CONTINUOUS WHOLE BUILDING VENTILATION

4034/4036-2727/100 + [(3+1) x 7.5] = 57 CFM

19) R402.4.1.2 Testing.
The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding 4 air changes per hour (ACH) in Climate Zones 4 and 5. The building or dwelling unit shall be provided with a whole-house mechanical ventilation system as designed in accordance with Section R403.5. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. (50 Pascals). When required by the code official, a testing shall be conducted by an approved third party. A written report of the results of the test, indicating the ACH, shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after all penetrations of the building thermal envelope have been sealed.

20) R403.5.3 Whole-house Mechanical Ventilation System.
Whole-house mechanical ventilation systems shall be designed in accordance with Sections R403.5.4 through R403.5.6.

21) R403.5.4 System Design.
The whole-house ventilation system shall consist of one or more supply or exhaust fans, or a combination, and associated ducts and controls. Local exhaust or supply fans are permitted to serve as such a system. Outdoor air ducts connected to the return side of an air handler shall be considered to provide supply ventilation.

22) R403.5.5 System Controls.
The whole-house mechanical ventilation system shall be provided with controls that enable manual override.

23) R403.5.6 Mechanical Ventilation Rate.
The whole house mechanical ventilation system shall provide outdoor air at a continuous rate of not less than that determined in accordance with Table R403.5.6(1).
Exception: The whole-house mechanical ventilation system is permitted to operate intermittently when the system has controls that enable operation for not less than 25 percent of each 4-hour segment and the ventilation rate prescribed in Table R403.5.6(1) is multiplied by the factor determined in accordance with Table R403.5.6(2).

TABLE R403.5.6(1)
CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION
SYSTEM AIRFLOW RATE REQUIREMENTS

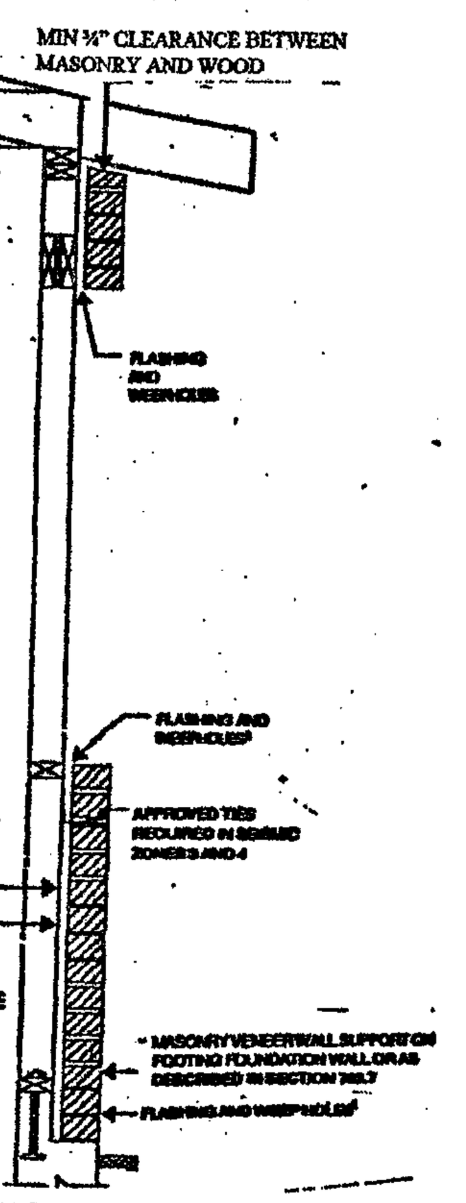
DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS 0 - 1	2 - 3	4 - 5	6 - 7	> 7
	Airflow in CFM				
< 1,500	30	45	60	75	90
1,501 - 3,000	45	60	75	90	105
3,001 - 4,500	60	75	90	105	120
4,501 - 6,000	75	90	105	120	135
6,001 - 7,500	90	105	120	135	150
> 7,500	105	120	135	150	165

For SI: 1 square foot = 0.0929 m2, 1 cubic foot per minute = 0.0004719 m3/s.

TABLE R403.5.6(2)
INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORSa, b

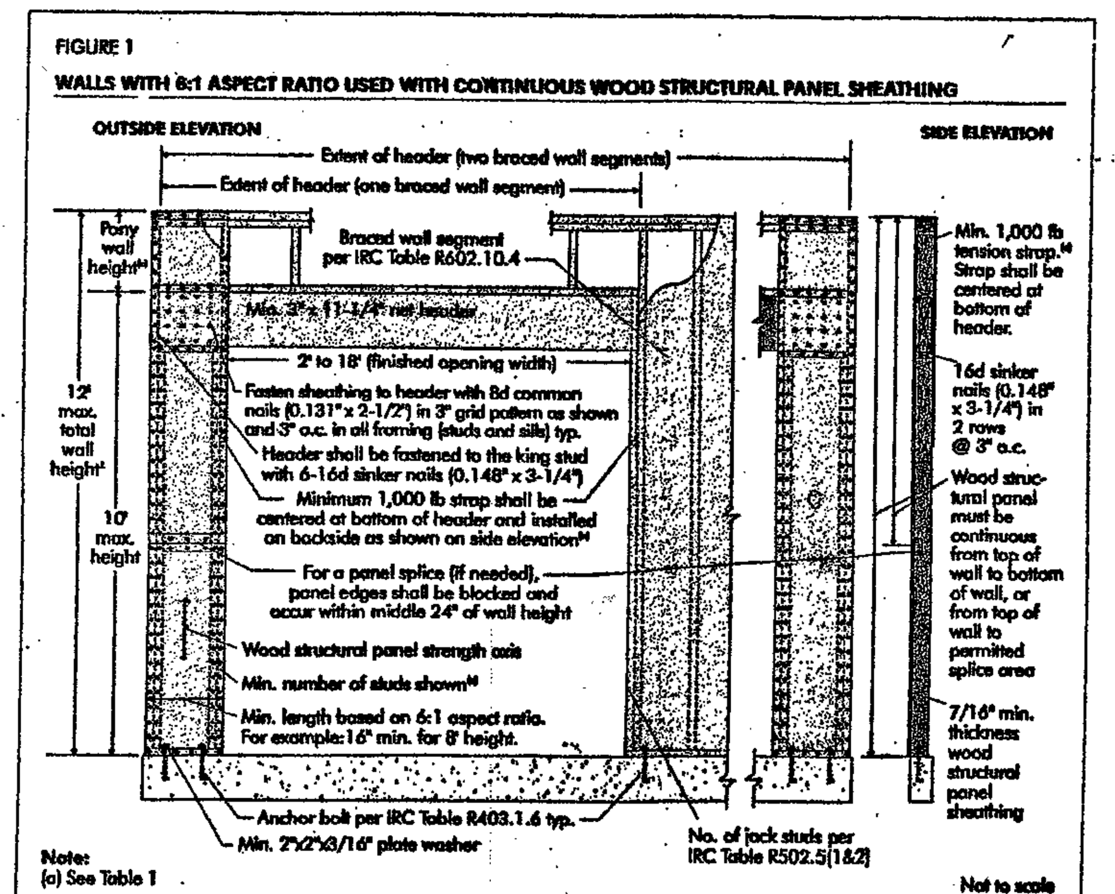
Run-Time Percentage In Each 4-Hr Segment	25%	33%	50%	66%	75%	100%
Factor a	4	3	2	1.5	1.3	1.0

a For ventilation system run time values between those given, the factors are permitted to be determined by interpolation.
b Extrapolation beyond the table is prohibited.



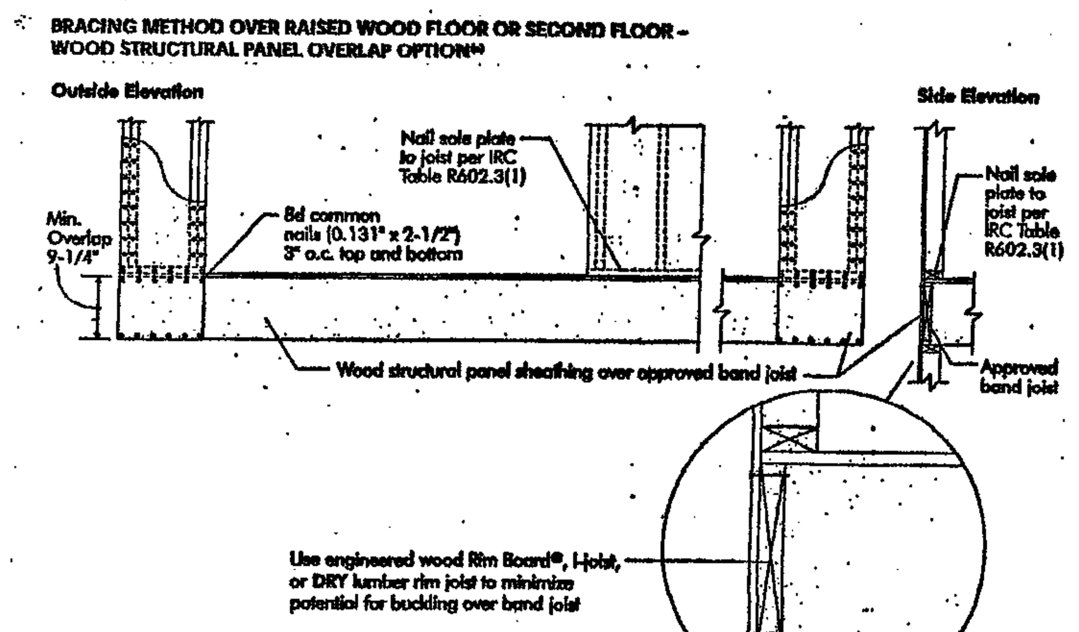
FLASHING AND WEEPHOLE DETAIL

FIGURE 1
WALLS WITH 6:1 ASPECT RATIO USED WITH CONTINUOUS WOOD STRUCTURAL PANEL SHEATHING



Note:
(a) See Table 1
Not to scale

FIGURE 3
BRACING METHOD OVER RAISED WOOD FLOOR OR SECOND FLOOR – WOOD STRUCTURAL PANEL OVERLAP OPTION[a]



Note:
(a) See Figure 1 for complete framing detail.
Not to scale

FIRE AND DRAFT STOPPING NOTES:

FIRESTOP AROUND ALL OPEININGS AROUND VENTS, PIPES, DUCTS, ETC... WITH NON-COMBUSTIBLE MATERIALS (SUCH AS DRYWALL JOINT COMPOUND OR FIRESTOP TYPE CAULKING.

WATER RESISTANT 1/2" GYP.BD. OR 1/2" DURA-ROCK MUST BE BROUGHT DOWN TO THE FLOOR BEHIND ALL TUBS AND SHOWER STALLS FOR PROPER FIRESTOPPING (OR FIRESTOP STUD SPACES W/ 2 X6 WOOD AT THE RIM HEIGHT OF TUB EVERY STUD SPACE).

FIRESTOP ALL CONCEALED OPENINGS (VERTICAL AND HORIZONTAL) WITH 2" NOMINAL LUMBER.

DRAFTSOPPING: NO AREA SHALL BE GREATER THAN 1000 SQ.FT. WHERE THE CEILING IS SUSPENDED UNDER THE FLOOR OR ROOF FRAMING. THESE AREAS SHALL BE DRAFTSTOPPED WITH 1/2" PLYWOOD OR GYPSUM BOARD.

INSULATION NOTE:

ANY EXPOSED INSULATING MATERIALS INCLUDING FACINGS SHALL HAVE A FLAME SPREAD INDEX NOT TO EXCEED 25 WITH AN ACCOMPANYING SMOKE DEVELOPED INDEX NOT TO EXCEED 450.

2018 ENERGY CONSERVATION CODE

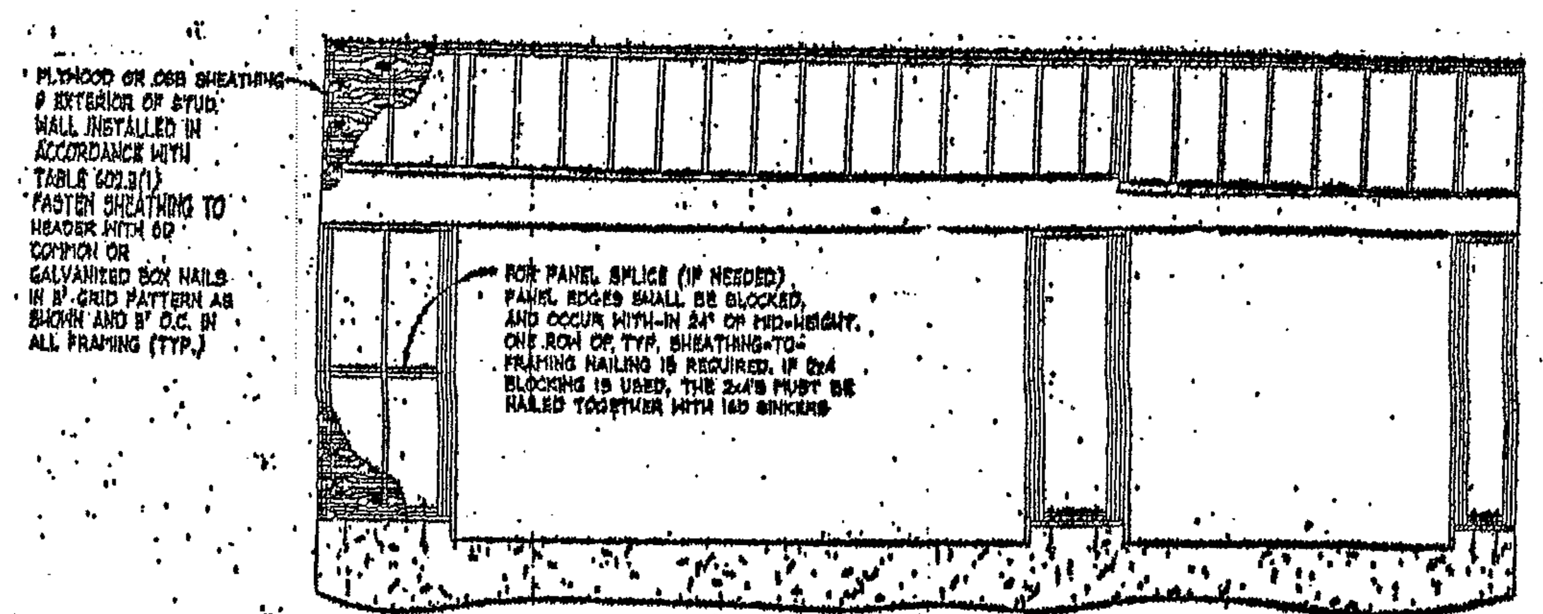
2018 Illinois Energy Conservation Code:
As the 2018 International Energy Code adapted by The Board (Illinois Capitol Development Board) as recommended by the Illinois Energy Conservation Council s modifications.
a) R101.5 COMPLIANCE. Residential buildings shall meet the provisions of the Illinois Energy Conservation Code. Minimum compliance shall be demonstrated by the submission of
i. Compliance certificates generated by the U.S.Department of Energy s REScheck code compliance tool; or
ii. Othe comparable compliance materials that meet or exceed, as determined by the AHJ, U.S.Department of Energy s REScheck code compliance tool; or
b) R401.3 CERTIFICATE [Mandatory]: A permanent certificate shall be posted on or in the electrical distribution panel (Naperville electrical inspector will provide when electrical service inspection is completed; which provides the R-values of the insulation installed, the U-factors, and the types and efficiencies of heating, cooling and service water heating equipment. This must be completed by the builder or registered design professional.
c) TABLE 402.1.1 INSULATION AND FENESTRATION Criteria [Prescriptive].
The building thermal envelope shall meet the requirements of table R402.1.1
d) 402.4 AIR LEAKAGE [Mandatory] :The Building thermal envelope shall comply with IMR402.4.1.2.
e) 403.1.1 PROGRAMMABLE THERMOSTAT [Mandatory]: One programmable thermostat for each separate heating and cooling system. Initially programmed Max 70° heat and not lower than 78° cooling.
f) R402.4.2 Fireplaces. New wood burning fireplaces shall have tight-fitting dampers and combustion air.
g) R403.2.2. SEALING [Mandatory]: Ducts, air handlers, and filter boxes shall be sealed. Duct tightness test not required if ducts within building thermal envelope.
h) R403.2.3 BUILDING CAVITIES [Mandatory]: Building framing cavities shall not be used as ducts or plenums.
i) R403.3 MECHANICAL SYSTEM PIPING. >105° or <55° insulate Min. R3
R403.4.1. Circulating hot water systems[Mandatory] Pump not in use switch off.
R403.4.2 Hot water pipe insulation [Prescriptive] R-3
i) IMR403.5. MECHANICAL VENTILATION [Mandatory] The building shall be provided with ventilation that meets the requirements of this section per Table IMR403.5.6 (1). Outdoor air intakes and exhaust shall have automatic or gravity dampers. . .
j) 404.1 LIGHTING EQUIPMENT [Mandatory]: A minimum of 75 percent of the lamps in permanently installed lighting fixtures shall have high-efficacy lamps.
*Blower Door Test: The contractor or homeowner can contract a Third Party Certified Service to provide this blower door test.
**Duct Tightness Test: The contractor or homeowner can contract a Third Party Certified Service to provide this duct tightness test.

36) IECC 405. SIMULATED PERFORMANCE ALTERNATIVE
Compliance with this section requires that the mandatory provisions identified in Section R401.2 be met. Section R401.2 Projects shall comply with sections identified as Mandatory AND with either sections identified as prescriptive or the performance approach.

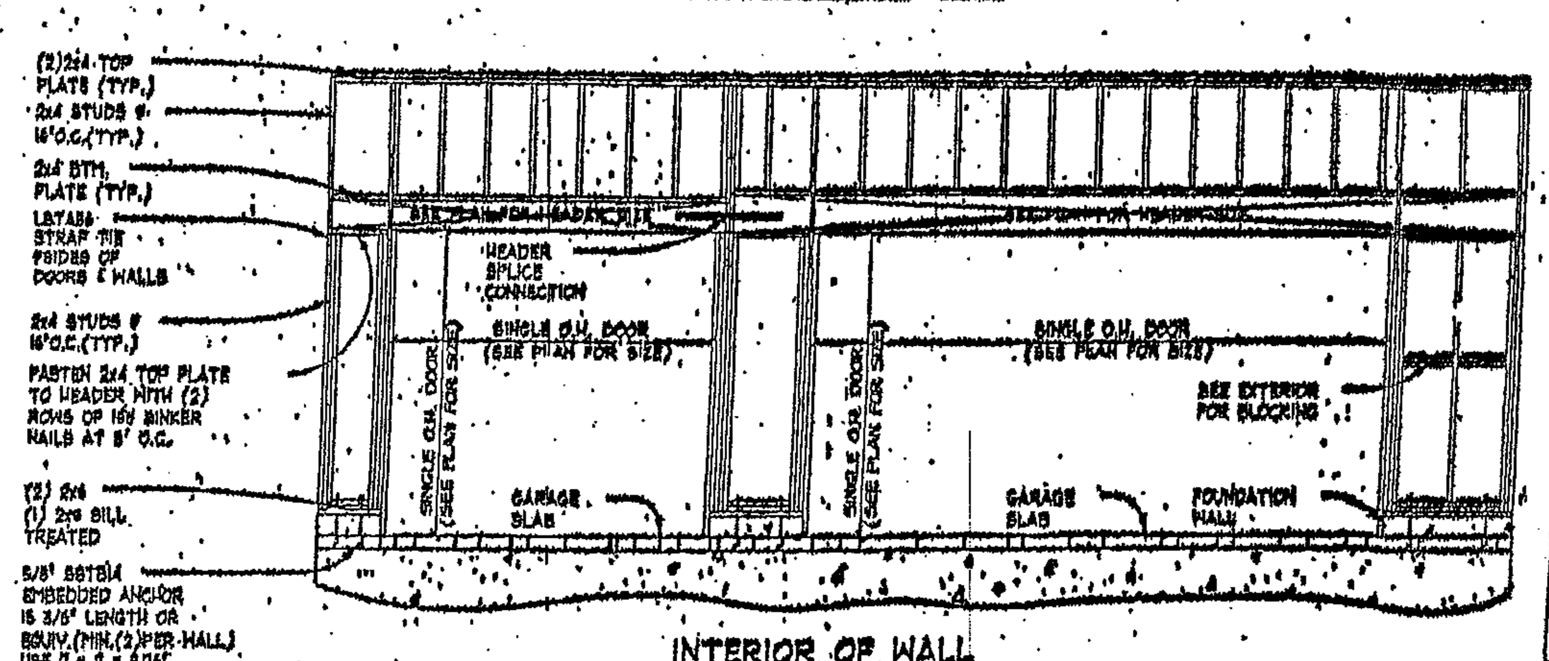
16) IECC 405.3 PERFORMANCE BASE COMPLIANCE:
Compliance, based on simulated energy performance requires that a proposed residence (proposed design) be shown to have an annual energy cost that is less than or equal to the annual energy cost of the standard reference design. See Exception regarding BTU per square foot of conditioned floor area shall be permitted to be substituted for the energy cost.

17) M1301 GENERAL MECHANICAL SYSTEM REQUIREMENTS
Indicate the size and location of additional H.V.A.C. equipment. This includes all exhaust, and make-up, combustion and fresh air requirements.

18) M1503.4 Makeup air required.
Exhaust hood systems capable of exhausting in excess of 400 cubic feet per minute shall be provided with makeup air at a rate approximately equal to the exhaust air rate. Such makeup air systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system.
** See Naperville exceptions allowing a CAZ test for compliance.



EXTERIOR OF WALL



INTERIOR OF WALL

ALTERNATE BRACED WALL PANEL

TABLE R402.2
MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE

TYPE OR LOCATION OF CONCRETE CONSTRUCTION	Severe
Basement walls, foundations and other concrete not exposed to the weather	2,500[c]
Basement slabs and interior slabs on grade, except garage floor slabs	2,500[c]
Basement walls, foundation walls, exterior walls and other vertical concrete work exposed to the weather	3,000[d]
Porches, carport slabs and steps exposed to the weather, and garage floor slabs	3,500[d,e,f]

DUCT CONSTRUCTION - R163
PROVIDE A DETAIL INDICATING LOCATION AND SIZE OF TRUNK LINES FOR BOTH SUPPLY AND RETURNS FOR EACH FURNACE TO BE INSTALLED ACCORDING TO MANUAL J FORM SUBMITTED. LIST R VALUES OF INSULATION FOR ANY DUCTS OUTSIDE CONDITION SPACE.

DRAFTSTOPPING REQUIRED
IRC R502.12
INSTALL 1/2" GYPSUM BOARD, 3/8"-INCH WOOD STRUCTURAL PANEL, OR EQUIVALENT WHEN THERE IS USABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE OF A FLOOR/CEILING ASSEMBLY. DRAFTSTOPS SHALL BE INSTALLED SO THAT THE AREA OF THE CONCEALED SPACE DOES NOT EXCEED 1,000 SQUARE FEET. DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS.

DUCT INSULATION
IRC N1103.2.1
EXCEPT WHERE THERE THE DUCTS OR PORTIONS THEREOF ARE LOCATED COMPLETELY INSIDE THE THERMAL ENVELOPE, SUPPLY AND RETURN DUCTS SHALL BE INSULATED TO A MINIMUM OF R-8. DUCTS IN FLOOR TRUSSES SHALL BE INSULATED TO A MINIMUM OF R-8.

WINDOW INSTALLATION INSTRUCTIONS
R613.1
WINDOW INSTALLATION INSTRUCTIONS FROM MANUFACTURER TO BE ON SITE FOR INSPECTION

FIELD VERIFY CODE COMPLIANT FIRESTOPPING IS PROVIDED AT THE FOLLOWING LOCATIONS:
A. CONCEALED SPACES OF STUDS,WALLS ,AND PARTITIONS, INCLUDING FURRED SPACES, AT THE CEILING AND FLOOR LEVEL.
B. ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCURS AT SOFFITS, DROP CEILINGS, COVE CEILINGS, ETC.
C. CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN
D. OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS AND FIREPLACES AT CEILING AND FLOOR LEVEL, WITHOUT NON CUMBUSTIBLE MATERIALS.

RETURN AIR AND SUPPLY AIR - R16A
PROVIDE A COMPLETE MECHANICAL PLAN SHOWING SUPPLIES, AND RETURN

FLOOR JOIST SCHEDULE

JOIST & SPACE L/360		MAXIMUM SPAN 40# LL-10# DL
2X8	16" OC	12'-3"
2X8	19.2" OC	[illegible]
2X10	16" OC	[illegible]
2X10	19.2" OC	[illegible]
2X10 DOUBLE EVERY OTHER	16" OC	[illegible]
2X12	16" OC	[illegible]
2X12	19.2" OC	[illegible]
2X12 DOUBLE EVERY OTHER	16" OC	[illegible]
2X12 DOUBLE	16" OC	[illegible]

- PROVIDE DBL FLR JTS BELOW ALL PARALLEL PARTITIONS UNLESS NOTED OTHERWISE ON PLANS
- ALL FLR JTS SHALL BE #2 DOMESTIC HEM-FIR OR #2 CANADIAN SPF OR #2 PINE FIR OR BETTER
- PROVIDE CROSS BRIDGING @ MAX. 8'-0" OC

CEILING JOIST SCHEDULE

JOIST SIZE	JOIST SPACING	MAXIMUM SPAN
2X4	16" OC	[illegible]
2X6	16" OC	[illegible]
2X6	[illegible]	[illegible]
2X8	16" OC	[illegible]
2X8	[illegible]	[illegible]
2X10	16" OC	[illegible]
2X10 DOUBLE EVERY OTHER	[illegible]	[illegible]
2X12	16" OC	[illegible]
2X12 DOUBLE EVERY OTHER	[illegible]	[illegible]

- ALL CLG JTS SHALL BE #2 DOMESTIC HEM-FIR OR #2 CANADIAN SPRUCE PINE FIR OR BETTER
- ALL JTS SHALL BE MINIMUM SIZE & SPACING PER SCHEDULE ABOVE UNLESS OTHERWISE NOTED ON PLANS

ROOF RAFTER SCHEDULE

RAFTER SIZE	RAFTER SPACING	MAXIMUM SPAN
2X6	16" OC	[illegible]
2X8	16" OC	[illegible]
2X8	[illegible]	[illegible]
2X10	16" OC	[illegible]
2X10	[illegible]	[illegible]
2X10 DOUBLE EVERY OTHER	16" OC	[illegible]
2X10 DOUBLE	16" OC	[illegible]
2X12	16" OC	[illegible]
2X12	[illegible]	[illegible]
2X12 DOUBLE EVERY OTHER	16" OC	[illegible]

- ALL RAFTERS SHALL BE #2 DOMESTIC HEM FIR (E=1,300,000 MIN) #2 CANADIAN SPRUCE PINE FIR (E=1,200,000 MIN) OR BETTER
- ALL RAFTERS SHALL BE MINIMUM SIZE & SPACING PER SHEDULE ABOVE UNLESS OTHERWISE NOTED ON PLANS

5) IECC Table 402.1.1 INSULATION AND FENESTRATION REQUIREMENTS

Table 402.1.1 (N1102.1.1)
Insulation and Fenestration Requirements by Component[a]

Climate Zone	Fenestration U-Factor[b]	Skylight[b] U-Factor	Ceiling R-Value	Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement[c] Wall R-Value	Slab[d] R-Value& Depth	Crawl-space[c] Wall R-Value
5	.30	.55	49	20 or 13+5[h]	13/17	30[g]	10/13-Full 15/19 – 4'	10,2ft	15/19
U-Value	.30	.55	0.026	0.060	0.082	0.033	0.039		0.055

706 *	Elevation
41	Latitude
-1	Winter Heating
91	Summer Cooling
0	Altitude Correction Factor
72 degree F Maximum	Indoor Design Temperature
75 degree F Minimum	Design Temperature Cooling
73 degrees F	Heating Temperature Difference
16 degrees F	Cooling Temperature Difference
8.4 mph**	Wind Velocity Heating
5.7 mph**	Wind Velocity Cooling
76	Coincident Wet Bulb
Medium (16-25 degrees)	Daily Range
30%	Winter Humidity
50%	Summer Humidity

CARBON MONOXIDE DETECTORS

CARBON MONOXIDE DETECTOR TO BE PROVIDED WITH-IN 15'-0" (FIFTEEN FEET) OF EACH BEDROOM OR SLEEPING ROOM. CARBON MONOXIDE DETECTORS SHALL RECEIVE THEIR POWER FROM THE BUILDING WIRING WHERE SUCH WIRING IS SERVED FROM THE COMMERCIAL SOURCE AND SHALL BE EQUIPPED WITH A BATTERY BACKUP. CARBON MONOXIDE DETECTOR SHALL EMIT A SIGNAL WHEN THE BATTERIES ARE LOW. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN AS REQUIRED FOR OVER-CURRENT PROTECTION. DETECTOR TO BE ON DEDICATED CIRCUIT.

TABLE 301.2(1) CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

30	Ground Snow Load	
115 mph (nominal design 3-second gust wind speed)	Speed (mph)	Wind Design
No	Topographic Effects	Wind Design
No	Special Wind Region	Wind Design
No	Windborne Debris Zone	Wind Design
A	Seismic Design Category	
Severe	Weathering	Subject to Damage From
42 inches	Frost Line Depth	Subject to Damage From
Moderate to Heavy.	Termite	Subject to Damage From
-4 degrees F	Winter Design Temp	
Yes	Ice Barrier Underlayment Required	
Refer to Local Ordinance	Flood Hazard	
1635	Air Freezing Index	
48.7 degrees F	Mean Annual Temperature	

Building Codes

2018 INTERNATIONAL ENERGY CONSERVATION CODE
- 2018 International Building Code
- 2018 International Residential Code
- 2018 International Property Maintenance Code
- 2018 International Fire Code
- 2018 International Fuel Gas Code
- 2018 International Mechanical Code
- 2018 International Plumbing Code
- 2018 International Existing Building Code
- 2018 International Swimming Pool and Spa Code
- 2017 National Electric Code (NFPA 70)
- 2006 International Code Council Electrical Administrative Provisions
- 2018 Life Safety Code (NFPA 101)
- Illinois Energy Conservation Code, Current Edition
- National Fire Code (NFPA), Current Edition
- Illinois State Plumbing Code, Current Edition
- Illinois Accessibility Code, Current Edition
- Local Amendments per Naperville Municipal Code

Soil Classification Used For Design -

Soil Group II Soil Class CL

Soil Description: Inorganic clays
Drainage Characteristics: Medium
Frost Heave Potential: Medium
Volume Change Potential: Medium to Low

Soil Bearing Pressure: 3000 PSF

SWITCH AND OUTLET REQUIREMENTS
ALL WALL SWITCHES CONTROLLING LIGHT FIXTURES AND FANS SHALL BE LOCATED AT A HEIGHT NOT TO EXCEED FORTY-EIGHT (48) INCHES ABOVE THE FINISHED FLOOR. HEIGHT SHALL BE DETERMINED BY MEASURING FROM THE FINISHED FLOOR TO THE CENTER OF THE SWITCH.
ALL RECEPTACLES SHALL BE LOCATED AT A HEIGHT NOT LESS THAN FIFTEEN (15) INCHES ABOVE THE FINISHED FLOOR. HEIGHT SHALL BE DETERMINED BY MEASURING FROM THE FINISHED FLOOR TO THE CENTER OF THE RECEPTACLE. WHEN THE RECEPTACLE PLACEMENT IS PROHIBITED BY THE HEIGHT OF A WINDOW OR DESIGN FEATURE, AN ALTERNATE LOCATION CAN BE APPROVED BY THE CHIEF BUILDING OFFICIAL OR A DULY AUTHORIZED DESIGNEE.

WALL REINFORCEMENT
ONE FIRST FLOOR BATH SHALL BE PROVIDED WITH WOOD BLOCKING INSTALLED WITHIN WALL FRAMING TO SUPPORT GRAB BARS AS NEEDED. THE WOOD BLOCKING, WHEN MEASURED TO THE CENTER, SHALL BE LOCATED BETWEEN THIRTY-THREE (33) INCHES AND THIRTY-SIX (36) INCHES ABOVE THE FINISHED FLOOR. THE WOOD BLOCKING SHALL BE LOCATED IN ALL WALLS ADJACENT TO A TOILET, SHOWER STALL OR BATHTUB.

DESIGN CRITERIA
DESIGN LOADS
1st Floor = 40 psf LL 10psf DL
2nd Floor = 40 psf LL 10psf DL
Wall = 60 plf or actual
Ceiling = 20 psf LL 10psf DL
Rafters = 30 psf LL 10psf DL
Cathedral = 30 psf LL 15psf DL
DESIGN STRESSES
Hem Fir #2 (Domestic) fb=850 psi
S.P.F. #2 (Canadian) fb=875 psi
L.V.L. BEAMS
Truss Joist McMillian fb=2600 psi
Microllam E=1.9x10⁶ psi
Georgia Pacific fb=2850 psi
G-P Lam E=2.0x10⁶ psi

-ALL JOISTS AND RAFTERS TO BE HEM FIR #2 (DOMESTIC) AND/OR S.P.F. #2 (CANADIAN)
-ALL HEADERS AT BEARING WALLS TO BE (2) 2x12 HEM FIR #2 (DOMESTIC) AND/OR S.P.F. #2 (CANADIAN)
-L 3 1/2" x 3 1/2" x 5/16" LINTEL OVER ALL DOORS AND WINDOWS AT MASONRY WALLS
-ALL ELECTRIC 110v SMOKE DETECTORS W/ BATTERY BACK-UP ARE TO BE WIRED IN SEQUENCE
-ALL EXHAUST FANS, DRYERS & MICROWAVES TO BE VENTED TO EXTERIOR
-FIRESTOP AT ALL SOFFITS
-DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS. DOUBLE JOISTS THAT ARE SEPARATED FOR PIPING & DUCTS SHALL HAVE BLOCKING AT 4'-0" O.C. MAX.
-ALL ELECTRIC & GFI OUTLETS ON BASEMENT WALLS TO BE IN CONDUIT
-3000 PSF SOIL BEARING TYPICAL AT ALL FOOTING
-■ BP = BEARING POINT

NAPERVILLE NOTES

Point	Description			Result
A	Datum Point (average elevation of both property lines at front setback)			687.0
	Elevation #1 (used above front setbacks)			687.0
	Elevation #2 (used above at front setbacks)			687.0
Segment	Description			Result
GI	Height of Roof (bottom of celing joist or top of plat to tallest peak)			13.4
AG	Mean Height AG + (.5 * GI)			27.83
AC	Datum Point to Basement Ceiling			2.13
AD	Datum Point to 1st Story Finished Floor			3.13
AB	Height of Foundation			2.0
BC	Height of Knee Wall above Foundation			.13
DF	Height of 1st Story (bottom of floor joist to bottom of ceilling joist)			10.0
FH	Height of 2nd Story (bottom of floor joist to bottom of ceilling joist)			9.0
AI	Peak Height			34.53
Column	Description	4034	4036	Result
1	Footprint of Principle Structure	1879	1879	3758
2	Footprint of Detached Garage			
3	Total Lot Square Footage			12272
4	Building Coverage = (column 1 + column 2)/column 3			.306
5	Gross Square Footage of Basement (Finished)	-	-	-
6	Gross Square Footage of Basement (Unfinished)	1260	1260	2520
7	Gross Square Footage of 1st Floor	1400	1400	2800
8	Gross Square Footage of Garage (attached)	460	460	920
9	Gross Square Footage of Enclosed Porches	19	19	38
10	Gross Square Footage of 2nd Floor	1327	1327	2654
11	Gross Square Footage of any 1/2 Story			

INDEX:

STATE OF ILLINOIS
RAYMOND SWANSON
001-015905
LICENSED ARCHITECT

LIC EXP 11-30-2024

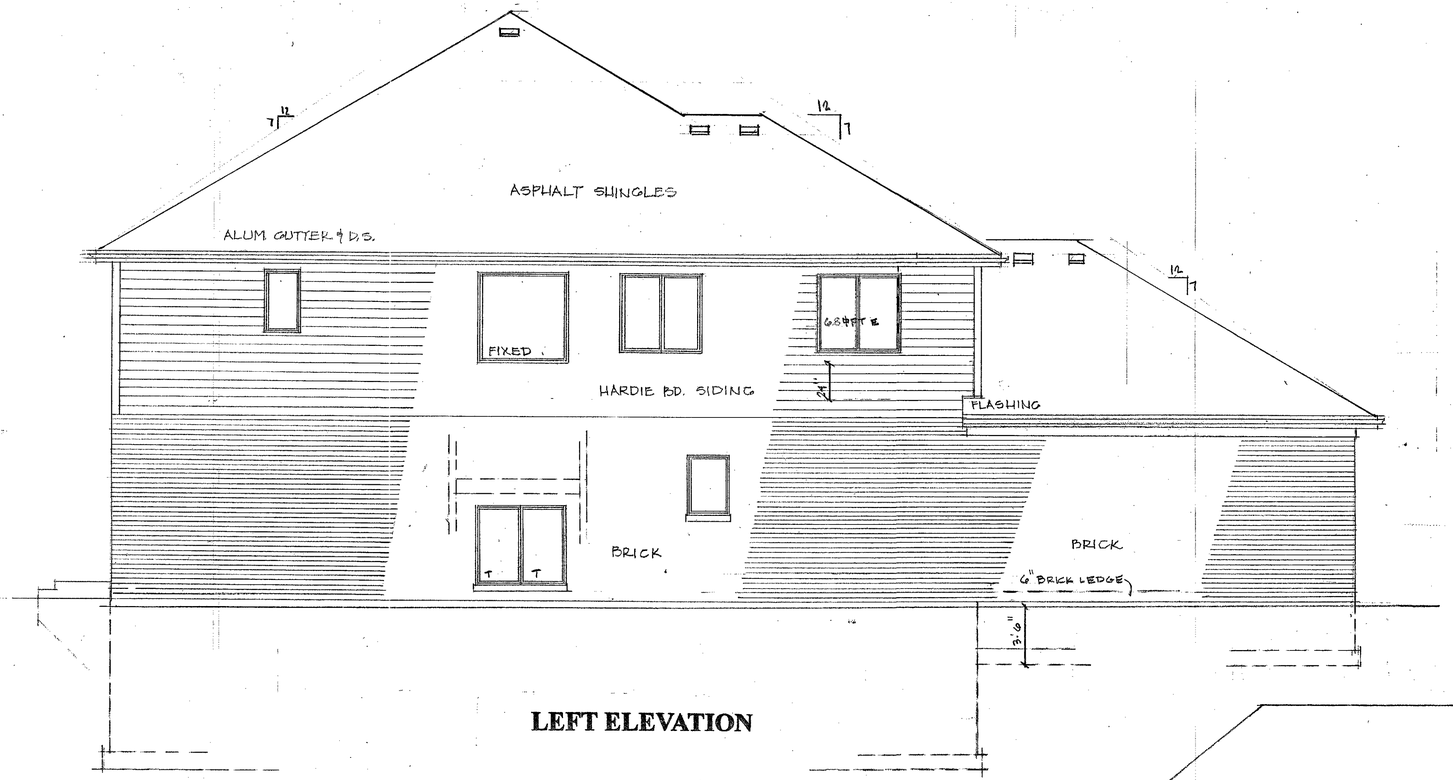
REVISIONS	BY
5-4-2020 PERMIT	
2-16-2021 PERMIT	
8-18-2021 PERMIT	
11-5-2021 DATUM POINT	
12-20-2021 MEAN HT	

ARCHITECTS PLUS LTD
10 S 373 NORMANTOWN ROAD
NAPERVILLE, IL. 60564
630-978-7670

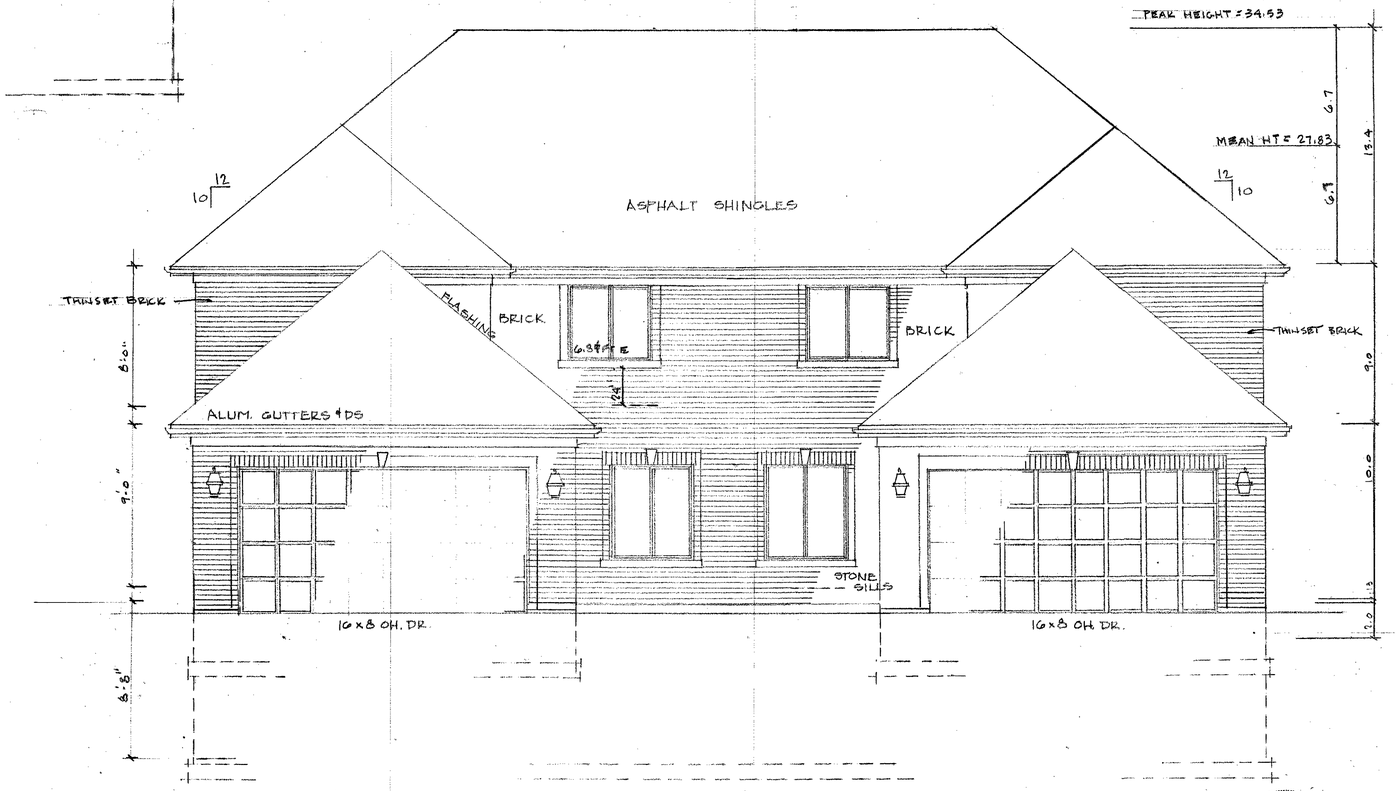
ASHWOOD PARK TOWNHOMES
NAPERVILLE, IL.
4034 AND 4036 ASHWOOD PARK COURT

CRESTVIEW BUILDERS
630-922-0511

DRAWN RS
CHECKED
DATE 7/24/2023
SCALE
JOB NO. 4034 AP TH
SHEET C-1
OF SIX SHEETS



LEFT ELEVATION



UNIT 1 4034 **UNIT 2 4036**

FRONT ELEVATION

To: Naperville Zoning Department
Re: Ashwood Park Two Unit Townhome Plans
Brick wall square footage calculations

	Total	Brick		Siding	
Front	**983**	**983**	**100%**	**0**	**0%**
Left	**1144**	**792**	**69%**	**352**	**31%**
Rear	**1318**	**817**	**62%**	**501**	**38%**
Right	**1240**	**856**	**69%**	**384**	**31%**
Total	**4685**	**3448**	**74%**	**1237**	**26%**

REVISIONS	BY
7/24/2023	

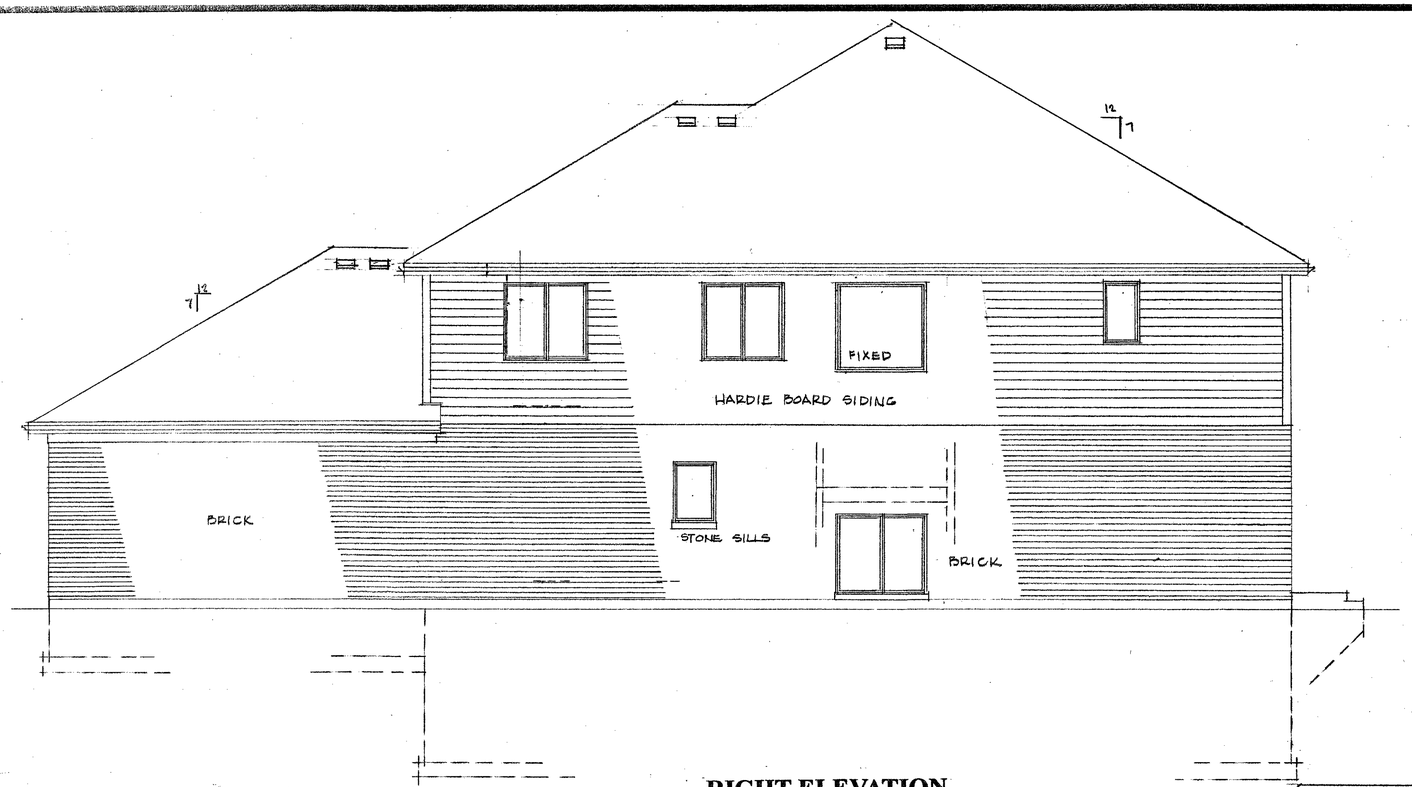
ARCHITECTS PLUS LTD
10 S 373 NORMANTOWN ROAD
NAPERVILLE, IL 60564
630-978-7670

ASHWOOD PARK TOWNHOMES
NAPERVILLE, IL.
4034 AND 4036 ASHWOOD PARK COURT

CRESTVIEW BUILDERS
630-922-0511

DRAWN: RS SC
CHECKED:
DATE: 10-10-2022
SCALE: 1/4" = 1'-0"
JOB NO.: 4034 APTH
SHEET: 1
OF SIX SHEETS

LICENSED ARCHITECT Raymond Swanson 001.015905 STATE OF ILLINOIS



RIGHT ELEVATION

UNIT 2 4036

UNIT 1 4034

REAR ELEVATION

LICENSED ARCHITECT
Raymond Swanson
001.015805
STATE OF ILLINOIS

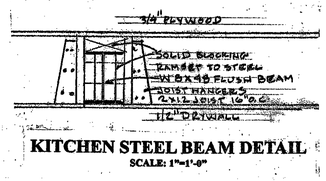
REVISIONS	BY
7/24/23	

ARCHITECTS PLUS LTD
10 S 373 NORMANTOWN ROAD
NAPERVILLE, IL. 60564
630-978-7670

ASHWOOD PARK TOWNHOMES
NAPERVILLE, IL.
4034 AND 4036 ASHWOOD PARK COURT

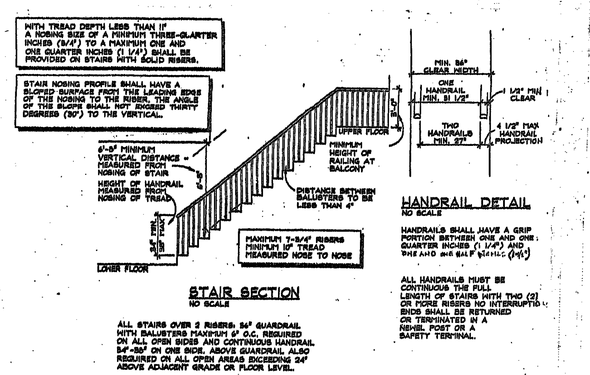
CRESTVIEW BUILDERS
630-922-0511

DRAWN	RS SC
CHECKED	
DATE	10-10-2022
SCALE	1/4" = 1'-0"
JOB NO.	4034APTH
SHEET	2
OF	512 SHEETS



KITCHEN STEEL BEAM DETAIL
SCALE: 1"=1'-0"

DESCRIPTION	AREA	LIGHT REQ.	LIGHT ACTUAL	VENT REQ.	VENT ACTUAL
DINING ROOM	150	12.0	19.0	6.3	19.0
LAUNDRY RM.	82	N/A	N/A	82CFM	85CFM
PWDR RM	36	N/A	N/A	36CFM	60CFM
KITCHEN/BREAKFAST	341	27.3	31.0	13.7	20.0
FAMILY ROOM	313	25.0	30.0	12.5	30.0
MASTER BEDROOM	298	23.8	24.0	11.9	24.0
MASTER BATH	139	11.1	12.0	5.6	60 CFM 105CFM
BEDROOM 2	179	14.3	16.0	7.2	16.0
BATH	48	N/A	N/A	49CFM	70CFM
BEDROOM 3	179	11.1	16.0	5.6	16.0
LOFT	127	10.2	16.0	5.1	16.0
BASEMENT	1260	25.2	16.0	25.2	16.0
		+ MECHANICAL LT & VENT			



STAIR SECTION
NO SCALE

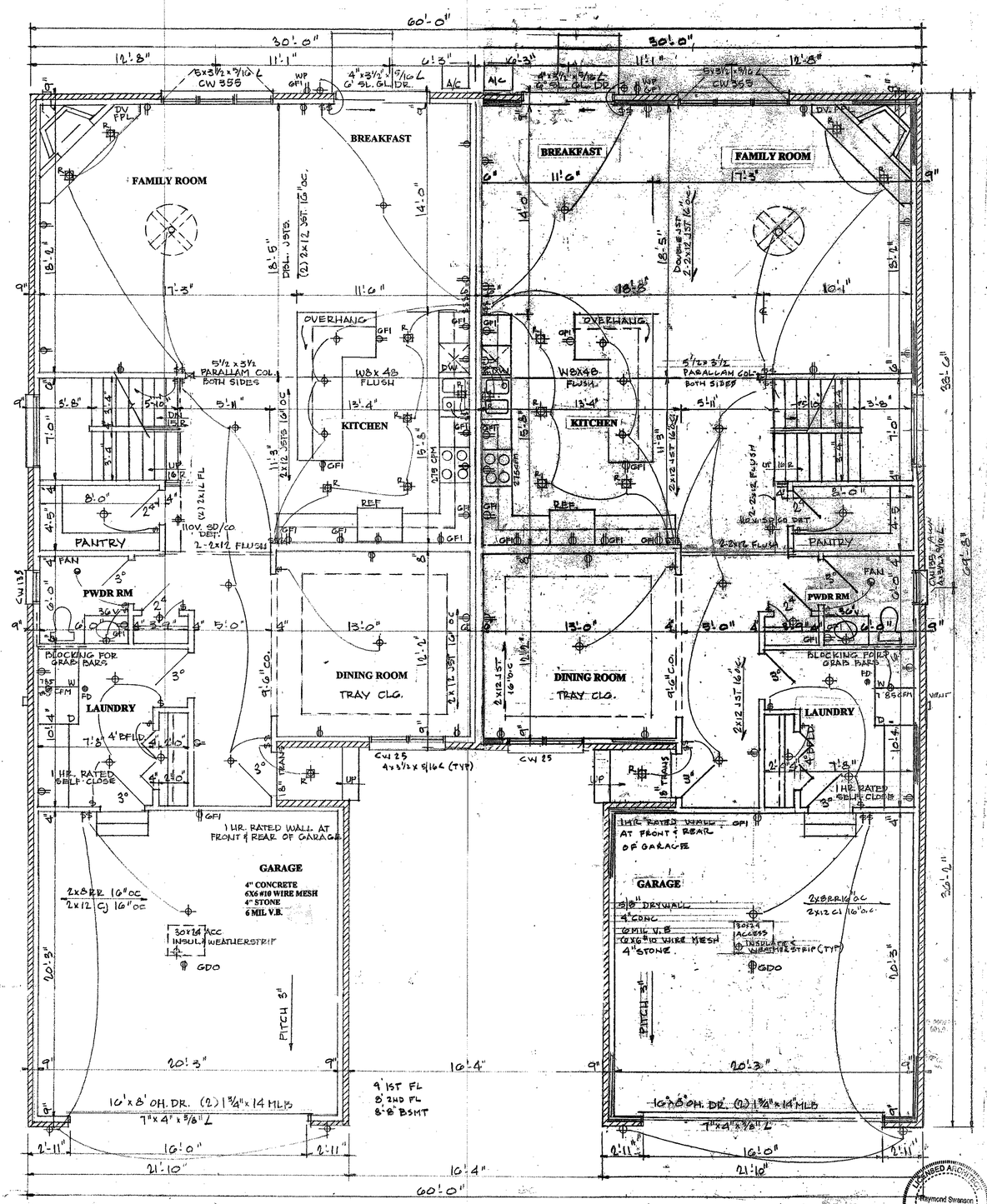
ALL STAIRS OVER 3 RISERS: 36" GUARDRAIL WITH BALUSTERS MAXIMUM 6" O.C. REQUIRED ON ALL OPEN SIDES AND CONTINUOUS HANDRAIL 34"-38" ON ONE SIDE. ABOVE GUARDRAIL ALSO REQUIRED ON ALL OPEN AREAS EXCEEDING 24" ABOVE ADJACENT GRADE OR FLOOR LEVEL.

ALL INTERIOR/EXTERIOR STAIRS:
MAXIMUM RISE-7 1/4"
MINIMUM TREAD DEPTH-10" CLEAR / OF NOSING
MINIMUM HEADROOM-6'-8" CONTINUOUS

HANDRAIL DETAIL
NO SCALE

HANDRAILS SHALL HAVE A GRIP PORTION BETWEEN ONE AND ONE-QUARTER INCHES (1 1/4") AND ONE AND ONE HALF INCHES (1 1/2").

ALL HANDRAILS MUST BE CONTINUOUS THE FULL LENGTH OF STAIRS WITH TWO (2) OR MORE RISERS NO INTERRUPTIONS. ENDS SHALL BE RETURNED OR TERMINATED IN A NEWEL POST OR A SAFETY TERMINAL.



REVISIONS	BY
11.6.2019	
4.23.2020	
8.14.2020 PERMIT	
2.16.2021 PERMIT	
PLAN CHANGE 7/29/23	

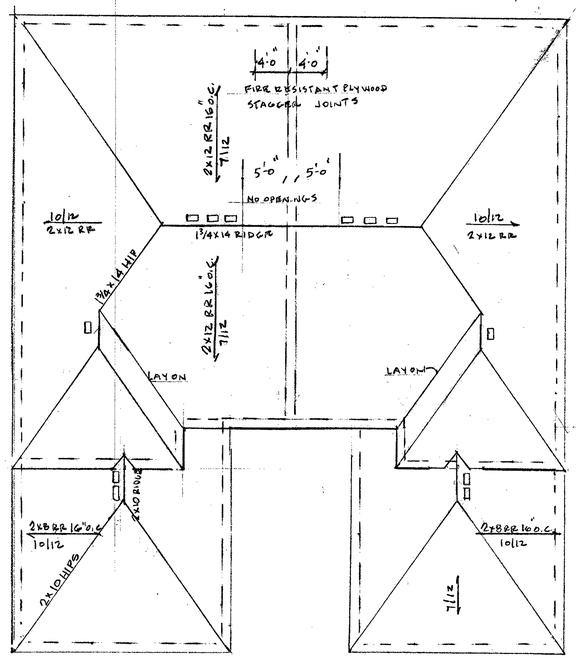
ARCHITECTS PLUS LTD
10 S 373 NORMANTOWN ROAD
NAPERVILLE, IL 60564
630-978-7670

ASHWOOD PARK TOWNHOMES
NAPERVILLE, IL.
4034 AND 4036 ASHWOOD PARK COURT

CRESTVIEW BUILDERS
630-922-0511

DRAWN	RS SG
CHECKED	
DATE	10-10-2022
SCALE	1/4"=1'-0"
JOB NO.	4034-APTH
SHEET	3

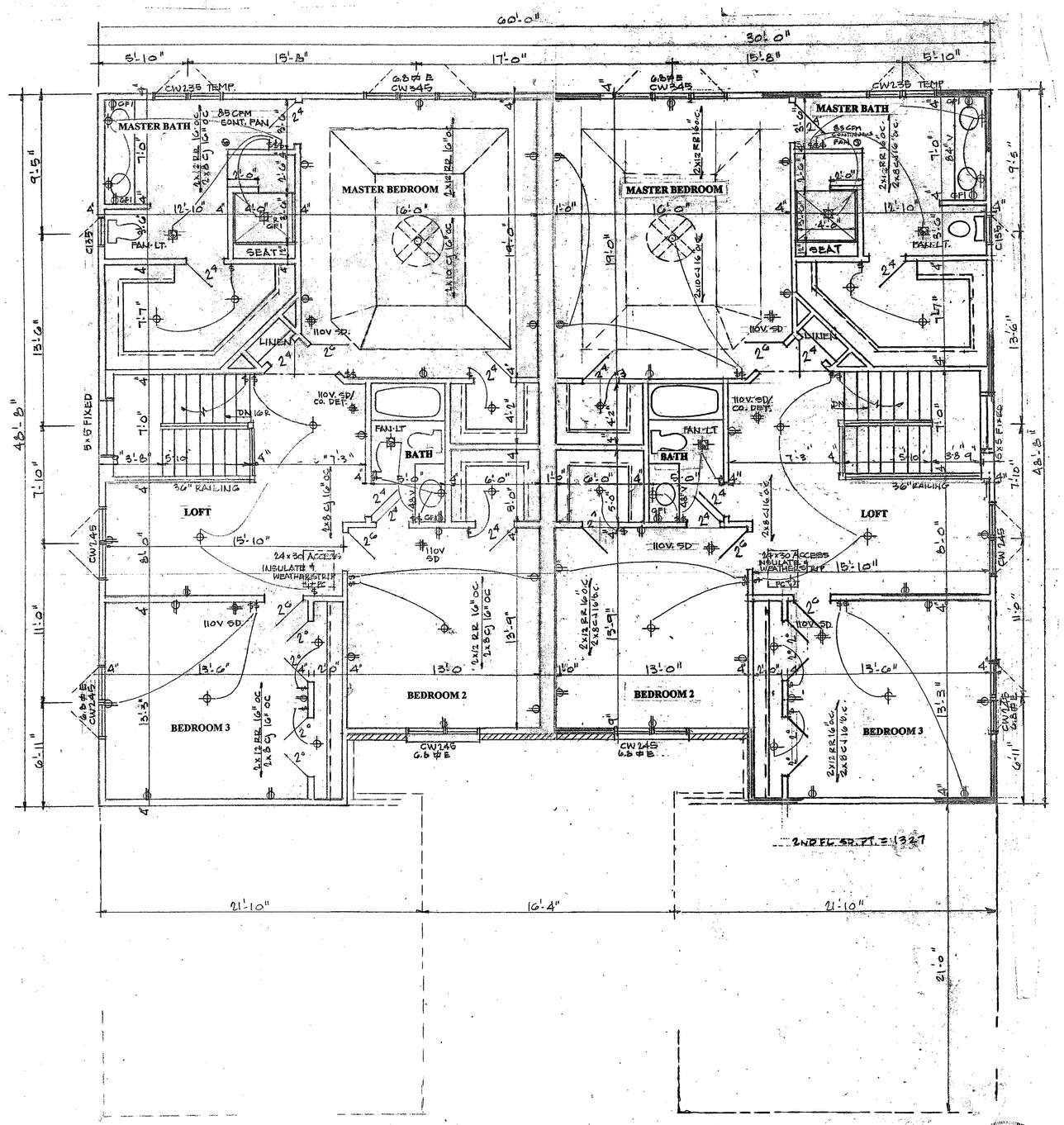
OF SIX SHEETS



EACH UNIT 1380 SQ.FT. ÷ 300 = 4.6 PFT REQUIRED
6.1 SQ.FT. ACTUAL

ROOF PLAN

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



UNIT 1 4034

UNIT 2 4036

SECOND FLOOR PLAN

Raymond Swanson
001.015905
LICENSED ARCHITECT
STATE OF ILLINOIS

REVISIONS	BY
7/29/2023	

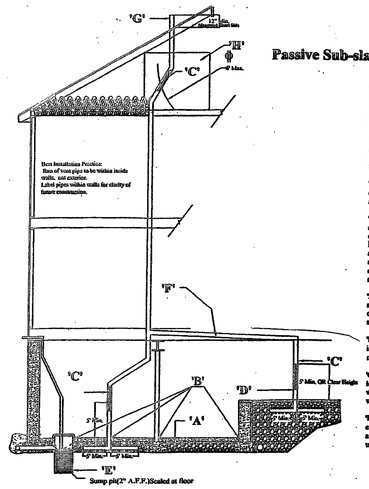
ARCHITECTS PLUS LTD
10 S 373 NORMANTOWN ROAD
NAPERVILLE, IL 60564
630-978-7670

ASHWOOD PARK TOWNHOMES
NAPERVILLE, IL.
4034 AND 4036 ASHWOOD PARK COURT

CRESTVIEW BUILDERS
630-922-0511

DRAWN	RS SC
CHECKED	
DATE	10-10-2022
SCALE	1/4" = 1'-0"
JOB NO.	4034 APTH
SHEET	4

OF SIX SHEETS



Passive Sub-slab Depressurization (SSD) System

'A' Subfloor Preparation" A layer of gas permeable material shall be placed under all concrete slabs and other floor systems that directly contact the ground. Clean aggregate- 4" thick minimum Min.
6MIl Polyethylene, 12" overlap fit tight to penetrations. Cuts, rips and tears shall be overlapped or taped.

'B' Entry Routes: Floor openings around all penetrations in the slab shall be sealed; pipes, columns, perimeter joints, control and isolation joints shall be caulk/bedded (Polyurethane Caulk) for final inspection.

'C' All exposed and visible interior radon vent pipes shall be conspicuously identified with at least one label on each floor or accessible attics. The label shall read "Radon Reduction System"

'D' A plumbing tee (min 3" diameter Schedule 40 pvc) or other approved connection with not less than 5 feet of perforated pipe extending from each horizontal opening of the tee shall be inserted horizontally beneath the sheeting. A 3" Vertical section (penetrated above finished floor) shall be installed in top opening of tee. Each area shall be fitted with an individual vent pipe. All vent pipes shall connect to a single vent with a vertical vent pipe installed through the sheeting up through the building floors to exterior termination.

'E' Sump pits open to soil or serving as the termination point for sub-slab or exterior drain tile loops shall be covered with a gasketed or otherwise sealed lid. Sump pits shall not be used as primary suction point in sub-slab depressurization system.

'F' All components of the radon vent pipe system shall be installed to provide positive drainage to the ground beneath the gas retarder sheeting

'G' Vent pipes shall connect to a single vent that shall terminate at least 12" above the highest roof in a location at least 2' above any window or other opening into the building and at least 10' from any window or opening in an adjacent building.

'H' Area of access to electrical outlet, installation of power exhaustor. This area shall have working space for attic appliance and a clear height of thirty-six inches (36"). Electrical "outlet" shall be within six-feet (6') of the "access area" and vent pipe.

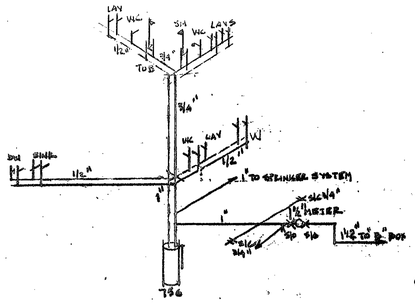
Table M Lead Values Assigned to Fixtures

Fixture	Basement	1st Floor	2nd Floor	3rd Floor	Sub-Totals	Fixture Unit	Totals
Bidet						1	
Water Closet	1	1	2		4	3	12
Lavatory	1	1	3		4	1	4
Bathtub						2	2
Shower Stall (per head)	1		1		2	2	4
Kitchen Sink		1			1	2	2
Laundry Trays (1-3)						3	
Dishwasher						1	1
Laundry Machine 3lb		1			1	4	4
Silicocks						5	10
					Total		39

TOTAL WSFU'S 39 Service Size 1'1/2" Meter Size 1'1/2"

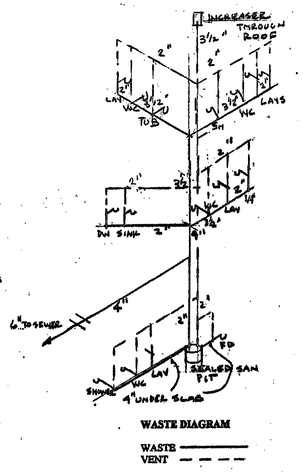
CONCRETE FOUNDATION WALLS
TABLE R404.1.1(5)

Foundation walls:
Thickness of walls 10 "
Maximum height of wall 8'6"
Maximum height of unbalanced backfill 8'
#6 AT 39"O.C. **vertical reinforcement**
#4 AT 3'-0" & 8'-0" **horizontal reinforcement**



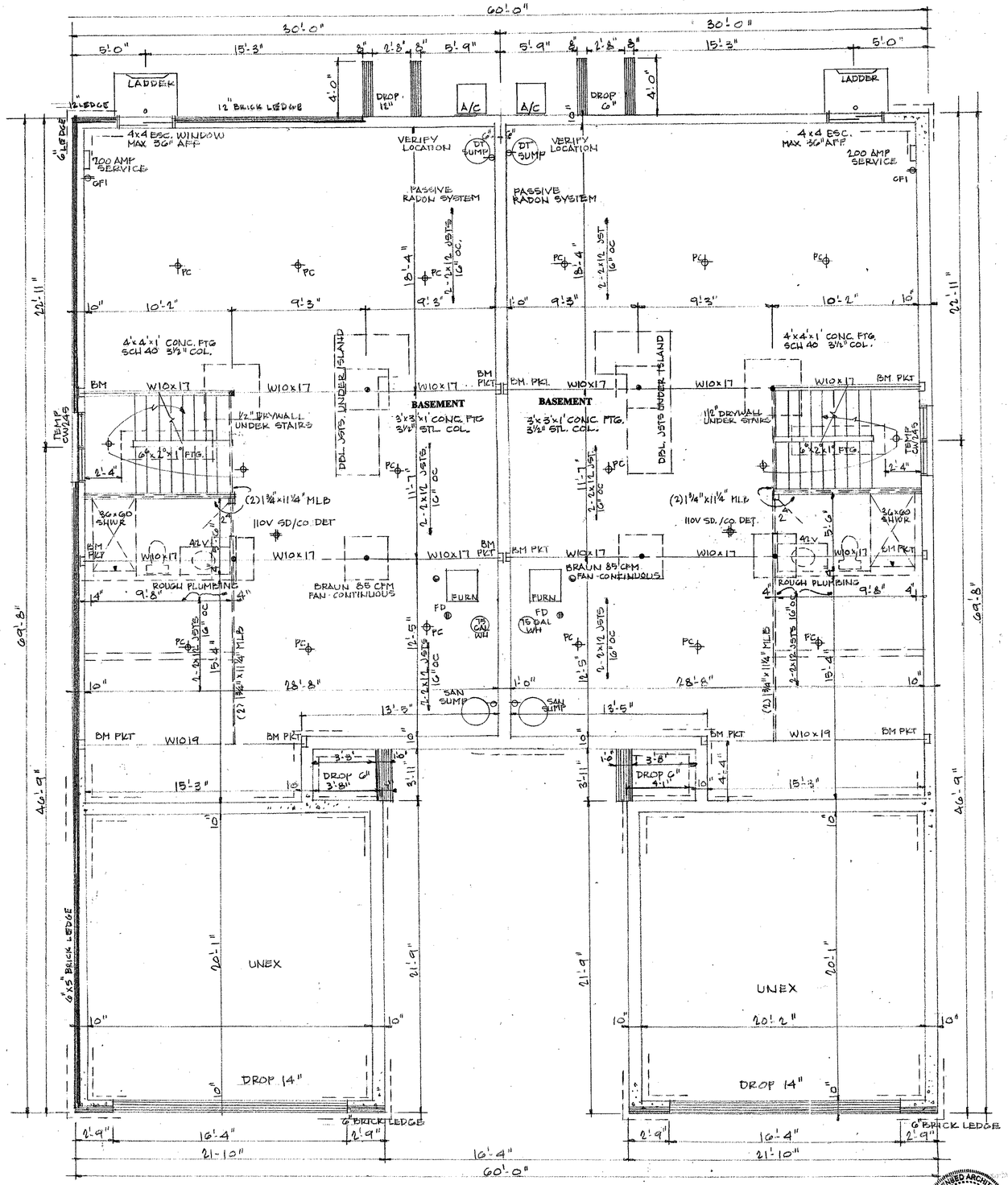
WATER DIAGRAM
ALL WATER PIPES ARE COPPER
ALL FIXTURES HAVE SHUTOFF VALVES
ALL SHOWERS HAVE THERMOSTATIC OR PRESSURE BALANCING SAFETY MIXING VALVES

COLD WATER ———
HOT WATER — — — —



WASTE DIAGRAM

WASTE ———
VENT — — — —



UNIT 1 4034 **UNIT 2 4036**

FOUNDATION PLAN

Raymond Swanson 001.015905 LICENSED ARCHITECT

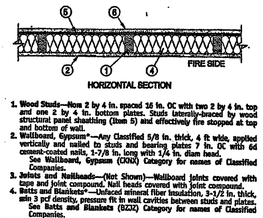
REVISIONS	BY
7/23/23	

ARCHITECTS PLUS LTD
10 S 373 NORMANTOWN ROAD
NAPERVILLE, IL. 60564
630-978-7670

ASHWOOD PARK TOWNHOMES
NAPERVILLE, IL.
4034 AND 4036 ASHWOOD PARK COURT

CRESTVIEW BUILDERS
630-922-0511

DRAWN	RS sc
CHECKED	
DATE	10-10-2022
SCALE	1/4"=1-0"
JOB NO.	4034-APTH
SHEET	5
OF	SIX SHEETS



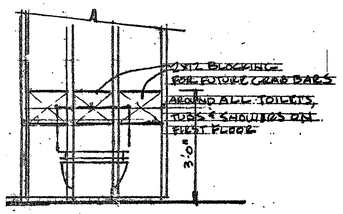
HORIZONTAL SECTION

Design No. U356
(Exposed to Fire on Interior Face Only)
Bearing Wall Rating—1 Hr
Finish Rating—23 Min

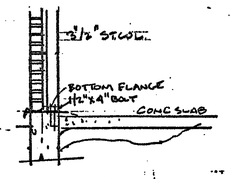
1. **Wood Studs**—Nom 2 by 4 in. spaced 16 in. OC with two 2 by 4 in. top and one 2 by 4 in. bottom plates. Studs laterally-braced by wood structural panel sheathing (Item 5) and effectively fire stopped at top and bottom of wall.
2. **Wallboard, Gypsum***—Any Classified 5/8 in. thick, 4 ft wide, applied vertically and nailed to studs and bearing plates 7 in. OC with 6d cement-coated nails, 1-7/8 in. long with 1/4 in. diam head.
   See Wallboard, Gypsum (CKNX) Category for names of Classified Companies.
3. **Joints and Nailheads**—(Not Shown)—Wallboard joints covered with tape and joint compound. Nail heads covered with joint compound.
4. **Batts and Blankets***—Unfaced mineral fiber insulation, 3-1/2 in. thick, min 3 pcf density, pressure fit in wall cavities between studs and plates.
   See Batts and Blankets (BZCX) Category for names of Classified Companies.
5. **Wood Structural Panel Sheathing**—Min 7/16 in. thick, 4 ft wide APA Rated Sheathing Exposure 1, plywood or oriented strand board (OSB) per PS 1, PS 2 or APA Standard PRP-108. Installed with long dimension of sheet (strength axis) or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. solid blocking. Attached to studs on exterior side of wall with 6d cement coated box nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs.
6. **Exterior Facings**—Installed in accordance with the manufacturer's installation instructions. One of the following exterior facings is to be applied over the sheathing:
   A. Vinyl Siding***—Any Classified exterior plastic siding (molded plastic).
   B. Particle Board Siding—Hardboard exterior sidings including patterned panel or lap siding.
   C. Wood Structural Panel or Lap Siding—APA Rated Siding, Exterior, plywood, OSB or composite panels with veneer faces and structural wood core, per PS 1 or APA Standard PRP-108, including textured, rough sawn, medium density overlay, brushed, grooved and lap siding.
   D. Cementitious Stucco—Portland cement or synthetic stucco systems with paper-backing metal lath or adhesive base coat. Thickness from 3/8 to 3/4 in., depending on system.

*Bearing the UL Classification Marking

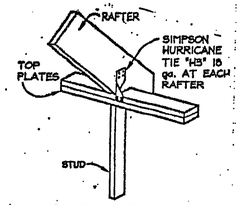
UPSTAIRS BEDROOMS REAR WALLS
COMMON TO NEXT UNIT



GRAB BAR BLOCKING DETAIL



GARAGE COLUMN DETAIL

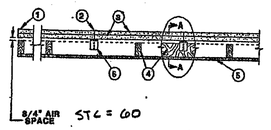


RAFTER TIE DETAIL
AT ALL VAULTED, CATHEDRAL & TRAY CEILINGS

1. Nailheads—Exposed or covered with joint compound.
2. Joints—Exposed or covered with fiber tape and joint compound, except where required for specific edge configuration. For tapered, rounded-edge wallboard, joints covered with joint compound or fiber tape and joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced.
3. Wallboard, Gypsum*—5/8 in. thick wallboard paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Wallboard nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads. When used in widths of other than 48 in., wallboard is to be installed horizontally.

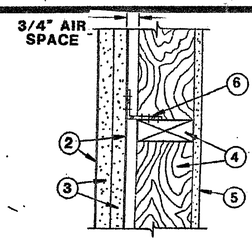
GARAGE FRONT & REAR BEARING WALLS

Design No. U305
Bearing Wall Rating—1 HR.
Finish Rating—See Item 3.



UL Des U336		
46	RAL-TL-88-353	
54	RAL-TL-88-348	Based on 2" mineral wool batt on one side
57	RAL-TL-88-351	Based on 2x4s and 3" mineral wool batt one side
58	RAL-TL-88-347	Based on 2x4s and 3" mineral wool batt on both sides
60	RAL-TL-88-350	Based on 2x4s and 3" mineral wool batt on both sides

Design No. U336
Exposed to fire from separation Wall side only
Nonbearing Wall Rating—2 Hr
Finish Rating—120 Min



SECTION A-A

SEPARATION WALLS (Max Height - 44 ft)

1. Floor, Intermediate or Top Wall—2 in. wide channel shaped with 1 in. long legs formed from No. 25 MSG galv steel, secured with suitable fasteners spaced 24 in. OC.
2. Metal Studs—Steel members formed from No. 25 MSG galv steel having "I"-shaped flanged spaced 24 in. OC overall depth 2 in. and flange width 1-5/8 in.
3. Wallboard, Gypsum*—Two layers of 1 in. thick gypsum wallboard liner panels, supplied in nom 24 in. widths. Vertical edges of panels friction fitted into "I"-shaped studs.
   Canadian Gypsum Company—Type SLX.
   United States Gypsum Co.—Type SLX
   Yeso Panamericano SA de CV—Type SLX.

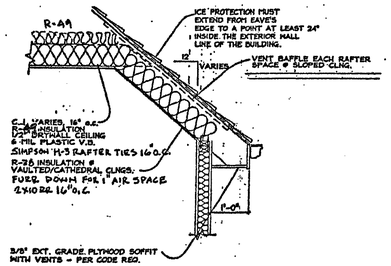
PROTECTED WALLS (Bearing or Nonbearing Wall)

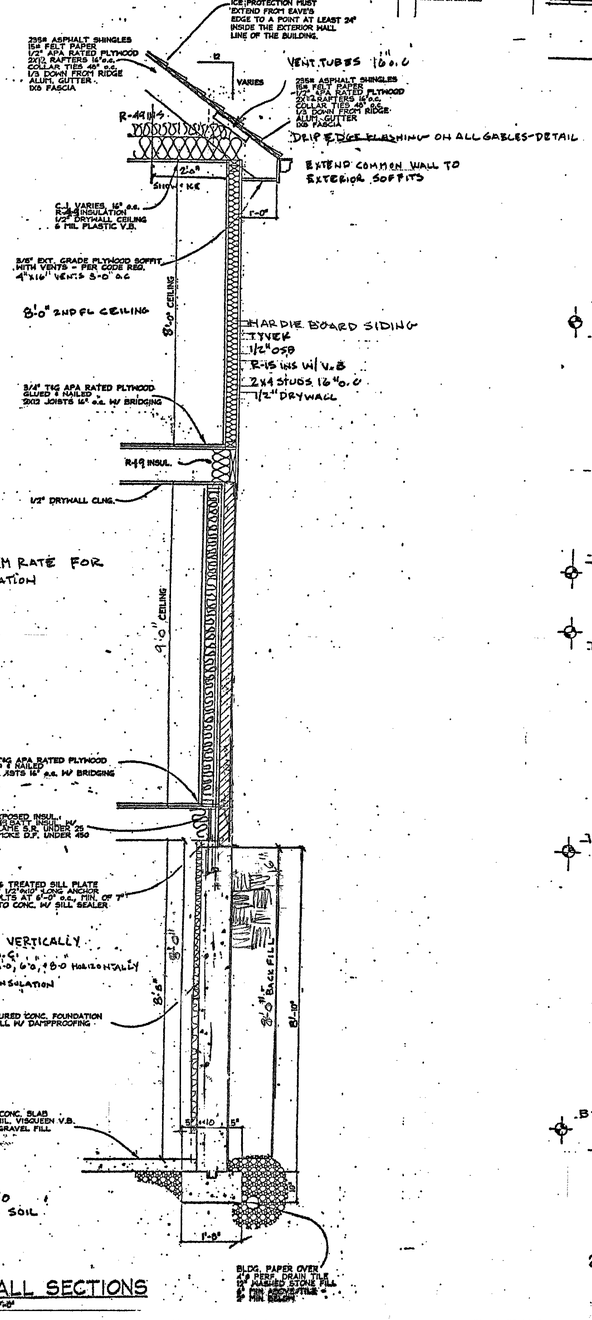
4. Wood Studs—Nom 2 by 4 in. max spacing 24 in. OC. Studs cross braced at mid-height where necessary for clip attachment. Min 3/4 in. separation between wood framing and fire separation wall.
5. Wallboard, Gypsum—Classified or Unclassified—Min 1/2 in. thick, 4 ft wide, applied either horizontally or vertically. Wallboard attached to studs with 1-1/4 in. long steel drywall nails spaced 8 in. OC. Vertical joints located over studs. (Optional) Joints covered with paper tape and joint compound. Nail heads covered with joint compound.
6. Attachment Clips—Aluminum angle, 0.062 in. thick, 2 in. wide with 2 in. and 2-1/4 in. legs. Clips secured with Type S screws 3/8 in. long to "H" studs and with Type W screws 3-1/4 in. long to wood framing through holes provided in clip.

6A. Clip placement (Item 6) for separation walls up to 23 ft high. Space clips as described in Item 6A for upper 21 ft. Remaining wall area below requires clips spaced a max 5 ft OC vertically between wood framing and "I" studs.

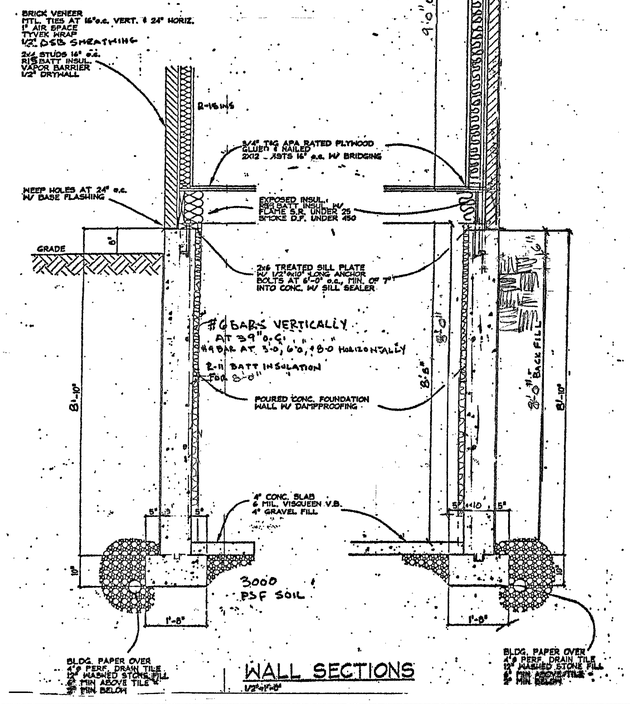
6B. Clip placement (Item 6) for separation walls up to 44 ft high. Space clips as described in Item 6A for upper 24 ft. Remaining wall area below requires clips spaced a max 5 ft OC vertically between wood framing and "I" studs.

*Bearing the UL Classification Marking





FOLLOW REM RATE FOR ALL INSULATION



WALL SECTIONS
1/2"=1'-0"

FIRE AND DRAFT STOPPING NOTES:

FIRESTOP AROUND ALL OPENINGS AROUND VENTS, PIPES, DUCTS, ETC. WITH NON-COMBUSTIBLE MATERIALS (SUCH AS DRYWALL JOINT COMPOUND OR FIRESTOP TYPE CAULKING.

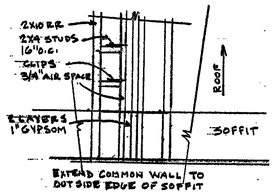
WATER RESISTANT 1/2" GYP.BD. OR 1/2" DURA-ROCK MUST BE BROUGHT DOWN TO THE FLOOR BEHIND ALL TUBS AND SHOWER STALLS FOR PROPER FIRESTOPPING (OR FIRESTOP STUD SPACES W/ 2 IN. WOOD AT THE RIM HEIGHT OF TUB EVERY STUD SPACE).

FIRESTOP ALL CONCEALED OPENINGS (VERTICAL AND HORIZONTAL) WITH 2" NOMINAL LUMBER.

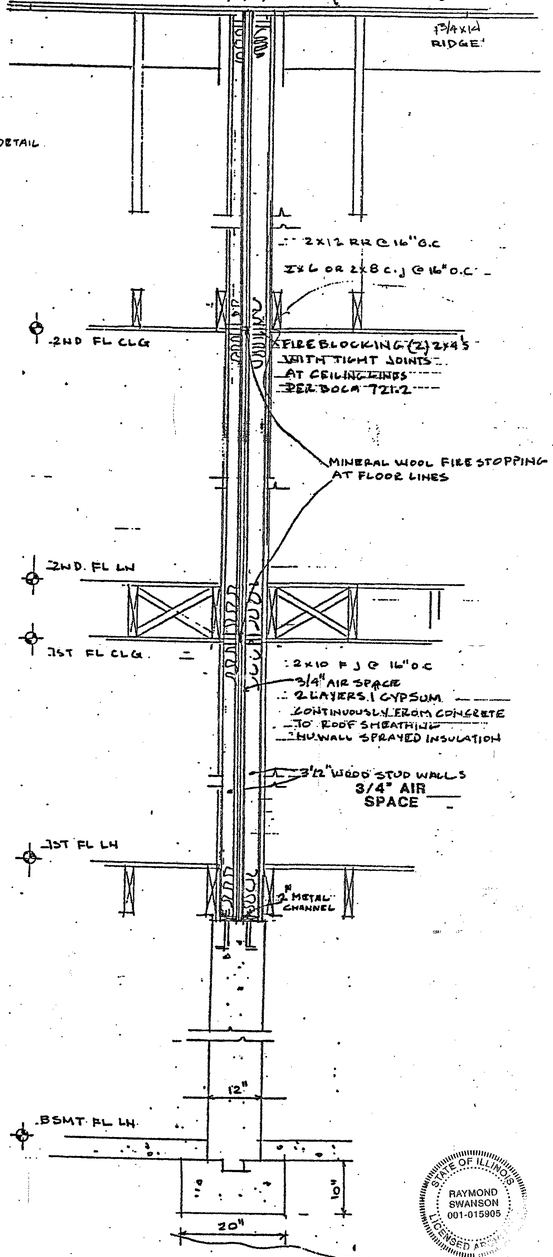
DRAFTSTOPPING: NO AREA SHALL BE GREATER THAN 1000 SQ.FT. WHERE THE CEILING IS SUSPENDED UNDER THE FLOOR OR ROOF FRAMING. THESE AREAS SHALL BE DRAFTSTOPPED WITH 1/2" PLYWOOD OR GYPSUM BOARD.

INSULATION NOTE:

ANY EXPOSED INSULATING MATERIALS INCLUDING FACINGS SHALL HAVE A FLAME SPREAD INDEX NOT TO EXCEED 25 WITH AN ACCOMPANYING SMOKE DEVELOPED INDEX NOT TO EXCEED 450.



SOFFIT COMMON WALL DETAIL
SCALE: 1/2" = 1'-0"



2 HOUR FIRE RATED PARTY WALL
SCALE 1/2" = 1'-0"

STATE OF ILLINOIS
RAYMOND SWANSON
001-015905
LICENSED ARCHITECT

REVISIONS	BY
7/24/23	

ARCHITECTS PLUS LTD
10 S 373 NORMANTOWN ROAD
NAPERVILLE, IL 60564
630-978-7670

ASHWOOD PARK TOWNHOMES
NAPERVILLE, IL.
4034 AND 4036 ASHWOOD PARK COURT

CRESTVIEW BUILDERS
630-922-0511

DRAWN	RS SC
CHECKED	
DATE	10-10-2022
SCALE	1/4" = 1'-0"
JOB NO.	4034 APTH
SHEET	6
OF	SIX SHEETS