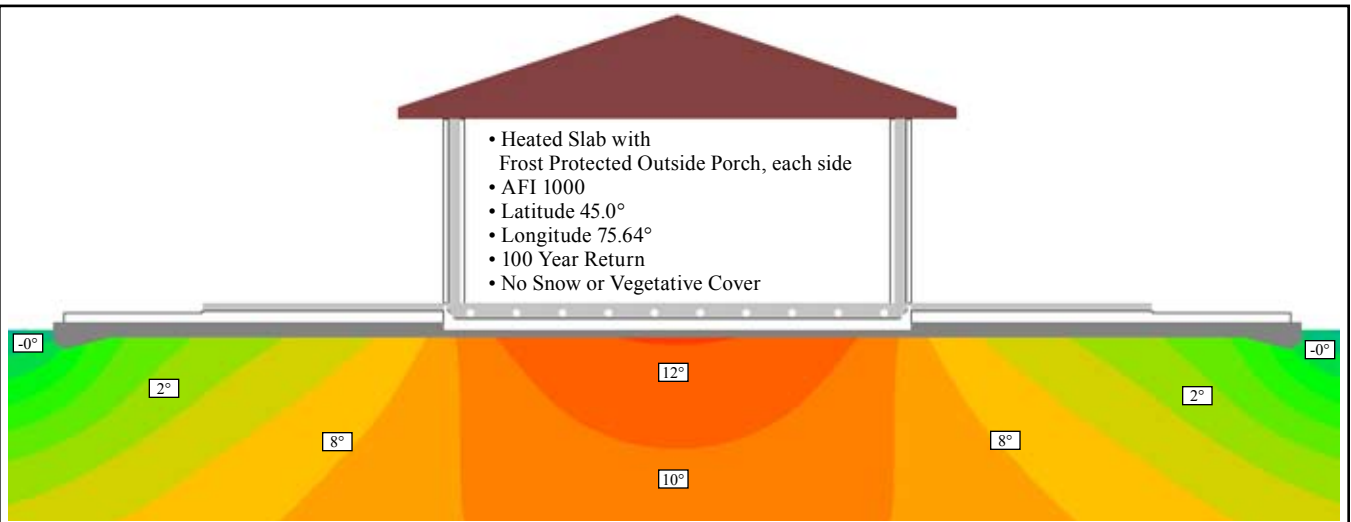


LEGALETT.



DESIGN PARAMETERS

Latitude:	45.0°
Longitude:	75.64°
Building location:	Merrickville, ON
Building location elevation:	107.9 m / 354 ft.
Nearest weather station:	Kemptville, ON
Nearest weather station elevation:	99.4 m / 326 ft.
Nearest weather station average AFI in °C_Days:	1000
Design AFI:	1390
Design outdoor temperature:	-23° C / -9.4° F
Mean soil design temperature:	9° C / 48° F
Existing simulation ground temperature based on AFI:	8° C / 46° F
Building Area:	408.9 m² / 4,401 sq. ft.
Building perimeter:	98.7 m / 324 ft.



THE TEAM

Developer/Owner: **Stephanie DeJong (613) 295-0784 / steph@tippyskennel.com**

Designer/Builder: **Arden Robitaille Construction Inc. / Arnprior, ON / (613) 623-8579 .**
Legalett installer: **Arden Robitaille Construction Inc. / Arnprior, ON / (613) 623-8579 .**

Legalett Service Representative: **John Teixeira - ICF Rideau / Westport, ON / (877) 273-5536 .**

TIPPY'S WOODLAND BOARDING KENNEL



<http://tippyskennel.com>

6.5

BUILDING ISSUES

LEGALETT

WHY LEGALET ?

- Legalett saved time over conventional footings and frost walls for slab on grade.
- A continuous centre drain was designed by Legalett to facilitate kennel clean up.
- Fast turnaround time for design and delivery was needed to accommodate schedule.
- A combination of heated and cold slab application was central to the design and Legalett provided the solutions.

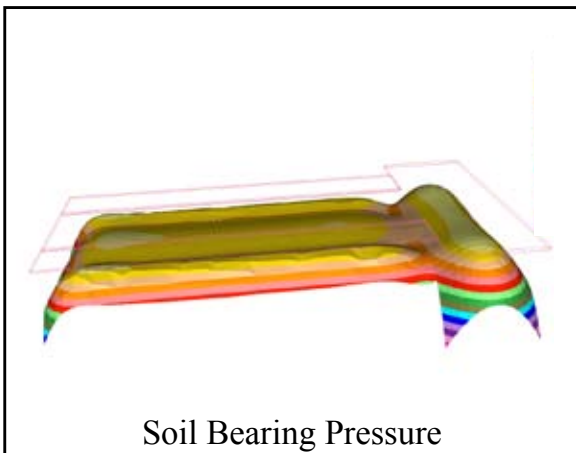
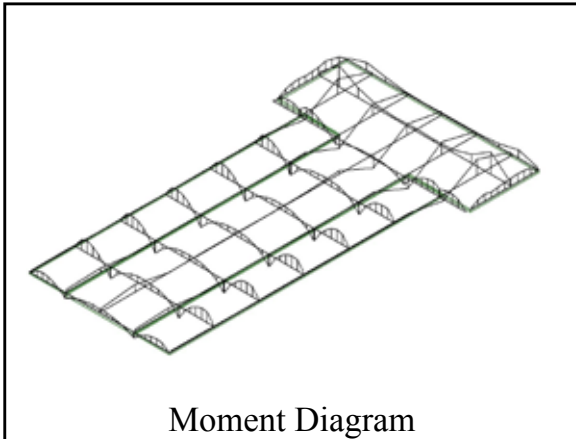
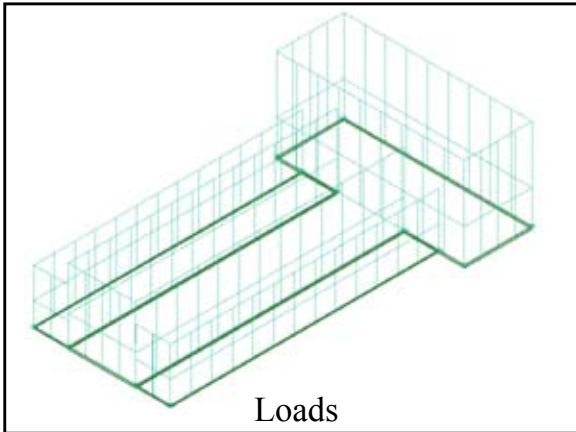
“John Teixeira - (ICF Rideau)”

We planned Legalett into this project at concept stage. We were looking for:

- Ease and speed of construction.
- Optimum comfort for staff and occupants(dogs).
- Thermal storage to take advantage of time of use metering.
- Zone control options.
- A no water leak alternative to hydronic infloor.

“Arden Robitaille - (Builder)”

STRUCTURAL



ENERGY

LEGALETT

Heat Loss Page 4 of 24
Legalett Project # 6061

Order Date	March 31, 2007	Project Title	Tippy's Kennel
Start Delivery Date	April 12, 2007	City	Merriville
Service Rep	ICF Rideau	Revised	
Installer	Arden Robitaille Construction Inc.	Nearest City	Ottawa, ON

Room Name	sq ft Area	Feet of Permet	sq ft Ceiling	sq ft Wind	sq ft Doors	Blow/s		Blow/sq ft		kW		Chkd.		
						Req.	Supp.	Req.	Supp.	Req.	Design			
Reception	221	18.7	221	46	2	2.282	2.282	2.818	10.33	10	12.78	0.67	0.65	0.82
Main Kennel Area	1600	180.0	1600	178	209	18.457	18.457	20.302	10.20	10	12.69	4.62	4.60	5.86
Call Area	253	47.3	253	51	21	3.671	3.671	4.629	13.47	10	16.82	1.08	0.90	1.33
Lab Area	263	16.6	263	16	1	1.600	2.626	2.344	6.49	10	8.61	0.58	0.86	0.69
Storage	230	28.1	230	10	21	1.817	2.300	2.365	9.19	10	11.86	0.66	0.62	0.89
Electrical and Mechanical	124	22.4	124	10	1	1.432	1.239	1.787	11.66	10	14.28	0.42	0.36	0.52
										10	10.00			
										10	10.00			
										10	10.00			
Total Individual Rooms	2720	312.0	2720	265	261	27.699	27.200	34.122	10.17	10	12.64	8.11	7.97	10.00
Entire Level	2720	312.0	2720	265	261	27.699	27.200	34.122	10.17	10	12.64	8.11	7.97	10.00

Room Name	Heaters			Loops			Zones			Chkd.
	Req.	Supp.	Design	Req.	Supp.	Design	Req.	Supp.	Design	
Reception	0.1	0.1	0.2	1.1	1.1	1.1	0.8	0.8	0.7	
Main Kennel Area	1.0	0.9	1.2	7.7	7.7	7.7	3.9	3.9	4.8	
Call Area	0.4	0.4	0.4	1.4	1.4	1.4	0.8	0.8	1.1	
Lab Area	0.1	0.2	0.1	0.6	0.4	0.9	0.4	0.7	0.5	
Storage	0.1	0.1	0.1	0.9	1.0	0.9	0.4	0.5	0.6	
Electrical and Mechanical	0.1	0.1	0.1	0.7	0.6	0.7	0.3	0.3	0.4	

Heat Loss

LEGALETT 4000 series Design Parameters PAGE 1 of 2

Project #	6061	Name	Tippy's Kennel
Location	Kemptville, ON		
Building size	2720	square feet	
Building size	253	square meters	
Building perimeter	312	feet	
Building perimeter	95	meters	
Indoor design temperature	21	Degrees Celsius (normally 22 C)	
Outdoor design temperature	-25	Degrees Celsius	
Mean Soil Temperature	10	Degrees Celsius	
Average Air Freeze Index	963	Degree Days-Celsius	
Mean Annual Temperature	10.17	Degree Celsius	
Heat Load	10.17	Btu per hour per square foot	
Heat Load	32.06	Watts per square meter	
Design Heat Density	10.19	Btu per hour per square foot	
Design Heat Density	32.12	Watts per square meter	
Slab on Grade	<input checked="" type="radio"/> Choose	tile, vinyl, linoleum, laminate	<input checked="" type="radio"/> Choose
Upper Floor	<input type="radio"/> Choose	hardwood, 1/2" carpet&pad	<input type="radio"/> Choose
Basement	<input type="radio"/> Choose	1" carpet& pad, wool carpet&pad	<input type="radio"/> Choose
pipe system	<input type="radio"/> 50 mm	<input checked="" type="radio"/> 100 mm	
Heater coverage	158.00	m2 (standard coverage 127 m2)	
Volume flow rate per heater	1022	m3/hour	<input checked="" type="radio"/> electric coil
Design Loop Length	16.5	m	<input type="radio"/> water coil
Design Equivalent Length	25.0	m	
Pressure Drop Loop	N/A	Fan 279	278 Pa
			adjust C23 to match

Piping Density

