DECK HOUSE

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DECK
HOUSE
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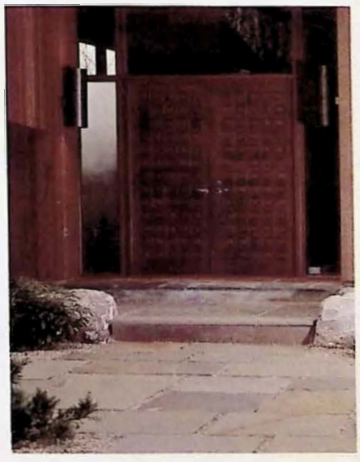
DECK HOUSE

IMPRESSIONS

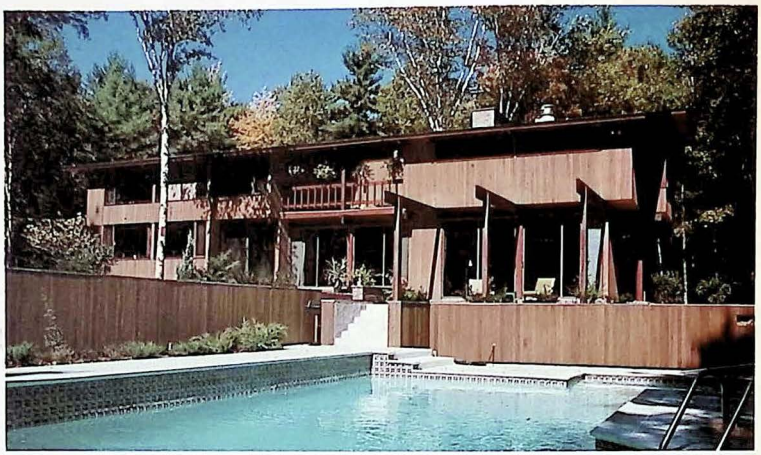
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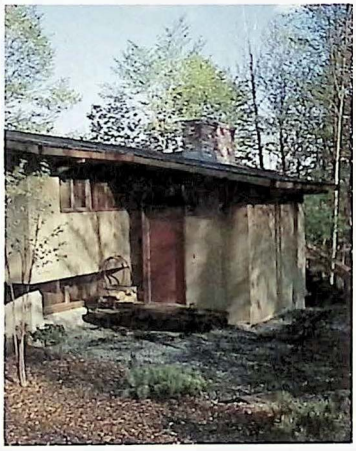
The Deck House

A contemporary classic. Timeless. It has that stability of style that comes of intelligent planning coupled with architectural integrity. Fine craftsmanship with excellent materials. It is that delicate balance between innovation and tradition that is good taste.



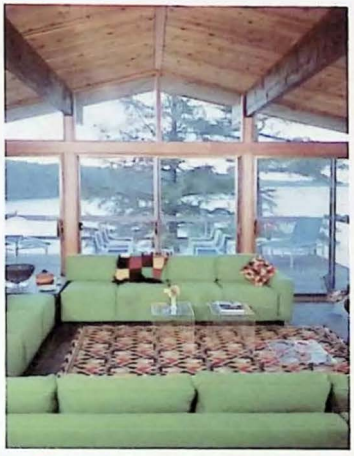
Deck House, Inc. was founded by William J. Berkes in 1960 to provide a quality house of excellent design for a reasonable investment. Without sacrifice to twentieth century living standards, the Deck House meets every measure of architectural integrity – purity of line, aesthetic satisfaction, the use of fine materials in their natural state.

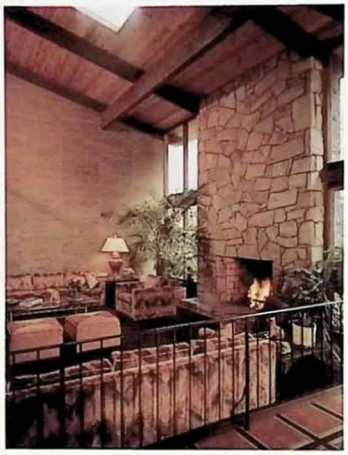
















The house exudes strength and stability. This quality stems from post and beam construction – the simplest architectural form – as old and enduring as Stonehenge.

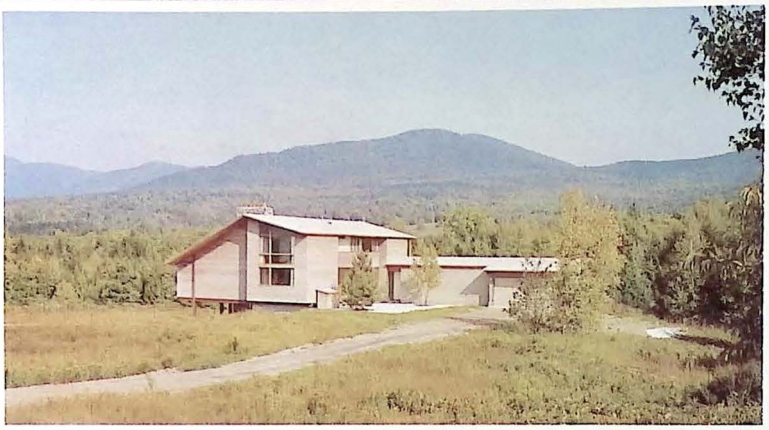
Mahogany, cedar, brick and stone offer the subtle colors and rich textures that are the major decorative elements of the house. Careful use of these materials provides a pleasing visual and emotional transition from interior to site.

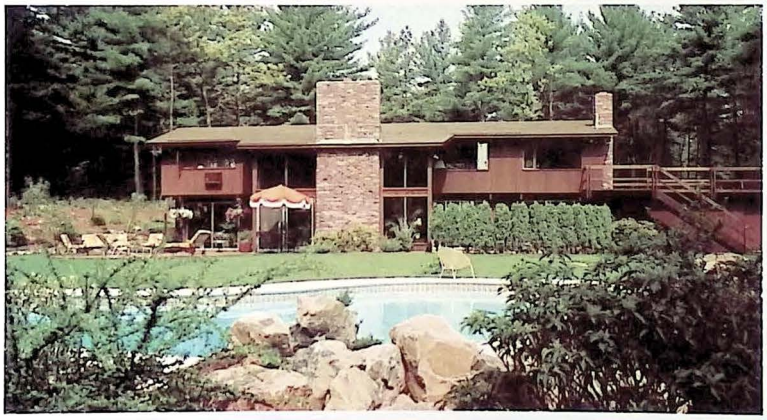
Special attention is given to the flow of space that invests one with a sense of freedom, of movement. Space expands horizontally through walls of glass out onto decks, and vertically to soaring ceilings.

Light and shadow provide continuous drama as they dance through the house – dipping through a clerestory, filtering through an expanse of glass, rippling with the leaves on an interior wall, bathing a deck in rich warm hues as the sun sets.











Expressed in organic materials and horizontal lines, the Deck House complements, rather than intrudes upon its setting. The house and its surroundings are in magnificent unison.

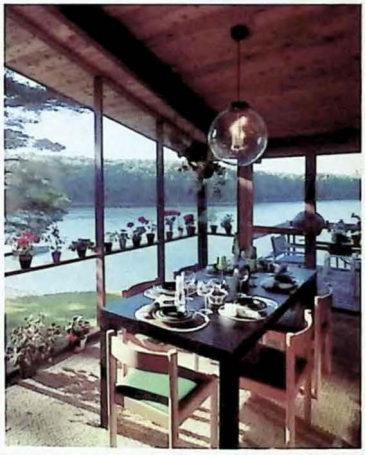


The Deck House is a perfect blend of aesthetics and function. Materials that provide color, warmth and texture are, at the same time, rugged structural elements.

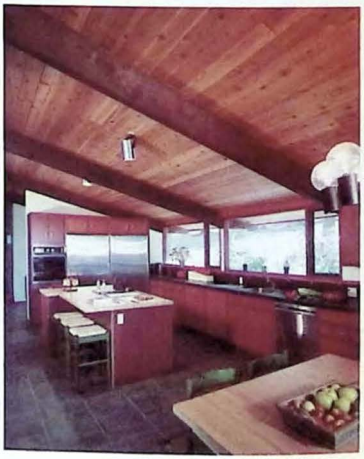
Posts and beams were utilized in colonial days and withstood the test of rigorous New England winters. Used today, this same construction permits window walls and open spaces. When properly planned, this liberal use of glass helps warm the house as well as admitting light and offering views at every turn of stair and corner. Mahogany millwork, cedar decking, and beams of Douglas Fir are both rich and practical, requiring a minimum of upkeep. Massive brick chimneys offer texture to balance the smooth gleam of glass.

The floor plan of the Deck House is designed to respect the individual as well as the family – the child's need for privacy as well as the adult's. There are spacious, light-washed areas for family and friends to gather, and smaller, more intimate places away from the mainstream for solitude.







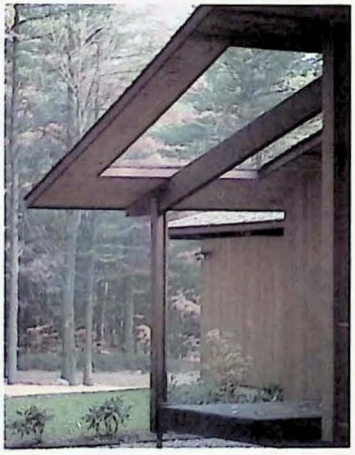












The architectural signature.

One cannot alter the perfection of a circle and still expect it to look and perform like a circle. The same concept applies to a Deck House. Each element of the Deck House has been chosen for its contribution to the total house. Thus, though there are as many Deck House plans as there are owners, each is instantly recognizable as a Deck House.



Building a house is a rewarding experience. It offers an opportunity to gain insight into yourself, while providing a satisfying outlet for your natural creativity. Your house should be a reflection of your values that will stand for generations.

Deck House, Inc. was formed not only to design a unique house, but to make your part in planning and building it, pleasant and fulfilling. By simplifying this process and overcoming most problems inherent in residential construction, Deck House makes your part in the experience an enjoyable one.

All that remains is to translate the Deck House concept into the ultimate expression of you.



DECK HOUSE

EXPRESSIONS 2

The Deck House- An Architectural System

Deck House is a systems approach to architecture, combining design, the preparation of components and a construction process to create an exciting contemporary house—in harmony with its site and surroundings—individually planned for you.

This book will acquaint you with the sound thinking that has gone into the development of the concept and will help you to understand and appreciate the potential of the Deck House design and building system as you consider alternative approaches to planning and constructing a new house today.

The Site

No Deck House is designed "in a vacuum." The relationship of the house to the building site is an important aspect of the design phase.

If you already own a building site – fine. Once we know your needs and your ideas – what you want your new house to be – we can design a house to answer those requirements while it complements your building site, taking advantage of its natural features.

As you plan your house and its placement on the site, here are some points to consider:

The path of the sun throughout the year

Orientation of the house to benefit from natural solar gain

Location of various rooms to receive sunlight at the appropriate time and to take advantage of the best views

Which trees to keep – which ones to cut

Maximizing views through judicious pruning

Taking advantage of prevailing winds

Low, wet areas, steep slopes or hidden ledge which will affect the location of the house

The natural drainage patterns of the site

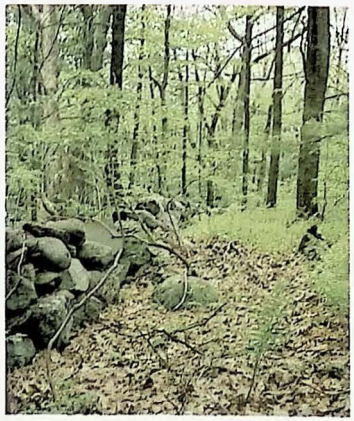
The location of the well, septic system and driveway

Locations of services – water, telephone, electricity, gas

Accessibility for construction vehicles

We can help you to determine your priorities and compromises with regard to building on the site. Whatever the characteristics of your land, our representatives will assist you in defining your needs and in designing a house that "works" for your living patterns and your building site.

If you do not own land, keep these considerations in mind as you conduct your search. If you have several sites from which to choose, a Deck House representative can inspect them and guide you in making your final choice.



Developing The Site

Consideration must also be given to the cost of developing your site. No matter what kind of house you want to build, if town sewerage is not available, a septic system must be designed and built to meet the requirements of your town. Trees must be cleared and stumps removed, a driveway must be laid out and a well dug (or a water line trench installed if your site has access to town water). Some sites require additional fill. Rock ledge may have to be removed.

We are prepared to counsel you from the beginning to minimize costly surprises later on.



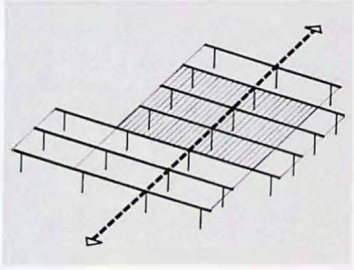
Design Concept

Once your site has been selected, it's time to plan the house.

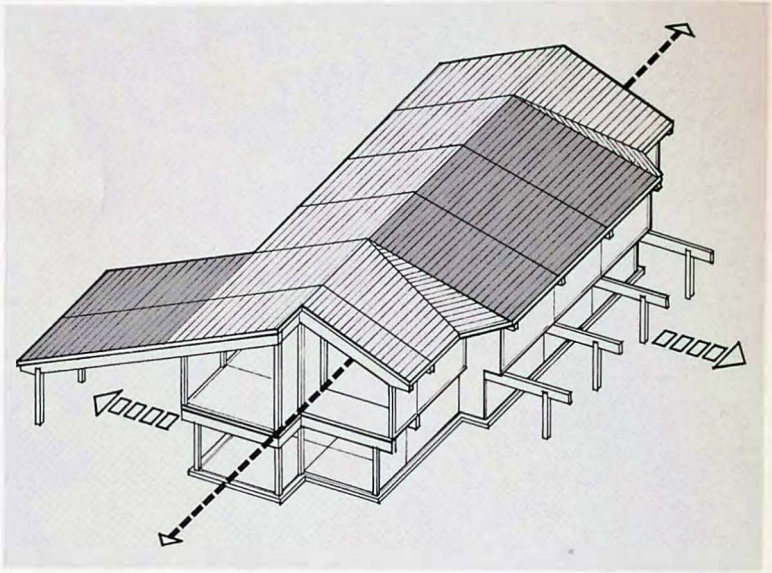
The Deck House design concept is based on a post and beam construction system, permitting almost unlimited design flexibility in a unique, solid structure.

To understand how this flexibility works, let's examine the logic behind our design system.

Think first of an abstract concept: Imagine a "spine" intersected with "ribs" placed eight feet apart along its length. By extending the spine at either end and adding more ribs, the size of this two-dimensional grid is expanded. Another way of enlarging this grid is to extend individual ribs farther outward from the spine.



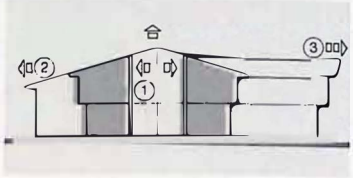
It is a simple transition from this abstract idea to the Deck House design concept. The spine corresponds to the centerline of the house; the ribs correspond to beams. These beams are normally placed at eight-foot intervals along the centerline. In Deck House post and beam construction, the roof and floor beams are supported at the centerline and outside walls by posts, and it is this sturdy, rugged framing which supports the entire structure.

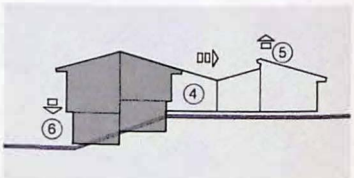


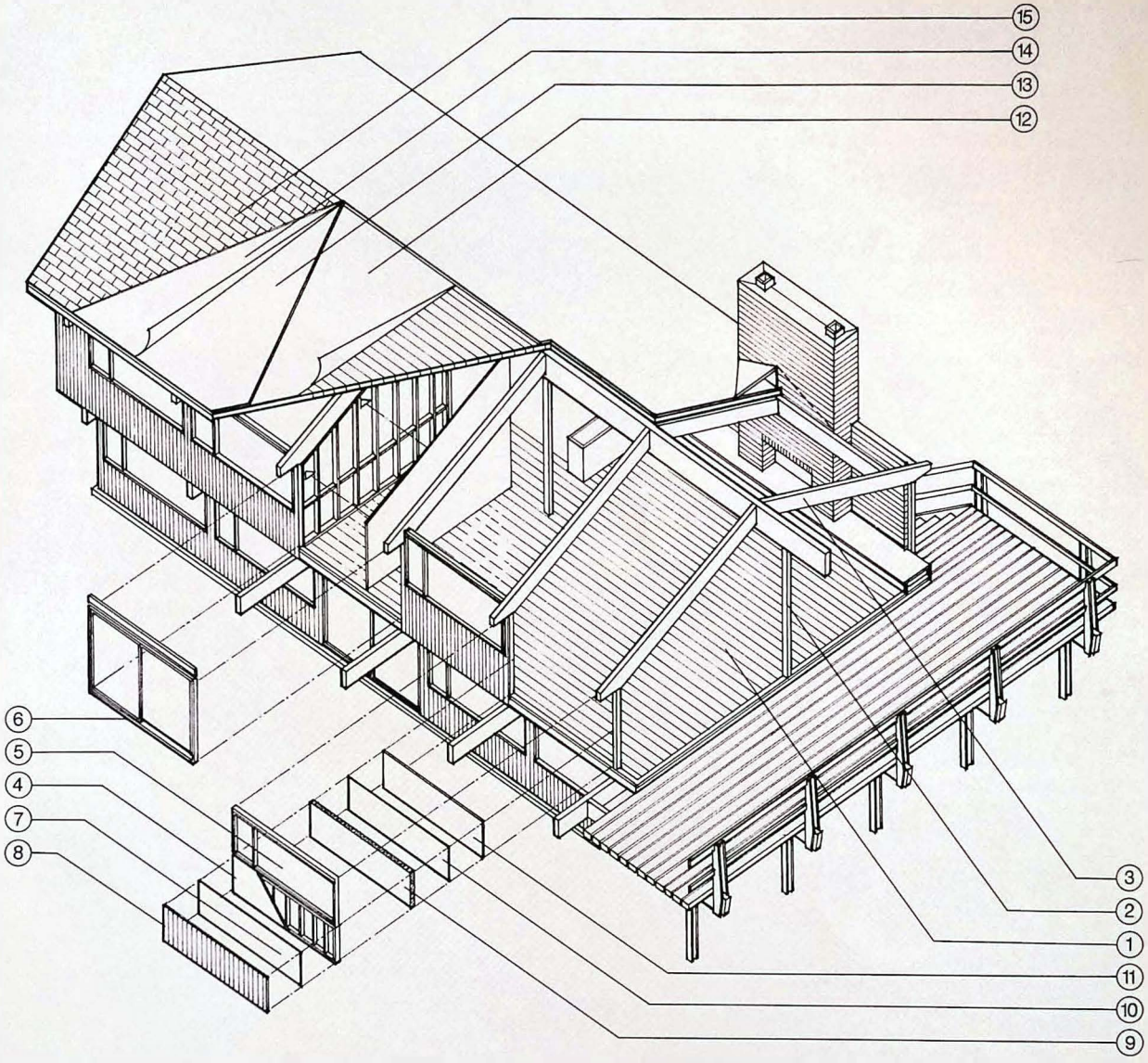
Extend the centerline and add more beams; you expand the house lengthwise. Extend the beams from the centerline; you expand the width of the house. Where design requirements dictate, beams may be added on one or both sides of the centerline at intervals less than eight feet.

The flexibility of the post and beam structure is not limited to these simple extensions. (1) The width of the house can be increased by adding space at the centerline which, in turn, raises the roof height. (2) Roof beams may be continued outward from the centerline to widen the house. (3) A framework may be placed at right angles to the main structure to create additional variations. (4) Separate structures can be connected with a link, (5) roofs can be raised, (6) floors can be lowered —all to create interesting living space and to take advantage of the natural terrain.

Interior partitions are non-load bearing, thus permitting flexibility in room arrangement. It is also possible to create uninterrupted space by eliminating some of the centerline posts, replacing them with beams.







Now that you begin to see how a Deck House can be designed to meet varying spatial requirements, consider how we enclose the space which has been created with our structural framing system.

Interlocking laminated decking (1) is nailed to the framework of posts (2) and beams (3) to form the floor and roof system.

Exterior walls are next installed between the perimeter posts. These are combinations of various sized solid panels – consisting of kiln-dried 2 x 4's and plywood sheathing (4) – glass panels, framed in Philippine mahogany (5) or sliding glass doors where maximum glass areas and access to the outside are desired (6). Once these panels are in place, asphalt paper (7) and exterior siding (8) are applied. Wall insulation (9), a polyethylene vapor barrier (10) and an interior surface of sheet rock (11) complete the exterior walls.

The exterior surface of the roof decking is covered with protective asphalt felt (12), a layer of rigid insulation (13), a second layer of asphalt felt (14) and asphalt roof shingles (15).

Design Implementation









Now let us review some specific applications of this design system.

1 First, consider the roof, designed with a generous overhang on all sides to shade and protect the house.

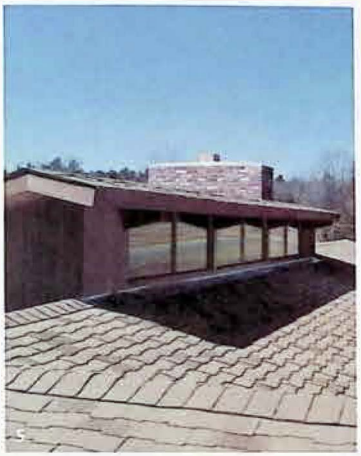
2 Inside, the decking creates a majestic ceiling of handsomely grained cedar, rising gently from beyond the exterior wall to a height of almost eleven feet at the ridge.

By moving the exterior wall farther from the centerline and raising the roof, the floor area of a room is enlarged and the sense of spaciousness is expanded.

3 Floors can be eliminated to create dramatic two-story space. Floor levels can be lowered for step-down rooms, or raised to produce interesting balconies.

4 A transverse gable roof treatment will also add height to a room, while introducing a change in ceiling planes and additional glass to capture an expanded view.

5 Another method of adding height is to raise a number of roof beams on one side of the ridge. This creates two different roof heights. Glass can be installed in the vertical plane between them to bring natural light into the center of the house. This clerestory is but one example of the versatility in window treatment possible in a Deck House.





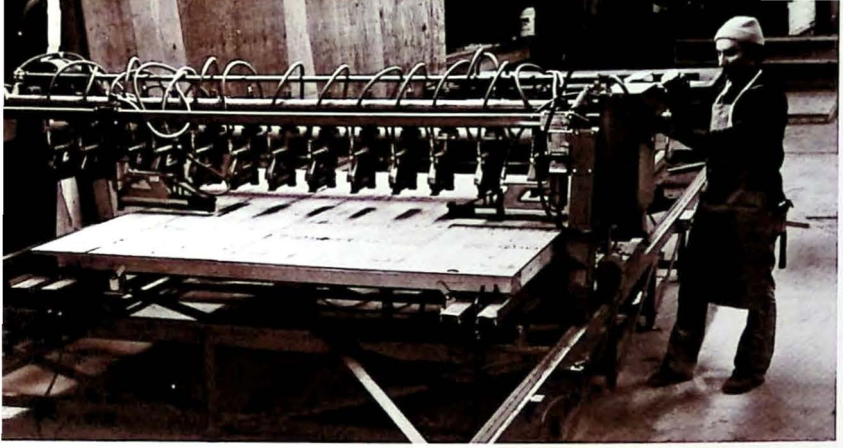


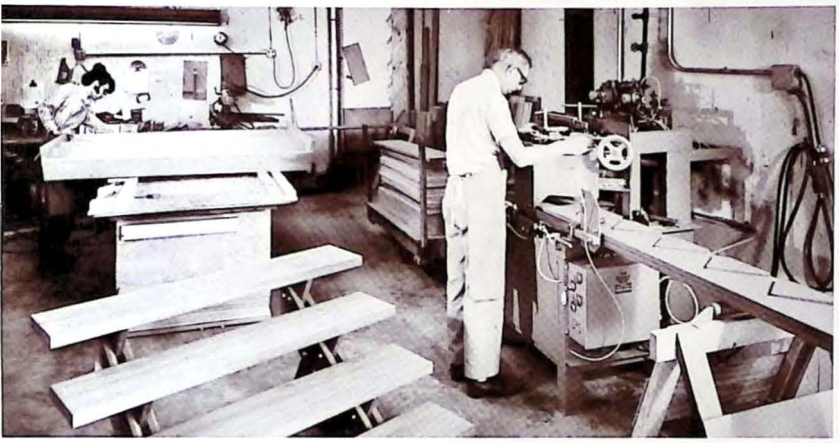
6 It is also possible to expand the window area of a room and increase the ceiling height by reversing the roof plane, and adding glass to the resulting raised exterior wall.

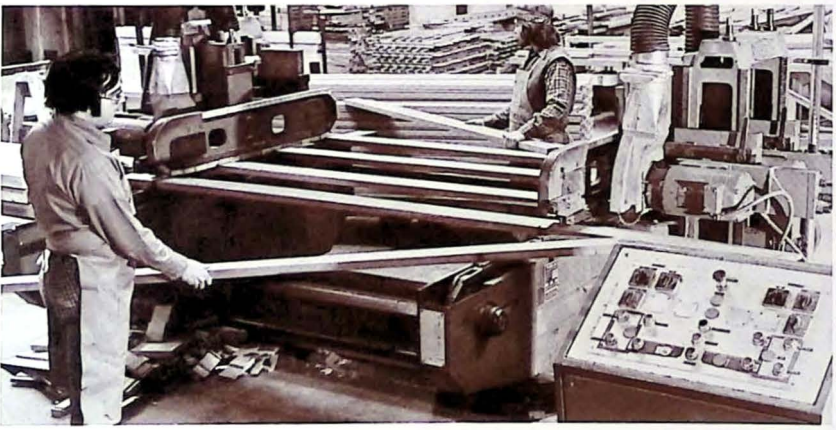
7 It might be more appropriate to use a narrower version of the reverse roof plane which we call a light scoop.
Natural light can be directed through the roof with skydormers – acrylic skylites, available in either a fixed or opening style, which may be placed anywhere in the roof.

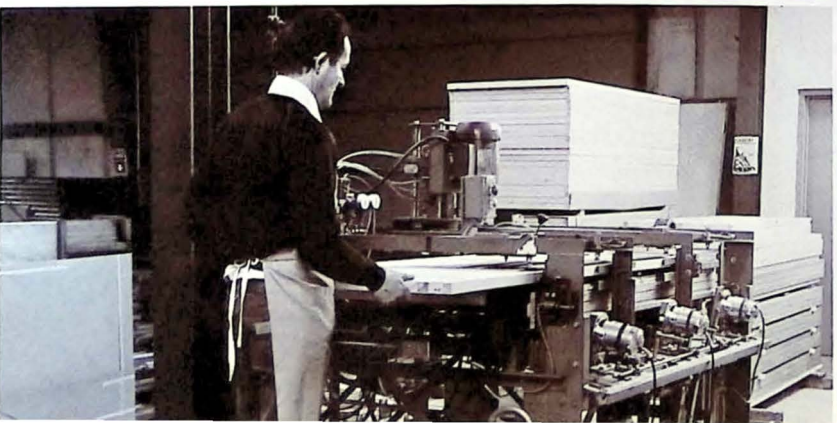
8 Balcony decks act as natural extensions of interior living space – a perfect spot for warm weather relaxation and entertaining. It's a simple matter to enlarge the balcony deck area – make it deeper for additional seating or extend the length to serve additional rooms. Perhaps you prefer to wrap the balcony deck around one end of the house with stairs to grade for easy access. These modifications are easily incorporated into your planning.











The Component Package

The design aspect of a Deck House is only the first phase of a practical, three-part systems approach, conceived to translate your ideas into an exciting and efficient house. Phase Two is the manufacturing of sub-assemblies and the gathering and preparation of materials used to construct the weather-tight shell of the house. These items are known as the component package.

In our manufacturing process the precise size, shape and finish of certain components is determined in advance, and they are processed in our production plant rather than at the building site. These manufacturing operations include prehanging interior doors in mahogany jambs, constructing solid wall panels, making insulating glass, assembling and glazing mahogany window panels, sizing posts to length, shaping and staining beams and assembling interior mahogany stairs and balustrades. By performing these functions in a plant environment, critical dimensions and quality can be controlled. Special wood-

The Construction Process

working machines perform tasks with a consistency and speed that a skilled, highly-paid carpenter would find difficult to achieve in the field.

In addition to these manufactured items, the component package includes other materials for completing the weather-tight shell of the house. Among the major items supplied are Potlatch cedar laminated decking, roof shingles, insulation and cedar siding.

The Deck House design must be executed with specific materials – many of them unique, serving a particular design function. We supply these materials in our component package to insure that the proper aesthetic effect and structural integrity of the Deck House is maintained.

Many of these materials are not available locally and could not be purchased at a reasonable cost for the construction of a single house. The Deck House buyer is able to benefit from our volume purchasing and avoid delays in his construction schedule.

Phase Three of the Deck House system is the construction process. This phase is the responsibility of independent builders who prepare the site, construct the foundation and assemble the weather-tight shell of the house using the components supplied by Deck House. Once the structure is enclosed, the builder, utilizing his subcontractors, installs the mechanicals (heat electricity and plumbing) and completes all finish work.

In the greater Boston area, we maintain our own construction department, which gives us the important advantage of being able to "talk the builder's language" and to assist him should questions arise during the construction process.

In most areas, there are builders we can recommend to you who are experienced in Deck House construction techniques. The company also maintains an orientation program to acquaint builders with our construction methodology. Builders are encouraged to visit our Massachusetts headquarters where they can examine houses in various stages of completion. Every builder also receives a comprehensive Detail and Construction Manual which delineates each step in properly framing and finishing the house.

In addition to the materials provided by Deck House, we also specify the materials which your builder supplies in accordance with your construction agreement with him. This insures that each Deck House will be of the same quality as our model homes – the standard of excellence in materials and workmanship against which all Deck Houses are judged.

Attention to Detail

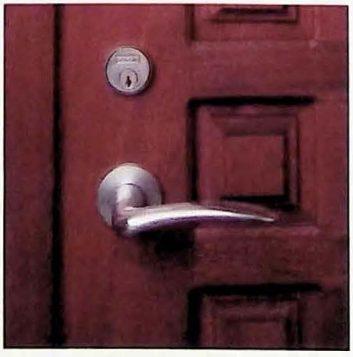
To convey in words something that must be experienced is difficult at best. Therefore, you are invited to visit a Model House where you can visually experience the freedom of open space, the subtle interplay of light and shadow, the use of natural materials, and the attention to quality and detail.





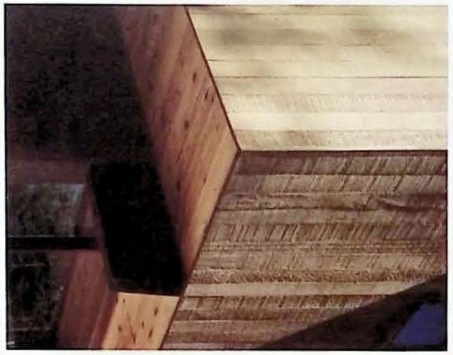














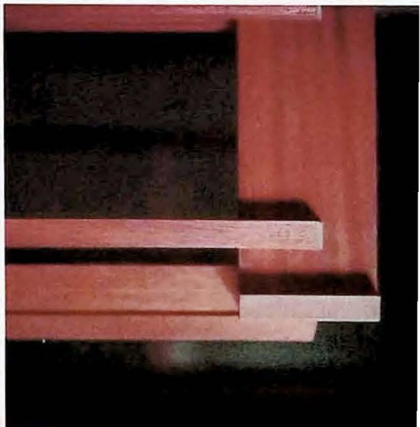












Creating Your Design

The Deck House concept has been developed to provide a housing environment that is exciting to live in and efficient as well, both in the arrangement of space and the use of unique materials. Accordingly, a series of designs have been created in a wide range of sizes, which are the "starting points" for most of the Deck Houses being built today. Our systems approach permits modifications and rearrangements of existing designs at reasonable costs.

To help you appreciate the kind of house we can create for you, we present a series of floor plan portfolios. Review the portfolios that contain floor plans of the approximate size that satisfies your needs. Consider what you want in your new house, and select plans that come close to answering your desires. Which features do you like – which ones would you eliminate? Share these feelings with us so that we can individually tailor a design to your particular requirements.

Perhaps you have already planned a house which you would like to build. Your plans may be rough sketches, drawn as you did your dreaming, or they may be finished working drawings. In either case, we invite you to discuss these plans with a Deck House representative. Clients, in growing numbers, are bringing us their own ideas which we have effectively translated into the Deck House system.

Whether we work from sketches, working drawings, or begin with a clean sheet of paper, we can plan your Deck House design in less time and at lower cost than using conventional methods.

The Planning Process

We believe that planning and building a new house should be an enjoyable experience. Many decisions must be made from the time of your initial meeting to the day you move in, and our entire program has been designed to anticipate your questions and to provide the answers every step of the way.

While individual situations may vary, the typical sequence of events in planning and building a Deck House is as follows:

1 Arrange an appointment with a Deck House representative.

2 Visit a Deck House Model Home and review your needs and ideas with the representative. In areas where we have no model home, it is often possible to inspect a privately-owned Deck House near your home.

3 You and the representative develop a preliminary house design, and determine how your house will be sited on your land. The details of your Deck House design can then be resolved.

4 Your representative provides you with a cost estimate for the total project.

5 Deck House prepares final working drawings for your approval.

6 Deck House and your builder confirm pricing and you sign contracts with Deck House, Inc., and with your builder.

7 Your builder prepares the site, constructs the foundation, and schedules delivery of the component package. Deck House delivers the package to your site.

8 Your builder completes the house.

9 You move in.

The Next Step

The Series Books which follow contain Deck House plans in a wide variety of sizes and arrangements. Look through them. Think in terms of those features you've always wanted, but have never been able to find in one house – a secluded deck off the master bedroom, a two-story living room, perhaps a barbeque in the kitchen.

As you review these plans you will have questions. Can I add a room here? A deck there? Relocate the entry? When questions arise, it's time to call your Deck House representative. He will be happy to assist you in developing a plan that works best with your lifestyle and becomes a visable expression of your personal tastes.

DECK HOUSE

SERIES

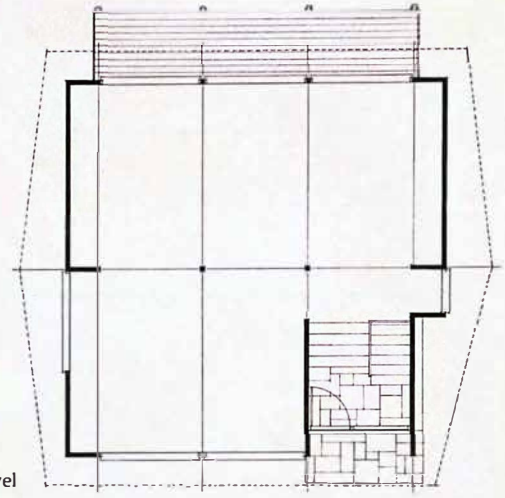
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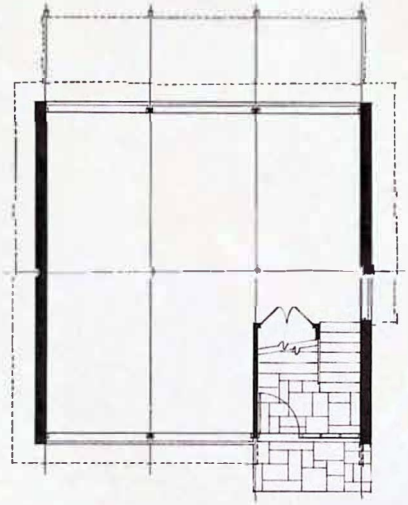
SERIES 3

This portfolio contains floor plans for Deck Houses of less than 1700 square feet. The descriptions accompanying each plan highlight features which may not be readily apparent from reading the plans.

The plan on this page represents the basic Series 3 design – the starting point from which many of the floor plans in this series were developed.



Upper Level

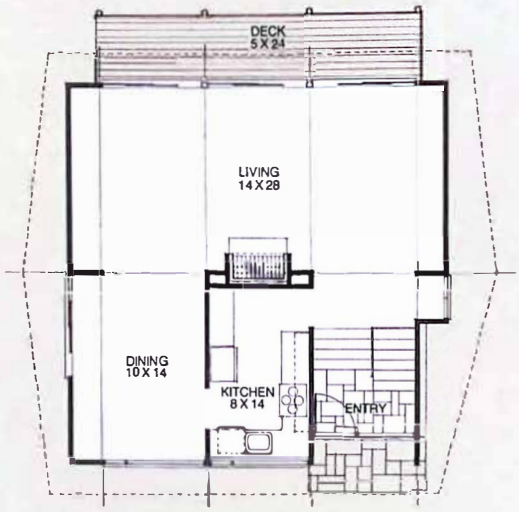


Lower Level

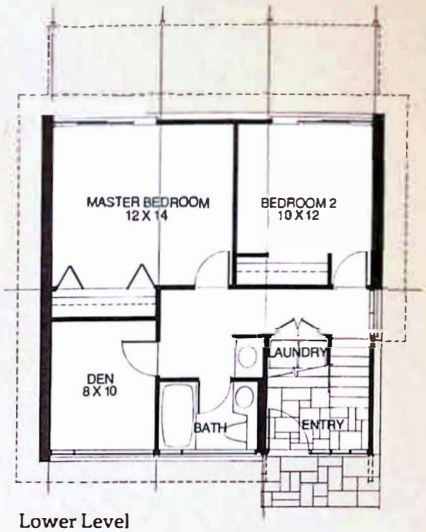
Model 7143

Upper Level 806 square feet
Lower Level 702 square feet
Total 1508 square feet

Open upper level plan features a rear wall of sliding glass doors opening to a balcony deck. Lower level bedrooms each have access to the outdoors.



Upper Level

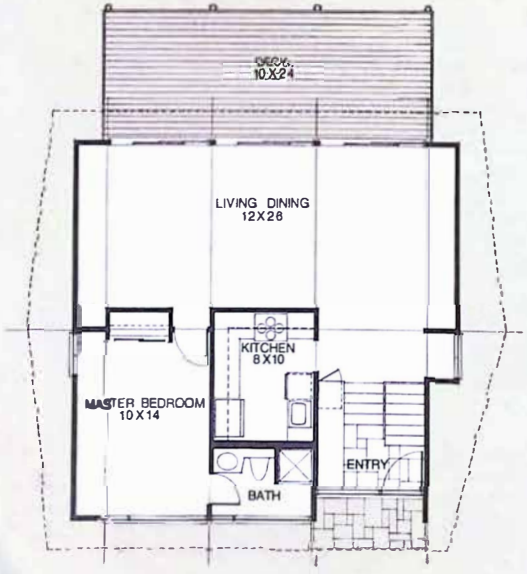


Lower Level

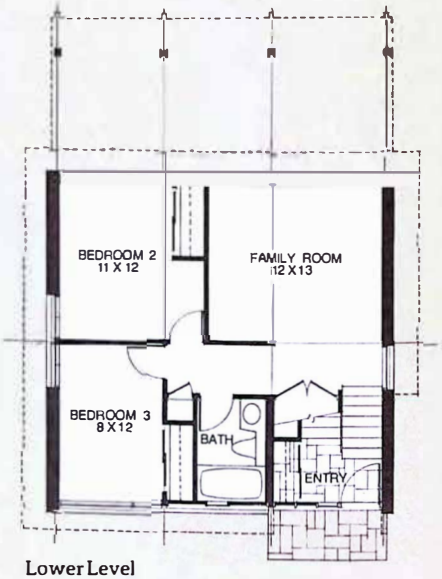
Model 7113

Upper Level 806 square feet
Lower Level 702 square feet
Total 1508 square feet

Master bedroom/bath on the upper level—children's bedrooms on the lower level.

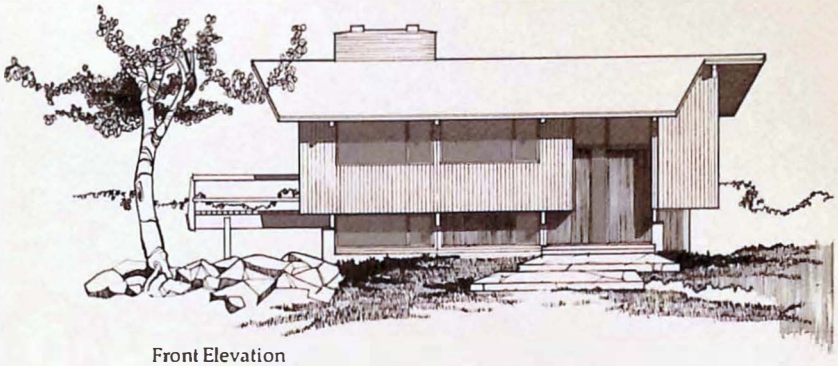


Upper Level



Lower Level

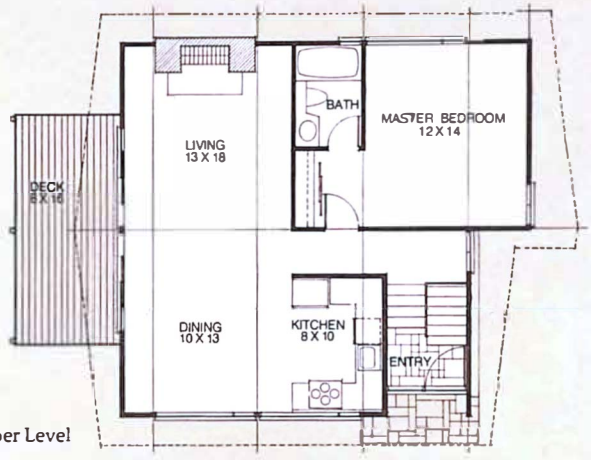
Model 7123



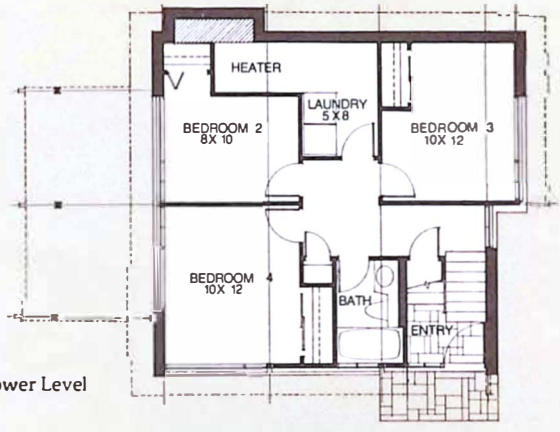
Front Elevation

Upper Level **835 square feet**
Lower Level **746 square feet**
Total **1581 square feet**

Living/dining room has a gable wall of glass and a dramatic cathedral ceiling.
Laundry is convenient to children's rooms.
Storage area beneath entry platform.



Upper Level



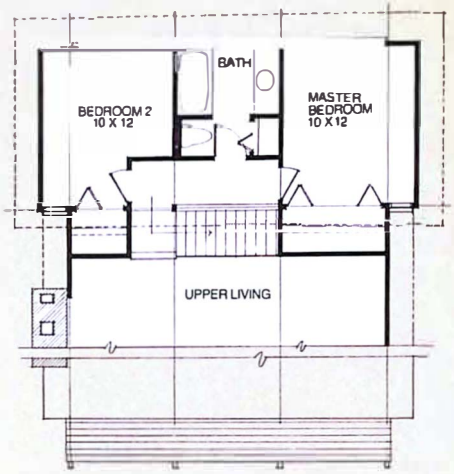
Lower Level

Model 7193

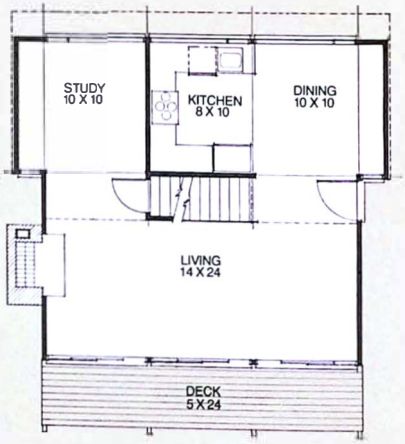
Upper Level	**424 square feet**
Lower Level	**642 square feet**
Basement	**642 square feet**
Total	**1708 square feet**

Compact floor plan has exciting vertical spaces, creating broad outdoor vistas. Clerestory windows bring additional daylight to bedrooms and expand visual space.

Full basement provides generous area for storage, laundry and hobbies.



Upper Level

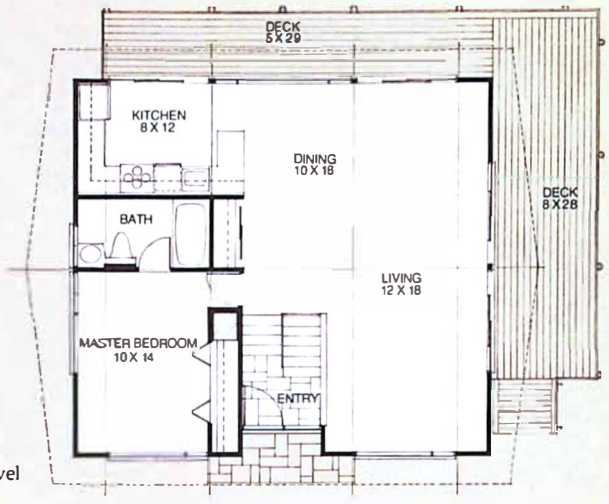


Lower Level

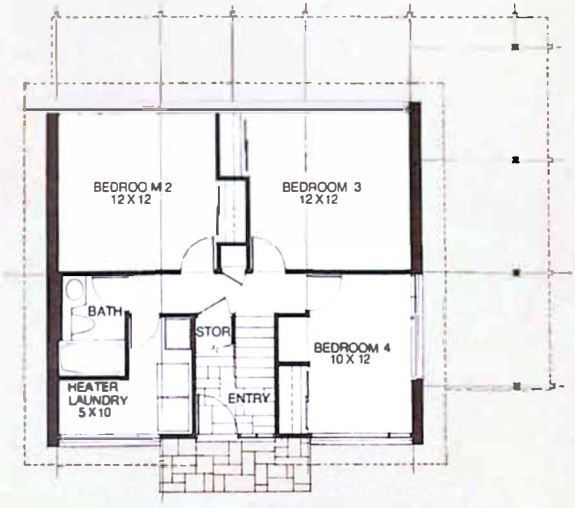
Model 7133

Upper Level	**906 square feet**
Lower Level	**774 square feet**
Total	**1680 square feet**

Recessed center entry with generous roof overhang. Open living/dining room with view in three directions.



Upper Level

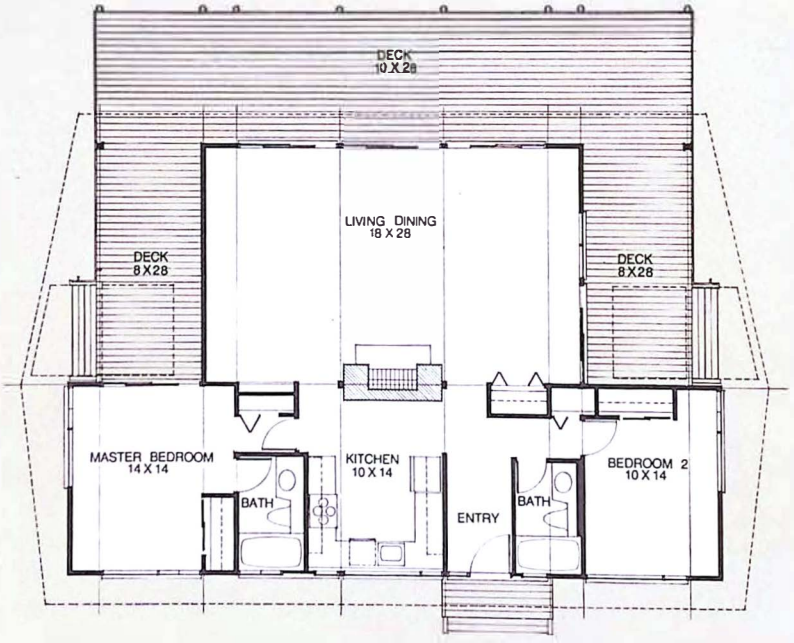


Lower Level

Model 7183

Total 1253 square feet

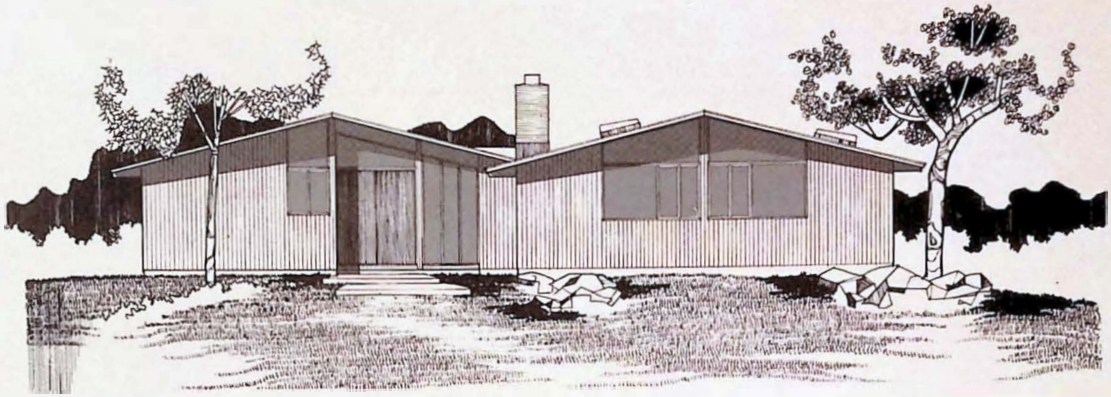
Generous balcony deck wraps around living/dining room, serving master bedroom as well. Dramatic open roof treatment.



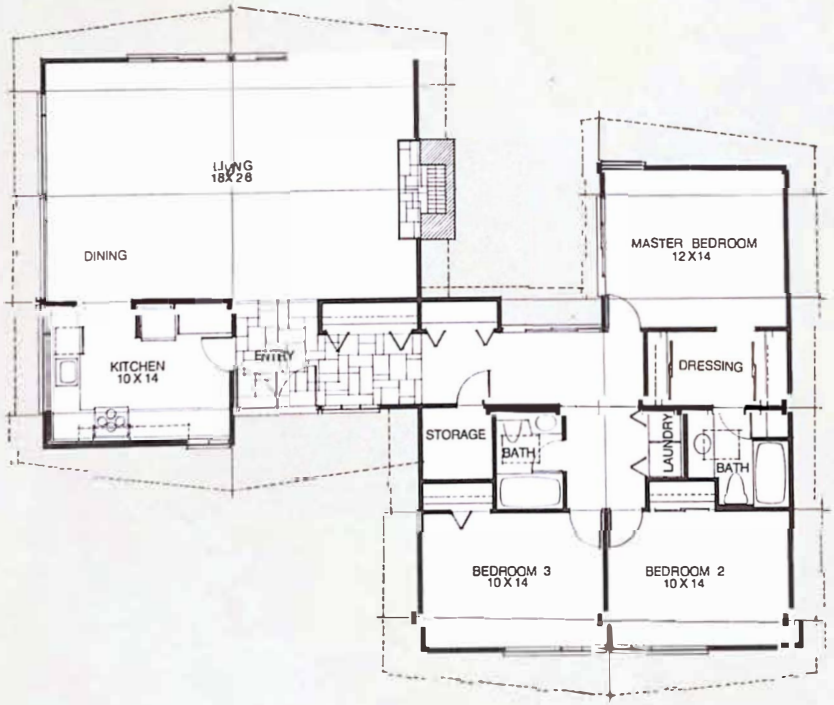
Model 7173

Total 1683 square feet

Living and sleeping areas are separated by a spacious foyer. Private terrace accessible from both the foyer and master suite. Plenty of storage.



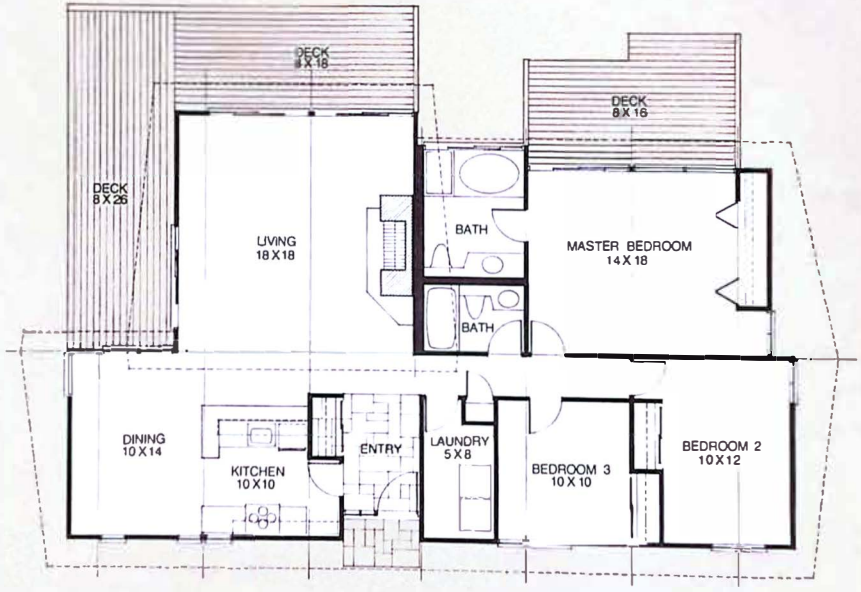
Front Elevation



Model 7163

Total 1516 square feet

Vertical window treatment on the front elevation.
Clerestory above the living room.
Master suite features a private deck.



DECK HOUSE

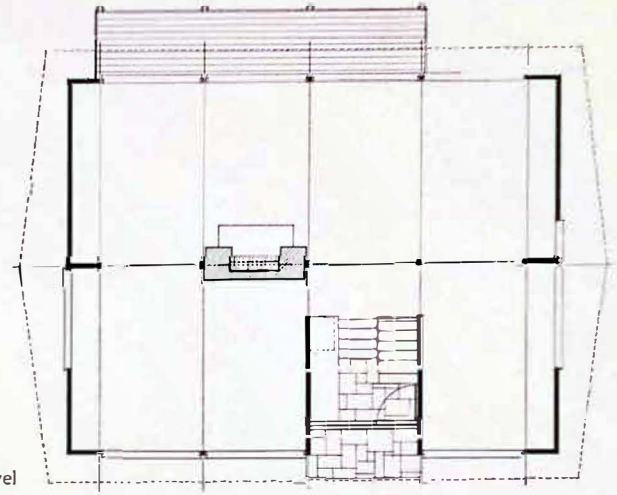
SERIES

4

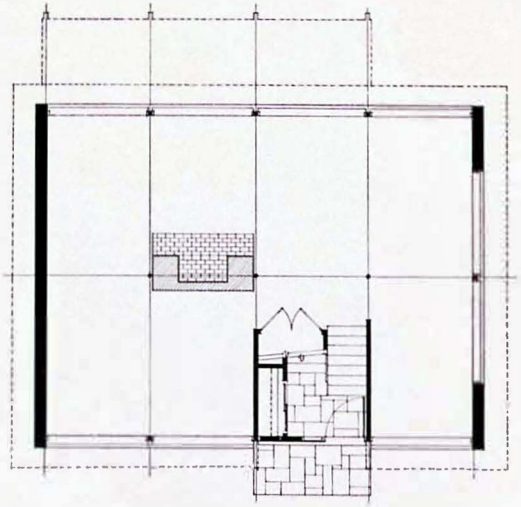
SERIES 4

This portfolio contains floor plans for Deck Houses of 1700 to 2200 square feet. The descriptions accompanying each plan highlight features which may not be readily apparent from reading the plans.

The plan on this page represents the basic Series 4 design – the starting point from which many of the floor plans in this series were developed.



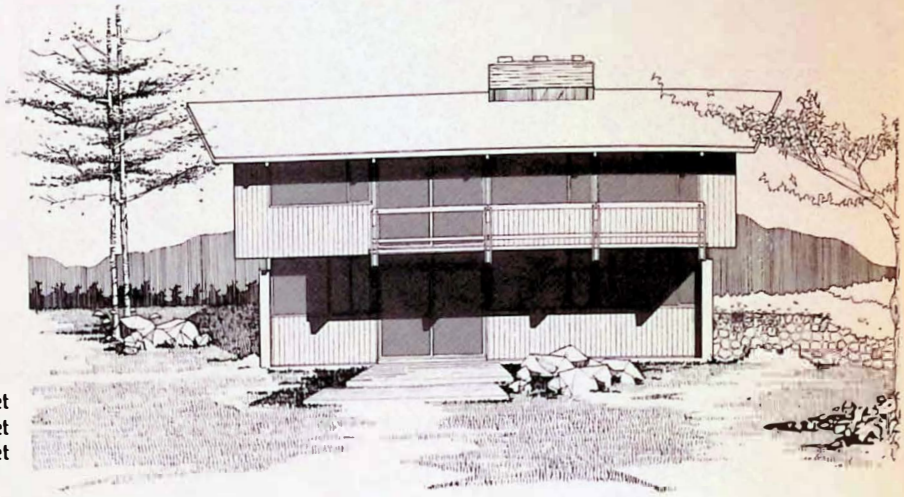
Upper Level



Lower Level

Model 7114

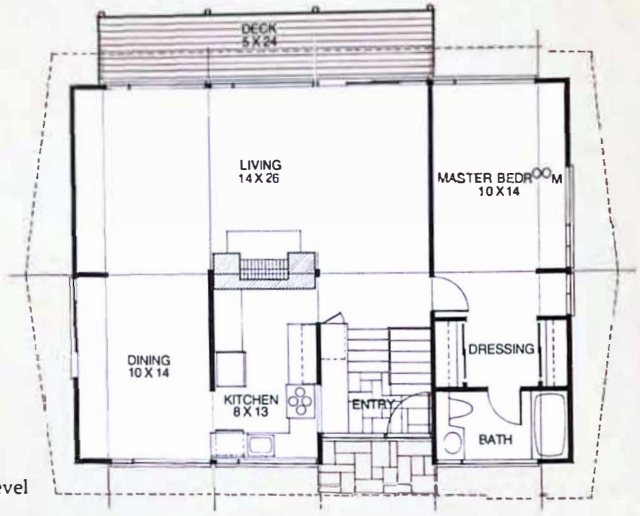
$81,600



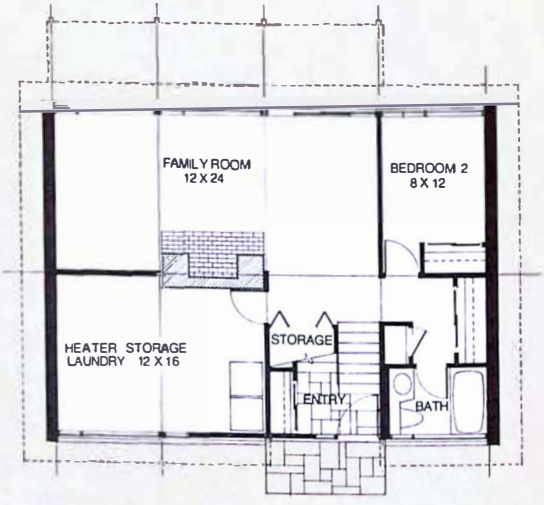
Upper Level	**1059 square feet**
Lower Level	**905 square feet**
Total	**1964 square feet**

Master bedroom with private dressing area and bath on the upper level.

Massive, center chimney provides fireplaces in the living room and family room, and a dramatic wall of brick in the kitchen.



Upper Level

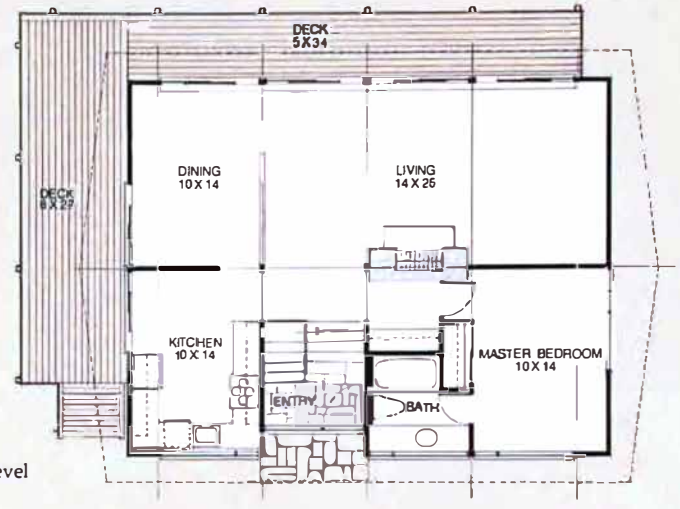


Lower Level

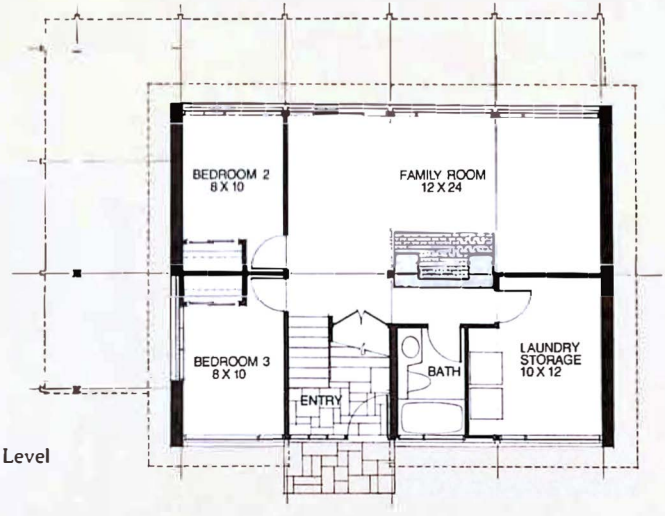
Model 7124

Upper Level	**1046 square feet**
Lower Level	**892 square feet**
Total	**1938 square feet**

Living room, dining room and kitchen served by wrap-around balcony deck with convenient stairs to grade.
Wall of sliding glass doors invites the view into living room and dining room.



Upper Level



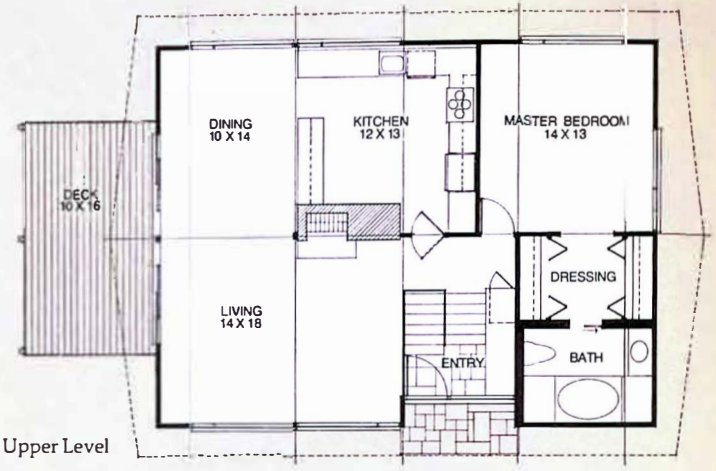
Lower Level

Model 7134

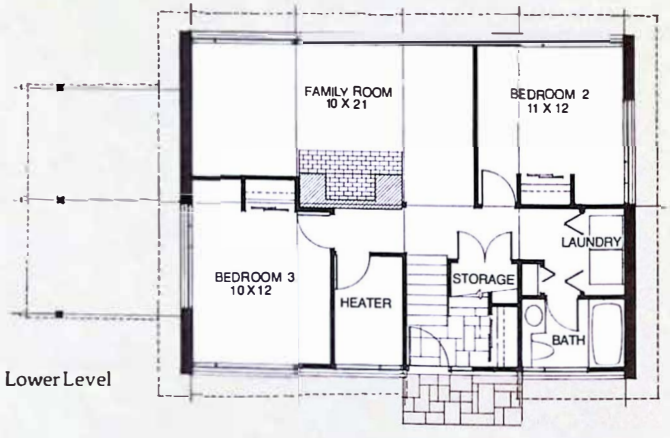
Upper Level	**1059 square feet**
Lower Level	**906 square feet**
Total	**1965 square feet**

Living/dining room at the gable end with trapezoids of glass to the ridge above sliding glass doors.

Elegant master bedroom suite with dressing area and oversize tub in master bath.

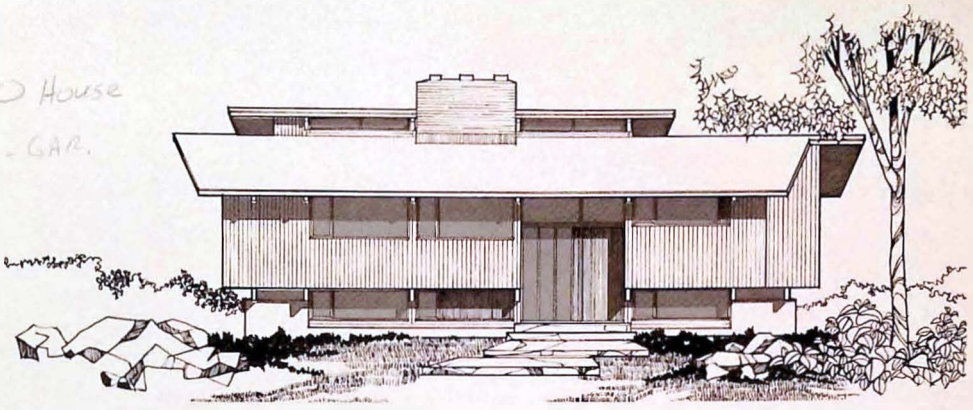


Upper Level



Lower Level

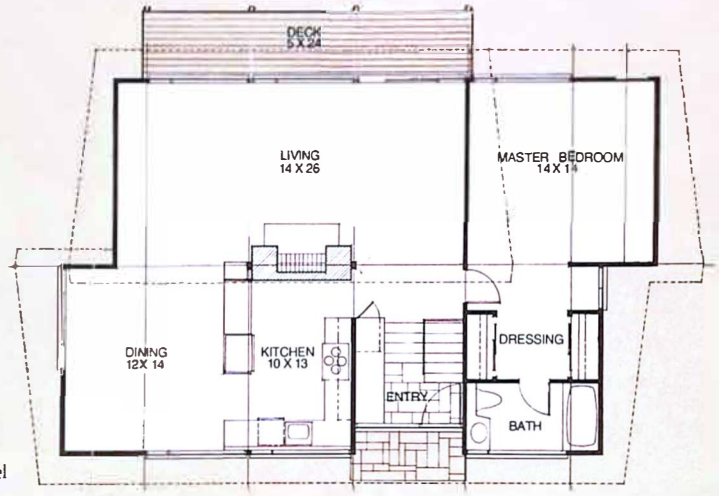
Model 7144



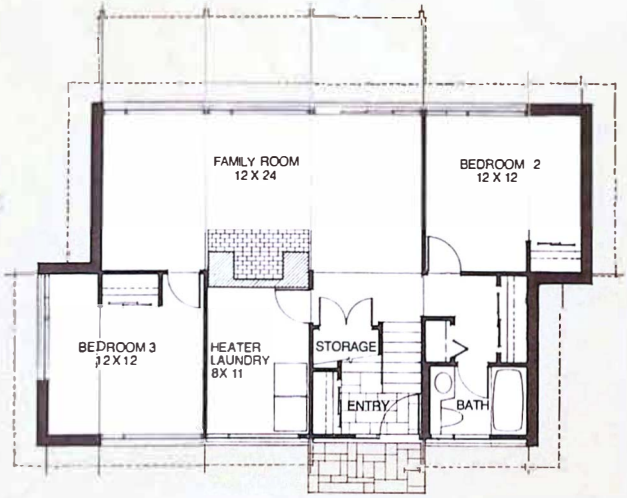
Front Elevation

Upper Level	**1176 square feet**
Lower Level	**1015 square feet**
Total	**2191 square feet**

Clerestory introduces additional light to the living room.
Four foot extensions create architectural interest both inside and out.



Upper Level



Lower Level

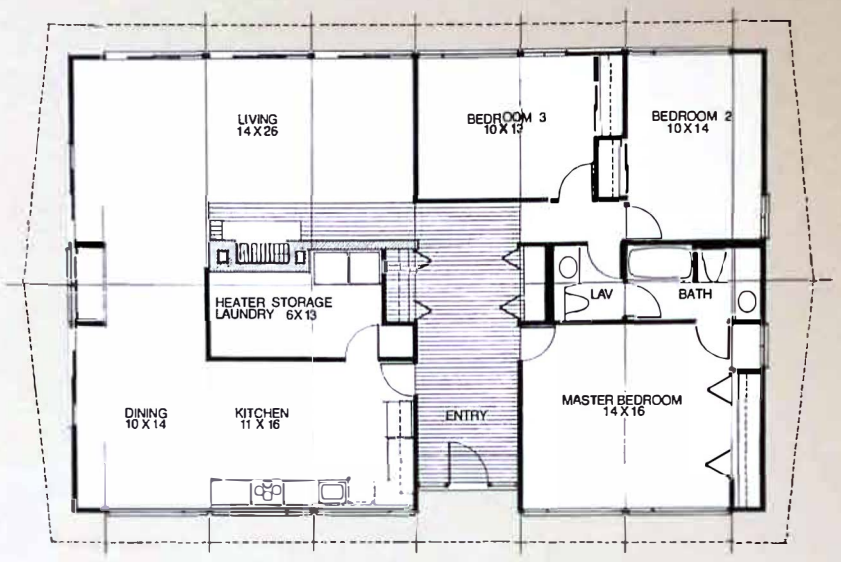
Model 7154

Total 1833 square feet

Well-planned living space on a single level.

Living room and dining room separated with a plant window, flanked by sliding glass doors.

Sixteen foot wall of brick in the livingroom.



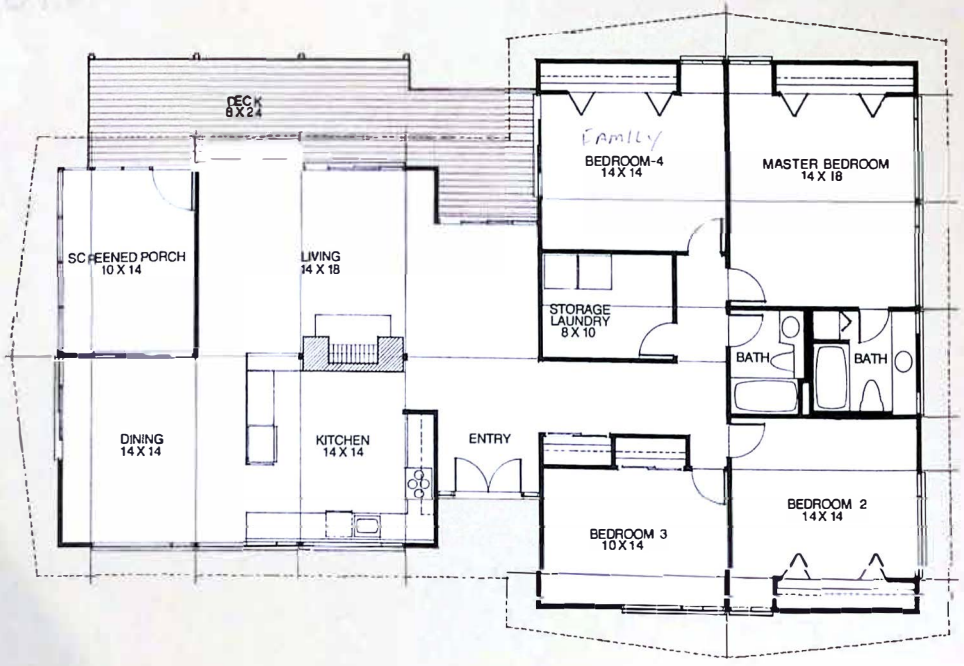
Model 7184

Total 2172 square feet

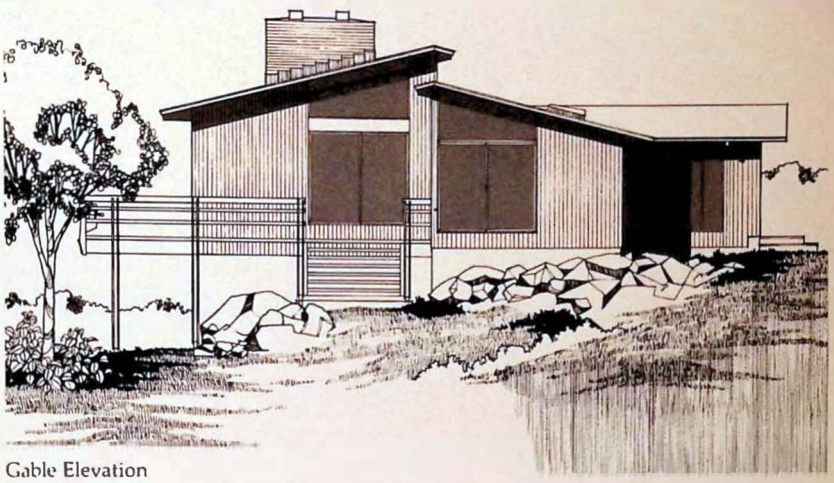
Single level plan with intersecting roof planes.

Recessed double door entry opens into a large foyer with sight line through sliding glass door to the balcony deck beyond.

Laundry/storage room is conveniently placed in the bedroom wing.



Model 7164



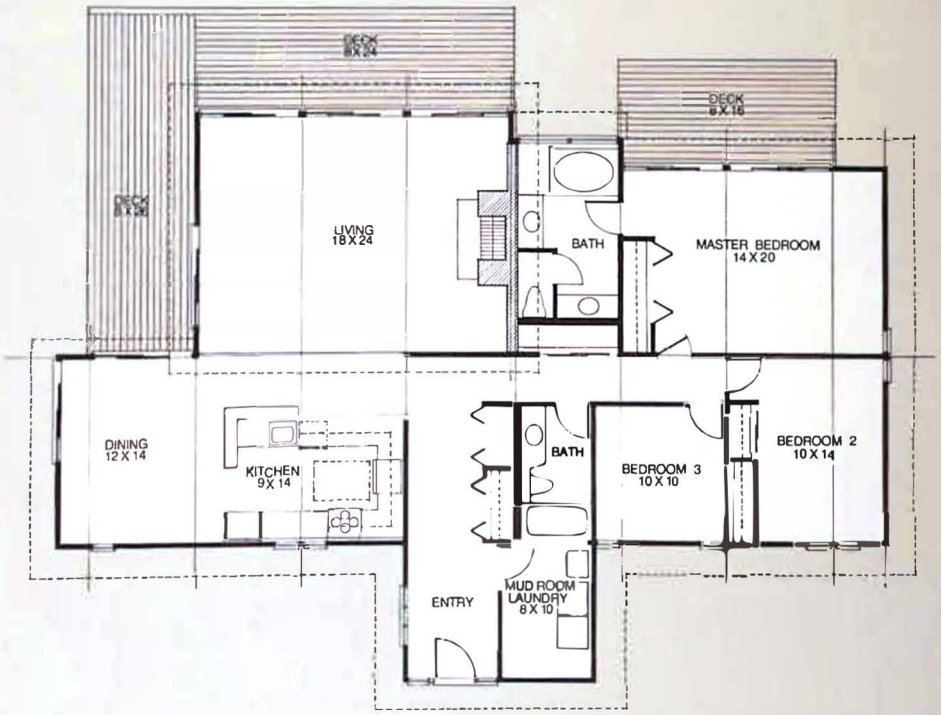
Gable Elevation

Total 1929 square feet

One level plan with extended entry featuring laundry/mud-room.

Clerestory over the living room and hall. Vertical window panels on front elevation.

Bedrooms are well separated from the living room, dining room, kitchen area.



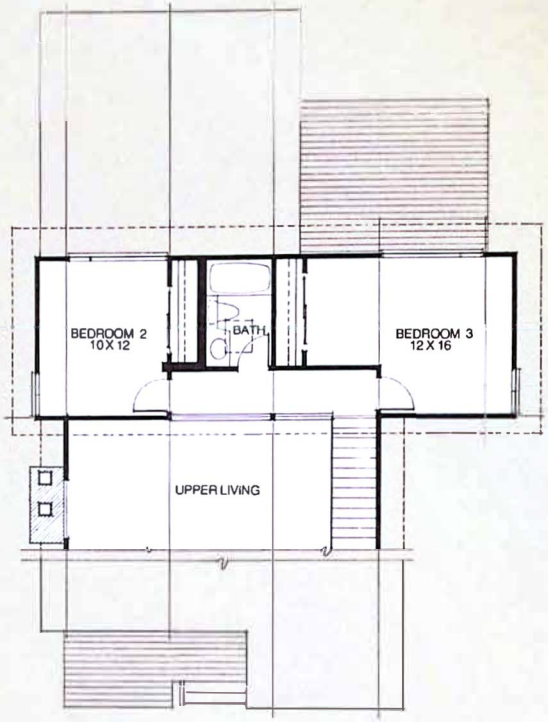
Model 7194

Upper Level	**461 square feet**
Lower Level	**1110 square feet**
Basement	**1110 square feet**
Total	**2681 square feet**

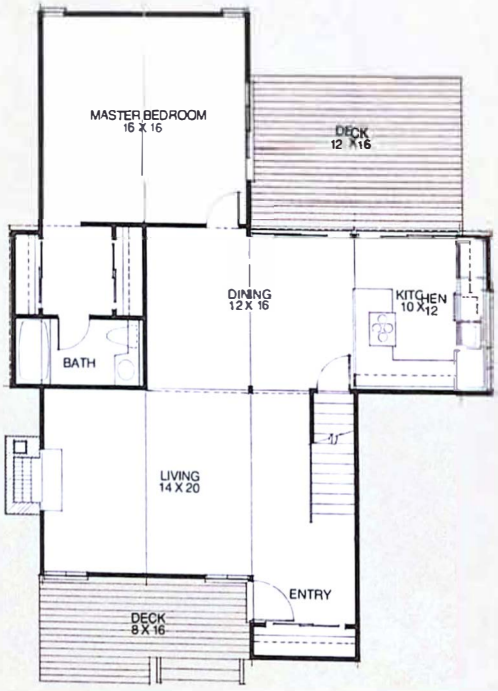
Elongated plan offers architectural excitement for narrow lots.

Deck at rear of house extends the living space, both visually and functionally.

Flexible loft area equally adaptable to young family now or returning family later.



Upper Level



Lower Level

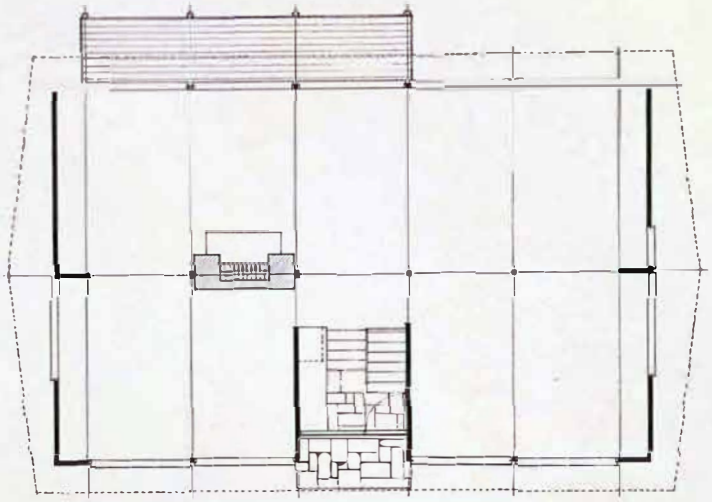
DECK HOUSE

SERIES 5

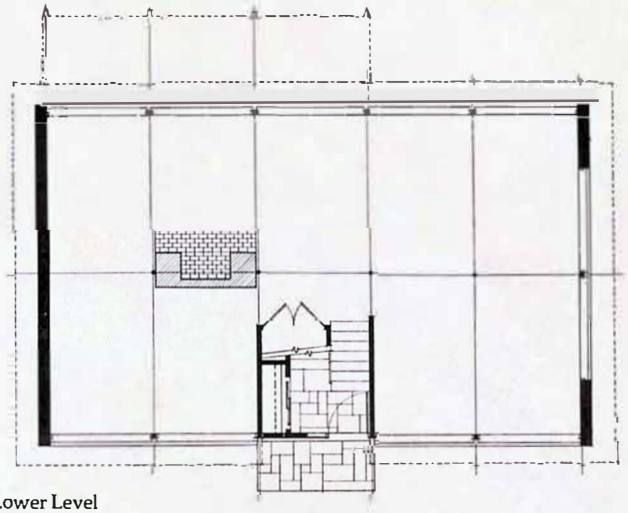
SERIES 5

This portfolio contains floor plans for Deck Houses of 2200 to 2700 square feet. The descriptions accompanying each plan highlight features which may not be readily apparent from reading the plans.

The plan on this page represents the basic Series 5 design – the starting point from which many of the floor plans in this series were developed.



Upper Level



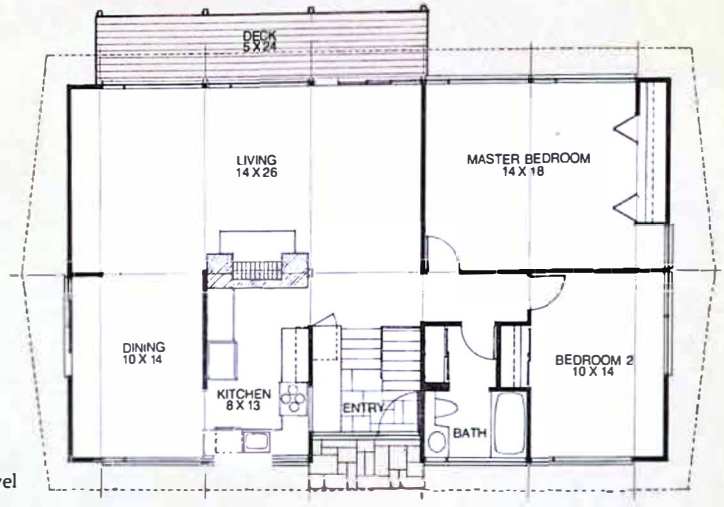
Lower Level

Model 7115

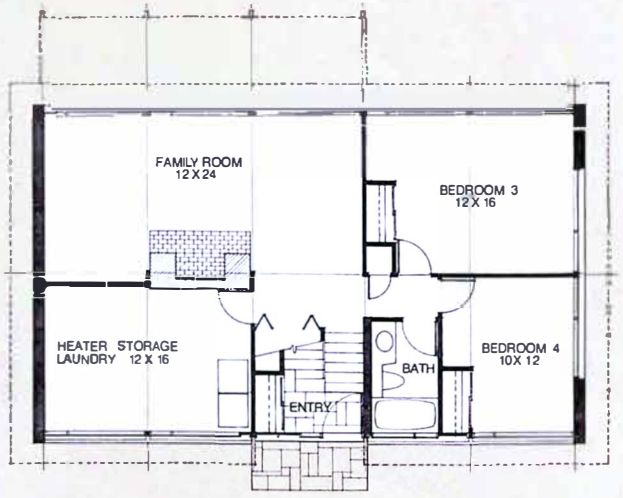
Upper Level	**1289 square feet**
Lower Level	**1112 square feet**
Total	**2401 square feet**

Entry features a mid-level coat closet, upper level storage cabinet with a planter above.

Lower level designed for children with a large family room and access to the outside.



Upper Level



Lower Level

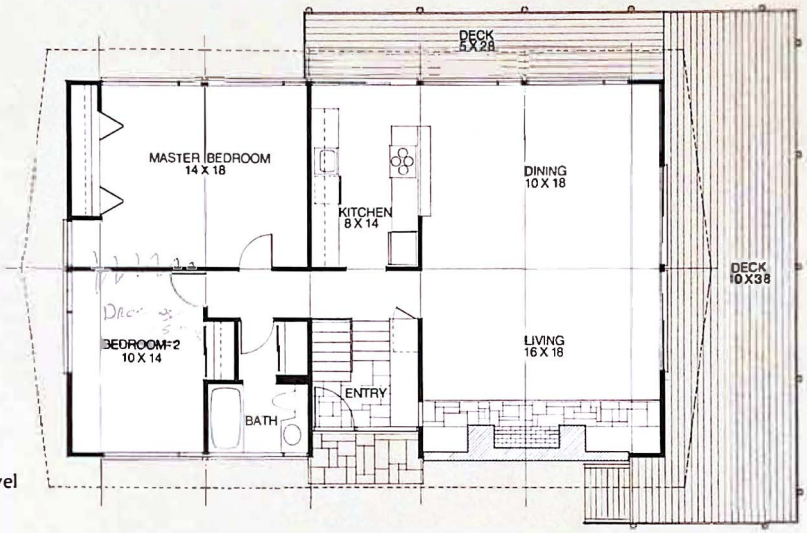
Model 7125

Upper Level	**1289 square feet**
Lower Level	**1112 square feet**
Total	**2401 square feet**

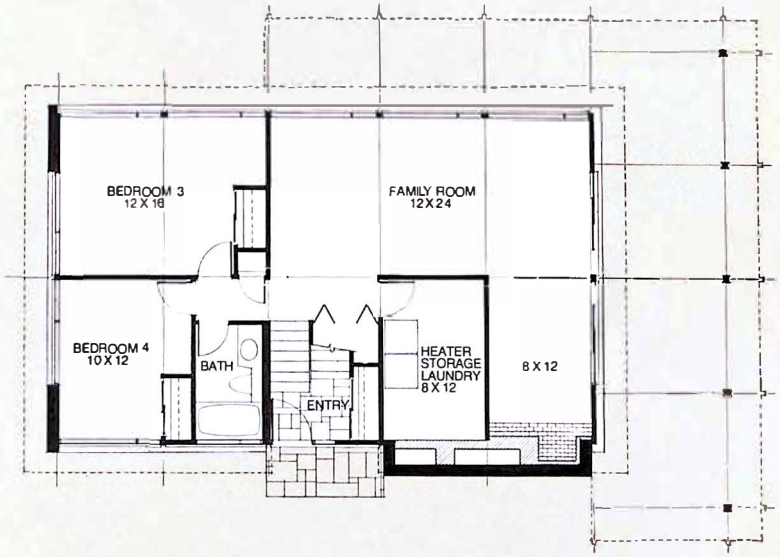
Gable living/dining room with a fireplace wall of brick and broad wrap-around balcony deck.

Trapezoid panels of glass to the ceiling above sliding glass doors in the gable.

Family room features a cozy fireplace alcove.



Upper Level

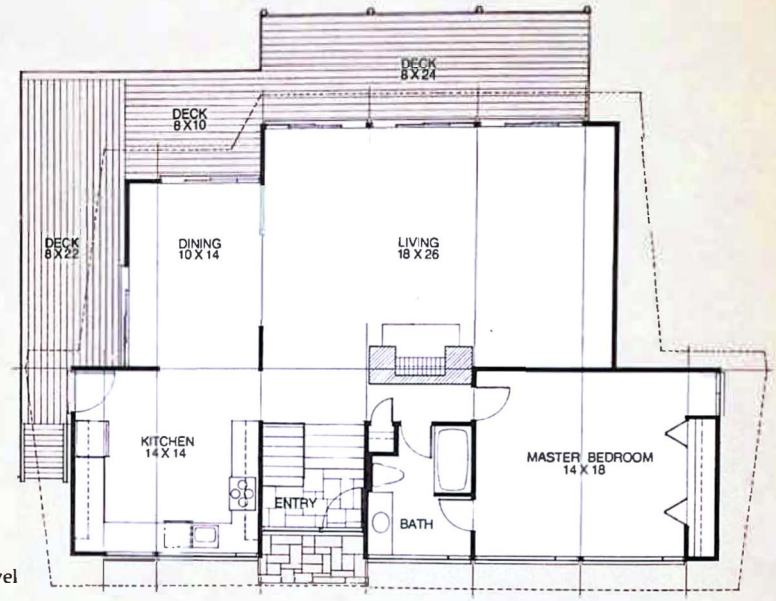


Lower Level

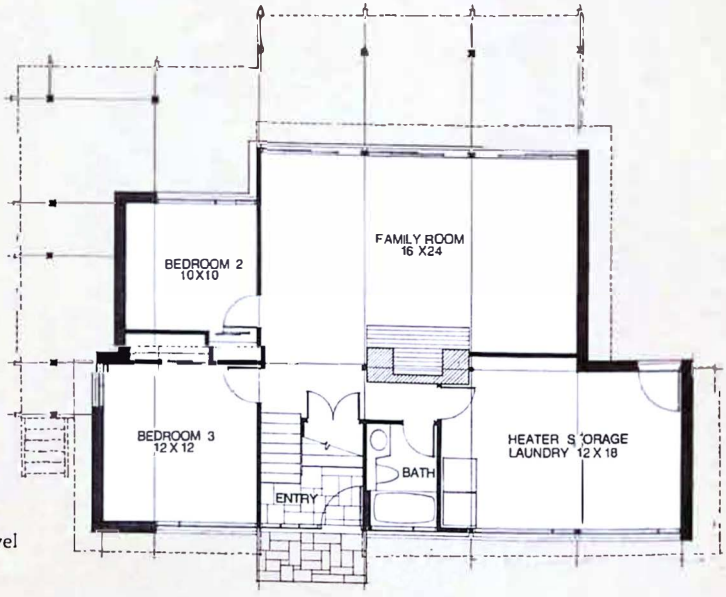
Model 7135

Upper Level **1327 square feet**
Lower Level **1185 square feet**
Total **2512 square feet**

Balcony deck serves living room, dining room and kitchen.
Convenient stairs to grade at kitchen entry.
Upper level bath accessible from hall and master bedroom.
Entry door from heater/storage/ laundry room to outside.



Upper Level



Lower Level

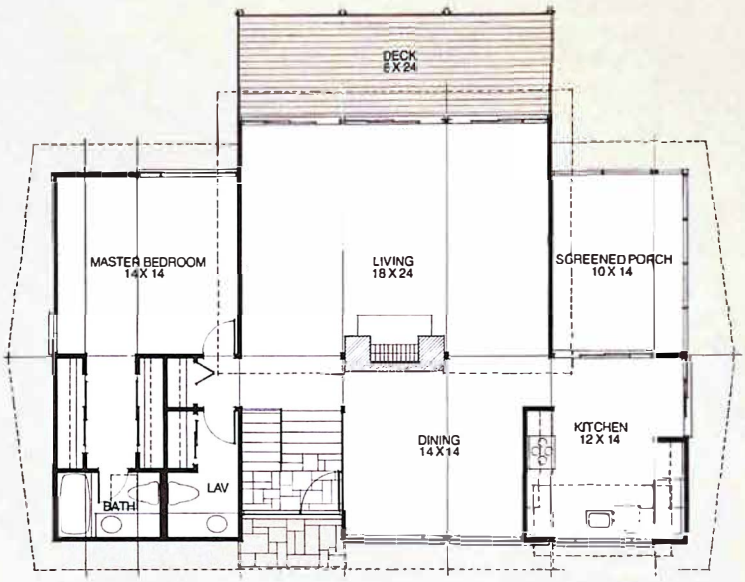
Model 7215

Upper Level	**1487 square feet**
Lower Level	**1201 square feet**
Total	**2688 square feet**

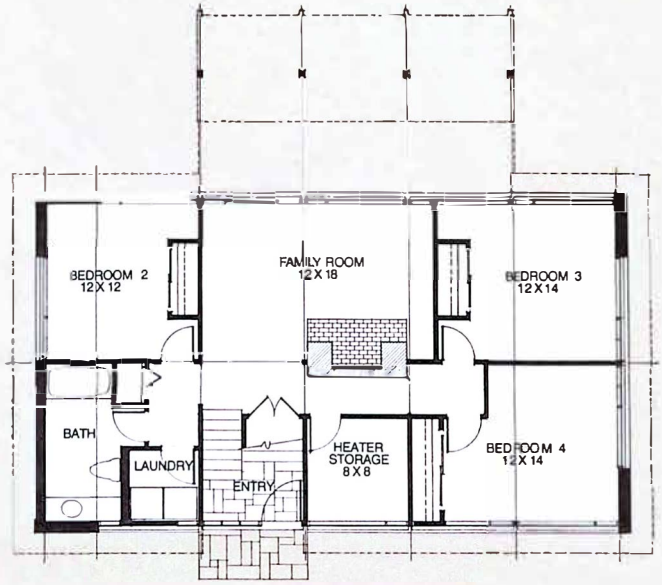
Efficient use of space combines screen porch, gracious stone entry, private master suite and formal dining room on one level.

Raised roof over living room adds interest to roof line and creates space for clerestory windows, flanking both sides of fireplace masonry.

Light scoop heightens window area and brings additional daylight to kitchen.



Upper Level



Lower Level

Model 7175

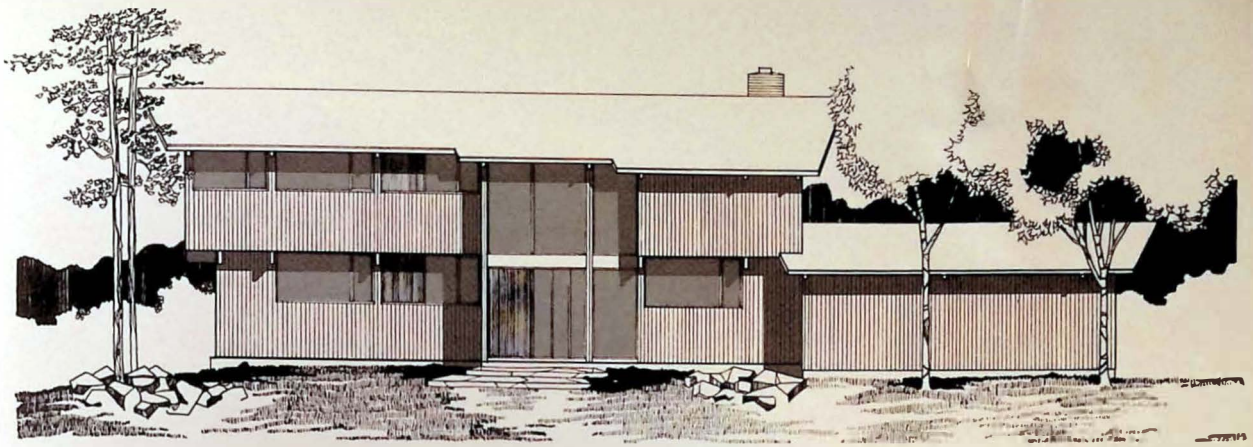
Upper Level	**1169 square feet**
Lower Level	**1176 square feet**
Open Space	**376 square feet***
Garage	**581 square feet**
Total	**3302 square feet**

*Floor area eliminated to create two-story space.

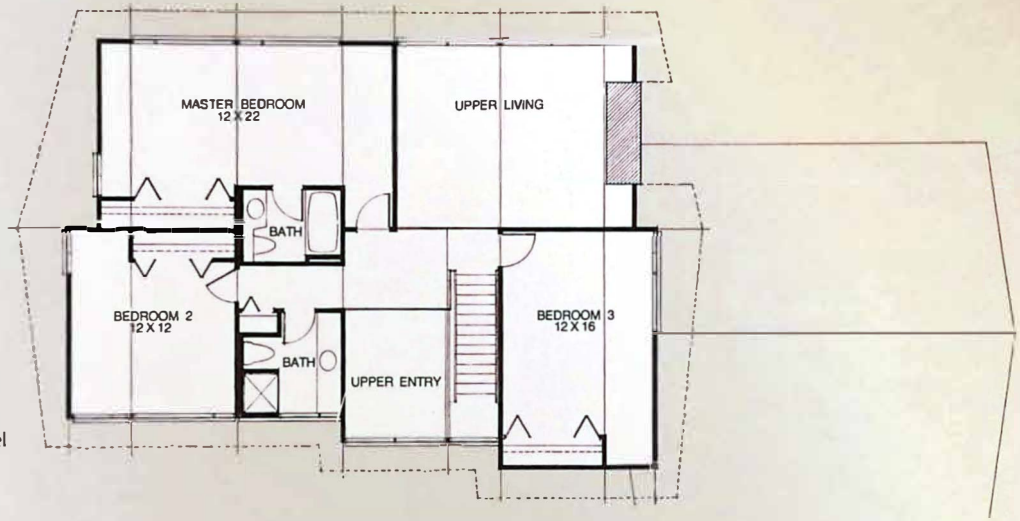
Spacious lower level entry is open to the upper level ceiling.

Two-story living room features floor to ceiling glass and an open balcony.

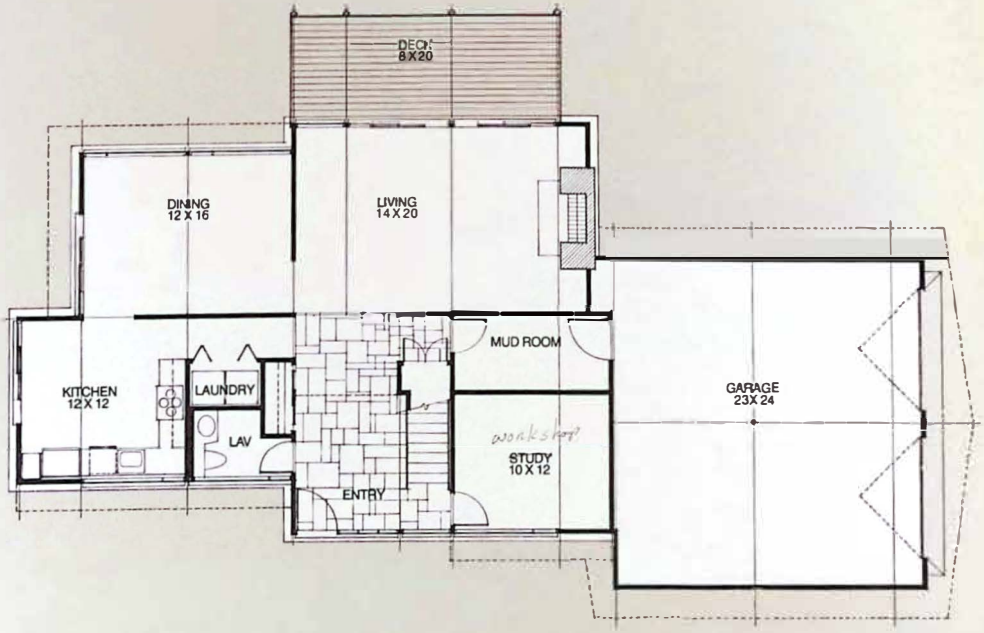
Convenient mud entry connects entry foyer and attached garage.



Front Elevation



Upper Level



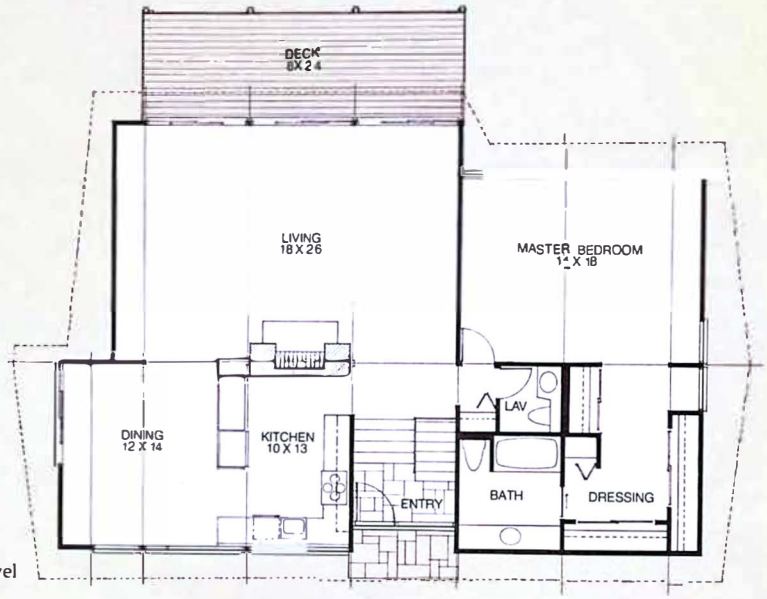
Lower Level

Model 7155

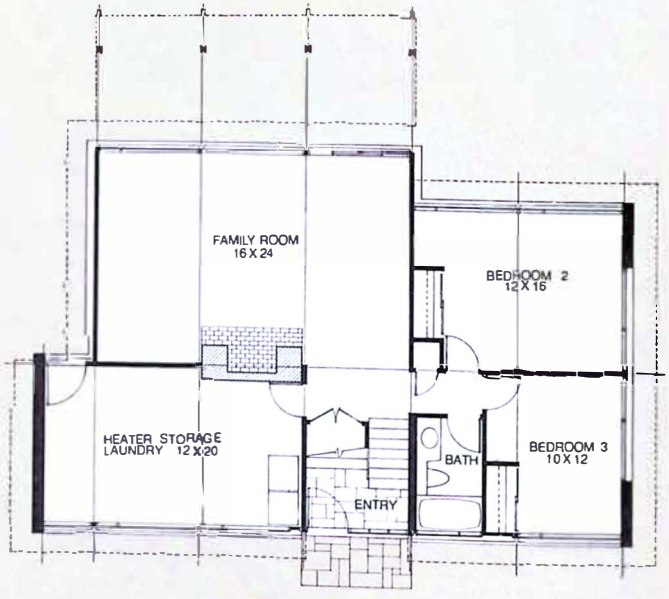
Upper Level	**1440 square feet**
Lower Level	**1254 square feet**
Total	**2694 square feet**

Master suite features large dressing room with plenty of closet space and private master bath.

Heater/storage/laundry room has outside entry door.



Upper Level

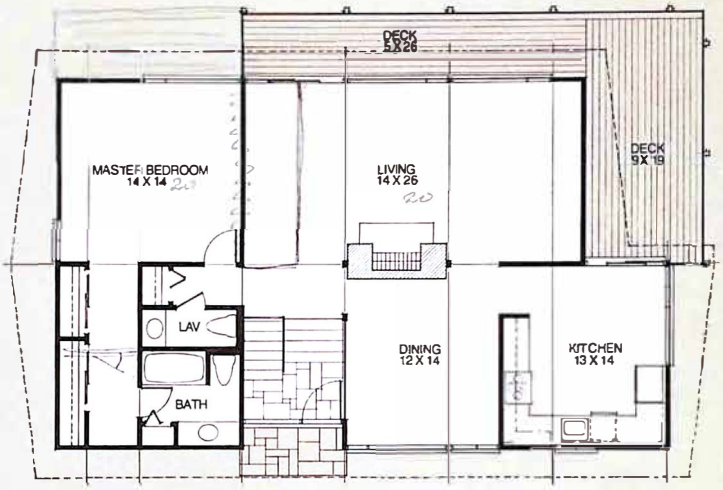


Lower Level

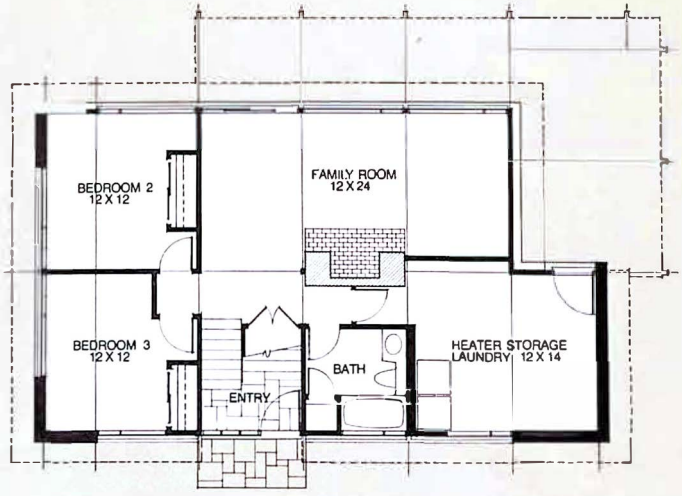
Model 7205

Upper Level	**1254 square feet**
Lower Level	**1054 square feet**
Total	**2308 square feet**

Eat-in country kitchen with broad exterior views opens to wrap-around balcony deck. Master bedroom suite offers ample closet space and private bath.



Upper Level



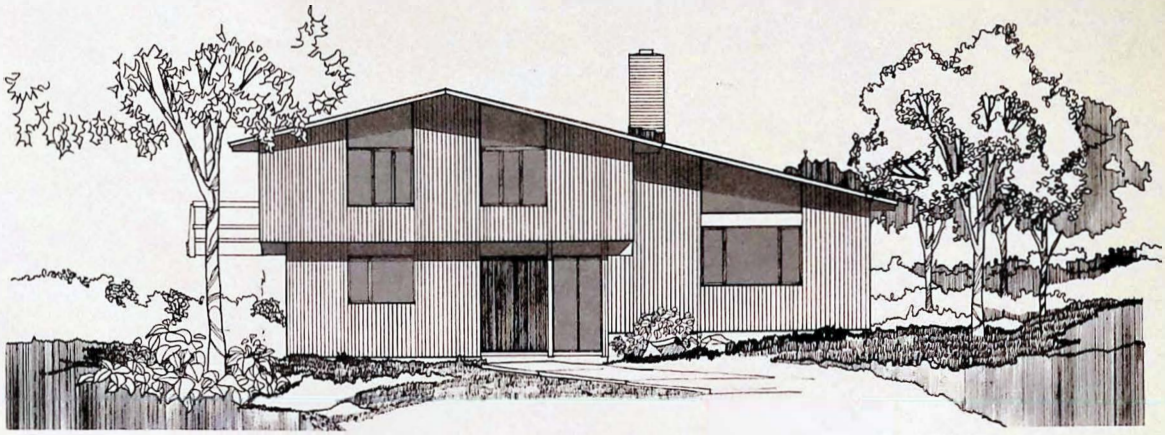
Lower Level

Model 7185

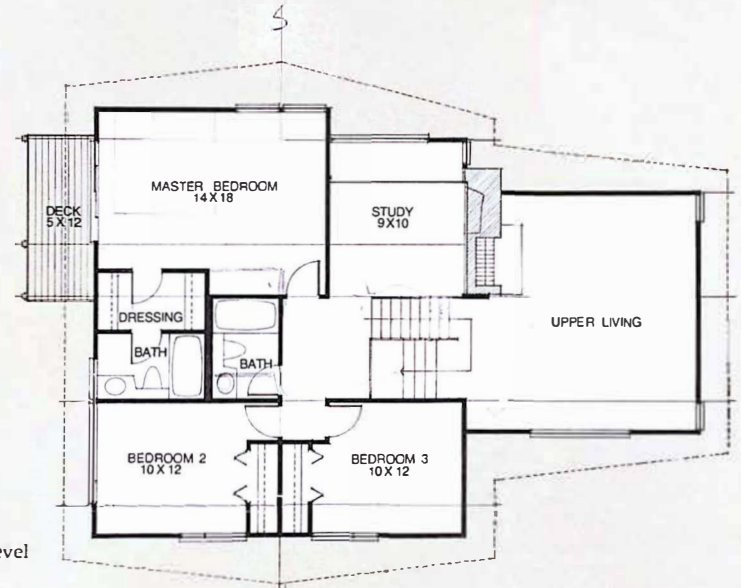
Level 1	**884 square feet**
Level 2	**358 square feet**
Level 3	**861 square feet**
Open Space	**38 square feet***
Basement	**297 square feet**
Total	**2438 square feet**

*Floor area eliminated to create two-story space.

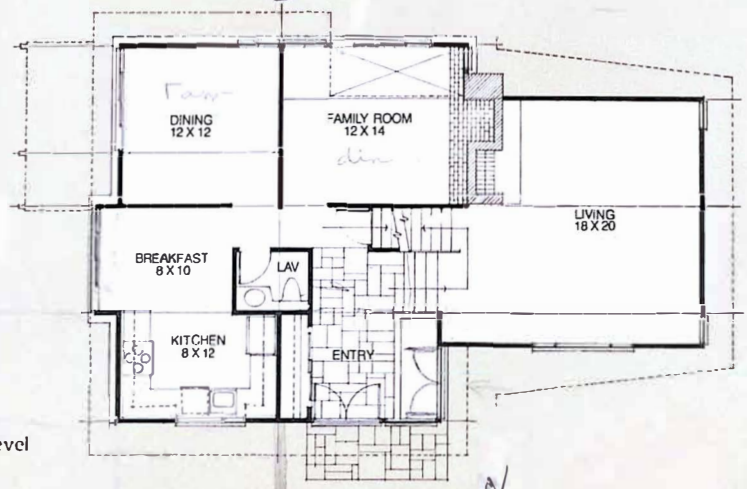
Gracious entry with interior garden.
Kitchen features a breakfast area with access to outdoors.
Large mid-level living room with full cellar beneath.
Bedrooms are on one level.
Study, with a wall of brick, is open to the family room below.



Front Elevation



Upper Level



Lower Level

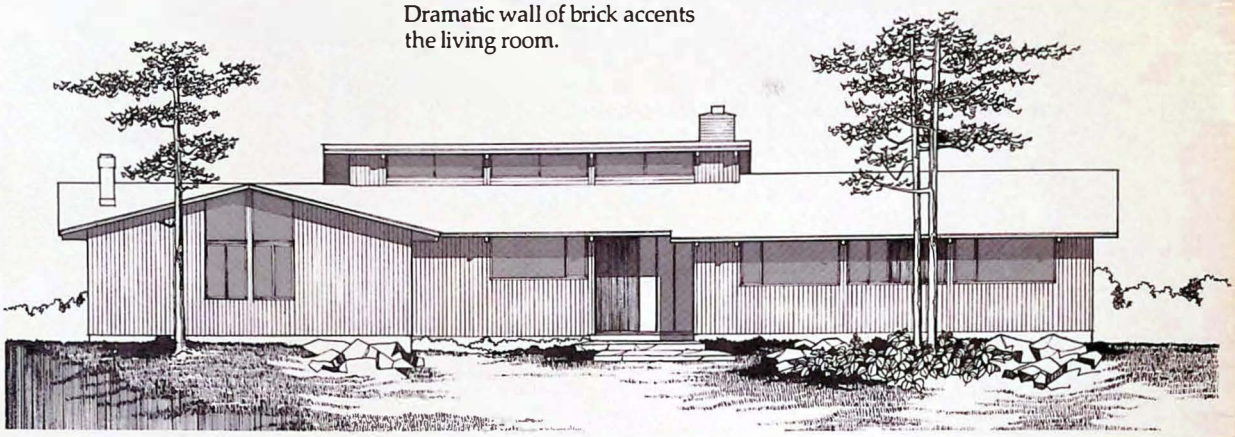
Model 7195

House 1856 square feet
Garage 630 square feet
Total 2486 square feet

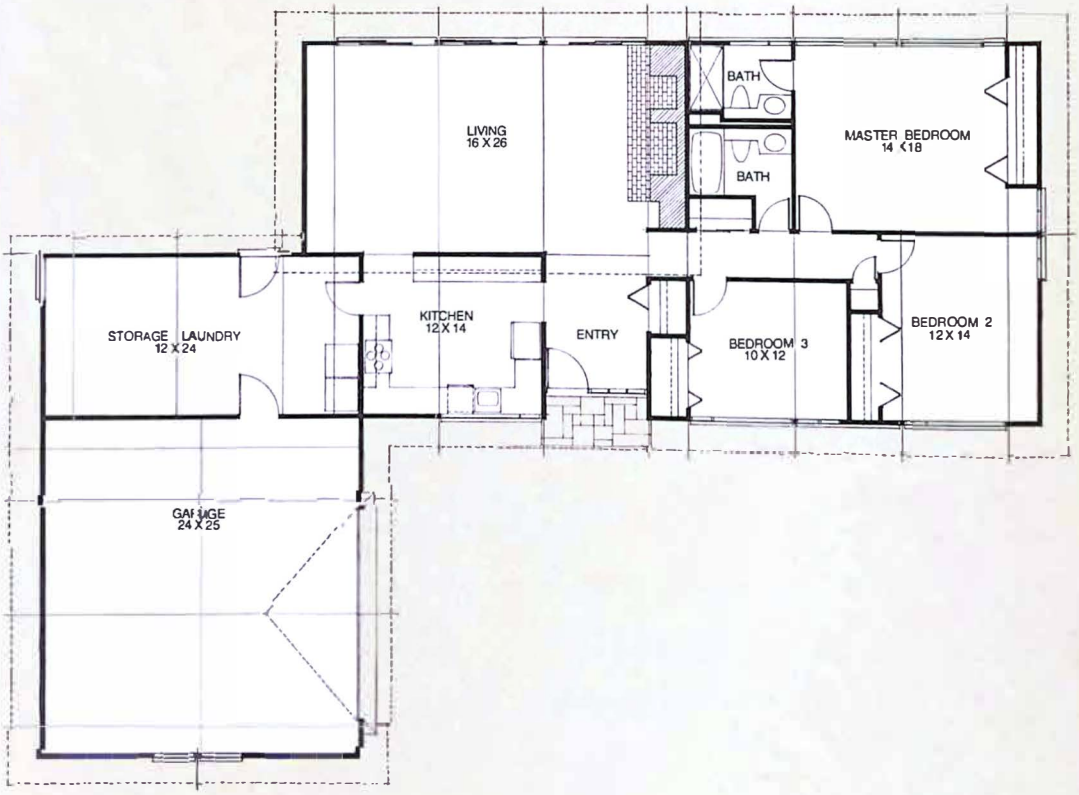
Single-level plan with clerestory above living room and additional ribbons of glass over the sliding glass doors.

Large storage/laundry room with outside entry links house and garage.

Dramatic wall of brick accents the living room.



Front Elevation



DECK HOUSE

SERIES

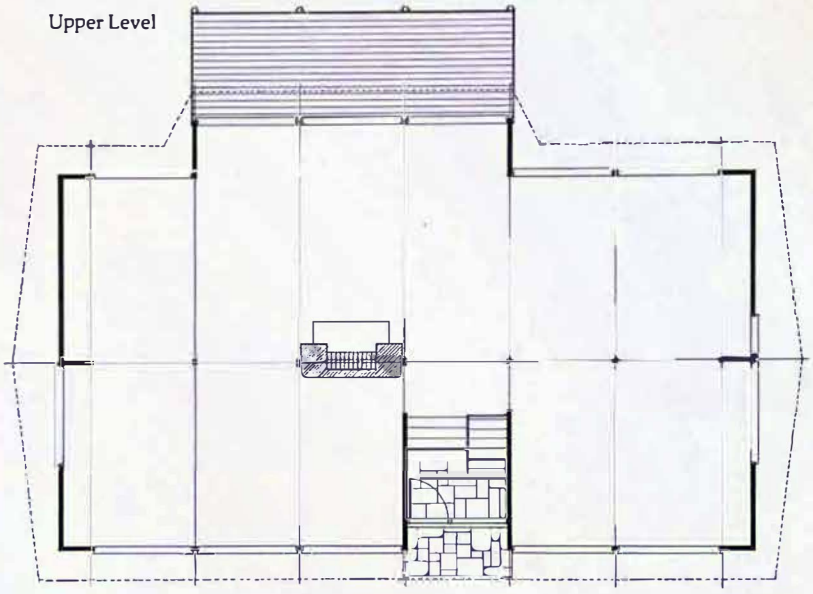
6

SERIES 6

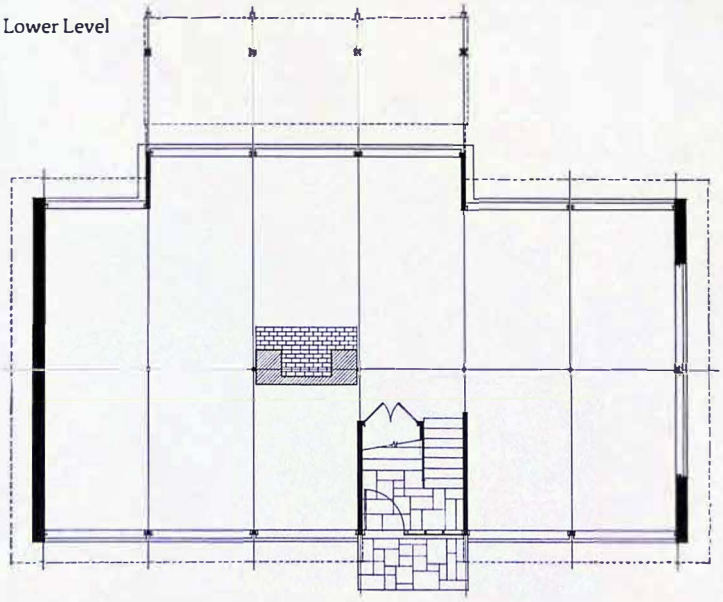
This portfolio contains floor plans for Deck Houses of 2700 to 3200 square feet. The descriptions accompanying each plan highlight features which may not be readily apparent from reading the plans.

The plan on this page represents the basic Series 6 design – the starting point from which many of the floor plans in this series were developed.

Upper Level



Lower Level

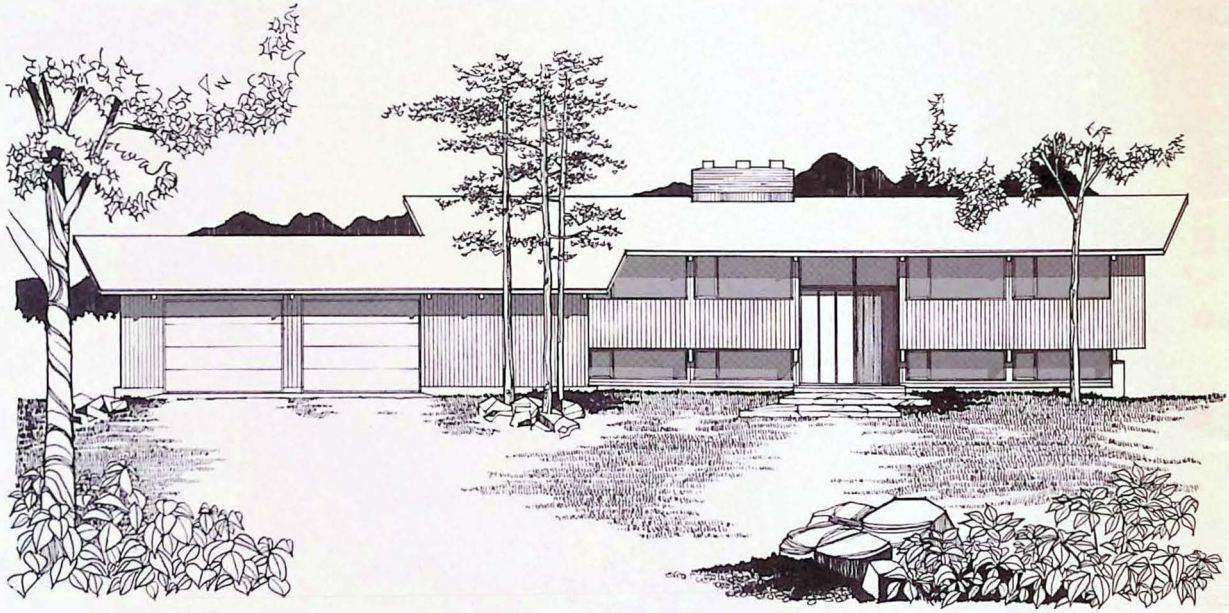


Model 7116

Upper Level	**1603 square feet**
Lower Level	**1436 square feet**
Entry Level	**101 square feet**
Garage	**637 square feet**
Total	**3777 square feet**

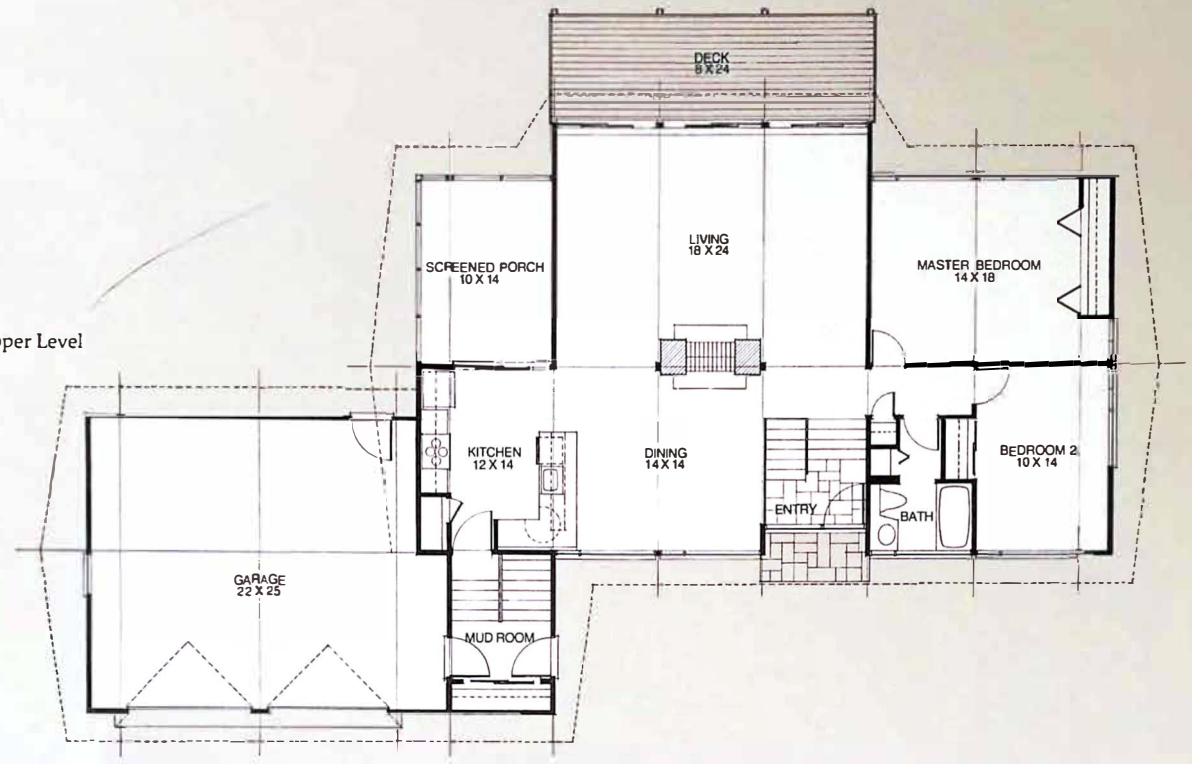
Attached two car garage creates interesting roof planes and provides additional storage space.

Access from garage to both kitchen and heater/storage/ laundry room.

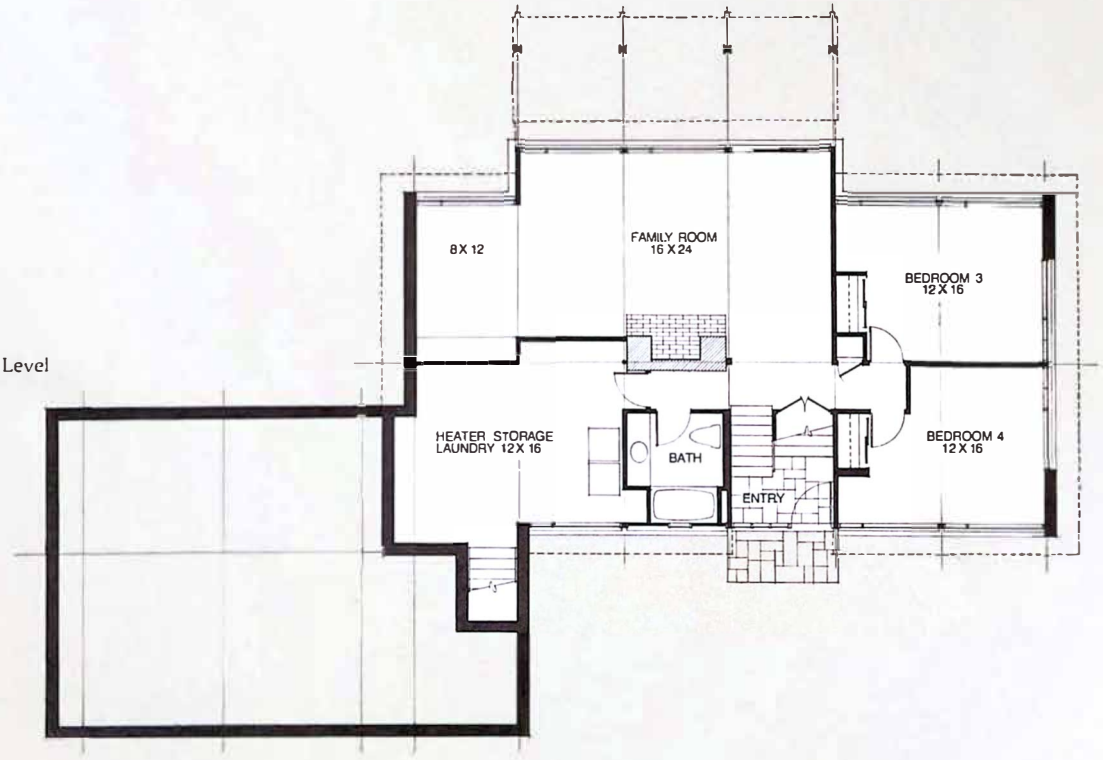


Front Elevation

Upper Level



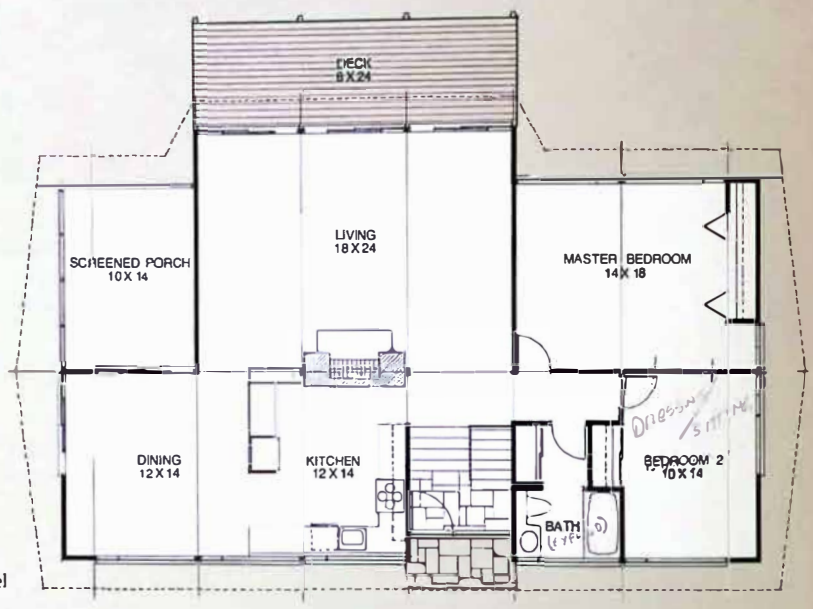
Lower Level



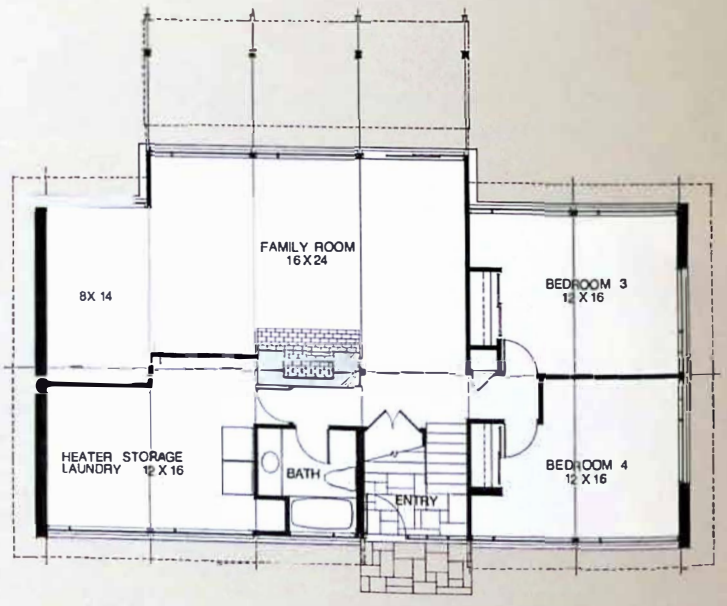
Model 7126

Upper Level **1603 square feet**
Lower Level **1406 square feet**
Total **3009 square feet**

Balcony deck acts as a natural extension of the living room. Lower level designed for children with their own family room. Screened porch expands the entertaining capabilities of the dining room.



Upper Level

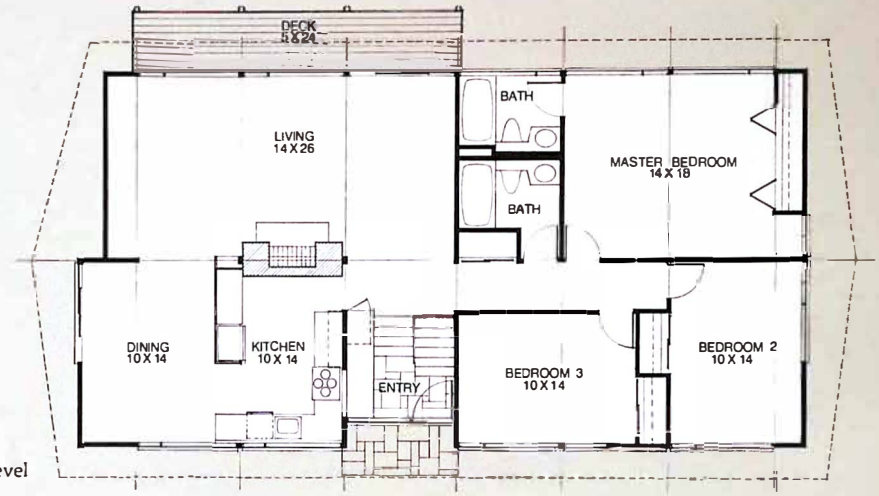


Lower Level

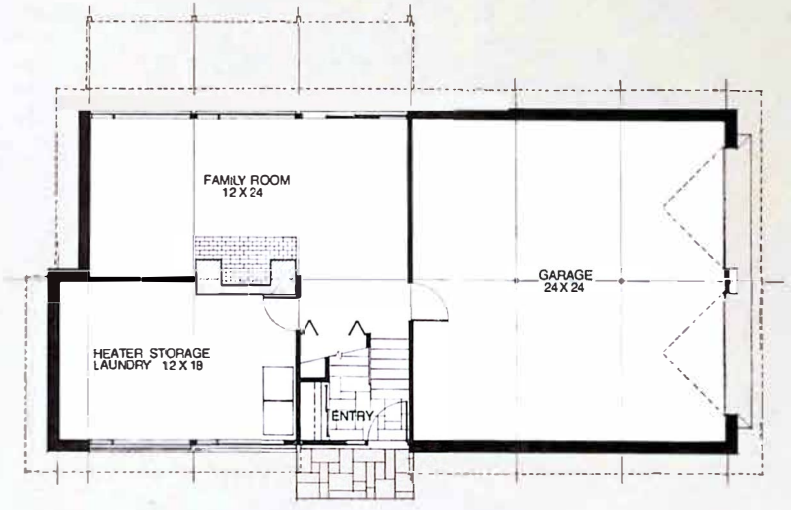
Model 7136

Upper Level	**1552 square feet**
Lower Level	**716 square feet**
Garage	**634 square feet**
Total	**2902 square feet**

Master suite and two additional bedrooms – all on one level.
Convenience of two car garage within the structure.

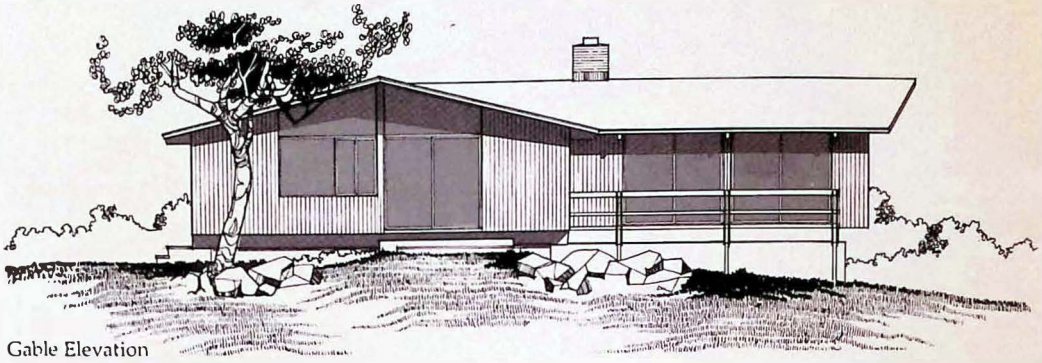


Upper Level



Lower Level

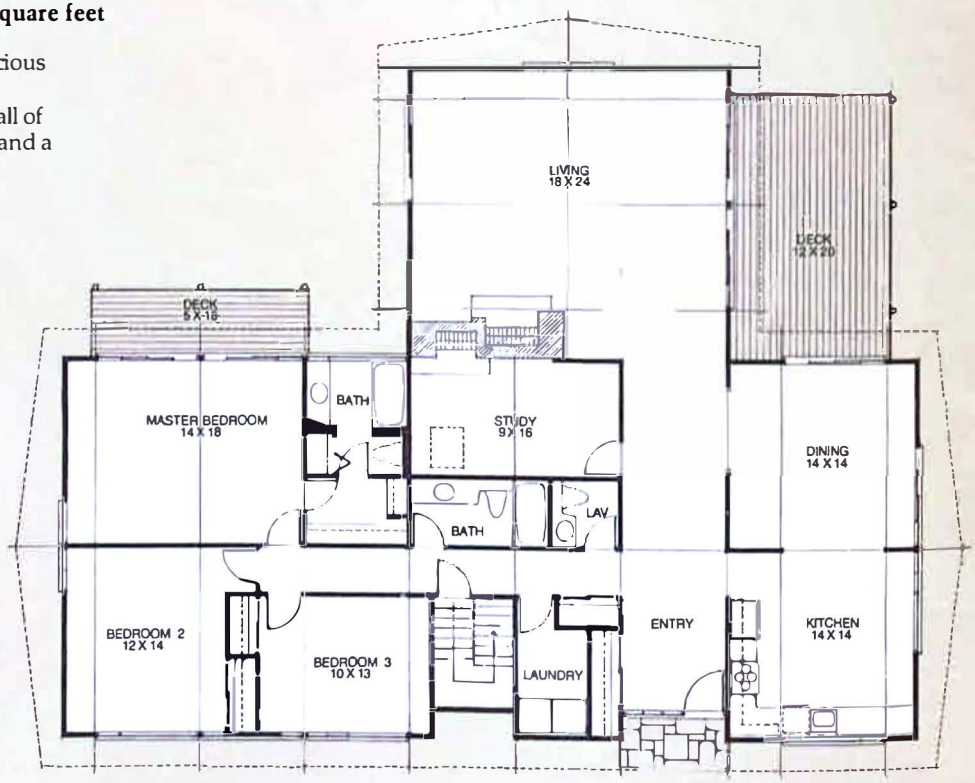
Model 7206



Gable Elevation

Upper Level	**2391 square feet**
Basement	**2062 square feet**
Total	**4453 square feet**

270° view from the spacious living room.
The study features a wall of brick, its own fireplace and a skylight.



Model 7236

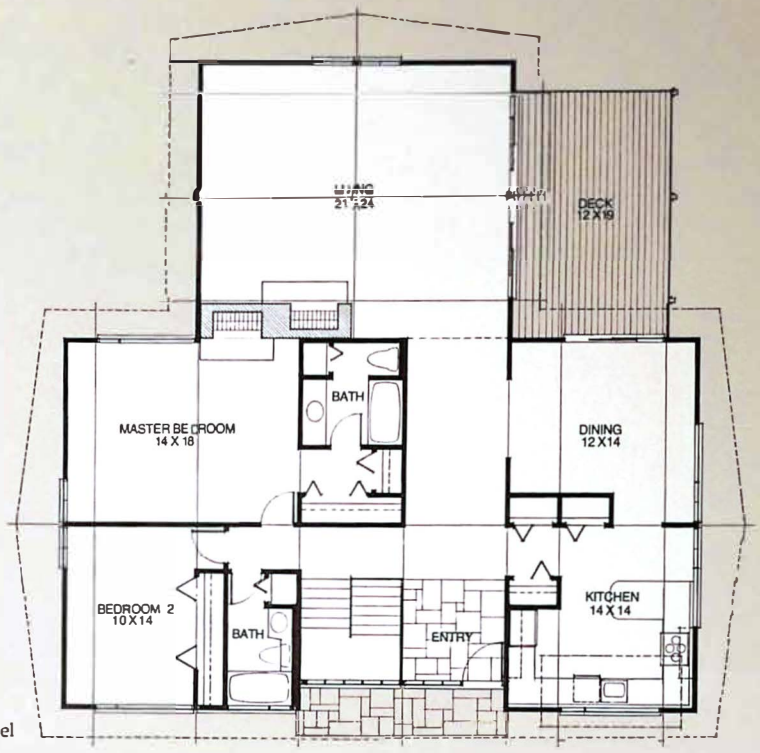
Upper Level 1893 square feet
Lower Level 1695 square feet
Total 3588 square feet

Chimney mass lends fireplace excitement to living room, master bedroom and family room.

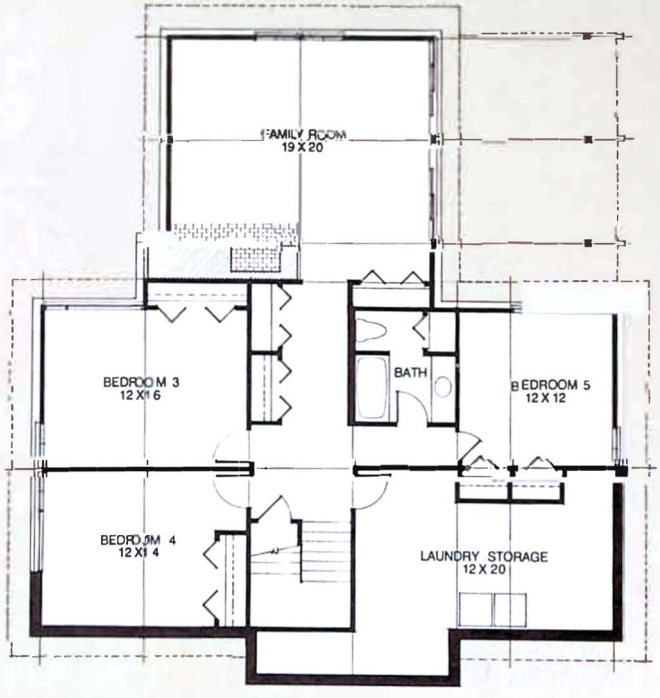
Dramatic entry area bathed in natural light features open mahogany staircase.

Five bedrooms make this efficient plan adaptable to a large family or guests.

Pleasant kitchen enjoys daylight through light scoop and gable window.



Upper Level



Lower Level

Model 7246

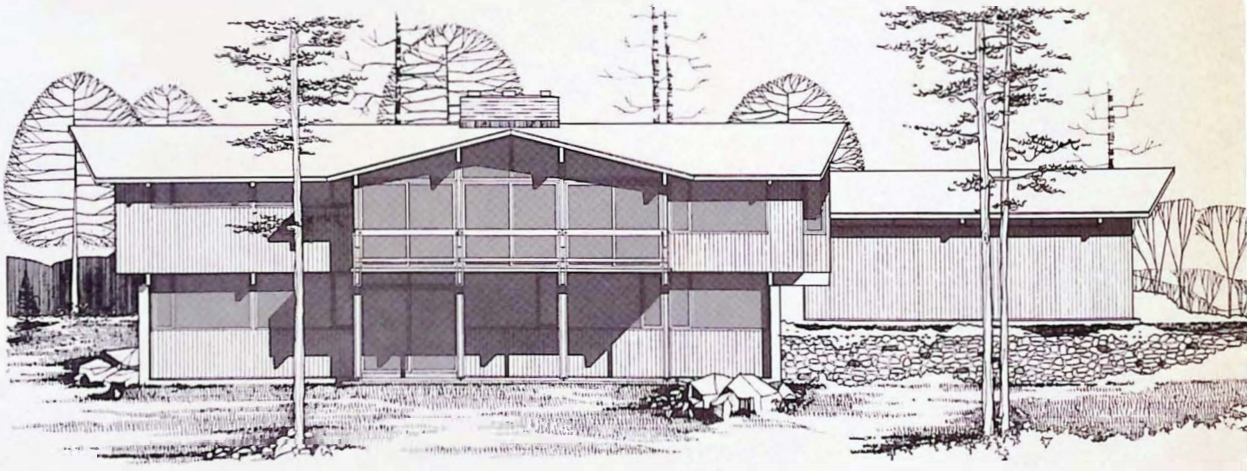
Upper Level	**1618 square feet**
Lower Level	**1436 square feet**
Entry	**101 square feet**
Garage	**637 square feet**
Total	**3792 square feet**

Gracious entertaining area features a gabled living room.

Easy living kitchen/breakfast area has convenient garage access.

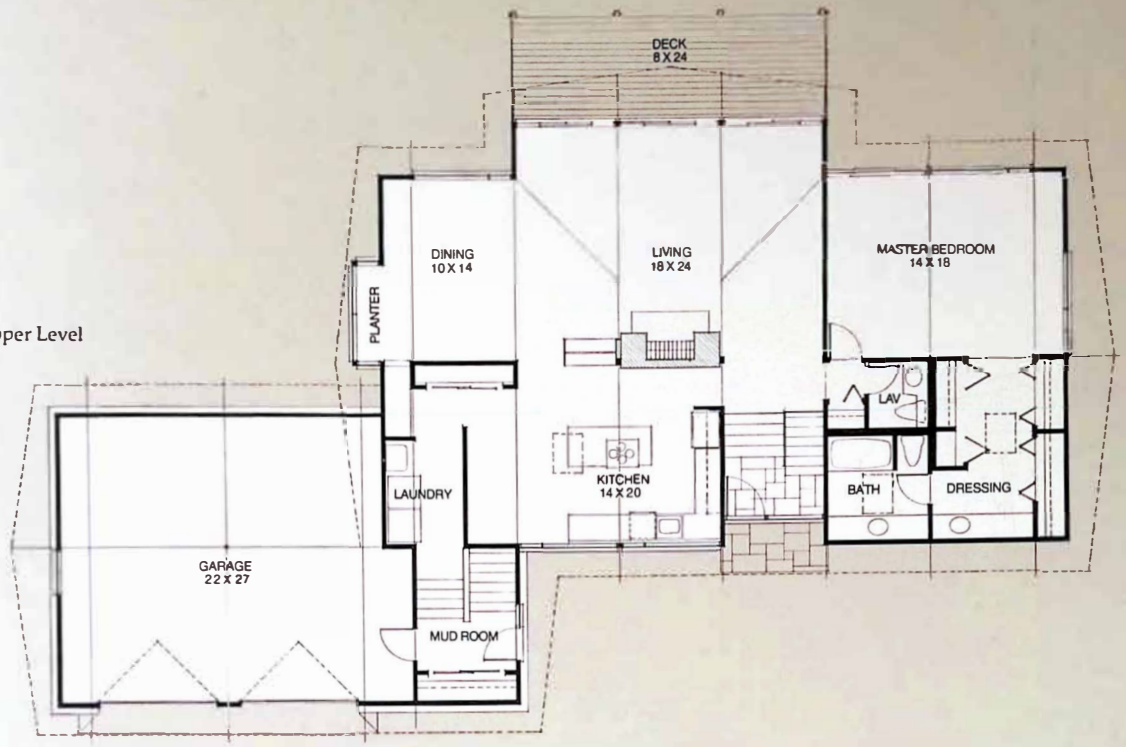
Master suite with dressing area and private bath.

Spacious playroom can be divided to create a fourth bedroom.

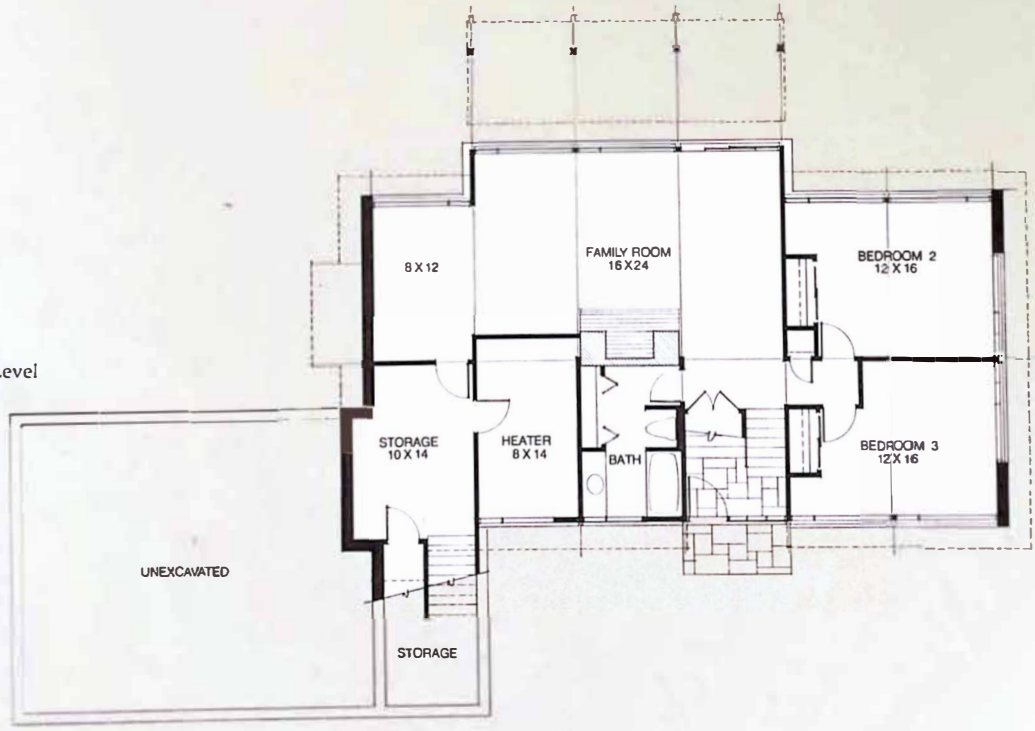


Rear Elevation

Upper Level



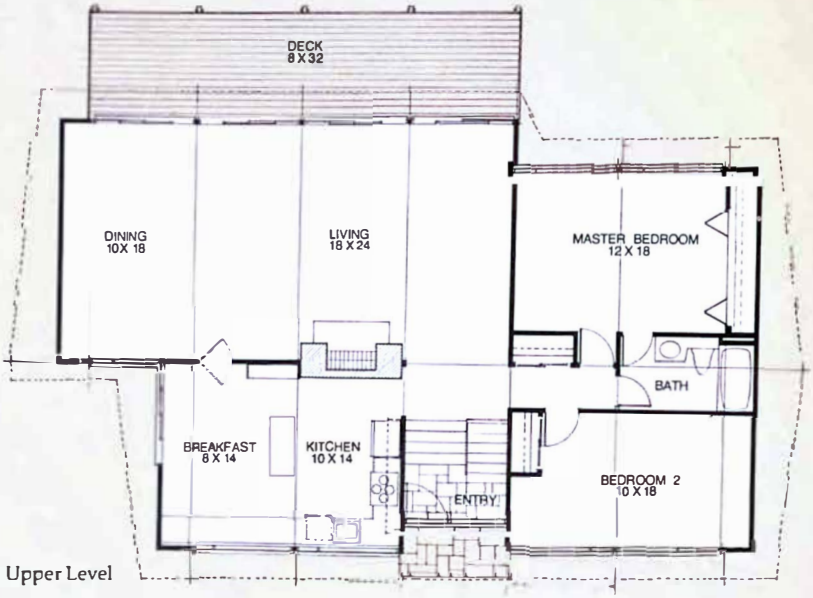
Lower Level



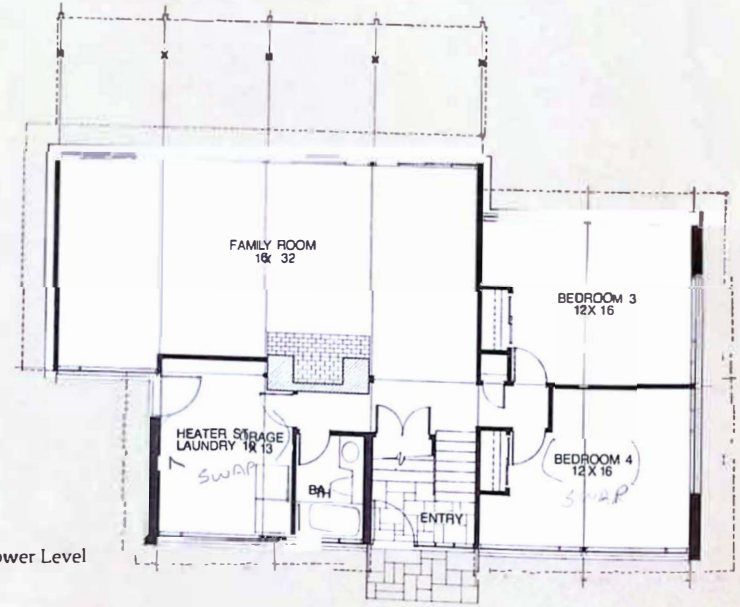
Model 7166

Upper Level	**1531 square feet**
Lower Level	**1341 square feet**
Total	**2872 square feet**

Large living/dining room with an entire wall of glass.
Family style kitchen.
Master bath serves guests as well with access from the hall.



Upper Level

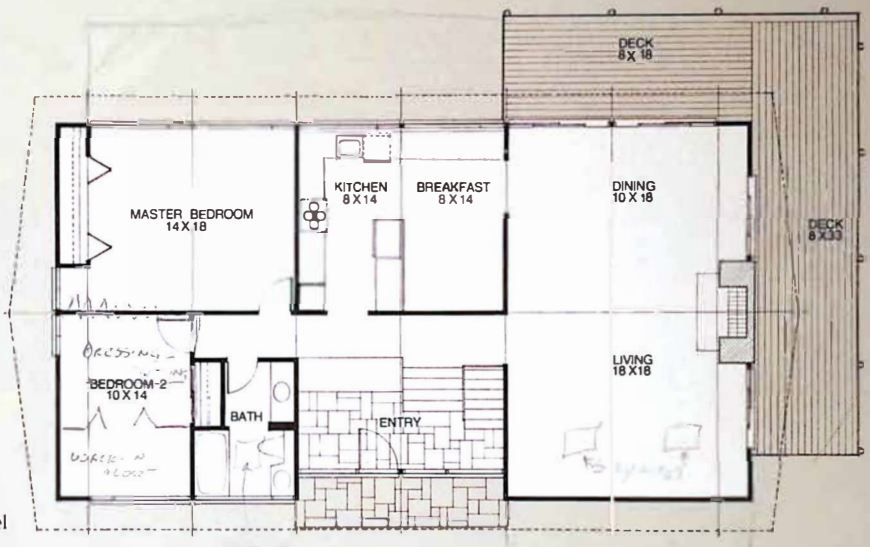


Lower Level

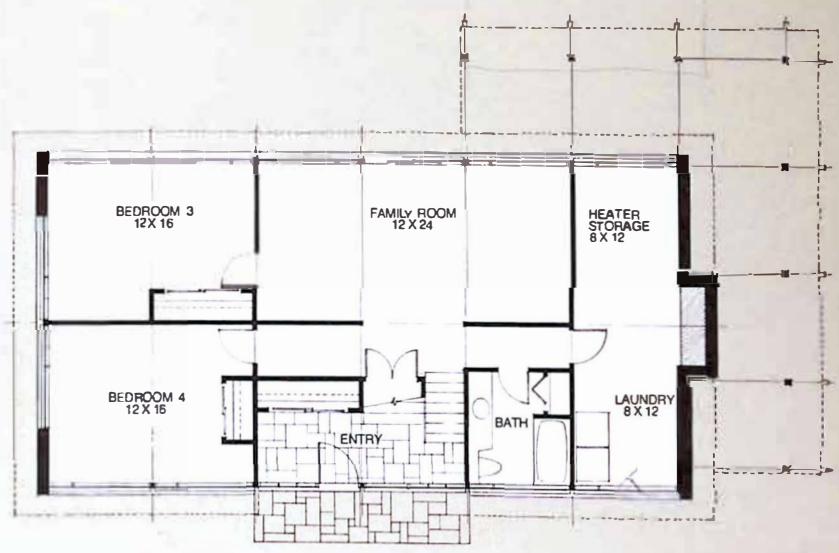
Model 7176

Upper Level	**1489 square feet**
Lower Level	**1348 square feet**
Total	**2837 square feet**

Impressive entry with a wall of glass and large coat closet.
Living room features an interesting beam arrangement.
Sliding glass doors frame the living room fireplace.
Extra storage beneath the bluestone entry platform.



Upper Level



Lower Level

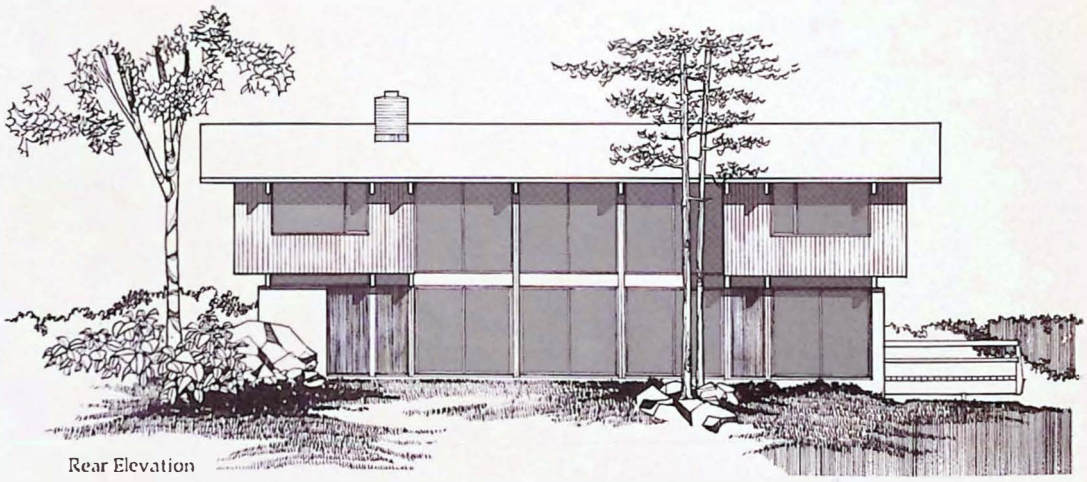
Model 7186

Upper Level	**1160 square feet**
Lower Level	**1255 square feet**
Open Space	**288 square feet***
Total	**2703 square feet**

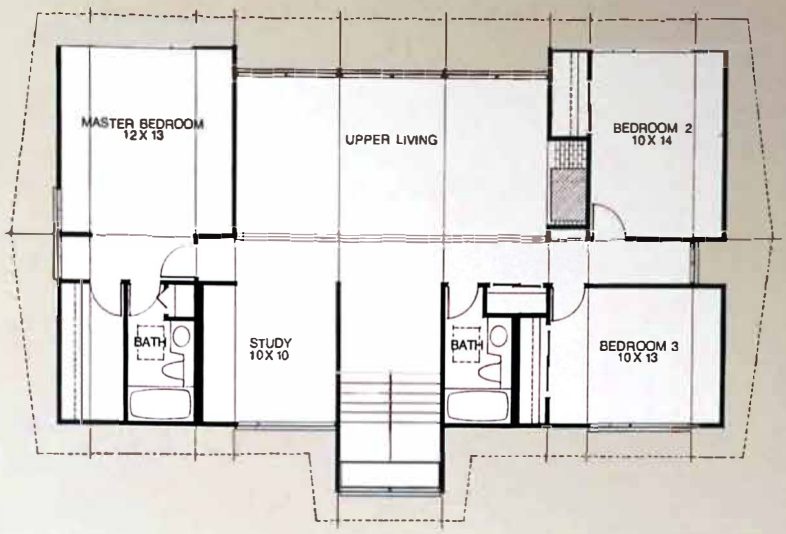
*Floor area eliminated to create two-story space.

Dramatic two-story living room with an exterior wall of glass.

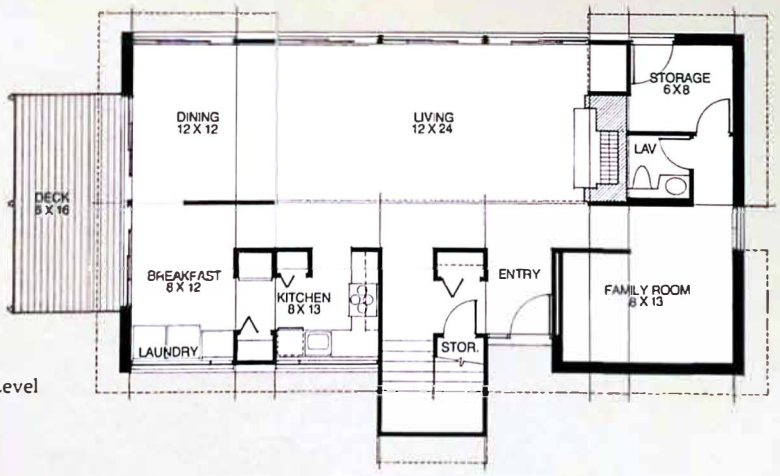
Master suite with its adjacent study separated from the children's bedrooms by a gallery overlooking the living room.



Rear Elevation



Upper Level

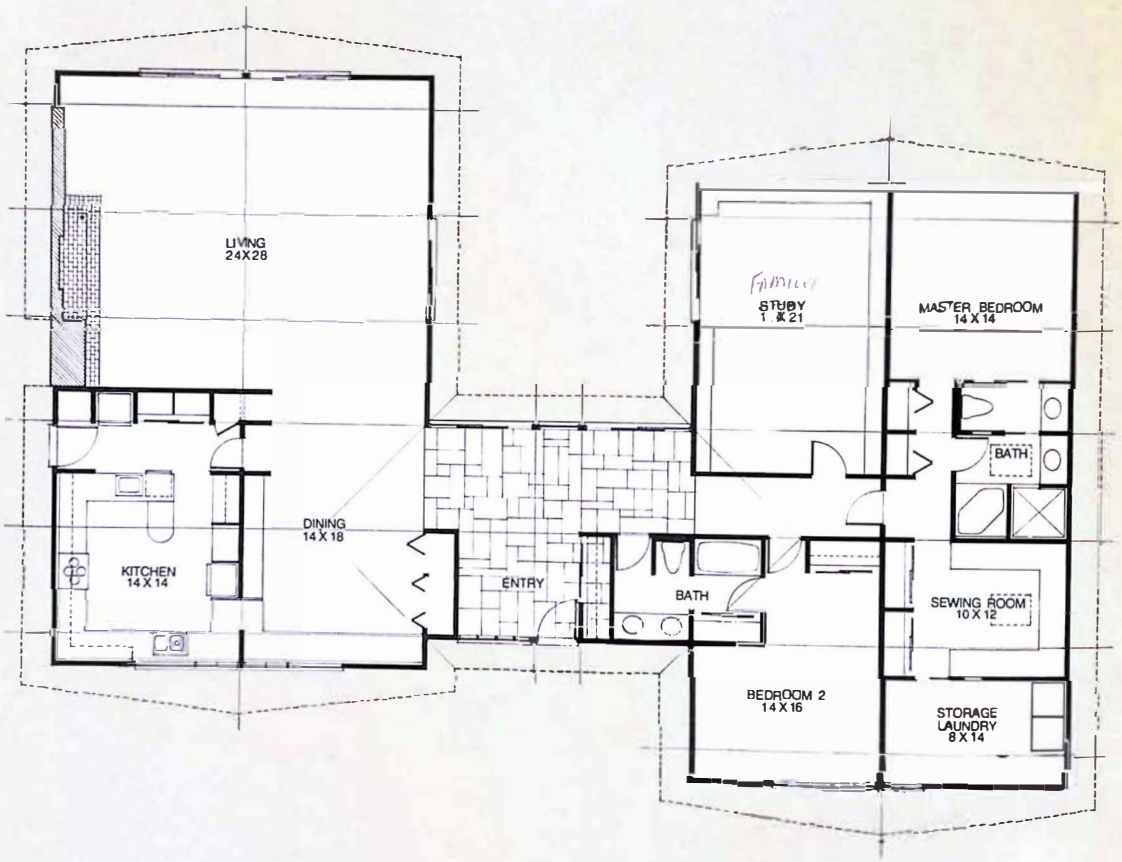


Lower Level

Model 7196

Total 2908 square feet

Interesting double gable roof line. Living room, study and foyer all open onto a private deck area. Bedroom wing separated from living room/dining/kitchen area by bluestone foyer.



Model 7216

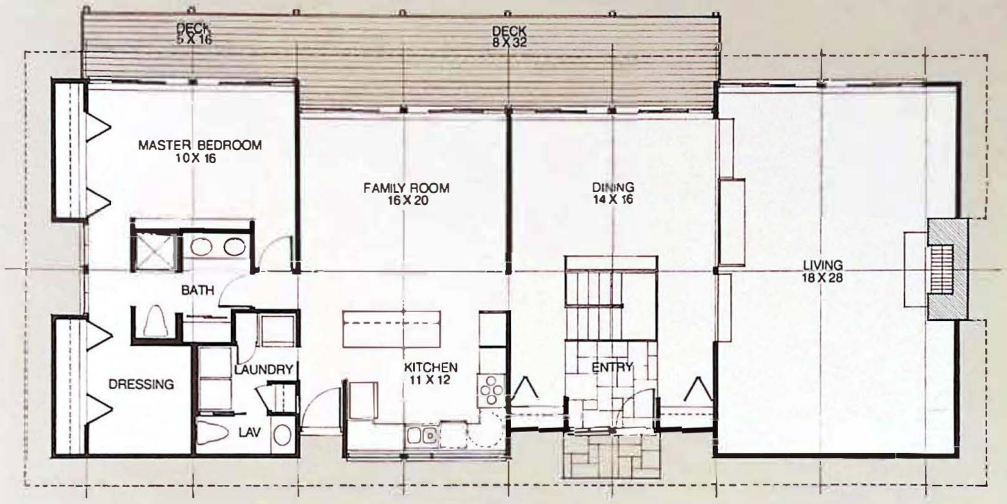
Upper Level	**1800 square feet**
Lower Level	**1252 square feet**
Total	**3052 square feet**

Step-down gable living room adjacent to the open foyer with its recessed entry.

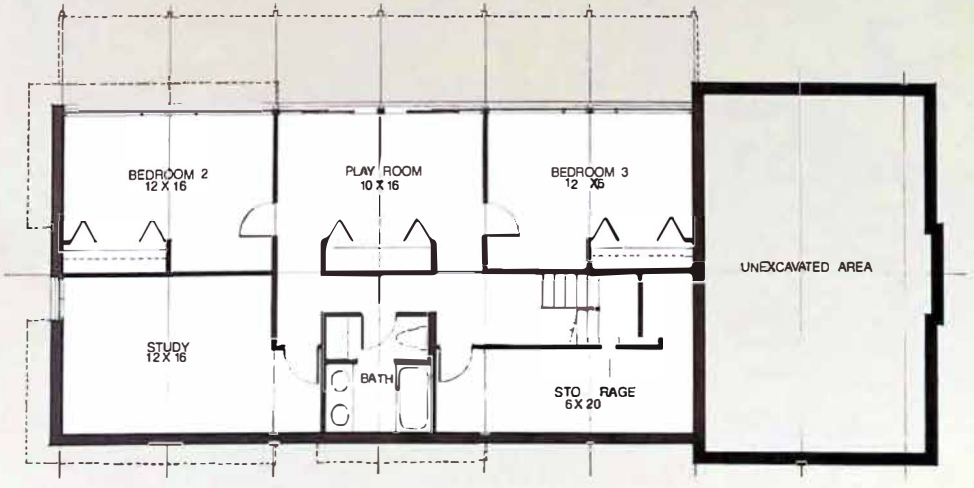
Abundant closet space and a separate dressing room highlight the master bedroom suite.

Lower level children's bedrooms are separated by an open play-room.

Plan offers plenty of storage space.



Upper Level



Lower Level

Model 7226

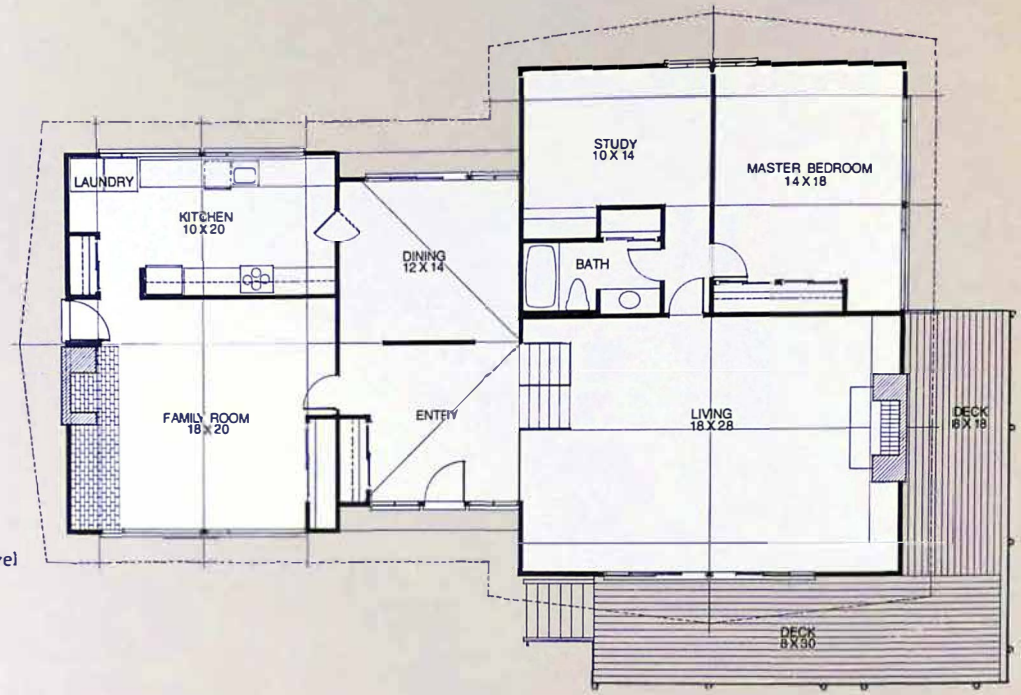
Upper Level	1089 square feet
Mid Level	937 square feet
Lower Level	937 square feet
Total	2963 square feet

Three living levels with lower level designed for children.

Oversize family room features a fireplace wall of brick.

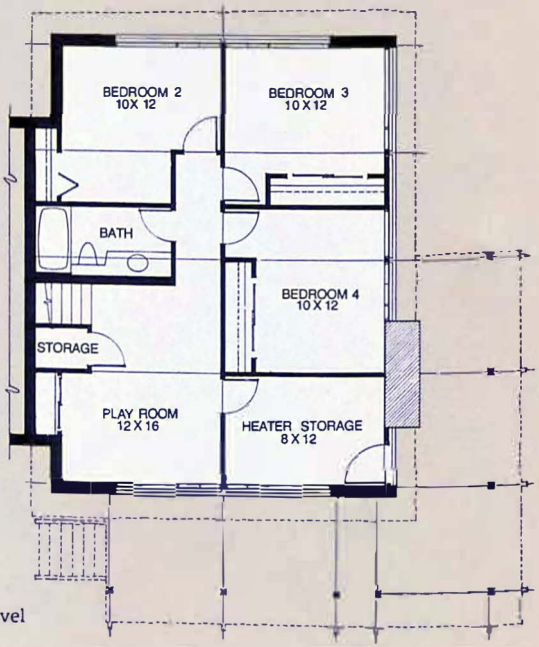
Intersecting roof planes create visual interest.

Partial wall separates entry foyer from dining room.



Mid Level

Upper Level



Lower Level

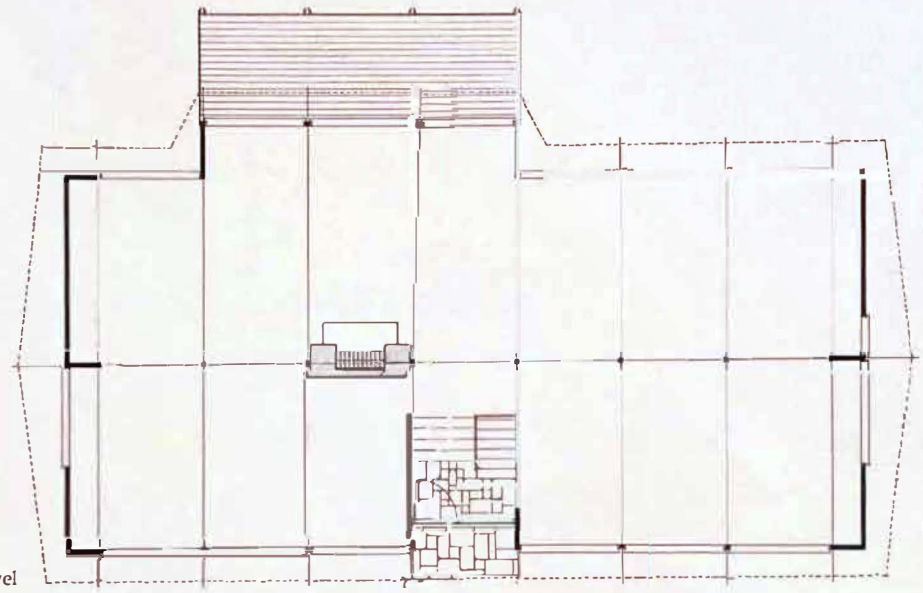
DECK HOUSE

SERIES 7

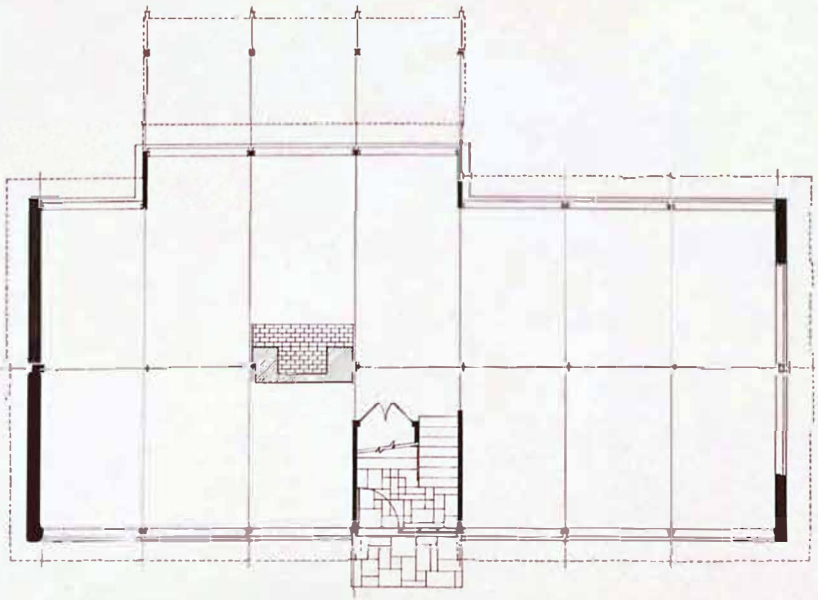
SERIES 7

This portfolio contains floor plans for Deck Houses of 3200 to 4000 square feet. The descriptions accompanying each plan highlight features which may not be readily apparent from reading the plans.

The plan below represents the basic Series 7 design – the starting point from which many of the floor plans in this series were developed.



Upper Level



Lower Level

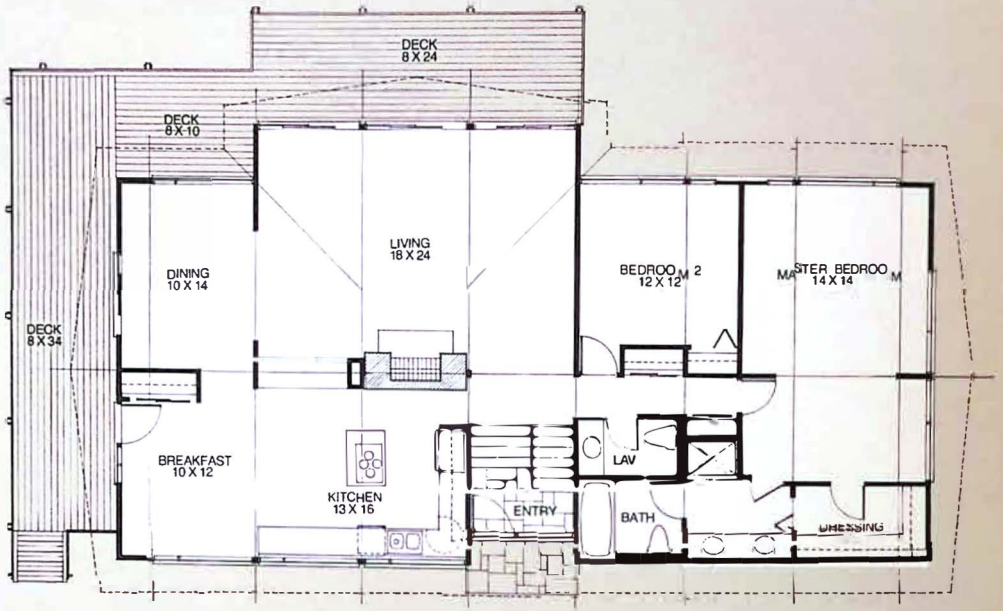
Model 7117

Upper Level	1833 square feet
Lower Level	1612 square feet
Total	3445 square feet

Gable extended living room introduces variations in beam arrangement and roof planes, and a triangle of glass panels above the sliding glass doors.

Family kitchen with access to wrap-around balcony deck.

Placement of ridge beam and gable beams in the master bedroom adds interest.



Upper Level



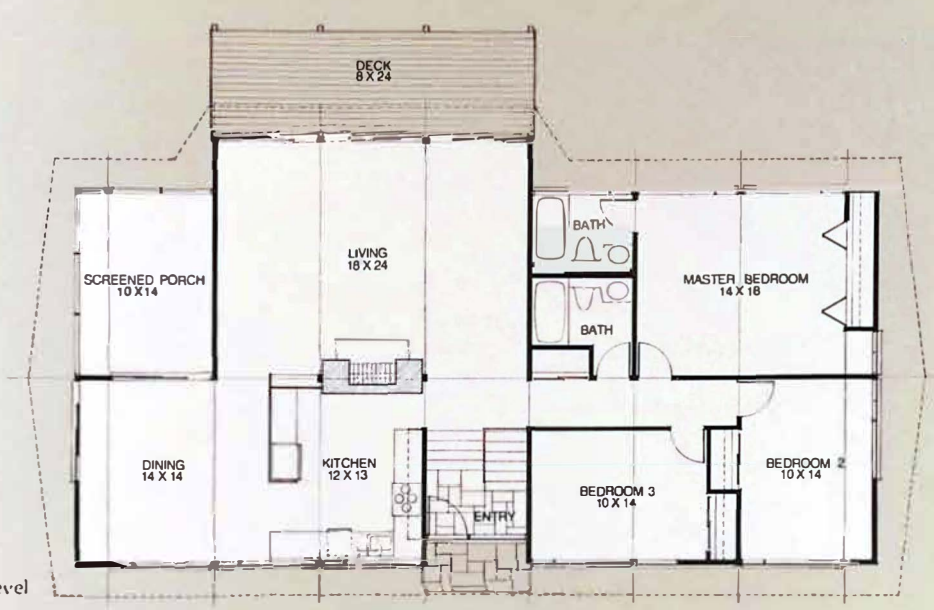
Lower Level

Model 7127

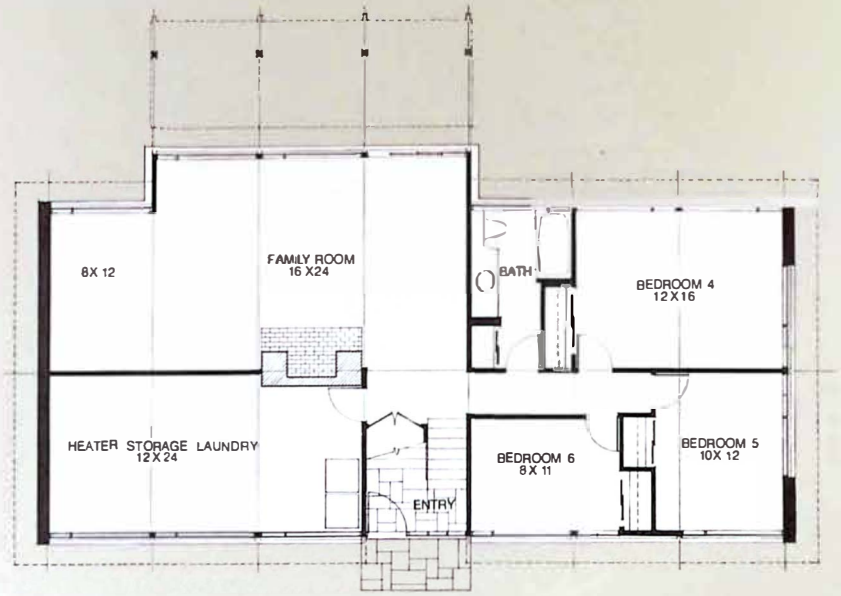
Upper Level	1833 square feet
Lower Level	1612 square feet
Total	3445 square feet

Panel of fixed glass above the sliding glass door, separating the dining room from the screened porch, permits both ceiling planes to be viewed simultaneously.

Lower level designed for children, with a large family room and plenty of storage space.



Upper Level



Lower Level

Model 7147

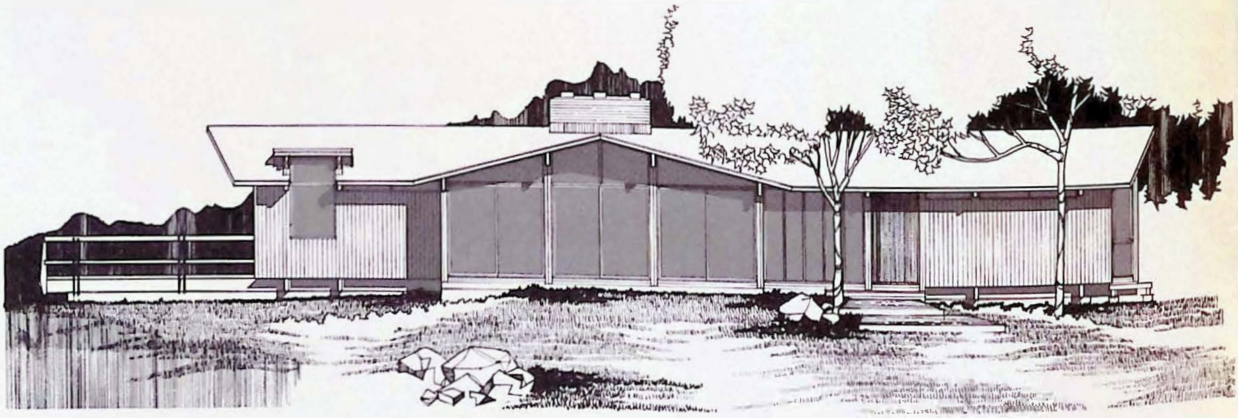
Upper Level	**1956 square feet**
Lower Level	**1715 square feet**
Total	**3671 square feet**

Upper level entry with stairway open to foyer and gable extended living room.

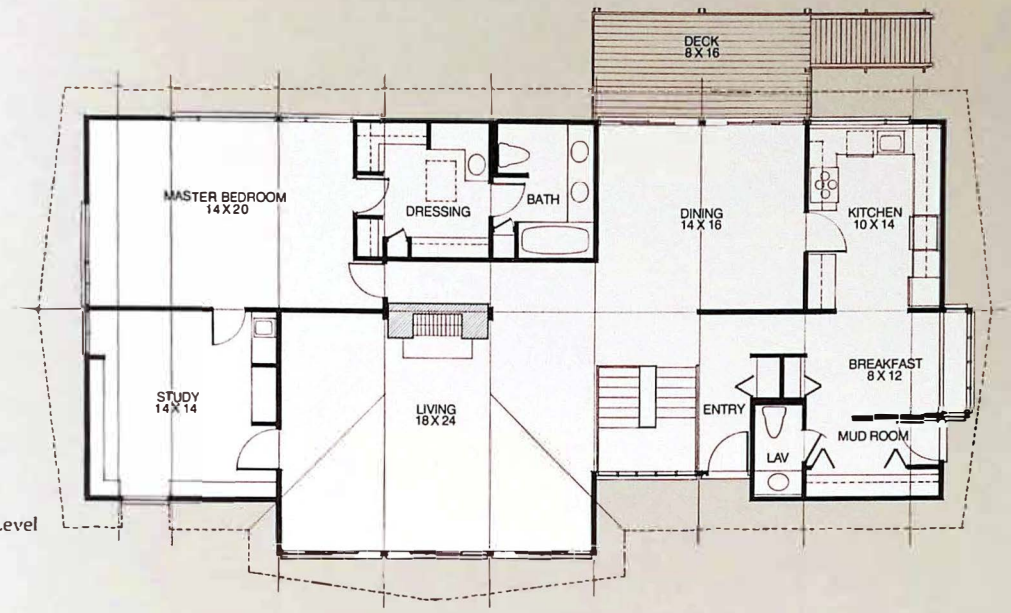
Mud room with outside entry and lavatory adjacent to kitchen.

Extended planter window in the breakfast area.

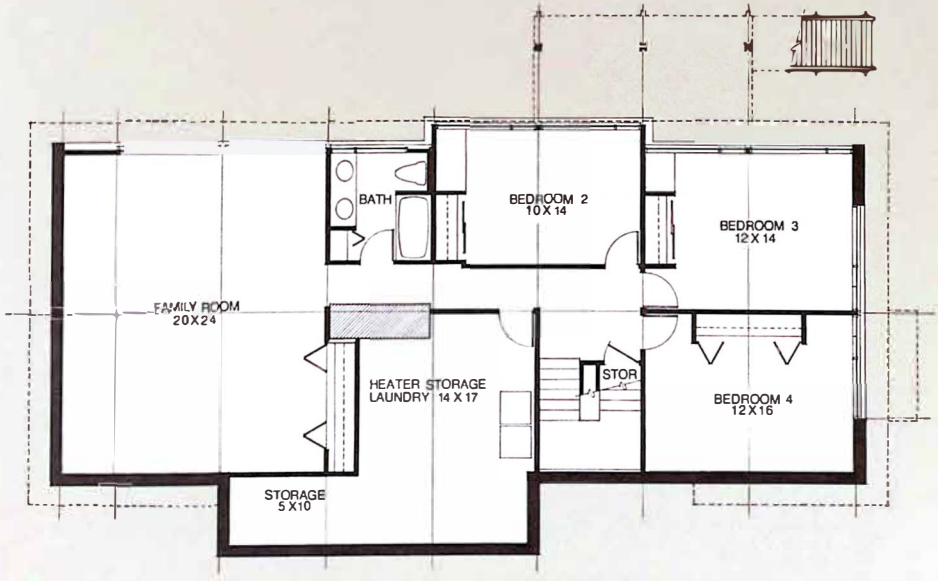
Study with light scoop accessible from living room and master bedroom.



Front Elevation



Upper Level

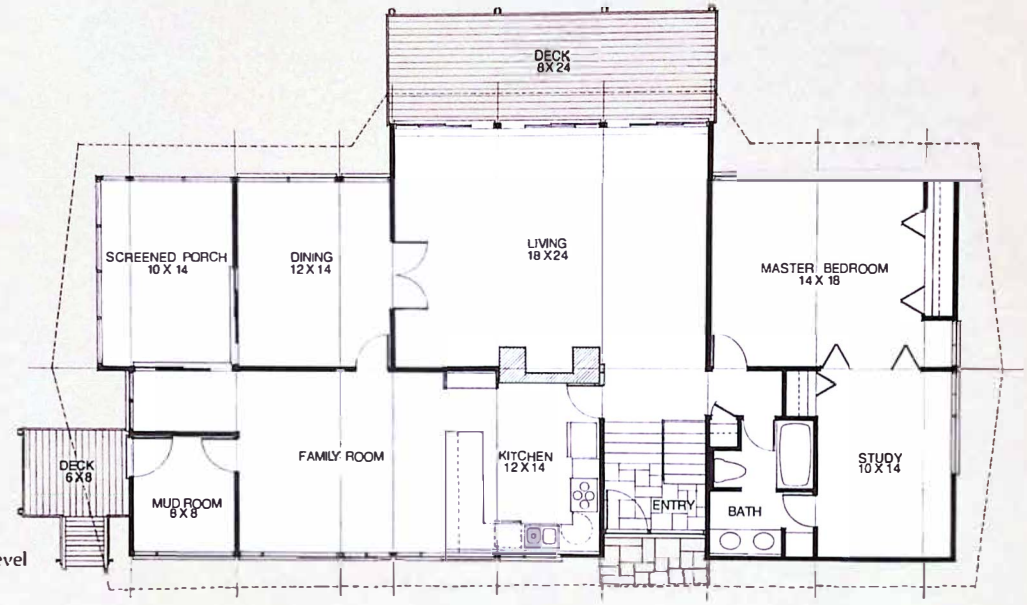


Lower Level

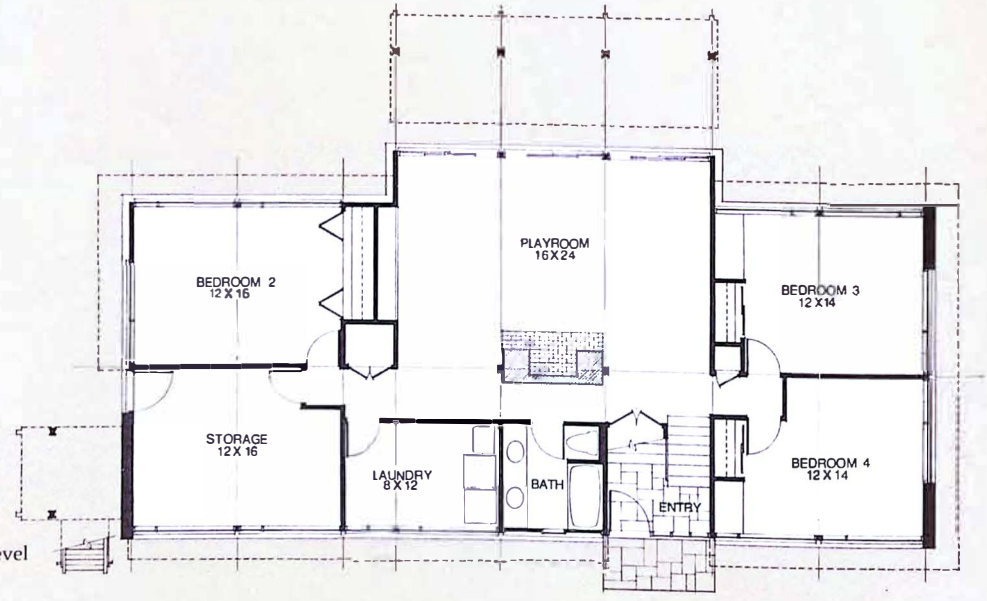
Model 7137

Upper Level	1858 square feet
Lower Level	1715 square feet
Total	3573 square feet

Formal dining room open to living room through double doorway.
Screened porch serves as a natural extension of kitchen and dining room.
Master suite has a private study which can be closed off with bi-fold doors.
Master bath also accessible from hall.



Upper Level



Lower Level

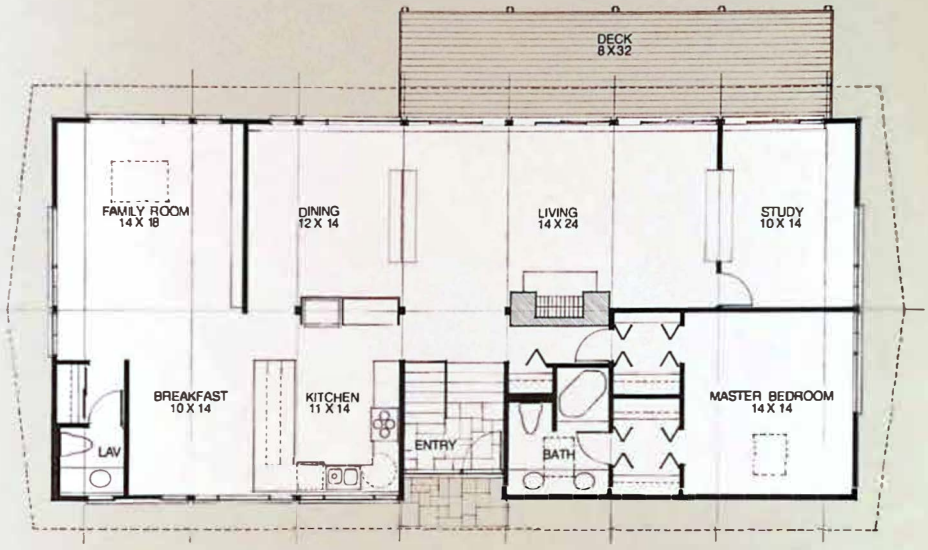
Model 7167

Upper Level	**1735 square feet**
Lower Level	**1537 square feet**
Total	**3272 square feet**

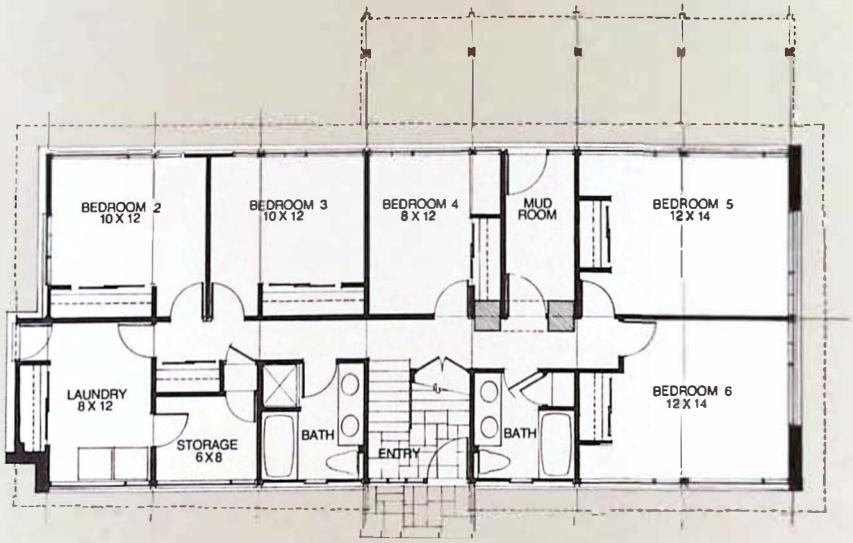
Skylights bring additional light to family room, master bedroom and master bath.

Lower level designed for children with five bedrooms, two full baths, laundry, storage and two outside entry doors.

Abundant closet space in master bedroom.



Upper Level



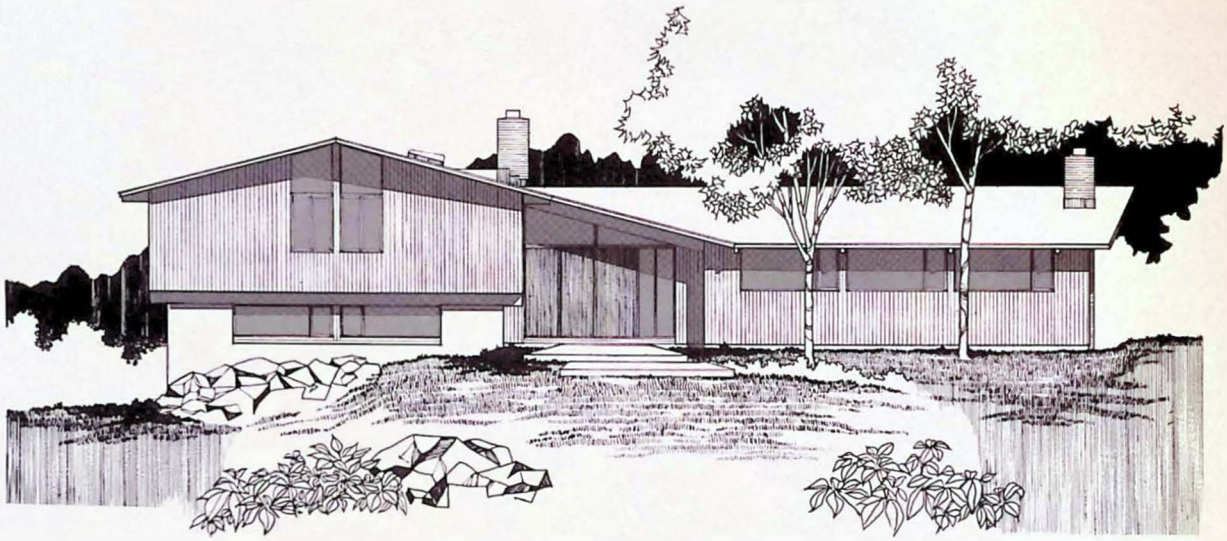
Lower Level

Model 7157

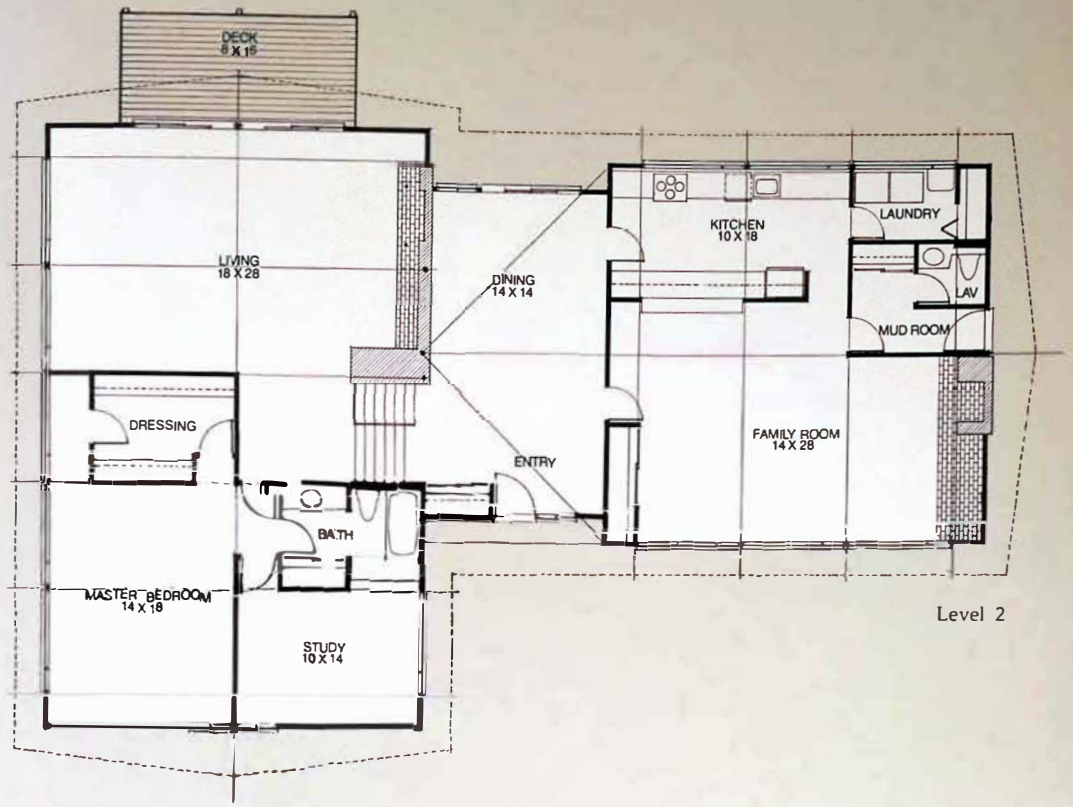
Level 1	**1069 square feet**
Level 2	**1168 square feet**
Level 3	**1291 square feet**
Heater-Storage	**372 square feet**
Total	**3900 square feet**

Three-level plan with children's and adult bedroom areas on separate levels.

Living room features a fireplace wall of brick and a symmetrical arrangement of beams and cedar decking overhead.

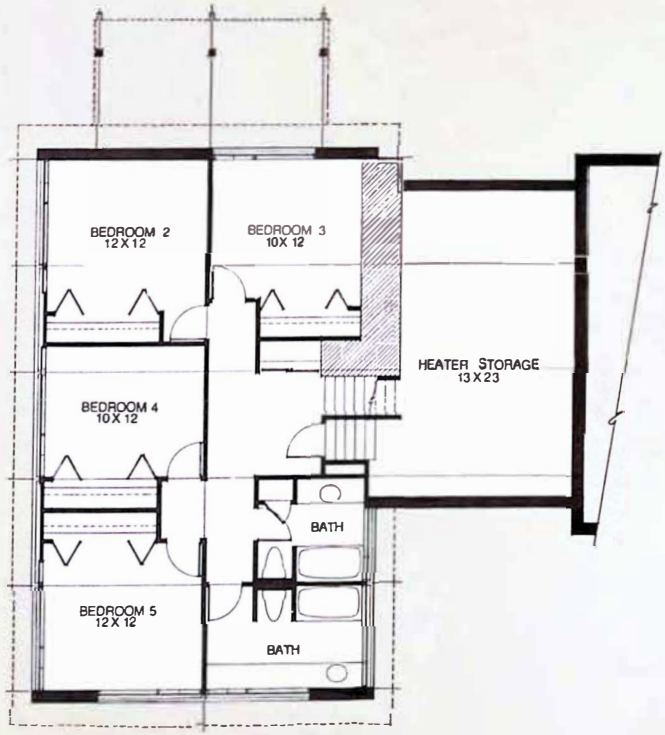


Front Elevation



Level 2

Level 1



Level 3

Model 7187

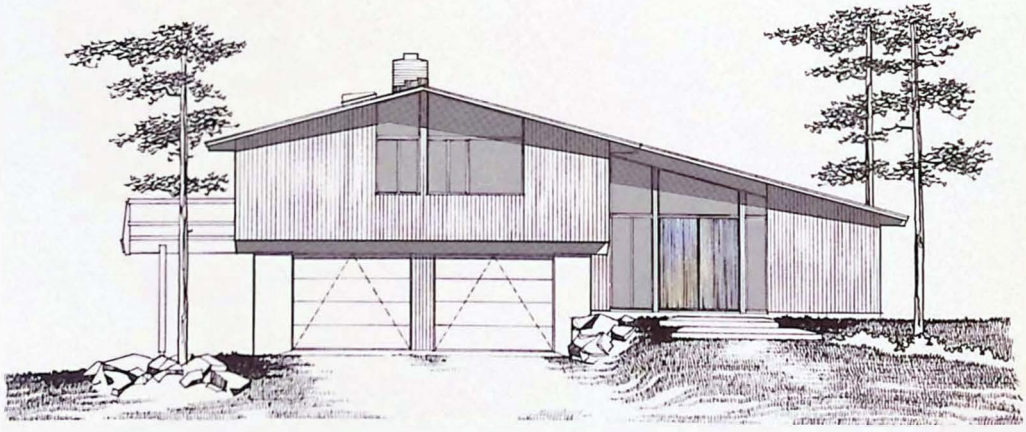
Upper Level	**2398 square feet**
Lower Level	**891 square feet**
Garage	**634 square feet**
Total	**3923 square feet**

Imposing bluestone foyer with double entry doors and walk-in closet opens to step-down living room.

Upper level dining room open to foyer and living room below – rimmed by mahogany balustrade.

Extended roof serves to tie the house more closely to the site.

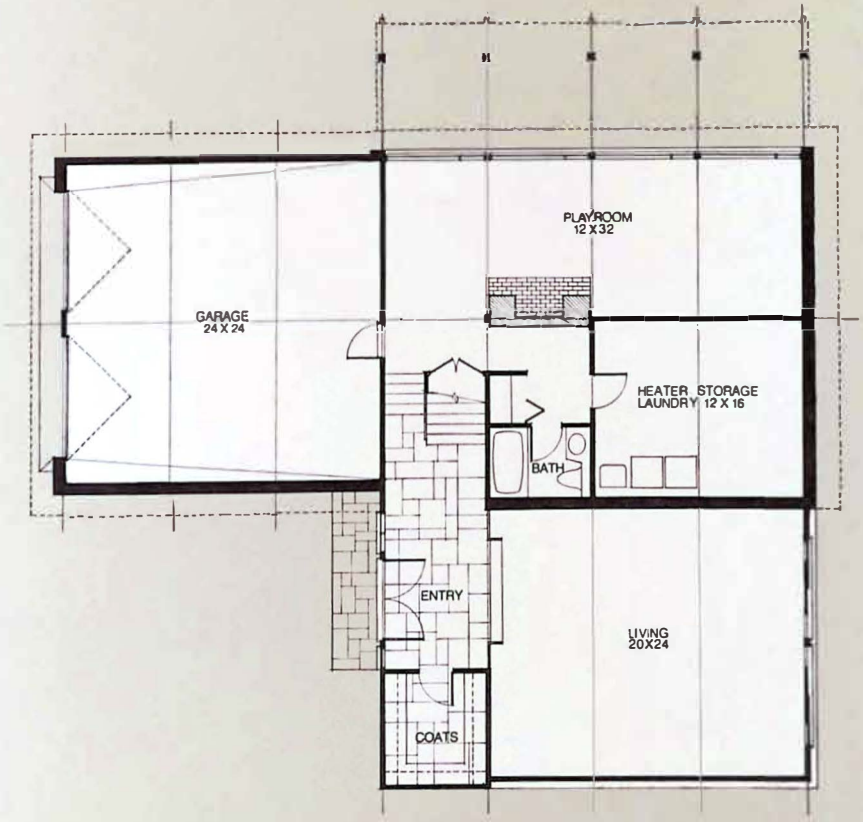
Visually dramatic ceiling plane runs from the front wall of the living room to the centerline of the upper level.



Gable Elevation



Upper Level



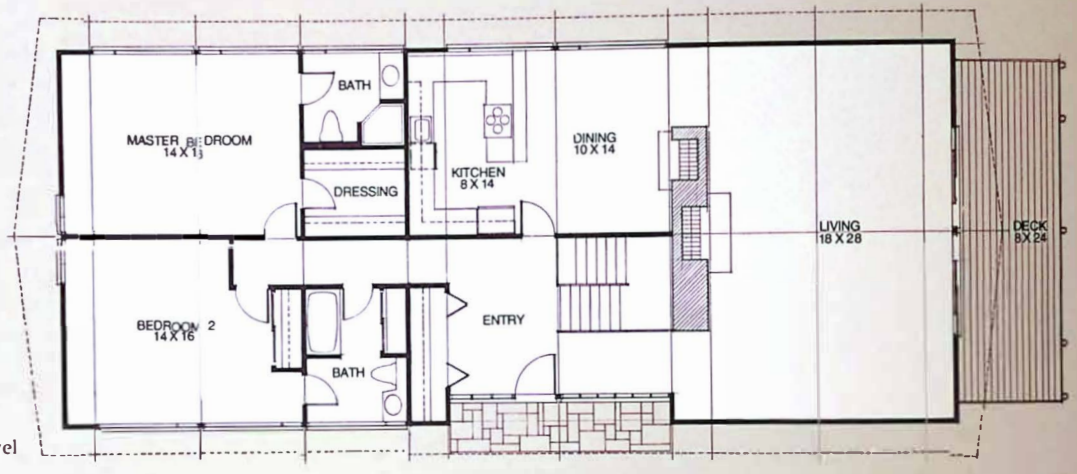
Lower Level

Model 7177

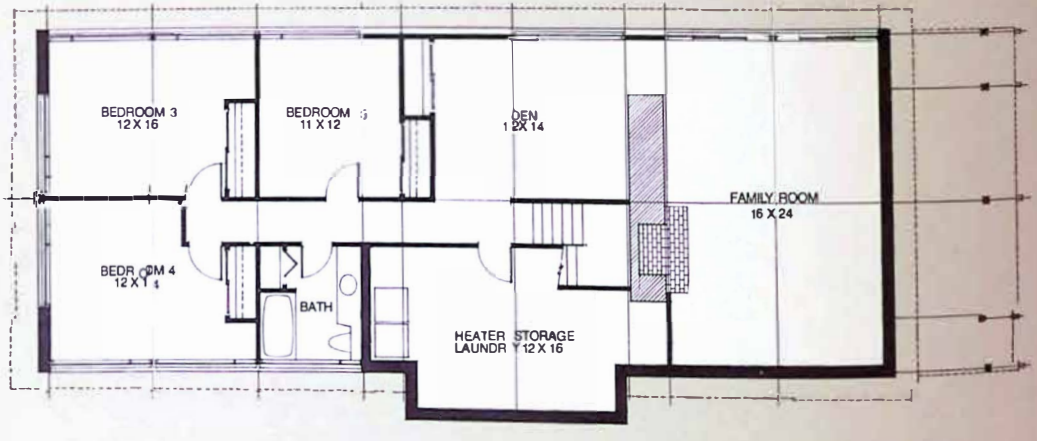
Upper Level	**1893 square feet**
Lower Level	**1690 square feet**
Total	**3583 square feet**

Recessed upper-level entry with an exterior wall of glass and a brick wall from stair landing to ceiling, opens into a gable living room dominated by a fireplace wall of brick.

Narrow ribbons of glass between the beams on the front wall of the living room permit the eye to view the roof plane as it extends beyond the exterior wall.



Upper Level



Lower Level

DECK HOUSE

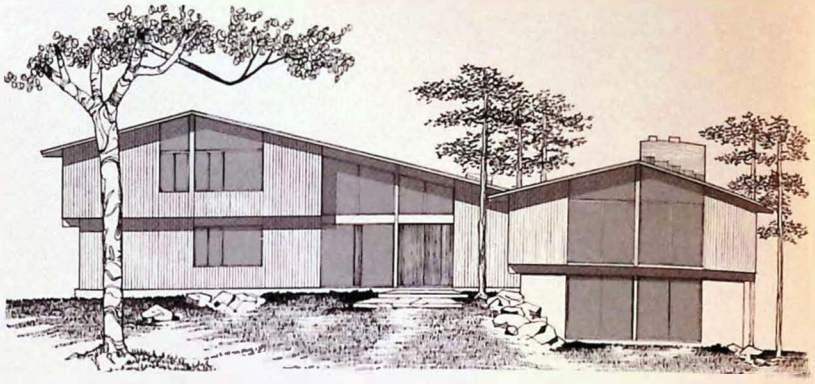
SERIES 8

SERIES 8

This portfolio contains floor plans for Deck Houses of more than 3,500 square feet. The descriptions accompanying each plan highlight features which may not be readily apparent from reading the plans. Because the houses in Series 8 are large, the floor plans, elevations and sections are drawn to a reduced scale ($\frac{1}{16}$" = 1 foot) from the other Series Books.

The generous size of these houses, and the more liberal budgets required to build them, tend to invite a greater degree of custom design. Whether your proposed house is large or small, our design and building concept permits your special requirements to be incorporated during the planning phase, using mostly standard components. Custom design, therefore, simply expresses your needs and good ideas through our proven system.

Model 7158



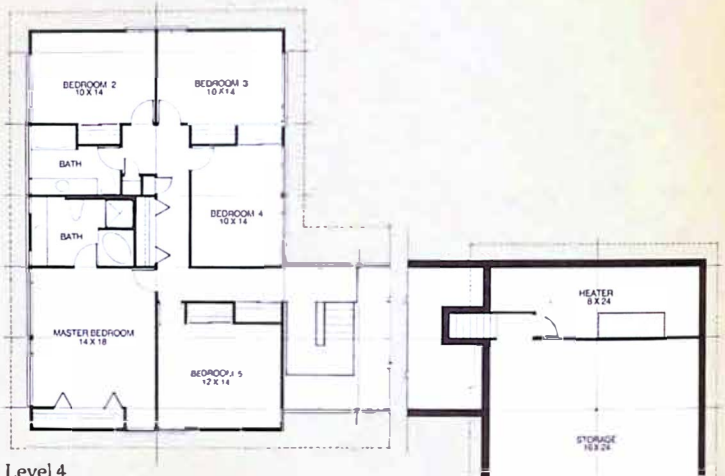
Front Elevation

Level 1	**657 square feet**
Level 2	**1438 square feet**
Level 3	**831 square feet**
Level 4	**1290 square feet**
Total	**4216 square feet**

Living room and library are set up from the rest of the house, adjacent to spectacular entry. Suspended, mahogany staircase with indoor garden beneath separates entry from dining room. Cathedral ceiling lends drama.

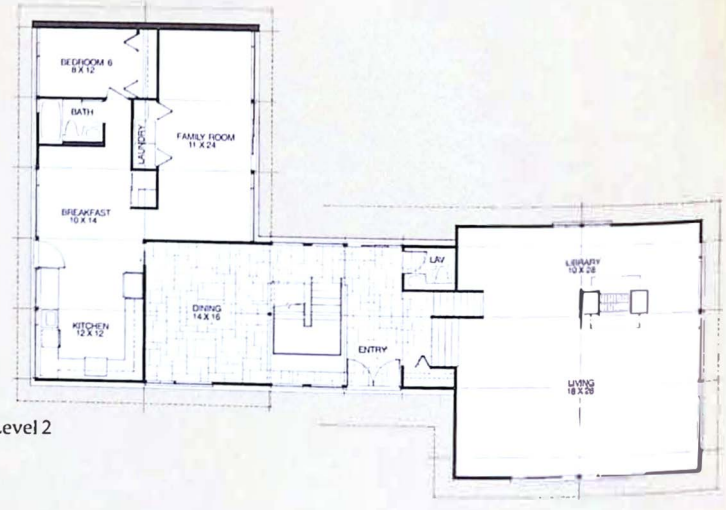
The family room has direct access to the outdoors to eliminate traffic through the formal entry.

Mirror in master bath has ideal natural lighting through windows on either side.



Level 4

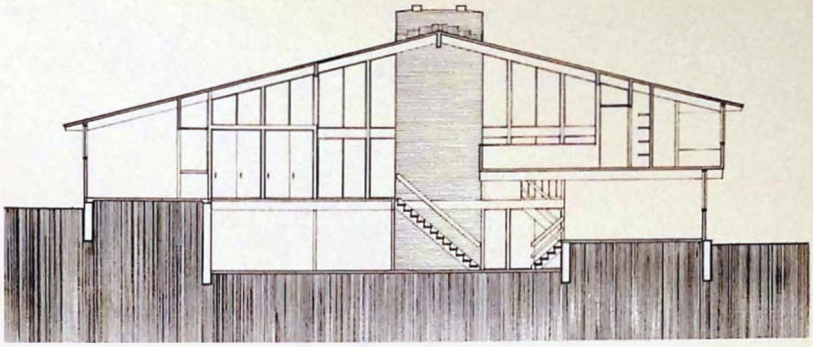
Level 1



Level 2

Level 3

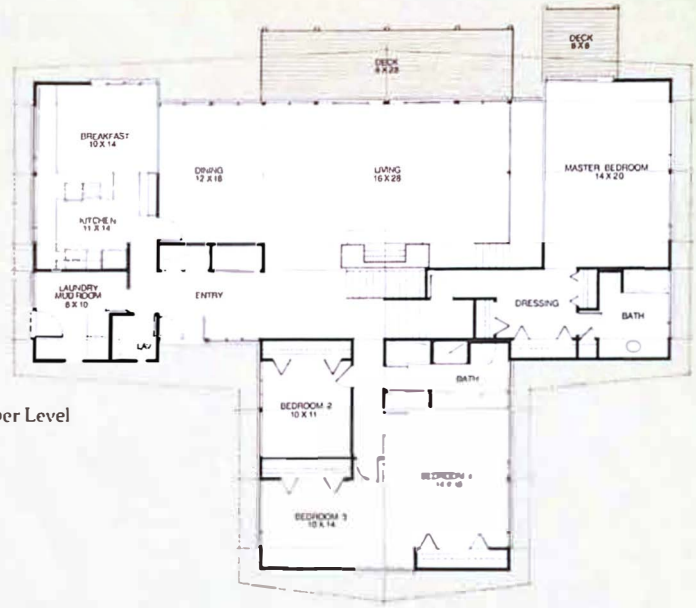
Model 7118



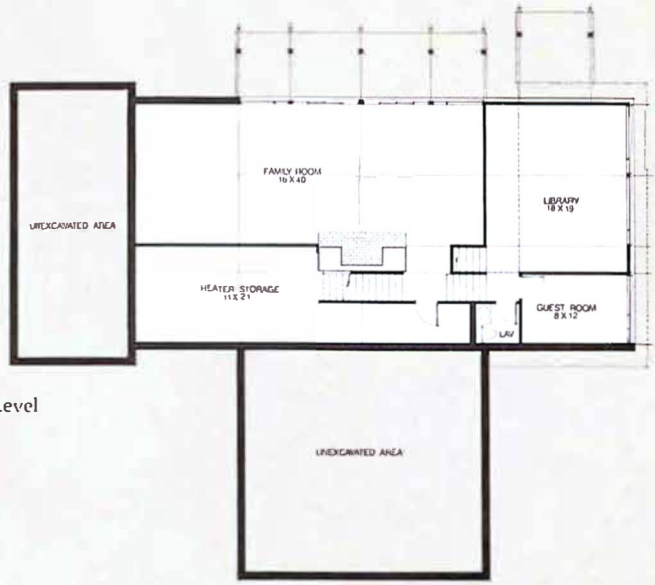
Section

Level 1	**542 square feet**
Level 2	**1161 square feet**
Level 3	**2162 square feet**
Level 4	**567 square feet**
Total	**4432 square feet**

Master bedroom area is raised above rest of living area. Living room opens to the library below which is visible from the balcony. Natural light and high ceilings make living room walls a focal point for artwork.
This spacious plan could easily accommodate a two-car garage under the bedroom wing.

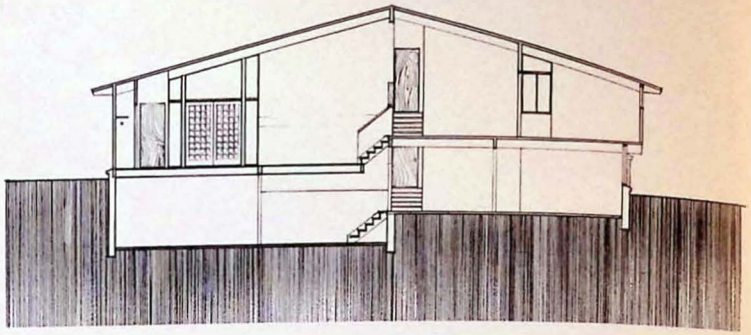


Upper Level



Lower Level

Model 7128



Section

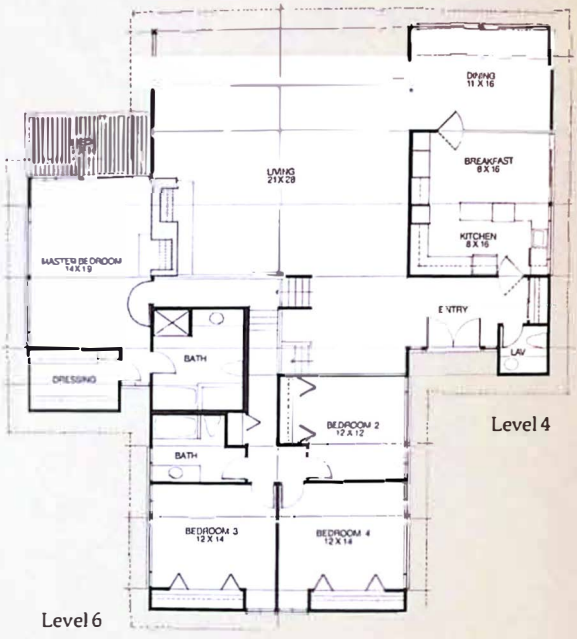
Level 1	**1344 square feet**
Level 2	**389 square feet**
Level 3	**651 square feet**
Level 4	**1381 square feet**
Level 5	**524 square feet**
Level 6	**705 square feet**
Total	**4994 square feet**

The six levels in this house offer the ultimate in separation of living areas.

Efficiently planned kitchen area provides ideal gathering place for family. Formal dining room offers quiet retreat for entertaining and shares view with lofty living room.

Soaring chimney serves three fireplaces on different levels.

Skylight in sumptuous master bath provides natural light for planter below.



Level 5

Level 4

Level 6

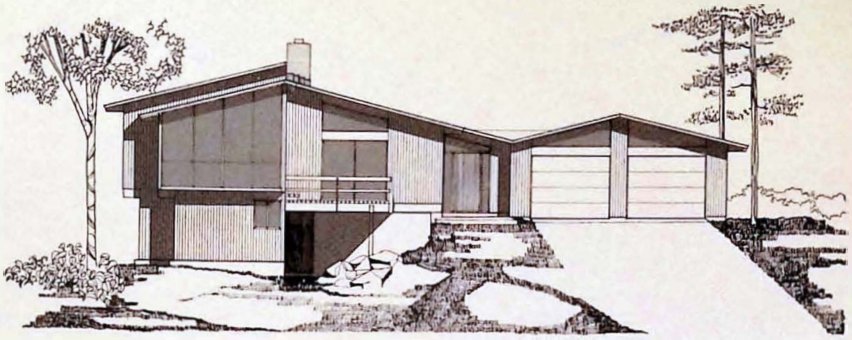


Level 2

Level 1

Level 3

Model 7138



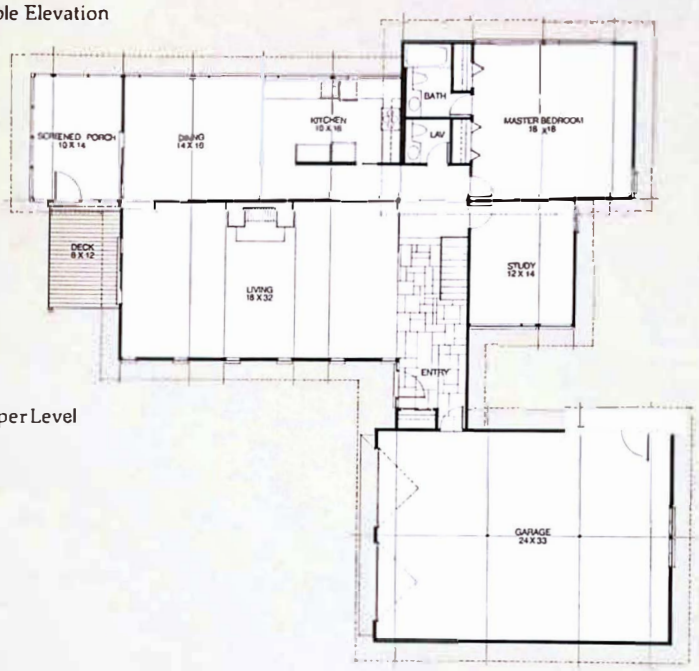
Gable Elevation

Upper Level	**2053 square feet**
Lower Level	**1809 square feet**
Garage	**839 square feet**
Total	**4701 square feet**

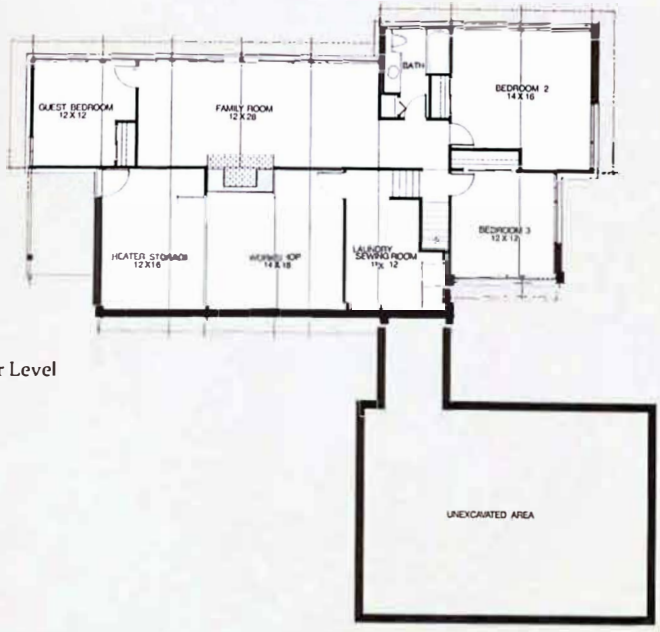
Each room in this plan serves a distinct function. Ideal for family that enjoys frequent entertaining.

Living room is on grade level. Height of surrounding rooms creates interesting conversation area. Operable vertical windows in living room reach from floor to ceiling, offering natural light without sacrificing privacy to driveway approach.

Gracious entry offers easy access to house from front door or direct from garage, adding visual interest to the exterior line of house.



Upper Level

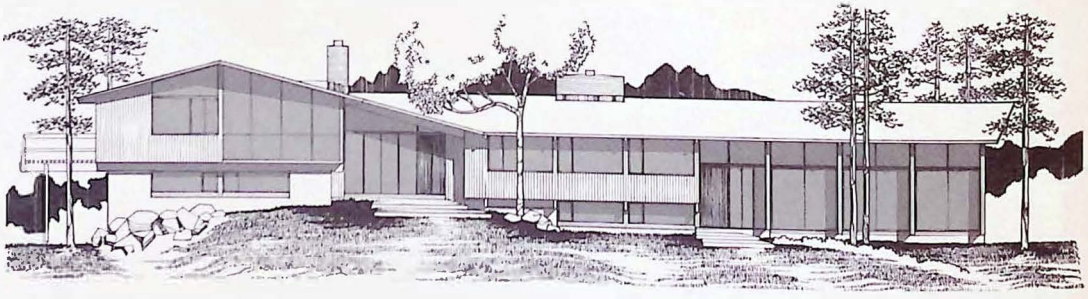


Lower Level

Model 7148

Level 1	**1260 square feet**
Level 2	**1428 square feet**
Level 3	**2369 square feet**
Level 4	**973 square feet**
Total	**6030 square feet**

Concentration of central support areas leaves the rest of the house relatively fresh and undisturbed. Zoning gives children as much privacy as adults and allows them unusual freedom in two-story playroom. Ideal for the active family with varied interests.

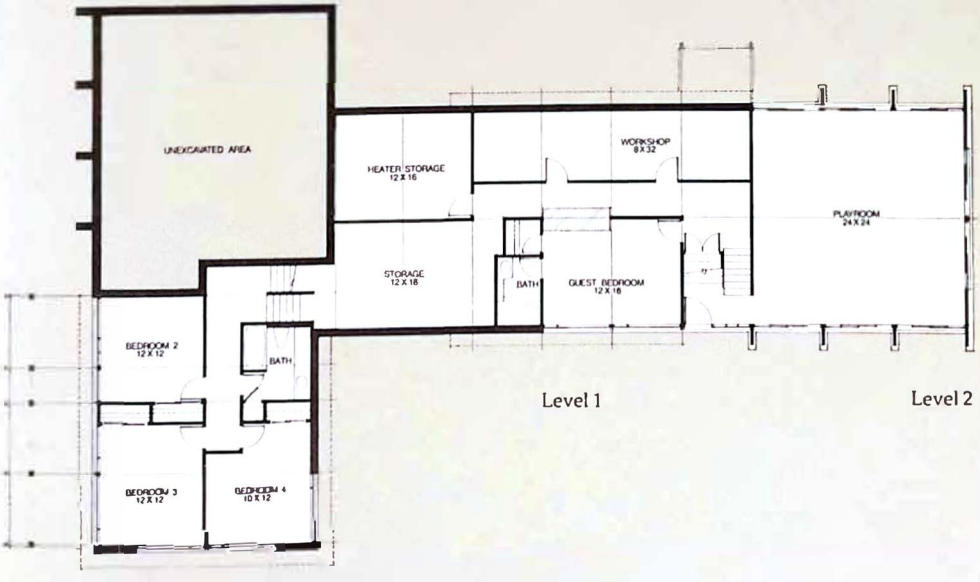


Front Elevation



Level 3

Level 4



Level 1

Level 2

Level 2

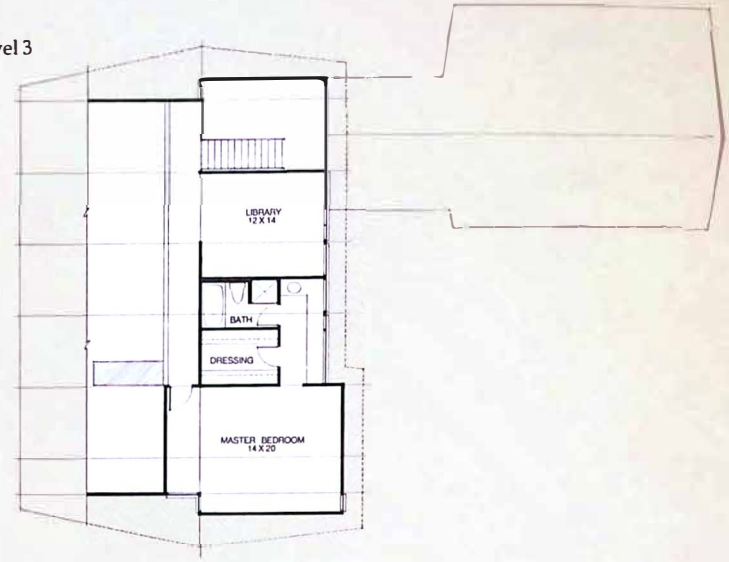
Model 7168

Level 1 1290 square feet
Level 2 1602 square feet
Level 3 767 square feet
Garage 537 square feet
Total 4196 square feet

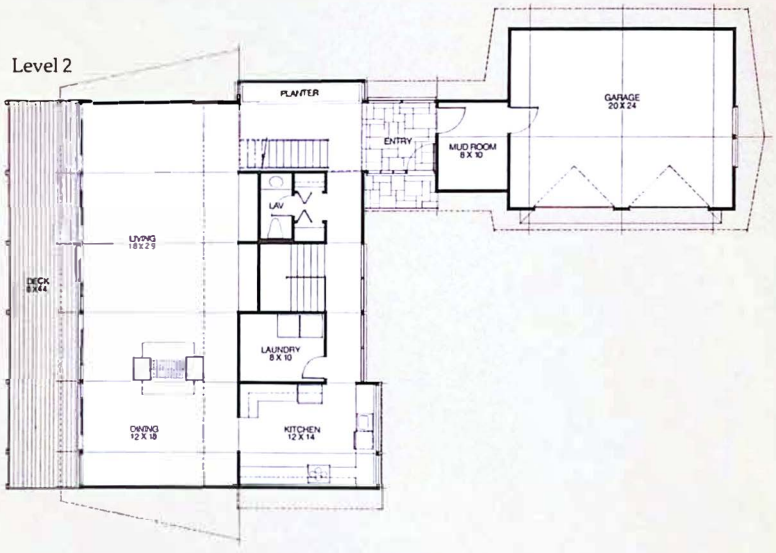
This house has roots in traditional New England "L" plans, with sunny corridor linking garage to the main house.

Balcony from master suite and library on upper level forms a continuous gallery overlooking the living room and view beyond.

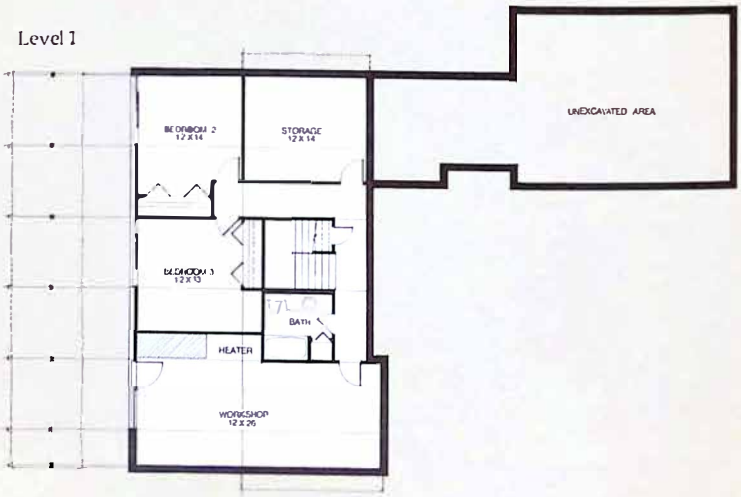
Level 3



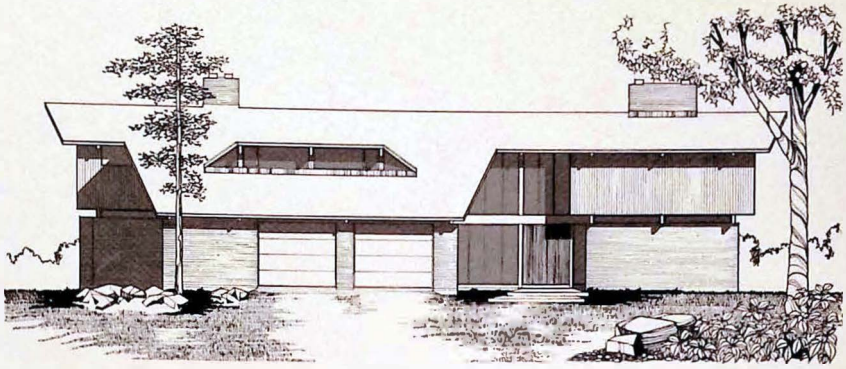
Level 2



Level 1



Model 7178



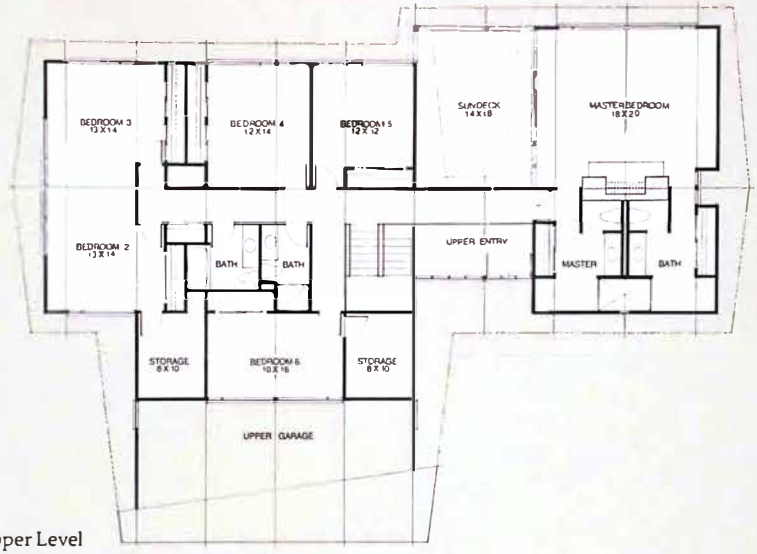
Front Elevation

Upper Level	**2608 square feet**
Lower Level	**2110 square feet**
Garage	**820 square feet**
Total	**5538 square feet**

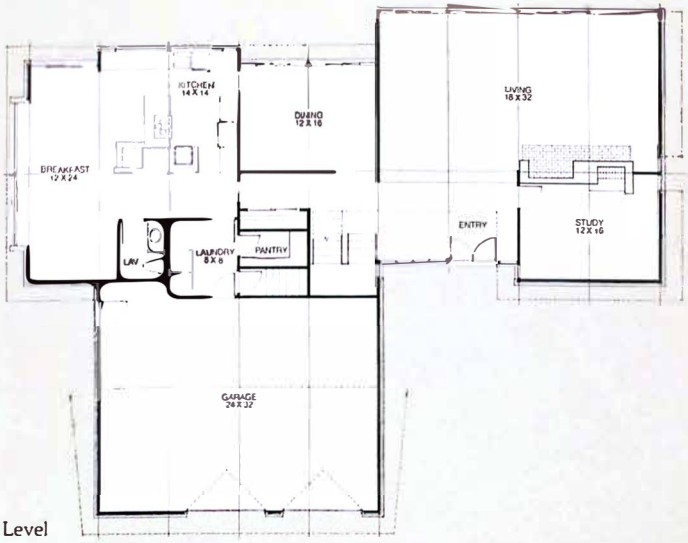
Elegant master suite features separate bath areas and offers easy access to unique sun deck.

Attractive clerestory window in front bedroom admits natural light without sacrificing the basic privacy of front elevation.

Rear of house opens to view and admits light along entire length . . . from breakfast area to step-down living room.

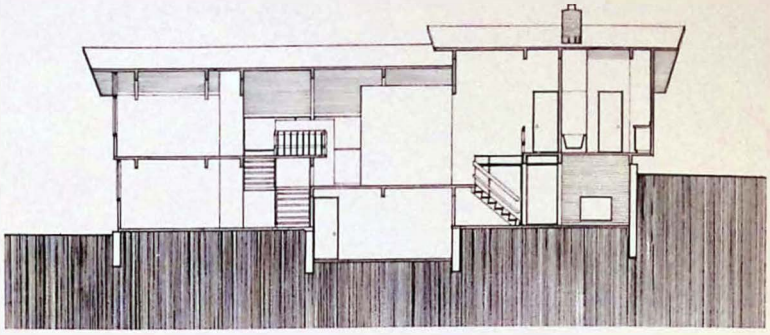


Upper Level



Lower Level

Model 7188

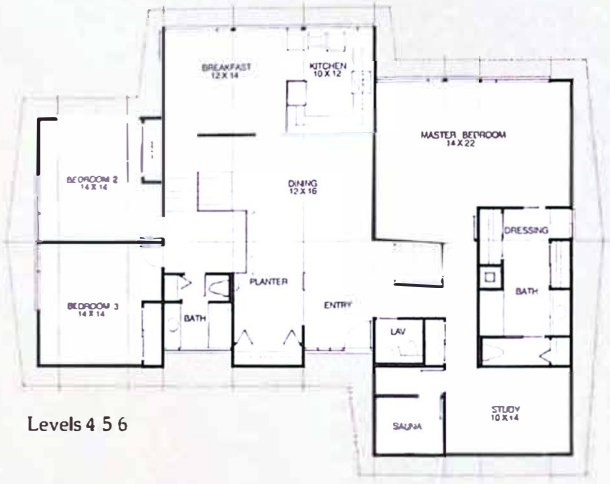


Section

Level 1	**743 square feet**
Level 2	**504 square feet**
Level 3	**817 square feet**
Level 4	**893 square feet**
Level 5	**410 square feet**
Level 6	**960 square feet**
Total	**4327 square feet**

This design offers distinctzones for children and adults, linked by a communal living space.

Luxurious master suite contains more than 800 square feet, while other bedrooms share their own common living area.

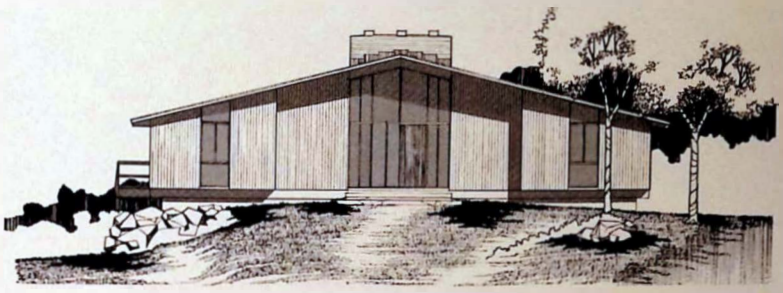


Levels 4 5 6



Levels 1 2 3

Model 7198

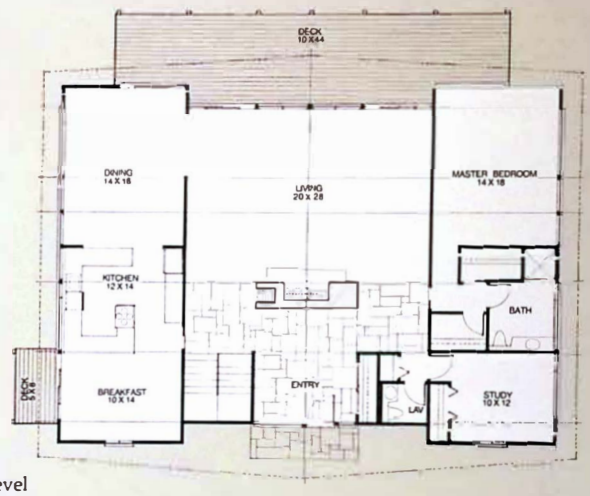


Upper Level	**2194 square feet**
Lower Level	**2016 square feet**
Total	**4210 square feet**

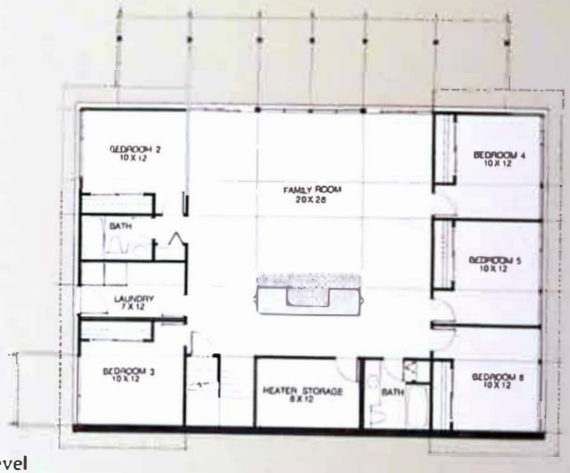
Living room, dining room and master bedroom capitalize on view, and all have direct access to forty-four foot deck.

The basic shape of this house encloses spacious interior with minimum exterior surface.

Kitchen has convenient location between dining and breakfast areas.



Upper Level



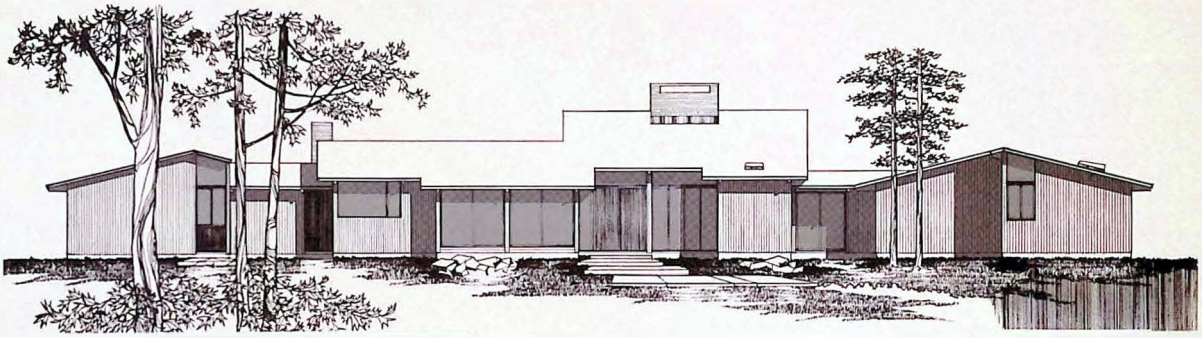
Lower Level

Model 7208

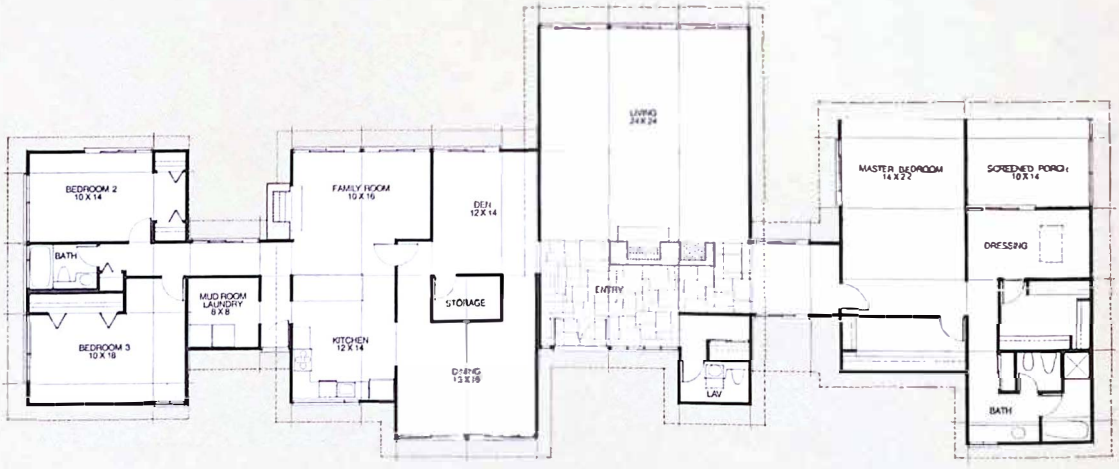
One Level 3534 square feet

Ultimate in distinct zoning for one-level living. Master bedroom is acoustically isolated from the rest of the house and offers an intimate retreat from the mainstream of activity. Skylight above dressing area provides natural illumination.

Sliding glass doors make this truly an indoor/outdoor home. Generous roof overhang shades the extensive glass areas in summer, permits solar gain in winter when the sun travels at a lower angle. Gives pleasing continuity of roof line from interior ceiling to exterior soffit.



Front Elevation



The Deck House An Architectural System

A new house is a major investment and deserves your critical examination. We think it is vital that you, the house buyer, have the facts to make a valid comparison of the alternatives and reach your own conclusions.

By now you have a general understanding of the Deck House concept and have seen it expressed in floor plans and photographs. Our house is the product of an integrated system which coordinates design, materials, in-plant manufacturing and on-site construction —a total system.

We have incorporated into every house quality materials and finish detail normally found only in the finest custom built houses. The moderate investment our system requires is a result of volume purchasing economies and advanced technological processes. These factors, together with our insistence on fine craftsmanship and continuing research, ensure that the final product is as practical and durable as it is appealing.

Specifications

The listing which follows is a distillation of our contractual specifications at the time of publication. We provide specifications not only for our materials but also for those supplied by your builder so that the materials and workmanship in your house will be comparable to those found in our model houses. We encourage you to visit one soon to visually supplement this presentation.

Items printed in brown are provided in the Deck House package, those in black are supplied by the builder.

Foundation

10" poured concrete or concrete block with parget finish and perimeter drains and footings as required.

Sills

4x6 or 4x4 fir pressure treated with Osmose K-33 preservative.

Framing

Assembled walls of kiln dried construction grade 2x4 with ½" CDX exterior glue plywood sheathing.

Mahogany framed assembled window units with insulating fixed glass and mahogany casement sash with insulating glass and screens.

Pre-cut select structural 4x4 fir posts and 3½" concrete filled steel columns for interior supports. 4x4 fir posts with mahogany side covers on a steel pipe column base for balcony supports and carports.

Pre-cut and shaped select structural 4x12 or 4x14 Douglas fir beams.

Red cedar faced Potlatch Lock-Deck laminated decking for floor and roof. ½" CDX plywood glued on top of floor decking.

Roofing

Bird 290 lb. Mark 25 roof shingles with self-sealing tabs. Roll roofing on 2:12 roof pitches. 15 lb. and 50 lb. roofing felt and wood shingle starter course.

Exterior Doors

Mahogany flush panel solid core door in assembled mahogany frame with aluminum threshold, 4x4 ballbearing hinges and architectural grade European style brushed chrome lever handle lockset with dead bolt.

Bronze finish aluminum sliding glass doors with insulating tempered glass and screens.

Insulation and Sealers

3⅝" fiberglas with 4 mil polyethylene vapor barrier for exterior framed walls. Type B insulation for finished masonry walls.

2" foil faced Thermax foam insulation board for roof.

1" rigid polystyrene along frost walls.

Plastic foam tape and bronze tone butyl caulking.

Siding

Nominal 4" wide tongue-and-groove, edge V-groove, Atlantic whitecedar over asphalt paper.

Balcony

3x6 Douglas fir pressure treated with Osmose K-33 preservative. Assembled mahogany rails and balusters. Shaped mahogany railing supports.

Screened Porch

Mahogany frame stock and bronze colored aluminum screening. Tapered urethane shims beneath exterior plywood underlayment covered with weatherproof deck coating.

Skydormers

Fixed or venting Wasco sealed bronze over clear acrylic domes with bronze finished aluminum frames.

Exterior Trim

Mahogany over windows, around sliding glass doors, fascia and rake.

Chimney

Random used brick with bluestone or brick hearth, 8x12 and 12x12 terra-cotta tile flues and external control cast iron damper.

Slab

Poured concrete over 6" layer of stone.

Partitions

Kiln dried construction grade 2x4 studding. Shoes on concrete pressure treated with Osmose K-33 preservative.

Electrical

100 or 200 amp service and copper wiring with circuit breaker panel.

Plumbing

American Standard fixtures in white: Bathtubs 5 foot "Spectra 70" recess style with slip resistant bottom, countertop lavatories 18" round "Circlyn" with rim, water closets floor mount rear discharge elongated "Yorkville" upper level, and elongated "Cadet" lower level. Kitchen sink stainless steel Elkay Lustertone 21"x24" with Moen "Leverset" faucet. All bath faucets Moen "Dialset."

Heating

Thermostatically controlled oil-fired circulating hot water system with baseboard radiation with circulating pump for each zone. 500 gallon buried oil storage tank.

Interior Finish

All walls except concrete in heater room and garage finished in ½" gypsum board with metal "L" bead and corner bead.

Ceramic tile in tub areas over moisture resistant gypsum board.

Stairs and Railings

Mahogany open or closed riser stairs, handrails and assembled balustrades. All screws countersunk, covered with mahogany plugs and sanded.

Countertops – Tile

Formica self-edged with backsplash applied to wall, except where mahogany heat detail is used.

Interior Trim

Mahogany over windows, around sliding glass doors, baseboard and exposed post covers.

Interior Doors

Solid or hollow core oriental ash doors prehung in mahogany jambs with Sargent brushed chrome locksets and mahogany casing.

Flooring

Kentile vinyl asbestos tile on concrete floors except in heater room and garage. Upper level kitchen and baths in Armstrong Solarian vinyl on underlayment. Front stoop and entry in bluestone.

Painting

2 coats finish on all walls and wood surfaces.

Allowances

Before embarking on your building project, it is important to consider all aspects of the house as they relate to your budget. This approach avoids the unknowns by including items needed to complete your house.

The allowance items discussed below are a necessary consideration in your house budget, but because of personal tastes and site variations the cost of these items can vary considerably. Therefore, these costs should be determined on an individual basis.



Site Development

Site development includes clearing, excavating, fill, grading, driveway work and trenching for underground utilities. In the event that public water and sewage connections are not available, well and septic systems should be included in this allowance.

A Deck House representative will suggest a realistic allowance amount for these items after discussing your requirements.

A Lighting Brochure, designed exclusively for our houses, gives suggestions for illumination and shows various fixtures available.

Cabinets and Vanities

We supply a Kitchen Planning Guide which contains information to develop your own personalized kitchen cabinet design. General information and design tips will guide your selections in cabinets and appliances. By outlining your kitchen dimensions on the planning grid, you can plot various combinations of cabinets and appliances until you achieve a kitchen environment that is workable and attractive. After the layout is determined, your attention is directed to custom cabinet features such as pull-out shelves, lazy suzan units and tray dividers.

Our kitchen service includes ordering cabinets and coordinating delivery to your site. Cabinet choices are made from wide selections offered by two highly respected cabinet manufacturers and samples are available at the model house.

Options

Deck House offers a number of options to supplement the standard package—carports and garages, where these are not an integral part of your design, kitchen cabinets, laminated beams, screen and storm doors, storm windows, mahogany paneling, waffle pattern mahogany entrance doors, mahogany light fixtures, patio blocks for landscaping and king and queen size mahogany bed.

In the planning stages it is important not to overlook such items as security systems, fire alarms, intercom and stereo wiring, etc. which should be discussed with your builder. phone, TV





The Deck House Components

The Deck House architectural signature is expressed primarily through natural woods with each house containing an average of 20,000 board feet of wood. Therefore, it is appropriate to comment on the structural and aesthetic merits of the wood species, and to elaborate on our highly refined manufacturing processes.

A house constructed of natural woods is a pleasant refuge from a world in which so much is plastic and artificial. The mellow tone of wood lends itself to a lifetime of comfortable and quiet enjoyment.

Each specie of wood used by Deck House has been selected for its unique and specialized characteristics. Mahogany, cedar, Douglas fir and oriental ash perform in beautiful harmony, each contributing its individual characteristics toward the design, structural and maintenance advantages of the house.

Framing Timbers

The posts and beams must be sturdy and durable because they serve as framing members for the house. Deck House uses select structural Douglas fir. This superior grade is the top of the line and its strength and stiffness, pound per pound, make it stronger than steel. If you or an independent builder shopped for lumber of this grade it would most likely have to be special-ordered at considerable expense and delay. This is but one instance where our volume purchasing permits clients to take advantage of high quality products not readily available through local suppliers.

Beam preparation is done at the plant to save construction time and ensure a precision fit on site. Framing is not delayed by constant interruptions to measure and cut the key pieces. In fact, most Deck Houses are weather-tight within two weeks of the time erection begins.

A bevel cut at the ridge end allows roof beams to meet at the proper angle. A diagonal cut at the opposite end allows the beam to rest on its supporting post, forming a secure horizontal joint. Additionally, there is a routed groove to allow the cedar siding to recess into the beam.

After receiving their proper profile in our manufacturing plant, all beams receive a prime coat of semi-transparent stain for protection during the construction process.

The beams have eased edges, a slight rounding which softens their appearance. They are fastened together on site with special metal hardware, unique in the construction industry.

Special laminated beams are used for wide span requirements or where a supporting post would be inappropriate to the design. These timbers are built-up sections of kiln dried 2x4 or 2x6, glued under pressure with a waterproof adhesive. The model houses contain both types of beams for visual comparison.

To support exterior balconies, wood posts are used with a steel shoe separating the otherwise incompatible wood and concrete footing. The posts are then trimmed with mahogany side covers. Compare the detailing of this balcony support with the round steel columns used in conventional building.

Roof and Floor Deck

The cedar decking provides a visually appealing feature of the Deck House. Lock-Deck, a product of Potlatch Corporation, consists of three kiln dried boards laminated together with the center piece offset to give each plank a tongue and groove. The ends of the decking are also offset to ensure a tight fit on all four sides and to provide for easy on-site installation.

Lock-Deck serves a dual role of function and form. The 3x6 decking, secured to the post and beam framework, forms the floor and roof systems. This provides a uniquely solid structure, while the exposed surface of inland red cedar creates a handsome ceiling throughout the house.

Between the roof decking and the wood-tone roof shingles are layers of roofing felt and two inch rigid foam insulation. This roof system offers outstanding insulating efficiency.

Deck Houses are designed with a generous overhang at the roof and upper level, adding architectural interest and energy efficiency through natural solar regulation. The overhang also helps to protect the siding from rain, thereby minimizing maintenance requirements and eliminating the need for gutters — an expense and maintenance worry you'll never miss.

Cedar Siding

Cedar siding is available in either smooth or rough texture. Solid boards are tongue-and-grooved to ensure a tight fit.

Cedar has a low volumetric shrinkage. Its low density and fine closed cellular structure make it an excellent insulator against heat and cold. This wood is also highly resistant to splitting, an important quality for any material which must withstand the rigors of seasonal change and constant exposure to the elements.

Chemical Preservative

The sills of most wood structures are in direct contact with a masonry foundation which could impart moisture to them. Our sills are specially treated to prevent the wood from absorbing moisture. The wood is put in a cylinder and excess water within its cellular structure is removed. The cylinder is then filled with chromated copper arsenate, which is put under pressure and permanently fixed within the cellular structure through a chemical reaction. The process also imparts resistance to insects and disease.

Pressure treated wood is also supplied for the shoes of interior partitions in contact with masonry floors and for the 3x6 balcony deck floors which are constantly exposed to the weather.

Windows

The windows are an especially important design feature in any Deck House, and the specially milled mahogany used for the frames harmonizes with the overall architectural style. The intent is to keep the materials, scale and proportions consistent with the style of the house. A house that is true to its design will mature gracefully and always be in good taste.

The natural insulating qualities of wood, combined with the use of insulating glass, make these windows efficient as well as attractive. Deck House manufactures the window frames and insulating glass. This enables us to offer a superior product which is precision engineered before shipment to the construction site, saving costly carpenter time in cutting and measuring.

Detailing on the window frames deserves special mention. A continuous groove is routed around the frame to receive the interior wall finish, eliminating the need for costly interior window casings. The window sill is beveled to direct rainwater away from the glass. A drip groove is cut on the underside to break up the flow of water and prevent it from running down the exterior siding. Behind it, another groove is routed to receive the siding. A channel is cut in the frame of opening sash windows to receive the screens without obtrusive hardware.

Conventional window treatments require extensive trim and molding applications at the site. Deck House windows are designed and fabricated so that no additional time or material is needed for interior or exterior trim.

Our windows contain clear float glass because of its distortion-free characteristics. Obscure glass is available and may be substituted for the clear where privacy is more important than view. Tempered glass is used wherever safety dictates. The tempering process puts glass through controlled heating and cooling to rearrange its molecular structure. This process puts the outer surface of the glass in tension, making it resistant to breakage. If an accident should occur, however, the glass will disintegrate into small, harmless particles.

After being cut to size, the glass is fed through a washing machine and exits on a series of rollers to a room that is temperature and humidity controlled. Here it is inspected for possible scratches or dust particles. The lites of glass are separated with a hollow aluminum channel which is filled with a dessicant to remove moisture within the sealed unit. At this point, a modern pumping system mixes materials for the sealing process and the units are cured under controlled conditions to ensure proper sealing.

Double glazed?



Mahogany Detailing

Careful attention to detail characterizes a truly outstanding house. The detailing in a Deck House is integral to its design. It is not an artificial device to add interest or apologize for empty spaces. When you consider the cost involved in manufacturing and installing millwork, it makes little sense to skimp on materials used. While the millwork in most houses is pine or birch, Deck House uses Philippine mahogany. It has stability, can be worked easily and takes a fine finish. The natural pattern of interwoven mahogany fibers gives the wood its depth and interest, occasionally heightened by the appearance of mottled, curly or fiddleback patterns. Moreover, it provides an attractive contrast to the other natural woods and textures used in a Deck House, has an inherent ability to withstand the rigors of exposure, and is as rugged as it is rich.

Many of us think of mahogany in terms of the elegant but dark wood found in the homes of earlier times. The warm natural color and rich grain were concealed by heavy coats of stain and lacquer, giving the wood a gloomy appearance. Deck House makes every effort to highlight rather than mask the natural beauty of mahogany. Before shipment each piece receives a coat of preservative/sealer, which is supplemented with a second coating on the building site. This finish protects the wood and requires less attention throughout the years than other millwork alternatives.

Deck House uses more than a million board feet of mahogany each year. The execution of our special detailing begins in tropical forests where the trees are felled then cured under water for five years. The logs are then rafted downstream to sawmills, cut into rough planks and shipped to the Port of Boston. Kiln drying and final milling are done to our particular specifications. Each mahogany sub-assembly is meticulously crafted in our plant, and ready for on-site installation with minimal construction time.

Mahogany used for the stairs must pass rigid inspection. The slightest twist or crack means that a particular board cannot be used in its entirety, and therefore not in the stairs. It will be cut into smaller pieces — the sub-standard ones discarded, the good ones earmarked for eventual use in such items as the waffle pattern door.

The stairs invite comparison with a piece of fine furniture and offer an impressive focal point in the interior of any Deck House. The stringers of the closed riser stairs are aligned and routed simultaneously, ensuring that the treads and risers fit in place true and square. They are tightly wedged into precisely cut grooves, glued and blocked for exceptional stability.

Open riser stairs have 1¾" thick mahogany treads. Securing screws are countersunk and concealed with mahogany plugs. This is true for the mahogany rails and balustrades as well, resulting in a handsomely detailed assembly.

Carefully detailed mahogany accents are found throughout the house — cove lighting, baseboard, wall light fixtures, and even a baseboard heat cover under the sliding glass doors. The mellow tones of this fine wood may be further appreciated when used as an accent wall of solid mahogany paneling. A king or queen size mahogany bed is yet another option available to complement the decor of your house. This handsome headboard has adjustable shelves and can easily accommodate a variety of lighting and other electrical fixtures.

How Much?

Interior Doors

Oriental ash has an elaborate grain and is used for all Deck House interior doors, whether solid or hollow core. The passage doors are hung in a mahogany jamb with three hinges for strength and stability. This ensures a precise fit and saves valuable on-site installation time. Specially milled mahogany casing, sized to match the window frames, is supplied to complete the visual tie-in of the mahogany millwork.

Exterior Doors

The mahogany exterior doors are available in a solid core smooth surface or a bold waffle pattern. The color and texture of the doors lend drama to the entrance and contrast with the adjacent siding and glass. Well over a hundred individual pieces of solid mahogany are handcrafted into each waffle pattern door.

Screen doors and combination screen/storm doors are available with panels of bronze tone aluminum screening set in a frame of solid mahogany. Interchangeable plexiglas storm panels are provided for the combination door.

Heavy duty ball bearing hinges of brushed chrome were chosen to support the massive exterior door and allow easy operation. The lever handle lockset, also of brushed chrome, functions easily while offering maximum security. This graceful lever handle is typical of European design. Anyone who has tried to operate a round knob with mittens or with arms heavy-laden can appreciate the merits of the lever handle.

Color continuity is another subtle but distinctive detail which serves to unite the whole house and give it architectural unity. Most of the Deck House hardware is brushed chrome. This finish highlights the natural earth tones of the wood and contributes to the elegant simplicity of the house.

All screening is bronze colored as are the exposed metal frames of the sliding glass doors and skydormers, the cranks of the opening sash windows, and the outer dome of the skydormer. The warmth of this tone harmonizes with the natural woods and is in keeping with the overall design.



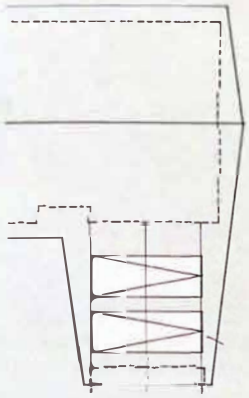
Carports and Garages

Automotive shelter can be incorporated into any Deck House design. Depending on site contour and personal preference, the shelter can take many forms. It can be either an open carport or an enclosed garage. It can be detached or attached on a level with the upper or lower floor of the house or mid-way between. It can be attached to the gable, front or rear elevations. The following illustrate a few basic solutions. Many more are possible.

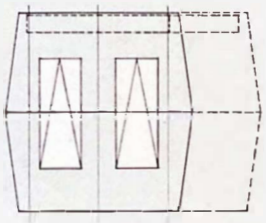




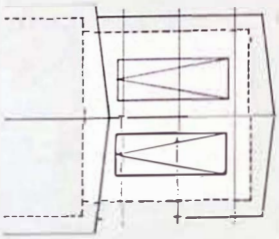




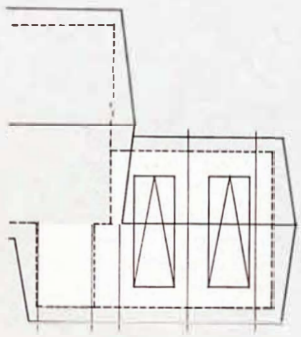
1. Attached carport created by extending the roof to shelter two cars at the entry level. Dotted line outlines optional storage enclosure for garden tools, bicycles, etc.



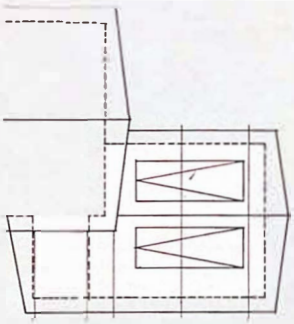
2. Free-standing two-car carport can be expanded for three cars. Storage enclosure forms rear wall.



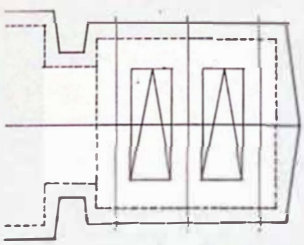
3. Gable two-car carport or garage with direct entry on lower level.



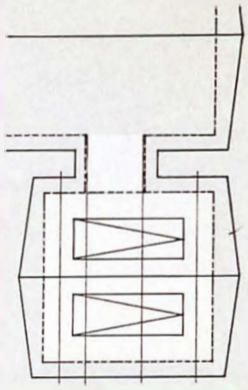
4. Mudroom/entry links carport or garage to one or both levels. Front roof plane is a continuation of the house roof.



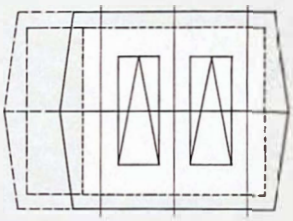
5. Depending on land slope, auto access can be from any of three sides. Parking at lower floor level, with front roof plane intersecting house wall.



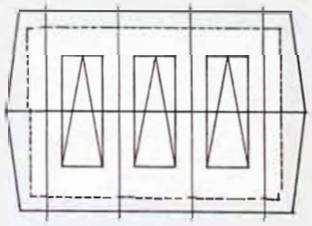
6. Carport or garage roof is a continuation of house. Link can be used for pantry, laundry, mudroom or half-bath.



7. Carport or garage can be turned 90° from direction shown. Roof of entry link can be a continuation of house or pitched section.



8. Free-standing two-car garage can be expanded on one end for workshop/storage area.



9. Free-standing garage accommodates three cars.

An Approach to Energy Efficiency

Building a new home offers the advantage of integrating energy efficiency into your building plan from the start. This includes a number of items — insulation, measures to reduce air infiltration, natural lighting, double glazed windows, proper orientation, a well designed heating/cooling system, energy-efficient appliances, and consideration of solar energy alternatives. Foresight at the early planning stages will mean energy savings in the years to come and a more comfortable, enjoyable home year- round.

It would be misleading to offer one single "energy conservation Deck House" because of the wide range of climatic variables throughout the country, to say nothing of the important considerations posed by your unique building site. The Deck House approach, rather, is that *every* house should be energy efficient. A house designed for a Minnesota site would not properly serve the needs of a family in Florida, and vice-versa. The former would be designed primarily for cold exclusion — the latter for heat dissipation. Most designs will be a tempered balance between these extremes.

Insulation

Heat flow is always in a direction that will equalize the temperatures. If it's cold outside, the heated air inside your house is trying to find its way out. Insulation reduces the conduction of heat through walls and ceilings. The more resistance it offers, the less heat transfer takes place. With good insulation, not only will your fuel bills be lower, but also the initial cost of heating and cooling equipment, because their capacity does not have to be so great.

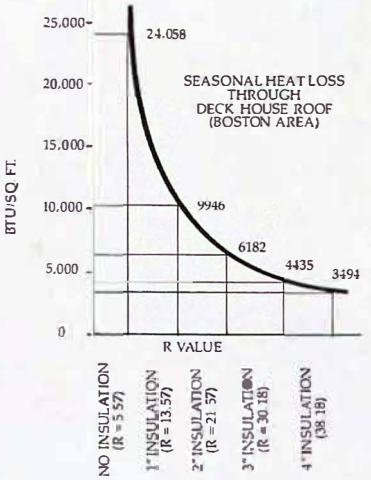
The Resistance or "R" value of an insulating material is a numerical measure of its ability to slow down heat transfer. The higher the R value, the better the insulating value. In spite of all the publicity about insulation, however, it is misleading to imply that an R value of 20 is twice as effective in reducing heat loss as an R value of 10, or that if you save X amount of dollars with one thickness of insulation, you'll save 2X with a double thickness. There is a point of diminishing returns where extra insulation does not make enough difference to be worthwhile. As the savings from added insulation decrease, it becomes more profitable to shift your energy conservation dollars into other techniques which will generate greater savings per dollar invested.

Energy discussions are also based on "U" values, which are the direct reciprocal of the R, or 1/R. The U value is a measure of how easily heat will flow through a material. Hence, the *lower* the U value the better. The U value gives the amount of heat (in BTUs) which will pass through one square foot of material per hour for each degree Fahrenheit difference between the air on the inside and the air on the outside of your house.

Heat loss is measured in BTUs. To relate the following BTU discussions to your own energy source and cost, allow 97,300 BTUs for each gallon of oil if your furnace is 70% efficient. If you plan to use conventional electric resistance heat, one kilowatt will yield 3,414 BTUs. Electric heat pumps can offer many times the BTU yield of conventional electric resistance heat, but the actual yield depends on the average outside temperature. The lower the temperature, the lower the heat pump efficiency.

Roof Insulation

Deck House's energy performance standards were established after cost/benefit analysis was applied to different levels of insulation. The graph below shows the dramatic reduction of heat loss in the roof with one inch of insulation. The first inch decreased heat loss almost 60% for a net reduction of 14,112 BTUs per square foot each year. The combined benefits of the next *three* inches of insulation reduce heat loss an additional 6452 BTUs – a classic case of diminishing returns.



The optimum investment level for roof insulation is two inches of very efficient Thermax insulation board, giving the total roof system an R value of 21.57. This is the Deck House standard. While you could opt for three or four inches of Thermax (R 30.18 and 38.18) we feel the additional investment is not justified by the savings.

To relate this discussion to a "real" house, we've applied the figures to Deck House model 7126, a two-level house with 3000 square feet of living space. (This house will be used in examples throughout.)

It would cost approximately $1500 to add an additional two inches of Thermax to the standard roof system of this house. The savings would be only $20 a year in the Boston area, or a 1.3% return on investment annually. In less severe climates, the return would be even less.

Our calculations are based on the heating load in the Boston area, which has a degree day rating[1] of 5600. Every area has its own rating, and the chart shown here will give you an idea what to expect in your area. To arrive at approximate figures for your location, you will need a comparison factor to apply to our calculations. Simply divide your degree day rating by Boston's 5600. For example, Richmond, Virginia has a degree day rating of 3800. Divide this by 5600 to arrive at Richmond's comparison factor of .68. In other words, the heating load in Richmond will run only 68% of Boston's. Applying this factor to the fuel savings with four inches of roof insulation shows that a Richmond area house would save only $13.60 each winter, compared to $20 in Boston.[2]

[1]*Degree Day.* A unit used in measuring heating fuel consumption for any one day. The number of degree days corresponds to the number of Fahrenheit degrees difference between the mean temperature for the day and 65° Fahrenheit. The sum total of degree days shows the annual heating load.

[2]*Heat Loss Formula.* To figure the seasonal heat loss for a particular surface in any given location, use the following formula:

Material's U Value x *24 (hours)* x *Degree Days* x *Square Footage*

A list of U values for Deck House materials is available from any sales representative.

INSULATION PERFORMANCE IN MODEL 7126 ROOF

Level of Insulation	Seasonal Heat Loss Through The Roof	Gallons Oil Used Each Year	Cost Per Year (50¢/Gal.)
No insulation (R 5.57)	34,571,346 BTU	355	$178
1" Thermax (R 13.57)	14,292,402 BTU	147	$ 74
*2" Thermax (R 21.57)	8,883,534 BTU	91	$ 46
3" Thermax (R 30.18)	6,373,095 BTU	65	$ 33
4" Thermax (R 38.18)	5,020,878 BTU	52	$ 26

*Deck House Standard Roof Insulation

DEGREE DAY RATINGS

State	City	Degree Days (°F-days)
Alabama	Birmingham	2,600
Alaska	Anchorage	10,800
Arizona	Phoenix	1,800
Arkansas	Little Rock	3,200
California	Los Angeles	2,000
California	San Francisco	3,000
Colorado	Denver	6,200
Connecticut	Hartford	6,200
Florida	Tampa	600
Georgia	Atlanta	3,000
Idaho	Boise	5,800
Illinois	Chicago	6,600
Indiana	Indianapolis	5,600
Iowa	Des Moines	6,600
Kansas	Wichita	4,600
Kentucky	Louisville	4,600
Louisiana	New Orleans	1,400
Maryland	Baltimore	4,600
Massachusetts	Boston	5,600
Michigan	Detroit	6,200
Minnesota	Minneapolis	8,400
Mississippi	Jackson	2,200
Missouri	St. Louis	5,000
Montana	Helena	8,200
Nebraska	Lincoln	5,800
Nevada	Reno	6,400
New Hampshire	Concord	7,400
New Mexico	Albuquerque	4,400
New York	Buffalo	7,000
New York	New York	5,000
North Carolina	Raleigh	3,400
North Dakota	Bismark	8,800
Ohio	Columbus	5,600
Oklahoma	Tulsa	3,800
Oregon	Portland	4,600
Pennsylvania	Philadelphia	4,400
Pennsylvania	Pittsburgh	6,000
Rhode Island	Providence	6,000
South Carolina	Charleston	2,000
South Dakota	Sioux Falls	7,800
Tennessee	Chattanooga	3,200
Texas	Dallas	2,400
Texas	San Antonio	1,600
Utah	Salt Lake City	6,000
Vermont	Burlington	8,200
Virginia	Richmond	3,800
Washington	Seattle	5,200
West Virginia	Charleston	4,400
Wisconsin	Madison	7,800
Wyoming	Cheyenne	7,400

Amortization

How much money can you afford to invest in energy conservation measures? Assuming a 9% interest rate on a 20 year mortgage, the annual payment needed to amortize a $1000 expenditure would be $108. Thus, every $1000 spent on energy measures can be economically justified if you can save at least $108 in fuel cost each year. More simply stated, one should invest no more than ten times the expected annual heat savings as measured in dollars.

This general guideline makes it easier to evaluate energy options. Increasing the roof insulation from two to four inches has already been established as an investment of $1500. To justify this investment in economic terms, you should realize fuel savings of at least $162 each year. If oil prices rise 10% a year, the cost of today's 50¢ gallon of oil will be $3.43 in 20 years. The average price throughout the 20 year period would be $1.60 a gallon. Even at this price, the additional roof insulation would save only $64 each year—still not enough to justify the $1500 investment. While no one can predict with certainty what will happen to the price of oil, we have given the reality of continually escalating fuel prices consideration in preparing the Deck House energy standards.

The most important point to keep in mind is that the $1500 could be better spent in other areas that would yield a better return, regardless of fuel costs. As the savings from any energy saving technique decrease, in terms of both BTUs and dollars, it becomes more profitable to shift additional investment into other measures which will generate greater savings for the same investment. Energy options can then be evaluated with confidence, regardless of the rate of fuel price increase.

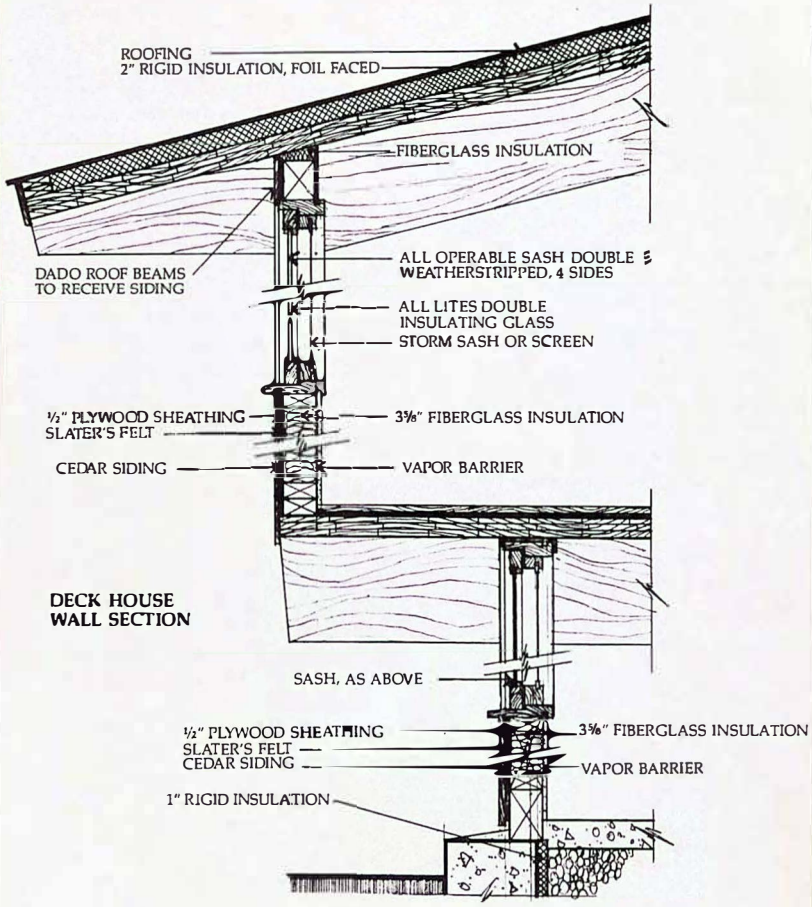
Given the choice, would you invest $1500 in additional roof insulation (yield $20 a year) or $15 in dimmer switches (yield $30 a year)? Would you rather have a return on investment of 1.3% or 200%? The choice is yours. While we would be delighted to sell more insulation with each house, we also recognize our responsibility to present the facts and let you, the consumer, decide.

Certainly a house cannot be energy efficient without good insulation. Yet insulation, by itself, does not ensure that the house will conserve energy. There are many other factors that must be coordinated into any energy efficient house.

Wall Insulation

The Deck House wall panels will accept full thick fiberglas (3⅝") for a total R value of 16.75.

The main emphasis at the walls should be the reduction of air infiltration. This is the primary source of heat loss in most houses, and it is caused by wind pressure and the temperature differential between inside and out. Cracks and gaps are an open invitation to this source of heat loss, so traditional sealing measures such as caulking and good weatherstripping cannot be ignored. To further reduce air infiltration, special details have been implemented into the Deck House manufacturing process. Wall panels are sheathed in plywood, specially cut to overlap supporting posts between each panel. Slater's felt is



then applied on site along the exterior wall to reduce air infiltration. Solid cedar siding is applied over the felt, and each piece is tongue-and-grooved. Beams and window sills have special grooves routed out at the point where they meet the siding to allow an interlocking rather than a butt joint. Inside, a polyethylene vapor goes between the insulation and the interior wall to provide an additional barrier to air infiltration and moisture penetration.

Glass

Deck Houses traditionally, though not necessarily, contain an ample amount of glass to continue the design interface between house and nature. Accordingly, our windows are not only designed for aesthetics, but also for energy efficiency.

Our mahogany is specially milled to eliminate joints where air leaks could occur within the window frame itself. In other words, the window frame is one solid piece, front to back, rather than several pieces attached.

Different types of windows vary considerably in their effectiveness against heat loss through air infiltration. Next to fixed glass, our opening wooden sash windows are effective in sealing out air leakage. They are fully weatherstripped to provide a good seal when securely latched. Each opening window will accept a screen for summer ventilation or a storm window for additional winter protection.

Insulating glass is very important even in southern areas of the country where the main energy focus is cooling. The two panes of glass and dead air space between will reduce conduction of heat between indoors and out, regardless of what direction the heat is going. It is just as important to keep summer heat out as it is to keep winter heat in.

Where is it used in house or is it an option?

Double on sliding glass doors?

Proper Orientation of the House

Superior materials and detailing are only a part of planning an energy efficient house with regard to the window areas. The house's orientation on the site is one of the most critical elements in designing glass areas for solar heat gain in winter, shading in summer.

The following chart illustrates the solar heat gain possible at different orientations in terms of BTUs per square foot of window area. (Figures are based on January 21/July 21 data at 40° latitude.)

Orientation	Winter	Summer
North	118	484
South	1630	622
East	508	1200
West	508	1200

It becomes obvious that the southern orientation is the best location for major glass areas because natural solar benefits will warm the house in winter. The sun rises and sets well to the south of the east/west line all winter. In summer, however, its course is north of the east/west line. The south facing surface receives less than half the insolation in summer that it did in winter.

In essence, the window areas can be planned to function as solar collectors, with the house itself reaping the benefits directly without elaborate mechanical hardware. This is known as the "greenhouse effect." Once sunlight (short wave radiation) passes through the glass it is transformed into heat energy (long wave radiation) which will not be radiated back outside. This is the basis of passive solar collection.

If the temperature is zero outside, a square foot of double glass will lose about 1000 BTUs daily, while each square foot of wall area will lose only 100 BTUs. The potential for heat *gain* through the south facing glass, however, is 1630 BTUs per square foot on a sunny winter day. The wall may lose only 100 BTUs each day, but the south facing glass area has the potential for a net gain of 630 BTUs. Applying this to the 7126, the south facing glass area could contribute a net gain of 280,350 BTUs daily, or the equivalent of nearly three gallons of oil!

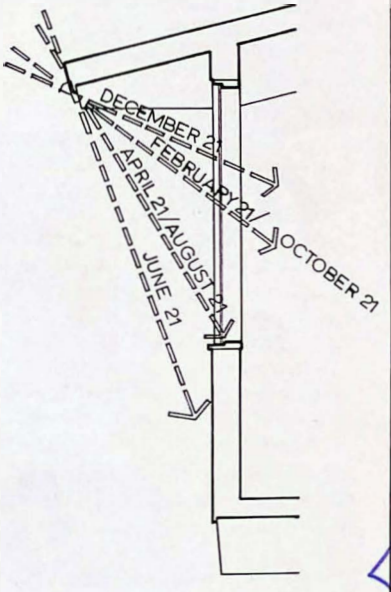
Houses with large window areas may not use more energy than houses with small windows. The key to successful design lies in the judicious planning of the window sizes and locations. It has already been demonstrated that windows can serve as passive solar collectors, with a net energy efficiency surpassing even the insulated wall. Properly designed windows will also reduce energy requirements for mechanical ventilation and artificial lighting. Windows contribute a dynamic character to the interior of the house due to changing patterns of sunlight. They provide an opportunity to enjoy the surrounding environment from within and lend a spacious quality to every room they grace. Deck House's rational approach to conserving energy through window design will mean lower heating and cooling costs for the homeowner. You can enjoy the best of two worlds—the feeling of openness to the outdoors and the advantage of natural solar collection.



Each Deck House has a generous roof overhang, designed to catch the brunt of the intense summer sun. It is important to note that shading glass on the outside is over seven times more effective in preventing unwanted heat gain than shading done inside the window by drapes, blinds or shades.

Are overhangs adjusted for various areas of country?

DECK HOUSE OVERHANG SHADING OF SOUTH WINDOWS (BOSTON, 42°N LATITUDE)



The north side of the house will receive little or no sunshine in winter. If you're serious about planning an energy efficient house, windows on this side should be minimized in severe climates where the temperature is cold and the winds are strong.

Careful landscaping can work to your advantage in reducing energy losses. Evergreen rows and hedges will maintain dense foliage year round, and when planted in the path of prevailing winter winds (generally north and west) will shelter the house and reduce heat loss through air infiltration. Heat losses through the envelope of the house and through air infiltration are directly dependent on exposure to wind velocity. A 20 mph wind will double the heating load of a house normally exposed to 5 mph winds. Selective plantings can reduce wind velocity and/or redirect its course.

Ideally, the site will slope southward to provide a delightful open living area on the lower level. The higher grade on the north side will protect much of the north elevation from winter winds, and the mass of earth here serves as additional insulation. Soil temperatures are moderate year round and are slow to change. This thermal lag of the earth will minimize the load on the heating/cooling systems because the earth temperature is closer to the optimal inside temperature level than to the extreme temperatures outside. At six feet below grade, the earth remains at a constant 55°F. all year.

The floor plan should be designed with primary living areas positioned on the south to get the most daylight. These centers of daytime activity will benefit from the natural light and significantly reduce the need for artificial illumination. Consider locating stairs, laundry, baths, storage and mechanical equipment along the north side. Reduced window areas here will not be detrimental to the functional or emotional qualities of these areas. A carport or garage on the north or northwest side of the house will provide added protection.

How about an airlock (vestibule) entry?

Efficient Heating and Cooling Systems

Your choice of heating and cooling systems will be influenced by your climate and local energy costs. Whatever your fuel selection, Deck House can be adapted for the system.

Water heating systems are more economical than air systems in northern climates where the main emphasis is heating. A separate central air conditioner can be provided to cool the house.

An electric heat pump works like a conventional air conditioner for cooling and costs roughly the same to operate. It extracts heat from the inside air and discharges it to the outside. The heat pump cycle can be reversed to transfer heat from the outside air to the inside of the house in winter.

With conventional electric heat, one unit of heat is produced for each unit of electricity input. A heat pump can double or triple the efficiency but its performance depends on the outside temperature. Obviously as the outside air gets colder, there is less heat available and the heat pump must work harder to extract each unit of heat. At about 15°F. more energy is used to operate the heat pump than a conventional electric furnace would need to produce the same amount of heat and at this point, most practical heat pumps will switch over to electric resistance coils.

In areas where the winter temperature averages 10°F., the heat pump will not offer heating efficiency superior to conventional electric heat. If the average temperature is 30–40°F., however, it is well worth investigating. Initial installation costs run higher than for other heating and cooling systems, but operational cost savings result in an average payback period of 3½ to 5 years.

In choosing any heat pump unit or air conditioner, pay particular attention to the Energy Efficiency Rating, or EER. This is determined by dividing the cooling output (BTU per hour) by the electrical input (watts required to operate the unit). Typical efficiencies range from 4 to 12. Although units with a high efficiency rating cost more, the dollar savings for improved operational efficiency will offset the added initial cost within a few years. A unit with an EER of 4 will cost roughly three times as much to operate as one with an EER of 12.

FIREPLACES

One of the most interesting developments in improving the performance of combustion furnaces is *outside venting*. Huge amounts of oxygen are constantly required for the combustion itself and for controlling the draft up the flue. This air is drawn into the combustion chamber, then evacuated with the flue gases up the chimney. Normally this air is taken directly from the air within the house, which has already been heated by the furnace. As this air exits, cold air seeps in around doors and windows to replace it, putting an additional heating load on the furnace. The obvious solution is to bring in combustion air from outside, achieving 5–15% fuel savings by reducing the house's heating load and improving combustion efficiency.

Regardless of what type heating system you choose, *internal heat zones* can mean significant energy savings. Each zone is governed by its own thermostat, so the areas can be heated (or not) according to need. This can be accomplished without affecting other heat zones throughout the house.

Temperature setbacks can be automated with *clock thermostats*. First determine when and where you need heat and where you don't, then set the clock accordingly. Heat loss through walls and windows is proportional to the temperature difference between indoors and out. A setback of 10°F. at night will reduce this temperature differential and can cut fuel consumption by at least 10% without sacrifice in comfort.

Domestic Hot Water

Thus far the discussion has dealt only with energy efficiency in regard to space heating and cooling. It is important to recognize that this represents only *half* the total energy used by the household. There is just as much opportunity to conserve in other areas where combined efficiencies will mean significant savings.

The energy used to operate the water heater ranks second, representing *one-fourth* the total energy used by a household. Energy saving water heaters are being introduced which can cut your hot water bills significantly. Look for heavier insulation, a better combustion chamber and improved controls. These heaters will cost more initially, but studies by the National Bureau of Standards show a payback period of only one to two years. With conventional hot water tanks, 25% of the energy used to heat the water can be lost through the tank itself, so the additional insulation in these improved water heaters will be well worth the cost.

Lighting Requirements

The need for artificial lighting can be greatly reduced by natural daylighting. The quantity of light entering a window depends on the amount of sky visible through the window. Traditional windows placed low in the wall do not transmit nearly the amount or quality of light needed. This is due to the sun's position, and also to the fact that the sky has a much higherreflectivity than the landscape. Thus, the higher the window area, the broader the natural illumination and the better the angle of lighting for most activities.

The benefits of natural daylighting must be weighed against the window's potential for unwanted heat loss or gain. In some cases, the disadvantage of the latter will outweigh the illumination benefits, particularly on harsh northern exposures. In such instances, consider a skydormer—two sealed acrylic domes installed in the ceiling to diffuse natural light over a broad area. The same amount of natural light will be admitted with only a fifth of the glazing area required by windows.

Skydormers are also an ideal solution in bathrooms, central hallways, walk-in closets and other areas where windows may be undesirable or impossible because there is no available exterior wall area. They come in fixed or venting units, so natural ventilation can also be accomplished.

Kitchens, study areas and work spaces all need intensive lighting. While natural light is ideal for overall lighting in these areas, direct artificial lighting must also be available. Warm tone fluorescents require about half the energy of incandescent fixtures and the bulbs will last 2–3 times longer. Use them wherever possible for efficient task lighting. Do not, however, use them where they would be turned on and off frequently. Fluorescents should be burned for at least three hours; otherwise, bulb life will be sacrificed. These bulbs are expensive and frequent replacement would negate the savings in operational efficiency.

General lighting must also be provided to supplement natural daylighting. Use dimmer controls here for substantial energy savings as well as extended bulb life and flexibility in regulating the brightness level to suit the mood. Solid state dimmer controls are available for incandescent lighting which offer an infinite light range control for a given wattage. As mentioned before, if you operate the lights at an average intensity of 70%, you should realize almost a 30% reduction in lighting costs, or about $30 each year if electricity costs are 5¢ per kilowatt.

Solar Energy

Solar systems are available for a wide variety of applications — space heating, cooling, domestic hot water, pool heating, and even photovoltaic electricity. The Deck House building system is compatible with all existing solar technologies and our houses have been designed and built to utilize solar heating and domestic hot water. Many have been designed for *future* conversion to solar.

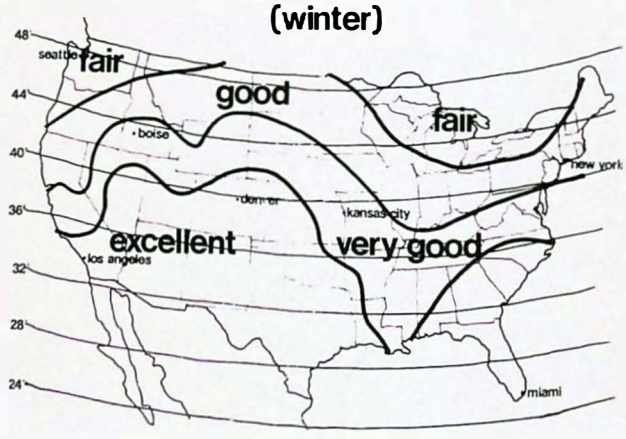
A solar system should be considered a supplement to rather than substitution for the important energy features already discussed. The more efficient the house design and operation, the greater contribution an active solar system can make. While there is no price-tag on sunshine, harnessing this energy is an expensive proposition. Be prepared to expect a solar heating system to add at least 10% to the cost of the house.

The components for most solar systems will include an array of *collectors* to gather solar energy, a *circulating medium* (air or liquid) to transfer heat from the collector to a *storage facility* (rocks or water) where it will remain until required by the house. Among commercially available solar equipment you will discover a multitude of variations on this basic theme.

There are many variables which will determine the feasibility and cost effectiveness of any solar application. Latitude is less important than local variables such as the amount of cloud cover, temperatures, reflected sunlight, and fuel costs. A solar system would obviously pay for itself faster in an area which may be extremely cold but also benefits from a high percentage of sunshine. The map below, based on sunshine availability, shows geographical areas and their suitability for solar applications. (Data from Revere Copper & Brass)

Sunshine factors will not only determine the relative economy of a particular solar system, but also the amount of collector area required in a given location. Considering that collectors make up more than half the cost of most solar applications, this variable will have a direct bearing on the initial cost of the installation. A solar system in New England or the Great Lakes area would require three times the collector area of an identical system in Florida or Arizona in order to produce the same output.

Relative Suitability for Solar Energy Collection (winter)



As a general rule of thumb, a solar space heating system should supply about 50–70% of your total requirements. Such a system costs less than the price of a 100% solar heating system. The excessive cost of the latter is due to the storage capacity required to heat the house through the periods of sunless, cold weather.

Optimum storage is about 1½ days for a number of reasons. Climatic data in most areas doesn't justify the enormous storage capacities of a total solar system. Less interior space is required to house the optimum storage tank, and the smaller the tank the faster it can reheat when weather conditions improve. Solar systems with moderate storage capabilities will prove cost effective much faster.

Solar components are being improved dramatically in performance and durability as residential applications become more numerous and capabilities can be monitored. Early systems required a collector area sized 50% or more of the house's square footage. The relative efficiency of present collectors has reduced this requirement to 20–30% of heated floor space. Engineers look to the future for significant increases in solar performance.

Costs, too, should improve in the future. Right now there is a circular quandary in the solar industry—the cost per unit is high because manufacturing volume is low. This volume is low because the market is small, and the market is small because costs are high!

The initial cost of a solar application will depend, in part, on its function. Solar air conditioning and photovoltaic electric systems are still in the developmental stages and are prohibitively expensive. Solar collector panels operate most effectively when the transfer medium is heated to a relatively low temperature. Air conditioning requires the medium to be heated to at least 240° to effectively vaporize refrigerant, while solar space heating requires 170°. Domestic hot water is more efficient, requiring temperatures around 140°.

Experts predict a breakthrough in solar air conditioning within a few years—either collectors will produce higher temperatures or air conditioning units will be designed to work with lower ones.

While we are enthusiastic about the potential for solar energy, we are also cautious about the present reality. Dramatic progress is certainly underway and we look to the near future for reliable and efficient solar applications.

Realistically speaking, household utilization of solar is presently limited to domestic hot water and space heating. The former will cost from $1200–2000 while space heating systems start at around $8000. The cost benefits of a domestic hot water system are the most attractive, not only because of the initial price, but also because collectors and storage systems will work at efficient lower temperatures and benefits will accrue year-round rather than just during the heating months. A good solar hot water system should pay for itself within four or five years and could provide nearly all the domestic hot water required.

One primary consideration in the design of a solar system is the location of the collector panels, whether on the roof, on a nearby garage, or on the ground. Collectors must be tilted at a rather steep angle, generally latitude plus 5° for solar hot water heating, and latitude plus 15° for winter space heating.

There are some disadvantages to the roof mounted collectors. Steep roofs require more materials to cover a given floor area and because the angle is more difficult to work on, labor costs will be higher. Interior spaces are somewhat difficult to utilize under steeply pitched roofs because of headroom interference at the outside wall.

There are definite merits to garage or ground mounted collectors, which will prove equally efficient as well as less expensive. A ground mounted collector can be adjusted to follow the seasonal path of the sun by tilting the panels for optimum solar collection. The optimum tilt (degrees from the horizontal) is 63° in December, yet 16° in June for a house at 40° latitude.

A Deck House representative will be pleased to discuss this information in detail. Our design flexibility permits the integration of energy efficiencies with your building plans. It is important, therefore, that these items be considered before the house gets as far as the drafting table so that these goals may be realized. Your house should also relate to its environment. Do not waste this opportunity by first designing the house, then trying to find a site for it!

The Next Step is Yours

The service and individual attention offered by our personnel are intended to make planning and building a house a rewarding experience. The company is small enough to offer friendly and personal service, large enough to be well-established, knowledgeable, and professional. Every Deck House is the culmination of a team effort—yours and ours. We are ready to assist you. The next step is yours!

DECK HOUSE INC

PRICE AND SPECIFICATION GUIDE

Freight cost & sale Tax not included

Add 7% Approx. + bldg. 15-20% in Fairfax County

MODEL	(1) SQUARE FOOT AREA	(2) DECK HOUSE MATERIALS	(3) CONSTRUCTION COST	TOTAL	COST PER SQ. FOOT
7113	1,508	23,000	33,000	56,000	37.00
7123	1,581	23,000	37,000	60,000	38.00
7133	1,680	26,000	36,000	62,000	37.00
7143	1,508	22,000	31,000	53,000	35.00
7163	1,516	29,000	38,000	67,000	44.00
7173	1,683	29,000	47,000	76,000	45.00
7183	1,253	32,000	41,000	73,000	58.00
7193	1,708*	23,000	30,000	53,000	31.00
7114	1,964	27,000	41,000	68,000	35.00
7124	1,938	29,000	42,000	71,000	37.00
7134	1,965	28,000	41,000	69,000	35.00
7144	2,191	31,000	43,000	74,000	34.00
7154	1,833	27,000	43,000	70,000	38.00
7164	1,929	35,000	50,000	85,000	44.00
7184	2,172	33,000	50,000	83,000	38.00
7194	2,681*	31,000	42,000	73,000	27.00
7115	2,401	32,000	44,000	76,000	32.00
7125	2,401	35,000	47,000	82,000	34.00
7135	2,512	35,000	47,000	82,000	33.00
7155	2,694	35,000	48,000	83,000	31.00
7175	3,302*	41,000	54,000	95,000	29.00
7185	2,438*	35,000	52,000	87,000	36.00
7195	2,486*	37,000	54,000	91,000	37.00
7205	2,308	34,000	44,000	78,000	34.00
7215	2,688	40,000	49,000	89,000	33.00
7116	3,777*	48,000	58,000	106,000	28.00
7126	3,000	39,000	51,000	90,000	30.00
7136	2,902*	35,000	49,000	84,000	29.00
7166	2,872	38,000	51,000	89,000	31.00
7176	2,837	38,000	45,000	83,000	29.00
7186	2,703	38,000	43,000	81,000	30.00
7196	2,908	39,000	62,000	101,000	35.00
7206	4,453*	47,000	62,000	109,000	24.00
7216	3,052	42,000	51,000	93,000	30.00
7226	2,963	42,000	59,000	101,000	34.00
7236	3,588	48,000	57,000	105,000	29.00
7246	3,792*	50,000	61,000	111,000	29.00
7117	3,445	48,000	62,000	110,000	32.00
7127	3,445	44,000	56,000	100,000	29.00
7137	3,573	48,000	52,000	100,000	28.00
7147	3,671	47,000	52,000	99,000	27.00
7157	3,900	49,000	80,000	129,000	33.00
7167	3,272	46,000	52,000	98,000	30.00
7177	3,583	45,000	56,000	101,000	28.00
7187	3,923*	47,000	67,000	114,000	29.00

*Garage and/or basement area included.

930 Main Street, Acton, Massachusetts 01720 • Telephone (617) 259-9450

AHS 7/80

Explanatory Notes

1. Square foot areas are computed based upon the American Institute of Architecture (AIA) method which utilizes the exterior dimensions of the house to determine the total square footage.

2. Included in these prices are the options of oriental ash pre-hung doors and mahogany baseboard. These material prices are F.O.B. Acton, MA. Shipping costs are based upon weight, distance and transportation method. Specifications of the basic house package are described in book nine of the brochure.

3. These prices are based upon construction costs in Acton, MA. Approximate allowance figures must be added for the following:

1) Site work such as:

excavating	_____
fill	_____
grading	_____
well	_____
septic system	_____
driveway surface	_____
Sub Total	_____

2) Kitchen and vanity cabinets _____

3) Kitchen appliances _____

4) Lighting fixtures _____

5) Carpeting or oak flooring _____

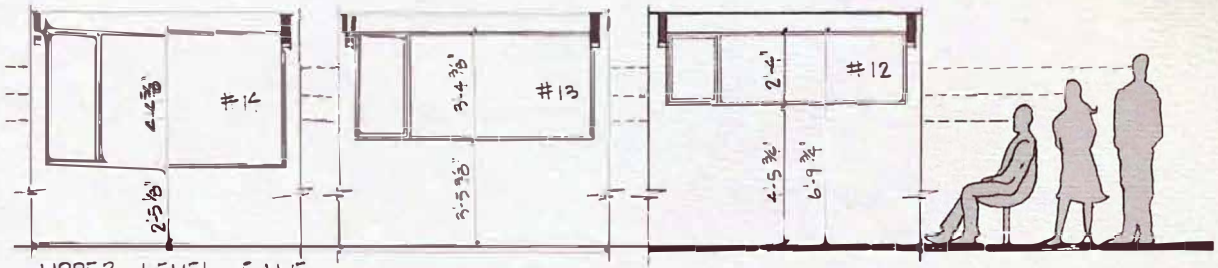
6) Miscellaneous _____

The prices shown are intended to assist you in determining which plans are appropriate to consider in relation to your budget. Because of regional construction practices and labor rates, please consult with a Deck House representative. He will assist you with specific price information for your area and appropriate figures for the various allowance items.

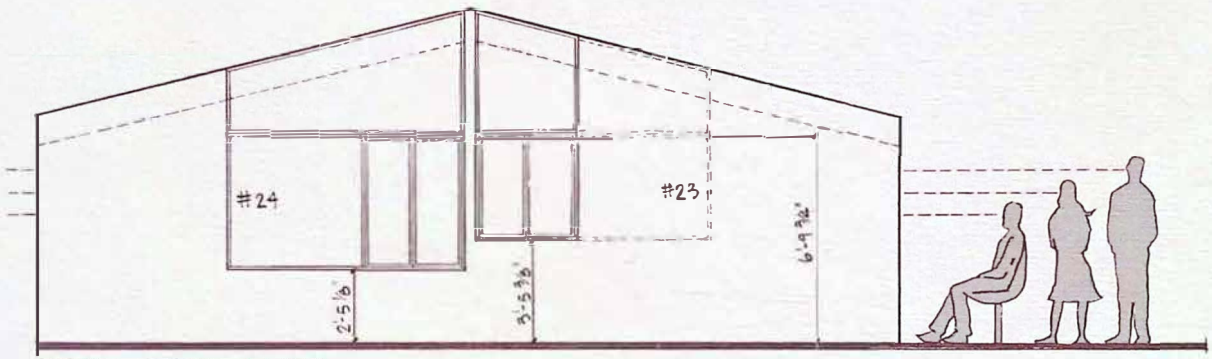
Please read book nine of the Deck House planning album for package and construction specifications.

DECK HOUSE WINDOW STANDARDS

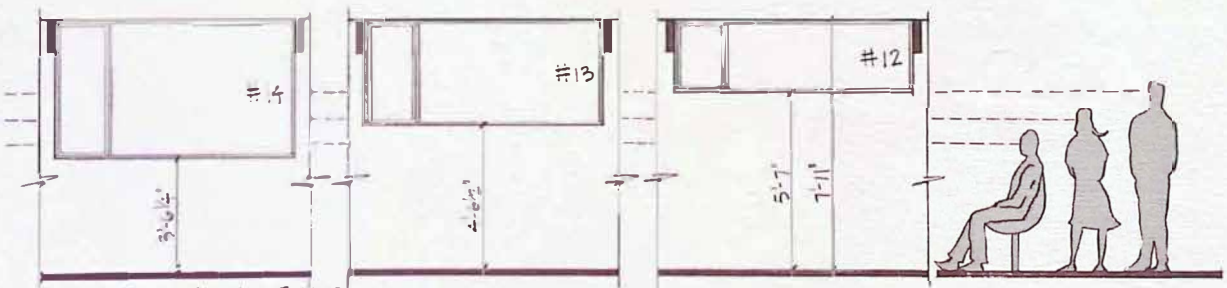
WINDOWSILL HEIGHTS ARE SHOWN TO HELP YOU VISUALIZE AND PLAN THE WINDOWS OF YOUR DECK HOUSE WITH REGARD TO FURNITURE PLACEMENT, VIEW, AND PRIVACY. (MEASUREMENTS ARE FROM FINISH FLOORING [¾"] TO BOTTOM OF WINDOWSILL.)



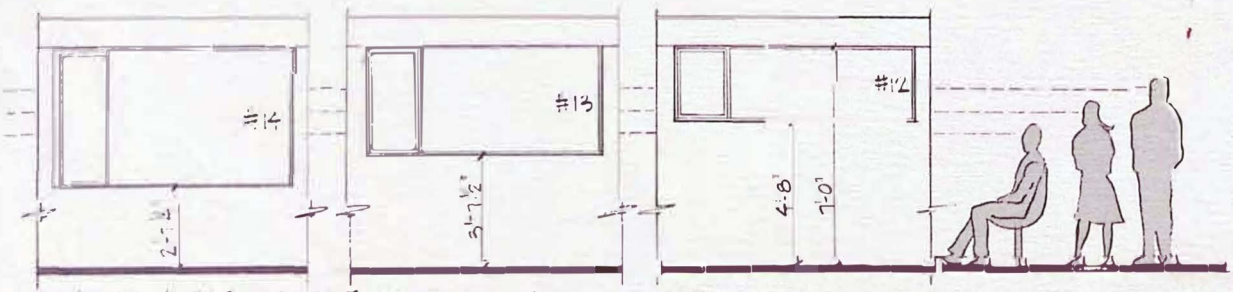
UPPER LEVEL EAVE



UPPER LEVEL GABLE

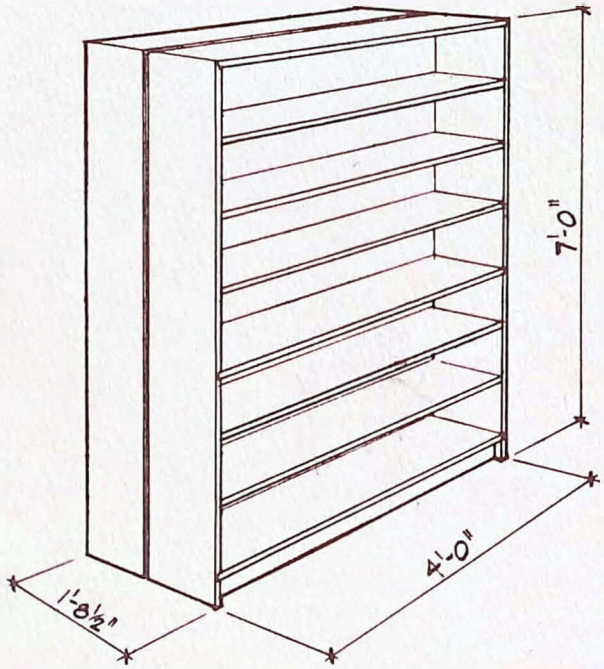


LOWER LEVEL EAVE (BETWEEN BEAMS)



LOWER LEVEL GABLE (UNDER BEAMS)

THE DECK HOUSE MAHOGANY BOOKCASE



The mahogany bookcase is an effective addition to any Deck House. Simple lines make it an attractive display case for books and decorative artifacts. It is an equally useful "workhorse", built of 1-1/16th inch thick solid Philippine mahogany stock and carefully constructed for years of durable service.

The mahogany veneer back is designed to screw directly into a wall, or to another bookcase (as shown above) when used as a room divider. This application is particularly effective next to the central fireplace mass of many Deck House plans.

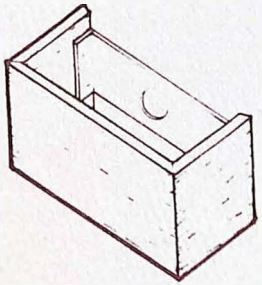
Five shelves, ten inches deep, are adjustable, held in place by unobtrusive plastic pegs in factory-drilled holes. A sixth shelf is permanently fixed. For installations along walls with hot water baseboard heating, please ask for a special detail.

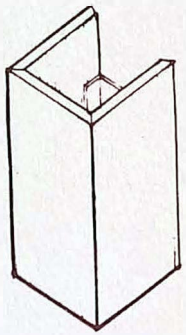
Bookcases are shipped fully assembled and pre-treated with a preservative sealer. As with all mahogany woodwork, they should receive an application of stain after installation.

Please refer to the option page of your Deck House Component Package Contract for price information. Orders may be placed with your sales representative.

MT
3/80

MAHOGANY WALL LIGHTS





The mahogany wall light is a simple, functional option to accent your Deck House. Half-inch mahogany stock encloses the fixture and light bulb on three sides to provide inexpensive lighting that is gentle and effective. Installed at eye level, the mahogany wall light cascades light up and down the wall without revealing the light source itself. Since the fixture is connected directly to a recessed electrical outlet, no obtrusive wires are visible.

The mahogany enclosure is 5-1/2" deep and is available in either vertical or horizontal style – 10-1/2" x 5-3/8". Metal backer plate and porcelain socket are included. Wiring provisions should be made by your electrician prior to sheetrock.

STORM WINDOWS

Storm windows for the opening sash windows will boost the energy efficiency of your new Deck House. In essence, the panels provide triple glazing and will cut conductive heat loss through the glass by approximately one-third.

The storm windows consist of 1/8" double-strength glass in a bronzed aluminum frame. Like the screen panels, they are designed to fit within the frame without obtrusive hardware clips.

Please refer to the option page of your Deck House Component Package Contract for price information on wall lights and storm windows. Orders may be placed with your sales representative.

THE DECK HOUSE MAHOGANY MEDICINE CABINET



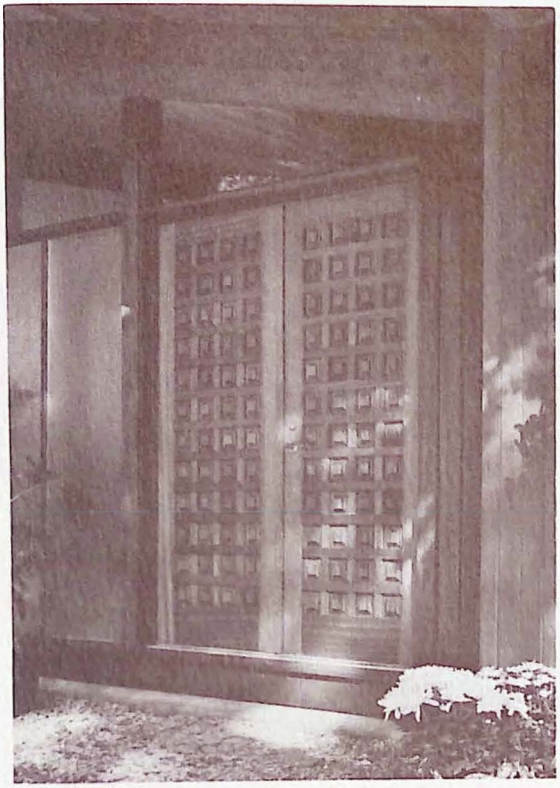
Our attractive mahogany medicine cabinet is a direct response to the trend toward more luxurious baths. Many clients opt for a wide, frameless mirror expanse over the bath counter rather than the traditional mirrored medicine cabinet. The clean lines of this approach visually enlarge the room while at the same time reflecting available light. It also offers practical advantages. If you're tired of opening the mirrored door on traditional medicine cabinets in the midst of shaving, or centering your face in front of the sink only to see your reflection "divided" in half, this may be the solution you've been looking for!

The medicine cabinet mounts to the side of the bath counter, measuring 33" by 15-1/2" overall. The door opens easily by a touch latch to reveal three adjustable mahogany shelves -- ample space to house bathroom clutter.

Please refer to the option page of your Deck House Component Package Contract for price information. Orders may be placed with your sales representative.

MT 3/80

THE DECK HOUSE WAFFLE DOOR





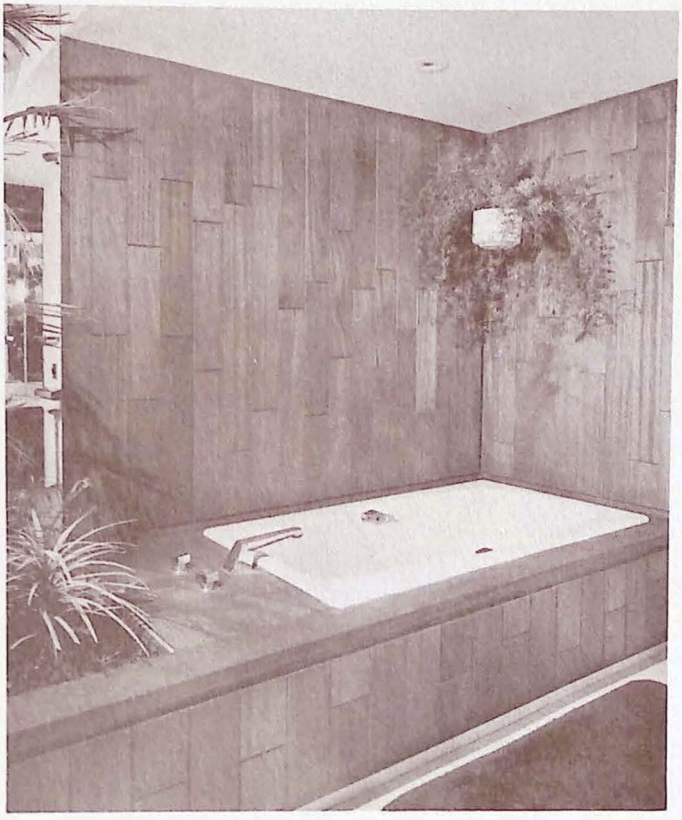
This bold waffle pattern door has long been recognized as a Deck House trademark. Its color and texture lend drama to the entrance and provide contrast with adjacent cedar and glass.

Well over a hundred individual pieces of solid Philippine mahogany are handcrafted in our manufacturing plant for each waffle door. Handsome ball bearing hinges of brushed chrome were chosen to provide substantial support for the heavy door. The graceful lever handle lockset, also of brushed chrome, functions easily while offering maximum security. Its durable mortise lock has a dead bolt throw.

Please refer to the option page of your Deck House Component Package Contract for price information. Orders may be placed with your sales representative.

MT877

MAHOGANY PANELING



Random length mahogany paneling can provide a handsome accent wall for any room in the house. Application possibilities are endless -- an elegant tub surround, as shown ... a paneled wall along your mahogany staircase ... a built-in "headboard" ... a dignified wall for your den or study.

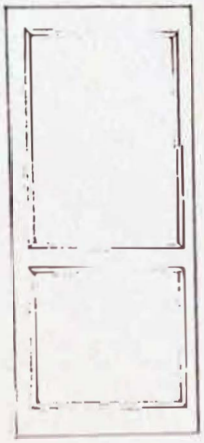
Individual mahogany boards are 1/2" thick, 5" wide and vary in length from 12" to 36". The wood is sanded smooth and edges are V-jointed. Staining procedure is the same as for other interior mahogany and should be done after application.

Apply paneling to half-inch plywood with construction grade adhesive. Please note that sheetrock is not strong enough to support the paneling and will not provide a good surface for nailing. Boards should be blind-nailed at the edges with 4-penny nails. (OR, nail a block of scrap wood at the joint between paneling strips to hold the boards in place while glue is drying. Once the glue sets, remove temporary blocking.)

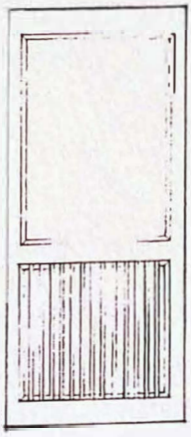
Please refer to the option page of your Deck House Component Package Contract for price information. Orders may be placed with your sales representative.

MT378

DECK HOUSE COMBINATION AND SCREEN DOORS



Combination Screen/Storm Door
or Standard Screen Door only
Two panels of painted, bronze tone aluminum screening set in a frame of solid Phillipine mahogany. Storm panels are included for the Combination Door and are aluminum framed plexiglas.



Dog-Proof Screen Door
Frame and screening identical to standard door, but lower screen panel is protected by 1" x 5/8" mahogany ribbing on both sides.

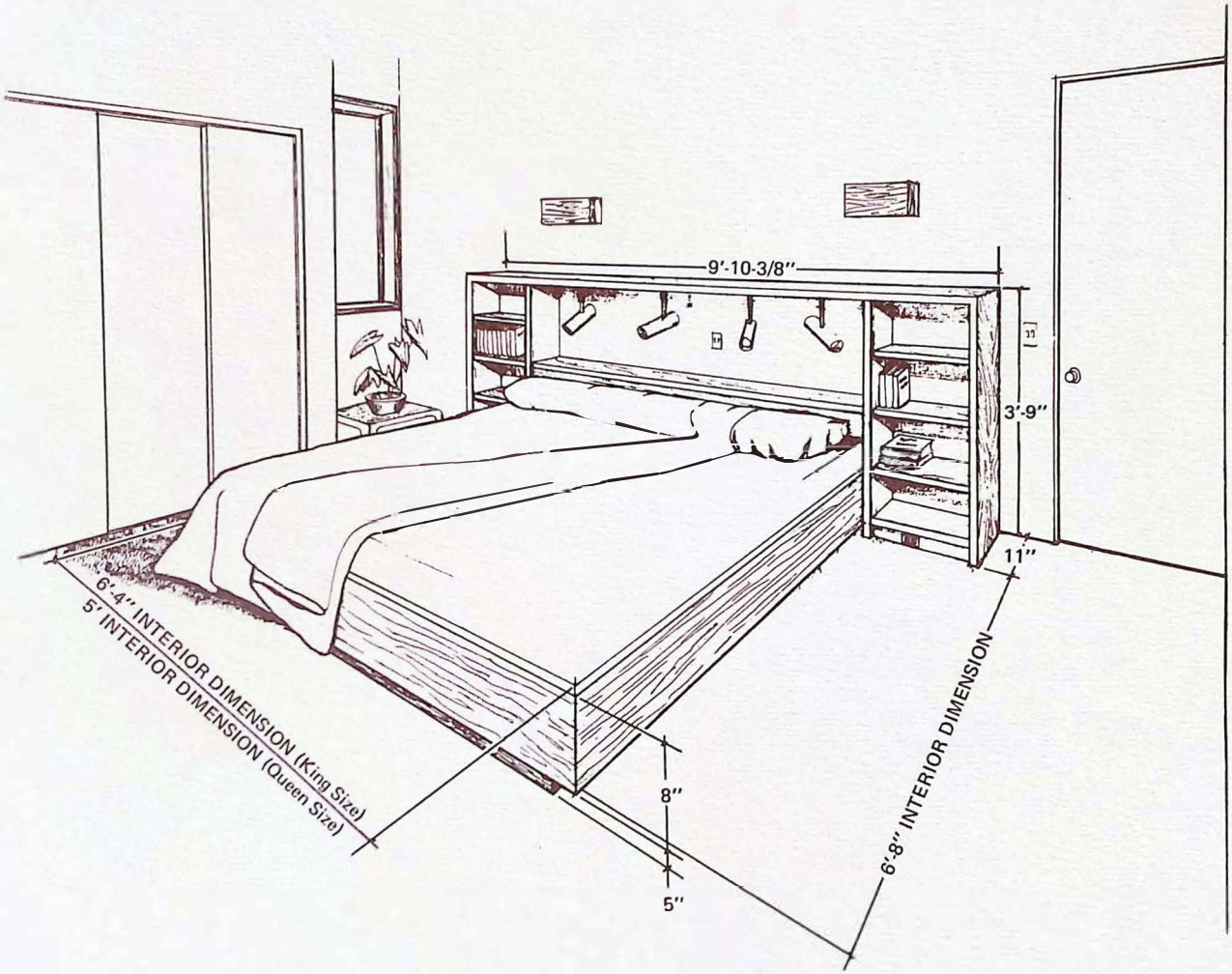
These Deck House doors offer a functional option which will harmonize with your home and offer years of service. Both designs are created from Phillipine mahogany and bronze tone aluminum screening. Hardware included with all doors includes three 3" x 3" Stanley door butts and one Dexter screen door lock.

The mahogany receives a coat of sealer/preservative after fabrication and should receive an application of stain after the door has been installed by your builder.

Doors are shipped from Acton, Massachusetts with an adaptor kit consisting of mahogany door jambs and stops.

Stock sizes are 3'0" x 7'0" and 3'0" x 6'8". Custom sizes are made to order and will require 2 to 3 weeks before shipment. (Please note that the Combination Door is not available in custom sizes.)

MT 3/79


9'-10-3/8"
3'-9"
11"
6'-4" INTERIOR DIMENSION (King Size)
5' INTERIOR DIMENSION (Queen Size)
8"
5"
6'-8" INTERIOR DIMENSION

THE DECK HOUSE MAHOGANY BED



The Deck House mahogany bed consists of two units which attach directly to the wall and floor of the bedroom — the headboard/bookcase and the bed frame, which is available in queen- or king-size.

The headboard is assembled in the manufacturing plant before shipment. Your carpenter will complete the bed assembly and accommodate custom features, such as wiring for a master panel of switches to control outdoor lighting. The headboard is routed here to receive a Lightolier Lytespan track which can accommodate a variety of lighting fixtures.

Please note the headboard dimensions carefully to ensure that it will fit into your bedroom. (See reverse page.) Because of the bed's size and special installation requirements, orders for the Deck House mahogany bed must be included with the component package shipment. Mattress and springs, Lytespan track and fixtures not included.

Please refer to the option page of your Deck House Component Package Contract for price information. Orders may be placed with your sales representative.

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