

The Secret of the Waste Side



How carpenters keep the line, crown the joists, and make wood obey a pencil mark.

THE TRUE LINE

The Secret of the Waste Side

A True Line Book
Laid True · Ash's Yard

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A gift from Valley Tile
Northridge, California

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Written for young builders ages 8 to 18.
Free to read. Free to share with a family.

These methods are real. Tools can bite. Work with a grown-up.
Local building codes always beat a picture book.

The True Line · Six Books

Book One The Secret of Square, Level & Plumb

Book Two The Secret of the Fall

Book Three The Secret of the Waste Side

Book Four The Secret of the Scribe

Book Five The Secret of the Bed

Book Six The Secret of the Dry Room

How to Read a True Line Book

These books keep real trade secrets. Younger readers follow Ash and the pictures. Older readers use the green boxes and go outside with an adult. If you are sitting in a showroom, or in the car on the way to look at stone, the watching lists in the back will give your eyes something honest to do.

IF YOU ARE 8 TO 12

- Read the story first. Look hard at the pictures.
- Try the backyard tests with an adult.
- You do not need a job site. A hose, a board, and chalk are enough.
- New words live in the Word Chest at the back.
- If the house is being remodeled, watch one thing at a time.

IF YOU ARE 13 TO 18

- Read the green boxes. Those are working rules.
- Scale the numbers up. Bigger layouts, smaller percent error.
- Check your tools before you trust them.
- Saws, solder, drain chemicals, and live water are grown-up jobs.
- A trade is a promise: do the work true, even when no one is looking.



THE LUMBER YARD

Wood Is Almost Straight

Ash sent the kids to the lumber stacks. “Meet Cedar,” he said. “Cedar thinks a pencil line is a promise.” Boards bow. Saws eat a little wood. Corners lie. The carpenter’s secrets are how to make almost-straight wood behave. If you are standing in a showroom looking at slabs, remember this: stone is chosen. Wood is argued with. Both only stay true if someone decides which side of the mark is the keeper.

Leave the Line

A saw has a width. That missing sliver is the kerf. If you cut down the middle of the mark, the keeper piece comes up short. Mark the good piece. Cut in the trash. The waste side gets the X so nobody has to guess when the blade starts singing.



TRY THIS

Draw a line on scrap. Put X marks on the waste side. Cut so the pencil line stays on the keeper. Measure both pieces. See what the kerf stole.

FOR OLDER BUILDERS

Carpenters often leave the line on the keep side. Fine woodworkers sometimes split the line. Either way, decide before the saw sings. The waste side gets the X.

Crown Up



Sight down a board. One edge usually bows up like a smile. That smile is the crown. Joists and rafters go crown up so the board settles toward flat, not toward a saggy hammock. A floor that feels like a dip ten years from now often began with a crown pointed the wrong way. The wood told the truth. Nobody listened.

TRY THIS

Stack three 2x4s on sawhorses. Sight each one. Mark the high edge with a caret ^. That mark is “this edge up.”

FOR OLDER BUILDERS

Put the most crowned joists toward midspan. A crown-down joist makes a dip you will feel in the floor forever.

Sixteen On Center



Studs and joists often stand 16 inches from center to center because drywall and plywood are 48 inches wide. Three spaces of 16 make a sheet land on a framing member. The first mark is not 16. It is half the first stud. People who forget that build a wall that fights every sheet.

TRY THIS

On a plank, mark $\frac{3}{4}$ inch (half a 2x4), then 16, 32, 48. Those marks are stud centers. The first mark is not 16 — it is half the first stud.

FOR OLDER BUILDERS

Layout is measured to the center, then you mark the thickness of the stud to each side. A story pole beats a tape when the same spacing repeats.

Square Is Still the Law

Carpentry borrows the mason's math and adds wood's bad habits.

3-4-5

Same secret. Bigger triangle on a wall or deck. Confirm with equal diagonals.

MEASURE TWICE

The cheap version. The real version is: mark once from a story pole.

REFERENCE FACE

Pick one good face and one good edge. All layout starts there.

DON'T CHASE A WALL

Set two true corners or two true plates, then fill the middle.

Cedar's Other Quiet Tools

A tape is loud with numbers. These tools keep you from drowning in them.

STORY POLE

A stick with only the marks this job needs. Stairs, siding, studs, cabinets.

SPEED SQUARE

A triangle that marks 90 and 45 and steps off rafters.

CHALK LINE

A long straight line on floors and plates.

WINDING STICKS

Two matched straightedges. Sight them to see twist in a board.

Cut Like You Mean It

The saw is the last of a chain: crown, reference face, mark, waste X, then cut.

SUPPORT THE KEEP PIECE

If the good end flops, it splits at the last tooth.

LET THE SAW GET TO SPEED

Pushing a slow blade wanders.

WATCH THE TOOTH, NOT THE GUARD

Line the tooth up with the waste side of the mark.

A SHORT PENCIL IS A LIAR

A sharp line has a middle. A fat line is a swamp.

Three Real Projects

Kerf Treasure

Ages 8+

Cut three scraps on the waste side of a line. Stack the sawdust-wide gaps in your mind. That missing ribbon is why the line must stay.

Crown Sort

Ages 10+

Sort a small pile of boards crown-up. Mark carets. Build a tiny joist model that smiles up.

Plate Layout

Ages 12+

Layout a 48-inch plate at 16 inches on center, including the half-stud start. Dry-fit three “studs” on the marks.

What to Watch in Framing

A remodel often opens a wall. The bones show. Read them like a page.

THE X ON THE SCRAP

If both sides of a line look the same, someone has not decided yet.

THE 16-INCH RHYTHM

Count the spaces. Sheets of wood like a steady beat.

TWO CORNERS FIRST

A wall chased from one end collects error like a rolling snowball.

THE SMILE IN THE JOIST

Look down a floor joist. The high edge should be up.

ONE GOOD FACE

Watch which face the marks live on. That is the reference.

THE SHARP PENCIL

A fat line is a guess wearing a costume.

Questions Worth Asking

Wood will not become straighter because you hoped. These questions help you see it clearly.

01 Why does cutting on the waste side keep the keeper honest?

02 What happens to a floor if the crowns all point down?

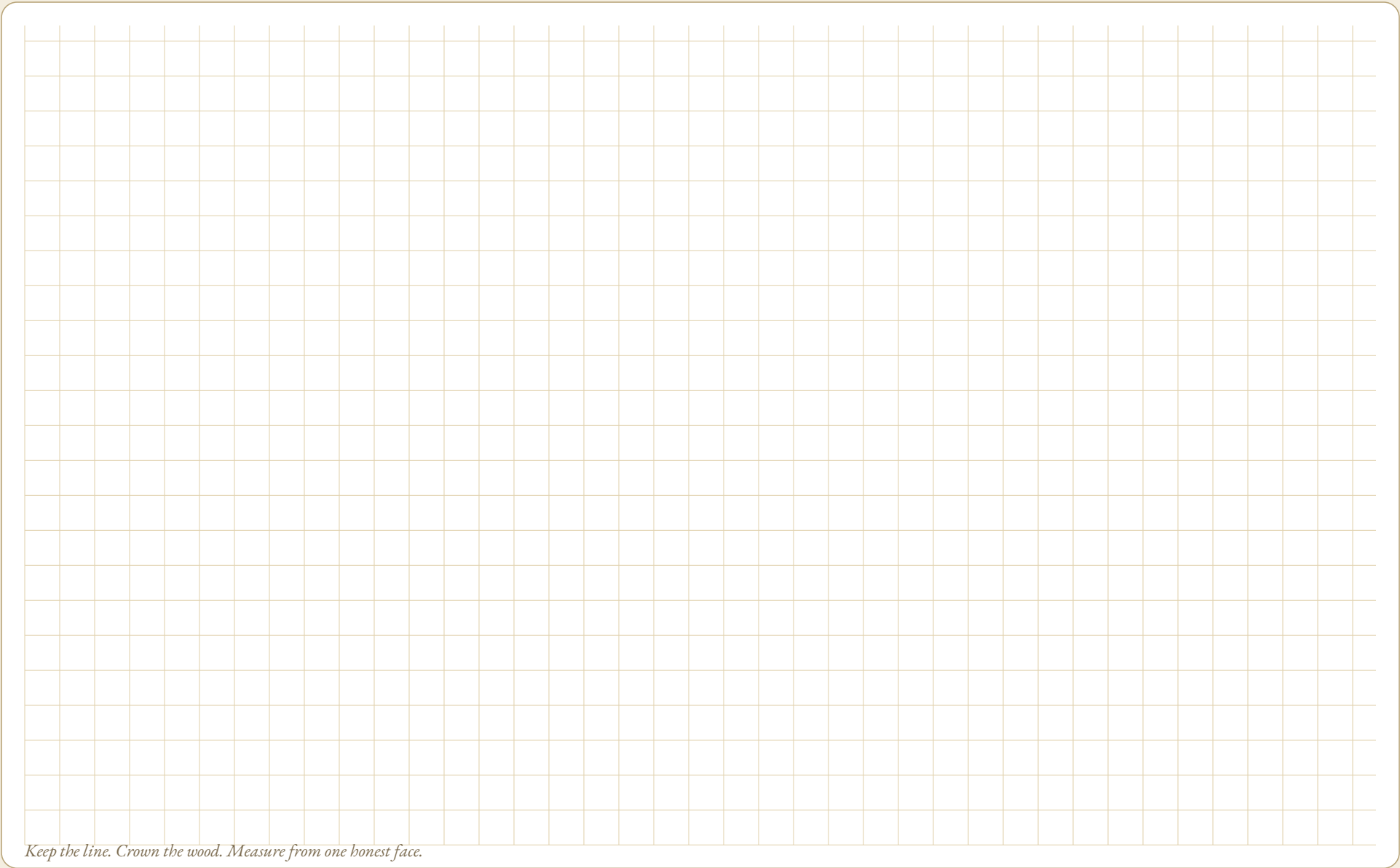
03 Why is the first layout mark half a stud, not a full 16 inches?

04 Cedar says a pencil line is a promise. What promise does a builder make to the next person who lives in the house?

05 When is it braver to throw a crooked board back on the pile than to force it into the wall?

Mark a Plate

On the grid, draw a 48-inch plate. Mark $\frac{3}{4}$ inch, then 16, 32, and 48. Draw a stud on each center. Put a small X on the waste side of one cut line.



Keep the line. Crown the wood. Measure from one honest face.

The Word Chest

Crown

The upward bow of a board. Goes up in joists and rafters.

Kerf

The slot a saw blade eats. It has width.

On center (O.C.)

Spacing measured from the middle of one member to the middle of the next.

Plate

The horizontal board a wall's studs stand on or under.

Reference face

The chosen good face all marks are taken from.

Reveal

A small setback, as when trim sits back from a jamb edge.

Story pole

A custom ruler for one job's repeated heights.

Stud

A vertical wall framing member.

Waste side

The scrap side of a cut line. The saw lives here.

Winding

Twist from end to end in a board.

Joist

A floor or ceiling framing member that carries the load across a span.

Rafter

A sloped framing member that carries a roof.

The Builder's Promise

Craft is courage plus care. A young builder works with a grown-up until the habits are as true as the work.

- 01** Ask an adult before using saws, torches, drain chemicals, live water, or anything heavier than a backpack.
- 02** Wear closed shoes. Use eye protection for cutting or chipping.
- 03** Do not climb roofs or unfinished walls. Do not work under hanging pipe or lumber.
- 04** Wash dust off your hands. Fine dust does not belong in lungs.
- 05** Saws are grown-up tools. No power saw without an adult's hand on the plan.
- 06** Never cut toward your body. Never stand in the path of a kickback.

ASH'S LAST WORD

Keep the line. Crown the wood. Measure from one honest face. The house will remember.



THE LINE IS STILL THERE
Level. Gauge. Plumb. Straighten.

THE TRUE LINE · A GIFT FROM VALLEY TILE · AGES 8 TO 18 · PRACTICE WITH A GROWN-UP · CHECK TWICE