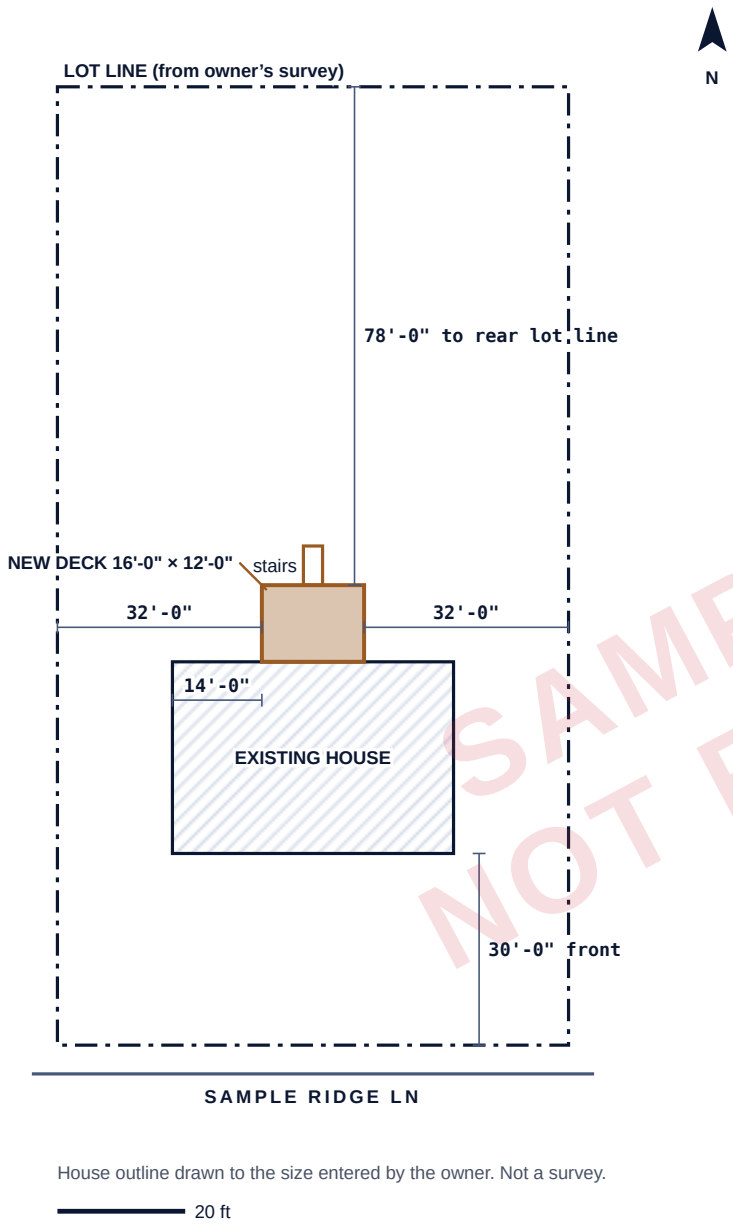
A1 · SITE PLAN



SITE NOTES

- New attached deck, 16'-0" × 12'-0", 4'-0" above grade, with stairs to grade.
- Lot lines and house location as entered by the owner from their survey.
- House outline drawn to the size entered by the owner — not a survey.
- Confirm setbacks and any easements with the building department.

DESIGN BASIS

- **Code:** 2021 International Residential Code, section R507 (decks), and AWC DCA 6. Towns adopt different editions (2015, 2018, 2021) and local amendments — confirm which applies with your building department.
- **Loads:** 50 psf (40 live + 10 dead), Table R301.5. Soil 1,500 psf presumptive (Table R401.4.1).
- **Lumber:** Southern Pine #2, pressure treated, ground contact where in or near soil.
- **Joists** 2×8 @ 16" o.c., span 10'-6" — Table R507.6. **Overhang** 1'-6" — R507.6 cantilever limits.
- **Decking** 5/4 × 6 treated, straight boards — Table R507.7.
- **Beam** 2-ply 2×10 on 3 6×6 posts @ 7'-0" — Tables R507.5, R507.4.
- **Footings** 20" dia. × 48" deep, bottom below the 42" frost line — R507.3, Table R507.3.1.
- **Ledger** ½" lags @ 15" o.c. staggered, flashed — Table R507.9.1.3, R507.9.1.2. **Lateral load:** two 1,500 lb hold-downs — R507.9.2.
- **Guards** 36" (36" min.), openings under 4" — R312. **Stairs** 7 risers @ 6-7/8", treads 11-1/4", handrail 34"–38" — R311.7.
- Fasteners and connectors hot-dip galvanized or stainless — R507.2.3.
- How every number is worked out: aerialquote.com/deck-methodology

SAMPLE PLAN NOT FOR PERMIT

STARTING-POINT PLAN · NOT AN ENGINEERED OR ARCHITECTURAL DRAWING · REVIEW WITH YOUR BUILDING DEPARTMENT BEFORE YOU BUILD

AerialQuote

PROJECT
Attached deck, 16'-0" × 12'-0"

ADDRESS
128 Sample Ridge Ln, Anytown, USA

HEIGHT
4'-0" to deck surface

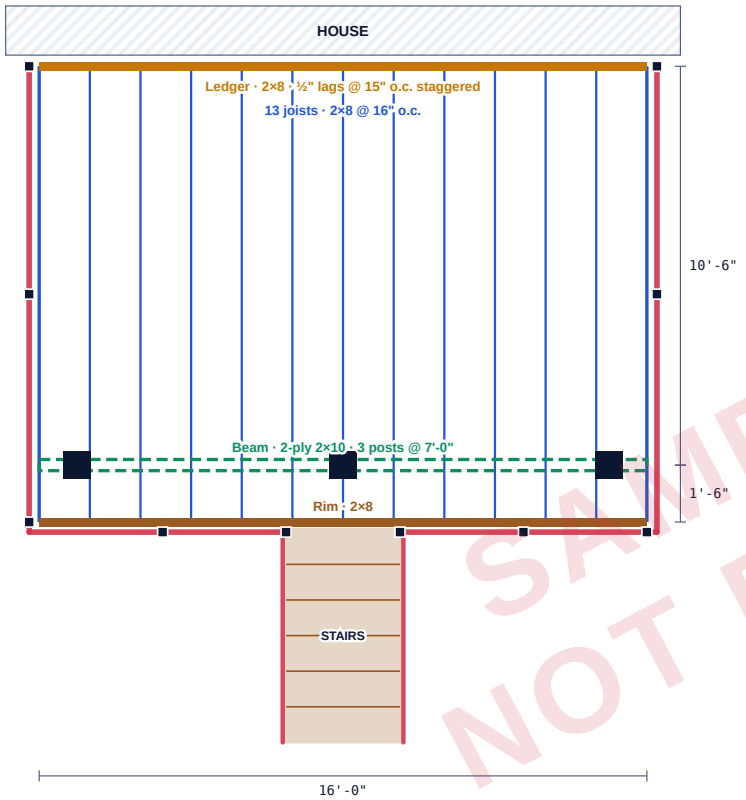
LOAD RATING
Standard · 50 psf

PREPARED
Oct 11, 2026

OWNER

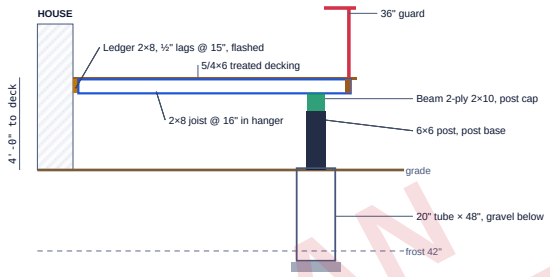
NOT AN ENGINEERED OR ARCHITECTURAL DRAWING. A starting point generated from the prescriptive tables of the 2021 IRC (R507) and AWC DCA 6, using assumed soil, lumber, frost depth and loads that may not match this site. Not reviewed by a licensed engineer or architect. Have it reviewed by your building department, and by a licensed professional where required, before building. AerialQuote is not responsible for construction or for compliance with local codes.

A2 · FRAMING PLAN

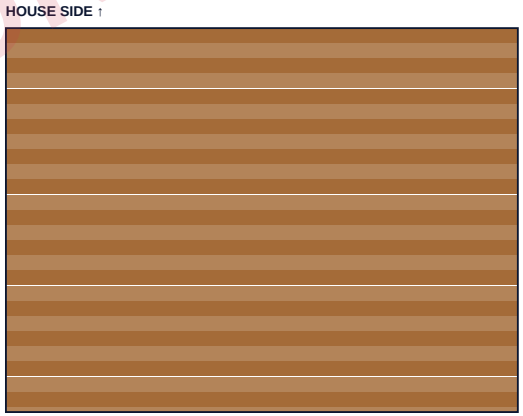


Joists run away from the house. The beam sits 10'-6" out, with a 1'-6" overhang past it to the rim.

A3 · SECTION



A4 · DECKING LAYOUT



26 rows of 16 ft boards, parallel to the house · no butt joints

2 screws per board at every joist, 1 in from the edges

SAMPLE PLAN
NOT FOR PERMIT

STARTING-POINT PLAN · NOT AN ENGINEERED OR ARCHITECTURAL DRAWING · REVIEW WITH YOUR BUILDING DEPARTMENT BEFORE YOU BUILD

AerialQuote

PROJECT
Attached deck, 16'-0" × 12'-0"

ADDRESS
128 Sample Ridge Ln, Anytown, USA

HEIGHT
4'-0" to deck surface

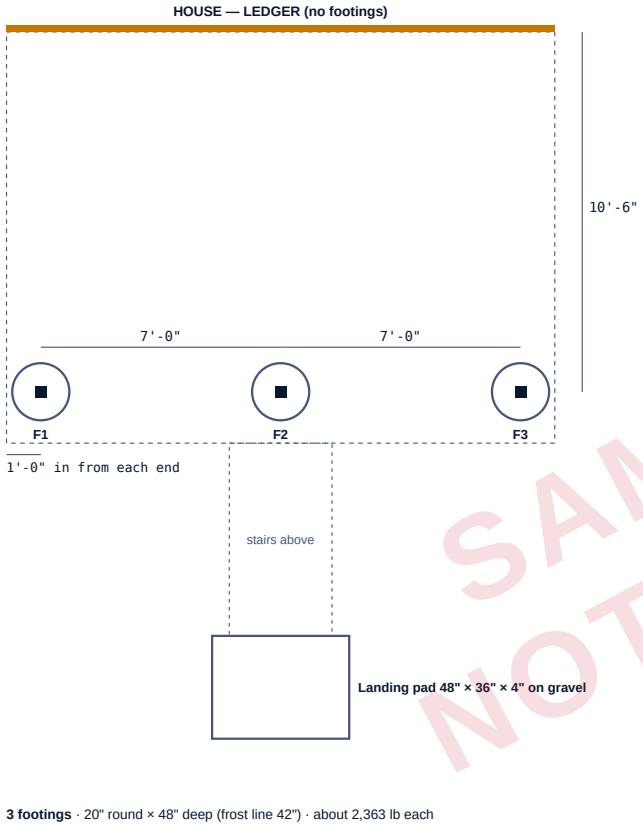
LOAD RATING
Standard · 50 psf

PREPARED
Oct 11, 2026

OWNER

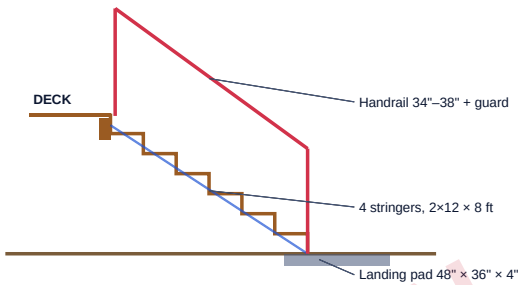
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S1 · FOUNDATION PLAN



3 footings · 20" round × 48" deep (frost line 42") · about 2,363 lb each

S2 · STAIR DETAIL



7 risers @ 6-7/8" · 6 treads @ 11-1/4" · total rise 48" · total run 5'-8" · 36" wide

IRC R311.7: risers 7-3/4" max, treads 10" min, handrail with 4 or more risers.

GENERAL NOTES

- **Code:** 2021 International Residential Code, section R507 (decks), and AWC DCA 6. Towns adopt different editions (2015, 2018, 2021) and local amendments — confirm which applies with your building department.
- **Loads:** 50 psf (40 live + 10 dead), Table R301.5. Soil 1,500 psf presumptive (Table R401.4.1).
- **Lumber:** Southern Pine #2, pressure treated, ground contact where in or near soil.
- **Joists** 2×8 @ 16" o.c., span 10'-6" — Table R507.6. **Overhang** 1'-6" — R507.6 cantilever limits.
- **Decking** 5/4 × 6 treated, straight boards — Table R507.7.
- **Beam** 2-ply 2×10 on 3 6×6 posts @ 7'-0" — Tables R507.5, R507.4.
- **Footings** 20" dia. × 48" deep, bottom below the 42" frost line — R507.3, Table R507.3.1.
- **Ledger** ½" lags @ 15" o.c. staggered, flashed — Table R507.9.1.3, R507.9.1.2. **Lateral load:** two 1,500 lb hold-downs — R507.9.2.
- **Guards** 36" (36" min.), openings under 4" — R312. **Stairs** 7 risers @ 6-7/8", treads 11-1/4", handrail 34"–38" — R311.7.
- Fasteners and connectors hot-dip galvanized or stainless — R507.2.3.
- How every number is worked out: aerialquote.com/deck-methodology

SAMPLE PLAN NOT FOR PERMIT

STARTING-POINT PLAN · NOT AN ENGINEERED OR ARCHITECTURAL DRAWING · REVIEW WITH YOUR BUILDING DEPARTMENT BEFORE YOU BUILD

AerialQuote

PROJECT
Attached deck, 16'-0" × 12'-0"

ADDRESS
128 Sample Ridge Ln, Anytown, USA

HEIGHT
4'-0" to deck surface

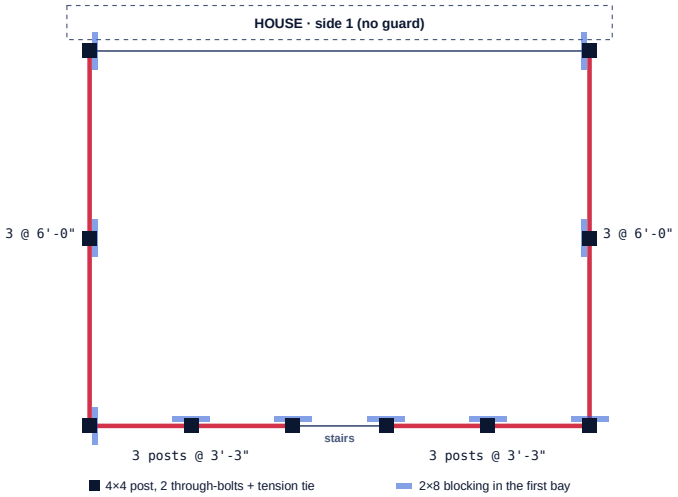
LOAD RATING
Standard · 50 psf

PREPARED
Oct 11, 2026

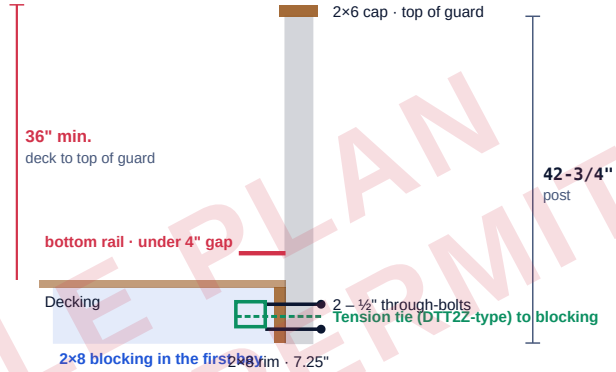
OWNER

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G1 · GUARD POST LAYOUT

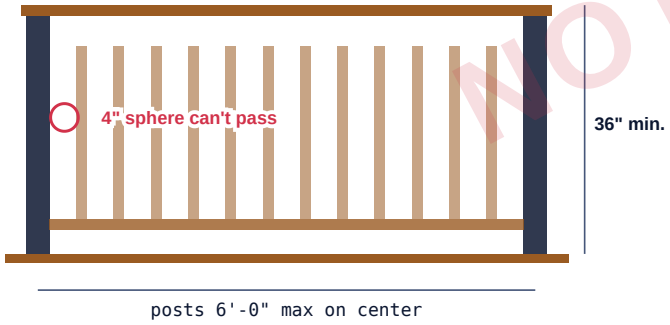


G2 · POST ATTACHMENT



Section through the rim at a post. Same detail on the end joists (sides 2 and 4).

G3 · GUARD BAY



- **Guard height** 36" minimum from the deck surface to the top of the guard (IRC R312.1.2), required where the deck is more than 30" above grade (R312.1.1).
- **Openings**: no gap a 4" sphere can pass (R312.1.3) — bottom rail no more than about 3-1/2" above the deck. On stairs, the triangle under the bottom rail must stop a 6" sphere.
- **Strength**: the top of the guard and each post must resist 200 lb in any direction (Table R301.5).
- **Posts**: 10 – 4×4 treated, 42-3/4" long (34-1/2" above the deck + 1" decking + 7.25" rim), 6'-0" max on center. Each bolted to the rim or end joist with 2 – ½" through-bolts, and tied back with a 1,800 lb tension tie (DTT2Z-type) to solid 2×8 blocking in the first bay — the common prescriptive detail (AWC DCA 6 style).
- **Stairs**: handrail 34"–38" above the tread nosings, graspable (R311.7.8).
- Notched posts are not allowed by many towns — keep posts full 4×4 at the rim. Hot-dip galvanized or stainless hardware.

SAMPLE PLAN NOT FOR PERMIT

STARTING-POINT PLAN · NOT AN ENGINEERED OR ARCHITECTURAL DRAWING · REVIEW WITH YOUR BUILDING DEPARTMENT BEFORE YOU BUILD

AerialQuote

PROJECT
Attached deck, 16'-0" × 12'-0"

ADDRESS
128 Sample Ridge Ln, Anytown, USA

HEIGHT
4'-0" to deck surface

LOAD RATING
Standard · 50 psf

PREPARED
Oct 11, 2026

OWNER

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FOUNDATION

3	20" × 48" concrete form tubes
48	80 lb bags of concrete mix
3	0.5 cu ft bags of gravel
3	6×6 post bases (ABU66 type)
3	Post caps for a 2-ply beam on 6×6

FRAMING LUMBER

13	2×8 × 12 ft joists
1	2×8 × 16 ft ledger
1	2×8 × 16 ft rim board
2	2×10 × 16 ft for the beam
2	6×6 × 8 ft posts

DECKING

28	5/4 × 6 treated deck boards, 16 ft
2	Boxes of #9 × 2-1/2" deck screws (350 count)

RAILING

5	4×4 × 8 ft treated posts
20	½" × 7" galvanized through-bolts, nuts and washers
10	Deck tension ties, 1,800 lb class (DTT2Z-type, with SDS screws)
10	½" × 6" galvanized bolts with nuts and washers (for the ties)
2	2×8 × 12 ft for post blocking
1	Boxes of 3" structural screws (100)
4	2×6 × 16 ft top cap
8	2×4 × 16 ft rails
78	2×2 × 36" balusters
1	Boxes of 2-1/2" exterior screws (350)

STAIRS

4	2×12 × 8 ft stair stringers
3	5/4 × 6 treated deck boards, 16 ft (treads)
4	Adjustable stair-stringer connectors (LSCZ-type)
7	80 lb bags of concrete mix (landing pad)
2	0.5 cu ft bags of gravel (under the pad)
2	4×4 × 8 ft posts (stair rail)
4	2×4 × 8 ft stair rails
28	2×2 × 36" balusters (stairs)
2	Graspable handrails, 8 ft, with 6 brackets

HARDWARE & FASTENERS

13	LUS28-type joist hangers
1	Boxes of joist-hanger nails or structural screws (250)
14	½" × 4" lag screws + washers
2	Lateral load hold-downs, 1,500 lb rated (DTT2Z-type)
13	Hurricane ties (H2.5-type)
1	Boxes of tie nails (250)
24	3" structural wood screws
2	10 ft ledger flashing (Z-flashing)
4	Rolls of joist tape (3" × 50 ft)

SAMPLE PLAN
NOT FOR PERMIT

AerialQuote

PROJECT
Attached deck, 16'-0" × 12'-0"

ADDRESS
128 Sample Ridge Ln, Anytown, USA

HEIGHT
4'-0" to deck surface

LOAD RATING
Standard · 50 psf

PREPARED
Oct 11, 2026

OWNER

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