUTURE FIRST FLOOR 'C'	3,804
SECOND FLOOR	19,018
THIRD FLOOR	17,392
TOTAL BUILDING	61,010

BUILDING '1' UNIT DISTRIBUTION

UNIT TYPE	QUANTITY	UNIT SQ. FT.	TOTAL SQ. FT.
FIRST FLOOR			
ONE BEDROOM 'A'	16	603	9,744
ONE BEDROOM 'B'	02	600	1,200
TWO BEDROOM 'C'	04	791	3,164
FIRST FLOOR	22		14,108
SECOND FLOOR			
ONE BEDROOM 'A'	16	603	9,744
ONE BEDROOM 'B'	-	600	
TWO BEDROOM 'C'	04	791	3,164
SECOND FLOOR	20		12,908
THIRD FLOOR			
ONE BEDROOM 'A'	16	603	9,744
ONE BEDROOM 'B'	-	600	-
TWO BEDROOM 'C'	02	791	1,582
THIRD FLOOR	18		11,326

UNIT SUMMARY

UNIT TYPE	QUANTITY
ONE BEDROOM 'A'	48
ONE BEDROOM 'B'	2
TWO BEDROOM 'C'	10
TOTAL UNITS	60

2

PHASE I - BUILDING '2' SUMMARY

FIRST FLOOR	5,000
TOTAL	5,000

PARKING SUMMARY

PARKING TYPE	QUANTITY
BUILDING '1'	
PARKING SPACE - ADA (5' AISLE) 12' X 18'	04
PARKING SPACES (90 DEG.) 10' X 18'	86
TOTAL PHASE BUILDING '1' PARKING SPACES	90
BUILDING '2'	
PARKING SPACES - ADA (5' AISLE) 12' X 18'	02
PARKING SPACES (90 DEG.) 10' X 18'	23
TOTAL BUILDING '2' PARKING SPACES	25
TOTAL BUILDING '1' AND '2' PARKING SPACES	115

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS
2	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	MKG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1" = 30'-0"

AS101

ARCHITECTURAL SITE PLAN

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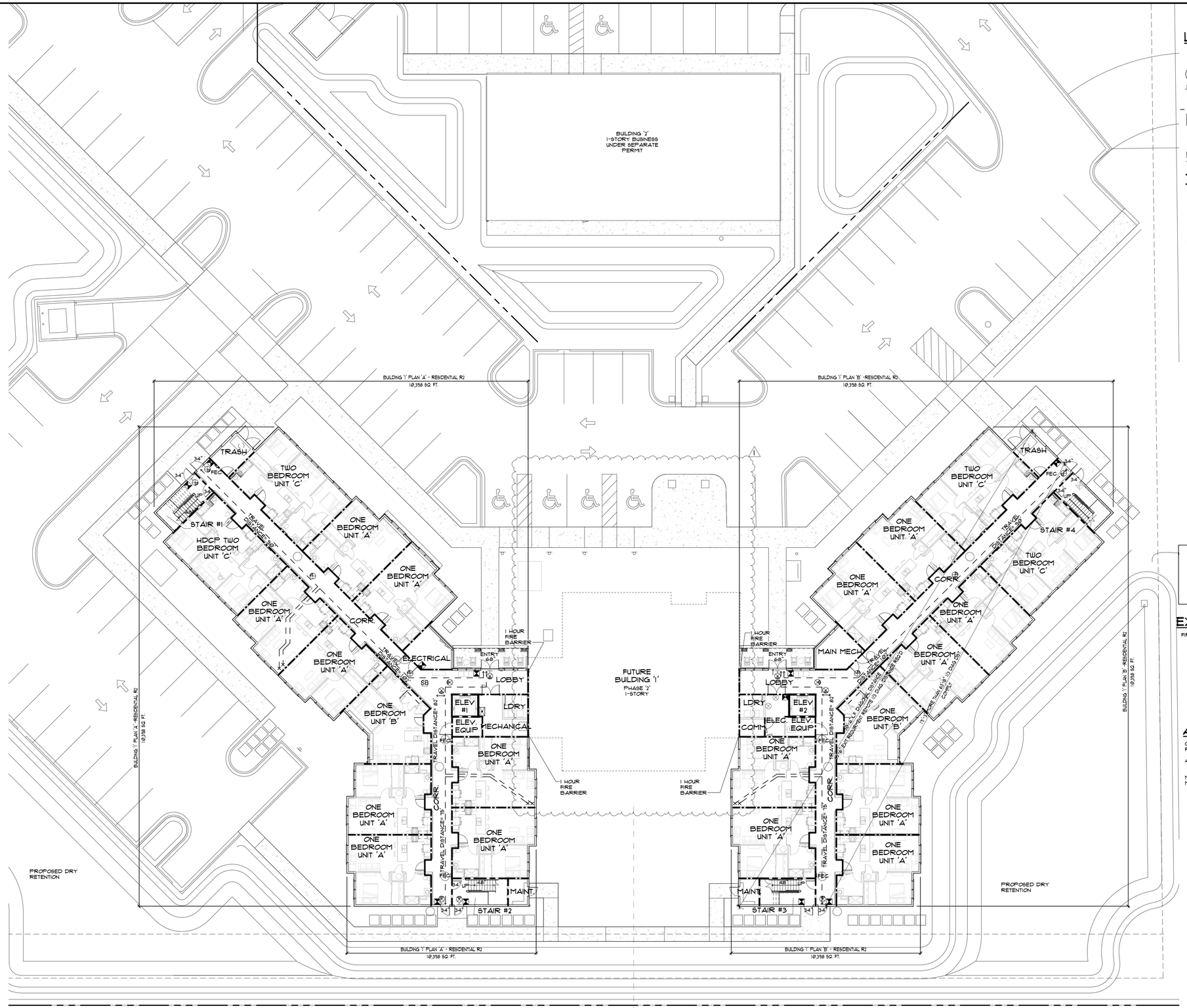

BUILDING '1' AND '2' FIRST FLOOR LIFE SAFETY PLAN

1 SCALE: 1/16" = 1'-0"

NORTH

LEGEND

NOTE #1 FOR BUILDING CODE ANALYSIS SEE SHEET G002
NOTE #2 FOR EMERGENCY SYMBOLS LEGEND SEE ELEC DRAWINGS

- EXIT LIGHT - SEE ELECTRICAL DRAWINGS
- FIRE EXTINGUISHER CABINET
- FIRE EXTINGUISHER AND WALL BRACKET
- PATH OF EGRESS / TRAVEL DISTANCE
- FIRE ALARM MANUAL PULL STATION

WALL RATINGS

- 1 HOUR FIRE PARTITION
- 1 HOUR FIRE BARRIER

ALLOWABLE AREAS - BUILDING '1'

CODE REFERENCE:
FLORIDA BUILDING CODE:

ALLOWABLE BUILDING AREA PER TABLE 503
R2 = 12,000 SF - TYPE V-A - FULLY SPRINKLED

MAXIMUM BUILDING HEIGHT PER TABLE 503 = 50 FEET

SECTION 506.1 - $A = A/T + (A/T \times I) + (A/T \times S)$

A= TOTAL ALLOWABLE BUILDING AREA PER FLOOR
A/T = AREA PER FBC TABLE 503
I = AREA INCREASE TO FRONTAGE = 0.437
S = AREA INCREASE TO SPRINKLER PER FBC 506.3 = 2

SECTION 506.2 - I= AREA INCREASE DUE TO FRONTAGE = (F/P-0.25)X(W/30)
P= BUILDING PERIMETER = 1268 LF
F= BUILDING PERIMETER FRONTING OPEN SPACE = 128 LF
W= WIDTH OF OPEN SPACE = 30
I=(128/1268 - 0.25) (30/30) = 0.32

CALCULATIONS:
PERIMETER OF BUILDING

P= 11'-6"+4'-0"+12'-0"+4'-0"+31'-0"+22'-3"+11'-11"+3'-10"+25'-6"+6'-11"+11'-4"+13'-6"+11'-4"+2'-6"+26'-2"+2'-6"+11'-4"+2'-0"+35'-5"+11'-4"+9'-3"+39'-4"+9'-3"+4'-10"+35'-5"+2'-0"+11'-4"+2'-6"+26'-2"+2'-6"+11'-4"+4'-6"+11'-11"+9'-6"+4'-8"+11'-4"+2'-6"+26'-2"+2'-6"+11'-4"+49'-7"+11'-4"+11'-6"+10'-10"+2'-6"+26'-2"+2'-6"+20'-7"+59'-6"+11'-4"+2'-6"+26'-2"+2'-6"+11'-4"+4'-9"+9'-6"+11'-11"+4'-9"+11'-4"+2'-6"+26'-2"+2'-6"+11'-4"+2'-0"+35'-5"+4'-10"+9'-3"+39'-4"+9'-3"+11'-4"+35'-5"+2'-0"+11'-4"+2'-6"+26'-2"+2'-6"+11'-4"+13'-6"+11'-4"+6'-10"+25'-6"+26'-0" 11'-

P=1267'-10" - USE 1268' LF

PERIMETER OF FRONTS ON PUBLIC WAY:

P= 11'-6"+4'-0"+12'-0"+4'-0"+31'-0"+22'-3"+11'-11"+3'-10"+25'-6"+6'-11"+11'-4"+13'-6"+11'-4"+2'-6"+26'-2"+2'-6"+11'-4"+2'-0"+35'-5"+11'-4"+9'-3"+39'-4"+9'-3"+4'-10"+35'-5"+2'-0"+11'-4"+2'-6"+26'-2"+2'-6"+11'-4"+11'-11"+9'-6"+11'-4"+2'-6"+26'-2"+2'-6"+11'-4"+39'-4"+9'-3"+11'-4"+35'-5"+2'-0"+11'-4"+2'-6"+26'-2"+2'-6"+11'-4"+13'-6"+11'-4"+6'-10"+ 25'-6"+26'-0"

P=128'-8" - USE 128' LF

WIDTH OF PUBLIC WAY- SECTION 506.2.1

W= 30'

SECTION 506.1 - PLAN 'A' & 'B' - RESIDENTIAL (R-2) TYPE V-A
FBC TABLE 503 = 12,000 SF
A= 12,000 + (12,000 X 0.32) + (12,000 X 2) = 39,840 SF
ACTUAL = 20,716 SF

PORTABLE FIRE EXTINGUISHERS

FLORIDA STATUTE 633.061 REQUIRES A LICENSE OR PERMIT OF ORGANIZATIONS AND INDIVIDUALS WHO SERVICE, RECHARGE, TEST, MARK, INSPECT, INSTALL, OR HYDROTEST FIRE EXTINGUISHERS.

USE A LICENSED FIRE EXTINGUISHER CONTRACTOR FOR IDENTIFYING THE FINAL LOCATION AND TYPE OF EXTINGUISHER TO USE.

EXIT UNIT CALCULATIONS - BUILDING '1'

FIRST FLOOR:

PLAN 'A' RESIDENTIAL R2:
10,358 SF / 200 SF = 52 PEOPLE
DOORS REQUIRED = 52 X 0.2" = 10.4"
DOORS PROVIDED= 2 DOORS @ 34"= 68" + 1 DOOR @ 68"
TOTAL= 136 COMPLIES

PLAN 'B' RESIDENTIAL R2:
10,358 SF / 200 SF = 52 PEOPLE
DOORS REQUIRED = 52 X 0.2" = 10.4"
DOORS PROVIDED= 2 DOORS @ 34"= 68" + 1 DOOR @ 68"
TOTAL= 136 COMPLIES

ALLOWABLE AREAS - BUILDING '2'

CODE REFERENCE:
FLORIDA BUILDING CODE:

ALLOWABLE BUILDING AREA PER TABLE 503
B - 9000 SF - TYPE V-B - FULLY SPRINKLERED

MAXIMUM BUILDING HEIGHT PER TABLE 503 = 40 FEET
MAXIMUM BUILDING STORIES PER TABLE 503 = 2

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MHA - PALMS AT UNIVERSITY COMMERCIAL CENTER PHASE I - BUILDING 2

515 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS		
NO:	DATE:	DESCRIPTION
1	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	SAE
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/16" = 1'-0"

A101

BUILDING '1' AND '2'
FIRST FLOOR
LIFE SAFETY PLAN

12/13/2018 5:12:08 PM

LEGEND

NOTE #1 FOR BUILDING CODE ANALYSIS SEE SHEET G002
NOTE #2 FOR EMERGENCY SYMBOLS LEGEND SEE ELEC DRAWINGS

- EXIT LIGHT - SEE ELECTRICAL DRAWINGS
- FIRE EXTINGUISHER CABINET
- FIRE EXTINGUISHER AND WALL BRACKET
- PATH OF EGRESS / TRAVEL DISTANCE
- FIRE ALARM MANUAL PULL STATION

WALL RATINGS

- 1 HOUR FIRE PARTITION
- 1 HOUR FIRE BARRIER

EXIT UNIT CALCULATIONS

SECOND FLOOR:

PLAN 'A'

RESIDENTIAL (GROSS) 9,539 SQ. FT. = 48 PEOPLE
200 SQ. FT.

REQUIRED: 48 PEOPLE X 0.2 = 9.6"
PROVIDED: 2 @ 34" = 68" COMPLIES

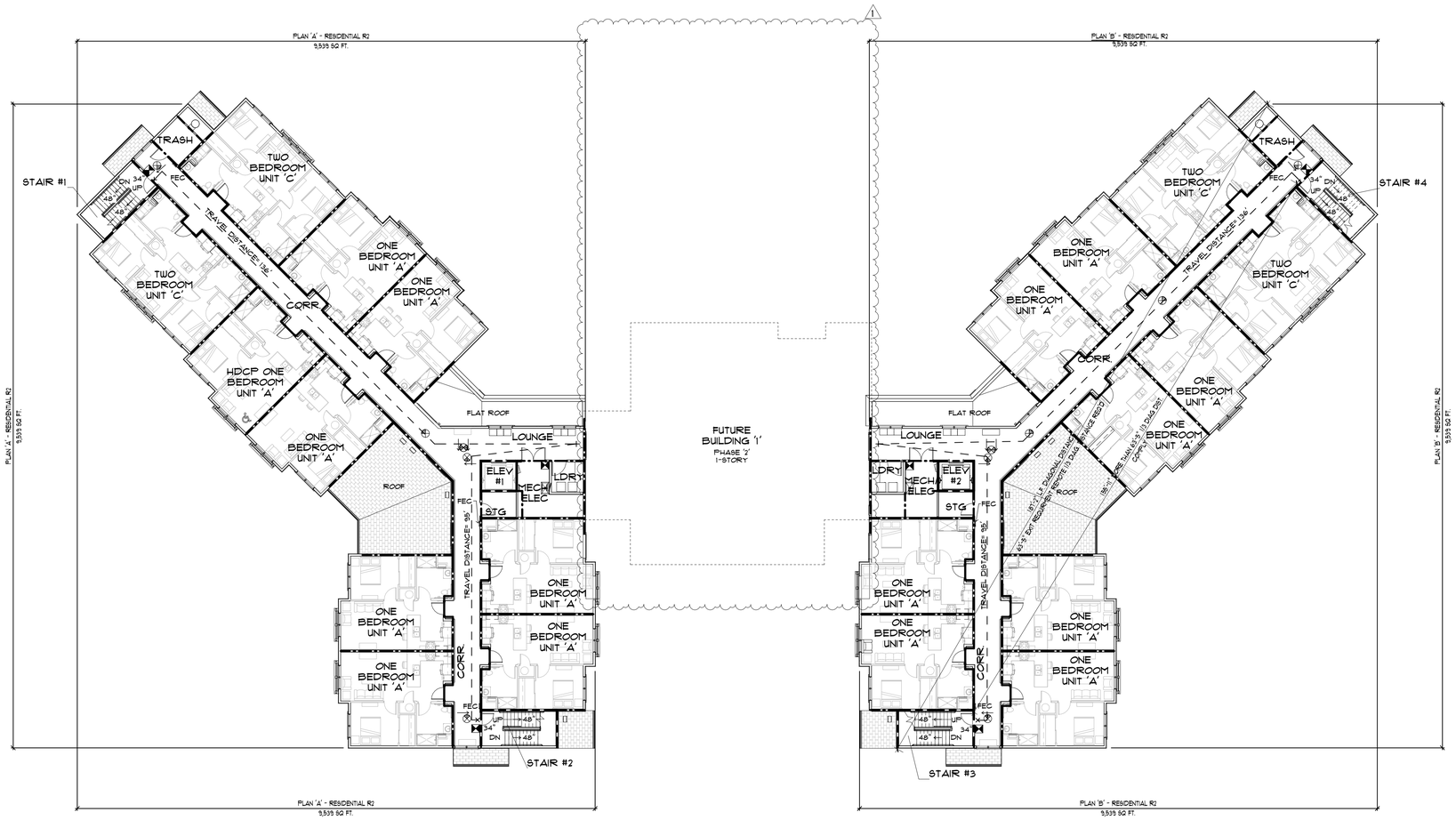
STAIR EGRESS: REQUIRED: 48 PEOPLE X 0.3 = 14.4"
PROVIDED: 2 @ 48" = 96" COMPLIES

PLAN 'B'

RESIDENTIAL (GROSS) 9,539 SQ. FT. = 48 PEOPLE
200 SQ. FT.

REQUIRED: 48 PEOPLE X 0.2 = 9.6"
PROVIDED: 2 @ 34" = 68" COMPLIES

STAIR EGRESS: REQUIRED: 48 PEOPLE X 0.3 = 14.4"
PROVIDED: 2 @ 48" = 96" COMPLIES



1 BUILDING '1'
SECOND FLOOR LIFE SAFETY PLAN
SCALE: 1/16" = 1'-0"

NORTH

12/13/2018 5:12:15 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS
PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS		
NO:	DATE:	DESCRIPTION
1	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/16" = 1'-0"

AL102

BUILDING '1'
SECOND FLOOR
LIFE SAFETY PLAN

LEGEND

NOTE #1 FOR BUILDING CODE ANALYSIS SEE SHEET G002.
NOTE #2 FOR EMERGENCY SYMBOLS LEGEND SEE ELEC DRAWINGS

- EXIT LIGHT - SEE ELECTRICAL DRAWINGS
- FIRE EXTINGUISHER CABINET
- FIRE EXTINGUISHER AND WALL BRACKET
- PATH OF EGRESS / TRAVEL DISTANCE
- FIRE ALARM MANUAL PULL STATION

WALL RATINGS

- 1 HOUR FIRE PARTITION
- 1 HOUR FIRE BARRIER

EXIT UNIT CALCULATIONS

THIRD FLOOR:

PLAN 'A'

RESIDENTIAL (GROSS) $\frac{8,696 \text{ SQ. FT.}}{200 \text{ SQ. FT.}}$ = 44 PEOPLE

REQUIRED: 44 PEOPLE × 0.2 = 8.8"
PROVIDED: 2 @ 34" = 68" COMPLIES

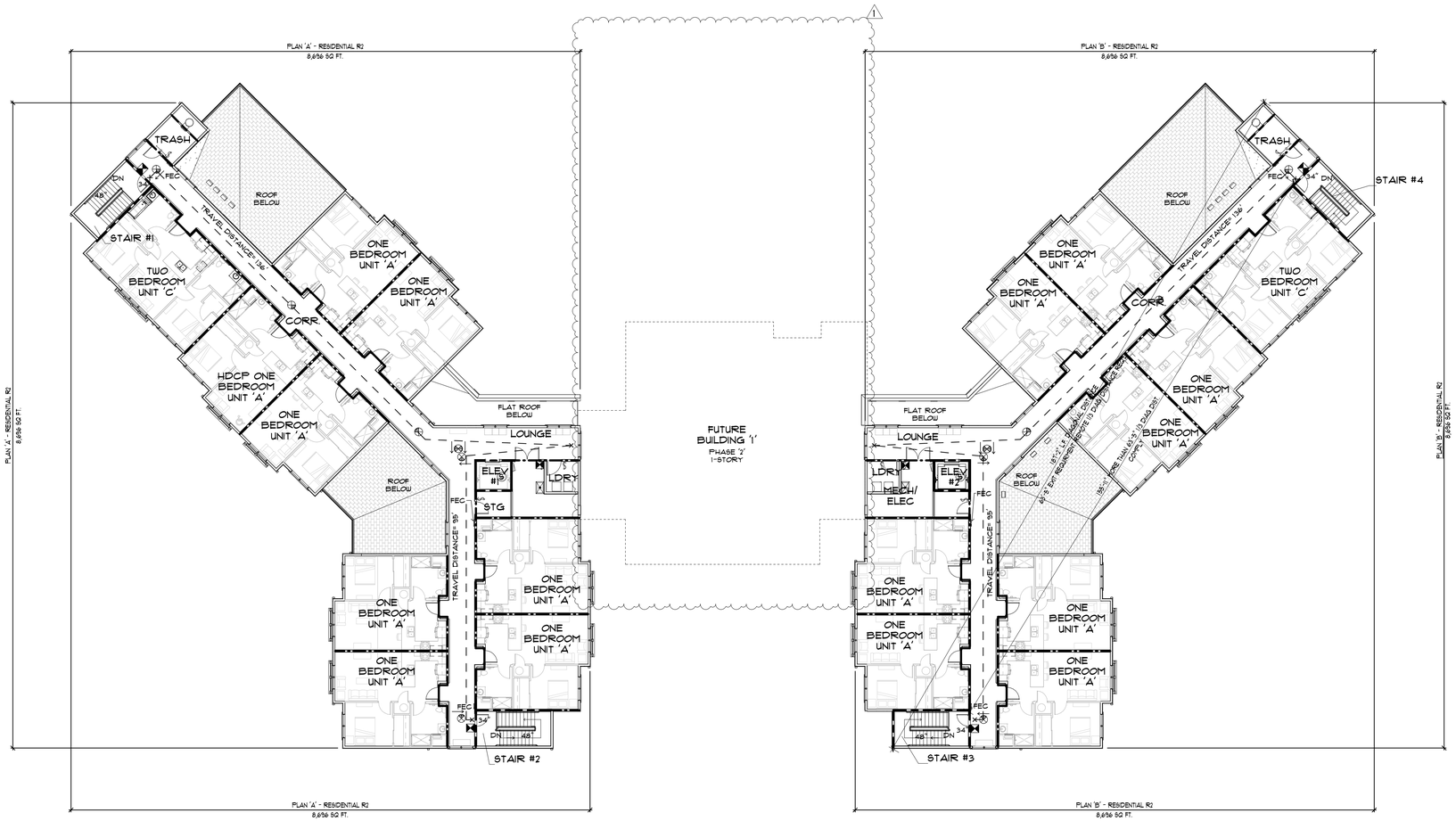
STAIR EGRESS: REQUIRED: 44 PEOPLE × 0.3 = 13.2"
PROVIDED: 2 @ 48" = 96" COMPLIES

PLAN 'B'

RESIDENTIAL (GROSS) $\frac{8,696 \text{ SQ. FT.}}{200 \text{ SQ. FT.}}$ = 44 PEOPLE

REQUIRED: 44 PEOPLE × 0.2 = 8.8"
PROVIDED: 2 @ 34" = 68" COMPLIES

STAIR EGRESS: REQUIRED: 44 PEOPLE × 0.3 = 13.2"
PROVIDED: 2 @ 48" = 96" COMPLIES



BUILDING '1'
THIRD FLOOR LIFE SAFETY PLAN
SCALE: 1/16" = 1'-0"

NORTH

12/13/2018 5:12:22 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED

DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

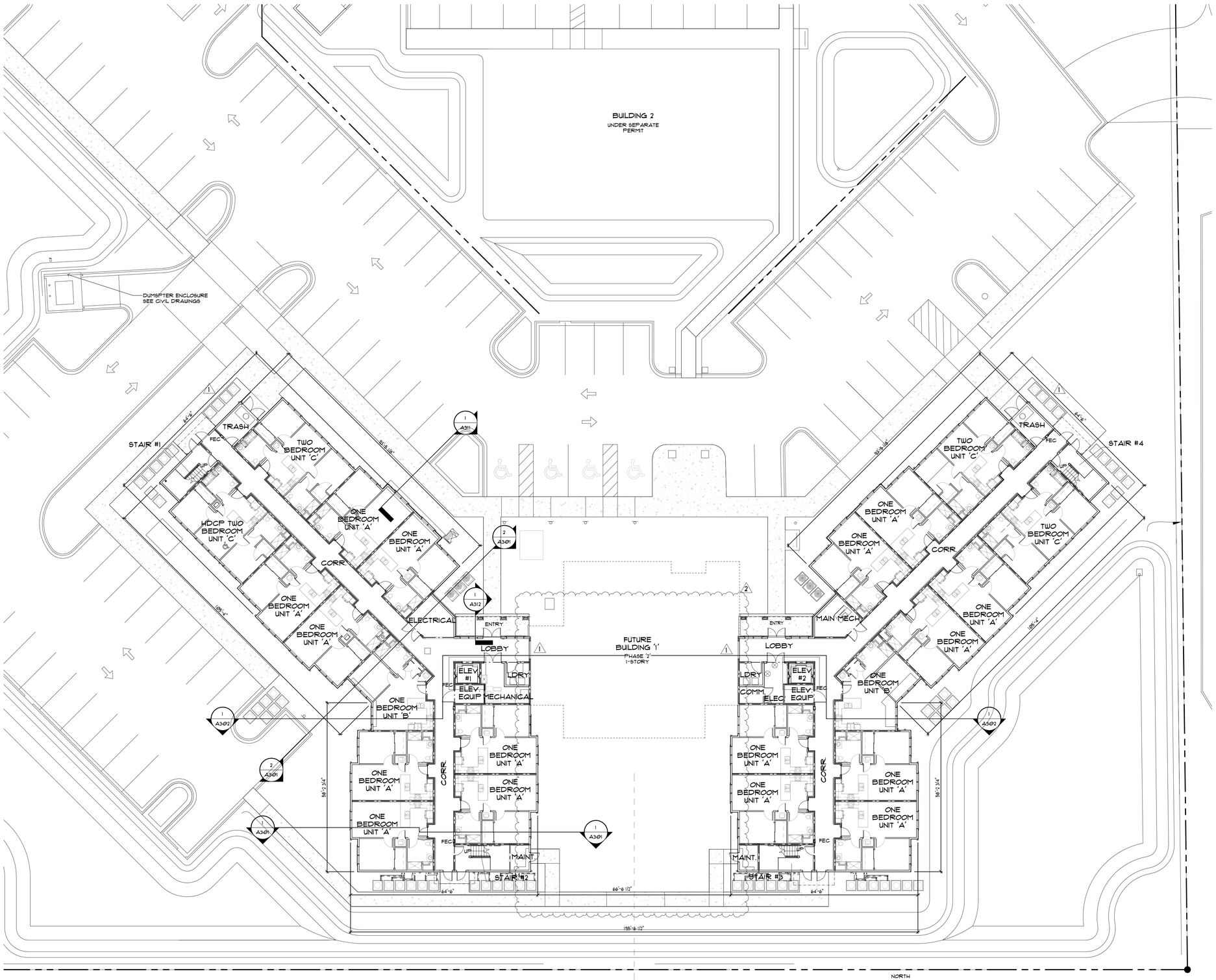
REVISIONS

NO:	DATE:	DESCRIPTION
1	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/16" = 1'-0"

AL103

BUILDING '1'
THIRD FLOOR
LIFE SAFETY PLAN



GENERAL NOTES

1. COORDINATE THIS DRAWING WITH STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
2. ALL DIMENSIONS ARE AS FOLLOWS
   - FACE OF STUD TO FACE OF STUD

WALL LEGEND

FRAMED PARTITION / WALL

WALL RATINGS

1 HOUR FIRE PARTITION

1 HOUR FIRE BARRIER

1 BUILDING '1' & '2' OVERALL FIRST FLOOR PLAN

SCALE: 1/16" = 1'-0"

BUILDING '1' 30,736 SQ. FT.
BUILDING '2' 5,000 SQ. FT.

NORTH

12/13/2018 5:08:02 PM

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ST. PETERSBURG, FL 33702
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KEVIN J. BESSOLO
AR12069

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

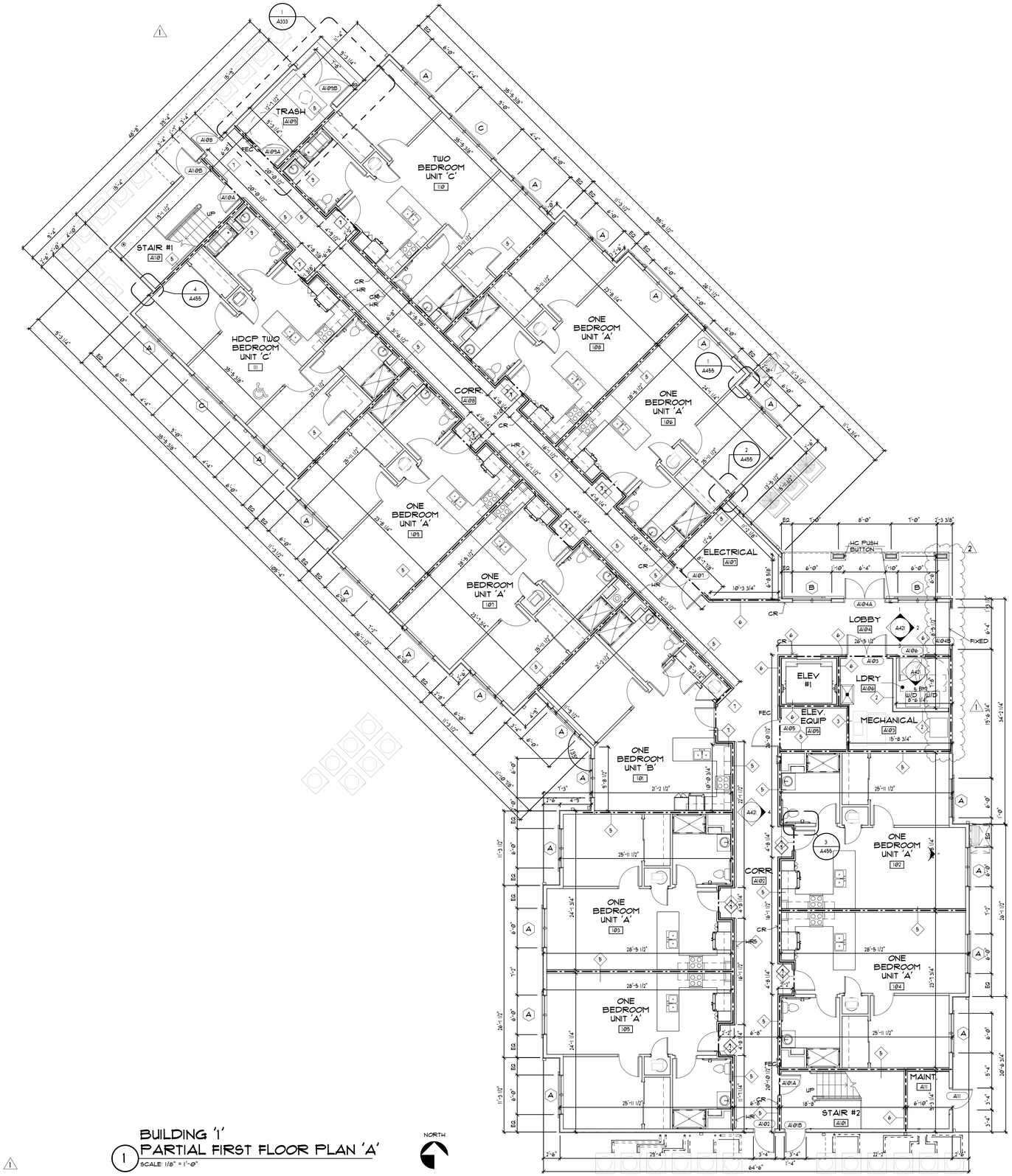
ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS		
NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS
2	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/16" = 1'-0"

A101

BUILDING '1' AND '2' OVERALL FIRST FLOOR PLAN



BUILDING '1'
PARTIAL FIRST FLOOR PLAN 'A'
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES

1. COORDINATE THIS DRAWING WITH STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
2. ALL DIMENSIONS ARE AS FOLLOWS:
   - CENTER LINE OF COLUMN TO CENTER LINE OF COLUMN
   - FACE OF STUD TO CENTER LINE OF COLUMN
   - FACE OF STUD TO FACE OF STUD
3. DIMENSIONS SHOWN ARE FOR LAYOUT OF EXTERIOR AND INTERIOR WALLS AND OPENING AND ARE FOR ROOMS & UNIT DEMISING WALLS. FOR DIMENSIONS OF RESIDENT UNIT INTERIOR PARTITIONS SEE DRAWINGS A401.
4. SEE DRAWING A601 FOR DOOR SCHEDULE.
5. SEE DRAWING A611 FOR WINDOW SCHEDULE.
6. ALL INTERIOR PARTITIONS TYPE 1 UNLESS OTHERWISE NOTED. SEE DRAWING A701 FOR PARTITION DETAIL.
7. ALL MECHANICAL ROOMS TO HAVE 2 LAYERS OF 5/8" FIRECODE GWB WITH SOUND ATTENUATION INSULATION WITHIN FRAMING.SEE PARTITION TYPES.

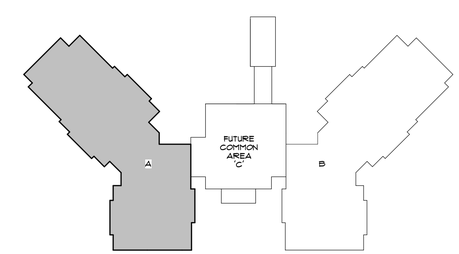
WALL LEGEND

FRAMED PARTITION / WALL

WALL RATINGS

1 HOUR FIRE PARTITION

1 HOUR FIRE BARRIER



KEY PLAN

BESSOLO
DESIGN GROUP, INC.
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License #AA-C002117
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■ ST. PETERSBURG, FL 33702 ■
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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE 11 - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

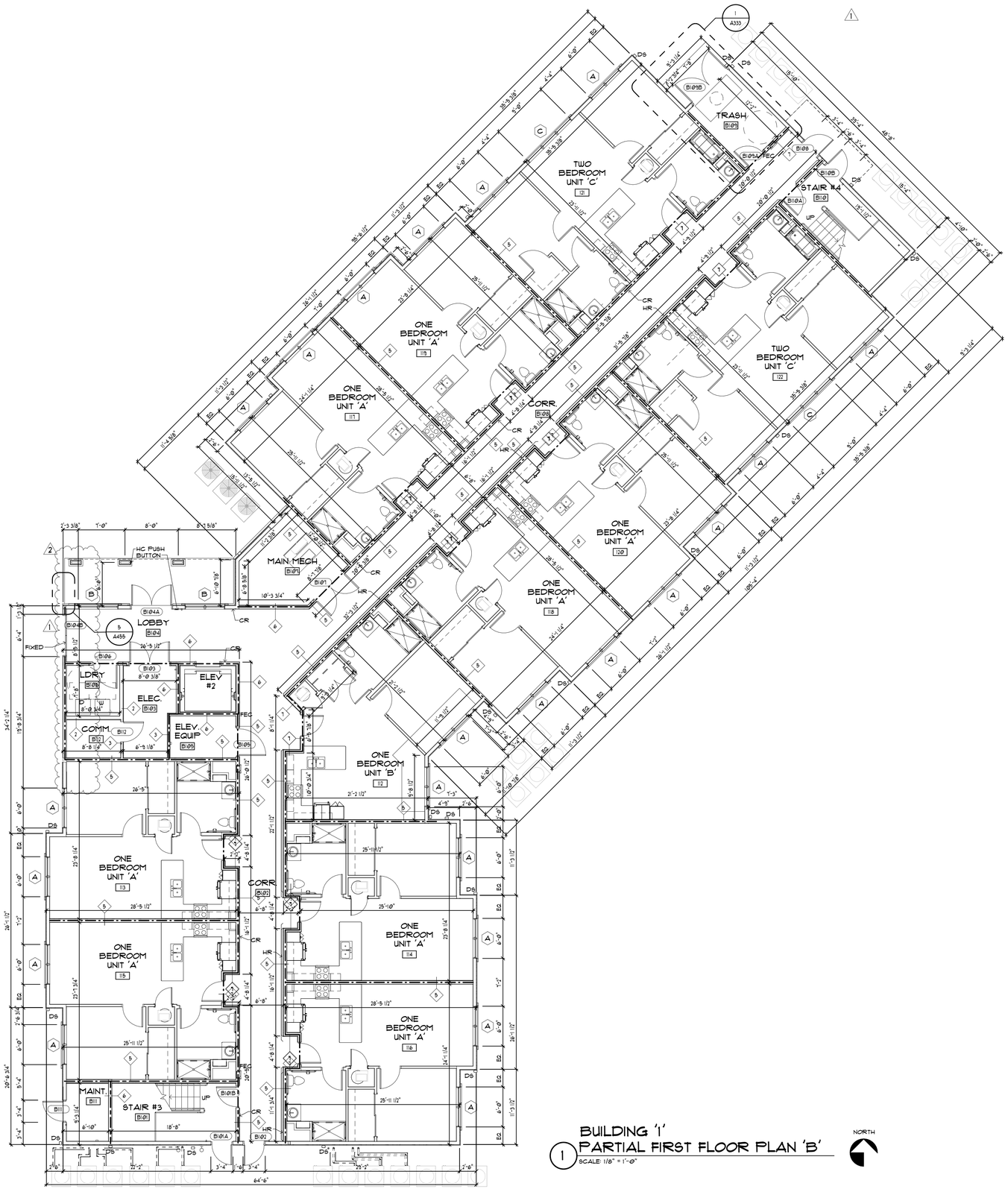
NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS
2	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/8" = 1'-0"

A101A

BUILDING '1'
PARTIAL FIRST FLOOR PLAN 'A'

12/13/2018 5:08:07 PM



BUILDING '1'
PARTIAL FIRST FLOOR PLAN 'B'
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES

1. COORDINATE THIS DRAWING WITH STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
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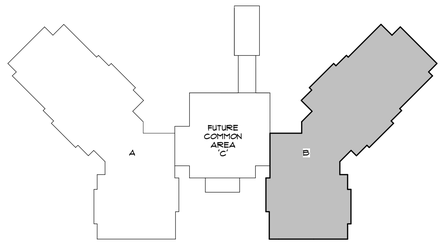
WALL LEGEND

FRAMED PARTITION / WALL

WALL RATINGS

1 HOUR FIRE PARTITION

1 HOUR FIRE BARRIER



KEY PLAN

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS		
NO:	DATE:	DESCRIPTION
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2	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/8" = 1'-0"

A101B

BUILDING '1'
PARTIAL FIRST FLOOR PLAN 'B'

12/13/2018 5:08:11 PM

GENERAL NOTES

1. COORDINATE THIS DRAWING WITH STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
2. ALL DIMENSIONS ARE AS FOLLOWS
   - FACE OF STUD TO FACE OF STUD

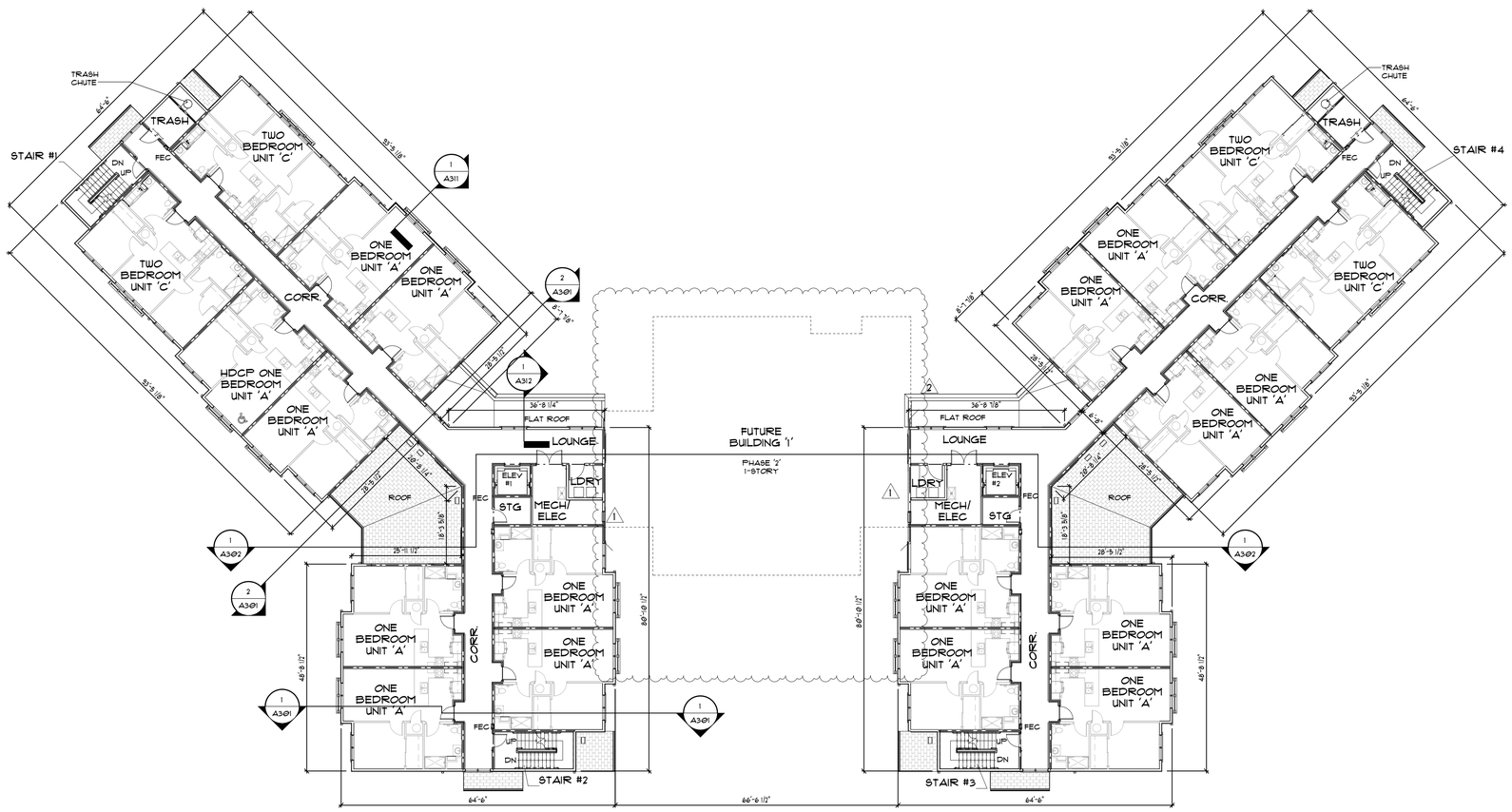
WALL LEGEND

FRAMED PARTITION / WALL

WALL RATINGS

1 HOUR FIRE PARTITION

1 HOUR FIRE BARRIER



BUILDING '1'
OVERALL SECOND FLOOR PLAN
SCALE: 1/16" = 1'-0"
19,078 SQ. FT.
NORTH

12/13/2018 5:08:17 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE 11 - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

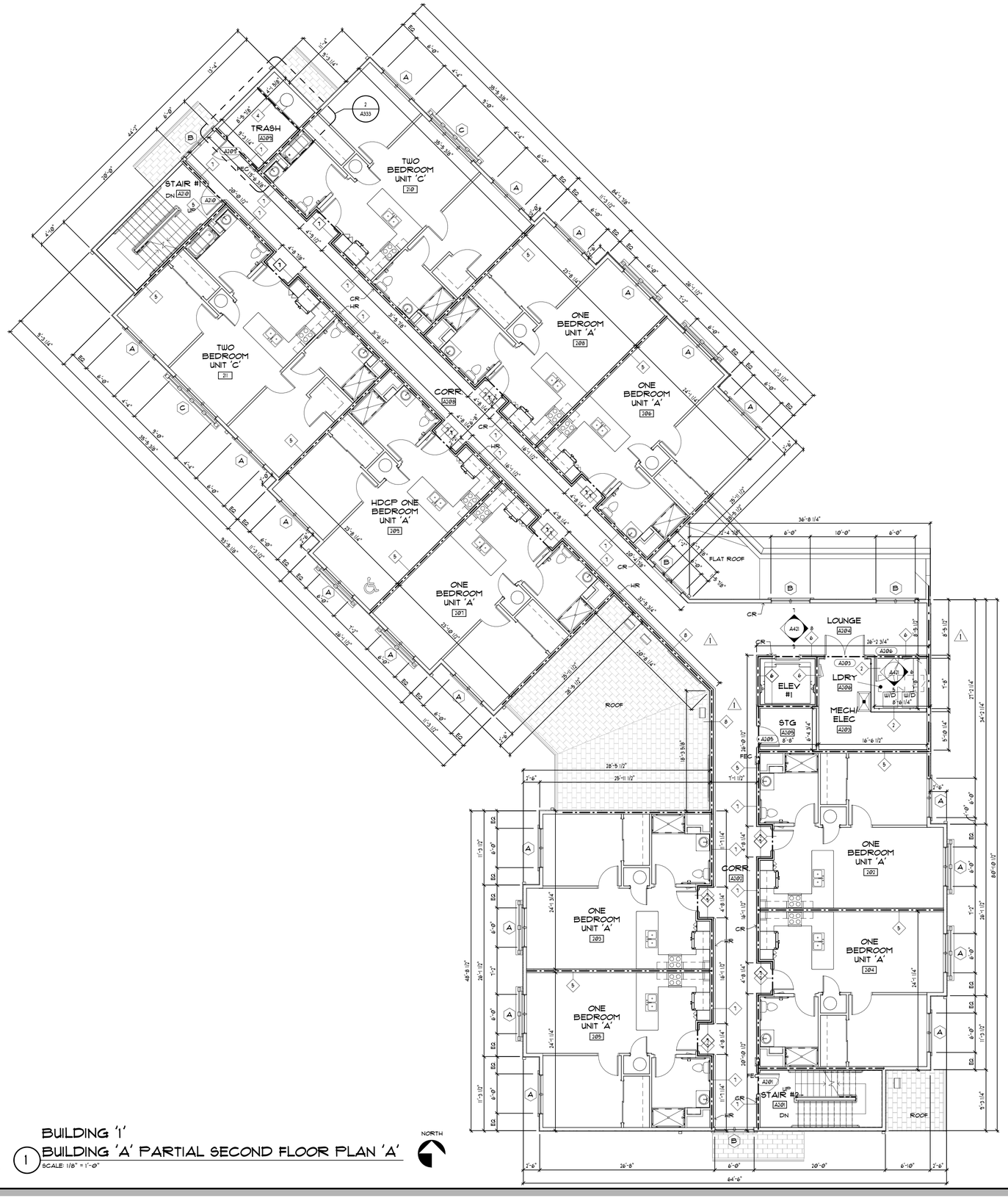
REVISIONS

NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS
2	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/16" = 1'-0"

A102

BUILDING '1'
OVERALL SECOND FLOOR PLAN



BUILDING '1'

1 BUILDING 'A' PARTIAL SECOND FLOOR PLAN 'A'

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

GENERAL NOTES

1. COORDINATE THIS DRAWING WITH STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
2. ALL DIMENSIONS ARE AS FOLLOWS:
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5. SEE DRAWING A611 FOR WINDOW SCHEDULE.
6. ALL INTERIOR PARTITIONS TYPE 1 UNLESS OTHERWISE NOTED. SEE DRAWING A701 FOR PARTITION DETAIL.
7. ALL MECHANICAL ROOMS TO HAVE 2 LAYERS OF 5/8" FIRECODE GWB WITH SOUND ATTENUATION INSULATION WITHIN FRAMING.SEE PARTITION TYPES.

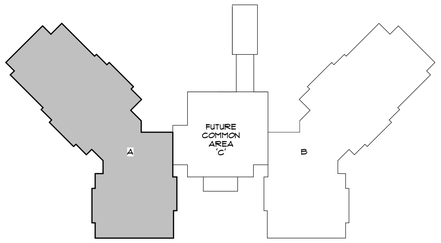
WALL LEGEND

FRAMED PARTITION / WALL

WALL RATINGS

1 HOUR FIRE PARTITION

1 HOUR FIRE BARRIER



KEY PLAN

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

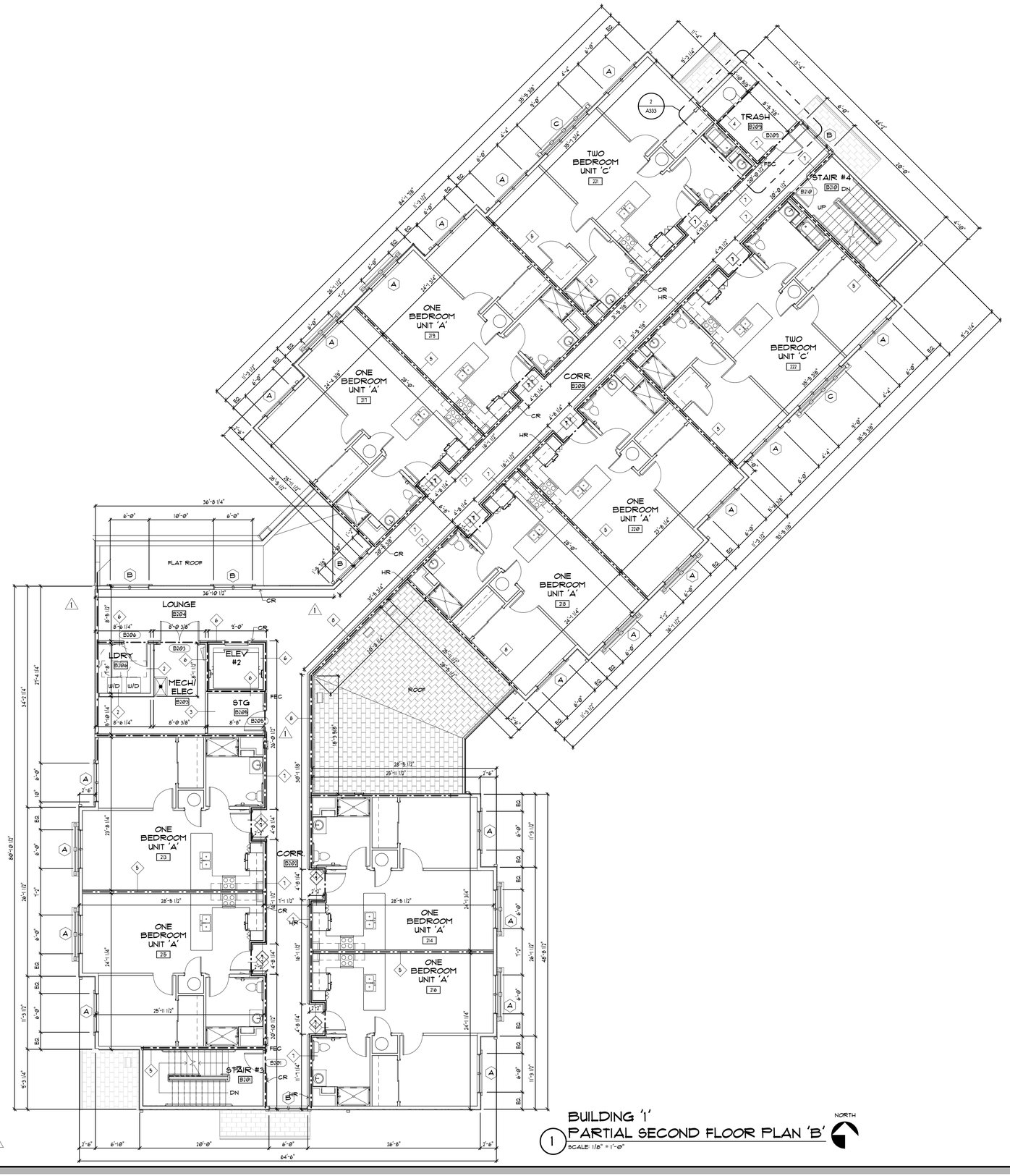
REVISIONS		
NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/8" = 1'-0"

A102A

BUILDING '1'
PARTIAL SECOND FLOOR PLAN 'A'

12/13/2018 5:08:21 PM



BUILDING '1'
PARTIAL SECOND FLOOR PLAN 'B'
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES

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7. ALL MECHANICAL ROOMS TO HAVE 2 LAYERS OF 5/8" FIRECODE GWB WITH SOUND ATTENUATION INSULATION WITHIN FRAMING.SEE PARTITION TYPES.

WALL LEGEND

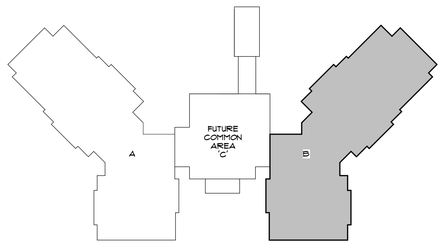
FRAMED PARTITION / WALL

WALL RATINGS

1 HOUR FIRE PARTITION

1 HOUR FIRE BARRIER

KEY PLAN



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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/8" = 1'-0"

A102B

BUILDING '1'
PARTIAL SECOND FLOOR PLAN 'B'

12/13/2018 5:08:26 PM

GENERAL NOTES

1. COORDINATE THIS DRAWING WITH STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
2. ALL DIMENSIONS ARE AS FOLLOWS
   - FACE OF STUD TO FACE OF STUD

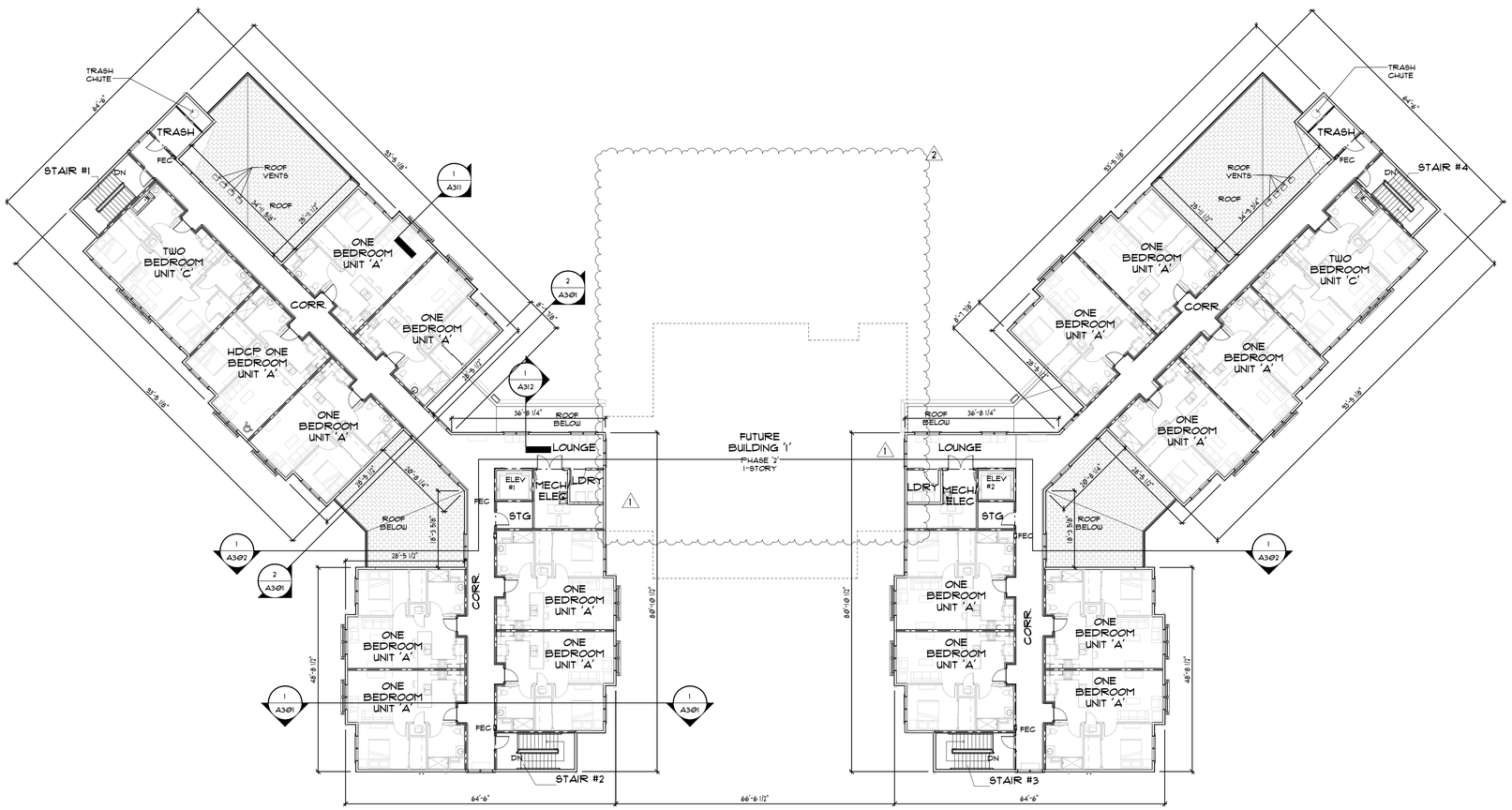
WALL LEGEND

FRAMED PARTITION / WALL

WALL RATINGS

1 HOUR FIRE PARTITION

1 HOUR FIRE BARRIER



1 BUILDING '1' OVERALL THIRD FLOOR PLAN

SCALE: 1/16" = 1'-0"

17,392 SQ. FT.

NORTH

12/13/2018 5:08:32 PM

BESSOLO DESIGN GROUP, INC.

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DRAWN BY:	SAE / RWW
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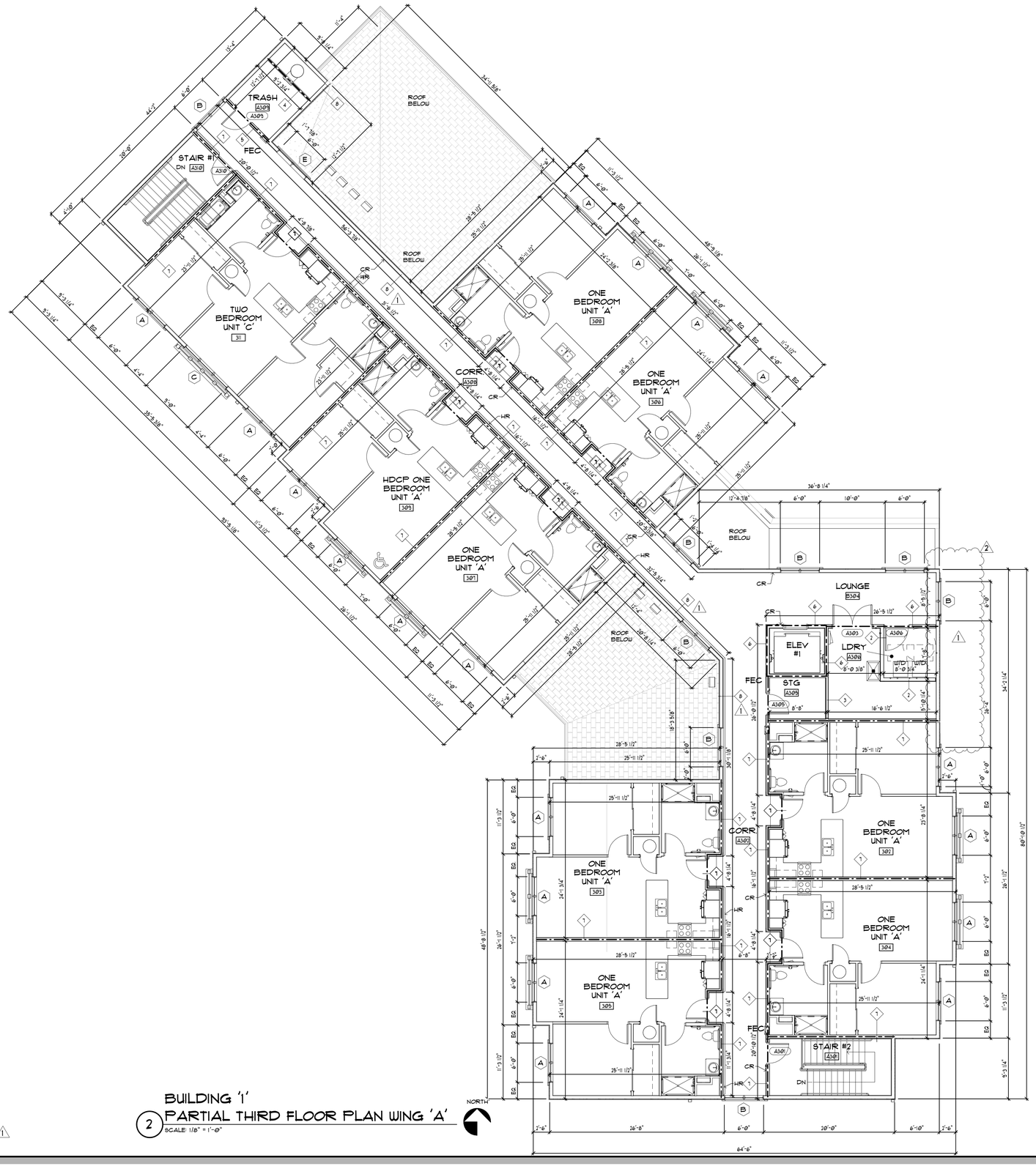
SCALE:	1/16" = 1'-0"

A103

BUILDING '1' OVERALL THIRD FLOOR PLAN



BUILDING '1'
2 PARTIAL THIRD FLOOR PLAN WING 'A'
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. COORDINATE THIS DRAWING WITH STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
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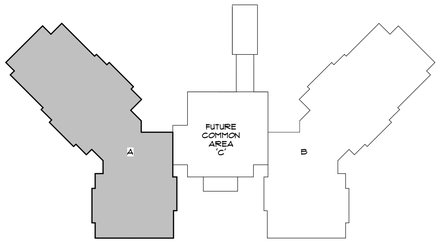
WALL LEGEND

FRAMED PARTITION / WALL

WALL RATINGS

1 HOUR FIRE PARTITION

1 HOUR FIRE BARRIER



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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

505 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS		
NO:	DATE:	DESCRIPTION
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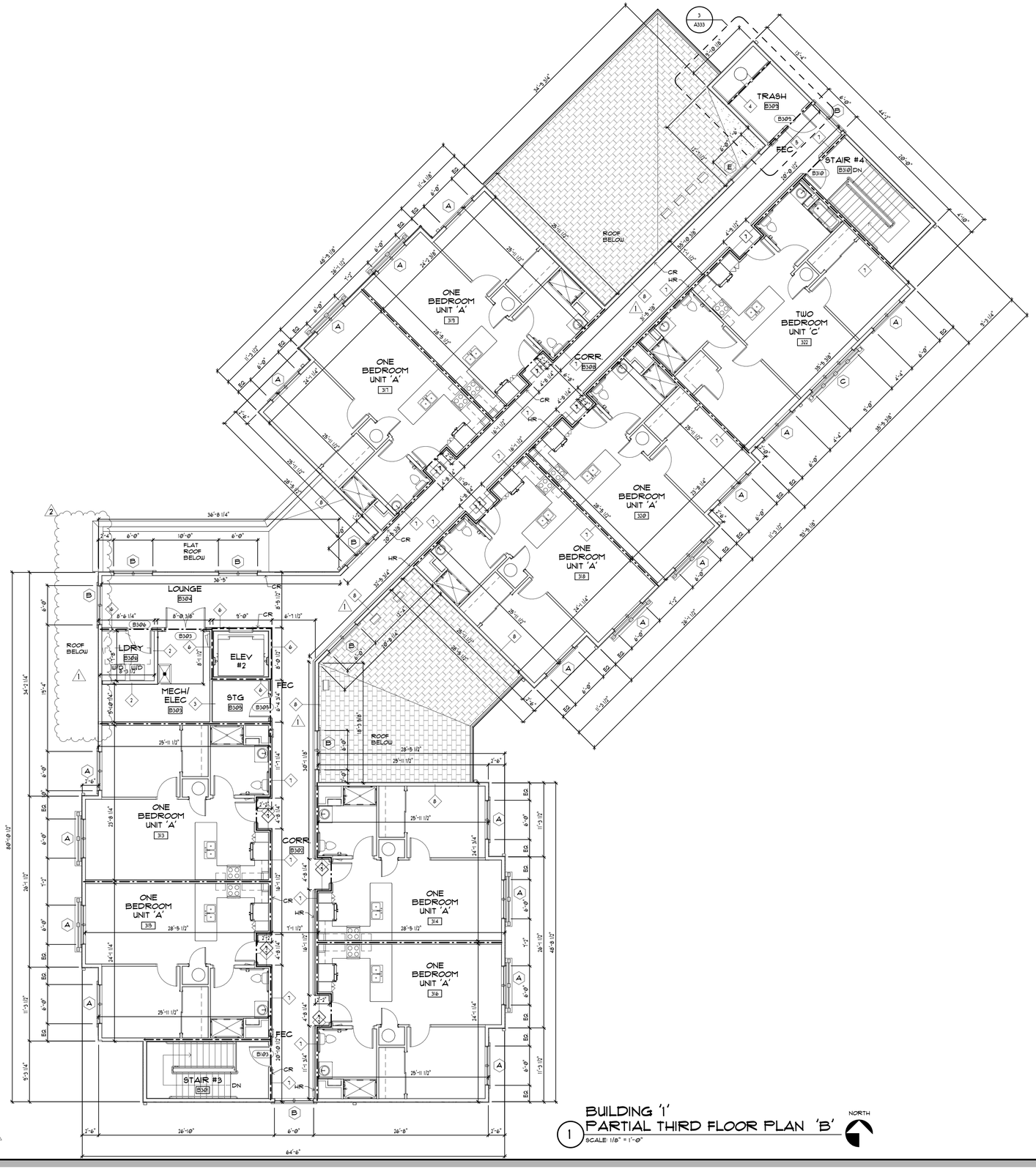
2	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/8" = 1'-0"

A103A

BUILDING '1'
PARTIAL THIRD FLOOR PLAN 'A'

12/13/2018 5:08:36 PM



1 BUILDING '1'
PARTIAL THIRD FLOOR PLAN 'B'
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES

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WALL LEGEND

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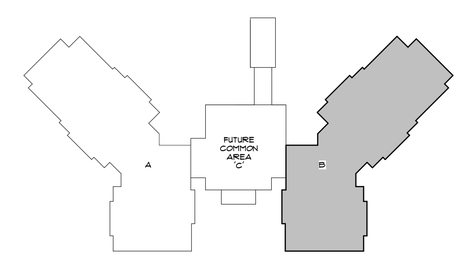
WALL RATINGS

1 HOUR FIRE PARTITION

1 HOUR FIRE BARRIER



KEY PLAN

BESSOLO
DESIGN GROUP, INC.
ARCHITECTURE ■ DEVELOPMENT
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PROFESSIONAL SEAL

KEVIN J. BESSOLO
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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

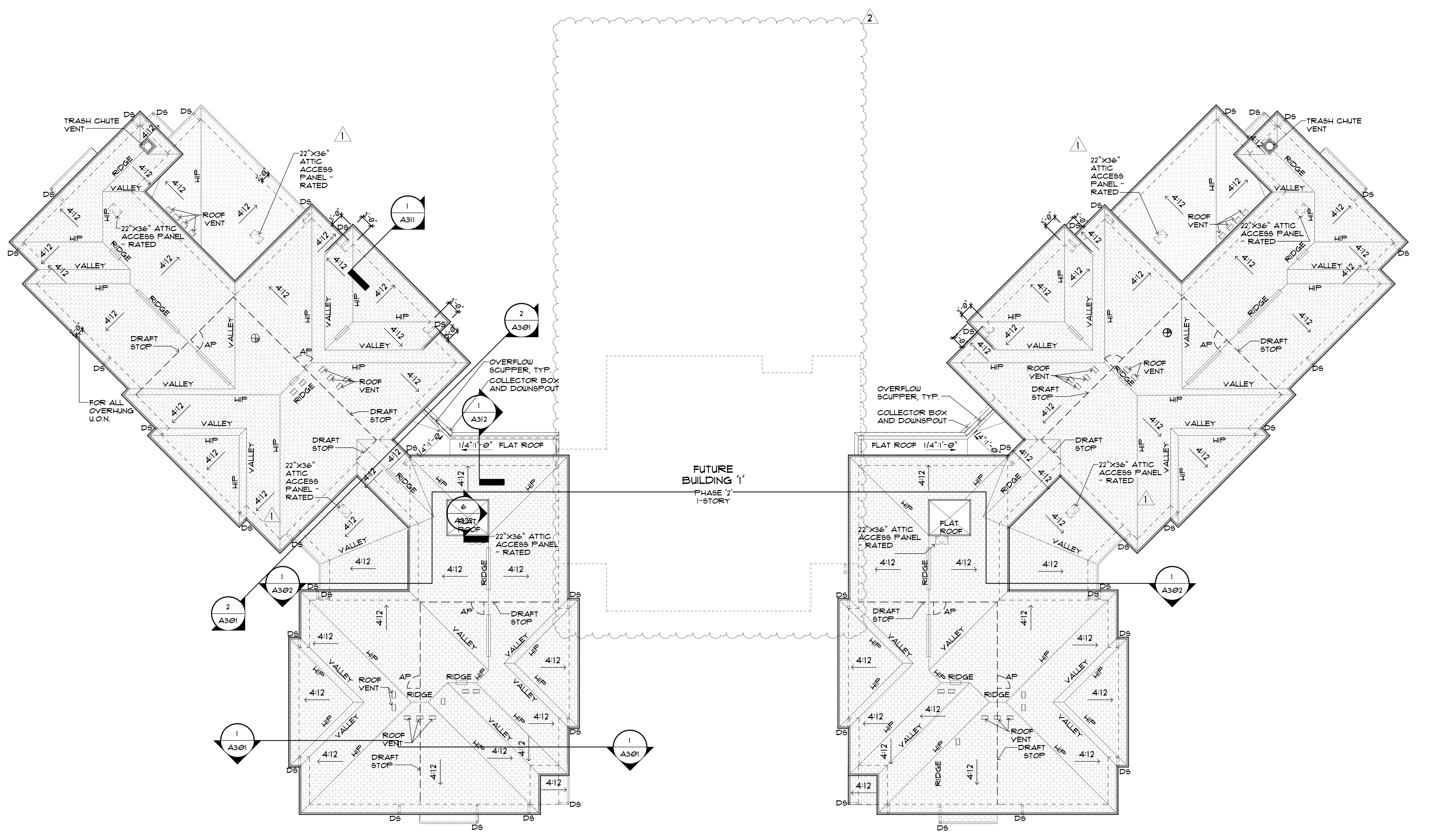
NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS
2	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/8" = 1'-0"

A103B

BUILDING '1'
PARTIAL THIRD FLOOR PLAN 'B'

12/13/2018 5:08:40 PM



BUILDING '1' OVERALL ROOF PLAN
1 SCALE: 1/16" = 1'-0"

GENERAL NOTES

1. FOR ABBREVIATIONS, LEGENDS, & SYMBOLS, SEE DRAWING G002.
2. COORDINATE THIS DRAWING WITH STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
3. AT ALL FLAT ROOFS, SLOPE TO BE 1/4" PER FOOT TO ROOF DRAIN.
4. ROOF PITCH FOR ALL SLOPED ROOFS SHALL BE 4:12 UNLESS OTHERWISE NOTED.
5. ALL PLYWOOD ROOF DECKING SHALL BE FIRE RETARDANT TREATED 603.1.1.3 FBC-B.
6. PROVIDE SPLASH BLOCK AT ALL DOWNSPOUTS FROM HIGH ROOF THAT TRANSITION ON LOWER ROOF.

LEGEND:

← ALL FIBERGLASS SHINGLE ROOFING HAS SLOPE 4:12, UNLESS NOTED OTHERWISE.

◄ ALL FLAT ROOF AREAS HAVE SLOPE OF 1/4"= 1'-0", UNLESS NOTED OTHERWISE.

DS DOWNSPOUT
OS OVERFLOW SCUPPER
SC SCUPPER
DST DRAFT-STOPPING
HP HIGH POINT
LP LOW POINT
AP ACCESS PANEL

NOTE: OVERFLOW SCUPPERS (OS)
OS TO BE MIN. 2" TO MAX 4" HIGHER THAN ROOF DRAIN SCUPPER SEE DETAILS SHEETS A505

ROOF VENT CALCULATIONS

ATTIC VENTILATION
FBS SECTION 1203 ATTIC VENTILATION

NET FREE AREA:
EAVE - PERFORATED SOFFIT 1 SQ FT = 34 SQ. IN.
RIDGE VENT = 21 SQ. IN. PER LINEAR FT AT RIDGE VENT
ROOF LOUVERS = 60 SQ. IN.

ROOF AREA A1:
850 SQ. FT. / 300 = 2.83 SQ. FT.
2.83 SQ. FT. X 144/2 = 203.76 SQ. IN.
4X ROOF LOUVERS PROVIDED = 240 SQ. IN.

2.83 SQ. FT. X 144/2 = 203.76 SQ. IN.
203.76 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
5.99 LINEAR FEET REQUIRED AT SOFFIT VENT
41 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA A2:
1481 SQ. FT. / 300 = 4.94 SQ. FT.
4.94 SQ. FT. X 144/2 = 355.68 SQ. IN.
355.68 / 21 SQ. IN. PER LINEAR FEET AT RIDGE VENT
16.9 LINEAR FEET REQUIRED AT RIDGE VENT
16.9 LINEAR FEET PROVIDED AT RIDGE VENT

4.94 SQ. FT. X 144/2 = 355.68 SQ. IN.
355.68 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
10.46 LINEAR FEET REQUIRED AT SOFFIT VENT
146 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA A3:
1673 SQ. FT. / 300 = 5.58 SQ. FT.
5.58 SQ. FT. X 144/2 = 401.8 SQ. IN.
2X ROOF LOUVERS PROVIDED = 120 SQ. IN.
281.8 / 21 SQ. IN. PER LINEAR FEET AT RIDGE VENT
13.4 LINEAR FEET REQUIRED AT RIDGE VENT
13.4 LINEAR FEET PROVIDED AT RIDGE VENT

5.58 SQ. FT. X 144/2 = 401.8 SQ. IN.
401.8 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
11.8 LINEAR FEET REQUIRED AT SOFFIT VENT
88 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA A4:
1357 SQ. FT. / 300 = 4.52 SQ. FT.
4.52 SQ. FT. X 144/2 = 325.4 SQ. IN.
4X ROOF LOUVERS PROVIDED = 240 SQ. IN.
85.4 / 21 SQ. IN. PER LINEAR FEET AT RIDGE VENT
4.1 LINEAR FEET REQUIRED AT RIDGE VENT
4.1 LINEAR FEET PROVIDED AT RIDGE VENT

4.52 SQ. FT. X 144/2 = 325.4 SQ. IN.
325.4 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
9.6 LINEAR FEET REQUIRED AT SOFFIT VENT
105 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA A5:
640 SQ. FT. / 300 = 2.1 SQ. FT.
2.1 SQ. FT. X 144/2 = 151.2 SQ. IN.
3X ROOF LOUVERS PROVIDED = 180 SQ. IN.

2.1 SQ. FT. X 144/2 = 151.2 SQ. IN.
151.2 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
4.5 LINEAR FEET REQUIRED AT SOFFIT VENT
21 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA A6:
1228 SQ. FT. / 300 = 4.1 SQ. FT.
4.1 SQ. FT. X 144/2 = 295.2 SQ. IN.
295.2 / 21 SQ. IN. PER LINEAR FEET AT RIDGE VENT
14.1 LINEAR FEET REQUIRED AT RIDGE VENT
14.1 LINEAR FEET PROVIDED AT RIDGE VENT

4.1 SQ. FT. X 144/2 = 295.2 SQ. IN.
295.2 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
8.7 LINEAR FEET REQUIRED AT SOFFIT VENT
116 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA A7:
1353 SQ. FT. / 300 = 4.51 SQ. FT.
4.51 SQ. FT. X 144/2 = 324.8 SQ. IN.
6X ROOF LOUVERS PROVIDED = 360 SQ. IN.

4.51 SQ. FT. X 144/2 = 324.8 SQ. IN.
324.8 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
9.6 LINEAR FEET REQUIRED AT SOFFIT VENT
106 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA A8:
1597 SQ. FT. / 300 = 5.32 SQ. FT.
5.32 SQ. FT. X 144/2 = 383.1 SQ. IN.
2X ROOF LOUVERS PROVIDED = 120 SQ. IN.
263.1 / 21 SQ. IN. PER LINEAR FEET AT RIDGE VENT
12.6 LINEAR FEET REQUIRED AT RIDGE VENT
12.6 LINEAR FEET PROVIDED AT RIDGE VENT

5.58 SQ. FT. X 144/2 = 383.1 SQ. IN.
383.1 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
11.3 LINEAR FEET REQUIRED AT SOFFIT VENT
89 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA A9:
63 SQ. FT. / 300 = .21 SQ. FT.
.21 SQ. FT. X 144/2 = 15.1 SQ. IN.
1X ROOF LOUVER PROVIDED = 60 SQ. IN.

.21 SQ. FT. X 144/2 = 15.1 SQ. IN.
15.1 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
.4 LINEAR FEET REQUIRED AT SOFFIT VENT
9 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA B1:
850 SQ. FT. / 300 = 2.83 SQ. FT.
2.83 SQ. FT. X 144/2 = 203.76 SQ. IN.
4X ROOF LOUVERS PROVIDED = 240 SQ. IN.

2.83 SQ. FT. X 144/2 = 203.76 SQ. IN.
203.76 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
5.99 LINEAR FEET REQUIRED AT SOFFIT VENT
41 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA B2:
1481 SQ. FT. / 300 = 4.94 SQ. FT.
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16.9 LINEAR FEET PROVIDED AT RIDGE VENT

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355.68 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
10.46 LINEAR FEET REQUIRED AT SOFFIT VENT
146 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA B3:
1673 SQ. FT. / 300 = 5.58 SQ. FT.
5.58 SQ. FT. X 144/2 = 401.8 SQ. IN.
2X ROOF LOUVERS PROVIDED = 120 SQ. IN.
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4.1 LINEAR FEET PROVIDED AT RIDGE VENT

4.52 SQ. FT. X 144/2 = 325.4 SQ. IN.
325.4 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
9.6 LINEAR FEET REQUIRED AT SOFFIT VENT
105 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA B5:
640 SQ. FT. / 300 = 2.1 SQ. FT.
2.1 SQ. FT. X 144/2 = 151.2 SQ. IN.
3X ROOF LOUVERS PROVIDED = 180 SQ. IN.

2.1 SQ. FT. X 144/2 = 151.2 SQ. IN.
151.2 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
4.5 LINEAR FEET REQUIRED AT SOFFIT VENT
21 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA B6:
1228 SQ. FT. / 300 = 4.1 SQ. FT.
4.1 SQ. FT. X 144/2 = 295.2 SQ. IN.
295.2 / 21 SQ. IN. PER LINEAR FEET AT RIDGE VENT
14.1 LINEAR FEET REQUIRED AT RIDGE VENT
14.1 LINEAR FEET PROVIDED AT RIDGE VENT

4.1 SQ. FT. X 144/2 = 295.2 SQ. IN.
295.2 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
8.7 LINEAR FEET REQUIRED AT SOFFIT VENT
116 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA B7:
1353 SQ. FT. / 300 = 4.51 SQ. FT.
4.51 SQ. FT. X 144/2 = 324.8 SQ. IN.
6X ROOF LOUVERS PROVIDED = 360 SQ. IN.

4.51 SQ. FT. X 144/2 = 324.8 SQ. IN.
324.8 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
9.6 LINEAR FEET REQUIRED AT SOFFIT VENT
106 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA B8:
1597 SQ. FT. / 300 = 5.32 SQ. FT.
5.32 SQ. FT. X 144/2 = 383.1 SQ. IN.
2X ROOF LOUVERS PROVIDED = 120 SQ. IN.
263.1 / 21 SQ. IN. PER LINEAR FEET AT RIDGE VENT
12.6 LINEAR FEET REQUIRED AT RIDGE VENT
12.6 LINEAR FEET PROVIDED AT RIDGE VENT

5.58 SQ. FT. X 144/2 = 383.1 SQ. IN.
383.1 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
11.3 LINEAR FEET REQUIRED AT SOFFIT VENT
89 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA B9:
63 SQ. FT. / 300 = .21 SQ. FT.
.21 SQ. FT. X 144/2 = 15.1 SQ. IN.
1X ROOF LOUVER PROVIDED = 60 SQ. IN.

.21 SQ. FT. X 144/2 = 15.1 SQ. IN.
15.1 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
.4 LINEAR FEET REQUIRED AT SOFFIT VENT
9 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA C1:
2334 SQ. FT. / 300 = 7.78 SQ. FT.
7.78 SQ. FT. X 144/2 = 560.16 SQ. IN.
2X ROOF LOUVERS PROVIDED = 120 SQ. IN.
440.16 / 21 SQ. IN. PER LINEAR FEET AT RIDGE VENT
20.96 LINEAR FEET REQUIRED AT RIDGE VENT
21 LINEAR FEET PROVIDED AT RIDGE VENT

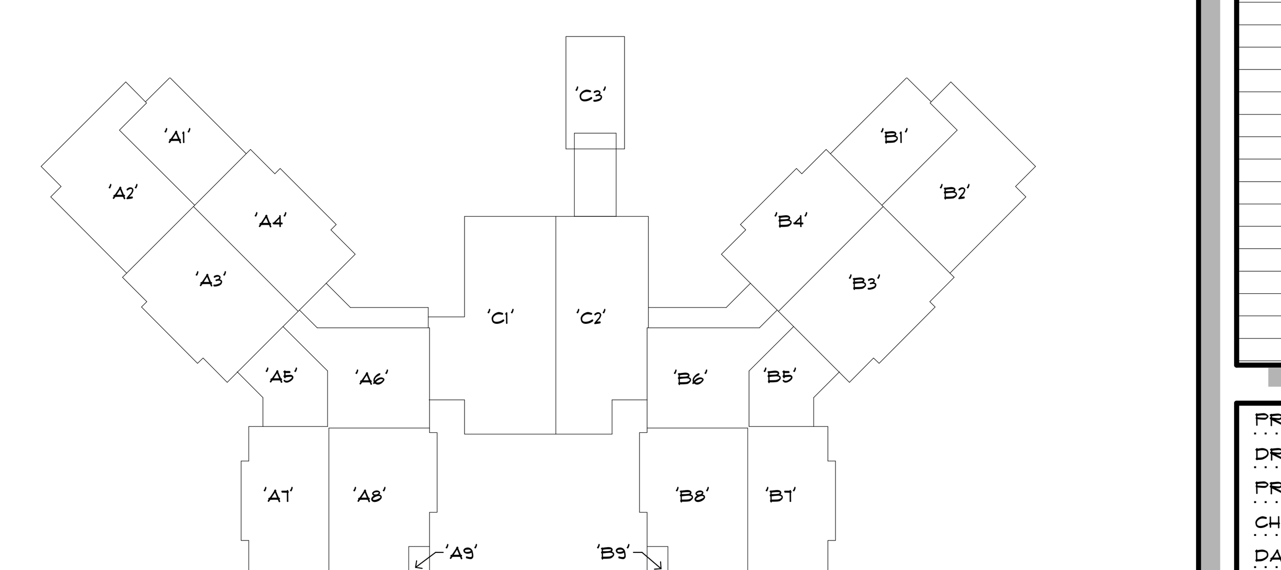
7.78 SQ. FT. X 144/2 = 560.16 SQ. IN.
560.16 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
16.48 LINEAR FEET REQUIRED AT SOFFIT VENT
151 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA C2:
2184 SQ. FT. / 300 = 7.28 SQ. FT.
7.28 SQ. FT. X 144/2 = 524.16 SQ. IN.
6X ROOF LOUVERS PROVIDED = 360 SQ. IN.
164.16 / 21 SQ. IN. PER LINEAR FEET AT RIDGE VENT
7.8 LINEAR FEET REQUIRED AT RIDGE VENT
7.8 LINEAR FEET PROVIDED AT RIDGE VENT

7.28 SQ. FT. X 144/2 = 524.16 SQ. IN.
524.16 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
15.42 LINEAR FEET REQUIRED AT SOFFIT VENT
136 LINEAR FEET PROVIDED AT SOFFIT VENT

ROOF AREA C3:
743 SQ. FT. / 300 = 2.5 SQ. FT.
2.5 SQ. FT. X 144/2 = 180 SQ. IN.
180 / 21 SQ. IN. PER LINEAR FEET AT RIDGE VENT
8.6 LINEAR FEET REQUIRED AT RIDGE VENT
8.6 LINEAR FEET PROVIDED AT RIDGE VENT

2.5 SQ. FT. X 144/2 = 180 SQ. IN.
180 / 34 SQ. IN. PER LINEAR FOOT AT SOFFIT VENT
5.3 LINEAR FEET REQUIRED AT SOFFIT VENT
96 LINEAR FEET PROVIDED AT SOFFIT VENT



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MHA - PALMS AT UNIVERSITY APARTMENTS
PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED

DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS
2	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	SAE
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/16" = 1'-0"

A104

BUILDING '1' OVERALL ROOF PLAN

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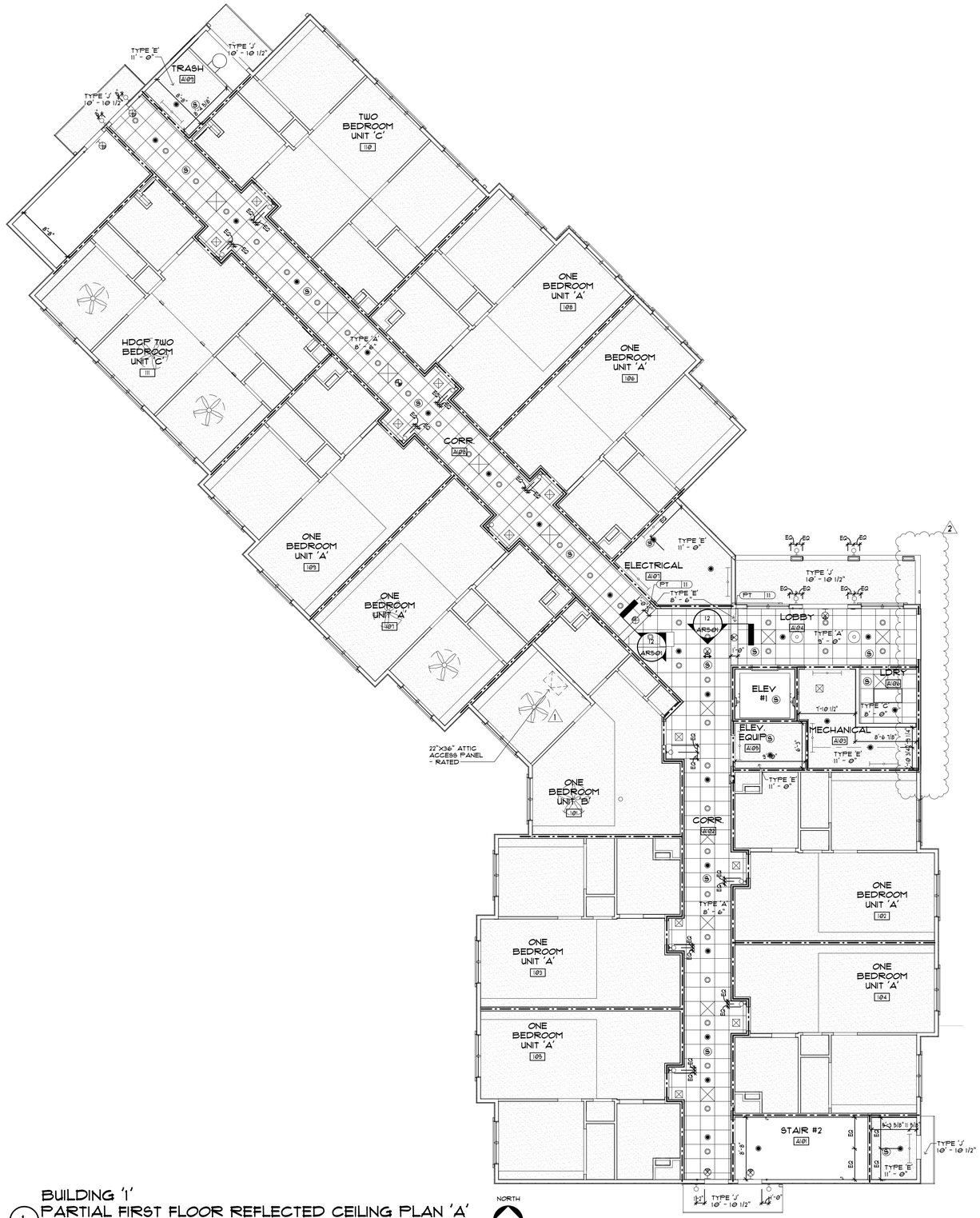


1 BUILDING '1'
PARTIAL FIRST FLOOR REFLECTED CEILING PLAN 'A'
SCALE: 1/8" = 1'-0"

GENERAL REFLECTED CEILING NOTES

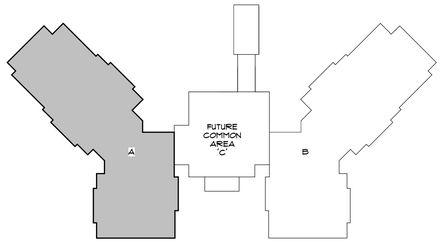
1. FOR ABBREVIATIONS, LEGENDS, & SYMBOLS NOT SHOWN, SEE DRAWING G002
2. THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THIS REFLECTED CEILING PLAN WITH THE ELECTRICAL LIGHTING PLANS, MECHANICAL SUPPLY & RETURN AND EXHAUST PLANS, AND THE FIRE PROTECTION PLANS. HE WILL REPORT TO THE ARCHITECT ANY ERRORS, INCONSISTENCY OR OMISSIONS THAT HE MAY DISCOVER.
3. ONLY CEILING MOUNTED EXIT LIGHTS ARE SHOWN ON THE REFLECTED CEILING PLANS. REFER TO THE ELECTRICAL DRAWINGS FOR LOCATION OF WALL MOUNTED EXIT LIGHTS.
4. THE CONTRACTOR SHALL VERIFY THAT ACCESS PANELS OF APPROPRIATE SIZE AND TYPE ARE INSTALLED IN GYPSUM WALLBOARD CEILING SOFFITS, IN CEMENT PLASTER CEILINGS OR SOFFITS, AND IN OTHER NON-ACCESSIBLE TYPE CEILINGS OR SOFFITS WHERE ACCESS, SERVICE OR ADJUSTMENT TO MECHANICAL PLUMBING OR ELECTRICAL ITEMS MAY BE REQUIRED. ACCESS PANELS SHALL BE THE FIRE RATED TYPE EQUAL TO THE RATING OF THE CEILING OR SOFFIT IN WHICH THEY OCCUR.
5. COORDINATE ELECTRICAL DRAWINGS AND/OR THE COMMUNICATIONS DRAWINGS FOR LOCATIONS OF CEILING MOUNTED SMOKE DETECTORS, SPEAKERS, FIRE ALARM DEVICES, ETC.
6. THE CONTRACTOR SHALL PROVIDE ACCESS PANELS IN GYPSUM WALLBOARD CEILINGS SO THAT THE ARCHITECT AND THE STATE AND LOCAL OFFICIALS CAN INSPECT RATED WALLS. ARCHITECT SHALL BE PROVIDED A LAYOUT FOR APPROVAL PRIOR TO INSTALLATION. THESE ACCESS PANELS WILL BE LOCATED ATINTERVALS NOT TO EXCEED 30'-0" ON CENTER, MINIMUM OF ONE PER SPACE, AND IN SUCH MULTIPLE LOCATIONS AS NECESSARY TO VIEW ALL SURFACES OF THE RATED WALLS.
7. ALL SMOKE DETECTORS SHALL BE MINIMUM OF 3'-0" FROM ANY HVAC DIFFUSERS.
8. ALL CEILING HEIGHTS 9'-0" AFF UNLESS OTHERWISE NOTED.
9. FOR DESCRIPTION OF ALL LIGHTING FIXTURES IDENTIFIED ON THIS DRAWING, SEE LUMINAIRE SCHEDULE ON ELECTRICAL DRAWINGS.
10. ACOUSTICAL PANEL CEILING SHALL BE CENTERED IN ROOM OR SPACE UNLESS OTHERWISE NOTED.
11. ALL LIGHTS, SPEAKERS, GRILLES, ETC., SHALL BE CENTERED IN CEILING PANELS UNLESS OTHERWISE NOTED.
12. ALL DIMENSIONS SHOWN ARE FINISHED FACE OF WALL TO CENTERLINE OF LIGHT FIXTURE

REFLECTED CEILING TYPES IN PLAN

TYPE 'A' ACOUSTICAL CEILING PANELS - 2'x2'	TYPE 'F' EXPOSED STRUCTURE - PAINTED
TYPE 'B' ACOUSTICAL CEILING PANELS 2'x4' SCORED FOR 2'x2' PATTERN	TYPE 'G' FIBER CEMENT - PAINTED
TYPE 'C' ACOUSTICAL CEILING PANELS - 2' x 4'	TYPE 'H' FIBER CEMENT STAINED
TYPE 'D' ACOUSTICAL CEILING PANELS - 2' x 4' WASHABLE	TYPE 'J' STUCCO - PAINTED
TYPE 'E' GYP CEILING-PAINTED	TYPE 'K' -FAUX WOOD VENEER

REFLECTED CEILING PLAN SYMBOLS

SURFACE MOUNTED LIGHT FIXTURE	AIR RETURN
RECESSED DOWN LIGHT	EXHAUST FAN
OR PENDANT LIGHT FIXTURE	AIR SUPPLY
OR WALL MOUNTED LIGHT FIXTURE	LINEAR SIDE WALL DIFFUSER
WALL MOUNTED ACCENT LIGHT FIXTURE	SMOKE DETECTOR
2'X4' RECESSED LIGHT FIXTURE	WALL MOUNTED EXIT SIGN
2'X4' RECESSED LIGHT FIXTURE - BASKET	CEILING MOUNTED LIGHT EXIT
4' SURFACE MOUNTED LIGHT FIXTURE	HEAT LAMP
4' FLUORESCENT STRIP LIGHT FIXTURE	CEILING FAN
4' WALL MOUNTED FLUORESCENT STRIP LIGHT FIXTURE	SIDEWALL SPRINKLER HEAD
18"x18" ACCESS PANEL	SPRINKLER HEAD



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PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

AR101A

BUILDING '1'
PARTIAL FIRST FLOOR
REFLECTED CEILING
PLAN 'A'

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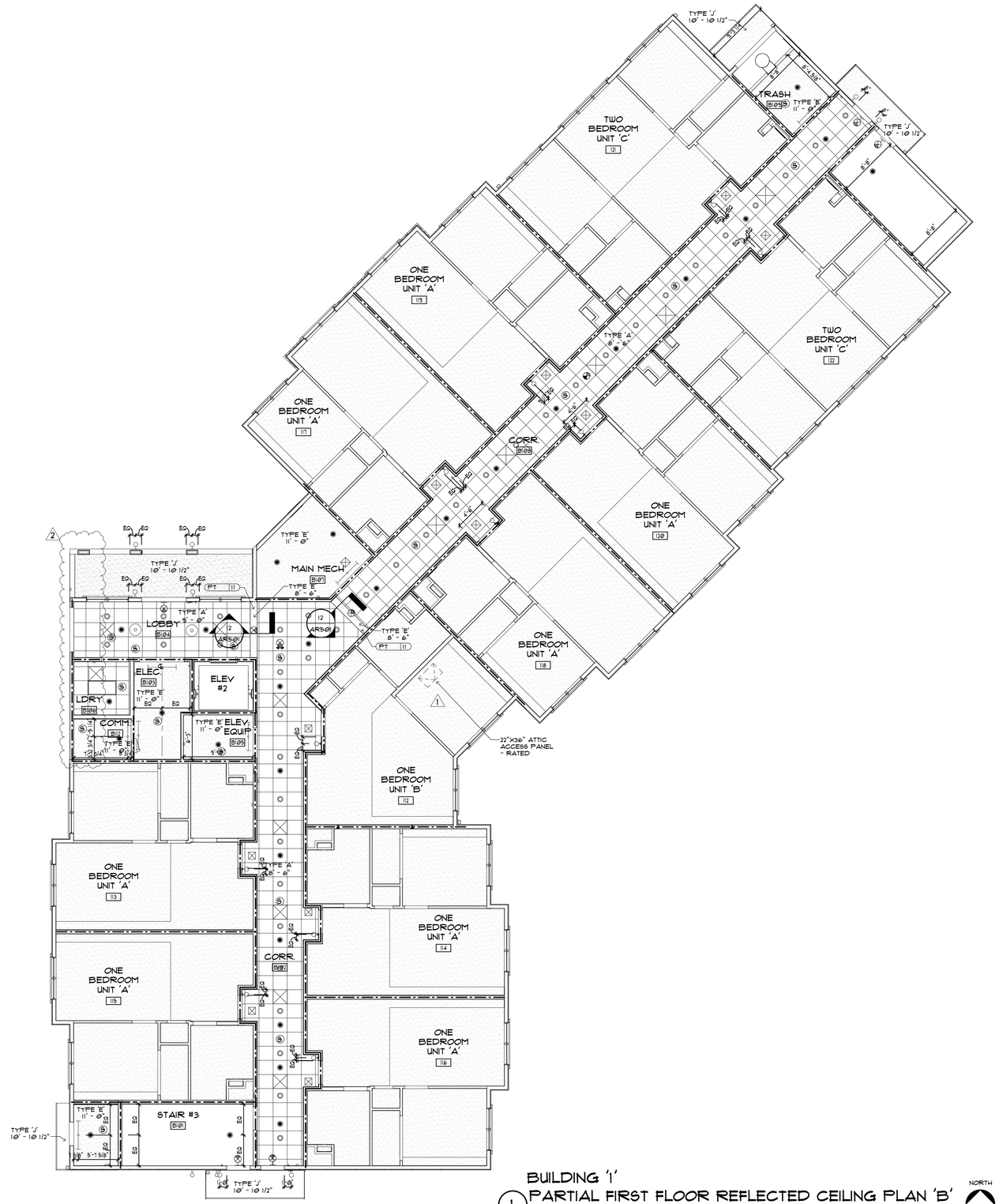

BUILDING '1'
1 PARTIAL FIRST FLOOR REFLECTED CEILING PLAN 'B'

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

NORTH

GENERAL REFLECTED CEILING NOTES

1. FOR ABBREVIATIONS, LEGENDS, & SYMBOLS NOT SHOWN, SEE DRAWING G002
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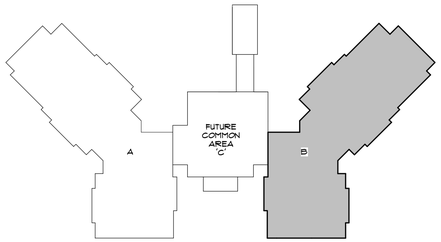
8. ALL CEILING HEIGHTS 9'-0" AFF UNLESS OTHERWISE NOTED.
9. FOR DESCRIPTION OF ALL LIGHTING FIXTURES IDENTIFIED ON THIS DRAWING, SEE LUMINAIRE SCHEDULE ON ELECTRICAL DRAWINGS.
10. ACOUSTICAL PANEL CEILING SHALL BE CENTERED IN ROOM OR SPACE UNLESS OTHERWISE NOTED.
11. ALL LIGHTS, SPEAKERS, GRILLES, ETC., SHALL BE CENTERED IN CEILING PANELS UNLESS OTHERWISE NOTED.
12. ALL DIMENSIONS SHOWN ARE FINISHED FACE OF WALL TO CENTERLINE OF LIGHT FIXTURE

REFLECTED CEILING TYPES IN PLAN

- TYPE 'A' ACOUSTICAL CEILING PANELS - 2'X2'
- TYPE 'B' ACOUSTICAL CEILING PANELS 2'X4' SCORED FOR 2'X2' PATTERN
- TYPE 'C' ACOUSTICAL CEILING PANELS - 2' X 4'
- TYPE 'D' ACOUSTICAL CEILING PANELS - 2' X 4' WASHABLE
- TYPE 'E' GYP CEILING-PAINTED
- TYPE 'F' EXPOSED STRUCTURE - PAINTED
- TYPE 'G' FIBER CEMENT - PAINTED
- TYPE 'H' FIBER CEMENT STAINED
- TYPE 'J' STUCCO - PAINTED
- TYPE 'K' -FAUX WOOD VENEER

REFLECTED CEILING PLAN SYMBOLS

- SURFACE MOUNTED LIGHT FIXTURE
- RECESSED DOWN LIGHT
- PENDANT LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- WALL MOUNTED ACCENT LIGHT FIXTURE
- 2'X4' RECESSED LIGHT FIXTURE
- 2'X4' RECESSED LIGHT FIXTURE - BASKET
- 4' SURFACE MOUNTED LIGHT FIXTURE
- 4' FLUORESCENT STRIP LIGHT FIXTURE
- 4' WALL MOUNTED FLUORESCENT STRIP LIGHT FIXTURE
- 18"X18" ACCESS PANEL
- AIR RETURN
- EXHAUST FAN
- AIR SUPPLY
- LINEAR SIDE WALL DIFFUSER
- SMOKE DETECTOR
- WALL MOUNTED EXIT SIGN
- CEILING MOUNTED LIGHT EXIT
- HEAT LAMP
- CEILING FAN
- SIDEWALL SPRINKLER HEAD
- SPRINKLER HEAD



KEY PLAN

BESSOLO DESIGN GROUP, INC.
ARCHITECTURE ■ DEVELOPMENT
License #AA-C002117
7901 4TH ST. NORTH, SUITE 200
ST. PETERSBURG, FL 33702
727 894-4453 www.bessolo.com

PROFESSIONAL SEAL

KEVIN J. BESSOLO
AR12069

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS
2	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

AR101B

BUILDING '1'
PARTIAL FIRST FLOOR REFLECTED CEILING PLAN 'B'

12/13/2018 5:12:43 PM

BUILDING '1'
1 PARTIAL SECOND FLOOR REFLECTED CEILING PLAN 'A'
SCALE: 1/8" = 1'-0"

GENERAL REFLECTED CEILING NOTES

1. FOR ABBREVIATIONS, LEGENDS, & SYMBOLS NOT SHOWN, SEE DRAWING G002
2. THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THIS REFLECTED CEILING PLAN WITH THE ELECTRICAL LIGHTING PLANS, MECHANICAL SUPPLY & RETURN AND EXHAUST PLANS, AND THE FIRE PROTECTION PLANS. HE WILL REPORT TO THE ARCHITECT ANY ERRORS, INCONSISTENCY OR OMISSIONS THAT HE MAY DISCOVER.
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- RECESSED DOWN LIGHT
- OR PENDANT LIGHT FIXTURE
- OR WALL MOUNTED LIGHT FIXTURE
- WALL MOUNTED ACCENT LIGHT FIXTURE
- 2'X4' RECESSED LIGHT FIXTURE
- 2'X4' RECESSED LIGHT FIXTURE - BASKET
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- 4' WALL MOUNTED FLUORESCENT STRIP LIGHT FIXTURE
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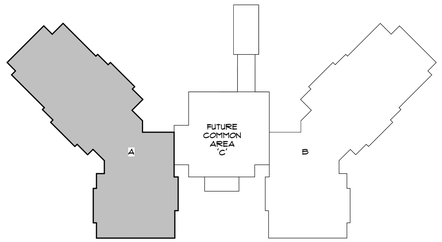
- AIR RETURN
- EXHAUST FAN
- AIR SUPPLY
- LINEAR SIDE WALL DIFFUSER
- SMOKE DETECTOR
- WALL MOUNTED EXIT SIGN
- CEILING MOUNTED LIGHT EXIT
- HEAT LAMP
- CEILING FAN
- SIDEWALL SPRINKLER HEAD
- SPRINKLER HEAD



KEY PLAN

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License #AA-C002117
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727 894-4453 www.bessolo.com

PROFESSIONAL SEAL

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

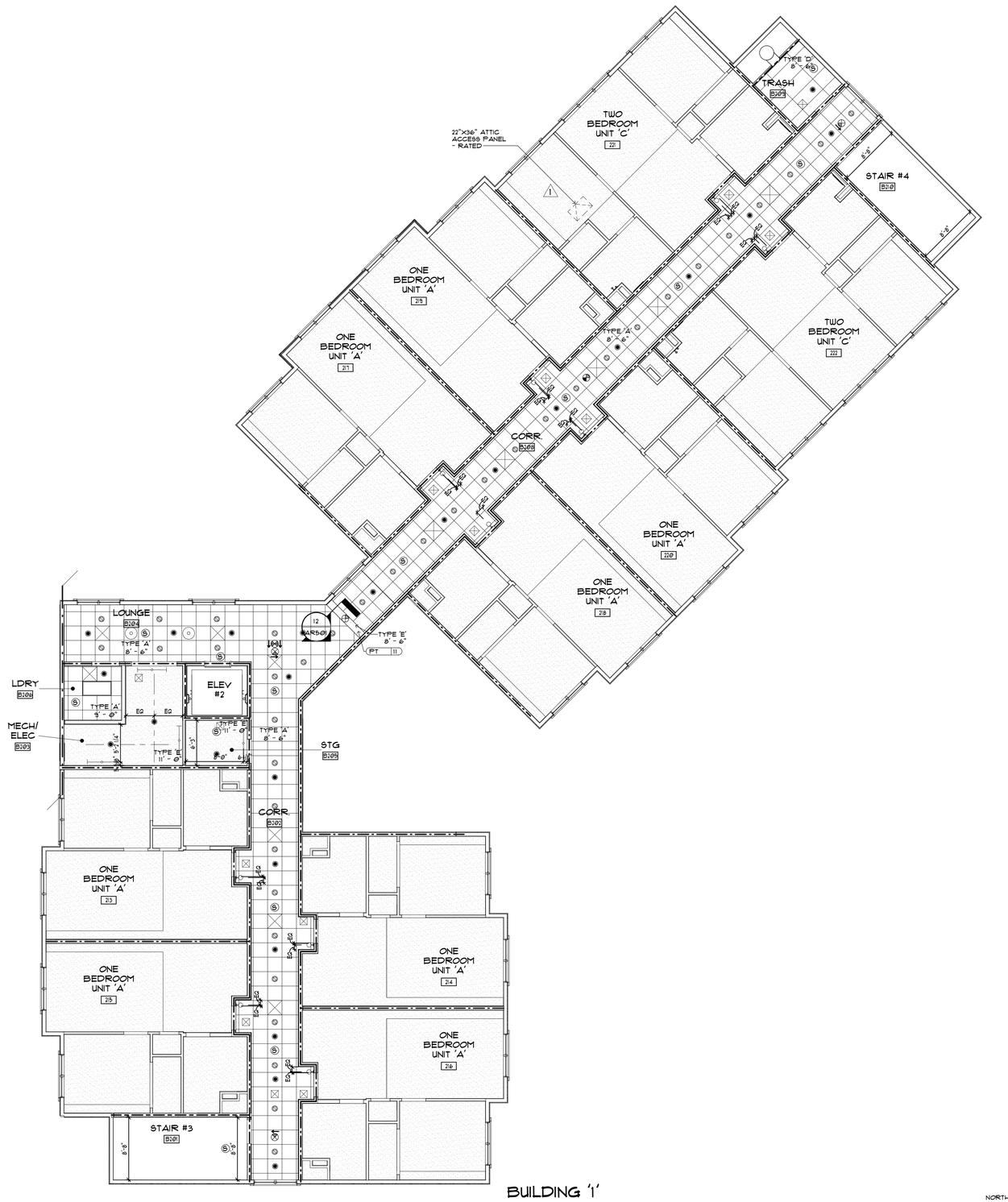
NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

AR102A

BUILDING '1'
PARTIAL SECOND FLOOR
REFLECTED CEILING
PLAN 'A'

12/13/2018 5:12:53 PM



BUILDING '1'
1 PARTIAL SECOND FLOOR REFLECTED CEILING PLAN 'B'
SCALE: 1/8" = 1'-0"

NORTH

GENERAL REFLECTED CEILING NOTES

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TYPE 'B' ACOUSTICAL CEILING PANELS 2'X4' SCORED FOR 2'X2' PATTERN	TYPE 'G' FIBER CEMENT - PAINTED
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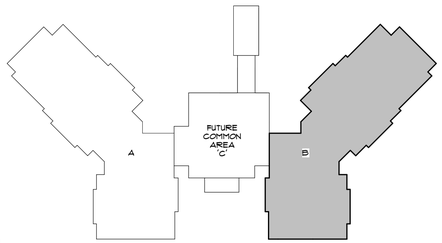
TYPE 'E' GYP CEILING-PAINTED	TYPE 'K' -FAUX WOOD VENEER

REFLECTED CEILING PLAN SYMBOLS

SURFACE MOUNTED LIGHT FIXTURE	AIR RETURN
RECESSED DOWN LIGHT	EXHAUST FAN
OR PENDANT LIGHT FIXTURE	AIR SUPPLY
OR WALL MOUNTED LIGHT FIXTURE	LINEAR SIDE WALL DIFFUSER
WALL MOUNTED ACCENT LIGHT FIXTURE	SMOKE DETECTOR
2'x4' RECESSED LIGHT FIXTURE	WALL MOUNTED EXIT SIGN
2'x4' RECESSED LIGHT FIXTURE - BASKET	CEILING MOUNTED LIGHT EXIT
4' SURFACE MOUNTED LIGHT FIXTURE	HEAT LAMP
4' FLUORESCENT STRIP LIGHT FIXTURE	CEILING FAN
4' WALL MOUNTED FLUORESCENT STRIP LIGHT FIXTURE	SIDEWALL SPRINKLER HEAD
18"x18" ACCESS PANEL	SPRINKLER HEAD



KEY PLAN

BESSOLO
DESIGN GROUP, INC.
ARCHITECTURE ■ DEVELOPMENT
License #AA-C002117
7901 4TH ST. NORTH, SUITE 200
ST. PETERSBURG, FL 33702
727 894-4453 www.bessolo.com

PROFESSIONAL SEAL

KEVIN J. BESSOLO
AR12069

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS		
NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

AR102B

BUILDING '1'
PARTIAL SECOND FLOOR REFLECTED CEILING PLAN 'B'

12/13/2018 5:13:03 PM

1 BUILDING '1'
PARTIAL THIRD FLOOR REFLECTED CEILING PLAN 'A'
SCALE: 1/8" = 1'-0"

NORTH

GENERAL REFLECTED CEILING NOTES

1. FOR ABBREVIATIONS, LEGENDS, & SYMBOLS NOT SHOWN, SEE DRAWING G002
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RECESSED DOWN LIGHT	EXHAUST FAN
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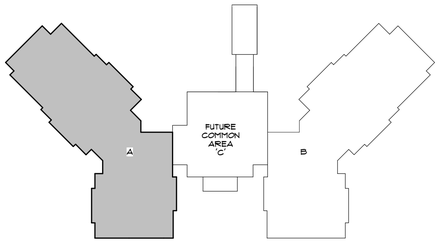
2'X4' RECESSED LIGHT FIXTURE - BASKET	CEILING MOUNTED LIGHT EXIT
4' SURFACE MOUNTED LIGHT FIXTURE	HEAT LAMP
4' FLUORESCENT STRIP LIGHT FIXTURE	CEILING FAN
4' WALL MOUNTED FLUORESCENT STRIP LIGHT FIXTURE	SIDEWALL SPRINKLER HEAD
AP 18"X18" ACCESS PANEL	SPRINKLER HEAD



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MHA - PALMS AT UNIVERSITY
APARTMENTS
PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

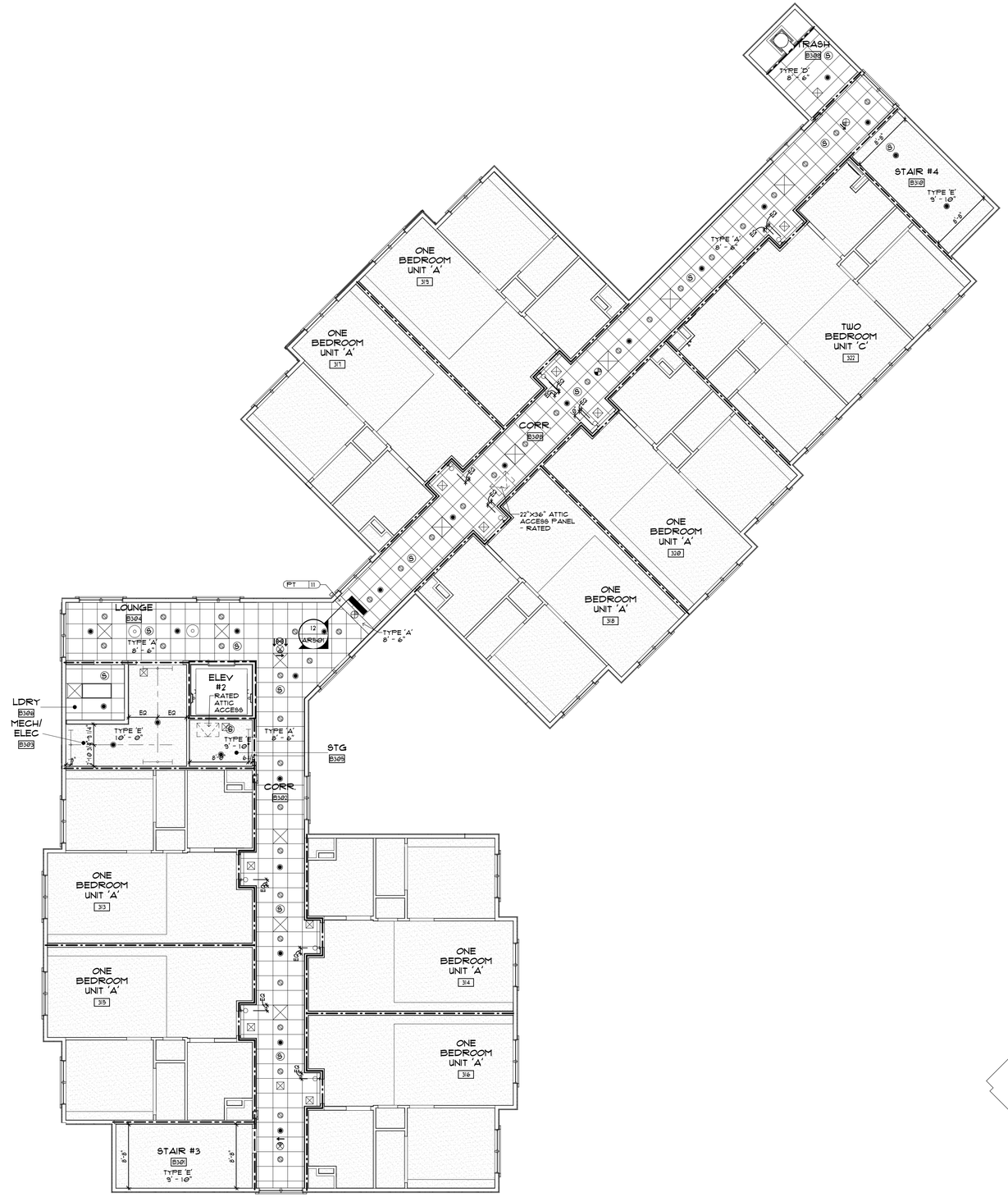
REVISIONS		
NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

AR103A

BUILDING '1'
PARTIAL THIRD FLOOR
REFLECTED CEILING
PLAN 'A'

12/13/2018 5:13:12 PM



BUILDING '1'
1 PARTIAL THIRD FLOOR REFLECTED CEILING PLAN 'B'
SCALE: 1/8" = 1'-0"

NORTH

GENERAL REFLECTED CEILING NOTES

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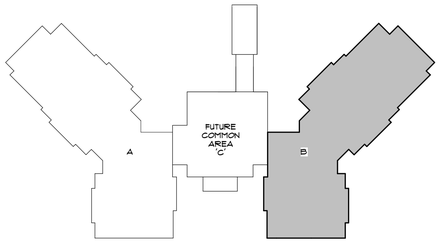
12. ALL DIMENSIONS SHOWN ARE FINISHED FACE OF WALL TO CENTERLINE OF LIGHT FIXTURE

REFLECTED CEILING TYPES IN PLAN

TYPE 'A' ACOUSTICAL CEILING PANELS - 2'X2'	TYPE 'F' EXPOSED STRUCTURE - PAINTED
TYPE 'B' ACOUSTICAL CEILING PANELS 2'X4" SCORED FOR 2'X2' PATTERN	TYPE 'G' FIBER CEMENT - PAINTED
TYPE 'C' ACOUSTICAL CEILING PANELS - 2' X 4'	TYPE 'H' FIBER CEMENT STAINED
TYPE 'D' ACOUSTICAL CEILING PANELS - 2' X 4' WASHABLE	TYPE 'J' STUCCO - PAINTED
TYPE 'E' GYP CEILING-PAINTED	TYPE 'K' -FAUX WOOD VENEER

REFLECTED CEILING PLAN SYMBOLS

SURFACE MOUNTED LIGHT FIXTURE	AIR RETURN
RECESSED DOWN LIGHT	EXHAUST FAN
OR PENDANT LIGHT FIXTURE	AIR SUPPLY
OR WALL MOUNTED LIGHT FIXTURE	LINEAR SIDE WALL DIFFUSER
WALL MOUNTED ACCENT LIGHT FIXTURE	SMOKE DETECTOR
2'x4' RECESSED LIGHT FIXTURE	WALL MOUNTED EXIT SIGN
2'x4' RECESSED LIGHT FIXTURE - BASKET	CEILING MOUNTED LIGHT EXIT
4' SURFACE MOUNTED LIGHT FIXTURE	HEAT LAMP
4' FLUORESCENT STRIP LIGHT FIXTURE	CEILING FAN
4' WALL MOUNTED FLUORESCENT STRIP LIGHT FIXTURE	SIDEWALL SPRINKLER HEAD
AP 18"X18" ACCESS PANEL	SPRINKLER HEAD



KEY PLAN

BESSOLO
DESIGN GROUP, INC.
ARCHITECTURE ■ DEVELOPMENT
License #AA-C002117
7901 4TH ST. NORTH, SUITE 200
■ ST. PETERSBURG, FL 33702 ■
727 894-8453 www.bessolo.com

PROFESSIONAL SEAL

KEVIN J. BESSOLO
AR12069

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

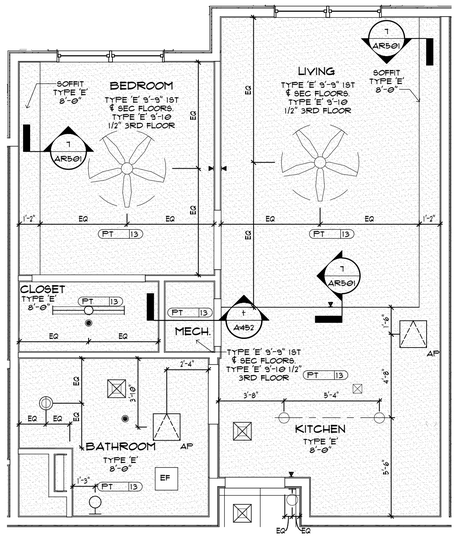
NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

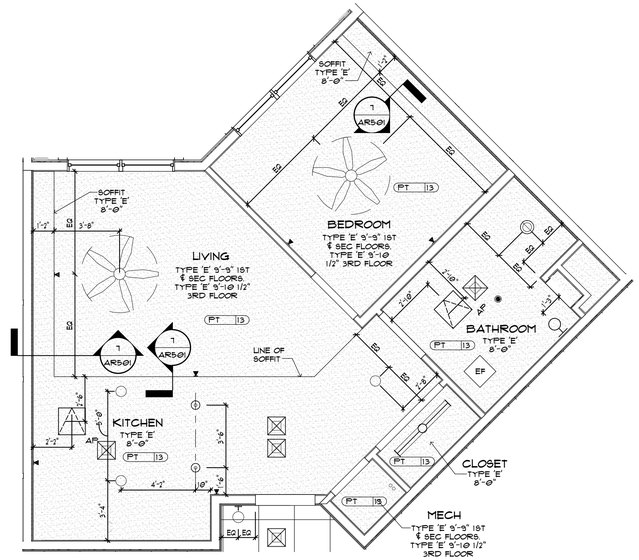
AR103B

BUILDING '1'
PARTIAL THIRD FLOOR
REFLECTED CEILING
PLAN 'B'

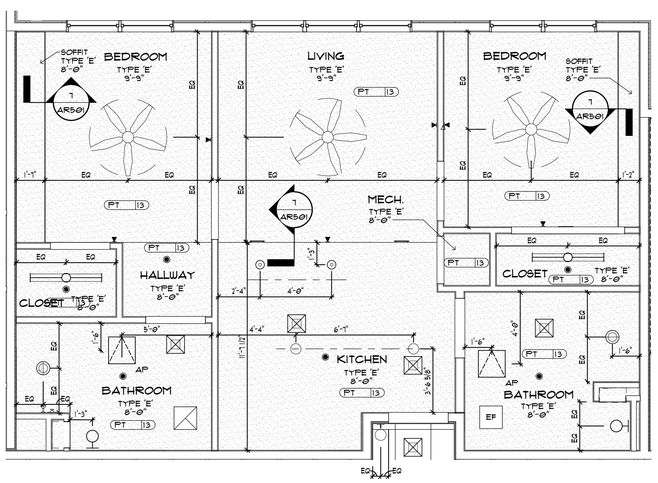
12/13/2018 5:13:21 PM



1 ONE BEDROOM UNIT 'A'
SCALE: 1/4" = 1'-0"



2 ONE BEDROOM UNIT 'B'
SCALE: 1/4" = 1'-0"



3 TWO BEDROOM UNIT 'C'
SCALE: 1/4" = 1'-0"

GENERAL REFLECTED CEILING NOTES

1. FOR ABBREVIATIONS, LEGENDS, & SYMBOLS NOT SHOWN, SEE DRAWING G002
2. THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THIS REFLECTED CEILING PLAN WITH THE ELECTRICAL LIGHTING PLANS, MECHANICAL SUPPLY & RETURN AND EXHAUST PLANS, AND THE FIRE PROTECTION PLANS. HE WILL REPORT TO THE ARCHITECT ANY ERRORS, INCONSISTENCY OR OMISSIONS THAT HE MAY DISCOVER.
3. ONLY CEILING MOUNTED EXIT LIGHTS ARE SHOWN ON THE REFLECTED CEILING PLANS. REFER TO THE ELECTRICAL DRAWINGS FOR LOCATION OF WALL MOUNTED EXIT LIGHTS.
4. THE CONTRACTOR SHALL VERIFY THAT ACCESS PANELS OF APPROPRIATE SIZE AND TYPE ARE INSTALLED IN GYPSUM WALLBOARD CEILING SOFFITS, IN CEMENT PLASTER CEILINGS OR SOFFITS, AND IN OTHER NON-ACCESSIBLE TYPE CEILINGS OR SOFFITS WHERE ACCESS, SERVICE OR ADJUSTMENT TO MECHANICAL, PLUMBING OR ELECTRICAL ITEMS MAY BE REQUIRED. ACCESS PANELS SHALL BE THE FIRE RATED TYPE EQUAL TO THE RATING OF THE CEILING OR SOFFIT IN WHICH THEY OCCUR.
5. COORDINATE ELECTRICAL DRAWINGS AND/OR THE COMMUNICATIONS DRAWINGS FOR LOCATIONS OF CEILING MOUNTED SMOKE DETECTORS, SPEAKERS, FIRE ALARM DEVICES, ETC.
6. THE CONTRACTOR WILL ADVISE THE OWNER AND TENANTS THAT AN 18" MINIMUM VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN THE BOTTOM OF THE EXTENDED SPRINKLER HEADS AND THE TOP OF ANY FILES, SHELVING, LOCKERS, ETC. THE CONTRACTOR WILL ALSO ADVISE THE OWNER AND TENANTS THAT ITEMS SHALL NOT BE PLACED OR STORED ON TOP OF SUCH SHELVING SO THAT THIS CODE REQUIRED 18" MINIMUM VERTICAL CLEARANCE WILL BE MAINTAINED.
7. THE CONTRACTOR SHALL PROVIDE ACCESS PANELS IN GYPSUM WALLBOARD CEILINGS SO THAT THE ARCHITECT AND THE STATE AND LOCAL OFFICIALS CAN INSPECT RATED WALLS. ARCHITECT SHALL BE PROVIDED A LAYOUT FOR APPROVAL PRIOR TO INSTALLATION. THESE ACCESS PANELS WILL BE LOCATED AT INTERVALS NOT TO EXCEED 30'-0" ON CENTER, MINIMUM OF ONE PER SPACE, AND IN SUCH MULTIPLE LOCATIONS AS NECESSARY TO VIEW ALL SURFACES OF THE RATED WALLS.
8. ALL SMOKE DETECTORS SHALL BE MINIMUM OF 3'-0" FROM ANY HVAC DIFFUSERS.
9. ALL CEILING HEIGHTS 8'-0" AFF UNLESS OTHERWISE NOTED.
10. REFER TO FIRE PROTECTION DRAWINGS FOR DETAILED INFORMATION RELATING TO SPRINKLER HEAD LOCATIONS.
11. FOR DESCRIPTION OF ALL LIGHTING FIXTURES IDENTIFIED ON THIS DRAWING, SEE LUMINAIRE SCHEDULE ON ELECTRICAL DRAWINGS.
12. ACOUSTICAL PANEL CEILING SHALL BE CENTERED IN ROOM OR SPACE UNLESS OTHERWISE NOTED.
13. ALL LIGHTS, SPEAKERS, GRILLES, ETC., SHALL BE CENTERED IN CEILING PANELS UNLESS OTHERWISE NOTED.
14. ALL DIMENSIONS SHOWN ARE FINISHED FACE OF WALL TO CENTERLINE OF LIGHT FIXTURE
15. FOR CEILING FINISHES - SEE ID001 AND ID602. CEILING FINISH TAG: (-)(-)

REFLECTED CEILING TYPES IN PLAN

TYPE 'A' ACOUSTICAL CEILING PANELS - 2'X2'	TYPE 'F' EXPOSED STRUCTURE - PAINTED
TYPE 'B' ACOUSTICAL CEILING PANELS 2'X4' SCORED FOR 2'X2' PATTERN	TYPE 'G' FIBER CEMENT - PAINTED
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REFLECTED CEILING PLAN SYMBOLS

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OR PENDANT LIGHT FIXTURE	AIR SUPPLY
OR WALL MOUNTED LIGHT FIXTURE	LINEAR SIDE WALL DIFFUSER
WALL MOUNTED ACCENT LIGHT FIXTURE	SMOKE DETECTOR
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18"X18" ACCESS PANEL	SPRINKLER HEAD

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

505 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

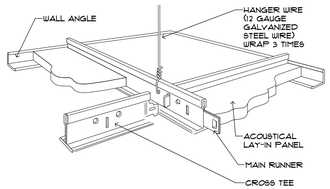
NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS

PROJECT NO:	15083.00
DRAWN BY:	RJW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

AR401

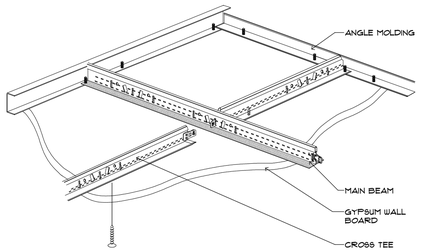
BUILDING '1' UNIT REFLECTED CEILING PLANS

12/13/2018 5:13:31 PM



1 TYPICAL SUSPENDED ACOUSTIC CELING DETAIL

SCALE:SCALE: NOT TO SCALE



2 TYPICAL ALTERNATE SUSPENDED GYPSUM BOARD CEILING DETAIL

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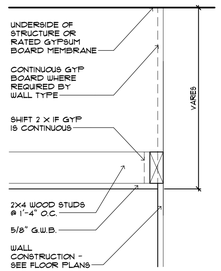
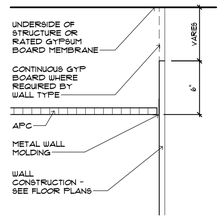


3 TYPICAL GWB DETAIL

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



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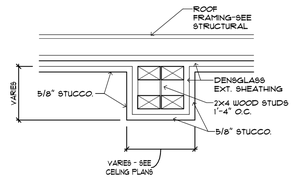
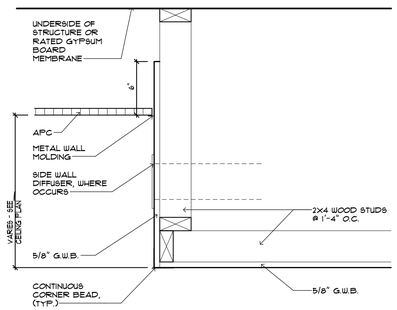


5 SOFFIT DETAIL

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



6 SOFFIT DETAIL

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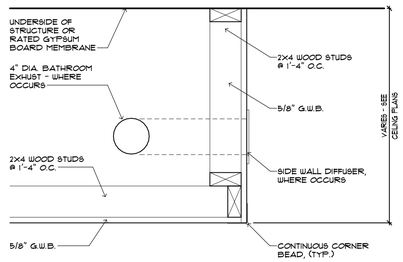

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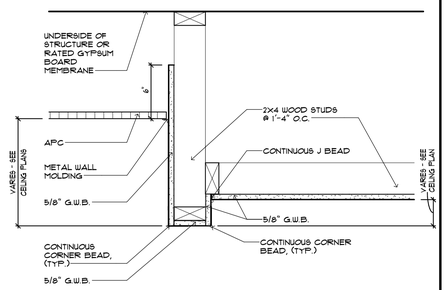
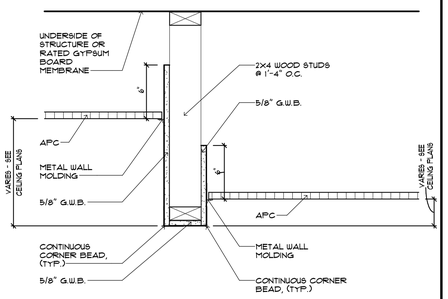


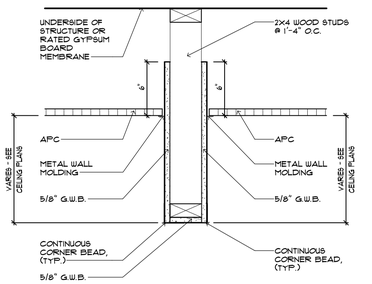
8 SOFFIT DETAIL

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



9 SOFFIT DETAIL

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



10 SOFFIT DETAIL

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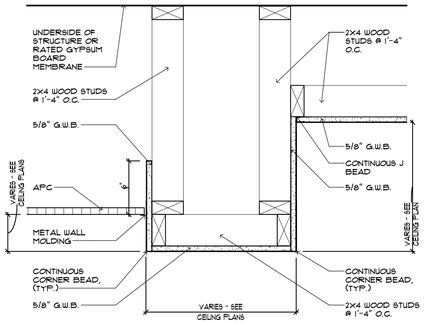

11 SOFFIT DETAIL

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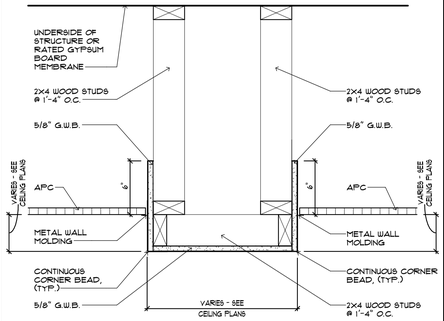
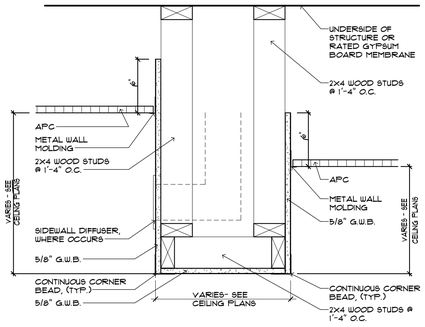


12 SOFFIT DETAIL

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



13 SOFFIT DETAIL

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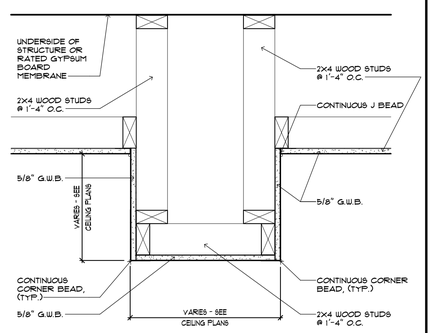

14 SOFFIT DETAIL

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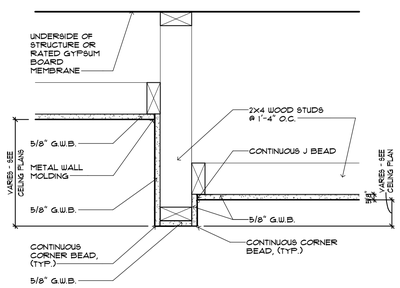
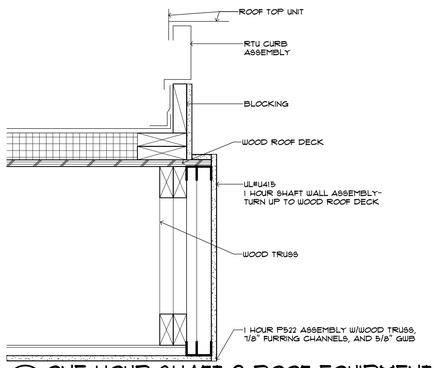


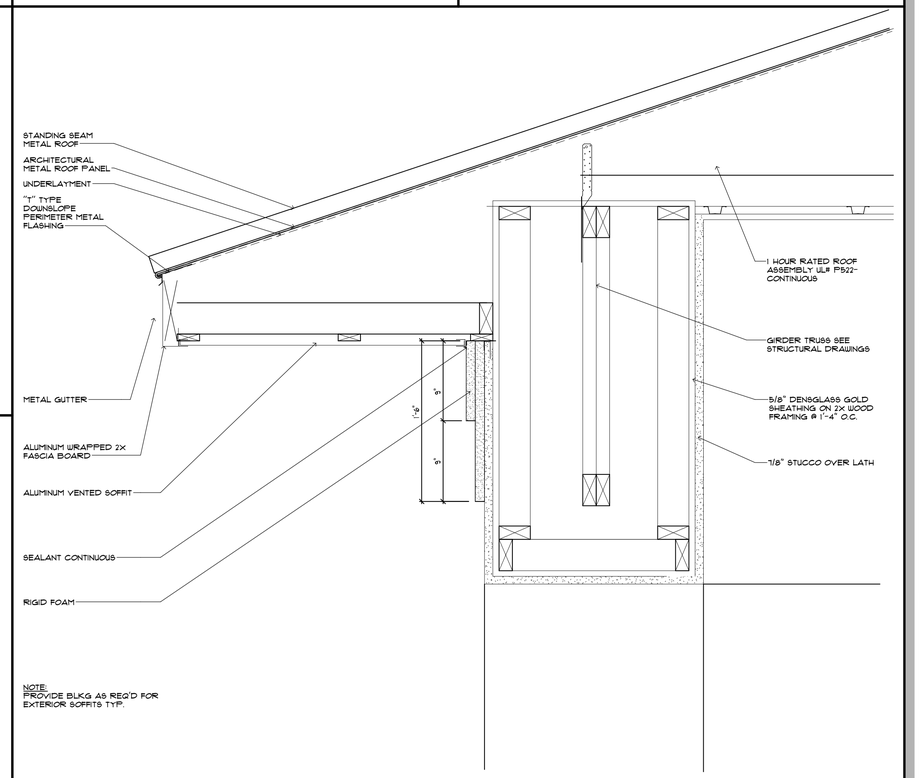
15 SOFFIT DETAIL

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



16 ONE HOUR SHAFT @ ROOF EQUIPMENT

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



NOTE:
PROVIDE BLKG AS REQ'D FOR EXTERIOR SOFFITS TYP.

17 SOFFIT DETAIL - PORTE COCHERE

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

12/13/2018 5:13:35 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

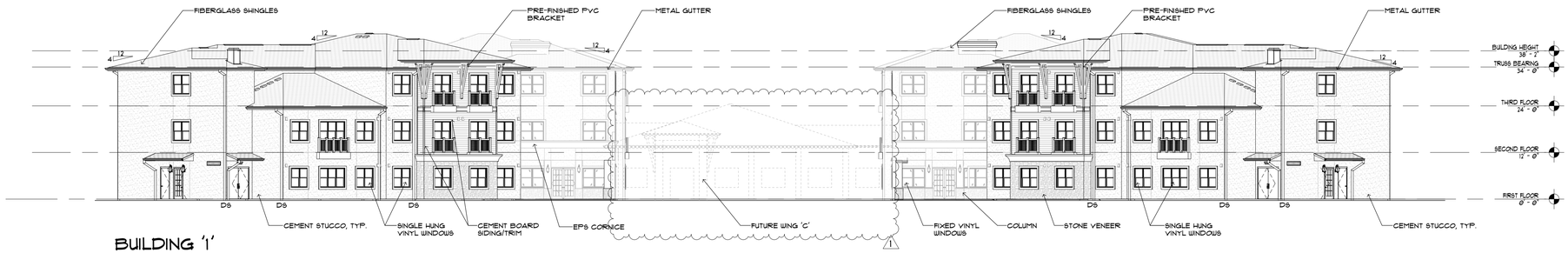
ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS		
NO:	DATE:	DESCRIPTION

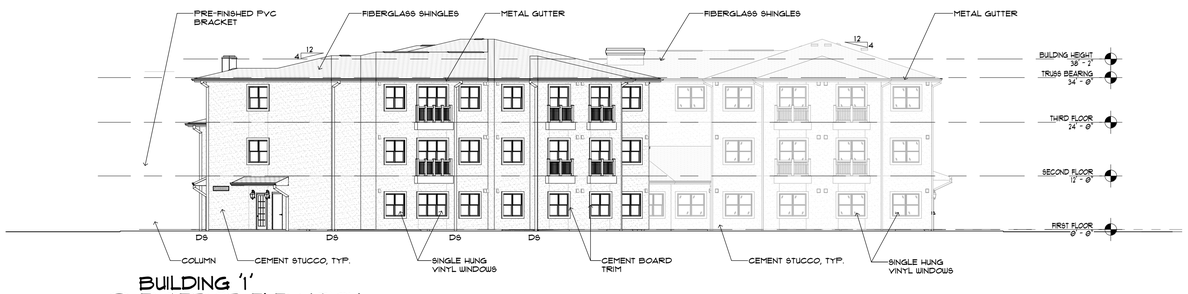
PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS NOTED

AR501

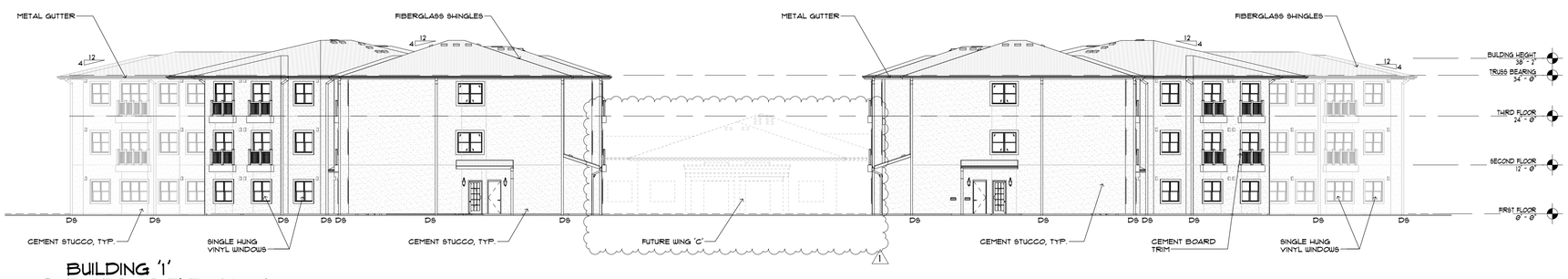
BUILDING '1'
CEILING DETAILS



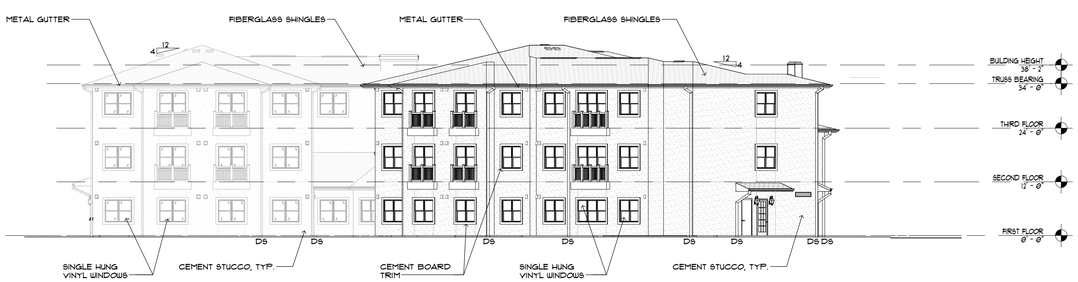
1 BUILDING '1' EXTERIOR ELEVATION
SCALE: 1/16" = 1'-0"



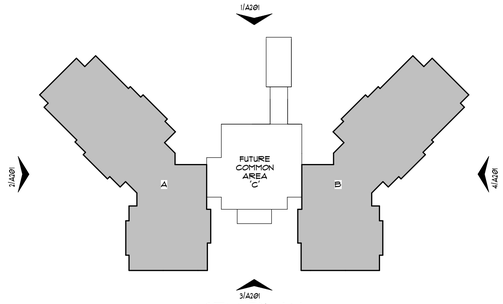
2 BUILDING '1' EXTERIOR ELEVATION
SCALE: 1/16" = 1'-0"



3 BUILDING '1' EXTERIOR ELEVATION
SCALE: 1/16" = 1'-0"



4 BUILDING '1' EXTERIOR ELEVATION
SCALE: 1/16" = 1'-0"



KEY PLAN

12/13/2018 5:08:51 PM

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ST. PETERSBURG, FL 33702
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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

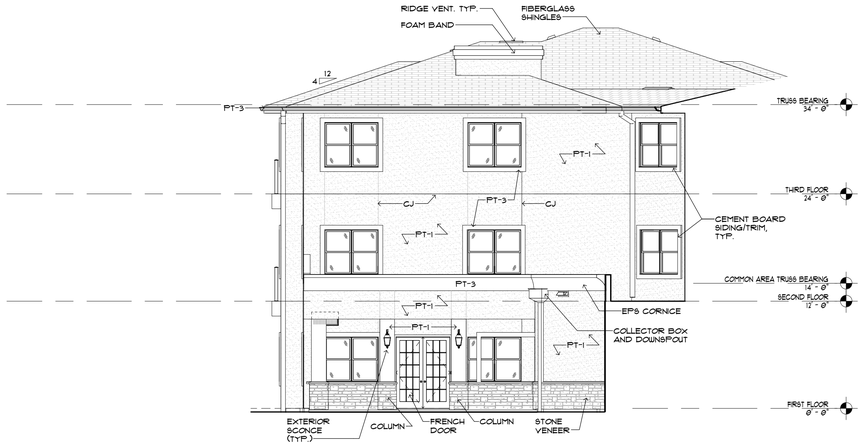
REVISIONS

NO:	DATE:	DESCRIPTION
1	12-13-18	VE CHANGES

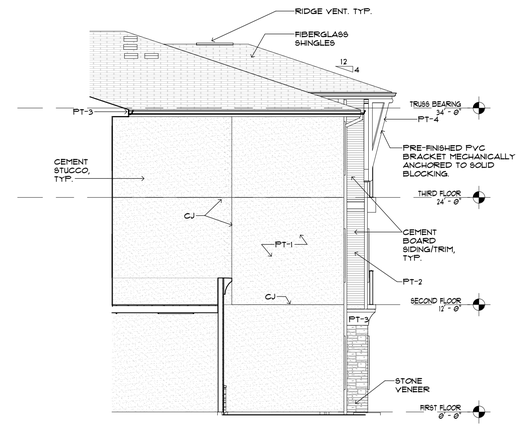
PROJECT NO:	15083.00
DRAWN BY:	RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

A201

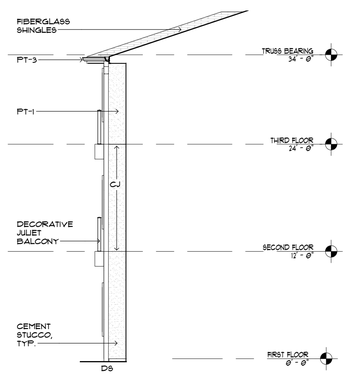
BUILDING '1' EXTERIOR ELEVATIONS



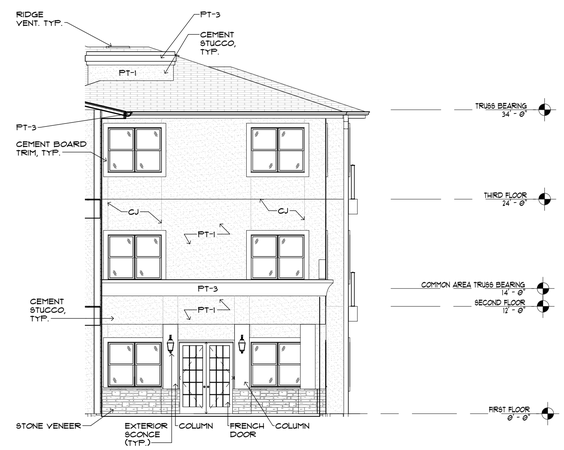
BUILDING '1'
1 PARTIAL EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"



BUILDING '1'
2 PARTIAL EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"



BUILDING '1'
3 PARTIAL EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"



BUILDING '1'
4 PARTIAL EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"

PAINT & MATERIAL LEGEND

FIBERGLASS SHINGLES: SHENANDOAH LANDMARK IR.

STONE VENEER: BORAL TERRA ROSA LEDGESTONE.

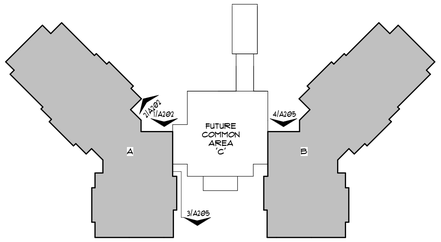
METAL ROOF: BERRIDGE CITYSCAPE - METAL ROOF

PT-1: SHERWIN WILLIAMS - CREME - SW 7556
PT-2: SHERWIN WILLIAMS - MESCLUN GREEN - SW 6724
PT-3: SHERWIN WILLIAMS - EXTRA WHITE - SW 7006
PT-4: SHERWIN WILLIAMS - UMBER - SW 6146

NOTE:
SEE SPECS FOR ACCEPTABLE MANUFACTURERS TO MATCHING PAINT COLORS AND MATERIALS LISTED ABOVE.

ALL DOWNSPOUTS AND GUTTERS TO MATCH COLOR PT-3.

SEE DETAIL 2/A521 FOR DOWNSPOUT CONNECTION TO UNDERGROUND.



KEY PLAN

BESSOLO
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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

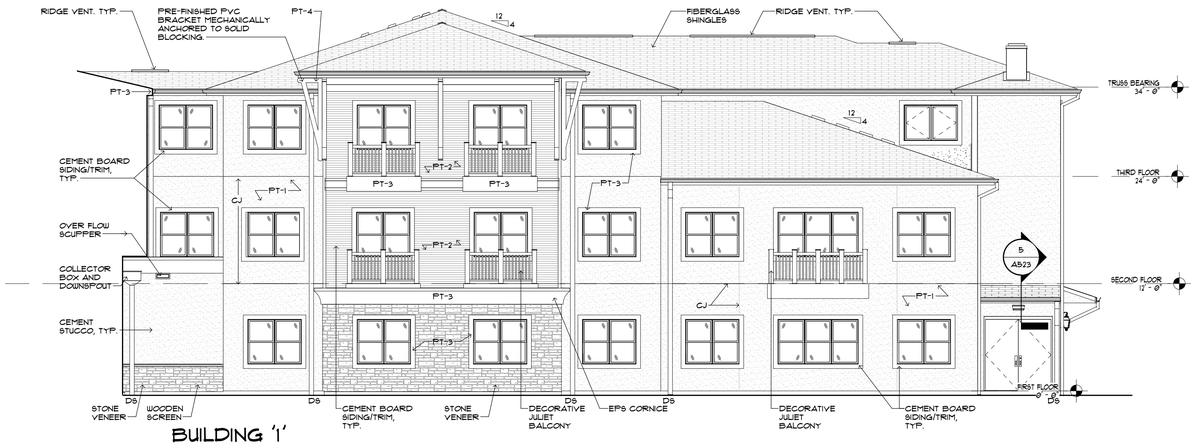
NO:	DATE:	DESCRIPTION
1	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

A202

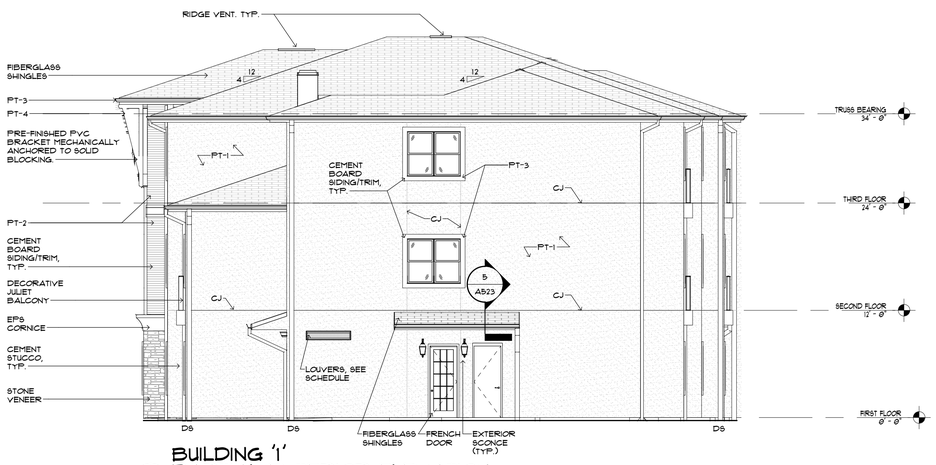
BUILDING '1'
PARTIAL EXTERIOR ELEVATIONS

12/13/2018 5:03:03 PM



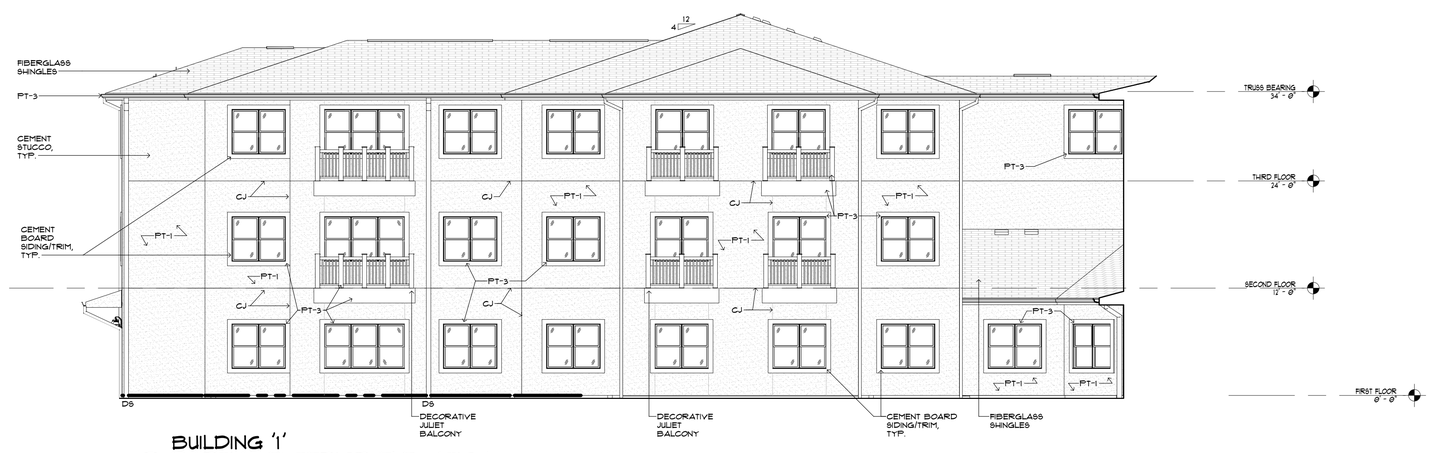
BUILDING '1' PARTIAL EXTERIOR ELEVATION

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



BUILDING '1' PARTIAL EXTERIOR ELEVATION

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



BUILDING '1' PARTIAL EXTERIOR ELEVATION

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

PAINT & MATERIAL LEGEND

FIBERGLASS SHINGLES: SHENANDOAH LANDMARK IR.

STONE VENEER: BORAL TERRA ROSA LEDGESTONE.

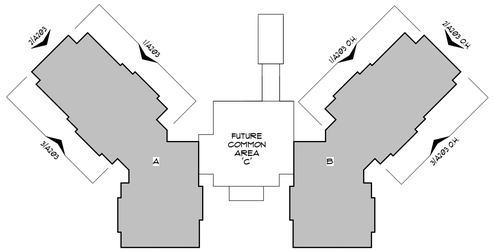
METAL ROOF: BERRIDGE CITYSCAPE - METAL ROOF

PT-1: SHERWIN WILLIAMS - CREME - SW 7556
PT-2: SHERWIN WILLIAMS - MESCLUN GREEN - SW 6724
PT-3: SHERWIN WILLIAMS - EXTRA WHITE - SW 7006
PT-4: SHERWIN WILLIAMS - UMBER - SW 6146

NOTE:
SEE SPECS FOR ACCEPTABLE MANUFACTURERS TO MATCHING PAINT COLORS AND MATERIALS LISTED ABOVE.

ALL DOWNSPOUTS AND GUTTERS TO MATCH COLOR PT-3.

SEE DETAIL 2/A521 FOR DOWNSPOUT CONNECTION TO UNDERGROUND.



KEY PLAN

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

A203

BUILDING '1' PARTIAL EXTERIOR ELEVATIONS

12/13/2018 5:09:10 PM

PAINT & MATERIAL LEGEND

FIBERGLASS SHINGLES: SHENANDOAH LANDMARK IR.

STONE VENEER: BORAL TERRA ROSA LEDGESTONE.

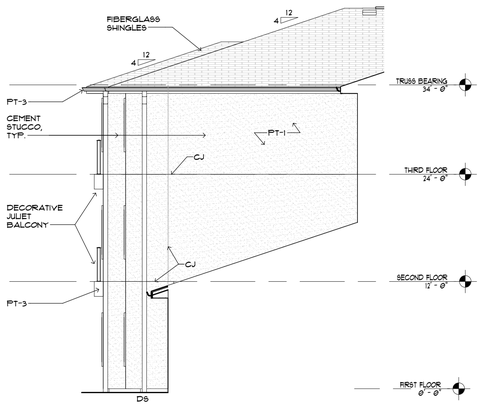
METAL ROOF: BERRIDGE CITYSCAPE - METAL ROOF

PT-1: SHERWIN WILLIAMS - CREME - SW 7556
PT-2: SHERWIN WILLIAMS - MESCLUN GREEN - SW 6724
PT-3: SHERWIN WILLIAMS - EXTRA WHITE - SW 7006
PT-4: SHERWIN WILLIAMS - UMBER - SW 6146

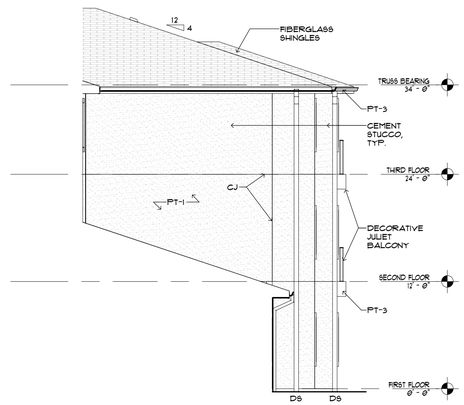
NOTE:
SEE SPECS FOR ACCEPTABLE MANUFACTURERS TO MATCHING PAINT COLORS AND MATERIALS LISTED ABOVE.

ALL DOWNSPOUTS AND GUTTERS TO MATCH COLOR PT-3.

SEE DETAIL 2/A521 FOR DOWNSPOUT CONNECTION TO UNDERGROUND.

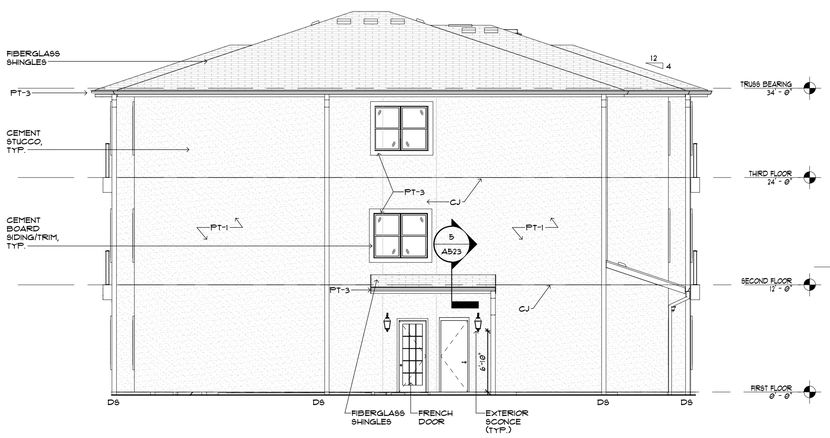


1 BUILDING '1'
PARTIAL EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"

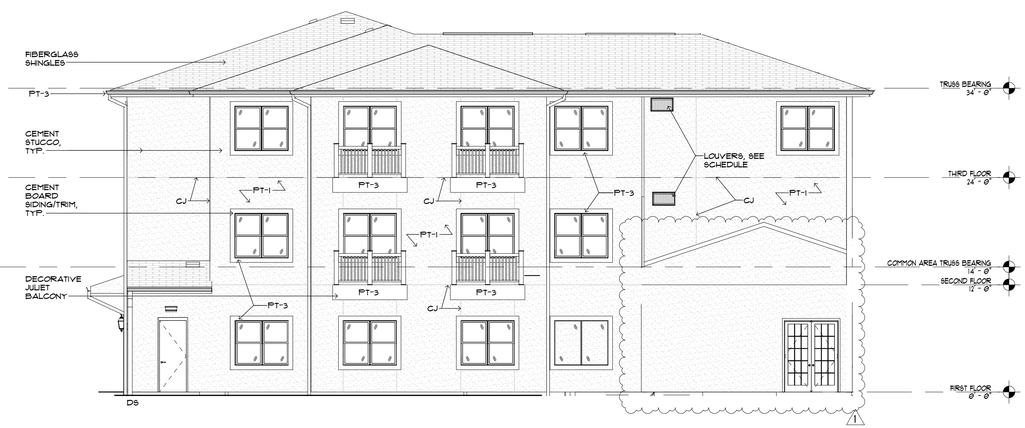


2 BUILDING '1'
PARTIAL EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"

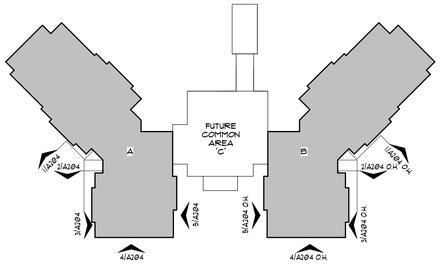
3 BUILDING '1'
PARTIAL EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"



4 BUILDING '1'
PARTIAL EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"



5 BUILDING '1'
PARTIAL EXTERIOR ELEVATION
SCALE: 1/8" = 1'-0"



KEY PLAN

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

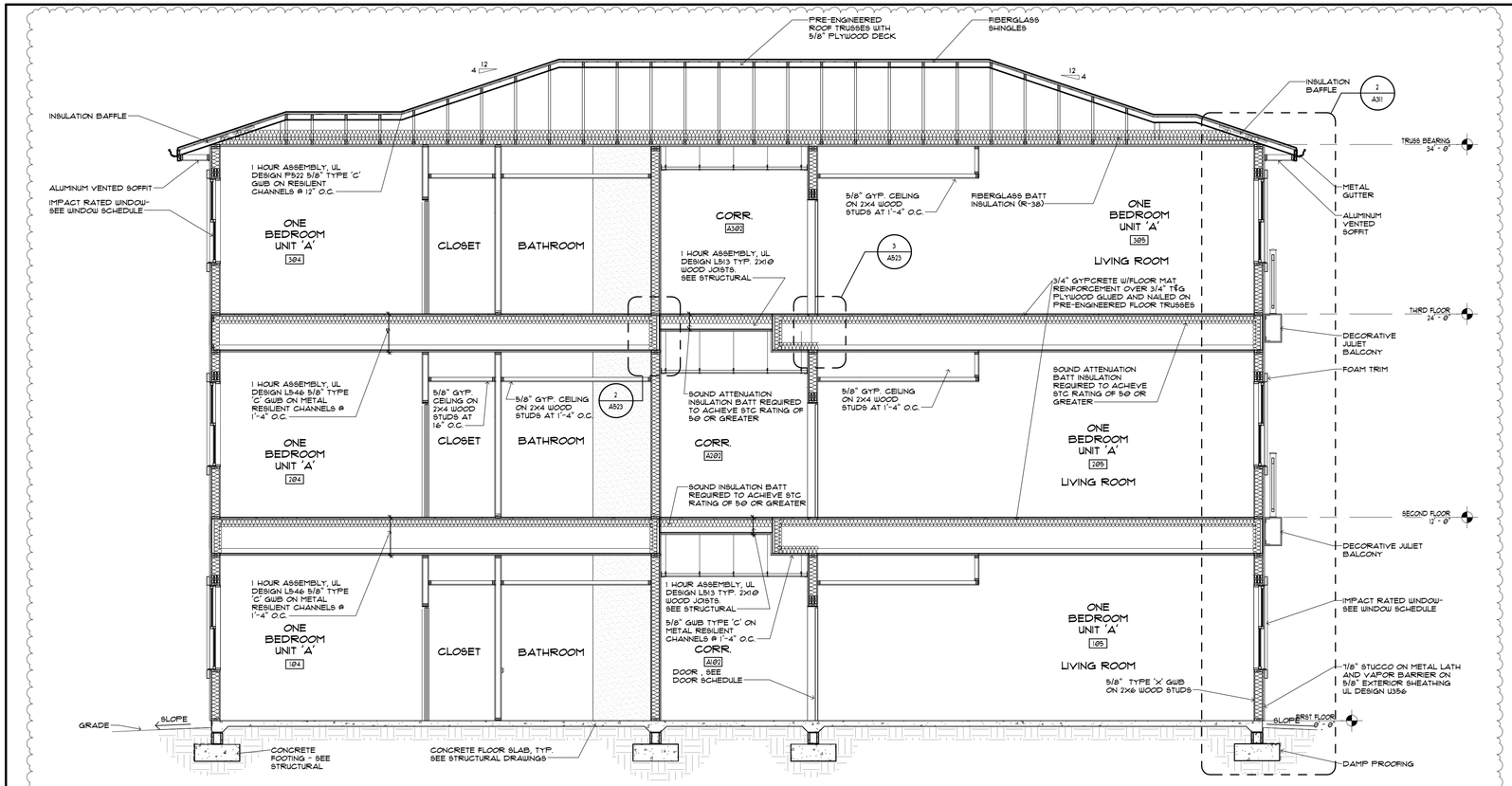
NO:	DATE:	DESCRIPTION
1	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

A204

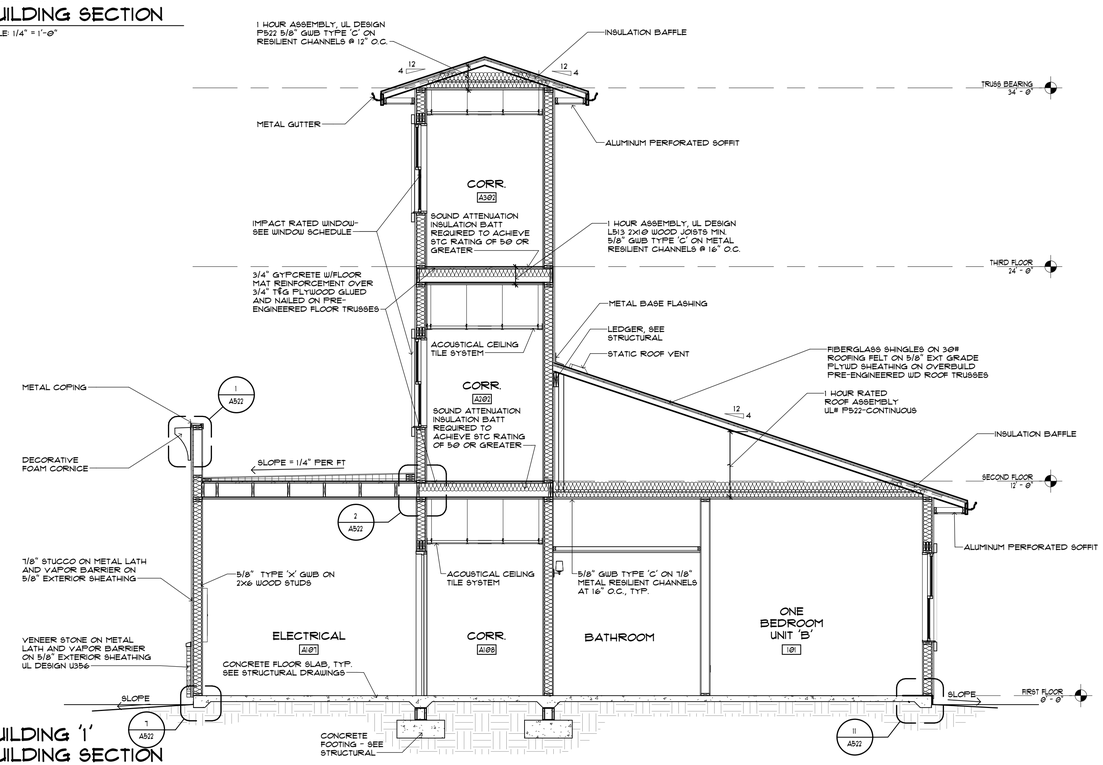
BUILDING '1'
PARTIAL EXTERIOR ELEVATIONS

12/13/2018 5:09:18 PM



BUILDING '1' BUILDING SECTION

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



BUILDING '1' BUILDING SECTION

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

12/13/2018 5:09:21 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

505 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

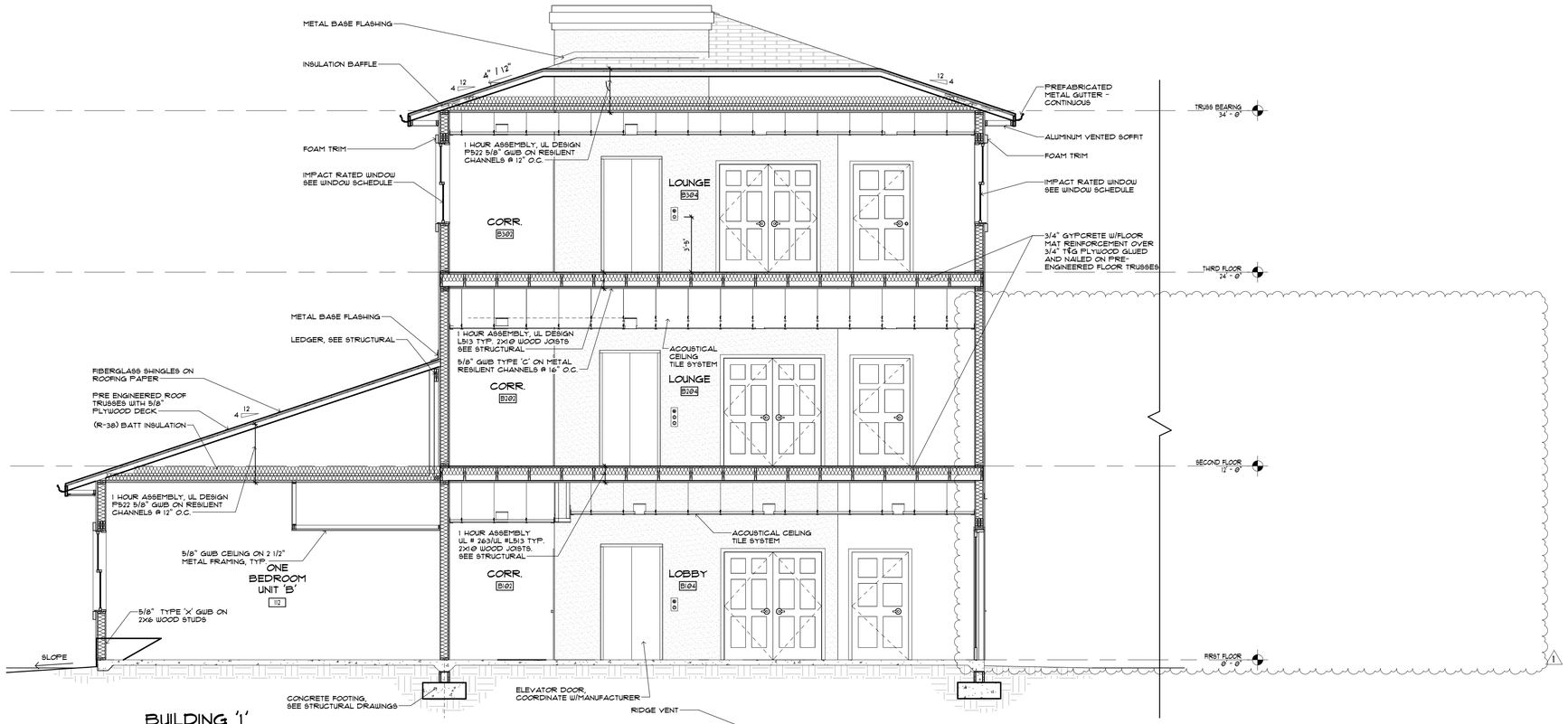
REVISIONS

NO:	DATE:	DESCRIPTION
1	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/4" = 1'-0"

A301

BUILDING '1' BUILDING SECTIONS



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

2 BUILDING '1' BUILDING SECTION
SCALE: 1/4" = 1'-0"

12/13/2018 5:09:26 PM

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■ ST. PETERSBURG, FL 33702 ■
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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

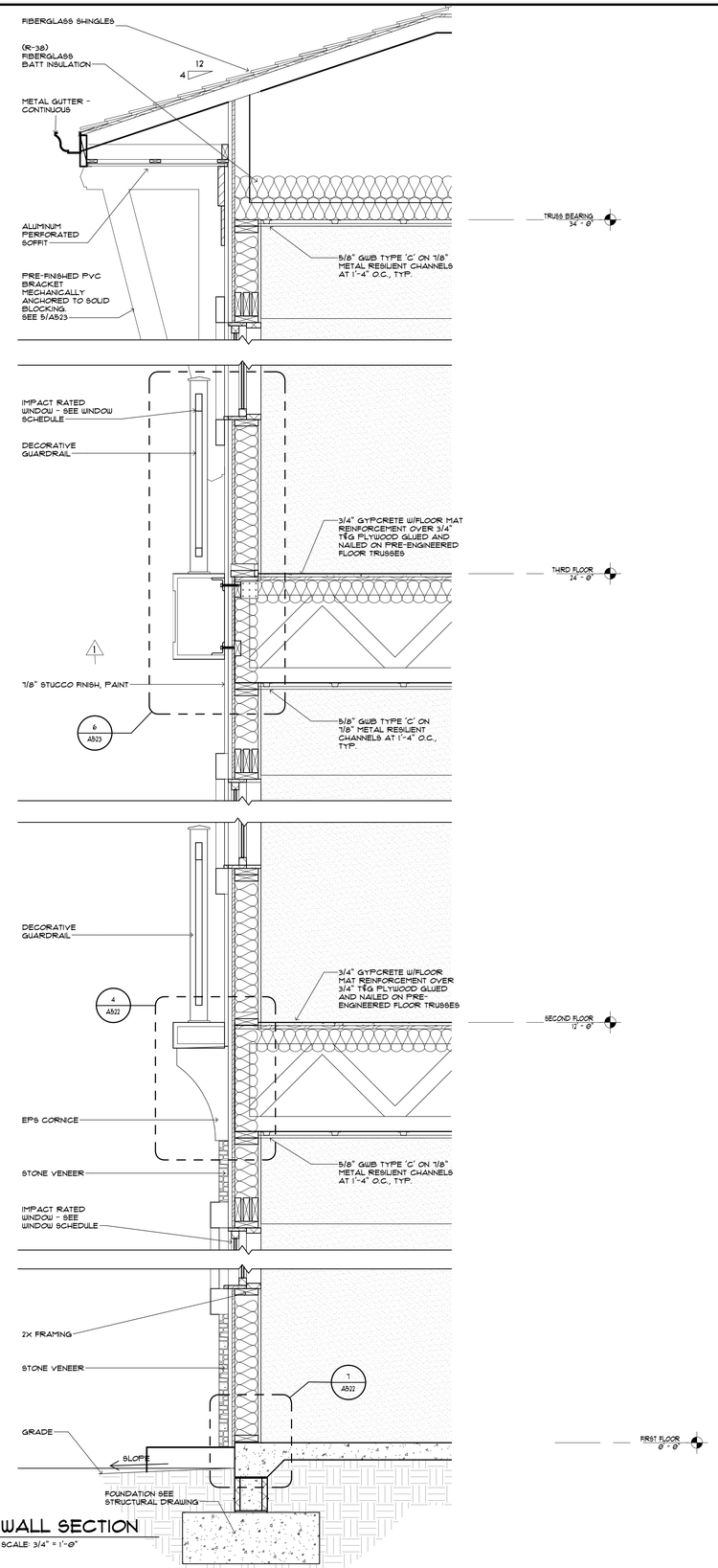
REVISIONS

NO:	DATE:	DESCRIPTION
1	12-13-18	VE CHANGES

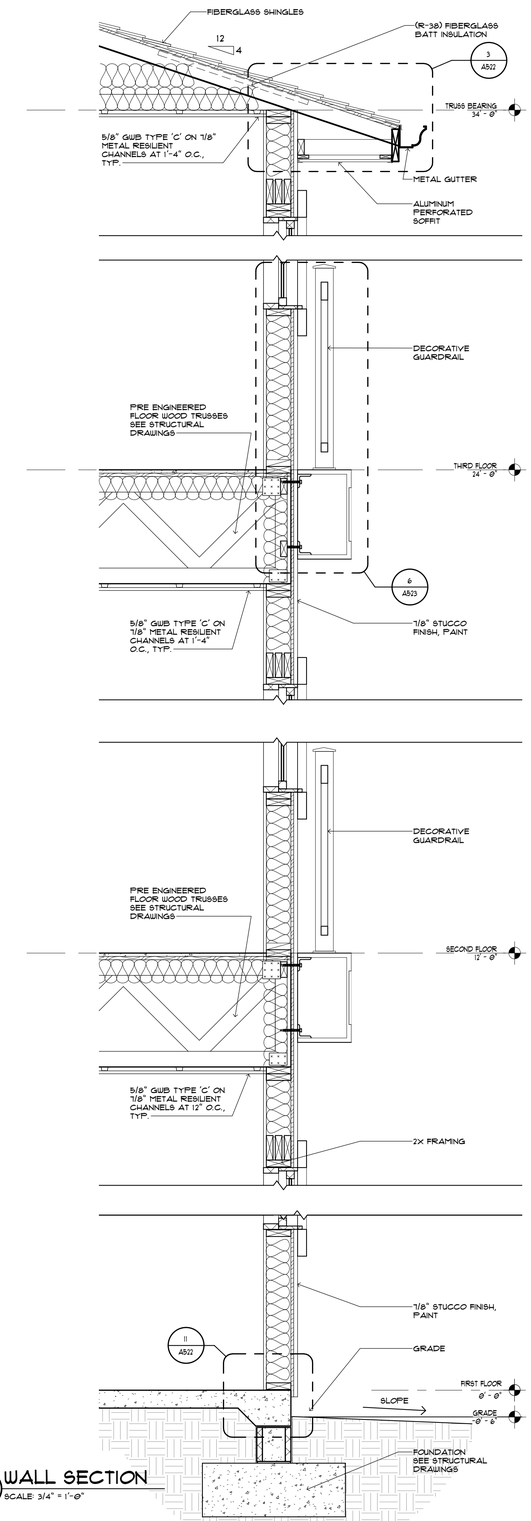
PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/4" = 1'-0"

A302

BUILDING '1' BUILDING SECTIONS



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



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

12/13/2018 5:09:30 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED

DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

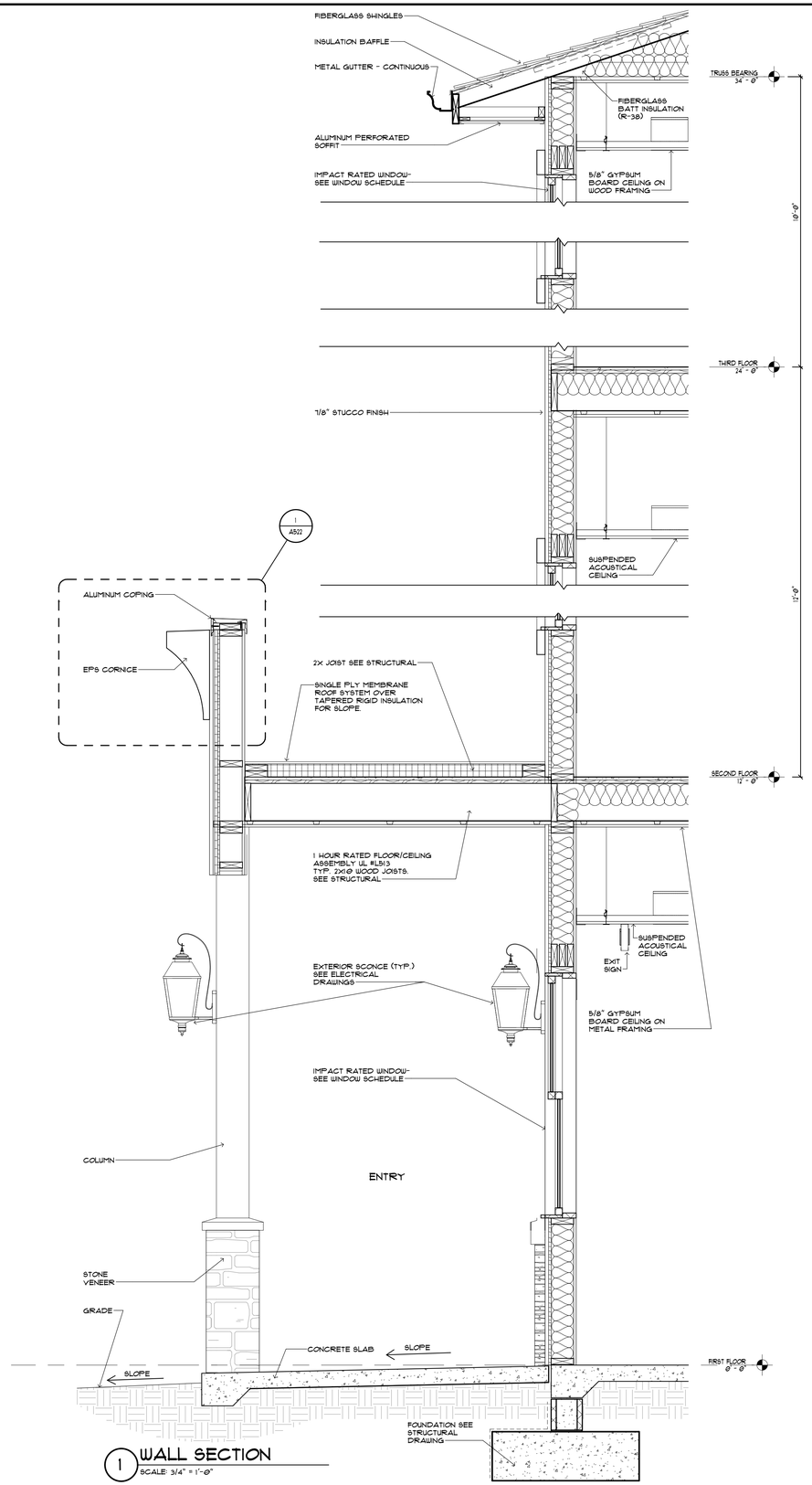
REVISIONS

NO:	DATE:	DESCRIPTION
1	07-05-18	BLDG. DEPT. COMM.

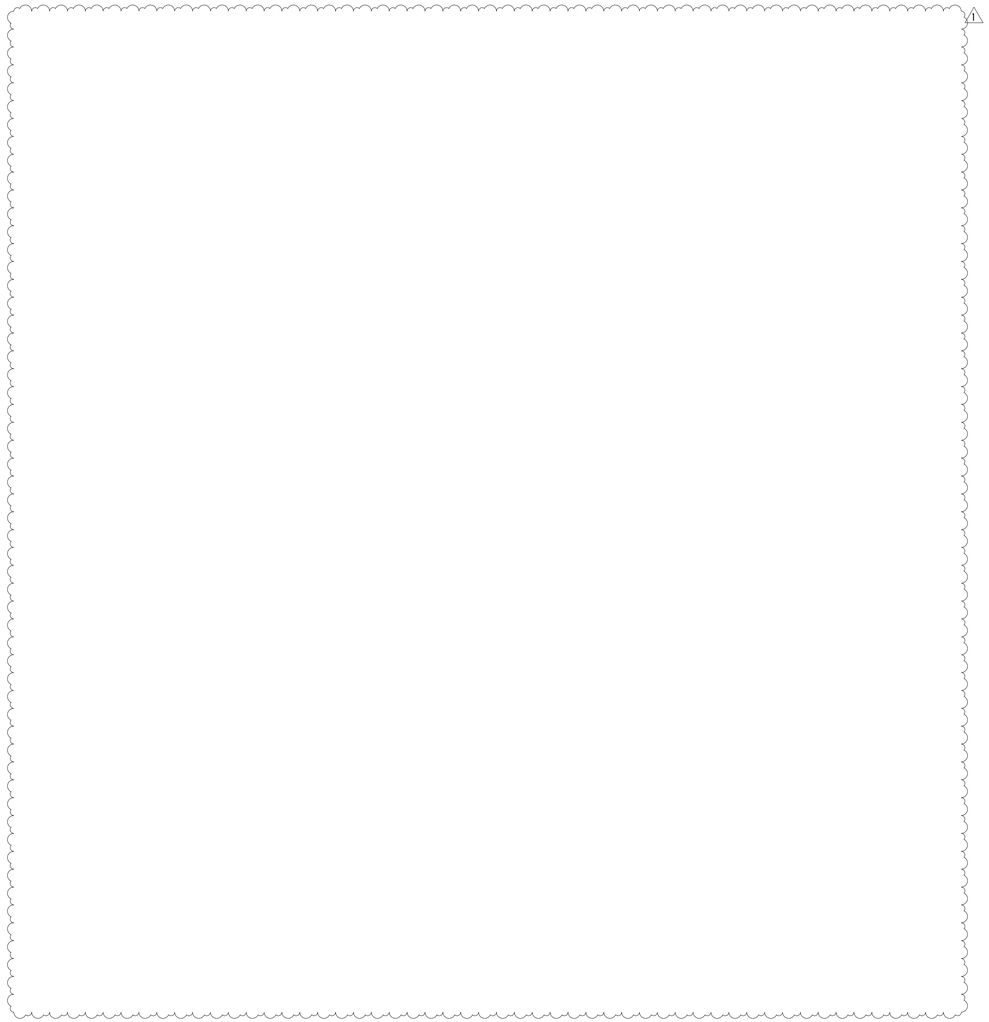
PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	3/4" = 1'-0"

A311

BUILDING '1'
WALL SECTIONS



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



12/13/2018 5:09:32 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION
1	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	3/4" = 1'-0"

A312

BUILDING '1'
WALL SECTIONS

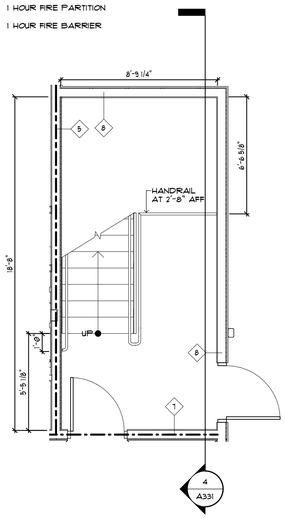
WALL LEGEND

FRAMED PARTITION / WALL

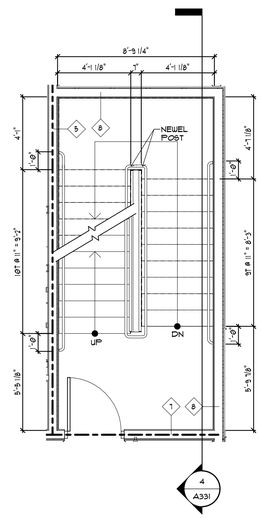
WALL RATINGS

1 HOUR FIRE PARTITION

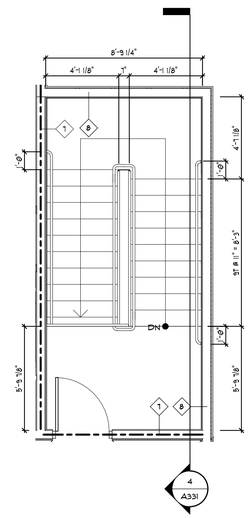
1 HOUR FIRE BARRIER



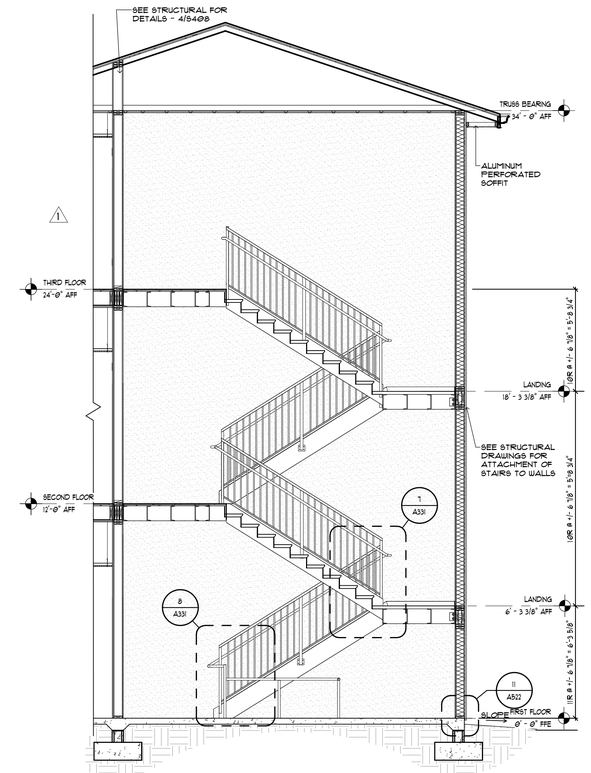
1 FIRST FLOOR STAIR PLAN
SCALE: 1/4" = 1'-0"



2 SECOND FLOOR STAIR PLAN
SCALE: 1/4" = 1'-0"

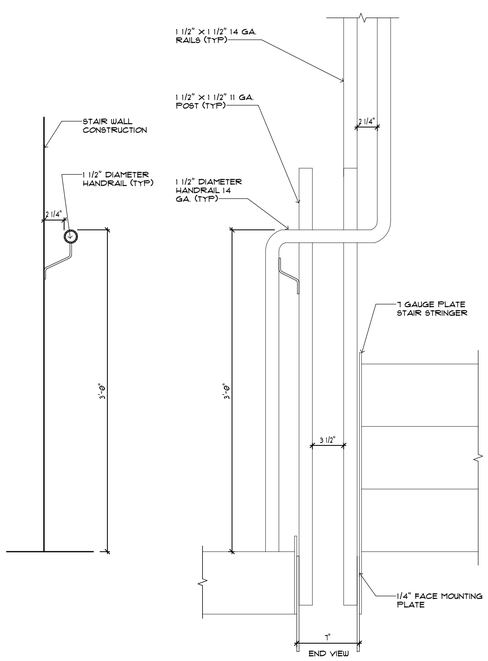


3 THIRD FLOOR STAIR PLAN
SCALE: 1/4" = 1'-0"

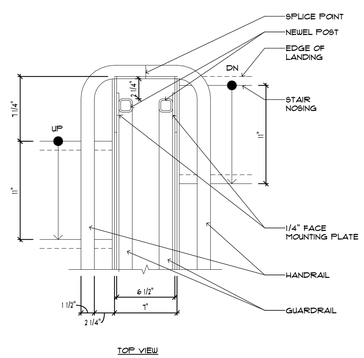


4 TYPICAL STAIR SECTION
SCALE: 1/4" = 1'-0"

NOTE:
PROVIDE VISUAL CONTRAST (LIGHT-ON-DARK OR DARK-ON-LIGHT) ON THE TOP AND BOTTOM STEPS THAT IS APPROXIMATELY 2 INCHES WIDE AND LOCATED EITHER ON NOSINGS OR AT THE LEADING EDGES OF TREADS.



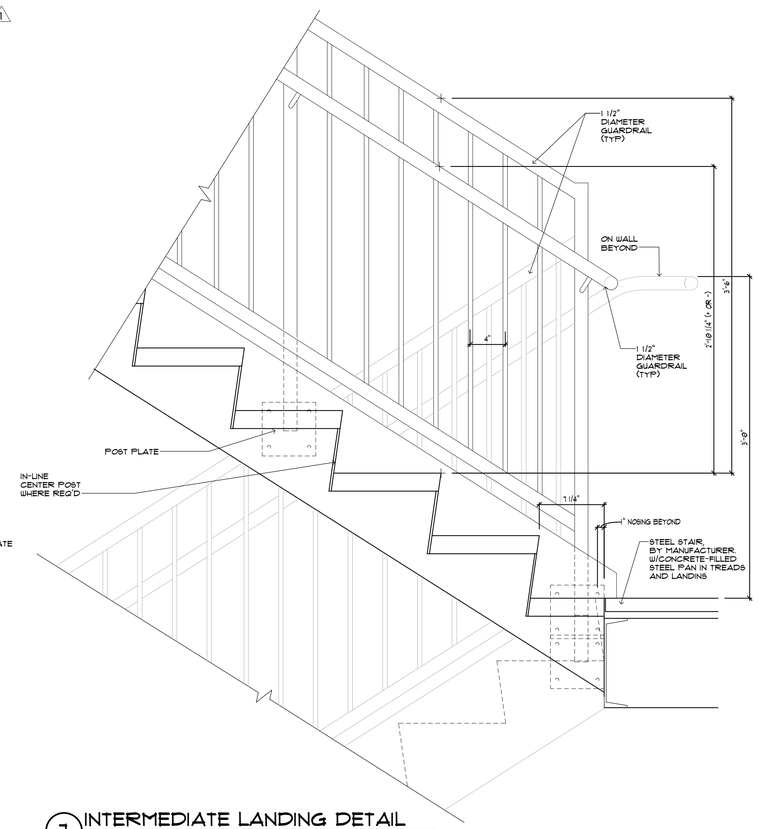
5 SECTION AT STAIR RAILING
SCALE: 1 1/2" = 1'-0"



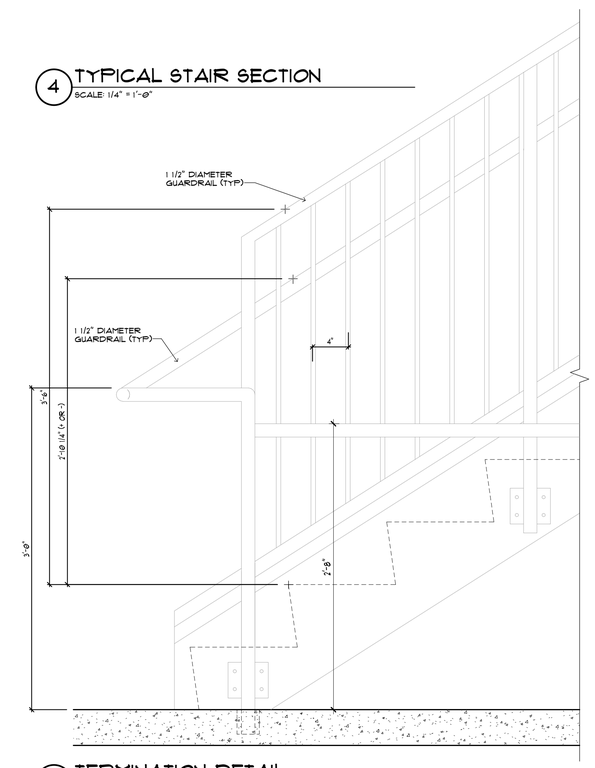
RAIL WITH STANDARD TOP - STANDARD BOTTOM

1. POST AND TOP LINE MATERIAL TO BE HSS 1 1/2" X 0.120"
2. HANDRAIL MATERIAL TO BE 1 1/4" Ø
3. PIPE PICKET MATERIAL TO BE 1/2" SQUARE BAR
4. THE HANDRAILS SHALL MAINTAIN THE APPROPRIATE FINGER CLEARANCE OF NOT LESS THAN 2 1/4" FROM THE WALL, AS PER NFPA-101:7.2.2.4.4.5, FFPC, 5TH EDITION.

6 PLAN AT STAIR RAILING
SCALE: 1 1/2" = 1'-0"



7 INTERMEDIATE LANDING DETAIL
SCALE: 1 1/2" = 1'-0"



8 TERMINATION DETAIL
SCALE: 1 1/2" = 1'-0"

12/13/2018 5:09:38 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

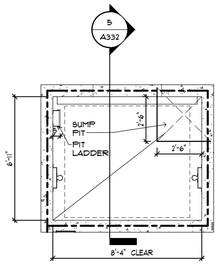
REVISIONS

NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

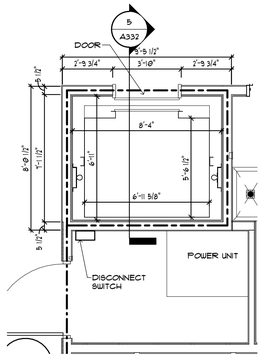
A331

BUILDING '1'
STAIR PLANS, SECTIONS, & DETAILS



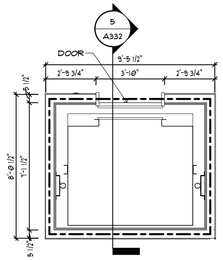
1 ELEVATOR PIT PLAN
SCALE: 1/4" = 1'-0"

NORTH



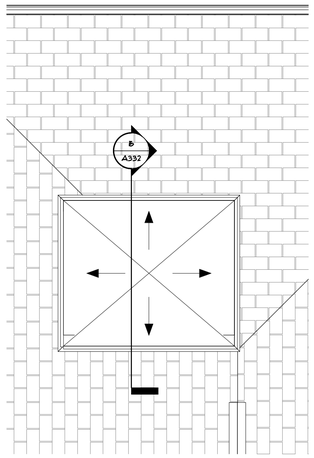
2 ELEVATOR FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

NORTH



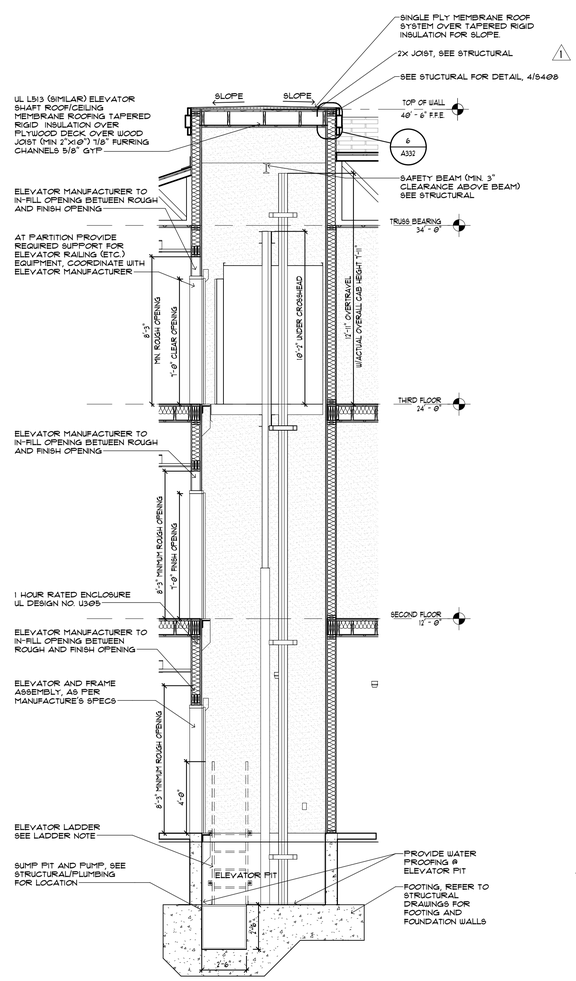
3 ELEVATOR SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

NORTH

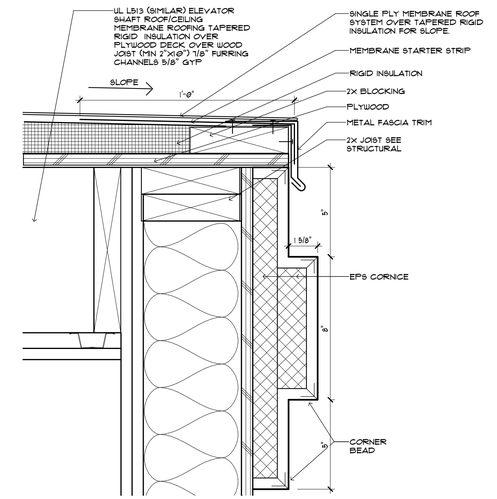


4 ELEVATOR ROOF PLAN
SCALE: 1/4" = 1'-0"

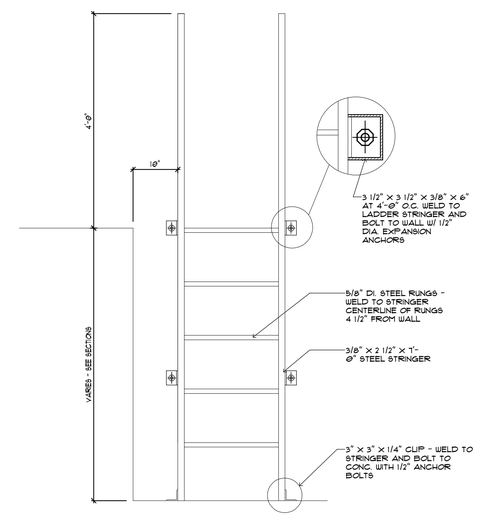
NORTH



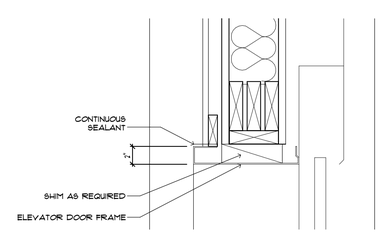
5 ELEVATOR SECTION
SCALE: 1/4" = 1'-0"



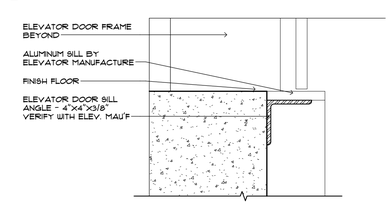
6 ELEVATOR ROOF SYSTEM DETAIL
SCALE: 3" = 1'-0"



7 ELEVATOR PIT LADDER DETAIL
SCALE: 3/4" = 1'-0"



8 ELEVATOR DOOR HEAD
SCALE: 1 1/2" = 1'-0"



9 ELEVATOR DOOR SILL
SCALE: 1 1/2" = 1'-0"

GENERAL NOTES

1. VERIFY ALL DIMENSIONS WITH ELEVATOR MANUFACTURER BEFORE BEGINNING OF CONSTRUCTION

WALL LEGEND

FRAMED PARTITION / WALL

WALL RATINGS

1 HOUR FIRE PARTITION

1 HOUR FIRE BARRIER

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS

PROJECT NO:	15083.00
DRAWN BY:	SAE
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

A332

BUILDING '1'
ELEVATOR PLANS AND SECTIONS

12/13/2018 5:09:42 PM

COMPLY PER SECTION 3.2.5.1 PER NFPA-13

NOTE:

1. TRASH VENT
EXTEND REFUSE VENT 4'-0" ABOVE HIGH POINT OF ADJACENT ROOF AS PER SECTION 3.2.2.4 OF NFA 84

2. SPRINKLER SYSTEM
PROVIDE SPRINKLER SYSTEM FOR TRASH CHUTE

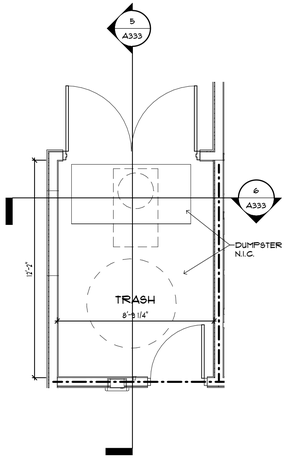
WALL LEGEND

FRAMED PARTITION / WALL

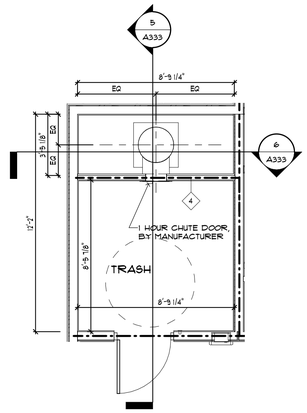
WALL RATINGS

1 HOUR FIRE PARTITION

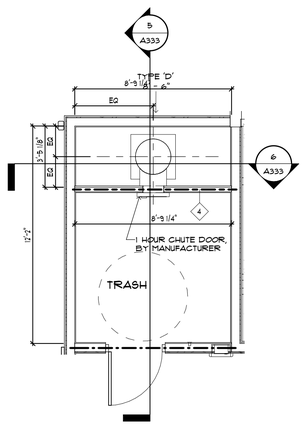
1 HOUR FIRE BARRIER



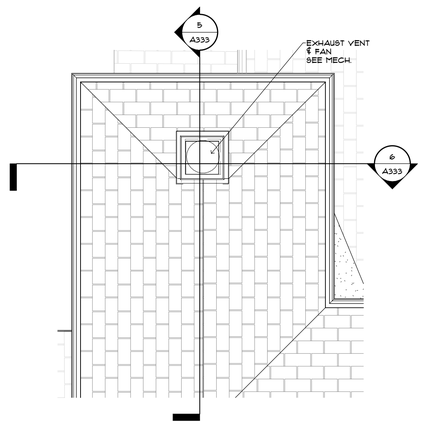
1 TRASH CHUTE FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"



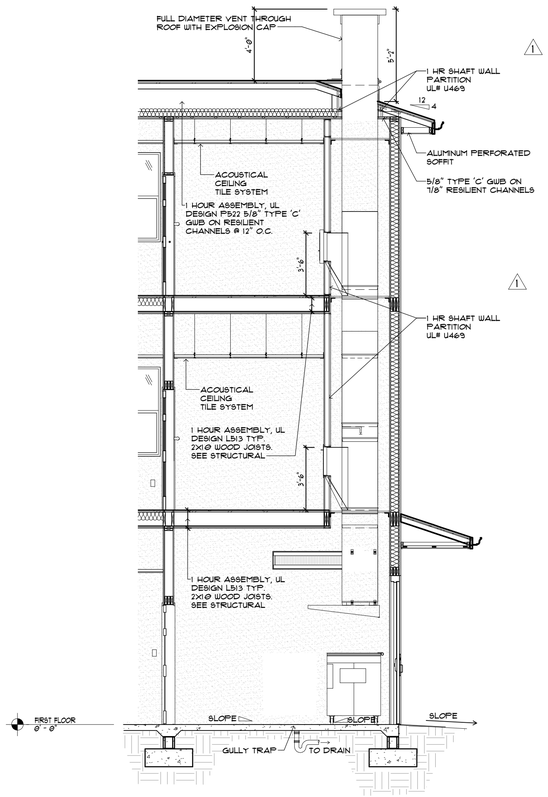
2 TRASH CHUTE SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"



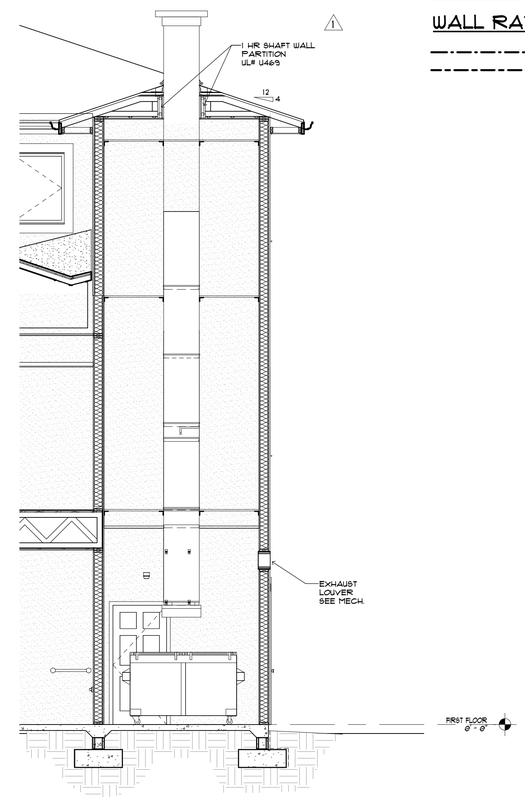
3 TRASH CHUTE THIRD FLOOR PLAN
SCALE: 1/4" = 1'-0"



4 TRASH CHUTE ROOF FLOOR PLAN
SCALE: 1/4" = 1'-0"



5 TRASH CHUTE SECTION
SCALE: 1/4" = 1'-0"



6 TRASH CHUTE SECTION
SCALE: 1/4" = 1'-0"

NOTE:
PROVIDE TRASH SHUTE CONTAINTERS PER ADA NO HEIGHER THAN 48" TO OPEN TOP.

12/13/2018 5:09:47 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

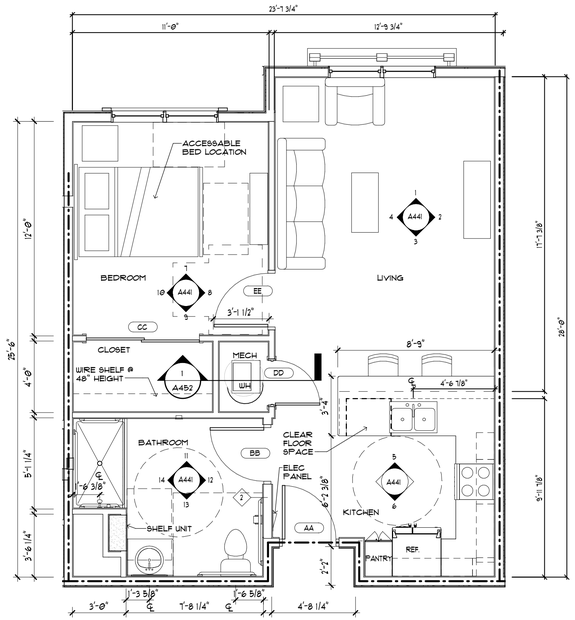
REVISIONS

NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS

PROJECT NO:	15083.00
DRAWN BY:	SAE
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/4" = 1'-0"

A333

BUILDING '1'
CHUTE PLANS & SECTIONS

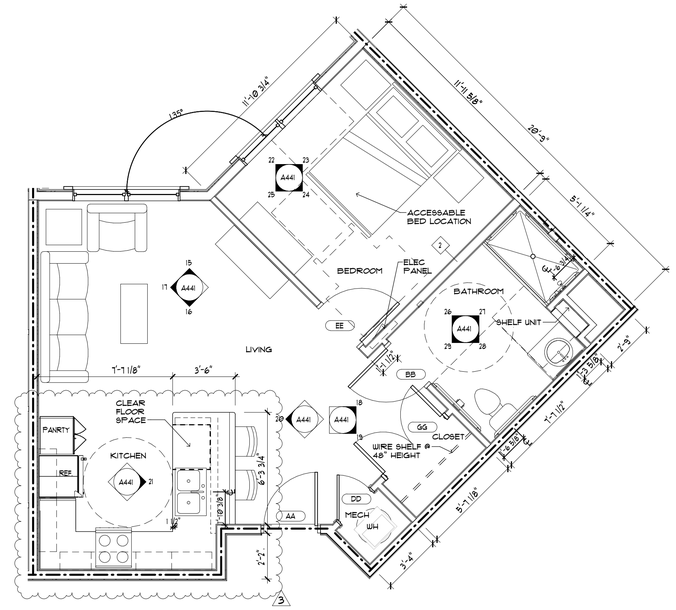


1 ONE BEDROOM UNIT 'A'

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

609 NET SF

48 TOTAL

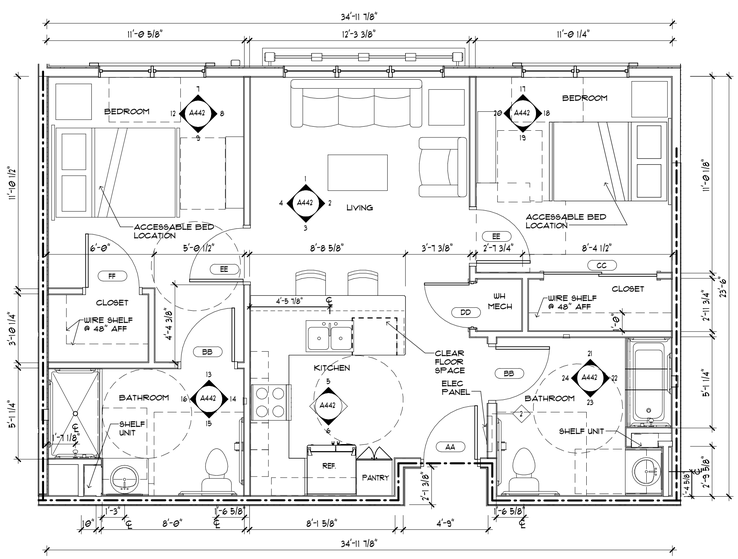


2 ONE BEDROOM UNIT 'B'

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

600 NET SF

2 TOTAL



3 TWO BEDROOM UNIT 'C'

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

791 NET SF

10 TOTAL

GENERAL NOTES

1. FOR ABBREVIATIONS, LEGENDS & SYMBOLS, SEE DRAWING G002
2. COORDINATE THIS DRAWING WITH MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
3. SEE PARTIAL FLOOR PLANS & DETAILED FLOOR PLANS FOR DIMENSIONS NOT SHOWN AND LOCATION OF UNITS.
4. ALL DIMENSIONS SHOWN ARE AS FOLLOWS:
   - FACE OF WOOD STUD TO FACE OF WOOD STUD
5. SEE DRAWINGS A441 FOR UNIT INTERIOR ELEVATIONS
6. FOR DOOR AND WINDOW SIZES, SEE DRAWING A601.
7. ALL INTERIOR PARTITIONS TYPE 1 UNLESS OTHERWISE NOTED. SEE DRAWING A101 FOR PARTITION DETAILS.
8. SEE PARTIAL FLOOR PLANS FOR EXTERIOR WINDOW TYPES & LOCATIONS.

WALL LEGEND

FRAMED PARTITION / WALL

WALL RATINGS

1 HOUR FIRE PARTITION

1 HOUR FIRE BARRIER

NOTE:

ALL APARTMENT UNITS TO HAVE A PORTABLE FIRE EXTINGUISHER. G.C. TO COORDINATE FINAL APPROVAL OF CLASS, NUMBER, LOCATION, AND SPACING WITH FIELD INSPECTOR.

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

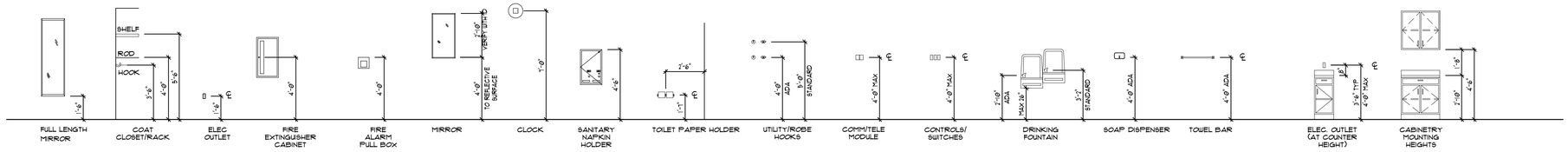
NO:	DATE:	DESCRIPTION
1	07-20-18	BLDG. DEPT. COMM.
2	08-23-18	HUD COMMENTS
3	10-11-18	HUD COMMENTS

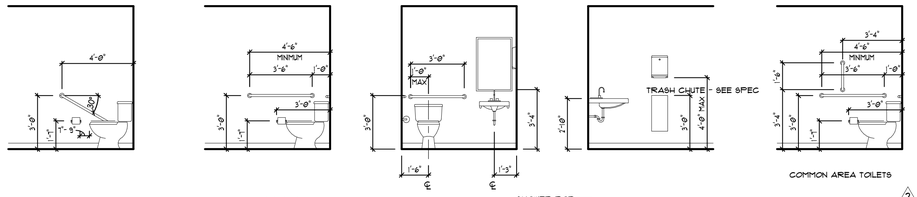
PROJECT NO:	15083.00
DRAWN BY:	SM
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1/4" = 1'-0"

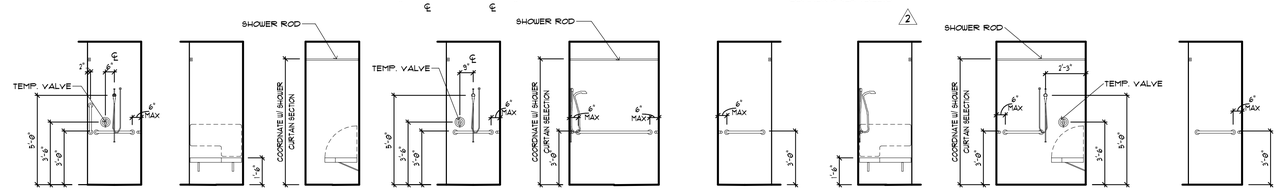
A401

BUILDING '1' UNIT PLANS

12/13/2018 5:09:51 PM

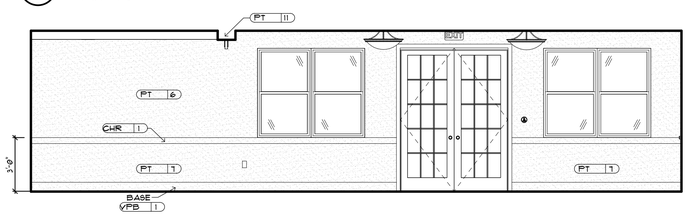






1 TYPICAL MOUNTING HEIGHTS

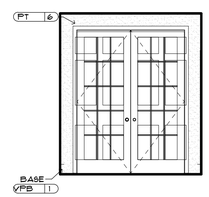
SCALE: 1/4" = 1'-0"



1

LOBBY - 104

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



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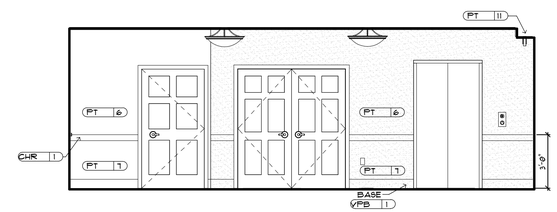

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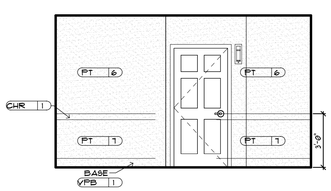
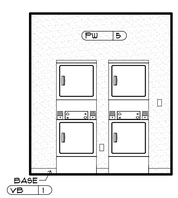


4

TYPICAL CORRIDOR

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



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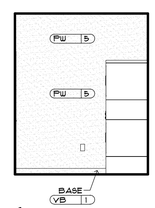
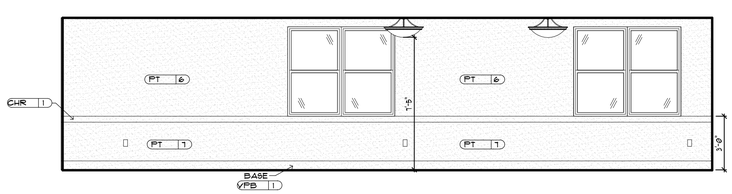


6

LAUNDRY - A205 & A305

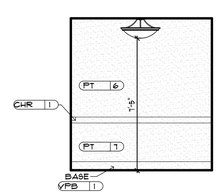
SCALE: 1/4" = 1'-0"



7

LOUNGE -A206 & A306

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



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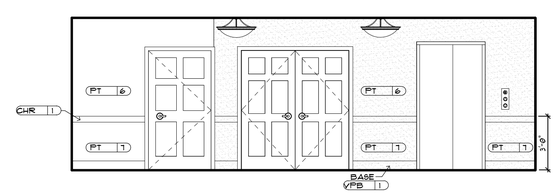

9

GENERAL NOTES:

1. SEE DRAWING A421 FOR TYPICAL MOUNTING HEIGHTS.
2. PROVIDE WOOD BLOCKING AT ALL WALL MOUNTED FIXTURES

RESTROOM ACCESSORY SCHEDULE

TAG	ITEM
A1	24" GRAB BAR
A2	36" GRAB BAR
A3	42" GRAB BAR
A4	54" GRAB BAR
A5	36" GRAB BAR
B	1-1/2" FRAME MIRROR, REMOVABLE IN UNIT RESTROOMS
C	TOILET PAPER DISP.
D	SHOWER ROD
E	TOWEL BAR UNIT RESTROOMS
F	SHAMPOO SHELF UNIT 'A'
G	1-1/2" FRAME MIRROR PUBLIC RESTROOMS
H	PAPER TOWEL DISP. PUBLIC AREAS
J	SOAP DISPENSER
K	ADA VERTICAL GRAB BAR
L	ROBE HOOK
M	SHOWER ROD
N	SHAMPOO SHELF UNIT 'B'
O	SHAMPOO SHELF UNIT 'C'

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ST. PETERSBURG, FL 33702
727 894-4453 www.bessolo.com

PROFESSIONAL SEAL

KEVIN J. BESSOLO
AR12069

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

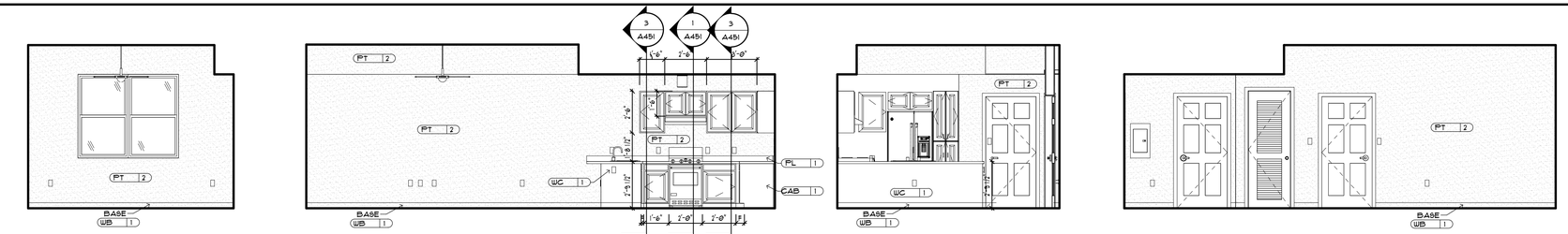
NO:	DATE:	DESCRIPTION
1	02-20-18	BLDG. DEPT. COMM.
2	08-23-18	HUD COMMENTS

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

A421

BUILDING '1'
INTERIOR ELEVATIONS

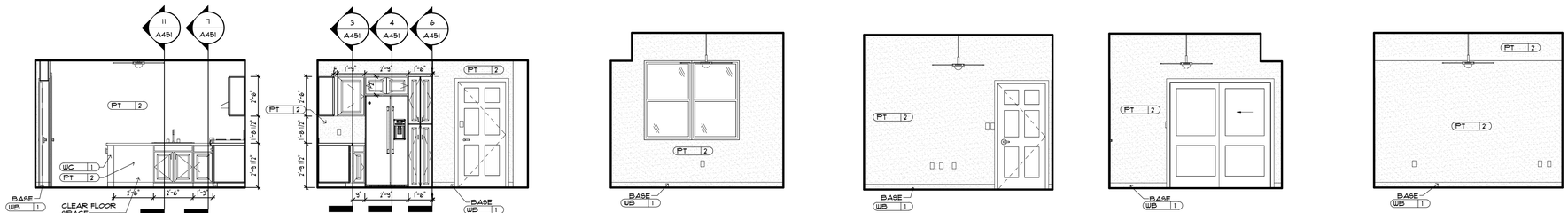
12/13/2018 5:03:58 PM



1 2 3 4

UNIT 'A' LIVING 1

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



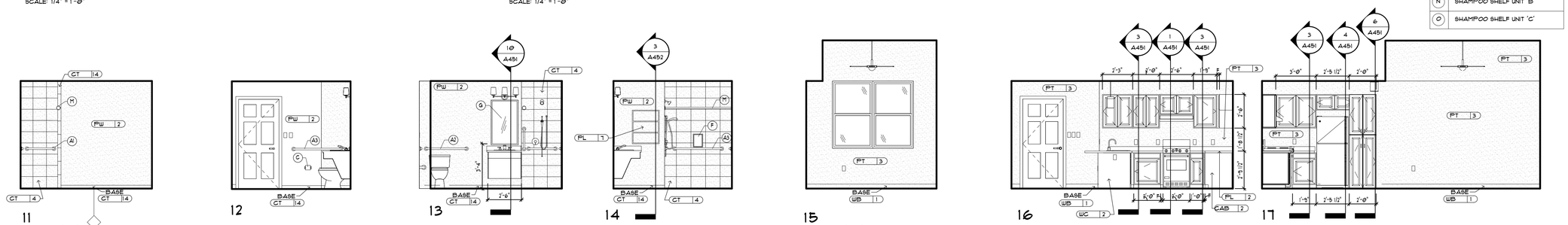
5 6 7 8 9 10

UNIT 'A' KITCHEN

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

UNIT 'A' BEDROOM

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



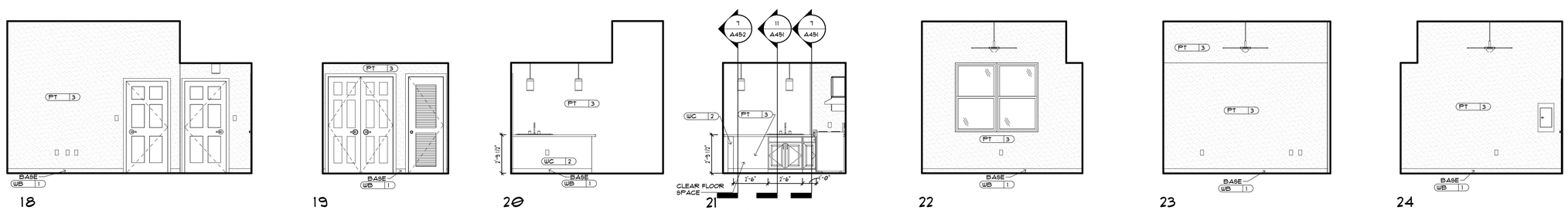
11 12 13 14 15 16 17

UNIT 'A' BATHROOM

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

UNIT 'B' LIVING

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



18 19 20 21 22 23 24

UNIT 'B' LIVING

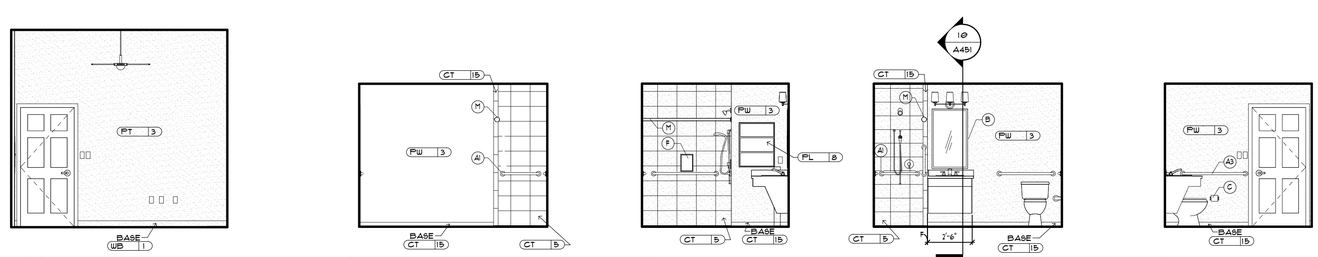
SCALE: 1/4" = 1'-0"

UNIT 'B' KITCHEN

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

UNIT 'B' BEDROOM

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



25 26 27 28 29

UNIT 'B' BEDROOM

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

UNIT 'B' BATHROOM 1

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

GENERAL NOTES:

1. SEE DRAWING A421 FOR TYPICAL MOUNTING HEIGHTS.
2. PROVIDE WOOD BLOCKING AT ALL WALL MOUNTED FIXTURES

RESTROOM ACCESSORY SCHEDULE

TAG	ITEM
A1	24" GRAB BAR
A2	36" GRAB BAR
A3	42" GRAB BAR
A4	54" GRAB BAR
A5	30" GRAB BAR
B	1-1/2" FRAME MIRROR, REMOVABLE IN UNIT RESTROOMS
C	TOILET PAPER DISP.
D	SHOWER ROD
E	TOWEL BAR UNIT RESTROOMS
F	SHAMPOO SHELF UNIT 'A'
G	1-1/2" FRAME MIRROR PUBLIC RESTROOMS
H	PAPER TOWEL DISP. PUBLIC AREAS
J	SOAP DISPENSER
K	ADA VERTICAL GRAB BAR
L	ROBE HOOK
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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

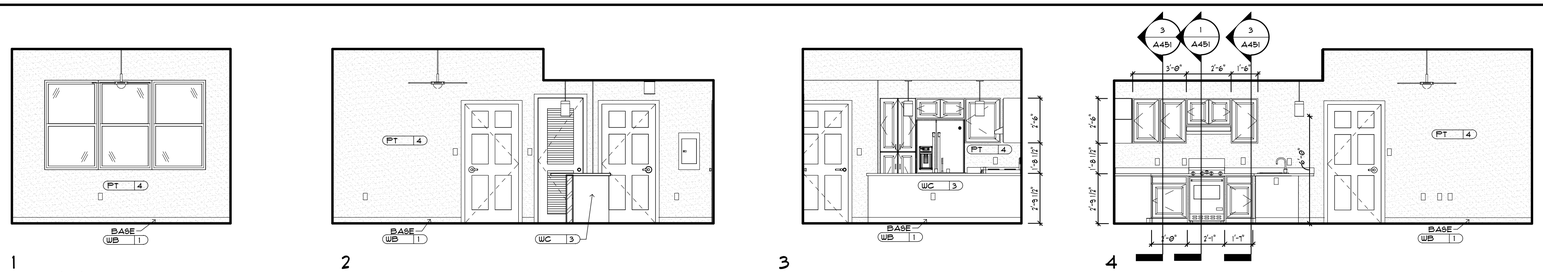
REVISIONS		
NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

A441

BUILDING '1'
UNIT INTERIOR
ELEVATIONS

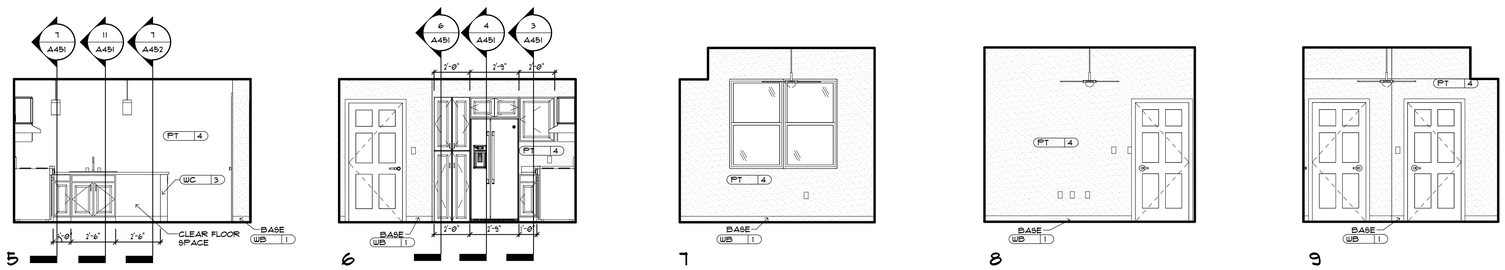
12/13/2018 5:10:11 PM



1 2 3 4

UNIT 'C' LIVING 1

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



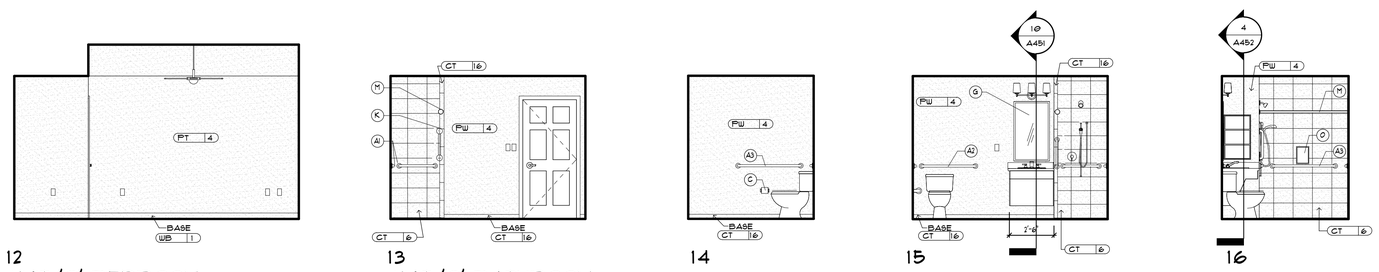
5 6 7 8 9

UNIT 'C' KITCHEN 1

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

UNIT 'C' BEDROOM 1 - 1

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



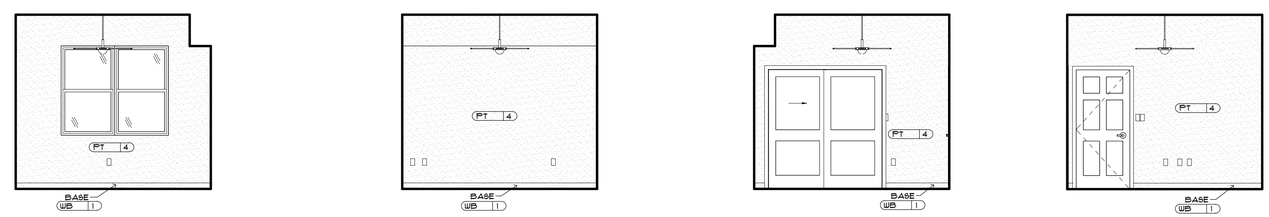
12 13 14 15 16

UNIT 'C' BEDROOM

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

UNIT 'C' BATHROOM

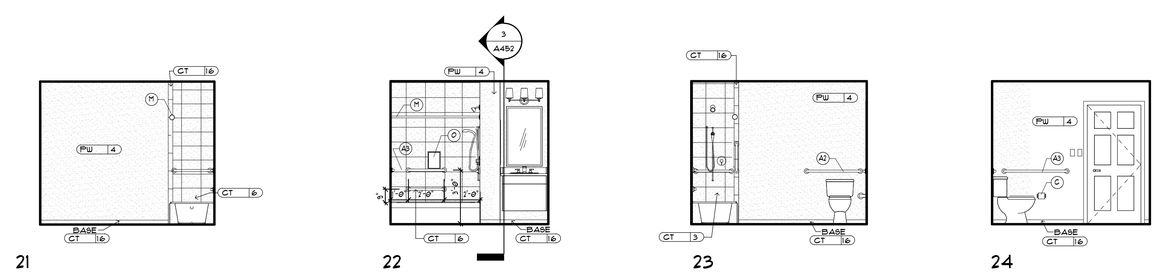
SCALE: 1/4" = 1'-0"



17 18 19 20

UNIT 'C' BEDROOM

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



21 22 23 24

UNIT 'C' BATHROOM 2 - 1

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

GENERAL NOTES:

1. SEE DRAWING A421 FOR TYPICAL MOUNTING HEIGHTS.
2. PROVIDE WOOD BLOCKING AT ALL WALL MOUNTED FIXTURES

RESTROOM ACCESSORY SCHEDULE

TAG	ITEM
A1	24" GRAB BAR
A2	36" GRAB BAR
A3	42" GRAB BAR
A4	54" GRAB BAR
A5	30" GRAB BAR
B	1-1/2" FRAME MIRROR, REMOVABLE IN UNIT RESTROOMS
C	TOILET PAPER DISP.
D	SHOWER ROD
E	TOWEL BAR UNIT RESTROOMS
F	SHAMPOO SHELF UNIT 'A'
G	1-1/2" FRAME MIRROR PUBLIC RESTROOMS
H	PAPER TOWEL DISP. PUBLIC AREAS
J	SOAP DISPENSER
K	ADA VERTICAL GRAB BAR
L	ROBE HOOK
M	SHOWER ROD
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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

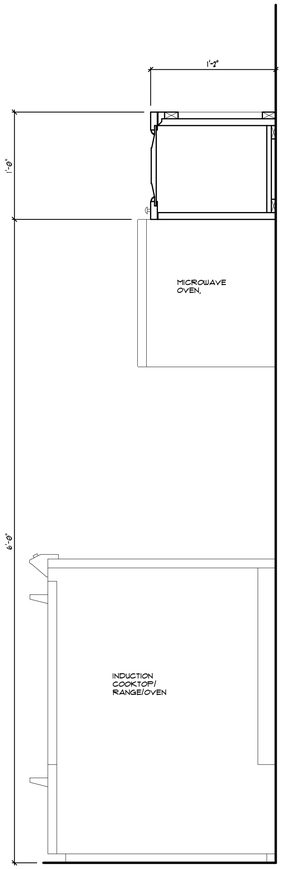
REVISIONS		
NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

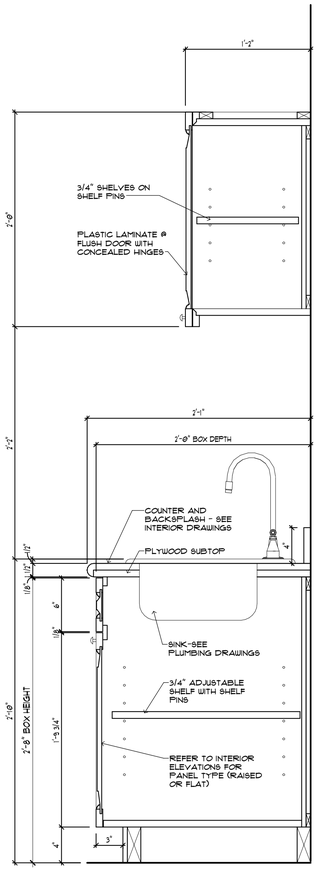
A442

BUILDING '1'
UNIT INTERIOR
ELEVATIONS

12/13/2018 5:10:22 PM



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



2 MILLWORK DETAIL
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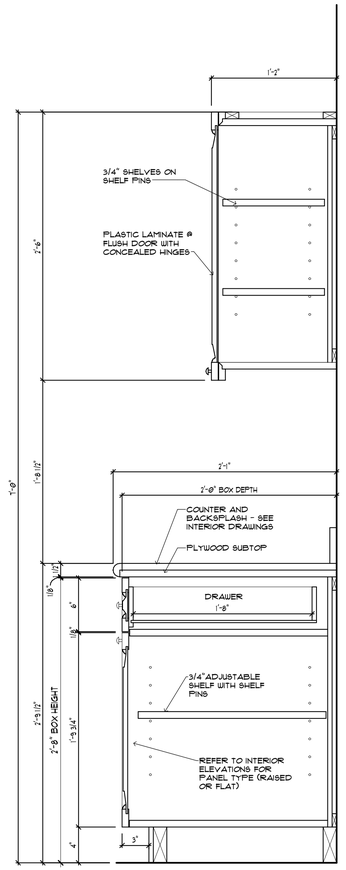
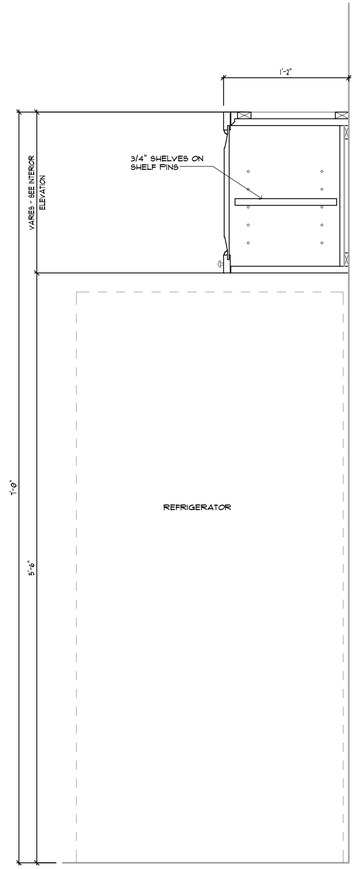
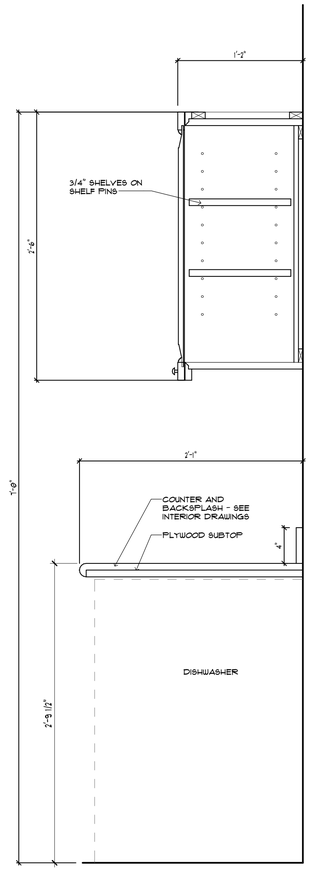


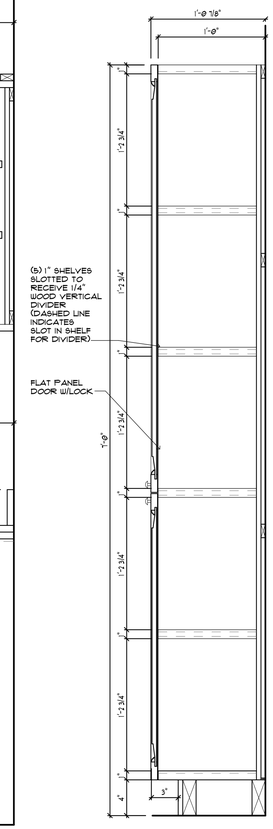
3 MILLWORK DETAIL
SCALE: 1 1/2" = 1'-0"



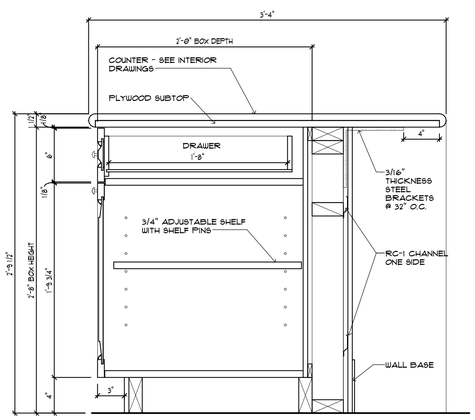
4 MILLWORK DETAIL
SCALE: 1 1/2" = 1'-0"



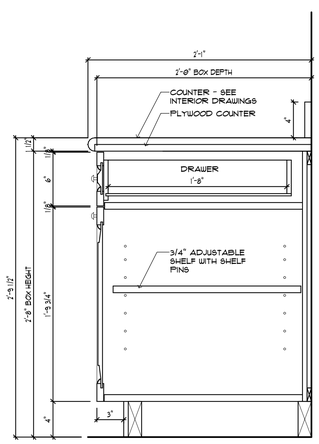
5 MILLWORK DETAIL
SCALE: 1 1/2" = 1'-0"



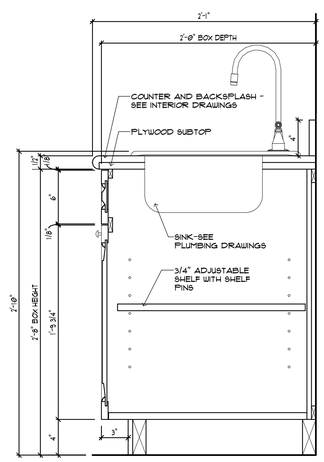
6 MILLWORK DETAIL
SCALE: 1 1/2" = 1'-0"



7 MILLWORK DETAIL
SCALE: 1 1/2" = 1'-0"



8 MILLWORK DETAIL
SCALE: 1 1/2" = 1'-0"



9 MILLWORK DETAIL
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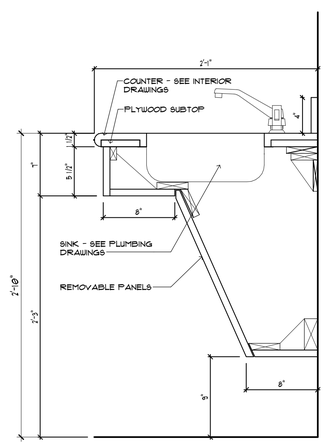
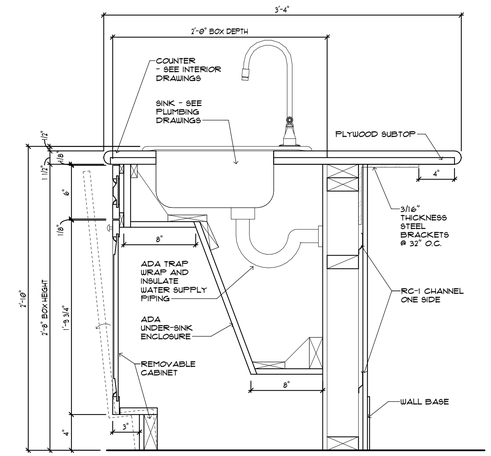


10 MILLWORK DETAIL
SCALE: 1 1/2" = 1'-0"



11 MILLWORK DETAIL
SCALE: 1 1/2" = 1'-0"

12/13/2018 5:10:25 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED

DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

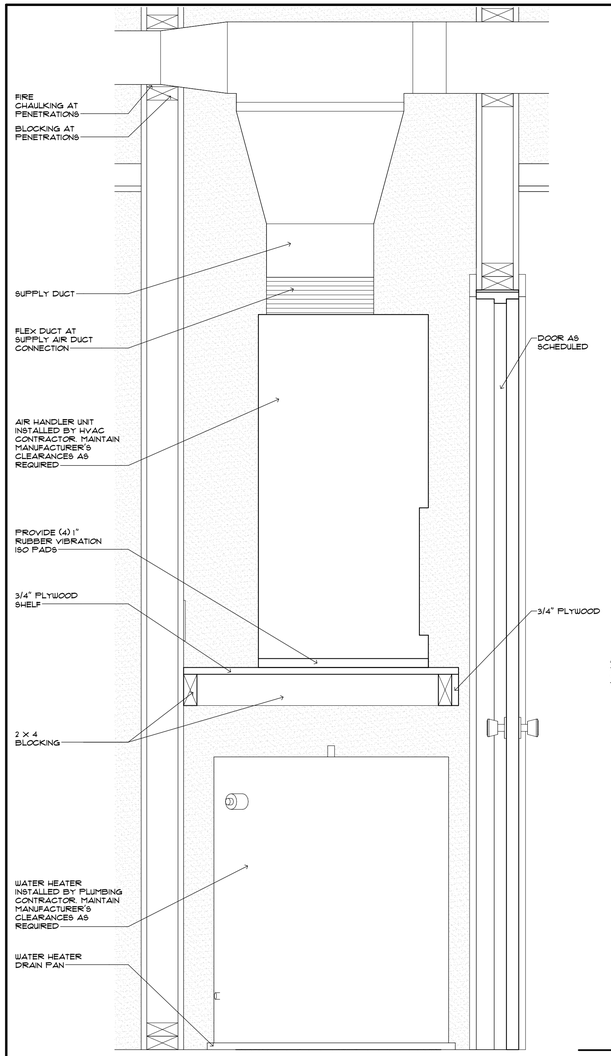
REVISIONS

NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS

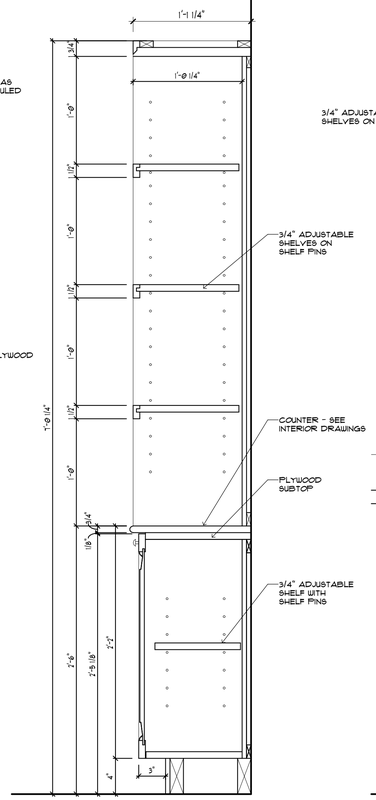
PROJECT NO:	15083.00
DRAWN BY:	RJW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1 1/2" = 1'-0"

A451

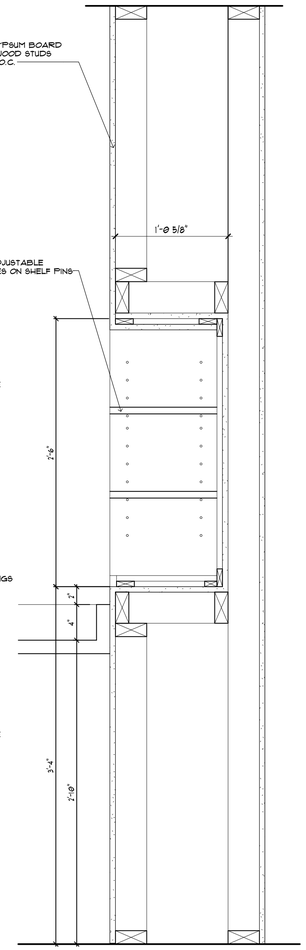
BUILDING '1'
MILLWORK DETAILS



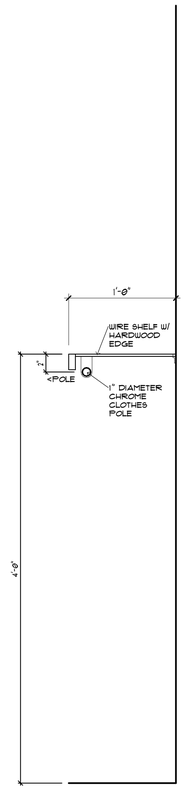
1 UTILITY CLOSET SHELF DETAIL
SCALE: 1 1/2" = 1'-0"



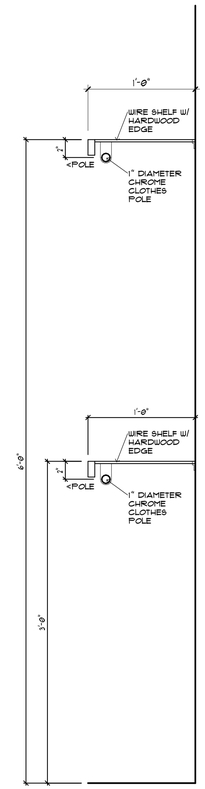
2 MILLWORK DETAIL
SCALE: 1 1/2" = 1'-0"



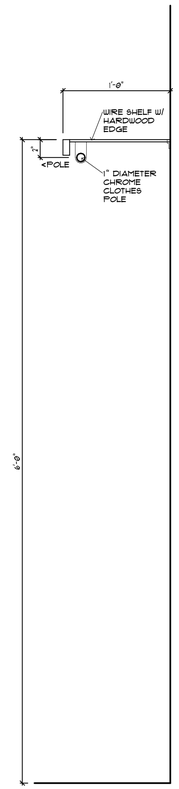
3 MILLWORK DETAIL
SCALE: 1 1/2" = 1'-0"



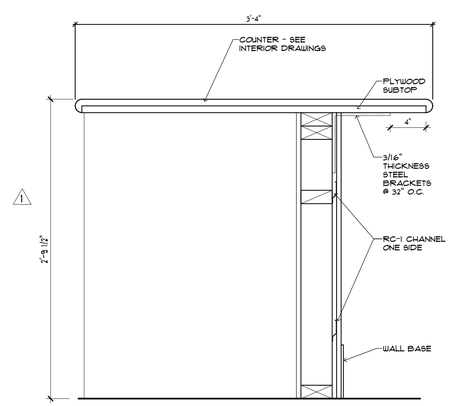
4 MILLWORK DETAIL
SCALE: 1 1/2" = 1'-0"



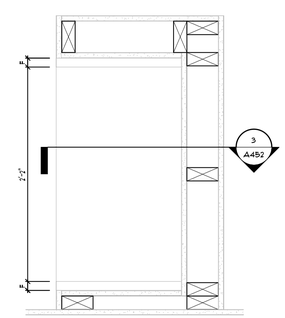
5 MILLWORK DETAIL
SCALE: 1 1/2" = 1'-0"



6 MILLWORK DETAIL
SCALE: 1 1/2" = 1'-0"



7 MILLWORK DETAIL
SCALE: 1 1/2" = 1'-0"



8 PLAN AT MEDICINE CABINET
SCALE: 1 1/2" = 1'-0"

9 NOT USED
SCALE: 1 1/2" = 1'-0"

12/13/2018 5:09:29 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

505 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

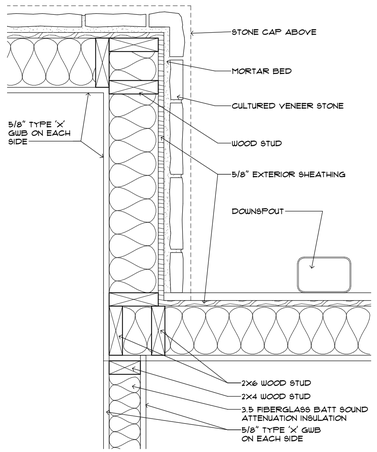
REVISIONS

NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS

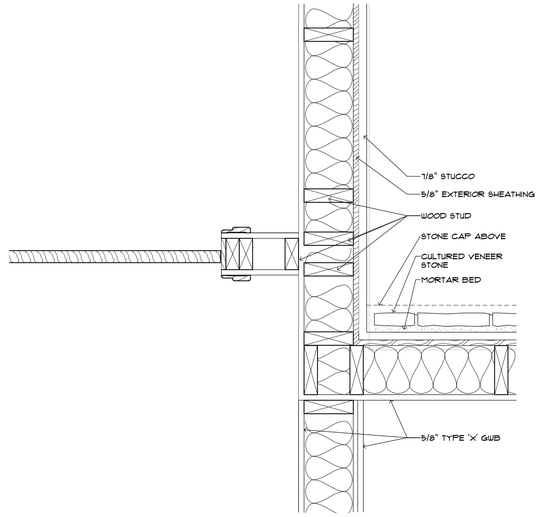
PROJECT NO:	15083.00
DRAWN BY:	RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1 1/2" = 1'-0"

A452

BUILDING '1'
MILLWORK DETAILS

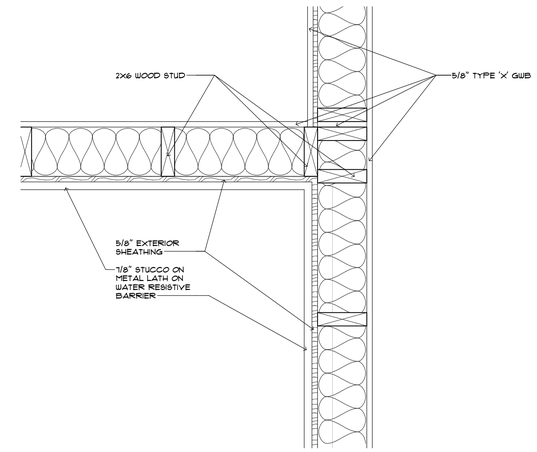


1 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"

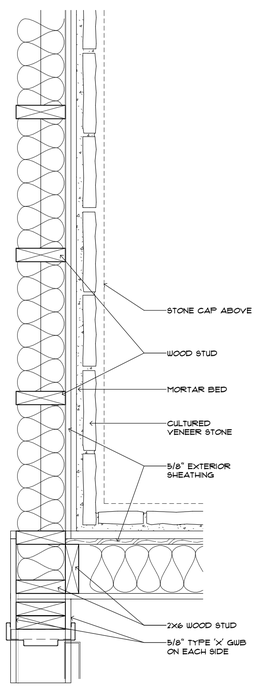


2 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"

3 NOT USED
SCALE: 1 1/2" = 1'-0"



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



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

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AR12069

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

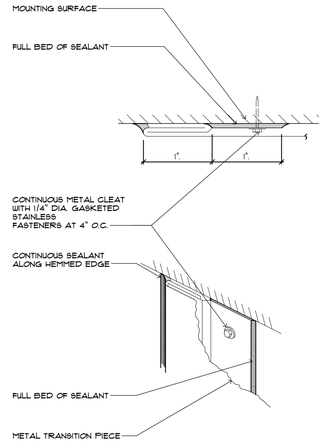
NO:	DATE:	DESCRIPTION
1	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	MM
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1 1/2" = 1'-0"

A455

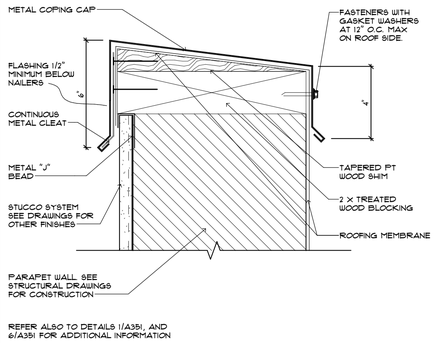
BUILDING '1'
PLAN DETAILS

12/13/2018 5:10:32 PM



1 TYPICAL COPING DETAIL

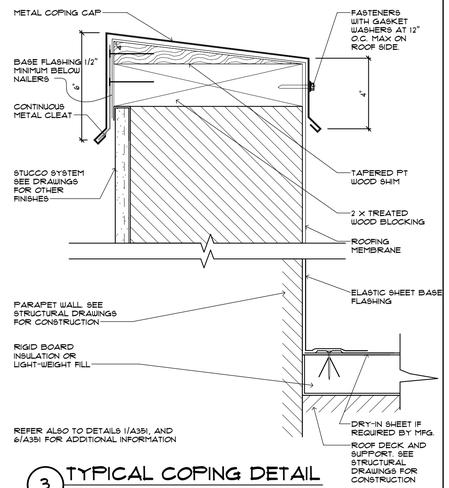
SCALE: NOT TO SCALE



REFER ALSO TO DETAILS 1/A351, AND 6/A351 FOR ADDITIONAL INFORMATION

2 TYPICAL COPING DETAIL

SCALE: NOT TO SCALE

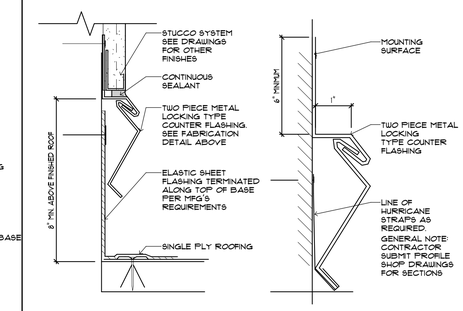


REFER ALSO TO DETAILS 1/A351, AND 6/A351 FOR ADDITIONAL INFORMATION

3 TYPICAL COPING DETAIL

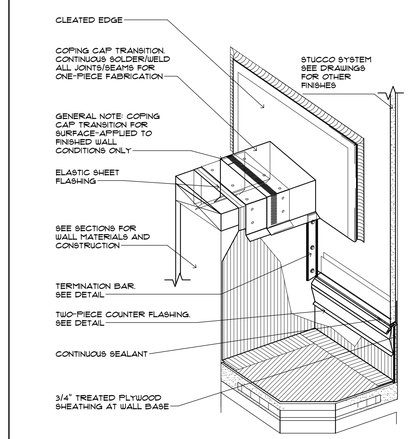
SCALE: NOT TO SCALE

COUNTER FLASHING FABRICATION



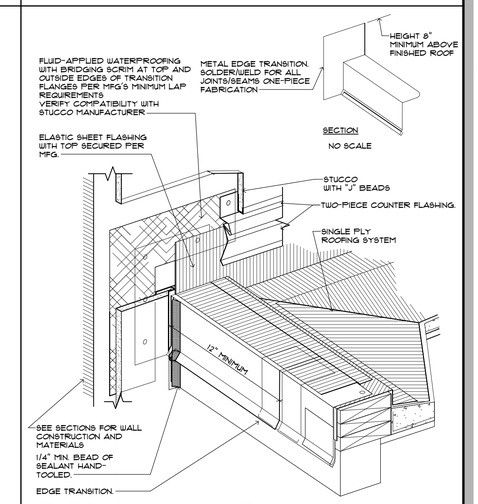
4 REGLET DETAIL

SCALE: NOT TO SCALE



5 FINISH PARAPET TO WALL TRANSITION

SCALE: NOT TO SCALE



6 EDGE AT WALL TRANSITION

SCALE: NOT TO SCALE

12/13/2018 5:10:35 PM

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KEVIN J. BESSOLO
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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

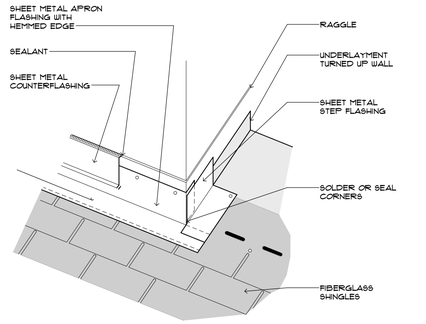
REVISIONS

NO:	DATE:	DESCRIPTION

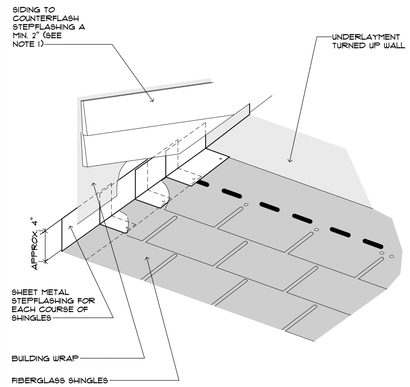
PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

A501

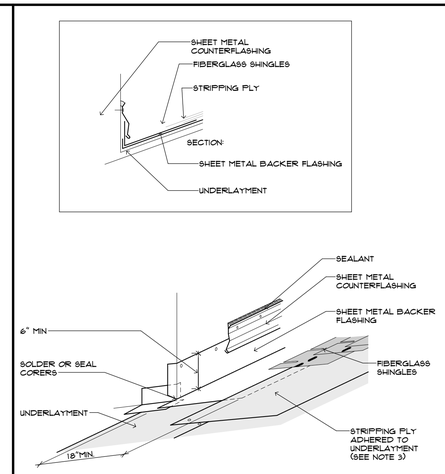
COPING, REGLET & EDGE ROOFING DETAILS



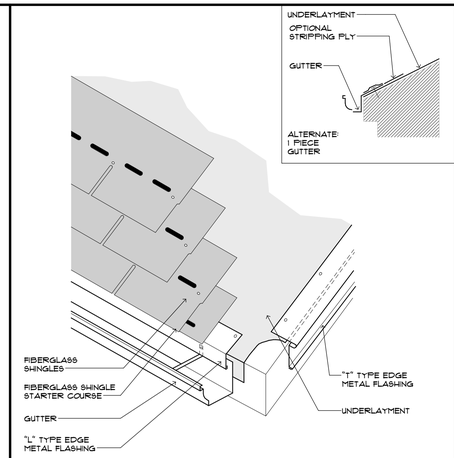
1 APRON FLASHING
SCALE:NOT TO SCALE



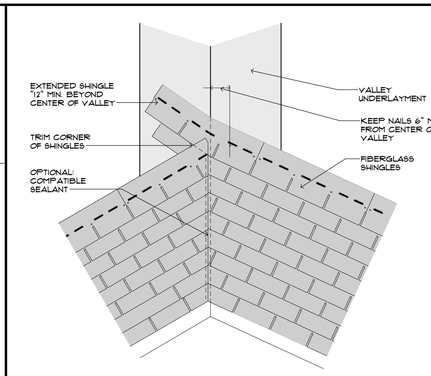
2 SIDEWALL FLASHING
SCALE:NOT TO SCALE



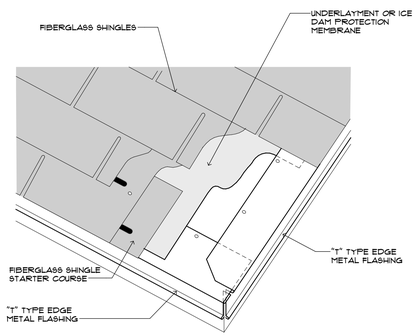
3 BACKWALL FLASHING
SCALE:NOT TO SCALE



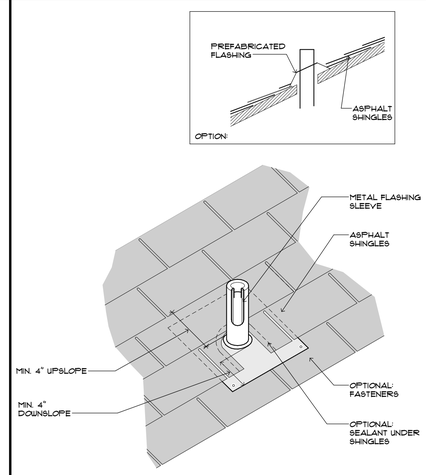
4 EAVE AND RAKE FLASHING WITH GUTTER
SCALE:NOT TO SCALE



5 CLOSED VALLEY FLASHING
SCALE:NOT TO SCALE



6 BACKER FLASHING AND RAKE EDGE DETAIL
SCALE:NOT TO SCALE



7 PIPING PENETRATION DETAIL
SCALE:NOT TO SCALE

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MHA - PALMS AT UNIVERSITY APARTMENTS
PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

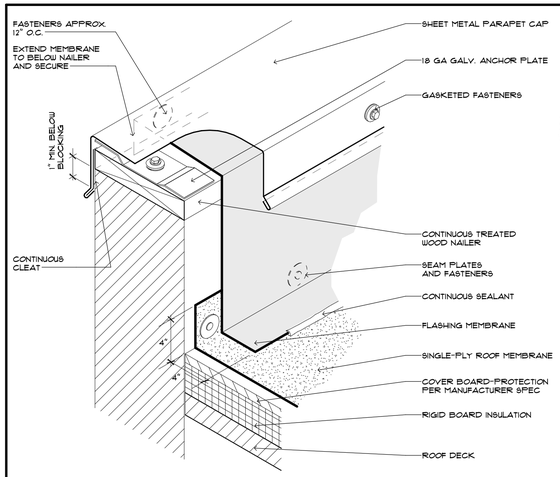
NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	NOT TO SCALE

A502

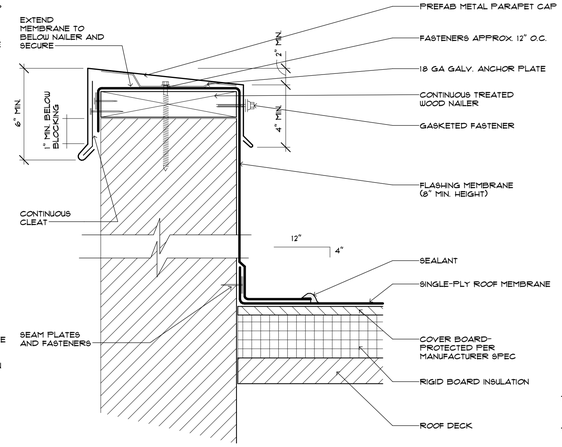
BUILDING '1' & '2'
FIBERGLASS SHINGLES
ROOFING DETAILS

12/13/2018 5:10:38 PM



1 METAL PARAPET CAP (COPING) AND BASE FLASHING (ISOMETRIC)

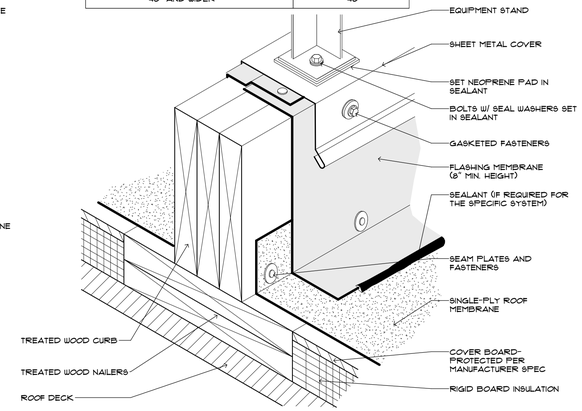
SCALE:NOT TO SCALE



2 METAL PARAPET CAP (COPING) AND BASE FLASHING (SECTION)

SCALE:NOT TO SCALE

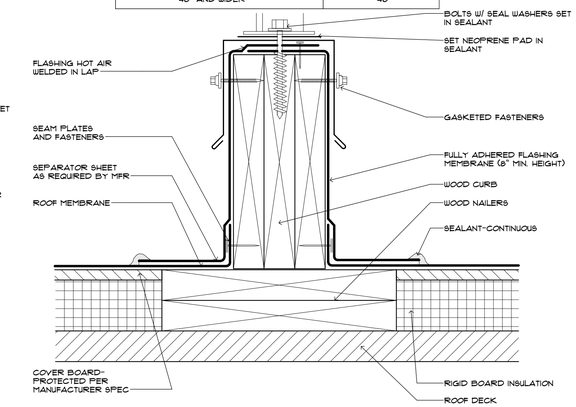
WITH OF EQUIPMENT	HEIGHT OF LEGS
UP TO 24"	24"
24"-48"	36"
48" AND WIDER	48"



3 EQUIPMENT SUPPORT CURB

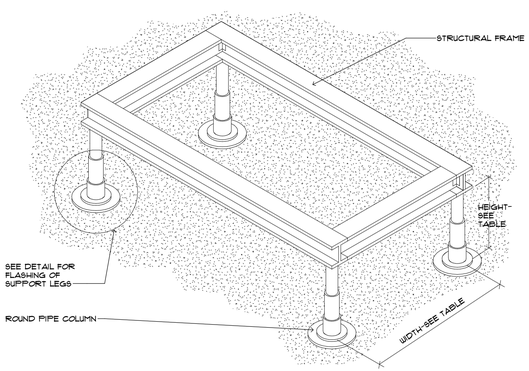
SCALE:NOT TO SCALE

WITH OF EQUIPMENT	HEIGHT OF LEGS
UP TO 24"	24"
24"-48"	36"
48" AND WIDER	48"



4 EQUIPMENT SUPPORT CURB

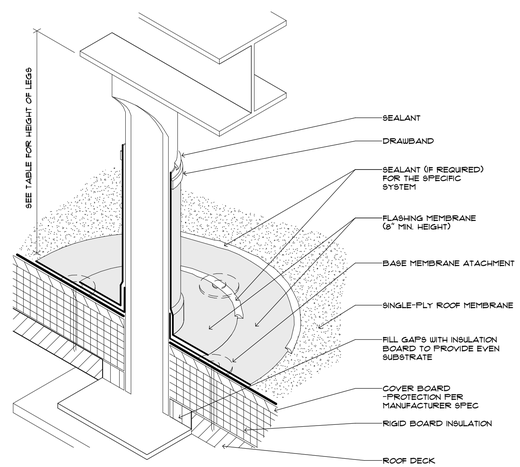
SCALE:NOT TO SCALE



WITH OF EQUIPMENT	HEIGHT OF LEGS
UP TO 24"	24"
24"-48"	36"
48" AND WIDER	48"

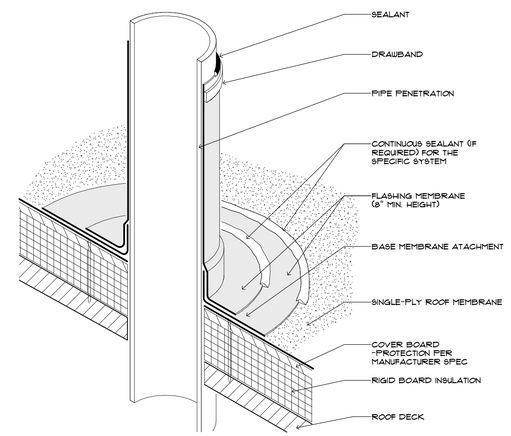
5 EQUIPMENT SUPPORT STAND

SCALE:NOT TO SCALE



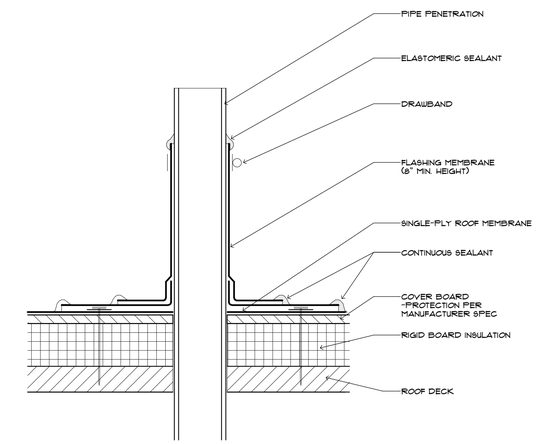
6 EQUIPMENT SUPPORT STAND LEG FIELD WRAP

SCALE:NOT TO SCALE



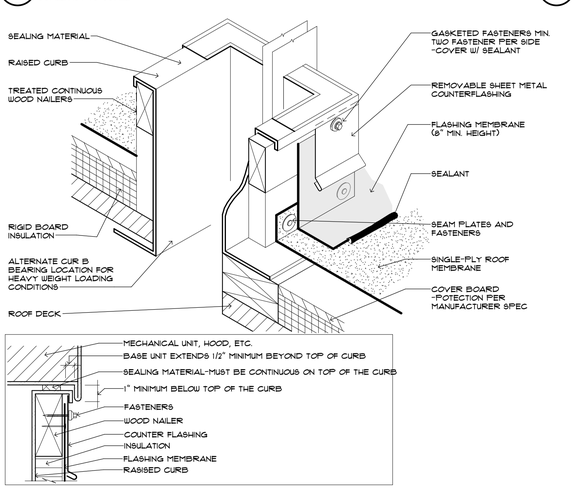
7 PIPE PENETRATION (FIELD WRAP)

SCALE:NOT TO SCALE



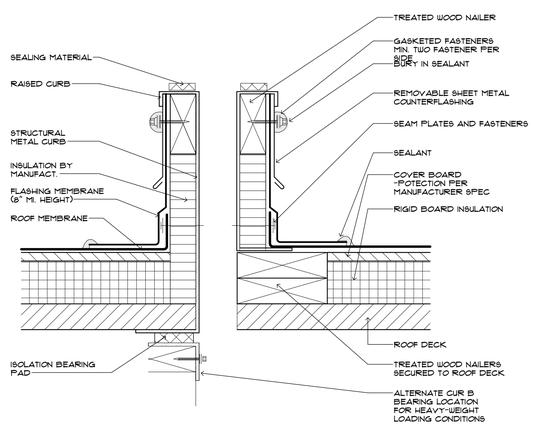
8 PIPE PENETRATION (FIELD WRAP)

SCALE:NOT TO SCALE



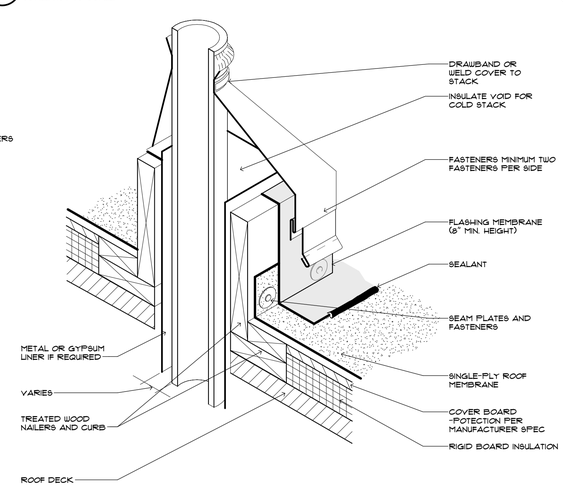
9 RAISED CURB DETAIL FOR ROOF TOP AIR HANDLIN UNITS AND DUCTS (PREFAB METAL CURB)

SCALE:NOT TO SCALE



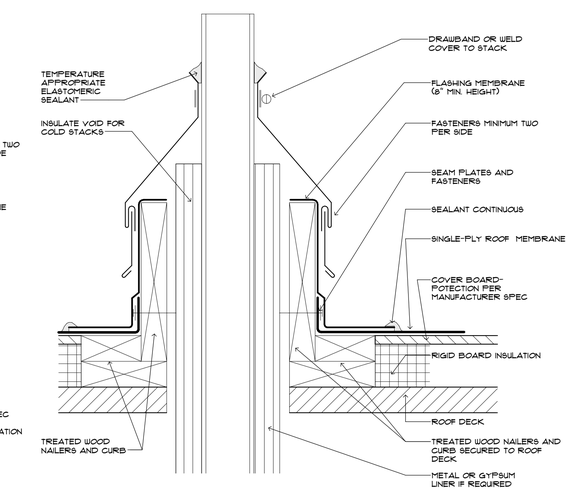
10 RAISED CURB DETAIL FOR ROOF TOP AIR HANDLING UNITS AND DUCTS (PREFAB METAL CURB)

SCALE:NOT TO SCALE



11 ISOLATED STACK FLASHING (HOT AND COLD)

SCALE:NOT TO SCALE



12 ISOLATED STACK FLASHING (HOT AND COLD)

SCALE:NOT TO SCALE

12/13/2018 5:10:42 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

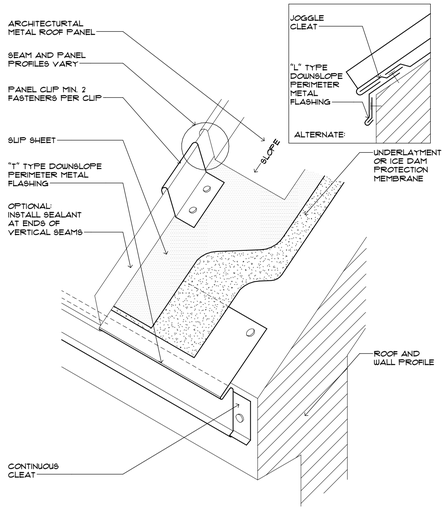
REVISIONS

NO:	DATE:	DESCRIPTION

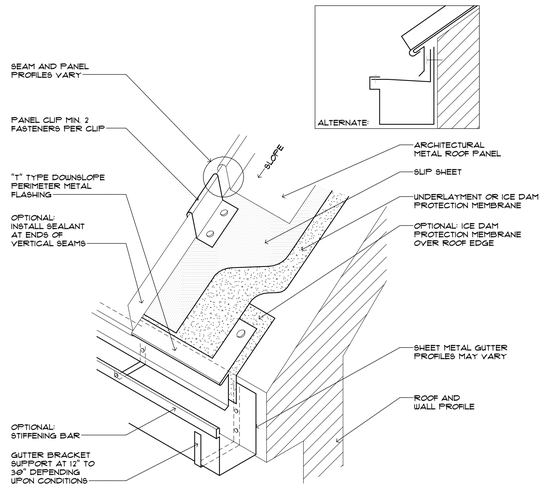
PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	NOT TO SCALE

A503

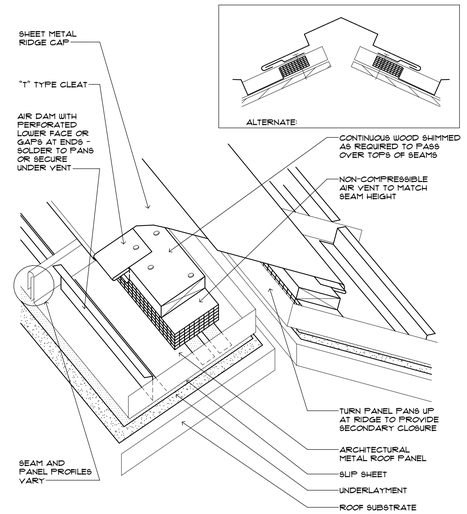
BUILDING '1' & '2'
SINGLE-PLY MEMBRANE
ROOFING DETAILS



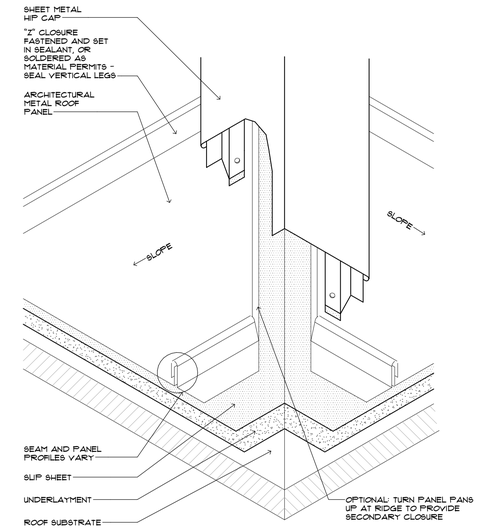
1 DOWNSLOPE PERIMETER EDGE FLASHING
SCALE: NOT TO SCALE



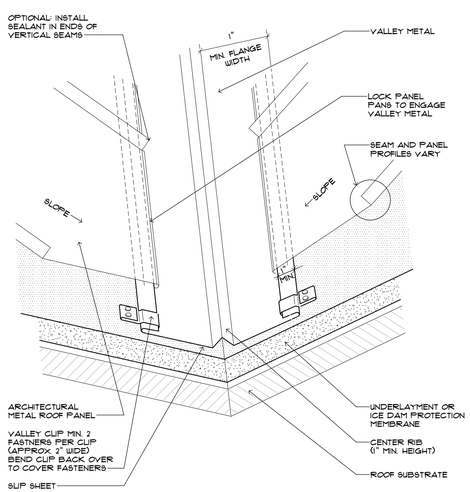
2 DOWNSLOPE PERIMETER EDGE FLASHING WITH GUTTER
SCALE: NOT TO SCALE



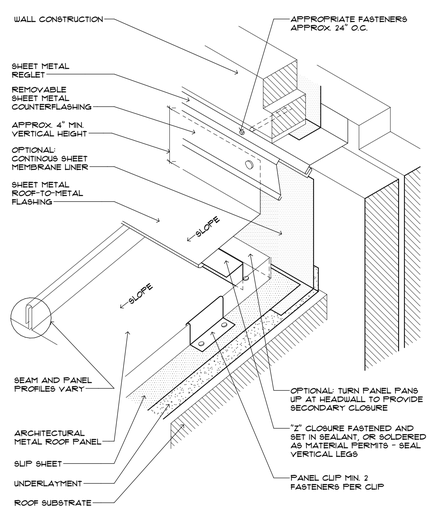
3 VENTING RIDGE CAP FLASHING
SCALE: NOT TO SCALE



4 HIP CAP FLASHING
SCALE: NOT TO SCALE



5 OPEN VALLEY FLASHING
SCALE: NOT TO SCALE



6 ROOF-TO-WALL (HEADWALL TRANSITION)
SCALE: NOT TO SCALE

12/13/2018 5:10:46 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS
PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

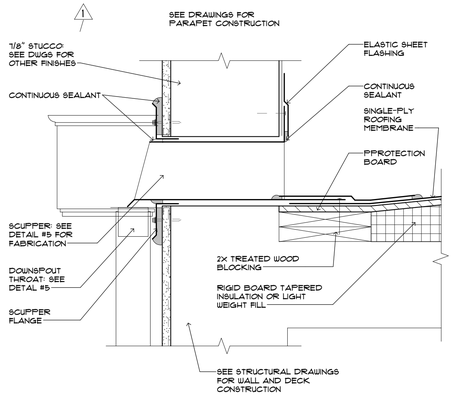
REVISIONS

NO:	DATE:	DESCRIPTION

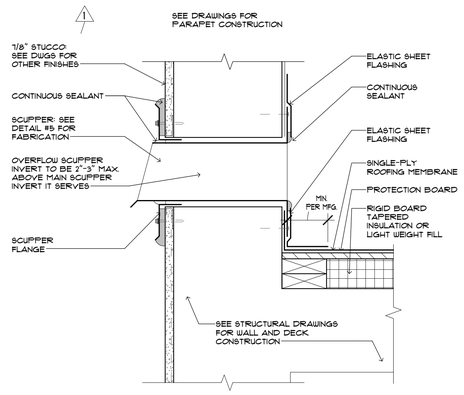
PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	NOT TO SCALE

A504

BUILDING '1' & '2'
STANDING SEAM ROOFING DETAILS



1 COLLECTOR BOX DETAIL
SCALE:NOT TO SCALE



2 OVERFLOW SCUPPER DETAIL
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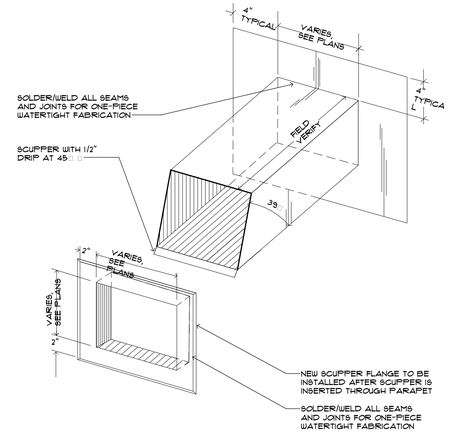
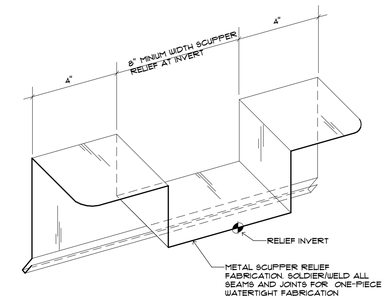


3 SCUPPER FABRICATION
SCALE:NOT TO SCALE



4 SCUPPER RELIEF FABRICATION
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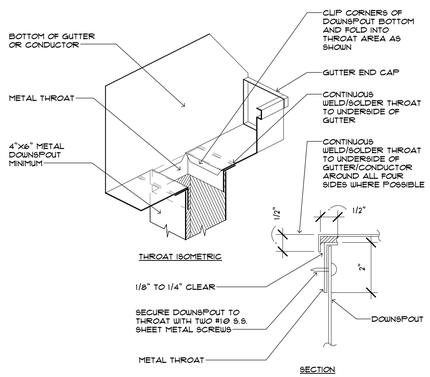
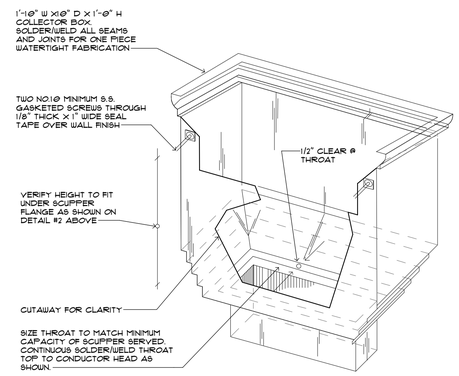


5 DOWNSPOUT THROAT DETAIL
SCALE:NOT TO SCALE



6 COLLECTOR BOX ISOMETRIC
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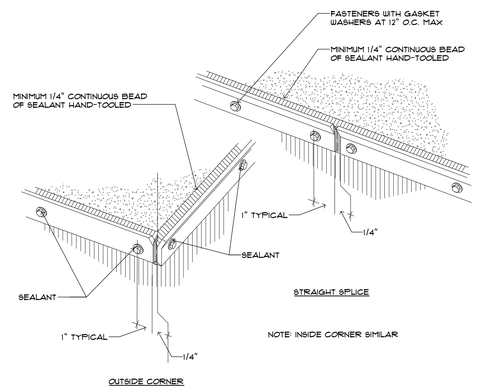
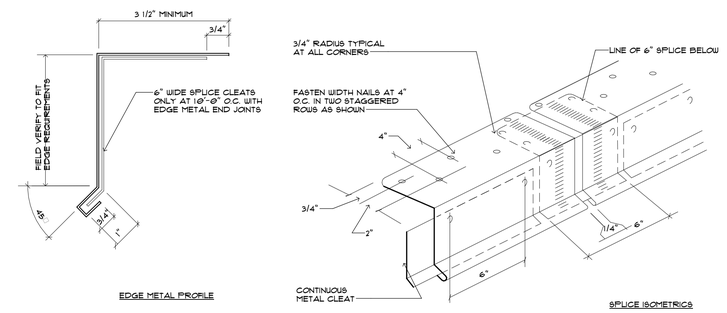


7 TERMINATION BAR
SCALE:NOT TO SCALE



8 EDGE METAL FABRICATION
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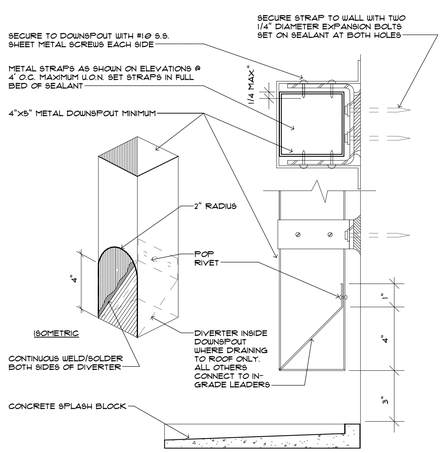
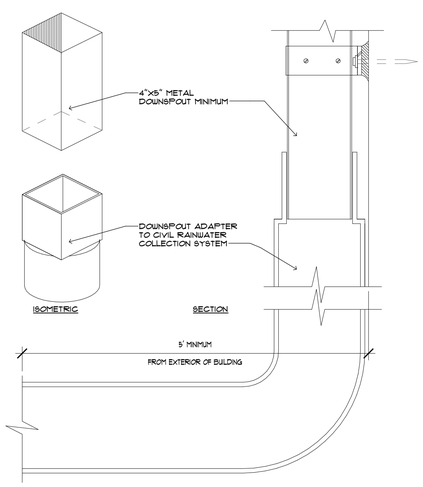
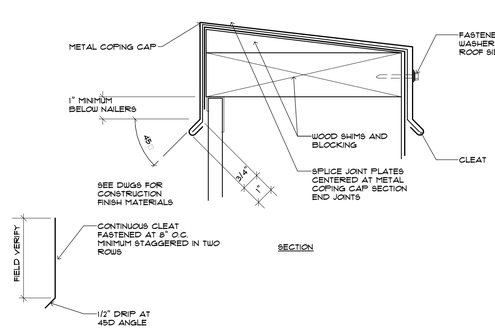
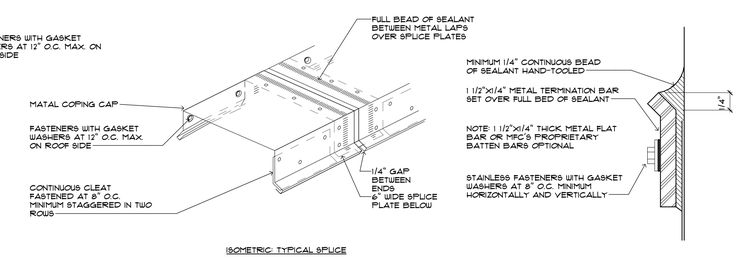


9 DOWNSPOUT SECTIONS
SCALE:NOT TO SCALE



10 DOWNSPOUT CONNECTION
SCALE:NOT TO SCALE





11 COPING CAP FABRICATION
SCALE:NOT TO SCALE

12/13/2018 5:10:49 PM

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KEVIN J. BESSOLO
AR12069

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

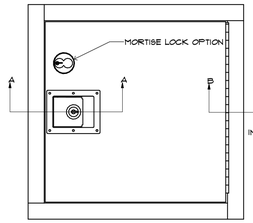
ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

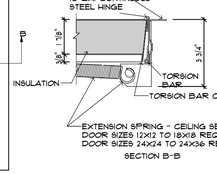
REVISIONS		
NO:	DATE:	DESCRIPTION
1	01-05-18	BLDG. DEPT. COMM.

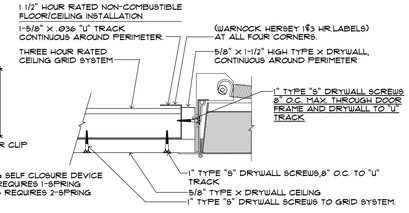
PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	NOT TO SCALE

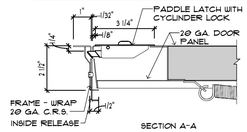
A505

BUILDING '1' & '2' SCUPPER, DOWNSPOUT AND COPING ROOFING DETAILS







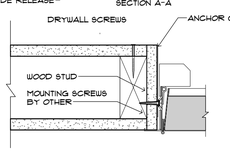


STANDARD SIZES & PRODUCT NUMBERS

DOOR SIZE	FRAME& OPENING	PRODUCT NUMBER	NO. PADDLE LATCHES	MASONRY ANCHORS
8X8	8-3/8 X8-3/8	3218 -010	1	4
12X12	12-3/8 X12-3/8	3218 -012	1	4
14X14	14-3/8 X14-3/8	3218 -014	1	4
16X16	16-3/8 X16-3/8	3218 -016	1	4
18X18	18-3/8 X18-3/8	3218 -018	1	4
12X24	12-3/8 X24-3/8	3218 -020	1	4
24X24	24-3/8 X24-3/8	3218 -024	1	4

* - 8X8 IS FOR WALL APPLICATION ONLY
* - INTENDED FOR VERTICAL (WALL) APPLICATION ONLY

NOTE: STAINLESS STEEL (#3 FINISH) FIRE-RATED DOORS ARE AVAILABLE IN A MAXIMUM DIMENSION OF 36"



STUD WALL INSTALLATION
UL 1 HR (B) LABEL

1 RATED ACCESS PANEL
SCALE: NOT TO SCALE

ACCESS PANEL NOTES:

1. USE RATED UTILITY ACCESS PANELS FOR PENETRATIONS INTO FIRE RATED SHAFTS,CEILING,OR WALLS IN COMMON AREAS.

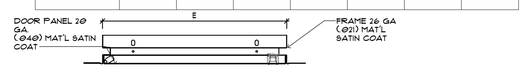
2. USE NON-RATED UTILITY ACCESS PANELS FOR PENETRATIONS INTO ELEC., BUS DUCTS, PLUMBING WALLS, SOFFITS,OR CEILING INSIDE EACH CONDO UNIT.

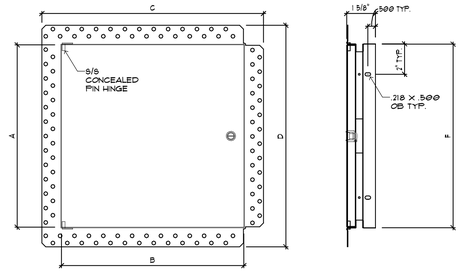
3. G.C. TO SIZE ACCESS PANELS FOR VALVES,FIRE DAMPERS, MOTORS, ETC. ACCORDING TO EQUIPMENT SIZE.

4. SUBMIT COMPLETE SCHEDULE AND SHOP DRAWINGS TO ARCHITECT & ENGINEER FOR REVIEW.

5. BALANCING DAMPERS IN EACH CONDO UNIT TO HAVE KEY PIN CONTROLS - NO ACCESS PANEL REQD. SEE MECH. FOR MORE INFO.

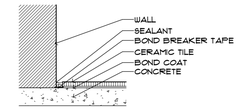
NOMINAL SIZE	A	B	C	D	E	F	LATCH QTY
6X6 (152 X152)	6.00 (152)	6.00 (152)	8.51 (218)	8.51 (218)	6.12 (155)	6.12 (155)	1
8X8 (202 X203)	8.00 (202)	8.00 (202)	10.51 (268)	10.51 (268)	8.12 (206)	8.12 (206)	1
10X10 (254 X254)	10.00 (254)	10.00 (252)	12.51 (319)	12.51 (319)	10.12 (257)	10.12 (257)	1
12X12 (305 X305)	12.00 (305)	12.00 (305)	14.51 (370)	14.51 (370)	12.12 (308)	12.12 (308)	1
14X14 (355 X355)	14.00 (355)	14.00 (355)	16.51 (421)	16.51 (421)	14.12 (359)	14.12 (359)	1
16X16 (406 X406)	16.00 (406)	16.00 (406)	18.51 (471)	18.51 (471)	16.12 (409)	16.12 (409)	1
18X18 (457 X457)	18.00 (457)	18.00 (457)	20.51 (522)	20.51 (522)	18.12 (460)	18.12 (460)	1
22X22 (560 X560)	22.00 (560)	22.00 (560)	24.51 (624)	24.51 (624)	22.12 (562)	22.12 (562)	1
24X24 (610 X610)	24.00 (610)	24.00 (610)	26.51 (675)	26.51 (675)	24.12 (613)	24.12 (613)	1
24X36 (610 X914)	36.00 (914)	24.00 (610)	26.51 (675)	38.51 (980)	24.12 (613)	36.12 (917)	2



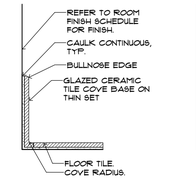


STANDARD FEATURES: SCREW DRIVER OPERATED CAM LATCH
SATIN COAT STEEL; FORMED DOOR PANEL WHITE BAKED ENAMEL FINISH FLANGE FRAME PERFORATED; MILL FINISH

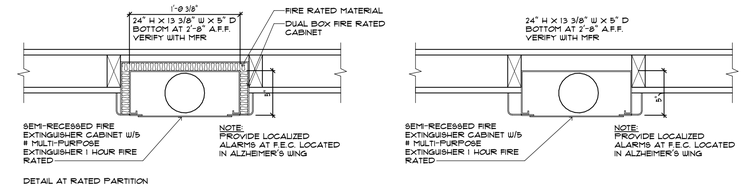
2 NON RATED ACCESS PANEL
SCALE: NOT TO SCALE



3 TILE PERIMITER JOINT DETAIL
SCALE: 3" = 1'-0"

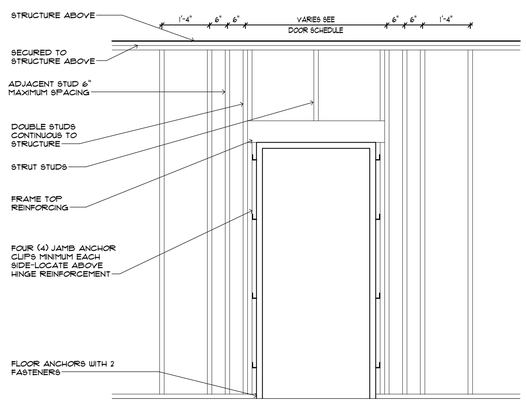


4 CERAMIC TILE BASE DETAIL
SCALE: 3" = 1'-0"

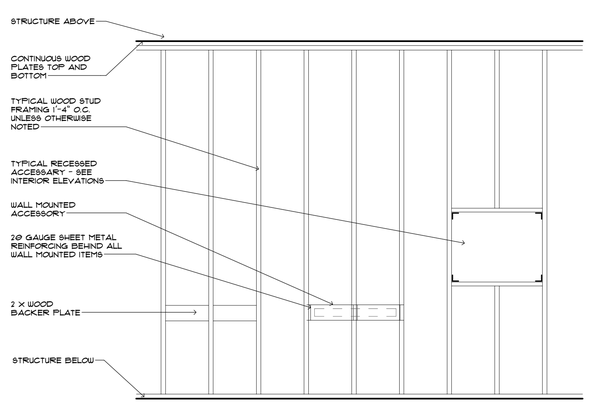


DETAIL AT RATED PARTITION

5 FIRE EXTINGUISHER CABINET DETAILS
SCALE: 1 1/2" = 1'-0"



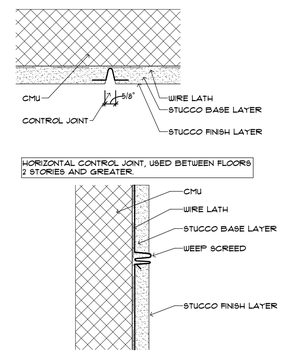
6 TYPICAL FRAMING AT INTERIOR DOORS
SCALE: 1/2" = 1'-0"



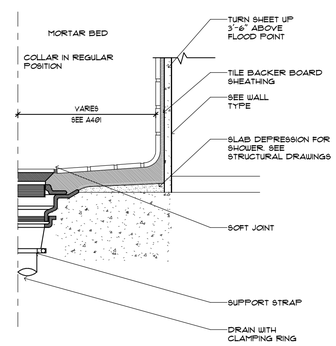
7 TYPICAL WALL FRAMING REINFORCING
SCALE: 1/2" = 1'-0"

MAX AREA AND ASPECT RATIO NOTED JOINT SPACING SHALL MEET THE FOLLOWING

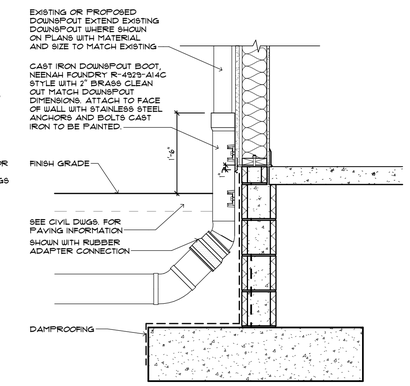
1. NO PANEL LENGTH GREATER THAN 18 FEET
2. NO PANEL TO EXCEED 144 S.F. FOR VERTICAL APPLICATIONS.
3. NO PANEL TO EXCEED 100 S.F. FOR HORIZONTAL APPLICATIONS
4. NO LENGTH -80- WIDTH RATION TO EXCEED 2 1/2" TO 1" IN ANY GIVEN PANEL



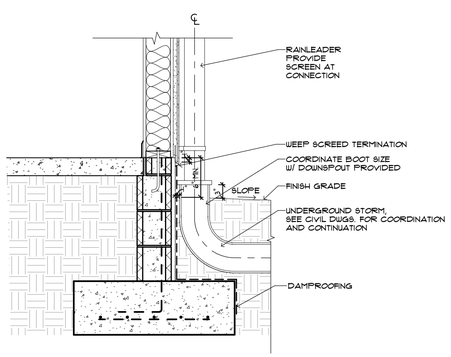
8 STUCCO CONTROL JOINTS
SCALE: 3" = 1'-0"



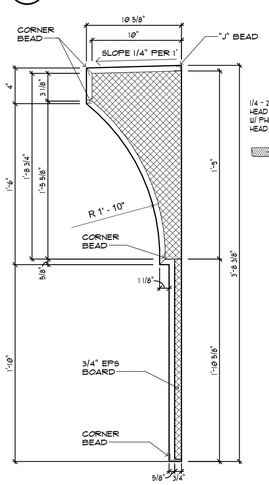
9 TYPICAL SHOWER PAN
SCALE: 3/4" = 1'-0"



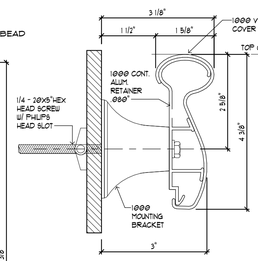
10 DOWNSPOUT BOOT DETAIL - ENTRY
SCALE: 3/4" = 1'-0"



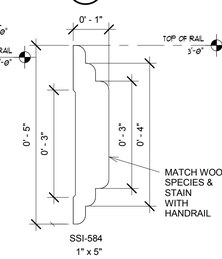
11 DOWNSPOUT DETAIL - TYPICAL
SCALE: 3/4" = 1'-0"



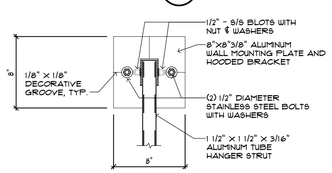
12 EPS CORNICE
SCALE: 1 1/2" = 1'-0"



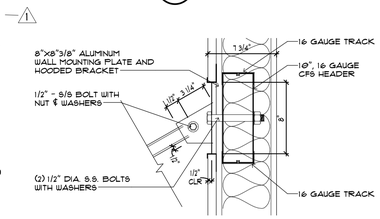
12A HAND RAIL
SCALE: 6" = 1'-0"



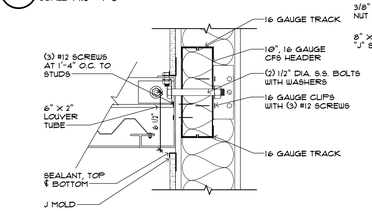
12B CHAIR RAIL
SCALE: 6" = 1'-0"



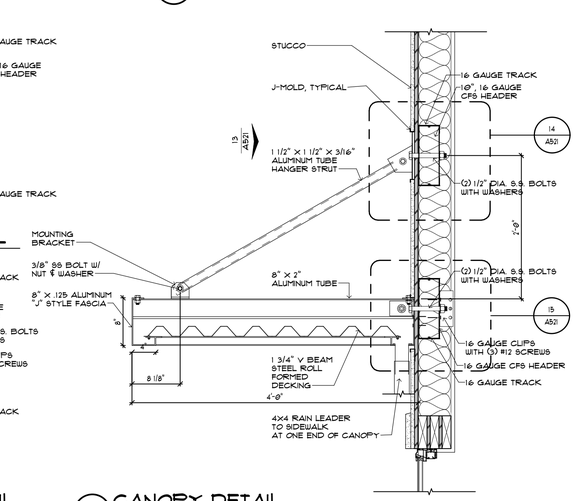
13 ATTACHMENT PLATE DETAIL
SCALE: 1 1/2" = 1'-0"



14 ATTACHMENT PLATE DETAIL
SCALE: 1 1/2" = 1'-0"



15 FRAME ATTACHMENT DETAIL
SCALE: 1 1/2" = 1'-0"



16 CANOPY DETAIL
SCALE: 1" = 1'-0"

12/13/2018 5:19:54 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED

DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

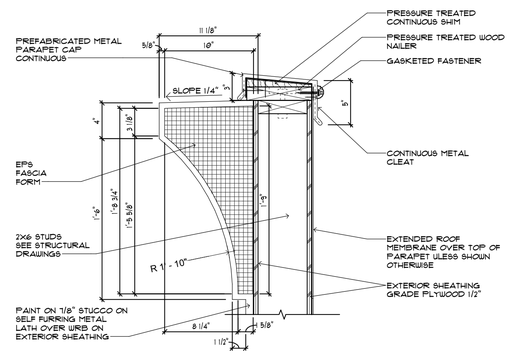
REVISIONS

NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS

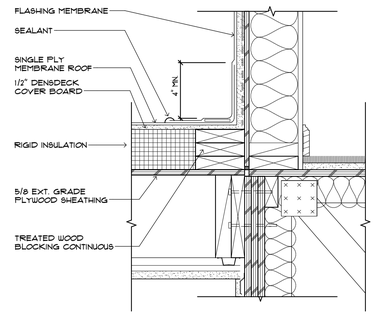
PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

A521

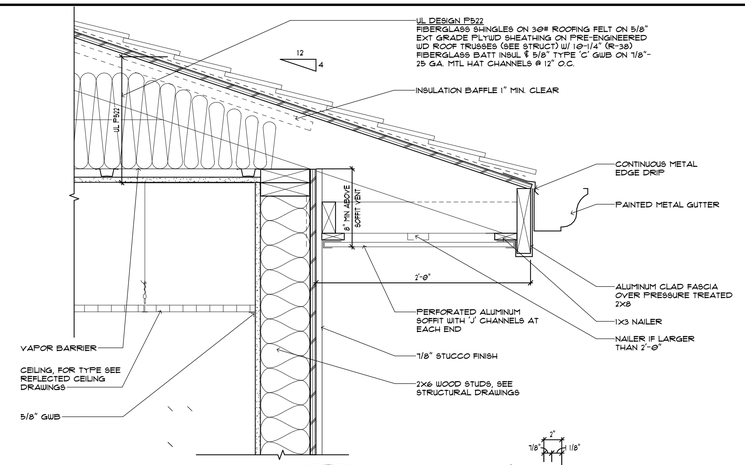
BUILDING '1' & '2' MISCELLANEOUS DETAILS



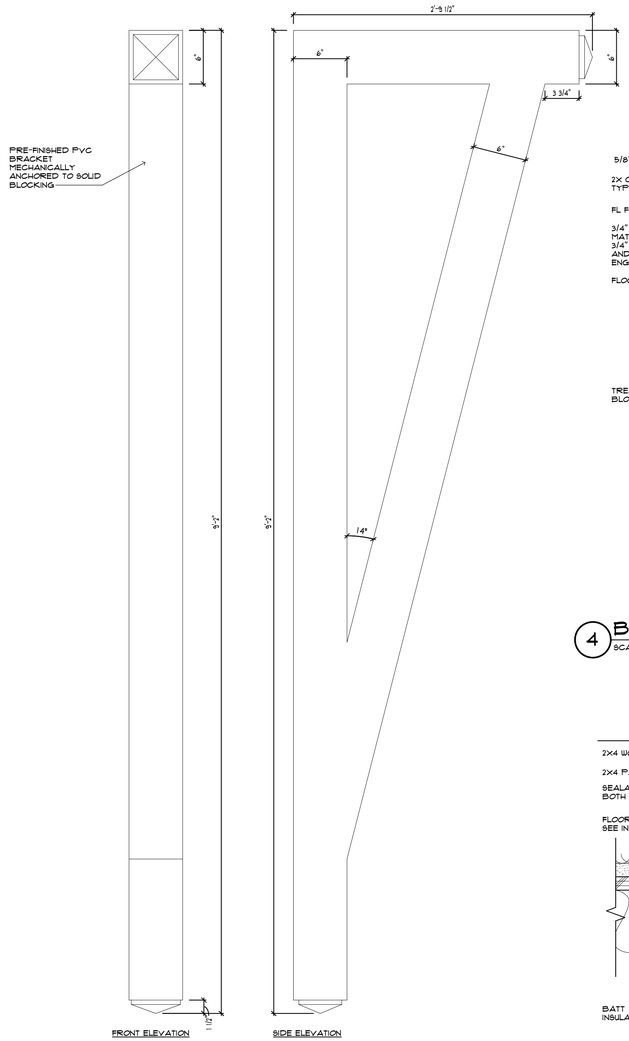
1 PARAPET DETAIL
SCALE: 1 1/2" = 1'-0"



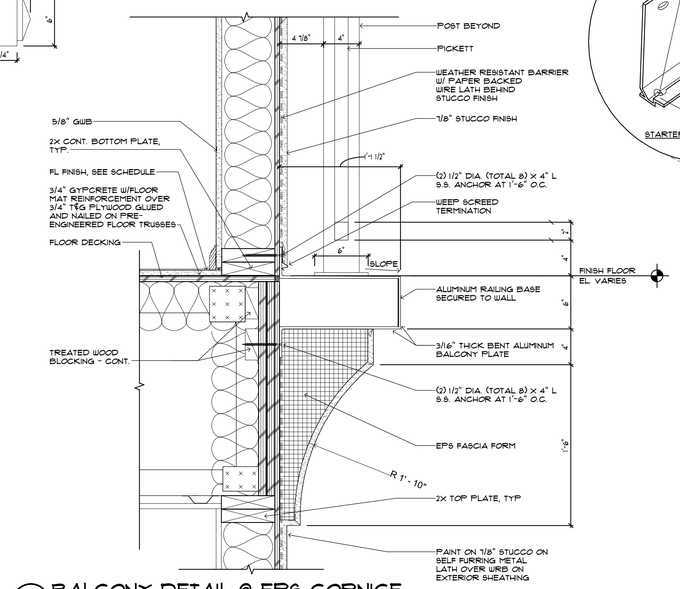
2 ROOF FLASHING
SCALE: 1 1/2" = 1'-0"



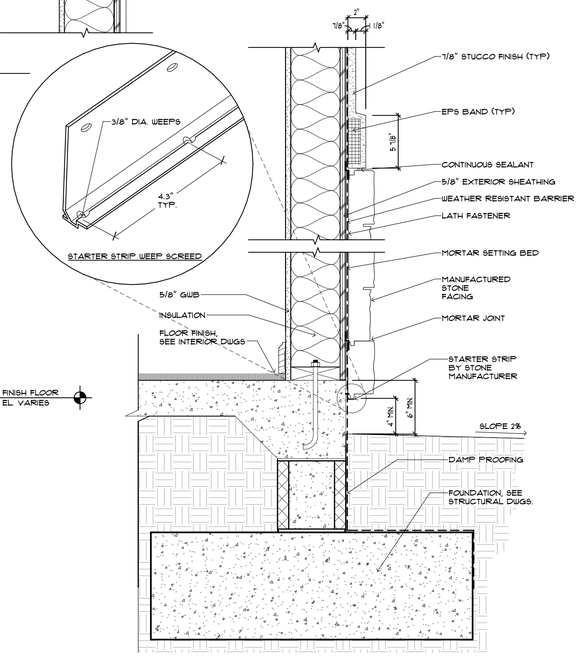
3 ROOF EAVE
SCALE: 1 1/2" = 1'-0"



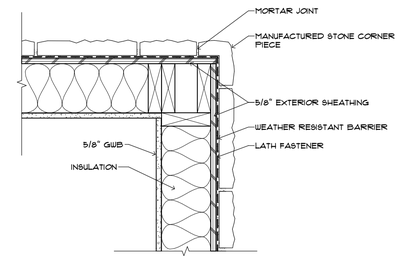
5 PVC BRACKET DETAIL
SCALE: 1 1/2" = 1'-0"



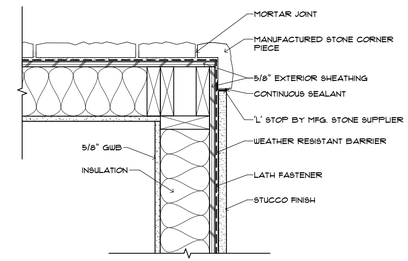
4 BALCONY DETAIL @ EPS CORNICE
SCALE: 1 1/2" = 1'-0"



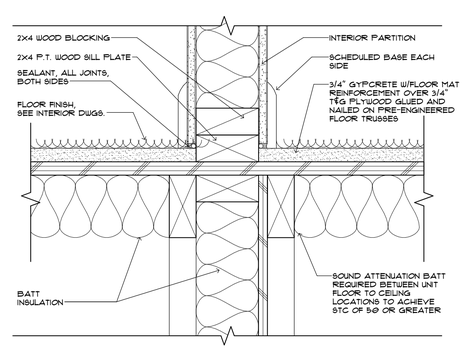
7 STONE VENEER WALL BASE DETAIL
SCALE: 1 1/2" = 1'-0"



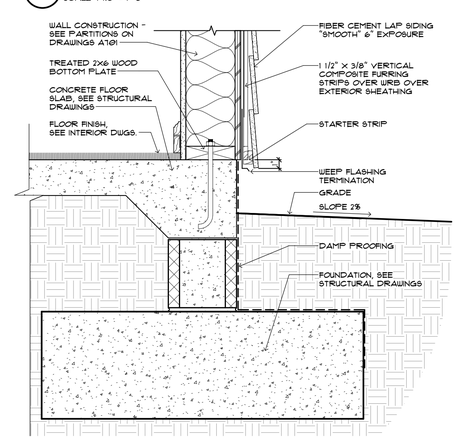
8 STONE VENEER CORNER DETAIL
SCALE: 1 1/2" = 1'-0"



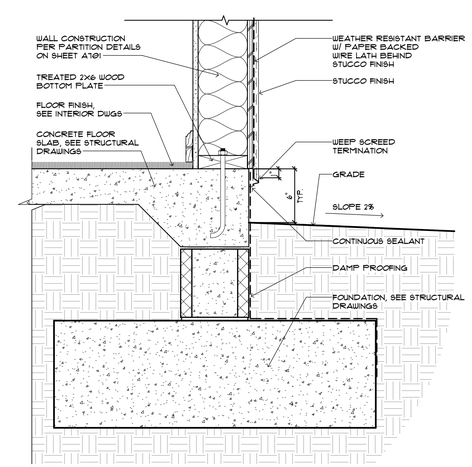
9 STONE VENEER/STUCCO CORNER DETAIL
SCALE: 1 1/2" = 1'-0"



6 TYPICAL WALL DETAIL AT GYP-CRETE FLOOR
SCALE: 3" = 1'-0"



10 EXTERIOR WALL BASE DETAIL
SCALE: 1 1/2" = 1'-0"



11 STUCCO FINISH WALL BASE DETAIL
SCALE: 1 1/2" = 1'-0"

12/13/2018 5:10:53 PM

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KEVIN J. BESSOLO
AR12069

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

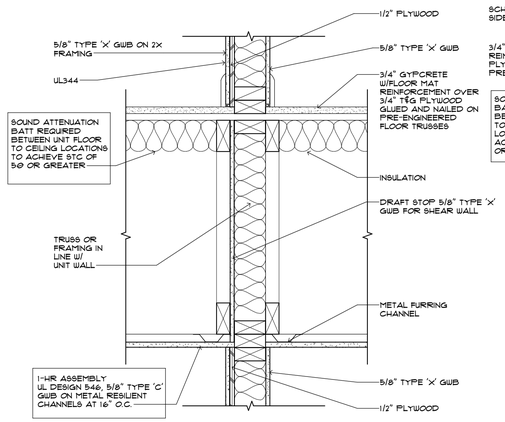
ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS		
NO:	DATE:	DESCRIPTION

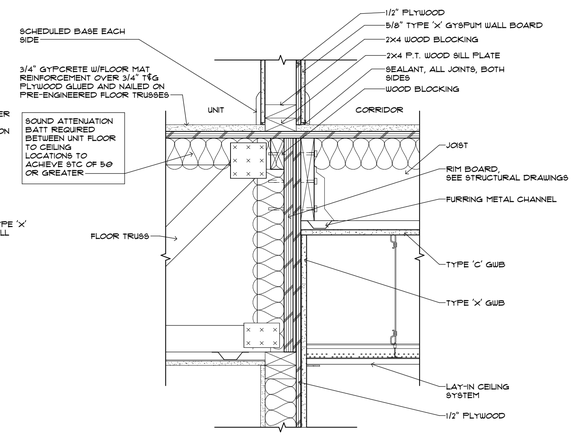
PROJECT NO:	15083.00
DRAWN BY:	SAE
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

A522

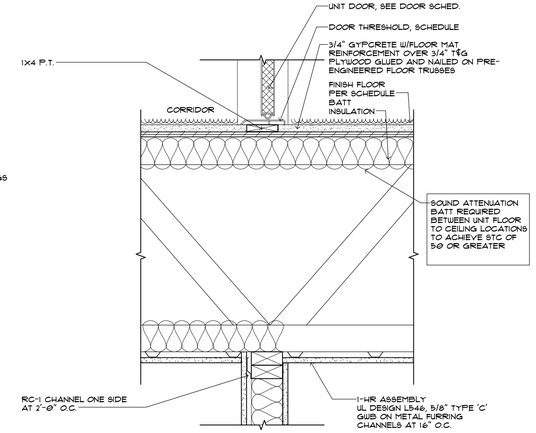
BUILDING '1' & '2' MISCELLANEOUS DETAILS



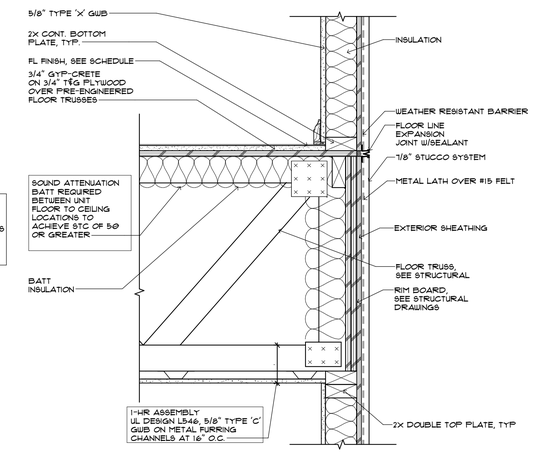
1 1 HOUR SHEAR WALL DETAIL
SCALE: 1 1/2" = 1'-0"



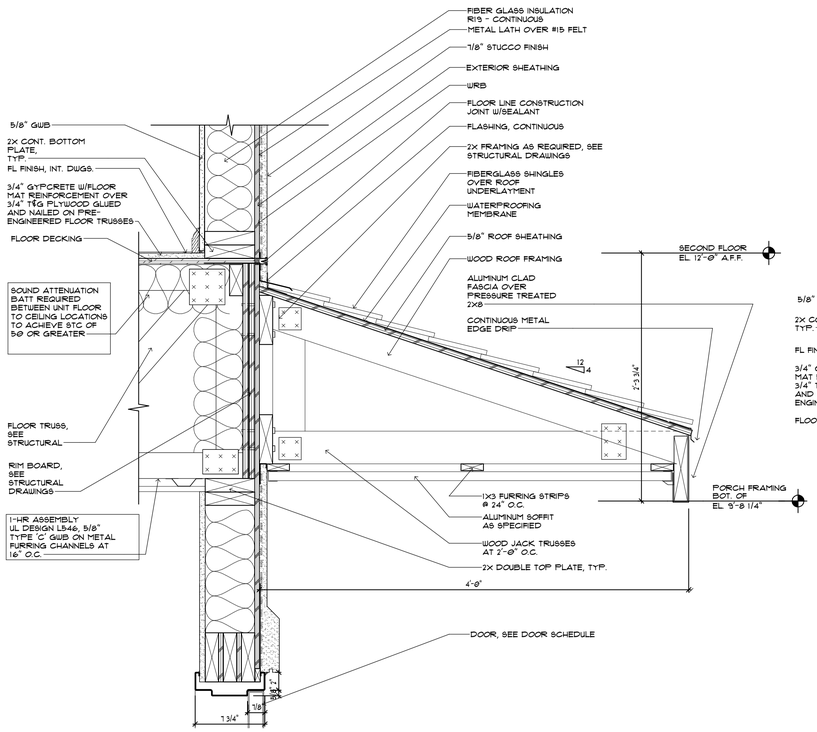
2 INTERIOR CORRIDOR DETAIL
SCALE: 1 1/2" = 1'-0"



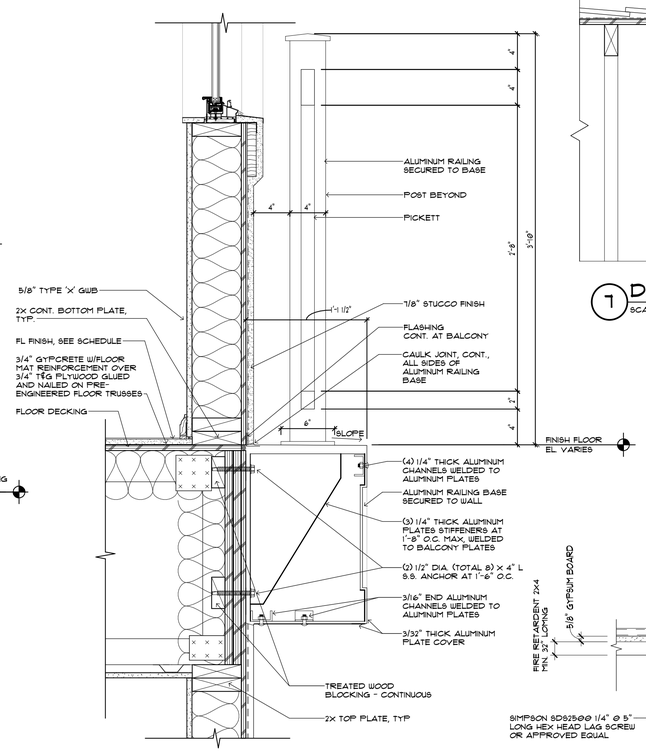
3 DOOR SILL DETAIL AT CORRIDOR
SCALE: 1 1/2" = 1'-0"



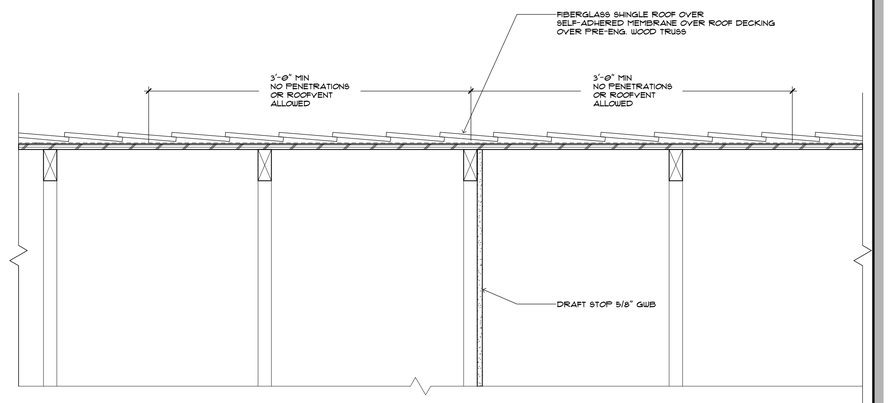
4 FIRESTOPPING @ TRUSS END CONDITION DETAIL
SCALE: 1 1/2" = 1'-0"



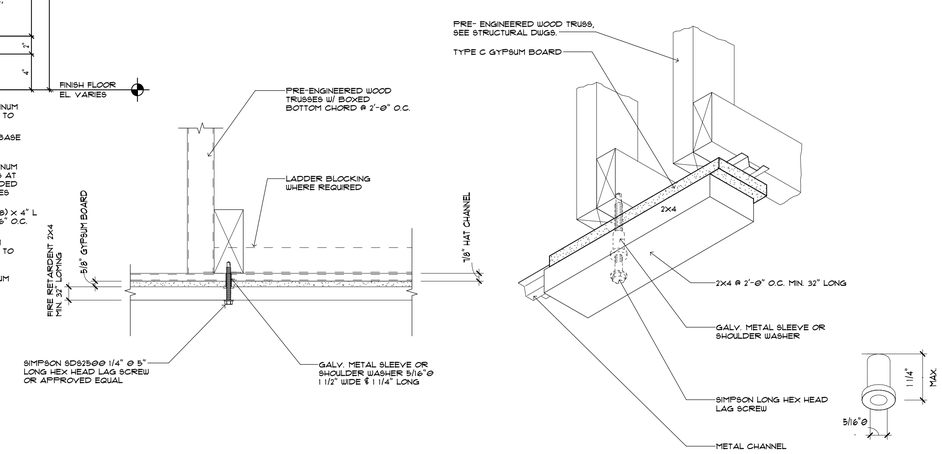
5 CANOPY DETAIL
SCALE: 1 1/2" = 1'-0"



6 STANDARD BALCONY DETAIL
SCALE: 1 1/2" = 1'-0"



7 DRAFT STOPPING TERMINATION AT ROOF DECK
SCALE: 1 1/2" = 1'-0"



8 WALL HEAD ATTACHMENT TO RATED CEILING ASSEMBLY DETAIL
SCALE: 1 1/2" = 1'-0"

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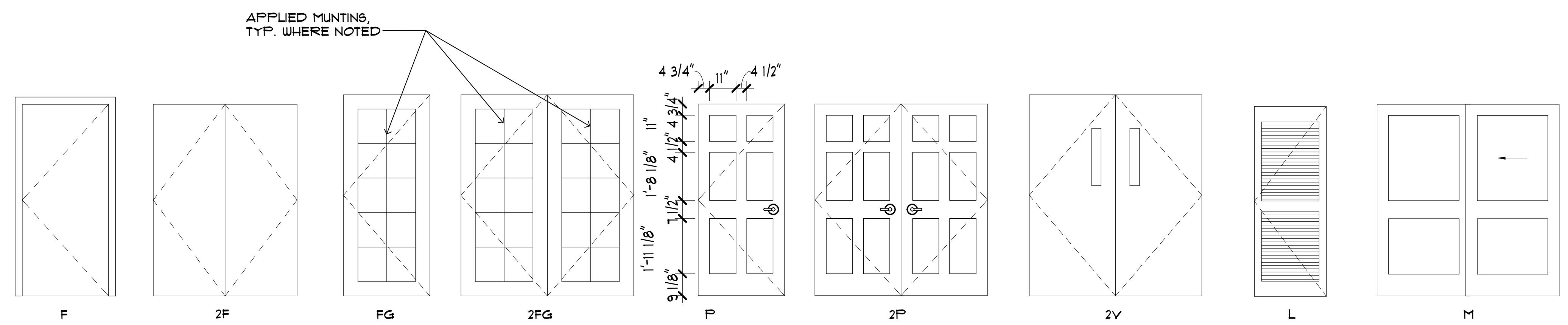
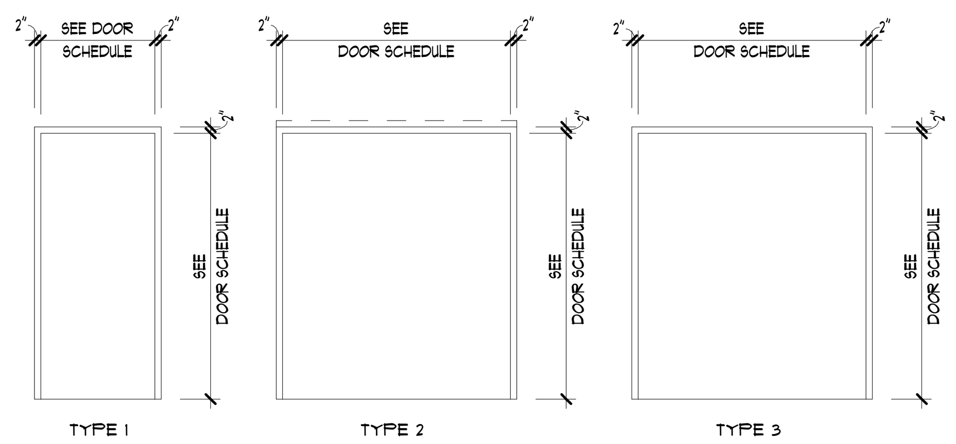
PROJECT NO:	15083.00
DRAWN BY:	SAE
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1 1/2" = 1'-0"

A523

BUILDING '1' & '2' MISCELLANEOUS DETAILS



DOOR TYPES



FRAME TYPES

GENERAL DOOR SCHEDULE NOTES

1. ASTRAGAL: ALL WOOD FIRE RATED PAIRS AND DOUBLE EGRESS FIRE DOORS SHALL HAVE APPROVED METAL ASTRAGALS.
2. HARDWARE: METAL DOOR LABELS CERTIFYING U.L. FIRE RATING SHALL BE INSTALLED ON THE HINGE SIDE OF THE DOOR ON ALL RATED OR CERTIFIED DOORS OR ASSEMBLIES.
3. HEIGHT: ALL INTERIOR DOORS ARE 6'-8" HIGH UNLESS OTHERWISE NOTED.
4. RAIN DRIP: PROVIDE ANODIZED, EXTRUDED ALUMINUM RAIN DRIP AT ALL EXTERIOR DOORS NOT PROTECTED BY CANOPY OR OVERHANGS.
5. DOOR STOPS: PROVIDE WOOD BLOCKING FOR EACH WALL MOUNTED DOOR STOP WHERE A METAL STUD PARTITION HAS BEEN SPECIFIED. REFER TO DETAIL.
6. DOOR STOPS: PROVIDE FLOOR DOORSTOPS IN ELECTRICAL ROOMS WHERE DOOR OPENS AGAINST PANELS AND IN ROOMS WHERE DOOR OPENS AGAINST CABINETS.
7. FINISHES FOR ALL EXTERIOR FRAMES AND DOORS TO BE SELECTED.
8. ALL MUNTINS ARE APPLIED.
9. ALL EXTERIOR ACCESS DOORS ON FIRST FLOOR SHALL BE IMPACT RESISTANT, TYPICAL.

DOOR SCHEDULE

BUILDING '1'

DOOR NO.	DOORS: SIZE	ROOM NAME	TKNS	TYPE	CONSTRUCTION: HOLLOW METAL	METAL/GLASS	WOOD/GLASS	WOOD SOLID CORE	HOLLOW CORE	ALUMINUM / GLASS	FIRE RATING: U.L.A - 90 MIN.	U.L.B - 60 MIN.	U.L.C - 45 MIN.	U.L.C - 20 MIN.	FACE/FINISH: STAIN	FACTORY FINISH	PAINTED	LOUVER	UNDER CUT: SEE DOOR SPEC.	FRAMES: TYPE	MATERIALS: METAL	ALUMINUM	WOOD	DETAILS: HEAD	JAMB	THRESHOLD	HDW SET	REMARKS
FIRST FLOOR																												
A101A	3'-0" x 6'-8"	STAIR #2	1 3/4"	P				●				●					●			1	●			H2	J2	S1	1	
A101B	3'-0" x 7'-10"	STAIR #2	1 3/4"	F	●											●				1	●			H5	J5	S2	3	WEATHERSTRIPPED
A102	3'-0" x 7'-10"	CORRIDOR	1 3/4"	FG		●										●				1	●			H5	J5	S2	4	WEATHERSTRIPPED
A103	(2) 3'-0" x 6'-8"	MECHANICAL	1 3/4"	2P				●					●				●			3	●			H3	J3	S1	7	
A104A	(2) 3'-0" x 7'-10"	LOBBY	1 3/4"	2FG						●						●				2		●		H7	J7/J8	S4	5	WEATHERSTRIPPED
A104B	(2) 3'-0" x 7'-10"	LOBBY	1 3/4"	2FG						●						●				2	●			H7	J7/J8	S4	5	WEATHERSTRIPPED / FIXED
A105	4'-0" x 7'-0"	ELEVATOR EQUIPMENT	1 3/4"	P				●					●				●			1	●			H2	J2	S1	11	4 HINGES
A106	3'-6" x 6'-8"	LAUNDRY	1 3/4"	P				●					●				●			1	●			H4	J4	S3	12	
A107	(2) 3'-0" x 6'-8"	ELECTRICAL	1 3/4"	2P				●					●				●			3	●			H2	J2	S1	7	
A108	3'-0" x 7'-10"	CORRIDOR	1 3/4"	FG		●										●				1	●			H5	J5	S2	4	WEATHERSTRIPPED
A109A	3'-0" x 6'-8"	TRASH	1 3/4"	F				●					●				●			1	●			H2	J2	S1	13	
A109B	(2) 3'-0" x 7'-10"	TRASH	1 3/4"	2F	●											●				3	●			H5	J5	S2	9	WEATHERSTRIPPED
A110A	3'-0" x 6'-8"	STAIR #1	1 3/4"	P				●				●					●			1	●			H2	J2	S1	1	
A110B	3'-0" x 7'-10"	STAIR #1	1 3/4"	F	●											●				1	●			H5	J5	S2	3	WEATHERSTRIPPED
A111	3'-0" x 7'-10"	MAINTENANCE	1 3/4"	F	●											●				1	●			H5	J5	S2	14	WEATHERSTRIPPED
B101A	3'-0" x 6'-8"	STAIR #3	1 3/4"	P				●									●			1	●			H5	J5	S1	3	
B101B	3'-0" x 7'-10"	STAIR #3	1 3/4"	F	●							●				●				1	●			H2	J2	S2	2	WEATHERSTRIPPED
B102	3'-0" x 7'-10"	CORRIDOR	1 3/4"	F		●										●				1	●			H5	J5	S2	4	WEATHERSTRIPPED
B103	(2) 3'-0" x 6'-8"	ELECTRICAL	1 3/4"	2P				●				●					●			3	●			H3	J3	S1	7	
B104A	(2) 3'-0" x 7'-10"	LOBBY	1 3/4"	2FG						●						●				2		●		H7	J7/J8	S4	5	WEATHERSTRIPPED
B104B	(2) 3'-0" x 7'-10"	LOBBY	1 3/4"	2FG						●						●				2		●		H7	J7/J8	S4	5	WEATHERSTRIPPED / FIXED
B105	4'-0" x 7'-0"	ELEVATOR EQUIPMENT	1 3/4"	P				●					●				●			1	●			H2	J2	S1	11	4 HINGES
B106	3'-6" x 6'-8"	LAUNDRY	1 3/4"	P				●					●				●			1	●			H4	J4	S3	12	
B107	(2) 3'-0" x 6'-8"	ELECTRICAL	1 3/4"	2P				●					●				●			3	●			H2	J2	S1	7	
B108	3'-0" x 7'-10"	CORRIDOR	1 3/4"	FG		●										●				1	●			H5	J5	S2	4	WEATHERSTRIPPED
B109A	3'-0" x 6'-8"	TRASH	1 3/4"	F				●					●				●			1	●			H2	J2	S1	13	
B109B	(2)3'-0" x 7'-10"	TRASH	1 3/4"	2F	●											●				3	●			H5	J5	S2	9	WEATHERSTRIPPED
B110A	3'-0" x 6'-8"	STAIR #4	1 3/4"	P				●				●					●			1	●			H2	J2	S1	1	
B110B	3'-0" x 7'-10"	STAIR #4	1 3/4"	F	●											●				1	●			H5	J5	S2	3	WEATHERSTRIPPED
B111	3'-0" x 7'-10"	MAINTENANCE	1 3/4"	F	●											●				1	●			H5	J5	S2	14	WEATHERSTRIPPED
B112	3'-0" x 6'-8"	COMMUNICATION	1 3/4"	F	●												●			1	●			H1	J1	S1	15	
SECOND FLOOR																												
A201	3'-0" x 6'-8"	STAIR #2	1 3/4"	P				●				●					●			1	●			H2	J2	S1	1	
A203	(2)3'-0" x 6'-8"	MECH/ELEC	1 3/4"	P				●					●				●			3	●			H3	J3	S2	7	
A205	3'-0" x 6'-8"	STORAGE	1 3/4"	P				●					●				●			1	●			H2	J2	S2	15	
A206	3'-6" x 6'-8"	LAUNDRY	1 3/4"	P				●					●				●			1	●			H4	J4	S3	12	
A209	3'-0" x 6'-8"	TRASH	1 3/4"	F				●					●				●			1	●			H2	J2	S1	13	
A210	3'-0" x 6'-8"	STAIR #1	1 3/4"	P				●				●					●			1	●			H2	J2	S1	1	
B201	3'-0" x 6'-8"	STAIR #3	1 3/4"	P				●				●					●			1	●			H2	J2	S1	1	
B203	(2)3'-0" x 6'-8"	MECH/ELEC	1 3/4"	P				●					●				●			3	●			H3	J3	S1	7	
B205	3'-0" x 6'-8"	STORAGE	1 3/4"	P				●					●				●			1	●			H2	J2	S1	15	
B206	3'-6" x 6'-8"	LAUNDRY	1 3/4"	P				●					●				●			1	●			H4	J4	S3	12	
B209	3'-0" x 6'-8"	TRASH	1 3/4"	F				●					●				●			1	●			H2	J2	S1	13	
B210	3'-0" x 6'-8"	STAIR #4	1 3/4"	P				●				●					●			1	●			H2	J2	S1	1	
THIRD FLOOR																												
A301	3'-0" x 6'-8"	STAIR #2	1 3/4"	P				●				●					●			1	●			H2	J2	S1	1	
A303	(2)3'-0" x 6'-8"	MECH/ELEC	1 3/4"	P				●					●				●			3	●			H3	J3	S1	7	
A305	3'-0" x 6'-8"	STORAGE	1 3/4"	P				●					●				●			1	●			H2	J2	S1	15	
A306	3'-6" x 6'-8"	LAUNDRY	1 3/4"	P				●					●				●			1	●			H4	J4	S3	12	
A309	3'-0" x 6'-8"	TRASH	1 3/4"	F				●					●				●			1	●			H2	J2	S1	13	
A310	3'-0" x 6'-8"	STAIR #1	1 3/4"	P				●				●					●			1	●			H2	J2	S1	1	
B301	3'-0" x 6'-8"	STAIR #3	1 3/4"	P				●				●					●			1	●			H2	J2	S1	1	
B303	(2)3'-0" x 6'-8"	MECH/ELEC	1 3/4"	P				●					●				●			3	●			H3	J3	S1	7	
B205	3'-0" x 6'-8"	STORAGE	1 3/4"	P				●					●				●			1	●			H2	J2	S1	15	
B306	3'-6" x 6'-8"	LAUNDRY	1 3/4"	P				●					●				●			1	●			H4	J4	S3	12	
B309	3'-0" x 6'-8"	TRASH	1 3/4"	F				●					●				●			1	●			H2	J2	S1	13	
B310	3'-0" x 6'-8"	STAIR #4	1 3/4"	P				●				●					●			1	●			H2	J2	S1	1	
UNITS																												
AA	3'-0" x 6'-8"	UNIT ENTRY DOOR	1 3/4"	P				●						●			●			1	●			H2	J2	S1	20	PRIVACY LOCK/2 PEEP HOLES@43"&60" AFF
BB	3'-0" x 6'-8"	BATHROOM	1 3/4"	P					●								●			1			●	H6	J6	S3	21	
CC	6'-0" x 6'-8"	CLOSET	1 3/4"	M					●								●			3			●	H9	J9	S1	22	
DD	2'-6" x 6'-8"	MECHANICAL CLOSET	1 3/4"	L					●								●	LOUVER		1			●	H6	J6	S1	23	
EE	3'-0" x 6'-8"	BEDROOM	1 3/4"	P					●								●			1			●	H6	J6	S1	24	LATCH SET
FF	3'-0" x 6'-8"	BEDROOM CLOSET	1 3/4"	P					●								●			1			●	H6	J6	S1	1	
GG	(2)3'-0" x 6'-8"	LINEN CLOSET	1 3/4"	P					●								●			1			●	H6	J6	S1	22	

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PROFESSIONAL SEAL

KEVIN J. BESSOLO
AR12069

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MHA - PALMS AT UNIVERSITY APARTMENTS
PHASE II - BUILDING I

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

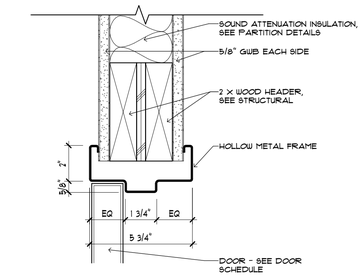
REVISIONS		
NO:	DATE:	DESCRIPTION
1	08-23-18	HUD COMMENTS
2	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	SAE
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

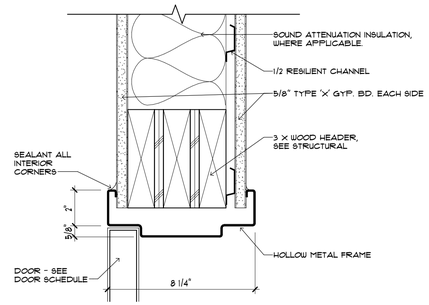
A601

BUILDING '1'
DOOR SCHEDULE

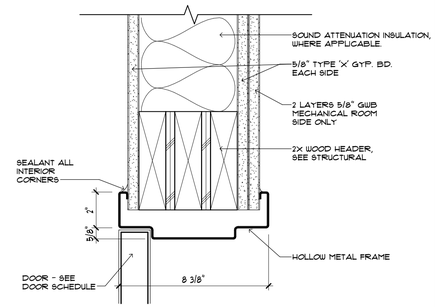
12/13/2018 5:11:07 PM



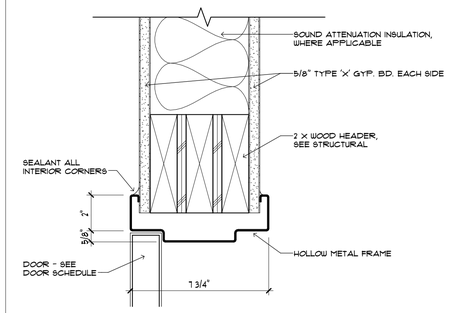
H1 HOLLOW METAL HEAD DETAIL
SCALE: 3" = 1'-0"



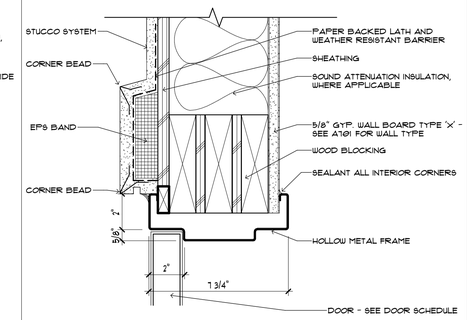
H2 HOLLOW METAL HEAD DETAIL
SCALE: 3" = 1'-0"



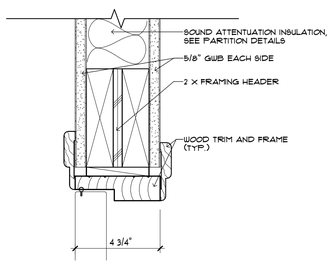
H3 HOLLOW METAL HEAD DETAIL
SCALE: 3" = 1'-0"



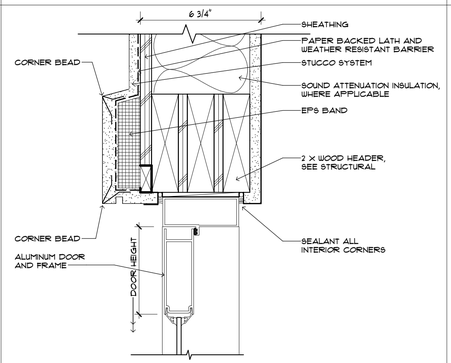
H4 HOLLOW METAL HEAD DETAIL
SCALE: 3" = 1'-0"



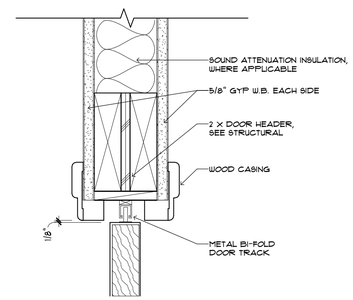
H5 HOLLOW METAL HEAD DETAIL
SCALE: 3" = 1'-0"



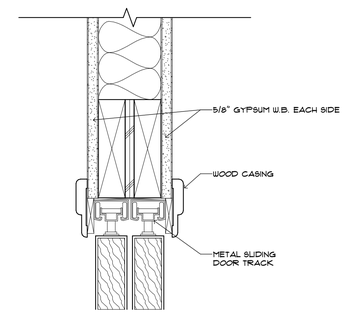
H6 WOOD FRAME HEAD DETAIL
SCALE: 3" = 1'-0"



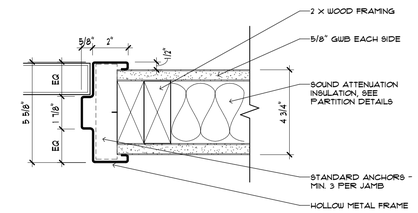
H7 ALUMINUM HEAD DETAIL
SCALE: 3" = 1'-0"



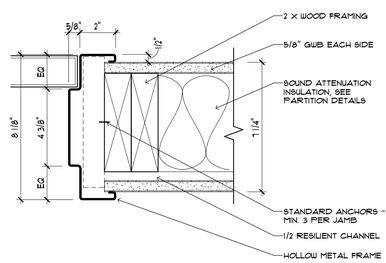
H8 BI FOLD DOOR HEAD DETAIL
SCALE: 3" = 1'-0"



H9 SLIDING DOORS HEAD DETAIL
SCALE: 3" = 1'-0"



J1 HOLLOW METAL JAMB DETAIL
SCALE: 3" = 1'-0"



J2 HOLLOW METAL JAMB DETAIL
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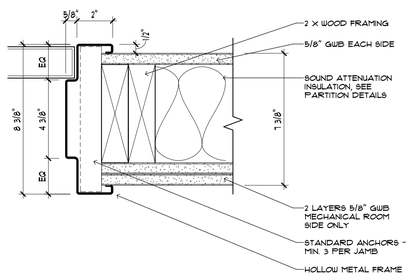
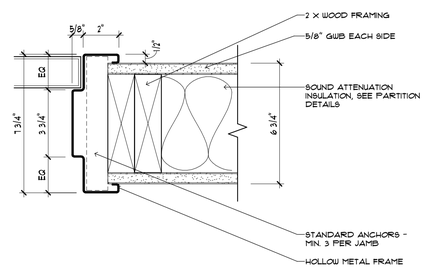
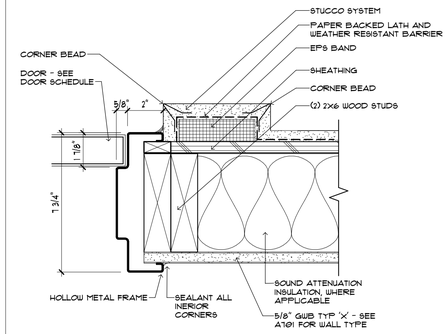


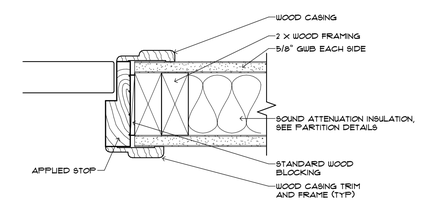
J3 HOLLOW METAL HEAD DETAIL
SCALE: 3" = 1'-0"



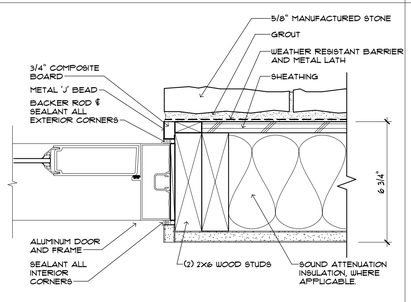
J4 HOLLOW METAL JAMB DETAIL
SCALE: 3" = 1'-0"



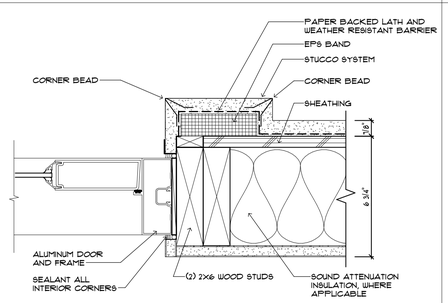
J5 HOLLOW METAL JAMB DETAIL
SCALE: 3" = 1'-0"



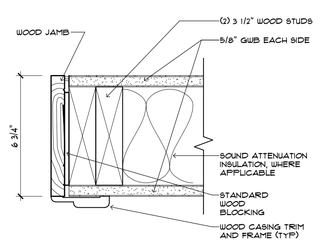
J6 WOOD FRAME JAMB DETAIL
SCALE: 3" = 1'-0"



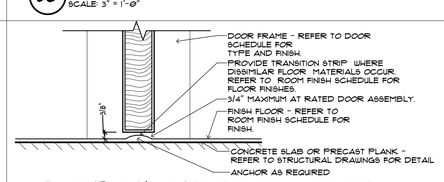
J7 ALUMINUM JAMB DETAIL
SCALE: 3" = 1'-0"



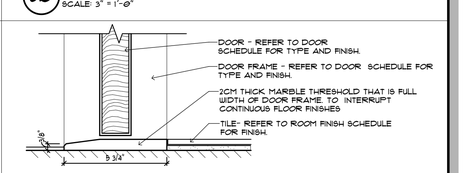
J8 ALUMINUM JAMB DETAIL
SCALE: 3" = 1'-0"



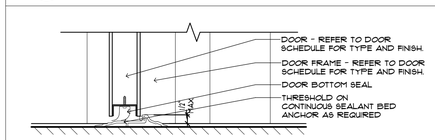
J9 WOOD FRAME JAMB DETAIL
SCALE: 3" = 1'-0"



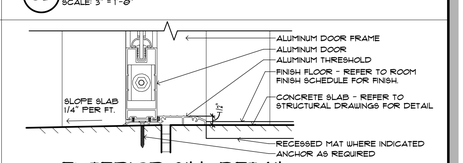
S1 TYPICAL UNDERCUT OF DOOR
SCALE: 3" = 1'-0"



S2 TYPICAL MARBLE THRESHOLD
SCALE: 3" = 1'-0"



EXTERIOR SILL DETAIL AT HOLLOW METAL DOOR
S3 SCALE: 3" = 1'-0"



EXTERIOR SILL DETAIL AT ALUMINUM DOOR
S4 SCALE: 3" = 1'-0"

12/13/2018 5:11:12 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

505 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

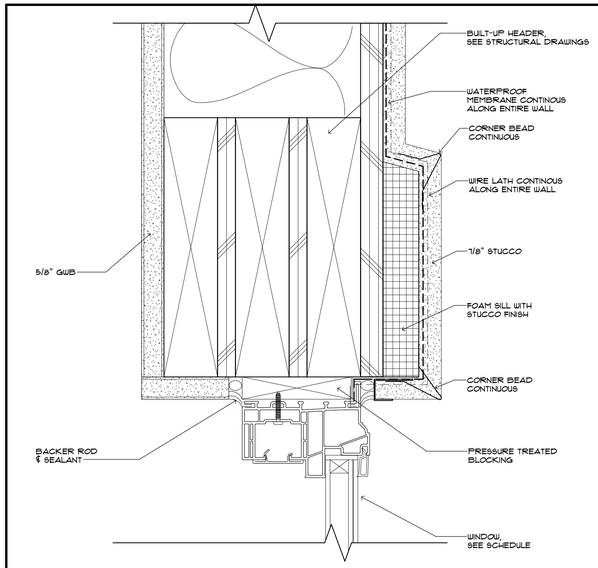
REVISIONS

NO:	DATE:	DESCRIPTION

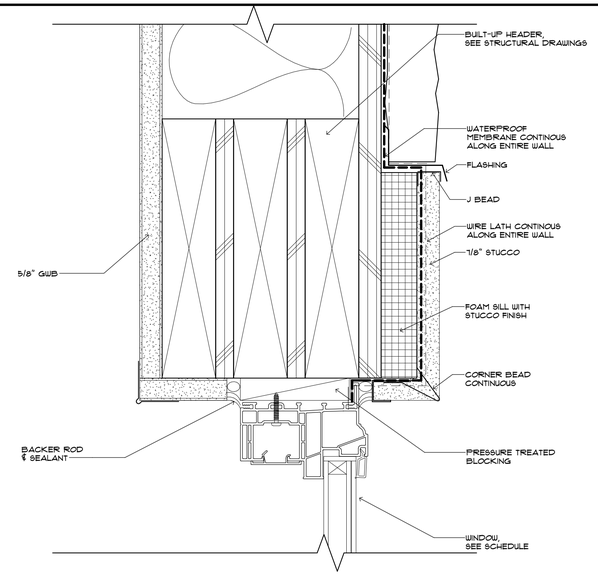
PROJECT NO:	15083.00
DRAWN BY:	SAE
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	3" = 1'-0"

A602

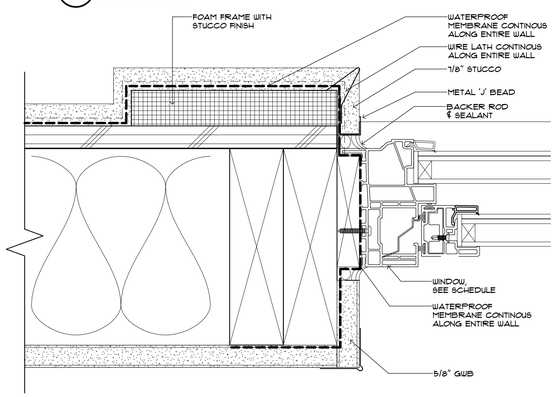
BUILDING '1' DOOR DETAILS



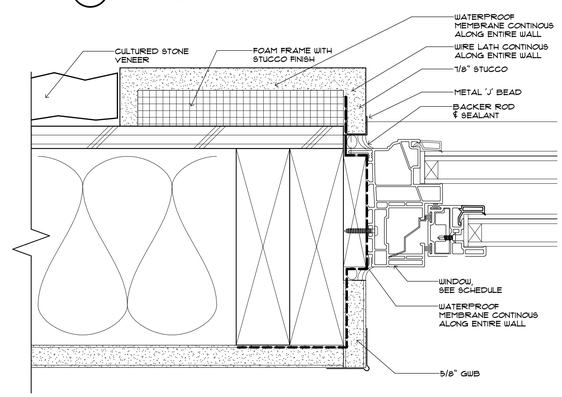
1 HEAD DETAIL - STUCCO
SCALE:HALF FULL SIZE



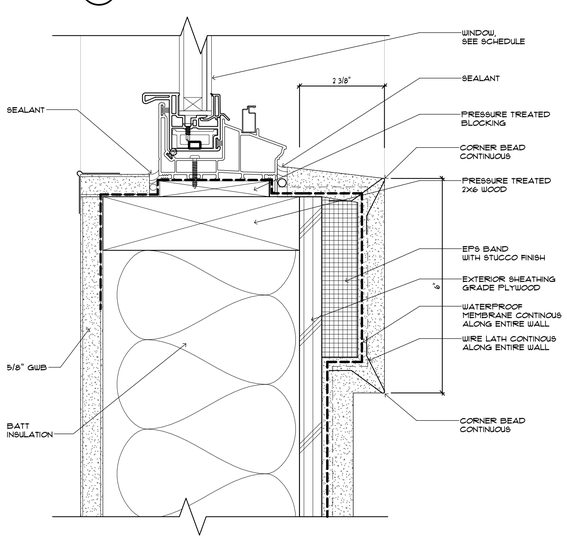
4 HEAD DETAIL - STONE
SCALE:HALF FULL SIZE



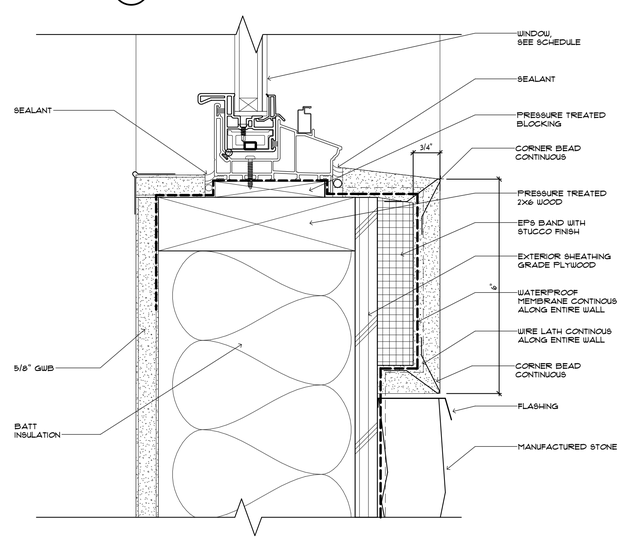
2 JAMB DETAIL - STUCCO
SCALE:HALF FULL SIZE



5 JAMB DETAIL - STONE
SCALE:HALF FULL SIZE



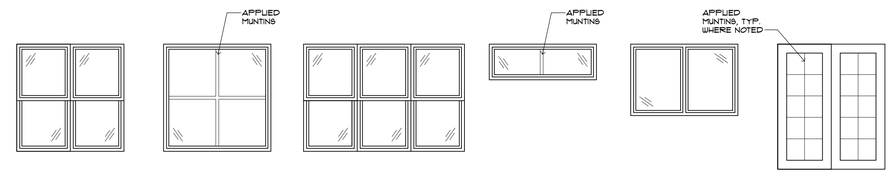
3 SILL DETAIL - STUCCO
SCALE:HALF FULL SIZE



6 SILL DETAIL - STONE
SCALE:HALF FULL SIZE

WINDOW / LOUVER SCHEDULE

	WINDOW TAG	WINDOW STYLE	HEAD HGT	WIDTH	HEIGHT	GLASS	FRAME FINISH	TYPE	DETAILS HEAD	INT. VERT.	INT. HORIZ.	JAMB	SILL	REMARKS
EXTERIOR WINDOWS *	A	SINGLE HUNG	8'-0"	6'-0"	5'-0"	LAMINATED/INSULATED	FACTORY	VINYL	1/4/1			2/5/8	3/6/9	
	B	FIXED	8'-0"	6'-0"	5'-0"	LAMINATED/INSULATED	FACTORY	VINYL	1			2	3	
	C	SINGLE HUNG	8'-0"	9'-0"	5'-0"	LAMINATED/INSULATED	FACTORY	VINYL	1			2	3	
	D	FIXED	12'-4"	6'-0"	2'-0"	LAMINATED/INSULATED	FACTORY	VINYL	1			2	3	
	E	FIXED	8'-0"	6'-0"	4'-0"	LAMINATED/INSULATED	FACTORY	VINYL	1			2	3	
	F	FIXED	8'-0"	6'-0"	8'-0"	LAMINATED/INSULATED	FACTORY	VINYL	1			2/5	-	
LOUVER	L1	LOUVER	10'-0"	2'-2"	3'-0"	N/A	PTD	HM	10			2	11	
	L2	LOUVER	10'-0"	1'-3"	2'-4"	N/A	PTD	HM	10			2	11	
	L3	LOUVER	10'-0"	3'-0"	1'-6"	N/A	PTD	HM	10			2	11	
	L4	LOUVER	10'-0"	5'-0"	1'-0"	N/A	PTD	HM	10			2	11	



A SINGLE HUNG
B FIXED
C SINGLE HUNG
D FIXED
E FIXED
F FIXED

EXTERIOR WINDOW TYPES

L1 L2 L3 L4

LOUVER TYPES

NOTES:

WINDOWS TO COMPLY W/ FBC 5TH EDITION (2014)

ALL OPERABLE WINDOWS IN RESIDENT ACCESS AREAS TO HAVE OPENING STOPS LIMITING OPENINGS TO 6" MAXIMUM.

REFER TO INTERIOR DESIGN DRAWINGS FOR WINDOW SILL MATERIAL AND COLORS.

CONFIRM COMPATABILITY OF NP1 SEALANT WITH ADJACENT MATERIALS.

CONDUCT WATER TEST ON IN PLACE WINDOW PER SPECIFICATION REQUIREMENTS

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MHA - PALMS AT UNIVERSITY APARTMENTS
PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

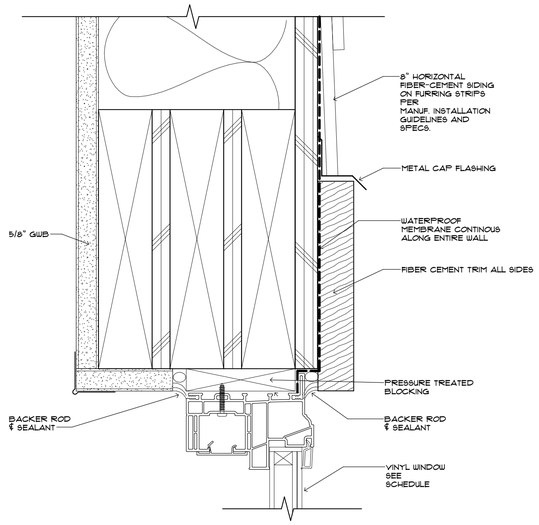
REVISIONS		
NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	AS INDICATED

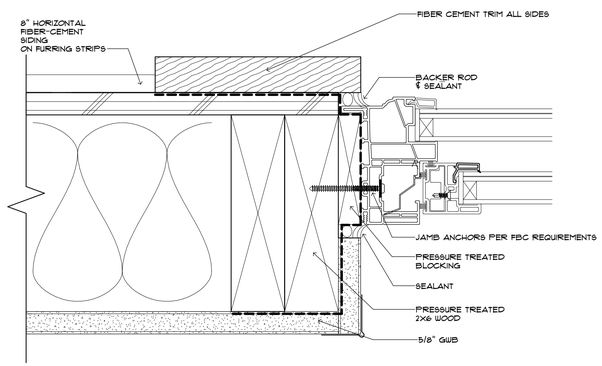
A611

BUILDING '1'
WINDOW / LOUVER
SCHEDULE AND DETAILS

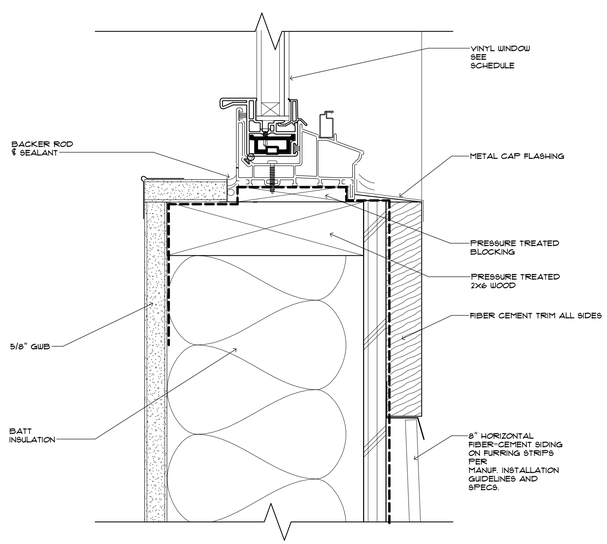
12/13/2018 5:11:16 PM



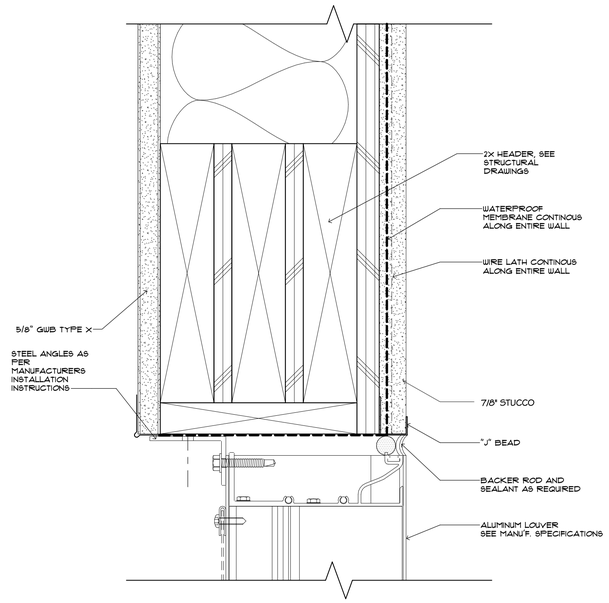
7 A612-7 HEAD DETAIL-SIDING
SCALE: 6" = 1'-0"



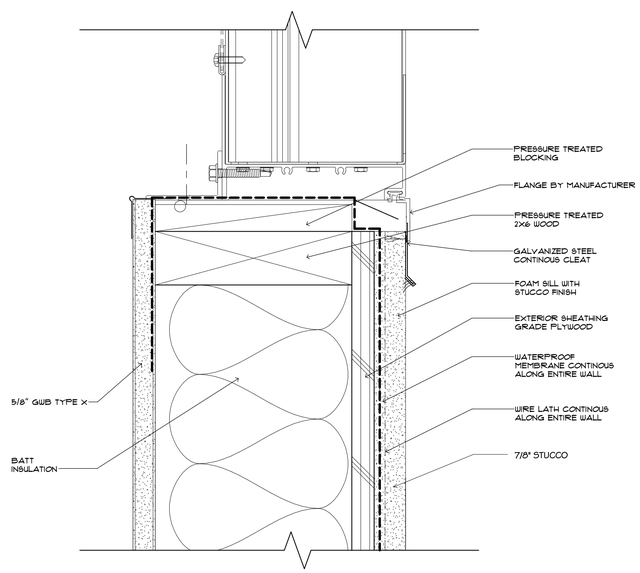
8 A612-8 JAMB DETAIL-SIDING
SCALE: 6" = 1'-0"



9 A612-9 SILL DETAIL-SIDING
SCALE: 6" = 1'-0"



10 A612-10 LOUVER DETAIL
SCALE: 6" = 1'-0"



11 A612-11 LOUVER DETAIL
SCALE: 6" = 1'-0"

12/13/2018 5:11:19 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

505 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED

DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

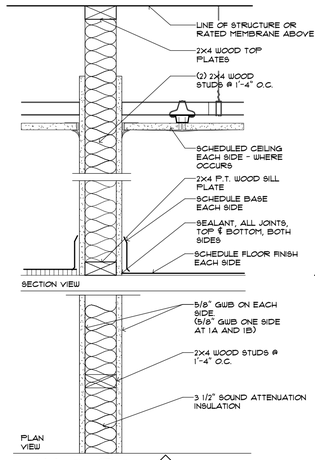
REVISIONS

NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	6" = 1'-0"

A612

BUILDING '1'
WINDOW / LOUVER
DETAILS



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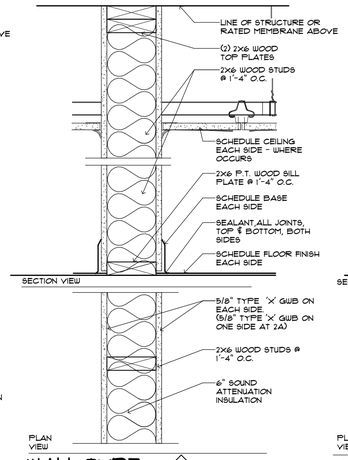
WOOD STUD PARTITION



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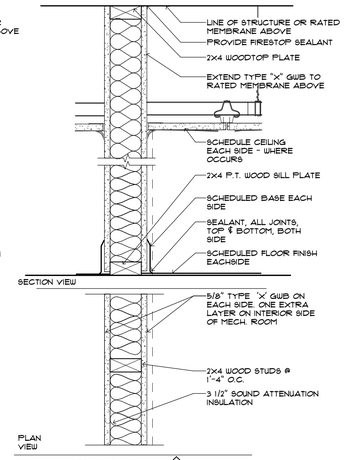
6" WOOD STUD PARTITION



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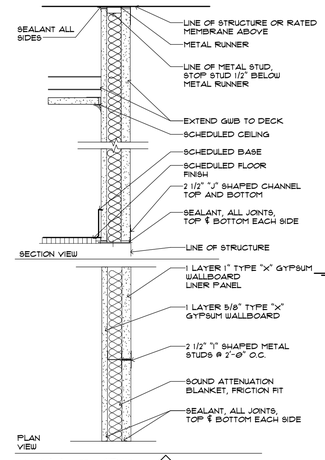
1 HOUR RATED
UL DESIGN #U305
4" WOOD STUD PARTITION



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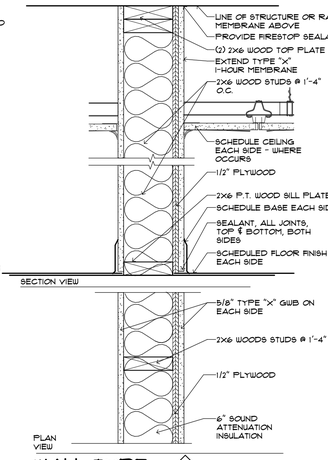
UL DESIGN #U469
SHAFT WALL - PARTITION



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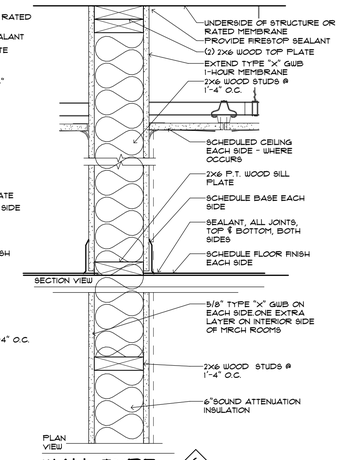
WOOD STUD SHEAR WALL



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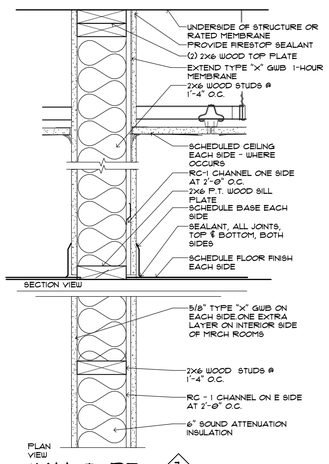
1 HOUR RATED
UL DESIGN #U305
6" STUD PARTITION



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1 HOUR RATED
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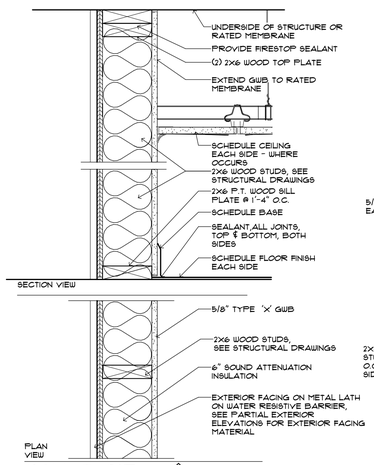
6" STUD PARTITION



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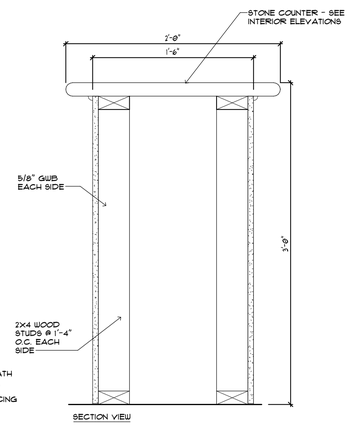
FROM INSIDE
UL DESIGN #U263
EXTERIOR WALL



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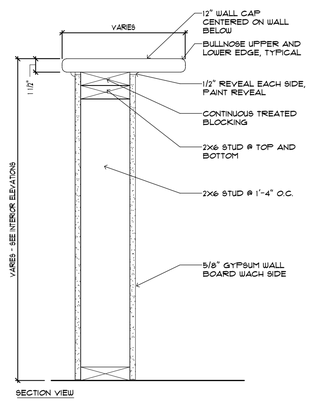
WOOD STUD PARTITION



WALL TYPE - 10
NON RATED
WOOD STUD PARTITION

12/13/2018 5:11:22 PM

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

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MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	SAE / RWW
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	1 1/2" = 1'-0"

A701

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PARTITION & WALL
DETAILS

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1. HOW DO YOU WANT TO SEARCH? 2. RESULTS

THROUGH-PENETRATION FIRESTOP SYSTEM

Assembly Usage Disclaimer

Search Parameters

Assembly type	Penetrating item	Rating
Framed floors	Metallic pipe, conduit or tubing	F Rating ≥ 1 hr and < 2 hr

XHEZ - Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems

System No. F-C-1006

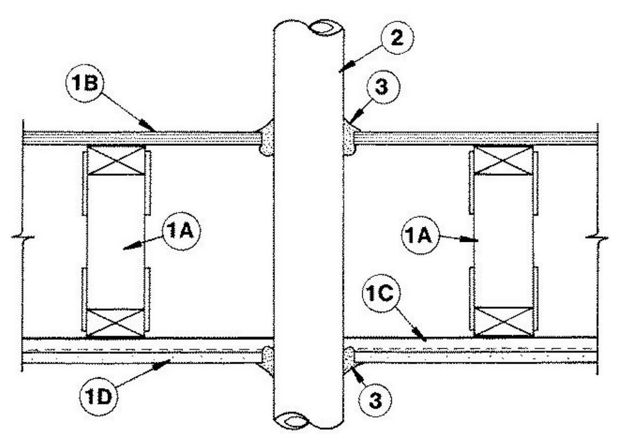
April 03, 2007

F Rating — 1 Hr

T Ratings — 0 and 1 Hr (See Item 2)

L Rating At Ambient — Less Than 1 CFM/sq ft

L Rating At 400 F — Less Than 1 CFM/sq ft



1. **Floor-Ceiling Assembly —** The 1 hr fire rated wood joist, wood truss or combination wood and steel truss Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individual L500-Series Design in the UL Fire Resistance Directory, as summarized below:

A. **Joists or Trusses —** Nom 2 by 10 in. (51 by 254 mm) lumber joists, min 12 in. (305 mm) deep parallel chord trusses fabricated from nom 2 by 4 in. (51 by 102 mm) lumber in conjunction with galv steel truss plates or **Structural Wood Members*** with bridging as required.

B. **Flooring —** Nom 3/4 in. (19 mm) thick plywood flooring with or without **Floor Topping Mixture***. Diam of circular cutouts is 1/4 to 1/2 in. (6 to 13 mm) larger than outside diam of the pipe.

C. **Furring Channels —** Rigid or resilient galv steel furring channels installed perpendicular to bottom chord of trusses.

D. **Gypsum Board* —** Nom 4 ft (1.2 m) wide by 5/8 in. (16 mm) thick, screw-attached to furring channels. Diam of circular cutouts is 1/4 to 1/2 in. (6 to 13 mm) larger than outside diam of the pipe.

1.1 **Chase Wall —** (Optional, now shown) — The through penetrants (Item No. 2) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs —** Nom 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.

B. **Sole Plate —** Nom 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of circular cutouts is 1/4 to 1/2 in. (6 to 13 mm) larger than outside diam of the pipe.

C. **Top Plate —** The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of circular cutouts is 1/4 to 1/2 in. (6 to 13 mm) larger than outside diam of the pipe.

D. **Gypsum Board* —** Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.

2. **Through-Penetrant —** Nom 10 in. (254 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe or cast iron pipe, nom 4 in. (102 mm) diam (or smaller) steel conduit or steel EMT or nom 3 in. (76 mm) diam (or smaller) Type L (or heavier) copper tubing. Pipe to be installed approx midway between joists or trusses and centered in circular cutouts. Annular space between penetrant and periphery of opening shall be min 1/8 in. (3 mm) to max 1/4 in. (6 mm). Pipe to be rigidly supported on both sides of Floor-Ceiling assembly.
T Rating is 1 hr for nom 4 in. (102 mm) diam (or smaller) penetrants. T Rating is 0 hr for all penetrants greater than nom 4 in. (102 mm) diam.

3. **Fill, Void or Cavity Materials* — Caulk or Sealant —** Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with bottom surface of ceiling or top plate. An additional min 1/4 in. (6 mm) crown of fill material applied to perimeter of penetrant at its egress from the top of flooring and underside of ceiling or from top of sole plate and underside of top plate.
3M COMPANY — CP 25 WB+ or FB-3000 WT

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2007-04-03

Design/System/Construction/Assembly Usage Disclaimer

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- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
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1. HOW DO YOU WANT TO SEARCH? 2. RESULTS

THROUGH-PENETRATION FIRESTOP SYSTEM

Assembly Usage Disclaimer

Search Parameters

Assembly type	Penetrating item	Rating
Framed floors	Metallic pipe, conduit or tubing	F Rating ≥ 1 hr and < 2 hr

XHEZ - Through-penetration Firestop Systems

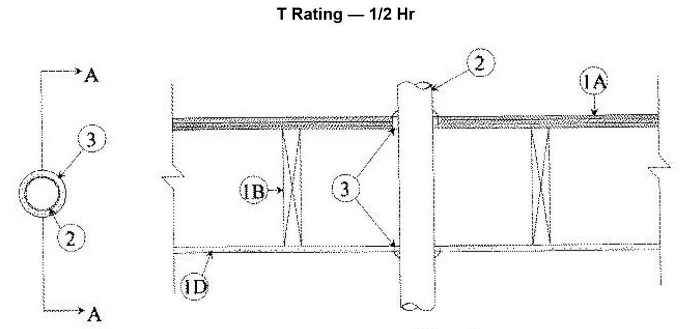
See General Information for Through-penetration Firestop Systems

System No. F-C-1025

December 26, 1997

F Rating — 1 Hr

T Rating — 1/2 Hr



SECTION A-A

1. **Floor-Ceiling Assembly —** The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory, as summarized below:

A. **Flooring System —** Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 5-1/2 in.

B. **Wood Joists —** Nom 2 by 10 in. lumber joists spaced 16 in. OC with nom 1 by 3 in. lumber bridging and with ends firestopped. As an alternate to lumber joists, nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required with ends firestopped.

C. **Furring Channels —** (Not Shown) — Resilient galv steel furring installed perpendicular to wood joists (Item 1B) between wallboard (Item 1D) and wood joists as required in the individual Floor-Ceiling Design.

D. **Gypsum Board* —** Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. Wallboard secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Max diam of ceiling opening is 5-1/2 in.

2. **Through Penetrants —** One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of metallic pipes or conduits may be used:

A. **Steel Pipe —** Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Conduit —** Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.

C. **Copper Tubing —** Nom 3 in. diam (or smaller) Type L (or heavier) copper tubing.

D. **Copper Pipe —** Nom 3 in. diam (or smaller) Regular (or heavier) copper pipe.
The annular space within the firestop system is dependent upon the nom diam of the through penetrant. If the nom diam of the through penetrant is 3 in. or less, the annular space within the firestop system shall be a min 0 in. (point contact) to a max 5/8 in. If the nom diam of the through penetrant is greater than 3 in., the annular space within the firestop system shall be a nom 1/2 in.

3. **Fill, Void or Cavity Material* — Sealant —** Min 3/4 in. thickness of fill material applied within annulus on top surface of floor. Min 5/8 in. thickness of fill material applied within annulus on bottom surface of ceiling. Additional fill material to be installed such that a min 1/4 in. crown is formed around the through penetrant on top surface of floor and bottom surface of ceiling.
ISOLATEK INTERNATIONAL — Type I

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Last Updated on 1997-12-26

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1. HOW DO YOU WANT TO SEARCH? 2. RESULTS

THROUGH-PENETRATION FIRESTOP SYSTEM

Assembly Usage Disclaimer

Search Parameters

Assembly type	Penetrating item	Rating
Framed floors	Nonmetallic pipe, conduit or tubing	F Rating ≥ 1 hr and < 2 hr

XHEZ - Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems

System No. F-C-2008

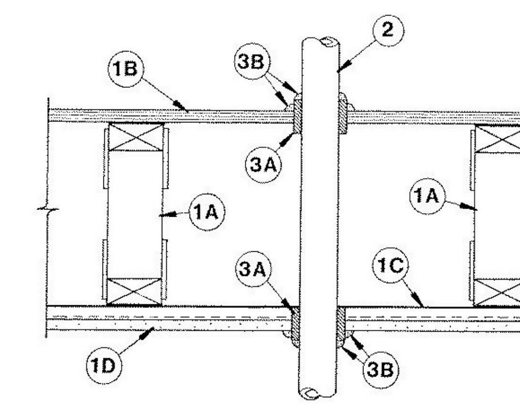
May 20, 2005

F Rating — 1 Hr

T Rating — 1 Hr

L Rating At Ambient — 7 CFM/sq ft (See Item 3B)

L Rating At 400 F — Less Than 1 CFM/sq ft (See Item 3B)



1. **Floor Assembly —** The fire rated wood truss or combination wood and steel truss Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individual L500 Series Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Trusses —** Min 12 in. (305 mm) deep parallel chord trusses fabricated from 2 by 4 in. (51 by 102 mm) lumber in conjunction with galv steel truss plates or **Structural Wood Members*** with bridging as required.

B. **Flooring —** Nom 3/4 in. (19 mm) thick plywood flooring with or without **Floor Topping Mixture*.** Diam of hole-sawed opening in flooring to be 1/2 to 3/4 in. (13 to 19 mm) larger than diam of pipe. Max diam of opening in flooring is 3 in. (76 mm).

C. **Furring Channels —** Rigid or resilient galv steel furring channels installed perpendicular to bottom chord of trusses.

D. **Gypsum Board* —** Nom 4 ft (1.22 m) wide by 5/8 in. (16 mm) thick, screw-attached to furring channels. Diam of hole-sawed opening in gypsum wallboard ceiling to be 1/2 to 3/4 in. (13 to 19 mm) larger than diam of pipe. Max diam of opening in ceiling is 3 in. (76 mm)

2. **Nonmetallic Pipe —** Nom 2 in. (51 mm) diam (or smaller) Schedule 40 polyvinyl chloride (PVC), SDR 13.5 chlorinated polyvinyl chloride (CPVC) or solid-core Schedule 40 acrylonitrile-butadiene-styrene (ABS) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. One pipe to be installed approx midway between trusses and centered in circular openings in flooring and in ceiling. A nom 1/4 in. to 3/8 in. (6 to 10 mm) annular space is required in the firestop system. Pipe to be rigidly supported on both sides of Floor-Ceiling assembly.

2A. **Electrical Nonmetallic Tubing+ —** Nom 1 in. (25 mm) diam (or smaller) corrugated wall ENT constructed of polyvinyl chloride. ENT to be installed as a complete system with all terminations in junction boxes, outlet boxes or other approved enclosures as specified in the National Electrical Code. Max one ENT per through opening. ENT to be centered in opening and rigidly supported on both sides of the Floor-Ceiling assembly.
See **Electrical Nonmetallic Tubing** (FKHU) category in Electrical Construction Materials Directory for names of manufacturers.

3. **Firestop System —** The details of the firestop system shall be as follows:

A. **Fill, Void or Cavity Materials* — Wrap Strip —** Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied to 2 in. (51 mm) wide strips. Nom 2 in. (51 mm) wide strip tightly-wrapped around nonmetallic pipe (foil side exposed), secured with two steel tie wires and slid into hole-sawed opening in flooring (Item 1B) and in gypsum wallboard ceiling (Item 1D). Bottom edge of wrap strip to project 9/16 to 11/16 in. (14 to 17.5 mm) below bottom surface of flooring and below bottom (ceiling) surface of gypsum board.
3M COMPANY — Type FS-195+

B. **Fill, Void or Cavity Materials* — Caulk, Sealant or Putty —** Nom 1/4 in. (6 mm) thickness of caulk or putty to be applied to the exposed edge of the wrap strip layer (top of flooring and bottom of gypsum board ceiling). Generous application of caulk or putty to be applied to fill all gaps at the wrap strip/flooring and wrap strip/gypsum board ceiling interfaces.
3M COMPANY — CP 25WB+ Caulk, FB-3000 WT Sealant, MP+ Stix Putty (Note: L Ratings apply only when Type CP 25WB+ caulk or FB-3000 WT sealant is used. CP 25WB+ not suitable for use with CPVC pipes.)

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Last Updated on 2005-05-20

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MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS		
NO:	DATE:	DESCRIPTION
1	02-20-18	BLDG. DEPT. COMM.

PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	NOT TO SCALE

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BUILDING '1' & '2'
FIRESTOPPING DETAILS

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THROUGH-PENETRATION FIRESTOP SYSTEM

Assembly Usage Disclaimer

XHEZ - Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems

System No. F-C-1075

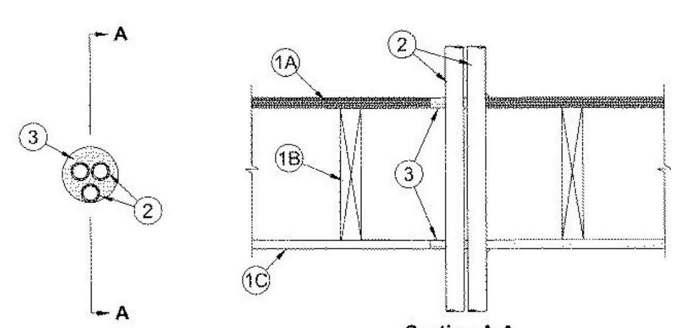
June 16, 2010

F Ratings — 1 Hr and 2 Hr (See Item 1)

T Ratings — 1/4, 1/2 and 1 Hr (See Item 2)

L Rating At Ambient - Less Than 1 CFM/sq ft

L Rating At 400 F - Less Than 1 CFM/sq ft



Section A-A

1. **Floor — Ceiling Assembly —** The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Designs in the UL Fire Resistance Directory. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511 or L536 in the UL Fire Resistance Directory. **The F Rating of the firestop system is equal to the fire rating of the floor-ceiling assembly**. The general construction features of the floor assembly are summarized below:

A. **Flooring System —** Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of opening is 4 in. (102 mm). As an alternate, the the opening may be square-cut with a max area of 16 sq in. (103 cm^2) an a max dimension of 4 in. (102 mm).

B. **Wood Joists —** Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped.

C. **Gypsum Board* —** Thickness, type, number of layers and fasteners as required in the individual Floor-Ceiling Design. Max diam of opening is 4 in.

D. **Furring Channel —** (Not Shown) — In 2 hr fire-rated assemblies, resilient galv steel furring channels installed perpendicular to wood joists between base and face layers of gypsum board (Item C). Furring channels spaced max 24 in. (610 mm) OC with additional short lengths of furring channel installed adjacent to and max 3 in. (76 mm) from two opposing sides of penetrants.

1A. **Chase Wall —** (Optional, Not Shown) — The through penetrant (Item 2) may be routed through a 1 or 2 hr fire rated single, double or staggered wood stud/gypsum board chase wall. Depth of chase wall stud cavity to be min 1/2 in. (13 mm) greater than diameter of opening cut in sole and top plates to accommodate the through penetrant (Item 2). The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs —** Nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.

B. **Sole Plate —** Nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening is 4 in. (102 mm).

C. **Top Plate —** The double top plate shall consist of two nom 2 by 4 in. (51 by 102 mm), two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening is 4 in. (102 mm).

D. **Gypsum Board* —** Thickness, type, number of layers and fasteners shall be as specified in the individual Wall and Partition Design.

2. **Through Penetrants —** One or more metallic pipes, conduits or tubing to be installed either concentrically or eccentrically within the opening. The space between the pipes, conduits or tubing shall be min 1/4 in. to max 1/2 in. (6 to 13 mm). Annular space between the pipes, conduits or tubing and the periphery of the opening shall be min 0 in. (point contact) to max 1 in. (0 to 25 mm). Penetrants to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of metallic pipe, conduits or tubing may be used:

A. **Steel Pipe —** Nom 1 in. (25 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.

B. **Iron Pipe —** Nom 1 in. (25 mm) diam (or smaller) cast or ductile iron pipe.

C. **Conduit —** Nom 1 in. (25 mm) diam (or smaller) steel conduit, steel electrical metallic tubing or flexible steel conduit.

D. **Copper Pipe or Tube —** Nom 1 in. (25 mm) diam (or smaller) Regular (or heavier) copper pipe or Type L (or heavier) copper tube.

The T Rating is 1/4 hr when copper pipe or tube is used in 1 hr fire-rated assemblies. The T Rating is 1/2 hr when copper pipe of tube is used in 2 hr fire-rated assemblies. When steel pipe, iron pipe, steel conduit or flexible metal piping (Item 2A) is used, T Rating is 1 hr.

2A. **Through Penetrating Product* — Flexible Metal Piping —** As an alternate to Item 2, one or more nom 1 in. (25 mm) diam (or smaller) steel flexible metal pipes to be installed either concentrically or eccentrically within the firestop. The space between the pipes shall be min 1/4 in. to max 1/2 in. (6 to 13 mm). Annular space between the pipes and the periphery of the opening shall be min 0 in. (point contact) to max 1 in. (0 to 25 mm). Pipes to be rigidly supported on both sides of floor-ceiling assembly.
OMEGA FLEX INC

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3. **Fill, Void or Cavity Material* — Sealant —** Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with the top surface of the floor or sole plate. Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with bottom surface of ceiling or top plate. Min 1/4 in. (6 mm) diam bead of fill material applied at point contact location on the top surface of floor or sole plate and at the penetrant/ceiling or top plate interface.
SPECIFIED TECHNOLOGIES INC — SpecSeal LCI Sealant or Type WF300 Firestop Caulk

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Last Updated on 2010-06-16

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1. HOW DO YOU WANT TO SEARCH? 2. RESULTS

THROUGH-PENETRATION FIRESTOP SYSTEM

Assembly Usage Disclaimer

Search Parameters

Assembly type	Penetrating item	Rating
Framed floors	Metallic pipe, conduit or tubing	F Rating ≥ 1 hr and < 2 hr

XHEZ - Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems

System No. F-C-1010

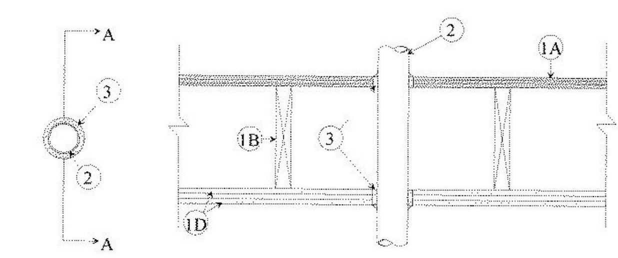
December 08, 2008

F Ratings — 1 and 2 Hr (See Item 1)

T Ratings — 1/2, 3/4, 1 and 1-1/2 Hr (See Item 2)

L Rating At Ambient — Less Than 1 CFM/sq ft

L Rating At 400 F — Less Than 1 CFM/sq ft



SECTION A-A

1. **Floor-Ceiling Assembly —** The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511 or L536 in the UL Fire Resistance Directory. The F Rating of the firestop system is equal to the hourly fire rating of the floor-ceiling assembly. The general construction features of the floor-ceiling assembly are summarized below:

A. **Flooring System —** Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 5 in.

B. **Wood Joists* —** For 1 hr fire-rated floor-ceiling assemblies, nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped. For 2 hr fire-rated floor-ceiling assemblies, nom 2 by 10 in. lumber joists spaced 16 in. OC with nom 1 by 3 in. lumber bridging and with ends firestopped.

C. **Furring Channels —** (Not Shown) - In 2 hr fire-rated assemblies, resilient galv steel furring installed perpendicular to wood joists between first and second layers of gypsum board (Item 1D). Furring channels spaced max 24 in. OC. In 1 hr fire-rated assemblies, resilient galv steel furring installed perpendicular to wood joists between gypsum board and wood joists as specified in the individual Floor-Ceiling Design. Furring channels spaced max 24 in. OC.

D. **Gypsum Board* —** Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. First layer of gypsum board secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Second layer of gypsum board (2 hr fire-rated assembly) screw-

attached to furring channels as specified in the individual Floor-Ceiling Design. Max diam of ceiling opening is 5 in.

2. **Through Penetrants —** One metallic pipe, conduit or tube installed approximately midway between wood joists. Diam of openings hole-sawed through flooring system and through gypsum board ceiling to be nom 1/2 in. greater than the outside diam of through-penetrant. For 1 hr rated floor assemblies, through penetrant to be installed either concentrically or eccentrically within the opening with an annular space of 0 in. (point contact) to 1/2 in. For 2 hr rated floor assemblies, through penetrant to be centered in the opening. Pipe, conduit or tube to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. **Steel Pipe —** Nom 4 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.

B. **Iron Pipe —** Nom 4 in. diam (or smaller) cast or ductile iron pipe.

C. **Conduit —** Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.

D. **Copper Pipe —** Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.

E. **Copper Tubing —** Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.
The T Rating of the firestop system is dependent upon the hourly rating of the floor-ceiling assembly and type of through-penetrant used as shown in the table below:

Floor Ceiling Rating Hr	Type of Penetrant	T Rating Hr
1	Steel or Iron Pipe	1
1	Steel Conduit	1
1	Copper Tube or Pipe	3/4
2	Steel or Iron Pipe	1-1/2
2	Steel Conduit	1-1/2
2	Copper Tube or Pipe	1/2

3. **Fill, Void or Cavity Material* — Sealant —** Fill material forced into annulus to fill space to max extent possible on top surface of floor and bottom surface of ceiling. Min 3/8 in. diam bead of fill material applied at point contact location on top surface of floor and on bottom surface of gypsum board ceiling.
SPECIFIED TECHNOLOGIES INC — SpecSeal Series SSS Sealant or SpecSeal LCI Sealant

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Last Updated on 2008-12-08

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ONLINE CERTIFICATIONS DIRECTORY

System No. F-C-2024
XHEZ.F-C-2024
Through-penetration Firestop Systems

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XHEZ - Through-penetration Firestop Systems

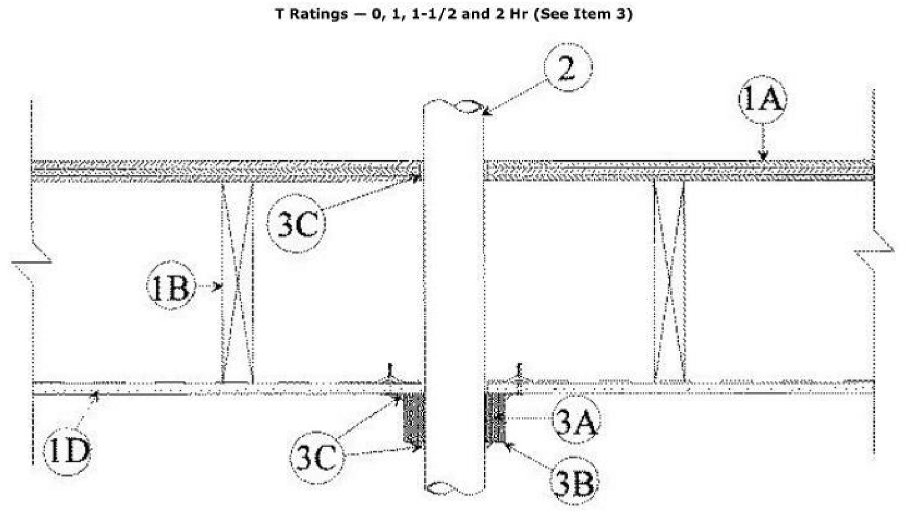
See General Information for Through-penetration Firestop Systems

System No. F-C-2024

November 20, 2009

F Ratings — 1 and 2 Hr (See Item 1)

T Ratings — 0, 1, 1-1/2 and 2 Hr (See Item 3)



1. **Floor-Ceiling Assembly —** The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511 or L536 in the UL Fire Resistance Directory. **The F Rating of the firestop system is equal to the rating of the floor-ceiling assembly.** The general construction features of the floor-ceiling assembly are summarized below:

A. **Flooring System —** Lumber or plywood subfloor with finish floor of lumber plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design.

B. **Wood Joists* —** For 1 hr fire-rated floor-ceiling assemblies nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped. For 2 hr fire-rated floor-ceiling

assemblies, nom 2 by 10 in. (51 by 254 mm) lumber joists spaced 16 in. (406 mm) OC with nom 1 by 3 in. (25 by 76 mm) lumber bridging and with ends firestopped.

C. **Furring Channels —** (Not Shown) — Resilient galv steel furring installed perpendicular to wood joists between first and second layers of wallboard (Item 1D) in 2 hr fire-rated assembly. Furring channels spaced max 24 in. (610 mm) OC.

D. **Gypsum Board* —** Nom 4 ft (122 cm) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. First layer of wallboard nailed to wood joists. Second layer of wallboard (2 hr fire-rated assembly) screw-attached to furring channels.

2. **Through Penetrants —** One nonmetallic pipe, conduit or tubing to be installed approx midway between wood joists. Diam of openings hole-sawed through flooring system and through two layers gypsum wallboard ceiling to be 0 to 1/4 in. (0 to 6 mm) larger than the outside diam of through-penetrant. Pipe or conduit to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes or conduits may be used:

A. **Polyvinyl Chloride (PVC) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid-core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

B. **Cellular-Core Polyvinyl Chloride (ccPVC) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe —** Nom 4 in. (102 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.

D. **Acrylonitrile Butadiene Styrene (ABS) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid-core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

E. **Cellular-Core Acrylonitrile Butadiene Styrene (ccABS) Pipe —** Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

3. **Firestop System —** The details of the firestop system shall be as follows:

A. **Fill, Void or Cavity Materials* — Wrap Strip —** Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 1 and 2 in. (25 and 51 mm) wide strips. Strips tightly wrapped around nonmetallic pipe (foil side exposed) with the edges butted against the bottom surface of the gypsum wallboard ceiling. The min wrap strip width, the number of layers of wrap strip required, the type of pipe and the nom diam, as well as the F and T Rating of the system are shown in the following table:

Pipe Type	Nom Pipe Diam In.	F Rating Hr	T Rating Hr	Wrap Strip Width In.	Min Wrap Strip Layers
PVC, CPVC, ABS,	1/2 (13 mm) to 1-1/2 (38 mm)	1	1	1 (25 mm)	1
ccPVC or ccABS (a)					
PVC, CPVC, ABS,	2 (51 mm) to 2-1/2 (64 mm)	1	1	1 (25 mm)	2
ccPVC, or ccABS (a)					
PVC, CPVC, ABS,	3 (76 mm)	1	1	1 (25 mm)	3
ccPVC or ccABS (a)					
PVC, CPVC, ABS,	1/2 (13 mm) to 2 (51 mm)	1	1	2 (51 mm)	1
ccPVC or ccABS (a)					
PVC, CPVC, ABS or ccPVC	2-1/2 (64 mm) to 4 (102 mm)	1	1	2 (51 mm)	2
ccABS (a)	2-1/2 (64 mm) to 3 (76 mm)	1	1/2	2 (51 mm)	2
ccABS (a)	3-1/2 (89 mm) to 4 (102 mm)	1	1/2	2 (51 mm)	3
PVC, CPVC, ABS, or ccPVC	1/2 (13 mm)to 1-1/2 (38 mm)	2	1-1/2	1 (25 mm)	1
ccABS (a)	1/2 (13 mm) to 1-1/2 (38 mm)	2	2	2 (51 mm)	2
ABS, PVC, ccPVC, or CPVC	1/2 (13 mm) to 2 (51 mm)	2	1-1/2	2 (51 mm)	1
ABS, PVC, ccPVC or CPVC	2-1/2 (64 mm) to 3 (76 mm)	2	1-1/2	2 (51 mm)	2
ABS	3-1/2 (89 mm) to 4 (102 mm)	2	1-1/2	2 (51 mm)	3
PVC, ccPVC or CPVC	3-1/2 (89 mm) to 4 (102 mm)	2	2	2 (51 mm)	3

(a) — Requires use of aluminum tape detailed in Item 3D

3M COMPANY — Type FS-195+

B. **Steel Collar —** Nom 2 in. (51 mm) deep collar with 1-1/4 in. (32 mm) wide by 2 in. (51 mm) long anchor tabs and min 3/4 in. (19 mm) long tabs to retain wrap strip layers. Coils of precut 0.016 in. (.41 mm) thick (30 gauge) galv sheet steel are available from wrap strip manufacturer. As an alternate, collar my be field fabricated from min 0.016 in. (.41 mm) thick (30 gauge) galv sheet steel in accordance with instruction sheet applied by wrap strip manufacturer Steel collar, with anchor tabs bent outward 90 degrees, wrapped tightly around wrap strip layers with min 1 in. (25 mm) overlap at the seam. With steel anchor tabs pressed tightly against underside of gypsum wallboard ceiling, compress collar around wrap strip layers using a min 1/2 in. (13 mm) wide by 0.028 in. (.71 mm) thick stainless steel band clamp at the collar midheight. As an alternate to the band clamps, collars may be secured by a means No. 10 by 1/2 in. (13 mm) long sheet metal screws installed in the vertical axis at the center of the 1 in. (25 mm) overlap along the perimeter joint of the collar. A min of three screws is required.

Secure collar to gypsum wallboard ceiling using 3/16 in. (5 mm) diam steel toggle bolts (5/8 in. (16 mm) grip) in conjunction with 1-1/4 in. (32 mm) diam steel fender washers. Min of three fasteners, symmetrically located, required for nom 1/2 in. to nom 3 in. (13 mm to 76 mm) diam pipes. Min of four symmetrically located fasteners required for nom 3-1/2 in. and 4 in. (89mm and 102 mm) diam pipes. As a final step, bend wrap strip retainer tabs 90 degrees toward pipe to lock wrap strip layers in position.

C. **Fill, Void or Cavity Materials* — Caulk or Sealant —** Generous application of caulk to be applied around the perimeter of the steel collar at its interface with the gypsum wallboard ceiling and around the perimeter of the pipe at its interface with the wrap strip layers. Caulk also applied around perimeter of pipe to fill annular space to max extent possible, flush with top surface of floor.

3M COMPANY — CP25 WB+, IC 15WB+ caulk, FireDam 150+ caulk or FB-3000 WT sealant. (Note: CP 25WB+ and FireDam 150+ not suitable for use with CPVC pipes.)

D. **Foil Tape (not shown) —** Nom 4 in. (102 mm) wide, 3 mil thick aluminum tape wrapped around pipe prior to the installation of the wrap strip (Item 3A). Min of one wrap, flush with the ceiling and proceeding downward. Tape is required only for nom 3-1/2 in. to 4 in. (89 mm to 102 mm) diam ABS pipes and for all ABS pipes.

E. **Firestop Device* —** (Not Shown) — As an alternate to Item A and B when nom 1-1/2 in. (32 mm), 2 in. (51 mm), 3 in. (76 mm), or 4 in. (102 mm) diam nonmetallic pipes are used, a firestop device consisting of a sheet-steel split collar lined with intumescent material and provided with steel clips for attachment may be used in accordance with the table below. Firestop device to be installed on underside of ceiling in accordance with the accompanying installation instructions.

Pipe Type	Nom Pipe Diam, In. (mm)	F Rating Hr	T Rating Hr	Firestop Device
PVC, CPVC, ABS,	1-1/2 (32)	1	1	PPD 1.5 or PPD 150
ccPVC or ccABS (a)				
	2 (51)	1	1	
PVC, CPVC, ABS,				PPD 2 or PPD 200
ccPVC or ccABS (a)				
PVC, CPVC, ABS,	3 (76)	1	1	PPD 3 or PPD 300
ccPVC or ccABS (a)				
PVC, CPVC, ABS or ccPVC	4 (102)	1	1	PPD 4 or PPD 400
ccABS (a)	2 (51)	1	1/2	PPD 200
ccABS (a)	3 (76)	1	1/2	PPD 300
ccABS (a)	4 (102)	1	1/2	PPD 400
PVC, CPVC, ABS or ccPVC	1-1/2 (32)	2	1-1/2	PPD 1.5 or PPD 150
ccABS (a)	1-1/2 (32)	2	2	PPD 150
ABS, PVC, ccPVC or CPVC	1-1/2 (32)	2	1-1/2	PPD 150
ABS, PVC, ccPVC or CPVC	2 (51)	2	1-1/2	PPD 200
ABS, PVC, ccPVC or CPVC	3 (76)	2	1-1/2	PPD 300
PVC, ccPVC or CPVC	4 (102)	2	2	PPD 400
ABS	4 (102)	2	1-1/2	PPD 400

(a) — Requires use of aluminum tape detailed in Item 3D

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Last Updated on 2009-11-20

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MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS		
NO:	DATE:	DESCRIPTION
1	02-20-18	BLDG. DEPT. COMM.

PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	NOT TO SCALE

A703

BUILDING '1' & '2'
FIRESTOPPING DETAILS

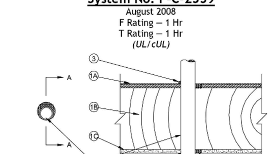
TREMCO FIRESTOP DETAILS

TYPE OF PIPE	1 HR GYPSUM WALLS
METALLIC PIPE	WL1097 (8")
PLASTIC PIPE	WL2063 (4")
INSULATED METALLIC PIPE	WL5081 (4")

WOOD FRAMING

TREMCO®

System No. F-C-2359
August 2008
F Rating — 1 Hr
T Rating — 1 Hr
(UL/cUL)



1. **Floor-Ceiling Assembly** — The 1 hr fire rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:
   - A. **Flooring System** — Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 2 in. (51 mm).
   - B. **Wood Joists*** — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped.
   - C. **Gypsum Board*** — Nom 4 ft wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Max diam of opening is 2 in. (51 mm).

1.1 **Chase Wall** — (Not Shown, Optional) — The through penetrants (Item 2) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum board chase wall having a fire rating consistent with that of the floor-ceiling assembly. The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   - A. **Studs** — Nom 2 by 4 in. (51 by 102 mm) or nom 2 by 6 in. (51 by 152 mm) lumber or double nom 2 by 4 in. (51 by 102 mm) lumber studs.
   - B. **Sole Plate** — Nom 2 by 4 in. (51 by 102 mm) lumber or parallel 2 by 4 in. (51 by 102 mm) or nom 2 by 6 in. (51 by 152 mm) lumber plates, tightly butted. Max diam of opening is 2 in. (51 mm).
   - C. **Top Plate** — The double top plate shall consist of two nom 2 by 4 (51 by 102 mm) or nom 2 by 6 in. (51 by 152 mm) lumber plates or double parallel nom 2 by 4 in. (51 by 102 mm) lumber plates tightly butted. Max diam of opening is 2-in. (51mm).
   - D. **Gypsum Board*** — Thickness, type, number or layers and fasteners shall be as specified in individual Wall and Partition Designs.

2. **Through Penetrant** — One nom 1-1/4 in. (32 mm) diam (or smaller) SDR 9 cross-linked polyethylene (PEX) tubing for use in closed (process or supply) piping systems. The annular space between the tubing and the periphery of the opening shall be min 0 in. (point contact) to a max 9/16 in. (14 mm). Tubing to be rigidly supported on both sides of the floor-ceiling assembly.
3. **Fill, Void or Cavity Material* — Sealant** — Min 3/4 in. (19 mm) thickness of fill material applied within annulus flush with top surface of floor or sole plate. Min 5/8 in. (16 mm) thickness of fill material applied flush within annulus flush with bottom surface of ceiling or on bottom surface of lower top plate. A 1/4 in. (6 mm) bead of fill material is applied to area of point contact on both sides of floor ceiling assembly.

   TREMCO INC — TREMstop Intumescent Acrylic, FyreCaulk, or TREMstop IA+

*Bearing the UL Classification Mark

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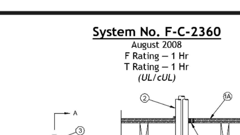
1451 Jacobson Avenue, Ashland OH 44805 // Phone: 419.289.2050 // 800.321.6357
An RPM Company
www.tremcosealants.com

TREMCO®

System No. F-C-2360
August 2008
F Rating — 1 Hr
T Rating — 1 Hr
(UL/cUL)



1. **Floor-Ceiling Assembly** — The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:
   - A. **Flooring System** — Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 2-1/2 in. (64mm).
   - B. **Wood Joists*** — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped.
   - C. **Gypsum Board*** — Nom 4 ft wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design.. Max diam of opening is 2-1/2 in. (64 mm).

1.1 **Chase Wall** — (Not Shown, Optional) — The through penetrants (Item 2) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum board chase wall having a fire rating consistent with that of the floor-ceiling assembly. The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   - A. **Studs** — Nom 2 by 4 in. (51 by 102 mm) or nom 2 by 6 in. (51 by 152 mm) lumber or double nom 2 by 4 in. (51 by 102 mm) lumber studs.
   - B. **Sole Plate** — Nom 2 by 4 in. (51 by 102 mm) lumber or parallel 2 by 4 in. (51 by 102 mm) or nom 2 by 6 in. (51 by 152 mm) lumber plates, tightly butted. Max diam of opening is 2-1/2 in. (64 mm).
   - C. **Top Plate** — The double top plate shall consist of two nom 2 by 4 (51 by 102 mm) or nom 2 by 6 in. (51 by 152 mm) lumber plates or double parallel nom 2 by 4 in. (51 by 102 mm) lumber plates tightly butted. Max diam of opening is 2-1/2 in. (64 mm).
   - D. **Gypsum Board*** — Thickness, type, number or layers and fasteners shall be as specified in individual Wall and Partition Designs.

2. **Through Penetrant** — A max of four SDR 9 cross-linked polyethylene (PEX) tubing for use in closed (process or supply) piping systems having a maximum diameter of 3/4 in. (19 mm). Of the four tubes, a max of two shall have a nom diam greater than 1/2 in. (13 mm). The annular space between the tubing and the periphery of the opening shall be min 0 in (point contact) and a max of 3/4 in. (19 mm). The space between the tubing shall be a min 0 in. (point contact) to a max 3/4 in. (19 mm). Tubing to be rigidly supported on both sides of the floor-ceiling assembly.
3. **Fill, Void or Cavity Material* — Sealant** — Min 3/4 in. (19 mm) thickness of fill material applied within annulus flush with top surface of floor or sole plate. Min 5/8 in. (16 mm) thickness of fill material applied within annulus flush with bottom surface of ceiling or bottom surface of lower top plate. A min 1/4 in. (6 mm) bead of fill material is applied to area of point contact on both sides of floor ceiling assembly. Additional fill material forced within the interstices of tubing to max extent possible on the top surface of floor or sole plate and bottom surface of ceiling or lower plate.

   TREMCO INC — TREMstop Intumescent Acrylic, FyreCaulk, or TREMstop IA+

*Bearing the UL Classification Mark

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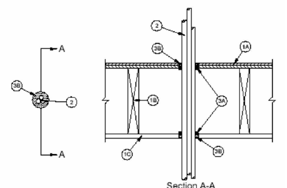
An RPM Company
www.tremcosealants.com

TREMCO®

System No. F-C-3037
August 2008
F Rating — 1 Hr
T Ratings — 0 and 3/4 Hr (See Item 2)
(UL/cUL)



1. **Floor-Ceiling Assembly** — The fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory, as summarized below:
   - A. **Flooring System** — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 2-3/8 in. (60 mm).
   - B. **Wood Joists** — Nom 2 by 10 in. (51 by 254 mm) lumber joists spaced 16 in. (406 mm) OC with nom 1 by 3 in. (25 by 76 mm) lumber bridging and with ends firestopped. As an alternate to lumber joists, nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required with ends firestopped.
   - C. **Gypsum Board*** — Nom 4 ft (1.22 m) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Gypsum board nailed to wood joists. Max diam of ceiling opening is 2-3/8 in. (60 mm).

1.1 **Chase Wall** — (Not Shown, Optional) - The through penetrant (Item 2) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   - A. **Studs** — Nom 2 by 4 in. (51 by 102 mm) lumber studs.
   - B. **Sole Plate** — Nom 2 by 4 in. (51 by 102 mm) lumber plates. Max diam of opening is 2-3/8 in. (60 mm).
   - C. **Top Plate** — The double top plate shall consist of two nom 2 by 4 in. (51 by 102 mm) lumber plates. Max diam of opening is 2-3/8 in. (60 mm).
   - D. **Gypsum Board*** — Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.

2. **Cables** — One or more cables to be centered within the firestop opening. The annular space between the cable or cable bundle and the edge of the opening shall be 1/2 in. (13 mm). Cables to be rigidly supported on both sides of floor assembly. The following types and sizes of copper conductor cables may be used:
   - A. Seven max three conductor with ground No. 10 AWG (or smaller) cables with polyvinyl chloride (PVC) insulation and jacket.
   - B. One max 100 pair No. 24 AWG (or smaller) cables with polyvinyl chloride (PVC) insulation and jacket.
   - C. **Through Penetrating Product*** — Nom 3/4 in. diam (or smaller) aluminum or steel Flexible Metal Conduit+ with electrical conductors as permitted by the National Electrical Code (NFPA 70).

     ALFLEX CORP

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TREMCO®

   - D. Max four aluminum conductor No. 2/0 AWG (or smaller) Type SER service entrance cable with cross-linked polyethylene insulation and PVC jacket.

     The T Rating of the firestop system is 3/4 Hr except that when the penetrants in Item 2C and/or 2D above are used, the T Rating is 0 hr.

1. **Firestop System** — The firestop system shall consist of the following:
   - A. **Packing Material** — (Optional) — Foam backer rod firmly packed into opening as a permanent form. Packing material to be recessed from top surface of subfloor or sole plate and bottom surface of ceiling or lower top plate of chase wall assembly as required to accommodate the required thickness of fill material.
   - B. **Fill, Void or Cavity Material* — Caulk** — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with top surface of the subfloor or sole plate and bottom surface of ceiling or lower top plate of chase wall assembly. Caulk to be forced into interstices of cable group to max extent possible. Additional fill material to be installed such that a min 1/16 in. (2 mm) crown is formed around the penetrating item and lapping 1/2 in. (13 mm) beyond the periphery of the opening.

     TREMCO INC — TREMstop Intumescent Acrylic, FyreCaulk, or TREMstop IA+

*Bearing the UL Classification Mark
+Bearing the UL Listing Mark

GYPSUM

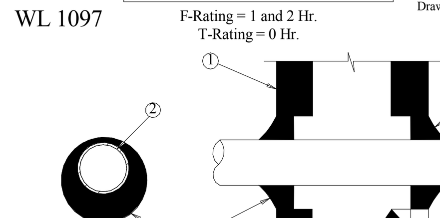
1 or 2 Hour Fire Rated Through Penetration Firestop for Single Metal Pipe through Gypsum Walls using FYRE-SHIELD.

TREMCO®
3735 Green Rd.
Beachwood, OH, 44122

WL 1097

F-Rating = 1 and 2 Hr.
T-Rating = 0 Hr.

Drawing not to scale



1. Pre-Rated Gypsum Wallboard/Stud Wall Assembly
2. Metallic Pipe - A) Steel Pipe - 8" diam. (or smaller) Sch. 40 (or heavier) steel pipe.
   B) Iron Pipe - 8" diam. (or smaller) cast or ductile iron pipe.
   C) Conduit - 4" diam. (or smaller) EMT or rigid steel conduit.
   D) Copper Tubing - 4" diam. (or smaller) Type L (or heavier) copper tubing.
   E) Copper Pipe - 4" diam. (or smaller) Regular (or heavier) copper pipe.
   The annular space shall be min. 1/4" to max. 5/8" within the firestop system.
3. FYRE-SHIELD - Min. 1/2" thickness of sealant applied within opening. Additional sealant to be installed such that a min. 1/4" crown is formed around the penetrating item.

Project: ______ Location: ______ Installer: ______ Signature: ______	The Tremco products used above have been tested in accordance with the following: • ASTM E814 (UL1479) Standard Test Method for Through Penetration Firestopping. Date: 4/23/97 Drawing: TW-1097 Approved by: J. Pitcole	The above described assembly has been tested and is based on both past and anticipated performance criteria. Tremco shall not be liable for any damages, direct or consequential, resulting from use of this material or design. Tremco shall only be responsible for replacing material found to be defective.

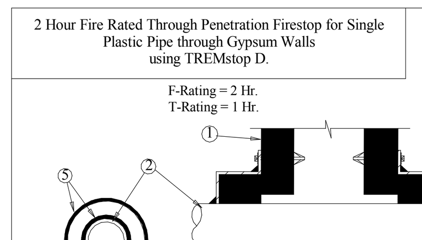
METALLIC PIPE

2 Hour Fire Rated Through Penetration Firestop for Single Plastic Pipe through Gypsum Walls using TREMstop D.

TREMCO®
3735 Green Rd.
Beachwood, OH, 44122

F-Rating = 2 Hr.
T-Rating = 1 Hr.

Drawing not to scale



1. Pre-Rated Gypsum Wallboard/Stud Wall Assembly
2. Plastic Pipe - Nom. 4" diam. (or smaller) Sch. 40 PVC pipe for use in closed or open piping systems. See table below for required annular space.
3. TREMstop WS - Intumescent wrap strips, continuously wrapped around outer circumference of the pipe. See table below for min. wraps required.

Pipe Diam. in.	Annular Space in.	Min. No. of Wrap Strip Layers
2	3/16	3
3	1/8	4
4	1/8	6

4. TREMstop MCR - Prefabricated steel collar wrapped over the wrap strips (Item 3) and mechanically fastened to both sides of wall assembly.
5. TREMstop IA or TREMstop Acrylic (Optional) - Min. 1/4" bead of sealant applied at the wallboard/device and device/pipe interfaces.

NOTE: TREMstop D can be used in place of TREMstop WS and TREMstop MCR.

UL/cUL SystemNo. WL 2063

Project: ______ Location: ______ Installer: ______ Signature: ______	The Tremco products used above have been tested in accordance with the following: • ASTM E814 (UL1479) Standard Test Method for Through Penetration Firestopping. Date: 4/16/01 Drawing: TW-2063 Approved by: J. Pitcole	This information is intended for engineering purposes only and is based on internal and third party testing which we believe to be accurate. The user of this information must determine the suitability of the design to the application and the product to local building codes. Tremco shall not be liable for damages, direct or consequential, resulting from use of this material or design. Tremco shall only be responsible for replacing material found to be defective.

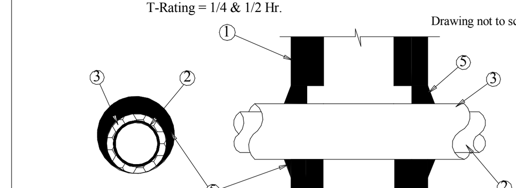
PLASTIC PIPE

1 and 2 Hour Fire Rated Through Penetration Firestop for Single Insulated Metal Pipe through Gypsum Walls using TREMstop IA.

TREMCO®
3735 Green Rd.
Beachwood, OH, 44122

F-Rating = 1 & 2 Hr.
T-Rating = 1/4 & 1/2 Hr.

Drawing not to scale



1. Pre-Rated Gypsum Wallboard/Stud Wall Assembly
2. Metallic Pipe - A) Steel Pipe - 4" diam. (or smaller) Sch. 10 (or heavier) steel pipe.
   B) Iron Pipe- 4" diam. (or smaller) cast or ductile iron pipe.
   C) Copper Tubing - 4" diam. (or smaller) Type L (or heavier) copper tubing.
   D) Copper Pipe - 4" diam. (or smaller) Regular (or heavier) copper pipe.
3. Pipe Covering - Nom. 3/4" thick (or less) AB/PVC flexible foam insulation.
   The annular space shall be min. 0" to max. 3/8".
4. Packing Material (Optional, Not Shown)- Foam backer rod firmly packed into opening.
5. TREMstop IA - For 2 Hr. Walls: Min. 1" thickness of sealant applied within annulus.
   For 1 Hr. Walls: Min. 1/2" thickness of sealant applied within annulus.
   Sealant applied flush with both sides of wall assembly, and an additional 1/2" crown is formed around the penetrating item.

UL/cUL System No. WL 5081

Project: ______ Location: ______ Installer: ______ Signature: ______	The Tremco products used above have been tested in accordance with the following: • ASTM E814 (UL1479) Standard Test Method for Through Penetration Firestopping. Date: 4/20/01 Drawing: TW-5081 Approved by: J. Pitcole	This information is intended for engineering purposes only and is based on internal and third party testing which we believe to be accurate. The user of this information must determine the suitability of the design to the application and the product to local building codes. Tremco shall not be liable for damages, direct or consequential, resulting from use of this material or design. Tremco shall only be responsible for replacing material found to be defective.

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1. HOW DO YOU WANT TO SEARCH? 2. RESULTS

THROUGH-PENETRATION FIRESTOP SYSTEM

Assembly Usage Disclaimer

Search Parameters

Assembly type	Penetrating item	Rating
Framed floors	Electrical cable	F Rating ≥ 1 hr and < 2 hr

XHEZ - Through-penetration Firestop Systems

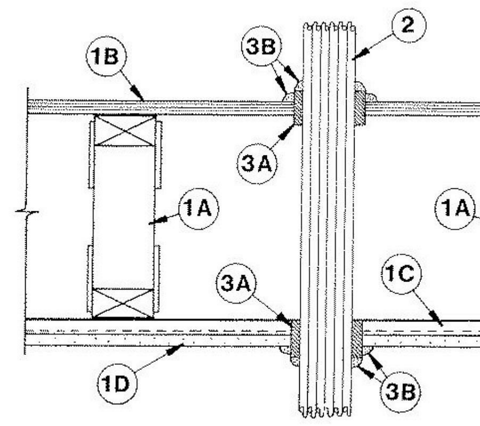
See General Information for Through-penetration Firestop Systems

System No. F-C-3008

October 01, 2008

F Rating — 1 Hr

T Rating — 1 Hr



1. **Floor Assembly** — The 1 hr fire rated wood truss or combination wood and steel truss Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individual L500 Series Design in the UL Fire Resistance Directory, as summarized below:

A. **Trusses** — Min 12 in. (305 mm) deep parallel chord trusses fabricated from nom 2 by 4 in. (51 by 102 mm) lumber in conjunction with galv steel truss plates or **Structural Wood Members*** with bridging as required.

B. **Flooring** — Nom 3/4 in. (19 mm) thick plywood flooring with or without **Floor Topping Mixture***. Max diam of opening is 3-1/2 in. (89 mm).

C. **Furring Channels** — Rigid or resilient galv steel furring channels installed perpendicular to bottom chord of trusses.

D. **Gypsum Board*** — Nom 4 ft (122 cm)wide by 5/8 in. (16 mm) thick, screw-attached to furring channels.

1.1 **Chase Wall** — (Optional, not shown) — The through penetrants (Item No. 2) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum board chase wall constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Nom 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.

B. **Sole Plate** — Nom 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted.

C. **Top Plate** — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted.

D. **Gypsum Board*** — Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.

2. **Cables** — Max seven conductor No. 12 AWG (or smaller) power/control cables or max 100 pair No. 22 AWG (or smaller) telecommunication cables or max four conductor with ground No. 4/0 AWG (or smaller) copper or aluminumSER cables with polyvinyl chloride (PVC) or cross-linked polyethylene (XLPE) insulation and jacket materials. Max 3 in. (76 mm) diam tightly bundled cables centered in circular cutouts. Circular cutouts to have a diam 1/2 in. to 3/4 in. (13 to 19 mm) larger than diam of cable bundle such that a 1/4 in. to 3/8 in. (6 to 10 mm) annular space is present between the cable bundle and the perimeter of the circular cutout. Cables to be rigidly supported on both sides of Floor-Ceiling assembly.

3. **Firestop System** — The details of the firestop system shall be as follows:

A. **Fill, Void or Cavity Materials* — Wrap Strip** — Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 2 in. (51 mm) wide strips. Nom 2 in. (51 mm) wide strip tightly wrapped around cable bundle (foil side exposed), secured with two steel tie wires and slid into hole-sawed opening in flooring (Item 1B) and in gypsum board ceiling (Item 1D) or the sole plate (Item 1.1B) and top plate (Item 1.1C) of the chase wall. Bottom edge of wrap strip to project 9/16 to 11/16 in. (14 to 17.5 mm) below bottom surface of flooring and below bottom (ceiling) surface of gypsum board or the bottom edge of the top plate.
3M COMPANY — FS-195+.

B. **Fill, Void or Cavity Materials* — Caulk, Sealant or Putty** — Applied to fill interstices between cables, to the max extent possible, within confines of wrap strip at both the floor and ceiling elevations. Nom 1/4 in. (6 mm) thickness of caulk or putty to be applied to the exposed edge of the wrap strip layer (top of flooring or sole plate and bottom of gypsum board ceiling or top plate). Generous application of caulk or putty to be applied to fill all gaps at the wrap strip/flooring and wrap strip/gypsum board ceiling or wrap strip/top plate interfaces.
3M COMPANY — CP 25WB+ caulk, MP+ Stix putty, IC 15WB+ caulk, FireDam 150+ caulk or FB-3000 WT Sealant

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2008-10-01

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- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

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1. HOW DO YOU WANT TO SEARCH? 2. RESULTS

THROUGH-PENETRATION FIRESTOP SYSTEM

Assembly Usage Disclaimer

Search Parameters

Assembly type	Penetrating item	Rating
Framed floors	Electrical cable	F Rating ≥ 1 hr and < 2 hr

XHEZ - Through-penetration Firestop Systems

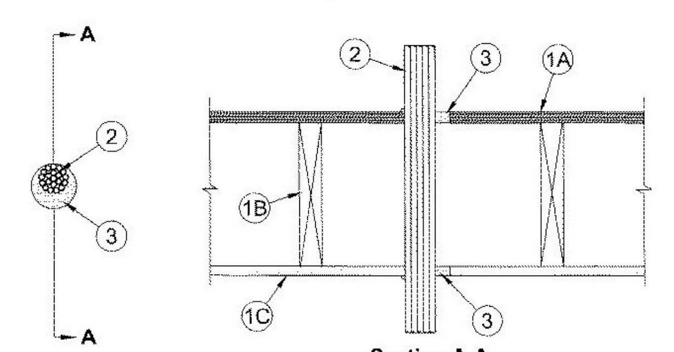
See General Information for Through-penetration Firestop Systems

System No. F-C-3057

March 26, 2008

F Ratings — 1 Hr and 2 Hr (See Item 1)

T Rating — 1/2 Hr



1. **Floor — Ceiling Assembly** — The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Designs in the UL Fire Resistance Directory. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511 or L536 in the UL Fire Resistance Directory. **The F Rating of the firestop system is equal to the fire rating of the floor-ceiling assembly**. The general construction features of the floor assembly are summarized below:

A. **Flooring System** — Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture*** as specified in the individual Floor-Ceiling Design. Max diam of opening is 3 in. (76 mm).

B. **Wood Joists** — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped.

C. **Gypsum Board*** — Thickness, type, number of layers and fasteners as required in the individual Floor-Ceiling Design. Max diam of opening is 3 in. (76 mm).

1A. **Chase Wall** — (Optional, Not Shown) — The through penetrant (Item 2) may be routed through a 1 or 2 hr fire rated single, double or staggered wood stud/gypsum board chase wall. Depth of chase wall stud cavity to be min 1/2 in. (13 mm) greater than diameter of opening cut in sole and top plates to accommodate the through penetrant (Item 2). The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 162 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.

B. **Sole Plate** — Nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm)or parallel 2 by 4 in. (51 by 102 mm)lumber plates, tightly butted. Max diam of opening is 3 in.

C. **Top Plate** — The double top plate shall consist of two nom 2 by 4 in. (51 by 102 mm), two nom 2 by 6 in. (51 by 152 mm)or two sets of parallel 2 by 4 in. (51 by 102 mm)lumber plates, tightly butted. Max diam of opening is 3 in. (76 mm).

D. **Gypsum Board*** — Thickness, type, number of layers and fasteners shall be as specified in the individual Wall and Partition Design.

2. **Cables** — Aggregate cross-sectional area of cables within opening to be max 54 percent of the cross-sectional ar of the opening. Annular space to be min 0 in. (point contact) to max 1-1/4 in. (32 mm). Penetrants to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of cables may be used:

A. Max 200 pair No. 24 AWG (or smaller) copper conductor telecommunication cable with PVC insulation and jacketing.

B. Max 3/C No. 3/0 AWG (or smaller) aluminum or copper conductor SER cable with PVC insulation and jacketing.

C. Max 3/C with ground No. 8 AWG (or smaller) Type NM (Romex) nonmetallic sheathed cable with PVC insulation and jacketing.

D. Max 1/C - 350 kcmil (or smaller) power cables with XLP insulation and jacketing.

E. Max 7/C No. 12 AWG (or smaller) power/control cables with PVC insulation and jacketing.

F. Max RG/U (or smaller) copper conductor coaxial cable with fluorinated ethylene insulation and jacketing materials.

G. Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with Hylar insulation and jacketing.

H. Max 4 pair No. 18 AWG (or smaller) copper conductor instrumentation cable with PVC insulation and jacketing.

I. Fiber optic cable with PVC insulation and jacketing.

J. Max 4/C (with ground) No. 300 kcmil (or smaller) aluminum conductor SER cables with PVC insulation and jacket.

2A. **Through Penetrating Product*** — (Not Shown) As an alternate Item 3), one or more through-penetrating produ to be installed within the opening. Max aggregate cross-sectional area of cables to be 52 percent of the cross-sectio area of the opening. Annular space between through-penetrating products and periphery of opening to be min 0 in. (point contact) to max 1-1/4 in. (32 mm). Through penetrating product rigidly supported on both sides of floor or wall assembly. The following types of through-penetrating products may be used:

A. Max 4/C with ground No. 2/0 AWG (or smaller) aluminum or copper conductor aluminum or steel jacketed **Armored Cable# +** or **Metal-Clad Cable+**.
AFC CABLE SYSTEMS INC

ENCORE WIRE CORP

B. Two or more twisted copper conductors No. 6 AWG (or smaller) **Power Limited Circuit Cable+** with or without a jacket under a metal armor.
AFC CABLE SYSTEMS INC

C. Two or more twisted copper conductors No. 10 AWG (or smaller) **Power Limited Fire Alarm Cable+** with or without a jacket under a metal armor.
AFC CABLE SYSTEMS INC

D. Max two twisted copper conductors No. 12 AWG (or smaller) **Non Power Limited Fire Alarm Cable+** with or without a jacket under a metal armor.
AFC CABLE SYSTEMS INC

3. **Fill, Void or Cavity Material* — Sealant** — Min 3/4 in. (19 mm) thickness of fill material applied within the annulu flush with the top surface of the floor or chase wall sole plate. Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with bottom surface of ceiling or chase wall top plate. At point contact, min 1/4 in. (6 mm) diam bead of fill material applied at cable bundle/subfloor or chase wall sole plate interface and at cable bundle/ceili or chase wall top plate interface.
SPECIFIED TECHNOLOGIES INC — SpecSeal LCI Sealant

+Bearing the UL Listing Mark

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or c Certification (such as Canada), respectively.**

Last Updated on 200

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- Authorities Having Jurisdiction should be consulted before construction.

- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
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MHA - PALMS AT UNIVERSITY
APARTMENTS
PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

NO:	DATE:	DESCRIPTION
1	02-20-18	BLDG. DEPT. COMM.

PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	NOT TO SCALE

1

A704

BUILDING '1' & '2'
FIRESTOPPING DETAILS

12/13/2018 5:11:35 PM

ONLINE CERTIFICATIONS DIRECTORY

Design No. U499
BXUV.U499
Fire Resistance Ratings - ANSI/UL 263

Page Bottom

Design/System/Construction/Assembly Usage Disclaimer

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- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
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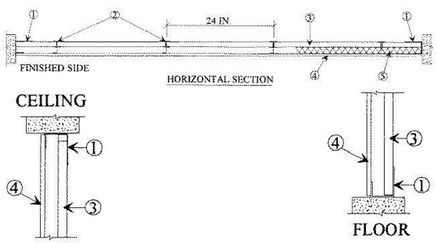
Fire Resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - ANSI/UL 263

Design No. U499

April 26, 2010

Nonbearing Wall Rating — 1 Hr.



1. **Channel Track** — "J" -shaped channel, 2-1/2 in. deep with unequal legs of 1 in. and 2 in., fabricated from No. 25 MSG galv steel. Channels attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC.

2. **Steel Studs** — "I" shaped studs, min 2-1/2 in. deep by 1-1/2 in. wide, fabricated from min 25 MSG galv steel, spaced 24 in. OC. Vertically restrained walls require studs to be cut 1/2 in. less than floor to ceiling height.

2A. **Steel Studs —** (Not Shown) — "C-H" -shaped studs, min 2-1/2 in. deep by 1-1/2 in. wide, fabricated from min 25 MSG galv steel, spaced 24 in. OC. Vertically restrained walls require studs to be cut 1/2 in. less than floor to ceiling height.

2B. **Steel Studs —** (Not Shown) — "C-T" - shaped studs, min 2-1/2 in. deep by 1-1/2 in. wide, fabricated from min 25 MSG galv steel, spaced 24 in. OC. Vertically restrained walls require studs to be cut 1/2 in. less than floor to ceiling height.

2C. **Furring Channels —** (Optional, not shown) - Resilient furring channels fabricated from min. 25 MSG corrosion protected steel, installed horizontally, and spaced vertically a max. 24 in. OC. Flange portion of channel attached to each intersecting stud on side of stud opposite the 1 in. liner panels with 1/2 in. long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only.

3. **Gypsum Board* —** 1 in. thick gypsum wallboard liner panels, supplied in nominal 24 in. widths. Vertical edges inserted in "I" studs. Free edge of end panels attached to long leg of "J" runners with 1-5/8 in. long Type S self-drilling, self-tapping bugle head steel screws spaced not greater than 24 in. OC.

NATIONAL GYPSUM CO — Types FSW, FSW-B, FSW-7.

4. **Gypsum Board* —** 5/8 in. thick, 4 ft wide, applied horizontally or vertically and attached to studs with 1 in. long Type S steel screws spaced 12 in. OC along the edges and in the field of the boards. When Furring Channels (Item 2C) are used, gypsum board attached vertically to furring channels with 1 in. long Type S steel screws spaced 12 in. OC.

NATIONAL GYPSUM CO — Types FSK-C, FSW, FSW-S, FSW-C, FSW-6.

4A. **Gypsum Board* —** 5/8 in. thick, 4 ft wide, applied vertically and attached to studs with 1 in. long Type S steel screws spaced 12 in. OC along the edges and in the field of the boards. When Furring Channels (Item 2C) are used, gypsum board attached vertically to furring channels with 1 in. long Type S steel screws spaced 12 in. OC.

NATIONAL GYPSUM CO — Types FSW-3, FSMR-C.

4B. **Gypsum Board* —** (As an alternate to Items 4 through 4A) - Installed as described in Item 4. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically and fastened to the studs with 1 in. long Type S steel screws spaced 8 in. OC.

NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board

5. **Batts and Blankets* —** (Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt bearing the UL Classification Marking as to Fire Resistance. See Batt and Blankets (BZJZ) Category For Names Of Classified Companies.

5A. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 3.0 lb/ft^3. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft^3.

U S GREENFIBER L L C — Cocoon2 Stabilized or Cocoon-FRM (Fire Rated Material)

5B. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

NU-WOOL CO INC — Cellulose Insulation

5C. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 5) - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.

INTERNATIONAL CELLULOSE CORP — Celbar-RL

*Bearing the UL Classification Mark

Last Updated on 2010-04-26

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MHA - PALMS AT UNIVERSITY
APARTMENTS
PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	

A705

BUILDING '1' & '2'
UL DESIGN U499

12/13/2018 5:11:39 PM

BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

Design No. U344

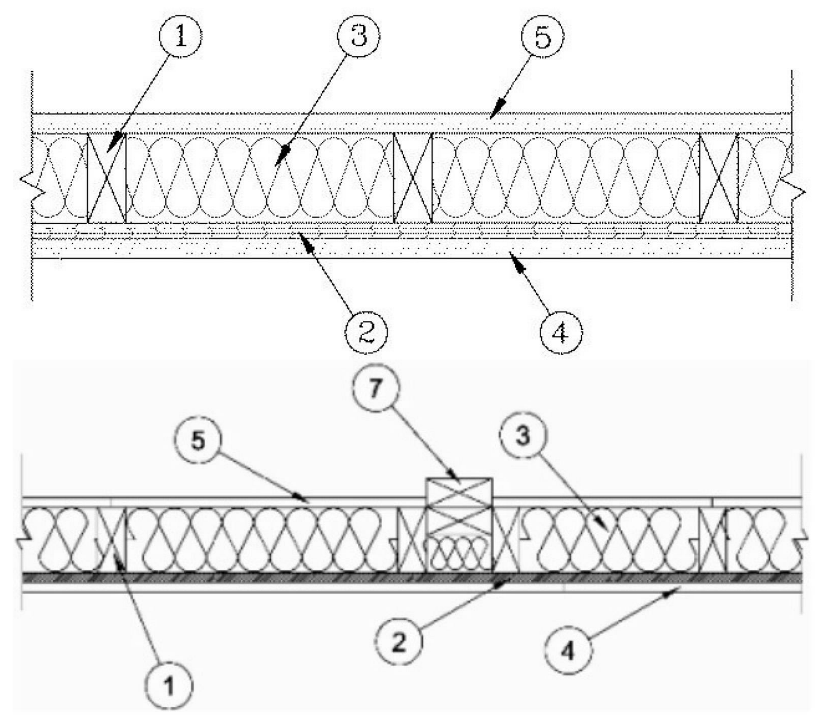
August 02, 2017

Bearing Wall Rating — 1 Hr.

Finish Rating — 26 Min.

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Wood Studs —** Nom 2 by 4 in. spaced 24 in. OC, laterally braced, and effectively fire stopped at top and bottom.

2. **Wood Structural Panel Sheathing —** Nom 15/32 in. thick, 4 ft wide APA Rated Sheathing 32/16. Exposure 1, plywood or oriented strand board (OSB) per PS1, PS2 or APA Standard PRP-108. Installed with long dimension of sheet (strength axis) or face grain of plywood, parallel with studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Horizontal joints backed with nom 2 by 4 in. wood backing. Attached to studs on exterior side of wall with 6d cement coated steel box nails spaced 12 in. OC along interior studs and 6 in. OC at perimeter of panels.

3. **Batts and Blankets* —** 3-1/2 in. thick foil-faced glass fiber batts. Supplied in rolls 23 in. wide. Density to be nom 0.70 pcf. Friction-fitted to completely fill the stud cavity.

See **Batts and Blankets*** (BZJZ) category for names of Classified Companies.

3A. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 3) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft^3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft^3, in accordance with the application instructions supplied with the product.
U S GREENFIBER L L C — INS735 & INS745 for use with wet or dry application. INS510LD, INS515LD, INS541LD, INS735, INS745, INS765LD, and INS770LD are to be used for dry application only.

3B. **Fiber, Sprayed* —** As an alternate to Item 3 and 3A — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 4.58 lb/ft^3.
NU-WOOL CO INC — Cellulose Insulation

3C. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 3) - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.
INTERNATIONAL CELLULOSE CORP — Celbar-RL

4. **Gypsum Board* —** 5/8 in. thick, 4 ft wide, applied horizontally or vertically. Attached to studs through plywood sheathing with 8d cement coated nails 2-3/8 in. long, 0.113 in. shank diam, 9/32 in. diam head nails spaced 7 in. OC along studs and at perimeter of panels. When used in widths other than 48 in., wallboard is to be installed horizontally. Joints exposed or covered with tape and compound.
When Item 6, **Steel Framing Members***, is used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

ACADIA DRYWALL SUPPLIES LTD — 5/8 Type X, Type Blueglass Exterior Sheathing

AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C.

CERTAINTEED GYPSUM INC — Type C, Type X or Type X-1 (Finished Rating is 23 minutes); Type EGRG, Type GlasRoc.

CGC INC — Type AR, C, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Types LGFC6, LGFC6A, LGFC-C, LGFC-C/A.

GEORGIA-PACIFIC GYPSUM L L C — Types TG-C, Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, GreenGlas Type X, Type LWX, Veneer Plaster Base-Type LWX, Water Rated-Type LWX, Sheathing Type-LWX, Soffit-Type LWX, Type DGLW, Water Rated-Type DGLW, Sheathing Type- DGLW, Soffit-Type DGLW, Type LW2X, Veneer Plaster Base - Type LW2X, Water Rated - Type LW2X, Sheathing - Type LW2X, Soffit - Type LW2X, Type DGL2W, Water Rated - Type DGL2W, Sheathing - Type DGL2W, Type DGG, Type DAP, Type DS.

NATIONAL GYPSUM CO — Types FSK, FSK-G, FSW, FSW-3, FSW-5, FSW-G, FSK-C, FSW-C, FSMR-C, FSW-6, FSL, FSW-8

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-11, PGS-WRS.

THAI GYPSUM PRODUCTS PCL — Type C or Type X

UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-X2, IPC-AR, WRC, SCX, SHX, ULIX, ULX, USGX or WRX

USG BORAL ZAWAWI DRYWALL L L C SFZ — Types C, SCX

USG MEXICO S A DE C V — Type AR, C, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC or WRX.

4A. **Gypsum Board* —** (As an alternate to Item 4) — 5/8 in. thick, 4 ft. wide, paper surfaced applied vertically and secured as described in Item 4.
GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min).

4B. **Gypsum Board* —** (As an alternate to Items 4, 4A) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically only and secured as described in Item 4.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES.

4C. **Wall and Partition Facings and Accessories* —** (As an alternate to Items 4, 4A, 4B) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically only and secured as described in Item 4.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527.

4D. **Gypsum Board* —** (As an alternate to Item 4) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

5. **Gypsum Board* —** 5/8 in. thick, 4 ft wide applied horizontally or vertically. Attached to studs or blocking at 7 in. OC with 6d cement coated nails, 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads. When used in widths other than 48 in., wallboard to be installed horizontally. Joints exposed or covered with tape and compound.
When Item 6-6B, **Steel Framing Members***, is used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

ACADIA DRYWALL SUPPLIES LTD — 5/8 Type X, Type Blueglass Exterior Sheathing

AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C

CGC INC — Type AR, C, IP-X1, IP-X2, IPC-AR, SCX, ULX, USGX, WRX

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Types LGFC6, LGFC6A, LGFC-C, LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Type TG-C, GreenGlass Type X, Type DGG

NATIONAL GYPSUM CO — Types FSK, FSK-G, FSW, FSW-3, FSW-5, FSW-G, FSK-C, FSW-C, FSMR-C, FSW-6, FSL, FSW-8

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-11, PGS-WRS

UNITED STATES GYPSUM CO — Type AR, C, FRX-G, IP-X1, IP-X2, IPC-AR, SCX, ULIX, ULX, USGX or WRX

USG BORAL ZAWAWI DRYWALL L L C SFZ — Types C, SCX

USG MEXICO S A DE C V — Type AR, C, IP-X1, IP-X2, IPC-AR, SCX, ULX, USGX or WRX

5A. **Gypsum Board* —** As an alternate to Item 5 — (not shown) - 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally. Joints exposed or covered with tape and compound.
AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C (Finished Rating is 25 minutes).

CERTAINTEED GYPSUM INC — Type C, Type X or Type X-1 (Finished Rating is 23 minutes); Type EGRG, Type GlasRoc.

CGC INC — Type AR, C, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC or WRX. (Finished Rating is 24 minutes).

THAI GYPSUM PRODUCTS PCL — Type C or Type X

UNITED STATES GYPSUM CO — Type AR, C, FRX-G, IP-X1, IP-X2, IPC-AR, SCX, ULX, USGX or WRX. (Finished Rating is 24 minutes)

USG BORAL ZAWAWI DRYWALL L L C SFZ — Types C, SCX

USG MEXICO S A DE C V — Type AR, C, IP-X1, IP-X2, IPC-AR, SCX, ULX, USGX or WRX. (Finished Rating is 24 minutes)

5B. **Gypsum Board* —** (As an alternate to Items 5 and 5A) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed as described in Item 5. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.
GEORGIA-PACIFIC GYPSUM L L C — GreenGlas Type X, Type DGG.

5C. **Gypsum Board* —** (As an alternate to Items 5 through 5B) — 5/8 in. thick, 4 ft. wide, paper surfaced applied vertically and secured as described in Item 5.
GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min)

5D. **Gypsum Board* —** (As an alternate to Items 5 through 5C) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically only and secured as described in Item 5.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES.

5E. **Wall and Partition Facings and Accessories* —** (As an alternate to Items 5 through 5D) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically only and secured as described in Item 5.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527

5F. **Gypsum Board* —** (As an alternate to Items 5 through 5E) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically only and secured as described in Item 5.
NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board

5G. **Gypsum Board* —** (As an alternate to Item 5) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

6. **Steel Framing Members* —** (Optional, Not Shown) — Furring Channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Items 4 and 5.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6a) to studs . Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. . RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75).

6A. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 5.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
PLITEQ INC — Type Genie Clip

6B. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.Gypsum board attached to furring channels as described in Item 5.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Ba) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

7. **Non-Bearing Wall Partition Intersection —** (Optional) — Two nominal 2 by 4 in. stud or nominal 2 by 6 in. stud nailed together with two 3-1/2 in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

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- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
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PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	CAP
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	

A706

BUILDING '1' & '2'
UL DESIGN U344

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Design No. P522
BXUV.P522
Fire Resistance Ratings - ANSI/UL 263

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Fire Resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - ANSI/UL 263

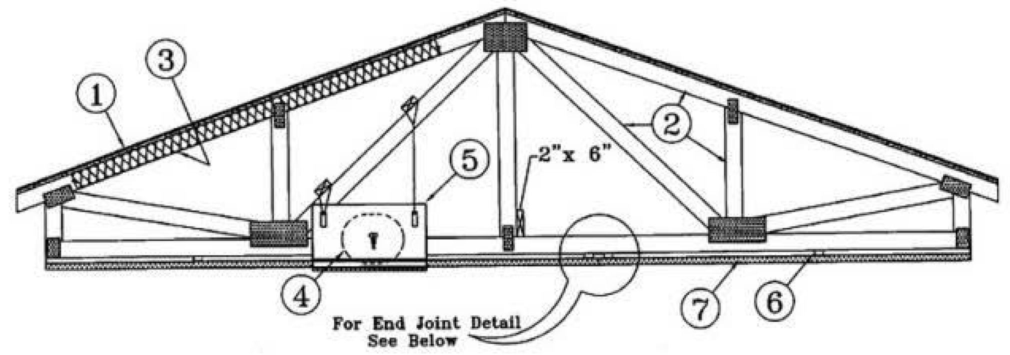
Design No. P522

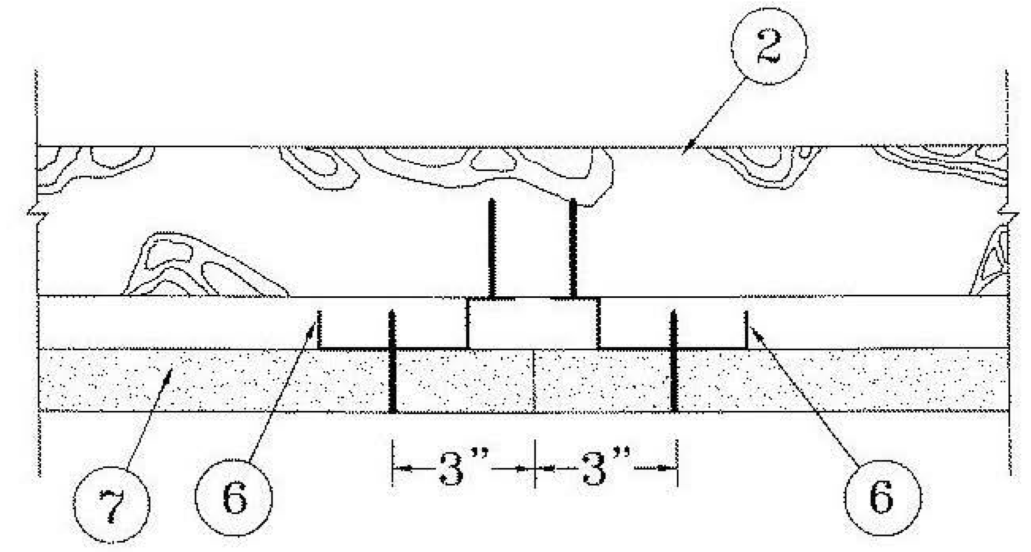
February 27, 2012

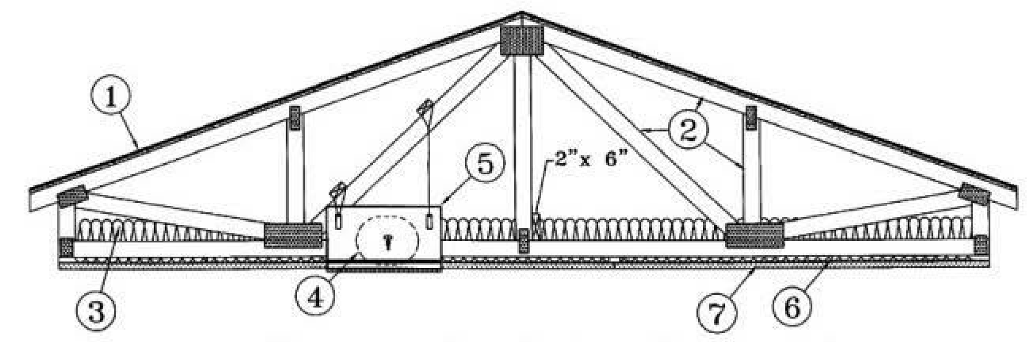
Unrestrained Assembly Rating — 1 Hr

Finish Rating — 25 Min (See Items 3 or 3A)

Load Restricted for Canadian Applications — See Guide BXUV7







Alternate Insulation Placement

1. **Roofing System*** — Any UL Class A, B or C Roofing System (TGFU) or Prepared Roof Covering (TFWZ) acceptable for use over nom 15/32 in. thick wood structural panels, min. grade "C-D" or "Sheathing". Nom 15/32 in. thick wood structural panels secured to trusses with No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Construction adhesive may be used with either the nails or staples.

2. **Trusses** — Pitched or parallel chord wood trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Truss members secured together with min. 0.0356 in. thick galv steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tooth has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/8 in. centers with four rows of teeth per inch of plate width. Where the truss intersects with the interior face of the exterior walls, the min truss depth shall be 5-1/4 in. with a min roof slope of 3/12 and a min. area in the plane of the truss of 21 sq/ft. Where the truss intersects with the interior face of the exterior walls, the min truss depth may be reduced to 3 in. if the batts and blankets (Item 3) are used as shown in the above illustration (Alternate Insulation Placement) and are firmly packed against the intersection of the bottom chords and the plywood sheathing.

3. **Batts and Blankets*** — (Optional) - Required when Item 6B is used — Glass fiber insulation, secured to the wood structural panels with staples spaced 12 in. OC or to the trusses with 0.090 in. diam galv steel wires spaced 12 in. OC. Any glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance, having a min density of 0.5 pcf. As an option, the insulation may be fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. When **Steel Framing Members** (Item 6B) are used, max 3-1/2 in. thick insulation shall be draped over the furring channels (Item 6Ba) and gypsum board ceiling membrane, and friction-fitted between trusses and Steel Framing Members

(Item 6Bd). The finished rating has only been determined when the insulation is secured to the decking.

3A. **Fiber, Sprayed*** — As an alternate to Item 3 (not evaluated for use with Item 6B) — Any thickness of spray-applied cellulose insulation material, having a min density of 0.5 pcf, applied within the concealed space, over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. The finished rating when Fiber,Sprayed is used has not been determined. The fiber is applied with water within the concealed space, over the resilient channel/gypsum board ceiling membrane, in accordance with the application instructions supplied with the product. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber in accordance with the application instructions supplied with the product. Alternate application method: The fiber is applied without water or adhesive in accordance with the application instructions supplied with the product.

U S GREENFIBER L L C — Cocoon2 Stabilized or Cocoon-FRM (Fire Rated Material).

4. **Air Duct*** — Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.

5. **Ceiling Damper*** — Max nom area, 324 sq in. Max square size, 18 in. by 18 in. rectangular sizes not to exceed 324 sq in. with a max width of 18 in. Max damper height is 14 in. Installed in accordance with manufacturers installation instructions provided with the damper. Max damper openings not to exceed 162 sq in. per 100 sq ft of ceiling area.

C&S AIR PRODUCTS — Model RD-521

POTTORFF — Model CFD-521

5A. **Alternate Ceiling Damper*** — Max nom area, 196 sq in. Max square size, 14 in. by 14 in. Rectangular sizes not to exceed 196 sq in. with a max width of 26 in. Max overall damper height is 7 in. Installed in accordance with the manufacturers installation instructions provided with the damper. Max damper openings not to exceed 98 sq in. per 100 sq ft of ceiling area.

C&S AIR PRODUCTS — Model RD-521-BT

POTTORFF — Model CFD-521-BT.

6. **Furring Channels** — Resilient channels, nom 1/2 in. deep by 2-3/8 in. wide at the base and 1-3/8 in. wide at the face, formed from 0.020 in. thick galv steel. Installed perpendicular to the trusses (Item 2), spaced a max of 16 in. OC when no insulation (Item 3 or 3A) is fitted in the concealed spaced, or a max of 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane. Two courses of resilient channel positioned 6 in. OC at wallboard butt-joints (3 in. from each end of wallboard). Channels oriented opposite at wallboard butt-joints. Channel splices overlapped 4 in. beneath wood trusses. Channels secured to each truss with 1-1/4 in. long Type S screws.

6A. **Steel Framing Members** — (Not Shown)* — As an alternate to Item 6, furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to trusses when no insulation (Items 3 or 3A) is fitted in the concealed space or 12 in. OC when insulation (Items 3 or 3A) is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane or 24 in. OC when insulation (Items 3 or 3A) is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane and a second layer of gypsum board is attached as described in Item 7 for steel framing members. Channels secured to joists as described in Item 6Ab. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. **Steel Framing Members** — Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC. RSIC-1 clips secured to alternating trusses with No. 8 by 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V clips secured to alternating joists with No. 8 by 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item 6Aa. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.

PAC INTERNATIONAL INC — Type RSIC-1, RSIC-V.

6B. **Steel Framing Members*** — (Not Shown) - As an alternate to Items 6 and 6A.

a. **Furring Channels** — Hat-shaped furring channels, 7/8 in. deep by 2-5/8 in. wide at the base and 1-1/4 in. wide at the face, formed from No. 25 ga. galv steel, spaced max 16 in. OC perpendicular to trusses and Cold Rolled Channels (Item 6Bb). Furring channels secured to Cold Rolled Channels at every intersection with a 1/2 in. pan head self-drilling screw through each furring channel leg. Ends of adjoining channels overlapped 4 in. and tied together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap. Supplemental furring channels at base layer and outer layer gypsum board butt joints are not required. Batts and Blankets draped over furring channels as described in Item 3. Two layers of gypsum board attached to furring channels as described in Item 7.

b. **Cold Rolled Channels** — 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to trusses, friction-fitted into the channel caddy on the Steel Framing Members (Item 6Bd). Adjoining lengths of cold rolled channels lapped min. 6 in. and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. **Blocking** — Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 6 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the truss (Item 2) at the top and bottom of the blocking at each Steel Framing Member (Item 6Bd) location.

d. **Steel Framing Members*** — Hangers spaced 48 in. OC. max along truss, and secured to the Blocking (Item 6Bc) on alternating trusses with a single 5/16 in. by 2 in. hex head lag bolt or four #6 1-1/4 in. drywall screws through mounting hole(s) on the hanger bracket. The two 1/4 in. long steel teeth on the hanger are embedded in the side of the blocking. Hanger positioned on blocking and leveling bolt height adjusted such that furring channels are flush with bottom of trusses before gypsum board installation. Spring gauge of hanger chosen per manufacturer\'s instructions.

KINETICS NOISE CONTROL INC — Type ICW.

6C. **Steel Framing Members*** — (Not Shown) - As an alternate to Items 6, 6A and 6B.

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep installed perpendicular to wood structural members. Channels spaced a max of 24 in. OC when no insulation (Item 3 or 3A) is fitted in the concealed space or a max of 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space. Channels secured to trusses as described in Item 6Cb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire near each end of overlap.

b. **Steel Framing Members*** — Used to attach furring channels (Item 6Ca) to trusses (Item 2). Clips secured to the bottom chord of each truss (24 in. OC) with one No. 8 by 2-1/2 in. long coarse drywall screw through center grommet. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item 6Ca. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.

PLITEQ INC — Type Genie Clip

6D. **Steel Framing Members*** — (Not Shown) - As an alternate to Items 6, 6A, 6B and 6C.

a. **Main runners** — Installed perpendicular to trusses — Nom 10 or 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft OC. Main runners hung a min of 2 in. from bottom chord of trusses with 12 SWG galv steel wire. Wires located a max of 48 in. OC.

b. **Cross tees or channels** — Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used at 8 in. from each side of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.

c. **Wall angles or channels** — Used to support steel framing member ends and for screw-attachment of the gypsum wallboard — Min 0.016 in. thick painted or galvanized steel angle with 1 in. legs or min. 0.016 in. thick painted or galvanized steel channel with

a 1 by 1-1/2 by 1 in. profile, attached to walls at perimeter of ceiling with fasteners 16 in. OC.

CGC INC — Type DGL or RX.

USG INTERIORS LLC — Type DGL or RX.

7. **Gypsum Board*** — One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to trusses. Attached to the resilient channels using 1 in. long Type S bugle-head screws. Screws spaced a max of 12 in. OC along butted end-joints and in the field when no insulation (Item 3 or 3A) is fitted in the concealed spaced, or a max of 8 in. OC along butted end-joints and in the field when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane.

When **Steel Framing Members*** (Item 6A or 6C) are used, sheets installed with long dimension perpendicular to furring channels and side joints of sheet located beneath trusses. Gypsum board screws are driven through channel spaced 12 in. OC in the field when no insulation (Item 3 or 3A) is fitted in the concealed space, or 8 in. OC in the field when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane. Gypsum board butt joints shall be staggered min. 2 ft within the assembly, and occur between the main furring channels. At the gypsum board butt joints, each end of the gypsum board shall be supported by a single length of furring channel equal to the width of the wallboard plus 6 in. on each end. The furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to the trusses with one clip at each end of the channel. Screw spacing along the butt joint to attach the gypsum board to the furring channels shall be 8 in. OC. Second (outer) layer of gypsum board required when furring channels (Item 6A, a) are spaced 24 in. OC and insulation is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane. Outer layer of gypsum board attached to the furring channels using 1-5/8 in. long Type S bugle-head screws spaced 8 in. OC at butted joints and 12 in. OC in the field. Butted end joints of outer layer to be offset a minimum of 8 in. from base layer end joints. Butted side joints of outer layer to be offset minimum 18 in. from butted side joints of base layer.

When **Steel Framing Members** (Item 6B) are used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels (Item 6Ba). Base layer attached to the furring channels using 1 in. long Type S bugle head steel screws spaced 8 in. OC along butted end joints and 12 in. OC in the field of the board. Butted end joints centered on the continuous furring channels. Butted base layer end joints to be offset a min of 16 in. in adjacent courses. Outer layer attached to the furring channels using 1-5/8 in. long Type S bugle head steel screws spaced 8 in. OC at butted end joints and 12 in. OC in the field. Butted end joints centered on the continuous furring channels and offset a min of 16 in. from butted end joints of base layer. Butted side joints of outer layer to be offset min 16 in. from butted side joints of base layer.

CGC INC — Types C, IP-X2, IPC-AR.

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR.

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR.

7A. **Gypsum Board*** — For use with Steel Framing Members (Item 6D) when Batts and Blankets* (Item 3) are not used - One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to the main runners. Gypsum board fastened to each cross tee or channel with five wallboard screws, with one screw located at the midspan of the cross tee or channel, one screw located 12 in. from and on each side of the cross tee or channel mid span and one screw located 1-1/2 in. from each gypsum board side joint. Except at wallboard end joints, wallboard screws shall be located on alternating sides of cross tee flange. At gypsum board end joints, gypsum board screws shall be located 1/2 in. from the joint. Gypsum board fastened to main runners with wallboard screws 1/2 in. from side joints, midway between intersections with cross tees or channels (16 in. OC). End joints of adjacent gypsum board sheets shall be staggered not less than 32 in. Gypsum board sheets screw attached to leg of wall angle with wallboard screws spaced 12 in. OC. Joints treated as described in Item 7. For use with **Steel Framing Members*** (Item 6D) when **Batts and Blankets*** (Item 3) are used - Ratings limited to 1 Hour - 5/8 in. thick, 4 ft wide; installed with long dimension perpendicular to cross tees with side joints centered along main runners and end joints centered along cross tees. Fastened to cross tees with 1 in. long steel gypsum board screws spaced 8 in. OC in the field and 8 in. OC along end joints. Fastened to main runners with 1 in. long gypsum board screws spaced midway between cross tees. Screws along sides and ends of boards spaced 3/8 to 1/2 in. from board edge. End joints of the sheets shall be staggered with spacing between joints on adjacent boards not less than 4 ft OC.

CGC INC — Type C or IP-X2.

UNITED STATES GYPSUM CO — Type C or IP-X2.

USG MEXICO S A DE C V — Type C or IP-X2.

8. **Finishing System** — (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board. **Alternate Ceiling Membrane** — Not Shown.

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COMMERCIAL CENTER
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515 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS		
NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	CAP
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	

A707

BUILDING '1' & '2'
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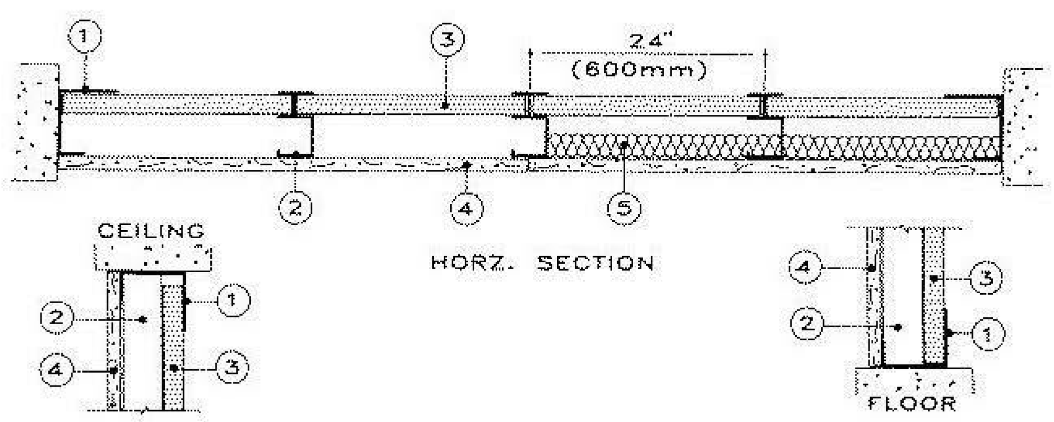
Design No. U469

December 31, 2012

Assembly Rating — 1 HR

Nonbearing Wall



1. **Floor and Ceiling Runners** — "J" - shaped, 2-1/2 in. wide with unequal legs of 1 in. and 2 in., fabricated from 24 MSG galv steel (min 20 MSG steel required when Item 4A is used). Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC.

2. **Steel Studs** — "C-H" shaped studs, 2-1/2 in. wide by 1-1/2 in. deep, fabricated from min 25 MSG galv steel (min 20 MSG steel required when Item 4A is used), spaced 24 in. or 600 mm OC. Vertically restrained walls require studs to be cut 3/8 in. less than floor to ceiling height.

3. **Gypsum Board*** — 1 in. thick gypsum wallboard liner panels, supplied in nominal 24 in. or 600 mm widths. Vertical edges inserted in "H" shaped section of "C-H" studs. Free edge of end panels attached to long leg of "J" runners with 1-5/8 in. long Type S head steel screws spaced not greater than 12 in. OC.

CGC INC — Type SLX.

LAFARGE NORTH AMERICA INC — Type LGFCSL

TEMPLE-INLAND — Type TP-6

UNITED STATES GYPSUM CO — Type SLX

USG MEXICO S A DE C V — Type SLX.

4. **Gypsum Board*** — 5/8 in. thick, 4 ft or 1200 mm wide, applied vertically and attached to studs with 1 in. long Type S steel screws spaced 12 in. OC along the edges and in the field of the boards.

AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C.

CERTAINTEED GYPSUM INC — Type C.

CERTAINTEED GYPSUM CANADA INC — Type C.

CGC INC — Types C, IP-X1, IP-X2, IPC-AR, SCX, ULX, or WRC.

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC.

LAFARGE NORTH AMERICA INC — Types LGFC-C, LGFC-C/A, LGFC6A

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-11, PG-C, PGS-WRS.

TEMPLE-INLAND — Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, TG-C.

THAI GYPSUM PRODUCTS PCL — Type C.

UNITED STATES GYPSUM CO — Types C, FRX-G, IP-X1, IP-X2, IPC-AR, SCX, ULX or WRC.

USG MEXICO S A DE C V — Types C, IP-X1, IP-X2, IPC-AR, SCX, ULX, or WRC.

4A. **Gypsum Board*** — Not Shown - As an Alternate to Item 4. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips (Item 6) required behind vertical joints

RAY-BAR ENGINEERING CORP — Type RB-LBG

4B. **Gypsum Board*** — Not Shown - As an Alternate to Item 4. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints. To be used with Lead Batten Strips (see Item 6B) or Lead Discs (see Item 6C).

MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4C. **Gypsum Board*** — (Not Shown - As an Alternate to Item 4.). Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws

spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

5. **Batts and Blankets*** — (Optional) — Mineral wool batts partially or completely filling stud cavity.

THERMAFIBER INC — Type SAFB.

5A. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 3.0 lb/ft^3. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft^3.

U S GREENFIBER L L C — Cocoon2 Stabilized or Cocoon-FRM (Fire Rated Material)

5B. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

NU-WOOL CO INC — Cellulose Insulation

5C. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 5) - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.

INTERNATIONAL CELLULOSE CORP — Celbar-RL

6. **Lead Batten Strips** — For Use with Item 4A - (Not Shown) — Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

6A. **Lead Discs or Tabs** — (Not Shown) - Used in lieu of or in addition to the lead batten strips (Item 6) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

6B. **Lead Batten Strips** — (Not Shown, for use with Item 4B) Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grades "A, B, C or D".

6C. **Lead Discs** — (Not Shown, for use with Item 4B) Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.9% meeting the Federal Specification QQ-L-201f, Grades "A, B, C or D".

*Bearing the UL Classification Mark

Last Updated on 2012-12-31

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AR12069

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MHA - PALMS AT UNIVERSITY APARTMENTS
PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	

A708

BUILDING '1' & '2'
UL DESIGN U469

12/13/2018 5:11:47 PM

ONLINE CERTIFICATIONS DIRECTORY

Design No. L546
BXUV.L546
Fire-resistance Ratings - ANSI/UL 263

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Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

Design No. L546

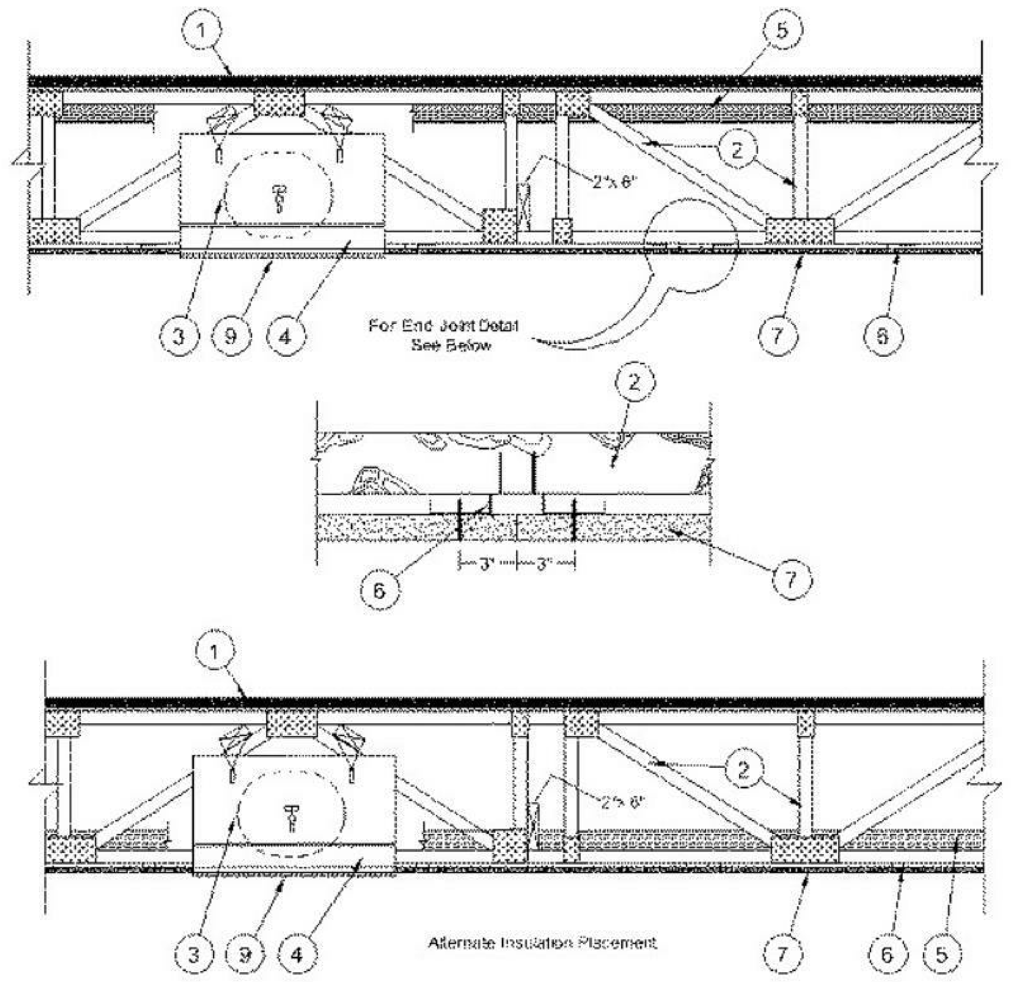
February 15, 2017

Unrestrained Assembly Rating — 1 Hr

Finish Rating — 24 or 25 Min (See Item 5)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Flooring System** — The flooring system shall consist of one of the following:

System No. 1

Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Finish Flooring - Floor Topping Mixture* — Min 3/4 thickness of floor topping mixture having a minimum compressive strength of 1500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

MAXXON CORP — Types D-C, GC, GC 2000, L-R, T-F, CT, SS

RAPID FLOOR SYSTEMS — Types RF, RFP, RFU, RFR, Ortecrete

Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

MAXXON CORP — Type Acousti-Mat I, Acousti-Mat II, Acousti-Mat II HP, Enkasonic 9110, Enkasonic 9110 HP, Acousti-Mat 3, Acousti-Mat 3 HP, Acousti-Mat LP, Acousti-Mat LP-R, Acousti-Mat SD.

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping over each floor mat material, primers, and use of crack suppression reinforcement.

MAXXON CORP — Crack Suppression Mat (CSM) or Maxxon Reinforcement (MR)

Metal Lath — (For use with or as an alternate to Crack Suppression Mat (CSM) or Maxxon Reinforcement (MR)) — 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.

System No. 2

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Finish Floor — Mineral and Fiber Board* — Min 1/2 in. thick, supplied in sizes ranging from 3 ft by 4 ft to 8 ft by 12 ft. All joints to be staggered a min of 12 in. with adjacent sub-floor joints.

HOMASOTE CO — Type 440-32 Mineral and Fiber Board

System No. 3

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.

Vapor Barrier — (Optional) — Nom 0.030 in thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.4 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5-1/2 gal of water.

ELASTIZELL CORP OF AMERICA — Type FF

System No. 4

Deleted

System No. 5

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Floor Mat Materials* — (Optional) — Floor mat material nom 5/64 in. (2 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1 in. of floor-topping mixture.

ECORE INTERNATIONAL INC — Type QTscu 4002

HACKER INDUSTRIES INC — Type Hacker Sound-Mat.

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32 mm) of floor-topping mixture.

ECORE INTERNATIONAL INC — Type QTrbm 3006-3

HACKER INDUSTRIES INC — Type Hacker Sound-Mat II.

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/8 in. (3mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 3/4 in. (19 mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 125

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1 in. (25 mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250, Quiet Qurl 55/025

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/8 in. (10 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/4 in. (32mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 400, Quiet Qurl 60/040

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/4 in. (19 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in. (38mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 750, Quiet Qurl 65/075

Metal Lath — (Optional) — For use with 3/8 in. (10 mm) floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor mat.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.

HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Firm-Fill High Strength, Gyp-Span Radiant

System No. 6

Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

ALLIED CUSTOM GYPSUM — Accu-Crete, AccuRadiant, AccuLevel G40 and AccuLevel SD30.

Alternate Floor Mat Material* — (Optional) — Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in. or 1 in. thickness of floor topping for 19/32 or 15/32 in. thick wood structural panels respectively.

ALLIED CUSTOM GYPSUM — Type AccuQuiet P80, Type AccuQuiet C40, AccuQuiet D13, and Type AccuQuiet D-18.

System No. 7

Subflooring — 15/32 or 19/32 in. thick wood structural panels, min. grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to joists with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt 0.030 in. thick.

Finish Flooring — Floor Topping Mixture* — Compressive strength to be 2100 psi min. Thickness to be 3/4 in. min for 19/32 in thick wood structural panels or 1 in. min. for 15/32 in thick wood structural panels. Refer to manufacturer's instructions accompanying the material for specific mix design.

System No. 8

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.

Vapor Barrier — (Optional) — Nom 0.010 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1800 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

UNITED STATES GYPSUM CO — Types LRK, HSLRK, CSD

USG MEXICO S A DE C V — Types LRK, HSLRK, CSD

Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials* — (Optional) - Nom 3/8 in. thick floor mat material loose laid over the subfloor.

GRASSWORX L L C — Type SC50

System No. 9

Subflooring — Min 23/32 in. thick T&G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Gypsum Board* — One layer of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1 in. long No. 6 Type W bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches from the joints of the subfloor.

GEORGIA-PACIFIC GYPSUM L L C — Type DS

Floor Mat Materials* — (As an alternate to the single layer gypsum board) — Floor mat material loose laid over the subfloor.

MAXXON CORP — Type Acousti-Mat I, Acousti-Mat II, Acousti-Mat II HP, Acousti-Mat 3, Acousti-Mat 3 HP, Enkasonic 9110, Enkasonic 9110 HP, Acousti-Mat LP-R.

Gypsum Board* — (For use when floor mat is used) Two layers of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists on top of the floor mat material. Gypsum board secured to each other with 1 in. long No. 6 Type G bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches in between layers and from the joints of the subfloor.

GEORGIA-PACIFIC GYPSUM L L C — Type DS

System No. 10

Subflooring — Min 15/32 or 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

DEPENDABLE LLC — GSL M3.4, GSL K2.6 and GSL RH.

Floor Mat Materials* — (Optional) — Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

2. **Trusses** — Parallel chord trusses spaced a max of 24 in. OC fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Min truss depth is 18 in. Truss members secured together with min 0.036 in. thick galv steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tooth has a chisel point on its outside edge with these points being diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/8 in. centers with four rows of teeth per inch of plate width.

3. **Air Duct*** — (Optional) — Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer

4. **Ceiling Damper*** — (Optional. To be used with Air Duct Item 3) — For use with min 18 in. deep trusses. Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max width of 18 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 162 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions.

C&S AIR PRODUCTS — Model RD-521

POTTORFF — Model CFD-521

4A. **Alternate Ceiling Damper*** — Max nom area shall be 196 sq in. Max square size shall be 14 in. by 14 in. Rectangular sizes not to exceed 196 sq in. with a max width of 26 in. Max height of damper shall be 7 in. Aggregate damper openings shall not exceed 98 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) not to exceed 144 $in.^2$ shall be installed in accordance with installation instructions.

C&S AIR PRODUCTS — Model RD-521-BT

POTTORFF — Model CFD-521-BT.

4B. **Alternate Ceiling Damper*** — (Optional. To be used with Air Duct Item 3) — For use with min 18 in. deep trusses. Max nom area shall be 256 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 17 in. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions.

POTTORFF — Models CFD-521-IP, CFD-521-NP

4C. **Alternate Ceiling Damper*** — For use with min. 18 in. deep trusses. Max. nom area shall be 349 sq in. Max. overall length and width shall not exceed 18-11/16 in. by 18-11/16 in. with max. 16 in. by 16 in. register opening. Aggregate damper openings shall not exceed 175 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. An aluminum or steel grille (Item 9) shall be installed in accordance with installation instructions.

MIAMI TECH INC — Model Series RxCRD, RxCRDS or RxCRPD

4D. **Alternate Ceiling Damper*** — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 75 sq in. with the length not to exceed 8-9/16 in. and the width not to exceed 8-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 38 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturers installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions.

DELTA ELECTRONICS INC — Models CRD2, GBR-CRD, ITG-CRD

4E. **Alternate Ceiling Damper*** — For use with min 18 in. deep trusses. Max nom area shall be 324 sq in. Max square size shall be 18 in. by 18 in. Rectangular sizes not to exceed 324 sq in. with a max length of 20 in. and a max width of 22 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 154 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper. An aluminum or steel grille (item 9) shall be installed in accordance with installation instructions.

UNITED ENERTECH CORP — Type C-S/R-WT or C-S/R-WTP (Max nom area 324 sq. in.) or C-S/R-WTS or C-S/R-WTPS (Max nom area 162 sq. in.)

4F. **Alternate Ceiling Damper*** — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 75 sq in. with the length not to exceed 9-1/4 in. and the width not to exceed 9-3/4 in. Max height of damper

SEE SHEET A710 FOR PAGES 7 TO 12

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KEVIN J. BESSOLO
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MHA - PALMS AT UNIVERSITY
APARTMENTS
PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	

A709

BUILDING '1' & '2'
UL DESIGN L546

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shall be 9-7/8 in. Aggregate damper openings shall not exceed 45 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions.

DELTA ELECTRONICS INC — Model SIG-CRD

4G. **Alternate Ceiling Damper*** — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 103 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 10-1/8 in. Aggregate damper openings shall not exceed 52 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions.

PANASONIC CORPORATION, PANASONIC CORPORATION OF NORTH AMERICA — Model PC-RD05C5

4H. **Alternate Ceiling Damper*** — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 113 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 11-1/8 in. Aggregate damper openings shall not exceed 57 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions.

BROAN-NUTONE L L C — Model RDFUWT

4I. **Alternate Ceiling Damper*** — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 79 sq in. with the length not to exceed 10 in. and the width not to exceed 7-15/16 in. Aggregate damper openings shall not exceed 40 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A metallic grille (Item 9) shall be installed in accordance with installation instructions.

BROAN-NUTONE L L C — Models RDJ1 and RDH

4J. **Alternate Ceiling Damper*** — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate damper openings shall not exceed 44 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 9) shall be installed in accordance with installation instructions.

BROAN-NUTONE L L C — Model RDMWT

5. **Batts and Blankets*** — (Optional With Items 7 and 7B; Required With Item 7A) — Glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. When the resilient channels (Item 6) or furring channels (Item 6A) are spaced 16 in. OC, the insulation shall be a max of 3-1/2 in. thick, and shall be secured against the subflooring with staples at 12 in. OC or held suspended in the concealed space with 0.090 in. diam galv steel wires attached to the wood trusses at 12 in. OC. When the resilient channels (Item 6) or furring channels (Item 6A) are spaced a max of 12 in. OC or when the Steel Framing Members (Item 6B) are used, there is no limit in the overall thickness of insulation, and the insulation can be secured against the subflooring, held suspended in the concealed space or draped over the resilient or furring channels (or Steel Framing Members) and gypsum panel membrane. When **Steel Framing Members** (Item 6C) are used, max 3-1/2 in. thick insulation shall be draped over the furring channels (Item 6Ca) and gypsum board ceiling membrane, and friction-fitted between trusses and Steel Framing Members (Item 6Cd). The finished rating has only been determined when the insulation is secured to the subflooring.

5A. **Fiber, Sprayed*** — (Dry Dense Packed 100% Borate Formulation) — As an alternate to Item 5 — When used, the resilient channel and gypsum board attachment is modified as specified in Items 6 and 7 and wire mesh (Item 10) shall be attached to the furring channels to facilitate installation of the material. The finished rating when Fiber, Sprayed is used has not been determined. The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft^3, in accordance with the application instructions supplied with the product. When Item 5A (Fiber, Sprayed) is used, two layers of gypsum board required as described in Item 7. Not evaluated for use with Items 6B, 6C or 6D.

U S GREENFIBER L L C — INS735, INS745, INS765LD & INS770LD to be used with dry application only.

5B. **Fiber, Sprayed*** — (Loose Fill 100% Borate Formulation) — As an alternate to Items 5 and 5A — The finished rating when Fiber, Sprayed is used has not been determined. The fiber is applied without water or adhesive at a minimum dry density of 0.5 lb/ft^3 and at a max thickness of 3-1/2 in., in accordance with the application instructions supplied with the product. Wire mesh (Item 10) shall be attached to the furring channels to facilitate installation of the material. When Item 5B (Fiber, Sprayed) is used, two layers of gypsum board required as described in Item 7. Not evaluated for use with Items 6B, 6C or 6D.

U S GREENFIBER L L C — INS735, INS745, INS765LD & INS770LD to be used with dry application only.

6. **Furring Channels** — Resilient channels, formed of 25 MSG thick galv steel, spaced 16 in. OC perpendicular to trusses. When insulation (Items 5, 5A, 5B) is draped over the resilient channel/gypsum board ceiling membrane, the spacing shall be reduced to 12 in. OC. Channels secured to each truss with 1-1/4 in. long Type S bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in OC, oriented opposite each gypsum board end joint as shown in the above illustration. Additional channels shall extend 6 in beyond each side edge of board.

6A. **Steel Framing Members*** — (Not Shown) — As an alternate to Item 6, furring channels and Steel Framing Members* as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to trusses. When batt insulation (Items 5) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. **Steel Framing Members*** — Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to alternating trusses with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to alternating trusses with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.

PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).

6B. **Alternate Steel Framing Members** — (Not Shown) — As an alternate to Items 6 and 6A, main runners, cross tees, cross channels and wall angle as listed below.

a. **Main Runners** — Nom 10 or 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Hanger wires to be located adjacent to main runner/cross tee intersections. Hanger wires wrapped and twist-tied on 16d nails driven in to side of trusses at least 5 in. above the bottom face.

b. **Cross Tees or Channels** — Nom 4 ft long cross tees, with 15/16 in. or 1-1/2 in. wide face, or nom 4 ft long cross channels, with 1-1/2 in. wide face, either spaced 16 in. OC, installed perpendicular to the main runners. Additional cross tees or channels used 8 in. from each side of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.

c. **Wall Angle or Channel** — Painted or galv steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum panel.

CGC INC — Type DGL or RX.

USG INTERIORS LLC — Type DGL or RX.

6C. **Steel Framing Members*** — (Not Shown) — As an alternate to Items 6, 6A and 6B.

a. **Furring Channels** — Hat-shaped furring channels, 7/8 in. deep by 2-5/8 in. wide at the base and 1-1/4 in. wide at the face, formed from No. 25 ga. galv steel, spaced max. 16 in. OC perpendicular to trusses and Cold Rolled Channels (Item 6Cb). Furring channels secured to Cold Rolled Channels at every intersection with a 1/2 in. pan head self-drilling screw through each furring channel leg. Ends of adjoining channels overlapped 4 in. and tied together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap. Supplemental furring channels at base layer and outer layer gypsum board butt joints are not required. Batts and Blankets draped over furring channels as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 7.

b. **Cold Rolled Channels** — 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to trusses, friction-fitted into the channel caddy on the Steel Framing Members (Item 6Cd). Adjoining lengths of cold rolled channels lapped min. 6 in. and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. **Blocking** — Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 6 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the truss (Item 2) at the top and bottom of the blocking at each Steel Framing Member (Item 6Cd) location.

d. **Steel Framing Members*** — Hangers spaced 48 in. OC. max along truss, and secured to the Blocking (Item 6Cc) on alternating trusses with a single 5/16 in. by 2 in. hex head lag bolt or four #6 1-1/4 in. drywall screws through mounting hole(s) on the hanger bracket. The two 1/4 in. long steel teeth on the hanger are embedded in the side of the blocking. Hanger positioned on blocking and leveling bolt height adjusted such that furring channels are flush with

bottom of trusses before gypsum board installation. Spring gauge of hanger chosen per manufacturer\'s instructions.

KINETICS NOISE CONTROL INC — Type ICW.

6D. **Steel Framing Members*** — (Not Shown) — As an alternate to Items 6, 6A, 6B and 6C.

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 16 in. OC perpendicular to wood structural members. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galv steel wire near each end of overlap.

b. **Steel Framing Members*** — Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC, and secured to the bottom chord of alternating trusses with two No. 8 x 2-1/2 in. course drywall screws, one through the hole at each end of the clip. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the clip spacing shall be reduced to 24 in. OC and secured to consecutive trusses. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7. Two layers of gypsum board required as described in Item 7. Not evaluated for use with Item 5B.

KINETICS NOISE CONTROL INC — Type Isomax.

6E. **Steel Framing Members*** — (Optional, Not Shown) — Used as an alternate method to attach min. 1/2 in. deep resilient channels (Item 6) to wood trusses (Item 2). Resilient channels are friction fitted into clips, and then clips are secured to the bottom chord of each wood truss with a min. 1-3/4 in. long Type S bugle head steel screw through the center hole of the clip and the resilient channel flange. Adjoining resilient channels are overlapped 4 in. under trusses. The clip flange is opened slightly to accommodate the two overlapped channels. Additional clips required to hold resilient channel that supports the gypsum board butt joints, as described in Item 7.

KEENE BUILDING PRODUCTS CO INC — Type RC Assurance.

6F. **Steel Framing Members** — (Not Shown) — As an alternate to Item 6, furring channels and Steel Framing Members* as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to trusses. When batt insulation (Items 5) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. **Steel Framing Members*** — Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC. GenieClips secured to alternating joists with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. When insulation, Items 5 is applied over the furring channel/gypsum panel ceiling membrane, the clip spacing shall be reduced to 24 in. OC and secured to consecutive trusses. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7. Not evaluated for use with Item 5A or 5B.

PLITEQ INC — Type GENIECLIP

6G. **Alternate Steel Framing Members*** — (Not Shown) — As an alternate to items 6-6F, furring channels and Steel Framing Members as described below.

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in deep, spaced 24 in OC, perpendicular to trusses. When batt insulation (Items 5) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b.

b. **Steel Framing Members*** — Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced at 24" OC and secured to the bottom of the joists with one No. 10 x 2-1/2 Coarse Drywall Screw through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and screwed with four #8 x 1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Additional clips are required to hold the Gypsum Butt joints and side joints as described in item 7.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

7. **Gypsum Board*** — Nom 5/8 in. thick, 48 in. wide gypsum board. When resilient channels (Item 6) are used, gypsum board installed with long dimension perpendicular to resilient channels. Gypsum board secured with 1 in. long Type S bugle head screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from end joints. End joints secured to both resilient channels as shown in end joint detail. When batt insulation (Item 5) is draped over the resilient channel/gypsum board ceiling membrane, screws spacing shall be 8 in. OC. When **Steel Framing Members*** (Item 6A, 6F) are used, gypsum board installed with long dimension perpendicular to furring channels and side joints of sheet located beneath joists. Gypsum board secured to furring channels with 1 in. long Type S bugle head screws spaced 12 in. OC in the field. Butted end joints shall be staggered min 2 ft within the assembly, and occur between the continuous furring channels. At butted end joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two furring channels shall be spaced approximately 3-1/2 in. OC and be attached to underside of the joist with one clip at each end of the channel. Screw spacing along the end joint shall be 8 in. OC.

AMERICAN GYPSUM CO — Type AG-C

CGC INC — Types C, IP-X2, IPC-AR

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL ZAWAWI DRYWALL L L C SFZ — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

7A. **Gypsum Board*** — Nom 5/8 in. thick, 48 in. wide gypsum board, installed with long dimension perpendicular to resilient channels. Gypsum board secured with 1-1/8 in. long Type S bugle head screws spaced 8 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. End joints secured to both resilient channels as shown in end joint detail. When Item 7A is used, the insulation must be used and must be draped over the resilient channel/gypsum board.

NATIONAL GYPSUM CO — Types eXP-C, FSW-G, FSW-C, FSK-G, FSK-C

7B. **Gypsum Board*** — Nom 5/8 in. thick, 48 in. wide gypsum panels. When resilient channels (Item 6) are used, gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type S bugle head steel screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. When insulation (Items 5 or 5A) is applied over the resilient channel/gypsum panel ceiling membrane screw spacing shall be reduced to 8 in. OC. End joints secured to both resilient channels as shown in end joint detail. When **Steel Framing Members** (Item 6A) are used, gypsum panels installed with long dimensions perpendicular to furring channels. Panels attached to the furring channels using 1 in. long Type S bugle-head steel screws spaced 8 in. OC along butted end joints and in the field of the panel. Butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum panel shall be supported by a single length of furring channel equal to the width of the gypsum panel plus 6 in. on each end. The two support furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to underside of the truss with one clip at each end of the channel. When **Steel Framing Members*** (Item 6B) are used, gypsum panels installed with long dimension perpendicular to cross tees with side joints centered along main runners and end joints centered along cross tees. Panels fastened to cross tees with 1 in. long . Type S bugle-head screws spaced in the field and 8 in. OC along end joints. Panels fastened to main runners with 1 in. long . Type S bugle-head screws spaced midway between cross tees. Screws along sides and ends of panels spaced 3/8 to 1/2 in. from panel edge. End joints of panels shall be staggered with spacing between joints on adjacent panels not less than 4 2 ft OC. When **Fiber, Sprayed** (Items 5A or 5B) is used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels. Base layer gypsum board secured with 1 in. long Type S bugle head steel screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. End joints secured to both resilient channels as shown in end joint detail. Outer layer gypsum board secured with 1-5/8 in. long Type S bugle head steel screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. Outer layer shall be finished as described in Item 8. When both **Steel Framing Members** (Item 6A) and **Fiber, Sprayed** (Items 5A or 5B) are used, furring channels spaced 12 in. OC and two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimension perpendicular to furring channels. Base layer secured to furring channels with nom 1 in. long Type S bugle head screws spaced 8 in. OC along butted end joints and in the field of the board. Butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two support furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to the underside of

the truss with one clip at each end of the channel. Outer layer secured to furring channels using 1-5/8 in. long Type S screws spaced 8 in. OC and 1-1/2 in. from the end joint. Butted end joints to be offset a min. of 8 in. from base layer end joints. Butted side joints of outer layer to be offset min. 18 in. from butted side joints of base layer. When **Steel Framing Members** (Item 6C) are used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels (Item 6Ca). Base layer attached to the furring channels using 1 in. long Type S bugle head steel screws spaced 8 in. OC along butted end joints and 12 in. OC in the field of the board. Butted end joints centered on the continuous furring channels. Butted base layer end joints to be offset a min of 16 in. in adjacent courses. Outer layer attached to the furring channels using 1-5/8 in. long Type S bugle head steel screws spaced 8 in. OC at butted end joints and 12 in. OC in the field. Butted end joints centered on the continuous furring channels and offset a min of 16 in. from butted end joints of base layer. Butted side joints of outer layer to be offset min 16 in. from butted side joints of base layer. When **Steel Framing Members** (Item 6D) are used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels. Base layer attached to the furring channels using 1 in. long Type S bugle-head steel screws spaced 12 in. OC in the field of the board. Butted end joints shall be staggered min 2 ft. within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two furring channels shall be spaced approximately 4 in. OC, and be attached to underside of the truss with one Isomax clip at each end of the channel. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Outer layer attached to the furring channels using 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC in the field. The end of the outer layer boards at the butt joint shall be attached to the base layer boards with 1-5/8 in. long Type G screws spaced 8 in. OC and 1-1/2 in. from the end joint. Butted end joints to be offset a min of 8 in. from base layer end joints. Butted side joints of outer layer to be offset min 18 in. from butted side joints of base layer. Outer layer shall be finished as described in Item 8. When **Steel Framing Members** (Item 6F) are used, two layers of nom 5/8 in. thick, 4 ft wide are installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels using 1 in. long No. 6 Type S bugle-head steel screws spaced 12 in. OC in the field of the board. Butted end joints shall be staggered minimum 2 ft. within the assembly. Additional furring channels constructed as per Item 6F shall be used to support each end of each gypsum board. These additional furring channels shall be attached to underside of the truss with Genie clips as described in Item 6F. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Outer layer attached to the furring channels using 1-5/8 in. long No. 6 Type S bugle-head steel screws spaced 12 in. OC in the field. The outer layer boards at the butt joint shall be attached to the base layer boards with No. 10, 1-1/2 in. long drywall screws spaced 8 in. OC and 1-1/2 in. from the end joint. Butted end joints to be offset a min of 24 in. from base layer end joints. Butted side joints of outer layer to be offset min 16 in. from butted side joints of base layer. When **Steel Framing Members** (Item 6G) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 72 in. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end, spaced approximately 2 in. in from joint. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Butt joint furring channels shall be attached with a RESILMOUNT Sound Isolation Clip secured to underside of every joist that is located over the butt joint. Over all Gypsum Board side joints, approximately 20 in. lengths of furring channel shall be installed parallel to trusses (Item 2) between main furring channels. Side joint furring channels shall be attached to underside of the truss with RESILMOUNT Sound Isolation Clips - located approximately 2 in. from each end of the approximate 20 in. length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge.

CGC INC — Types C, IP-X2, IPC-AR

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL ZAWAWI DRYWALL L L C SFZ — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

8. **Finishing System** — (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board.

9. **Grille** — Steel grille, installed in accordance with the installation instructions provided with the ceiling damper.

10. **Wire Mesh** — (Not Shown) — For use with Item 5A and 5B — 1 in. 20 gauge galvanized poultry netting installed between the furring channels and gypsum board. The poultry netting is attached with washers and 1/2 in. wafer head screws, spaced 24 in. OC., to the furring channels. The **Fiber, Sprayed** (Item 5A or 5B) is installed through cut-openings in the poultry netting, in-between trusses. The cut-openings in the poultry netting shall be staggered at a maximum of 6 ft.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2017-02-15

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AR12069

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APARTMENTS
PHASE II - BUILDING I
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	

A710

BUILDING '1' & '2'
UL DESIGN L546

ONLINE CERTIFICATIONS DIRECTORY

Design No. L513
BXUV.L513
Fire Resistance Ratings - ANSI/UL 263

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Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

Design No. L513

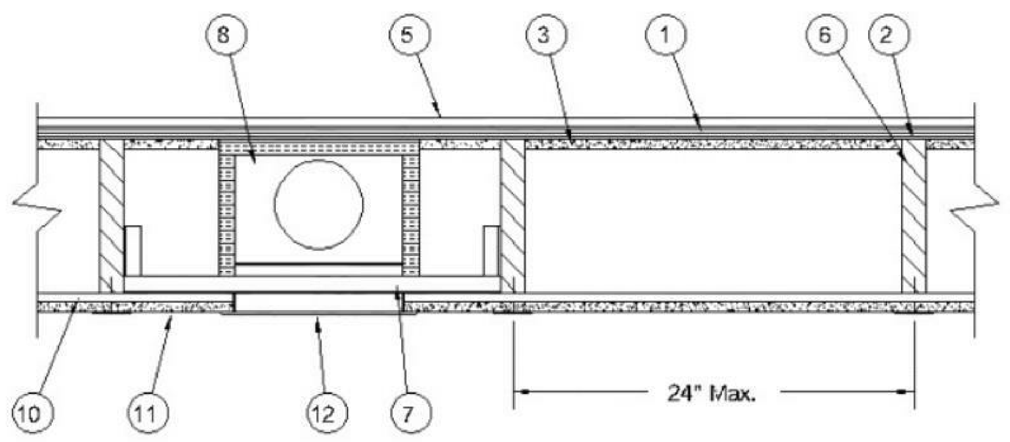
December 30, 2016

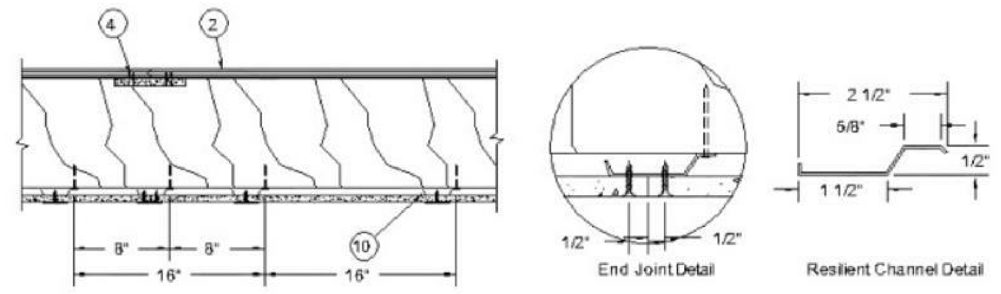
Unrestrained Assembly Rating — 1 Hr.

Finish Rating — 28 Min.

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**





1. **Subflooring** — Min 3/4 in. thick wood structural panels, min grade "Underlayment" or "Single Floor". Face grain of plywood or strength axis of panels to be perpendicular to joists with joints staggered.

2. **Adhesive** — Elastomeric adhesive per American Plywood Association Specification AFG-01, applied in 3/8 in. diam beads to top of joists and 1/4 in. diam beads to T& G panel joints.

3. **Battens** — Nom 6 by 22-1/2 by 5/8 in. thick pieces of gypsum board (Item 11) centered under T & G panel joints and fastened with staples (Item 4) spaced 7 in. OC along each edge. The battens and staples (Item 4) are optional when any of the optional finish flooring systems are used.

4. **Staples** — Formed of 16 SWG (0.062 in. thick) steel with 1-1/8 in. legs and 1/2 in. crown, driven flush with gypsum board batten strips.

5. **Finish Flooring System — (Optional)** — One of the following flooring system may be used over the subflooring. If a finished flooring system is used, the batten strips and staples may be omitted.

System No. 1

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1800 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

UNITED STATES GYPSUM CO — Types LRK, HSLRK, CSD

USG MEXICO S A DE C V — Types LRK, HSLRK, CSD

Floor Mat Materials* — (Optional) — (Optional) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials* — (Optional) — Nom 3/8 in. thick floor mat material loose laid over the subfloor. Floor topping thickness shall be as specified under **Floor Topping Mixture.**

GRASSWORX L L C — Type SC50

Alternate Floor Mat Material* — (Optional) - Floor mat material nominal 3/8 in. thick loose laid over the subfloor. Floor topping shall be a min 3/4 in. thick.

System No. 2

Finish Flooring — Floor Topping Mixture* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.4 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5-1/2 gal of water.

ELASTIZELL CORP OF AMERICA — Type FF

System No. 3

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Floor Mat Materials* — (Optional) — Floor mat material nom 5/64 in. (2 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1 in. of floor-topping mixture.

ECORE INTERNATIONAL INC — Type QTscu 4002

HACKER INDUSTRIES INC — Type Hacker Sound-Mat

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32 mm) of floor-topping mixture.

ECORE INTERNATIONAL INC — Type QTrbm 3006-3

HACKER INDUSTRIES INC — Type Hacker Sound-Mat II.

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/8 in. (3 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 3/4 in. (19 mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 125

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1 in. (25 mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250, Quiet Qurl 55/025

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/8 in. (10 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/4 in. (32 mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 400, Quiet Qurl 60/040

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/4 in. (19 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in. (38 mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 750, Quiet Qurl 65/075

Metal Lath (Optional) — For use with 3/8 in. (10 mm) floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor mat.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.

HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 4010, Firm-Fill High Strength, Gyp-Span Radiant, Firm-Fill 3310

System No. 4

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 105 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.2 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5-1/2 gal of water.

AERIX INDUSTRIES — Floor Topping Mix

System No. 5

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 1 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.4 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 62.5 lb of pea gravel, 312.5 lbs of sand with 5-1/2 gal of water.

LITE-CRETE INC — Type I

System No. 6

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1000 psi. Mixture shall consist of 5 to 8 gal of water to 80 lbs of floor topping mixture to 2.1 cu ft of sand.

ULTRA QUIET FLOORS — UQF-A, UQF-Super Blend, UQF-Plus 200

System No. 7

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

MAXXON CORP — Type D-C, GC, GC 2000, L-R, T-F, CT, SS

RAPID FLOOR SYSTEMS — Type RF, RFP, RFU, RFR, Ortecrete

Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

MAXXON CORP — Type Acousti-Mat I, Acousti-Mat II, Acousti-Mat II HP, Enkasonic 9110, Enkasonic 9110 HP, Acousti-Mat 3, Acousti-Mat 3 HP, Acousti-Mat LP, Acousti-Mat LP-R, Acousti-Mat SD.

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping over each floor mat material, primers, and use of crack suppression reinforcement.

MAXXON CORP — Crack Suppression Mat (CSM) or Maxxon Reinforcement (MR)

Metal Lath — (For use with or as an alternate to Crack Suppression Mat (CSM) or Maxxon Reinforcement (MR)) — 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.

System No. 8

Deleted

System No. 9

Finish Floor — Mineral and Fiber Board* — Min 1/2 in. thick, supplied in sizes ranging from 3 ft by 4 ft to 8 ft by 12 ft. All joints to be staggered a min of 12 in. with adjacent sub-floor joints.

HOMASOTE CO — Type 440-32 Mineral and Fiber Board

System No. 10

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

ALLIED CUSTOM GYPSUM — Accu-Crete, AccuRadiant, AccuLevel G40 and AccuLevel SD30

Alternate Floor Mat Material* — (Optional) - Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in.

ALLIED CUSTOM GYPSUM — Type AccuQuiet P80, Type AccuQuiet C40, AccuQuiet D13, and Type AccuQuiet D-18

System No. 11

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — 3/4 in. thickness of floor topping mixture having a min compressive strength of 2100 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

System No. 12

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) — Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional) — Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 13

Subflooring — Min 23/32 in. thick T&G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Gypsum Board* — One layer of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1 in. long No. 6 Type W bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches from the joints of the subfloor.

GEORGIA-PACIFIC GYPSUM L L C — Type DS

Floor Mat Materials* — (As an alternate to the single layer gypsum board) — Floor mat material loose laid over the subfloor.

MAXXON CORP — Type Acousti-Mat I, Acousti-Mat II, Acousti-Mat II HP, Acousti-Mat 3, Acousti-Mat 3 HP, Enkasonic 9110, Enkasonic 9110 HP, Acousti-Mat LP-R.

Gypsum Board* — (For use when floor mat is used) Two layers of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists on top of the floor mat material. Gypsum board secured to each other with 1 in. long No. 6 Type G bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches in between layers and from the joints of the subfloor.

GEORGIA-PACIFIC GYPSUM L L C — Type DS

System No. 14

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

DEPENDABLE LLC — GSL M3.4, GSL K2.6 and GSL RH.

Floor Mat Materials* — (Optional) — Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 15

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) — Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional) — Nom 3/32 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

PLITEQ INC — Type GenieMat RST02

Floor Mat Materials* — (Optional) — Nom 3/16 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

PLITEQ INC — Type GenieMat FF04

Floor Mat Materials* — (Optional) — Nom 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

PLITEQ INC — Type GenieMat FF06

Floor Mat Materials* — (Optional) — Nom 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

PLITEQ INC — Type GenieMat FF10

Floor Mat Materials* — (Optional) — Nom 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

PLITEQ INC — Type GenieMat FF17

Floor Mat Materials* — (Optional) — Nom 1 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

PLITEQ INC — Type GenieMat FF25

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APARTMENTS
PHASE II - BUILDING I
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	

A711

BUILDING '1' & '2'
UL DESIGN L513

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System No. 16

Finish Flooring* — Floor Topping Materials — Min 3/4 in. to 1-1/2 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance with a minimum compressive strength of 1500 psi.

See **Floor- and Roof-Topping Mixtures** (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional) — Floor mat material nom 1/8 in. to 3/4 in. thick. Loose laid over the subfloor. When used, Acousti-flor CSM (crack suppression mat) is loose laid over the floor mat material. Floor topping material thickness is dependent on thickness of floor mat used.

WALFLOR INDUSTRIES INC — Type Acousti-flor, Acousti-flor CSM. Floor topping thickness depends on products used as follows:

Acousti-flor (1/8 in. thick) - Floor topping thickness shall be a minimum of 3/4 in.

Acousti-flor (1/4 in. thick) - Floor topping thickness shall be a minimum of 1 in.

Acousti-flor (3/8 in. thick) - Floor topping thickness shall be a minimum of 1 in.

Acousti-flor (3/4 in. thick) - Floor topping thickness shall be a minimum of 1-1/2 in.

Metal Lath — (Optional) — Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.

Fiberglass Mesh Reinforcement — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat material.

6. **Wood Joists —** Min 2 by 10, spaced 24 in. OC and effectively fireblocked in accordance with local codes.

7. **Horizontal Bridging —** Used in same joist bay as ceiling damper (Item 8), when ceiling damper is employed. Wood 2 by 4 in. secured between joists with nails.

8. **Ceiling Damper* — (Optional) —** Max nom area shall be 198 sq in. Max rectangular size shall be 12 in. wide by 16-1/2 in. long. Max height of damper shall be 8-3/4 in. Aggregate damper openings shall not exceed 99 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 12) shall be installed in accordance with installation instructions.

AIR KING VENTILATION PRODUCTS — Series AS, Series AK

AIR MANAGEMENT INC — Models AMI-50-CD-WG-B, AMI-50-CD-WG-B/VC

CENTRAL VENTILATION SYSTEMS CO L L C — Models C-S/R-HC(-A), C-RD-HC(-A)

GREENHECK FAN CORP — Model CRD-1WJ

METAL-FAB INC — Models MSCDHC, MRCDHC

METAL INDUSTRIES INC — Models CD-S/R-HC, CD-S/R-HC-A, CD-RD-HC, CD-RD-HC-A

METROPOLITAN AIR TECHNOLOGY — Model C-S/R-HC

NCA MFG INC — Models CD-S/R-HC, CD-S/R-HC-A, CD-RD-HC, CD-RD-HC-A

PRICE INDUSTRIES LTD — Models CD-S/R-HC, CD-RD-HC

RUSKIN COMPANY — Model CFD7

UNITED ENERTECH CORP — Models C-S/R-HC(-A), C-RD-HC(-A)

9. **Batts and Blankets* — (Optional, Not Shown) —** For use with **Steel Framing Members*** (Item 10C) and **Gypsum Board*** (Item 11A) - Any thickness mineral wool or glass fiber insulation bearing the UL Classification Marking for Surface Burning Characteristics, having a flame spread index of 25 or less and a smoke spread index of 50 or less. Insulation fitted in the concealed space, draped over steel framing members/gypsum board ceiling membrane.

9A. **Batts and Blankets* —** For Use With Items 10G and 11C — Glass fiber insulation draped over the resilient channel/gypsum panel ceiling membrane. Max. 3-1/2 in. thickness of glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance having a min. density of 0.5 pcf.

9B. **Batts and Blankets* —** (Optional, Not Shown) — For use with **Steel Framing Members*** (specifically Item 10K) and **Gypsum Board*** (specifically Item 11D) - min. 3-1/2 in. thick min. density 0.9 lb/ft^3 unfaced fiberglass batt insulation bearing the UL Classification Marking for Surface Burning Characteristics, having a flame spread value of 25 or less and a smoke spread value of 50 or less. Insulation fitted in the concealed space, draped over steel framing members/gypsum board ceiling membrane and light fixture protection.

10. **Resilient Channels —** Formed of No. 25 MSG galv steel spaced 16 in. OC perpendicular to joists. Channels butted at splice, centered on joist and fastened to each joist with 1-7/8 in. long 6d cement-coated nails. Additional resilient channels positioned so as to coincide with end joints of gypsum board (Item 11), spaced 8 in. from other channels. Additional channels shall extend beyond each side edge of board. As an alternate to the resilient furring channels, Steel Framing Members* (Item 10A, 10B, 10C or 10D) may be used.

10A. **Steel Framing Members* — (Not Shown) —** As an alternate to Item 10, main runners nom 12 ft long spaced 48 in. OC. Cross tees nom 4 ft long installed perpendicular to main runners and spaced 16 in. OC. Additional cross tees located 8 in. from and on each side of gypsum board end joints. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Hanger wires to be located adjacent to main runner/cross tee intersections. Hanger wires wrapped and twist-tied on 16d nails driven into the side of joists at least 5 in. above the joist bottom face.

CHICAGO METALLIC CORP — Types 650, 650C, 670, 670C

10B **Steel Framing Members* — (Not Shown) —** As an alternate to Items 10 and 10A, main runners nom 12 ft long, spaced 48 in. OC. Ends of main runners at walls to rest on wall angle, without attachment, with 1/2 to 3/4 in. end clearance. Primary cross tees (1-1/2 in. wide across flange) or cross channels, nom 4 ft long, installed perpendicular to main runners and spaced 16 in. OC. Additional primary cross tees or cross channels required at each gypsum board end joint and 8 in. from and on each side of gypsum board end joint.

ARMSTRONG WORLD INDUSTRIES INC — Type DFR-8000

10C. **Steel Framing Members* — (Not Shown) —** As an alternate to Items 10, 10A and 10B, main runners, cross tees, cross channels and wall angle as listed below:

a. **Main Runners —** Nom 10 or 12 ft. long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Hanger wires to be located adjacent to main runner/cross tee intersections. Hanger wires wrapped and twist-tied on 16d nails driven in to the side of joists at least 5 in. above the bottom face.

b. **Cross Tees —** Nom 4 ft. long, 1-1/2 in. wide face, installed perpendicular to the main runners, spaced 16 in. OC. When Batts and Blankets* (Item 9) are used, cross tees spaced 16 in. OC. Additional cross tees or cross channels used at 8 in. from each side of butted gypsum board end joints. The cross tees or cross channels may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.

c. **Cross Channels —** Nom 4 ft. long, installed perpendicular to main runners, spaced 16 in. OC. When **Batts and Blankets*** (Item 9) are used, cross channels spaced 16 in. OC.

d. **Wall Angle or Channel —** Painted or galv steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum board.

CGC INC — Type DGL or RX.

USG INTERIORS LLC — Type DGL or RX.

10D. **Steel Framing Members* — (Not Shown) —** As an alternate to Items 10, 10A, 10B and 10C, furring channels and **Steel Framing Members*** as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to joists. Channels secured to joists as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to joists (Item 6). Clips spaced 48 in. OC., RSIC-1 and RSIC-1 (2.75) clips secured to alternating joists with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to alternating joists with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 11.

PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75)

10E. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 10, 10A, 10B, 10C and 10D. For use in corridors or rooms having a maximum width dimension of 14 ft. Steel framing members consist of grid runners, locking angle wall molding and hanger bars. Locking angle wall molding secured to walls with steel nails or screws spaced max 24 in. OC. Slots of locking angle wall molding parallel with hanger bars to be aligned with tabbed cutouts in bottom edge of hanger bars. Hanger bars spaced max 50 in. OC and suspended with No. 12 AWG steel hanger wires spaced max 48 in. OC. Adjoining lengths of hanger bar to overlap 12 in. and to be secured together and suspended by a shared hanger wire. A min clearance of 1/4 in. shall be maintained between the ends of the hanger bars and the walls. Grid runners cut-to-length and installed perpendicular to hanger bars and spaced max 16 in. OC with additional grid runners installed 8 in. OC at gypsum board end joints. Grid runners parallel with walls to be spaced max 16 in. from wall. Ends of grid runners to rest on and engage slots of locking angle wall molding with a clearance of 3/8 in. to 1/2 in. maintained between each end of the grid runner and the wall. Bulb of grid runner to be captured by tabbed cutouts in bottom edge of hanger bars.

ARMSTRONG WORLD INDUSTRIES INC — Type DFR-8000-SS

10F. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 10, 10A, 10B, 10C, 10D and 10E. Main runners nom 12 ft long, spaced 72 in. OC. Cross tees, nom 6 ft long, installed perpendicular to main runners and spaced 24 in. OC. Additional 6 ft long cross tees required at each gypsum board end joint with butted gypsum board end joints centered between cross tees spaced 8 in. OC. The main runners and cross tees may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.

ARMSTRONG WORLD INDUSTRIES INC — Type DFR-8000

10G. **Resilient Channels —** Resilient channels, formed from No. 25 MSG galv steel and shaped as shown, spaced 12 in. OC perpendicular to joist. Channels overlapped 4 in. at splices and secured to each joist with 1-1/4 in. Type S screws. Min end clearance of channels to wall to be 1/2 in. Additional resilient channels positioned so as to coincide with end joints of gypsum board (Item 11B and 11C). Channels oriented opposite at wallboard butt joints spaced 6 in. OC.

10H. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 10, 10A, 10B, 10C, 10D, 10E, 10F, 10G furring channels and **Steel Framing Members*** as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to joists. Channels secured to joists as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to joists (Item 6). Clips spaced 48 in. OC., GenieClips secured to alternating joists with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 11.

PLITEQ INC — Type GENIECLIP

10I. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 10-10H, furring channels and Steel Framing Members as described below.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in deep, spaced 24 in OC, perpendicular to joists. Channels secured to joists as described in Item b.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood joists (Item 2). Clips spaced at 24" OC and secured to the bottom of the joists with one No. 10 x 2-1/2 Coarse Drywall Screw through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and screwed with four No. 8 x 1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Additional clips are required to hold the Gypsum Butt joints and side joints as described in Item 11.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

10J. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 10 through 10I - Main runners nom 12 ft long, spaced 72 in. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Cross tees, nom 6 ft long, installed perpendicular to main runners and spaced 24 in. OC. Additional 6 ft long cross tees required at each gypsum board end joint with butted gypsum board end joints centered between cross tees spaced 8 in. OC. The main runners and cross tees may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.

USG INTERIORS LLC — Type DGL or RX.

10K. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 10 through 10J - Main runners nom 12 ft long, spaced 48 in. OC. Cross tees, nom 4 ft. long, installed perpendicular to main runners and spaced 24 in. OC. Additional 4 ft. long cross tees required at 6 in. from each side of butted gypsum board end joints. When **Batts and Blankets*** (Item 9B) are used, cross tees spaced 16 in. OC with additional cross tees 8 in. away from each side of butted gypsum board end joints. The cross tees shall be riveted with 1/8 in. dia. rivets to the wall angle and to the main tee where the cross tee does not align with slot in the main tee. Galvanized steel wall angle with 1-1/2 in. legs attached to walls at perimeter of ceiling with fasteners at 16 in. OC. to support steel framing member ends and for screw-attachment of the gypsum board.

CERTAINTEED CORP — Types DWS12-13-20, DWS4.16-13-20, DWS4-13-20, DWS2-13-20, DWS2.16-13-20 and DWA1.5-1.5

10L. **Framing Members* —** (Not Shown) — As an alternate to Items 10 through 10K. Main runners nom 12 ft long, spaced 72 in. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Cross tees, nom 6 ft long, installed perpendicular to main runners and spaced 24 in. OC. Additional 6 ft long cross tees required at each gypsum board end joint with butted gypsum board end joints centered between cross tees spaced 8 in. OC. The main runners and cross tees may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.

CHICAGO METALLIC CORP — Type 670C

11. **Gypsum Board* —** Nom 5/8 in. thick by 4 ft wide gypsum board. When resilient channels (Item 10) are used, gypsum board installed with long dimension perpendicular to resilient channels and edge joints located between wood joists. Gypsum board secured to resilient channels with 1 or 1-1/4 in. long Type S bugle head screws spaced 12 in. OC in field and 8 in. OC along end joints. End joints of gypsum board similarly fastened to additional resilient channels positioned at end joint locations. Screws located 3/4 in. from side joints and 1/2 in. from end joints.

When **Steel Framing Members*** (Items 10A, 10B or 10C) are used, gypsum board installed with long dimension perpendicular to cross tees with side joints centered along main runners and end joints centered along cross tees. Gypsum board secured to cross tees with 1 in. long Type S bugle head screws spaced 12 in. OC in the field and 8 in. OC along end joints. Gypsum board also secured to main runners with 1 in. long Type S bugle head screws midway between cross tees. Screws along sides and ends of boards spaced 3/4 to 1/2 in. from board edge. End joints of the sheets shall be staggered with spacing between joints on adjacent boards not less than 4 ft OC.

When **Steel Framing Members*** (Items 10D, 10H) are used, gypsum board installed with long dimension perpendicular to furring channels and side joints of sheet located beneath joists. Nom 1 or 1-1/4 in. long Type S bugle head screws are driven through channel spaced 12 in. OC in the field. Gypsum board butt joints shall be staggered min. 2 ft. within the assembly, and occur between the main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to underside of the joist with one clip at each end of the channel. Screw spacing along the butt joint to attach the wallboard to the furring channels shall be 8 in. OC.

When alternate **Steel Framing Members*** (Item 10E) are used, gypsum board sheets installed with long dimension (side joints) perpendicular to the grid runners with the end joints staggered min 4 ft and centered between grid runners which are spaced 8 in. OC. Prior to installation of the gypsum board sheets, backer strips consisting of nom 7-3/4 in. wide by 48 in. long pieces of gypsum board are to be laid atop the grid runner flanges and centered over each butted end joint location. The backer strips are to be secured to the flanges of the grid runners at opposite corners of the backer strip to prevent the backer strips from being uplifted during screw-attachment of the gypsum board sheets. Gypsum board fastened to grid runners with drywall screws spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board. The butted end joints are to be secured to the backer strip with No. 10 by 1-1/2 in. long Type G laminating screws located 1 in. from each side of the butted end joint and spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board.

When alternate **Steel Framing Members*** (Item 10F) are used, gypsum board sheets installed with long dimension (side joints) perpendicular to the 6 ft long cross tees with the end joints staggered min 4 ft and centered between cross tees which are spaced 8 in. OC. Gypsum board side joints may occur beneath or between main runners. Prior to installation of the gypsum board sheets, backer strips consisting of nom 7-3/4 in. wide pieces of gypsum board are to be laid atop the cross tee flanges and centered over each butted end joint location. The backer strips are to be secured to the flanges of the cross tees at opposite corners of the backer strip to prevent the backer strips from being uplifted during screw-attachment of the gypsum board sheets. Gypsum board fastened to cross tees with drywall screws spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board. The butted end joints are to be secured to the backer strip with No. 10 by 1-1/2 in. long Type G laminating screws located 1 in. from each side of the butted end joint and spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board.

When **Steel Framing Members** (Item 10I) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 72 in. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end, spaced approximately 2 in. in from joint. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Butt joint furring channels shall be attached with a RESILMOUNT Sound Isolation Clip secured to underside of every joist that is located over the butt joint. Over all Gypsum Board side joints, approximately 20 in. lengths of furring channel shall be installed parallel to joists (Item 2) between main furring channels. Side joint furring channels shall be attached to underside of the joist with RESILMOUNT Sound Isolation Clips - located approximately 2 in. from each end of the approximate 20 in. length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge.

When alternate **Steel Framing Members*** (Item 10J and 10L) are used, gypsum board sheets installed with long dimension (side joints) perpendicular to the 6 ft long cross tees with the end joints staggered min 4 ft and centered

between cross tees which are spaced 8 in. OC. Gypsum board side joints may occur beneath or between main runners. Prior to installation of the gypsum board sheets, backer strips consisting of nom 7-3/4 in. wide pieces of gypsum board are to be laid atop the cross tee flanges and centered over each butted end joint location. The backer strips are to be secured to the flanges of the cross tees at opposite corners of the backer strip with hold down clips to prevent the backer strips from being uplifted during screw-attachment of the gypsum board sheets. Gypsum board fastened to cross tees with 1 in. drywall screws spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board. The butted end joints are to be secured to the backer strip with No. 10 by 1-1/2 in. long Type G laminating screws located 1 in. from each side of the butted end joint and spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board.

AMERICAN GYPSUM CO — Type AG-C

CERTAINTEED GYPSUM INC — Type FRPC or SF3, or Type C

CGC INC — Type C

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types 5, C, DAPC, TG-C

NATIONAL GYPSUM CO — Types eXP-C, FSK-C, FSW-C, FSW-G

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C, PG-3 or PG-C

PANEL REY S A — Types PRC, PRC2

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — Type C

USG BORAL ZAWAWI DRYWALL L L C SFZ — Type C

USG MEXICO S A DE C V — Type C

11A. **Gypsum Board* —** For use when **Batts and Blankets*** (Item 9) and **Steel Framing Members*** (Item 10C) are used. Nom 5/8 in. thick, 4 ft wide gypsum board installed with long dimension perpendicular to cross tees with side joints centered along main runners and end joints centered along cross tees. Fastened to cross tees with 1 in. long Type S bugle head screws spaced 8 in. OC in the field and 8 in. OC along end joints. Fastened to main runners with 1 in. long Type S bugle head screws spaced midway between cross tees. Screws along sides and ends of boards spaced 3/8 to 1/2 in. from board edge. End joints of the sheets shall be staggered with spacing between joints on adjacent boards not less than 4 ft OC.

CGC INC — Type C

UNITED STATES GYPSUM CO — Type C

USG BORAL ZAWAWI DRYWALL L L C SFZ — Type C

USG MEXICO S A DE C V — Type C

11B. **Gypsum Board* —** For use when **Batts and Blankets*** (Item 9) and Resilient Channels (Item 10G) are used. Nom 5/8 in. thick, 4 ft wide gypsum board installed with long dimension perpendicular to resilient channels. Nom 1 in. long No. Type S bugle head screws are driven through channel spaced 8 in. OC. End joints of gypsum board similarly fastened to additional resilient channels positioned at end joint locations.

CERTAINTEED GYPSUM INC — Type C

11C. **Gypsum Board* —** For use when **Batts and Blankets*** (Item 9A) and Resilient Channels (Item 10G) are used. Nom 5/8 in. thick, 4 ft wide gypsum board installed with long dimension perpendicular to resilient channels. Nom 1 in. long No. Type S bugle head screws are driven through channel spaced 8 in. OC. End joints of gypsum board similarly fastened to additional resilient channels positioned at end joint locations.

AMERICAN GYPSUM CO — Type AG-C.

11D. **Gypsum Board* —** For use when alternate **Steel Framing Members*** (Item 10K) are used - 1/2 in. thick, 4 ft. wide; installed with long dimension parallel to main runners and perpendicular to the 4 ft. long cross tees with the end joints centered between cross tees which are spaced 6 in. OC. Sheets are attached to cross tees with screws spaced 8 in. OC on the ends and 12 in. OC in the field with additional screws located 1-1/2 in, from the side edges. Sheets are attached to the main tees with screws spaced 8 in. OC with additional screws located 4 in. OC from the edges. Screws on the sides are located 1/2 in. from the side edge of the gypsum board. When **Batts and Blankets*** (Item 9B) are used - 5/8 in. thick, 4 ft wide; installed with long dimension parallel to main runners and perpendicular to cross tees and attached with screws spaced 8 in. OC on the ends and 8 in. OC in the field with additional screws located 1-1/2 in. from the side edges. Sheets are attached to main tees with screws spaced 8 in. OC with additional screws located 4 in. OC from the side edges. Screws on the sides located 3/4 in. from the side edge of the gypsum board, and screws at the end of the gypsum board located 1/2 in. from the board ends. Joints to be covered with paper tape and joint compound.

CERTAINTEED GYPSUM INC — Type C

12. **Finishing System — (Not Shown) —** Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom. 3/32 in. thick veneer plaster may be applied to the entire surface of the gypsum board.

13. **Grille —** Steel grille installed in accordance with the installation instructions provided with the ceiling damper.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2016-12-30

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MHA - PALMS AT UNIVERSITY APARTMENTS
PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	

A712

BUILDING '1' & '2'
UL DESIGN L513

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ONLINE CERTIFICATIONS DIRECTORY

Design No. U301
BXUV.U301
Fire-resistance Ratings - ANSI/UL 263

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Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
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BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

Design No. U301

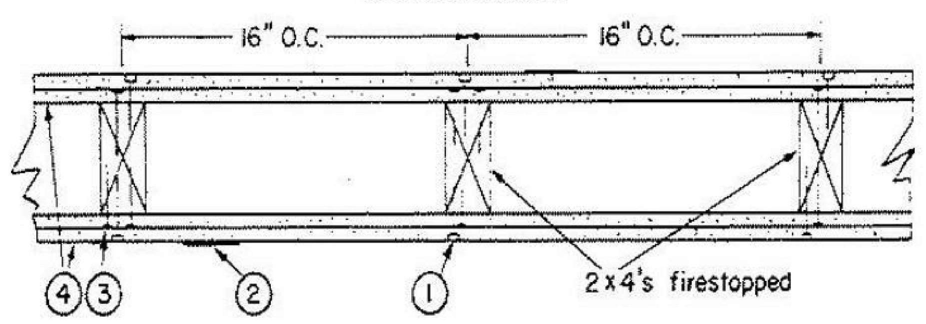
September 21, 2015

Bearing Wall Rating — 2 HR.

Finish Rating — 66 Min.

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Nailheads** — Exposed or covered with joint compound.

2. **Joints** — Exposed joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape.

3. **Nails** — 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam, 1/4 in. diam heads, and 8d cement coated nails 2-3/8 in. long, 0.113 in. shank diam, 9/32 in. diam heads.

4. **Gypsum Board*** — 5/8 in. thick, two layers applied either horizontally or vertically. Inner layer attached to studs with the 1-7/8 in. nails spaced 6 in. OC. Outer layer attached to studs over inner layer with the 2-3/8 in. long nails spaced 8 in. OC. Vertical joints located over studs. All joints in face layers staggered with joints in base layers. Joints of each base layer offset with joints of base layer on opposite side.

When used in widths other than 48 in., gypsum board to be installed horizontally.

When Steel Framing Members* (Item 6 or 6A) are used, base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced max 24 in. OC; face layer attached with 1-5/8 in. long Type S bugle-head steel screws spaced max 12 in. OC.

ACADIA DRYWALL SUPPLIES LTD — Type X, 5/8 Type X, Moisture Resistant Type X, Gypsum Sheathing Type X, Mold& Mildew Resistant Type X and Mold & Mildew Resistant AR Type X, , Type Blueglass Exterior Sheathing

AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, AGX-11.

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1.

CERTAINTEED GYPSUM INC — Types 1, FRPC, EGRG, GlasRoc, Type C, Type X, Type X-1.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Types LGFC2A, LGFC6A, LGFC-C/A, LGFC-WD, LGLLX.

GEORGIA-PACIFIC GYPSUM L L C — Types 5, 6, 9, C, DAP, DD, DA, DAPC, DGG, DS, GPFS6. LS, TG-C, Type X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, GreenGlass Type X, Type LWX, Veneer Plaster Base-Type LWX, Water Rated-Type LWX, Sheathing Type-LWX, Soffit-Type LWX, Type DGLW, Water Rated-Type DGLW, Sheathing Type- DGLW, Soffit-Type DGLW, Type LW2X, Veneer Plaster Base - Type LW2X, Water Rated - Type LW2X, Sheathing - Type LW2X, Soffit - Type LW2X, Type DGL2W, Water Rated - Type DGL2W, Sheathing - Type DGL2W.

NATIONAL GYPSUM CO — Types eXP-C, FSK, FSK-C, FSK-G, FSW, FSW-3, FSW-5, FSW-6, FSW-8, FSW-C, FSW-G, FSMR-C, FSL.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-2, PG-3, PG-3W, PG-4, PG-5, PG-5W, PG-5WS, PG-9, PG-11, PG-C or PGS-WRS.

PANEL REY S A — Types PRC, PRX, RHX, MDX, ETX, GREX

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1

THAI GYPSUM PRODUCTS PCL — Type C or Type X.

UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL ZAWAWI DRYWALL L L C SFZ — Types C, SCX

USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX.

4A. **Gypsum Board*** — (As an alternate to Item 4) — Nom 3/4 in. thick, installed as described in Item 4.

CGC INC — Types AR, IP-AR.

UNITED STATES GYPSUM CO — Types AR, IP-AR.

USG MEXICO S A DE C V — Types AR, IP-AR.

4B. **Gypsum Board*** — (As an alternate to Items 4 and 4A)—5/8 in. thick, 2 ft wide, tongue and groove edge, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 4. Joint covering (Item 2) not required.

CGC INC — Type SHX

UNITED STATES GYPSUM CO — Type SHX

USG MEXICO S A DE C V — Type SHX

4C. **Gypsum Board*** — (As an alternate to Items 4, 4A or 4B — Not shown) For Direct Application to Studs Only- For use on one or both sides of the wall as the base layer or one or both sides of the wall as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-12 pan head steel screws, F4j.one at the top of the strip and one at the bottom of the strip. Lead discs or tabs may be used in lieu of or in addition to the lead batten strips or optional at other locations. Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards underneath screw locations prior to the installation of the screws. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.

RAY-BAR ENGINEERING CORP — Type RB-LBG.

4D. **Gypsum Board*** — As an Alternate to Item 4 — 5/8 in. thick applied either horizontally or vertically. Inner layers fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. Outer layers fastened to framing with 1-7/8 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum board to be installed horizontally. All joints in face layers staggered with joints in base layers. Joints of each base layer offset with joints of base layer on opposite side.

AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C.

4E. **Gypsum Board*** — (As an alternate to Items 4 through 4D) — 5/8 in. thick, 4 ft. wide, paper surfaced applied vertically and secured as described in Item 4.

GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board.

4F. **Gypsum Board*** — (As an alternate to Item 4) — Not to be used with item 6. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically and secured as described in Item 4.

NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board

4G. **Gypsum Board *** — (As an alternate to Items 4 through 4F) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types QuietRock ES.

4H. **Gypsum Board*** — (As an alternate to Item 4) — Not to be used with item 6. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically and secured as described in Item 4.

CERTAINTEED GYPSUM INC — Type SilentFX

4I. **Gypsum Board*** — (As an alternate to item 4) — 5/8 in. thick, two layers applied either horizontally or vertically. Inner layer attached to studs with 1-1/4 in. long Type W steel screws spaced 8 in. OC. Outer layer attached to studs over inner layer with 2 in. long Type W steel screws spaced 8 in. OC offset 6 in. from base layer. Vertical joints located over studs. Vertical and horizontal joints between inner and outer layers staggered. Outer layer joints covered with joint tape and compound, screwheads covered with joint compound. As an alternate to the joint compound nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced. Wallboard other than 48 in. wide must be applied horizontally. The SoundBreak XP Type X Gypsum Board is not to be used with Item 6.

NATIONAL GYPSUM CO — Types eXP-C, FSK, FSK-C, FSK-G, FSW, FSW-3, FSW-5, FSW-6, FSW-C, FSW-G, FSMR-C, SoundBreak XP Type X Gypsum Board.

4J. **Gypsum Board*** — (As an alternate to Items 4) For Direct Application to Studs Only- For use as the base layer or as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick. compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.

MAYCO INDUSTRIES INC — "X-Ray Shielded Gypsum"

4K. **Gypsum Board*** — For use with Item 7 — 5/8 in. thick, two layers applied vertically. Inner layer attached to resilient channels with 1 in. long steel screws spaced 8 in. OC. Outer layer attached to resilient channels over inner layer with 1-5/8 in. long steel screws spaced 8 in. OC. All joints in face layers staggered with joints in base layers. Joints of each base layer offset with joints of base layer on opposite side. Insulation, Items 8 or 9 is required.

AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, AGX-11.

4L. **Gypsum Board*** — (As an alternate to Items 4) For Direct Application to Studs Only- For use as the base layer or as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.

RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

4M. **Gypsum Board*** — (As an alternate to Item 4) — 5/8 in. thick, 4 ft. wide, two layers applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 4.

CERTAINTEED GYPSUM INC — 5/8" Easi-Lite Type X

4N. **Gypsum Board*** — (As an alternate to 5/8 in. Type FSW in Item 4 or 4I) - Nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Two layers of 5/16 in. for every single layer of 5/8 in. gypsum board described in Item 4 or 4I. Horizontal joints on the same side need not be staggered. Inner layer of each double 5/16 in. layer attached with fasteners, as described in item 4 or 4I, spaced 24 in. OC. Outer layer of each double 5/16 in. layer attached per Item 4 or 4I.

NATIONAL GYPSUM CO — Type FSW

4O. **Wall and Partition Facings and Accessories *** — (As an alternate to Items 4 through 4N) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527

4P. **Gypsum Board*** — (As an alternate to Item 4) — 5/8 in. thick, two layers applied either horizontally or vertically. Inner layer attached to studs with 1-1/4 in. long Type W steel screws spaced 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. Outer layer attached to studs over inner layer with 1-7/8 in. long Type W steel screws spaced 10 in. OC offset 5 in. from base layer with the last two screws 4 and 1 in. from the edges of the board. Vertical joints located over studs. Vertical and horizontal joints between inner and outer layers staggered. Outer layer joints covered with joint tape and compound, screwheads covered with joint compound. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A, Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

5. **Molded Plastic*** — Not shown, Optional — Solid vinyl siding mechanically secured over the outer layer to framing members in accordance with manufacturer's recommended installation details.

ALSIDE, DIV OF ASSOCIATED MATERIALS INC

GENTEK BUILDING PRODUCTS LTD

VYTEC CORP

6. **Steel Framing Members** — (Optional, Not Shown)* - Furring channels and resilient sound isolation clip as described below:

A. **Furring Channels** — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Wallboard attached to furring channels as described in Item 4.

B. **Steel Framing Members*** — Resilient sound isolation clip used to attach furring channels (Item 6a) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.

PAC INTERNATIONAL INC — Types RSIC-1, RSIC-1 (2.75).

6A. **Steel Framing Members** — (Optional, Not Shown)* — Furring channels and resilient sound isolation clip as described below:

A. **Furring Channels** — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured together with four self-tapping No. 8x1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Gypsum board attached to furring channels as described in Item 4. Side joint furring channels shall be attached to studs with RESILMOUNT Sound Isolation Clips - Type A237R located approximately 2 in. from each end of length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge.

B. **Steel Framing Members*** — Resilient sound isolation clip used to attach furring channels (Item 6Aa) to studs. Clips spaced 16 in. OC., and secured to studs with No. 10 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

7. **Furring Channel** — Optional — Not Shown — For use on one side of the wall with Item 4K — Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Item 8 or 9 is required.

8. **Batts and Blankets*** — Required for use with resilient channels, Item 7, min. 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the nom 4 in. face of the studs with staples placed 24 in. OC.

ROXUL INC — Type SAFEnSOUND

THERMAFIBER INC — Type SAFB

9. **Batts and Blankets*** — (As an alternate to Item 8) — min. 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the stud cavities. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

9A. **Fiber, Sprayed*** — (optional) As an alternate to Batts and Blankets (Item 8), Required for use with resilient channels, Item 7, Not for use with Item 6, or 6A. — Spray applied mineral wool insulation. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See Fiber, Sprayed (CCAZ).

TEXAS AMERROCK PARTNERS L P, DBA AMERROCK PRODUCTS — Type Rockwool

10. **Wall and Partition Facings and Accessories*** — (Optional, Not shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 or QR-510

11. **Cementitious Backer Units*** — (Optional Item Not Shown — For Use On Face Of 2 Hr Systems With All Standard Items Required) — 7/16 in., 1/2 in., 5/8 in., 3/4 in. or 1 in. thick, min. 32 in. wide.- Applied vertically with vertical joints centered over studs. Face layer fastened over gypsum board to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members, and a minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC.

NATIONAL GYPSUM CO — Type DuraBacker, PermaBase, DuraBacker Plus, or PermaBase Plus

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2015-09-21

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MHA - PALMS AT UNIVERSITY APARTMENTS
PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	

A713

BUILDING '1' & '2'
UL DESIGN U301

ONLINE CERTIFICATIONS DIRECTORY

Design No. U305
BXUV.U305
Fire Resistance Ratings - ANSI/UL 263

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Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

Design No. U305

April 04, 2017

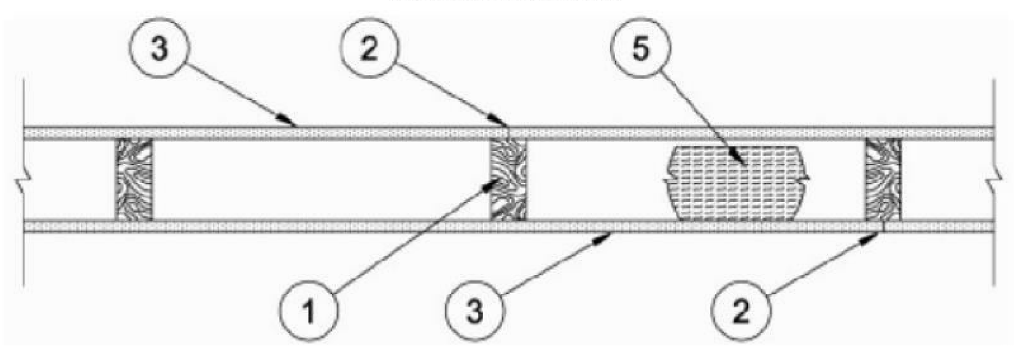
Bearing Wall Rating — 1 Hr

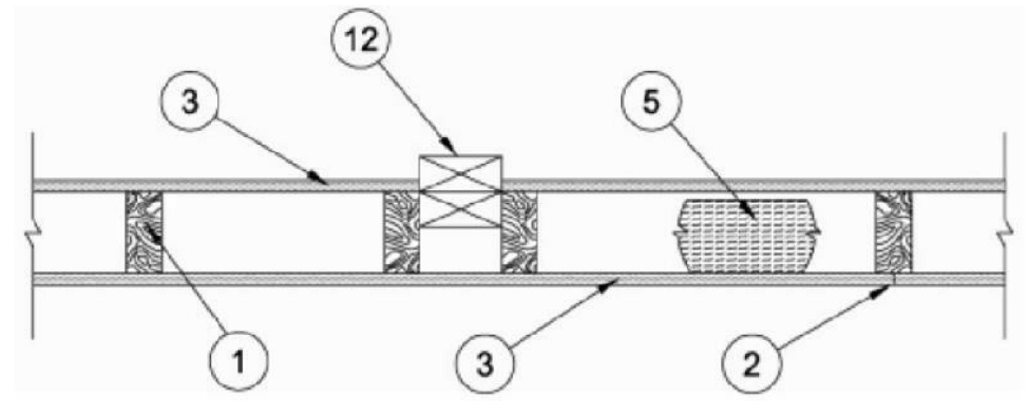
Finish Rating — See Items 3, 3A, 3D, 3E, 3F, 3G, 3H, 3J and 3L.

STC Rating - 56 (See Item 9)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**





1. **Wood Studs —** Nom 2 by 4 in. spaced 16 in. OC max, effectively firestopped.

2. **Joints and Nail-Heads —** Joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape. Nailheads exposed or covered with joint compound.

3. **Gypsum Board* —** 5/8 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths other than 48 in., gypsum panels are to be installed horizontally. For an alternate method of attachment of gypsum panels, refer to Items 6, 6A or 6B, **Steel Framing Members***.

When Items 6, 6B, or 6C **Steel Framing Members***, are used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

When Item 6A, **Steel Framing Members***, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers. One layer of gypsum board attached to opposite side of wood stud without furring channels as described in Item 3.

When Item 7, resilient channels are used, 5/8 in. thick, 4 ft wide gypsum panels applied vertically. Screw attached furring channels with 1 in. long, self-drilling, self-tapping Type S or S-12 steel screws spaced 8 in. OC, vertical joints located midway between studs.

ACADIA DRYWALL SUPPLIES LTD — Type X (finish rating 22 min), 5/8 Type X, Moisture Resistant Type X, Gypsum Sheathing Type X, Mold & Mildew Resistant Type X and Mold & Mildew Resistant AR Type X, Type Blueglass Exterior Sheathing

AMERICAN GYPSUM CO — Types AGX-1(finish rating 23 min.), M-Glass (finish rating 23 min.), Type AGX-11 (finish rating 26 min), Type LightRoc (finish rating 22 min) or Type AG-C

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1 (finish rating 24 min)

CERTAINTEED GYPSUM INC — Type 1, Type SF3 (finish rating 20 min) or FRPC; Type C, Type X or Type X-1 (finish rating 26 min); Type EGRG or GlasRoc (finish rating 23 min)

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min)

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A (finish rating 34 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX (finish rating 21 min)

GEORGIA-PACIFIC GYPSUM L L C — Type 5 (finish rating 26 min), Type 6 (finish rating 23 min), Type 9 (finish rating 26 min), Type C (finish rating 26 min), Type DGG (finish rating 20 min), Type GPFS1 (finish rating 20 min), Type GPFS2 (finish rating 20 min), Type GPFS6 (finish rating 26 min), Type DS, Type DAP, Type DD (finish rating 20 min), Type DA, Type

DAPC, Type LS (finish rating 23 min), Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, Type LWX (finish rating 22 min), Veneer Plaster Base-Type LWX (finish rating 22 min), Water Rated-Type LWX (finish rating 22 min), Sheathing Type-LWX (finish rating 22 min), Soffit-Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Water Rated-Type DGLW (finish rating 22 min), Sheathing Type- DGLW (finish rating 22 min), Soffit-Type DGLW (finish rating 22 min), Type LWX (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), Water Rated - Type LW2X (finish rating 22 min), Sheathing - Type LW2X (finish rating 22 min), Soffit - Type LW2X (finish rating 22 min), Type DGL2W (finish rating 22 min), Water Rated - Type DGL2W (finish rating 22 min), Sheathing - Type DGL2W (finish rating 22 min)

NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min), Type FSL (finish rating 24 min), Type FSW-8

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-2 (finish rating 20 min), PG-3 (finish rating 20 min), Types PG-3W, PG-5W (finish rating 20 min), Type PG-4 (finish rating 20 min), Type PG-6 (finish rating 23 min), Types PG-3WS, PG-5WS, PGS-WRS (finish rating 20 min), Types PG-5, PG-9 (finish rating 26 min), PG-11 or Type PG-C

PANEL REY S A — Type GREX, PRX, PRC, PRC2; Types RHX, MDX, ETX (finish rating 22 min)

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1 (finish rating 26 min)

THAI GYPSUM PRODUCTS PCL — Type C, Type X (finish rating 26 min)

UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type FRX-G (finish rating 29 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type ULIX (finish rating 20 min)

USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), SCX (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type ULX (finish rating 22 min)

3A. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.

AMERICAN GYPSUM CO — Types AGX-1 (finish rating 25 min.), M-Glass (finish rating 25 min.), Type AG-C (finish rating 25 min.)

CERTAINTEED GYPSUM INC — Type C, Type X or Type X-1 (finish rating 26 min)

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min)

UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type FRX-G (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min)

USG BORAL ZAWAWI DRYWALL L L C SFZ — Types C, SCX

USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX, Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min)

3B. **Gypsum Board* —** (As an alternate to Item 3) — Nom 3/4 in. thick, installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-3/8 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A.

CGC INC — Types AR, IP-AR

UNITED STATES GYPSUM CO — Types AR, IP-AR

USG MEXICO S A DE C V — Types AR, IP-AR

3C. **Gypsum Board* —** (As an alternate to Items 3, 3A and 3B) — 5/8 in. thick, 2 ft wide, tongue and groove edge, applied horizontally to one side of the assembly. Installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-1/4 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A. Joint covering (Item 2) not required.

CGC INC — Type SHX

UNITED STATES GYPSUM CO — Type SHX

USG MEXICO S A DE C V — Type SHX

3D. **Gypsum Board* —** (As an alternate to Items 3, 3A, 3B, or 3C — Not Shown) — For Direct Application to Studs Only- Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs or tabs may be used in lieu of or in addition to the lead batten strips or optional at other locations. Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards underneath screw locations prior to the installation of the screws. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

RAY-BAR ENGINEERING CORP — Type RB-LBG (finish rating 24 min)

3E. **Gypsum Board* —** (As an alternate to Items 3, 3A, 3B, 3C, and 3D) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.

GEORGIA-PACIFIC GYPSUM L L C — Type DGG (finish rating 20 min), GreenGlass Type X (finish rating 23 min)

3F. **Gypsum Board* —** (As an alternate to Items 3, 3A, 3B, 3C, 3D, and 3E) — 5/8 in. glass-mat faced with square edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC around the perimeter and in the field with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Nails shall be placed 1 inch and 3 inch from horizontal joints and 7 inch OC thereafter.

CGC INC — Type USGX (finish rating 22 min)

UNITED STATES GYPSUM CO — Type USGX (finish rating 22 min.)

USG MEXICO S A DE C V — Type USGX (finish rating 22 min.)

3G. **Gypsum Board* —** (As an alternate to Items 3 through 3F) — 5/8 in. thick paper surfaced applied vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.

GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min)

3H. **Gypsum Board* —** (As an alternate to Items 3) — Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically only. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.

NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board

3I. **Gypsum Board* —** (As an alternate to Items 3 through 3H, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES (finish rating 20 min)

3J. **Gypsum Board* —** (As an alternate to Item 3) — Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically or horizontally. Gypsum panels secured per item 3 or 3A.

CERTAINTEED GYPSUM INC — Type SilentFX

3K. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 8 in. OC with the last screw 1 in. from the edge of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min)

3L. **Gypsum Board* —** (As an alternate to Item 3) — For Direct Application to Studs Only — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick. compression fitted or adhered over the screw heads. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D".

MAYCO INDUSTRIES INC — "X-Ray Shielded Gypsum"

3M. **Gypsum Board* —** (As an alternate to Items 3) — For Direct Application to Studs Only — For use as the base layer or as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.

RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

3N. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick, 4 ft. wide, applied horizontally or vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 3 or 3A.

CERTAINTEED GYPSUM INC — 5/8" Easi-Lite Type X (finish rating 24 min)

3O. **Wall and Partition Facings and Accessories* —** (As an alternate to Item 3, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527 (finish rating 24 min).

3P. **Gypsum Board* —** (As an alternate to Item 3, Not Shown) — Two layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by wood studs. Horizontal joints on the same side between face and base layers need not be staggered. Base layer gypsum panels fastened to studs with 1-1/4 in. long drywall nails spaced 8 in. OC. Face layer gypsum panels fastened to studs with 1-7/8 in. long drywall nails spaced 8 in. OC starting with a 4" stagger.

NATIONAL GYPSUM CO — Type FSW (finish rating 25 min)

3Q. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

3R. **Gypsum Board* —** (As an alternate to Item 3. For use with Item 5H) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 3 above. Applied either horizontally or vertically, and screwed to panels with 1-5/8 in. long Type W coarse thread steel screws at 8 in. OC at perimeter and in the field with the last two screws 4 and 3/4 in. from the edges of the board when applied as the base layer. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

4. **Steel Corner Fasteners —** (Optional) — For use at wall corners. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide cleats protruding into the 5/8 in. wide channel, fabricated from 24 gauge galv steel. Fasteners applied only to the end or cut edge (not along tapered edges) of the gypsum board, no greater than 2 in. from corner of gypsum board, max spacing 16 in. OC. Nailed to adjacent stud through tab using one No. 6d cement coated nail per fastener. Corners of wall board shall be nailed to top and bottom plate using No. 6d cement coated nails.

5. **Batts and Blankets* —** (Optional — Required when Item 6A is used (RC-1)) — Glass fiber or mineral wool insulation. Placed to completely or partially fill the stud cavities. When Item 6A is used, glass fiber or mineral wool insulation shall be friction-fitted to completely fill the stud cavities.

CERTAINTEED CORP

JOHNS MANVILLE

KNAUF INSULATION LLC

MANSON INSULATION INC

OWENS CORNING HT INC, DIV OF OWENS CORNING — Corning Fiberglas Corp

ROCK WOOL MANUFACTURING CO — Delta Board

ROXUL INC — Acoustical Fire Batts

THERMAFIBER INC — Type SAFB

5A. **Fiber, Sprayed* —** (Not Shown — Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft^3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft^3, in accordance with the application instructions supplied with the product. When Item 6B is used, Fiber, Sprayed shall be INS735, INS745, INS765LD or INS770LD.

U S GREENFIBER L L C — INS735 & INS745 for use with wet or dry application. INS510LD, INS515LD, INS541LD, INS735, INS745, INS765LD, and INS770LD are to be used for dry application only

5B. **Fiber, Sprayed* —** (Not Shown - Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

NU-WOOL CO INC — Cellulose Insulation

5C. **Batts and Blankets* —** Required for use with resilient channels, Item 7, 3 in. thick mineral wool batts, friction-fitted to fill interior of wall.

SEE SHEET A715
FOR PAGES 7 TO 9

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MHA - PALMS AT UNIVERSITY
APARTMENTS
PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS		
NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	

A714

BUILDING '1' & '2'
UL DESIGN U305

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THERMAFIBER INC — Type SAFB

5D. **Glass Fiber Insulation —** (As an alternate to Item 5C) — 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the interior of the wall. See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

5E. **Batts and Blankets* —** (Required for use with Wall and Partition Facings and Accessories, Item 3D) — Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.

5F. **Fiber, Sprayed* —** (Optional, Not Shown — Not for use with Items 6, 6A or 6B) — As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied granulated mineral fiber material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See **Fiber, Sprayed** (CCAZ).

AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool

5G. **Fiber, Sprayed* —** (Optional, Not Shown — Not for use with Items 6, 6A or 6B). — As an alternate to Batts and Blankets (Item 5) and Item 5A - Brown Colored Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed stud cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.

INTERNATIONAL CELLULOSE CORP — Celbar-RL

5H. **Foamed Plastic* —** (Optional -For use with Item 3R) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.

SES FOAM INC — SES 2 lb. Spray Foam and Sucraseal 0.5 lb. Spray Foam.

6. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6a) to studs. Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels.

PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75)

6A. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members on one side of studs as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Aa) to one side of studs only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.

KINETICS NOISE CONTROL INC — Type Isomax

6B. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in.

long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Ba) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

PLITEQ INC — Type Genie Clip

6C. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured together with four self-tapping No. 8x1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Gypsum board attached to furring channels as described in Item 3. Side joint furring channels shall be attached to studs with RESILMOUNT Sound Isolation Clips located approximately 2 in. from each end of length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Ca) to studs. Clips spaced 16 in. OC., and secured to studs with No. 10 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

7. **Furring Channel —** Optional — Not Shown — For use on one side of the wall - Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Items 5C or 5D is required.

8. **Caulking and Sealants —** (Not Shown, Optional) — A bead of acoustical sealant applied around the partition perimeter for sound control.

9. **STC Rating —** The STC Rating of the wall assembly is 56 when it is constructed as described by Items 1 through 6, except:

A. Item 2, above — Nailheads Shall be covered with joint compound.

B. Item 2, above — Joints As described, shall be covered with fiber tape and joint compound.

C. Item 5, above — Batts and Blankets* The cavities formed by the studs shall be friction fit with R-19 unfaced fiberglass insulation batts measuring 6-1/4 in. thick and 15-1/4 in. wide.

D. Item 6, above — Steel Framing Members* Type RSIC-1 clips shall be used to attach gypsum board to studs on either side of the wall assembly.

E. Item 8, above — Caulking and Sealants (Not Shown) A bead of acoustical sealant shall be applied around the partition perimeter for sound control.

F. Steel Corner Fasteners (Item 4), Fiber, Sprayed (Items 5A and 5B) and Steel Framing Members (Item 6A), not evaluated as alternatives for obtaining STC rating.

10. **Wall and Partition Facings and Accessories* —** (Optional, Not Shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 and QR-510

11. **Cementitious Backer Units* —** (Optional Item Not Shown — For Use On Face Of 1 Hr Systems With All Standard Items Required) - 7/16 in., 1/2 in., 5/8 in., 3/4 in. or 1 in. thick, min. 32 in. wide. Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members, and a minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC. When 4 ft. wide boards are used, horizontal joints need not be backed by framing.

NATIONAL GYPSUM CO — Type DuraBacker, PermaBase, DuraBacker Plus, or PermaBase Plus

12. **Non-Bearing Wall Partition Intersection —** (Optional) —Two nominal 2 by 4 in. studs or nominal 2 by 6 in. studs nailed together with two 3 in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

13. **Mesh Netting —** (Not Shown) — Any thin, woven or non-woven fibrous netting material attached with staples to the outer face of one row of studs to facilitate the installation of the sprayed fiber from the opposite row.

14. **Mineral and Fiber Board* —** (Optional, Not Shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with 2 in. long Type W steel screws, spaced 12 in. OC. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

HOMASOTE CO — Homasote Type 440-32

14A. **Mineral and Fiber Board* —** (Optional, Not Shown) — For use with Items 14B-14E) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with minimum 1-3/8 in. long ring shanked nails or 1-1/4 in. long Type W steel screws, spaced 12 in. OC along board edges and 24 in. OC in field of board along intermediate framing. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

HOMASOTE CO — Homasote Type 440-32

14B. **Glass Fiber Insulation —** (For use with Item 14A) — 3-1/2 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) categories for names of Classified companies.

14C. **Batts and Blankets* —** (As an alternate to Item 14B, For use with Item 14A), 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 3-1/2 in. face of the studs with staples placed 24 in. OC.

THERMAFIBER INC — Type SAFB

14D. **Adhesive —** (For use with Item 14A) — Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical edges of Mineral and Fiber Board (Item 14A).

14E. **Gypsum Board* —** (For use with Item 14A) — 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 14A) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 14A). Secured to outermost studs and bearing plates with 2 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound. Finish Rating 30 Min.

AMERICAN GYPSUM CO — Type AG-C

CERTAINTEED GYPSUM INC — Type FRPC, Type C

CGC INC — Types C, IP-X2, IPC-AR

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

NATIONAL GYPSUM CO — Types FSK-C, FSW-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C

PANEL REY S A — Type PRC

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL ZAWAWI DRYWALL L L C SFZ — Type C

SEE SHEET A714
FOR PAGES 1 TO 6

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AR12069

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MHA - PALMS AT UNIVERSITY APARTMENTS
PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	

A715

BUILDING '1' $ '2'
UL DESIGN U305

12/13/2018 5:12:00 PM

ONLINE CERTIFICATIONS DIRECTORY

Design No. U356
BXUV.U356
Fire Resistance Ratings - ANSI/UL 263

Page Bottom

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

Design No. U356

September 22, 2017

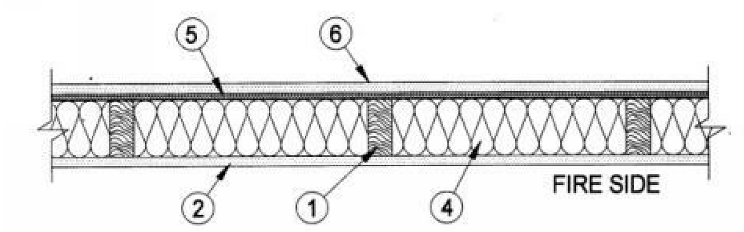
(Exposed to Fire on Interior Face Only)

Bearing Wall Rating — 1 Hr

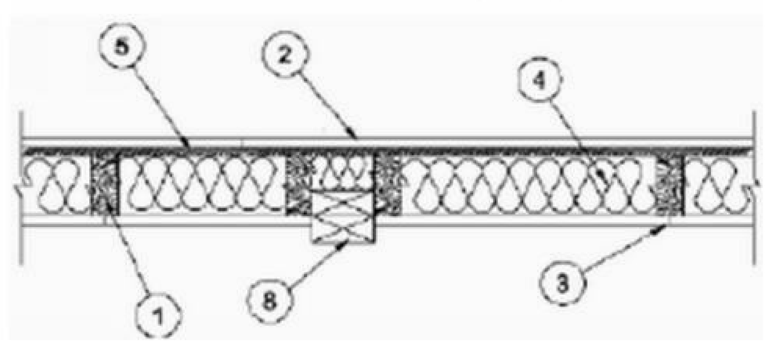
Finish Rating — 23 Min or 25 Min (See Item 2C)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



HORIZONTAL SECTION



1. **Wood Studs —** Nom 2 by 4 in. spaced 16 in. OC with two 2 by 4 in. top and one 2 by 4 in. bottom plates. Studs laterally-braced by wood structural panel sheathing (Item 5). When **Mineral and Fiber Boards*** (Item 5A) are considered as bracing for the studs, the load is restricted to 76% of allowable axial load. Walls effectively fire stopped at top and bottom of wall.

2. **Gypsum Board* — Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305.** Nom 5/8 in. thick, 4 ft wide, applied vertically and nailed to studs and bearing plates 7 in. OC with 6d cement-coated nails, 1-7/8 in. long with 1/4 in. diam head.

When Item 7, 7B, or 7C **Steel Framing Members***, is used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

When Item 7A **Steel Framing Members***, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers.

ACADIA DRYWALL SUPPLIES LTD (View Classification) — CKNX.R25370

AMERICAN GYPSUM CO (View Classification) — CKNX.R14196

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO (View Classification) — CKNX.R19374

CERTAINTEED GYPSUM INC (View Classification) — CKNX.R3660

CGC INC (View Classification) — CKNX.R19751

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C (View Classification) — CKNX.R18482

GEORGIA-PACIFIC GYPSUM L L C (View Classification) — CKNX.R2717

LOADMASTER SYSTEMS INC (View Classification) — CKNX.R11809

NATIONAL GYPSUM CO (View Classification) — CKNX.R3501

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM (View Classification) — CKNX.R7094

PANEL REY S A (View Classification) — CKNX.R21796

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD (View Classification) — CKNX.R19262

THAI GYPSUM PRODUCTS PCL (View Classification) — CKNX.R27517

UNITED STATES GYPSUM CO (View Classification) — CKNX.R1319

USG MEXICO S A DE C V (View Classification) — CKNX.R16089

2A. **Gypsum Board* —** (As an alternate to Item 2, Not Shown) — Any 5/8 in. thick 4 ft wide gypsum panels that are eligible for use in Design Nos. L501, G512 or U305, supplied by the Classified Companies listed below shown in the **Gypsum Board*** (CKNX) category. Applied vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.

CGC INC

UNITED STATES GYPSUM CO

USG MEXICO S A DE C V

2B. **Gypsum Board* —** (As an alternate to Item 2, Not Shown) — 5/8 in. thick 4 ft wide gypsum panels applied vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.

ACADIA DRYWALL SUPPLIES LTD — Type X, 5/8 Type X, Type Blueglass Exterior Sheathing

AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, LightRoc

CERTAINTEED GYPSUM INC — Type C, Type X or Type X-1

GEORGIA-PACIFIC GYPSUM L L C — Types X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, Type X ComfortGuard Sound Deadening Gypsum Board.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-11, PGS-WRS.

THAI GYPSUM PRODUCTS PCL — Type C or Type X

2C. **Gypsum Board* —** (As an alternate to Item 2, Not Shown) — For Use with Item 5A only - 5/8 in. thick 4 ft wide gypsum panels applied horizontally and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screws 1 in.and 4 in. from edges of board. Finish Rating is 25 min.

ACADIA DRYWALL SUPPLIES LTD — 5/8 Type X, Type Blueglass Exterior Sheathing

GEORGIA-PACIFIC GYPSUM L L C — Type X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-11, PGS-WRS

2D. **Gypsum Board* —** (As an alternate to Item 2) — Not to be used with item 7. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically only and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC.

NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board

2E **Gypsum Board* —** (As an alternate to Items 2 through 2D) — Nominal 5/8 in. thick, 4 ft wide panels, secured as described in Item 2.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES.

2F. **Gypsum Board* —** (As an alternate to Item 2) — Not to be used with item 7. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically or horizontally and fastened to the studs and plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.

CERTAINTEED GYPSUM INC — Type SilentFX

2G. **Wall and Partition Facings and Accessories* —** (As an alternate to Items 2 through 2F) — Nominal 5/8 in. thick, 4 ft wide panels, secured as described in Item 2.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527.

2H. **Gypsum Board* —** (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

2I. **Gypsum Board* —** (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.

AMERICAN GYPSUM CO — Types AGX-1 (finish rating 25 min.), M-Glass (finish rating 25 min.), AG-C (finish rating 25 min.), LightRoc (finish rating 25 min.)

NATIONAL GYPSUM CO — Type FSK, Type FSK-G, Type FSW, Type FSW-3, Type FSW-5, Type FSW-G, Type FSK-C, Type FSW-C, Type FSMR-C, Type FSW-6, Type FSL

2J. **Gypsum Board* —** (As an alternate to Item 2) - 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread steel screws spaced a max 8 in. OC with the last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum boards are to be installed horizontally.

CERTAINTEED GYPSUM INC — Type C, Type X or Type X-1(finish rating 26 min), Easi-Lite Type X (finish rating 24 min), Type EGRG or GlasRoc or GlasRoc Sheathing (finish rating 23 min)

3. **Joints and Fastener Heads —** (Not Shown) — Gypsum board joints covered with tape and joint compound. Fastener heads covered with joint compound.

4. **Batts and Blankets* —** Mineral fiber or glass fiber insulation, 3-1/2 in. thick, pressure fit to fill wall cavities between studs and plates. Mineral fiber insulation to be unfaced and to have a min density of 3 pcf. Glass fiber insulation to be faced with aluminum foil or kraft paper and to have a min density of 0.9 pcf (min R-13 thermal insulation rating).

See **Batts and Blankets*** (BKNV) Category in the Building Materials Directory and **Batts and Blankets*** (BZJZ) Category in the Fire Resistance Directory for names of Classified Companies.

4A. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft^3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft^3, in accordance with the application instructions supplied with the product.

U S GREENFIBER L L C — INS735 & INS745 for use with wet or dry application. INS510LD, INS515LD, INS541LD, INS735, INS745, INS765LD, and INS770LD are to be used for dry application only.

4B. **Fiber, Sprayed* —** As an alternate to Item 4 and 4A — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 4.58 lb/ft^3.

NU-WOOL CO INC — Cellulose Insulation

4C. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.

INTERNATIONAL CELLULOSE CORP — Celbar-RL

4D. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 4) — Spray applied, granulated mineral fiber material. The fiber is applied with adhesive, at a minimum density of 4.0 pcf, to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See Fiber, Sprayed (CCAZ).

AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

5. **Wood Structural Panel Sheathing —** Min 7/16 in. thick, 4 ft wide wood structural panels, min grade "C-D" or "Sheathing". Installed with long dimension of sheet (strength axis) or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 6d cement coated box nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs.

5A. **Mineral and Fiber Boards* —** As an alternate to Item 5 - Min 1/2 in. thick, 4 ft wide sheathing, installed vertically to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 1-1/2 in. long galvanized roofing nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs. As an option a weather resistive barrier may be applied over the Mineral and Fiber Boards.

6. **Exterior Facings —** Installed in accordance with the manufacturer's installation instructions. One of the following exterior facings is to be applied over the sheathing:

A. **Vinyl Siding — Molded Plastic* —** Contoured rigid vinyl siding having a flame spread value of 20 or less.

See **Molded Plastic** (BTAT) category in the Building Materials Directory for names of manufacturers.

B. **Particle Board Siding —** Hardboard exterior sidings including patterned panel or lap siding.

C. **Wood Structural Panel or Lap Siding —** APA Rated Siding, Exterior, plywood, OSB or composite panels with veneer faces and structural wood core, per PS 1 or APA Standard PRP-108, including textured, rough sawn, medium density overlay, brushed, grooved and lap siding.

D. **Cementitious Stucco —** Portland cement or synthetic stucco systems with self-furring metal lath or adhesive base coat. Thickness from 3/8 to 3/4 in., depending on system.

E. **Brick Veneer —** Any type on nom 4 in. wide brick veneer. When brick veneer is used, the rating is applicable with exposure on either face. Brick veneer fastened with corrugated metal wall ties attached over sheathing to wood studs with 8d nail per tie: ties spaced not more than each sixth course of brick and max 32 in. OC horizontally. One in. air space provided between brick veneer and sheathing.

F. **Exterior Insulation and Finish System (EIFS) —** Nom 1 in. **Foamed Plastic*** insulation bearing the UL Classification Marking, attached over sheathing and finished with coating system, or Portland cement or synthetic stucco systems, in accordance with manufacturer's instructions. See **Foamed Plastic** (BRYX and CCVW) categories for names of Classified companies.

G. **Siding —** Aluminum or steel siding attached over sheathing to studs.

H. **Fiber-Cement Siding —** Fiber-cement exterior sidings including smooth and patterned panel or lap siding.

I. **Wall and Partition Facings and Accessories* —** Stone veneer is mortar bonded to a lath, scratch coat and water resistant barrier applied to sheathing, installed in accordance with the manufacturers installation instructions, and meeting the requirements of local code agencies.

ELDORADO STONE OPERATIONS L L C — Type Eldorado Stone

6A. **Building Units* — As an alternate to Exterior Facing Item 6 —** Insulated steel panels, 12 through 42 in. wide. Attached over sheathing through retainer clips to studs or support steel with No. 14 hex head self-tapping screws located at each joint in the concealed lip of the units and spaced in accordance with the structural design requirements.

CENTRIA, A DIVISION OF NCI GROUP, INC — Types Formawall Dimension Series and Formawall Graphix Series

KINGSPAN INSULATED PANELS INC — Types 200, 300, 400, 900, or KS series, 2 through 6 in. thickness; CWP-V, H, 2 through 3 in. nominal thickness or Designwall 2000 or Designwall 4000, 2 and 3 in. nominal thickness.

7. **Steel Framing Members* —** (Optional, Not Shown) — Furring Channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7A) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.

PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75).

7A. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Two layers of gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Aa) to interior side of studs. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.

KINETICS NOISE CONTROL INC — Type Isomax.

7B. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

PLITEQ INC — Type Genie Clip

7C. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ca) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

8. **Non-Bearing Wall Partition Intersection —** (Optional) — Two nominal 2 by 4 in. stud or nominal 2 by 6 in. stud nailed together with two 3in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2017-09-22

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MHA - PALMS AT UNIVERSITY APARTMENTS
PHASE II - BUILDING 1
585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
12-29-17	BUILDING PERMIT

REVISIONS

NO:	DATE:	DESCRIPTION

PROJECT NO:	15083.00
DRAWN BY:	BDG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	12-29-17
SCALE:	

A716

BUILDING '1' & '2'
UL DESIGN U356

GENERAL NOTES

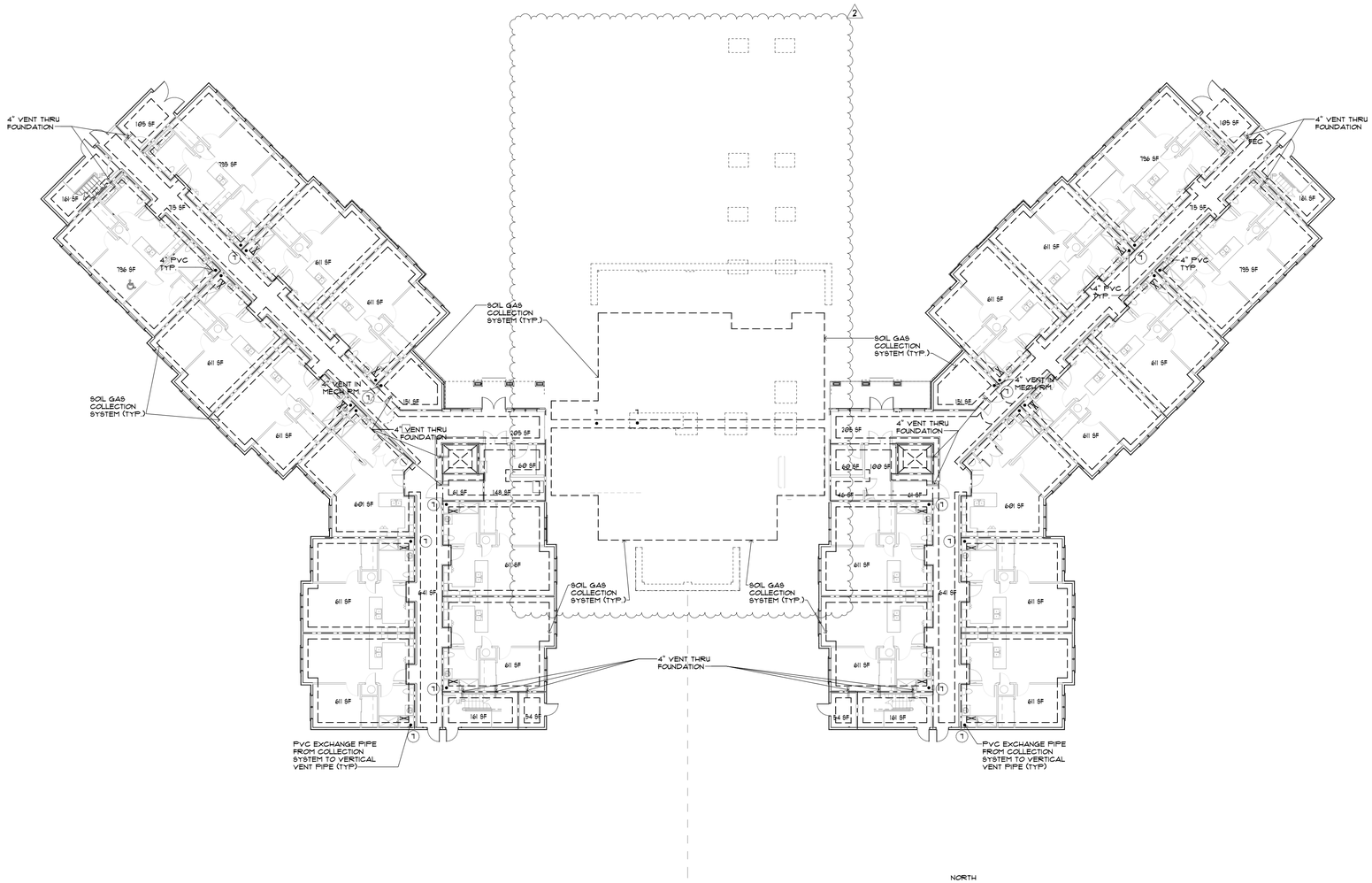
1. ALL CONCRETE SLABS THAT COME IN CONTACT WITH GROUND SHALL BE LAID OVER GAS PERMEABLE MATERIAL MADE UP OF EITHER A MIN. 4" THICK UNIFORM LAYER OF CLEAN AGGREGATE, OR A 4" THIK UNIFORM LAYER OF SAND, OVERLAIN BY ALAYER OR STRIPS OF MANUFACTURED MATTING DESIGNED TO ALLOW THE LATERAL FLOW OF SOIL GASES.
2. ALL CONCRETE FLOOR SLABS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL BUILDING CODE.
3. ALL OPENING, GAPS AND JOINTS IN FLOORS AND WALL ASSEMBLIES IN CONTACT SOIL OR GAPS AROUND PIPES,TOILETS, BATH TUBS OR DRAIN PENETRATING THESE ASSEMBLIES SHALL BE FILLED OR CLOSED WITH MATERIALS THAT PROVIDE A PERMANENT AIR-TIGHT SEAL. SEAL LARGE OPENINGS WITH NON-SHRINK MORTAR, GROUTS OR EXPANDING FOAM MATERIALS AND SMALLER GAPS WITH AN ELASTOMERIC JOINT SEALANT, AS DEFINED IN ASTM C920-87.
4. VENT PIPES SHALL BE INSTALLED SO THAT ANY RAINWATER OR CONDENSATION DRAINS DOWNWARD INTO THE GROUND BENEATH THE SLAB OR SOIL-GAS-RETARDED MEMBRANE.
5. ALL EXPOSED AND VISIBLE INTERIOR RADON VENT PIPES SHALL BE IDENTIFIED WITH AT LEAST A LABEL ON EACH FLOOR LEVEL, THE LABEL SHALL READ: ("RADON REDUCTION SYSTEM").
6. VERIFY LOCATION OF PLUMBING LINES AND VENTS PRIOR TO RADON SYSTEM INSTALLATION.
7. TYPICAL 4" PVC EXCHANGE PIPE FROM COLLECTION SYSTEM TO VERTICAL VENT PIPE THROUGH ROOF.

LEGEND

AREA OF RADON BARRIER

4" PVC VENT PIPE

4" VENT THROUGH FOUNDATION



1 OVERALL FIRST FLOOR RADON SYSTEM PLAN
SCALE: 1/16" = 1'-0"

NORTH

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MHA - PALMS AT UNIVERSITY APARTMENTS PHASE II - BUILDING 1

585 E. UNIVERSITY BOULEVARD
MELBOURNE, FLORIDA 32901

ISSUED	
DATE:	ISSUED FOR:
10-12-17	CONSTRUCTION DOCUMENTS

REVISIONS

NO:	DATE:	DESCRIPTION
1	10-11-18	HUD COMMENTS
2	12-13-18	VE CHANGES

PROJECT NO:	15083.00
DRAWN BY:	BRG
PROJECT MANAGER:	AW
CHECKED BY:	KJB
DATE:	10-12-17
SCALE:	1/16" = 1'-0"

RM101

RADON MITIGATION

12/13/2018 5:13:57 PM