

To: Dan Louche
 From: Amanda Hamilton
 Date: May 13, 2019
 Re: Editing Plan for "Tiny Home Design and Construction Guide"



ANALYSIS

Purpose

The text is meant to guide readers through the process of designing and constructing a tiny house.

Audience

The text is written for people interested in building a tiny home.

Use

The text is available in print and PDF.

EVALUATION

In order for this text to achieve its purpose, its purpose must first be clarified. The lack of an end goal muddies the organization of the text and the scope of the information included. While sections are arranged in floor-up construction order, the instructions consist of unnumbered steps interspersed with advice, anecdotes, notes, and various other divergences--none of which turn to the topic of environmental sustainability nodded to in the subtitle. Finally, many sections conclude with instructions to "search the internet" for more details, which is unnecessary to state and ethically questionable to construe as guidance.

In the same vein, the intended reader is unclear. Assumptions about readers' familiarity with construction vary significantly between sections. For example, "Framing and Building Techniques," on p. 12 discusses build plans for the frame using terms like *stud*, *load bearing wall*, *header*, and *top plate* without defining them. Meanwhile, *hammer* and *pencil* are explained on p. 22.

In addition to foundational ambiguity, writing style throughout is unclear and difficult to follow. The discussion points vary from section to section, as does the amount and specificity of information. Paragraph structure is inverted, discussing a point before naming it, much like solving an equation. Tracking logic in the text is further complicated by a general lack of transitions between paragraphs.. Clarity is also an issue in sentence constructions, which are crowded with redundancies, unnecessary articles, subjective modifiers, and lengthy prepositions.

Finally, visual content is problematic. Justified text detracts from visual hierarchy. Section titles appear at the bottom of each section's preceding, mostly blank page. Images throughout lack uniformity and many are badly composed, unnecessary, or unexplained; all are poorly labelled. Format is prioritized over content, which creates readability issues. The format of the book also contradicts one of the main tiny living tenets it touts, efficient use of space. Of the text's 143 pages, 24 (17% of pages) are dedicated to a section heading and an average of one sentence.

EDITING PLAN

Content

Comprehensiveness:

- Clarify the purpose of the text and determine the reader this should be tailored to in order to determine what the scope of the contents should be. Sentence-level edits cannot proceed until these global revisions have been made.
- Paragraph and section contents vary widely even between subtopics sharing a section. Edit the content of sections for consistency.
 - Ex: Under the topic of Design & Plans, each section has, of course, a variation of the information that can be presented in it—but the Existing Design section reads like a biased argument in favor of this option, mainly presenting the benefits of the approach.
- In addition to revision and clarification, the text is missing information that readers might think to search this general guide for.
 - Ex: Environmentally conscious building techniques should be added to the discussion, especially as the text's subtitle describes tiny homes as *environmentally sustainable*.
 - Ex: Popular tiny home building concerns, including downsizing belongings to fit, storage solutions, designing for families, compost toilets, the true mobility of a tiny house trailer, reclaimed materials, and so forth should be more present in the text.
 - Ex: The tools list should include more safety equipment, especially hearing protection as it relates to power tools such as air compressors

Organization

Sections:

- The introductory section of the book includes some too-technical information that would be better left to an appropriate, more in-depth section of the same topic later in the book.
 - “Framing and Design” discussion in design and plans section (studs, etc.) (p. 12)
- While the text seems to be intended for inexperienced readers, some of the sections assume too much prior knowledge or deprioritize the novice. If the true beginner is to be this text’s intended reader, revisions should be made to accommodate their greater need for facilitation.
 - Ex: “Framing and Building Techniques” is a discussion that will likely be entirely inaccessible to novice builders without clarification of terms like *framing* and *stud* and concepts crucial to safety like structural stability. (p. 12)

Headings and Subheadings:

- Subheadings are centered between paragraphs and are a very similar color to the body of the text making it hard to recognize where sections start and end.
 - Ex: “Capturing and Documenting Your Design,” disappears into the body of the text, making it unclear where the text switches from introduction to discussion. (p. 11)

Style

Point of View:

- Personal opinions, anecdotes, and advice are present in the text in first person perspective and Tiny Home Builders are framed authoritatively but the reader will find it difficult to trust the advice without more substantial support. Provide context for readers to gauge credibility of such content.
 - Ex: “Below is a list of the tools that I use...and how I use them.” (p. 21)
 - Ex: “The program that we recommend and use...” (p. 11)
 - Ex: “Tiny Home Builders...uses just one of these layouts...” (p. 14)

Sentence Structure:

- Simplify sentence structure by removing unnecessary articles, prepositions, modifiers and redundancies. These create a challenge for readers to interpret even simple points.
 - Ex: “The difficult part of designing your own house from scratch is that it requires a lot of knowledge that you may not already possess and that may take a lot of time to acquire. You’ll need to know how to use the technology that can capture and document your design, proper framing and building techniques, and how to best take advantage of small spaces.” (p. 11)

Concreteness of Words:

- There are several word pairings that seem indistinct from each other. Introduce jargon before discussing them to clarify related-but-discrete objects and concepts.
 - Ex: It is unclear what *capture* of a design is, or how *capture* and *document* differ. (p. 11)
 - Ex: Similarly, what distinguishes a *design* from a *plan*? (p. 11)
 - Ex: Also, explain the difference between *framing* and *building*. (p. 12)
- Use of negative constructions buries the true meaning of several statements in wordy, backwards logic. Revise these as positive constructions.
 - Ex: “Pliers aren’t used that often except when installing electrical lines.” (p. 25)
 - Ex: “A flat bar isn’t used that often but...” (p. 27)
 - Ex: “There are not nearly as many design combinations...” (p. 17)
 - Ex: “Not having a place for everything will make your house feel smaller...” (p. 14)

Graphics

Textual Integration:

- Graphic integration is poorly executed detracting from readability and creating disharmony against the rigid formatting of the surrounding text.
 - Ex: The pro/con list in the House Layout section is interrupted by two full pages of floor plan examples that could easily have taken up half the space they’re allotted.
- Captions throughout are poorly constructed, creating confusion about the contents of the image, or which image has been referenced in the body of the text.
 - Ex: The images included in the Tools section present multiple tools together in one photo that has one long caption which would force the reader to work harder than necessary to identify an unknown tool.
 - Ex: In-text references fall short of effective, generally stating, “see diagram,” without including the page number or diagram title. (p. 12)

Type:

- Consistency in the types of images included seems to have been attempted and abandoned making the text seem sloppy and unprofessional at times. Swapping these unmatched photos for line art images would probably be a better choice.
 - Ex: Many of the photographs included were taken against white backgrounds and look uniform while others include outdoor or in-use backgrounds. (p. 24)

It is extremely important that while performing any steps in this guide that you use the safest methods possible.

All:
move onto the page with its content.

BE SAFE!

All:
what does "omissions
of a project" mean?

Below are a few reminders while working on any project

All:
tone of term "reminders"
is maybe too casual
for the section's overall
tone and content. Revise for
formality and
directness.

- Always use caution, good judgment, and common sense when following the procedures described in this guide or elsewhere.
- Read and follow any instructions or warning labels on both products and tools as they take precedence over any instructions in this guide.
- Special care should be taken when working with power tools. Only drill or cut small pieces of wood with a power tool if they are properly clamped in place. Keep your hands as far away from any blades as possible and do not wear loose fitting clothing.
- Always wear eye protection, especially when working with power tools or when using a striking tool like a framing hammer or sledge hammer.

The information contained in this book is intended to provide general guidance. Because tools, products, materials, techniques, building codes and local regulations are continually changing, Tiny Home Builders assumes no responsibility for the accuracy of the information contained herein and disclaims any liability for the omissions, errors or the outcome of any project. It is your responsibility to ensure compliance with all applicable laws, rules, codes and regulations for a project. You must always take proper safety precautions and exercise caution when taking on any project. If there is any question or doubt in regards to any element of a project, please consult with a licensed professional.

All: a licensed
professional — what?

All: not necessary to
frame it as a
request.



Building your own tiny house is an
achievable dream!

MOVE to
next page

INTRODUCTION

establish audibility:
include Tiny Home Builders
history & success along
with personal

adverb form
of "rampant,"

Multiple tenses throughout.
Especially pay attention to
use of "now" in otherwise
past tense constructions

In August 2009, I received an unsettling call from my mother. The poorly constructed trailer home ~~she was living in~~ was beginning to deteriorate around her. Water lines had been leaking for some time, and now mold was growing rampant. Living under ~~those~~ conditions was causing her health to deteriorate, but neither ~~she~~ nor I had the money to purchase a conventional house or even a new trailer. So I started researching our options. I had always been interested in smaller homes, but up until this point, I had no idea there was an entire movement around tiny living. Once I discovered it, I was hooked. I began building my mother a tiny house ~~of her own~~ in September 2009.

All: who are
the "others"?
Friends of
Mom? Clarify.

After the house was complete and my mother had moved in, I was amazed by the level of joy that it brought her. Her excitement was contagious as others who had previously been skeptical of tiny living were now genuinely considering the possibility of living in a tiny house themselves. When I saw this reaction I knew that I wanted to help others experience a similar level of happiness and independence and so I founded Tiny Home Builders.

Re: "not having a
mortgage" - avoid negative
constructions.

I imagine since you are reading this book you, too, are excited about the possibilities that a tiny house can bring, the financial freedom of not having a mortgage, the freedom to move as you desire and to take your house with you, and finally the freedom of a simpler life. I hope you find answers and inspiration in these pages and realize that building your own tiny house is an achievable dream.



My Mom's House

~~Before any construction can begin on your tiny house, you'll need to determine a design~~

AU:
what will this section include about "designs and plans"? How will readers be able to scan for that information?

AV:
are both needed?
used interchangeably throughout section.

Ad:
move into its section

DESIGN & PLANS

"either" should be followed only by two options.

The design that you select for your house can either be your own design, an existing design, or a combination of the two.

CUSTOM DESIGN

Coming up with your own custom design allows you to create a house to your exact specification. The size restrictions imposed on tiny houses on wheels, generally a maximum of 8.5 feet wide and 13.5 feet tall, can be restrictive but can also actually make them easier to design. If someone were to give you a blank page and tell you to design your perfect house, that might be pretty intimidating. However, if instead you were given a specifically sized box and told to fit in it and arrange everything you need to live and be happy, that probably seems a lot less daunting. Sometimes having too many choices can be crippling.

AM:
only one
difficult part?

The difficult part of designing your own house from scratch is that it requires a lot of knowledge that you may not already possess and that may take a lot of time to acquire. You'll need to know how to use the technology that can capture and document your design, proper framing and building techniques, and how to best take advantage of small spaces.

CAPTURING AND DOCUMENTING YOUR DESIGN

AM: how are
framing and building
different?

There are several different options to capture and document your design. These range in price from free to thousands of dollars. Since the free tools that are available are more than adequate for this job, I'll focus on them.

The most obvious of these options is a pencil and paper. When starting from scratch I highly recommend starting with a sketch. A sketch is great for quickly capturing your ideas and is very easy to make changes to unlike a more complicated model in a design program. The sketch can be nothing more than a floor plan that can be used to determine where the door(s), windows, bathroom, and kitchen should be. This information can then be used to help determine the external appearance.

While the entire design can be captured and built from hand drawings, there are significant advantages to using a design and modeling computer program to convert your sketches into plans. The program that we recommend and use ourselves at Tiny Home Builders is Trimble SketchUp (previously named Google SketchUp). This program has several different versions, and at the time this book was published, the basic version was free.

SketchUp is a 3D modeling program that is incredibly easy to learn. However, as with paper, if you open up the program and start with a blank canvas it can be intimidating. We recommend that you search for and download a sample model of a tiny house to get a feel for how the model should be constructed.

TinyHouseDesign.com has several tiny house models you can download for free. By using a program that models your house in 3D, you get a unique perspective and get to see how all the different components fit together. More importantly, you are able to instantly determine any measurement of any component in the house during construction.

FRAMING AND BUILDING TECHNIQUES

While understanding how to capture your design is important, you will also need to understand the proper way to frame a house so that what you design is structurally sound. While this can be extremely complicated in larger structures, it is much less difficult for a tiny house.

The first step is understanding the various components of a houses framing (see diagram).

specify diagram
p. number/ title

Studs in a house are generally placed either 16 or 24 inches apart. Since the wood that studs are made of is not a good insulator, it is desirable to have the minimum number of them in your wall as possible while still providing sufficient support. For a smaller structure like a tiny house, 24 inches apart is usually adequate.

If possible, to reduce the number of studs and thus the amount of wood in the walls, windows should be positioned such that one side of them is against an existing stud. In load bearing walls (generally all four walls in a tiny house), if any windows or doors are large enough that they intersect a stud, a header will need to be placed above it to support the load from the cut stud. See the chapter on wall framing for more information on headers.

Older framing methods may suggest using two top plates in a house as well, but by lining up the rafter so that they make contact with the top plate at the same location that the studs make contact, the weight of the roof is transferred directly to the studs, and only a single top plate is required.

For additional information on proper building and framing standards, consult the International Building Code (IBC). For additional information on the most energy efficient framing techniques, search the internet for "advanced framing methods".

Second to last pt: if you're going to dismiss a tried-and-true method to inexperienced builders, it's going to need more thorough explanation.

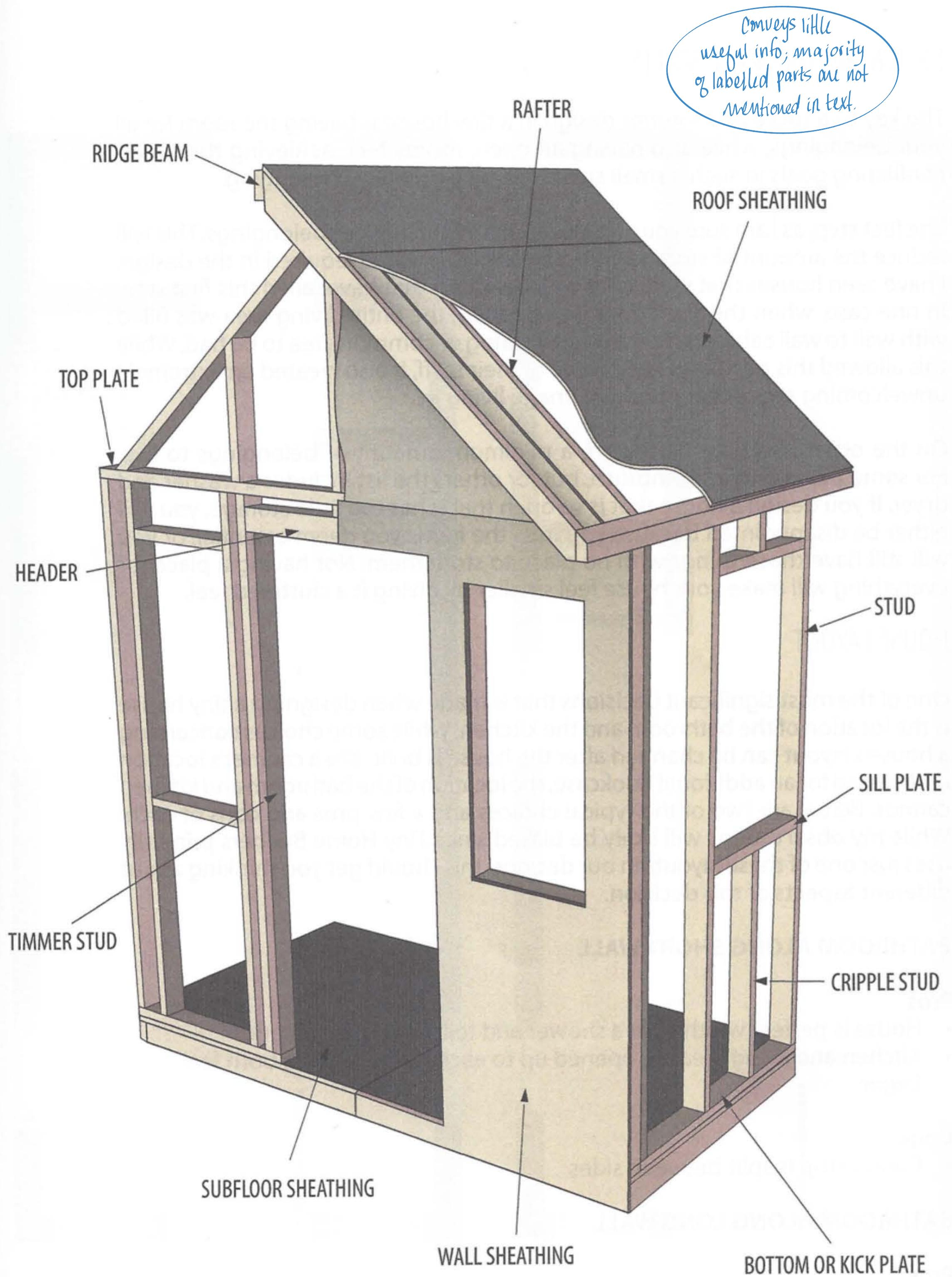
Expand section;
"various components"
of framing are introduced,
but following paragraphs focus
on too-vague info about
stud placement

All:
Specify
the "first step"
of what
process

All:
will your
readers know
all these
terms?

State command
first in imperative
sentences.

This section seems shockingly
short for such a crucial
part of the build process.
What's missing here?



Elements of the Frame
Anatomy of a House

DESIGNING FOR SMALL SPACES

This section gives one step of an unspecified process and a collection of considerations. Decide purpose of this section and revise accordingly.

The key to a successful interior design in a tiny house is having the room for all your belongings, while also having an open, roomy feel. Achieving those two conflicting goals in such a small space can be extremely challenging.

The first step, as I am sure you are aware, is to minimize your belongings. This will reduce the amount of storage and cabinets that will be required in the design. I have seen houses that were built by individuals that have failed this first step. In one case, when the front door was opened, the entire living area was filled with wall to wall cabinets. There was no sitting or common area to be had. While this allowed this person to keep more of their stuff, it also created an extremely unwelcoming space that I couldn't imagine living in.

On the other hand, we all require a minimum amount of belongings to live. For some this is only a toothbrush, but for others the list includes a washer and dryer. If you design a house that is so open that it has too little storage, you will either be disappointed because you miss the items you deem essential, or you will still have those things with no place to store them. Not having a place for everything will make your house feel smaller by giving it a cluttered feel.

All:
"on the other hand" is not a logical transition from "the first step"

HOUSE LAYOUT

One of the most significant decisions that is made when designing a tiny house is the location of the bathroom and the kitchen. While some choices concerning a house's layout can be changed after the house is built, like a cabinet's location or the need for an additional bookcase, the location of the bathroom and kitchen cannot. Below are two of the typical choices and a few pros and cons of each. While my observations will likely be biased since Tiny Home Builders primarily uses just one of these layouts in our designs, this should get you thinking about different aspects of this decision.

BATHROOM ALONG SHORT WALL

Pros

- House is perfect width to fit a shower and toilet in this orientation
- Kitchen and living area are opened up to each other, making both feel larger

Cons

- Countertop is split between sides

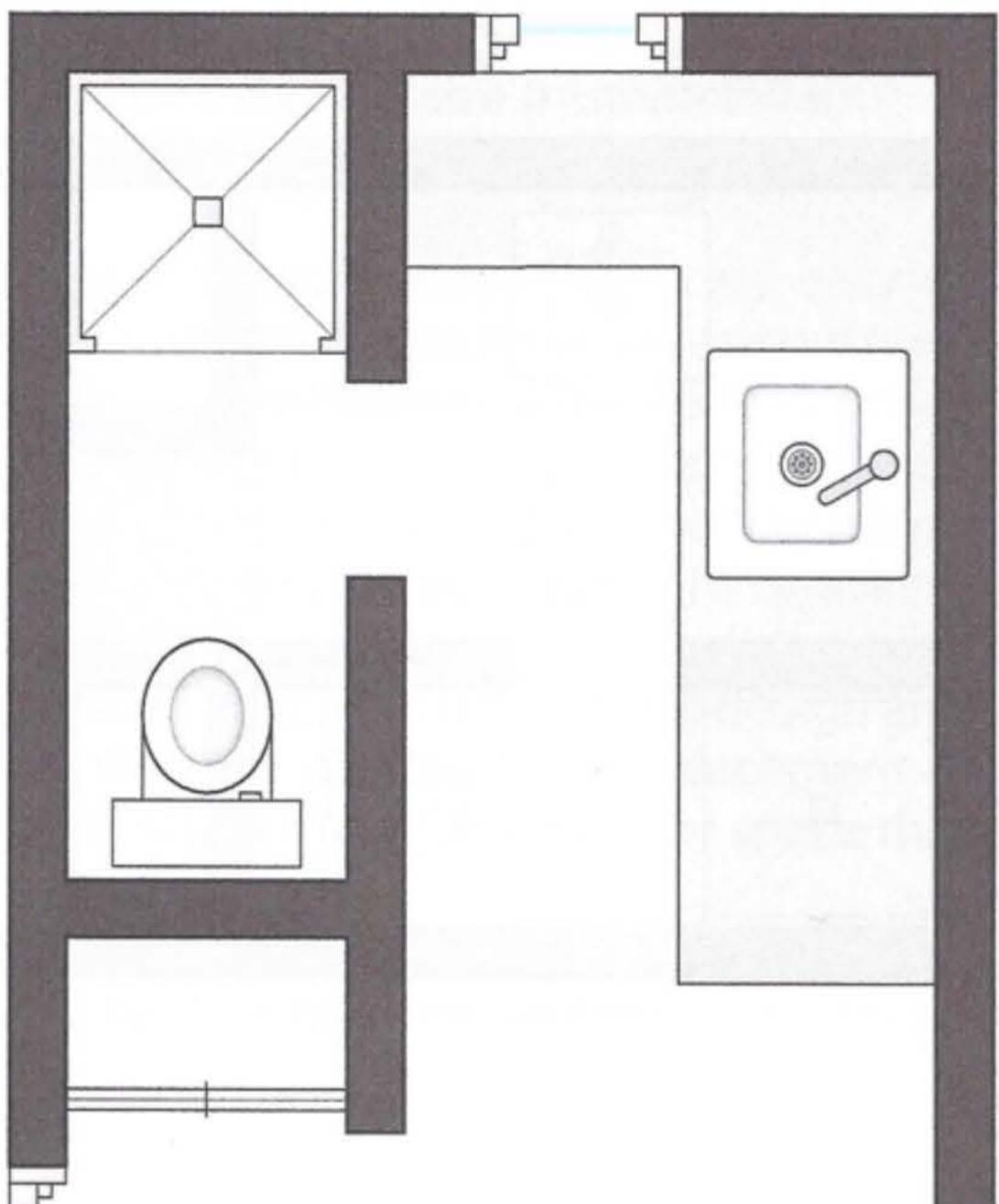
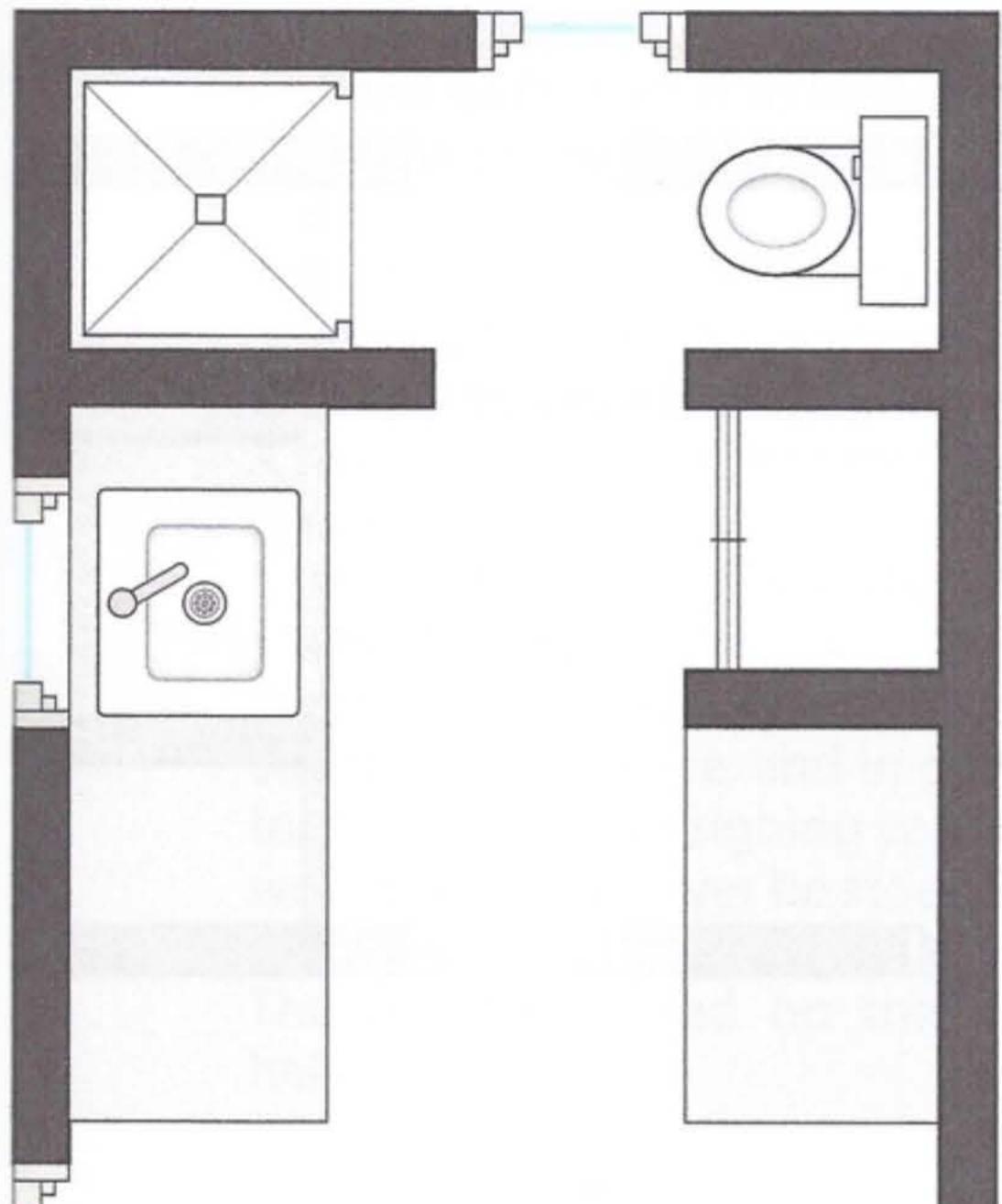
BATHROOM ALONG LONG WALL

Pros

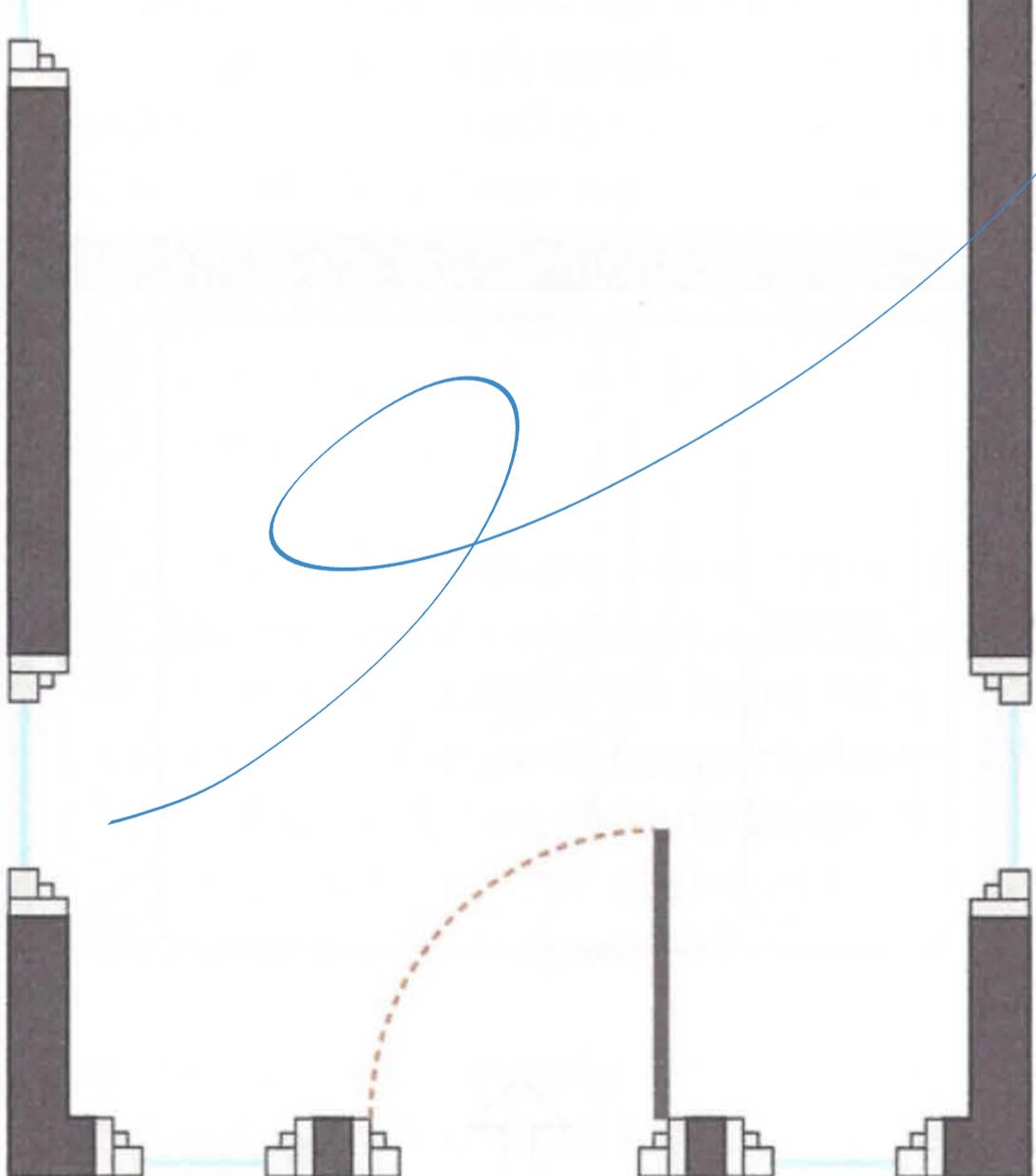
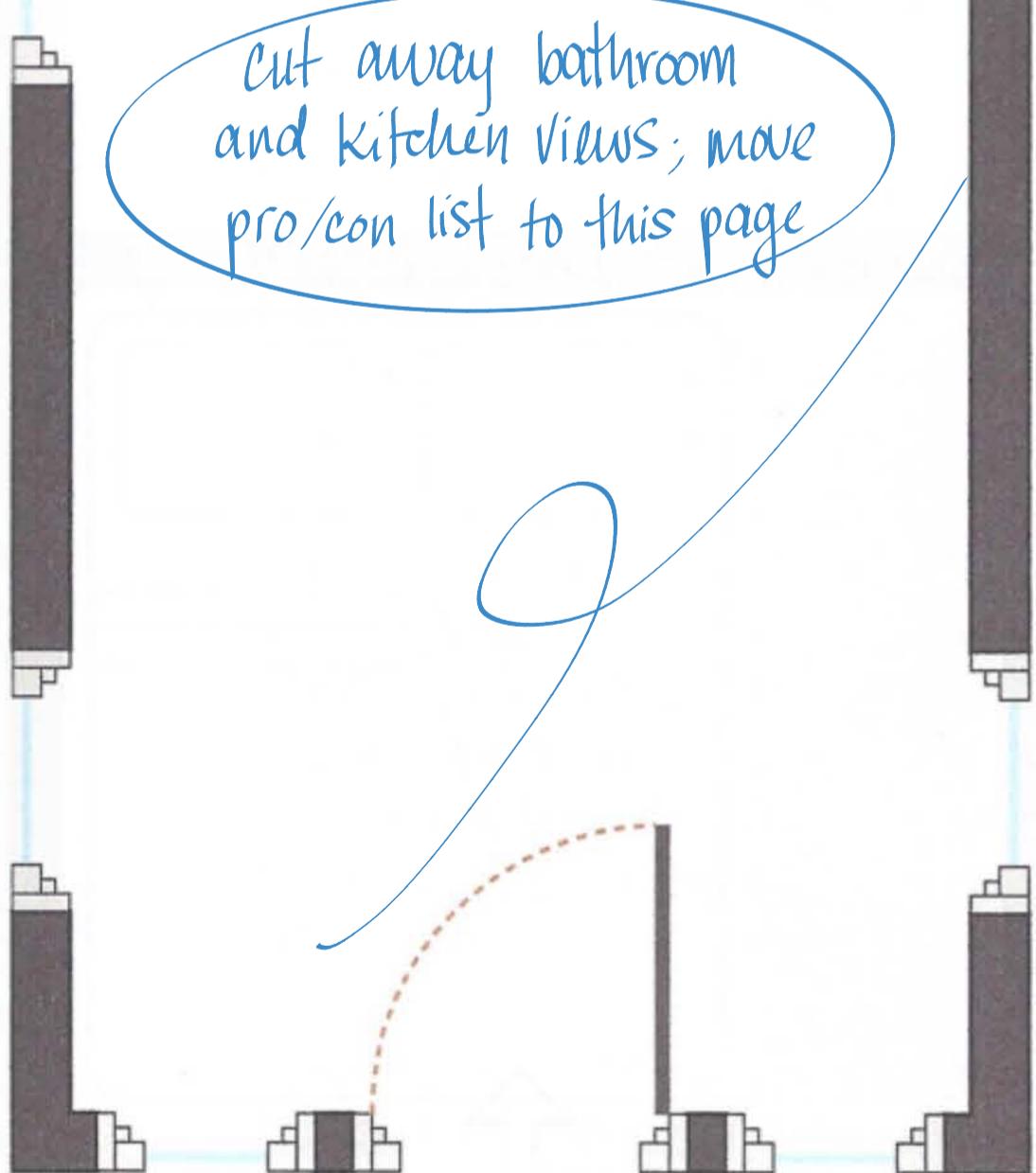
- Long, continuous countertop

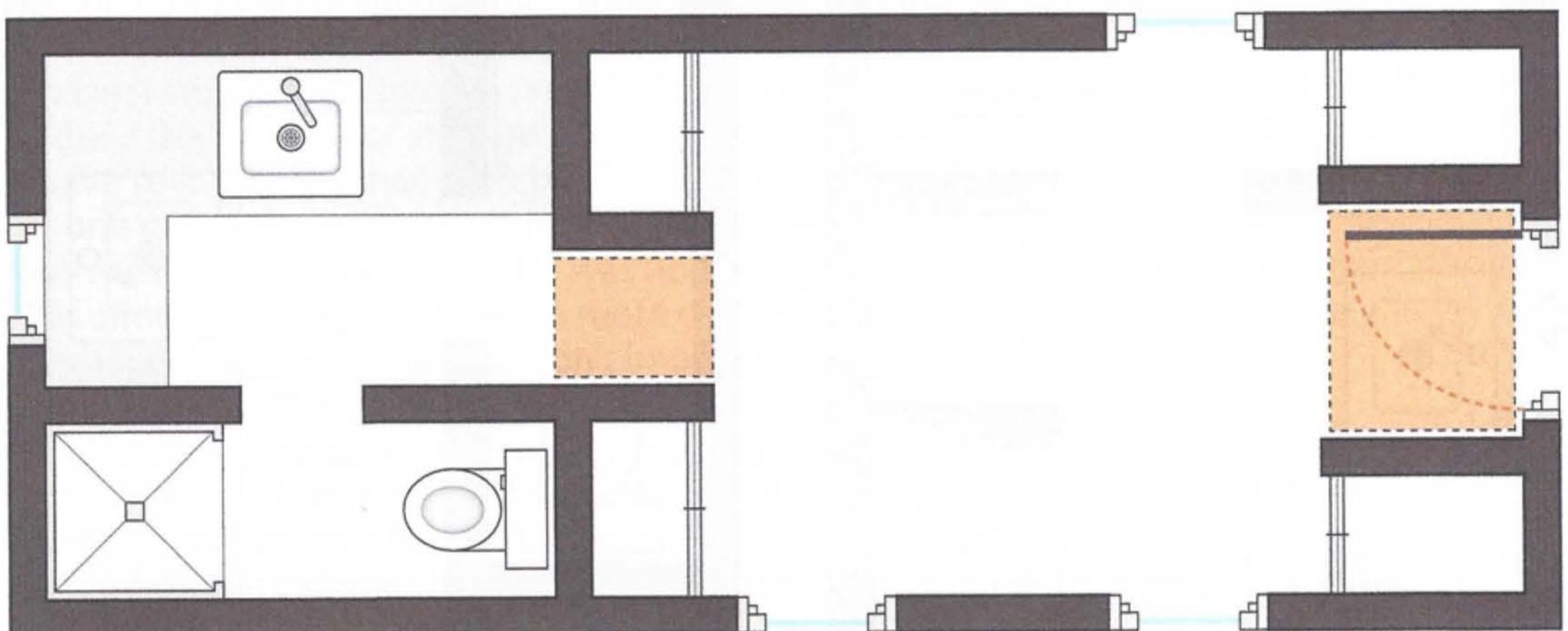
feels incomplete. Needs more on lofts, built in storage, built in furniture, stairs (as storage!), porch options, variability of options based on length of trailer. Yeah, this section is missing too much.

move
pro/con list
to next page to avoid
two page delay on
remaining parts

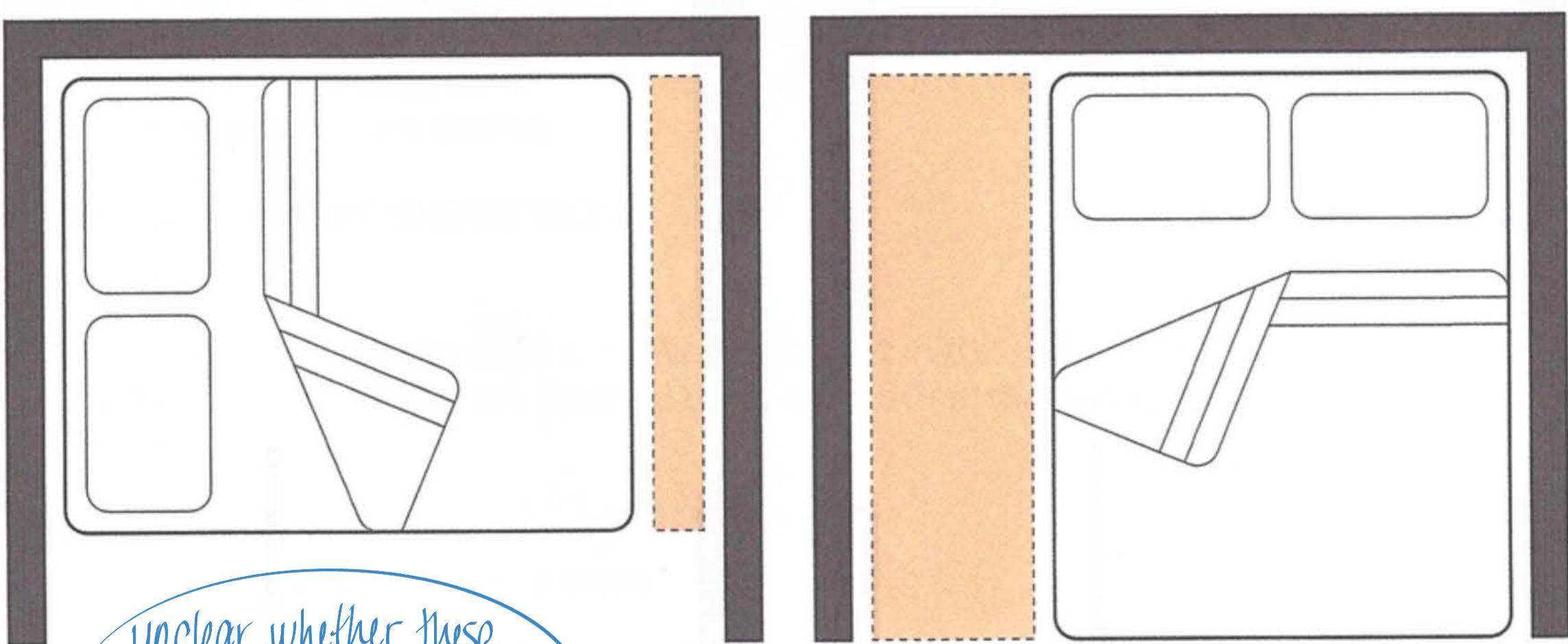


cut away bathroom
and kitchen views; move
pro/con list to this page





Micro Hallways in House Design



Efficient and Inefficient Furniture Placement

Cons

- Kitchen may have a tighter feel since it is between two solid walls
- Depending on the size of the trailer, the bathroom may overlap the wheel well, which may present some design challenges
- If the bathroom is to be under a loft, there may be a size mismatch (i.e. desired bathroom size is bigger than desired loft size)

Also, try to avoid creating micro hallways in your design. It is very easy to identify a hallway in a traditional house. It's an interior passage whose purpose is simply to provide a means of getting from one room of a house to another. A micro hallway is a little more difficult to spot. A micro hallway is any area of a house that would likely only ever be used to get from one part of a tiny house to another. It's essentially a hallway without the enclosure. You might be asking yourself, "who would put a hallway in a tiny house?", but they're a little more common than you might think. In some cases they are built into the design and structure of a house, and in other cases they are created by the placement of furniture. When designing your tiny house try to minimize any floor space that would likely only ever be stood in for a few moments.

The areas indicated on the diagrams to the left are examples of micro hallways.

EXISTING DESIGN

Because of the size constraints of a tiny house, the options for a tiny house's layout are limited. For instance, the front door can really only be placed on either the back of the trailer or on one of the sides. If it is placed on the side of the house it will most likely be off-center because of the wheel wells. If it's placed on the back of the house it will either be centered or along one of the edges. Because of these limitations, there are not nearly as many design combinations as can be found with traditional houses. So there is a good chance that a set of plans already exist for the design that you have in mind.

If you are able to settle on an existing design, even if there are a few items that you would like to change, this can be the easiest, least time consuming, and least expensive option. With existing plans there is no need to learn how to use a new design program or to be concerned if the house is properly framed (for example to support the load of the roof). All of that has already been done for you. Depending on how you value your time and the cost of the plans, this option can be significantly cheaper than designing a house yourself.

Another advantage to using an existing design, particularly if at least one house has been built from the design, is that many of the kinks have likely been worked out. Often a design may look good on paper, but once it is built, it may be discovered that it's not as practical or as functional as initially believed. For instance, the first house that was built by Tiny Home Builders included a storage

* numbers/#'s consistency fails

loft above the bathroom. Since it was small and would not carry a very large load, 2x4s were used instead of 2x6s. This ended up being a poor decision as no recessed lights or bathroom exhaust fans are designed to fit in a 3½ inch ceiling cavity. In this particular case the fix was not very difficult, but it still took time and would have gone undiscovered in the plans had the house not actually been built.

Revised: "Another benefit"
Redundant transition.

Another benefit to buying plans for a house that has already been built is that you get to see what it will look like when it is completed. Just as designs may not be as functional on paper, they may not look as good in real life either.

Finally, another benefit is that some plans come with additional valuable information like a materials list. As described in the Building Materials chapter, this can save a significant amount of money, essentially reducing or negating the cost of the plans.

The disadvantage of using an existing design is that it may not be exactly what you want, and depending on how easy it is to modify, compromises may need to be made.

CUSTOMIZING AN EXISTING DESIGN

All:
consistency: "benefits"
or "advantages"?

second-easiest option
should be sub-section
#2 of "design & plans"

If you're only able to find a design that is close to what you want, but not exact, you may be able to customize it to fit your exact needs. Most plans are primarily framing plans, so changes to the exterior, including window and door locations, will require the most rework. Interior changes on the other hand, assuming that they still work with the existing window and door placement, may not require any changes to the plans at all.

EXTERIOR CHANGES

Some minor framing and exterior customizations can be made to a design without making changes to the plans. Instead, these changes can be done during a house's construction and are usually referred to as 'site modifications'. An example of this type of change might be the removal of a window or even a slightly more difficult alteration like shifting the location of the wheel wells. While not having the plans exactly the way you want them before you begin construction is not optimal, with care and special attention they can still work.

If the plans that you purchase are provided to you in a format that can be easily changed, you will have a lot more flexibility as to the changes that you can make. For instance, the plans sold by Tiny Home Builders include not only a PDF version of the plans (that can't be easily changed), but also the Trimble SketchUp model (that can be easily changed). So if you plan to make alterations to a design, inquire about receiving the plans in a change friendly format.

INTERIOR CHANGES

The framing of a house is primarily linked to the layout of the house through the window and door placement. For instance, if a kitchen is anticipated to be in a certain location it will likely have a window positioned above where the sink is expected. If instead you were to decide to move the kitchen to another wall, you'll need to ensure that any windows on that wall will not interfere with the cabinets.

Having the right tools for a job is extremely important as they can save a considerable amount of time and frustration

All: move onto
following page.
(it misses its friends ;)

TOOLS

Is this the only
problem?

The problem for tiny home builders is that they are usually trying to minimize their belongings and so the prospect of acquiring a bunch of tools is unappealing.

will readers know
what pneumatic
tools are?

Some tools should be owned by every homeowner; however, others are large and would rarely be used (e.g. air compressor and pneumatic tools). While those tools can be rented, given the length of time that building a tiny house can take, an option to consider is buying them and then reselling them once you are finished.

Tools are often rented at a daily rate of between five and ten percent of their cost if new. That means that if a tool is rented for over twenty days, as much money or more will be spent than if it had been purchased new. However, if instead the tool was purchased new in the beginning, it could likely be sold at the end of the project for around fifty percent of the original cost. In this scenario the tool would be used longer and would cost only half as much as renting for the shorter length of time.

FREE 'RENTALS'

Poor
word
choice

Revise: leave out 'free'
tool claim. Focus on recoupable
cost without the ethically
dubious tone.

An even better option, if the required tools can be found in relatively good condition, is to buy used. A tool that is purchased used and only used for a few months adding little wear and tear could likely sell for near the same price that was originally paid, effectively allowing the use of the tool for free.

I was able to do this a few years ago with a refrigerator when I rented an apartment that didn't come with one. At that time I had the option to either rent one from the apartment complex for \$10 per month (\$120/year) or supply my own. After research I found that a new comparable model refrigerator cost \$200, while a used one between one and two years old cost about \$100. While the depreciation during the first year was significant, the depreciation during the second year was negligible. So I bought a one year old used refrigerator in near perfect condition for \$100, then one year later when I moved out I was able to sell it for \$100, thus paying nothing for the use of the refrigerator and saving myself \$120 in rental fees. This same method can be used for tools.

unnecessary
repetition
of point made
in #3

Revise:
Introduces one
option, gives two.

A good place to look into buying and selling used tools is Craigslist.org and even eBay for smaller tools. There are also online retailers that are dedicated to selling refurbished tools.

TOOL LIST

Below is a list of the tools that I use and a description of how I use them when building tiny houses.

THE ESSENTIALS

organize into groups by material, function, type (hand vs. electric), or similar.

HAMMER - This is one of the most commonly used tools. From hammering nails to knocking boards in place, a builder won't get far without one of these.

inconsistency: "a must" doesn't adhere to "how I use them" intro of list.

TAPE MEASURE - A quality, sturdy 25 foot tape measure is a must.

But what is it?
"Hammer" got defined
why not "tape measure"?

PENCIL - Carpenters have their own pencils for a reason, a thicker lead means less time sharpening and more strength while marking rough lumber.

UTILITY KNIFE & BLADES - A utility knife is used to cut the house wrap, tar paper, and even to score the metal roof panels.

CHALK LINE - This is used to mark a straight line over an extended length. It's essentially a string that is covered in chalk. The string is pulled tight before being pulled back and released to strike a surface where a mark is left behind. This tool is used most frequently while installing the exterior siding and flooring. While using this tool be careful that the chalk doesn't come in contact with any wood that will be visible when the house is complete as it can be very difficult to remove or cover up. Red chalk is the most difficult to remove and so blue chalk is recommended.

SCREW DRIVERS - Screw drivers are used for ~~miscellaneous tasks throughout the project~~, particularly while installing the electrical outlets, switches, and plates.

DRILL - A drill is used to drill holes and to drive shorter screws. If the framing of the house is fastened with screws this tool will get a lot of use pre-drilling many of the framing boards

IMPACT DRIVER - Impact drivers are used primarily to drive screws (although they do make drill bit attachments). While this tool may be confused for a drill, it works in a different way to produce a lot more torque than a drill. While a standard drill might have a difficult time driving a $3\frac{1}{2}$ inch screw (without stripping it), this tool will do it with ease. The biggest drawback to this tool is that it is somewhat loud to operate.

CIRCULAR SAW - A circular saw is used to cut all of the sheathing and the occasional 2x4.

MITER SAW - A miter saw is essential to house framing. Behind the impact driver it is the most commonly used power tool. Almost every single board (except for the sheathing) used in your house will have an edge cut with this saw. While a 10 inch saw will do ninety-five percent of the cuts, a twelve inch version with a blade that pivots in both directions is the best option.

impact driver
not described
as "most used"
tool in its
earlier entry

All:
inconsistent numbers/##
on this page, too.

All:
Random collection;
group into measuring,
marking, or other
logical relationship.



Carpenter's Pencil, Screw Drivers, Hammer, Tape Measure, Chalk Line, and Utility Knife



Captions don't
make clear which
tools are which.

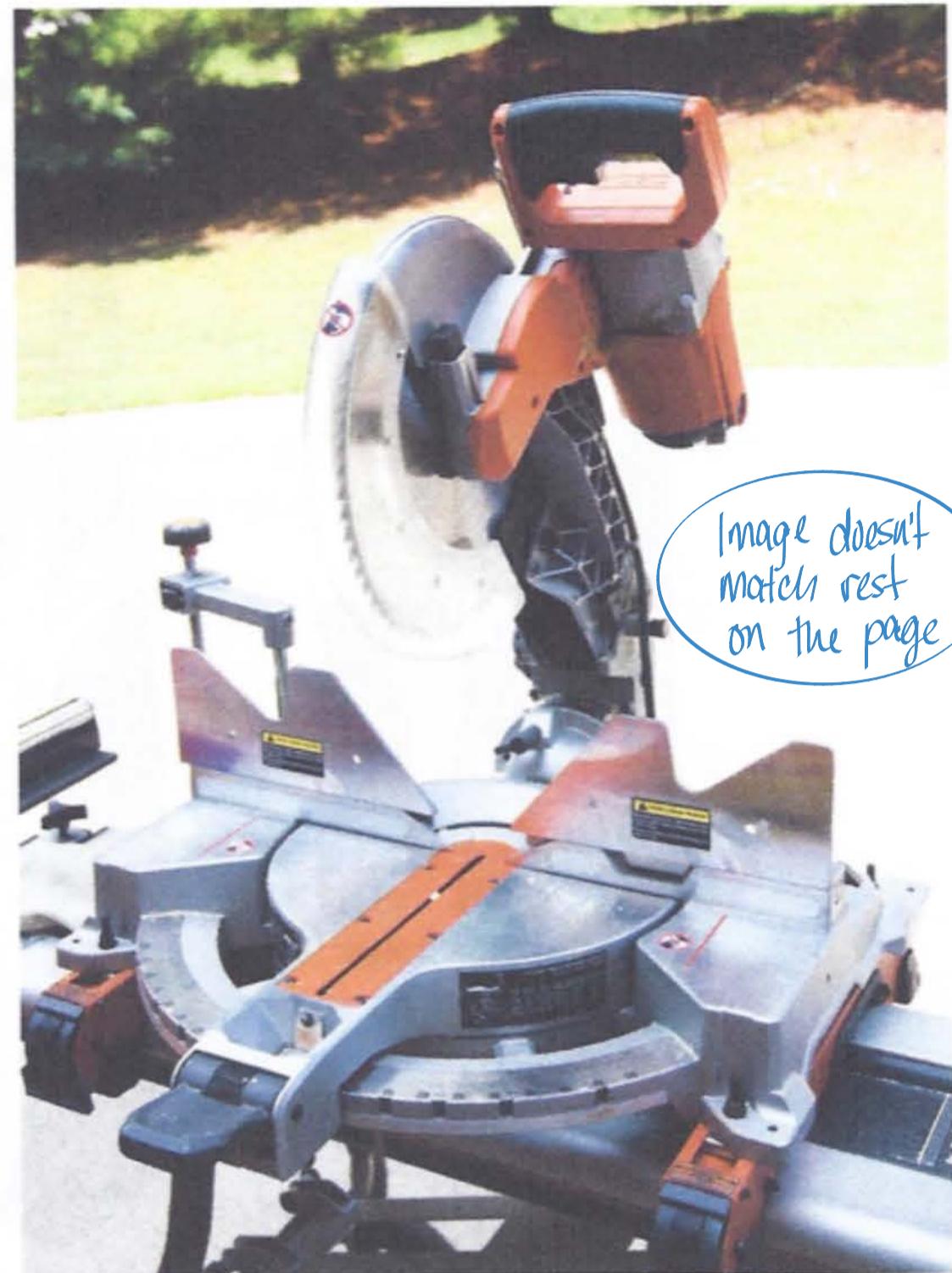
Drill and Impact Driver

Why is extension cord the most visually significant part of this photo?



Circular Saw and Extension Cord

not included
in tools list



Miter Saw

Image doesn't
match rest
on the page



PVC Pipe Cutter and Hole Saw

Revision: decide if definitions should include specific tasks or simpler explanations, then make them more uniform

Consistency: Why
is "PVC cutter tool" the only
entry on page that talks
about cost.

PVC PIPE CUTTER - A pipe cutter is an inexpensive tool that creates quick and clean cuts of PVC and CPVC. A hand or miter saw can also be used as a substitute for this tool but it is not nearly as convenient and will leave behind burs that will need to be removed before the pipes are attached to any fittings.

it a tool
or an
attachment?

HOLE SAW - A hole saw is a blade that attaches to a conventional drill. This tool is used to make holes in the subfloor for the drainage plumbing as well as holes in the exterior walls for the bathroom vent and the plumbing exhaust.

LEVEL - A level is used often to verify that various surfaces are level.

Ex:
last sentence =
main point.

SQUARES - Squares come in various shapes and sizes. The most commonly used square is called a speed square because of its small size. Squares are used to assist in marking lines and making cuts that are 90 degrees.

use positive
constructions

PLIERS - Pliers aren't used that often except when installing the electrical. They are however an essential tool for any homeowner.

WIRE CUTTERS - Wire cutters are used while installing the electric lines. This is thick wire so the larger the cutters the better. *what sizes do they come in?*

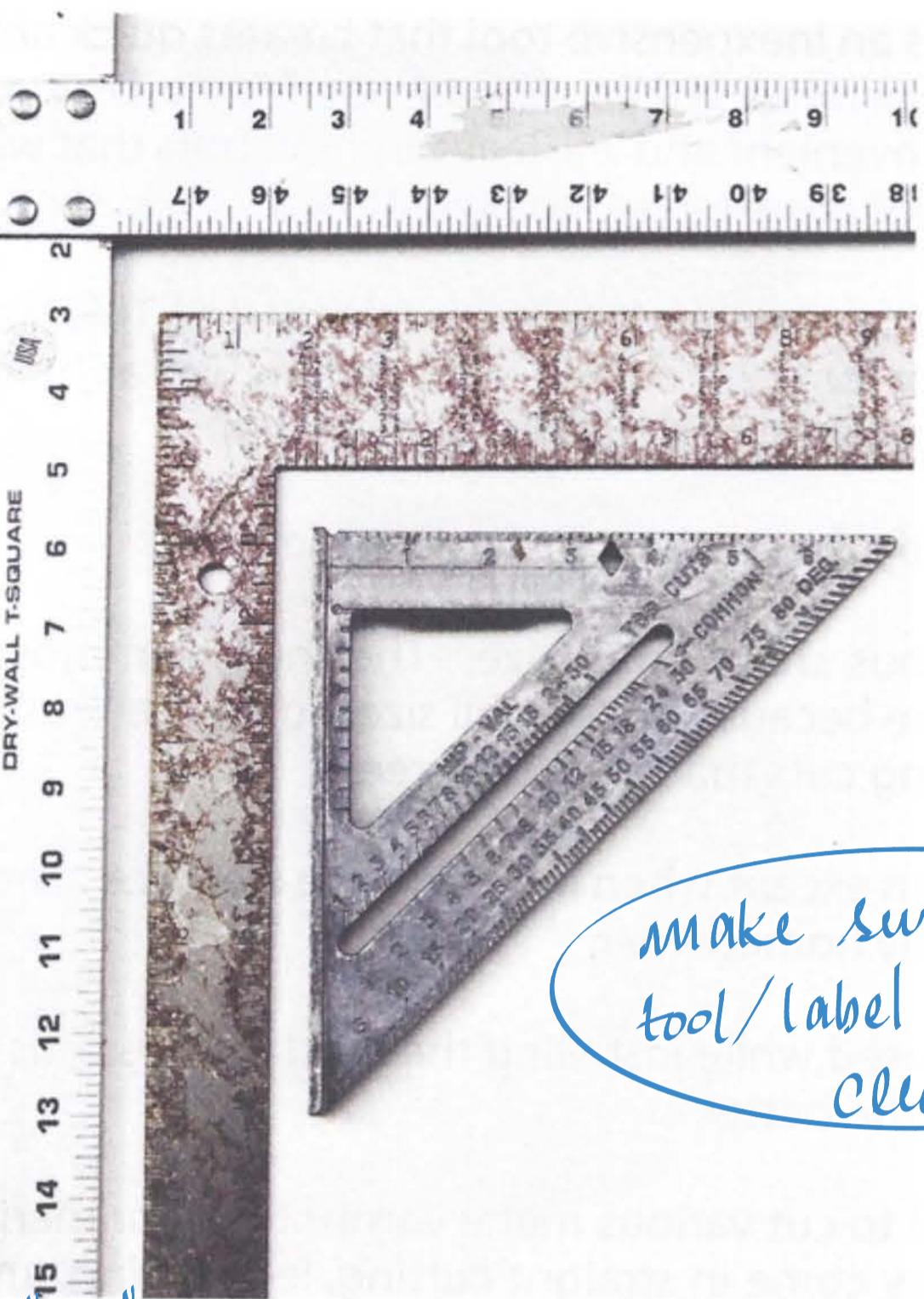
what sizes do they come in?
how long is too long?

STEEL SNIPS - Steel snips are used to cut various metal components primarily while installing the metal roof. They come in straight cutting, left cutting, and

This is an inefficient
use of space.



this level is
unlevel.



Drywall T Square, Carpenters Square, Speed Square



Pliers, Tin Snips, Wire Cutters



Angle Grinder

right cutting versions that designate in which direction they can easily cut angles. These are discussed in more detail in the chapter on roofing.

include page number

GRINDER - A grinder is occasionally used on the metal roofing panels to cut sections where the snips or shears have a hard time reaching. These are discussed in more detail in the chapter on roofing.

include page number

ALMOST ESSENTIAL

AU: revise for precision; this word combo is needlessly ambiguous.

TABLE SAW - A table saw is incredibly useful. It only made it to the 'almost essential' list because a circular saw can do a lot of what a table saw is used for (cutting boards lengthwise). But a table saw does it much more easily and with a lot more precision.

FLAT BAR - A flat bar isn't used that often but can be especially helpful with removing stubborn nails or adjusting sheathing and flooring. A straight claw hammer can often be used as a substitute.

COMPRESSOR AND PNEUMATIC TOOLS - Since a house can be framed by screwing together the boards, a compressor and pneumatic tools are not required. They can however speed up progress considerably and I wouldn't want to install interior plank paneling without a pneumatic brad nailer.

JIG SAW - A jig saw's small blade makes it unique in that it can easily make curved cuts. This tool is not used often but is really handy when cutting the sheathing and siding around the wheel wells. A hand coping saw can be used as a substitute.

POWER SHEARS - Power shears are used to make quick and clean cuts to a metal roof panel. A combination of snips and a grinder, or a utility knife can be used as a substitute.

"hand coping saw" not included in list of essential tools



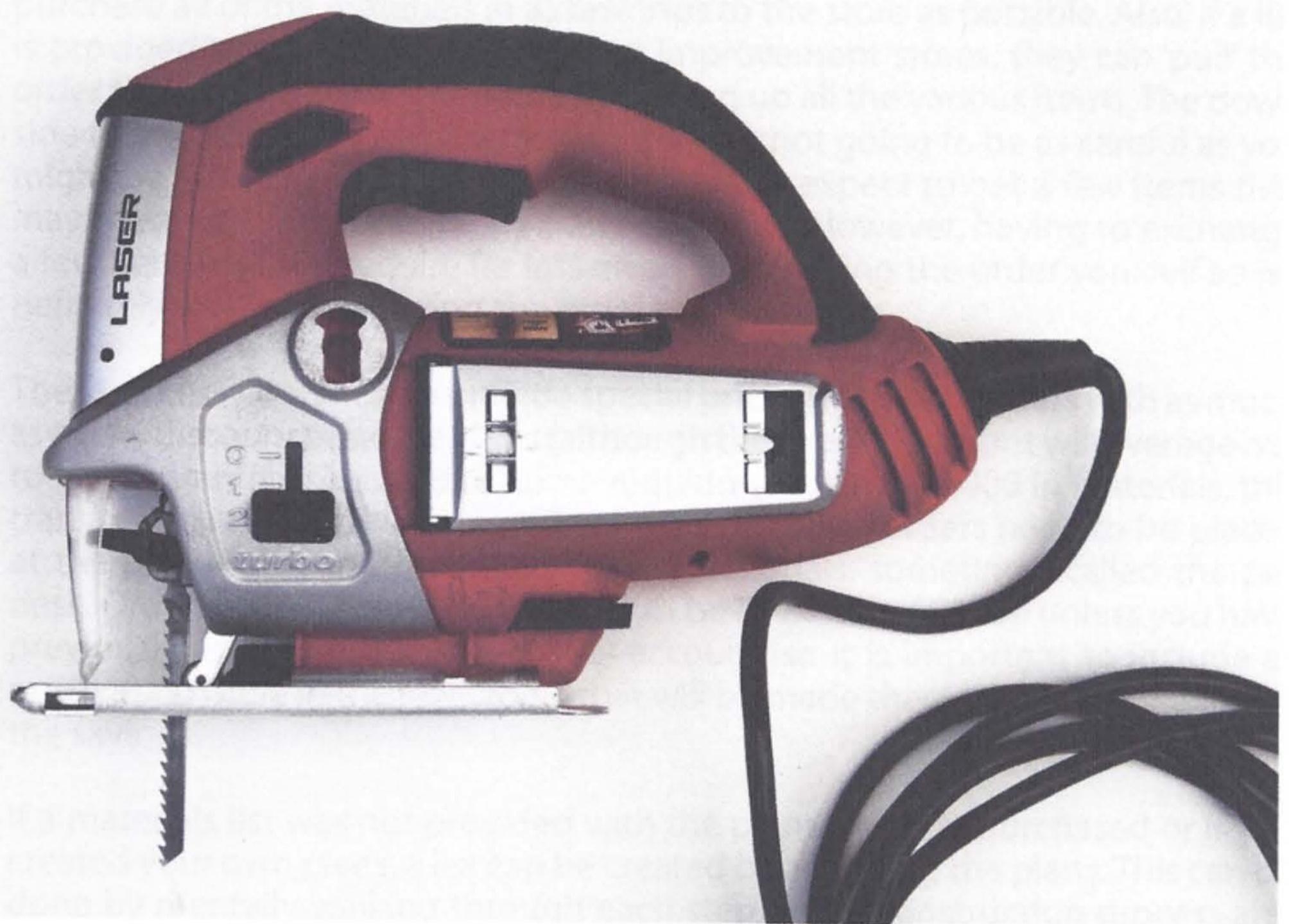
Flat Bar



Air Compressor



Table Saw



Jig Saw



Electric Power Shears