

Deck Designer Specification Kit For  
**AZEK**

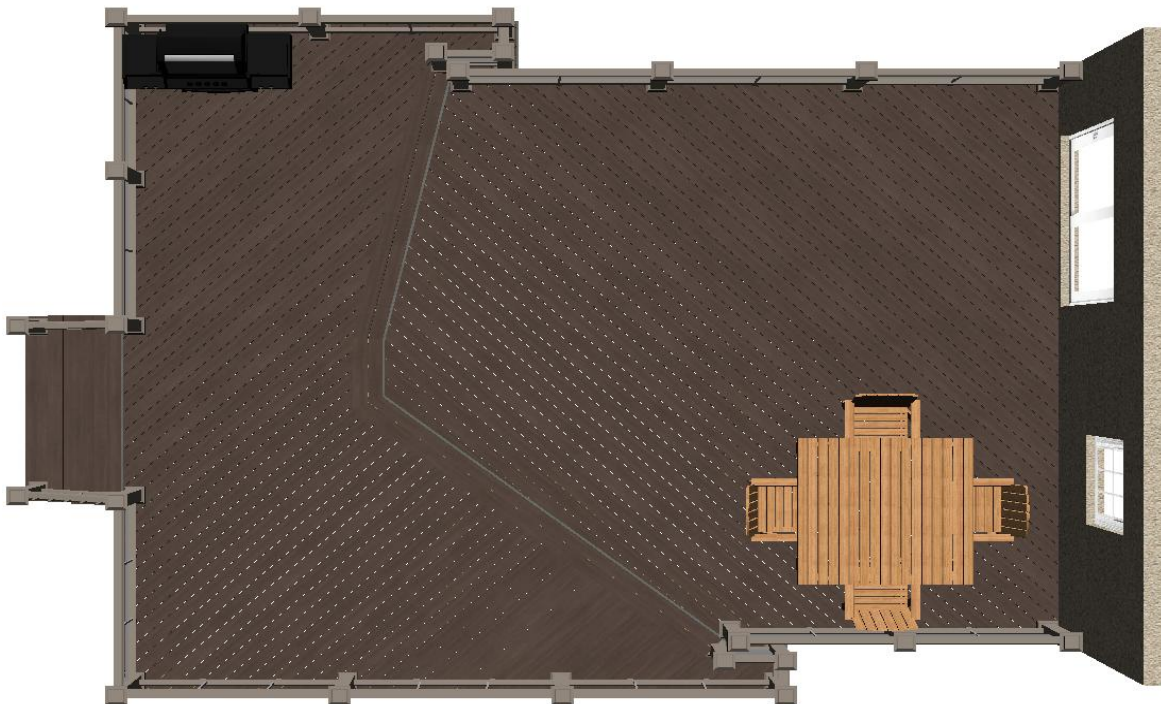
### Deck layout diagram



Top view without planks

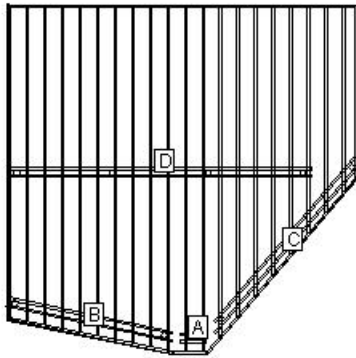


Bottom view with planks



Top view with planks

**Permit Page: Level 1**



**LOAD AND SUPPORT:**

Your deck will support a 41 PSF live load.  
Posts have 36" below ground support.

**DECK AND POST HEIGHT:**

You selected a height of 48" from the top of the decking to the ground level. The top of the deck support posts will therefore be 39" above ground level.

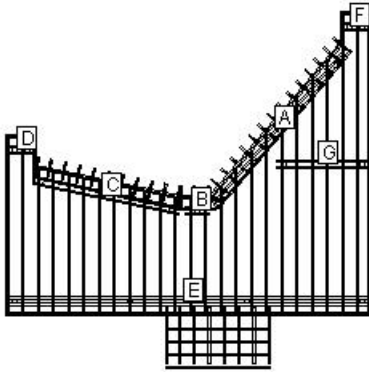
**Joists:**

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

**Stress Analysis: Level 1**

Joist Deflection	122
Joist Bending	51
Joist Shear	110
Joist Compression	110
Beam Deflection	218
Beam Bending	71
Beam Shear	68
Post Stability	126

Permit Page: Level 2



**LOAD AND SUPPORT:**

Your deck will support a 49 PSF live load.  
Posts have 36" below ground support.

**DECK AND POST HEIGHT:**

You selected a height of 34" from the top of the decking to the ground level. The top of the deck support posts will therefore be 25" above ground level.

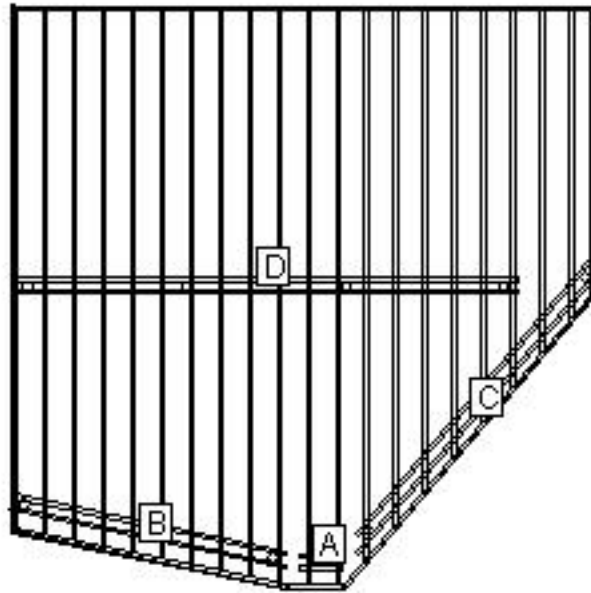
**Joists:**

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

**Stress Analysis: Level 2**

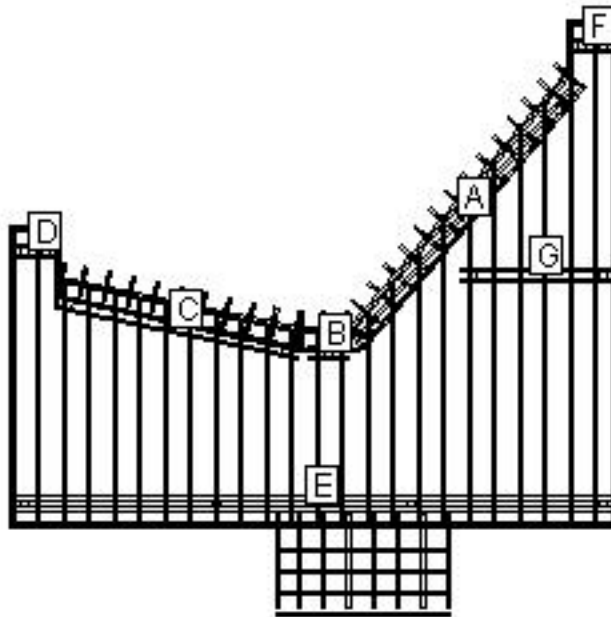
Joist Deflection	150
Joist Bending	59
Joist Shear	117
Joist Compression	117
Beam Deflection	244
Beam Bending	81
Beam Shear	74
Post Stability	143

### Beam Layout Level 1



BEAM LABEL	BEAM LENGTH	POST COUNT	POST SPACING
A	1' 6"	1	0
B	9' 8"	2	8' 7 1/2"
C	12' 8 1/4"	3	5' 8 1/4"
D	17' 3"	4	5' 5 1/4"

### Beam Layout Level 2



BEAM LABEL	BEAM LENGTH	POST COUNT	POST SPACING
A	12' 6 1/4"	3	5' 7 1/4"
B	1' 6"	1	0
C	9' 8 1/2"	2	8' 8 1/4"
D	1' 10 1/4"	2	10 3/4"
E	23' 10 1/4"	4	7' 7 1/2"
F	1' 10 1/4"	2	10 3/4"
G	6' 1 1/4"	2	5' 1 3/4"

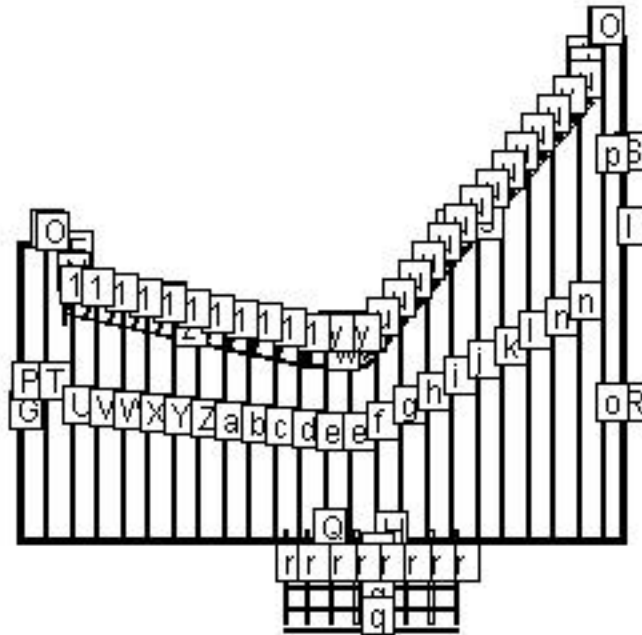


LABEL	NAME	QTY	LENGTH	BEVELS	LABEL	NAME	QTY	LENGTH	BEVELS
M	Internal Joist	1	8' 9 1/4"	0, 12	e	Internal Joist	1	16' 4 1/2"	0, 50
N	Internal Joist	1	9' 3 3/4"	0, 12	f	Internal Joist	1	15' 2 1/2"	0, 50
O	Internal Joist	1	8' 10 3/4"	0, 12	g	Internal Joist	1	14' 1/4"	0, 50
P	Internal Joist	2	9' 4 3/4"	0, 12	h	Internal Joist	1	12' 10 1/4"	0, 50
Q	Internal Joist	1	9' 1 1/4"	0, 12	i	Internal Joist	1	11' 8 1/4"	0, 50
R	Internal Joist	1	9' 4"	0, 12	j	Internal Joist	1	10' 6"	0, 50

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	2' 1/4"	45, 20	b	Internal Joist	1	8' 1/4"	12, 0
B	Cladding	1	13' 3 3/4"	20, 25	c	Internal Joist	1	7' 9 1/2"	12, 0
C	Cladding	1	2' 1/2"	25, 6	d	Internal Joist	1	7' 7"	12, 0
D	Cladding	1	9' 8 1/4"	6, 39	e	Internal Joist	2	7' 6 1/4"	0, 0
E	Cladding	1	2' 3/4"	39, 45	f	Internal Joist	1	8' 4"	50, 0
F	Cladding	2	2'	45, 45	g	Internal Joist	1	9' 6"	50, 0
G	Cladding	1	11' 11"	45, 45	h	Internal Joist	1	10' 8 1/4"	50, 0
H	Cladding	1	24'	45, 45	i	Internal Joist	1	11' 10 1/4"	50, 0
I	Cladding	1	20'	45, 45	j	Internal Joist	1	13' 1/4"	50, 0
J	Rim Joist	1	3' 2 1/4"	0, 0	k	Internal Joist	1	14' 2 1/2"	50, 0
K	Header	1	13' 3 3/4"	0, 0	l	Internal Joist	1	15' 4 1/2"	50, 0
L	Header	1	2' 1/2"	0, 0	m	Internal Joist	1	16' 6 3/4"	50, 0

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

LABEL	NAME	QTY	LENGTH	BEVELS	LABEL	NAME	QTY	LENGTH	BEVELS
M	Header	1	9' 8 1/4"	0, 0	n	Internal Joist	1	17' 8 3/4"	50, 0
N	Rim Joist	1	3' 2 1/2"	0, 0	o	Internal Joist	1	9' 9 1/2"	0, 0
O	Header	2	1' 7 1/4"	0, 0	p	Internal Joist	1	9' 9 3/4"	0, 0
P	Rim Joist	1	11' 9 1/4"	0, 0	q	Riser	4	6' 10 1/4"	0, 0
Q	Header	1	23' 7 1/4"	0, 0	r	Pre Cut Stringer	8	3' 10 1/2"	0, 0
R	Rim Joist	1	9' 11 1/4"	0, 0	s	Riser	1	13' 8"	25, 0
S	Rim Joist	1	9' 11"	0, 0	t	Pre Cut Stringer	1	1' 2 1/4"	0, 0
T	Internal Joist	1	11' 6 1/4"	0, 0	u	Pre Cut Stringer	14	1' 1 1/4"	0, 0
U	Internal Joist	1	9' 6"	12, 0	v	Pre Cut Stringer	1	1' 1 1/4"	0, 0
V	Internal Joist	1	9' 3 1/2"	12, 0	w	Riser	1	2' 6 1/4"	6, 25
W	Internal Joist	1	9' 1"	12, 0	x	Pre Cut Stringer	1	1' 1 1/4"	0, 0
X	Internal Joist	1	8' 10 1/4"	12, 0	y	Pre Cut Stringer	3	1' 1 1/4"	0, 0
Y	Internal Joist	1	8' 8"	12, 0	z	Riser	1	9' 8 3/4"	0, 6
Z	Internal Joist	1	8' 5 1/4"	12, 0	1	Pre Cut Stringer	11	1' 1 1/4"	0, 0
a	Internal Joist	1	8' 2 3/4"	12, 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	15	2X8X18 Treated	TREATED
Internal Joist	25	2X8X10 Treated	TREATED
Internal Joist	9	2X8X12 Treated	TREATED
Internal Joist	6	2X8X16 Treated	TREATED
Internal Joist	2	2X8X14 Treated	TREATED
Beam	6	2X10X10 Treated	TREATED
Beam	4	2X10X14 Treated	TREATED
Beam	2	2X10X18 Treated	TREATED
Railing Post	2	4X4X8 Treated	TREATED
Railing Post	4	4X4X18 Treated	TREATED
Railing Section	13	AZEK 6' Premier Custom Rail Pack - Slate Gray - 6'	AZEK
Baluster	19	TT/AZEK CableRail 36" Intermediate Baluster [1 9-hole baluster, 1 intermediate base plate, 1 #10x2" pan head screw, 3 #10x1" flat head screws] - Silver	AZEK
Cladding	13	AZEK Terra Collection Rim Joist Covers/Fasica - Tahoe® - 12'	AZEK
Decking	10	AZEK Vintage Collection® Deck Plank, Grooved - Dark Hickory® - 12'	AZEK
Decking	76	AZEK Vintage Collection® Deck Plank, Grooved - Dark Hickory® - 16'	AZEK
Decking	10	AZEK Vintage Collection® Deck Plank, Grooved - Dark Hickory® - 20'	AZEK
Beam	3	2X10X8 Treated	TREATED
Post	11	4X4X8 Treated	TREATED
Beam	2	2X10X16 Treated	TREATED
Pre Cut Stringer	8	4-Step Treated Stair Stringer	TREATED
Pre Cut Stringer	33	2-Step Treated Stair Stringer	TREATED
Railing Section	2	AZEK 8' Premier Custom Rail Pack - Slate Gray - 8'	AZEK
Rim Joist	6	2X8X8 Treated	TREATED
Beam	1	2X10X12 Treated	TREATED
Riser	6	AZEK Terra Collection Rim Joist Covers/Fasica - Tahoe® - 12'	AZEK

**Lumber Materials**

<b>COMPONENT</b>	<b>QTY</b>	<b>DESCRIPTION</b>	<b>WOOD TYPE</b>
Railing Section	2	TT/AZEK CableRail 36" Stair Intermediate Baluster [1 angled 9-hole baluster, 1 intermediate base plate, 1 #10x2" pan head screw, 3 #10x1 flat head screws] - Silver	AZEK

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
3	TT/AZEK CableRail 100' Stainless Steel Cable - Stainless - 100'
4	1 LB. 10D X1 1/2" Nail
6	1 LB. 10D Hot-Dip Galvanized Nail
48	2x8-10" Triple Zinc Joist Hanger JUS28-TZ
72	5" Triple Zinc Angle Clip MP5-TZ
8	7" Triple Zinc Angle Clip AC7-TZ
3	5" Triple Zinc Angle Clip MP5-TZ
2	THR128-HDG Threaded Rod
4	DTB-TZ Deck Tie Bracket
5	1LB. 8D Galvanized Common Nail
4	1 LB. 1-1/2" Joist Hanger Nail
99	Triple Zinc Rafter Tie RT7-TZ
26	Anchor Bolt AB128
26	4X4 Triple Zinc Deck Post Anchor PA44E-TZ
41	80 L.B. Basic Concrete Mix
3	10 LB. Basic Concrete Mix
20	8" X 48" Concrete Form Tube
416	1/2 Galvanized Flat Washer
9	1/2 Galvanized Hex Nut
208	1/2 X 8" Galvanized Carriage Bolt
46	4X4 Triple Zinc Deck Post Tie SDPT7-TZ
1	1 LB. 8X3" Philips Head Stainless Deck Screws
23	AZEK 5 1/2" Post Skirt - Slate Gray
92	3/8 Galvanized Hex Nut
184	3/8 Galvanized Flat Washer
92	3/8 X 8" Galvanized Carriage Bolt
23	AZEK 5 1/2" LED Lighted Island Cap - Slate Gray
23	AZEK 5.5" x 5.5" Post Sleeve - Slate Gray - 39"
1	TT/AZEK CableRail Cable Cutters
1	TT/AZEK CableRail Accessory Kit [Quick-Connect release tool, lacing needle, hanger bolt installation tool] -
16	TT/AZEK CableRail 36" Hardware Kit [9 Quick-Connect fittings, 9 Quick Connect Swivel fittings, 18 hanger bolts, 9 lock nuts] - Stainless
1	TT/AZEK CableRail Protector Sleeves [Pack of 20] - Stainless
13	2 Pieces of Joist Material Nailed to Each Joist Splice
7	TimberTech CONCEALoc Hidden Fastener - Unit = 8 retail cartons @ 100 sq.ft. coverage each (175 CONCEALoc fasteners, 184 Screws and drive bit) - Brown
40	1/2 X 6" Galvanized Lag Screw
1	TT/AZEK CableRail 500' Stainless Steel Cable - Stainless - 500'

<b>Qty</b>	<b>Description</b>
1	5 LB. 10D Hot-Dip Galvanized Nail
1	60 L.B. Basic Concrete Mix
39	7" Triple Zinc Angle Clip AC7-TZ
1	AZEK Cortex - 100 LF Vintage Collection® - Dark Hickory

**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.

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**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.**

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