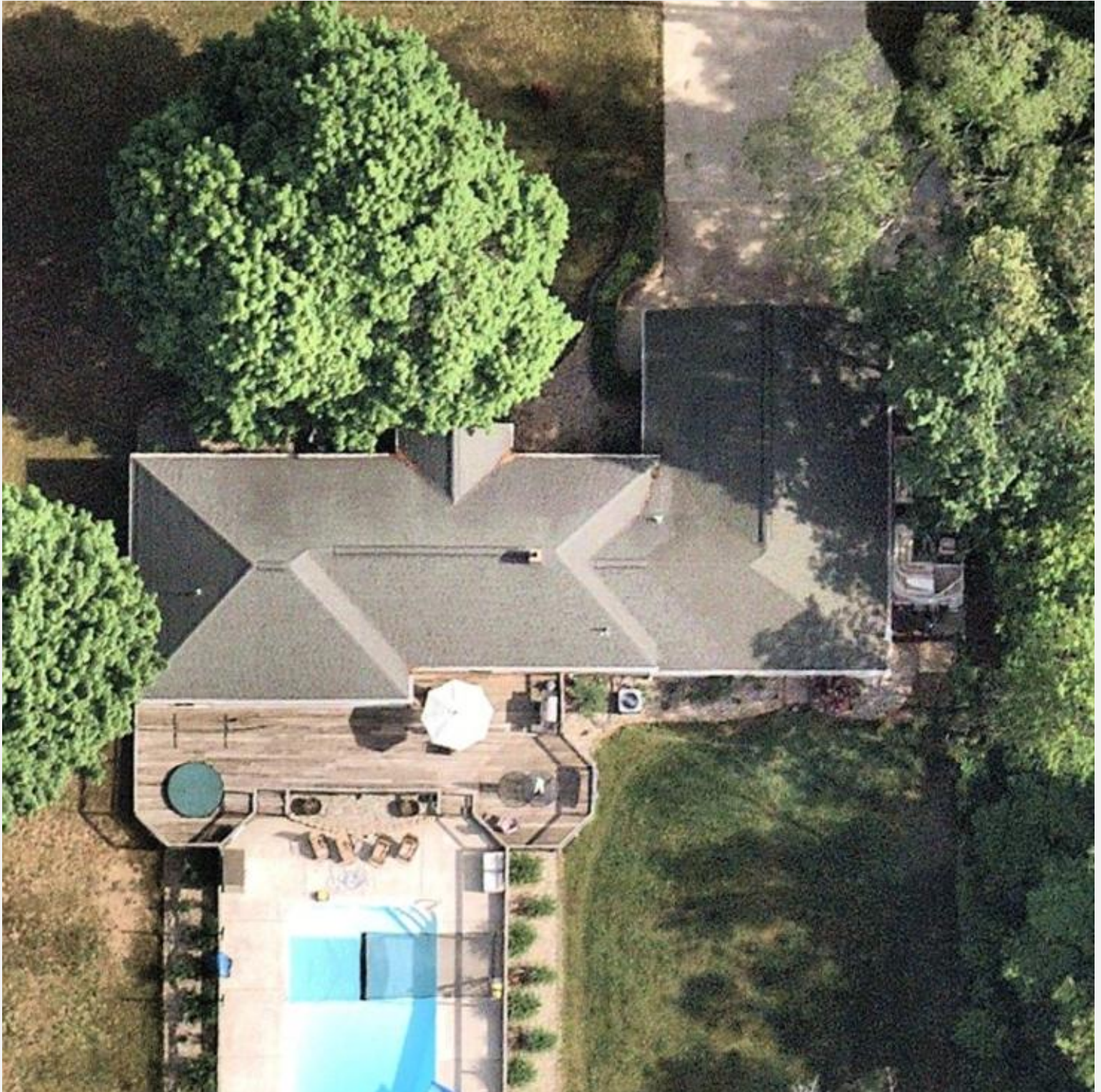


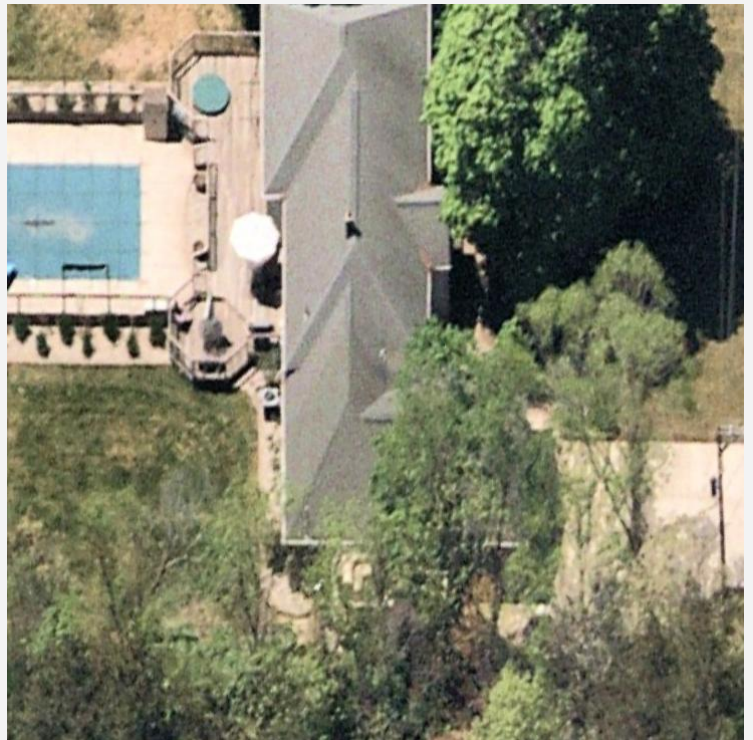
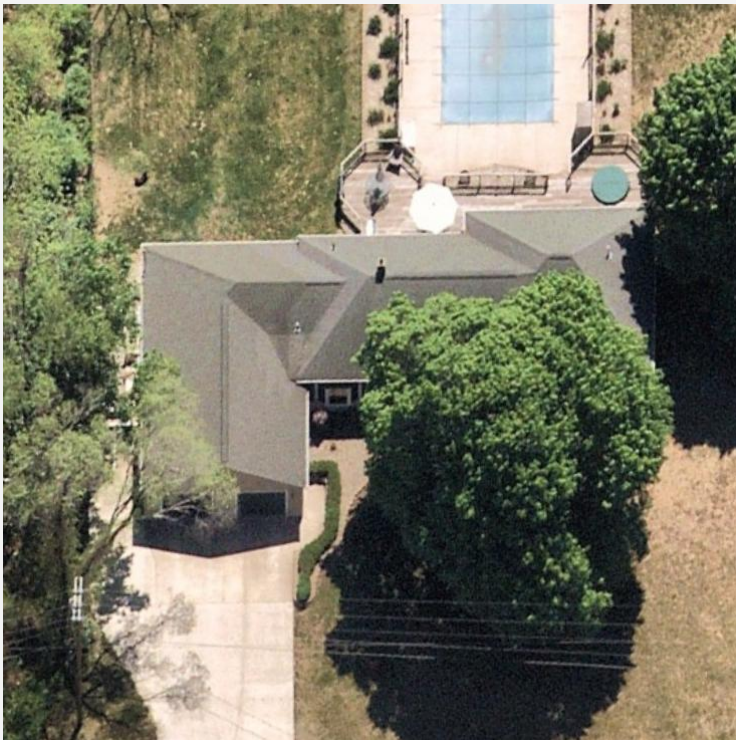
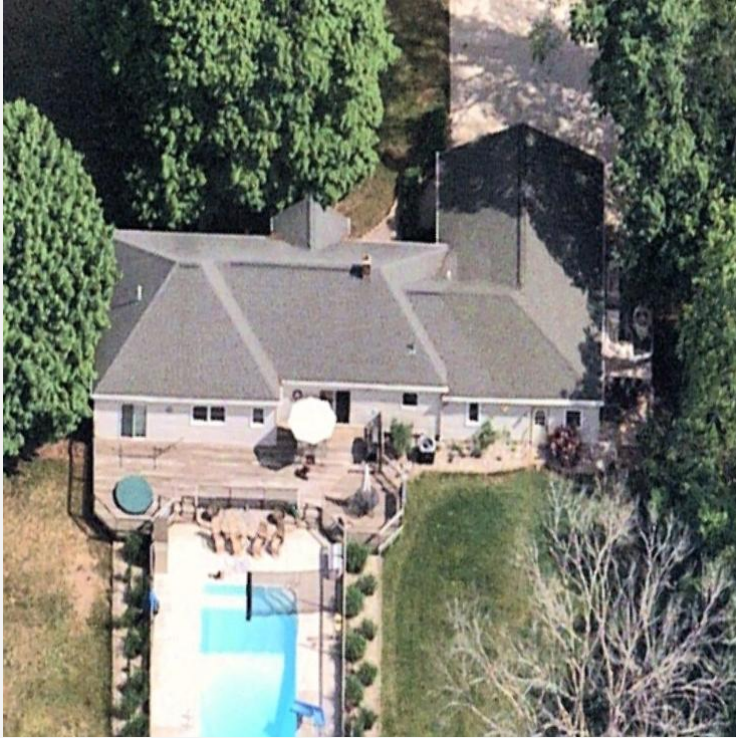
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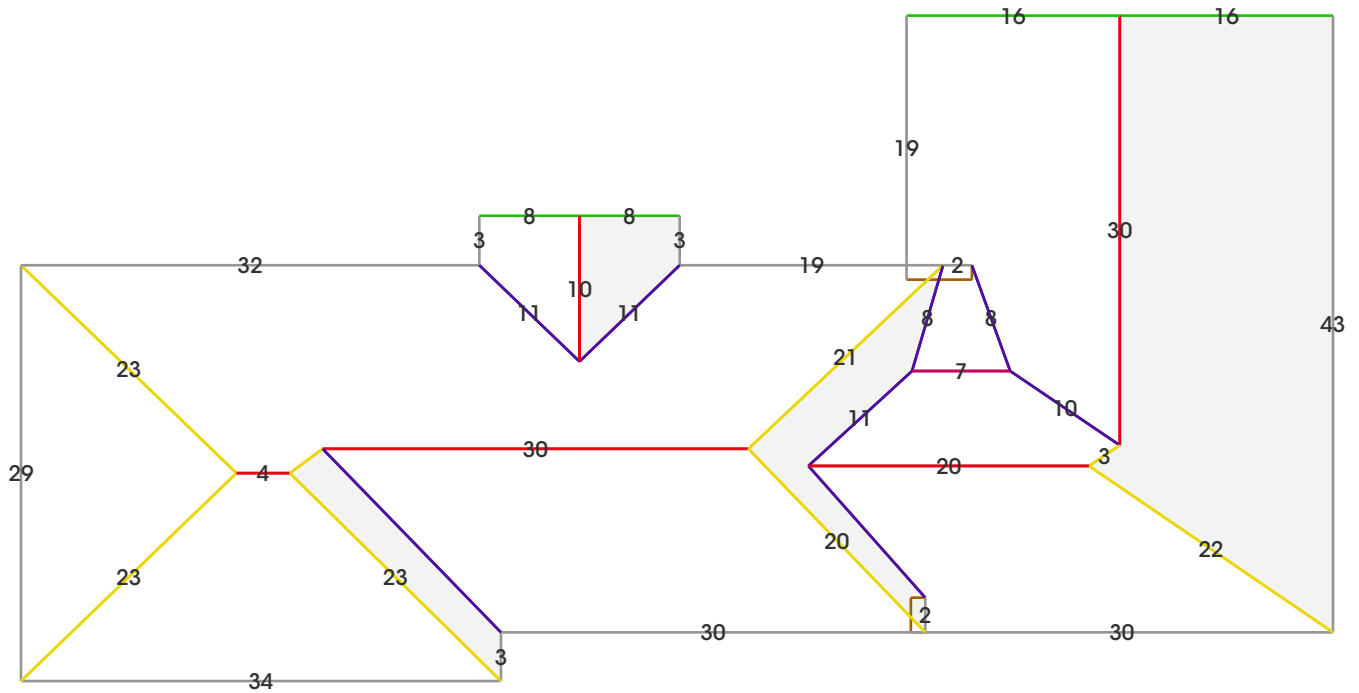
Roof Area	3,562 sq ft
Roof Facets	13
Predominant Pitch	8 / 12
Ridges/Hips	232 ft
Valleys	91 ft
Rakes	49 ft
Eaves	250 ft
Bends	7 ft





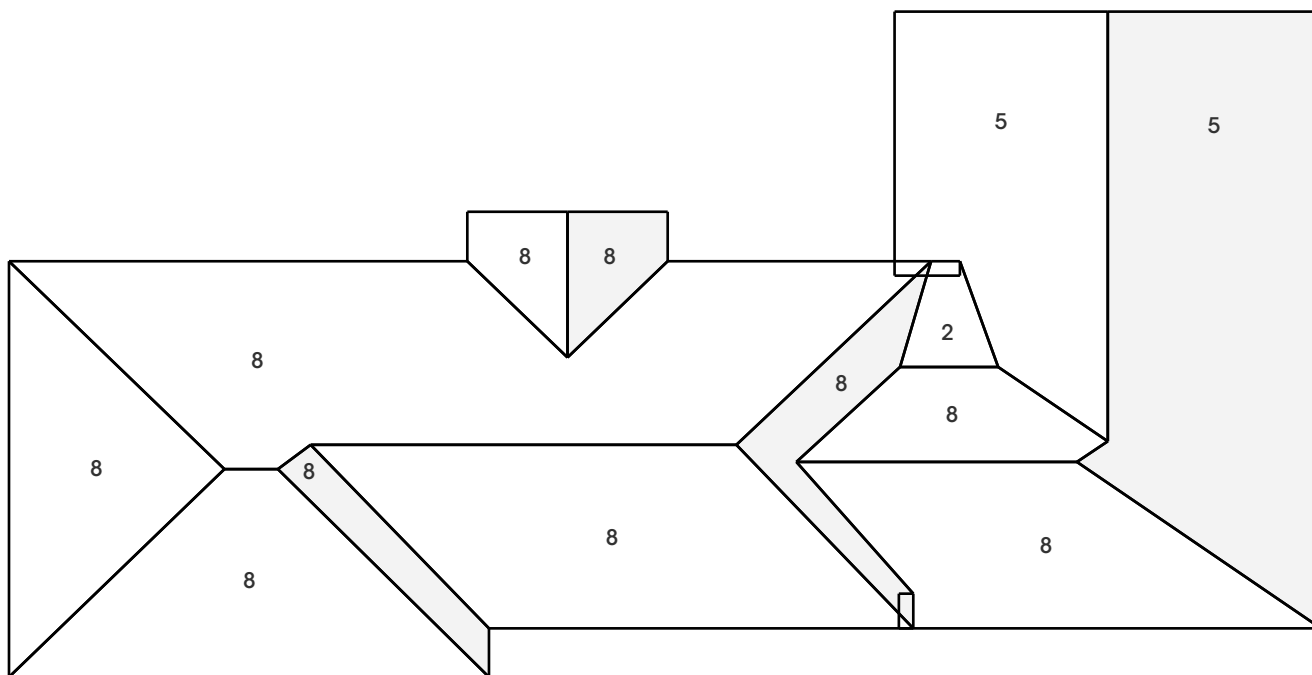


Flash	Step	Drip
2	8	299

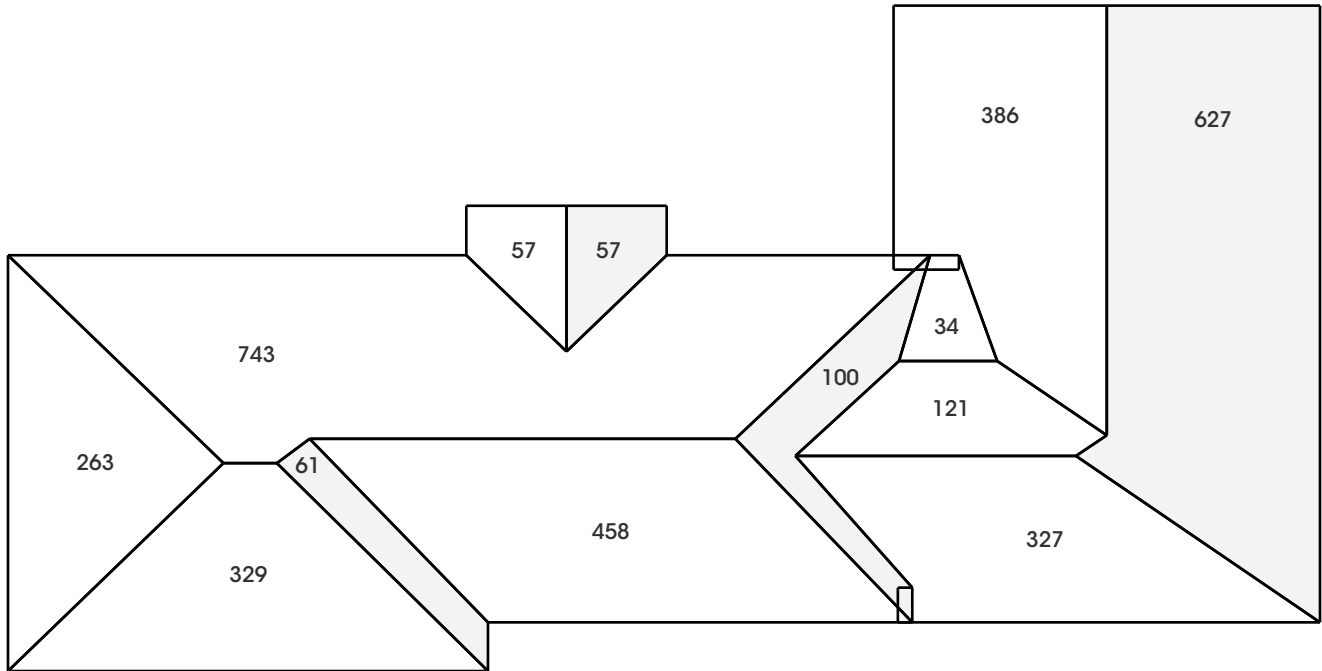


■ Bend	■ Eave	■ Hip	■ Rake	■ Ridge	■ Valley
7	250	138	49	94	91

Lengths in feet



Pitches in inches per foot



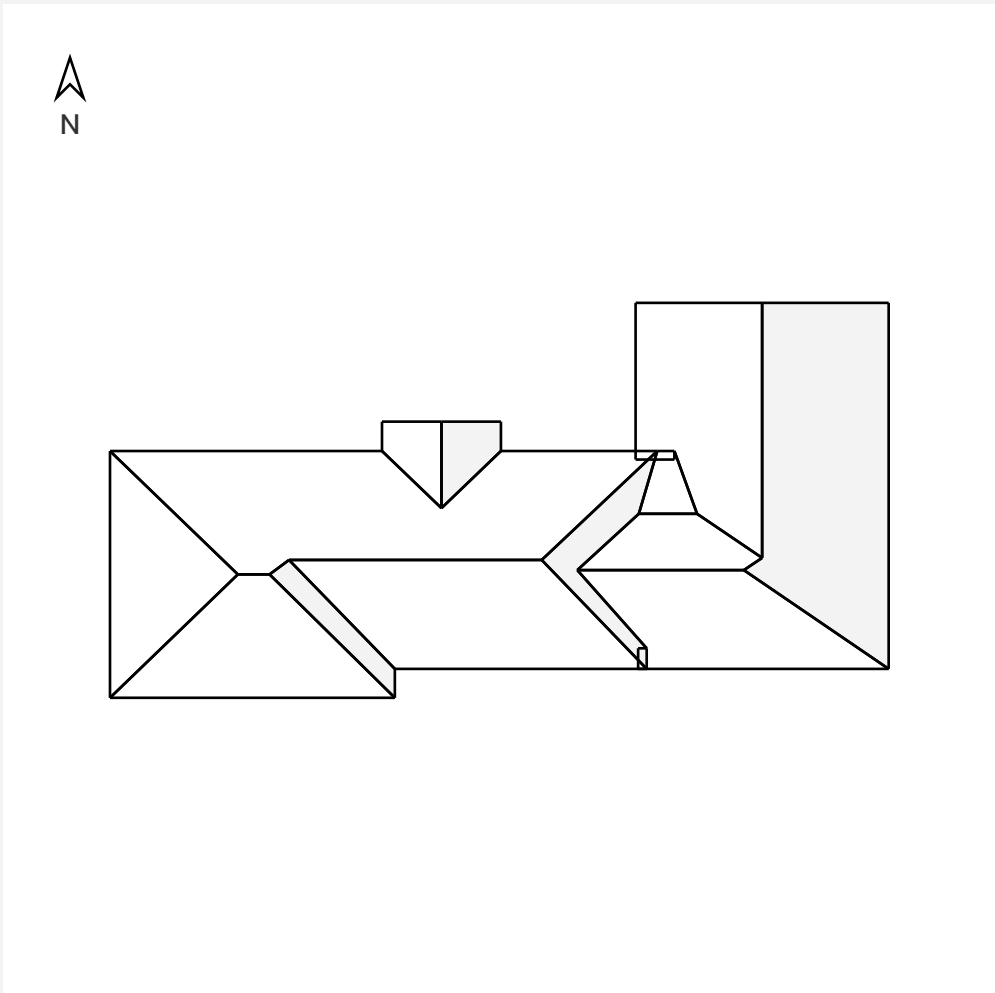
Areas in square feet



Pitch	2	5	8
Area	34	1,013	2,516
Percent	1%	28%	71%

Suggested

Waste	0%	7%	10%	12%	14%	17%	22%
Area	3,562	3,812	3,919	3,990	4,061	4,168	4,346
Squares	36	39	40	40	41	42	44



Roof Area	3,562 sq ft
Roof Facets	13
Pitch	8 / 12
<hr/>	
Bends	7 ft
Eaves	250 ft
Hips	138 ft
Rakes	49 ft
Ridges	94 ft
Valleys	91 ft
<hr/>	
Flash	2 ft
Step	8 ft
Drip Edge	299 ft
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Leak Barrier	545 ft
Ridge Cap	232 ft
Starter	299 ft
<hr/>	
Parapets	0 ft

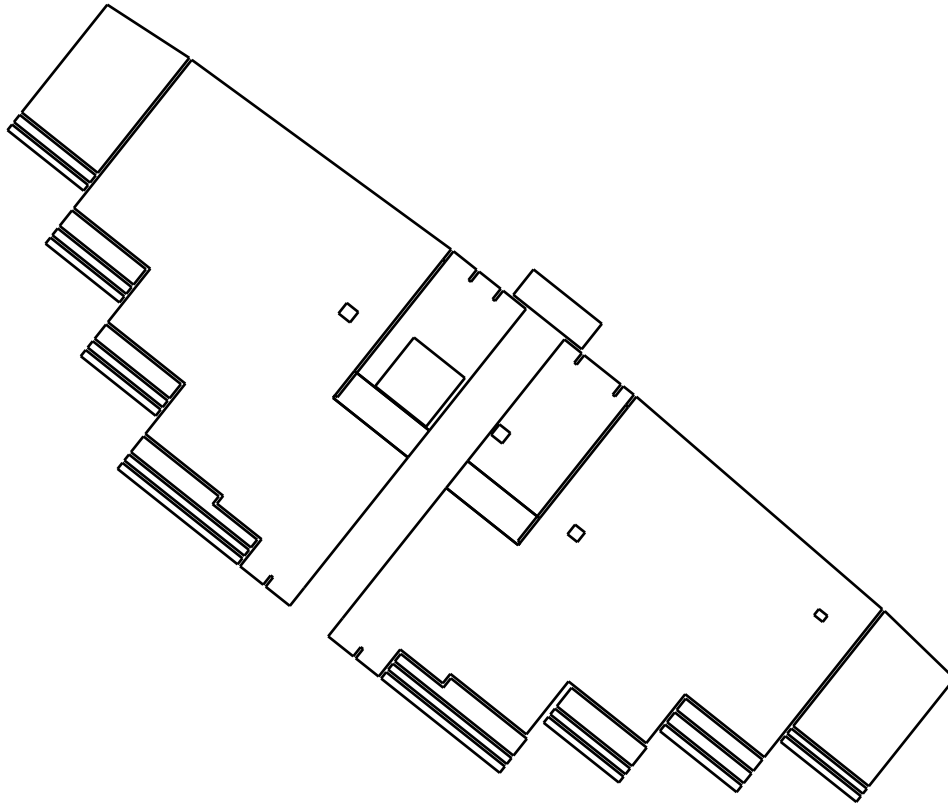
Notes: 1) Measurements are rounded to the nearest whole number. 2) Rakes are defined as sloped roof edges. 3) Eaves are defined as level roof edges and excludes valleys. 4) Flashing pertains to level roof edges and excludes valleys. 5) Step flashing pertains to sloped roof edges and excludes areas around penetrations. 6) Drip edge = eaves + rakes. 7) Waste table excludes additional materials needed for ridges, hips, valleys, etc. 8) Suggested waste factor is based on the roof complexity and is provided for guidance purposes only. You should confirm the appropriate waste factor prior to ordering.



	Waste	0%	7%	Suggested 12%	17%
Timberline Products					
HDZ, HD, Natural Shadow, American Harvest, Reflector, Royal Sovereign, and Cool Series	bundle	109	117	122	128
Low-Slope Roofing System *					
Liberty Base/Ply Sheet	roll	0	0	0	0
Liberty Cap Sheet	roll	0	0	0	0
Starter					
WeatherBlocker	bundle	3	4	4	4
Pro-Start	bundle	3	3	3	3
Quick-Start	roll	10	10	11	11
Roof Deck Protection *					
Deck-Armor, Tiger Paw, FeltBuster 10 sq	roll	4	4	4	5
Shingle-Mate	roll	9	10	10	11
VersaShield	roll	11	11	12	12
Leak Barrier *					
StormGuard, WeatherWatch 2 sq	roll	9	9	10	10
WeatherWatch 1.5 sq	roll	11	12	13	13
Ridge Cap					
Seal-A-Ridge	bundle	10	10	11	11
TimberTex	bundle	12	13	13	14
Z-Ridge	bundle	8	8	8	9
TimberCrest	box	12	13	13	14
Attic Ventilation					
Cobra 4' Plastic Ridge Vents	foot	48			
Master Flow SSB960 Metal Slant-Black	vent	15			
Master Flow High-Capacity Dome Vent	vent	6			
Cobra IntakePro Rooftop Intake	foot	95			

Notes: 1) These approximate quantities are based on estimated measurements and are for guidance purposes only. You should always confirm quantities prior to ordering and ensure you are following local building code requirements. 2) For Timberline, 3 bundles = 0.984 squares. 3) Starter = eaves + rakes. 4) Leak barrier = bends + eaves + flashing + hips + rakes + step + valleys. 5) Ridge cap = hips + ridges. 6) Estimated quantity of attic ventilation products based solely on exterior roof area and intended for estimating purposes only. Installer must verify attic floor square footage, roof design, local code requirements, quantity/type/approved roof pitch of recommended vent products, and conditioned space under the roof. Always have a balanced attic ventilation system. In no case should the amount of exhaust ventilation exceed the amount of intake ventilation. For more info, visit gaf.com/ventcalculator. 7) Low-slope products applied to 1/12 pitch areas. 8) Timberline products applied to 2/12 pitch areas and above.

* Installed coverage will be less and depend on quantity and width of side and end laps.

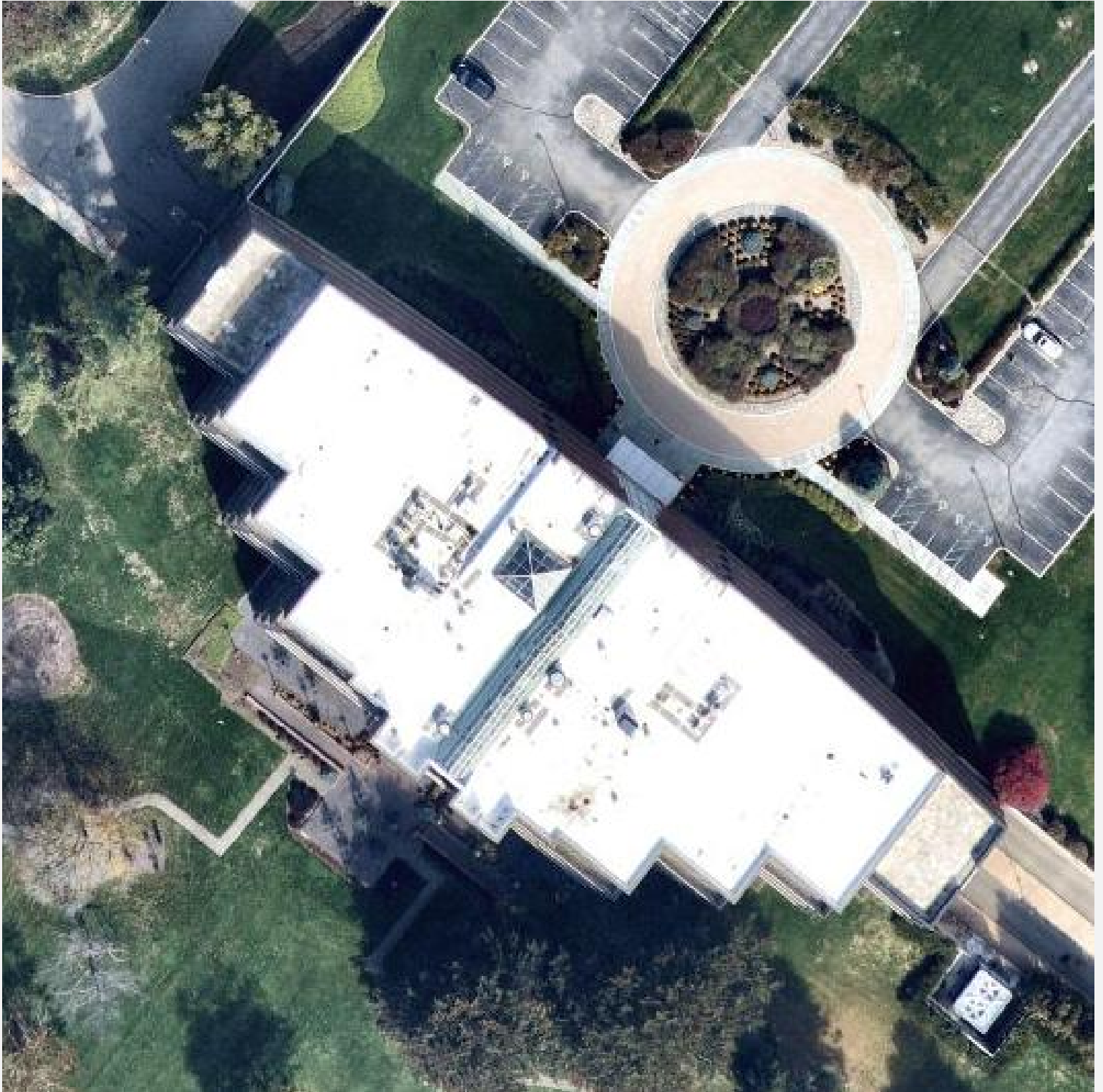


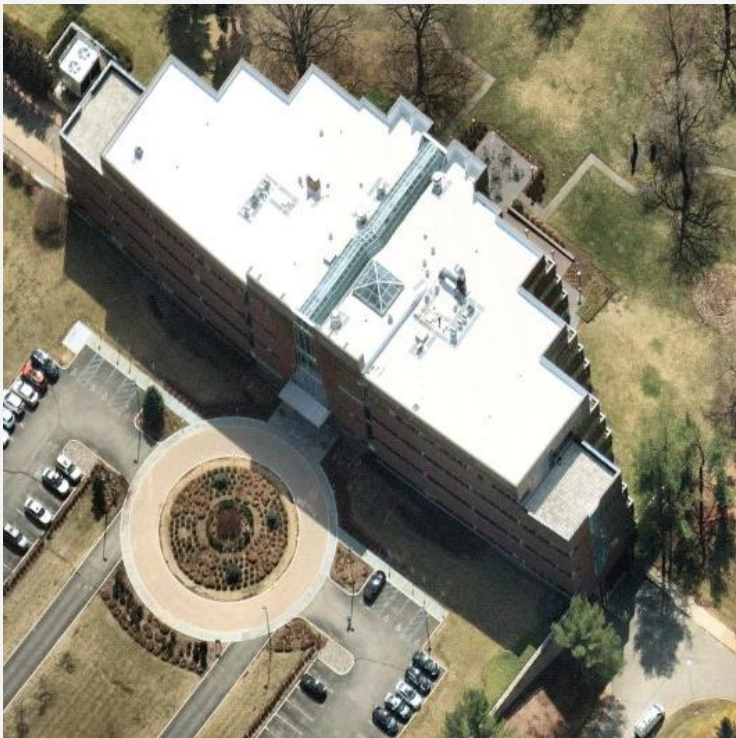
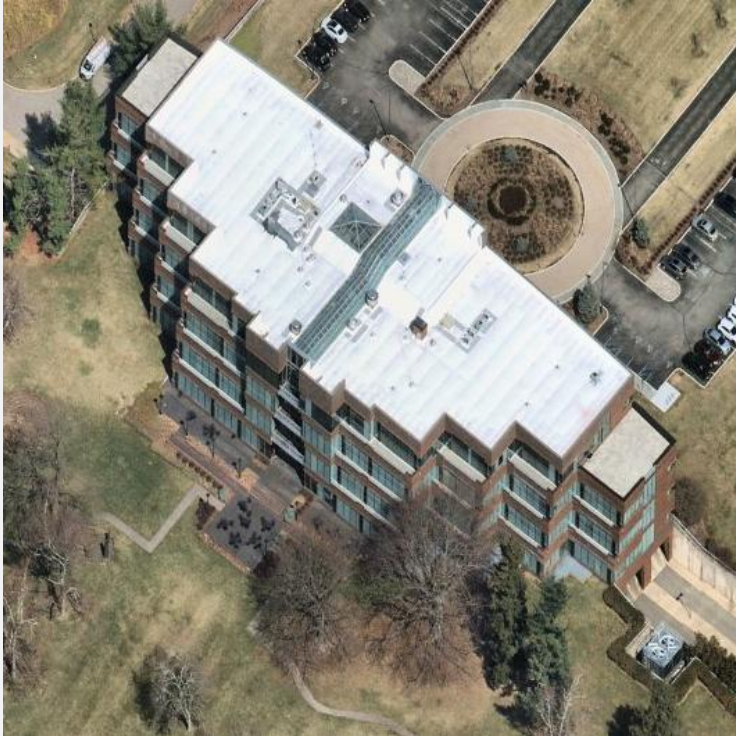
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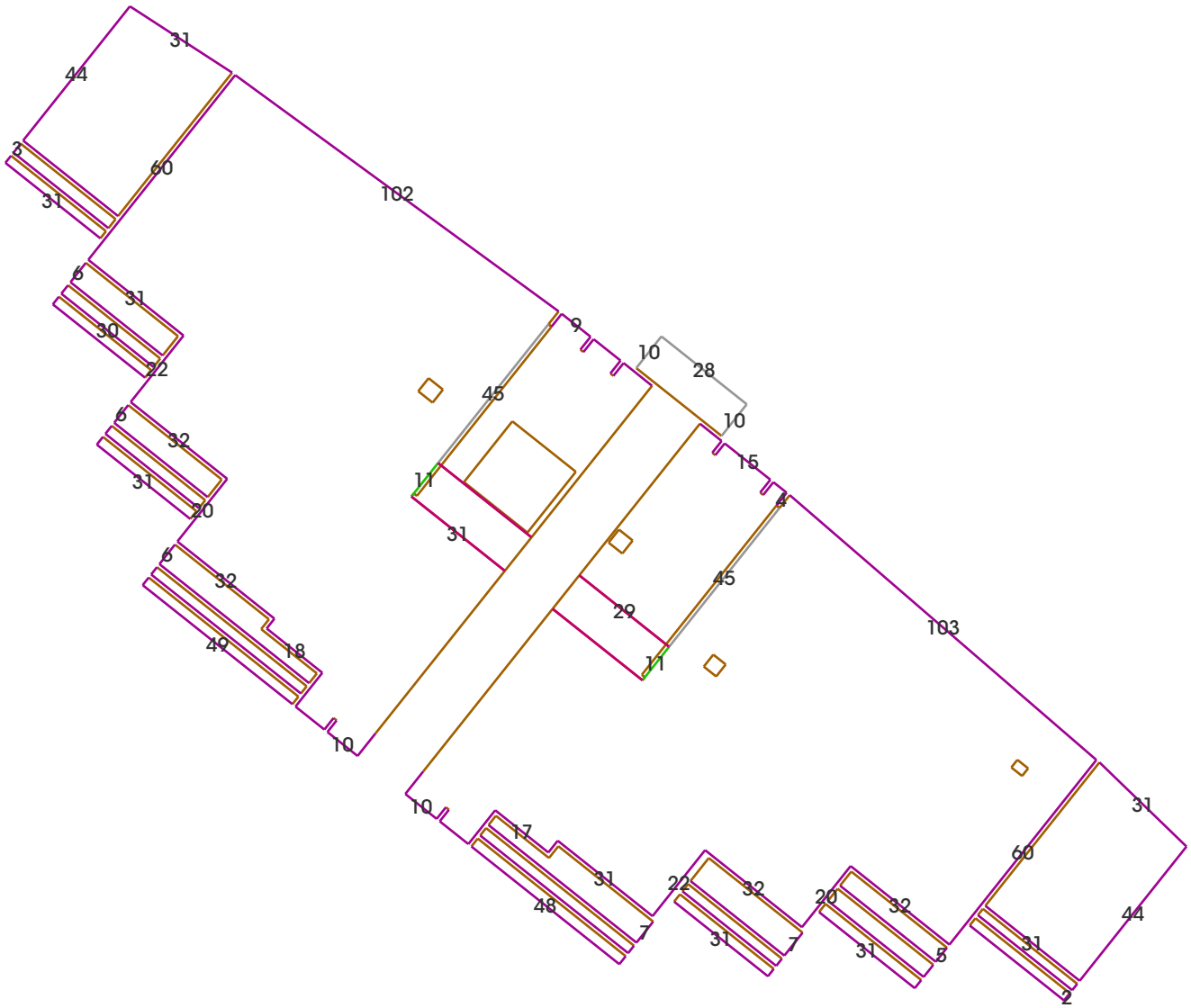
Roof Area	29,954 sq ft
Roof Facets	31
Predominant Pitch	0 / 12
Rakes	23 ft
Eaves/Bends	259 ft





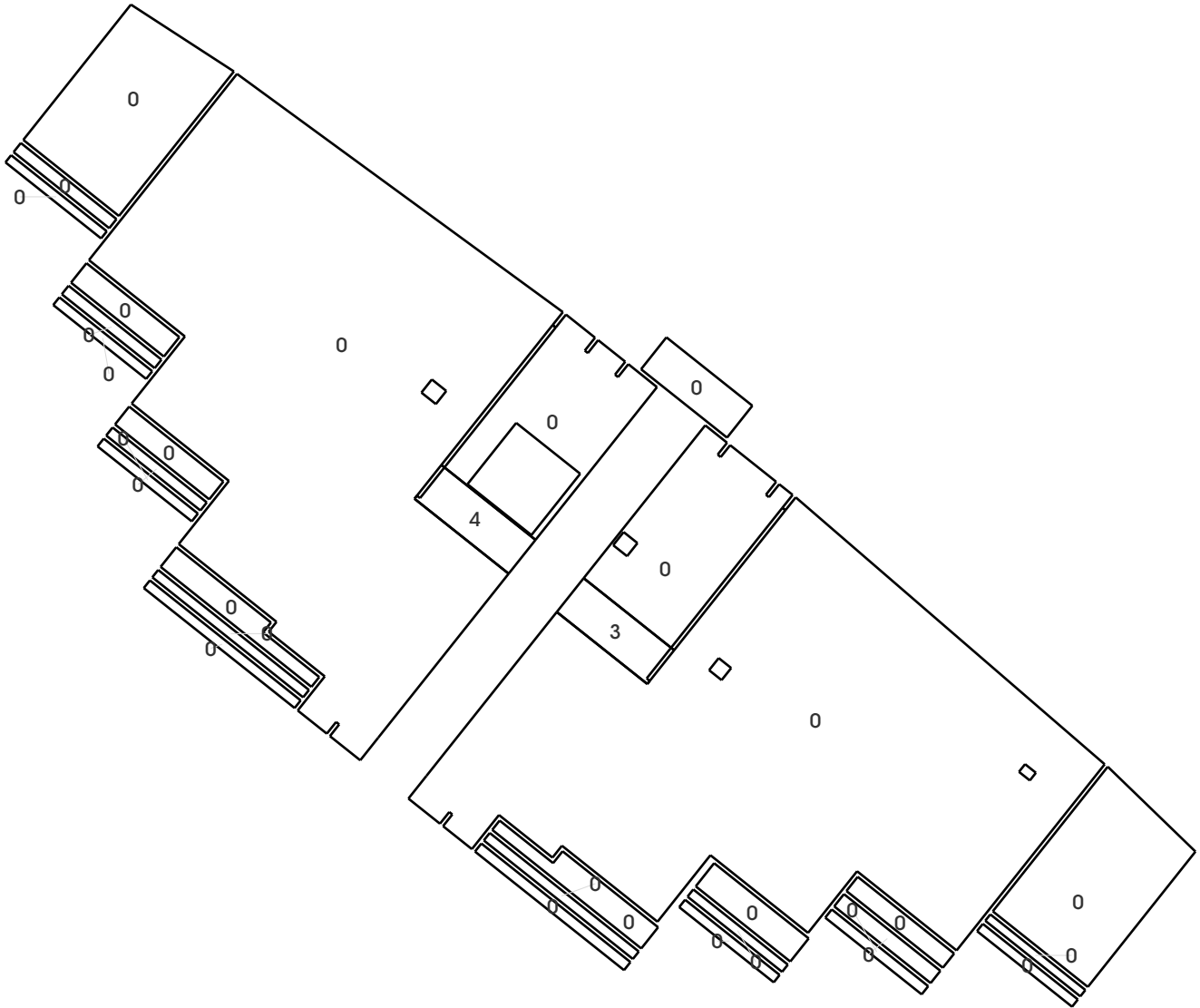


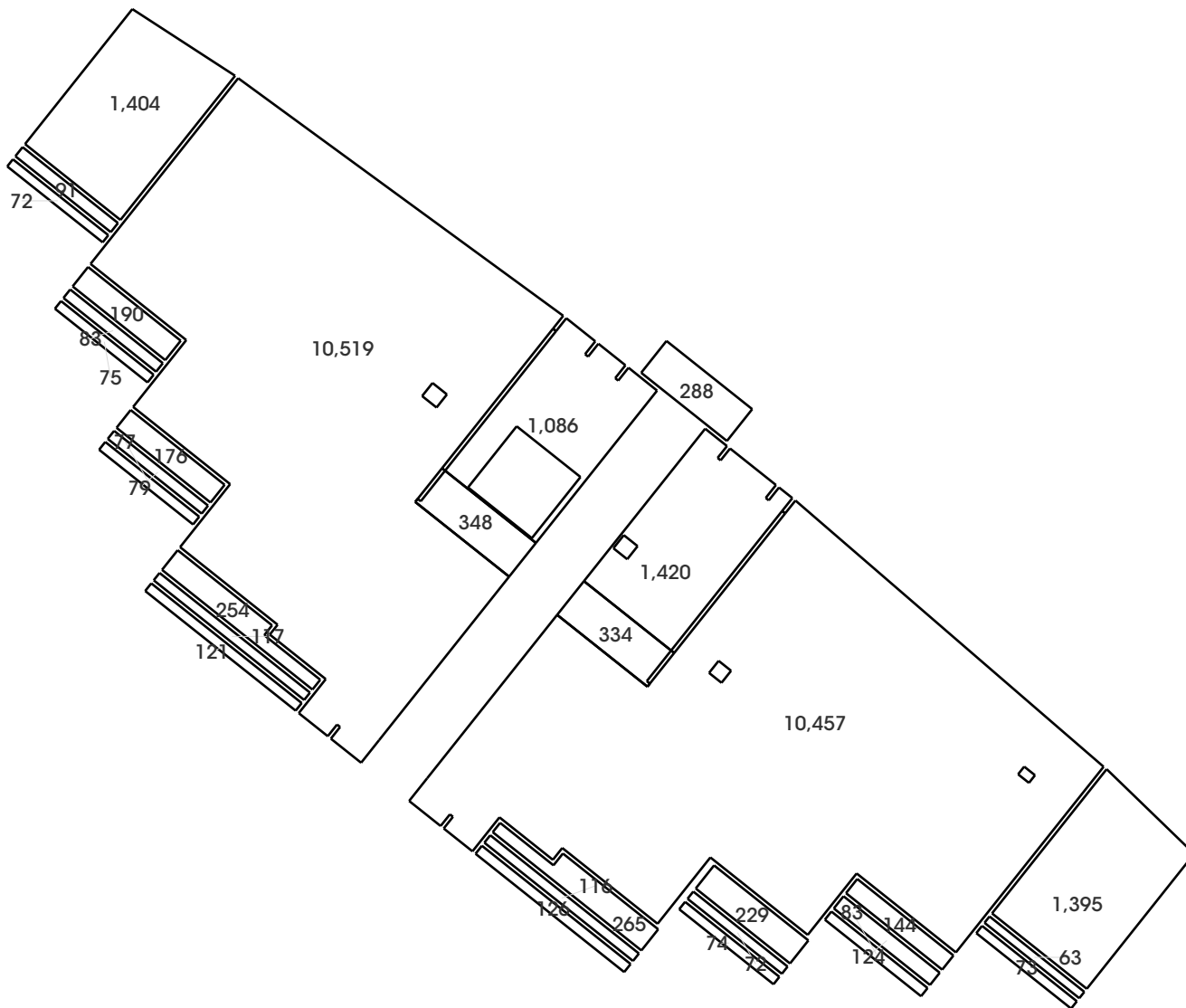
Flash	Step	Drip
1,465	23	162



■ Bend	■ Eave	■ Parapet	■ Rake
120	139	1,900	23

Lengths in feet



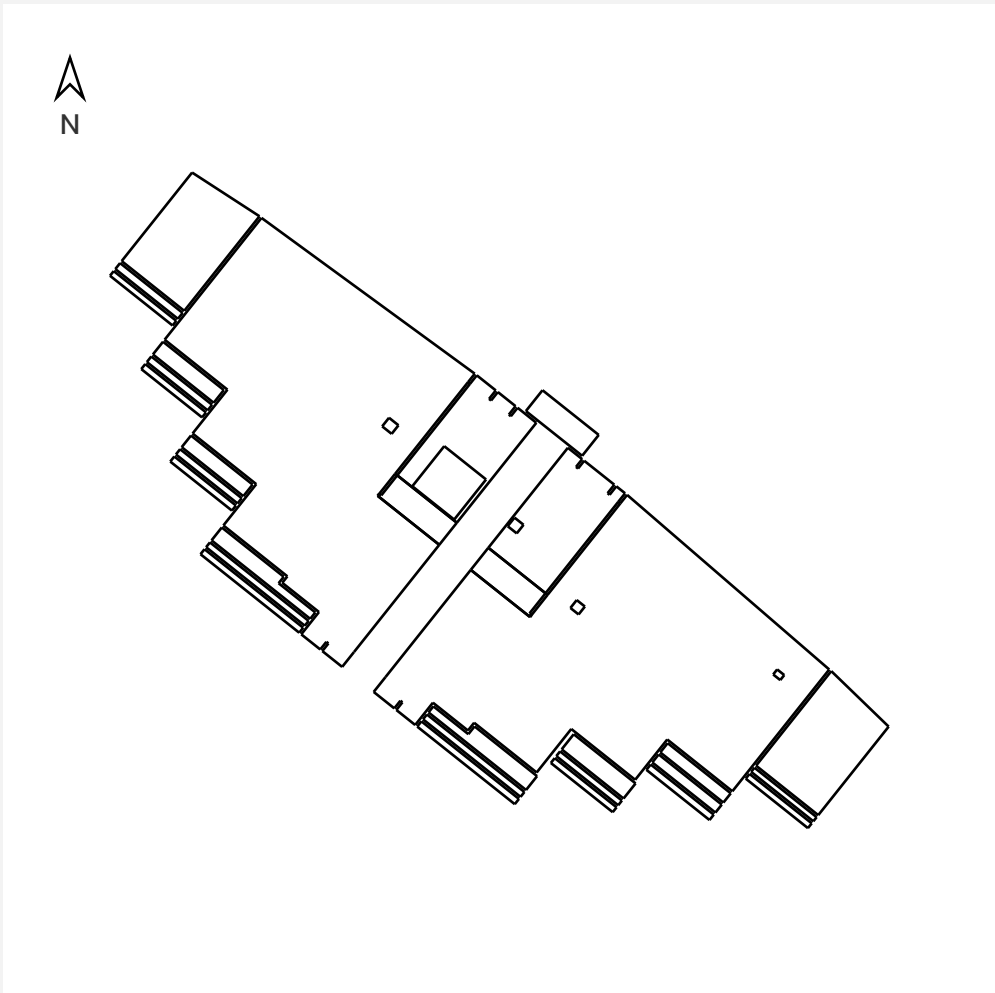


Areas in square feet



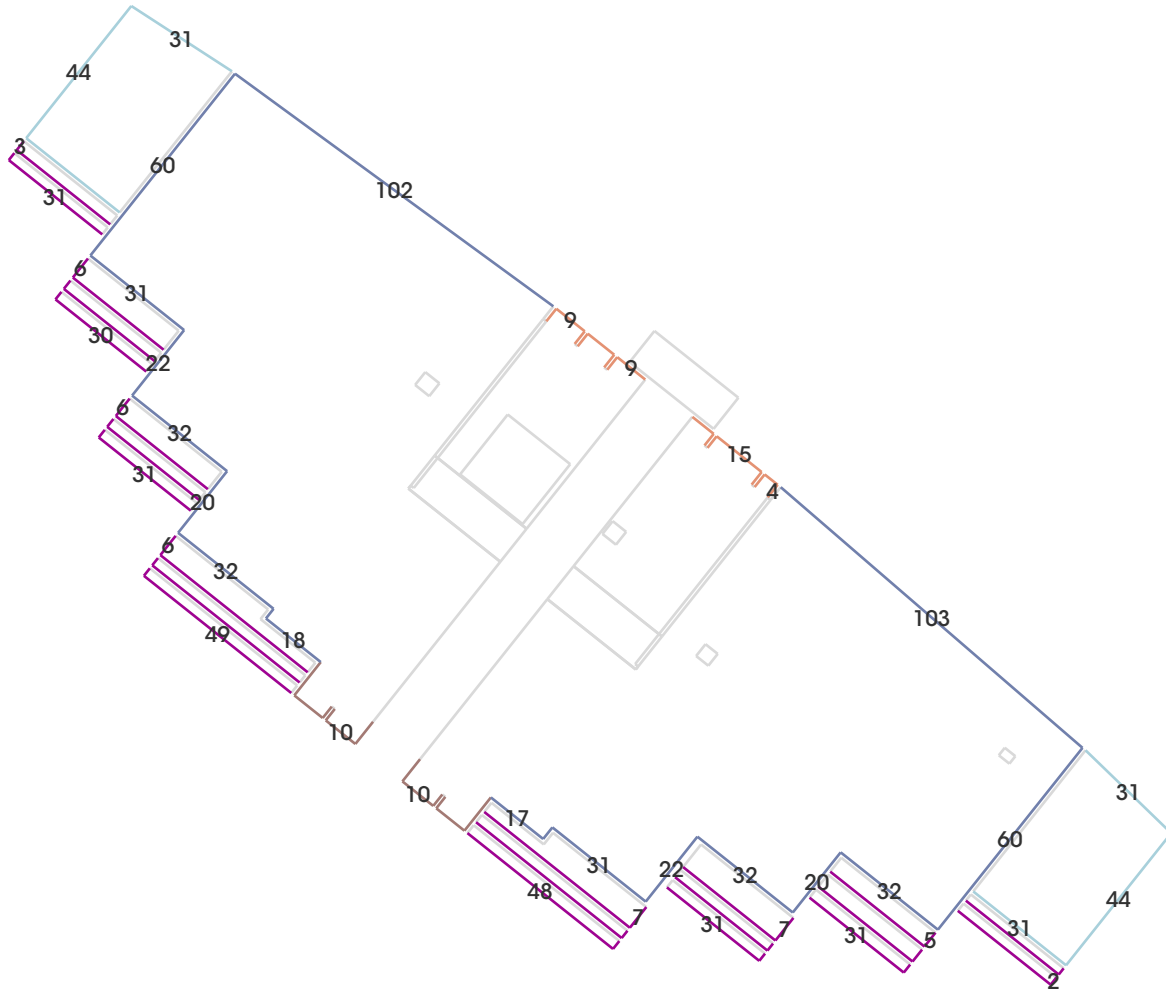
Pitch	0	3	4
Area	29,272	334	348
Percent	98%	1%	1%






Waste	0%	5%	10%	12%	15%	17%	20%
Area	29,954	31,452	32,949	33,549	34,447	35,046	35,945
Squares	300	315	330	336	345	351	360



Roof Area	29,954 sq ft
Roof Facets	31
Pitch	0 / 12
Bends	120 ft
Eaves	139 ft
Rakes	23 ft
Flash	1,465 ft
Step	23 ft
Drip Edge	162 ft
Leak Barrier	165 ft
Starter	23 ft
Parapets	1,900 ft
Penetrations	5
Pen. Area	475 sq ft
Pen. Perimeter	144 ft

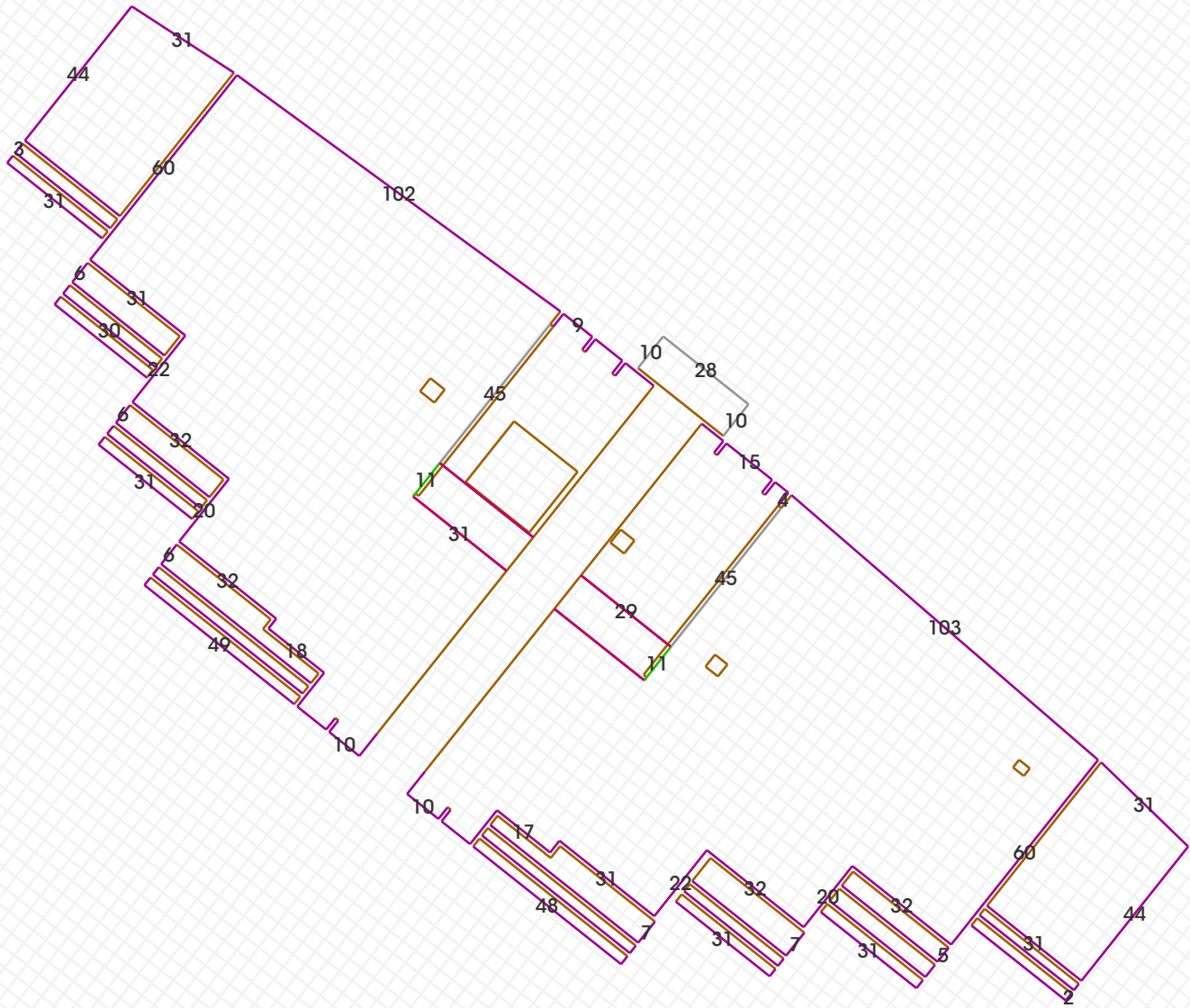
Notes: 1) Measurements are rounded to the nearest whole number. 2) Rakes are defined as sloped roof edges. 3) Eaves are defined as level roof edges and excludes valleys. 4) Flashing pertains to level roof edges and excludes valleys. 5) Step flashing pertains to sloped roof edges and excludes areas around penetrations. 6) Drip edge = eaves + rakes. 7) Waste table excludes additional materials needed for ridges, hips, valleys, etc. 8) Suggested waste factor is based on the roof complexity and is provided for guidance purposes only. You should confirm the appropriate waste factor prior to ordering.



	Length (ft)	Height (in)	Vertical Area (sq ft)	Wall Width (in)
	861	36	2,583	12
	642	18	963	12
	211	24	423	12
	95	48	380	12
	91	66	499	12

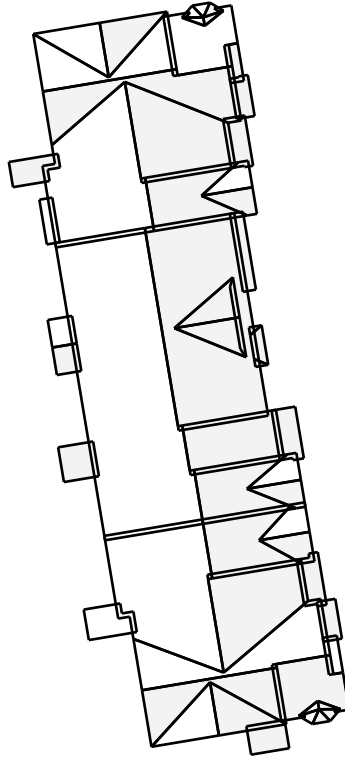


Flash	Step	Drip
1,465	23	162



■ Bend	■ Eave	■ Parapet	■ Rake
120	139	1,900	23

4 ft x 4 ft grid
Lengths in feet

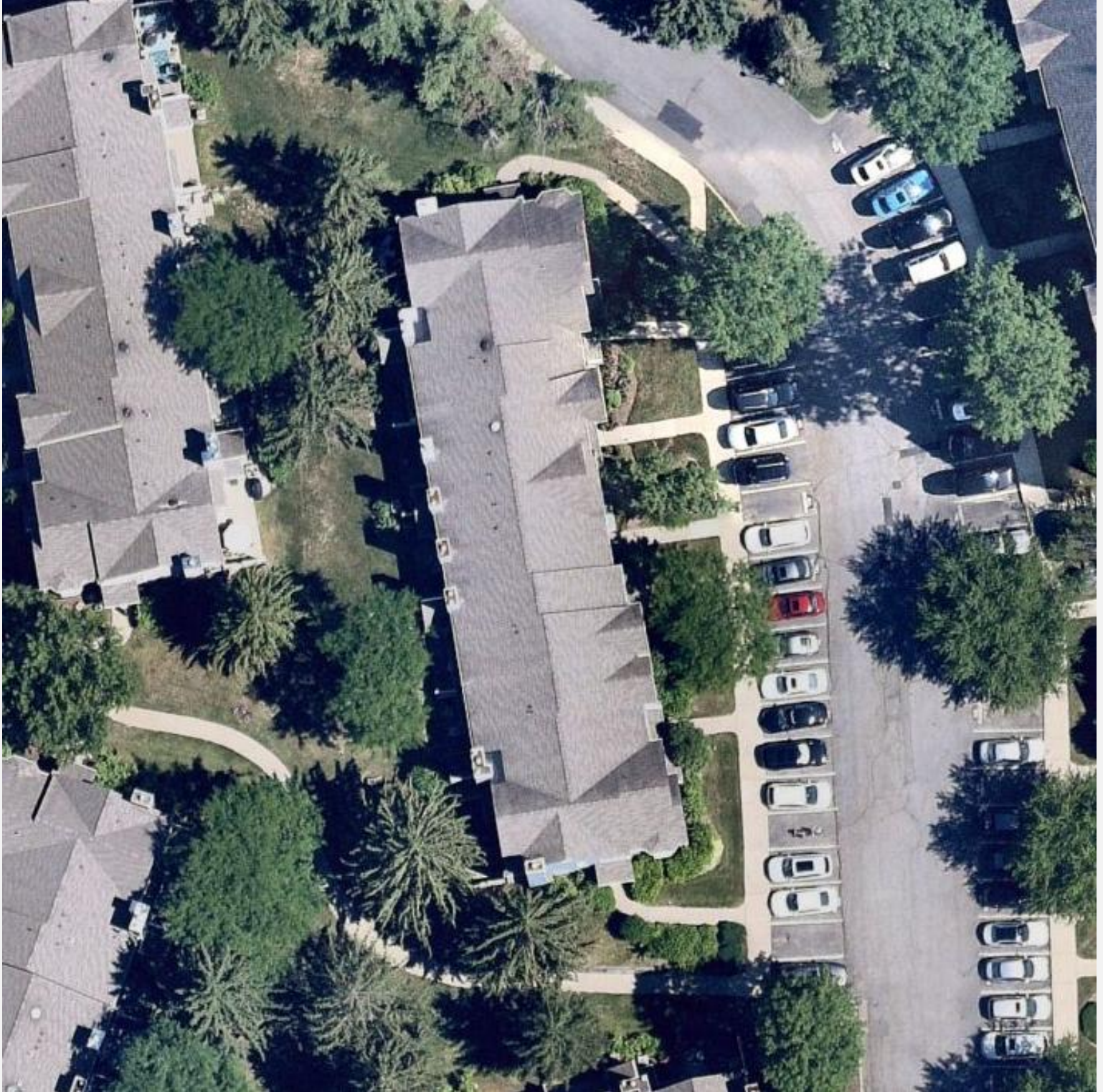


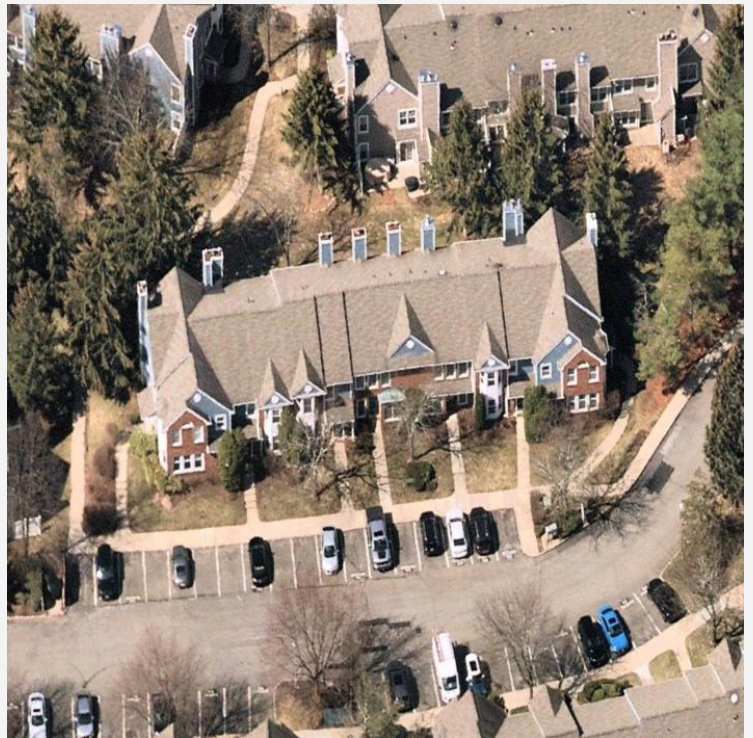
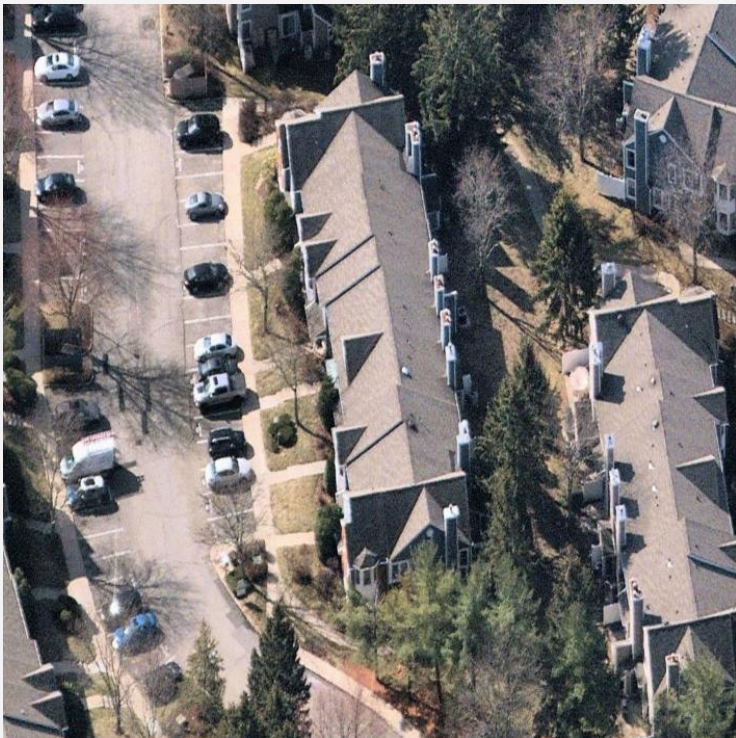
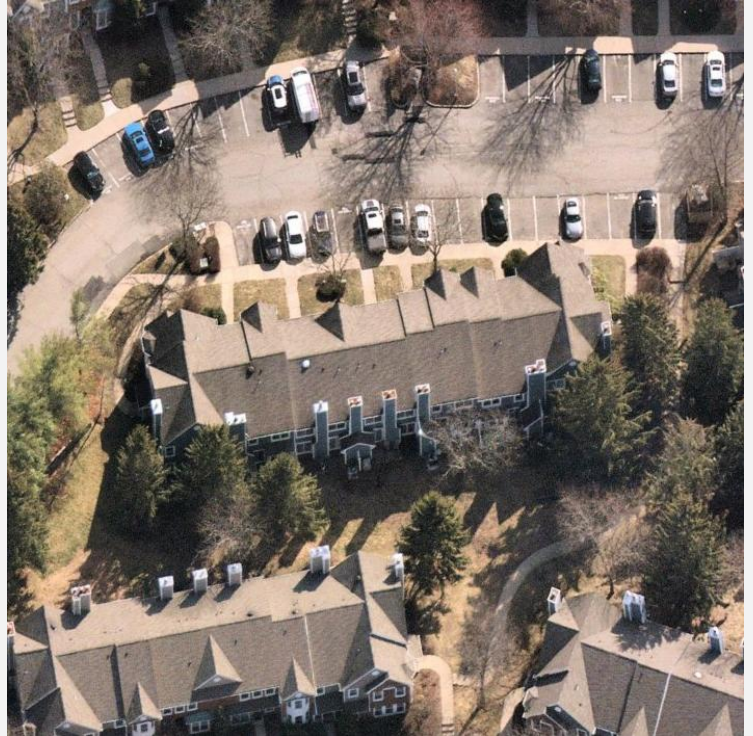
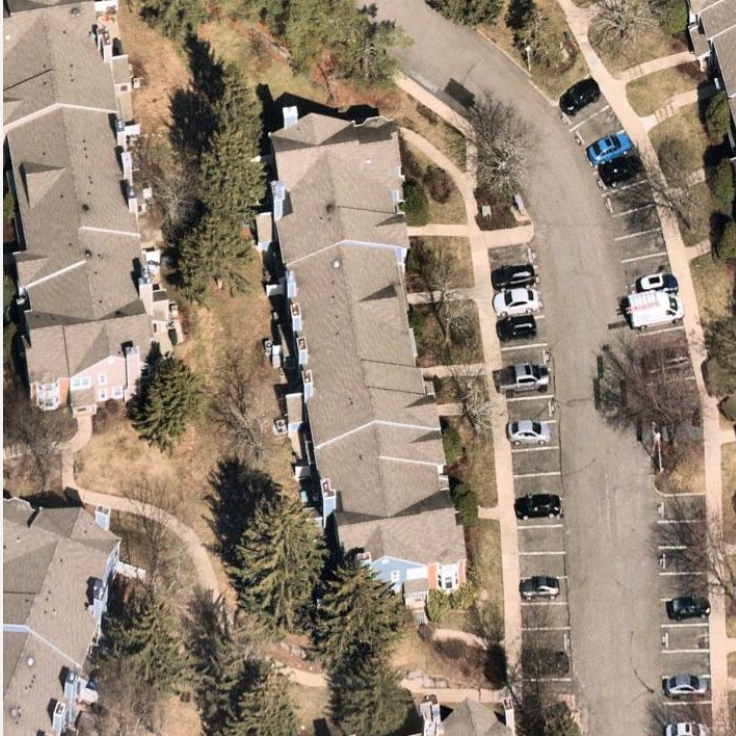
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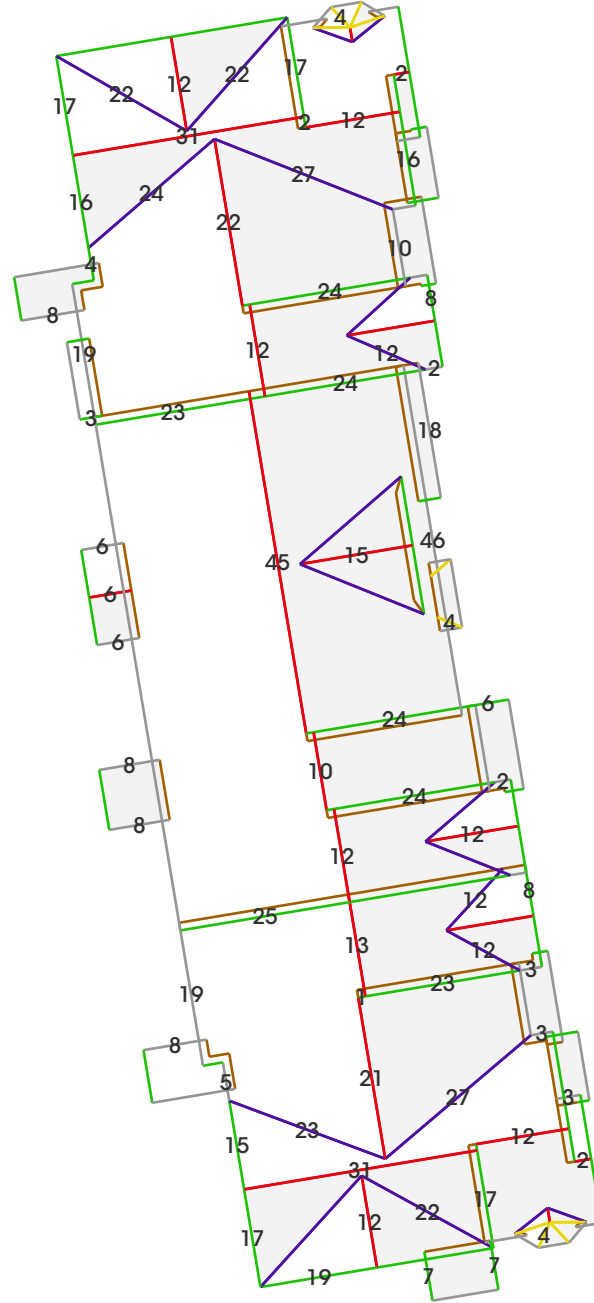
Roof Area	9,277 sq ft
Roof Facets	56
Predominant Pitch	6 / 12
Ridges/Hips	356 ft
Valleys	326 ft
Rakes	636 ft
Eaves	425 ft
Bends	0 ft





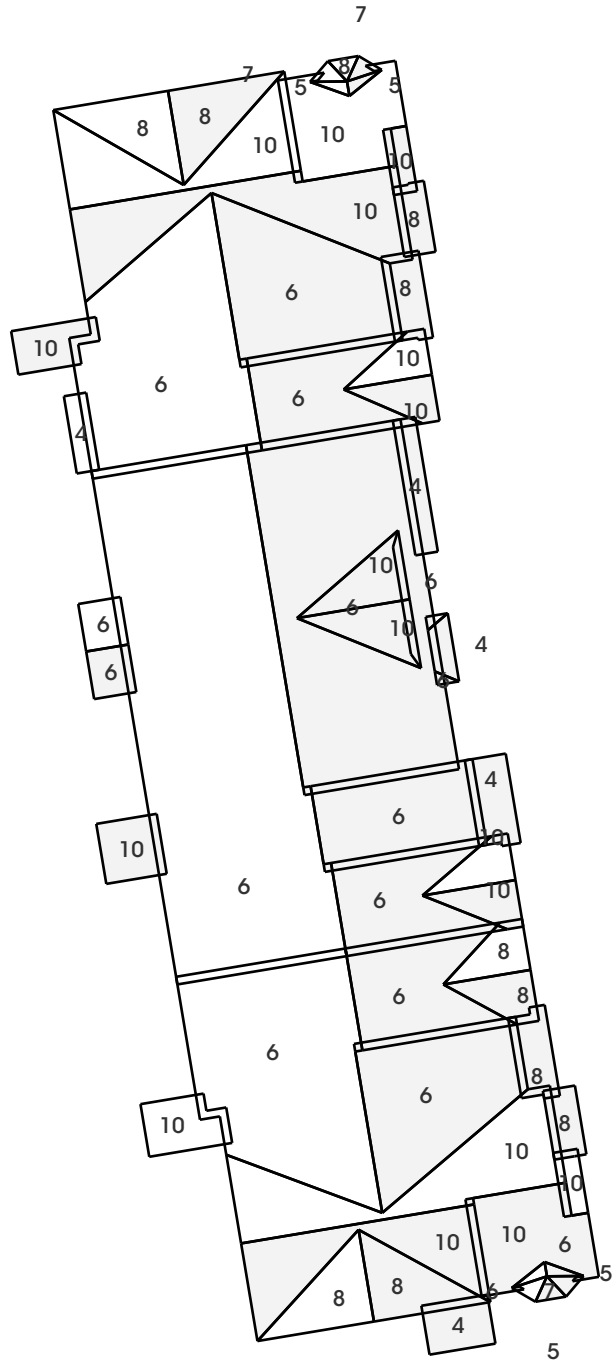


Flash	Step	Drip
131	330	1,061

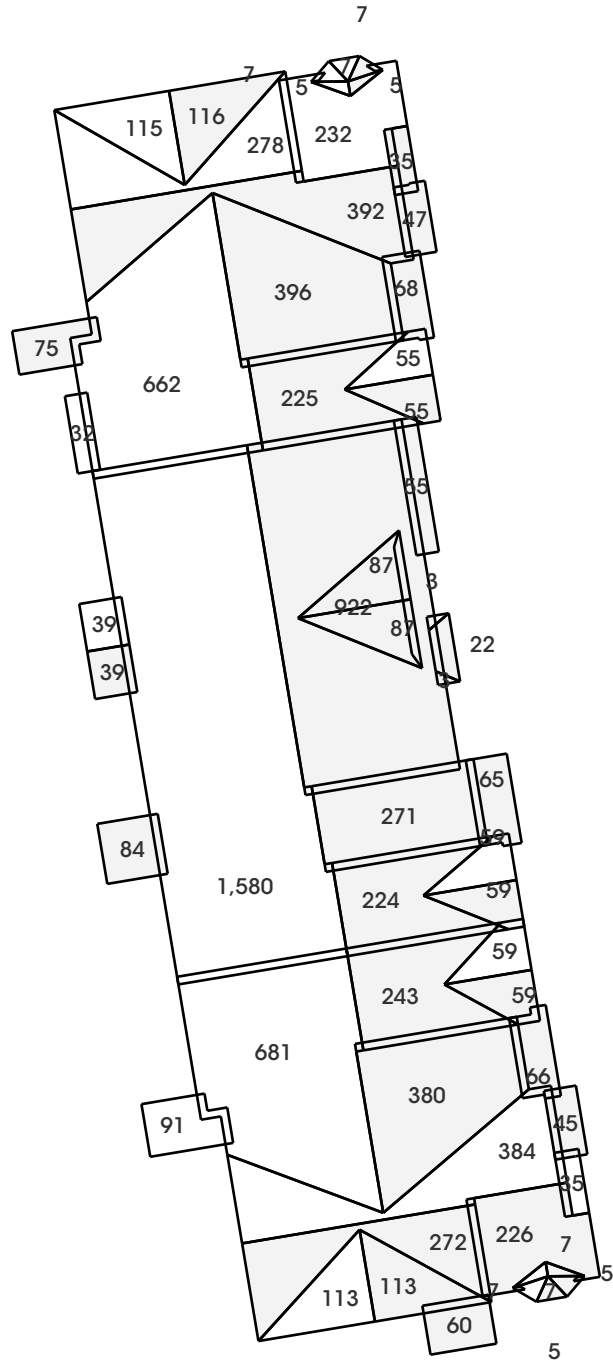


Eave	Hip	Rake	Ridge	Valley
425	44	636	312	326

Lengths in feet



Pitches in inches per foot

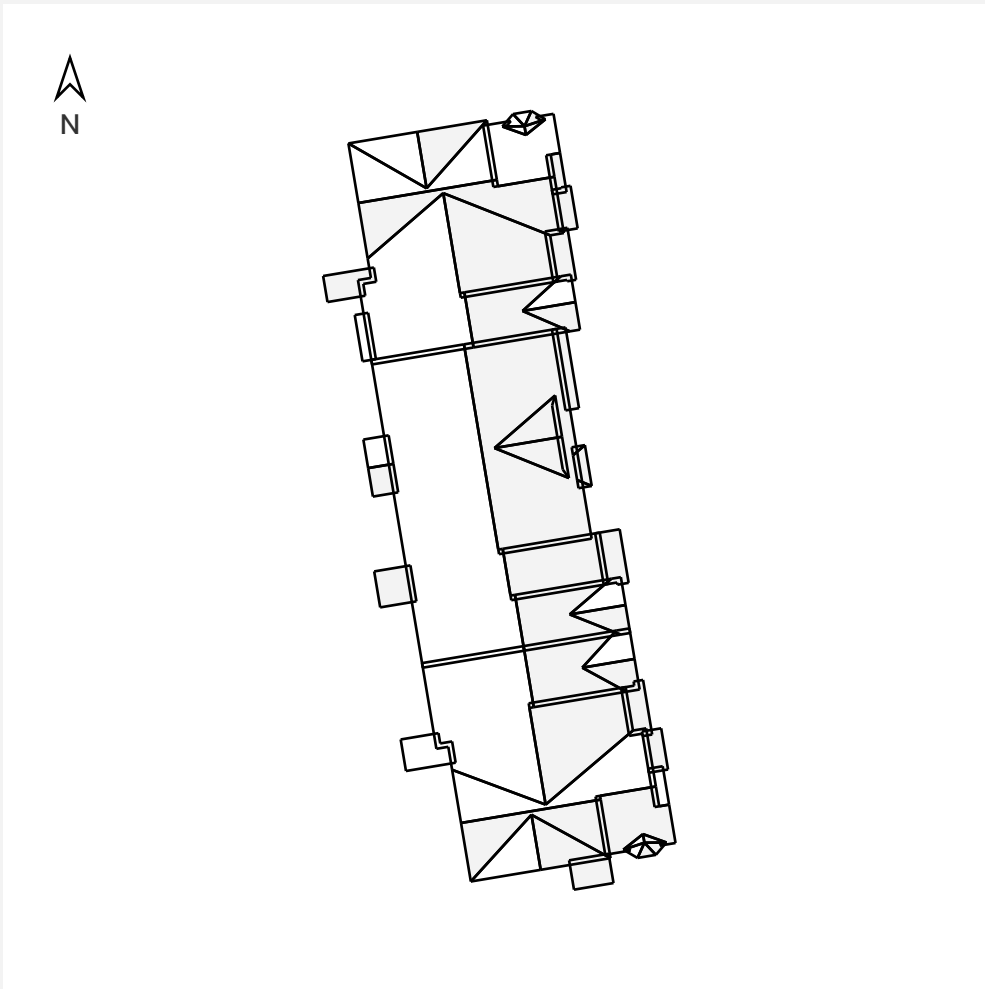


Areas in square feet



Pitch	4	5	6	7	8	10
Area	235	20	5,685	22	809	2,507
Percent	3%	0%	61%	0%	9%	27%

Waste	0%	5%	10%	12%	15%	17%	20%
Area	9,277	9,741	10,205	10,390	10,669	10,854	11,133
Squares	93	98	103	104	107	109	112



Roof Area	9,277 sq ft
Roof Facets	56
Pitch	6 / 12
<hr/>	
Bends	0 ft
Eaves	425 ft
Hips	44 ft
Rakes	636 ft
Ridges	312 ft
Valleys	326 ft
<hr/>	
Flash	131 ft
Step	330 ft
Drip Edge	1,061 ft
<hr/>	
Leak Barrier	1,891 ft
Ridge Cap	356 ft
Starter	1,061 ft
<hr/>	
Parapets	0 ft
Penetrations	1
Pen. Area	133 sq ft
Pen. Perimeter	57 ft

Notes: 1) Measurements are rounded to the nearest whole number. 2) Rakes are defined as sloped roof edges. 3) Eaves are defined as level roof edges and excludes valleys. 4) Flashing pertains to level roof edges and excludes valleys. 5) Step flashing pertains to sloped roof edges and excludes areas around penetrations. 6) Drip edge = eaves + rakes. 7) Waste table excludes additional materials needed for ridges, hips, valleys, etc. 8) Suggested waste factor is based on the roof complexity and is provided for guidance purposes only. You should confirm the appropriate waste factor prior to ordering.



	Waste	0%	10%	15%	20%
Timberline Products					
HDZ, HD, Natural Shadow, American Harvest, Reflector, Royal Sovereign, and Cool Series	bundle	283	312	326	340
Low-Slope Roofing System *					
Liberty Base/Ply Sheet	roll	0	0	0	0
Liberty Cap Sheet	roll	0	0	0	0
Starter					
WeatherBlocker	bundle	11	12	13	13
Pro-Start	bundle	9	10	11	11
Quick-Start	roll	33	36	37	39
Roof Deck Protection *					
Deck-Armor, Tiger Paw, FeltBuster 10 sq	roll	10	11	11	12
Shingle-Mate	roll	24	26	27	28
VersaShield	roll	27	30	31	32
Leak Barrier *					
StormGuard, WeatherWatch 2 sq	roll	29	32	33	35
WeatherWatch 1.5 sq	roll	38	42	44	46
Ridge Cap					
Seal-A-Ridge	bundle	15	16	17	18
TimberTex	bundle	18	20	21	22
Z-Ridge	bundle	11	12	13	13
TimberCrest	box	18	20	21	22
Attic Ventilation					
Cobra 4' Plastic Ridge Vents	foot	124			
Master Flow SSB960 Metal Slant-Black	vent	38			
Master Flow High-Capacity Dome Vent	vent	16			
Cobra IntakePro Rooftop Intake	foot	248			

Notes: 1) These approximate quantities are based on estimated measurements and are for guidance purposes only. You should always confirm quantities prior to ordering and ensure you are following local building code requirements. 2) For Timberline, 3 bundles = 0.984 squares. 3) Starter = eaves + rakes. 4) Leak barrier = bends + eaves + flashing + hips + rakes + step + valleys. 5) Ridge cap = hips + ridges. 6) Estimated quantity of attic ventilation products based solely on exterior roof area and intended for estimating purposes only. Installer must verify attic floor square footage, roof design, local code requirements, quantity/type/approved roof pitch of recommended vent products, and conditioned space under the roof. Always have a balanced attic ventilation system. In no case should the amount of exhaust ventilation exceed the amount of intake ventilation. For more info, visit gaf.com/ventcalculator. 7) Low-slope products applied to 1/12 pitch areas. 8) Timberline products applied to 2/12 pitch areas and above.

* Installed coverage will be less and depend on quantity and width of side and end laps.