PROPOSED MURRAY ROAD APARTMENT DEVELOPMENT FOR:

LTBB ODAWA INDIANS

PETOSKEY, MICHIGAN

APARTMENT BUILDINGS 3, 5 & 6
DRAWING SET 1

ACCESSIBILITY TABULATION

	UNIT #	UNIT LOCATION	ACCESSIBILITY TYPE
DRAWING SET 1 - BUILDING 3	UNIT 3A	BLDG. 3; LOWER	TYPE "B" ACCESSIBLE
	UNIT 3B	BLDG. 3; UPPER	-
	UNIT 3C	BLDG. 3; UPPER	-
	UNIT 3D	BLDG. 3; LOWER	TYPE "B" ACCESSIBLE
	UNIT 3E	BLDG. 3; UPPER	-
	UNIT 3F	BLDG. 3; LOWER	TYPE "B" ACCESSIBLE
	UNIT 3G	BLDG. 3; LOWER	TYPE "B" ACCESSIBLE
	UNIT 3H	BLDG. 3; UPPER	-
	UNIT 3I	BLDG. 3; UPPER	-
	UNIT 3J	BLDG. 3; LOWER	TYPE "B" ACCESSIBLE
DRAWING SET 2 - BLDG. 4	UNIT 4A	BLDG. 4; LOWER	TYPE "B" ACCESSIBLE
	UNIT 4B	BLDG. 4; UPPER	-
	UNIT 4C	BLDG. 4; UPPER	-
	UNIT 4D	BLDG. 4; LOWER	TYPE "B" ACCESSIBLE
	UNIT 4E	BLDG. 4; UPPER	TYPE "A" ACCESSIBLE
	UNIT 4F	BLDG. 4; LOWER	-
	UNIT 4G	BLDG. 4; UPPER	-
	UNIT 4H	BLDG. 4; LOWER	TYPE "A" ACCESSIBLE
DRAWING SET 1 - BUILDING 3	UNIT 5A	BLDG. 5; LOWER	TYPE "B" ACCESSIBLE
	UNIT 5B	BLDG. 5; UPPER	-
	UNIT 5C	BLDG. 5; UPPER	-
	UNIT 5D	BLDG. 5; LOWER	TYPE "B" ACCESSIBLE
	UNIT 5E	BLDG. 5; UPPER	-
	UNIT 5F	BLDG. 5; LOWER	TYPE "B" ACCESSIBLE
	UNIT 5G	BLDG. 5; LOWER	TYPE "B" ACCESSIBLE
	UNIT 5H	BLDG. 5; UPPER	-
	UNIT 5I	BLDG. 5; UPPER	-
	UNIT 5J	BLDG. 5; LOWER	TYPE "B" ACCESSIBLE
DRAWING SET 1 - BUILDING 3	UNIT 6A	BLDG. 6; LOWER	TYPE "B" ACCESSIBLE
	UNIT 6B	BLDG. 6; UPPER	-
	UNIT 6C	BLDG. 6; UPPER	-
	UNIT 6D	BLDG. 6; LOWER	TYPE "B" ACCESSIBLE
	UNIT 6E	BLDG. 6; UPPER	-
	UNIT 6F	BLDG. 6; LOWER	TYPE "B" ACCESSIBLE
	UNIT 6G	BLDG. 6; LOWER	TYPE "B" ACCESSIBLE
	UNIT 6H	BLDG. 6; UPPER	-
	UNIT 6I	BLDG. 6; UPPER	-
	UNIT 6J	BLDG. 6; LOWER	TYPE "B" ACCESSIBLE

DEFERRED SUBMITTALS

1. FIRE SPRINKLER SHOP DRAWINGS, PRODUCT DATA, & HYDRAULIC CALCULATIONS
2. FIRE ALARM SHOP DRAWINGS AND PRODUCT DATA.
3. PRE-ENGINEERED ROOF TRUSS SHOP DRAWINGS AND CALCULATIONS.
4. PRE-ENGINEERED FLOOR TRUSS SHOP DRAWINGS AND CALCULATIONS.
5. ELECTRICAL PANEL BOARD AIC RATING CALCULATIONS.

REQUIRED SPECIAL INSPECTIONS

1. PER MBC 1705.3.4.b PERIODIC INSPECTION OF ANCHORS POST INSTALLED IN HARDENED CONCRETE.
2. PER MBC 1705.3.5 PERIODIC CONFIRMATION OF CONCRETE MIX.
3. PER MBC 1705.3.6 CONTINUOUS INSPECTION FOR SLUMP, AIR CONTENT AND TEMPERATURE OF CONCRETE INCLUDING SPECIMENS FOR COMPRESSIVE STRENGTH TESTING.
4. PER MBC 1705.3.12 PERIODIC INSPECTION OF FORMWORK.
5. PER MBC 1705.6 PERIODIC VERIFICATION OF SOILS FOR SHALLOW FOUNDATIONS.
6. PER MBC 1705.6 PERIODIC VERIFICATION OF DEPTH OF EXCAVATIONS AND SOILS.

BUILDING USE / CODE DATA

APPLICABLE CODES
BUILDING CODE: 2015 MICHIGAN BUILDING CODE
MECHANICAL CODE: 2015 MICHIGAN MECHANICAL CODE
PLUMBING CODE: 2015 MICHIGAN PLUMBING CODE
ELECTRICAL CODE: 2017 MICHIGAN ELECTRIC CODE
ENERGY CODE: 2015 MICHIGAN ENERGY CODE

BUILDING USE GROUP
ASSEMBLY GROUP R2

CONSTRUCTION TYPE
TYPE 5B NON-COMBUSTIBLE, UNPROTECTED

ALLOWABLE AREA
TABULAR ALLOWABLE HEIGHT AND AREA (SINGLE STORY, R13 SUPPRESSED):
ALLOWABLE HEIGHT: 3 STORIES, 60'
ALLOWABLE AREA: 24,500 sf

ACTUAL BUILDING HEIGHT: 2 STORY, 28'
ACTUAL BUILDING AREA: 9,748 sf

REQUIRED FIRE RESISTANCE RATINGS FOR BUILDING ELEMENTS
STRUCTURAL FRAME: 0 HOUR
BEARING WALLS (EXT): 0 HOUR
BEARING WALLS (INT): 0 HOUR
NON-BEARING WALLS AND PARTITIONS (EXT): 0 HOURS
NON-BEARING WALLS AND PARTITIONS (INT): 0 HOURS
FLOOR CONSTRUCTION: 0 HOUR (1hr PROVIDED)
ROOF CONSTRUCTION: 0 HOUR (1hr PROVIDED)

REQUIRED FIRE RESISTANCE RATINGS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE
SEPARATION<10': 0 HOURS

FIRE SUPPRESSION SYSTEM: NFPA 13R SUPPRESSED

DWELLING UNIT ACCESSIBILITY REQUIREMENTS
TOTAL NUMBER OF DWELLING UNITS 38
NUMBER OF TYPE "A" UNITS REQUIRED = 1; TYPE "A" UNITS PROVIDED = 2
NUMBER OF TYPE "B" UNITS REQUIRED = ALL OTHER UNITS ON GRADE LEVEL

SHEET INDEX

T TITLE SHEET / PROJECT INFORMATION

A1.1 LOWER FLOOR PLAN
A1.2 UPPER FLOOR PLAN
A1.3 FIRE SEPARATION PLANS
A2.1 LOWER FLOOR REFLECTED CEILING PLAN
A2.2 UPPER FLOOR REFLECTED CEILING PLAN
A3.1 EXTERIOR ELEVATIONS
A4.1 ROOM FINISH SCHEDULE AND INTERIOR ELEVATIONS
A5.1 DOOR AND WINDOW SCHEDULES AND DETAILS
A6.1 BUILDING SECTIONS "A-A", "B-B" & "C-C"
A6.2 TYPICAL STAIR SECTIONS AND BUILDING DETAILS
A7.1 TYPICAL WALL DETAILS
A8.1 BATHROOM PLANS AND ELEVATIONS
S1.0 STRUCTURAL DIAGRAMS AND NOTES
S1.1 FOUNDATION PLAN
S2.1 UPPER FLOOR FRAMING PLAN
S3.1 LOWER ROOF FRAMING PLAN
S3.2 UPPER ROOF FRAMING PLAN
S3.3 UPPER VALLEY SET PLAN
S4.1 STRUCTURAL DETAILS

P1.0 PLUMBING TITLE SHEET
P2.1 BELOW GRADE PLUMBING PLAN – LOWER FLOOR
P2.2 ABOVE GRADE PLUMBING PLAN – LOWER FLOOR
P2.3 ABOVE GRADE PLUMBING PLAN – UPPER FLOOR
P3.1 PLUMBING DETAILS

M1.0 MECHANICAL TITLE SHEET
M2.1 MECHANICAL PLAN – LOWER FLOOR
M2.2 MECHANICAL PLAN – UPPER FLOOR
M3.1 MECHANICAL DETAILS

E1.0 ELECTRICAL TITLE SHEET
E2.1 ELECTRICAL POWER PLAN – LOWER FLOOR
E2.2 ELECTRICAL POWER PLAN – UPPER FLOOR
E3.1 ELECTRICAL LIGHTING PLAN – LOWER FLOOR
E3.2 ELECTRICAL LIGHTING PLAN – UPPER FLOOR
E4.1 ELECTRICAL DETAILS
E4.2 ELECTRICAL DETAILS

REVIEWED FOR CODE COMPLIANCE

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Bobbet V. La Guardia

DATE: 01/31/2023

STATE OF MICHIGAN
ANTHONY P. ESSON
ARCHITECT
NO. 32400

STATE OF MICHIGAN REGISTRATION

ANTHONY P. ESSON
ARCHITECT
PO BOX 479 GAYLORD, MICHIGAN
TELEPHONE: (989) 732-0585

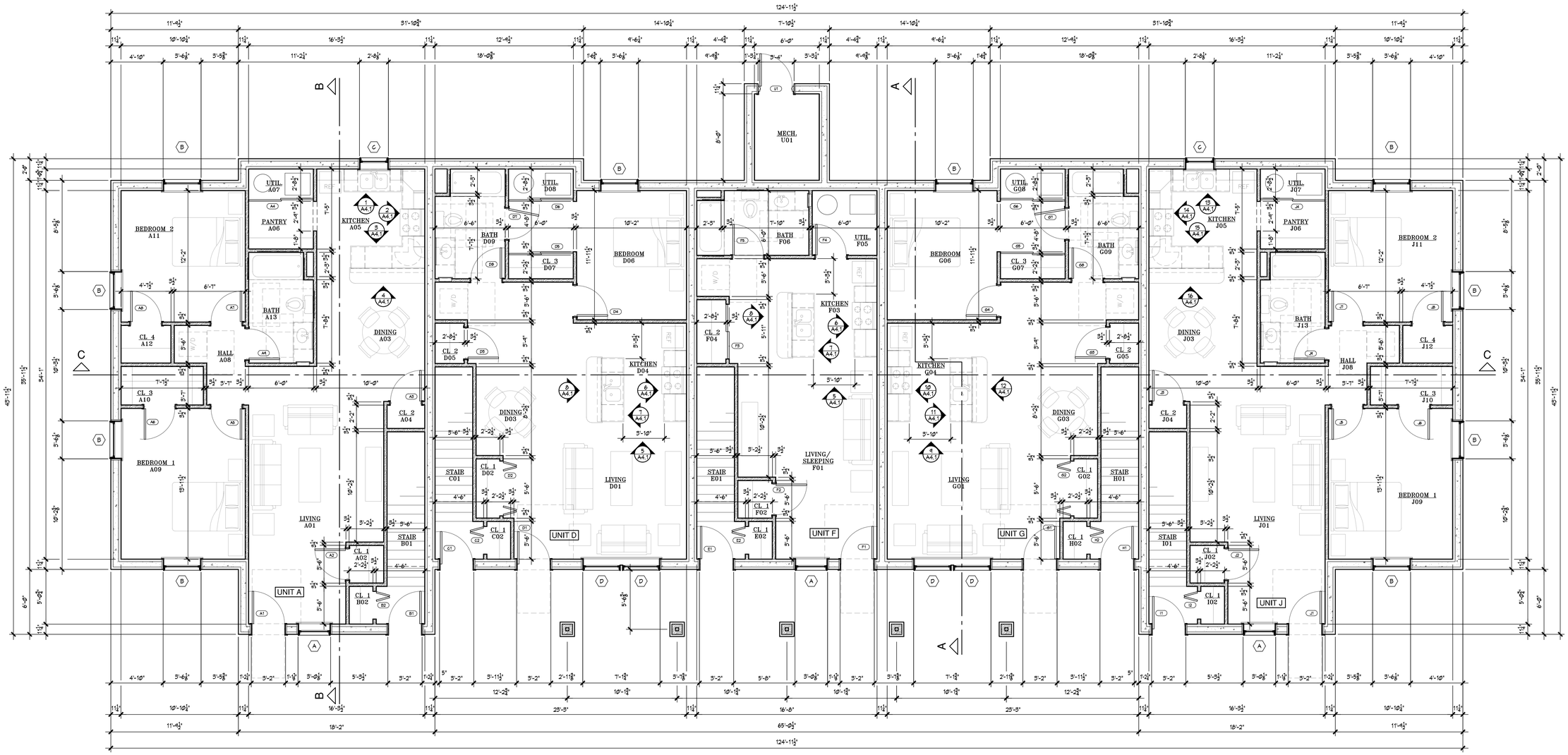
DRAWING TITLE
BUILDINGS 3, 5 & 6
TITLE SHEET & PROJECT INFORMATION

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APARTMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
MAY 1, 2020
SEPT. 14, 2022
JAN. 24, 2023

SHEET T



LOWER FLOOR PLAN

SCALE: ¼" = 1'-0"

NOTE: PLAN DIMENSIONS ARE FACE OF STUD TO FACE OF STUD, OR FACE OF ICF TO FACE OF ICF

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ANTHONY P. ESSON
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PO BOX 479 GAYLORD, MICHIGAN
TELEPHONE: (989) 732-0585

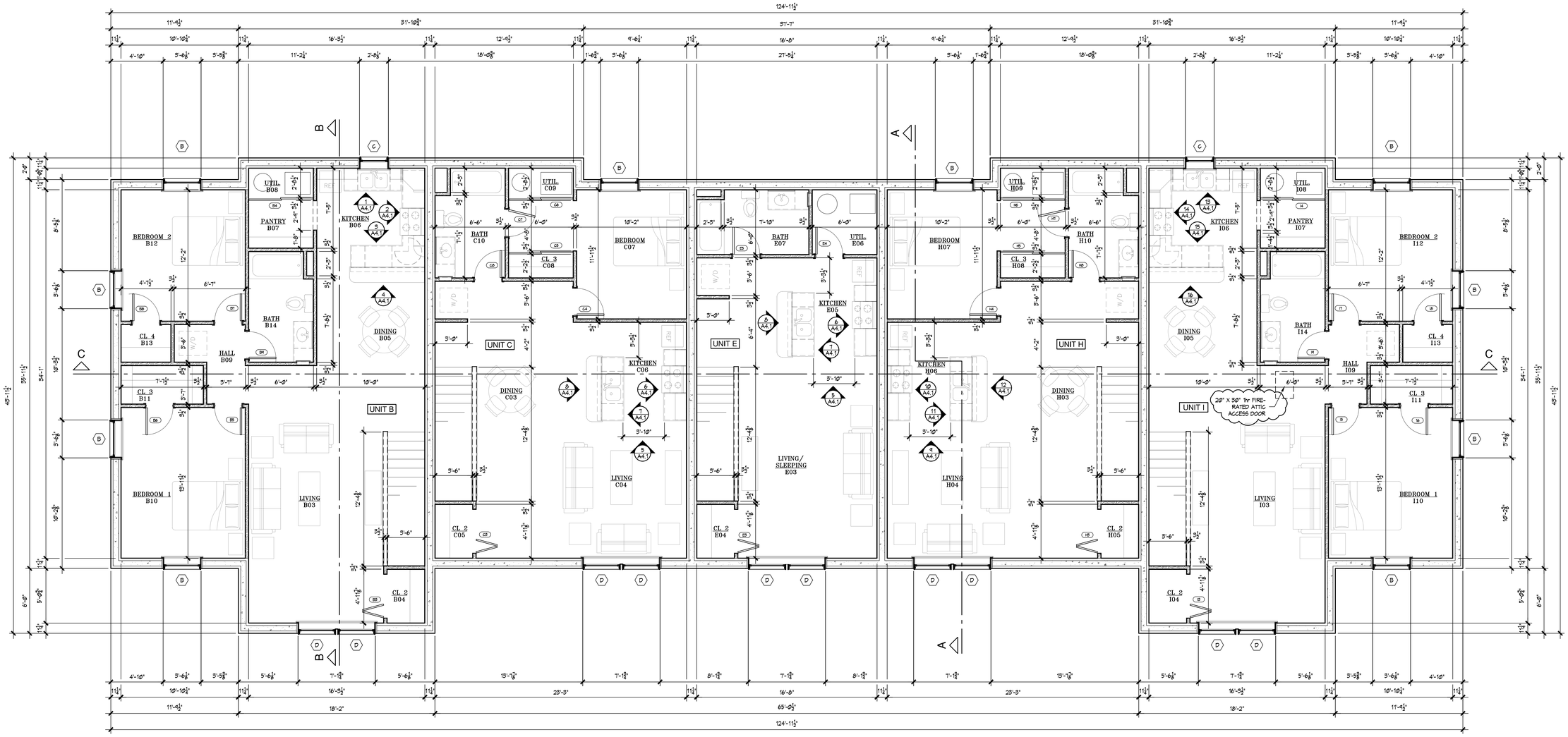
DRAWING TITLE
BUILDINGS 3, 5 & 6
LOWER FLOOR PLAN

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APRATMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
MAY 1, 2020
SEPT. 14, 2022

SHEET **A1.1**



UPPER FLOOR PLAN

SCALE: ¼" = 1'-0"

NOTE: PLAN DIMENSIONS ARE FACE OF STUD TO FACE OF STUD, OR FACE OF ICF TO FACE OF ICF.

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DRAWING TITLE
BUILDINGS 3, 5 & 6
UPPER FLOOR PLAN

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APRATMENT DEVELOPMENT
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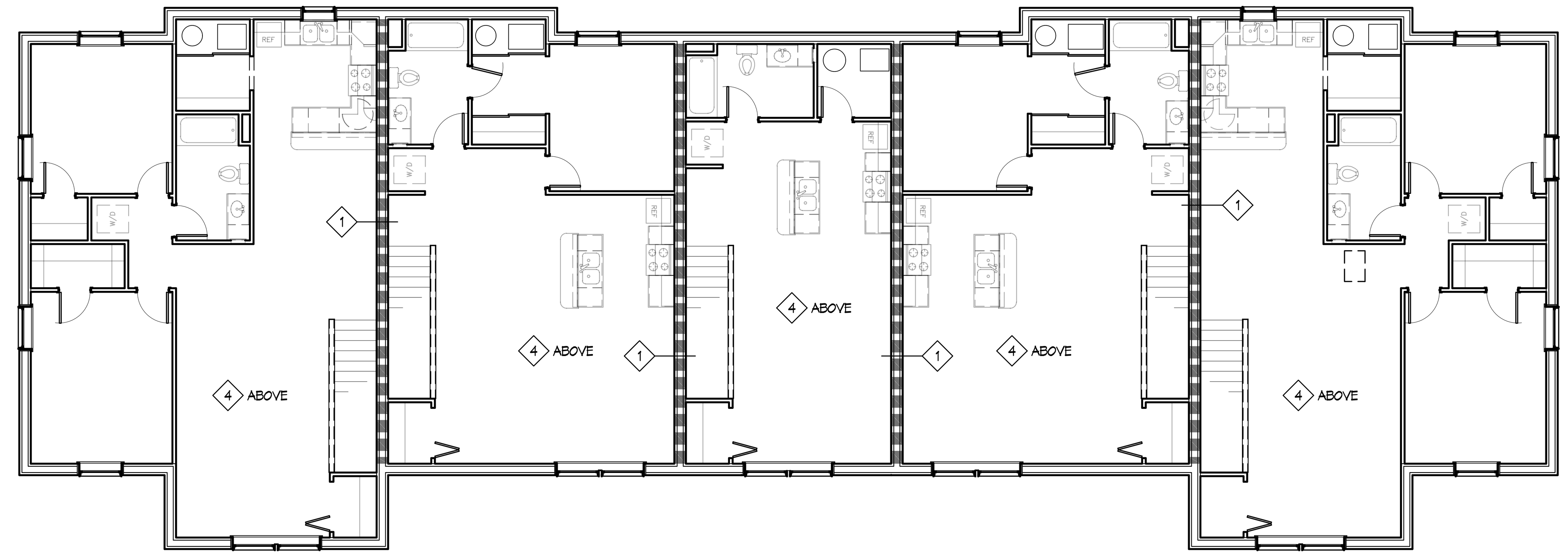
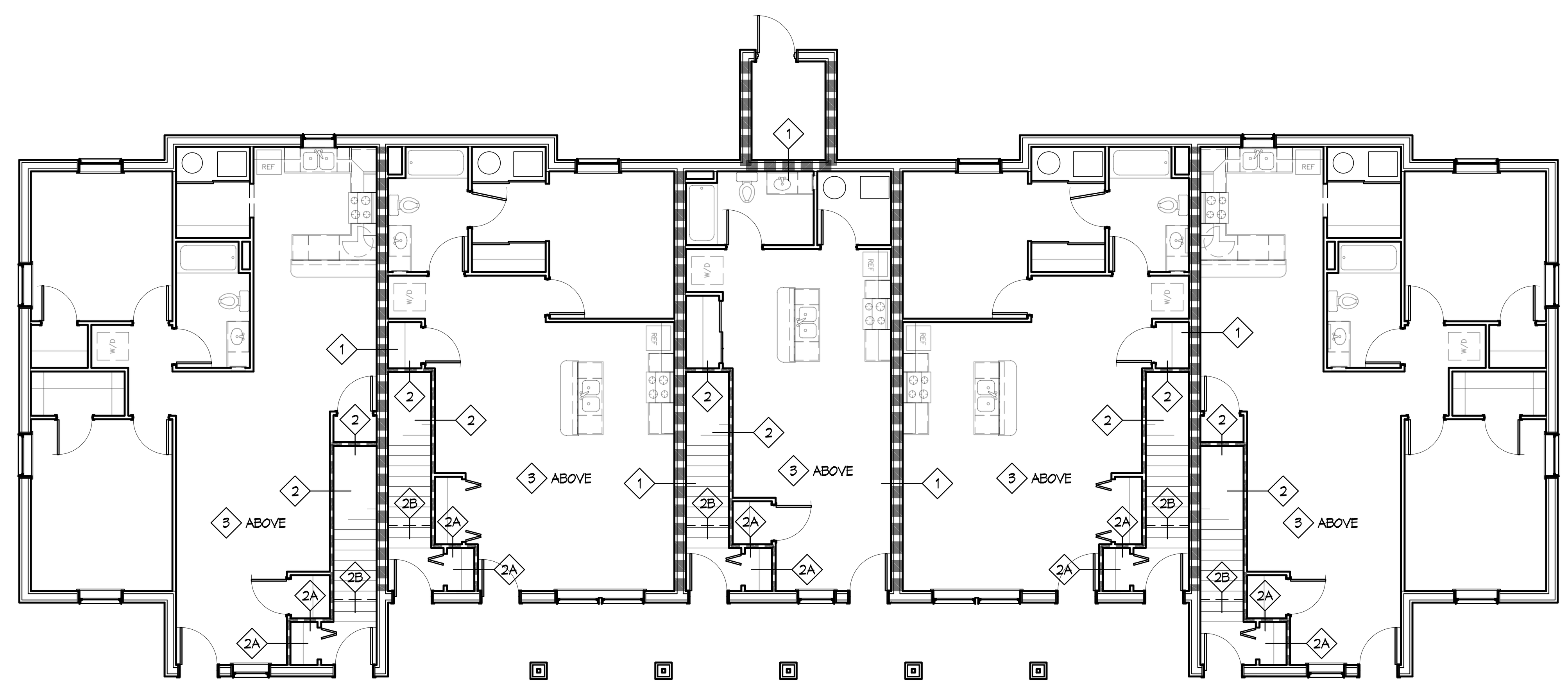
SHEET **A1.2**



UPPER FLOOR FIRE SEPARATION PLAN

SCALE: $\frac{1}{8}$" = 1'-0"



LOWER FLOOR FIRE SEPARATION PLAN

SCALE: $\frac{1}{8}$" = 1'-0"

1. 1hr FIRE RATED "FIRE PARTITION" - 6" CORE ICF WALL w/ $\frac{1}{2}$" GYP. BD. EA. SIDE. EXTEND WALL FROM CONC. SLAB TO UNDERSIDE OF FIRE RATED ROOF ASSEMBLY ABOVE (2015 MBC ASSEMBLY 4-1.1).
2. 1hr FIRE RATED "FIRE PARTITION"; STC 50 - 2x4 STUDS AT 16" O.C. w/ RC-1 RESILIENT CHANNELS ONE SIDE, 5/8" TYPE 'X' GYP. BD. BOTH SIDES AND CAVITIES FILLED w/ BATT INSULATION. EXTEND WALL FROM CONC. SLAB THROUGH FLOOR ASSEMBLY TO UNDERSIDE OF FLOOR SHEATHING ABOVE. FIRE PERFORMANCE UL DESIGN U311, ACOUSTICAL PERFORMANCE BBN-760903.

2A. SAME AS 2 ABOVE, EXCEPT THAT PARTITION EXTENDS TO UNDERSIDE OF FIRE RATED FLOOR /CEILING ASSEBLY.

2B. SAME AS 2 ABOVE, EXCEPT THAT PARTITION EXTENDS THROUGH FIRE RATED FLOOR /CEILING ASSEBLY ONLY AT STAIR OPENING.

3. 1hr FIRE RATED "HORIZONTAL ASSEMBLY" - FLAT CHORD TRUSSES AT 19.2" O.C. w/ $\frac{3}{4}$" OSB SUB-FLOORING, $\frac{1}{2}$" HOMASOTE PANELS AND (1) LAYER $\frac{5}{8}$" TYPE 'X' GYP. BD. OVER RESILIENT CHANNELS AT 12" O.C. ON BOTTOM CHORD. FIRE PERFORMANCE DESIGN L521 SYSTEM 3, ACOUSTICAL PERFORMANCE STC 56 AND IIC 52.
4. 1hr FIRE RATED "ROOF/CEILING ASSEMBLY" - PRE-ENGINEERED TRUSSES AT 24" O.C. w/ $\frac{1}{2}$" OSB ROOF SHEATHING AND (1) LAYER $\frac{5}{8}$" TYPE 'X' GYP. BD. OVER RESILIENT CHANNELS AT 12" O.C. ON BOTTOM CHORD. FIRE PERFORMANCE DESIGN P522.

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DRAWING TITLE
BUILDINGS 3, 5 & 6
FIRE SEPARATION PLANS

PROJECT TITLE
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MURRAY ROAD APRATMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
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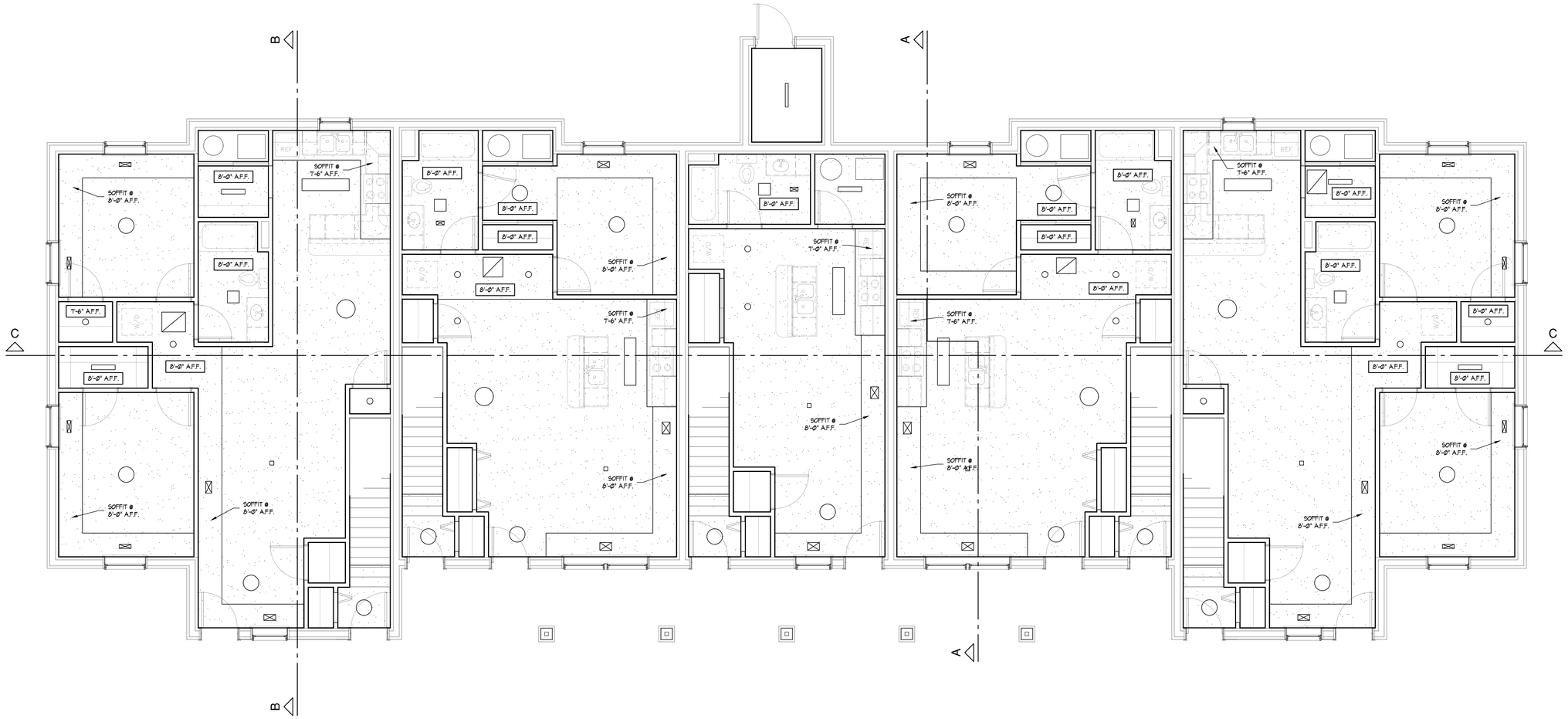
SEPT. 14, 2022

SHEET A1.3



LOWER FLOOR REF'D. CEILING PLAN

SCALE: $\frac{1}{4}$" = 1'-0"

8'-0" A.F.F. — INDICATES DROP CEILING HEIGHT A.F.F. - WHERE NOT INDICATED OTHERWISE, CEILING IS BTM. OF GYPSUM BOARD ON FLOOR/ROOF TRUSSES (9'-4$\frac{1}{2}$" A.F.F.)

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BUILDINGS 3, 5 & 6
LOWER FLOOR REF'D. CEILING PLAN

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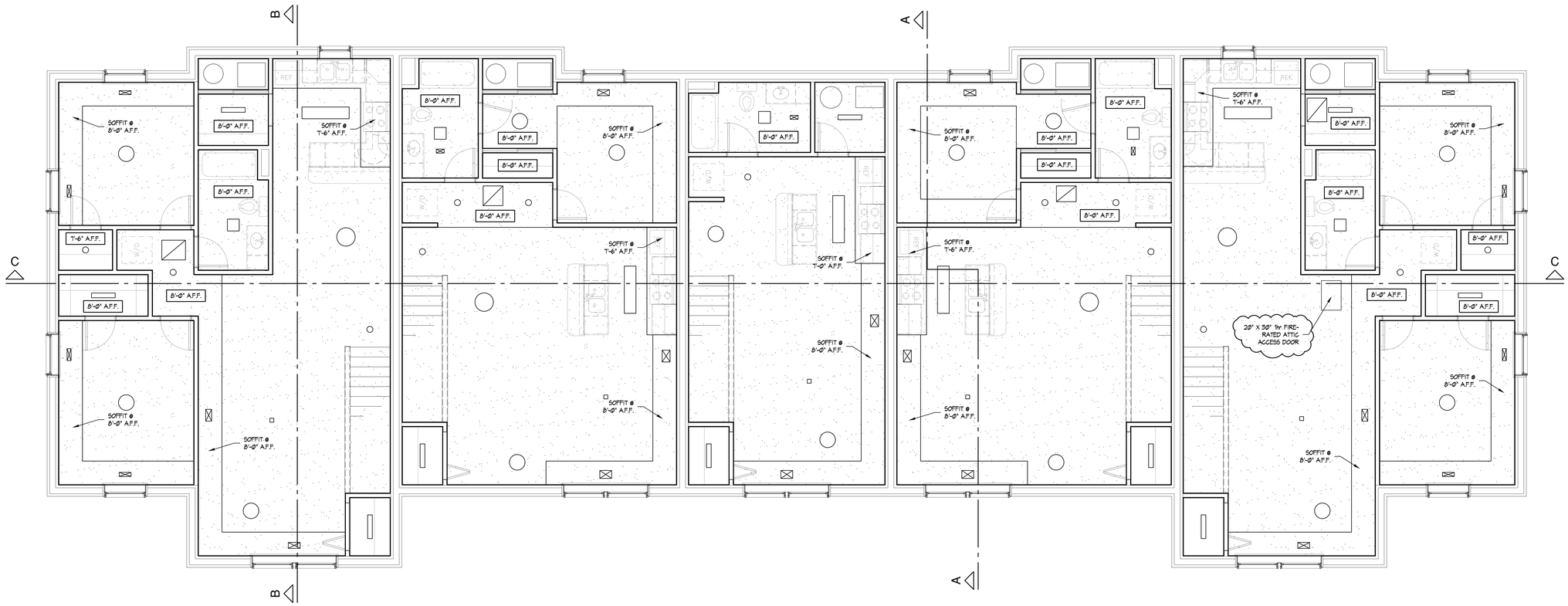
SHEET **A2.1**



UPPER FLOOR REF'D. CEILING PLAN

SCALE: $\frac{1}{4}$" = 1'-0"

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DRAWING TITLE
BUILDINGS 3, 5 & 6
UPPER FLOOR REF'D. CEILING PLAN

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APRATMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
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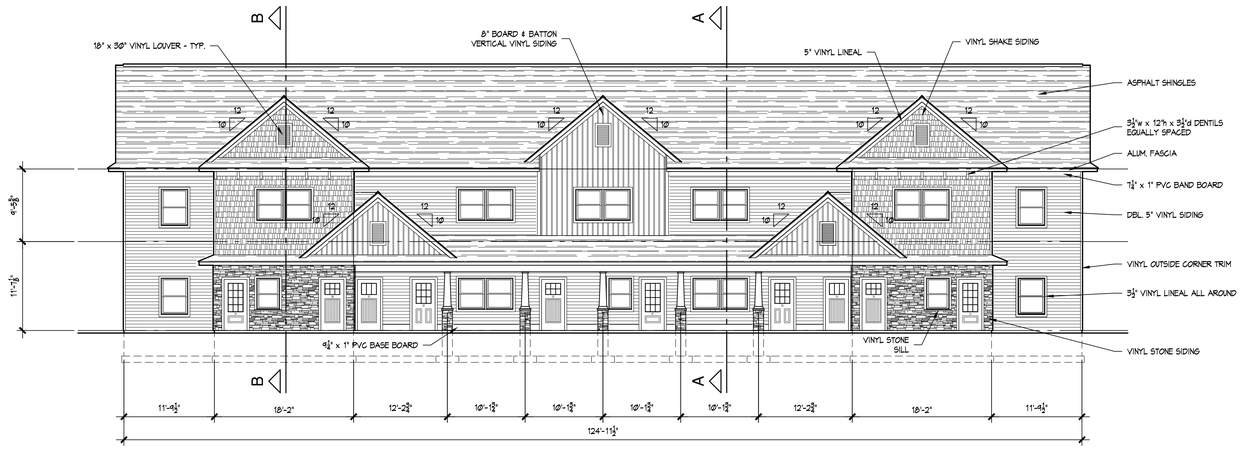
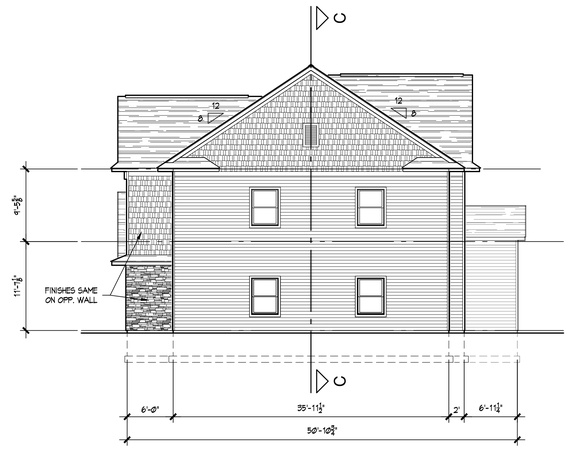
SHEET **A2.2**



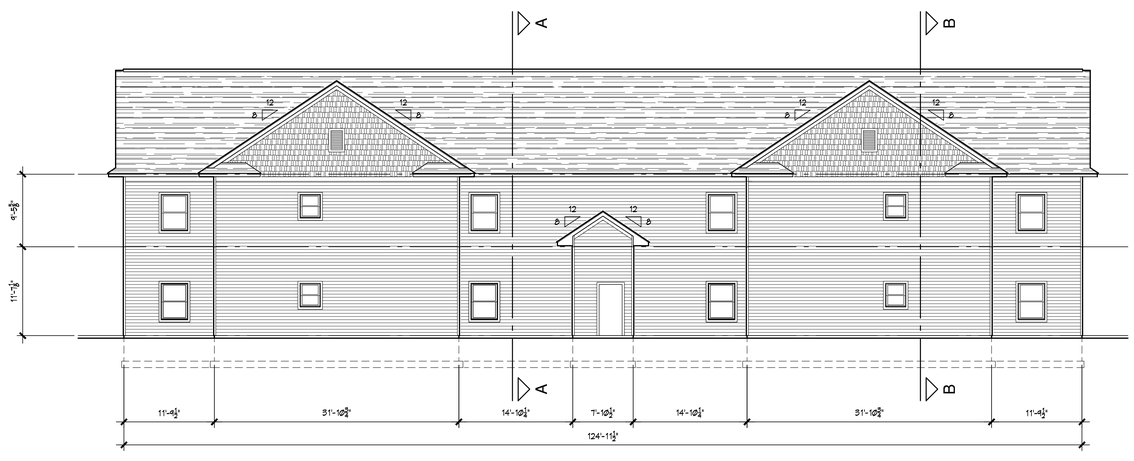
FRONT ELEVATION

SCALE: ⅛" = 1'-0"



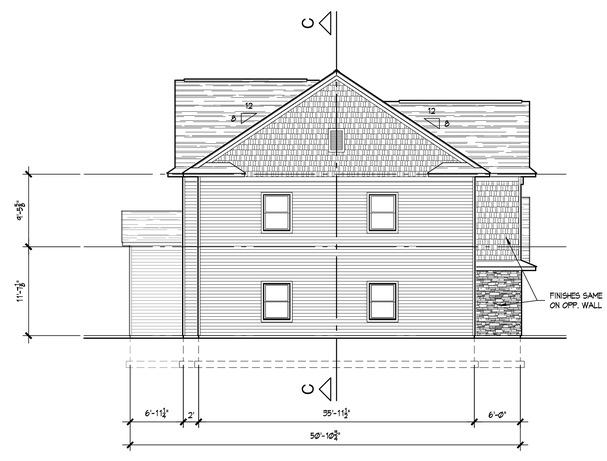
RIGHT SIDE ELEVATION

SCALE: ⅛" = 1'-0"



REAR ELEVATION

SCALE: ⅛" = 1'-0"



LEFT SIDE ELEVATION

SCALE: ⅛" = 1'-0"

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DRAWING TITLE
BUILDINGS 3, 5 & 6
EXTERIOR ELEVATIONS

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APRATMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
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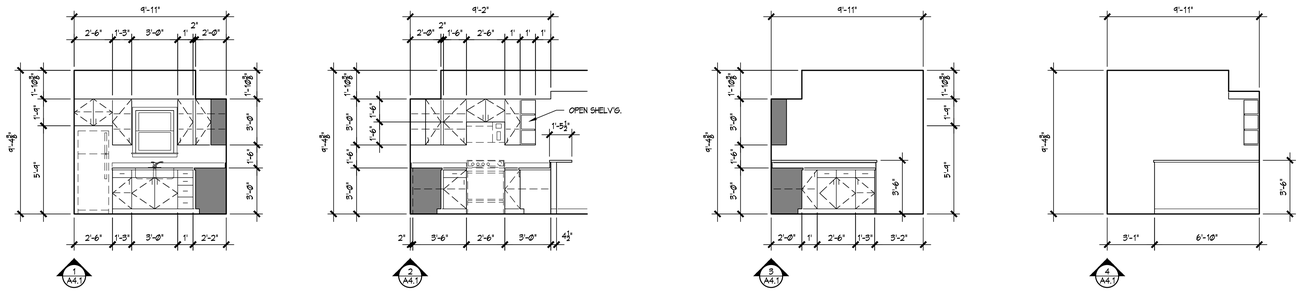
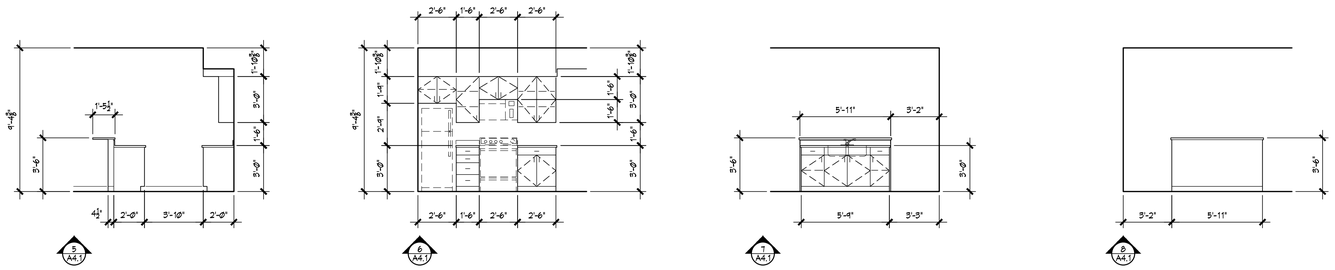
SEPT. 14, 2022

SHEET **A3.1**



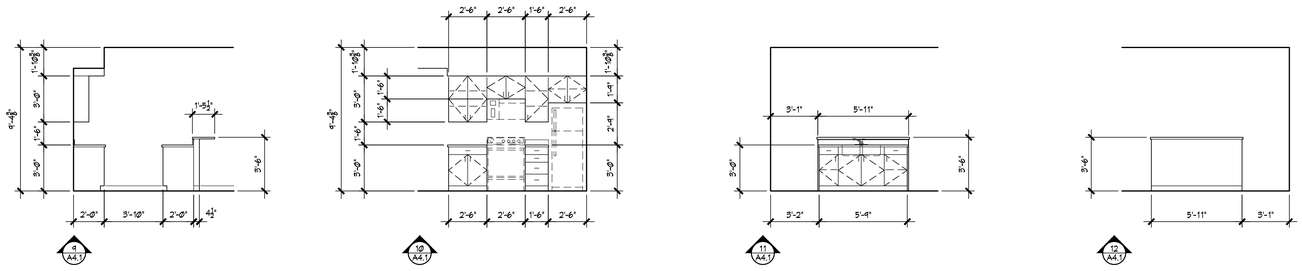
KITCHEN A05 & B06

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



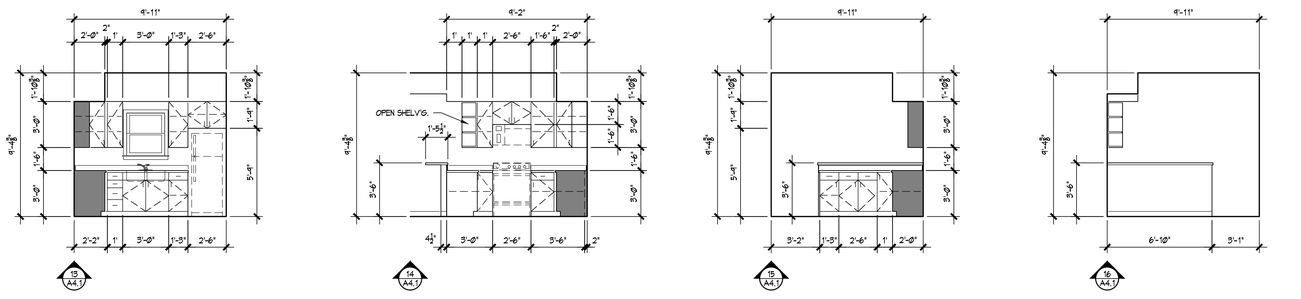
KITCHEN C06, D04, E05 & F03

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



KITCHEN G04 & H06

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



KITCHEN I06 & J05

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

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DATE: 01/31/2023

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR MAT.	WALL BASE	WALL FINISH				CEILING FINISH		REMARKS
				NORTH	EAST	SOUTH	WEST	CEILING FINISH	HEIGHT	
A01	LIVING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
A02	CLOSET 1	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
A03	DINING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	9'-4 5/8"	
A04	CLOSET 2	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
A05	KITCHEN	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
A06	PANTRY	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
A07	UTILITY	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
A08	HALL	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
A09	BEDROOM 1	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
A10	CLOSET 3	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	8'-0"	
A11	BEDROOM 2	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
A12	CLOSET 4	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	7'-6"	
A13	BATH	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
B01	STAIR	RPF/CPT	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	VARIES	
B02	CLOSET 1	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
B03	LIVING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
B04	DINING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	9'-4 5/8"	
B05	CLOSET 2	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
B06	KITCHEN	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
B07	PANTRY	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
B08	UTILITY	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
B09	HALL	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
B10	BEDROOM 1	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
B11	CLOSET 3	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
B12	BEDROOM 2	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
B13	CLOSET 4	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	7'-6"	
B14	BATH	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
C01	STAIR	RPF/CPT	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	VARIES	
C02	CLOSET 1	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
C03	DINING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
C04	LIVING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
C05	CLOSET 2	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
C06	KITCHEN	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
C07	BEDROOM	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
C08	CLOSET 3	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	8'-0"	
C09	UTILITY	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
C10	BATH	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
D01	LIVING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
D02	CLOSET 1	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
D03	DINING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
D04	KITCHEN	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
D05	CLOSET 2	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
D06	BEDROOM	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
D07	CLOSET 3	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	8'-0"	
D08	UTILITY	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
D09	BATH	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
E01	STAIR	RPF/CPT	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	VARIES	
E02	CLOSET 1	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
E03	LIVING/SLEEPING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
E04	CLOSET 2	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
E05	KITCHEN	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
E06	UTILITY	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	9'-4 5/8"	
E07	BATH	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
F01	LIVING/SLEEPING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
F02	CLOSET 1	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
F03	KITCHEN	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
F04	CLOSET 2	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
F05	UTILITY	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	9'-4 5/8"	
F06	BATH	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
G01	LIVING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
G02	CLOSET 1	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
G03	DINING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
G04	KITCHEN	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
G05	CLOSET 2	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
G06	BEDROOM	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
G07	CLOSET 3	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	8'-0"	
G08	UTILITY	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
G09	BATH	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
H01	STAIR	RPF/CPT	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	VARIES	
H02	CLOSET 1	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
H03	DINING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
H04	LIVING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
H05	CLOSET 2	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
H06	KITCHEN	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
H07	BEDROOM	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
H08	CLOSET 3	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	8'-0"	
H09	UTILITY	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
H10	BATH	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
I01	STAIR	RPF/CPT	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	VARIES	
I02	CLOSET 1	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
I03	LIVING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
I04	DINING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	9'-4 5/8"	
I05	CLOSET 2	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
I06	KITCHEN	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
I07	PANTRY	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
I08	UTILITY	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
I09	HALL	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
I10	BEDROOM 1	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
I11	CLOSET 3	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
I12	BEDROOM 2	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
I13	CLOSET 4	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	8'-0"	
I14	BATH	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
J01	LIVING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
J02	CLOSET 1	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
J03	DINING	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	9'-4 5/8"	
J04	CLOSET 2	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
J05	KITCHEN	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
J06	PANTRY	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
J07	UTILITY	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
J08	HALL	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
J09	BEDROOM 1	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
J10	CLOSET 3	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	9'-4 5/8"	
J11	BEDROOM 2	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	SEE PLAN	
J12	CLOSET 4	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	8'-0"	
J13	BATH	RPF	WD / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB-TF / IPS-1	8'-0"	
U01	MECHANICAL	CONC.	NONE	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	GB / IPS-1	12'-0 5/8"	

ROOM FINISH SCHEDULE ABBREVIATIONS:

C	CONC. (SEALED)	IPS-2	INTERIOR PAINT SYSTEM -2 (ENAMEL)
CPT	CARPET	RPF	RESILIENT PLANK FLOORING
EPS-1	EXTERIOR PAINT SYSTEM -1	TF	TEXTURED FINISH
GB	GYPSUM BOARD	WD	WOOD
IPS-1	INTERIOR PAINT SYSTEM -1 (LATEX)		

ANTHONY P. ESSON ARCHITECT
PO BOX 479 GAYLORD, MICHIGAN
TELEPHONE: (989) 732-0585

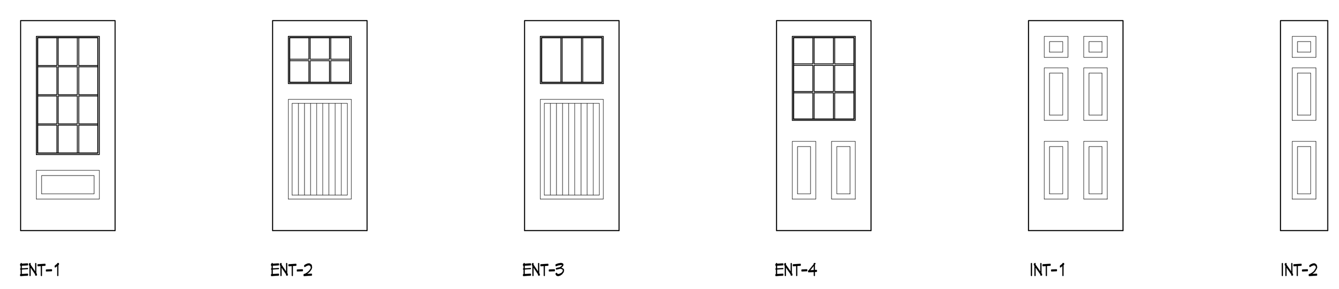
DRAWING TITLE
BUILDINGS 3, 5 & 6
ROOM FINISH SCHEDULE AND INT. ELEVATIONS

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APRATMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

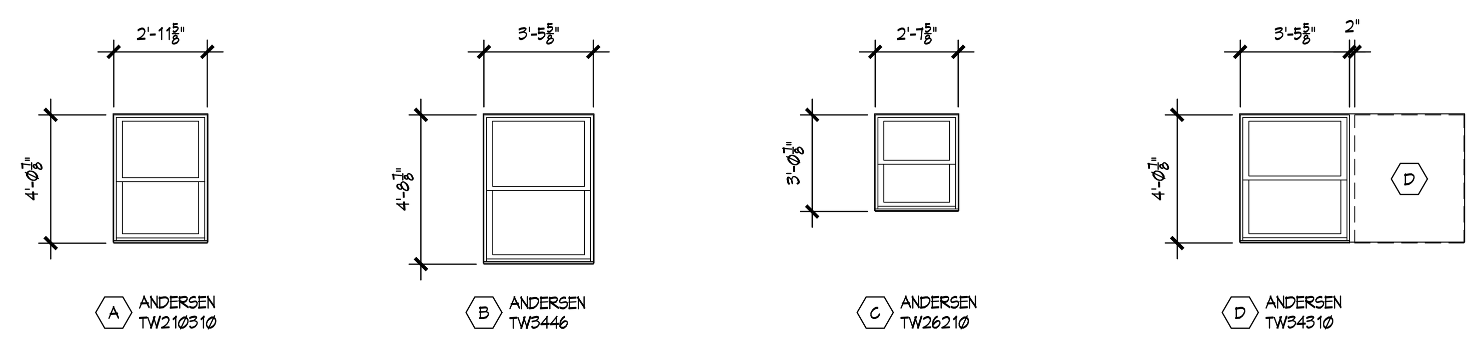
DATE
MAY 1, 2020
SEPT. 14, 2022

SHEET A4.1



DOOR ELEVATIONS

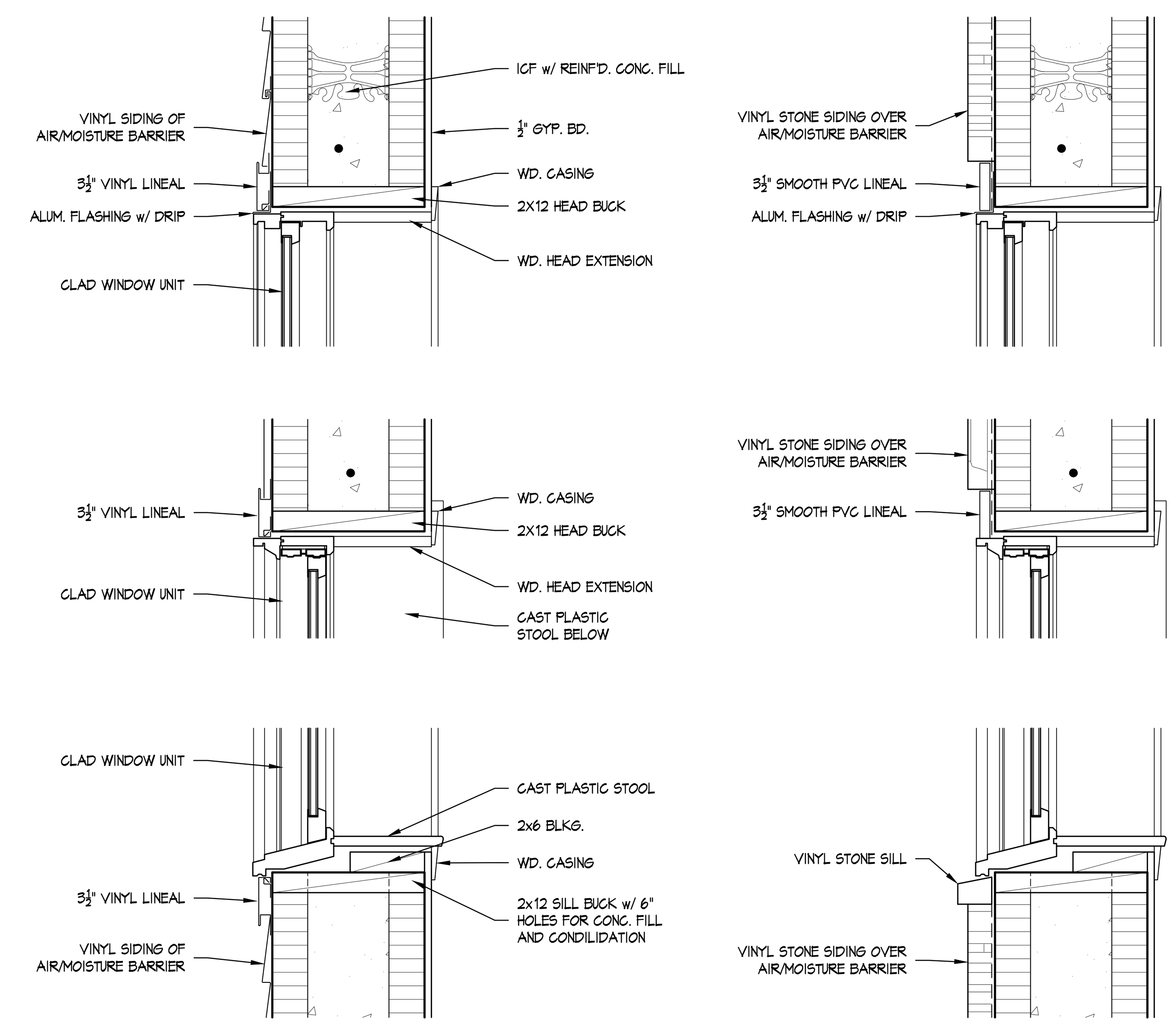
SCALE: 1/4" = 1'-Ø"



WINDOW ELEVATIONS

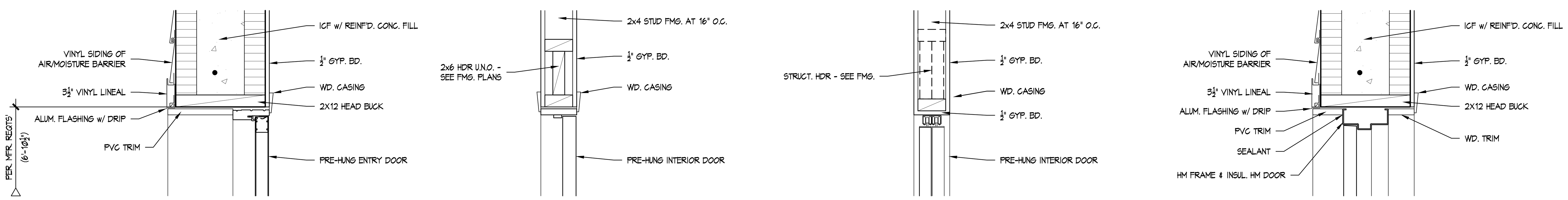
SCALE: 1/4" = 1'-Ø"

NOTE; WINDOS ON THE UPPER LEVEL w/ STOOL HIEGHTS GREATER THAN 36" ABOVE FINISH FLOOR SHALL BE EQUIPPED WITH MANUFACTURERS OPENING CONTROL DEVICES.

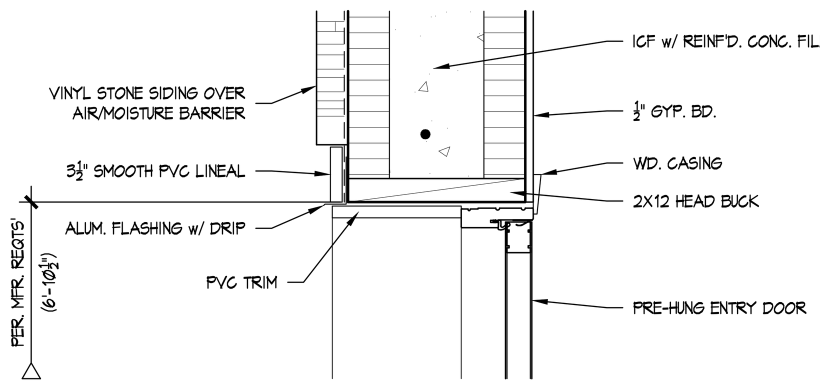


WINDOW HEAD & JAMB DETAILS

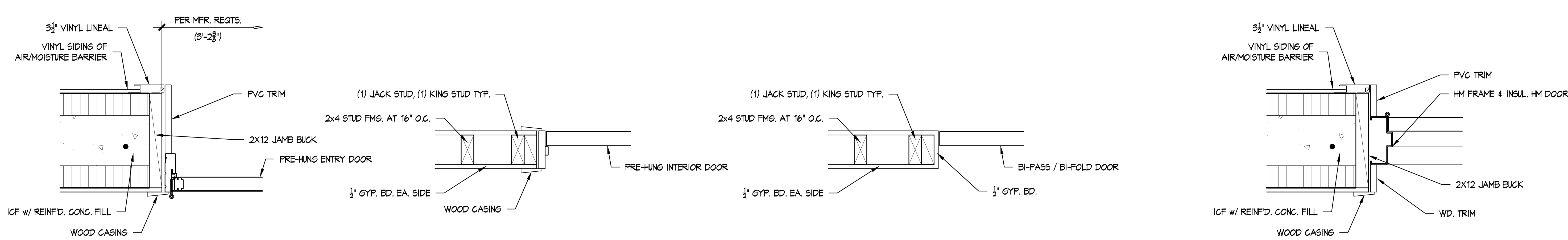
SCALE: 1 1/2" = 1'-Ø"



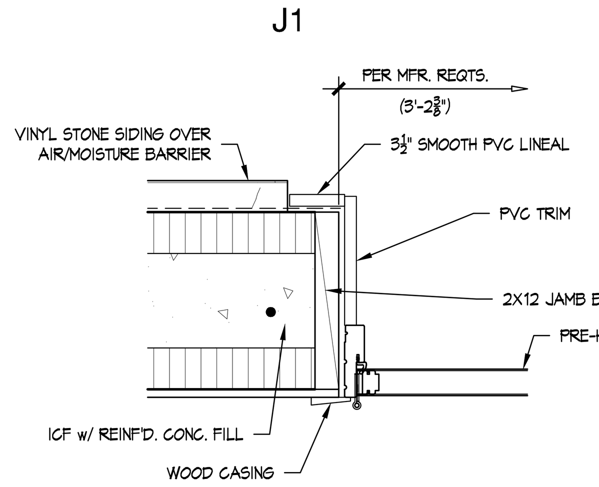
H1 H2 H3 H4



H5



J1 J2 J3 J4



J5

DOOR HEAD & JAMB DETAILS

SCALE: 1 1/2" = 1'-Ø"

DOOR, FRAME AND HARDWARE SCHEDULE

DOOR NO.	DOOR SIZE	DOOR DATA			FRAME DATA			DETAILS		HDWE GROUP	REMARKS
		MAT.	TYPE	GLAZING	MAT.	TYPE	GLAZING	HEAD	JAMB		
#-A1	3'-Ø" X 6'-8"		ENT-1			PRE-HUNG		H5	J5	1	
#-A2	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-A3	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-A4	6'-Ø" X 6'-8" BY-PASS		INT-1			NONE		H3	J3	4	
#-A5	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-A6	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-A7	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-A8	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-A9	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-B1	3'-Ø" X 6'-8"		ENT-2			PRE-HUNG		H5	J5	1	
#-B2	2'-6" X 6'-8" BI-FOLD		INT-2			NONE		H3	J3	5	
#-B3	4'-Ø" X 6'-8" BI-FOLD		INT-2			NONE		H3	J3	5	
#-B4	6'-Ø" X 6'-8" BY-PASS		INT-1			NONE		H3	J3	4	
#-B5	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-B6	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-B7	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-B8	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-B9	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-C1	3'-Ø" X 6'-8"		ENT-3			PRE-HUNG		H1	J1	1	
#-C2	2'-6" X 6'-8" BI-FOLD		INT-2			NONE		H3	J3	5	
#-C3	4'-Ø" X 6'-8" BI-FOLD		INT-1			NONE		H3	J3	4	
#-C4	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-C5	6'-Ø" X 6'-8" BY-PASS		INT-1			NONE		H3	J3	4	
#-C6	6'-Ø" X 6'-8" BY-PASS		INT-1			NONE		H3	J3	4	
#-C7	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-C8	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-D1	3'-Ø" X 6'-8"		ENT-4			PRE-HUNG		H1	J1	1	
#-D2	5'-Ø" X 6'-8" DBL. BI-FOLD		INT-2			NONE		H1	J1	6	
#-D3	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-D4	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-D5	6'-Ø" X 6'-8" BY-PASS		INT-1			NONE		H3	J3	4	
#-D6	6'-Ø" X 6'-8" BY-PASS		INT-1			NONE		H3	J3	4	
#-D7	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-D8	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-E1	3'-Ø" X 6'-8"		ENT-2			PRE-HUNG		H1	J1	1	
#-E2	2'-6" X 6'-8" BI-FOLD		INT-2			NONE		H3	J3	5	
#-E3	4'-Ø" X 6'-8" BI-FOLD		INT-1			NONE		H3	JB	6	
#-E4	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-E5	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-F1	3'-Ø" X 6'-8"		ENT-1			PRE-HUNG		H1	J1	1	
#-F2	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-F3	5'-Ø" X 6'-8" BY-PASS		INT-1			NONE		H3	J3	4	
#-F4	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-F5	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-G1	3'-Ø" X 6'-8"		ENT-4			PRE-HUNG		H1	J1	1	
#-G2	5'-Ø" X 6'-8" DBL. BI-FOLD		INT-2			NONE		H1	J1	6	
#-G3	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-G4	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-G5	6'-Ø" X 6'-8" BY-PASS		INT-1			NONE		H3	J3	4	
#-G6	6'-Ø" X 6'-8" BY-PASS		INT-1			NONE		H3	J3	4	
#-G7	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-G8	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-H1	3'-Ø" X 6'-8"		ENT-3			PRE-HUNG		H1	J1	1	
#-H2	2'-6" X 6'-8" BI-FOLD		INT-2			NONE		H3	J3	5	
#-H3	4'-Ø" X 6'-8" BI-FOLD		INT-1			NONE		H3	J3	6	
#-H4	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-H5	6'-Ø" X 6'-8" BY-PASS		INT-1			NONE		H3	J3	4	
#-H6	6'-Ø" X 6'-8" BY-PASS		INT-1			NONE		H3	J3	4	
#-H7	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-H8	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-I1	3'-Ø" X 6'-8"		ENT-2			PRE-HUNG		H5	J5	1	
#-I2	2'-6" X 6'-8" BI-FOLD		INT-2			NONE		H3	J3	5	
#-I3	4'-Ø" X 6'-8" BI-FOLD		INT-2			NONE		H3	J3	6	
#-I4	6'-Ø" X 6'-8" BY-PASS		INT-1			NONE		H3	J3	4	
#-I5	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-I6	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-I7	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-I8	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-I9	2'-6" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-J1	3'-Ø" X 6'-8"		ENT-1			PRE-HUNG		H5	J5	1	
#-J2	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-J3	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-J4	6'-Ø" X 6'-8" BY-PASS		INT-1			NONE		H3	J3	4	
#-J5	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-J6	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-J7	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-J8	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	2	
#-J9	2'-1Ø" X 6'-8"		INT-1			PRE-HUNG		H2	J2	3	
#-U1	3'-Ø" X 6'-8"	H.M.	FLUSH	-	H.M.	-	-	H4	J4	7	

ENTRY DOOR TYPE SCHEDULE:

ENT-1: THERMA-TRU; MODEL CCVØ5Ø12
ENT-2: THERMA-TRU; MODEL CCV96Ø-SDL
ENT-3: THERMA-TRU; MODEL CCV93Ø-SDL
ENT-4: THERMA-TRU; MODEL CCVØ6Ø9

INTERIOR DOOR TYPE SCHEDULE:

INT-1: PRE-HUNG 6 PANEL
INT-2: BI-FOLD PANEL MATCHING INT-1

ANTHONY P. ESSON
ARCHITECT
PO BOX 479
GAYLORD, MICHIGAN
TELEPHONE: (989) 732-0585

DRAWING TITLE
BUILDINGS 3, 5 & 6
DOOR AND WINDOW SCHEDULES AND DETAILS

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APRATMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
MAY 1, 2020
SEPT. 14, 2022

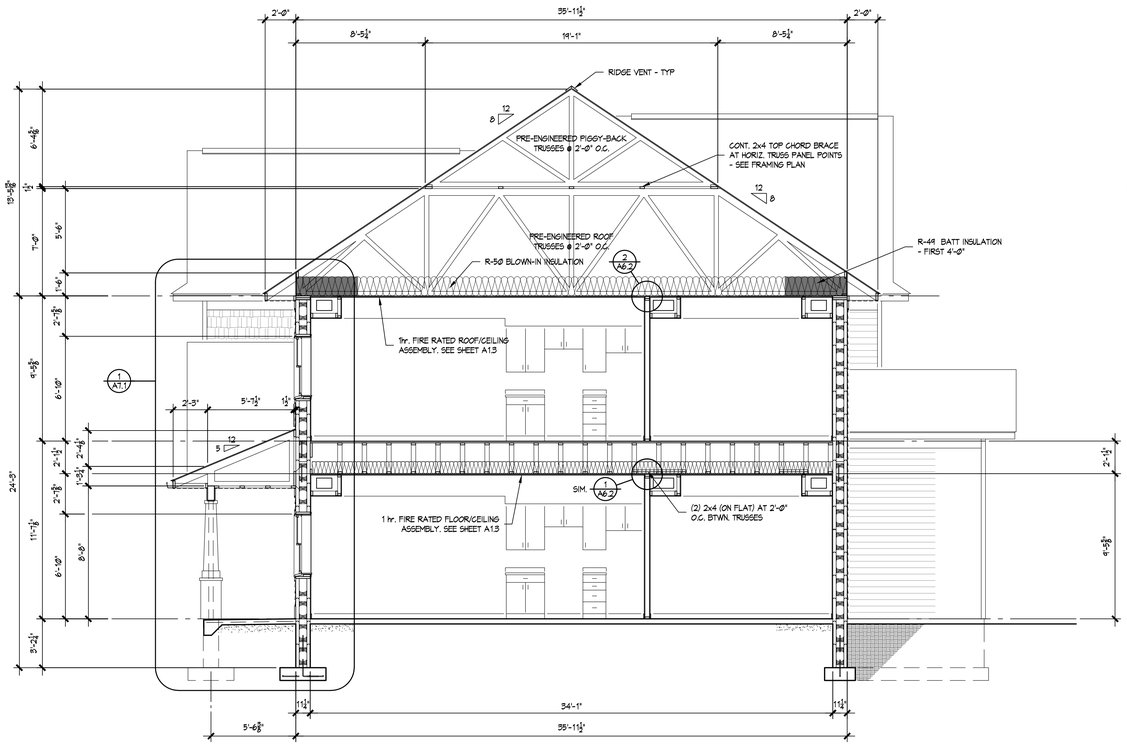
SHEET A5.1

REVIEWED FOR CODE COMPLIANCE

These plans and documents have been reviewed and found to be in compliance with the applicable code requirements of the jurisdiction Issuance of a permit is recommended subject to approval by other departments and any noted conditions. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes and standards no relieve the owner, design professional of record or contractor of compliance with the applicable codes and standards. Plan review of documents does not authorize construction to proceed in violation of any federal, state, nor local regulation.

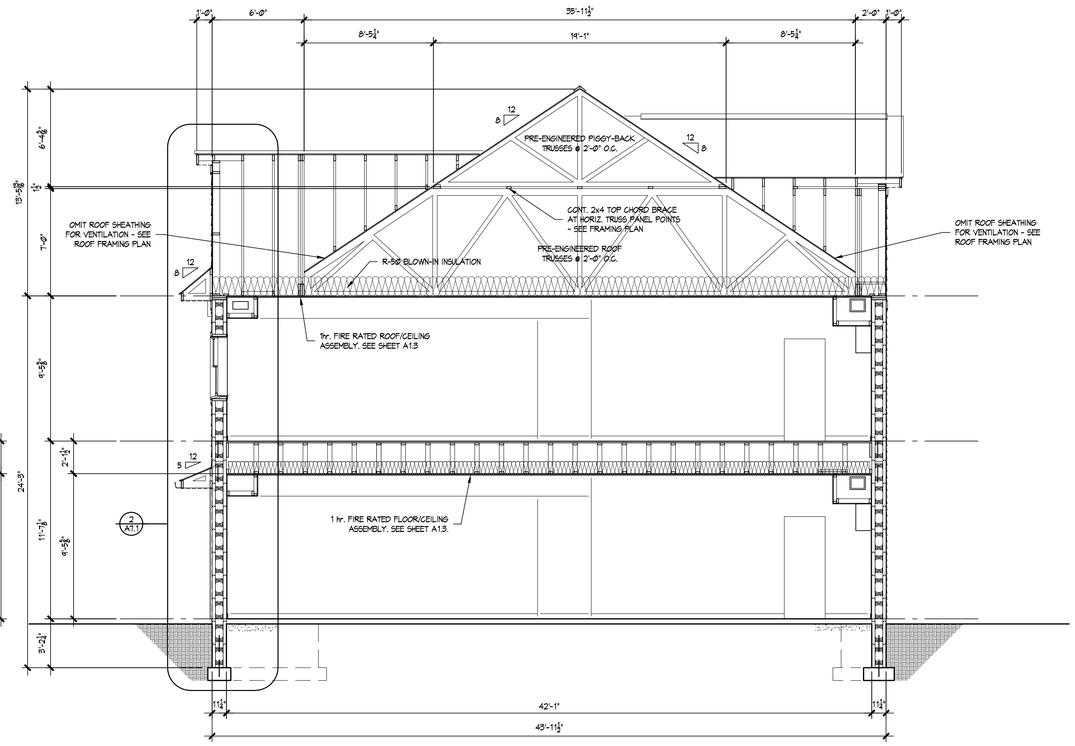
BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Bobbet V. La Guardia
DATE: 01/31/2023



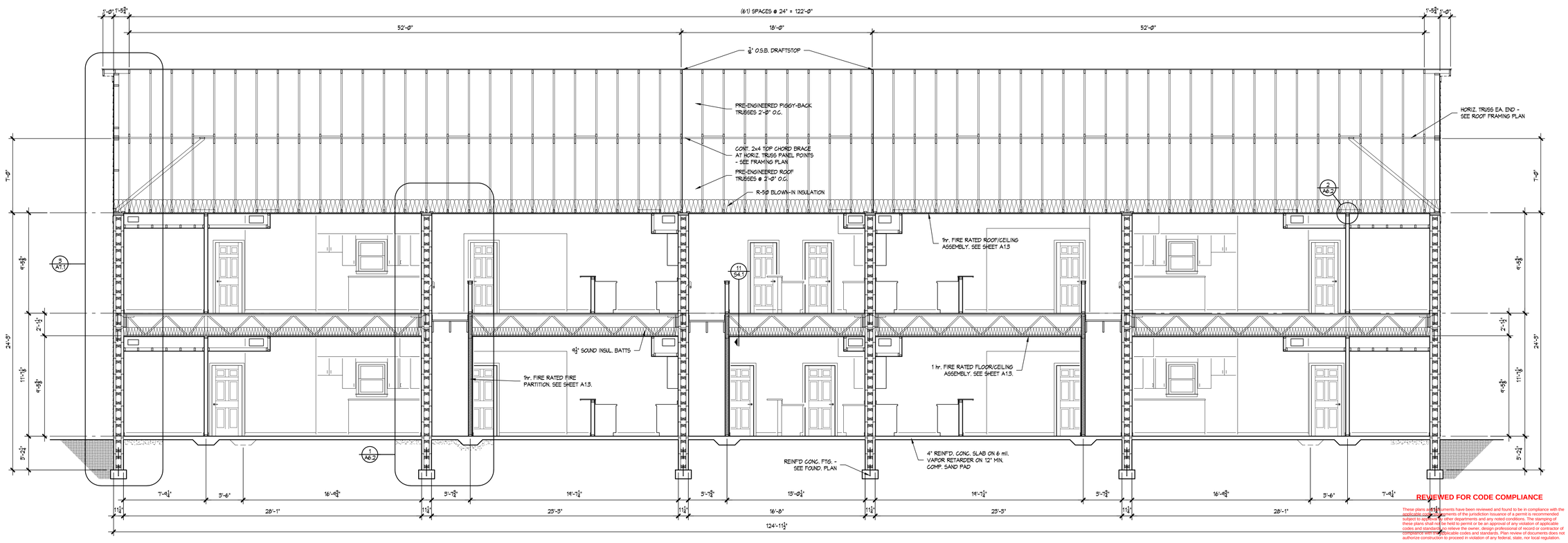
BUILDING SECTION "A-A"

SCALE: ¼" = 1'-0"



BUILDING SECTION "B-B"

SCALE: ¼" = 1'-0"



BUILDING SECTION "C-C"

SCALE: ¼" = 1'-0"

REVIEWED FOR CODE COMPLIANCE

These plans and documents have been reviewed and found to be in compliance with the applicable codes. Requirements of the jurisdiction issuance of a permit is recommended subject to approval by other departments and any noted conditions. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes and standards, nor relieve the owner, design professional of record or contractor of compliance with applicable codes and standards. Plan review of documents does not authorize construction to proceed in violation of any federal, state, nor local regulation.

BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Bobbet V. La Guardia

DATE: 01/31/2023

ANTHONY P. ESSON
ARCHITECT
PO BOX 479 GAYLORD, MICHIGAN
TELEPHONE: (989) 732-0585

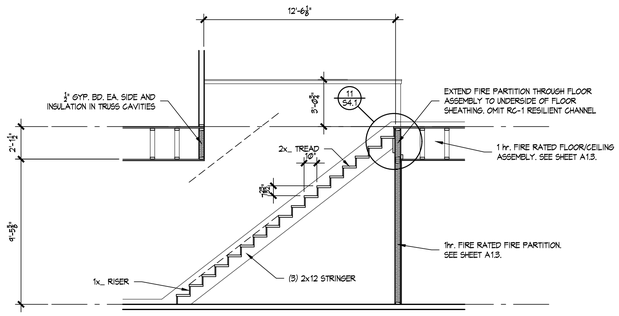
DRAWING TITLE
BUILDINGS 3, 5 & 6
BUILDING SECTIONS "A-A", "B-B" & "C-C"

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APRATMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

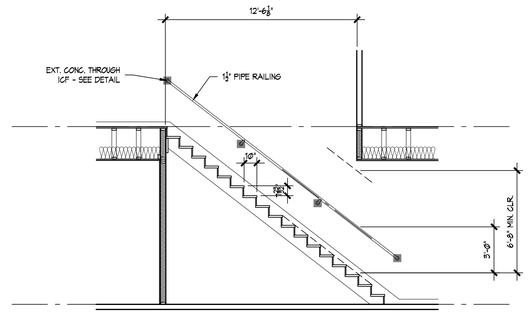
DATE
MAY 1, 2020
SEPT. 14, 2022

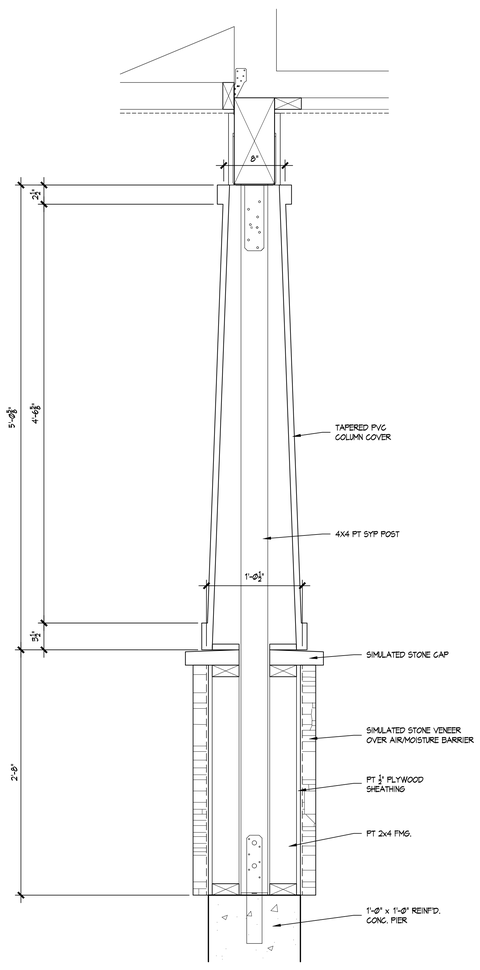
SHEET **A6.1**



TYPICAL STAIR SECTIONS

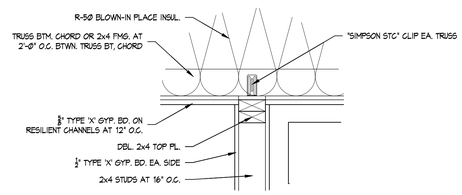
SCALE: 1/4" = 1'-0"





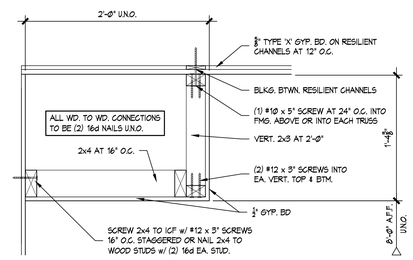
5 / A6.2 COLUMN COVER DETAIL

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



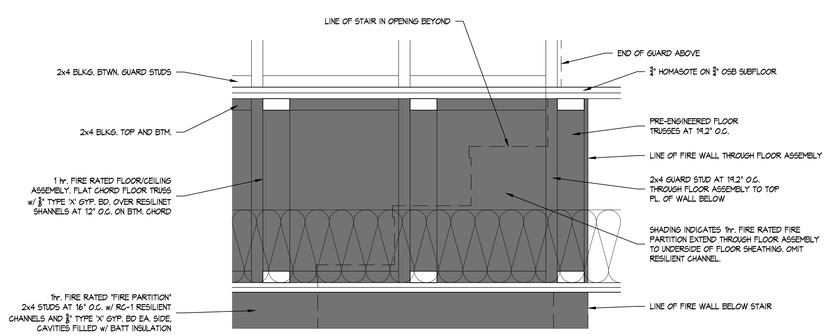
2 / A6.2 NON-BRG. PART'N DETAIL

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



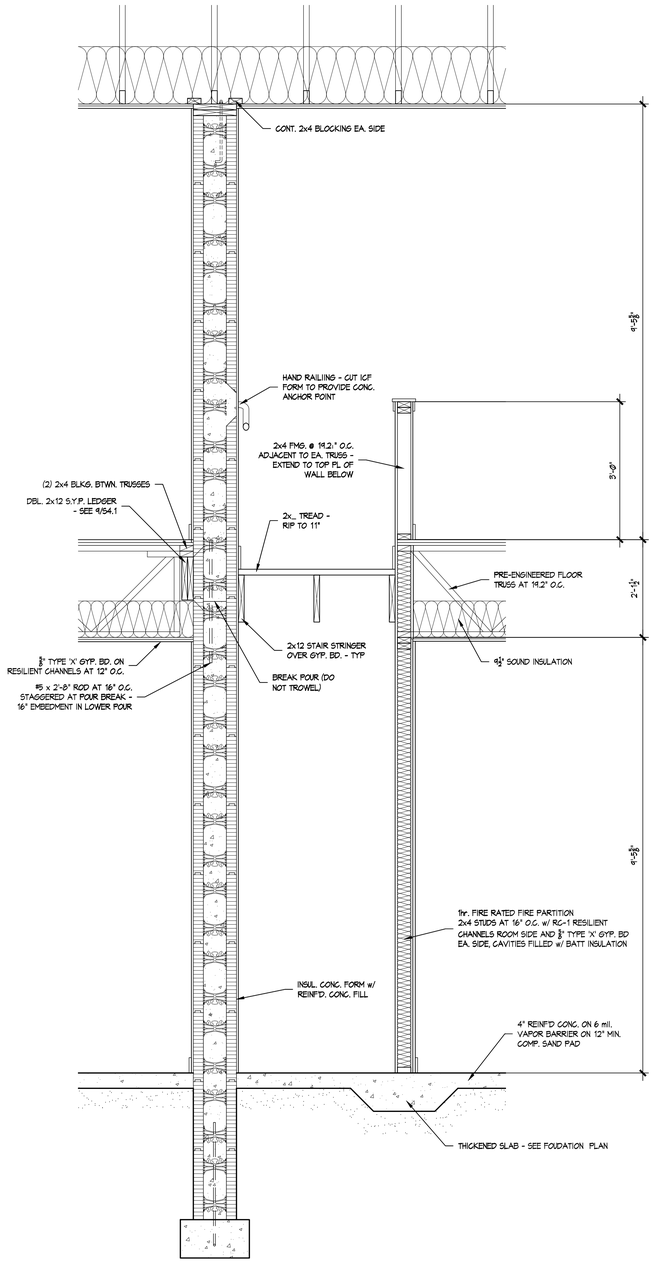
3 / A6.2 SOFFIT FMG. DETAIL

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



4 / A6.2 GUARD FRAMING DETAIL

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



1 / A6.2 TYPICAL WALL DETAL

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

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Bobbet V. La Guardia

DATE: 01/31/2023

ANTHONY P. ESSON
ARCHITECT
PO BOX 479 GAYLORD, MICHIGAN
TELEPHONE: (989) 732-0585

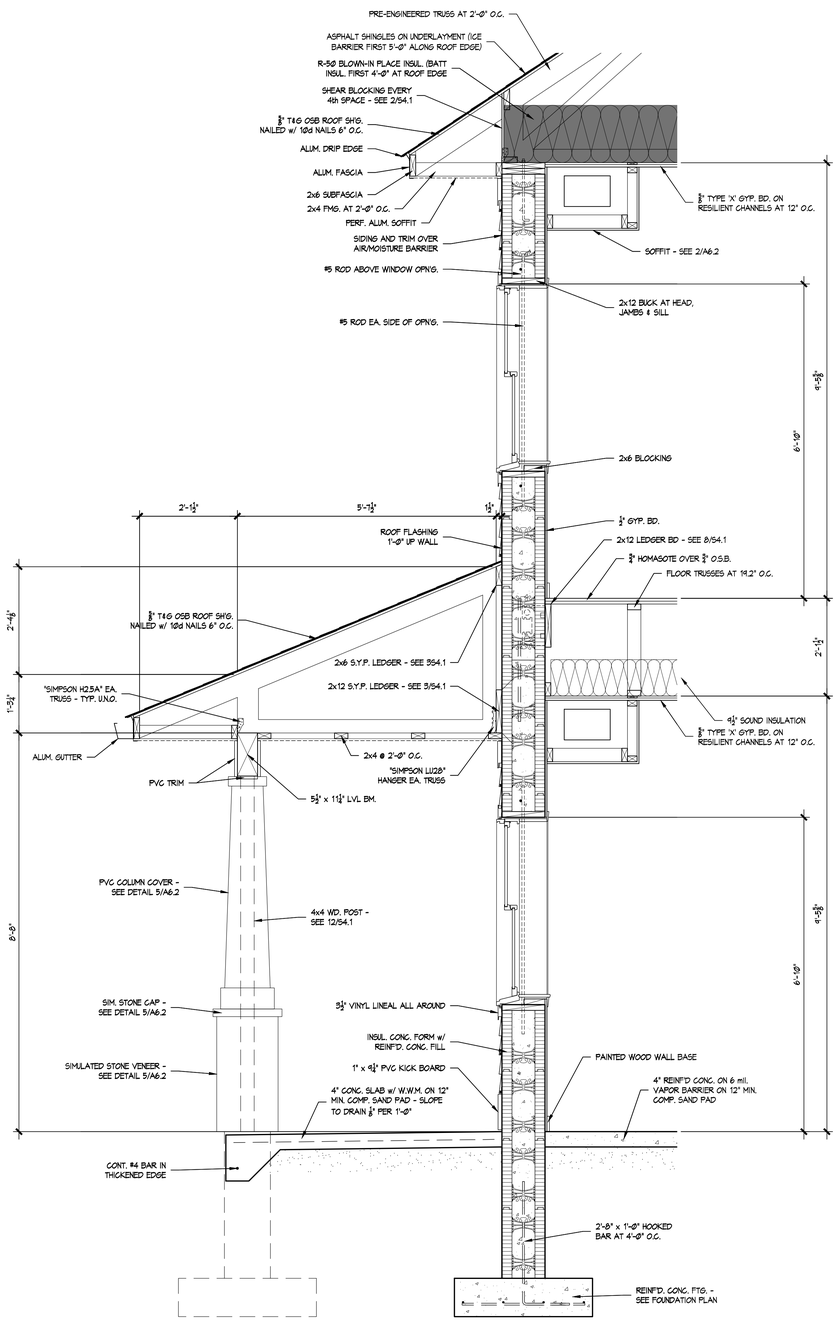
DRAWING TITLE
BUILDINGS 3, 5 & 6
TYPICAL STAIR SECTIONS AND BUILDING DETAILS

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APRATMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

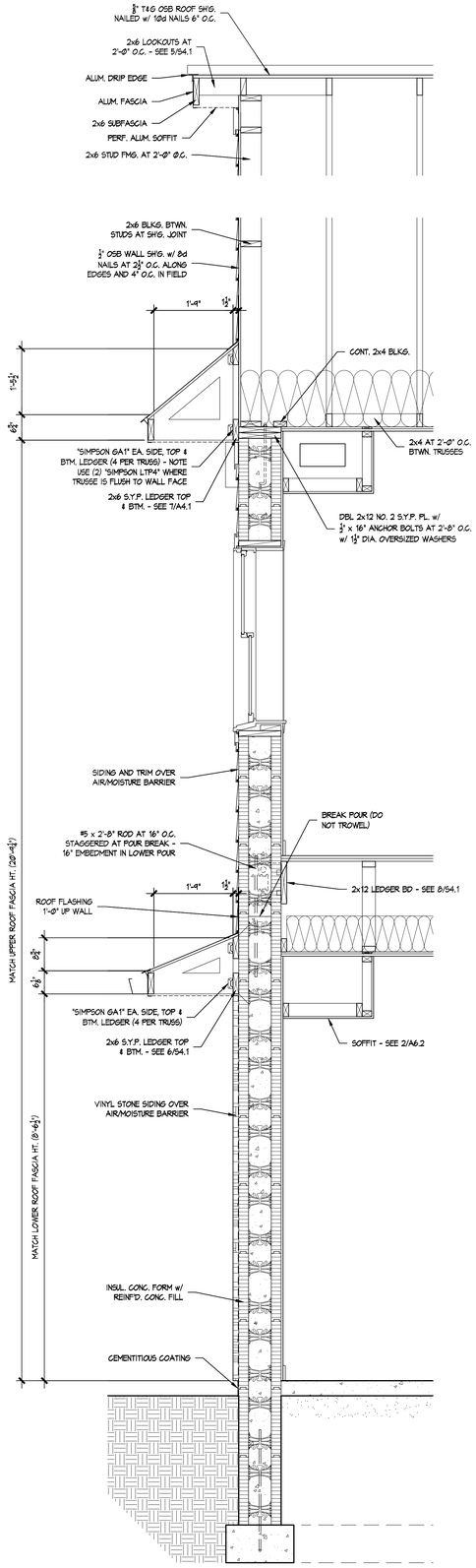
DATE
MAY 1, 2020
SEPT. 14, 2022

SHEET A6.2



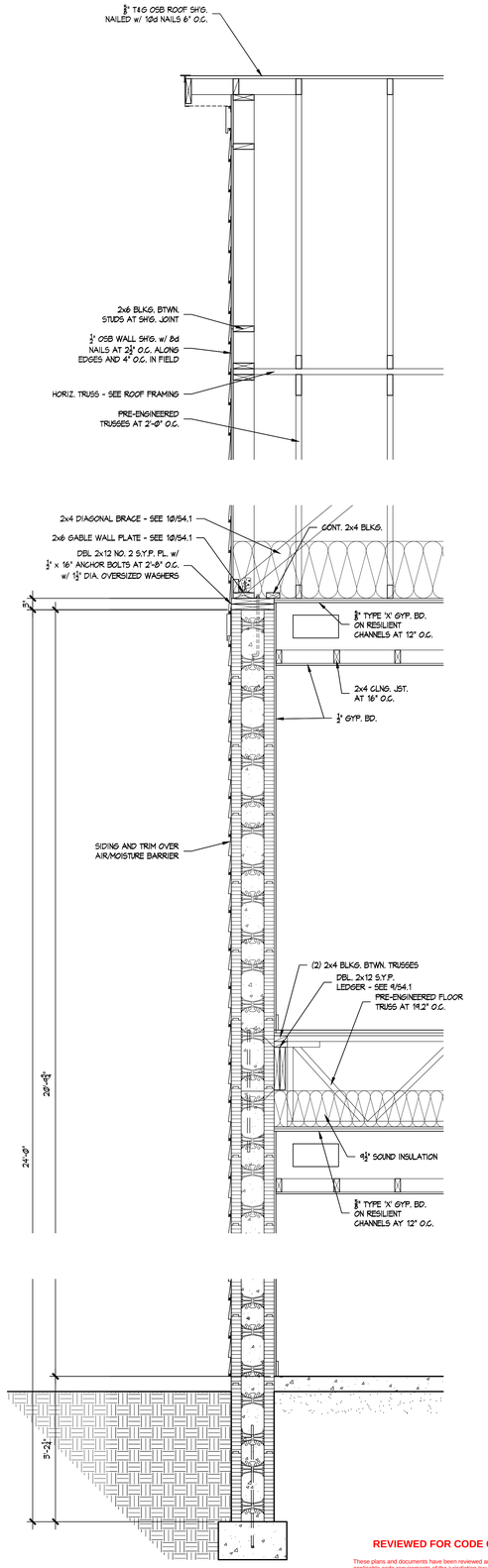
1 A7.1 TYPICAL WALL DETAIL

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



2 A7.1 TYPICAL WALL DETAIL

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



3 A7.1 TYPICAL WALL DETAIL

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

REVIEWED FOR CODE COMPLIANCE

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Robbet V. La Guardia

DATE: 01/31/2023

ANTHONY P. ESSON ARCHITECT
PO BOX 479 GAYLORD, MICHIGAN
TELEPHONE: (989) 732-0585

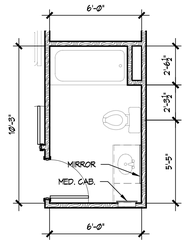
DRAWING TITLE
BUILDINGS 3, 5 & 6
TYPICAL WALL DETAILS

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APRATMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
MAY 1, 2020
SEPT. 14, 2022

SHEET A7.1

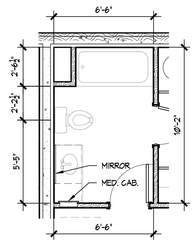


NOTE: BATHROOM I14 LAYOUT IS MIRRORED

BATH B14 & I14 - FLOOR PLAN

SCALE: ¼" = 1'-0"

NOTE: PLAN DIMENSIONS ARE FACE OF STUD TO FACE OF STUD, OR FACE OF ICF TO FACE OF ICF

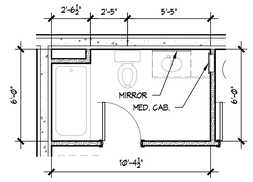


NOTE: BATHROOM H10 LAYOUT IS MIRRORED

BATH C10 & H10 - FLOOR PLAN

SCALE: ¼" = 1'-0"

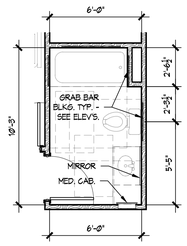
NOTE: PLAN DIMENSIONS ARE FACE OF STUD TO FACE OF STUD, OR FACE OF ICF TO FACE OF ICF



BATH E07 - FLOOR PLAN

SCALE: ¼" = 1'-0"

NOTE: PLAN DIMENSIONS ARE FACE OF STUD TO FACE OF STUD, OR FACE OF ICF TO FACE OF ICF

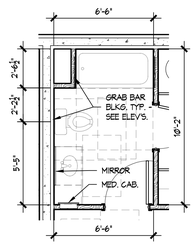


NOTE: BATHROOM J13 LAYOUT IS MIRRORED

BATH A13 & J13 - FLOOR PLAN

SCALE: ¼" = 1'-0"

NOTE: PLAN DIMENSIONS ARE FACE OF STUD TO FACE OF STUD, OR FACE OF ICF TO FACE OF ICF

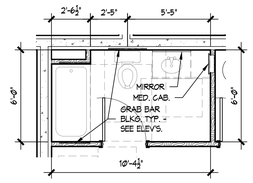


NOTE: BATHROOM G09 LAYOUT IS MIRRORED

BATH D09 & G09 - FLOOR PLAN

SCALE: ¼" = 1'-0"

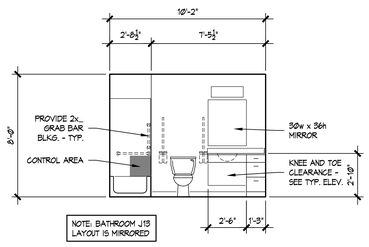
NOTE: PLAN DIMENSIONS ARE FACE OF STUD TO FACE OF STUD, OR FACE OF ICF TO FACE OF ICF



BATH F06 - FLOOR PLAN

SCALE: ¼" = 1'-0"

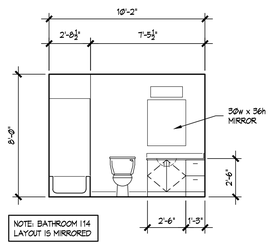
NOTE: PLAN DIMENSIONS ARE FACE OF STUD TO FACE OF STUD, OR FACE OF ICF TO FACE OF ICF



NOTE: BATHROOM J13 LAYOUT IS MIRRORED

BATH A13 & J13 - ELEVATION

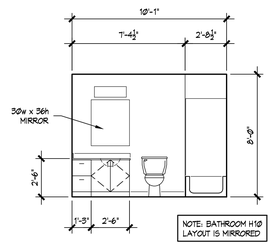
SCALE: ¼" = 1'-0"



NOTE: BATHROOM I14 LAYOUT IS MIRRORED

BATH B14 & I14 - ELEVATION

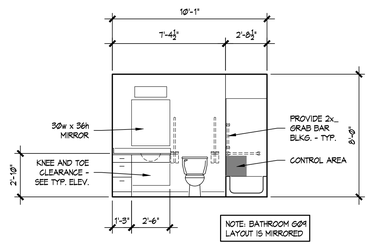
SCALE: ¼" = 1'-0"



NOTE: BATHROOM H10 LAYOUT IS MIRRORED

BATH C10 & H10- ELEVATION

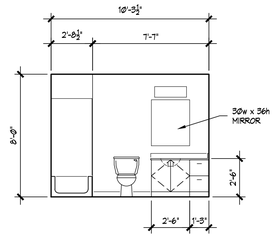
SCALE: ¼" = 1'-0"



NOTE: BATHROOM G09 LAYOUT IS MIRRORED

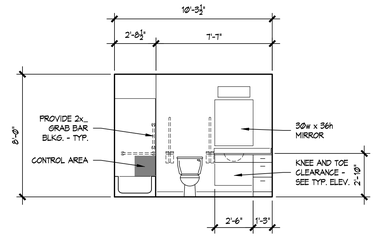
BATH D09 & G09 - ELEVATION

SCALE: ¼" = 1'-0"



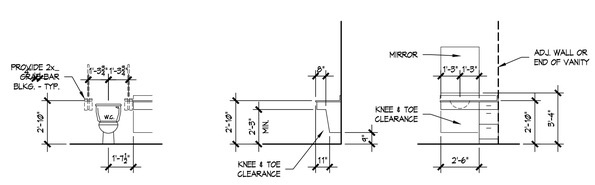
BATH E07 - ELEVATION

SCALE: ¼" = 1'-0"



BATH F06 - ELEVATION

SCALE: ¼" = 1'-0"



TYP. "TYPE B" ACCESSIBLE RESTROOM FIXTURE/EQPM. ELEVATIONS

SCALE: ¼" = 1'-0"

REVIEWED FOR CODE COMPLIANCE

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Bobbet V. La Guardia

DATE: 01/31/2023

ANTHONY P. ESSON
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PO BOX 479 GAYLORD, MICHIGAN
TELEPHONE: (989) 732-0585

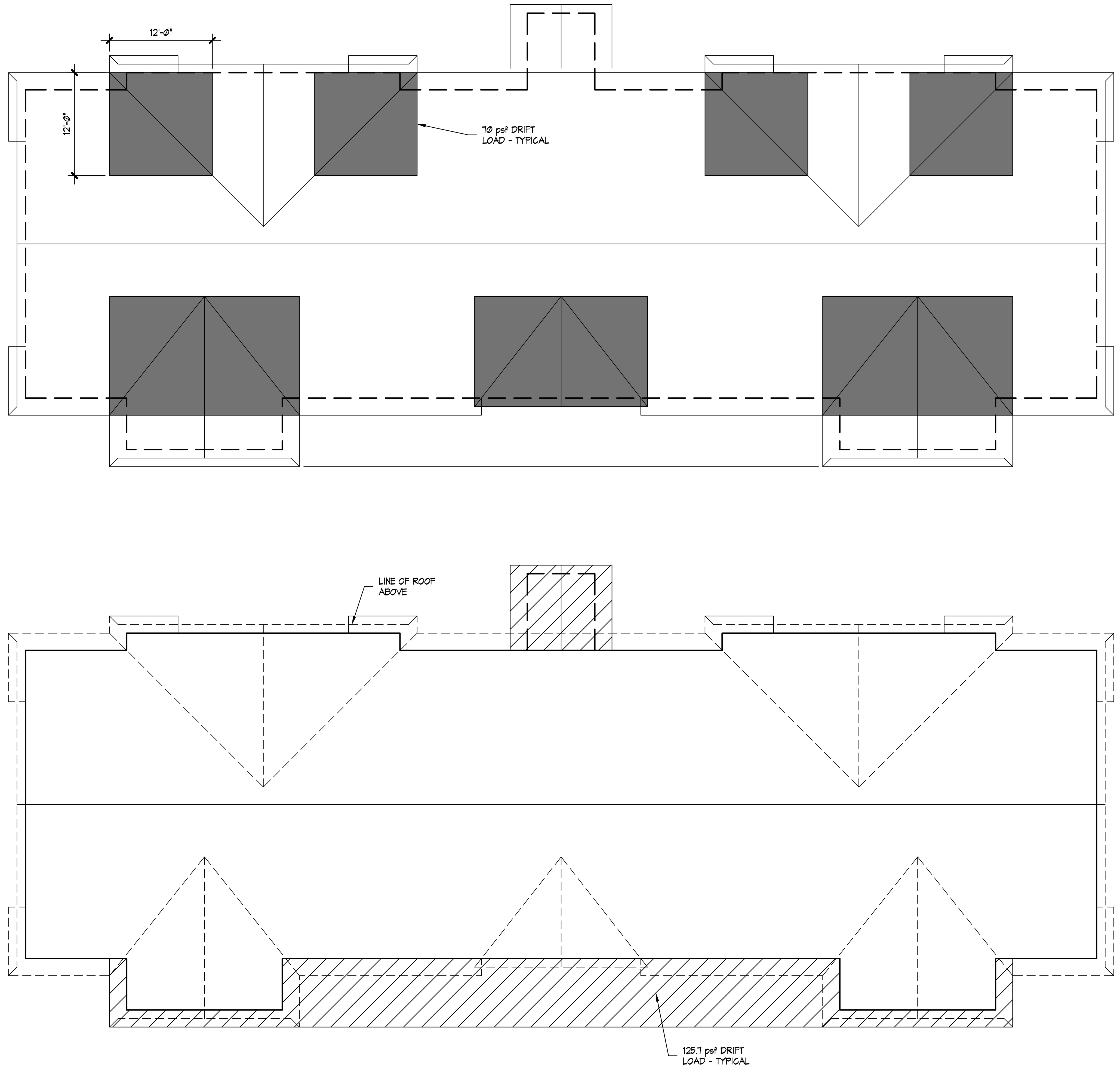
DRAWING TITLE
BUILDINGS 3, 5 & 6
BATHROOM PLANS AND ELEVATIONS

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APRATMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
MAY 1, 2020
SEPT. 14, 2022

SHEET **A8.1**



DRIFT LOADING DIAGRAM

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

BUILDING LOADS		
LIVE LOADS		
LOAD TYPE	DEFLECTION LIMIT	LOAD (psf)
1. Section 1603.1.1 FLOOR LIVE LOAD	L/360	40
2. Section 1603.1.2 ROOF LIVE LOAD	L/360	SEE DIAGRAM
ROOF SNOW LOAD Section 1603.1.3		
LOAD TYPE		LOAD (psf)
3. GROUND SNOW LOAD, Pg		70
4. FLAT ROOF SNOW LOAD, Pf		53.9
SNOW LOAD FACTORS		VALUE
5. SNOW EXPOSURE FACTOR, Ce		1.0
6. SNOW LOAD IMPORTANCE FACTOR, Is		1.1
7. THERMAL FACTOR – BLDG., Ct		1.0
8. ROOF SLOPE FACTOR, Cs		1.0
WIND LOADS Section 1603.1.4		
LOAD OR VARIABLE		VALUE
9. ULTIMATE DESIGN WIND SPEED (3–SECOND GUST)		115 mph
10. RISK CATEGORY		II
11. WIND EXPOSURE CATEGORY		C
12. MAIN WIND FORCE RESISTING SYSTEM (MAX. ROOF UPLIFT)		−29.9 psf
13. MAIN WIND FORCE RESISTING SYSTEM (MAX WALL)		−34.7 psf
14. INTERNAL PRESSURE COEFFICIENT		±0.55
EARTHQUAKE DESIGN DATA Section 1603.1.5		
LOAD OR VARIABLE		VALUE
15. RISK CATEGORY		II
16. SEISMIC IMPORTANCE FACTOR		1.0
17. MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER, S_s		0.047g
18. MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETER, S_1		0.028g
19. SITE CLASS		D
20. SEISMIC DESIGN CATEGORY		A
21. BASIC SEISMIC FORCE RESISTING SYSTEM		BRG. WALL
22. SEISMIC RESPONSE COEFFICIENT		0.03
23. ANALYSIS PROCEDURE: MINIMIM LATERAL FORCE ANALYSIS PROCEDURE 1616.4		
SOIL BEARING STRENGTH Section 1803.6		
SOIL BEARING STRENGTH IS 2,000 PSF.		

NOTES:

1. APPLICABLE CODE IS MBC 2015.
2. LOADS ARE BASED ON SECTION 16 OF MBC 2015 UNLESS OTHERWISE NOTED.

GENERAL STRUCTURAL NOTES

1. THE GENERAL STRUCTURAL NOTES ARE INTENDED TO AUGMENT THE DRAWINGS AND SPECIFICATIONS. SHOULD CONFLICTS OCCUR BETWEEN THE DRAWINGS AND/OR THE GENERAL STRUCTURAL NOTES, THE STRICTEST PROVISION SHALL GOVERN.
2. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED, SELF SUPPORTING, STABLE STRUCTURE UNLESS OTHERWISE INDICATED. THEY DO NOT INDICATE THE MEANS OR METHOD OF CONSTRUCTION. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND CONSTRUCTION SEQUENCE AND PROVIDE ALL MEASURES NECESSARY TO ENSURE THE STABILITY AND SAFETY OF THE STRUCTURE AND ITS COMPONENTS. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT AND BRACING FOR CRANES AND GIN POLES, ETC.
3. THE GOVERNING BUILDING CODE IS MICHIGAN BUILDING CODE 2015.
4. SHOP DRAWINGS PREPARED BY SUPPLIERS, SUBCONTRACTORS, ETC. SHALL BE REVIEWED BY THE ARCHITECT/ENGINEER FOR CONFORMANCE WITH DESIGN INTENT ONLY.
5. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL RELEVANT DIMENSIONS AND ELEVATIONS FOR EQUIPMENT INSTALLATIONS AGAINST APPROVED MANUFACTURERS CERTIFIED EQUIPMENT DRAWINGS.
6. MECHANICAL FRAMING LOADS, OPENING AND STRUCTURE IN ANY WAY RELATED TO MECHANICAL REQUIREMENTS ARE SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL COORDINATE WITH MECHANICAL AND OTHER TRADES TO VERIFY EQUIPMENT SIZE AND LOCATIONS. ANY CHANGES IN EQUIPMENT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OF RECORD.
7. UNLESS NOTED OTHERWISE, REQUIREMENTS GIVEN FOR ONE OR MORE LOCATIONS ALSO APPLY AT OTHER LOCATIONS AT WHICH CONDITIONS ARE SIMILAR. THE REQUIREMENTS GIVEN SHALL BE ADAPTED TO CONDITIONS AT SUCH OTHER LOCATIONS.
8. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE PLANS AND FOR COORDINATING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS WITH THOSE SHOWN ON THE ARCHITECTURAL AND MECHANICAL DRAWINGS. IF DISCREPANCIES IN THE DIMENSIONS OCCUR, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO BRING THE DISCREPANCY TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
9. CONTRACTOR SHALL NOT MIX GALVANIZED AND STAINLESS STEEL. ANY METAL PARTS IN CONTACT WITH OTHER METAL PARTS SHALL BE OF SIMILAR MATERIAL.

SOILS

1. ALL DENSITIES SHALL BE DETERMINED BY THE MODIFIED PROCTOR METHOD.
2. ALL BASE MATERIAL UNDER SLABS AND CONCRETE PAVINGS SHALL BE MDOT CLASS II GRANULAR FILL COMPACTED TO A MINIMUM 95% MAXIMUM DENSITY WITH A MINIMUM COMPACTED THICKNESS OF 6 INCHES UNLESS INDICATED OTHERWISE IN THE DRAWINGS OR SPECIFICATIONS.
3. ALL FOOTINGS SHALL BE PLACED ON UNDISTURBED SOILS, UNLESS SITE CONDITIONS PROHIBIT. FOOTINGS REQUIRING BASE FILL MATERIAL SHALL BE PLACED ON ENGINEERED FILL CONSISTING OF MDOT CLASS II GRANULAR FILL COMPACTED TO A MINIMUM 98% MAXIMUM DENSITY.
4. SOIL BORING INFORMATION CONTAINED IN SOIL BORING LOGS REPRESENTS POINT INFORMATION ONLY, AND IN NO WAY INFERS THAT THE SUBSURFACE CONDITIONS ARE CONSISTENT THROUGHOUT.
5. ANY SUBSURFACE CONDITIONS OR EXISTING FOUNDATIONS ENCOUNTERED THAT ARE NOT AS REPRESENTED IN THE PLANS OR IN ANY SOIL BORING LOGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR DIRECTION PRIOR TO PROCEEDING WITH CONSTRUCTION OF FOUNDATIONS AS DESIGNED.

BACKFILLING

1. PROVIDE A BALANCED BACKFILL AGAINST FOUNDATIONS TO ELIMINATE LATERAL LOAD EFFECTS, OR PROVIDE NECESSARY TEMPORARY LATERAL SUPPORT TO THE TOP OF FOUNDATIONS UNTIL PERMANENT SUPPORT IS INSTALLED.
2. AFTER EXCAVATING FOR ALL EARTH–SUPPORTED FLOOR SLAB BASES, THE EXPOSED NATURAL SOIL SHALL BE THOROUGHLY COMPACTED PRIOR TO PLACING AND COMPACTING FILL FOR SLAB BASE.
3. ALL EXCAVATED AREAS AROUND STRUCTURES SHALL BE BACKFILLED WITH GRANULAR MATERIAL FREE OF ORGANIC MATTER, SILT AND CLAY. ALL FILL SLOPES SHALL BE PLACED IN LAYERS AS SPECIFIED AND COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BE THE NUCLEAR DENSITY METHOD.

FOOTINGS AND FOUNDATIONS

1. ALL FOOTINGS HAVE BEEN SIZED BASED ON AN ALLOWABLE SOIL BEARING CAPACITY OF 2,000 POUNDS PER SQUARE FOOT (psf). CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING AND PROVIDING 2,000 psf BEARING CAPACITY AT THE PREPARED SITE FOR ALL FOOTINGS AND SLABS WITH LESS THAN 1/4" SETTLEMENTS.
2. CONCRETE FOOTINGS SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.

CAST–IN–PLACE CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS; THE LATEST EDITION OF ACI 318, BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE; AND ACI 4301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS. IN CASE OF CONFLICT, THE MOST STRICT PROVISION SHALL GOVERN.
2. MINIMUM 28 DAY CONCRETE STRENGTH SHALL BE AS FOLLOWS:
   A. BUILDING FOOTINGS AND GRADE BEAMS SURROUNDING CONDITIONED SPACES: F'c = 3,500 psi.
   B. PORCH FOOTINGS AND PIERS WITH NO CONDITIONED SPACE EITHER SIDE: F'c = 4,500 psi.
   C. INTERIOR CONCRETE SLABS–ON–GRADE: F'c = 3,500 psi AT 28 DAYS.
   D. EXTERIOR CONCRETE SLABS–ON–GRADE: F'c = 3,500 psi AT 28 DAYS.
   E. ICF WALLS AND FOUNDATIONS; F'c = 3,500 psi AT 28 DAYS.
3. ALL REBAR SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO ASTM A615 GRADE 60. ALL DETAILS AND ACCESSORIES SHALL CONFORM TO THE LATEST ACI 315 STANDARD DETAILING MANUAL.
4. BUILDING CONCRETE TO BE REINFORCED WITH INTEGRAL–TO–THE–MIX HELIX MICRO–REBAR. REFER TO SPECIFCATIONS FOR DOSING SCHEDULES AND MIX DESIGNS.
5. MAINTAIN MINIMUM SPECIFIED CONCRETE COVER OVER REINFORCEMENT.

   CONCRETE POURED AGAINST EARTH: 3 INCHES.
   ALL OTHER CONCRETE: 2 INCHES.
6. ALL EMBEDDED ITEMS SHALL BE PLACED IN THE FORMWORK PRIOR TO PLACING CONCRETE. DRILLING AND GROUTING IS ACCEPTABLE ONLY UPON ARCHITECT APPROVAL.
7. ALL BOLTS, NUTS, WASHERS, PLATES, AND ANCHOR BOLTS IN DIRECT OR INTERMITTENT CONTACT WITH WATER SHALL BE HOT DIPPED GALVANIZED PER LATEST ASTM STANDARDS.
8. ALL CONCRETE EXPOSED TO FREEZE–THAW CYCLES SHALL BE AIR–ENTRAINED.
9. ALL CONCRETE FILL IN ICF WALLS SHALL BE AIR ENTRAINED.
10. FOR CONCRETE SLABS ON GRADE, PROVIDE CONTROL JOINTS (CJ) AT A MINIMUM OF 20'–0" o.c. UNLESS OTHERWISE CALLED OUT. CJ'S SHALL BE SAW–CUT 1/4" WIDE x 1 1/2" DEEP IMMEDIATELY AFTER PLACEMENT AND FINISHING OF CONCRETE, WHEN CONCRETE CAN SUPPORT REQUIRED EQUIPMENT, BUT NO LONGER THAN 24 HOURS AFTER PLACEMENT OF CONCRETE. SAW CUT JOINTS SHALL BE STRAIGHT AND TRUE TO LINE.

GENERAL WOOD FRAMING

1. ALL PRESSURE PRESERVATIVE TREATED LUMBER (PT) SHALL BE SOUTHERN YELLOW PINE (SYP) NO. 2 OR BETTER. ALL TREATED LUMBER SHALL BE IN ACCORDANCE WITH AWPA SPECIFICATIONS FOR TREATED LUMBER AND ASTM D1760 AND SHALL HAVE A MINIMUM RETENTION OF 0.40 FOR ABOVE GROUND USE, AND 0.60 FOR BELOW GRADE USE OR DIRECT EXPOSURE TO FRESHWATER.
2. ALL FRAMING MEMBERS SHALL BE SPRUCE–PINE–FIR (SPF) NO. 2 OR BETTER, UNLESS NOTED OTHERWISE.
3. ALL LAMINATED VENEER LUMBER (LVL) SHALL HAVE THE FOLLOWING MINIMUM STRUCTURAL PROPERTIES:

   Fb > 2,800 psi
   Fv > 285 psi
   E > 2,000,000 psi
4. FRAMING SHALL BE IN ACCORDANCE WITH THE "MANUAL FOR HOUSE FRAMING" OF THE NATIONAL FOREST PRODUCTS ASSOCIATION.
5. METAL HANGERS/CONNECTORS SHALL BE 18 GA GALVANIZED, SIMPSON STRONG–TIE (OR EQUAL). USE HANGERS AS RECOMMENDED BY THE MANUFACTURER FOR THE INTENDED PURPOSE.
6. SHEATHING SHALL BE APA RATED AS FOLLOWS:

   ROOF SHEATHING: 5/8" MINIMUM; 40/20, EXPOSURE 1
   WALL SHEATHING: 1/2" MINIMUM; 32/16, EXPOSURE 1
   SUBFLOOR SHEATHING: 3/4" MINIMUM STURD–I–FLOOR, EXPOSURE 1, T&G, GLUED AND NAILED.
7. MINIMUM NAILING REQUIREMENTS FOR ROOF AND FLOOR SHEATHING SHALL BE 8d NAILS 6" O.C. U.N.O.
8. STEEL PLATES AND FASTENERS IN CONTACT WITH LUMBER AND PROTECTED WITHIN THE BUILDING ENVELOP (ADEQUATELY SHIELDED FROM DIRECT CONTACT WITH MOISTURE) SHALL BE STAINLESS STEEL OR GALVANIZED TO G60 PER ASTM A924 REQUIREMENTS. STEEL PLATES OR FASTENERS IN CONTACT WITH PT LUMBER LOCATED OUTSIDE OF THE BUILDING ENVELOP OR EXPOSED TO MOISTURE SHALL BE STAINLESS STEEL OR G90 GALVANIZED PER ASTM A924 REQUIREMENTS.

SHOP–FABRICATED WOOD TRUSSES

1. TRUSSES SHALL BE DESIGNED TO LIMIT LIVE LOAD DEFLECTION TO L/360 MAXIMUM.
2. TRUSSES SHALL BE MANUFACTURED IN ACCORDANCE WITH TRUSS PLATE INSTITUTE (TPI) STANDARDS. TRUSS MANUFACTURER IS RESPONSIBLE TO SPECIFY ALL TRUSS TO TRUSS HANGERS UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE ALL DIMENSIONS PRIOR TO FABRICATION OF TRUSSES.
4. CONTRACTOR SHALL INSTALL TIE–DOWNS AT EACH END OF EACH ROOF TRUSS AS INDICATED.
5. TRUSS BEARING SHALL BE DESIGNED FOR 425 psi ALLOWABLE BEARING PRESSURE. CONTRACTOR SHALL PROVIDE HEEL BLOCKS OR BEARING ENHANCERS PER TRUSS MANUFACTURERS SPECIFICATIONS TO MEET THIS REQUIREMENT.
6. CONTRACTOR SHALL INSTALL PANEL SHEATHING CLIPS (PSCL) BY SIMPSON (OR EQUAL) BETWEEN ALL HORIZONTAL PANEL EDGES, AND MAINTAIN A UNIFORM 1/8" SPACES BETWEEN ADJACENT PANELS.
7. TPI HIB–91 "COMMENTARY AND RECOMMENDATIONS FOR HANDLING, INSTALLING & BRACING METAL PLATE CONNECTED WOOD TRUSSES". INSTALL AND FASTEN PERMANENT BRACING DURING TRUSS ERECTION AND BEFORE CONSTRUCTION LOADS ARE APPLIED. ANCHOR ENDS OF PERMANENT BRACING WHERE TERMINATING AT WALLS, BEAMS, OR HORIZONTAL TRUSSES.
8. IN ADDITION TO LATERAL BRACING DESIGNATED BY THE TRUSS MANUFACTURER, CONTRACTOR SHALL PROVIDE AND INSTALL PERMANENT DIAGONAL STABILITY BRACING FOR ALL COMPRESSION WEB MEMBERS WHICH REQUIRE BRACING TO REDUCE THEIR BUCKLING LENGTH. THIS BRACING SHALL CONSIST OF 2x4 LUMBER NAILED TO WEB MEMBER w/ (2) 16d NAILS MIN. ON OPPOSITE SIDE OF LATERAL BRACING. DIAGONALS SHALL BE INSTALLED AT A 45 DEGREE ANGLE TO LATERAL BRACING IN A CHEVRON PAIR AT EACH END OF THE TRUSS BAY AND WITH NO MORE THAN 20 FEET BETWEEN PAIRS. WHERE TRUSS TYPES DIFFER AND DIAGONAL BRACING CANNOT BE USED, CONTRACTOR SHALL INSTALL A 2x4 TEE BRACE TO THE COMPRESSION WEB MEMBER w/ 16d NAILS 12 INCHES O.C.
9. HORIZONTAL GABLE END TRUSSES SHALL BE DESIGNED FOR CUMULATIVE LOADING INCLUDING WINDLOADING OF 65.3 plf AT HEELS INCREASING TO 127.8 AT THE CENTER; DIAGONAL WALL BRACING LOADS OF 365# PER BRACE; AND TOP CHORD BRACING LOADS FROM ALL TRUSSES AS PER CODE OR 2% OF THE TOP CHORD COMPRESSION LOAD.

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BUREAU VERITAS NORTH AMERICA, INC.
SIGNATURE: Jose Rely B Chico
DATE: JANUARY 31, 2023

ANTHONY P. ESSON
ARCHITECT
PO BOX 479 GAYLORD, MICHIGAN
TELEPHONE: (989) 732-0585

DRAWING TITLE
BUILDINGS 3, 5 & 6
STRUCTURAL DIAGRAMS AND NOTES

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APRATMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO.
273-19

DATE
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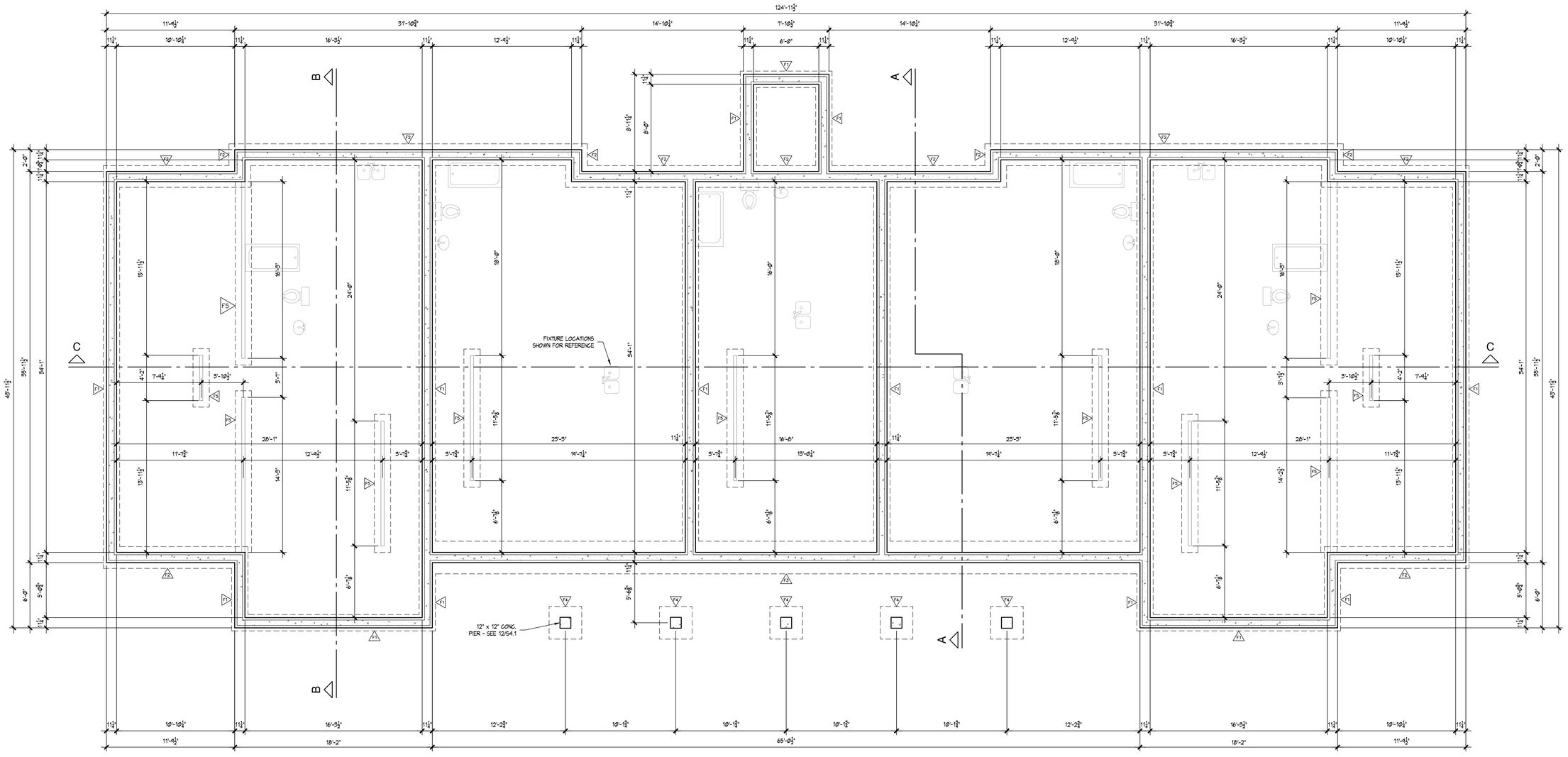
SHEET
S1.0



FOUNDATION PLAN

SCALE: ¼" = 1'-0"

NOTE: PLAN DIMENSIONS ARE FACE OF ICF TO FACE OF ICF

FOOTING SCHEDULE

TAG	SIZE (D x W x L)	REINF'G.	WALL DOWELS
F1	10" x 1'-6" x STRIP	HMR-25; 12.1 lbs/cy	#5x2'-8"x1'-0" HOOKED BAR AT 4'-0" O.C.
F2	10" x 2'-0" x STRIP	HMR-25; 12.1 lbs/cy	#5x2'-8"x1'-0" HOOKED BAR AT 4'-0" O.C.
F3	10" x 3'-0" x STRIP	HMR-25; 12.1 lbs/cy	#5x2'-8"x1'-0" HOOKED BAR AT 4'-0" O.C.
F4	10" x 3'-0" x 3'-0"	HMR-25; 12.1 lbs/cy	(4) #5x2'-8"x1'-0" HOOKED BAR
F5	10" x 1'-6" THICKEND SLAB	HMR-25; 12.1 lbs/cy	NONE

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FOUNDATION PLAN

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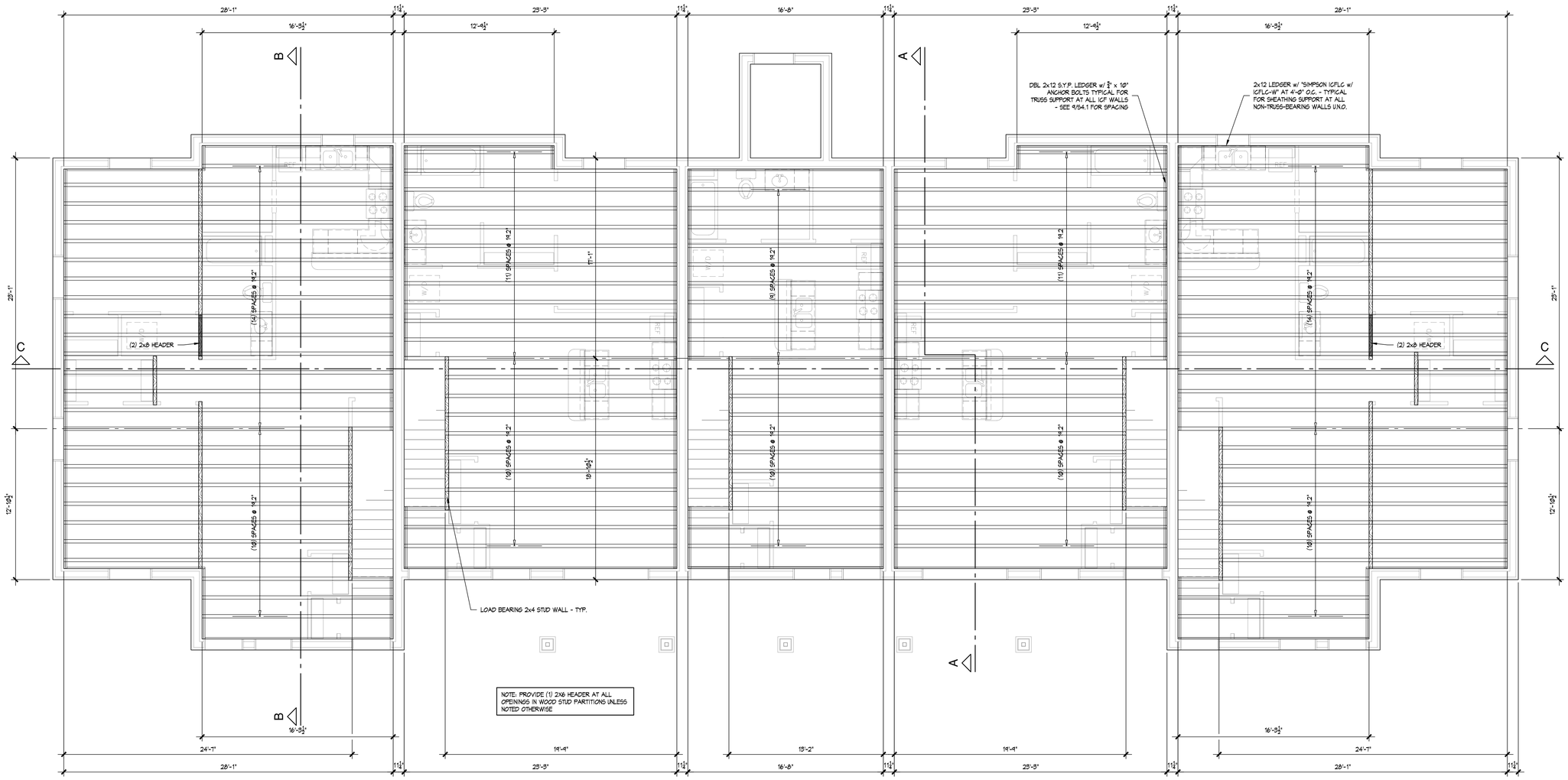

UPPER FLOOR FRAMING PLAN

SCALE: ¼" = 1'-0"

NOTE: TRUSSES DIMENSIONS ARE FACE OF STUD TO CENTERLINE OF TRUSS, OR FACE OF ICF TO CENTERLINE OF ICF

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: *Jose Rely B Chico*

DATE: JANUARY 31, 2023

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BUILDINGS 3, 5 & 6
UPPER FLOOR FRAMING PLAN

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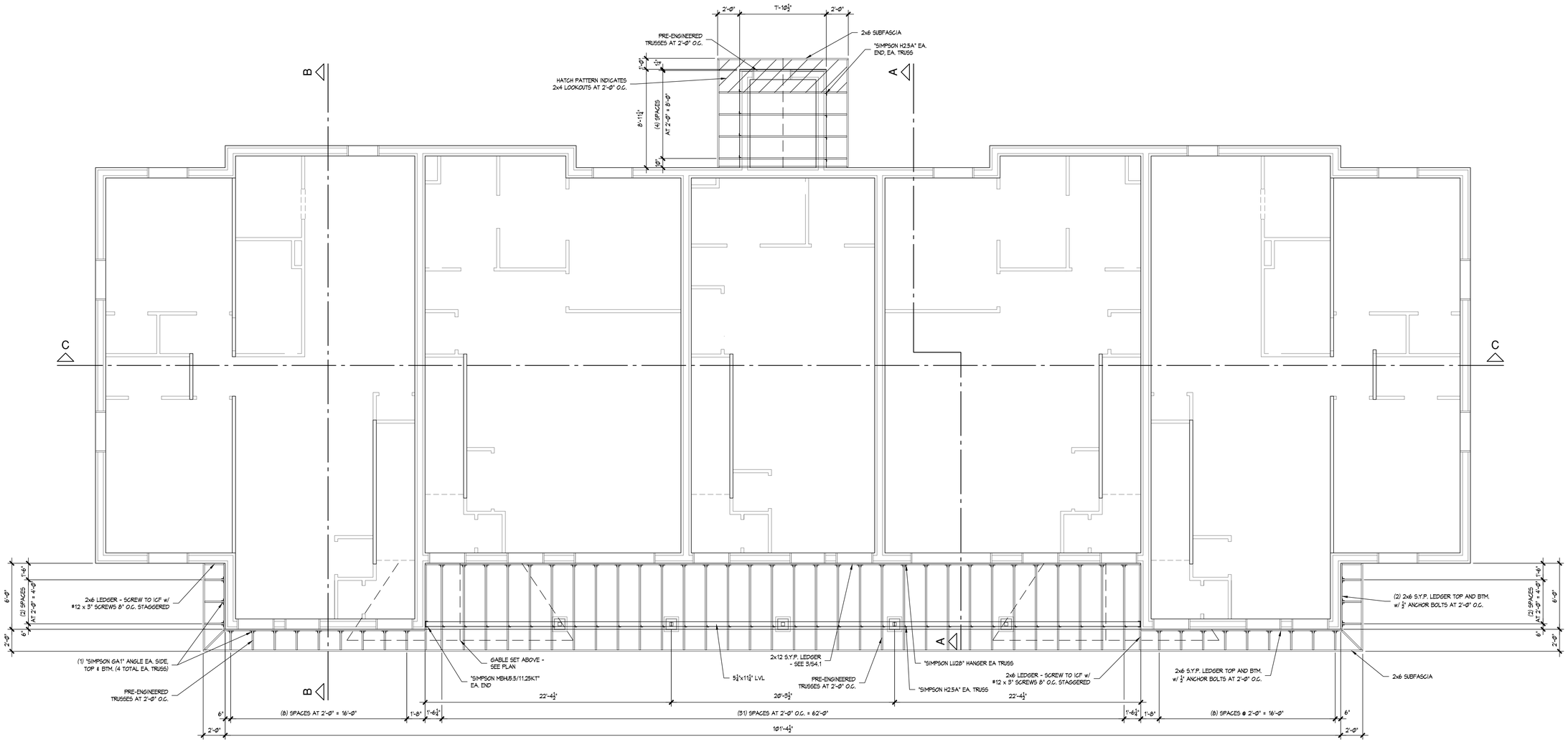
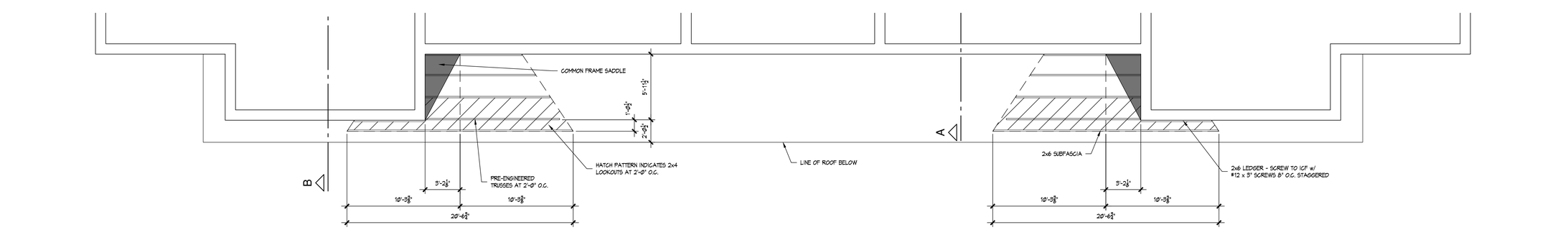
SHEET S2.1





LOWER ROOF FRAMING PLAN

SCALE: ¼" = 1'-0"

NOTE: TRUSSES DIMENSIONS ARE FACE OF STUD TO CENTERLINE OF TRUSS, OR FACE OF ICF TO CENTERLINE OF ICF

REVIEWED FOR CODE COMPLIANCE

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Jose Rely B Chico

DATE: JANUARY 31, 2023

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DRAWING TITLE
BUILDINGS 3, 5 & 6
LOWER ROOF FRAMING PLAN

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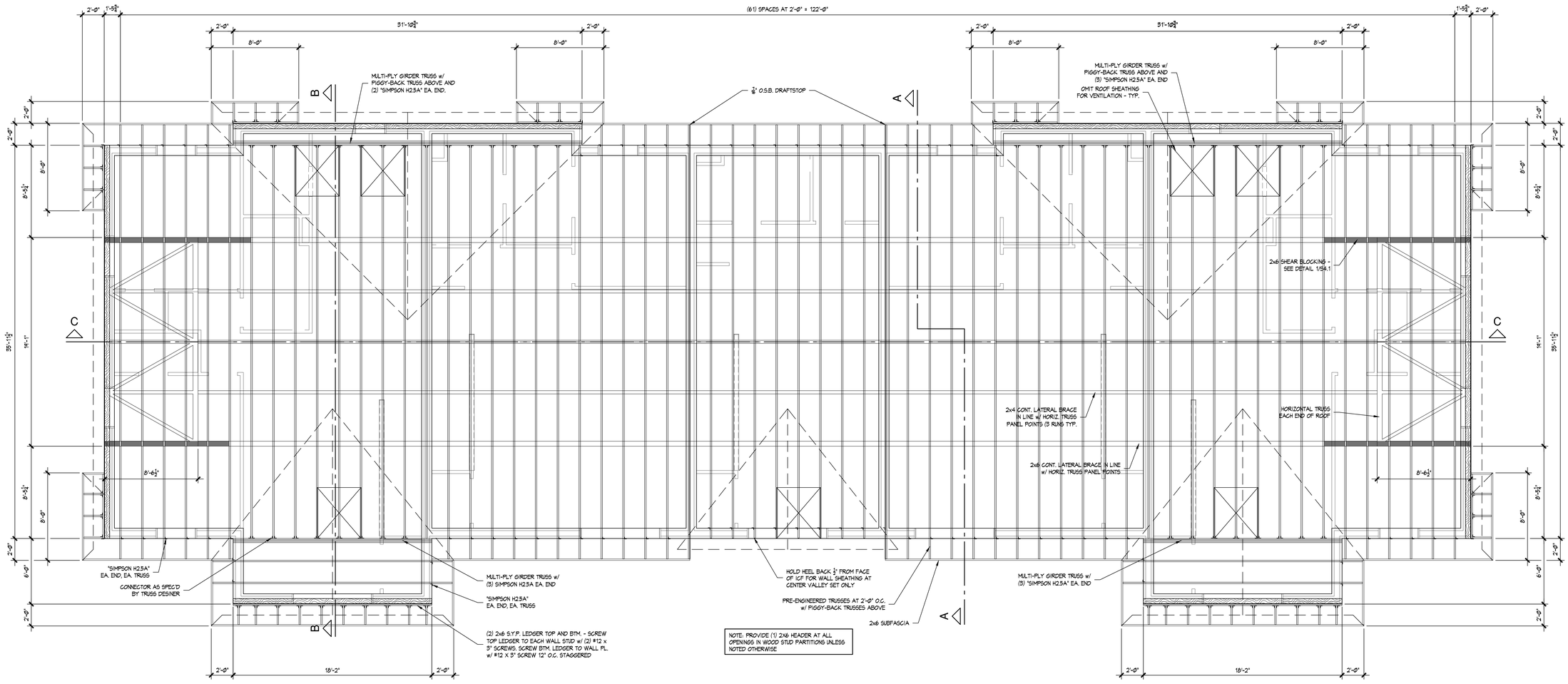

NOTE: PROVIDE (1) 2x6 HEADER AT ALL OPENINGS IN WOOD STUD PARTITIONS UNLESS NOTED OTHERWISE

UPPER ROOF FRAMING PLAN

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

NOTE: TRUSSES DIMENSIONS ARE FACE OF STUD TO CENTERLINE OF TRUSS, OR FACE OF ICF TO CENTERLINE OF ICF

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Jesse Ricky B Chico

DATE: JANUARY 31, 2023

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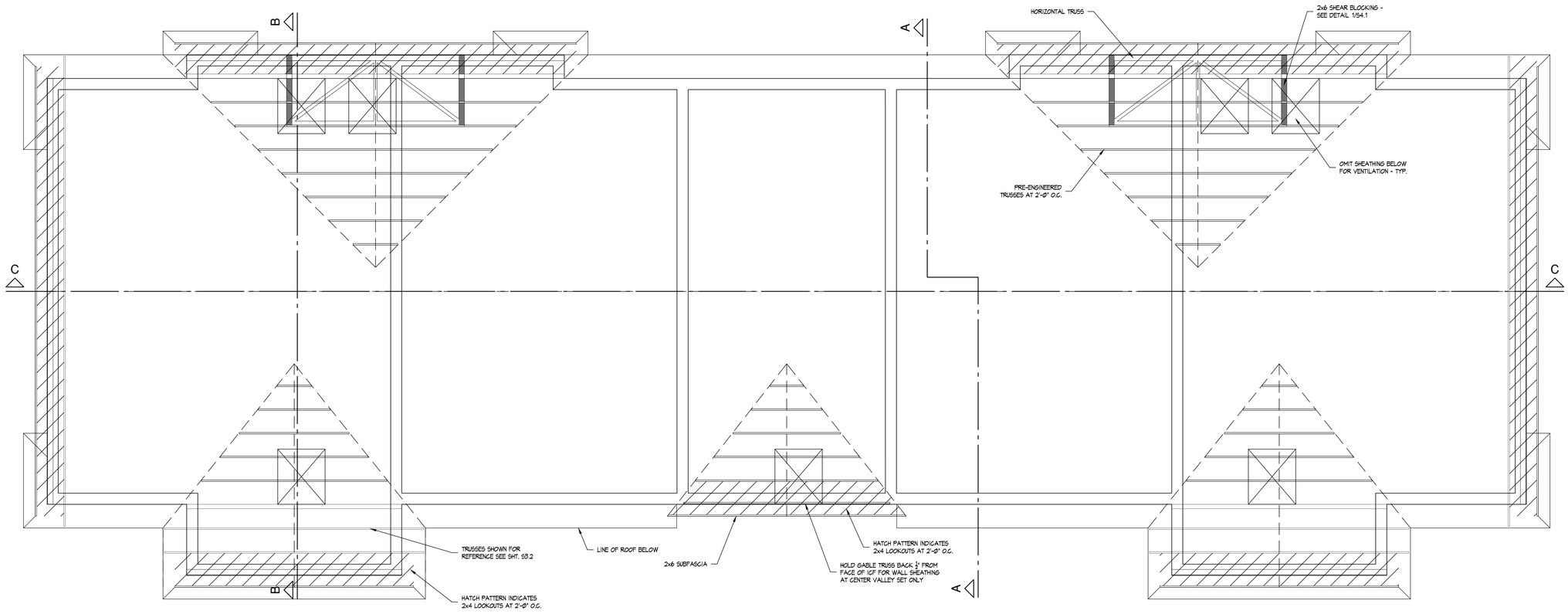
SHEET S3.2



UPPER VALLEY SET PLAN

SCALE: ¼" = 1'-0"

NOTE: TRUSSES DIMENSIONS ARE FACE OF STUD TO CENTERLINE OF TRUSS, OR FACE OF ICF TO CENTERLINE OF ICF

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SIGNATURE: Jose Ruby B Chico

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DRAWING TITLE

BUILDINGS 3, 5 & 6
UPPER VALLEY SET ROOF PLAN

PROJECT TITLE

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MURRAY ROAD APRATMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO.	DATE
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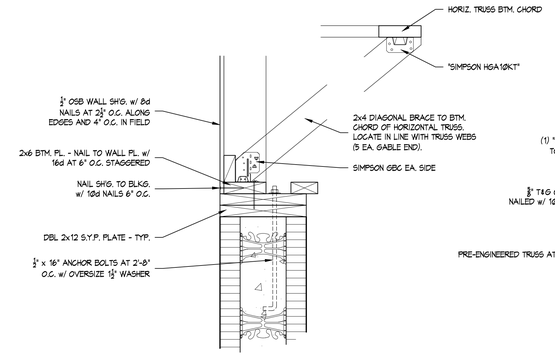
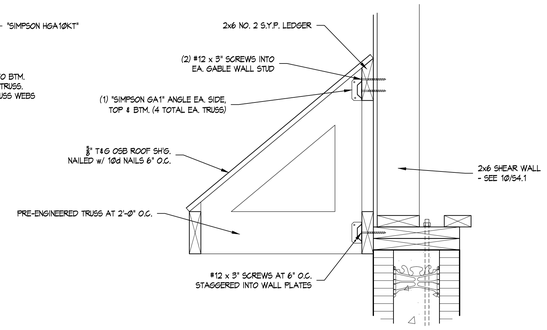
	SEPT. 14, 2022

SHEET **S3.3**



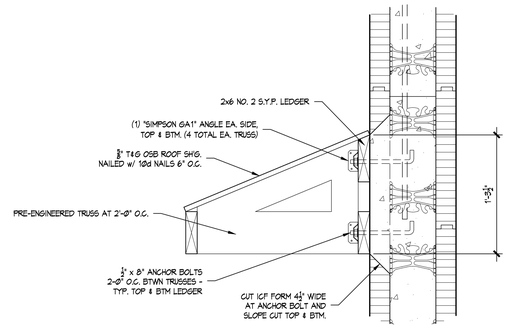
10/S4.1 TYP. GABLE WALL DETAIL

SCALE: ½" = 1'-0"



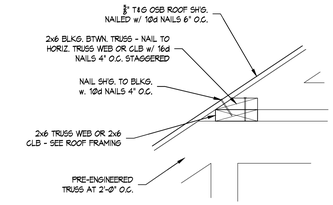
7/S4.1 ROOF LEDGER DETAIL

SCALE: ½" = 1'-0"



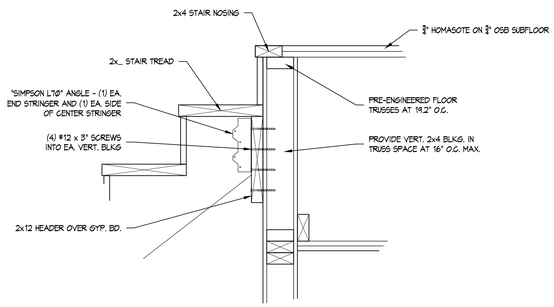
6/S4.1 ROOF LEDGER DETAIL

SCALE: ½" = 1'-0"



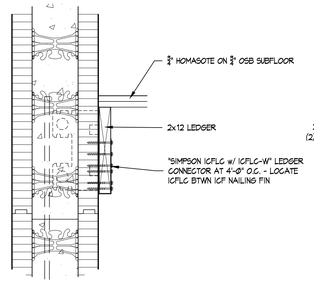
1/S4.1 SHEAR CONN. DETAIL

SCALE: ½" = 1'-0"



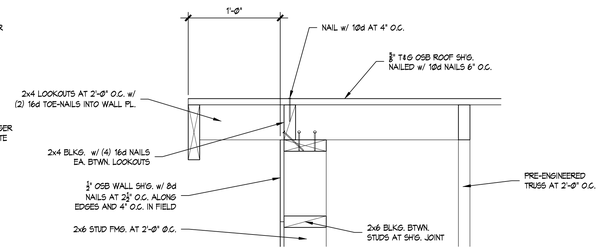
11/S4.1 STAIR HEAD DETAIL

SCALE: ½" = 1'-0"



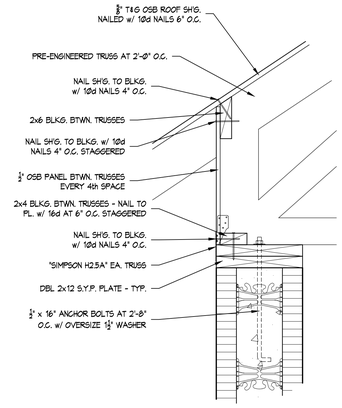
8/S4.1 FLR. LEDGER DETAIL

SCALE: ½" = 1'-0"



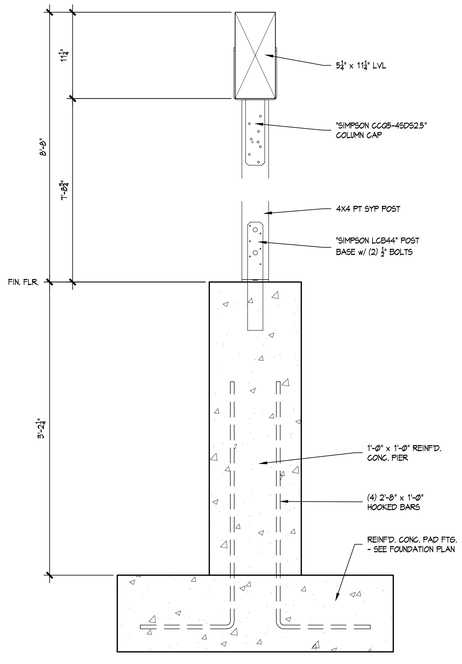
5/S4.1 LOOKOUT DETAIL

SCALE: ½" = 1'-0"



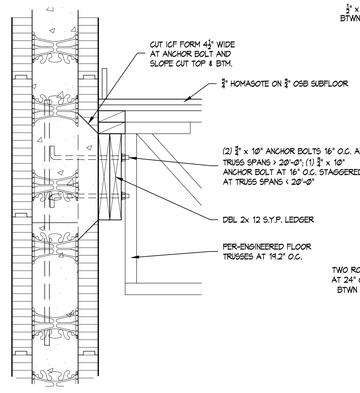
2/S4.1 SHEAR PANEL DETAIL

SCALE: ½" = 1'-0"



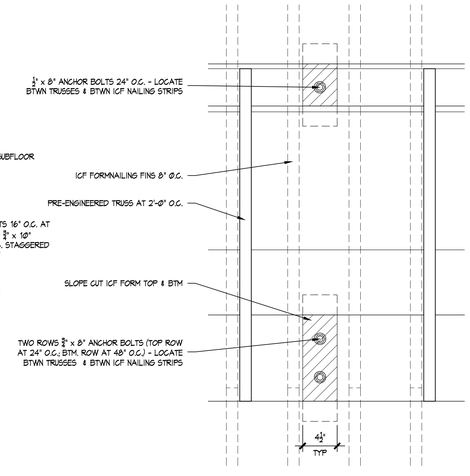
12/S4.1 TYPICAL COLUMN DETAIL

SCALE: ½" = 1'-0"



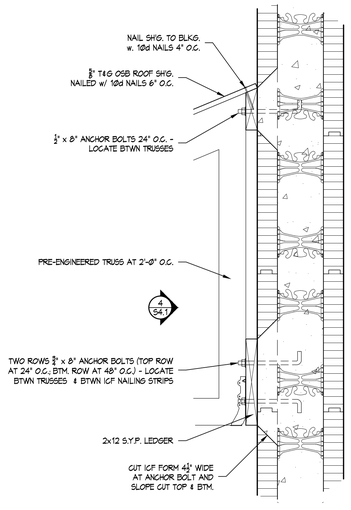
9/S4.1 FLR. LEDGER DETAIL

SCALE: ½" = 1'-0"



4/S4.1 ROOF LEDGER ELEV.

SCALE: ½" = 1'-0"



3/S4.1 ROOF LEDGER DETAIL

SCALE: ½" = 1'-0"

REVIEWED FOR CODE COMPLIANCE

These plans and documents have been reviewed and found to be in compliance with the applicable code requirements of the jurisdiction. Issuance of a permit or approval of plans and specifications does not prevent the building from future conditions. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes and standards to relieve the owner, design professional of record or contractor of compliance with the applicable codes and standards. Plan review of documents does not authorize construction to proceed in violation of any federal, state, or local regulation.

BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Jose Ricky B Chico

DATE: JANUARY 31, 2023

ANTHONY P. ESSON ARCHITECT
PO BOX 479 GAYLORD, MICHIGAN
TELEPHONE: (989) 732-0585

DRAWING TITLE
BUILDING 4
STRUCTURAL DETAILS

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APRATMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
MAY 1, 2020
SEPT. 14, 2022

SHEET S4.1

PLUMBING CONNECTION SCHEDULE

FIXTURE TYPE	HOT WATER (HW)	COLD WATER (CW)	WASTE (W) & INDIRECT WASTE (IW)	TRAP	VENT (V)
BATHTUB SHOWER (BTS)	1/2"	1/2"	2"	2"	1-1/2"
CLOTHES WASHING MACHINE (DOMESTIC)	1/2"	1/2"	2"	2"	1-1/2"
LAVATORY (LAV)	1/2"	1/2"	1-1/2"	1-1/2"	1-1/2"
SINK (SK) – RESIDENTIAL/LIGHT COMMERCIAL	1/2"	1/2"	1-1/2"	1-1/2"	1-1/2"
WALL HYDRANT (WH) OR HOSE BIB (HB)	--	3/4"	--	--	--
WATER CLOSET (WC) – FLUSH TANK	--	1/2"	3"	3"	2"

NOTES:
1. REFER TO DRAWINGS AND SPECIFICATIONS FOR MORE DETAILS.
2. NOTE THAT THE WATER SUPPLY PIPE SIZES ABOVE ARE MINIMUM SIZES FOR STANDARD COPPER TUBING. PEX TUBING MAY BE USED INSTEAD OF COPPER, UNLESS NOTED OTHERWISE, PEX TUBING RUN-OUTS SHOULD BE 1/2" PIPE SIZE LARGER.

PLUMBING SYMBOL LIST

SYMBOL	DESCRIPTION
	PIPE ELBOW UP
	PIPE ELBOW DOWN
	DIRECTION OF FLOW
	UNION
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	PIPE CAP OR PLUG
	CIRCULATING PUMP
	ISOLATION VALVE
	BALL VALVE
	CHECK VALVE (SWING)
	CHECK VALVE (SPRING)
	COMBINATION BALANCE VALVE & FLOW MEASURING DEVICE
	STRAINER (Y-TYPE)
	STRAINER (BLOW OFF TYPE)
	TRAP (PLAN VIEW)
	FLOOR DRAIN (PLAN VIEW)
	FLOOR DRAIN (ELEVATION)
FFD	FUNNEL FLOOR DRAIN (PLAN VIEW)
	FUNNEL FLOOR DRAIN (ELEVATION)
CO	CLEAN OUT (IN FLOOR)
CO	CLEAN OUT (IN LINE)
BFP	BACKFLOW PREVENTER
HB	HOSE BIBB (INTERIOR - NON FREEZEPROOF)
WH	WALL HYDRANT (EXTERIOR - FREEZEPROOF)
	SIAMESE CONNECTION (YARD)
	SIAMESE CONNECTION (WALL MOUNTED)
	PRESSURE RELIEF VALVE
	PRESSURE REDUCING VALVE
	PRESSURE AND TEMPERATURE RELIEF VALVE
	PRESSURE REGULATING VALVE
P/T	PRESSURE AND TEMPERATURE TEST PLUG
	PRESSURE GAUGE AND COCK
	THERMOMETER
MV	MANUAL AIR VENT
AV	AUTOMATIC AIR VENT
CW	DOMESTIC COLD WATER PIPING
HW	DOMESTIC HOT WATER PIPING
HWR	DOMESTIC HOT WATER RETURN PIPING
SAN	SANITARY WASTE PIPING
	SANITARY VENT PIPING
NPCW	NON POTABLE COLD WATER
F	FIRE PROTECTION PIPING

PLUMBING ABBREVIATION LIST

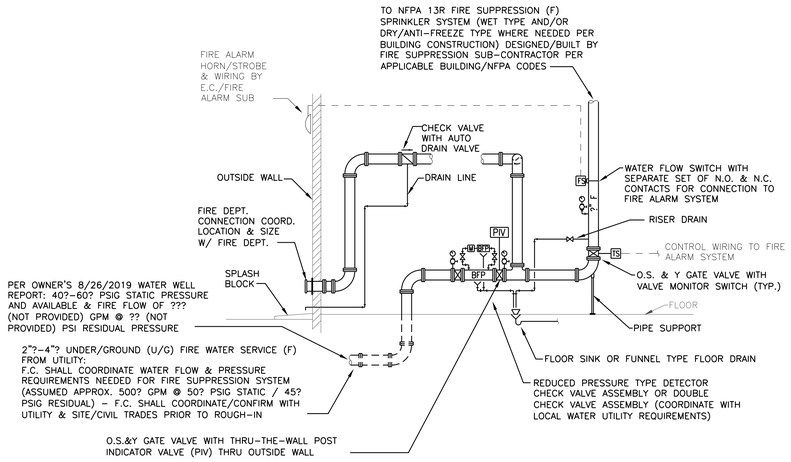
ABBREVIATION	DESCRIPTION
AAV	AIR ADMITTANCE VALVE
AFF	ABOVE FINISHED FLOOR
ASR	AUTOMATIC SPRINKLER RISER
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CO	CLEAN OUT
COND	CONDENSATE
CONT	CONTINUATION OR CONTINUED
CONTR	CONTRACTOR
COORD	COORDINATE
CW	DOMESTIC COLD WATER
DEG	DEGREES
DN	DOWN
DWH	DOMESTIC WATER HEATER
DW&V	DRAINAGE WASTE & VENT
(E)	EXISTING
E.C.	ELECTRICAL CONTRACTOR
ELEC	ELECTRICAL
ELEV	ELEVATION
EWT	ENTERING WATER TEMPERATURE
F	FIRE PROTECTION
(F)	FUTURE
F.A.	FIRE ALARM SUBCONTRACTOR
F.C.	FIRE SUPPRESSION SUBCONTRACTOR
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
FLA	FULL LOAD AMPS
FLR	FLOOR
FPM	FEET PER MINUTE
FT	FEET
G	GAS (NATURAL GAS/PROPANE)
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HB	HOSE BIB
HP	HORSEPOWER
HR	HOUR
HTG	HEATING
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
HYD	HYDRANT
ID	INSIDE DIAMETER
I.E.	INVERT ELEVATION
IN	INCHES
INL	INLET
IW	INDIRECT WASTE
KW	KILOWATT
LAV	LAVATORY
LRA	LOCKED ROTOR AMPS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
M.C.	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MMBH	MILLION BRITISH THERMAL UNITS PER HOUR
MS	MOP SINK
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NPCW	NON POTABLE WATER
OC	ON CENTER/CENTER TO CENTER
OD	OUTSIDE DIAMETER
P.C.	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PRI	PRIOR TO ROUGH-IN
PRV	PRESSURE REDUCING VALVE
PSIA	POUNDS PER SQUARE INCH (ABSOLUTE)
PSIG	POUNDS PER SQUARE INCH (GAUGE)
RPM	REVOLUTIONS PER MINUTE
SAN	SANITARY WASTE
SHR	SHOWER
SK	SINK
SPHD	SPRINKLER HEAD
SPKR	SPRINKLER
SPKR.STP	SPRINKLER STANDPIPE
SqFt	SQUARE FOOT/SQUARE FEET
SS	SERVICE SINK
TYP	TYPICAL
U/G	UNDERGROUND (BELOW GRADE)
UL	UNDERWRITERS LABORATORY
UON	UNLESS OTHERWISE NOTED
UR	URINAL
V	VENT
VS	VENT STACK
VSD	VARIABLE SPEED DRIVE
VTR	VENT THRU ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WG	WATER GAUGE
WH	WALL HYDRANT
W&V	WASTE & VENT

GENERAL PLUMBING NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL SCOPE OF WORK. CONTRACTOR SHALL PROVIDE PLUMBING SYSTEMS AND RELATED EQUIPMENT COMPLETE AND INCLUDE ALL NECESSARY OFFSETS, FITTINGS, AND OTHER COMPONENTS REQUIRED DUE TO INTERFERENCES, SPACE CONSTRAINTS, ETC.
2. PLUMBING SYSTEMS SHALL BE INSTALLED PER MICHIGAN/INTERNATIONAL PLUMBING CODE, MICHIGAN/INTERNATIONAL FUEL GAS CODE, MICHIGAN/INTERNATIONAL MECHANICAL CODE, AND APPLICABLE MICHIGAN/INTERNATIONAL BUILDING CODES (E.G. MICHIGAN/INTERNATIONAL BUILDING CODES, NFPA CODES, ETC.). COORDINATE & CONFIRM LTBB ODAWA INDIANS' (OWNER) CURRENT BUILDING CODE REQUIREMENTS PRIOR TO BID/CONSTRUCTION.
3. PLUMBING CONTRACTOR (P.C.) SHALL COORDINATE THE INSTALLATION OF PLUMBING & FIRE SUPPRESSION WORK WITH ALL OTHER TRADES. P.C./F.C. SHALL VERIFY ALL MECHANICAL/PLUMBING AND ELECTRICAL CLEARANCES PRIOR TO FABRICATION OF ANY NEW WORK. PIPING SHALL NOT BE LOCATED DIRECTLY OVER ELECTRICAL EQUIPMENT AND PANELS, OR INTERFERE WITH ELECTRICAL/MECHANICAL EQUIPMENT CLEARANCE SPACES.
4. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION/HEIGHTS OF FIXTURES (STANDARD AND BARRIER FREE), SINKS, TOILETS, LAVATORIES, COUNTERS, APPLIANCES, ETC. COORDINATE WITH ARCHITECTURAL PLANS FOR DETAILS ON CASEWORK, FURNITURE, ETC.
5. MINIMUM UNDERGROUND (U/G) SANITARY PIPE SIZE SHALL BE 3", UNLESS NOTED OTHERWISE.
6. PLUMBING VENTS THROUGH THE ROOF SHALL BE LOCATED AT LEAST 10'-0" AWAY FROM OUTDOOR AIR INTAKE LOCATIONS.
7. ALL CLEANOUTS INSTALLED IN SANITARY WASTE AND VENT PIPING SHALL HAVE CODE REQUIRED CLEARANCES PROVIDED.
8. ALL EQUIPMENT SHALL BE PROVIDED WITH ISOLATION VALVES AND ALL FIXTURES SHALL BE PROVIDED WITH STOP VALVES. ALL VALVES/STOPS SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.
9. ALL FLOOR DRAINS SUBJECT TO LOSS OF SEAL (I.E. MECHANICAL ROOMS/CLOSETS, STORAGE ROOMS, ETC.) SHALL BE PROVIDED WITH A TRAP SEAL PROTECTOR OR A TRAP SEAL PRIMER.
10. COORDINATE ALL FLOOR, WALL, AND ROOF PENETRATIONS, EQUIPMENT PADS, ETC. WITH ARCHITECTURAL/STRUCTURAL TRADES PRIOR TO ROUGH-IN. UNLESS NOTED OTHERWISE, EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, CORING, PATCHING ASSOCIATED WITH THEIR WORK. CUTTING, CORING, PATCHING WORK SHALL BE PERFORMED BY A QUALIFIED SUB-CONTRACTOR AND MATCH EXISTING OR NEW FINISHES.
11. FIRE CAULK/STOP ALL PLUMBING PENETRATIONS THRU FIRE RATED ASSEMBLIES PER CODE REQUIREMENTS. REFER TO ARCHITECTURAL PLANS/SECTIONS FOR LOCATION/TYPES OF FIRE RATED ASSEMBLIES.

GENERAL FIRE PROTECTION/SUPPRESSION NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. THE FIRE PROTECTION/SUPPRESSION CONTRACTOR (F.C.) SHALL DESIGN-BUILD NEW FIRE PROTECTION SYSTEMS COMPLETE, PER APPLICABLE CODES, PER NFPA, PER OWNER'S INSURANCE REQUIREMENTS, AND PER REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION (AHJ). REFER TO DIVISION 21000 SPECIFICATIONS FOR REQUIREMENTS.
2. DESIGN-BUILD FIRE PROTECTION SUB-CONTRACTOR SHALL PROVIDE DESIGN & CONSTRUCTION OF A COMPLETE NEW AUTOMATIC WET PIPE SPRINKLER SYSTEM SYSTEM IN ACCORDANCE WITH NFPA 13 (OR 13R WHERE ALLOWED BY BUILDING CODE), INCLUDING ALL PIPING, OFFSETS, FITTINGS, VALVES, DRAINS, TEST CONNECTIONS, SPRINKLER HEADS, ETC. AS REQUIRED TO PROTECT THE ENTIRE BUILDING. REFER TO ARCHITECTURAL PLANS FOR DETAILS. PROVIDE DRY/ANTI-FREEZE SYSTEMS FOR AREAS SUBJECT TO FREEZING CONDITIONS (WOOD ATTIC, WOOD FRAMED COVERED PORCHES, ETC...REFER TO ARCHITECTURAL PLANS/SECTIONS) WHERE REQUIRED BY CODE.
3. VERIFY AVAILABLE WATER PRESSURE/FLOW WITH LOCAL MUNICIPAL WATER UTILITY AND/OR PERFORM FLOW/PRESSURE TEST PRIOR TO BID/DESIGN. PER OWNER'S 8/26/2019 WATER WELL REPORT: 40?-60? PSIG STATIC PRESSURE AND AVAILABLE & FIRE FLOW OF ??? (NOT PROVIDED) GPM @ ?? (NOT PROVIDED) PSI RESIDUAL PRESSURE.
4. PREPARE SHOP DRAWINGS, INCLUDING HYDRAULIC CALCULATIONS, SIGNED/SEALED BY A LICENSED PROFESSIONAL FIRE PROTECTION ENGINEER (IN STATE OF PROJECT JURISDICTION) EXPERIENCED IN FIRE SUPPRESSION SPRINKLER SYSTEM DESIGN, AND SUBMIT TO AHJ FOR APPROVAL PRIOR TO CONSTRUCTION.
5. COORDINATE FIRE PROTECTION WORK WITH THE WORK OF ALL OTHER TRADES. COORDINATE EQUIPMENT CLEARANCES WITH OTHER TRADES. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR CEILING TYPES. COORDINATE INTERFACES WITH FIRE ALARM CONTRACTOR (E.G. FLOW SWITCHES, TAMPER SWITCHES, ETC.).
6. REFER TO ARCHITECTURAL PLANS FOR INFORMATION ON FIRE RATED ASSEMBLY LOCATION/TYPES AND TO REFLECTED CEILING PLANS FOR CEILING TYPES AND HEIGHTS.



FIRE PROTECTION SUPPRESSION RISER PIPING DETAIL

NO SCALE

FIRE PROTECTION/SUPPRESSION NOTES:

1. ENTIRE BUILDING, INCLUDING ALL LEVELS, AND THE WOOD-FRAMED ATTIC SPACES (IF NFPA 13), SHALL BE PROTECTED/SUPPRESSED.
2. ALL PIPING SHALL BE CONCEALED WHERE POSSIBLE. ANY PIPING EXPOSED WITHIN FINISHED AREAS SHALL COORDINATED WITH ARCHITECT PRIOR TO ROUGH-IN ANY EXPOSED PIPING SHALL BE PAINTED TO MATCH. COORDINATE COLOR WITH ARCHITECT/OWNER PRIOR TO ROUGH-IN.
3. ALL EXPOSED UPTURNED SPRINKLER HEADS SHALL BE BLACK, COORDINATE COLOR WITH ARCHITECT/OWNER PRIOR TO ROUGH-IN.
4. ALL SPRINKLER HEADS IN FINISHED CEILINGS SHALL BE CONCEALED TYPE WITH WHITE COVER.
5. SPRINKLER HEADS IN HIGH ABUSE AREAS (E.G. MECHANICAL ROOMS/CLOSETS, JANITOR CLOSETS, ETC.) SHALL BE PROTECTED WITH WIRE GUARDS.

METHODS OF NOTATION

- EF 1 — EQUIPMENT DESIGNATION (I.E. EXHAUST FAN NUMBER 1)
- 1 — CONSTRUCTION KEYED NOTE NUMBER
- NEW SYSTEM COMPONENT
- EXISTING SYSTEM COMPONENT TO REMAIN
- POINT OF NEW CONNECTION

PLUMBING DRAWING INDEX

P1.0 PLUMBING TITLE SHEET – BUILDINGS 3, 5 & 6

P2.1 BELOW GRADE PLUMBING PLAN – LOWER FLOOR BUILDINGS 3, 5 & 6
P2.2 ABOVE GRADE PLUMBING PLAN – LOWER FLOOR BUILDINGS 3, 5 & 6
P2.3 ABOVE GRADE PLUMBING PLAN – UPPER FLOOR BUILDINGS 3, 5 & 6

P3.1 PLUMBING DETAILS – BUILDINGS 3, 5 & 6

REVIEWED FOR CODE COMPLIANCE

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Bobbet V. La Guardia

DATE: 01/31/2023

JLK Engineering Project Number: AEA 1903-01

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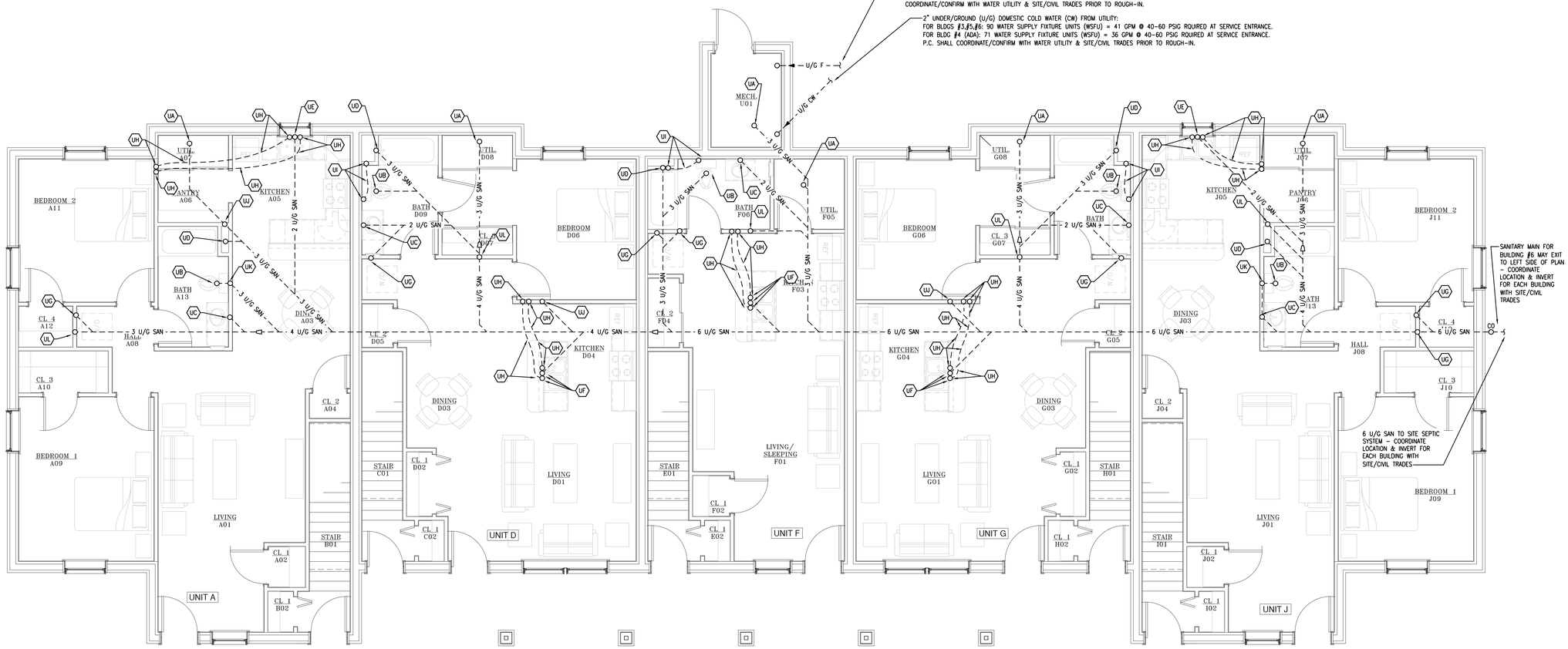
DRAWING TITLE: BUILDINGS 3, 5 & 6 PLUMBING TITLE SHEET

PROJECT TITLE: LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS MURRAY ROAD APARTMENT DEVELOPMENT PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
May 1, 20220
Sept. 14, 2022

SHEET P1.0



BUILDINGS 3, 5 & 6
BELOW GRADE PLUMBING PLAN – LOWER FLOOR
SCALE: 1/4" = 1'-0"

KEYED BELOW GRADE PLUMBING CONSTRUCTION NOTES:

- UA — 3 W UP TO FLOOR DRAIN ABOVE (FD). COORDINATE FLOOR DRAIN LOCATIONS WITH MECHANICAL AND PLUMBING EQUIPMENT LOCATIONS PRIOR TO ROUGH-IN.
- UB — 3 W UP TO WATER CLOSET (WC) ABOVE.
- UC — 2 DWV STACK UP TO LAV(S) ABOVE.
- UD — 3 W UP TO TWO (2) BATHTUB/SHOWER (BTS) ABOVE.
- UE — 2 W UP TO SINK (SK) ABOVE.
- UF — 2 W, 1/2 CW, 1/2 HW UP TO SINK (SK) ABOVE.
- UG — 2 W UP TO LAUNDRY BOX ABOVE.
- UH — ROUTE 1/2 CW AND 1/2 HW UNDERGROUND (U/G) TO SERVE SK/LAV. 1/2 CW AND 1/2 HW UP IN WALL TO CONNECT TO CW AND HW MAINS.
- UI — ROUTE 1/2 UNDERGROUND (U/G) CW TO WATER CLOSET (WC). 1/2 CW UP IN WALL TO CONNECT TO CW MAIN.
- UJ — 2 W UP INTO WALL ABOVE, TO SERVE SANITARY WASTE FROM 2ND FLOOR SINK & FLOOR DRAIN.
- UK — 3 W UP INTO WALL ABOVE, TO SERVE SANITARY WASTE FROM WATER CLOSET(S) ABOVE.
- UL — 3 W UP INTO WALL ABOVE, TO SERVE SANITARY WASTE FROM FIXTURES ABOVE.

REVIEWED FOR CODE COMPLIANCE

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SIGNATURE: Bobbet V. La Guardia

DATE: 01/31/2023

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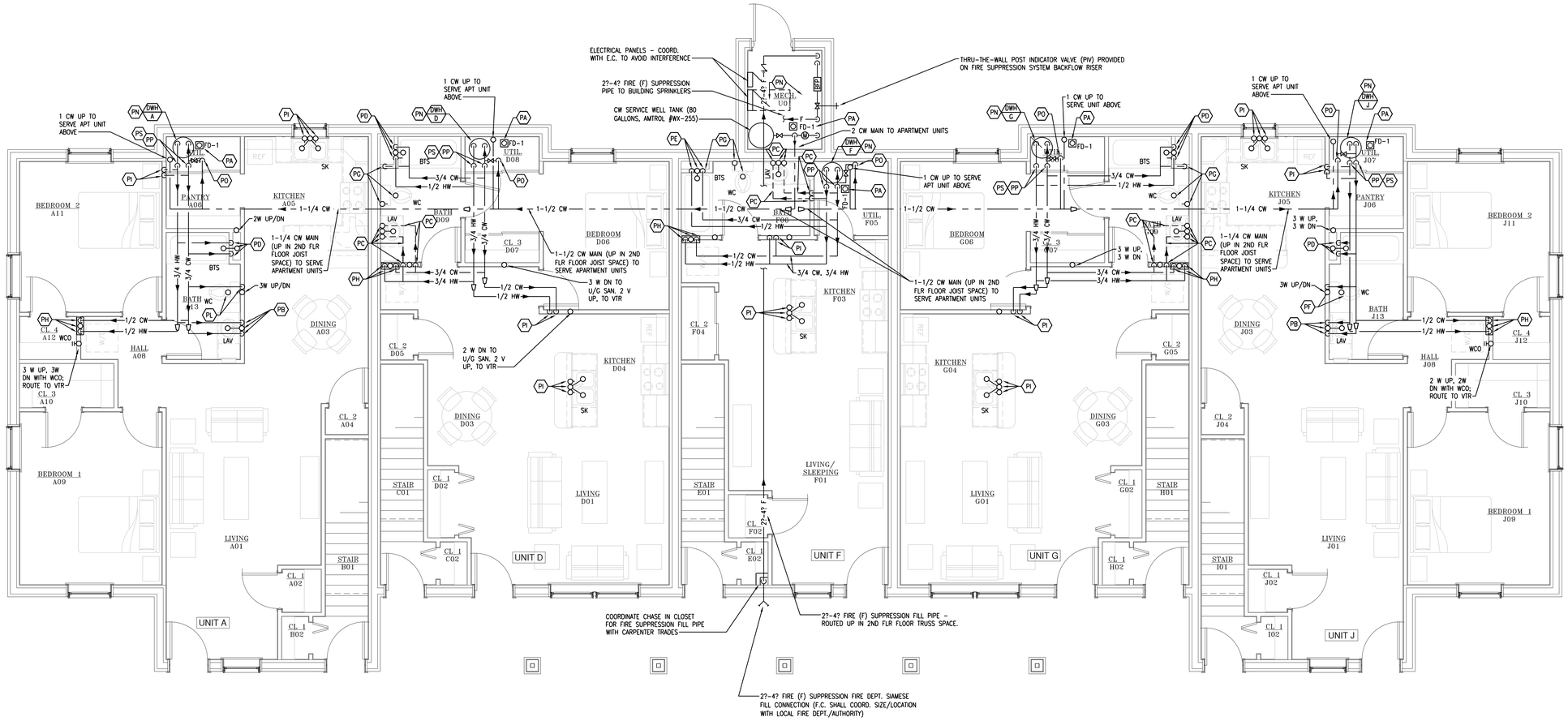
DRAWING TITLE
BUILDINGS 3, 5 & 6
BELOW GRADE PLUMBING PLAN - LOWER FLOOR

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APARTMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
May 1, 2022
Sept. 14, 2022

SHEET P2.1



BUILDINGS 3, 5 & 6
ABOVE GRADE PLUMBING PLAN – LOWER FLOOR

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

KEYED ABOVE GRADE PLUMBING CONSTRUCTION NOTES:

PA COORDINATE FLOOR DRAIN (FD) LOCATIONS WITH MECHANICAL AND PLUMBING EQUIPMENT LOCATIONS PRIOR TO ROUGH-IN.

PB 1/2 CW AND 1/2 HW TO LAVATORY (LAV). 2 W DN FROM LAV, WITH WALL CLEAN OUT BELOW, CONNECT TO SAN. 2 V UP FROM LAV, ROUTE TO VTR.

PC 1/2 CW AND 1/2 HW DOWN INSIDE WALL TO SERVE LAVATORY (LAV). ROUTE CW AND HW UNDERGROUND (U/G) OR IN BASE OF CABINET. 2 W DN FROM LAV, W/ WCO, CONNECT TO U/G SAN. 2 VENT (V) UP FROM LAV, ROUTE TO 3 VTR.

PD 1/2 CW & 1/2 HW TO BATHTUB/SHOWER (BTS). 2 W DN FROM BTS, CONNECT TO SAN. 1-1/2 V FROM BTS, ROUTE TO VTR.

PE 3/4 CW DOWN INSIDE WALL TO SERVE BATHTUB/SHOWER (BTS) AND WATER CLOSET (WC). 1/2 CW AND 1/2 HW TO BTS. ROUTE 1/2 CW UNDERGROUND AND OUT TO WATER CLOSET. 3 W DN FROM TWO (2) BTS ABOVE, CONNECT TO U/G SAN.

PF NOT USED.

PG 1/2 CW DOWN INSIDE WALL AND ROUTE UNDERGROUND TO SERVE WATER CLOSET (WC). 3 W DN FROM WC, CONNECT TO U/G SAN.

PH 1/2 CW AND 1/2 HW TO CLOTHES WASHING MACHINE SUPPLY BOX. 2 W DN FROM SUPPLY BOX, CONNECT TO SANITARY. 1-1/2 V UP, ROUTE TO 3 VTR. COORDINATE BOX LOCATIONS WITH OTHER TRADES.

PI 1/2 CW AND 1/2 HW DOWN INSIDE WALL TO SERVE KITCHEN SINK (SK). ROUTE CW AND HW UNDERGROUND. 1-1/2 W DN FROM SINK; CONNECT TO U/G SAN. PROVIDE AIR ADMITTANCE VALVE (AAV) FOR SK.

PJ 1/2 CW AND 1/2 HW TO KITCHEN SINK (SK). 1-1/2 W DN FROM SINK, CONNECT TO SAN. 1-1/2 V FROM SINK, ROUTE TO VTR, OR PROVIDE AIR ADMITTANCE VALVE (AAV) WHERE NO VENT AVAILABLE (E.G. ISLAND SINKS, SINKS ON OUTSIDE WALL).

PK 1/2 CW AND 1/2 HW TO SERVE LAVATORY (LAV). 2 W DN FROM LAV, CONNECT TO SAN. 2 V UP FROM LAV, ROUTE TO 3 VTR, OR PROVIDE AIR ADMITTANCE VALVE (AAV) WHERE NO VENT AVAILABLE (E.G. ISLAND SINKS, SINKS ON OUTSIDE WALL).

PL 1/2 CW TO WATER CLOSET (WC). 3 W DN FROM WC, CONNECT TO SAN MAIN OR DWV STACK. 2 V UP, ROUTE TO VTR.

PM 1/2 CW AND 1/2 HW TO SERVE BATHTUB/SHOWER (BTS). ROUTE 1/2 CW BELOW SECOND FLOOR AND OUT TO WATER CLOSET. 2 W DN FROM BTS, CONNECT TO U/G SAN.

PN COORDINATE LAYOUT OF PLUMBING & FIRE SUPPRESSION EQUIPMENT/SYSTEMS WITH THE MECHANICAL AND ELECTRICAL EQUIPMENT/SYSTEMS PRIOR TO ROUGH-IN AS REQUIRED TO AVOID INTERFERENCES AND CLEARANCES.

PO 1 CW (TAPPED OF CW MAIN IN JOIST SPACE BETWEEN LOWER AND UPPER FLOOR) DOWN INTO LOWER LEVEL APT UNIT'S UTILITY ROOM. PROVIDE A CW SERVICE SHUT OFF VALVE FOR EACH APT UNIT'S CW SYSTEM FOR FUTURE MAINTENANCE.

PP 3/4 CW FROM CW SERVICE VALVE & AND 3/4 HW FROM DWH UP INTO THE JOIST/TRUSS SPACE (BETWEEN LOWER AND UPPER FLOOR) AND OUT TO SERVE APT UNIT'S PLUMBING FIXTURES.

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PS PLUMBING PIPING (SAN, CW, & HW) SERVING UPPER FLOOR UNITS SHALL BE LOCATED IN 2ND FLOOR JOIST/TRUSS SPACE (BETWEEN UPPER AND LOWER FLOOR) WHERE APPLICABLE. EACH APARTMENT UNIT SHALL HAVE IT'S OWN CW/HW PIPING SERVICING ONLY THAT UNIT WITH A CW SERVICE SHUT OFF VALVE ACCESSIBLE IN MECH CLOSET. REFER TO LOWER FLOOR PLAN FOR CW MAIN.

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Bobbet V. La Guardia

DATE: 01/31/2023

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JLK Engineering Project Number: AEA 1903-01

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ANTHONY P. ESSON ARCHITECT
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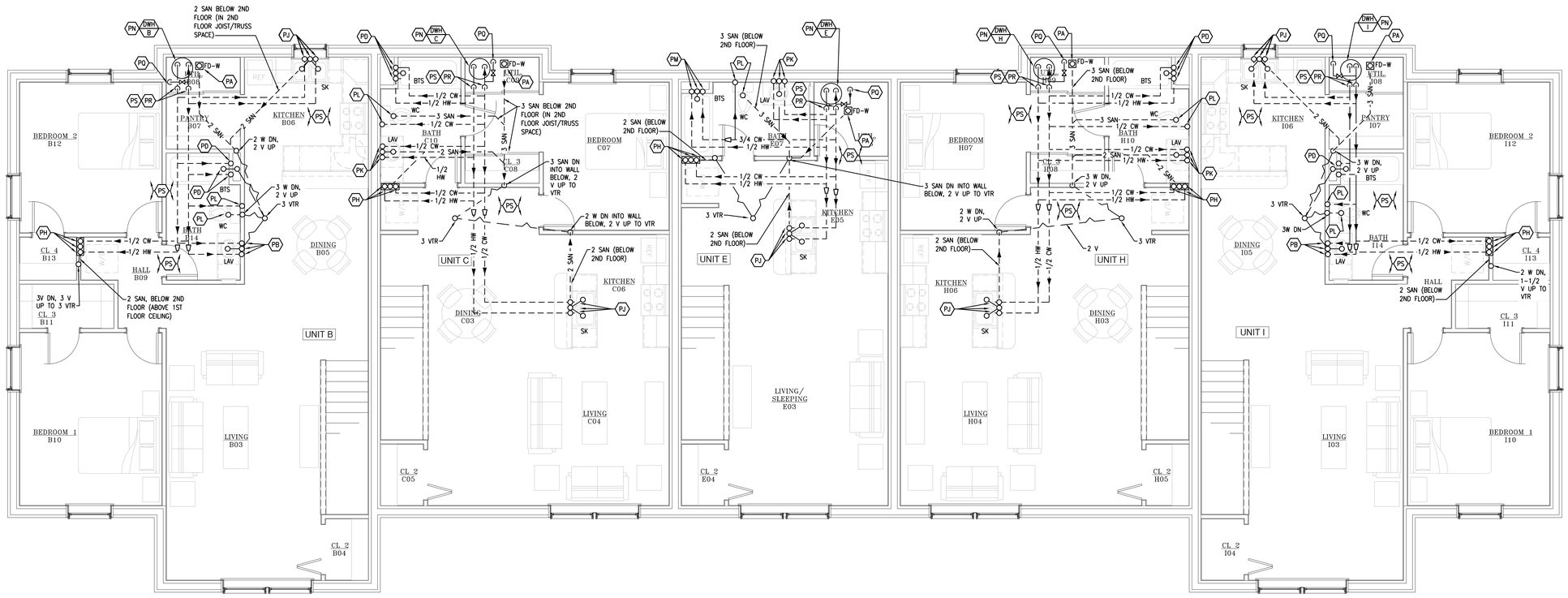
DRAWING TITLE
BUILDINGS 3, 5 & 6
ABOVE GRADE PLUMBING PLAN - LOWER FLOOR

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APARTMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO.	DATE
273-19	May 1, 20220
	Sept. 14, 2022

SHEET **P2.2**



BUILDINGS 3, 5 & 6
ABOVE GRADE PLUMBING PLAN – UPPER FLOOR

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

KEYED ABOVE GRADE PLUMBING CONSTRUCTION NOTES:

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MURRAY ROAD APARTMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
May 1, 2020
Sept. 14, 2022

SHEET P2.3

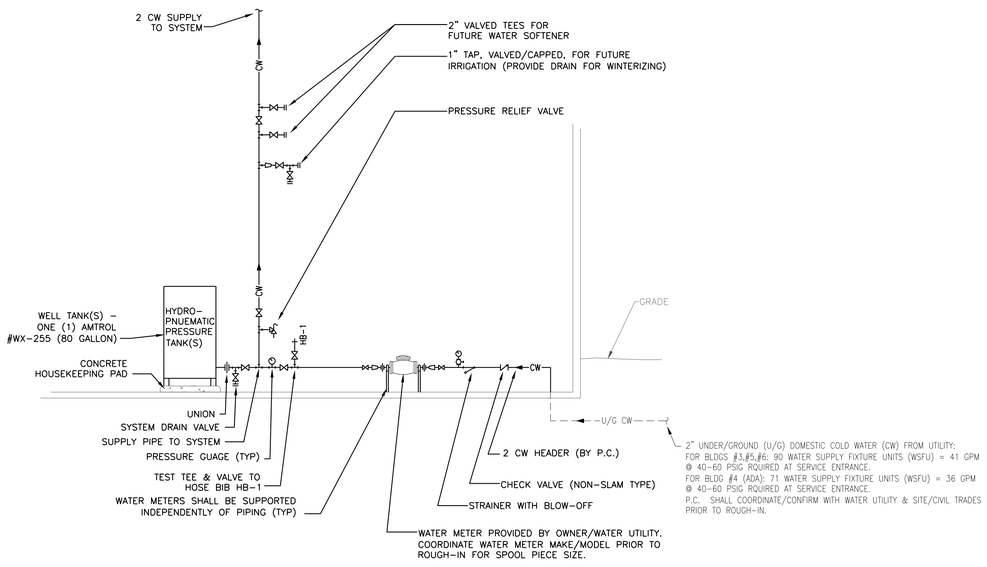
PLUMBING SPECIALTIES SCHEDULE

MARK	MANUFACTURER SERIES NUMBER	DESCRIPTION			ACCESSORIES, FEATURES, AND NOTES
FLOOR DRAINS					
		CONSTRUCTION	GRATE	SIZE	
FD-1	ZURN #Z-415B	ASME A112.21.1M; LACQUERED CAST IRON TWO PIECE BODY	ADJUSTABLE, ROUND, NICKEL-BRONZE STRAINER (ZURN TYPE B)	LINE SIZE SHOWN ON PLANS (MINIMUM 2")	DOUBLE DRAINAGE FLANGE, WEEP HOLES, REVERSIBLE CLAMPING COLLAR, TRAP PRIMER CONNECTION, AND ADJUSTABLE ROUND NICKEL-BRONZE STRAINER. USE CLAMPING COLLAR ON FLOORS ABOVE GRADE. THIS IS A STANDARD FLOOR DRAIN USE IN TOILET ROOMS, JANITOR'S CLOSETS, SHOWERS, ETC.
FD-W	ZURN #FD-2240-???-NT	ASME A112.21.1M; CAST IRON BODY; STEEL ANCHOR FLANGE; CAST IRON FRAME & GRATE	ROUND NICKEL STRAINER GRATE	LINE SIZE SHOWN ON PLANS (MINIMUM 2")	WOOD DECK FLOOR DRAIN: PVC OR CAST IRON BODY; STEEL ANCHOR FLANGE; CAST IRON FRAME AND GRATE; OPTIONAL NICKEL TOP (NT) THIS IS A STANDARD FLOOR DRAIN USE IN TOILET ROOMS, JANITOR'S CLOSETS, SHOWERS, ETC.
INTERIOR HOSE BIBS					
		DESCRIPTION	INLET	OUTLET	
HB-1	WOODFORD MODEL "40HT" OR EQUAL	ANTI-SIPHON WALL FAUCET WITH INTEGRAL MOUNTING FLANGE, REPLACEABLE HEXAGONAL DISC, CHROME PLATED WHERE EXPOSED WITH HANDWHEEL, INTEGRAL VACUUM BREAKER IN CONFORMANCE WITH HASSE1011, HALF TURN HANDLE	1/2"	3/4" MALE HOSE THREAD	HOSE BIB FOR INTERIOR NON-FREEZING AREAS.

PLUMBING FIXTURE SCHEDULE

FIXTURE MARK	MANUFACTURER	FIXTURE & TRIM DESCRIPTION					ACCESSORIES, FEATURES, & NOTES
BATHTUB / SHOWERS							
		BATH TUB-SHOWER TYPE	SHOWER VALVE	BATH TUB SUPPLY&SHOWER HEAD SPRAY PACKAGE			
BTS	"NEW SALEM RECESS BATH" BY AMERICAN STANDARD	60"Lx30"Wx14.5"H ONE-PIECE ENAMELED STEEL MODULE; SLIP RESISTANT SURFACE	CHROME COMBINATION PRESSURE-BALANCED/ THERMOSTATIC WITH TEMP./VOLUME CONTROL; ASSE 1016	BATH/SHOWER HEAD TRIM KIT WITH METAL SHOWER HEAD (1.75 GPM), WALL TUB SPOUT WITH DIVERTER, METAL LEVER HANDLE			VERIFY TUB COLOR (WHITE?) AND OUTLET LOCATION (RIGHT? OR LEFT?) PRIOR TO ORDER. BATH/SHOWER TRIM KIT (AMERICAN STANDARD "COLONY PRO" #TU075) - POLISHED CHROME (VERIFY COLOR/FINISH). VERIFY SHOWER WALLS PRIOR TO ORDER.
BTS-A (ADA COMPLIANT)	"NEW SALEM RECESS BATH" BY AMERICAN STANDARD	60"Lx30"Wx14.5"H ONE-PIECE ENAMELED STEEL MODULE; SLIP RESISTANT SURFACE	CHROME COMBINATION PRESSURE-BALANCED/ THERMOSTATIC WITH TEMP./VOLUME CONTROL; ASSE 1016	SAME AS "BTS" BUT ADD SHOWER HEAD WITH ADA APPROVED HAND-HELD SPRAY HEAD ON FLEXIBLE SS HOSE & 36"L SLIDE BAR.			VERIFY TUB COLOR (WHITE?) AND OUTLET LOCATION (RIGHT? OR LEFT?) PRIOR TO ORDER. COMMERCIAL BATH/SHOWER ADA SHOWER TRIM KIT WITH SLIDE BAR (AMERICAN STANDARD "COLONY PRO" #TU662.215) - POLISHED CHROME (VERIFY COLOR/FINISH). VERIFY SHOWER WALLS AND/OR SEAT PRIOR TO ORDER.
LAVATORIES							
		BOWL TYPE	FAUCET	SUPPLY PIPE	TRAP	TAIL-PIECE	
LAV	FAUCET ONLY - AMERICAN STANDARD "COLONY PRO" SINGLE LEVER FAUCET (#7075.000)	NO BOWL - INTEGRAL SOLID SURFACE LAV/SINK BOWL BY OTHERS	SINGLE LEVER; INDEXED COLOR (HOT/ COLD)	ANGLE SCREW-DRIVER STOPS	1-1/4" ADJUSTABLE CHROME PLATED P-TRAP	1-1/4" CHROME PLATED	INTEGRAL SOLID SURFACE LAV/SINK BOWL BY OTHERS - TO PROVIDE FAUCET ONLY PROVIDE AMERICAN STANDARD "COLONY PRO" SINGLE LEVER FAUCET (#7075.000) WITH POP-UP DRAIN; VERIFY FAUCET FINISH (POLISHED CHROME?) PRIOR TO ORDER.
LAV-A (ADA COMPLIANT)	FAUCET ONLY - AMERICAN STANDARD "COLONY PRO" SINGLE LEVER FAUCET (#7075.000)	NO BOWL - INTEGRAL SOLID SURFACE LAV/SINK BOWL BY OTHERS	SINGLE LEVER; INDEXED COLOR (HOT/ COLD)	ANGLE SCREW-DRIVER STOPS	1-1/4" ADJUSTABLE CHROME PLATED P-TRAP	1-1/4" CHROME PLATED (ADA COMPLIANT)	INTEGRAL SOLID SURFACE LAV/SINK BOWL BY OTHERS - TO PROVIDE FAUCET ONLY PROVIDE AMERICAN STANDARD "COLONY PRO" SINGLE LEVER FAUCET (#7075.000) WITH POP-UP DRAIN; VERIFY FAUCET FINISH (POLISHED CHROME?) PRIOR TO ORDER.
SINKS							
		BOWL TYPE	FAUCET	SUPPLY PIPE	TRAP	TAIL-PIECE	
SK	FAUCET ONLY - AMERICAN STANDARD "COLONY PRO" SINGLE LEVER FAUCET (#7075.000)	NO BOWL - INTEGRAL SOLID SURFACE LAV/SINK BOWL BY OTHERS	6.5"H SINGLE LEVER FAUCET WITH 8.5"L SWIVEL SPOUT	ANGLE SCREW-DRIVER STOPS	(2) 1-1/2" ADJUSTABLE CHROME PLATED P-TRAPS	(2) 1-1/2" CHROME PLATED	INTEGRAL SOLID SURFACE LAV/SINK BOWL BY OTHERS - PROVIDE AMERICAN STANDARD "COLONY PRO" SINGLE LEVER FAUCET (AS #7074.000); VERIFY FAUCET FINISH (POLISHED CHROME?) PRIOR TO ORDER. PROVIDE TWO (2) DRAIN STRAINERS.
SK-A (ADA COMPLIANT)	FAUCET ONLY - AMERICAN STANDARD "COLONY PRO" SINGLE LEVER FAUCET (#7075.000)	NO BOWL - INTEGRAL SOLID SURFACE LAV/SINK BOWL BY OTHERS	6.5"H SINGLE LEVER FAUCET WITH 8.5"L SWIVEL SPOUT	ANGLE SCREW-DRIVER STOPS	(2) 1-1/2" ADJUSTABLE CHROME PLATED P-TRAPS	(2) 1-1/2" CHROME PLATED ADA COMPLIANT	INTEGRAL SOLID SURFACE LAV/SINK BOWL BY OTHERS - PROVIDE AMERICAN STANDARD "COLONY PRO" SINGLE LEVER FAUCET (AS #7074.000); VERIFY FAUCET FINISH (POLISHED CHROME?) PRIOR TO ORDER. PROVIDE TWO (2) DRAIN STRAINERS.
WATER CLOSETS							
		BOWL TYPE	OUTLET	FLUSH TANK/VALVE			
WC	COLONY RIGHT HEIGHT ELONGATED BY AMERICAN STANDARD	WHITE VITREOUS CHINA; FLOOR MOUNT ELONGATED; FLUSH TANK	BOTTOM	1.6 GPF			PROVIDE CLOSED FRONT ELONGATED SEAT WITH COVER (AS RISE AND SHINE MODEL #5324.019); VERIFY TOILET/SET COLOR (WHITE?) AND TRIP LEVER LOCATION PRIOR TO ORDER
WC-A (ADA COMPLIANT)	COLONY RIGHT HEIGHT ELONGATED BY AMERICAN STANDARD	WHITE VITREOUS CHINA; FLOOR MOUNT ELONGATED; FLUSH TANK	BOTTOM	1.6 GPF			PROVIDE CLOSED FRONT ELONGATED SEAT WITH COVER (AS RISE AND SHINE MODEL #5324.019); VERIFY TOILET/SET COLOR (WHITE?) AND TRIP LEVER LOCATION PRIOR TO ORDER

NOTES:
1. ALL PLUMBING FIXTURES, EQUIPMENT, TRIM, ETC. SHALL COMPLY WITH LOCAL, STATE AND FEDERAL REGULATIONS AND CODES, INCLUDING, BUT NOT LIMITED TO, WATER AND ENERGY CONSERVATION CODES, ADA REQUIREMENTS.
2. PROVIDE/INSTALL POINT OF USE "ASSE 1070 LISTED" THERMOSTATIC MIXING VALVES ON SUPPLIES TO ALL ADA ACCESSIBLE LAVATORIES AND SINKS.
3. INSTALL "LAV-SHIELDS" ON ALL ADA WALL MOUNTED LAVS/SINKS TO COMPLETELY CONCEAL EXPOSED TRAPS, SUPPLIES, AND MIXING VALVES.
4. INSTALL "LAV GUARDS" OR "BASIN GUARDS" ON ALL DRAIN/SUPPLY PIPING BELOW ALL ADA COUNTER MOUNTED LAVS/SINKS TO COVER TRAPS, SUPPLIES, AND MIXING VALVES.
5. COORDINATE ALL FIXTURE FINISHES/COLORS WITH ARCHITECT PRIOR TO ORDERING.
6. FLUSH VALVE HANDLES ARE TO BE LOCATED ON OPEN SIDE OF BARRIER FREE WATER CLOSETS - REFER TO ARCHITECTURAL INTERIOR ELEVATIONS.

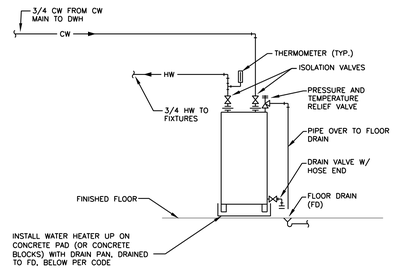


2" UNDER/GROUND (U/G) DOMESTIC COLD WATER (CW) FROM UTILITY:
FOR BLDGS #3,#5,#6: 90 WATER SUPPLY FIXTURE UNITS (WSFU) = 41 GPM @ 40-60 PSIG RQUIRED AT SERVICE ENTRANCE.
FOR BLDG #4 (ADA): 71 WATER SUPPLY FIXTURE UNITS (WSFU) = 36 GPM @ 40-60 PSIG RQUIRED AT SERVICE ENTRANCE.
P.C. SHALL COORDINATE/CONFIRM WITH WATER UTILITY & SITE/CIVIL TRADES PRIOR TO ROUGH-IN.

NOTES:
1) COORDINATE REQUIREMENTS WITH SITE/CIVIL/WELL-CONTRACTOR PRIOR TO ROUGH-IN.
2) SITE/CIVIL/WELL-CONTRACTOR SHALL INSTALL DOMESTIC CW PIPING FROM WELL SYSTEM INTO THE BUILDING.
3) PLUMBING CONTRACTOR SHALL PROVIDE/INSTALL WATER SERVICE INSIDE THE BUILDING INCLUDING, BUT NOT LIMITED TO, PIPING, VALVES, WELL TANK(S), ETC.

DOMESTIC COLD WATER (CW) SERVICE PIPING DETAIL

NO SCALE



ELECTRIC DOMESTIC WATER HEATER PIPING DIAGRAM

NO SCALE

ELECTRIC DOMESTIC WATER HEATER SCHEDULE

UNIT I.D.	STORAGE CAPACITY GALLONS	VOLTAGE / PHASE	ELEMENT WATTAGE UPPER/LOWER	1ST HR GAL. / RECOVERY GPH@90F RISE	WEIGHT LBS (DRY)	MODEL NUMBER	REMARKS
DWH-A (LOWER 2-BED)	50	240/1	4,500 / 4,500	64 / 21	130	RE250T6	TALLBOY (20"ø X 60"TALL)
DWH-B (UPPER 2-BED)	50	240/1	4,500 / 4,500	64 / 21	130	RE250T6	TALLBOY (20"ø X 60"TALL)
DWH-C (UPPER 1-BED)	40	240/1	4,500 / 4,500	53 / 21	125	RE340T6	TALLBOY (20"ø X 60"TALL)
DWH-D (LOWER 1-BED)	40	240/1	4,500 / 4,500	53 / 21	125	RE340T6	TALLBOY (20"ø X 60"TALL)
DWH-D (UPPER EFF.)	40	240/1	4,500 / 4,500	53 / 21	125	RE340T6	TALLBOY (20"ø X 60"TALL)
DWH-f (LOWER EFF.)	40	240/1	4,500 / 4,500	53 / 21	125	RE340T6	TALLBOY (20"ø X 60"TALL)
DWH-G (LOWER 1-BED)	40	240/1	4,500 / 4,500	53 / 21	125	RE340T6	TALLBOY (20"ø X 60"TALL)
DWH-H (UPPER 1-BED)	40	240/1	4,500 / 4,500	53 / 21	125	RE340T6	TALLBOY (20"ø X 60"TALL)
DWH-I (UPPER 2-BED)	50	240/1	4,500 / 4,500	64 / 21	130	RE250T6	TALLBOY (20"ø X 60"TALL)
DWH-J (LOWER 2-BED)	50	240/1	4,500 / 4,500	64 / 21	130	RE250T6	TALLBOY (20"ø X 60"TALL)

NOTES:
1. MODEL NUMBERS ARE BRADFORD WHITE, LOCHINVAR AND AO SMITH MAY BE BID AS EQUALS.
2. NON-SIMULTANEOUS DUAL ELEMENTS: 4,500 WATTS/240V = 19 AMP - WIRE TO 30A/2P BREAKER (2,250W PER PHASE).
3. PROVIDE DRAIN PAN BELOW AND PIPE DRAIN PAN DRAIN TO NEARBY FLOOR DRAIN.

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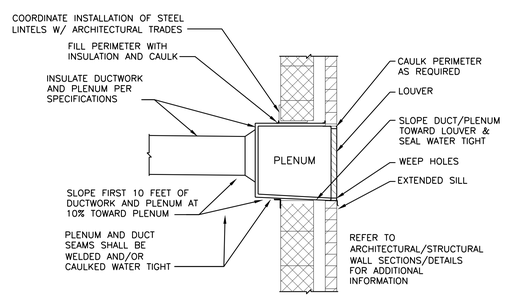
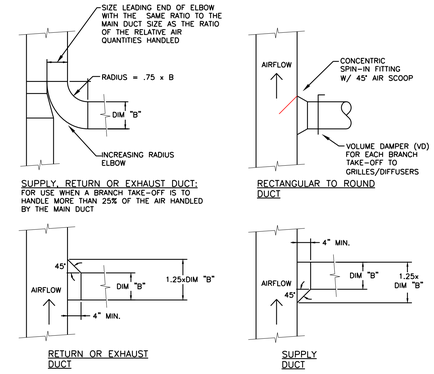
SHEET P3.1



OUTDOOR AIR INTAKE AIR LOUVER & PLENUM DETAIL

NO SCALE



RECTANGULAR DUCT TAKE-OFF DETAILS

NO SCALE

WALL LOUVER SCHEDULE

UNIT I.D.	SYSTEM SERVED	AIRFLOW RATE (CFM)	TYPE	FREE AREA SQ.FT.	FACE VELOCITY (FPM)	PRESSURE DROP (IN.WC.)	OVERALL WIDTH (INCHES)	OVERALL HEIGHT (INCHES)	OVERALL DEPTH (INCHES)	CONSTRUCTION	COLOR	MODEL NO.	REMARKS
L-U	UTILITY ROOM VENTILATION INTAKE	350	INTAKE	0.67	525	0.04	18	16	6	EXTRUDED ALUMINUM	NOTE 2	ESD-603	SEE NOTES 1, 2, 3, 4

NOTES:
1. MODEL NUMBERS ARE GREENHECK UNLESS NOTED OTHERWISE. RUSKIN AND NCA MAY BE BID AS EQUAL.
2. LOUVERS SHALL HAVE A ACROFLUR COATING WITH 50% KYNAR OR HYLAR IN ITS RESIN SYSTEM WITH A 5 YEAR ADHESION WARRANTY AND 5 YEAR CHALKING/FADING WARRANTY. PROVIDE COLOR CHART & COORDINATE COLOR WITH ARCHITECT PRIOR TO ORDERING.
3. PROVIDE WITH THE FOLLOWING OPTIONS: ALUMINUM BIRDSCREEN.
4. PROVIDE LOUVER WITH AUTOMATIC DAMPER "D-U" WITH ELECTRIC ACTUATOR: DAMPER SHALL BE 18"Wx16"H AND SHALL BE A GREENHECK VCD-23 LOW LEAK DAMPER (OR EQUAL) WITH GALV. FRAME, VINYL RUBBER BLADE SEALS, STEEL AXLES, SYNTHETIC ACETAL BEARINGS. DAMPER ACTUATOR SHALL BE A 120V SPRING FAIL CLOSED/POWER OPEN, TWO POSITION ACTUATOR, WITH END SWITCH, LOCATED EXTERNALLY (BY BELIMO, SIEMENS, OR INVENSYS). DAMPER "D-U" SHALL BE INTERLOCKED TO OPEN WHEN EF-U OPERATES.

GENERAL MECHANICAL NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL SCOPE OF WORK. CONTRACTOR SHALL PROVIDE ALL MECHANICAL SYSTEMS AND ASSOCIATED EQUIPMENT COMPLETE AND INCLUDE ALL NECESSARY OFFSETS, FITTINGS, CONTROLS, AND OTHER COMPONENTS REQUIRED DUE TO INTERFERENCES, SPACE CONSTRAINTS, CODES, ETC.
2. MECHANICAL SYSTEMS SHALL BE INSTALLED PER MICHIGAN/INTERNATIONAL MECHANICAL CODE, MICHIGAN/INTERNATIONAL PLUMBING CODE, MICHIGAN/INTERNATIONAL FUEL GAS CODE, APPLICABLE NFPA BUILDING CODES (E.G. 101, 90A, ETC.), AND APPLICABLE BUILDING CODES (I.E. MICHIGAN/INTERNATIONAL BUILDING CODE, ETC.). COORDINATE AND CONFIRM LTBB ODAWA INDIANS' (OWNER) CURRENT BUILDING CODE REQUIREMENTS PRIOR TO BID/CONSTRUCTION.
3. CONTRACTOR TO VERIFY REQUIREMENTS OF ALL EQUIPMENT WITH SHOP DRAWING SUBMITTALS PRIOR TO INSTALLATION. NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN SHOP DRAWINGS AND PLANS.
4. COORDINATE THE INSTALLATION OF MECHANICAL WORK WITH ALL OTHER TRADES. VERIFY ALL MECHANICAL AND ELECTRICAL CLEARANCES PRIOR TO THE FABRICATION OF ANY WORK. DUCTWORK, PIPING, ETC. SHALL NOT BE LOCATED DIRECTLY OVER ELECTRICAL PANELS/EQUIPMENT, OR INTERFERE WITH MECHANICAL/ ELECTRICAL EQUIPMENT CLEARANCES.
5. CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS SUPPORTING STEEL, HANGERS, ETC., FOR THE PROPER INSTALLATION OF ALL MECHANICAL SYSTEMS. DUCTWORK OR PIPING SHALL NOT BE SUPPORTED FROM/BY EQUIPMENT OR EQUIPMENT CONNECTIONS.
6. COORDINATE ALL FLOOR, WALL, AND ROOF PENETRATIONS, EQUIPMENT PADS, WALL LOUVERS, ETC. WITH ARCHITECTURAL/STRUCTURAL TRADES PRIOR TO ROUGH-IN. UNLESS NOTED OTHERWISE, EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, CORING, PATCHING ASSOCIATED WITH THEIR WORK. CUTTING, CORING, PATCHING WORK SHALL BE PERFORMED BY A QUALIFIED SUB-CONTRACTOR AND MATCH EXISTING OR NEW FINISHES.

MECHANICAL ABBREVIATION LIST

ABBREVIATION	DESCRIPTION
A/C	AIR CONDITIONING
AFF	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNITS PER HOUR
CFM	CUBIC FEET PER MINUTE
CONT	CONTINUATION OR CONTINUED
CONTR	CONTRACTOR
COORD	COORDINATE
CW	DOMESTIC COLD WATER
DB	DRY BULB TEMPERATURE
DEG	DEGREES
DN	DOWN
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EBH	ELECTRIC BASEBOARD HEATER
E.C.	ELECTRICAL CONTRACTOR
EDB	ENTERING DRY BULB TEMPERATURE
EF	EXHAUST FAN
EG	EXHAUST GRILLE OR REGISTER
ELEC	ELECTRICAL
ELEV	ELEVATION
ESP	EXTERNAL STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER
EWB	ENTERING WET BULB TEMPERATURE
EWH	ELECTRIC WALL HEATER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
F	FIRE PROTECTION
(F)	FUTURE
FA	FRESH AIR
F.A.	FIRE ALARM SUBCONTRACTOR
F.C.	FIRE SUPPRESSION SUBCONTRACTOR
FD	FLOOR DRAIN
F.DPR	FIRE DAMPER
FLA	FULL LOAD AMPS
FLR	FLOOR
FPM	FEET PER MINUTE
FT	FEET
FUR	FURNACE
G	GAS (NATURAL GAS/PROPANE)
HP	HORSEPOWER
HR	HOUR
HTG	HEATING
IN	INCHES
ISP	INTERNAL STATIC PRESSURE
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LDB	LEAVING DRY BULB TEMPERATURE
LRA	LOCKED ROTOR AMPS
LWB	LEAVING WET BULB TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
M.C.	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
NC	NORMALLY CLOSED
N.C.	NOISE CRITERIA
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
OA	OUTSIDE AIR
P.C.	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PRI	PRIOR TO ROUGH-IN
PSIA	POUNDS PER SQUARE INCH (ABSOLUTE)
PSIG	POUNDS PER SQUARE INCH (GAUGE)
PVAC	PACKAGED VERTICAL AIR CONDITIONER
RA	RETURN AIR
RAG	RETURN AIR GRILLE OR REGISTER
REL.A	RELIEF AIR
RH	RELATIVE HUMIDITY
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SAD	SUPPLY AIR DIFFUSER
SAG	SUPPLY AIR GRILLE OR REGISTER
SP	STATIC PRESSURE
SqFt	SQUARE FOOT/SQUARE FEET
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
U/G	UNDERGROUND (BELOW GRADE)
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
UON	UNLESS OTHERWISE NOTED
V	VENT
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VSD	VARIABLE SPEED DRIVE
VTR	VENT THRU ROOF
WB	WET BULB TEMPERATURE
WG	WATER GAUGE

MECHANICAL SYMBOL LIST

SYMBOL	DESCRIPTION
	RECTANGULAR TAKE-OFF (SINGLE LINE)
	RECTANGULAR TAKE-OFF (DOUBLE LINE)
	ROUND TAKE-OFF (SINGLE LINE)
	ROUND TAKE-OFF (DOUBLE LINE)
	SPIN-IN FITTING (WITH VOLUME DAMPER)
	RECTANGULAR ELBOW (WITH TURNING VANES)
	RADIUS RECTANGULAR ELBOW
	RADIUS ROUND ELBOW
	RECTANGULAR ELBOW UP
	ROUND ELBOW UP
	DUCT UP (SINGLE LINE)
	RECTANGULAR ELBOW DOWN
	ROUND ELBOW DOWN
	DUCT DOWN (SINGLE LINE)
	CONCENTRIC TRANSITION (DOUBLE LINE)
	CONCENTRIC TRANSITION (SINGLE LINE)
	ECCENTRIC TRANSITION (DOUBLE LINE)
	ECCENTRIC TRANSITION (SINGLE LINE)
	CROSS SECTION OF SUPPLY AIR DUCT
	CROSS SECTION OF EXHAUST OR RETURN AIR DUCT
	FLEXIBLE CONNECTION (DUCT)
	SQUARE CEILING DIFFUSER
	RETURN OR EXHAUST CEILING GRILLE
	TRANSFER GRILLE
	SUPPLY AIR GRILLE – CEILING OR FLOOR MOUNTED
	RETURN AIR GRILLE – CEILING OR FLOOR MOUNTED
	SUPPLY AIR GRILLE – SIDEWALL MOUNTED
	RETURN AIR GRILLE – SIDEWALL MOUNTED
	THERMOSTAT
	FIRE DAMPER (HORIZONTAL)
	FIRE DAMPER (VERTICAL)
	VOLUME DAMPER (MANUALLY ADJUSTABLE)
	MOTORIZED DAMPER

METHODS OF NOTATION

S-1 10ø 350-4	SUPPLY DIFFUSER WITH SCHEDULE TAG 10" DIAMETER NECK SIZE 350 CFM TYPICAL FOR 4
R-1 22x10 640-2	RETURN REGISTER WITH SCHEDULE TAG 22" W x 10" H NECK SIZE 640 CFM TYPICAL FOR 2 EXHAUST REGISTER (E) DESIGNATION SIMILAR
EF 1	EQUIPMENT DESIGNATION (I.E. EXHAUST FAN NUMBER 1)
1	CONSTRUCTION KEYED NOTE NUMBER
12x8 SA	DUCTWORK LABELING 12x8 SA = 12" WIDE x 8" HIGH SUPPLY AIR

MECHANICAL DRAWING INDEX

M1.0 MECHANICAL TITLE SHEET – BUILDINGS 3, 5 & 6

M2.1 MECHANICAL PLAN – LOWER FLOOR BUILDINGS 3, 5 & 6
M2.2 MECHANICAL PLAN – UPPER FLOOR BUILDINGS 3, 5 & 6

M3.1 MECHANICAL DETAILS – BUILDINGS 3, 5 & 6

REVIEWED FOR CODE COMPLIANCE

These plans and documents have been reviewed and found to be in compliance with the applicable code requirements of the jurisdiction tyisuance of a permit is recommended subject to approval by other departments and any noted conditions. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes and standards no relieve the owner, design professional of record or contractor of compliance with the applicable codes and standards. Plan review of documents does not authorize construction to proceed in violation of any federal, state, nor local regulation.

BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Bobbet V. La Guardia

DATE: 01/31/2023

9/14/2022_For Plan Review #1 Response (PR#1)

JLK Engineering Project Number: AEA 1903-01

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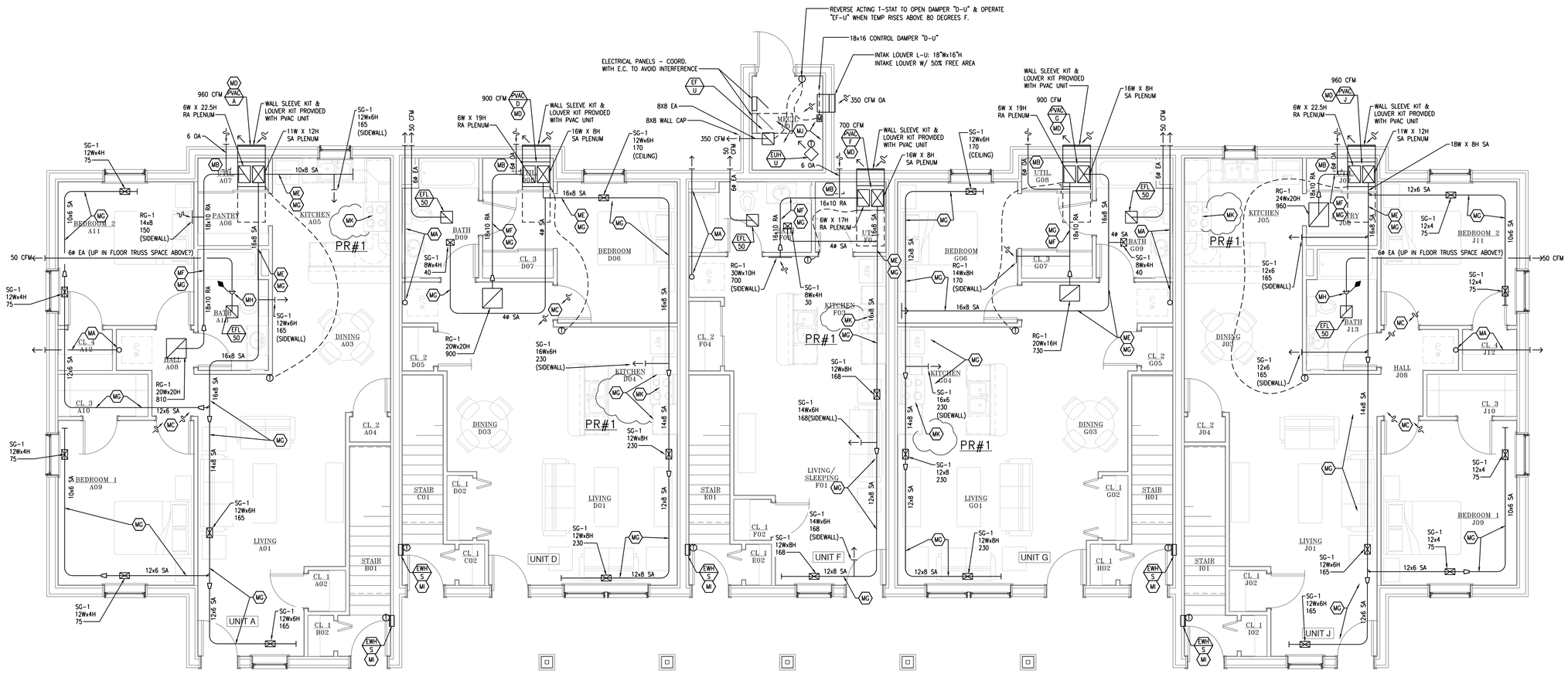
DRAWING TITLE
BUILDINGS 3, 5 & 6
MECHANICAL TITLE SHEET

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APARTMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
May 1, 20220
Sept. 14, 2022

SHEET M1.0



BUILDINGS 3, 5 & 6
MECHANICAL PLAN – LOWER FLOOR
SCALE: 1/4" = 1'-0"

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Bobbet V. La Guardia

DATE: 01/31/2023

KEYED MECHANICAL CONSTRUCTION NOTES:

- **MA** VENT DRYER TO THE OUTDOORS PER CODE REQUIREMENTS AND IN ACCORDANCE WITH DRYER MANUFACTURER RECOMMENDATIONS. ROUTE UP HIGH; BELOW SECOND FLOOR. COORDINATE BULKHEAD TO OUTDOOR WALL CAP.
- **MB** PROVIDE 6ø FRESH OUTDOOR AIR (OA) DUCT (INSULATED PER SPEC) FROM RETURN AIR (RA) MAIN DUCT NEAR PVAC UNIT, WITH MANUAL BALANCE DAMPER (SET TO 50 CFM FOR 2-BED UNITS AND 40 CFM FOR 1-BED APTS), TO OUTDOOR INTAKE WALL CAP WITH INSECT SCREEN.
- **MC** RETURN AIR (RA) TRANSFER THRU DOOR UNDERCUT (1" - 1.5") - COORDINATE WITH CARPENTER/DOOR TRADES.
- **MD** COORDINATE SIZE/CONFIGURATION OF MECHANICAL CLOSET FOR PVAC UNIT AND PVAC UNIT'S WALL SLEEVE/LOUVER (WITH PROPER CLEARANCES) WITH PLUMBING TRADES & CARPENTER TRADES PRIOR TO ROUGH-IN TO AVOID INTERFERENCES/CLEARANCES.
- **ME** ACCOUSTICALLY LINE THE FIRST 15 FEET OF SUPPLY AIR (SA) FROM THE PVAC UNIT WITH 1" THICK DUCT LINER (REFER TO DUCT INSULATION SPECS). DUCT SIZES SHOWN ON PLANS ARE WITHOUT LINER SO ADD 2" FOR OVERALL DUCT SIZE.
- **MF** ACCOUSTICALLY LINE THE FIRST 15 FEET OF RETURN AIR (RA) FROM THE PVAC UNIT WITH 1/2" THICK DUCT LINER (REFER TO DUCT INSULATION SPECS). DUCT SIZES SHOWN ON PLANS ARE WITHOUT LINER SO ADD 1" FOR OVERALL DUCT SIZE.
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- **MH** FIRE DAMPER (HORIZONTAL) ON BATH FAN'S 6ø EXH DUCT PENETRATION INTO FLOOR TRUSS/ATTIC SPACE. PROVIDE & COORDINATE LOCATION/SIZE OF ACCESS PANEL IN CEILING (AS REQUIRED TO MAINTAIN FIRE DAMPER) WITH CEILING TRADES PRIOR TO ROUGH-IN.
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- **MK** NOTE: NON-DUCTED RECIRCULATING RANGEHOOD TO BE PROVIDED BY OWNER.

PR#1

VENTILATION LOAD CALCULATIONS

Code: 2015 Michigan Mechanical Code
By: Justin Kowatch, PE - JLK Engineering
Project: LTBB MURRAY ROAD APARTMENTS - PETOSKEY, MI
Project AEA1903
Date: 4/10/2020

Room / Zone			Natural Ventilation		Occupants			Mechanical Ventilation							
Room ID	Room Name	Az Size (SqFt)	Area @4% (SqFt)	Provided (SqFt)	Default # Per 403.3 (/1000 SqFt)	Pz Estimated OR Actual	Pz Actual Seating #	People OA Rp CFM/Person Per 403.3	Area OA Ra CFM/SqFt Per 403.3	Exhaust Airflow CFM/SqFt Per 403.3	Exhaust Airflow Required CFM	Ez - Zone Effectiveness per 403.3.1.2	Zone Vbz Vbz = RpPz+RaAz CFM	Zone OA Voz = Vzb/Ez CFM	Notes:
UNITS A & J (2-BED LOWER)															
	LIVING/DINING / KITCHEN	529				3.0		15.0			0.0	0.8	45.0	56.3	VENTILATE VIA VERTICAL PVAC
	BEDROOM 1	188				0.0					0.0	0.8	0.0	0.0	
	BEDROOM 2	156				0.0					0.0	0.8	0.0	0.0	
	BATH	58				0.0				0.9	49.3	0.8	0.0	0.0	EXHUAST VIA EF-50
	PANTRY/UTILITY	44				0.0					0.0	0.8	0.0	0.0	
						0.0					0.0	0.8	0.0	0.0	

Room / Zone			Natural Ventilation		Occupants			Mechanical Ventilation							
Room ID	Room Name	Az Size (SqFt)	Area @4% (SqFt)	Provided (SqFt)	Default # Per 403.3 (/1000 SqFt)	Pz Estimated OR Actual	Pz Actual Seating #	People OA Rp CFM/Person Per 403.3	Area OA Ra CFM/SqFt Per 403.3	Exhaust Airflow CFM/SqFt Per 403.3	Exhaust Airflow Required CFM	Ez - Zone Effectiveness per 403.3.1.2	Zone Vbz Vbz = RpPz+RaAz CFM	Zone OA Voz = Vzb/Ez CFM	Notes:
UNITS D & G (1-BED LOWER)															
	LIVING/DINING / KITCHEN	474				2.0		15.0			0.0	0.8	30.0	37.5	VENTILATE VIA VERTICAL PVAC
	BEDROOM	120				0.0					0.0	0.8	0.0	0.0	
	BATH	65				0.0				0.8	48.8	0.8	0.0	0.0	EXHUAST VIA EF-50
	CLOSET/UTILITY	60				0.0					0.0	0.8	0.0	0.0	
						0.0					0.0	0.8	0.0	0.0	

Room / Zone			Natural Ventilation		Occupants			Mechanical Ventilation							
Room ID	Room Name	Az Size (SqFt)	Area @4% (SqFt)	Provided (SqFt)	Default # Per 403.3 (/1000 SqFt)	Pz Estimated OR Actual	Pz Actual Seating #	People OA Rp CFM/Person Per 403.3	Area OA Ra CFM/SqFt Per 403.3	Exhaust Airflow CFM/SqFt Per 403.3	Exhaust Airflow Required CFM	Ez - Zone Effectiveness per 403.3.1.2	Zone Vbz Vbz = RpPz+RaAz CFM	Zone OA Voz = Vzb/Ez CFM	Notes:
UNIT F (EFFICIENCY LOWER)															
	LIVING/SLEEPING / KITCHEN	382				2.0		15.0			0.0	0.8	30.0	37.5	VENTILATE VIA VERTICAL PVAC
	BATH	63				0.0				0.8	50.4	0.8	0.0	0.0	EXHUAST VIA EF-50
	UTILITY	36				0.0					0.0	0.8	0.0	0.0	
						0.0					0.0	0.8	0.0	0.0	

9/14/2022_For Plan Review #1 Response (PR#1)

JLK Engineering Project Number: AEA 1903-01

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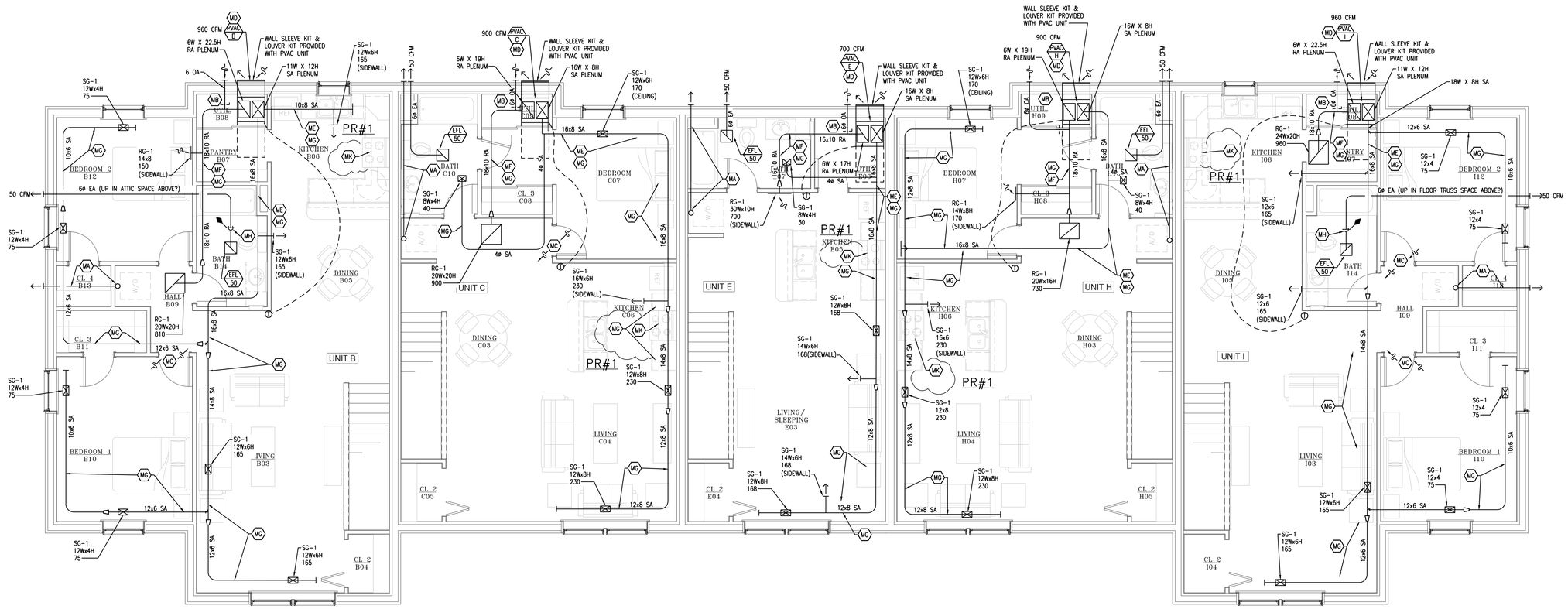
DRAWING TITLE
BUILDINGS 3, 5 & 6
MECHANICAL PLAN - LOWER FLOOR

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APARTMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
May 1, 2022
Sept. 14, 2022

SHEET M2.1



BUILDINGS 3, 5 & 6
MECHANICAL PLAN – UPPER FLOOR
SCALE: 1/4" = 1'-0"

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- **MF** ACCOUSTICALLY LINE THE FIRST 15 FEET OF RETURN AIR (RA) FROM THE PVAC UNIT WITH 1/2" THICK DUCT LINER (REFER TO DUCT INSULATION SPECS). DUCT SIZES SHOWN ON PLANS ARE WITHOUT LINER SO ADD 1" FOR OVERALL DUCT SIZE.
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PR#1

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By: Justin Kowatch, PE - JLK Engineering
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Room / Zone			Natural Ventilation		Occupants			Mechanical Ventilation							
Room ID	Room Name	Az Size (SqFt)	Area @4% (SqFt)	Provided (SqFt)	Default # Per 403.3 (/1000 SqFt)	Pz Estimated OR Actual	Pz Actual Seating #	People OA Rp CFM/Person Per 403.3	Area OA Ra CFM/SqFt Per 403.3	Exhaust Airflow CFM/SqFt Per 403.3	Exhaust Airflow Required CFM	Ez - Zone Effectiveness per 403.3.1.2	Zone Vbz Vbz = RpPz+RaAz CFM	Zone OA Voz = Vzb/Ez CFM	Notes:
UNITS B & I (2-BED UPPER)															
	LIVING/DINING / KITCHEN	604				3.0		15.0			0.0	0.8	45.0	56.3	VENTILATE VIA VERTICAL PVAC
	BEDROOM 1	188				0.0					0.0	0.8	0.0	0.0	
	BEDROOM 2	156				0.0					0.0	0.8	0.0	0.0	
	BATH	58				0.0				0.9	49.3	0.8	0.0	0.0	EXHAUST VIA EF-50
	PANTRY/UTILITY	44				0.0					0.0	0.8	0.0	0.0	
						0.0					0.0	0.8	0.0	0.0	

Room / Zone			Natural Ventilation		Occupants			Mechanical Ventilation							
Room ID	Room Name	Az Size (SqFt)	Area @4% (SqFt)	Provided (SqFt)	Default # Per 403.3 (/1000 SqFt)	Pz Estimated OR Actual	Pz Actual Seating #	People OA Rp CFM/Person Per 403.3	Area OA Ra CFM/SqFt Per 403.3	Exhaust Airflow CFM/SqFt Per 403.3	Exhaust Airflow Required CFM	Ez - Zone Effectiveness per 403.3.1.2	Zone Vbz Vbz = RpPz+RaAz CFM	Zone OA Voz = Vzb/Ez CFM	Notes:
UNITS C & H (1-BED UPPER)															
	LIVING/DINING / KITCHEN	554				2.0		15.0			0.0	0.8	30.0	37.5	VENTILATE VIA VERTICAL PVAC
	BEDROOM	120				0.0					0.0	0.8	0.0	0.0	
	BATH	65				0.0				0.8	48.8	0.8	0.0	0.0	EXHAUST VIA EF-50
	CLOSET/UTILITY	60				0.0					0.0	0.8	0.0	0.0	
						0.0					0.0	0.8	0.0	0.0	

Room / Zone			Natural Ventilation		Occupants			Mechanical Ventilation							
Room ID	Room Name	Az Size (SqFt)	Area @4% (SqFt)	Provided (SqFt)	Default # Per 403.3 (/1000 SqFt)	Pz Estimated OR Actual	Pz Actual Seating #	People OA Rp CFM/Person Per 403.3	Area OA Ra CFM/SqFt Per 403.3	Exhaust Airflow CFM/SqFt Per 403.3	Exhaust Airflow Required CFM	Ez - Zone Effectiveness per 403.3.1.2	Zone Vbz Vbz = RpPz+RaAz CFM	Zone OA Voz = Vzb/Ez CFM	Notes:
UNIT E (EFFICIENCY UPPER)															
	LIVING/SLEEPING / KITCHEN	462				2.0		15.0			0.0	0.8	30.0	37.5	VENTILATE VIA VERTICAL PVAC
	BATH	63				0.0				0.8	50.4	0.8	0.0	0.0	EXHAUST VIA EF-50
	UTILITY	36				0.0					0.0	0.8	0.0	0.0	
						0.0					0.0	0.8	0.0	0.0	

REVIEWED FOR CODE COMPLIANCE

These plans and documents have been reviewed and found to be in compliance with the applicable code requirements of the jurisdiction Issuance of a permit is recommended subject to approval by other departments and any noted conditions. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes and standards no relieve the owner, design professional of record or contractor of compliance with the applicable codes and standards. Plan review of documents does not authorize construction to proceed in violation of any federal, state, nor local regulation.

BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Bobbet V. La Guardia

DATE: 01/31/2023

9/14/2022_For Plan Review #1 Response (PR#1)

JLK Engineering Project Number: AEA 1903-01

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DRAWING TITLE
BUILDINGS 3, 5 & 6
MECHANICAL PLAN - UPPER FLOOR

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APARTMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
May 1, 2020
Sept. 14, 2022

SHEET M2.2

PACKAGED VERTICAL AIR CONDITIONING (PVAC) UNIT SCHEDULE: ELECTRIC-HEAT / ELECTRIC-COOL WITH THRU-THE-WALL VENTING VIA WALL SLEEVE/LOUVER

AREA SERVED	UNIT NO.	TYPE	HEAT TYPE	CAPACITY				AIR HANDLING			ELECTRICAL			APPROX. WEIGHT (LBS)	UNIT DIMENSIONS H x W x D INCHES	MODEL NO.	REMARKS
				HEATING KW	HEATING OUTPUT BTUH	COOLING OUTPUT TON/BTUH	EFFECIENCY EER	AIR FLOW CFM	STATIC PRESSURE IN. WG.	OUTDOOR AIR (OA) CFM	VOLTAGE/ PHASE	MINIMUM CKT AMPS (MCA)	MAXIMUM OCP				
APT UNIT #A (LOWER 2-BED)	PVAC-A	VERTICAL THRU-WALL	ELECTRIC	10/8.8	30,084	2.5-TON 28,400	11.0	960	0.35	50 VIA OA/RA	230/ 1ø	52	60	260	56x28x25	10KW MCE4-11-301FP	SEE NOTES BELOW FOR SPECS ALUMINUM LOUVER - COORD. COLOR
APT UNIT #B (UPPER 2-BED)	PVAC-B	VERTICAL THRU-WALL	ELECTRIC	10/8.8	30,084	2.5-TON 28,400	11.0	960	0.35	50 VIA OA/RA	230/ 1ø	52	60	260	56x28x25	10KW MCE4-11-301FP	SEE NOTES BELOW FOR SPECS ALUMINUM LOUVER - COORD. COLOR
APT UNIT #C (UPPER 1-BED)	PVAC-C	VERTICAL THRU-WALL	ELECTRIC	10/8.8	30,084	2-TON 22,800	11.1	900	0.50	40 VIA OA/RA	230/ 1ø	53	60	230	47x28x25	10KW MCE4-11-241FP	SEE NOTES BELOW FOR SPECS ALUMINUM LOUVER - COORD. COLOR
APT UNIT #D (LOWER 1-BED)	PVAC-D	VERTICAL THRU-WALL	ELECTRIC	10/8.8	30,084	2-TON 22,800	11.1	900	0.50	40 VIA OA/RA	230/ 1ø	53	60	230	47x28x25	10KW MCE4-11-241FP	SEE NOTES BELOW FOR SPECS ALUMINUM LOUVER - COORD. COLOR
APT UNIT #E (UPPER EFF.)	PVAC-E	VERTICAL THRU-WALL	ELECTRIC	7/6.6	22,563	1.5-TON 17,100	11.0	700	0.50	40 VIA OA/RA	230/ 1ø	39	40	210	44x28x22	7KW MCE4-11-181FP	SEE NOTES BELOW FOR SPECS ALUMINUM LOUVER - COORD. COLOR
APT UNIT #F (LOWER EFF.)	PVAC-F	VERTICAL THRU-WALL	ELECTRIC	7/6.6	22,563	1.5-TON 17,100	11.0	700	0.50	40 VIA OA/RA	230/ 1ø	39	40	210	44x28x22	7KW MCE4-11-181FP	SEE NOTES BELOW FOR SPECS ALUMINUM LOUVER - COORD. COLOR
APT UNIT #G (LOWER 1-BED)	PVAC-G	VERTICAL THRU-WALL	ELECTRIC	10/8.8	30,084	2-TON 22,800	11.1	900	0.50	40 VIA OA/RA	230/ 1ø	53	60	230	47x28x25	10KW MCE4-11-241FP	SEE NOTES BELOW FOR SPECS ALUMINUM LOUVER - COORD. COLOR
APT UNIT #H (UPPER 1-BED)	PVAC-H	VERTICAL THRU-WALL	ELECTRIC	10/8.8	30,084	2-TON 22,800	11.1	900	0.50	40 VIA OA/RA	230/ 1ø	53	60	230	47x28x25	10KW MCE4-11-241FP	SEE NOTES BELOW FOR SPECS ALUMINUM LOUVER - COORD. COLOR
APT UNIT #I (UPPER 2-BED)	PVAC-I	VERTICAL THRU-WALL	ELECTRIC	10/8.8	30,084	2.5-TON 28,400	11.0	960	0.35	50 VIA OA/RA	230/ 1ø	52	60	260	56x28x25	10KW MCE4-11-301FP	SEE NOTES BELOW FOR SPECS ALUMINUM LOUVER - COORD. COLOR
APT UNIT #J (LOWER 2-BED)	PVAC-J	VERTICAL THRU-WALL	ELECTRIC	10/8.8	30,084	2.5-TON 28,400	11.0	960	0.35	50 VIA OA/RA	230/ 1ø	52	60	260	56x28x25	10KW MCE4-11-301FP	SEE NOTES BELOW FOR SPECS ALUMINUM LOUVER - COORD. COLOR

NOTES:
1. BASIS OF DESIGN ARE ALLIED AIR-MAGIC-PAK MODEL #S. BASE-BID ALLIED AIR-MAGIC-PAK, OTHER MANUFACTURER/MODELS MAY BE BID AS ALTERNATE DEDUCTS/ADDS TO THE BASE-BID BUT MUST BE CLARIFIED AS SUCH.

2. STANDARD FEATURES: COMPRESSOR WITH 5-YEAR WARRANTY; UL1995 & ANSI Z21.47 (DIRECT VENT APPLIANCE) APPROVED; R-410 REFRIGERANT WITH 11 EER EFFICIENCY; EVAPORATOR DRAIN PAN OVERFLOW SWITCH; SECONDARY DRAIN PAN; ECM CONSTANT TORQUE BLOWER MOTOR 0-0.50 IN. W.G.; 1-INCH THICK WASHABLE MERV 5 FILTER; HELIX WOUND CHROME ELECTRIC HEATING ELEMENT WITH CUT-OFF LIMIT CONTROL; STEEL CABINET WITH FOIL FACED 0.50 INCH INSULATION.

3. ACCESSORIES / OPTIONS:
3.1 WALL SLEEVES - REQUIRED TO PENETRATE BUILDING ENVELOPE AND CREATE PATH FOR CONDENSER AIR INTAKE/EXHAUST (AND FLUE GAS EXHAUST ON GAS UNITS); AVAILABLE IN 6 INCH MINIMUM - 12 INCH MAXIMUM (COORDINATE SIZE REQUIRED FOR EXTERIOR WALL THICKNESS) - LARGER HEIGHT WALL SLEEVES MAY BE USED ON SMALLER TONNAGE UNITS TO MAINTAIN CONSISTENT LOUVER SIZE; DESIGNED TO ACT AS A DRAIN PAN TO DIRECT RAIN WATER OUT AND OVERFLOW FROM CONDENSATE DRAIN; CONTRACTOR SHALL REFER TO THE PVAC APPLICATION GUIDE AND COORDINATE WALL SLEEVE DEPTH/CONFIGURATION WITH ARCHITECTURAL/CARPENTER TRADES PRIOR TO ORDER AS REQUIRED TO COORDINATE WITH THE SIZE/CONFIGURATION OF THE MECHANICAL CLOSET AND THE BUILDING WALL CONSTRUCTION.
3.2 WALL LOUVERS - LOUVERS ARE REQUIRED FOR ALL PVAC INSTALLATIONS, CONTRACTOR SHALL COORDINATE STANDARD COLOR OF LOUVERS WITH ARCHITECT/OWNER PRIOR TO ORDER.
DESIGNER NOTE - SELECT ALUMINUM OR PLASTIC LOUVER OPTION BELOW:
3.2A ARCHITECTURAL ALUMINUM LOUVERS - 6063-T6 GRADE ALUMINUM PAINTED WITH 70% FLOUROPOLYMER WHICH CARRY'S A 20-YEAR PAINT WARRANTY. COORDINATE STANDARD COLOR WITH ARCHITECT..
OR
3.2B ARCHITECTURAL POLYPROPYLENE LOUVERS - DURABLE, CORROSION RESISTANT PLASTIC AVAILABLE IN 4 COLOR OPTIONS (WHITE, SANDSTONE, BEIGE, TAUPESTONE).

INSTALLATION NOTES:
A. PROVIDE/INSTALL SEVEN (7)-DAY PROGRAMMABLE T-STATS (HEAT/COOL/AUTO/FAN-ON).
B. M.C./P.C. TO TRAP/DRAIN CONDENSATE TO NEAREST FLOOR DRAIN OR SANITARY LINE. FOR UNITS SUSPENDED ABOVE OCCUPIED AREAS PROVIDE WATER TIGHT AUXILIARY DRAIN PAN BELOW ENTIRE UNIT WITH 3/4" DRAIN. PROVIDE WATER SENSOR IN AUXILIARY DRAIN PAN - WIRED TO SHUT UNIT DOWN UNIT AND INDICATE VISIBLE ALARM IN NEARBY OCCUPIED AREA.
C. PVAC UNITS REQUIRE A MINIMUM OF 36" OF MAINTENANCE CLEARANCE IN FRONT OF THE UNIT AND 1" ON SIDES. M.C. SHALL COORDINATE THE SIZE/CONFIGURATION OF THE MECHANICAL CLOSET WITH ARCHITECTURAL/CARPENTER TRADES PRIOR TO ROUGH-IN OF THE MECHANICAL CLOSET.

FAN SCHEDULE

UNIT I.D.	SYSTEM SERVED	TYPE	AIRFLOW CFM	E.S.P. IN. W.G.	FAN RPM	MOTOR				ELECTRICAL			WEIGHT LBS	MODEL NO.	REMARKS
						WATTS	HP		DRIVE	VOLTS	PHASE				
EFL-50	BATHROOM	CEILING EXHAUST FAN WITH LIGHT	55	0.25	797	10	FRACT.		DIRECT	115	1		15	SP-A90 W/ LED LIGHT	SEE NOTES 1, 2 (< 0.3 SONES)
EF-U	UTILITY ROOM	IN-LINE CABINET EXH FAN	350	0.25	1,258	118	FRACT.		DIRECT	115	1		28	CSP-A390 14"W X 12"L X 11"H	SEE NOTES 1, 3 (< 2 SONES)

NOTES:
1. MODEL NUMBERS ARE GREENHECK, UNLESS OTHERWISE NOTED. OR APPROVED EQUAL BY COOK, S&P, BROAN, PANASONIC.
2. PROVIDE THE FOLLOWING OPTIONS/ACCESSORIES: DISCONNECT SWITCH, FACTORY MOUNTED; SOLID STATE SPEED CONTROL, FACTORY MOUNTED; BACKDRAFT DAMPER, GRAVITY; 6" DIAMETER WALL CAP (WC-6).
3. PROVIDE THE FOLLOWING OPTIONS/ACCESSORIES: DISCONNECT SWITCH, FACTORY MOUNTED; SOLID STATE SPEED CONTROL, FACTORY MOUNTED; BACKDRAFT DAMPER, GRAVITY; 8"X8" HOODED WALL CAP (WC-8X8); BIRDSCREEN.

ELECTRIC UNIT HEATER SCHEDULE

UNIT I.D.	CAPACITY MBH	CAPACITY KW	FAN		ELECTRICAL			WEIGHT LBS	MODEL NO.	REMARKS
			TYPE	AIRFLOW CFM	VOLTS	PHASE	MAX AMPS			
EUH-U	8.5	2.5	PROPELLER	275	240	1	10	32	5600 SERIES	SEE NOTES 14"W X 13"D X 14"H

NOTES:
1. MODEL NUMBERS ARE MARKEL UNLESS OTHERWISE NOTED. BERKO, TRANE, AND Q-MARK MAY BE BID AS EQUALS.
2. STANDARD FEATURES: MULTIPLE TAP ELECTRICAL CONNECTION ALLOWS FOR FIELD CONVERSION TO 8 WATTAGE SETTINGS AT 208-240V/1ø OR 240-480V/3ø; THERMAL OVERLOAD WITH AUTOMATIC RESET; INTEGRAL HEAVY-DUTY HYDRAULIC THERMOSTAT FACTORY INSTALLED/WIRED; 3-POSITION MOUNTING BRACKET FOR WALL, CEILING, OR WORKBENCH MOUNT.

RECESSED ELECTRIC WALL HEATER SCHEDULE

UNIT I.D.	CAPACITY MBH	AMPS	ELECTRICAL			MODEL NO.	REMARKS
			VOLTS	PHASE	KW		
EWH-S	3,413/1,706	8.4/4.2	120	1	1/0.5	SRA 1012 DSF	SEE NOTES-10.5"Wx12"Hx5"D

NOTES:
1. MODEL NUMBERS ARE BERKO UNLESS OTHERWISE NOTED. Q-MARK OR MARKEL MAY BE BID AS EQUAL.
2. STANDARD FEATURES:
2A. BUILT-IN FAN DELAY SWITCH.
2B. INTEGRAL T-STAT FOR EASY ADJUSTMENT.
2C. MANUAL RESET THERMAL OVERHEAT PROTECTOR
2D. BUILT-IN ON/OFF SWITCH FOR MAINTENANCE.
3. FACTORY INSTALLED OPTIONS/ACCESSORIES:
3A. PROVIDE TAMPER RESISTANT COVER (#SRAFCTP).
4. FIELD INSTALLED OPTIONS/ACCESSORIES:
4A. PROVIDE BACK-BOX (11"H X 9.25"W X 4"D). M.C. SHALL COORDINATE BACK-BOX WITH CARPENTRY/MASONRY TRADES PRIOR TO ROUGH-IN.
5. INSTALLATION: INSTALL PER MFR REQUIREMENTS (E.G. MINIMUM 8" ABOVE FLOOR, MINIMUM 8" FROM ADJACENT WALL/SURFACE, DO NOT INSTALL BEHIND DOOR OR TOWEL RACK, ETC.)

GRILLE, REGISTER, AND DIFFUSER SCHEDULE (HART & COOLEY)

UNIT I.D.	FACE SIZE	NECK SIZE	FRAME TYPE	ACCESSORY	CONSTRUCTION	FINISH	MODEL NO.	REMARKS
SG-1	NECK SIZE + 1-3/4"	SEE PLANS	EXPOSED SCREW	OPPOSED DAMPER	STEEL	WHITE ONLY	92VHV	COMMERCIAL SIDEWALL/CEILING SG DOUBLE DEFLECTION - 3/4" SPACING
				-				
SG-5	NECK SIZE + 1-1/4"	SEE PLANS	EXPOSED SCREW	SHUTTER VALVE	STEEL	WHITE ONLY	661	RESIDENTIAL GRILLE-2 WAY DEFLECTION SHALLOW DUCT CEILING OR SIDEWALL
RG-1	NECK SIZE + 1-3/4"	SEE PLANS	EXPOSED SCREW	OPPOSED DAMPER	STEEL	WHITE ONLY	94A HOV	COMMERCIAL SIDEWALL/CEILING RG FIXED 35° DEFLECTION - 3/4" SPACING
RG-2	NECK SIZE + 1-3/4"	SEE PLANS	EXPOSED SCREW	-	STEEL	WHITE OR GOLDEN SAND	657	RESIDENTIAL BASEBOARD RETURN GRILLE FIXED 20° DEFLECTION - 1/3" SPACING
RG-5	NECK SIZE + 1-1/4"	SEE PLANS	EXPOSED SCREW	SHUTTER VALVE	STEEL	WHITE ONLY	661	RESIDENTIAL GRILLE-2 WAY DEFLECTION SHALLOW DUCT CEILING OR SIDEWALL
RG-N	NECK SIZE + 1-3/4"	SEE PLANS	EXPOSED SCREW	-	STEEL	WHITE ONLY	94A	COMMERCIAL SIDEWALL/CEILING RG FIXED 35° DEFLECTION - 3/4" SPACING

NOTES:
1. MODEL NUMBERS ARE HART & COOLEY UNLESS OTHERWISE NOTED. OR EQUAL BY TITUS, PRICE, KRUEGER.
2. ALL FINISHES SHALL BE COORDINATED & CONFIRMED WITH OWNER/ARCHITECT PRIOR TO ORDERING. PROVIDE COLOR SELECTION GUIDE IN COLOR FOR OWNER/ARCHITECT TO REVIEW/APPROVE.

REVIEWED FOR CODE COMPLIANCE

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Bobbet V. La Guardia

DATE: 01/31/2023

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DRAWING TITLE
BUILDINGS 3, 5 & 6
MECHANICAL DETAILS

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APARTMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
May 1, 2020
Sept. 14, 2022

SHEET M3.1

ELECTRICAL ABBREVIATION LIST

ABBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPS INTERRUPTING CAPACITY
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
COORD	COORDINATE
CP	CIRCULATION PUMP
CU	CONDENSING UNIT
DISC	DISCONNECT
DP	DISTRIBUTION PANEL
DWG	DRAWING
(E)	EXISTING
EBH	ELECTRIC BASEBOARD HEATER
E.C.	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EFL	EXHAUST FAN/LIGHT COMBO
EML	EMERGENCY LIGHT
EMT	ELECTRICAL METALLIC TUBING
EUH	ELECTRIC UNIT HEATER
EWH	ELECTRIC WALL HEATER
(F)	FUTURE
F.A.	FIRE ALARM SUBCONTRACTOR
F.C.	FIRE SUPPRESSION SUBCONTRACTOR
FC	FAN COIL
FLA	FULL LOAD AMPS
FU	FUSE
GFI	GROUND FAULT INTERRUPTER
GRD	GROUND
GRS	GALVANIZED RIGID STEEL
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
JB	JUNCTION BOX
KVA	KILO VOLT-AMPERES
KW	KILOWATT
KWH	KILOWATT-HOURS
LC	LIGHTING CONTROLLER
LP	LIGHTING PANEL
M.C.	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MFS	MAX FUSE SIZE
MLO	MAIN LUGS ONLY
MPC	METER-PAK CENTER
MTD	MOUNTED
MTR	MOTOR
NC	NORMALLY CLOSED
N.E.C.	NATIONAL ELECTRIC CODE
NF	NON-FUSIBLE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
P-A	PANEL "A"
P.C.	PLUMBING CONTRACTOR
PRI	PRIOR TO ROUGH-IN
PVAC	PACKAGED VERTICAL AIR CONDITIONER
RECEPT	RECEPTACLE
SD	SMOKE DETECTOR
SPEC	SPECIFICATION
SW	SWITCH
SWGR	SWITCHGEAR
TELECOM	TELECOMMUNICATIONS
TTB	TELECOM TERMINAL BACKBOARD
TYP	TYPICAL
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
U/G	UNDERGROUND (BELOW GRADE)
VFD	VARIABLE FREQUENCY DRIVE
VSD	VARIABLE SPEED DRIVE
WP	WEATHERPROOF
XFMR	TRANSFORMER

ELECTRICAL SYMBOL LIST

SYMBOL	DESCRIPTION
FA	FIXTURE TYPE
	PENDANT OR SURFACE MOUNTED LIGHT FIXTURE
	PENDANT OR SURFACE MOUNTED EMERGENCY LIGHT FIXTURE
	WALL MOUNTED LIGHT FIXTURE
	DOWNLIGHT LIGHTING FIXTURE
	DOWNLIGHT EMERGENCY LIGHTING FIXTURE
	WALL SCONCE
	POLE MOUNTED LIGHTING FIXTURE – SINGLE HEAD
	POLE MOUNTED LIGHTING FIXTURE – DOUBLE HEAD
	BOLLARD LIGHTING FIXTURE
	OUTDOOR WALL MOUNTED LIGHTING FIXTURE
S	SINGLE POLE TOGGLE SWITCH
S_2	TWO POLE TOGGLE SWITCH
S_3	3-WAY TOGGLE SWITCH
S_4	4-WAY TOGGLE SWITCH
S_O	OCCUPANCY SENSOR WALL SWITCH
S_V	VACANCY SENSOR WALL SWITCH
S_L	LOW VOLTAGE SWITCH
S_M	HORSE POWER RATED SWITCH
S_D	DIGITAL SWITCH
C	CONTACTOR
T/C	TIME CLOCK
P	PHOTOELECTRIC CONTROLLER
T	T-STAT (BY OTHERS) ROUGHED IN BY E.C. @ 52" AFF WITH CONDUIT PATHWAY TO EQUIPMENT CONTROLS CONNECTION – COORD. WITH MECHANICAL TRADES

SYMBOL	DESCRIPTION
	SINGLE PHASE MOTOR
	COMBINATION MOTOR STARTER WITH DISCONNECT SWITCH
VSD	VARIABLE SPEED DRIVE COMBINATION MOTOR STARTER WITH DISCONNECT SWITCH
	NON-FUSABLE DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
SM	HORSE POWER RATED SWITCH
J	JUNCTION BOX
	HARD WIRE POWER CONNECTION
	CONDUIT UP
	CONDUIT DOWN
	COMBINATION TELE/DATA OUTLET – ROUGH-IN ONLY, NO CABLE DROP
2	COMBINATION TELE/DATA OUTLET – 2 CABLE DROPS
	COMBINATION TELE/DATA OUTLET MOUNTED 6" ABOVE COUNTERTOP – ROUGH-IN ONLY NO CABLE DROPS
2	COMBINATION TELE/DATA OUTLET MOUNTED 6" ABOVE COUNTERTOP – 2 CABLE DROPS
	TELECOMMUNICATIONS BACKBOARD
	DUPLEX RECEPTACLE
48"	DUPLEX RECEPTACLE MOUNTED AT 48" ABOVE FLOOR (UNLESS NOTED OTHERWISE) – SIMILAR FOR ISOLATED GROUND, EMERGENCY AND GFI RECEPTACLES
	QUAD RECEPTACLE
	DUPLEX RECEPTACLE MOUNTED 6" ABOVE COUNTERTOP OR AS REQUIRED TO ACCOMMODATE COUNTERS – REFER TO ARCHITECTURAL ELEVATIONS
	DUPLEX RECEPTACLE – GROUND FAULT INTERRUPTER
	DUPLEX RECEPTACLE – GROUND FAULT INTERRUPTER – MOUNTED 6" ABOVE COUNTERTOP OR AS REQUIRED TO ACCOMMODATE COUNTERS – REFER TO ARCHITECTURAL ELEVATIONS
WP	DUPLEX RECEPTACLE – GROUND FAULT INTERRUPTER – WEATHERPROOF COVER
DF	DUPLEX RECEPTACLE – GROUND FAULT INTERRUPTER – DEAD-FRONT COVER
	SPECIAL RECEPTACLE – NEMA CONFIGURATION AS NOTED
TV	TELEVISION OUTLET – ROUGH-IN ONLY

SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	GROUND
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TT	TWIST TIMER
A-3	CIRCUIT HOMERUN TO PANEL "A" CIRCUIT #3
	LIGHTING PANEL (LP = <240V)
	POWER PANEL (PP = >480V)
	DISTRIBUTION PANEL
T	TRANSFORMER
M	UTILITY METER
CT	UTILITY CT CABINET
F	MANUAL FIRE ALARM STATION
SD	SMOKE DETECTOR
SD SB	SMOKE DETECTOR WITH SOUNDER BASE
S/C	COMBINATION SMOKE/CO DETECTOR
TD	THERMAL DETECTOR
F	FIRE ALARM HORN
-XX	FIRE ALARM STROBE – WALL MOUNTED (xx CANDELA)
C -XX	FIRE ALARM STROBE – CEILING MOUNTED (xx CANDELA)
F -XX	FIRE ALARM HORN/STROBE – WALL MOUNTED (xx CANDELA)
C F -XX	FIRE ALARM HORN/STROBE – CEILING MOUNTED (xx CANDELA)
S -XX	FIRE ALARM SPEAKER/STROBE – WALL MOUNTED (xx CANDELA)
C S -XX	FIRE ALARM SPEAKER/STROBE – CEILING MOUNTED (xx CANDELA)
IM	ADDRESSABLE INTERFACE MODULE
CM	ADDRESSABLE CONTROL MODULE
TS	TAMPER SWITCH
FS	FLOW SWITCH
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR PANEL

METHODS OF NOTATION

- FA — LIGHT FIXTURE DESIGNATION (I.E. FIXTURE TYPE "FA" – SEE FIXTURE SCHEDULE)
- 1 — CONSTRUCTION KEYED NOTE NUMBER
- A-3 — CIRCUIT HOMERUN (BACK TO PANEL "A" – REFER TO PANEL SCHEDULE)

STANDARD MOUNTING HEIGHTS

CONVENIENCE AND SPECIAL PURPOSE RECEPTACLE OUTLETS, TELE/DATA AND COMMUNICATIONS OUTLETS, NOT OTHERWISE SPECIFIED:
- 18" AFF TO THE MIDDLE OF BOX
- 16" AFF TO BOTTOM OF BOX IN CMU WALLS

CONVENIENCE AND SPECIAL PURPOSE RECEPTACLE OUTLETS ABOVE COUNTERS, NOT OTHERWISE SPECIFIED:
- 6" ABOVE COUNTER TO CENTER OF BOX OR AS REQUIRED TO ACCOMMODATE COUNTERS. (REFER TO ARCHITECTURAL ELEVATIONS.)

LIGHT SWITCHES, MOTOR CONTROL DEVICES, AND FIRE ALARM PULL STATIONS, NOT OTHERWISE SPECIFIED:
- 48" AFF TO THE MIDDLE OF BOX
- 48" AFF TO THE TOP OF BOX IN CMU WALLS

T-STATS, TEMP. SENSORS, CO2 SENSORS, NOT OTHERWISE SPECIFIED:
- 48" AFF TO THE MIDDLE OF BOX
- 48" AFF TO THE TOP OF BOX IN CMU WALLS

FIRE ALARM HORNS, SPEAKERS, STROBES, AND COMBINATION DEVICES, NOT OTHERWISE SPECIFIED:
- 96" AFF (TO TOP OF BOX) OR 6" BELOW CEILING, WHICHEVER IS LESS – BUT NO LOWER THAN 80" AFF.

GFI RECEPTACLES IN TOILET ROOMS, STORAGE ROOMS, AND JANITOR CLOSETS, NOT OTHERWISE SPECIFIED:
- 48" AFF TO TOP OF BOX.

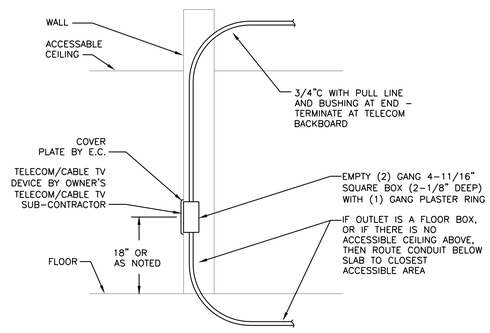
LIGHTING AND RECEPTACLE BRANCH CIRCUIT PANELBOARDS AND LIGHTING CONTROLLERS:
- 6'-6" AFF TO TOP OF ENCLOSURE.

GENERAL ELECTRICAL POWER, AUXILIARY, & LIGHTING NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF WORK. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MATERIALS (E.G. CONDUIT, WIRE, PULL BOXES, FIXTURES, ETC.) REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
2. ALL ELECTRICAL SYSTEMS SHALL BE PROVIDED/INSTALLED TO MEET APPLICABLE BUILDING CODES: MICHIGAN/INTERNATIONAL BUILDING CODE, MICHIGAN/INTERNATIONAL ELECTRICAL CODE, N.E.C., LIFE SAFETY CODE NFPA 101, MICHIGAN/INTERNATIONAL ENERGY CODE, ETC. COORDINATE AND CONFIRM LTBB ODAWA INDIANS' (OWNER) CURRENT BUILDING CODE REQUIREMENTS PRIOR TO BID/CONSTRUCTION.
3. VERIFY REQUIREMENTS OF ALL MECHANICAL/PLUMBING/ARCHITECTURAL EQUIPMENT WITH SHOP DRAWING SUBMITTALS PRIOR TO INSTALLATION. NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN SHOP DRAWINGS AND PLANS.
4. COORDINATE LOCATIONS AND MOUNTING HEIGHTS OF ALL RECEPTACLE (RECEPT) OUTLETS WITH LOCATIONS/HEIGHTS OF COUNTERTOPS, SINKS, FURNITURE, CABINETS, ETC. WITH ARCHITECTURAL ELEVATIONS AND OTHER TRADES.
5. COORDINATE REQUIREMENTS FOR FIRE ALARM SYSTEMS WITH FIRE PROTECTION SYSTEMS AND CONTRACTORS (E.G. FLOW SWITCHES, TAMPER SWITCHES, ETC.).
6. COORDINATE THE INSTALLATION OF ALL ELECTRICAL WORK WITH ALL OTHER TRADES. CONTRACTOR SHALL VERIFY ALL MECHANICAL AND ELECTRICAL CLEARANCES PRIOR TO FABRICATION OF ANY NEW WORK. ELECTRICAL EQUIPMENT, WIRING, ETC. SHALL NOT INTERFERE WITH MECHANICAL EQUIPMENT CLEARANCE SPACES.
7. FIRE ALARM SYSTEM, WIRING, DEVICES, ETC. SHOWN ARE DIAGRAMMATIC AND INDICATE THE GENERAL SCOPE OF WORK. THE FIRE ALARM SYSTEM SHALL BE DESIGNED AND INSTALLED BY A CERTIFIED FIRE ALARM CONTRACTOR PER THE SPECIFICATIONS.
8. ALL 15-20 AMP @ 120V BRANCH CIRCUITS FEEDING ALL RECEPTACLES/DEVICES THROUGHOUT DWELLING UNITS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER (AFCI) RATED BREAKER AND RECEPTACLES IN ACCORDANCE WITH N.E.C. 210.12.
9. COORDINATE EXACT LIGHT FIXTURE LOCATIONS WITH ARCHITECTURAL PLANS (REFLECTED CEILING PLANS, BUILDING ELEVATIONS, ETC.).
10. ELECTRICAL CONTRACTOR (E.C.) SHALL PROVIDE ALL ROUGH-INS (E.G. BOXES, CONDUIT, ETC.) FOR AUXILIARY ELECTRICAL SYSTEMS (E.G. FIRE ALARM, TELECOM, CABLE TV, SECURITY, MECHANICAL T-STATS/CONTROLS, ETC.). COORDINATE REQUIREMENTS WITH OTHER SUB-CONTRACTORS PRIOR TO ROUGH-IN AND VERIFY ALL WORK REQUIRED. ALL CONDUIT ROUGH-INS SHALL TERMINATE AT BACKBOARD IN UTILITY ROOM.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURERS	LAMPS	VOLTS/WATTS	REMARKS
B2	4.75"Wx4.5"Hx24"L LED WALL/CEILING BRACKET FIXTURE; STEEL HOUSING; OPAL ACRYLIC DIFFUSED LENS; 0-10V CONTINUOUS DIMMING	1. METALUX "BCLED" SERIES 2BCLED-LD4-205L-F-UNV-L830-CD1 2. ENGINEER APPROVED EQUAL BY LITHONIA OR HUBBLE.	LED 2,000 LUMENS 3,000 K TEMP	120V / 23W	WALL MOUNT OR CEILING MOUNT
CFL	CEILING FAN / LIGHT COMBINATION – TO BE SELECTED BY ARCHITECT/OWNER AND PROVIDED/INSTALLED BY ELECTRICAL CONTRACTOR (PROVIDE $500 ALLOWANCE PER FIXTURE)	1. N/A 2. ENGINEER APPROVED EQUAL	LED?/INCAN? 2,000 LUMENS 3,000 K TEMP	120V / ASSUMED 250W	
D	4"Ø SURFACE MOUNTED BACKLIT LED DOWNLIGHT; 6.25"W x 1.25"D; ALUMINUM HOUSING & FRAME; SUITABLE FOR CEILING/WALL MOUNTING TO 4" SQ. ELEC J-BOX; 120V DIMMING; 90 CRI; UL WET & DAMP LISTED	1. HALO MODEL #: BLD4-06-930-WH 2. ENGINEER APPROVED EQUAL BY LITHONIA OR HUBBLE.	LED 690 LUMENS 3,000 K TEMP	120V / 8.2W	
E	4.5"Wx5.4"Dx6.8"H LED ENTRY LIGHT; POLYCARBONATE HOUSING; FROSTED LENS; UL WET LISTED; INTEGRAL PHOTO CONTROL; BRONZE OR WHITE FINISH? (COORD. COLOR WITH OWNER)	1. HALO OUTDOOR MODEL #: FE065OLPC-BRONZE? OR WHITE? 2. ENGINEER APPROVED EQUAL BY LITHONIA OR HUBBLE.	LED 811 LUMENS 5,000 K TEMP	120V / 9W	VERIFY FINISH, MOUNTING HEIGHT, AND LOCATION WITH ARCHITECTURAL ELEVATIONS AND OWNER PRI
F	12"Wx2"Hx48"L LED PANEL FIXTURE; STEEL HOUSING; WHITE FROST IMPACT RESTISTANT LENS; 0-10V CONTINUOUS DIMMING; DAMP LOCATION LISTED	1. METALUX "14FP LED" SERIES 14FP2630C 2. ENGINEER APPROVED EQUAL BY LITHONIA OR HUBBLE.	LED 2,744 LUMENS 3,000 K TEMP	120V / 24.8W	PROVIDE SURFACE MOUNT KIT #FPSURF14
LE	5.75"Wx3.5"Dx6.75"H LED WALL PACK LIGHT; DIE-CAST ALUMINUM CONSTRUCTION; UL WET LISTED; STANDARD CARBON BRONZE FINISH (COORD. COLOR WITH OWNER)	1. LUMARK "CROSSTOUR" SERIES MODEL #: XTOR3B-PC1 2. ENGINEER APPROVED EQUAL BY LITHONIA OR HUBBLE.	LED 2,751 LUMENS 5,000 K TEMP	120-277V / 26W	VERIFY COLOR/FINISH, MOUNTING HEIGHT, AND LOCATION WITH ARCHITECTURAL ELEVATIONS AND OWNER PRI
P1	18.58"Ø X 10.56"H DECORATIVE LED PENDANT; AIR CRAFT CABLE MOUNTED (VERIFY MOUNTING HEIGHT); DAMP LISTED; 120V DIMMABLE; ALUMINUM SHROUD AND COPPER SHADE & TRIM; CANOPY MOUNTING PLATE AND COVER TO J-BOX; VERIFY FINISH AND MOUNTING WITH OWNER PRIOR TO ROUGH-IN	1. SHAPER MODEL #: 1800-RLM-90-L30-2-W-UNV-STD-SBA-TBA-AC-WL 2. ENGINEER APPROVED EQUAL BY LITHONIA OR HUBBLE.	LED 5,638 LUMENS 3,000 K TEMP	120-277V / 42W	120" LONG FIELD CUTTABLE AIRCRAFT CABLE. VERIFY FINISH, MOUNTING HEIGHT, AND LOCATION WITH ARCHITECTURAL ELEVATIONS AND OWNER PRI
S	15"Ø X 4"H LED LOW PROFILE ROUND FLUSHMOUNT; STEEL HOUSING PAINTED WHITE WTH ACRYLIC ROUND LENS; WALL OR CEILING MOUNTED VIA JUNCTION BOX; 120V DIMMING	1. METALUX AP SERIES MODEL #: FM15WRCCR 2. ENGINEER APPROVED EQUAL BY LITHONIA OR HUBBLE.	LED 1,600 LUMENS 3,000 K TEMP	120V / 21.3W	
S2	24" LONG x 3" WIDE x 4" HIGH LED LENSED STRIPLIGHT FIXTURE; FULL FROST LENS; UNIVERSAL VOLTAGE; 0-10V DIMMING SURFACE MOUNT OR PENDANT HUNG (CONFIRM HANGING ACCESSORIES – ADJ STEM SET?)	1. METALUX "SNLED" LENSED MODEL#: 2SNLED-LD5-205L-LW-UNV-L840-CD1-AYC OR Y-TOGGLE 2. ENGINEER APPROVED EQUAL BY LITHONIA OR HUBBLE.	LED 2,162 LUMENS (120 LM/WATT) 4,000 K TEMP 80 CRI	120-277V / 18W	SURFACE MOUNTED OR PENDANT HANG VIA ADJUSTABLE 48" STEM SET
W1	9"W X 15"H X 2.75"D LED (WAVESTREAM) SCONCE INDOOR/OUTDOOR; SURFACE MNT ON WALL/CEILING VIA J-BOX; ALUMINUM HOUSING (WHITE? BLACK? BRONZE? DK PLATINUM?-CONFIRM W/ ARCHITECT); HIGH ABUSE CLEAR POLYCARBONATE LENS; 120V TO 0-10V DIMMING; WET LOCATION	1. FAIL-SAFE MODEL #: FW-612-1000-30-UNV-CP-R4-EDD1-LGW 2. ENGINEER APPROVED EQUAL BY LITHONIA OR HUBBLE.	LED 1,000 LUMENS 3,000 K TEMP	120-277V / 13W	VERIFY MOUNTING HEIGHT, AND LOCATION WITH ARCHITECTURAL ELEVATIONS VERIFY COLOR/FINISH WITH ARCHITECT PRIOR TO ORDER
W2	25"L X 8.75"H X 4"D LED LUMINOUS WALL SCONCE-VANITY; 0-10 V DIMMING; UL WET LISTED; HORIZ. OR VERTICAL MOUNT VIA J-BOX; PAINTED ALUMINUM FINISH (VERIFY WITH ARCHITECT) WITH ACRYLIC LENS; UL DAMP INDOOR OR WET OUTDOOR ("W");	1. SHAPER MODEL #: 605-25-W-L3/830-UNV-ALP 2. ENGINEER APPROVED EQUAL BY LITHONIA OR HUBBLE.	LED 2,000 LUMENS 3,000 K TEMP	120-277V / 20W	VERIFY MOUNTING HEIGHT, AND LOCATION WITH ARCHITECTURAL ELEVATIONS VERIFY COLOR/FINISH WITH ARCHITECT PRIOR TO ORDER



NOTES:
1) PROVIDE LABEL ON CONDUIT STATING OUTLET BOX LOCATION (I.E. ROOM NAME & NUMBER).
2) ROUTE CONDUIT SLEEVES FROM TELECOM/CABLE TV OUTLET BOXES TO UTILITY ROOM AND TERMINATE AT TELECOM BACKBOARD IN UTILITY ROOM.
2) NOTE: ALL TELECOM/CABLE TV/SECURITY WIRING SHALL BE DONE BY OWNER SELECTED CONTRACTOR UNDER A SEPARATE CONTRACT.

TV **TELECOM/CABLE TV OUTLET DETAIL**
NO SCALE

BRANCH CIRCUIT WIRE SIZE/LENGTH SCHEDULE

MAX BRANCH CIRCUIT (AMPS)	MAX CIRCUIT LENGTH (FEET) TO LAST CONNECTION IN THE CIRCUIT						
	50	75	100	125	150	300	
15	#12	#10	#10	#8	#6	#4	
20	#10	#10	#8	#6	#6	#3	
30	#8	#8	#6	#4	#4	#1	

NOTES:
1. REFER TO SPECIFICATIONS FOR WIRE TYPE.
2. SCHEDULE IS BASED UPON A MAX 3% VOLTAGE DROP ON 115-120V/1Ø CIRCUITS.
3. FOR LENGTHS BETWEEN TABLED VALUES – USE LONGER LENGTH.

BRANCH CIRCUIT WIRE SIZE/LENGTH SCHEDULE

MAX BRANCH CIRCUIT (AMPS)	MAX CIRCUIT LENGTH (FEET) TO LAST CONNECTION IN THE CIRCUIT						
	50	75	100	125	150	< 300	
15	#10	#10	#10	#10	#8	#4	
20	#10	#10	#10	#8	#6	#4	
30	#8	#8	#6	#6	#4	#2	

NOTES:
1. REFER TO SPECIFICATIONS FOR WIRE TYPE.
2. SCHEDULE IS BASED UPON A MAX 3% VOLTAGE DROP ON 208-240V/1Ø CIRCUITS.
3. FOR LENGTHS BETWEEN TABLED VALUES – USE LONGER LENGTH.

ELECTRICAL DRAWING INDEX

E1.0 ELECTRICAL TITLE SHEET – BUILDINGS 3, 5 & 6

E2.1 ELECTRICAL POWER PLAN – LOWER FLOOR BUILDINGS 3, 5 & 6
E2.2 ELECTRICAL POWER PLAN – UPPER FLOOR BUILDINGS 3, 5 & 6

E3.1 ELECTRICAL LIGHTING PLAN – LOWER FLOOR BUILDINGS 3, 5 & 6
E3.2 ELECTRICAL LIGHTING PLAN – UPPER FLOOR BUILDINGS 3, 5 & 6

E4.1 ELECTRICAL DETAILS – BUILDINGS 3, 5 & 6
E4.2 ELECTRICAL DETAILS – BUILDINGS 3, 5 & 6

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Bobbet V. La Guardia

DATE: 01/31/2023

9/14/2022_For Plan Review #1 Response (PR#1)

JLK Engineering Project Number: AEA 1903-01

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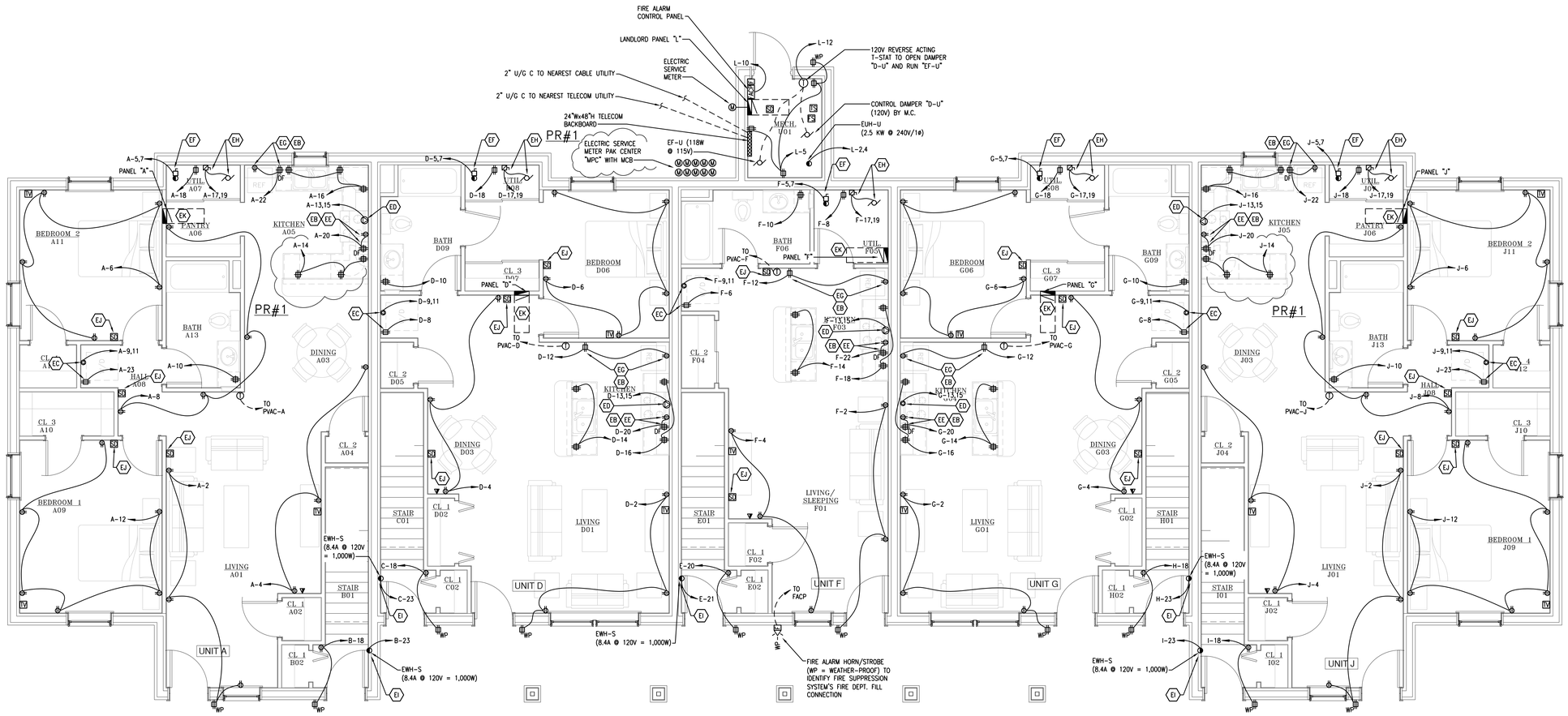
DRAWING TITLE: BUILDINGS 3, 5 & 6 ELECTRICAL TITLE SHEET

PROJECT TITLE: LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS MURRAY ROAD APARTMENT DEVELOPMENT PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE: May 1, 2020; Sept. 14, 2022

SHEET E1.0



BUILDINGS 3, 5 & 6
ELECTRICAL POWER PLAN – LOWER FLOOR

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

KEYED ELECTRICAL POWER CONSTRUCTION NOTES:

- **EA** COORDINATE LOCATION AND MOUNTING HEIGHT OF ALL ELECTRICAL DEVICES AND AUXILLARY ELECTRICAL DEVICES (I.E. TELECOM, AUDIO/VIDEO, CABLE TV, ETC.) WITH OWNER/OWNER'S REP PRIOR TO ROUGH-IN.
- **EB** FOR LOCATIONS WHERE GFI RECEPTACLES ARE REQUIRED TO SERVICE APPLIANCES AND INSTALLED IN NON-ACCESSIBLE LOCATIONS, WIRE A RECEPTACLE FROM A NEW DEAD-FRONT (DF) GFI RECEPTACLE IN ACCESSIBLE LOCATION PER NEC.
- **EC** PROVIDE POWER/RECEPTACLE FOR ELECTRIC STACKABLE WASHER/DRYER (ASSUMED 24A @ 240V = 5,760W). COORDINATE AND CONFIRM REQUIREMENTS WITH OWNER PRIOR TO ROUGH IN.
- **ED** PROVIDE POWER/RECEPTACLE FOR ELECTRIC RANGE (ASSUMED 7.5 KW @ 240V = 4A/2P BKR. COORDINATE AND CONFIRM REQUIREMENTS WITH OWNER PRIOR TO ROUGH IN.
- **EE** PROVIDE POWER/RECEPTACLE FOR NON-DUCTED RECIRCULATING RANGEHOOD (ASSUMED 400 W @ 115V). COORDINATE AND CONFIRM REQUIREMENTS AND LOCATION WITH OWNER PRIOR TO ROUGH IN.
- **EF** PROVIDE POWER & DISCONNECT FOR ELECTRIC DOMESTIC WATER HEATER (DWH) 4.5 KW @ 240V. COORDINATE AND CONFIRM REQUIREMENTS WITH P.C. PRIOR TO ROUGH IN.
- **EG** PROVIDE RECEPT. FOR REFRIGERATOR (ASSUMED 1,500W @ 115V). COORDINATE AND CONFIRM REQUIREMENTS WITH OWNER PRIOR TO ROUGH IN.
- **EH** PROVIDE POWER/DISCONNECT & CONTROL ROUGH-IN FOR PACKAGED VERTICAL AIR CONDITIONING UNIT (PVAC). COORDINATE/CONFIRM WITH M.C. PRIOR TO ROUGH IN.
- **EI** ELECTRICAL CONTRACTOR (E.C.) SHALL COORDINATE CKT/CONDUIT ROUGH-IN FOR RECESSED ELEC WALL HEATER WITH M.C. AND ICF CONTRACTOR.
- **EJ** PROVIDE SMOKE DETECTORS (SD) THROUGHOUT EACH APARTMENT UNIT AND INTERCONNECT TO ALARM WITH OTHER SMOKE DETECTORS IN THAT APARTMENT UNIT.
- **EK** COORDINATE EXACT LOCATION OF PANELBOARD WITH OTHER TRADES TO AVOID CONFLICTS WITH DUCTWORK, PIPING, EQUIPMENT, ETC.
- **EL** PROVIDE RECEPTACLES IN PENINSULA/ISLAND COUNTERTOP IN ACCORDANCE WITH APPLICABLE CODES. LOCATE IN BACKSPLASH ABOVE MAIN COUNTERTOP AND BELOW RAISED BAR COUNTERTOP.
- **EM** PROVIDE RECEPTACLES ON EACH SIDE OF ADA ISLAND COUNTERTOP IN ACCORDANCE WITH APPLICABLE CODES. LOCATE WITHIN 12" OF TOP OF COUNTERTOP.

PR#1

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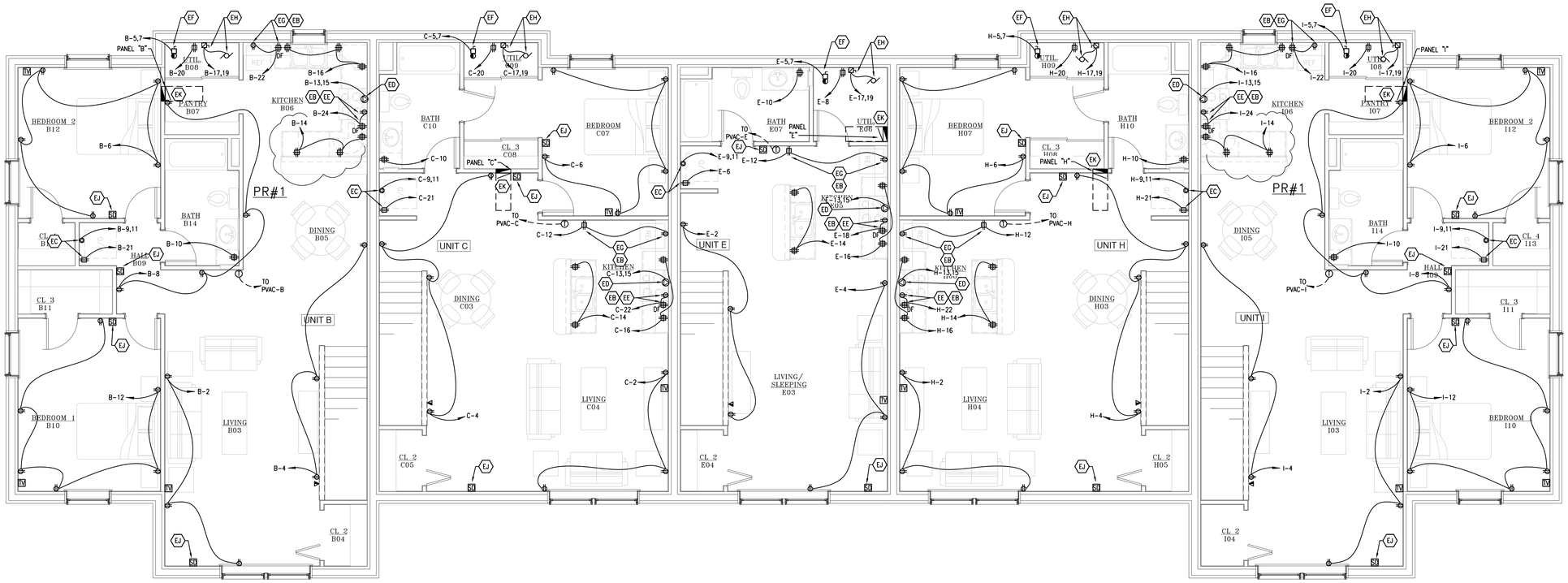
DRAWING TITLE
BUILDINGS 3, 5 & 6
ELECTRICAL POWER PLAN - LOWER FLOOR

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APARTMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
May 1, 20220
Sept. 14, 2022

SHEET E2.1



BUILDINGS 3, 5 & 6
ELECTRICAL POWER PLAN – UPPER FLOOR
SCALE: 1/4" = 1'-0"

KEYED ELECTRICAL POWER CONSTRUCTION NOTES:

- **EA** COORDINATE LOCATION AND MOUNTING HEIGHT OF ALL ELECTRICAL DEVICES AND AUXILLARY ELECTRICAL DEVICES (I.E. TELECOM, AUDIO/VIDEO, CABLE TV, ETC.) WITH OWNER/OWNER'S REP PRIOR TO ROUGH-IN.
- **EB** FOR LOCATIONS WHERE GFI RECEPTACLES ARE REQUIRED TO SERVICE APPLIANCES AND INSTALLED IN NON-ACCESSIBLE LOCATIONS, WIRE A RECEPTACLE FROM A NEW DEAD-FRONT (DF) GFI RECEPTACLE IN ACCESSIBLE LOCATION PER NEC.
- **EC** PROVIDE POWER/RECEPTACLE FOR ELECTRIC STACKABLE WASHER/DRYER (ASSUMED 24A @ 240V = 5,760W). COORDINATE AND CONFIRM REQUIREMENTS WITH OWNER PRIOR TO ROUGH IN.
- **ED** PROVIDE POWER/RECEPTACLE FOR ELECTRIC RANGE (ASSUMED 7.5 KW @ 240V = 4A/2P BKR. COORDINATE AND CONFIRM REQUIREMENTS WITH OWNER PRIOR TO ROUGH IN.
- **EE** PROVIDE POWER/RECEPTACLE FOR NON-DUCTED RECIRCULATING RANGEHOOD (ASSUMED 400 W @ 115V). COORDINATE AND CONFIRM REQUIREMENTS AND LOCATION WITH OWNER PRIOR TO ROUGH IN.
- **EF** PROVIDE POWER & DISCONNECT FOR ELECTRIC DOMESTIC WATER HEATER (DWH) 4.5 KW @ 240V. COORDINATE AND CONFIRM REQUIREMENTS WITH P.C. PRIOR TO ROUGH IN.
- **EG** PROVIDE RECEPT. FOR REFRIGERATOR (ASSUMED 1,500W @ 115V). COORDINATE AND CONFIRM REQUIREMENTS WITH OWNER PRIOR TO ROUGH IN.
- **EH** PROVIDE POWER/DISCONNECT & CONTROL ROUGH-IN FOR PACKAGED VERTICAL AIR CONDITIONING UNIT (PVAC). COORDINATE/CONFIRM WITH M.C. PRIOR TO ROUGH IN.
- **EI** ELECTRICAL CONTRACTOR (E.C.) SHALL COORDINATE CKT/CONDUIT ROUGH-IN FOR RECESSED ELEC WALL HEATER WITH M.C. AND ICF CONTRACTOR.
- **EJ** PROVIDE SMOKE DETECTORS (SD) THROUGHOUT EACH APARTMENT UNIT AND INTERCONNECT TO ALARM WITH OTHER SMOKE DETECTORS IN THAT APARTMENT UNIT.
- **EK** COORDINATE EXACT LOCATION OF PANELBOARD WITH OTHER TRADES TO AVOID CONFLICTS WITH DUCTWORK, PIPING, EQUIPMENT, ETC.
- **EL** PROVIDE RECEPTACLES IN PENINSULA/ISLAND COUNTERTOP IN ACCORDANCE WITH APPLICABLE CODES. LOCATE IN BACKSPLASH ABOVE MAIN COUNTERTOP AND BELOW RAISED BAR COUNTERTOP.
- **EM** PROVIDE RECEPTACLES ON EACH SIDE OF ADA ISLAND COUNTERTOP IN ACCORDANCE WITH APPLICABLE CODES. LOCATE WITHIN 12" OF TOP OF COUNTERTOP.

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DRAWING TITLE
BUILDINGS 3, 5 & 6
ELECTRICAL POWER PLAN - UPPER FLOOR

PROJECT TITLE
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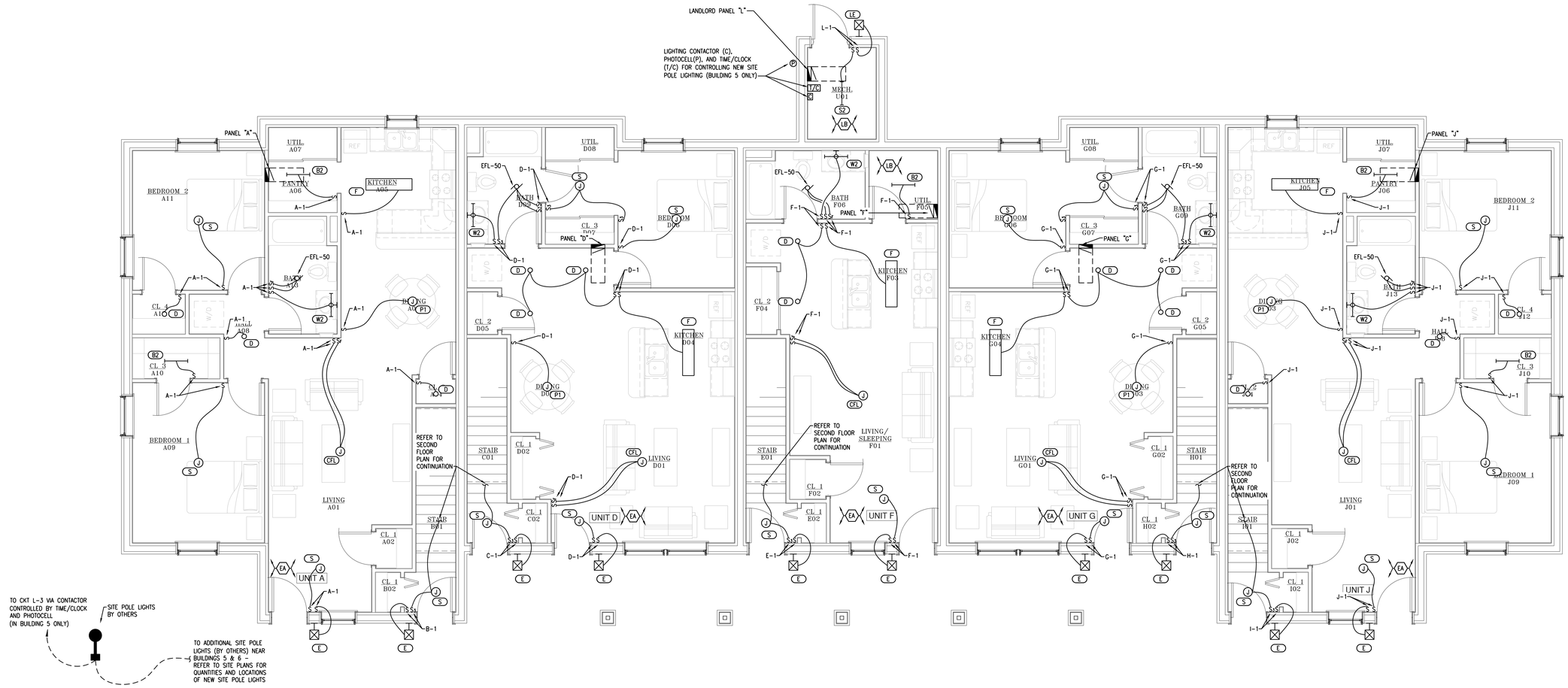
MURRAY ROAD APARTMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
May 1, 2022
Sept. 14, 2022

SHEET E2.2



BUILDINGS 3, 5 & 6
ELECTRICAL LIGHTING PLAN – LOWER FLOOR
SCALE: 1/4" = 1'-0"

KEYED ELECTRICAL LIGHTING CONSTRUCTION NOTES:

1A COORDINATE LOCATION AND MOUNTING HEIGHT OF ALL LIGHTING AND CONTROL/SWITCHING WITH OWNER/OWNER'S REP PRIOR TO ROUGH-IN.

1B COORDINATE LIGHT FIXTURE LOCATIONS WITHIN MECHANICAL/ELECTRICAL ROOMS TO AVOID CONFLICTS WITH DUCTWORK, PIPING, ETC. COORDINATE WITH OTHER TRADES PRIOR TO ROUGH-IN.

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DRAWING TITLE
BUILDINGS 3, 5 & 6
ELECTRICAL LIGHTING PLAN - LOWER FLOOR

PROJECT TITLE
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MURRAY ROAD APARTMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
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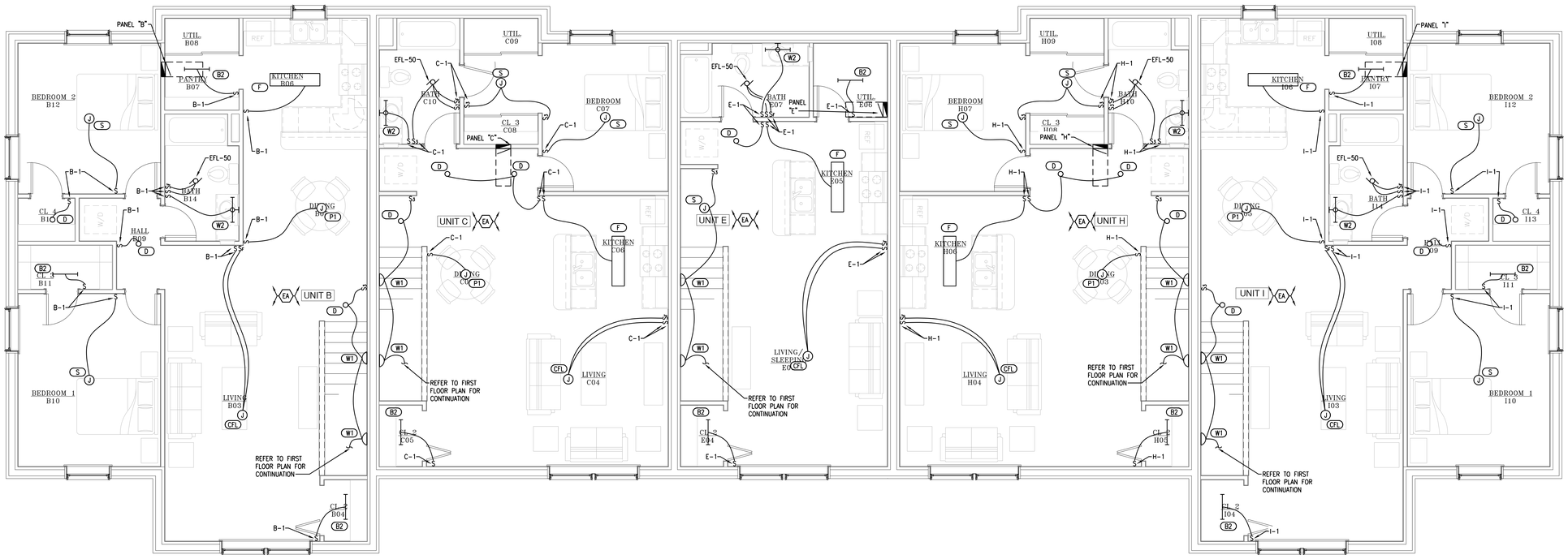
SHEET E3.1



BUILDINGS 3, 5 & 6
ELECTRICAL LIGHTING PLAN – UPPER FLOOR

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

KEYED ELECTRICAL LIGHTING CONSTRUCTION NOTES:

1A. COORDINATE LOCATION AND MOUNTING HEIGHT OF ALL LIGHTING AND CONTROL/SWITCHING WITH OWNER/OWNER'S REP PRIOR TO ROUGH-IN.

1B. COORDINATE LIGHT FIXTURE LOCATIONS WITHIN MECHANICAL/ELECTRICAL ROOMS TO AVOID CONFLICTS WITH DUCTWORK, PIPING, ETC. COORDINATE WITH OTHER TRADES PRIOR TO ROUGH-IN.

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JLK Engineering Project Number: AEA 1903-01

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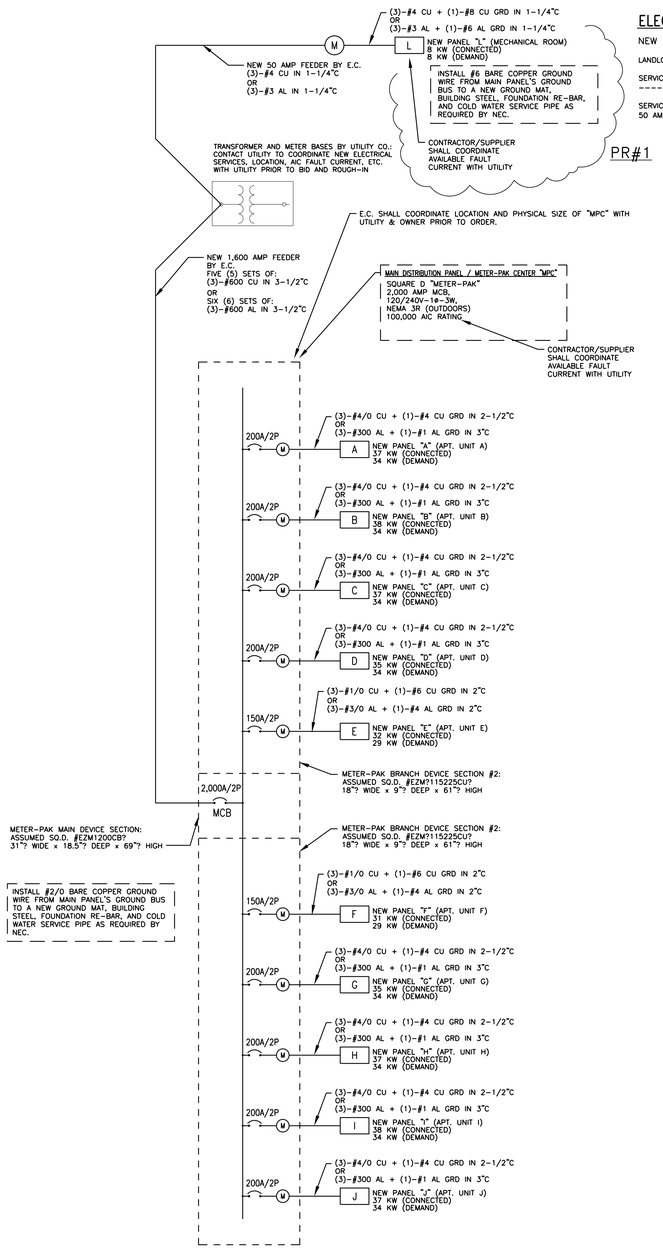
DRAWING TITLE
BUILDINGS 3, 5 & 6
ELECTRICAL LIGHTING PLAN - UPPER FLOOR

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APARTMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
May 1, 2020
Sept. 14, 2022

SHEET E3.2



ELECTRICAL ONE-LINE DIAGRAM
NON-ADA BUILDINGS #3, #5, #6

NO SCALE

ELECTRICAL SERVICE LOAD CALCULATIONS:

NEW APARTMENT UNITS:
APT #A (2-BED) PANEL "A" = 37 KW (CONNECTED) / 34 KW (DEMAND)
APT #B (2-BED) PANEL "B" = 38 KW (CONNECTED) / 34 KW (DEMAND)
APT #C (1-BED) PANEL "C" = 37 KW (CONNECTED) / 34 KW (DEMAND)
APT #D (1-BED) PANEL "D" = 35 KW (CONNECTED) / 34 KW (DEMAND)
APT #E (EFF.) PANEL "E" = 32 KW (CONNECTED) / 29 KW (DEMAND)
APT #F (EFF.) PANEL "F" = 31 KW (CONNECTED) / 29 KW (DEMAND)
APT #G (1-BED) PANEL "G" = 35 KW (CONNECTED) / 34 KW (DEMAND)
APT #H (1-BED) PANEL "H" = 37 KW (CONNECTED) / 34 KW (DEMAND)
APT #I (2-BED) PANEL "I" = 38 KW (CONNECTED) / 34 KW (DEMAND)
APT #J (2-BED) PANEL "J" = 37 KW (CONNECTED) / 34 KW (DEMAND)

LANDLORD PANEL "L" = 8 KW (CONNECTED) / 8 KW (DEMAND)

SERVICE SIZE (CONNECTED) = 357,000 WATTS / 240V/1ø = 1,488 AMPS x 1.25 = 1,860 AMPS
----> 2,000 AMP @ 240V/1ø/3W SERVICE PANEL (CONNECTED).

SERVICE SIZE (DEMAND) = 330,000 WATTS / 240V/1ø = 1,375 AMPS x 1.25 = 1,719 AMPS
----> 2,000 AMP @ 240V/1ø/3W SERVICE PANEL (DEMAND)

ELECTRICAL SERVICE LOAD CALCULATIONS:

NEW LANDLORD ELEC SERVICE:

LANDLORD PANEL "L" = 8 KW (CONNECTED) / 8 KW (DEMAND)

SERVICE SIZE (CONNECTED) = 8,000 WATTS / 240V/1ø = 34 AMPS x 1.25 = 52 AMPS
----> 50 AMP @ 240V/1ø/3W SERVICE PANEL (CONNECTED).

SERVICE SIZE (DEMAND) = 8,000 WATTS / 240V/1ø = 34 AMPS x 1.25 = 52 AMPS ----> 50 AMP @ 240V/1ø/3W SERVICE PANEL (CONNECTED)

PR#1

PANEL:	P-A	200A/2P MAIN CIRCUIT BREAKER (MCB)	BUSSING SIZE:	200 A	FED FROM :	MPC
# OF POLES:	30	VOLTS: 120-240/1P/3W	NEUTRAL BUS:	200 A	MOUNTING:	RECESSED
PHASE:	1	GROUND BUS: YES	TVSS:	NO	AIC RMS AMPS:	22,000?
HERTZ:	60	ISOLATED GROUND: NO	REFER TO PLANS FOR LOCATION &			
LOCATION: 2-BED APARTMENT UNIT "A"			REMARKS: RECESSED OR SURFACE MOUNT			

CIRCUIT	BREAKER	DESCRIPTION	A	B
1	20	LIGHTING & BATH EFL	510.5	
3	20	SPARE		0
5	30	WATER HEATER (4.5 KW @ 240V)	2250	
7	-	-		2250
9	30	STACKED WASHER/DRYER (ASSUMED 5 KW @ 240V)	2500	
11	-	-		2500
13	40	ELECTRIC RANGE (ASSUMED 7.5 KW @ 240V)	3750	
15	-	-		3750
17	60	PVAC (52 MCA @ 230V - COORD. WITH M.C.)	5980	
19	-	-		5980
21			0	
23	20	STACKABLE WASHER RECEPT		500
25			0	
27				0
29			0	
				0
			0	
				0
			0	
				0
			0	
2	20	RECEPTS - ENTRY & LIVING ROOM	540	
4	20	RECEPTS - LIVING & DINING ROOMS		540
6	20	RECEPTS - BEDROOM 2	900	
8	20	RECEPTS - HALL & PANTRY		720
10	20	RECEPT - BATH	180	
12	20	RECEPTS - BEDROOM 1		1080
14	20	RECEPTS - KITCHEN (PENINSULA)	540	
16	20	RECEPTS - KITCHEN (SINK AREA)		540
18	20	RECEPT - UTILITY	180	
20	20	RANGHOOD (ASSUMED 400W @ 115V)		400
22	20	REFRIGERATOR (ASSUMED (1,500W @ 115V)	1500	
24				0
26			0	
28				0
30			0	
				0
			0	
				0
			0	
				0
			0	
				0
			0	
KVA:	37	CONNECTED AMPS: 154.5	PHASE WATTS:	18,831 / 18,260
DEMAND KVA:	34	DEMAND AMPS: 143.7		

PANEL:	P-B	200A/2P MAIN CIRCUIT BREAKER (MCB)	BUSSING SIZE:	200 A	FED FROM :	MPC
# OF POLES:	30	VOLTS: 120-240/1P/3W	NEUTRAL BUS:	200 A	MOUNTING:	RECESSED
PHASE:	1	GROUND BUS: YES	TVSS:	NO	AIC RMS AMPS:	22,000?
HERTZ:	60	ISOLATED GROUND: NO	REFER TO PLANS FOR LOCATION &			
LOCATION: 2-BED APARTMENT UNIT "B"			REMARKS: RECESSED OR SURFACE MOUNT			

CIRCUIT	BREAKER	DESCRIPTION	A	B
1	20	LIGHTING & BATH EFL	562.5	
3	20	SPARE		0
5	30	WATER HEATER (4.5 KW @ 240V)	2250	
7	-	-		2250
9	30	STACKED WASHER/DRYER (ASSUMED 5 KW @ 240V)	2500	
11	-	-		2500
13	40	ELECTRIC RANGE (ASSUMED 7.5 KW @ 240V)	3750	
15	-	-		3750
17	60	PVAC (52 MCA @ 230V - COORD. WITH M.C.)	5980	
19	-	-		5980
21	20	STACKABLE WASHER RECEPT	500	
23	20	ELEC WALL HEATER EWH-S (1 KW @ 120V)		1000
25			0	
27				0
29			0	
				0
			0	
				0
			0	
				0
			0	
2	20	RECEPTS - LIVING ROOM	540	
4	20	RECEPTS - LIVING & DINING ROOMS		540
6	20	RECEPTS - BEDROOM 2	900	
8	20	RECEPTS - HALL & PANTRY		720
10	20	RECEPT - BATH	180	
12	20	RECEPTS - BEDROOM 1		1080
14	20	RECEPTS - KITCHEN (PENINSULA)	540	
16	20	RECEPTS - KITCHEN (SINK AREA)		540
18	20	RECEPTS - ENTRY	360	
20	20	RECEPT - UTILITY		180
22	20	REFRIGERATOR (ASSUMED 1,500W @ 115V)	1500	
24	20	RANGEHOOD (ASSUMED 400W @ 115V)		400
26			0	
28				0
30			0	
				0
			0	
				0
			0	
				0
			0	
				0
			0	
KVA:	39	CONNECTED AMPS: 160.4	PHASE WATTS:	19,563 / 18,940
DEMAND KVA:	34	DEMAND AMPS: 143.7		

PANEL:	P-L	50A MAIN CIRCUIT BREAKER (MCB)	BUSSING SIZE:	100 A	FED FROM :	UTILITY
# OF POLES:	20	VOLTS: 120-240/1P/3W	NEUTRAL BUS:	100 A	MOUNTING:	SURFACE
PHASE:	1	GROUND BUS: YES	TVSS:	NO	AIC RMS AMPS:	100,000?
HERTZ:	60	ISOLATED GROUND: NO	THIS IS THE LANDLORD PANEL FOR			
LOCATION: MECH. UTILITY WATER SERVICE ROOM U01			REMARKS: UTILITY LOADS, ETC.			

CIRCUIT	BREAKER	DESCRIPTION	A	B
1	20	MECHANICAL ROOM LIGHTING	44	
3	20	NEW SITE POLE LIGHTS (BUILDING 5 ONLY)		750
5	20	RECEPTS - MECH UTILITY ROOM	720	
7				0
9			0	
11				0
13			0	
15				0
17			0	
19				0
21			0	
23				0
			0	
				0
			0	
				0
			0	
				0
			0	
				0
			0	
2	15	ELEC UNIT HEATER EUH-U (2.5KW @ 240V)	1250	
4	-	-		1250
6	20	FIRE SUPPRESSION AIR COMPRESSOR? (ASSUMED 13FLA @ 230V)	1495	
8	-	-		1495
10	20	FIRE ALARM CONTROL PANEL (FACP)	250	
12	20	UTILITY ROOM EXH FAN EF-U & DAMPER D-U		250
14			0	
16				0
18			0	
20				0
22			0	
24				0
			0	
				0
			0	
				0
			0	
				0
			0	
				0
			0	
KVA:	08	CONNECTED AMPS: 31.3	PHASE WATTS:	3,759 / 3,745
DEMAND KVA:	08	DEMAND AMPS: 31.3		

PR#1

CONTRACTOR/SUPPLIER SHALL COORDINATE AVAILABLE FAULT CURRENT WITH UTILITY

REVIEWED FOR CODE COMPLIANCE

These plans and documents have been reviewed and found to be in compliance with the applicable code requirements of the jurisdiction Issuance of a permit is recommended subject to approval by other departments and any noted conditions. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes and standards no relieve the owner, design professional of record or contractor of compliance with the applicable codes and standards. Plan review of documents does not authorize construction to proceed in violation of any federal, state, nor local regulation.

BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Bobbet V. La Guardia

DATE: 01/31/2023

9/14/2022_For Plan Review #1 Response (PR#1)

JLK Engineering
Project Number:
AEA 1903-01

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DRAWING TITLE
BUILDINGS 3, 5 & 6
ELECTRICAL DETAILS

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APARTMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO.
273-19

DATE
May 1, 20220
Sept. 14, 2022

SHEET
E4.1

PANEL:	P-C	200A/2P MAIN CIRCUIT BREAKER (MCB)	BUSSING SIZE:	200 A	FED FROM :	MPC
# OF POLES:	30	VOLTS: 120-240/1P/3W	NEUTRAL BUS:	200 A	MOUNTING:	RECESSED
PHASE:	1	GROUND BUS: YES	TVSS:	NO	AIC RMS AMPS:	22,0007
HERTZ:	60	ISOLATED GROUND: NO	REFER TO PLANS FOR LOCATION &			
LOCATION:	1-BED APARTMENT UNIT "C"		REMARKS:	RECESSED OR SURFACE MOUNT		

CIRCUIT	BREAKER	DESCRIPTION	A	B
1	20	LIGHTING & BATH EFL	513.5	
3	20	SPARE		0
5	30	WATER HEATER (4.5 KW @ 240V)	2250	
7	-	-		2250
9	30	STACKED WASHER/DRYER (ASSUMED 5 KW @ 240V)	2500	
11	-	-		2500
13	40	ELECTRIC RANGE (ASSUMED 7.5 KW @ 240V)	3750	
15	-	-		3750
17	60	PVAC (53 MCA @ 230V - COORD. WITH M.C.)	6095	
19	-	-		6095
21	20	STACKABLE WASHER RECEPT	500	
23	20	ELEC WALL HEATER EWH-S (1 KW @ 120V)		1000
25			0	
27				0
29			0	
				0
			0	
				0
			0	
				0
			0	
2	20	RECEPTS - LIVING ROOM	540	
4	20	RECEPTS - LIVING & DINING ROOMS		720
6	20	RECEPTS - BEDROOM	900	
8	20	SPARE		0
10	20	RECEPT - BATH	180	
12	20	REFRIGERATOR (ASSUMED 1,500W @ 115V)		1500
14	20	RECEPTS - KITCHEN (ISLAND)	360	
16	20	RECEPTS - KITCHEN		360
18	20	RECEPTS - ENTRY	360	
20	20	RECEPT - UTILITY		180
22	20	RANGEHOOD (ASSUMED 400W @ 115V)	400	
24				0
26			0	
28				0
30			0	
				0
			0	
				0
			0	
				0
			0	
KVA:	37	CONNECTED AMPS: 152.9	PHASE WATTS:	18,349	18,355
DEMAND KVA:	34	DEMAND AMPS: 141.0			

PANEL:	P-D	200A/2P MAIN CIRCUIT BREAKER (MCB)	BUSSING SIZE:	200 A	FED FROM :	MPC
# OF POLES:	30	VOLTS: 120-240/1P/3W	NEUTRAL BUS:	200 A	MOUNTING:	RECESSED
PHASE:	1	GROUND BUS: YES	TVSS:	NO	AIC RMS AMPS:	22,0007
HERTZ:	60	ISOLATED GROUND: NO	REFER TO PLANS FOR LOCATION &			
LOCATION:	1-BED APARTMENT UNIT "D"		REMARKS:	RECESSED OR SURFACE MOUNT		

CIRCUIT	BREAKER	DESCRIPTION	A	B
1	20	LIGHTING & BATH EFL	464.5	
3	20	SPARE		0
5	30	WATER HEATER (4.5 KW @ 240V)	2250	
7	-	-		2250
9	30	STACKED WASHER/DRYER (ASSUMED 5 KW @ 240V)	2500	
11	-	-		2500
13	40	ELECTRIC RANGE (ASSUMED 7.5 KW @ 240V)	3750	
15	-	-		3750
17	60	PVAC (53 MCA @ 230V - COORD. WITH M.C.)	6095	
19	-	-		6095
21			0	
23				0
25			0	
27				0
29			0	
				0
			0	
				0
			0	
				0
			0	
2	20	RECEPTS - ENTRY & LIVING ROOM	720	
4	20	RECEPTS - LIVING & DINING ROOMS		540
6	20	RECEPTS - BEDROOM	900	
8	20	STACKABLE WASHER RECEPT		500
10	20	RECEPT - BATH	180	
12	20	REFRIGERATOR (ASSUMED (1,500W @ 115V)		1500
14	20	RECEPTS - KITCHEN (ISLAND)	360	
16	20	RECEPTS - KITCHEN		360
18	20	RECEPT - UTILITY	180	
20	20	RANGHOOD (ASSUMED 400W @ 115V)		400
22			0	
24				0
26			0	
28				0
30			0	
				0
			0	
				0
			0	
				0
			0	
KVA:	35	CONNECTED AMPS: 147.1	PHASE WATTS:	17,400	17,895
DEMAND KVA:	34	DEMAND AMPS: 141.0			

PANEL:	P-E	150A/2P MAIN CIRCUIT BREAKER (MCB)	BUSSING SIZE:	200 A	FED FROM :	MPC
# OF POLES:	30	VOLTS: 120-240/1P/3W	NEUTRAL BUS:	200 A	MOUNTING:	SURFACE
PHASE:	1	GROUND BUS: YES	TVSS:	NO	AIC RMS AMPS:	22,0007
HERTZ:	60	ISOLATED GROUND: NO	REFER TO PLANS FOR LOCATION &			
LOCATION:	EFFICIENCY APARTMENT UNIT "E"		REMARKS:	RECESSED OR SURFACE MOUNT		

CIRCUIT	BREAKER	DESCRIPTION	A	B
1	20	LIGHTING & BATH EFL	456.6	
3	20	SPARE		0
5	30	WATER HEATER (4.5 KW @ 240V)	2250	
7	-	-		2250
9	30	STACKED WASHER/DRYER (ASSUMED 5 KW @ 240V)	2500	
11	-	-		2500
13	40	ELECTRIC RANGE (ASSUMED 7.5 KW @ 240V)	3750	
15	-	-		3750
17	40	PVAC (39 MCA @ 230V - COORD. WITH M.C.)	4485	
19	-	-		4485
21	20	ELEC WALL HEATER EWH-S (1KW @ 120V)	1000	
23				0
25			0	
27				0
29			0	
				0
			0	
				0
			0	
				0
			0	
2	20	RECEPTS - LIVING ROOM & STAIRS	540	
4	20	RECEPTS - LIVING ROOM		540
6	20	STACKABLE WASHER RECEPT	500	
8	20	RECEPT - UTILITY		180
10	20	RECEPT - BATH	180	
12	20	REFRIGERATOR (ASSUMED (1,500W @ 115V)		1500
14	20	RECEPTS - KITCHEN (ISLAND)	360	
16	20	RECEPTS - KITCHEN		360
18	20	RANGHOOD (ASSUMED 400W @ 115V)	400	
20	20	RECEPTS - ENTRY		360
22			0	
24				0
26			0	
28				0
30			0	
				0
			0	
				0
			0	
				0
			0	
KVA:	32	CONNECTED AMPS: 134.8	PHASE WATTS:	16,422	15,925
DEMAND KVA:	29	DEMAND AMPS: 122.1			

PANEL:	P-F	150A/2P MAIN CIRCUIT BREAKER (MCB)	BUSSING SIZE:	200 A	FED FROM :	MPC
# OF POLES:	30	VOLTS: 120-240/1P/3W	NEUTRAL BUS:	200 A	MOUNTING:	SURFACE
PHASE:	1	GROUND BUS: YES	TVSS:	NO	AIC RMS AMPS:	22,0007
HERTZ:	60	ISOLATED GROUND: NO	REFER TO PLANS FOR LOCATION &			
LOCATION:	EFFICIENCY APARTMENT UNIT "F"		REMARKS:	RECESSED OR SURFACE MOUNT		

CIRCUIT	BREAKER	DESCRIPTION	A	B
1	20	LIGHTING & BATH EFL	395.4	
3	20	SPARE		0
5	30	WATER HEATER (4.5 KW @ 240V)	2250	
7	-	-		2250
9	30	STACKED WASHER/DRYER (ASSUMED 5 KW @ 240V)	2500	
11	-	-		2500
13	40	ELECTRIC RANGE (ASSUMED 7.5 KW @ 240V)	3750	
15	-	-		3750
17	40	PVAC (39 MCA @ 230V - COORD. WITH M.C.)	4485	
19	-	-		4485
21			0	
23				0
25			0	
27				0
29			0	
				0
			0	
				0
			0	
				0
			0	
2	20	RECEPTS - LIVING ROOM	540	
4	20	RECEPTS - LIVING ROOM		540
6	20	STACKABLE WASHER RECEPT	500	
8	20	RECEPT - UTILITY		180
10	20	RECEPT - BATH	180	
12	20	REFRIGERATOR (ASSUMED (1,500W @ 115V)		1500
14	20	RECEPTS - KITCHEN (ISLAND)	360	
16	20	RECEPTS - KITCHEN		360
18	20	RANGHOOD (ASSUMED 400W @ 115V)	400	
20				0
22			0	
24				0
26			0	
28				0
30			0	
				0
			0	
				0
			0	
				0
			0	
KVA:	31	CONNECTED AMPS: 128.9	PHASE WATTS:	15,360	15,565
DEMAND KVA:	29	DEMAND AMPS: 122.1			

PANEL:	P-G	200A/2P MAIN CIRCUIT BREAKER (MCB)	BUSSING SIZE:	200 A	FED FROM :	MPC
# OF POLES:	30	VOLTS: 120-240/1P/3W	NEUTRAL BUS:	200 A	MOUNTING:	RECESSED
PHASE:	1	GROUND BUS: YES	TVSS:	NO	AIC RMS AMPS:	22,0007
HERTZ:	60	ISOLATED GROUND: NO	REFER TO PLANS FOR LOCATION &			
LOCATION:	1-BED APARTMENT UNIT "G"		REMARKS:	RECESSED OR SURFACE MOUNT		

CIRCUIT	BREAKER	DESCRIPTION	A	B
1	20	LIGHTING & BATH EFL	464.5	
3	20	SPARE		0
5	30	WATER HEATER (4.5 KW @ 240V)	2250	
7	-	-		2250
9	30	STACKED WASHER/DRYER (ASSUMED 5 KW @ 240V)	2500	
11	-	-		2500
13	40	ELECTRIC RANGE (ASSUMED 7.5 KW @ 240V)	3750	
15	-	-		3750
17	60	PVAC (53 MCA @ 230V - COORD. WITH M.C.)	6095	
19	-	-		6095
21			0	
23				0
25			0	
27				0
29			0	
				0
			0	
				0
			0	
				0
			0	
2	20	RECEPTS - ENTRY & LIVING ROOM	720	
4	20	RECEPTS - LIVING & DINING ROOMS		540
6	20	RECEPTS - BEDROOM	900	
8	20	STACKABLE WASHER RECEPT		500
10	20	RECEPT - BATH	180	
12	20	REFRIGERATOR (ASSUMED (1,500W @ 115V)		1500
14	20	RECEPTS - KITCHEN (ISLAND)	360	
16	20	RECEPTS - KITCHEN		360
18	20	RECEPT - UTILITY	180	
20	20	RANGHOOD (ASSUMED 400W @ 115V)		400
22			0	
24				0
26			0	
28				0
30			0	
				0
			0	
				0
			0	
				0
			0	
KVA:	35	CONNECTED AMPS: 147.1	PHASE WATTS:	17,400	17,895
DEMAND KVA:	34	DEMAND AMPS: 141.0			

PANEL:	P-H	200A/2P MAIN CIRCUIT BREAKER (MCB)	BUSSING SIZE:	200 A	FED FROM :	MPC
# OF POLES:	30	VOLTS: 120-240/1P/3W	NEUTRAL BUS:	200 A	MOUNTING:	RECESSED
PHASE:	1	GROUND BUS: YES	TVSS:	NO	AIC RMS AMPS:	22,0007
HERTZ:	60	ISOLATED GROUND: NO	REFER TO PLANS FOR LOCATION &			
LOCATION:	1-BED APARTMENT UNIT "H"		REMARKS:	RECESSED OR SURFACE MOUNT		

CIRCUIT	BREAKER	DESCRIPTION	A	B
1	20	LIGHTING & BATH EFL	513.5	
3	20	SPARE		0
5	30	WATER HEATER (4.5 KW @ 240V)	2250	
7	-	-		2250
9	30	STACKED WASHER/DRYER (ASSUMED 5 KW @ 240V)	2500	
11	-	-		2500
13	40	ELECTRIC RANGE (ASSUMED 7.5 KW @ 240V)	3750	
15	-	-		3750
17	60	PVAC (53 MCA @ 230V - COORD. WITH M.C.)	6095	
19	-	-		6095
21	20	STACKABLE WASHER RECEPT	500	
23	20	ELEC WALL HEATER EWH-S (1 KW @ 120V)		1000
25			0	
27				0
29			0	
				0
			0	
				0
			0	
				0
			0	
2	20	RECEPTS - LIVING ROOM	540	
4	20	RECEPTS - LIVING & DINING ROOMS		720
6	20	RECEPTS - BEDROOM	900	
8	20	SPARE		0
10	20	RECEPT - BATH	180	
12	20	REFRIGERATOR (ASSUMED 1,500W @ 115V)		1500
14	20	RECEPTS - KITCHEN (ISLAND)	360	
16	20	RECEPTS - KITCHEN		360
18	20	RECEPTS - ENTRY	360	
20	20	RECEPT - UTILITY		180
22	20	RANGEHOOD (ASSUMED 400W @ 115V)	400	
24				0
26			0	
28				0
30			0	
				0
			0	
				0
			0	
				0
			0	
KVA:	37	CONNECTED AMPS: 152.9	PHASE WATTS:	18,349	18,355
DEMAND KVA:	34	DEMAND AMPS: 141.0			

PANEL:	P-I	200A/2P MAIN CIRCUIT BREAKER (MCB)	BUSSING SIZE:	200 A	FED FROM :	MPC
# OF POLES:	30	VOLTS: 120-240/1P/3W	NEUTRAL BUS:	200 A	MOUNTING:	RECESSED
PHASE:	1	GROUND BUS: YES	TVSS:	NO	AIC RMS AMPS:	22,0007
HERTZ:	60	ISOLATED GROUND: NO	REFER TO PLANS FOR LOCATION &			
LOCATION:	2-BED APARTMENT UNIT "I"		REMARKS:	RECESSED OR SURFACE MOUNT		

CIRCUIT	BREAKER	DESCRIPTION	A	B
1	20	LIGHTING & BATH EFL	562.5	
3	20	SPARE		0
5	30	WATER HEATER (4.5 KW @ 240V)	2250	
7	-	-		2250
9	30	STACKED WASHER/DRYER (ASSUMED 5 KW @ 240V)	2500	
11	-	-		2500
13	40	ELECTRIC RANGE (ASSUMED 7.5 KW @ 240V)	3750	
15	-	-		3750
17	60	PVAC (52 MCA @ 230V - COORD. WITH M.C.)	5980	
19	-	-		5980
21	20	STACKABLE WASHER RECEPT	500	
23	20	ELEC WALL HEATER EWH-S (1 KW @ 120V)		1000
25			0	
27				0
29			0	
				0
			0	
				0
			0	
				0
			0	
2	20	RECEPTS - LIVING ROOM	540	
4	20	RECEPTS - LIVING & DINING ROOMS		540
6	20	RECEPTS - BEDROOM 2	900	
8	20	RECEPTS - HALL & PANTRY		720
10	20	RECEPT - BATH	180	
12	20	RECEPTS - BEDROOM 1		1080
14	20	RECEPTS - KITCHEN (PENINSULA)	540	
16	20	RECEPTS - KITCHEN (SINK AREA)		540
18	20	RECEPTS - ENTRY	360	
20	20	RECEPT - UTILITY		180
22	20	REFRIGERATOR (ASSUMED 1,500W @ 115V)	1500	
24	20	RANGEHOOD (ASSUMED 400W @ 115V)		400
26			0	
28				0
30			0	
				0
			0	
				0
			0	
				0
			0	
KVA:	39	CONNECTED AMPS: 160.4	PHASE WATTS:	19,563	18,940
DEMAND KVA:	34	DEMAND AMPS: 143.7			

PANEL:	P-J	200A/2P MAIN CIRCUIT BREAKER (MCB)	BUSSING SIZE:	200 A	FED FROM :	MPC
# OF POLES:	30	VOLTS: 120-240/1P/3W	NEUTRAL BUS:	200 A	MOUNTING:	RECESSED
PHASE:	1	GROUND BUS: YES	TVSS:	NO	AIC RMS AMPS:	22,0007
HERTZ:	60	ISOLATED GROUND: NO	REFER TO PLANS FOR LOCATION &			
LOCATION:	2-BED APARTMENT UNIT "J"		REMARKS:	RECESSED OR SURFACE MOUNT		

CIRCUIT	BREAKER	DESCRIPTION	A	B
1	20	LIGHTING & BATH EFL	510.5	
3	20	SPARE		0
5	30	WATER HEATER (4.5 KW @ 240V)	2250	
7	-	-		2250
9	30	STACKED WASHER/DRYER (ASSUMED 5 KW @ 240V)	2500	
11	-	-		2500
13	40	ELECTRIC RANGE (ASSUMED 7.5 KW @ 240V)	3750	
15	-	-		3750
17	60	PVAC (52 MCA @ 230V - COORD. WITH M.C.)	5980	
19	-	-		5980
21			0	
23	20	STACKABLE WASHER RECEPT		500
25			0	
27				0
29			0	
				0
			0	
				0
			0	
				0
			0	
2	20	RECEPTS - ENTRY & LIVING ROOM	540	
4	20	RECEPTS - LIVING & DINING ROOMS		540
6	20	RECEPTS - BEDROOM 2	900	
8	20	RECEPTS - HALL & PANTRY		720
10	20	RECEPT - BATH	180	
12	20	RECEPTS - BEDROOM 1		1080
14	20	RECEPTS - KITCHEN (PENINSULA)	540	
16	20	RECEPTS - KITCHEN (SINK AREA)		540
18	20	RECEPT - UTILITY	180	
20	20	RANGHOOD (ASSUMED 400W @ 115V)		400
22	20	REFRIGERATOR (ASSUMED (1,500W @ 115V)	1500	
24				0
26			0	
28				0
30			0	
				0
			0	
				0
			0	
				0
			0	
KVA:	37	CONNECTED AMPS: 154.5	PHASE WATTS:	18,831	18,260
DEMAND KVA:	34	DEMAND AMPS: 143.7			

REVIEWED FOR CODE COMPLIANCE

These plans and documents have been reviewed and found to be in compliance with the applicable code requirements of the jurisdiction Issuance of a permit is recommended subject to approval by other departments and any noted conditions. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes and standards no relieve the owner, design professional of record or contractor of compliance with the applicable codes and standards. Plan review of documents does not authorize construction to proceed in violation of any federal, state, nor local regulation.

BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: Bobbet V. La Guardia

DATE: 01/31/2023

9/14/2022_For Plan Review #1 Response (PR#1)

JLK Engineering
Project Number:
AEA 1903-01

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DRAWING TITLE
BUILDINGS 3, 5 & 6
ELECTRICAL DETAILS

PROJECT TITLE
LITTLE TRAVERSE BAY BAND OF ODAWA INDIANS
MURRAY ROAD APARTMENT DEVELOPMENT
PETOSKEY, MICHIGAN

PROJECT NO. 273-19

DATE
May 1, 2020
Sept. 14, 2022

SHEET E4.2