



Deck Designer Specification Kit For  
**AZEK**

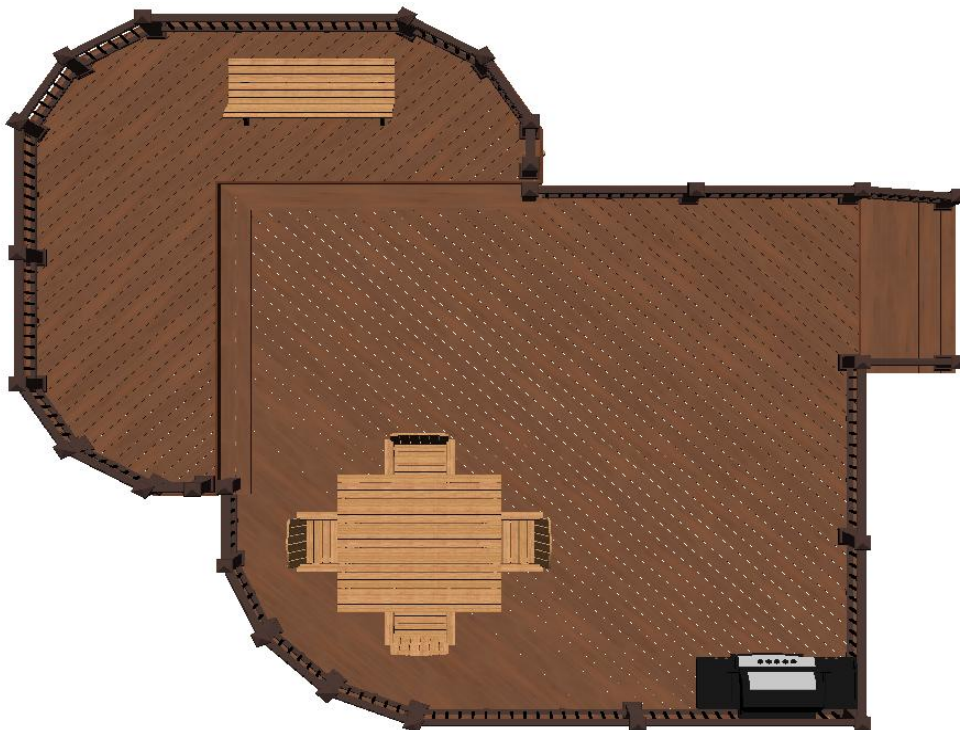
**Deck layout diagram**



Top view without planks

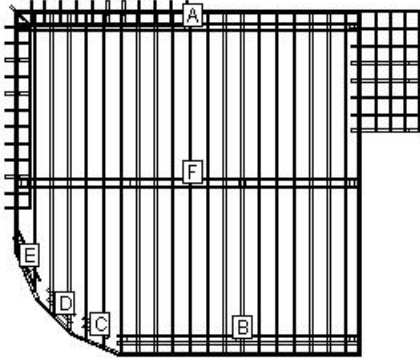


Bottom view with planks



Top view with planks

Permit Page: Level 1



**LOAD AND SUPPORT:**

Your deck will support a 50 PSF live load.  
Posts have 36" below ground support.

**DECK AND POST HEIGHT:**

You selected a height of 36" from the top of the decking to the ground level. The top of the deck support posts will therefore be 27" above ground level.

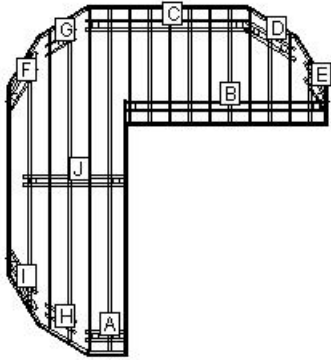
**Joists:**

Set joists on top of beams, 12"; center to center.

**Stress Analysis: Level 1**

Joist Deflection	246
Joist Bending	83
Joist Shear	134
Joist Compression	134
Beam Deflection	154
Beam Bending	60
Beam Shear	62
Post Stability	113

Permit Page: Level 2



**LOAD AND SUPPORT:**

Your deck will support a 90 PSF live load.  
Posts have 36" below ground support.

**DECK AND POST HEIGHT:**

You selected a height of 50" from the top of the decking to the ground level. The top of the deck support posts will therefore be 41" above ground level.

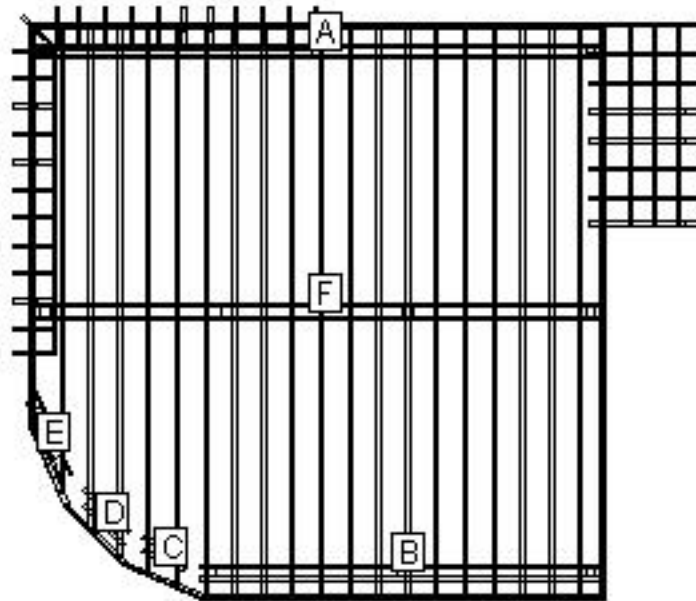
**Joists:**

Set joists on top of beams, 12"; center to center.

**Stress Analysis: Level 2**

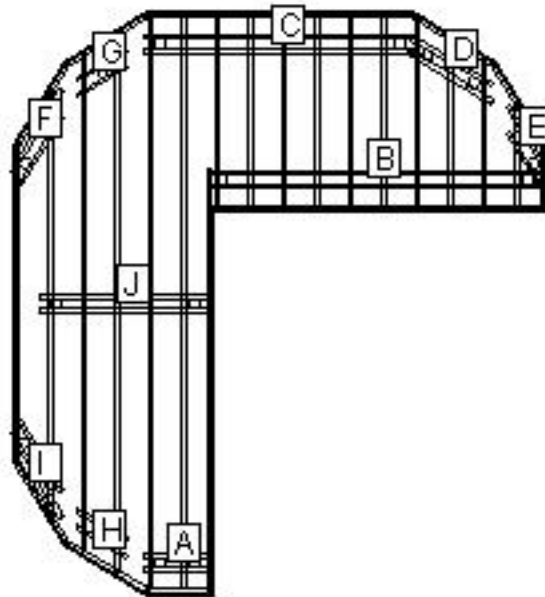
Joist Deflection	447
Joist Bending	123
Joist Shear	160
Joist Compression	160
Beam Deflection	337
Beam Bending	120
Beam Shear	100
Post Stability	325

### Beam Layout Level 1



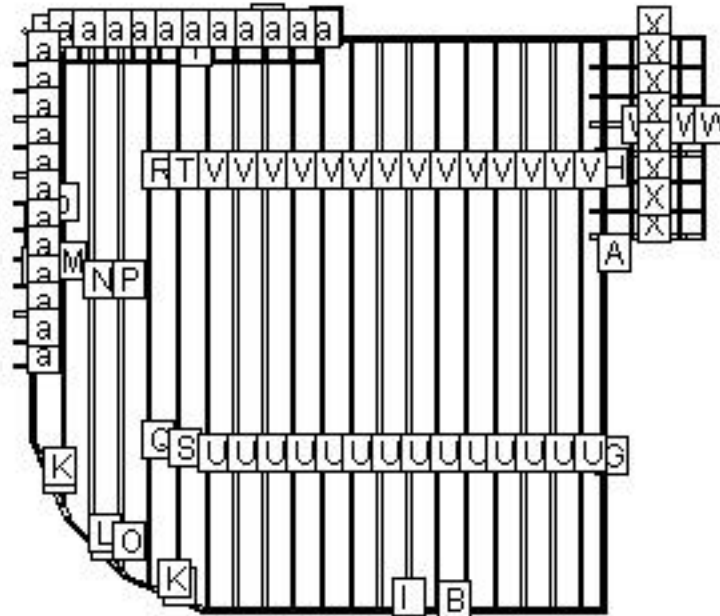
BEAM LABEL	BEAM LENGTH	POST COUNT	POST SPACING
A	19' 10 1/4"	3	9' 5 1/2"
B	14' 1/2"	3	6' 6 1/2"
C	1' 7 1/2"	1	0
D	1' 11"	1	0
E	3' 2"	2	1' 6 1/4"
F	19' 10 1/4"	4	6' 3 1/2"

### Beam Layout Level 2



BEAM LABEL	BEAM LENGTH	POST COUNT	POST SPACING
A	2' 1/2"	2	1' 1"
B	10' 1 1/2"	2	9' 2"
C	8' 2 1/2"	2	7' 3"
D	2' 9 1/4"	2	1' 7 3/4"
E	2' 4 3/4"	2	11 1/4"
F	2' 11"	2	1' 5 3/4"
G	1' 9"	1	0
H	1' 9"	1	0
I	2' 11"	2	1' 5 3/4"
J	5' 1 1/4"	2	4' 1 3/4"

Materials Cut List: Level 1



LABEL	NAME	QTY	LENGTH	BEVELS	LABEL	NAME	QTY	LENGTH	BEVELS
A	Cladding	2	20'	45, 45	O	Internal Joist	1	1'	0, 45
B	Cladding	1	14'	11, 45	P	Internal Joist	1	17' 3 1/2"	0, 45
C	Cladding	1	14'	45, 11	Q	Internal Joist	1	9' 1 1/4"	0, 23
D	Cladding	2	3'	11, 11	R	Internal Joist	1	9' 8 1/2"	0, 23
E	Cladding	1	2' 11 1/4"	11, 11	S	Internal Joist	1	9' 5 1/4"	0, 23
F	Header	1	19' 7 1/4"	0, 0	T	Internal Joist	1	9' 9 1/2"	0, 23
G	Rim Joist	1	9' 11 1/4"	0, 0	U	Internal Joist	14	9' 9 1/2"	0, 0
H	Rim Joist	1	9' 11"	0, 0	V	Internal Joist	14	9' 9 3/4"	0, 0
I	Header	1	13' 9 1/2"	0, 0	W	Riser	4	7'	0, 0
J	Rim Joist	1	13' 11"	0, 0	X	Pre Cut Stringer	8	4' 2"	0, 0
K	Header	2	2' 11 1/2"	0, 0	Y	Riser	1	9' 2"	45, 0
L	Header	1	2' 11"	0, 0	Z	Pre Cut Stringer	1	1' 5"	0, 0

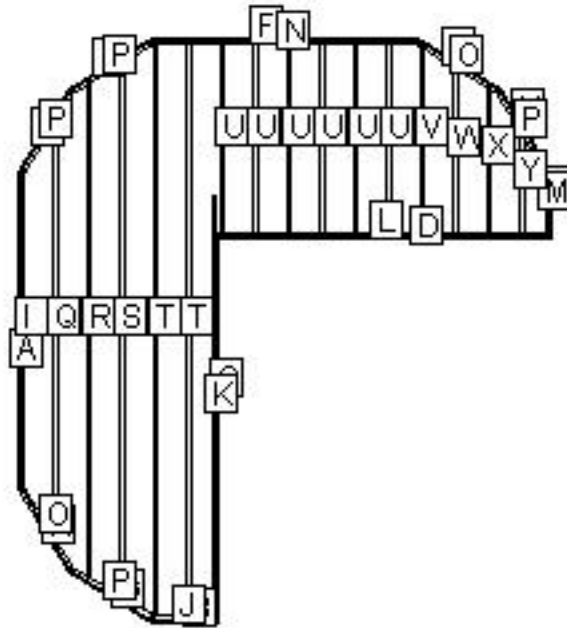
Cut Angles: L=Left, R=Right, F=Front, S=Side

LABEL	NAME	QTY	LENGTH	BEVELS	LABEL	NAME	QTY	LENGTH	BEVELS
M	Internal Joist	1	16' 1 1/2"	0, 67	a	Pre Cut Stringer	23	1' 1 1/4"	0, 0
N	Internal Joist	1	17' 3 3/4"	0, 45	b	Riser	1	10' 8"	0, 45

Cut Angles: L=Left, R=Right, F=Front, S=Side



Materials Cut List: Level 2



LABEL	NAME	QTY	LENGTH	BEVELS	LABEL	NAME	QTY	LENGTH	BEVELS
A	Cladding	1	9' 6"	15, 15	N	Header	1	7' 11 1/2"	0, 0
B	Cladding	1	2'	15, 45	O	Header	2	2' 10 1/2"	0, 0
C	Cladding	1	11' 7"	45, 45	P	Header	4	2' 10 1/2"	0, 0
D	Cladding	1	10' 1"	45, 45	Q	Internal Joist	1	12' 8 3/4"	59, 59
E	Cladding	1	2'	45, 15	R	Internal Joist	1	14' 10 1/2"	31, 31
F	Cladding	1	8'	15, 15	S	Internal Joist	1	16' 1"	31, 31
G	Cladding	3	2' 11"	14, 15	T	Internal Joist	2	17' 1 1/4"	0, 0
H	Cladding	3	2' 11"	15, 14	U	Internal Joist	6	5' 7 1/4"	0, 0
I	Rim Joist	1	9' 5 1/2"	0, 0	V	Internal Joist	1	5' 6 1/4"	31, 0
J	Header	1	1' 9 1/2"	0, 0	W	Internal Joist	1	4' 11 1/4"	31, 0
K	Rim Joist	1	12' 8 3/4"	0, 0	X	Internal Joist	1	4' 4"	31, 0
L	Header	1	10'	0, 0	Y	Internal Joist	1	2' 11 1/2"	59, 0

Cut Angles: L=Left, R=Right, F=Front, S=Side

LABEL NAME	QTY	LENGTH	BEVELS	LABEL NAME	QTY	LENGTH	BEVELS
M	1	1' 11"	0, 0				

Cut Angles: L=Left, R=Right, F=Front, S=Side

## Component Descriptions

These recommendations are for railing with a 4" gap from deck surface to the bottom of the bottom rail. Always refer to your local building codes to determine if other requirements must be met. Canadian requirements may vary.

TimberTech RadianceRail and AZEK Black and White rail sections are available in 10 ft. sections. See your local TimberTech or AZEK Dealer for more information.

### Lumber Materials

COMPONENT	QTY	DESCRIPTION	WOOD TYPE
Rim Joist	4	2X8X14 Treated	TREATED
Internal Joist	12	2X8X18 Treated	TREATED
Internal Joist	5	2X8X8 Treated	TREATED
Internal Joist	35	2X8X10 Treated	TREATED
Beam	6	2X10X10 Treated	TREATED
Beam	2	2X10X16 Treated	TREATED
Beam	3	2X10X8 Treated	TREATED
Beam	3	2X10X14 Treated	TREATED
Pre Cut Stringer	8	4-Step Treated Stair Stringer	TREATED
Pre Cut Stringer	24	2-Step Treated Stair Stringer	TREATED
Railing Post	1	4X4X14 Treated	TREATED
Railing Post	4	4X4X18 Treated	TREATED
Railing Section	12	AZEK 8' Premier Custom Rail Pack - Kona® - 8'	AZEK
Railing Section	12	TT/AZEK 31" Round Aluminum Baluster - Black - 31"	AZEK
Cladding	13	AZEK Arbor Collection® Rim Joist Covers/Fasica - Redland Rose® - 12'	AZEK
Decking	23	AZEK Vintage Collection® Deck Plank, Grooved - Mahogany® - 16'	AZEK
Decking	44	AZEK Vintage Collection® Deck Plank, Grooved - Mahogany® - 20'	AZEK
Post	14	4X4X8 Treated	TREATED
Riser	6	AZEK Arbor Collection® Rim Joist Covers/Fasica - Redland Rose® - 12'	AZEK
Stair Step	5	AZEK Vintage Collection® Deck Plank, Grooved - Mahogany® - 12'	AZEK
Railing Section	2	TT/AZEK 31" Round Aluminum Stair Baluster - Black - 31"	AZEK
Pre Cut Stringer	1	3-Step Treated Stair Stringer	TREATED
Internal Joist	1	2X8X16 Treated	TREATED
Beam	2	2X10X12 Treated	TREATED
Railing Post	1	4X4X8 Treated	TREATED
Railing Section	1	AZEK 6' Premier Custom Rail Pack - Kona® - 6'	AZEK

**Lumber Materials**

<b>COMPONENT</b>	<b>QTY</b>	<b>DESCRIPTION</b>	<b>WOOD TYPE</b>
Rim Joist	1	2X8X12 Treated	TREATED
Beam	2	2X10X18 Treated	TREATED

To find an AZEK and/or TimberTech Dealer or Contractor in your area, please go to [www.azek.com](http://www.azek.com)

### Other Materials

Qty	Description
4	1 LB. 10D X1 1/2" Nail
1	5 LB. 10D Hot-Dip Galvanized Nail
5	1 LB. 10D Hot-Dip Galvanized Nail
53	2x8-10" Triple Zinc Joist Hanger JUS28-TZ
26	5" Triple Zinc Angle Clip MP5-TZ
1	1LB. 16D Galvanized Common Nail
2	2x6-8" Triple Zinc Right Skewed Joist Hanger SKH26R-TZ
5	7" Triple Zinc Angle Clip AC7-TZ
4	5" Triple Zinc Angle Clip MP5-TZ
5	1LB. 8D Galvanized Common Nail
5	1 LB. 1-1/2" Joist Hanger Nail
103	Triple Zinc Rafter Tie RT7-TZ
32	Anchor Bolt AB128
32	4X4 Triple Zinc Deck Post Anchor PA44E-TZ
51	80 L.B. Basic Concrete Mix
1	40 LB. Basic Concrete Mix
2	10 LB. Basic Concrete Mix
24	8" X 48" Concrete Form Tube
512	1/2 Galvanized Flat Washer
11	1/2 Galvanized Hex Nut
256	1/2 X 8" Galvanized Carriage Bolt
32	7" Triple Zinc Angle Clip AC7-TZ
52	4X4 Triple Zinc Deck Post Tie SDPT7-TZ
1	1 LB. 8X3" Philips Head Stainless Deck Screws
26	AZEK 5 1/2" Post Skirt - Kona®
104	3/8 Galvanized Hex Nut
208	3/8 Galvanized Flat Washer
104	3/8 X 8" Galvanized Carriage Bolt
26	AZEK 5 1/2" Pyramid Cap - Kona®
26	AZEK 5.5" x 5.5" Post Sleeve - Kona® - 39"
18	2 Pieces of Joist Material Nailed to Each Joist Splice
1	AZEK Cortex - 100 LF Vintage Collection® - Mahogany
6	TimberTech CONCEALoc Hidden Fastener - Unit = 8 retail cartons @ 100 sq.ft. coverage each (175 CONCEALoc fasteners, 184 Screws and drive bit) - Brown

**LEGAL DISCLAIMER:** The suggested design is a construction guide and is **NOT** a finished building plan. It is your responsibility to verify its accuracy, completeness, suitability for your particular site conditions, and compliance with local building codes and practices. Please consult your local building codes for requirements for deck lighting, railing, and stairs.

**AZEK Building Products and its affiliates assume no responsibility for any damages, including direct or consequential, personal injuries suffered, or property or economic losses incurred as a result of the information published within this Deck Design, AZEK Building Products and its affiliate websites or Deck Design Detail Report. Before beginning any project, review the instructions carefully. We cannot anticipate all of your working conditions or the characteristics of your materials and tools. For your safety, you should consider your own skill level and use caution, care and good judgment when following the instructions. If you have doubts, concerns or questions, consult local experts, architects, soil engineers or building authorities. Because local zoning and building codes and regulations vary greatly, you should ALWAYS CHECK WITH LOCAL AUTHORITIES TO ENSURE THAT YOUR PROJECT COMPLIES WITH ALL APPLICABLE CODES AND REGULATIONS. Always read and observe instructions and safety precautions provided by any tool or equipment manufacturer, and follow all accepted safety procedures.**

**You are responsible for ensuring that all measurements are correct. Due to the size, shape, location or other considerations, your design may require supporting structures, such as knee braces and bridging between joists and posts and are not included on the materials list and other information provided. YOU ARE RESPONSIBLE FOR ENSURING THAT YOUR DESIGN IS SAFE AND STRUCTURALLY SOUND FOR ITS SIZE, LOCATION AND ANTICIPATED USE. You are also responsible for verifying that the design and any substitutions or modifications you make meet all local building codes and regulations.**

**AZEK Building Products and its affiliates assume no liability or responsibility for your design, construction or use of any product supplied by AZEK Building Products.**

**YOU ASSUME TOTAL RESPONSIBILITY AND RISK FOR YOUR USE OF THE AZEK BUILDING PRODUCTS DESIGN, THE AZEK BUILDING PRODUCTS WEBSITE AND SUPPLIED DECK DESIGN DETAIL REPORT. AZEK BUILDING PRODUCTS PROVIDES THIS WEB-BASED TOOL, ALL INFORMATION, PRODUCTS, AND SERVICES "AS IS" AND DOES NOT MAKE EXPRESS OR IMPLIED WARRANTIES, REPRESENTATIONS, OR ENDORSEMENTS OF ANY KIND WHATSOEVER (INCLUDING WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE).**