

Memorandum

To: Mr. Timothy W. Boyer
Interim Executive Director

Date: October 15, 2003

From: 
David J. Gau, Deputy Director
Property and Special Taxes Department

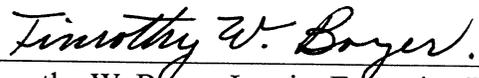
Subject: *Assessors' Handbook Section 531, Residential Building Costs
(November 19, 2003 Administrative Consent Agenda)*

I am requesting that Assessors' Handbook Section 531, *Residential Building Costs*, be approved for publication. Revenue and Taxation Code Section 401.5 requires the Board to issue to county assessors data relating to costs of property to promote uniformity in appraisal practices and in assessed values throughout the state. Pursuant to that mandate, staff developed the January 2004 version of AH 531 that contains current cost data and locale adjustment factors for residential homes, manufactured homes, and mountain residences.

Please place this item on the Board's November 19, 2003 Administrative Consent Calendar for approval.

DJG:sk
Attachment

cc: Ms. Deborah Pellegrini

Approved: 
Timothy W. Boyer, Interim Executive Director

BOARD APPROVED
at the _____ Board Meeting

Deborah Pellegrini, Chief
Board Proceedings

ASSESSORS' HANDBOOK
SECTION 531

RESIDENTIAL BUILDING COSTS

JANUARY 2004

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FOREWORD

This edition of Assessors' Handbook Section 531, *Residential Building Costs*, represents basic building costs to be utilized as of January 1, 2004.

There are increased costs throughout the cities and counties for permits and fees to construct buildings. Because of variation in charges, the appraiser must research and analyze the charges for the permits and fees. These costs include higher building permit fees, water and sewer connections, environmental studies, handicap access requirements, expanded engineering and architectural costs, etc.

The pages are printed in loose-leaf form to allow for insertion of revisions by section and page.

General instructions and pertinent information concerning the use of this handbook are contained in the *Introduction* section. Specific instructions and comments applicable to each building type will be found in the introductory pages of the section of the handbook devoted to that particular structure type.

Although diligent efforts have been made to supply accurate and reliable information, it is important to temper this data with local costs, since construction costs may vary both within and among counties.

This revision was prepared by Assessment Policy and Standards Division staff under the direction of the Property and Special Taxes Department.

David J. Gau
Deputy Director
Property and Special Taxes Department
State Board of Equalization
January 2004

RESIDENTIAL BUILDING COSTS

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AH 531.10: INTRODUCTION

BASIS OF COST

Costs in this handbook are based upon the cost to build on a level site in Sacramento as of the date in the lower right-hand corner of each page. They include, except for unusually high fees and permits required by governmental agencies, all necessary costs that must be incurred in placing the building or component in the hands of the ultimate consumer, including the following:

1. Excavation for foundations, piers, and other structural foundation components, considering a level site
2. Materials
3. Labor
4. Architectural fees
5. Engineering fees
6. Supervision
7. Normal permits, etc.
8. Normal utility hook-ups
9. Overhead and profit
10. Contingencies
11. Carrying charges during construction
 - Taxes
 - Interest
 - Insurance
12. Legal expenses
13. Typical sales commissions or costs and transfer fees

Costs are in the form of square foot cost tables for basic buildings and additive or in-place costs for optional or extra components that might differ from building to building. Building components included in basic square foot costs are:

1. Foundations as required for normal solid conditions
2. Floor, wall, and roof structures

3. Interior floor, wall, and ceiling finishes
4. Exterior wall finish and roof cover
5. Interior partitions
6. Cabinet work, doors, windows, trim, etc.
7. Electrical wiring and fixtures
8. Rough and finish plumbing as described in applicable building specifications
9. Built-in appliances as described in applicable specifications

The cost of these items should be added to the basic building costs to arrive at total improvement costs:

1. Heating and cooling systems
2. Fireplaces
3. Plumbing fixtures and built-in appliances not included in basic building costs
4. Basements
5. Porches and patios
6. Garages or carports
7. Yard improvements, i.e., fences, curbs, paving, etc.
8. Site specific extraordinary permit fees
9. Extra utility hook-ups (e.g., wells, septic)
10. Driveways, walkways
11. Landscaping

STANDARD CLASSIFICATION SYSTEM

The Standard Classification System is a method of estimating basic building costs by referring to square foot cost tables. Basic building costs are then augmented by in-place or square foot costs of optional or extra components. Components included in the basic square foot costs vary with different building types.

In applying the square foot method of cost estimating, a square foot cost is assigned to the building being appraised on the basis of comparison with new buildings with known costs. The

premise is that the subject building would have the same square foot cost as a similar new building.

A difficulty in applying this method arises in finding new buildings, with known costs for comparison, that are similar to the building to be appraised. Few buildings are exactly alike, and therefore few have the same square foot cost. A further complication is the matter of deciding which known costs are representative or typical replacement costs.

The Standard Classification System is a means of estimating square foot costs by systematically comparing the subject structure with structures whose costs are known. Buildings are classified according to variations in physical characteristics that cause square foot cost differences. The classification of a building then serves as a reference in finding a proper square foot cost from tables catalogued according to this system.

COST VARIABLES

The physical characteristics used as variables in the standard classification system are:

- Design type
- Construction type
- Quality class
- Shape class
- Area class

Descriptive words, letters, and numbers are used to designate a particular type or class for each of the five cost characteristics. They are assigned on the basis of standards or specifications set up in the Standard Classification System. This means that any one building is assigned an overall classification and is identified by designations for each of these cost variables. Here is an example.

A building is classified as a single-family residence, D6A, with 1,450 square feet. "Single-family residence" refers to its design type; "D" to its construction type; "6" to its relative level of quality or quality class; "A" to its shape; and "1,450" is its square foot size or area class. All buildings that have this classification will have approximately the same cost. To know the cost of one is to know the cost of all.

DESIGN TYPES

Buildings are first classified on the basis of the use for which they were designed. Square foot costs of buildings may vary considerably for different design types. Two buildings may be alike in area, shape, quality, and type of construction but have different square foot costs because one has the design-type features of a multiple-family residence and the other those of a single-family residence.

This handbook contains square foot costs for these design types:

- Conventional single-family residences
- Modern single-family residences
- Mountain residences
- Multiple-family residences
- Manufactured housing

CONSTRUCTION TYPE

Construction type refers to the structural characteristics of a building. The letters A, B, C, D, and S are used to designate five different structural types recognized by the building trades. These types may be identified by the use of the following descriptions.

Class A Construction Type

Class A buildings have structural steel frames which are fireproofed by encasing them in concrete or by spraying them with fireproofing material. Floor and roof structures are built of reinforced concrete. Walls are filler or curtain type and may be built of brick, concrete, aluminum, glass, or any other noncombustible material. Multiple-story office or hotel buildings are typical Class A buildings.

Class B Construction Type

Class B buildings have a framework built of reinforced concrete columns and beams. As in Class A buildings, the floor and roof structures are built of reinforced concrete and the walls are built of noncombustible materials. Typical Class B buildings are multiple-story office buildings, hotels, and stores.

Class C Construction Type

Class C buildings have masonry-type exterior walls. Floor structures may be built of wood frame or poured concrete. Roof structures are wood frame. The walls may be either a continuous bearing wall system or a pilaster and bond beam frame with a masonry filler or curtain wall. The masonry may be brick, tile, stone, or concrete, either poured in place or tilt-up. Interior partitions are usually wood frame. Class C buildings are usually restricted in height. They are used generally as stores, supermarkets, garages, and warehouses, and sometimes as offices or residences. Structural members may be wood or steel trusses, steel girders, or laminated wood beams.

Class D Construction Type

Class D buildings have wood-frame construction such as that generally encountered in residences. The frame is usually made of two-by-four vertical studs, spaced about sixteen inches apart, with horizontal top and bottom plates. The exterior finish or skin may be wood siding, shingle, stucco, masonry veneer, or sheet metal. Class D construction seldom exceeds three stories.

Class S Construction Type

Class S buildings are specialized ones that do not fit any of the above categories. Service station buildings are an example of Class S construction.

QUALITY CLASSIFICATION

Quality class ranks buildings according to their amounts of materials, grades of materials, and workmanship. If two buildings are of the same design type, construction type, shape, and size, but one has more materials or better materials, it will have a higher square foot cost. Also, if two buildings are exactly alike, except that one was built with greater care and skill, it will be of better *quality* and will have a higher cost.

Of the five choices that lead to the overall classification of a building, the choice of a quality class is the most difficult. The relative quality of a building is not as obvious as its design type, construction type, shape, or size. Many points of reference must be observed. Many parts of a building cannot be seen, and their presence and nature must be inferred.

The quality class designations are usually numbered from 1 to 10. A class 1 building is the least costly to build per square foot, and a class 10 is the most costly. They are assigned on the basis of a comparison to numbered descriptions (specifications) of typical buildings of various quality levels.

The specifications for each quality class make a distinction between classes. This distinction often shows in the *quality* of a feature and not whether the feature is present. The same feature may exist in different classes, but the quality of the feature will help to determine the classification. Conversely, some features may be included in a particular classification, while in another class, the same feature must be treated as an additive.

Each section of this handbook dealing with different design and construction types contains a set of applicable specifications.

The building specification charts found in the various sections are a compilation of attributes *typically* found in the building class listed on the individual charts. Not all structures will include all of the typical attributes listed in a particular classification. That does not automatically mean that it is an improper classification. The appraiser must use judgment to determine if the majority of attributes listed pertain to the structure being classified.

Many times buildings have quality features that fall between those of two classes rather than being most like one or the other. For this reason, half-class gradations are used. For example, buildings can fall in the 5.5 class, 6.5 class, etc. The unit cost of a class 5.5 is halfway between the cost of a class 5 and the cost of a class 6. The square foot cost tables array costs for half-classes as well as for full classes.

The typical attributes listed in the specifications are the basis for the cost factors established in the square foot area cost tables. These factors recognize and include an element of cost for the typical attributes. **The factors do not, however, include costs for additives.**

Generally, more additives are found in the higher building classifications, particularly D8 and above. The appraiser must use judgment to determine if an additive is significant enough to add value to the structure being appraised. If so, an appropriate adjustment should be made utilizing the *Building Additives* section of this handbook.

MEASURING AND DIAGRAMMING

A diagram of the building should be made showing the house, porches, garages, and any other significant plot plan features. This enables the appraiser to compute the area of the house, to select its shape, and to compute the area of any other components to which a square foot cost should be applied.

Usually measurements are begun at the left front corner of the building and proceed counterclockwise around the house. Measurements should be recorded as dots or angles properly located on the grid. When the house is completely measured, the dots or angles are tied together with ruled lines to form an outline of the house.

Measurements are made and plotted to the nearest foot rather than fractions of a foot. The scale of the diagram should be one inch to ten feet except when the house is too large to fit on the grid at this scale. The front of the house usually faces the bottom of the page. However, some houses must be turned to face the side in order to fit the grid. Fireplaces are shown in their approximate location by a rectangle crossed in the middle.

Upper Floors and Basements

The following color code is used to show the various floor levels:

- Main floor - black line
- Second floor - red line
- Third floor - blue line
- Basement - green line

If a first and a second, third, or basement wall fall on the same line, the second-floor line is drawn inside the first-floor line, the third-floor line is drawn inside the second-floor line, and the basement line is drawn inside any upper-floor line.

Porches and Inferior Areas

Porches are drawn with broken lines. If there is a porch on the second floor, it is drawn with a broken red line.

Areas such as porches, inferior additions, and restricted upper floors whose costs per square foot are a fraction or percentage of the cost per square foot of the main residence should have that fraction noted and circled in the proper color on the diagram.

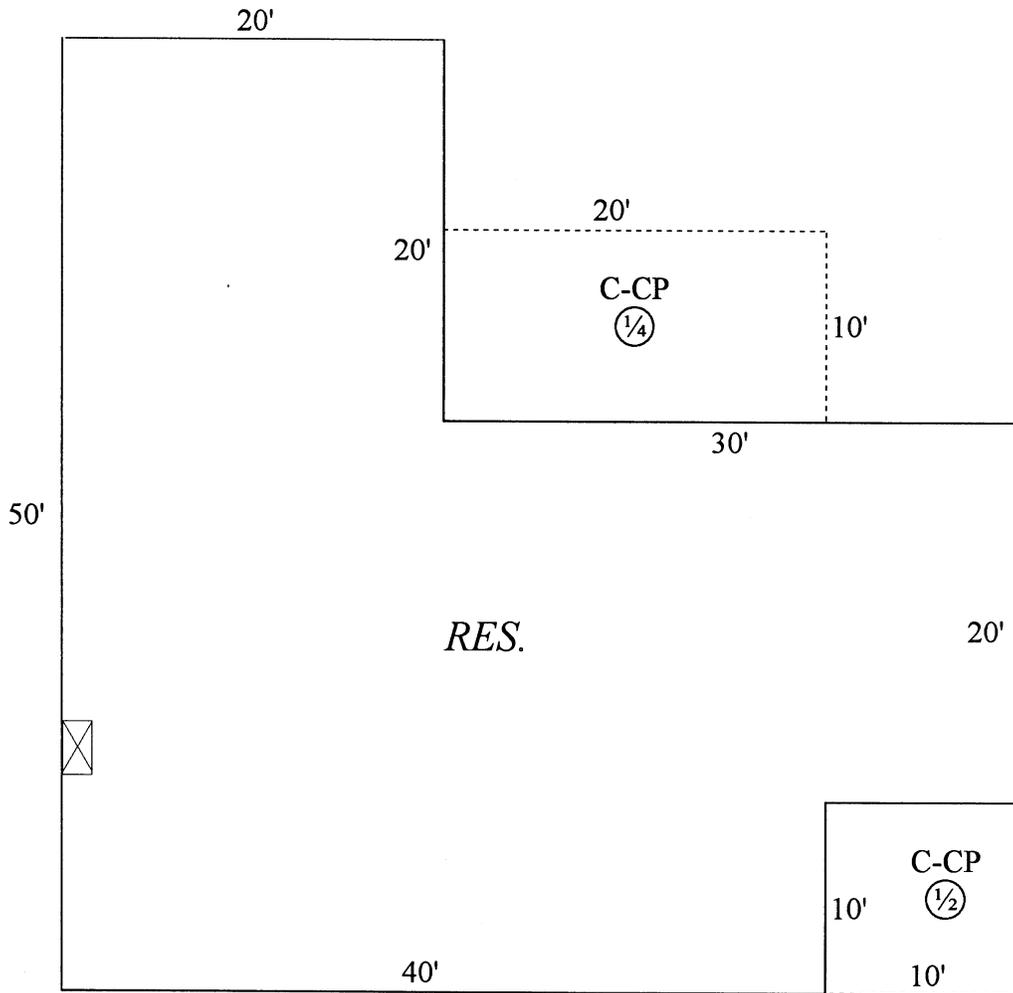
A description of the type of porch involved should be indicated on the sketch of the building plan. It can be noted by the use of the following symbols:

C	Concrete Floor	U.P.	Uncovered Porch
W	Wood Floor	C.P.	Covered Porch
B	Brick Floor	S.P.	Screened-in Porch
F	Flagstone Floor	G.P.	Glassed-in Porch

Example: C - CP = Concrete Floor, Covered Porch

Dimensioning

The dimensions for the residence should be placed on the outside of the diagram except where a line is broken by an intersecting line as is the case in the 20,' 30,' and 40' lines in the following example. Dimensions for upper floors and basements are shown on the inside of the diagram. Dimensions are shown in the same color as the wall lines for the respective floor levels.



AREA COMPUTATION

Uniform procedures for computing building areas are desirable when possible. It is important that a person reviewing the appraisal is able to check the building area computations quickly and accurately.

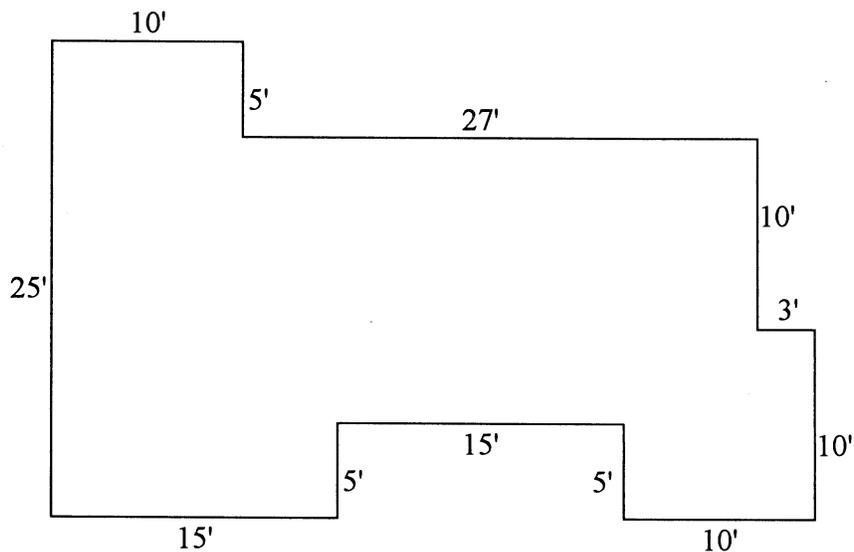
Rectangular Buildings

Rectangular building areas are computed by dividing the building diagram into a series of rectangles, computing the area of each rectangle, and finding the sum of all the areas.

Rectangles are formed by starting at a point which is the extreme left of the lowest horizontal line on the drawing. The base of the first rectangle is a horizontal line between the point of beginning and the intersection of the first vertical line to the right. The altitude of this first rectangle is the distance between the base line and the next intersecting horizontal line above.

After eliminating areas previously formed into rectangles, this process is repeated until all areas have been formed into rectangles.

In listing dimensions, the horizontal distance is always listed first.

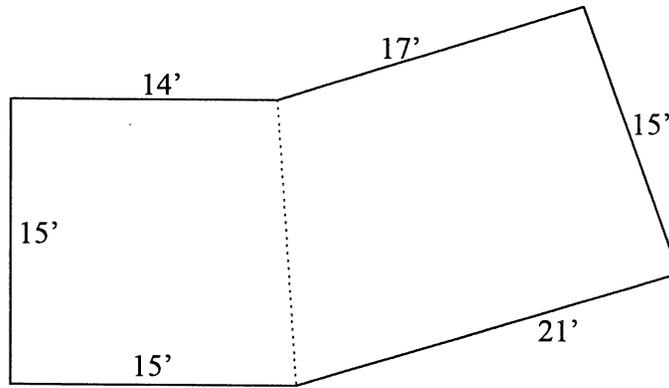


COMPUTATIONS	
$15 \times 5 =$	75
$10 \times 5 =$	50
$40 \times 5 =$	200
$37 \times 10 =$	370
$10 \times 5 =$	50
	745

Angular Buildings

Angular buildings are so variable that a uniform method of area computation is not feasible. Areas of these buildings are computed by dividing the diagram into a series of geometric shapes. The area of each of these segments is computed, and the areas of all parts are summed.

The best procedure for computing angular building areas is one that produces the simplest and most clear-cut division of the building area. Care should be taken to insure that a reviewer is able to follow each step of the calculation and that all areas are included.



COMPUTATIONS	
$\frac{15 + 14}{2} \times 15 = 218$	
$\frac{21 + 17}{2} \times 15 = 285$	
503	

AREA CLASSIFICATION

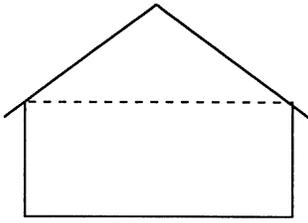
Area classification may take two forms: *total area classification* for single-family residences and *unit area classification* for multiple-family residences.

Total Area Classification

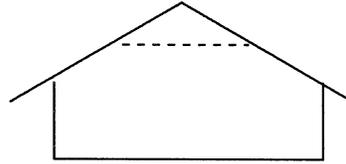
Total area classification is made simply by selecting a square foot cost from the table that is applicable to the total building area. Total building area for this purpose includes the following areas:

- All full-story areas within and including the exterior walls of all floor levels of the building.
- Small inset areas such as entrances outside of the exterior wall but under the main roof.
- Any enclosed additions, annexes, and lean-tos with a square foot cost greater than two-thirds of the square foot cost of the main building.

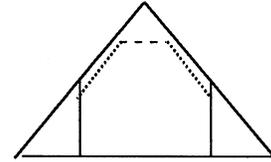
A full-story area has eight or more feet of ceiling height at all exterior walls, as opposed to half-story areas which utilize the sloping roof as all or part of the exterior wall.



Full-Story Area



Half-Story Areas



Total building area for single-family structures includes all full-story areas at all floor levels.

Example:

The square foot cost of a single-family residence with 1,200 square feet of full-story area on the first floor and 1,200 square feet of full-story area on the second floor is based upon the square foot cost for 2,400 square feet.

When portions of a building differ as to construction type, design type, or quality class, a square foot cost based upon the respective construction, design, and quality of each area is used for area classification in selecting each square foot cost; however, it is always the sum of all full-story areas on all floors of the building.

Example:

The first floor of a single-family residence is "C" construction type, "6" quality, and has 1,200 square feet of full-story area.

The second floor of this building is "D" construction type, "5.5" quality, and has 1,000 square feet of full-story area.

The square foot cost applied to the 1,200 square feet of full-story area on the first floor is based upon the cost of "C" construction type, "6" quality, and 2,200 square feet of full-story area.

The square foot cost applied to the 1,000 square feet of full-story area on the second floor is based upon the cost of "D" construction type, "5.5" quality, and 2,200 square feet of full-story area.

Unit Area Classification

Multiple-family residences square foot costs require modification for varying unit sizes.

Average unit area is found by dividing the total building area devoted to apartment use on *all* floors by the total number of units in the building. Area devoted to apartment use includes the following:

- Apartment units
- Manager's unit
- Normal office area
- A typical amount of utility room area
- Interior hallways and interior stairways

AREA CLASSIFICATION VARIABLES

Other things equal, the smallest building is the most expensive to construct per square foot of floor area, while the largest is the cheapest. There are three major reasons for this—ratio of perimeter wall area to floor area, fixed costs, and quantity buying.

Ratio of Perimeter Wall Area to Floor Area

The ratio of the area of the outside wall to the enclosed floor area tends to decrease with increased building size. Larger buildings have a greater floor area over which to spread the costs of the wall. Here is an example, which assumes that the buildings are similar in all respects except size.

Building	Floor Area	Perimeter (Feet)	Perimeter Wall Cost at \$15 Per Linear Foot	Wall Cost Per Square Foot of Floor Area
A	400	80	\$1,200	\$3.00
B	1,600	160	\$2,400	\$1.50

Though the larger building has a higher wall cost, there is proportionately more floor area over which to spread that cost.

Fixed Costs

There are many items that cost the same regardless of building size. The cost of these items will therefore be greater per square foot in a small building than in a larger one of the same class.

Examples of fixed cost items are plumbing fixtures and kitchen cabinets in residences of the same class, and the cost of transporting a crane to a job site for setting tilt-up panels. In both cases, these costs will be the same regardless of the area of the building; thus, the larger the building the lower the cost per square foot.

Quantity Buying

Builders typically receive quantity discounts on large orders of materials for large buildings and competition may force them to pass the saving on to the consumer. This discount should not be confused with the quantity discounts that large-volume builders receive but may not pass on to the consumer in the finished product.

While costs per square foot do decrease with increasing building size, the decrease is most rapid at the lower end of the size scale and tapers off with increasing building size, eventually reaching a plateau. This can be demonstrated graphically and is noticeable in the square foot cost tables.

Area classification is made simply by computing the area of the building. A square foot cost is then selected from the proper table for this area. Building areas to be included for area classification will vary with different design types.

SHAPE CLASSIFICATION

Shape is a consideration in the classification of single-family residences and mountain cabins. Shape classification considers any cost differences that may arise from variations in the building outline. Buildings of the same design type, construction type, quality, and size will cost different amounts per square foot if they are of differing shapes. These cost differentials may be due to one or more of the following causes:

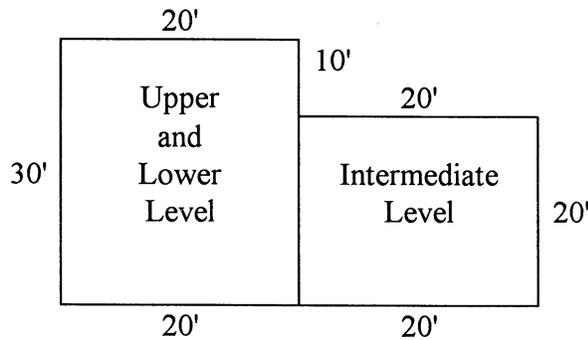
1. Differences in the number of corners for a given area.
2. Differences in the number of roof valleys and ridges for a given area (*cut-upness*).
3. Differences in the ratio of exterior wall area to floor area.

There are four shape designations: A, B, C, and D, with D the most irregular. Which designation is selected depends upon the interaction of the above three shape factors. The ratio of perimeter to floor area is the most important influence, but its importance in the selection of the shape class can be modified by the other two factors.

Shape classification of all multiple-story or split-level residential type buildings is based upon the outline formed by a composite of the extreme outside exterior walls of all full-story areas regardless of varying levels.

Example:

A split-level, single-family residence has a 20' x 30' lower level, a 20' x 30' upper level directly over the lower level, and a 20' x 20' intermediate level contiguous to the 30' side of the first rectangle. In this case, shape classification is determined from the outline formed by a composite of the 20' x 30' rectangle and the contiguous 20' x 20' square.



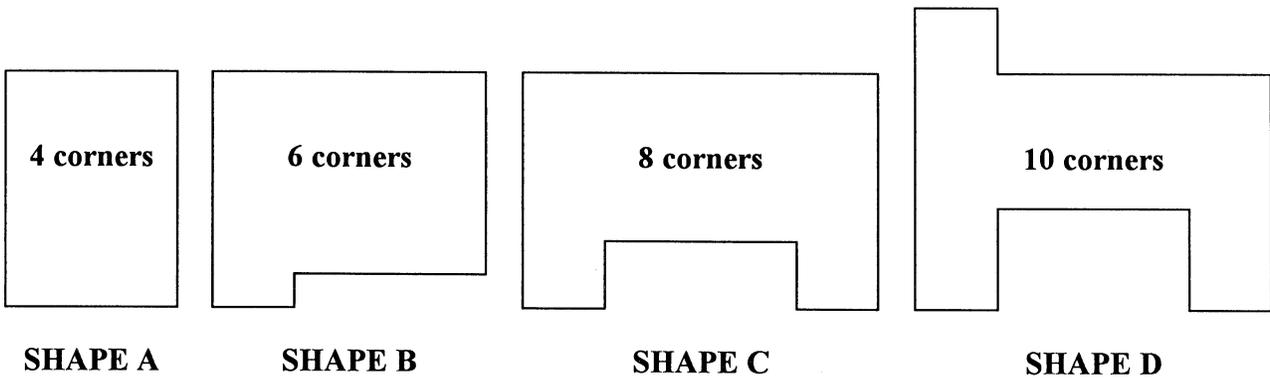
In selecting a shape classification, it is important to follow the roof and foundation line of the building. Porches and garages are items that should not be included in the shape of the home. The shape outline should only follow the foundation outline of the main structure.

NOTE: There is no shape classification for apartments.

If the shape classification guide is used, the area used for area perimeter comparison is the area within the outline used for shape classification. In the example above, use the area of the lower level plus the area of the intermediate level or 1,000 square feet.

Single-Family Residential Shape Classification Guides

TYPICAL SHAPE ILLUSTRATIONS



The majority of single-family residences can be classified for shape by a visual comparison of a diagram of the subject structure with the typical shape illustrations above. If there is a question as to a proper shape classification, the Single-Family Residential Shape Classification Table (following in this chapter) may be helpful.

Buildings of the same design type, character of construction, quality of construction, and size will vary in costs because of their shape. The more irregular the shape, the greater the cost per square foot. There are three major factors that cause the costs to increase: (1) the number of corners, (2) the cut-upness of the roof, and (3) the ratio of perimeter to floor area.

Number of Corners

There are additional costs of materials when corners are added. With the cost of materials there are also more labor costs to build corners. With more materials and labor costs, the cost per square foot increases significantly.

Cut-Upness of the Roof

Cut-upness refers to the number of roof ridges, valleys, and hips and the manner in which the roof is broken up. As the shapes of houses become more complex, their roof systems are more cut-up. The more the roof is cut-up, the more the cost that must be absorbed by each square foot of floor area.

The cut-upness of the roof also adds to the costs in labor and materials. The increase in labor and material costs are absorbed in the total costs per square foot.

Ratio of Perimeter to Floor Area

The greatest effect of shape upon cost is caused by the differing ratios of perimeter to floor area in buildings of different shapes. Given two buildings of equal size but different shape, the building with the more irregular shape will require more wall area to enclose it, and the wall cost per square foot of floor area will therefore be greater.

Following is an example of two buildings, each with an area of 400 square feet and a wall cost of \$50 per linear foot.

Buildings	Dimensions (Feet)	Perimeter (Feet)	Wall Cost	Wall Cost Per Square Foot of Floor Area
A	20 x 20	80	\$4,000	\$10.00
B	40 x 10	100	\$5,000	\$12.50

Shape Classification Table

Shape classification may be determined by comparing the length of the outline formed by the outermost exterior walls of a single-family residence (**excluding the garage and porches**) and the area enclosed by this outline. Shape classification is indicated by a range of perimeter lengths for each shape class at various areas.

Notice in the following Single-Family Residential Shape Classification Table that the suggested ranges of perimeter lengths overlap between shape classes. This is because consideration has been given to variations in costs that might arise from building corners and framing irregular roof structures. If a perimeter length falls into an overlapping area, final determination of shape classification will consider the number of corners and roof design.

Example:

A residence of 800 square feet has a perimeter of 121 feet and will be classified as an "A" shape if it is a simple rectangle, and a "B" shape if it is of an irregular shape or if it has a cut-up roof.

**SINGLE-FAMILY RESIDENTIAL
SHAPE CLASSIFICATION TABLE**

Area	Shape	Perimeter Length	Area	Shape	Perimeter Length	Area	Shape	Perimeter Length
600	A	98-106	1,600	A	160-181	3,400	A	233-277
	B	100-108		B	175-196		B	271-315
	C	102-110		C	190-211		C	309-353
	D	104-Up		D	205-Up		D	347-Up
700	A	106-115	1,700	A	165-188	3,600	A	240-286
	B	109-118		B	182-205		B	280-326
	C	112-121		C	199-222		C	320-366
	D	115-Up		D	216-Up		D	360-Up
800	A	113-124	1,800	A	170-194	3,800	A	247-296
	B	118-129		B	188-212		B	290-339
	C	123-134		C	206-230		C	333-382
	D	128-Up		D	224-Up		D	376-Up
900	A	120-132	2,000	A	178-205	4,000	A	253-304
	B	126-138		B	199-226		B	298-351
	C	132-144		C	220-247		C	345-396
	D	138-Up		D	241-Up		D	390-Up
1,000	A	126-139	2,200	A	187-216	4,200	A	259-313
	B	133-146		B	210-239		B	307-361
	C	140-153		C	233-262		C	355-409
	D	144-Up		D	256-Up		D	403-Up
1,100	A	133-148	2,400	A	196-228	4,400	A	265-322
	B	142-157		B	222-254		B	316-374
	C	151-166		C	248-280		C	368-425
	D	160-Up		D	274-Up		D	419-Up
1,200	A	138-154	2,600	A	204-237	4,600	A	271-330
	B	148-164		B	231-264		B	324-383
	C	158-174		C	258-291		C	377-436
	D	168-Up		D	285-Up		D	430-Up
1,300	A	144-161	2,800	A	212-248	4,800	A	277-339
	B	155-172		B	242-278		B	333-395
	C	166-183		C	272-308		C	389-451
	D	177-Up		D	302-Up		D	445-Up
1,400	A	149-168	3,000	A	219-258	5,000	A	283-347
	B	162-181		B	252-291		B	341-405
	C	175-194		C	285-324		C	399-463
	D	188-Up		D	318-Up		D	447-Up
1,500	A	155-175	3,200	A	266-267			
	B	169-189		B	261-302			
	C	183-203		C	296-337			
	D	197-Up		D	331-Up			

SQUARE FOOT COST ADJUSTMENTS

In some cases, basic square foot costs for all or a portion of a building may require adjustment. Situations where this is necessary are:

- Half-story areas
- Third and upper floors
- Superior or inferior areas

HALF-STORY AREAS

Half-story areas are upper floors of buildings that have less than eight feet of ceiling height at the exterior wall line. The sloping roof makes up all or a portion of the exterior wall. Square foot costs for half-story areas are based upon fractions of the main floor square foot costs as suggested in the *Building Additives* section. Half-story areas are *never* included in the area used for area modification.

THIRD- AND UPPER-STORY ADJUSTMENTS

Basic square foot costs in this cost manual are applicable to first-floor level or second-floor level. Building costs tend to rise for floor levels above the second because of the increased cost of lifting materials. Square foot costs for floor levels above the second level are estimated by using the appropriate second-floor cost and increasing it by 2 percent for each floor above the second. For example:

Third Story = Second story square foot cost + 2 percent

Fourth Story = Second story square foot cost + 4 percent

Fifth Story = Second story square foot cost + 6 percent

SUPERIOR AND INFERIOR AREA ADJUSTMENTS

There are several methods of estimating proper square foot costs for buildings with areas of different quality. The best method to use depends on the particular situation.

Composite Quality Class

If the difference in quality is slight or there is no distinct dividing line between areas of varying quality, use a square foot cost based on the building's average quality. For example, if a residence has D5 cost characteristics in certain areas and is more similar to a D6 in other areas, a D5.5 classification may be applicable. The total of all areas is used as the area for selecting a square foot cost from a cost table.

Separate Quality Classes

If two or more distinct areas are of a significantly different quality level, separate quality classes may be assigned to each area. In other words, the first-floor area may be classified as D6 quality,

and the second floor may be classified as D5.5 quality. As in the case above, the total of all areas is used for selecting a square foot cost from a cost table.

Fractions

If a small but distinct area of the building, such as an addition or a residential porch, is of significantly different quality than the main area, its cost may be estimated by applying a square foot cost that is based on a fraction of the square foot cost of the main area.

When using fractions, the area used for area classification should include all areas with assigned costs that are greater than two-thirds of the square foot cost of the main building.

LOCATION ADJUSTMENTS

The basic building costs provided in this section are based on the Sacramento area. However, costs may vary considerably with location differences. As such, the AH 531.10 contains suggested locale factors, which are intended to account for general location differences in costs. The suggested locale factors, however, are not intended to account for the myriad of different permit and other fees charged by different jurisdictions within a region. Because of the variations in costs both within and among the counties, it is incumbent on the appraiser to research and analyze permits and fees of jurisdictions within the region and to make adjustments accordingly. In other words, the AH 531 should serve as a guide, but an appraiser must research the market to determine which costs are most applicable for the appraisal assignment and temper the data provided in the AH 531 with local cost data.

The map at the end of this section shows suggested location adjustment factors for all locations in the State of California. An adjustment for time, along with location, should also be considered if costs in the county have changed in the previous 12 months.

The appropriate locale factor adjustment, **except for manufactured housing**, should be applied to all improvement costs in this handbook, including square foot building cost, additives, yard improvements, in-place cost, and compact cost. In addition, all costs in this handbook, except for manufactured housing, should be modified by any local cost differences that are found to exist in the county.

Various counties have two or more location zones. The zone boundaries are as follows.

Alpine County

- | | |
|--------------|---|
| Western Zone | All areas west of the summit of the Sierra Mountains. |
| Eastern Zone | All areas east of the summit of the Sierra Mountains. |

Amador County

- Western Zone All areas west of the western border of the El Dorado National Forest.
- Middle Zone From the western boundary of the El Dorado National Forest to the 5,000-foot elevation line.
- Eastern Zone All areas east of the 5,000-foot elevation line.

Butte County

- Western Zone All areas west of the western boundary of the Plumas National Forest.
- Eastern Zone All areas east of the western boundary of the Plumas National Forest.

Calaveras County

- Western Zone All areas west of the western boundary of the Stanislaus National Forest.
- Middle Zone From the western boundary of the Stanislaus National Forest to the 5,000-foot elevation line.
- Eastern Zone All areas east of the 5,000-foot elevation line.

El Dorado County

- Western Zone All areas west of the western boundary of the El Dorado National Forest.
- Western Middle Zone From the western boundary of the El Dorado National Forest east to the 5,000-foot elevation line.
- Eastern Middle Zone From the 5,000-foot elevation line to the summit of the Sierra Mountains.
- Eastern Zone From the summit of the Sierra Mountains to the Nevada border.

Fresno County

- Western Zone All areas west of the western border of the Sierra National Forest.
- Middle Zone From the western boundary of the Sierra National Forest to the 5,000-foot elevation line.
- Eastern Zone From the 5,000-foot elevation line to the eastern boundary of the county.

Inyo County

National Forest Zone All areas within the Inyo National Forest.

Bishop/
Independence Zone All areas outside the Inyo National Forest.

Kern County

Western Zone All areas west of a line following the western boundary of the Sequoia National Park in the northern portion of the county to the intersection of the Kern River, then continuing in a southerly direction east of the towns of Edison, Di Georgio, and Arvin to a point on the Ventura County border west of the town of Lebec.

Sequoia National Forest Zone All areas within and surrounded by the Sequoia National Forest, including the towns of Lake Isabella, Bodfish, Wooford Heights, Kernville, Onyx, Weldon, and Havilah.

Middle Zone All areas between the eastern boundary of the western zone and the Los Angeles Aqueduct, excluding the Sequoia zone.

Eastern Zone All areas east of the Los Angeles Aqueduct.

Los Angeles County

Western Zone All areas west of the San Bernardino National Forest boundary line.

Mountain Desert Zone All areas east of the San Bernardino National Forest boundary line.

Madera County

Western Zone All areas west of the western boundary of the Sierra National Forest.

Middle Zone From the western boundary of the Sierra National Forest to the 5,000-foot elevation line.

Eastern Zone From the 5,000-foot elevation line to the eastern boundary of the county.

Mariposa County

Western Zone All areas west of the western border of the Stanislaus National Forest.

Middle Zone From the western boundary of the Stanislaus National Forest to the 5,000-foot elevation line.

Eastern Zone From the 5,000-foot elevation line to the eastern boundary of the county.

Mono County

National Forest Zone All areas within the Toiyabe and Inyo National Forests.

Bridgeport Zone All areas outside the national forest areas.

Nevada County

Western Zone All areas west of the western boundary of the Tahoe National Forest.

Western Middle Zone From the western boundary of the Tahoe National Forest to the 5,000-foot elevation level.

Eastern Middle Zone From the 5,000-foot elevation level to the summit of the Sierra Mountains.

Eastern Zone From the summit of the Sierra Mountains to the Nevada border.

Placer County

Western Zone All areas west of Highway 49 and excluding all towns on Highway 49.

Western Middle Zone From Highway 49 east to the Tahoe National Forest boundary and including the town of Auburn.

Eastern Middle Zone From the western boundary of the Tahoe National Forest to the summit of the Sierra Nevada Mountains.

Eastern Zone From the summit of the Sierra Mountains to the Nevada border.

Riverside County

Western Zone All areas west of San Gorgonio Pass and the western border of the San Bernardino National Forest, including the towns of Beaumont and Banning.

Eastern Zone All areas east of San Gorgonio Pass and the western boundary of the San Bernardino National Forest.

San Bernardino County

San Bernardino Zone All areas west of the San Bernardino National Forest boundary line.

Mountain Desert Zone All areas east of the San Bernardino National Forest boundary line.

San Diego County

Western Zone All areas west of the western boundary of the Cleveland National Forest.

Eastern Zone All areas east of the western boundary of the Cleveland National Forest.

Santa Barbara County

Northern Zone All areas north of the Santa Ynez River.

Southern Zone All areas south of the Santa Ynez River.

Sierra County

Western Zone All areas west of the 5,000-foot elevation line.

Middle Zone From the 5,000-foot elevation line to the summit of the Sierra Mountains.

Eastern Zone From the summit of the Sierra Mountains to the Nevada border.

Tulare County

Western Zone All areas west of western boundary of the Sequoia National Forest.

Middle Zone From the western boundary of the Sequoia National Forest to the 5,000-foot elevation line.

Eastern Zone From the 5,000-foot elevation line to the eastern boundary of the county.

Tuolumne County

Western Zone All areas west of the western boundary of the Stanislaus National Forest.

Middle Zone From the western boundary of the Stanislaus National Forest to the 5,000-foot elevation line.

Eastern Zone From the 5,000-foot elevation line to the eastern boundary of the county.

Yuba County

Western Zone All areas west of the western boundary of the Plumas National Forest.

Eastern Zone All areas east of the eastern boundary of the Plumas National Forest.

Factors to adjust 1-1-2004 residential costs to all locations in the State of California

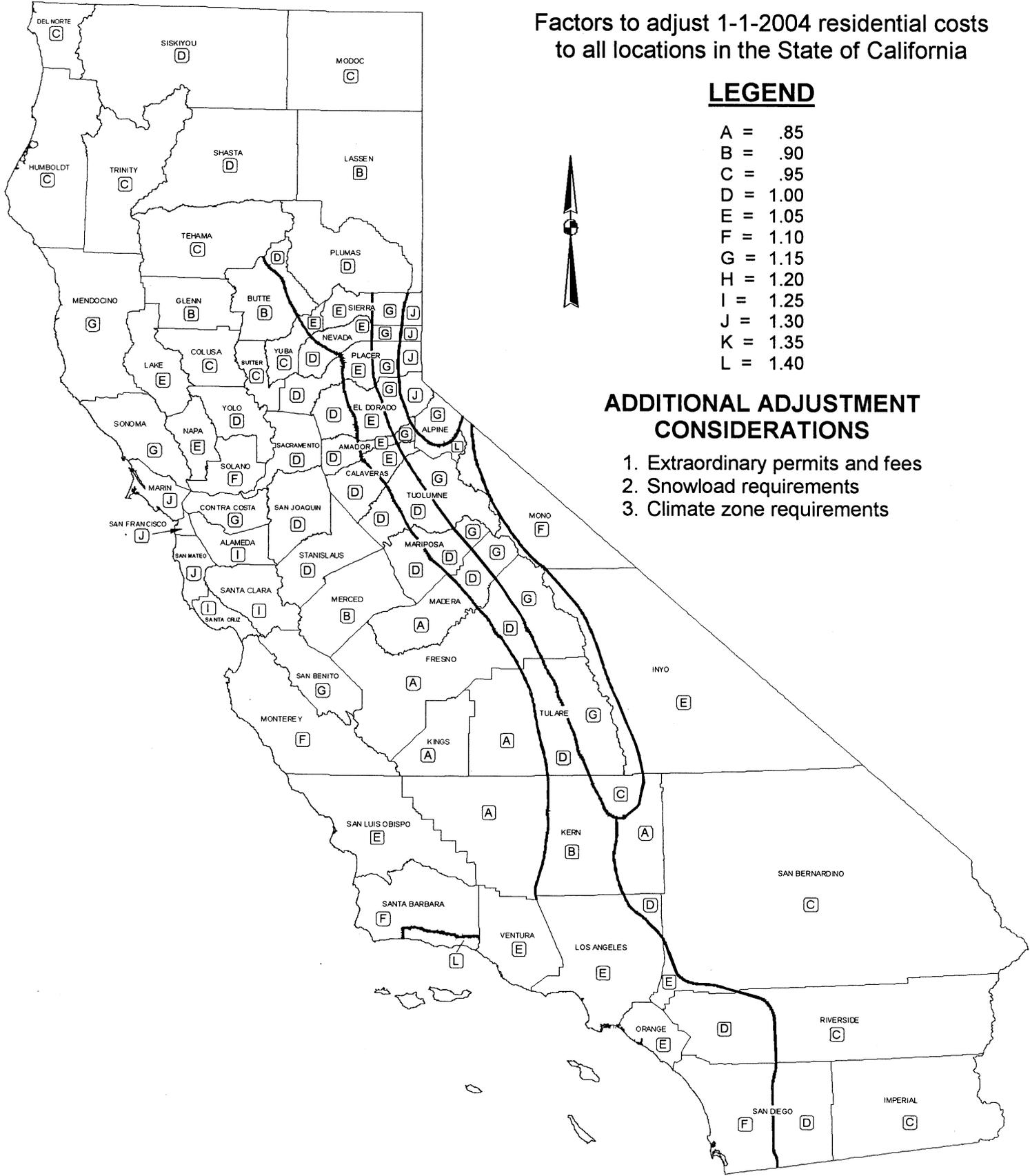
LEGEND

A =	.85
B =	.90
C =	.95
D =	1.00
E =	1.05
F =	1.10
G =	1.15
H =	1.20
I =	1.25
J =	1.30
K =	1.35
L =	1.40



ADDITIONAL ADJUSTMENT CONSIDERATIONS

1. Extraordinary permits and fees
2. Snowload requirements
3. Climate zone requirements



AH 531.20: SINGLE-FAMILY RESIDENTIAL CONVENTIONAL TYPE

Conventional single-family residences are residential buildings designed for permanent single-family occupancy and usually built before the year 1950. They differ from modern single-family residences in that they have fewer bathrooms and fewer built-in features such as ovens, ranges, and dishwashers. These differences are defined by the respective building specifications.

Square foot costs include all costs and components as described on page 1 of AH 531.10, the *Introduction* section of this handbook, including all plumbing fixtures and built-ins as described in the applicable building specifications.

Shape classification may be determined by using the guides in the *Introduction* section of this handbook.

NOTE: The specifications for each quality class make a distinction between classes. This distinction often shows in the *quality* of a feature and not whether the feature is present. The same feature may exist in different classes, but the quality of the feature will help to determine the classification. Conversely, some features may be included in a particular classification, while in another class, the same feature must be treated as an additive.

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"C" CONSTRUCTION**

C-4 QUALITY

CONVENTIONAL

Foundation Light concrete
Floor Structure Joists: 2" x 6", 24" o.c., or 4" concrete
Walls and Exterior 6" reinforced concrete block, or clay tile Painted exterior Windows: Low-cost steel sash
Roof Framing: 2" x 4" rafters, 24" o.c. Cover: 3 ply built-up 15# felt, mopped Overhang: 16", unsealed Gutters: None
Floor Finishes Painted concrete or low-cost asphalt tile
Interior Finish Painted concrete block; wallboard or plywood and paint on partition walls
Interior Detail Trim: One member Douglas Fir painted or rubber base Closets: One small closet per bedroom; minimum shelving
Bath Detail Number: One Floors: Painted concrete or low-cost asphalt tile Walls: Painted concrete block; wallboard or plywood and paint on partition walls Shower: None or metal shower in place of tub
Kitchen Base Cabinet: 6' Douglas Fir, painted Wall Cases: Small area Douglas Fir, painted Drain Board: 6' wood or linoleum
Plumbing Four fair quality fixtures Laundry tray and small water heater
Special Features None
Electrical Knob and tube or Romex wiring; simple fixtures

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"C" CONSTRUCTION**

C-5 QUALITY

CONVENTIONAL

Foundation Reinforced concrete
Floor Structure Standard wood frame or reinforced concrete
Walls and Exterior 8" reinforced concrete block, painted exterior Windows: Low-cost steel sash
Roof Framing: Standard wood frame Cover: Asphalt shingles or composition tar and pea gravel Overhang: 12" to 16", unsealed Gutters: Over entrances
Floor Finishes Asphalt tile or low-cost carpet
Interior Finish Painted concrete block; gypsum board taped, textured, and painted on partitions
Interior Detail Trim: Douglas Fir, painted, or rubber base Closets: Moderate amount; low-cost doors
Bath Detail Number: One Floors: Asphalt tile Walls: Plaster painted or gypsum board and enamel Shower: None or over tub; no tile
Kitchen Base Cabinet: 6' Douglas Fir, painted Wall Cases: 20 sq. ft. Douglas Fir, painted Drain Board: 6' low-cost ceramic tile
Plumbing Four average quality fixtures Single laundry tray and small water heater
Special Features None
Electrical Romex wiring; simple fixtures

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"C" CONSTRUCTION**

C-6 QUALITY

CONVENTIONAL

Foundation Reinforced concrete
Floor Structure Standard wood frame or reinforced concrete
Walls and Exterior 8" reinforced colored concrete block, or 8" common brick Windows: Average quality steel sash
Roof Framing: Standard wood frame Cover: Wood shingle, light shake, good composition shingles, or composition with tar and rock Overhang: 16", unsealed Gutters: 4" galvanized and painted at all eaves
Floor Finishes Good quality vinyl asbestos tile or low-cost carpet
Interior Finish Gypsum board, taped, textured, and painted; colored interior plaster; some wallpaper
Interior Detail Trim: Douglas Fir, painted Closets: Average amount; low-cost wood or metal doors
Bath Detail Number: One Floors: Ceramic tile or good vinyl asbestos tile Walls: Hard plaster enameled or gypsum board taped and enameled Shower: Over tub with ceramic tile wainscot
Kitchen Base Cabinet: 8' white pine, painted Wall Cases: 36 sq. ft. white pine, painted Drain Board: 8' ceramic tile
Plumbing Five medium-priced fixtures Single laundry tray; water heater
Special Features None
Electrical Romex or knob and tube; medium-priced fixtures

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"C" CONSTRUCTION**

C-7 QUALITY

CONVENTIONAL

Foundation	Reinforced concrete
Floor Structure	Standard wood frame or reinforced concrete
Walls and Exterior	8" reinforced colored detailed concrete block, or 8" common brick Windows: Good quality aluminum, or average quality steel sash
Roof	Framing: Standard wood frame Cover: Medium shake, or composition with large rock Overhang: 30", unsealed Gutters: 6" galvanized and painted at all eaves
Floor Finishes	Average quality carpet; average quality sheet vinyl or good quality inlaid linoleum in kitchen and breakfast room
Interior Finish	Gypsum board taped, textured, and painted; plaster with putty coat finish; some wallpaper
Interior Detail	Trim: Douglas Fir, painted; some hardwood members Closets: Average amount with average quality wood doors
Bath Detail	Number: One and one-half Floors: Ceramic tile in main; good vinyl asbestos tile in half bath Walls: Hard plaster and enamel Shower: 6' ceramic tile with glass door
Kitchen	Base Cabinet: 10' good pine or hardwood veneer Wall Cases: 36 sq. ft. good pine or hardwood veneer Drain Board: 10' ceramic tile with 14" splash
Plumbing	Six standard fixtures ; one double laundry tray; water heater
Special Features	6' sliding glass or French doors; garbage disposer; kitchen exhaust vent; 4' ceramic tile top vanity in main bath
Electrical	Romex wiring; average fixtures with a special fixture in dining room

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"C" CONSTRUCTION**

C-8 QUALITY

CONVENTIONAL

Foundation	Reinforced concrete
Floor Structure	Standard wood frame or reinforced concrete
Walls and Exterior	8" reinforced split face or slump stone block Windows: Good quality steel sash
Roof	Framing: Standard wood frame Cover: Heavy shake or adobe tile Overhang: 36", unsealed, or 24", sealed Gutters: 8" galvanized and painted at all eaves
Floor Finishes	Terrazzo or mission tile in entry hall; good tongue and groove hardwood or good carpet in living, dining, and bedrooms; good sheet vinyl in kitchen and breakfast rooms
Interior Finish	Gypsum board with heavy texture and paint; plaster with putty coat finish; some good wallpaper or vinyl wall covering; some good hardwood veneer paneling
Interior Detail	Trim: Two members pine base and shoe; some good hardwood Closets: Ample closet space and shelving
Bath Detail	Number: One bath for two bedrooms Floors: Good ceramic tile Walls: Hard plaster and enamel Shower: 6' good ceramic tile with glass door
Kitchen	Base Cabinet: 10' good hardwood veneer Wall Cases: Ample good hardwood veneer and utility cabinets Drain Board: Good ceramic tile
Plumbing	Eight or more good fixtures; double laundry tray; two water heaters
Special Features	8' sliding glass or French doors; 4' ceramic tile top vanity in each bath; deluxe range hood and fan; built-in oven and range; garbage disposer; Formica breakfast bar
Electrical	Romex wiring; good fixtures

SINGLE-FAMILY RESIDENTIAL
CONVENTIONAL TYPE
SQUARE FOOT AREA COST TABLES

"C" CONSTRUCTION - SHAPE A

Class	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
C-4	64.13	61.34	59.13	57.22	55.46	54.15	52.88	51.78	50.85	50.05	49.21
C-4.5	69.86	66.83	64.42	62.36	60.48	58.99	57.63	56.46	55.44	54.51	53.62
C-5	76.13	72.93	70.26	67.93	65.91	64.27	62.78	61.54	60.47	59.44	58.52
C-5.5	83.05	79.43	76.53	74.06	71.80	70.07	68.40	67.09	65.88	64.76	63.81
C-6	94.82	90.78	87.41	84.55	82.04	80.08	78.12	76.57	75.20	74.08	72.82
C-6.5	104.32	99.86	96.17	93.05	90.28	88.04	85.99	84.31	82.74	81.44	80.09
C-7	114.74	109.79	105.80	102.41	99.29	96.91	94.63	92.78	91.09	89.58	88.19
C-7.5	131.97	126.27	121.70	117.71	114.25	111.44	108.90	106.66	104.71	102.96	101.34
C-8	151.47	144.93	139.64	135.11	131.04	127.90	124.97	122.46	120.23	118.24	116.34

"C" CONSTRUCTION - SHAPE A

Class	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	4000
C-4	48.65	47.39	46.46	45.62	44.92	44.31	43.82	43.33	42.87	42.47	41.90
C-4.5	52.99	51.73	50.68	49.73	48.89	48.32	47.76	47.25	46.79	46.30	45.67
C-5	57.74	56.33	55.19	54.17	53.32	52.64	52.04	51.47	50.95	50.41	49.73
C-5.5	62.91	61.44	60.14	59.09	58.14	57.40	56.78	56.07	55.51	54.97	54.22
C-6	71.88	70.17	68.65	67.36	66.39	65.53	64.83	64.06	63.43	62.80	61.93
C-6.5	79.10	77.15	75.55	74.24	73.09	72.07	71.22	70.46	69.81	69.10	68.11
C-7	87.01	84.89	83.13	81.65	80.36	79.39	78.38	77.49	76.77	76.01	74.99
C-7.5	100.06	97.59	95.64	93.89	92.39	91.23	90.18	89.14	88.28	87.43	86.20
C-8	114.81	112.07	109.79	107.77	106.08	104.73	103.45	102.27	101.34	100.37	98.88

"C" CONSTRUCTION - SHAPE B

Class	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
C-4	65.96	63.27	60.95	58.99	57.40	55.99	54.73	53.62	52.73	51.78	51.15
C-4.5	71.83	68.91	66.42	64.27	62.59	61.01	59.68	58.52	57.45	56.46	55.74
C-5	78.34	75.19	72.34	70.07	68.24	66.49	64.99	63.81	62.64	61.54	60.72
C-5.5	85.47	81.85	78.88	76.44	74.38	72.56	70.85	69.51	68.29	67.09	66.22
C-6	97.51	93.54	90.02	87.21	84.89	82.74	80.95	79.31	78.00	76.57	75.60
C-6.5	107.32	102.91	99.17	96.01	93.43	91.09	89.00	87.27	85.76	84.31	83.17
C-7	118.10	113.19	109.04	105.59	102.81	100.18	97.94	96.05	94.34	92.78	91.47
C-7.5	135.75	130.15	125.48	121.45	118.19	115.22	112.69	110.46	108.57	106.66	105.28
C-8	155.83	149.42	143.98	139.37	135.68	132.24	125.49	126.80	124.59	122.46	120.87

"C" CONSTRUCTION - SHAPE B

Class	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	4000
C-4	50.40	49.24	48.32	47.37	46.79	46.11	45.55	45.09	44.70	44.35	43.65
C-4.5	54.96	53.66	52.64	51.70	50.95	50.28	49.64	49.16	48.72	48.35	47.57
C-5	59.90	58.53	57.36	56.30	55.49	54.78	54.16	53.56	53.08	52.73	51.82
C-5.5	65.27	63.82	62.55	61.41	60.54	59.71	59.04	58.38	57.89	57.45	56.49
C-6	74.55	72.86	71.41	70.09	69.17	68.23	69.72	66.67	66.06	65.63	64.51
C-6.5	81.99	80.23	78.65	77.10	76.07	75.09	74.15	73.35	72.79	72.22	71.04
C-7	90.28	88.23	86.40	84.82	83.68	82.50	81.60	80.72	79.99	79.42	78.12
C-7.5	103.82	101.48	99.42	97.55	96.18	94.90	93.81	92.78	92.01	91.29	89.88
C-8	119.14	116.42	114.09	111.96	110.45	108.90	107.66	106.58	105.64	104.78	103.14

SINGLE - FAMILY RESIDENTIAL
CONVENTIONAL TYPE
SQUARE FOOT AREA COST TABLES

"C" CONSTRUCTION - SHAPE C

Class	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
C-4	67.93	65.16	62.90	61.01	59.25	57.82	56.65	55.65	54.62	53.69	53.01
C-4.5	74.06	71.01	68.53	66.49	64.62	63.05	61.78	60.58	59.62	58.55	57.79
C-5	80.70	77.45	74.73	72.47	70.38	68.78	67.30	66.04	64.92	63.87	63.03
C-5.5	87.97	84.37	81.47	78.98	76.76	74.93	73.34	72.00	70.75	69.57	68.68
C-6	100.45	96.40	92.95	90.18	87.59	85.59	83.80	82.21	80.81	79.52	78.40
C-6.5	110.53	105.97	102.35	99.24	96.44	94.12	92.21	90.46	88.94	87.45	86.28
C-7	121.54	116.64	112.59	109.20	106.07	103.58	101.41	99.52	97.81	96.17	94.88
C-7.5	139.78	134.17	129.48	125.58	122.08	119.14	116.63	114.48	112.47	110.63	109.15
C-8	160.52	153.99	148.63	144.16	140.02	136.77	133.94	131.34	129.14	126.96	125.31

"C" CONSTRUCTION - SHAPE C

Class	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	4000
C-4	52.28	51.17	50.15	49.41	48.69	48.06	47.52	47.05	46.57	46.30	45.32
C-4.5	57.07	55.76	54.72	53.84	53.05	52.37	51.77	51.29	50.78	50.41	49.43
C-5	62.14	60.74	59.68	58.59	57.81	57.09	56.43	55.88	55.36	54.97	53.85
C-5.5	67.74	66.23	64.97	63.91	63.04	62.29	61.51	60.95	60.36	59.95	58.62
C-6	77.37	75.69	74.21	72.93	71.97	71.09	70.25	69.59	68.93	68.52	66.96
C-6.5	85.12	83.29	81.66	80.31	79.20	78.25	77.28	76.51	75.86	75.25	73.69
C-7	93.67	91.61	89.85	88.37	87.16	86.08	85.00	84.22	83.40	82.83	81.11
C-7.5	107.73	105.33	103.32	101.62	100.20	98.91	97.79	96.82	95.91	95.22	93.29
C-8	123.67	120.92	118.54	116.61	114.97	113.56	112.28	111.21	110.19	109.40	107.05

"C" CONSTRUCTION - SHAPE D

Class	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
C-4	69.89	67.11	64.88	62.84	61.20	59.80	58.59	57.45	56.54	55.70	54.90
C-4.5	76.19	73.23	70.72	68.52	66.79	65.16	63.91	62.64	61.61	60.66	59.85
C-5	83.10	79.74	77.09	74.69	72.71	71.01	69.60	68.29	67.20	66.16	65.24
C-5.5	90.57	86.97	84.00	81.42	79.35	77.45	75.91	74.44	73.25	72.10	71.09
C-6	103.36	99.29	95.91	92.93	90.56	88.42	86.70	84.90	83.59	82.33	81.21
C-6.5	113.77	109.20	105.52	102.25	99.63	97.29	95.37	93.44	91.98	90.59	89.30
C-7	125.17	120.14	116.11	112.50	109.61	107.00	104.92	102.85	101.19	99.64	98.29
C-7.5	143.98	138.21	133.52	129.43	126.06	123.10	120.64	118.34	116.38	114.57	113.03
C-8	165.24	158.65	153.25	148.57	144.65	141.26	138.54	135.75	133.62	131.56	129.66

"C" CONSTRUCTION - SHAPE D

Class	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	4000
C-4	54.17	53.05	52.06	51.25	50.49	49.91	49.28	48.88	48.51	48.08	47.51
C-4.5	59.09	57.81	56.80	55.86	54.96	54.46	53.69	53.31	52.88	52.41	51.74
C-5	64.39	63.04	61.90	60.91	59.96	59.31	58.55	58.09	57.63	57.11	56.39
C-5.5	70.23	68.69	67.40	66.39	65.41	64.65	63.89	63.31	62.84	62.33	61.48
C-6	80.15	78.48	77.05	75.79	74.61	73.80	72.90	72.35	71.77	71.17	70.20
C-6.5	88.22	86.32	84.74	83.39	82.10	81.21	80.26	79.53	78.92	78.28	77.25
C-7	97.03	94.99	93.19	91.69	90.40	89.34	88.31	87.56	86.86	86.10	84.98
C-7.5	111.58	109.23	107.21	105.49	103.90	102.81	101.52	100.67	99.88	99.04	97.70
C-8	128.08	125.44	123.10	121.07	119.33	117.91	116.50	115.54	114.68	113.76	112.14

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"D" CONSTRUCTION**

D-1 QUALITY

CONVENTIONAL

Foundation	Redwood mudsills on grade
Floor Structure	Joists: 2" x 4" or 6", 24" o.c. Sub-Floor: None
Walls and Exterior	Framing: 1" x 12" vertical boards; 2" x 4" top and bottom plates Cover: 1" x 12" vertical boards with 1" x 2" battens Windows: Sliding barn sash Front Door: 1-3/8" single panel
Roof	Framing: 2" x 4" rafters, 32" o.c. Cover: Rolled roofing Overhang: 12", unsealed Gutters: None
Floor Finishes	1" x 4" or 6" Douglas Fir tongue and groove
Interior Finish	1" x 12" boards; open ceiling
Interior Detail	Interior Doors: 1-3/8" single panel Trim: None Closets: None
Bath Detail	None
Kitchen	Small amount of painted Douglas Fir Drain Board: Douglas Fir
Plumbing	Two low-cost fixtures
Special Features	None
Electrical	Knob and tube wiring; one drop cord per room

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"D" CONSTRUCTION**

D-2 QUALITY

CONVENTIONAL

Foundation	Light nonreinforced concrete
Floor Structure	Joists: 2" x 6", 24" o.c. Sub-Floor: None
Walls and Exterior	Framing: 1" x 12" boards; 2" x 4" top and bottom plate; 2" x 4" on either side of openings; 4" x 4" in corners; 2" x 4" center nail tie Cover: 1" x 12" vertical boards with 1" x 2" battens Windows: Wood casements, painted Front Door: 1-3/8", 2 to 4 panels
Roof	Framing: 2" x 4" rafters, 24" o.c. Cover: Wood shingles Overhang: 12", unsealed Gutters: None
Floor Finishes	1" x 4" tongue and groove Douglas Fir; print linoleum in kitchen
Interior Finish	1" x 12" boards with 2 coats lead and oil paint on walls Wallboard or plywood on ceilings
Interior Detail	Interior Doors: 1-3/8" single panel Trim: None Closets: None
Bath Detail	Number: One Floors: Linoleum Walls: Painted 1" x 12" boards Shower: None
Kitchen	Base Cabinet: 6' Douglas Fir, painted Wall Cases: Small area Douglas Fir, painted Drain Board: 6" linoleum squares
Plumbing	Four fair quality fixtures; water heater
Special Features	None
Electrical	Knob and tube wiring; simple fixtures in living and dining rooms; drop cords in other rooms

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"D" CONSTRUCTION**

D-3 QUALITY

CONVENTIONAL

Foundation Concrete piers
Floor Structure Joists: 2" x 6", 24" o.c. Sub-Floor: None
Walls and Exterior Framing: 2" x 4" studs, 24" o.c. Sheathing: None Cover: 1/2" redwood siding, painted Windows: Wood casements, painted Front Door: 1-3/8" stock, two panels
Roof Framing: 2" x 4" rafters, 24" to 32" o.c. Cover: Rolled roofing Overhang: 12", unsealed Gutters: None
Floor Finishes 1" x 4" Douglas Fir tongue and groove; print linoleum in kitchen
Interior Finish Wallboard, plaster board, or plywood, painted
Interior Detail Interior Doors: 1-3/8" stock, single panel Trim: One member baseboard, painted Closets: One closet per bedroom with minimum shelving
Bath Detail Number: One Floors: Print linoleum Walls: Wallboard, painted Shower: None or metal shower in place of tub
Kitchen Base Cabinet: 6' Douglas Fir, painted Wall Cases: Small area Douglas Fir, painted Drain Board: 6" wood squares
Plumbing Four fair quality fixtures; water heater
Special Features None
Electrical Knob and tube wiring; simple fixtures in living and dining rooms; drop cords in other rooms

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"D" CONSTRUCTION**

D-4 QUALITY

CONVENTIONAL

Foundation Light concrete
Floor Structure Joists: 2" x 4", 24" o.c. Sub-Floor: None
Walls and Exterior Framing: 2" x 4" studs, 16" o.c. Sheathing: None Cover: 1/2" redwood siding painted; light stucco Windows: Wood casements or double hung, painted Front Door: 1-3/8" stock, two or four panels
Roof Framing: 2" x 4" rafters, 24" o.c. Cover: 3 ply built-up 15# felt, mopped Overhang: 16", unsealed Gutters: None
Floor Finishes 1" x 4" Douglas Fir tongue and groove; print linoleum in kitchen
Interior Finish Two coats of sand plaster on wood or gypsum lath glue size and calcimine
Interior Detail Interior Doors: 1-3/8" stock, single panel Trim: One member Douglas Fir, painted Closets: One closet per bedroom with minimum shelving
Bath Detail Number: One Floors: Print linoleum Walls: Wallboard, painted Shower: None or metal shower in place of tub
Kitchen Base Cabinet: 6' Douglas Fir, painted Wall Cases: Small area Douglas Fir, painted Drain Board: 6" wood or linoleum squares
Plumbing Four fair quality fixtures; laundry tray; water heater
Special Features None
Electrical Knob and tube or Romex wiring; simple fixtures

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"D" CONSTRUCTION**

D-5 QUALITY

CONVENTIONAL

Foundation	Standard concrete
Floor Structure	Joists: 2" x 6", 16" o.c. Sub-Floor: 1" x 6" or 8" in living room
Walls and Exterior	Framing: 2" x 4" studs, 16" o.c. Sheathing: Line wire and paper Cover: 1" stucco or 1" x 6" wood siding painted Windows: Painted wood, double hung Front Door: 1-3/8" stock, four rectangular panels
Roof	Framing: 2" x 4" rafters, 24" o.c. Cover: Wood shingles or average composition shingles Overhang: 16", unsealed Gutters: Painted galvanized iron over entrances
Floor Finishes	Oak hardwood in living room; print linoleum in kitchen; 1" x 4" tongue and groove Douglas Fir in balance
Interior Finish	Colored interior stucco in living room, sand plaster calcimine on balance
Interior Detail	Interior Doors: 1 3/8" stock, one panel Trim: One member base, painted Closets: One closet for each bedroom with painted shelving and hook strip
Bath Detail	Number: One Floors: Print linoleum Walls: Wall plaster, painted Shower: None
Kitchen	Base Cabinet: 6' Douglas Fir, painted Wall Cases: 20" sq. ft. Douglas Fir, painted Drain Board: 6" low-cost ceramic tile
Plumbing	Four average quality fixtures; a single laundry tray; water heater
Special Features	None
Electrical	Romex wiring; simple fixtures

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"D" CONSTRUCTION**

D-6 QUALITY

CONVENTIONAL

Foundation	Reinforced concrete
Floor Structure	Joists: 2" x 6", 16" o.c. Sub-Floor: 1" x 6" or 8"
Walls and Exterior	Framing: 2" x 4" studs, 16" o.c. Sheathing: Line wire and paper Cover: 1" stucco or 1" clear heart redwood Windows: Wood double hung, painted; steel or aluminum casements Front Door: 1-3/4" hardwood veneer slab
Roof	Framing: 2" x 4" rafters, 24" o.c. Cover: Wood or good composition shingles Overhang: 16" unsealed Gutters: Painted galvanized iron over entrances
Floor Finishes	1/2" x 2" oak; inlaid linoleum in kitchen
Interior Finish	Two coats plaster with putty finish; colored stucco or 1/2" gypsum board and texture; small amount of soft wood wainscot
Interior Detail	Interior Doors: Stock one panel or slab Trim: One member base, painted Closets: 15 linear ft. closet shelving with hook strip and pole; 15 linear ft. linen closet shelving
Bath Detail	Number: One Floors: Average ceramic tile or linoleum Walls: Wall plaster, painted Shower: Over tub with average ceramic tile wainscot
Kitchen	Base Cabinet: 8' white pine, painted Wall Cases: 36" sq. ft. white pine, painted Drain Board: 8" average ceramic tile
Plumbing	Five medium-priced fixtures; single laundry tray; water heater
Special Features	None
Electrical	Romex or knob and tube; medium priced fixtures

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"D" CONSTRUCTION**

D-7 QUALITY

CONVENTIONAL

<p>Foundation Reinforced concrete</p>
<p>Floor Structure Joists: 2" x 8", 16" o.c. Sub-Floor: 1" x 6" or 8"</p>
<p>Walls and Exterior Framing: 2" x 4" studs, 16" o.c. Sheathing: 1/2" gypsum or insulated board ; 1" x 8" clear heart redwood rustic painted or stained; good cedar shakes or shingles painted or stained Windows: Wood, double hung; steel sash Front Doors: 1-3/4" good pine or wood veneer</p>
<p>Roof Framing: 2" x 4" rafters, 24" o.c. Cover: Good wood or asbestos shingles Overhang: Boxed or finished eaves Gutters: Over entrances</p>
<p>Floor Finishes 1/2" x 2" tongue and groove select plain oak; inlaid linoleum in kitchen</p>
<p>Interior Finish Good plaster, white putty coat finish; some hardwood veneer paneling; some average wallpaper and enamel in kitchen</p>
<p>Interior Detail Interior Doors: Stock slab or six flat panel Trim: One member pine base and shoe, painted Closets: 20 linear feet of closet shelving with hook strip and pole; 15 linear feet of linen closet shelving</p>
<p>Bath Detail Number: One and one-half Floors: Average ceramic tile in main; good linoleum in half bath Walls: Hard plaster with enamel Shower: 6" average ceramic tile with glass door</p>
<p>Kitchen Base Cabinet: 10' good pine or hardwood veneer Wall Cases: 36 sq. ft. good pine or hardwood veneer Drain Board: 10' average ceramic tile; 14" splash</p>
<p>Plumbing Six standard fixtures; double laundry tray; water heater</p>
<p>Special Features Picture window; French doors; garbage disposer; kitchen exhaust vent; 4' ceramic tile top vanity in main bath</p>
<p>Electrical Romex wiring; average fixtures with a special fixture in dining room</p>

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"D" CONSTRUCTION**

D-8 QUALITY

CONVENTIONAL

<p>Foundation Reinforced concrete</p>
<p>Floor Structure Joists: 2" x 8", 16" o.c. Sub-Floor: 1" x 4" tongue and groove</p>
<p>Walls and Exterior Framing: 2" x 4" studs, 16" o.c. Sheathing: 2" x 6" or 8" boards Cover: Good 1" stucco, 1" x 10" clear heart redwood, or good cedar shingles Windows: Good wood double hung; good steel sash, painted Front Doors: 1-3/4" Philippine Mahogany</p>
<p>Roof Framing: 2" x 6" rafters, 24" o.c. Cover: 3/4" shakes, tile, or asbestos Overhang: Boxed eaves Gutters: Painted galvanized iron at all eaves</p>
<p>Floor Finishes 13/16" select plain oak; heavy inlaid linoleum in kitchen</p>
<p>Interior Finish Two coats plaster, smooth white putty coat finish; coved ceilings; small amount of good hardwood veneer paneling; some good quality wallpaper</p>
<p>Interior Detail Interior Doors: Philippine Mahogany or pine slab doors or 6 panel flat doors Trim: Two member pine base and shoe; some good hardwood Closets: Ample closet space and linen shelving</p>
<p>Bath Detail Number: One bath for two bedrooms Floors: Good ceramic tile Walls: Hard plaster and enamel Shower: 6" good ceramic tile with glass door</p>
<p>Kitchen Base Cabinet: 10' good hardwood veneer Wall Cases: Ample good hardwood Drain Board: Good ceramic tile</p>
<p>Plumbing Eight or more good fixtures; double laundry tray; two water heaters</p>
<p>Special Features Custom picture window; 4' ceramic tile top vanity in each bath; deluxe range hood and fan, built-in oven and range, garbage disposer; Formica breakfast bar</p>
<p>Electrical Romex wiring; good fixtures</p>

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"D" CONSTRUCTION**

D-9 QUALITY

CONVENTIONAL

Foundation	Reinforced concrete
Floor Structure	Joists: 2" x 10", 16" o.c. Sub-Floor: 1" x 4" tongue and groove
Walls and Exterior	Framing: 2" x 4" studs, 16" o.c. Sheathing: 1" x 6" or 8" boards Cover: Good 1" stucco, 1" x 10" good redwood, some brick or stone veneer on front wall Windows: Good wood or steel sash, painted Front Doors: Good 2" hardwood
Roof	Framing: 2" x 6" rafters, 16" o.c. Cover: 3/4" to 1-1/2" shake; adobe tile Overhang: Boxed eaves Gutters: Good quality at all eaves
Floor Finishes	Clear matched oak or good carpet in living, dining and bedrooms; terrazzo in entry; battleship linoleum, good sheet vinyl, or solid vinyl tile in family room, kitchen, utility room
Interior Finish	Good plaster, putty coat finish; ornamental acoustic plaster ceilings; good hardwood veneer paneling in den, family room and entry; some good wallpaper
Interior Detail	Interior Doors: Matched hardwood or six panel raised Trim: Hardwood to match paneling Closets: Extensive closets with cupboards and storage drawers
Bath Detail	Number: 1-1/2 for each two bedrooms Floors: Good ceramic tile Walls: Good ceramic tile wainscot, hard plaster and enamel Shower: Good ceramic tile with good glass door
Kitchen	Base Cabinet: 12' or more matched hardwood veneer Wall Cases: Many; matched hardwood veneer Drain Board: Tile or good Formica
Plumbing	Copper tubing; 10 or more good fixtures; double laundry tray; two or more water heaters
Special Features	Several custom picture windows; 6' ceramic tile vanity in each bath; built-in range, oven, range hood and fan, dishwasher, garbage disposer, breakfast bar and pantry
Electrical	Romex wiring; good fixtures with good chandelier in dining room

**SINGLE-FAMILY RESIDENTIAL
BUILDING SPECIFICATIONS
"D" CONSTRUCTION**

D-10 QUALITY

CONVENTIONAL

Foundation	Reinforced concrete
Floor Structure	Joists: 2" x 10", 16" o.c. Sub-Floor: 1" x 4" tongue and groove
Walls and Exterior	Framing: 2" x 4" studs, 16" o.c. Sheathing: 1" x 4" boards Cover: Good wood siding or masonry veneer Windows: Best quality wood or steel sash Front Doors: Best hardwood, double
Roof	Framing: 2" x 6" rafters, 16" o.c. Cover: Adobe tile or slate Overhang: Boxed eaves Gutters: Good quality at all eaves
Floor Finishes	Special matched oak or very good carpet in living, dining, and bedrooms; good terrazzo in entry; rubber, cork, or solid vinyl tile in kitchen, family room, and utility room
Interior Finish	Best plaster, putty coat finish; ornamental acoustic plaster ceilings; matched hardwood paneling in entry, dining room, den, family room, and living room; extensive use of best paint, vinyl, and cloth wall covers
Interior Detail	Interior Doors: Good hardwood or six panel raised panel Trim: Good detailed pine; hardwood to match paneling Closets: Extensive with cupboards above and drawers below
Bath Detail	Number: One for each bedroom Floors: Good ceramic tile Walls: Good ceramic tile Shower: Good ceramic tile with good glass door
Kitchen	Base Cabinet: Good matched hardwood Wall Cases: Good matched hardwood Drain Board: Good ceramic tile
Plumbing	Copper tubing; 12 or more very good fixtures; double laundry tray; three or more water heaters
Special Features	Several ornate picture windows; best quality built-in oven, range, dishwasher, range hood and fan, garbage disposer, breakfast bar, pantry, and special baths
Electrical	Romex or conduit wiring; very good fixtures; expensive chandelier in dining room

SINGLE - FAMILY RESIDENTIAL
CONVENTIONAL TYPE
SQUARE FOOT AREA COST TABLES

"D" CONSTRUCTION - SHAPE A

Class	400	500	600	700	800	900	1000	1100	1200	1300	1400
D-1	43.05	40.01	37.68	35.95	34.45	33.27	32.30	31.45	30.71	30.17	29.59
D-1.5	47.29	43.90	41.32	39.43	37.85	36.57	35.48	34.54	33.71	33.18	32.51
D-2	51.90	48.21	45.46	43.33	41.62	40.14	38.94	37.89	37.09	36.37	35.71
D-3	56.96	52.93	49.87	47.57	45.66	44.11	42.73	41.63	40.72	39.96	39.24
D-3.5	62.55	58.09	54.79	52.25	50.14	46.94	46.94	45.73	44.71	43.86	43.05
D-4	68.68	63.82	60.12	57.32	55.01	53.08	51.51	50.19	49.10	48.21	47.29
D-4.5	75.39	70.01	66.02	62.99	60.47	58.29	56.59	55.14	53.91	52.88	51.90

"D" CONSTRUCTION - SHAPE A

Class	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
D-5	69.11	66.38	64.01	62.10	60.53	59.15	58.05	56.96	56.06	55.26	54.52
D-5.5	75.90	72.91	70.33	68.24	66.47	64.93	63.65	62.55	61.51	60.63	59.85
D-6	87.23	83.89	80.86	78.50	76.44	74.72	73.22	71.95	70.82	69.70	68.79
D-6.5	96.73	92.84	89.63	87.00	84.72	82.81	81.17	79.72	78.43	77.31	76.38
D-7	107.22	103.00	99.36	96.43	93.88	91.77	90.01	88.37	86.94	85.65	84.64
D-7.5	124.24	119.28	115.06	111.66	108.73	106.29	104.27	102.31	100.79	99.25	97.99

"D" CONSTRUCTION - SHAPE A

Class	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	4000
D-5	53.92	52.81	51.90	51.14	50.41	49.87	49.28	48.88	48.55	48.21	47.57
D-5.5	59.21	58.01	56.96	56.21	55.41	54.73	54.15	53.66	53.32	52.93	52.25
D-6	68.08	66.67	65.53	64.56	63.67	62.94	62.27	61.75	61.34	60.86	60.10
D-6.5	75.54	73.90	70.53	71.56	70.66	69.81	69.02	68.47	67.98	67.45	66.62
D-7	83.68	81.91	80.45	79.35	78.24	77.37	76.52	75.87	75.37	74.72	73.80
D-7.5	96.92	94.91	93.29	91.98	90.65	89.60	88.60	87.88	87.27	86.59	85.52

"D" CONSTRUCTION - SHAPE A

Class	1300	1400	1500	1600	1700	1800	2000	2200	2400	2600	2800
D-8	126.30	124.03	121.97	120.11	118.69	117.40	114.89	112.94	111.71	109.86	108.48
D-8.5	151.29	148.53	146.03	143.85	142.15	140.47	137.57	135.26	133.71	131.46	129.92
D-9	215.27	211.34	207.88	204.78	202.31	200.00	195.77	192.35	190.36	187.17	184.93
D-9.5	319.59	313.81	308.66	303.97	300.33	296.96	290.71	285.79	282.61	277.89	274.48
D-10	380.78	373.85	367.69	362.28	357.93	353.87	346.45	340.68	336.71	331.13	327.14

"D" CONSTRUCTION - SHAPE A

Class	3000	3200	3400	3600	3800	4000	4200	4400	4600	4800	5000
D-8	107.35	106.46	105.69	104.85	104.14	99.98	103.24	102.80	102.57	102.05	101.90
D-8.5	128.57	127.50	126.54	125.63	124.63	124.05	123.63	123.03	122.73	122.18	122.06
D-9	183.04	181.49	180.17	178.77	177.36	176.50	175.99	175.07	174.75	173.94	173.63
D-9.5	271.76	269.45	267.49	265.38	263.40	262.11	261.25	259.97	259.42	258.25	257.89
D-10	323.82	321.08	318.73	316.34	313.88	312.37	302.20	309.89	309.09	307.75	307.35

SINGLE - FAMILY RESIDENTIAL
CONVENTIONAL TYPE
SQUARE FOOT AREA COST TABLES

"D" CONSTRUCTION - SHAPE B

Class	400	500	600	700	800	900	1000	1100	1200	1300	1400
D-1	43.95	40.84	38.51	36.62	35.15	33.96	32.92	32.22	31.43	30.82	30.21
D-1.5	48.31	44.86	42.27	40.18	38.58	37.35	36.25	35.29	34.45	33.90	33.20
D-2	53.01	49.21	46.43	44.17	42.38	40.98	39.75	38.85	37.88	37.16	36.42
D-3	58.23	54.11	51.02	48.42	46.56	45.01	43.64	42.64	41.62	40.83	40.05
D-3.5	63.90	59.35	55.98	53.20	51.14	49.44	47.91	46.80	45.71	44.84	43.95
D-4	70.23	65.17	61.46	58.46	56.12	54.28	52.64	51.34	50.14	49.19	48.31
D-4.5	77.07	71.52	67.47	64.19	61.61	59.61	57.79	56.39	55.04	53.96	53.01

"D" CONSTRUCTION - SHAPE B

Class	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
D-5	70.37	67.61	65.39	63.38	61.90	60.47	59.24	58.18	57.36	56.47	55.73
D-5.5	77.26	74.21	71.75	69.57	67.94	66.38	65.13	63.90	63.03	61.96	61.18
D-6	88.93	85.39	82.51	80.08	78.09	76.38	74.83	73.56	72.43	71.30	70.43
D-6.5	98.53	94.68	91.45	88.72	86.65	84.58	82.92	81.48	80.32	79.01	78.02
D-7	109.20	104.92	101.41	98.38	95.98	93.76	91.98	90.29	89.00	87.58	86.40
D-7.5	126.53	121.54	117.44	113.96	111.19	108.59	106.54	104.62	98.22	96.67	95.40

"D" CONSTRUCTION - SHAPE B

Class	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	4000
D-5	55.14	53.96	53.05	52.28	51.74	51.14	50.56	50.14	49.76	49.44	48.83
D-5.5	60.54	59.31	58.23	57.46	56.83	56.21	55.51	55.04	54.62	54.28	53.61
D-6	69.66	68.24	66.96	66.11	65.33	64.56	63.90	63.36	62.91	62.51	61.73
D-6.5	77.17	75.59	74.31	73.22	72.42	71.56	70.82	70.22	69.66	69.19	68.37
D-7	85.53	83.83	82.30	81.17	80.26	79.35	78.54	77.79	77.17	76.69	75.82
D-7.5	99.15	97.07	95.37	94.07	93.01	91.98	90.94	90.17	89.40	88.86	87.80

"D" CONSTRUCTION - SHAPE B

Class	1300	1400	1500	1600	1700	1800	2000	2200	2400	2600	2800
D-8	129.06	126.67	124.56	122.69	121.22	120.00	117.57	115.45	113.95	112.59	111.27
D-8.5	154.46	151.68	149.11	146.98	145.16	143.61	140.81	138.24	136.37	134.79	133.16
D-9	219.95	215.85	212.29	209.19	206.61	204.44	200.39	196.81	194.09	191.87	189.49
D-9.5	326.55	320.58	315.30	310.51	306.87	303.47	297.60	292.24	288.22	284.85	281.38
D-10	389.14	381.93	375.64	370.12	365.61	361.66	354.55	348.26	343.51	339.49	335.39

"D" CONSTRUCTION - SHAPE B

Class	3000	3200	3400	3600	3800	4000	4200	4400	4600	4800	5000
D-8	110.15	109.15	108.31	107.65	106.76	106.31	105.93	105.49	105.19	104.81	104.56
D-8.5	131.80	130.61	129.60	128.84	127.91	127.28	126.80	126.30	126.00	125.51	125.15
D-9	187.64	185.97	184.53	183.34	181.97	181.18	180.49	179.78	179.27	178.62	178.24
D-9.5	278.62	276.04	274.06	272.35	270.17	268.94	268.01	266.88	266.27	265.19	264.67
D-10	331.96	328.91	326.45	324.46	322.08	320.55	319.51	318.04	317.28	316.11	315.44

SINGLE - FAMILY RESIDENTIAL
CONVENTIONAL TYPE
SQUARE FOOT COST TABLES

"D" CONSTRUCTION - SHAPE C

Class	400	500	600	700	800	900	1000	1100	1200	1300	1400
D-1	44.99	41.73	39.36	37.17	35.78	34.66	33.63	32.83	32.05	31.45	30.96
D-1.5	49.43	45.85	43.18	40.84	39.36	38.06	36.95	36.00	35.21	34.54	33.95
D-2	54.17	50.38	47.39	44.86	43.18	41.72	40.52	39.49	38.67	37.89	37.32
D-3	59.48	55.27	52.06	49.24	47.39	45.79	44.55	43.42	42.51	41.63	40.93
D-3.5	65.39	60.71	57.22	54.11	52.05	50.33	48.83	47.67	46.64	45.73	44.99
D-4	71.76	66.62	62.77	59.35	57.11	55.26	53.61	52.28	51.26	50.19	49.41
D-4.5	78.75	73.23	68.91	65.17	62.75	60.63	58.93	57.45	56.28	55.14	54.17

"D" CONSTRUCTION - SHAPE C

Class	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
D-5	71.64	68.91	66.57	64.67	63.05	61.80	60.58	59.48	58.55	57.81	57.09
D-5.5	78.70	75.66	73.09	71.00	69.19	67.86	66.52	65.39	64.28	63.51	62.72
D-6	90.44	87.07	84.08	81.68	79.67	78.06	76.51	75.17	73.92	72.97	72.12
D-6.5	100.28	96.48	93.20	90.56	88.33	86.45	84.82	83.33	81.98	80.93	79.94
D-7	111.16	106.89	103.32	100.33	97.82	95.85	93.99	92.36	90.86	89.68	88.63
D-7.5	128.71	123.82	122.55	116.25	113.37	111.10	108.94	107.01	106.74	103.90	102.63

"D" CONSTRUCTION - SHAPE C

Class	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	4000
D-5	56.43	55.36	54.46	53.60	52.98	52.41	51.93	51.47	51.09	50.76	50.12
D-5.5	61.95	60.74	59.73	58.89	58.17	57.60	57.04	56.47	56.07	55.73	55.01
D-6	71.28	69.96	68.75	67.75	66.94	66.20	65.57	64.97	64.51	64.10	63.27
D-6.5	78.98	77.49	76.17	75.10	74.21	73.43	72.76	71.96	71.51	71.04	70.15
D-7	87.57	85.92	84.47	83.18	82.21	81.35	80.60	79.80	79.25	78.78	77.75
D-7.5	101.44	99.49	97.82	96.42	95.21	94.17	93.31	92.39	91.85	91.23	90.07

"D" CONSTRUCTION - SHAPE C

Class	1300	1400	1500	1600	1700	1800	2000	2200	2400	2600	2800
D-8	131.92	129.56	127.75	125.76	124.08	122.73	120.51	118.47	116.79	115.30	114.10
D-8.5	158.01	155.14	152.88	150.51	148.61	147.00	144.27	141.89	139.84	138.08	136.66
D-9	224.87	220.78	217.60	214.22	211.60	209.24	205.37	201.91	199.07	196.49	194.53
D-9.5	333.95	327.92	323.23	318.06	314.13	310.73	304.96	299.88	295.49	291.94	288.81
D-10	397.85	390.67	385.10	379.04	374.32	370.26	363.34	357.22	352.32	347.90	344.16

"D" CONSTRUCTION - SHAPE C

Class	3000	3200	3400	3600	3800	4000	4200	4400	4600	4800	5000
D-8	113.07	111.99	111.27	110.55	109.66	109.18	108.73	108.31	108.00	107.62	107.35
D-8.5	135.35	134.09	133.16	132.33	131.31	130.77	130.24	129.60	129.32	128.79	128.57
D-9	192.68	190.96	189.49	188.33	186.83	186.10	185.29	184.53	184.00	183.27	183.04
D-9.5	286.19	283.43	281.38	279.60	277.48	276.20	275.10	274.06	273.31	272.19	271.76
D-10	341.02	337.64	335.39	333.23	330.62	329.26	327.89	326.45	325.59	324.33	323.82