



SURROUND ARCHITECTURE  
MOONBEAM BOULDER, LLC

# TRAILHEAD

DESIGN PATTERN BOOK

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## OWNER/DEVELOPER:

Moonbeam Boulder, LLC  
Boulder, CO

## PLANNING AND DESIGN CRITERIA BOOKLET

### ARCHITECTS:

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303-440-8089

### LANDSCAPE ARCHITECTS:

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### CIVIL ENGINEERS:

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### TRAFFIC ENGINEERS:

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1889 York Street, Denver CO 80206  
303-333-1105

\*\*This sheet was updated with a Minor Modification to the Trailhead Design Pattern Book through City of Boulder Administrative Review Case #ADR2015-00197.



SURROUND ARCHITECTURE  
MOONBEAM BOULDER, LLC

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" Going to the mountains is going home. "

- John Muir



SURROUND ARCHITECTURE  
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INTRODUCTION

1.0



## 1.1: GOALS OF THE DESIGN PATTERN PROCESS



**THIS PATTERN BOOK PROVIDES GUIDANCE** to future homeowners, architects, and home builders so they may design and build in harmony with the goals stated by the Design and Development Team. These goals have been reinforced through input from the City of Boulder Planning Staff, the City of Boulder Planning Board, the neighborhood, and other members of the community.

This booklet describes positive neighborhood qualities and goals without limiting creativity or prescribing style.

This document is a product of a holistic planning process. It demonstrates the input from the community solicited by the current design and development team; it also reflects the years of comments and responses from the community, city staff and planning board members as previous proposals have come forth from previous owners for a neighborhood addition in this location. This Pattern Book is essentially an extension of the City of Boulder's Junior Academy Sub-community Area Plan (approved by the City Council October 27, 2009). The Sub-community plan defines the broad goals and objectives, and this document describes the means to achieve these goals.

The entire *design and development team honors the community's vision in developing this neighborhood extension*. The following booklet is designed to provide clear and useful guidance through the building and development process, to define the elements of design,

and to optimize both the homeowner's residence and the neighborhood character.

This site is at the edge of the city and therefore functions as a threshold where the patterns of the city give way to the patterns of nature. This creates something very wonderful in terms of character and feel. Edges, by their very nature, create interest.

The "neighborhood" is immediately adjacent to the city center, as well as an existing network of homes with their own unique quality and feel, nestled against the beautiful open space that sits at the foot of the Rockies.

The path through the home design process weaves its way through challenges and opportunities. These guidelines intend to communicate the overall goals, outline the process, describe the site and the types of lots, and discuss examples of homes and neighborhood qualities worth emulating. The guidelines seek to insure quality, compatible and contextual character, and to provide some assurances within the community that the overall planning goals are met.

It is not the intent of this booklet to dictate "style". The intent is to clarify existing home style patterns and ask that future homes are compatible with the neighborhood fabric in terms of form, materiality, and overall design and construction quality.





## 1.2: EXISTING NEIGHBORHOOD CHARACTER

**QUALITIES WORTH UNDERSTANDING** and responding to carefully include:

- Scale of the surrounding neighborhood
- Patterns of the existing homes in the neighborhood
- The material and color palettes
- Textural qualities
- The relationship between home and street

Shown to the right are representative examples of the essential components of the surrounding neighborhood. Designers and home builders should not copy, but instead acknowledge and respond to the images in thoughtful and specific ways.

Home sizes within the neighborhood vary, but many are defined by massing that is broken-up. Although some are “grand”, many are on the smaller side and defined by their level of quality over their size.

There are many great examples of historic homes within the surrounding neighborhoods. Avoid replicating historic details. Instead, re-interpret historic details with an understanding of their intent. This method produces results that are unique and appropriate to the time and the context. Using highest-quality materials available and avoiding imitative materials is the best overall approach towards achieving the kind of richness and detail found in the historic-contextual homes.

Although many of the homes within the immediate area are older (100 years in some cases), many examples of newer more contemporary homes within the neighborhood exist. Diversity of home styles is one of the hallmark features of this neighborhood.

The home’s appropriateness to the site is more important than its “style”. ***First understanding and paying attention to the existing context***, then responding with a high quality material palette that reflects the consideration of context will lead to a home that is timeless and not imitative or stylistically restrained.



An example of a typical home found within the neighborhood



An example of a historic home in the neighborhood



An example of a contemporary home within the neighborhood





# 1.3: EXISTING NEIGHBORHOOD CONTEXT

**SITE CONSIDERATIONS** such as landscaping, streets and sidewalk elements are just as important as home design in constructing *neighborhood character*. The site plan layout is designed to demonstrate connection to, and extension of, the existing circulation and landscape patterns. The placement of the home on the individual lots, the landscaping, walkways and porches emphasize the importance of activating the front of the house. The following examples of landscaping and circulation in the existing neighborhood need to be considered:

## KEY NEIGHBORHOOD FEATURES:

- Mature landscaping.
- Separating the sidewalks from the streets with planting strips.
- Clear “front of the house” and sense of entry.
- Richness of plant materials and hardscape.
- Not everything is the same, variety is essential at every level.
- While open and inviting in appearance, there is a very clear public / private delineation without ambiguous common areas.

Many of the homes within the neighborhood have an activated “front of the house” with a small patio or a front porch, flower boxes and beds, and trees and shrubs.

The neighborhood acts in many ways as a portal to the Rockies. Trailhead access for the neighborhood is an important consideration as a contributor to the neighborhood character.



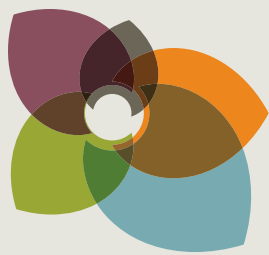
The neighborhood serves as a portal to Open Space hiking trails



Homes have clear sense of entry and ‘activated’ fronts.



Sidewalk and street separation with trees and plantings.





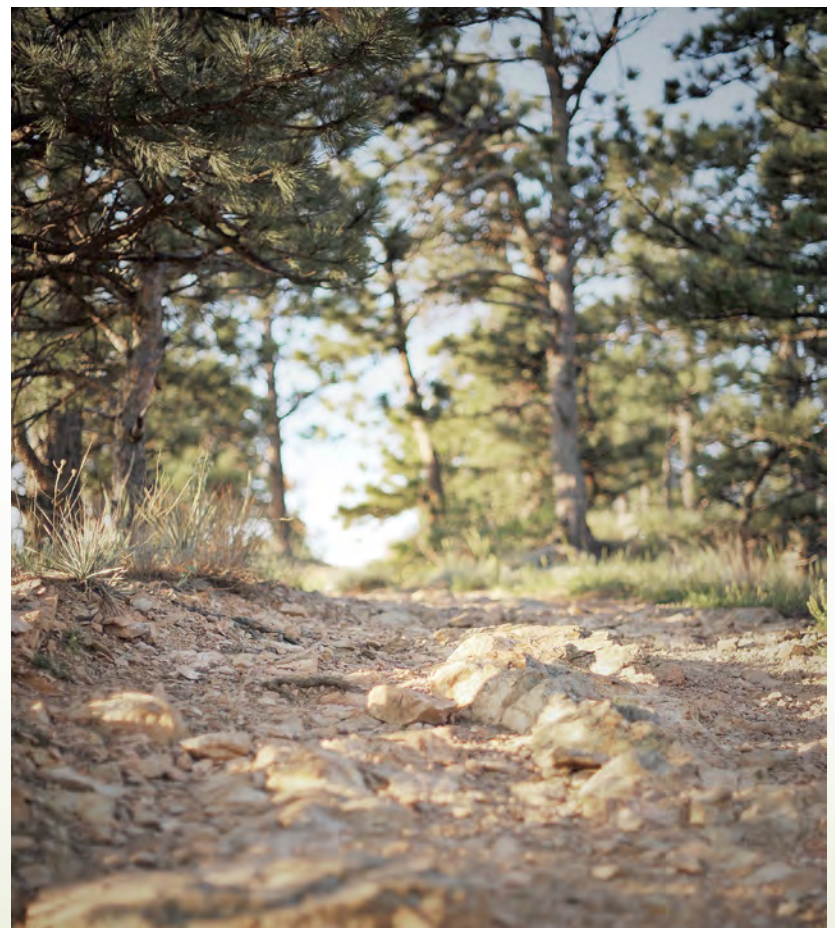
## 1.4: SITE PLAN



SITE PLAN

**THE ILLUSTRATED SITE PLAN** of the property addresses the goals identified through the planning process and input from the community. The two primary goals identified by this process:

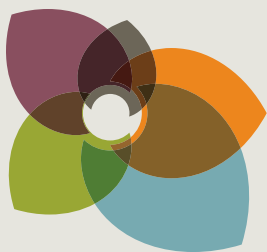
- *The site should feel like an extension of the adjacent existing neighborhood.*
- *The site should be inviting and accessible to the adjacent community.*







“ Adopt the pace of nature: her secret is patience. ”  
- Ralph Waldo Emerson



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PROCESS 2.0



## 2.1: PROCESS OUTLINE

### PROCESS

1. The owner/designer assembles and submits a schematic design package of drawings, renderings, and material samples to the master developer and their design team for review.
2. The owner/designer meets with the master developer and their design team to present and discuss the concepts of the design, and how the design meets the intent of the design criteria.
3. The master developer's design team has a period of time to review and respond to the owner/designer's documents and presentation.
4. The owner/designer has the opportunity to respond to comments, if any, and re-submit the design package for further review.
5. Upon approval of the home and landscape design, the master developer's design team will issue a statement of compliance to the homeowner/designer, indicating that the specific plans have been approved, and that the designers may proceed with the development of construction documents.
6. The owner/designer submits construction documents to the master developer's design team for a final review of conformance to the approved design direction.
7. Upon final approval of the construction documents, the master developer's design team responds with a signed letter of compliance to the owner/designer stating that the plans are in compliance with the design guidelines and the project may be submitted to the City of Boulder for issuance of a building permit.

### TIMELINE

The time estimated between the initial schematic design package submittal by the owner/designer to the final issuance of the certificate of compliance with the Design Pattern Booklet is four to six weeks, depending upon a number of factors including:

- Completeness of submittal.
- Degree of alignment with the intent of the document.
- Efficiency and accuracy with which the owner or the owner's designer can respond to comments with drawing revisions.

### SCHEMATIC DESIGN SUBMITTAL

*Package to include:*

1. Scaled site plan of the house, including all proposed hardscape treatments and dimensions to all property lines and setbacks, and general indication of existing and proposed grading.
2. Scaled elevations of all sides of the proposed home with all major materials identified.
3. Three dimensional images of the proposed home.
4. A shadow analysis, demonstrating compliance with the City of Boulder solar access requirements.
5. Tabular information indicating size of house, size of garage, lot area, and building coverage.
6. A preliminary landscape concept plan.

### ISSUANCE OF STATEMENT OF COMPLIANCE

Indicating that the specific plans have been approved, and that the designers may proceed with the development of construction documents.

### CONSTRUCTION DOCUMENT SUBMITTAL

*Package to include:*

1. Final site plan with all proposed landscape and hardscape improvements. Site plan to show eave overhangs.
2. Final finished grading plans.
3. Building plans, sections, and elevations indicating all building materials and details.
4. Outline specifications of proposed materials.
5. Color selections.
6. Detailed plans indicating points of connection to existing utilities.

### SIGNED LETTER OF COMPLIANCE

Certifying that the design is in compliance with the intent of the Design Pattern Booklet and that the designers may submit for building permit.

***SUBMIT FOR A BUILDING PERMIT*** with the City of Boulder Building Department. The City will make the final determination as to the adherence of the design to the intent and criteria of these Design Guidelines. Changes may be required.

***CONSTRUCTION MAY BEGIN*** only after the receipt of the Building Permit from the City of Boulder.







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LOT PLANNING

3.0



3.1: OVERALL SITE PLAN



LOT PLAN

**TWO LOT TYPES** were created for the project in order to serve the dual conditions identified during the site analysis and community outreach processes: neighborhood fabric and open rural space. The site is located on the edge of the Mapleton and Newlands neighborhoods and is also adjacent to Open Space. As an edge condition site it is important to acknowledge the existing transition from neighborhood fabric to rural open space. With this goal in mind, two lot types were created:

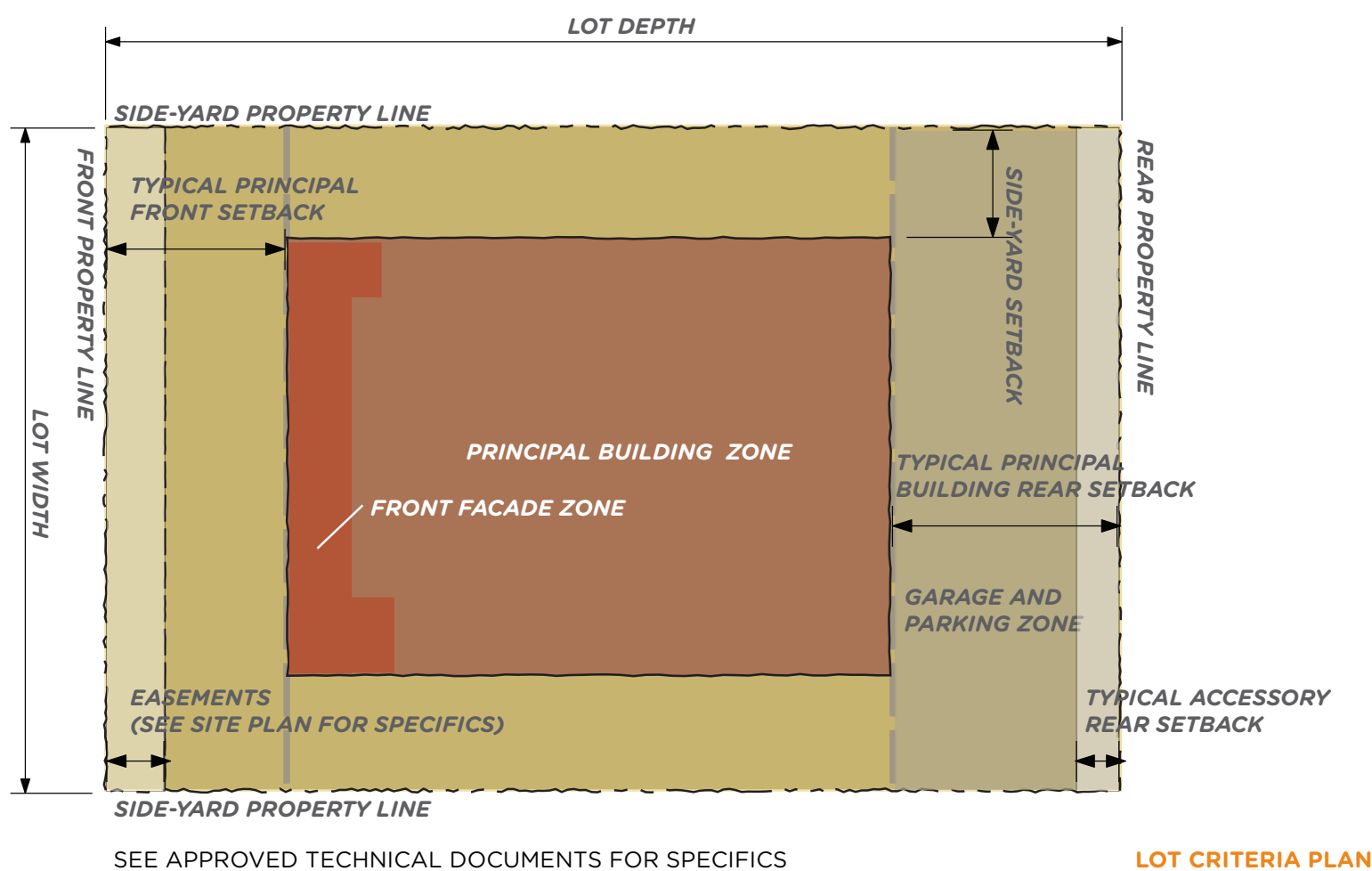
**CARRIAGE LOTS** are located along 4th street as well as the Dewey Avenue extension into the site. The shape, size, and orientation of these lots (rectangular with a narrower frontage) mimic the adjacent neighborhood. The extension of these homes into the site help to blend the edge.

**COTTAGE LOTS** are located on ‘rear’ and interior areas of the site. The intent is for the western edge of the site, which borders Open Space, to become less dense as it meets the rural conditions. Cottage Lots are larger and less dense.





## 3.2: LOT TYPES



This section outlines criteria for placement of homes on the lot, including orientation, access, and lot-specific landscape zones. The section utilizes the following terms to describe the design of the individual lots:

### ZONES

The zones are the designated portion of the site to be built upon. The zone takes into consideration lot-specific considerations as well as organizational principles that are appropriate to the context and the community. Additionally, the following specific types of zones will exist for every property:

#### FRONT FACADE ZONE

The portion of the lot to which the design must orient the main entry, porch, and front elevation of the house.

#### HOUSE PLACEMENT ZONE

All of the homes building mass and secondary structures will need to be identified within this zone.

#### GARAGE PLACEMENT ZONE

Garage and parking facilities will need to be programmed within these zones.

### LOT COVERAGE

Lot coverage is used to describe the percentage of the lot covered by buildings (home, covered porches, parking structures).

### SHARED ACCESS EASEMENTS

In some cases, shared access easements, either pedestrian or automobile access easements, will be shared between adjacent properties. The enclosed Landscape Patterns outline the specific treatments of these areas.

### SETBACKS

In addition to the City of Boulder zoning setbacks for this property, this criteria defines additional setback requirements (no-build zones)

**Front Yard Setback:** The distance from the front property line to the face of the home

**Side Yard Setback:** the distance to the side property line and the structure. These will be defined side to side to consider solar setback design limitations.

**Rear Setback:** The distance from the back property line to a structure. This may vary from between principal and accessory structures.





3.3: CARRIAGE LOT TYPE



| Trailhead Subdivision - Lot Metrics |          |               |                       |              |                             |       |                             |       |                      |                                    |                              |                             |                             |
|-------------------------------------|----------|---------------|-----------------------|--------------|-----------------------------|-------|-----------------------------|-------|----------------------|------------------------------------|------------------------------|-----------------------------|-----------------------------|
| Lot                                 | Type     | Lot Area (SF) | Minimum Front Setback | Front of Lot | Minimum Side Setback        | Side  | Minimum Side Setback        | Side  | Minimum Rear Setback | Min. Separation Between Structures | Min. Accessory Front Setback | Min. Accessory Side Setback | Min. Accessory Rear Setback |
| Lot 1                               | Carriage | 6,080         | 25'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 2                               | Carriage | 5,750         | 25'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 3                               | Carriage | 4,313         | 25'                   | East         | 5'                          | South | 5'                          | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 4                               | Carriage | 8,625         | 25'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 5                               | Carriage | 6,613         | 25'                   | East         | 5'                          | South | 12.5' Min. Side from Street | North | 25'                  | 6'                                 | 55'                          | 3' (12.5' from street)      | 0 or 3'                     |
| Lot 6                               | Carriage | 7,475         | 25'                   | East         | 12.5' Min. Side from Street | South | 5'                          | North | 25'                  | 6'                                 | 55'                          | 3' (12.5' from street)      | 0 or 3'                     |
| Lot 7                               | Carriage | 6,325         | 25'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 8                               | Carriage | 4,830         | 25'                   | East         | 5'                          | South | 5'                          | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 9                               | Carriage | 10,125        | 25'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 10                              | Carriage | 6,729         | 25'                   | East         | 5' (15' min aggregate)      | South | 12.5' (15' min aggregate)   | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 11                              | Carriage | 8,160         | 25'                   | West         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 10'                         |
| Lot 12                              | Carriage | 6,000         | 20'                   | North        | 10'                         | East  | 5' (15' min aggregate)      | West  | 25'                  | 6'                                 | 55'                          | 10' (East) 3' (West)        | 3'                          |
| Lot 13                              | Carriage | 5,981         | 20'                   | North        | 5' (15' min aggregate)      | East  | 5' (15' min aggregate)      | West  | 25'                  | 6'                                 | 55'                          | 3'                          | 3'                          |
| Lot 14                              | Carriage | 5,981         | 20'                   | South        | 5' (15' min aggregate)      | East  | 5' (15' min aggregate)      | West  | 25'                  | 6'                                 | 55'                          | 3'                          | 3'                          |
| Lot 15                              | Carriage | 6,000         | 20'                   | South        | 10'                         | East  | 5' (15' min aggregate)      | West  | 25'                  | 6'                                 | 55'                          | 10' (East) 3' (West)        | 3'                          |
| Lot 16                              | Carriage | 8,400         | 25'                   | West         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 10'                         |
| Lot 17                              | Cottage  | 20,095        | 25'                   | West         | 5' (15' min aggregate)      | South | 45'                         | North | 25'                  | 6'                                 | 55'                          | 45' (North) 3' (South)      | 10'                         |
| Lot 18                              | Cottage  | 26,603        | 10'                   | East         | 5' (15' min aggregate)      | South | 45'                         | North | 25'                  | 6'                                 | 55'                          | 45' (North) 3' (South)      | 15'                         |
| Lot 19                              | Cottage  | 13,141        | 15'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 15'                         |
| Lot 20                              | Cottage  | 13,141        | 15'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 15'                         |
| Lot 21                              | Cottage  | 13,141        | 15'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 15'                         |
| Lot 22                              | Cottage  | 16,386        | 25'                   | East         | 30'                         | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 30' (South) 3' (North)      | 15'                         |
| Lot 23                              | Cottage  | 11,520        | 25'                   | West         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 10'                         |

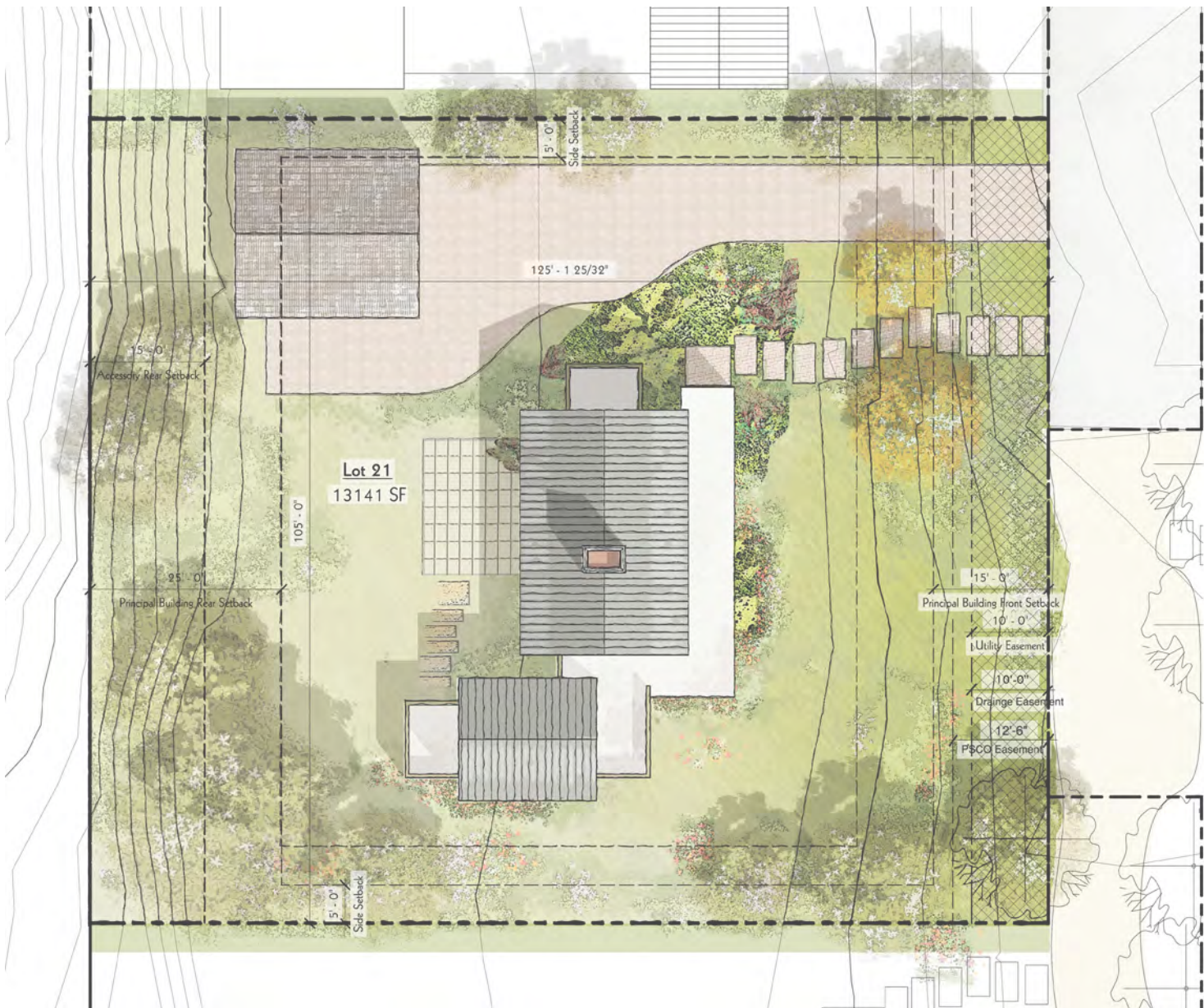
Shaded Cells indicate that the setback shown is a variation from RL-1 Zoning standards

Exhibit to Project Fact Sheet





3.4: COTTAGE LOT TYPE



| Trailhead Subdivision - Lot Metrics |          |               |                       |              |                             |       |                             |       |                      |                                    |                              |                             |                             |
|-------------------------------------|----------|---------------|-----------------------|--------------|-----------------------------|-------|-----------------------------|-------|----------------------|------------------------------------|------------------------------|-----------------------------|-----------------------------|
| Lot                                 | Type     | Lot Area (SF) | Minimum Front Setback | Front of Lot | Minimum Side Setback        | Side  | Minimum Side Setback        | Side  | Minimum Rear Setback | Min. Separation Between Structures | Min. Accessory Front Setback | Min. Accessory Side Setback | Min. Accessory Rear Setback |
| Lot 1                               | Carriage | 6,080         | 25'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 2                               | Carriage | 5,750         | 25'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 3                               | Carriage | 4,313         | 25'                   | East         | 5'                          | South | 5'                          | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 4                               | Carriage | 8,625         | 25'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 5                               | Carriage | 6,613         | 25'                   | East         | 5'                          | South | 12.5' Min. Side from Street | North | 25'                  | 6'                                 | 55'                          | 3' (12.5' from street)      | 0 or 3'                     |
| Lot 6                               | Carriage | 7,475         | 25'                   | East         | 12.5' Min. Side from Street | South | 5'                          | North | 25'                  | 6'                                 | 55'                          | 3' (12.5' from street)      | 0 or 3'                     |
| Lot 7                               | Carriage | 6,325         | 25'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 8                               | Carriage | 4,830         | 25'                   | East         | 5'                          | South | 5'                          | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 9                               | Carriage | 10,125        | 25'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 10                              | Carriage | 6,729         | 25'                   | East         | 5' (15' min aggregate)      | South | 12.5' (15' min aggregate)   | North | 25'                  | 6'                                 | 55'                          | 3'                          | 0 or 3'                     |
| Lot 11                              | Carriage | 8,160         | 25'                   | West         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 10'                         |
| Lot 12                              | Carriage | 6,000         | 20'                   | North        | 10'                         | East  | 5' (15' min aggregate)      | West  | 25'                  | 6'                                 | 55'                          | 10' (East) 3' (West)        | 3'                          |
| Lot 13                              | Carriage | 5,981         | 20'                   | North        | 5' (15' min aggregate)      | East  | 5' (15' min aggregate)      | West  | 25'                  | 6'                                 | 55'                          | 3'                          | 3'                          |
| Lot 14                              | Carriage | 5,981         | 20'                   | South        | 5' (15' min aggregate)      | East  | 5' (15' min aggregate)      | West  | 25'                  | 6'                                 | 55'                          | 3'                          | 3'                          |
| Lot 15                              | Carriage | 6,000         | 20'                   | South        | 10'                         | East  | 5' (15' min aggregate)      | West  | 25'                  | 6'                                 | 55'                          | 10' (East) 3' (West)        | 3'                          |
| Lot 16                              | Carriage | 8,400         | 25'                   | West         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 10'                         |
| Lot 17                              | Cottage  | 20,095        | 25'                   | West         | 5' (15' min aggregate)      | South | 45'                         | North | 25'                  | 6'                                 | 55'                          | 45' (North) 3' (South)      | 10'                         |
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| Lot 20                              | Cottage  | 13,141        | 15'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 15'                         |
| Lot 21                              | Cottage  | 13,141        | 15'                   | East         | 5' (15' min aggregate)      | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 3'                          | 15'                         |
| Lot 22                              | Cottage  | 16,386        | 25'                   | East         | 30'                         | South | 5' (15' min aggregate)      | North | 25'                  | 6'                                 | 55'                          | 30' (South) 3' (North)      | 15'                         |
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Shaded Cells indicate that the setback shown is a variation from RL-1 Zoning standards

Exhibit to Project Fact Sheet





3.5: CARRIAGE LOT TYPE IN WILDLAND-URBAN INTERFACE ZONE

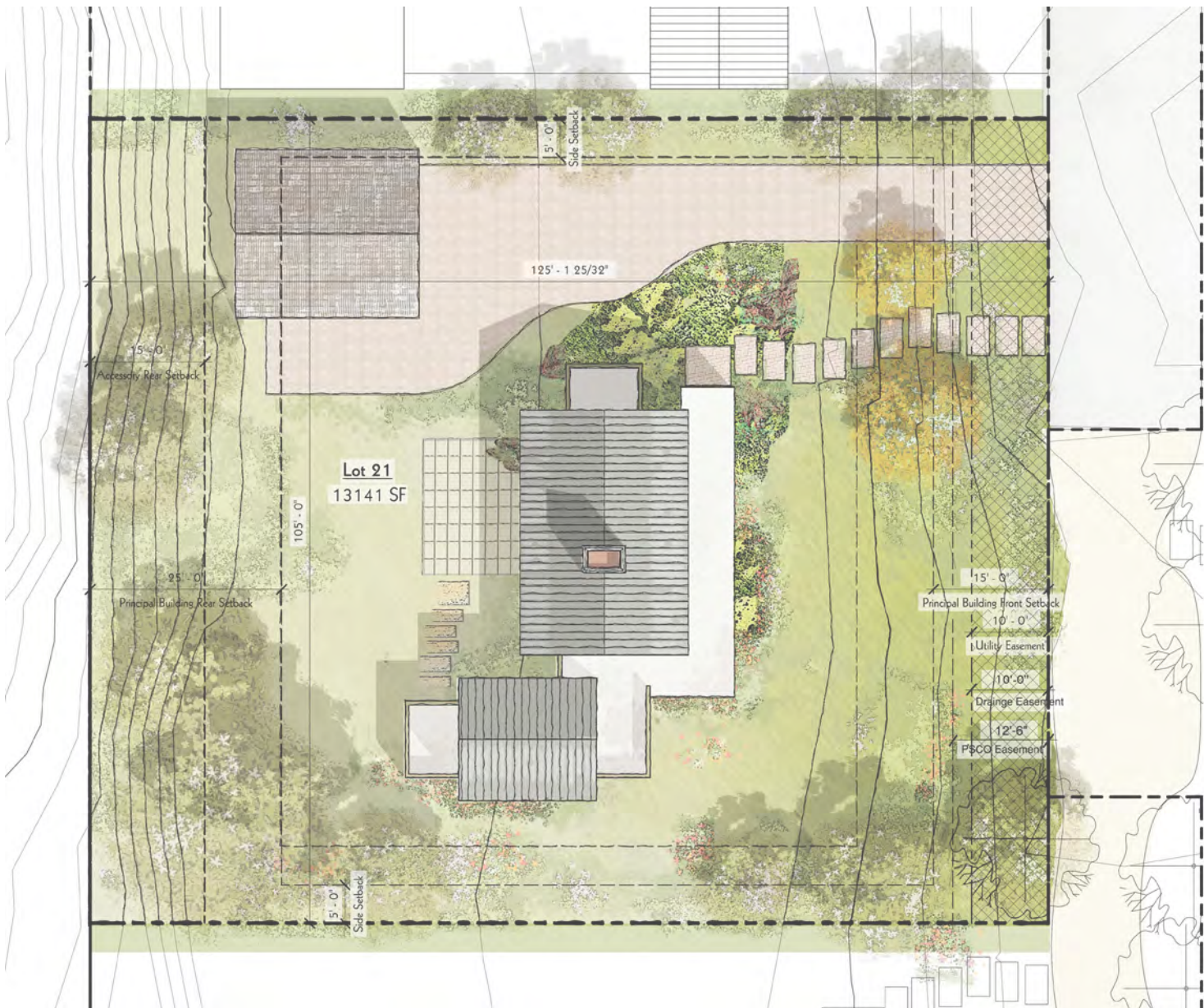


Several of the Carriage Lots in the Trailhead Development are subject to the regulations of the International Wildland-Urban Interface Code, as adopted and amended by the City of Boulder. Lots subject to such requirements include Lot 12 and Lot 15, which must conform to Class 3 Ignition Resistant Construction per the 2012 IWUIC, as well as Lot 11, Lot 13, Lot 14, and Lot 16, which must conform to Class 2 Ignition Resistant Construction per the 2012 IWUIC. These lots may require special provisions to allow for slight alterations to the Building Details in the Trailhead Design Pattern Book, in order to meet the appropriate Ignition Resistant Construction Classification requirements of the 2012 IWUIC. The design guidelines in the Trailhead Design Pattern Book must be upheld as closely as possible. It is up to the applicant to endeavor their best attempt to uphold the design intent in the Trailhead Design Pattern Book, while also complying with the IWUIC requirements. Lots affected by the IWUIC requirements shall be exempt from Appendix B of the IWUIC as adopted by the City of Boulder, and the applicants for those lots shall not be required to submit a Vegetation Management Plan. Landscape requirements outlined in the Trailhead Design Pattern Book and approved Technical Document shall be maintained. The design guidelines for the residences within this zone are to adhere to the same Lot Metrics as outlined in Section 3.3 Carriage Lot Type.

\*\*This sheet is a Minor Modification to the Trailhead Design Pattern Book through City of Boulder Administrative Review Case #ADR2015-00197.



3.6: COTTAGE LOT TYPE IN WILDLAND-URBAN INTERFACE ZONE



Several of the Cottage Lots in the Trailhead Development are subject to the regulations of the International Wildland-Urban Interface Code, as adopted and amended by the City of Boulder. Lots subject to such requirements include Lot 17, Lot 18, Lot 19, Lot 20, Lot 21, Lot 22, and Lot 23, which must conform to Class 2 Ignition Resistant Construction per the 2012 IWUIC. These lots may require special provisions to allow for slight alterations to the Building Details in the Trailhead Design Pattern Book, in order to meet the appropriate Ignition Resistant Construction Classification requirements of the 2012 IWUIC. The design guidelines in the Trailhead Design Pattern Book must be upheld as closely as possible. It is up to the applicant to endeavor their best attempt to uphold the design intent in the Trailhead Design Pattern Book, while also complying with the IWUIC requirements. Lots affected by the IWUIC requirements shall be exempt from Appendix B of the IWUIC as adopted by the City of Boulder, and the applicants for those lots shall not be required to submit a Vegetation Management Plan. Landscape requirements outlined in the Trailhead Design Pattern Book and approved Technical Document shall be maintained. The design guidelines for the residences within this zone are to adhere to the same Lot Metrics as outlined in Section 3.4 Cottage Lot Type.

\*\*This sheet is a Minor Modification to the Trailhead Design Pattern Book through City of Boulder Administrative Review Case #ADR2015-00197.





SURROUND ARCHITECTURE  
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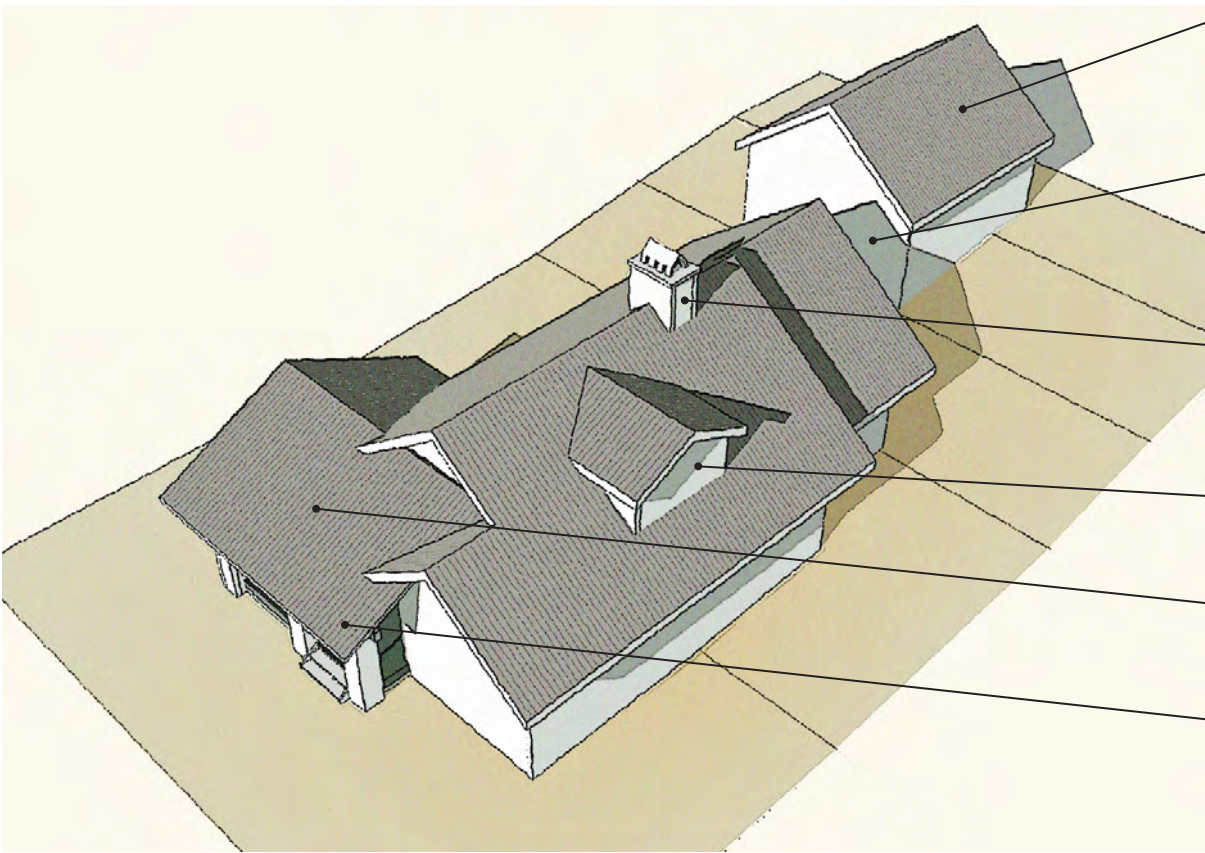
**BUILDING FORM** 4.0



## 4.1: CARRIAGE HOME BUILDING FORMS

**THE HOME STYLES AND SIZES** within the surrounding neighborhood vary greatly. Consistent to these homes, however, are techniques to reduce the apparent mass of the home. In keeping with this variety, new homes should utilize building forms which minimize the visual impact of the structure. Strategies and techniques to consider include:

- Varied roof forms
- Gable roof forms (in lieu of hip roofs)
- Separate garage massing from the main house
- Dormer types (shed, gable dormers)
- Articulation of wall planes
- Asymmetrical compositions
- Roof slope



*The slope of the garage roof should match that of the primary building*

*Separation between the primary building and the garage reduce the scale of the overall building appearance*

*Chimney projections should be close to the central core of the building*

*Dormers placed to break-up the expanse of roof areas*

*Complementary secondary axis off of main form axis*

*Smaller scaled roof elements at the main entry to bring down the scale of the house and create a small-scale entry appearance*

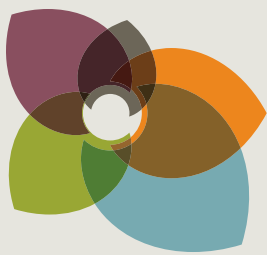


*The roof form steps down to smaller scale roof forms at the entry and the front porch*

*Prominent eaves create depth and shadow opportunities*

*Articulated wall segments break up the mass of the building*

*The detail is an integral part of the home design*



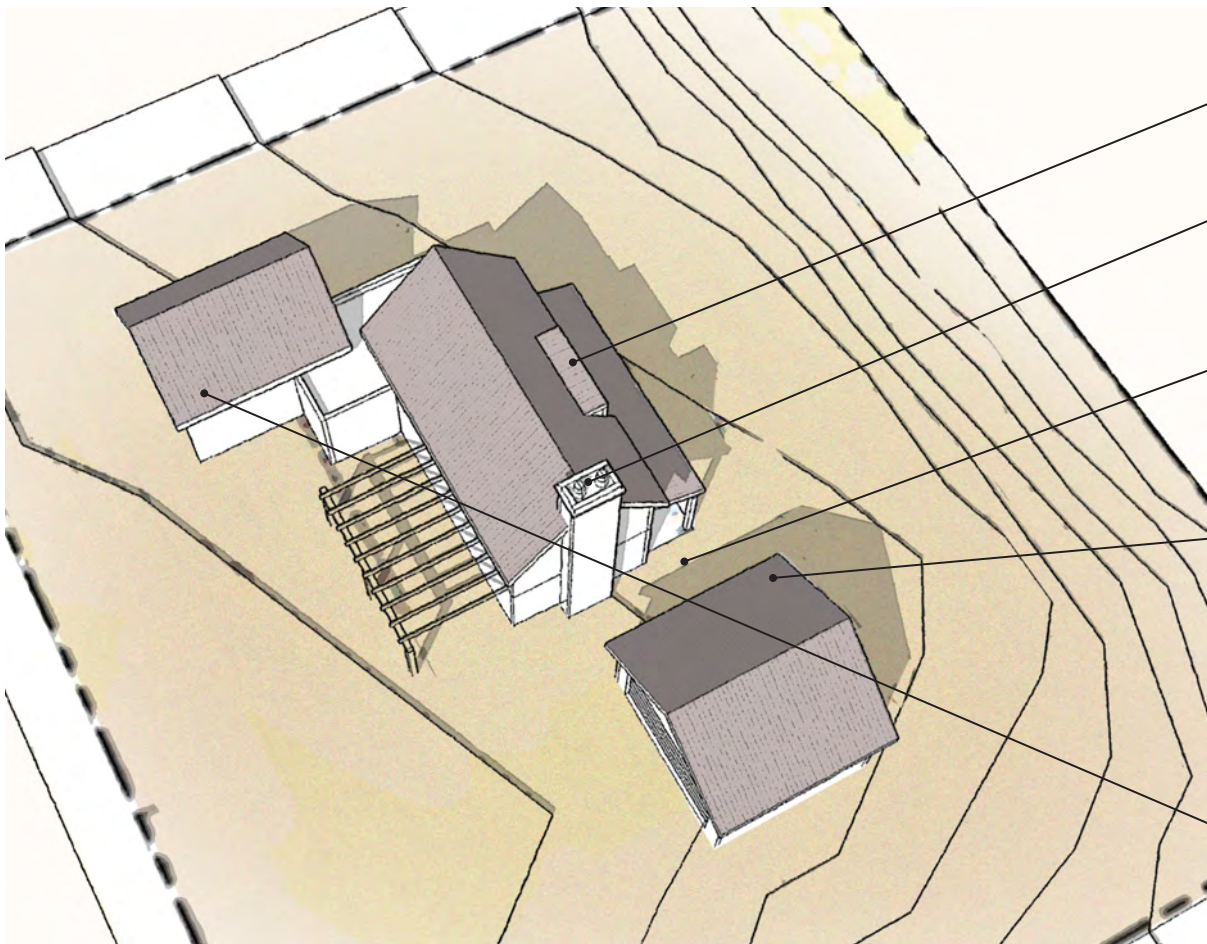


## 4.2: COTTAGE HOME BUILDING FORMS

**THE HOME STYLES AND SIZES** within the surrounding neighborhood vary greatly. Consistent to these homes, however, are techniques to reduce the apparent mass of the home.

In keeping with this variety, new homes should utilize building forms which minimize the impact of the actual home size through varied roof forms and separating the massing of the garage, (when possible) from the main house.

Many of the Cottage Home sites have topography that will need to be considered. The illustrations below demonstrate strategies of the home form following the slope as to lower the overall profile of the building and reduce exposed foundation wall conditions.



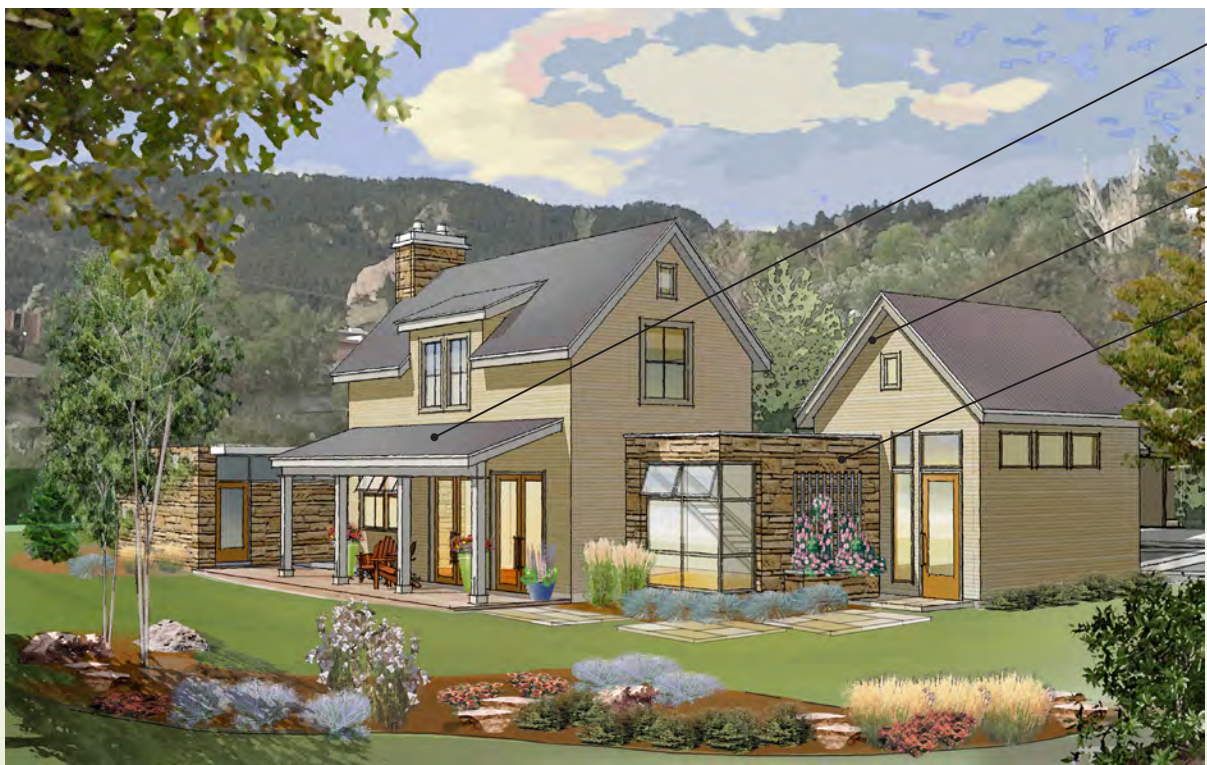
*Dormers should be large enough for functional interior spaces*

*Chimneys used to create interest in the form and/or elevation of the home*

*Separation between the primary building and the garage reduce the scale of the overall building appearance*

*The slope of the garage roof should match that of the primary building*

*Complementary secondary axis off of main form axis*

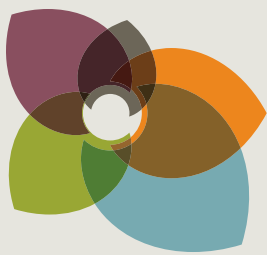


*The roof form steps down to smaller scale roof forms at the entry and the front porch*

*Prominent eaves create depth and shadow opportunities*

*Articulated wall segments break up the mass of the building*

*Detail is important and should complement the character of the home without being overly ornate.*







SURROUND ARCHITECTURE  
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**BUILDING DETAILS**

5.0



## 5.1: ROOF DETAILS

**ROOF FORMS AND PROPORTIONS** are an important part of the design for this site. Not only are the roof forms a critical part of establishing neighborhood character, but they are highly visible from the trails and various vantage points above.

While it is encouraged that the roof forms are varied, restraint should be practiced to avoid an excess of roof forms within any one building to avoid looking too suburban. Care should be taken to choose massing and forms that vary from immediately adjacent house shapes. Clarity and simplicity of form should be a goal; structures should express a clear hierarchy of roofs.

**ROOF SLOPES:**

- Primary structures: Between 6:12 and 12:12
- Porches & Additive Structures between 1:12 and 6:12.

**ROOFS TO EMPLOY:**

- Gable Roofs
- Shed Roofs
- Hip Roofs
- Dormers: Gable, Shed, Eyebrow
- Flat Roofs with Parapets (As Subordinate Roofs)

**ROOFS TO AVOID:**

- Gambrel Roofs
- Mansard Roofs
- Flat Roofs when Visible from Street or Sidewalks

**ROOF ELEMENTS AND DETAILS** are critical to the look and feel of a neighborhood, and therefore shall be chosen with care. Keep these elements in mind for your roof design:

- Deep overhangs
- Minimize flashing exposures - 3" Maximum
- Exposed rafters - CLOSED SOFFITS NOT ALLOWED
- Thin roof expression - Fascias to be minimized
- Dormers large enough to be occupiable
- TOWERS OR STACKED GABLES NOT ALLOWED
- Balconies and widow's walks allowable per review
- Round profile gutters preferred

**ROOF COMPOSITION AND MATERIALS** may vary in color and texture within the following choices:

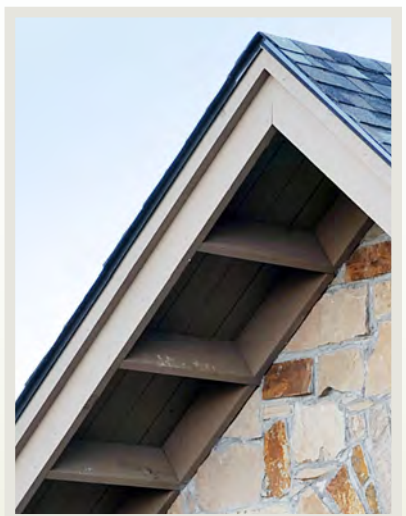
- Architectural grade asphalt shingles
- Composite shingles
- Metal roofing: Galvalume, Corrugated, Standing Seam



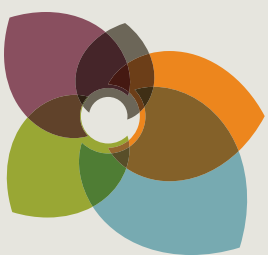
Trim layering and beadboard soffits create shadows and texture. Natural materials are required - foam and plastic not allowed.



Deep overhangs and exposed rafters offer solar shading benefits and architectural interest. Closed eaves are prohibited.



Architectural details such as vents in gables, rakeboards, and brackets are encouraged. Limit galvanized flashing exposures.





## 5.2: SIDING, TRIM, & MATERIALS

**THE SIDING AND TRIM DETAILS** criteria promote building textures which provide an overall level of quality and consistency with the adjacent neighborhood, without being too literal or imitative. An overall sense of proportion, quality, and level of detail is more important to the overall quality than literal interpretations of historic details. Some things to consider:

**WALLS & TRIM** should be of a consistent material on all sides of a cohesive mass - house, garage, and/or adjacent structure. Texture is important. Material and pattern changes may be employed to distinguish volumes, hierarchy, and define design elements.

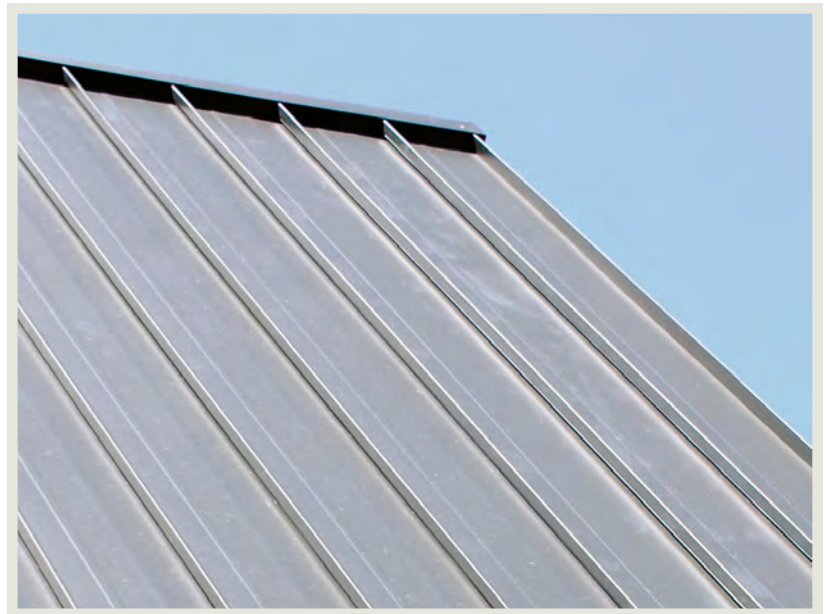
### ALLOWABLE WALL MATERIALS INCLUDE:

- Wood Vertical and Horizontal Lap Siding
- Concrete or Resin Panels: Subject to approval
- Board and Batten: Subject to approval
- Galvanized or Galvalume Metal Panels
- Steel panels: Subject to approval
- Marine Grade Plywood: Subject to approval
- Wood Shingles
- Brick: Shape, Color and Texture subject to approval
- Natural Full-depth Stone Veneer
- Precast concrete caps & details: Subject to approval
- Wood and cementitious trim
- Stucco is not allowed
- NO FALSE STRUCTURAL TRIM DETAILS

**DETAILS** include trim materials and cladding shapes, attachments, colors, and patterns. Simple and elegant detailing is paramount.

### HERE ARE A FEW TRIM RULES:

- Siding and clapboard must stop at the edge of trim - DO NOT install trim over siding (with exceptions)
- Corner, Door, and Window trim should be simple and employ thin profiles where possible
- Metal cladding trim should employ minimal widths and proportions - NOT commercial-type detailing
- Shaped trim profiles (e.g.'ogee') NOT ALLOWED
- Avoid bright white trim, and avoid the selection of jarring contrasts in paint color
- Minimize flashing exposure at drips and material transitions, base of walls, chimney flashing, etc.
- Light fixtures should be simple (No Polished Brass, No Glare)



Metal as panels applied to roofs, walls, and trim.



Horizontal and vertical natural wood siding in lapped, butt, and tongue and groove configurations are encouraged.



Masonry as natural stone veneers and bricks are allowable in a variety of styles and configurations.





## 5.3: WINDOW AND DOOR DETAILS

**THE FENESTRATION PATTERNS** for the development shall follow the richness of detail and character currently found within the surrounding neighborhood. The following criteria is not designed to replicate historic details within the surrounding context, but to communicate an overall expectation of high quality and thoughtful design similar to the surrounding neighborhood.

The design criteria encourage contemporary interpretations of the details shown here, as long as the level of detail, richness of material, and elements of scale are consistent with the surrounding neighborhood.

**PROPORTIONS AND SHAPES** of all windows and doors shall be appropriate to the scale of the subject structure.

**WINDOW** lites should be large and simple - complex sash division patterns are prohibited. Window shapes should be orthogonal (rectangles, squares), with very few exceptions. As such, arched, circular, elliptical, octagonal, diamond, round-top, and Palladian windows are prohibited. Transom units are acceptable, and window groupings may be employed. Operable units are encouraged for fresh air access. Shutters are not permitted unless they are fully functional wood units.

**WINDOW MATERIALS & DETAILS:**

- Wood, Wood Clad, or Metal Windows Permitted
- Clear Glass is required (Slight tinting per approval)
- Windows with sash divisions shall employ actual or simulated divided lites with dimensional muntin profiles applied equally to interior and exterior of glass surface required
- All exterior window paint, stain, or cladding colors are Subject to Approval per manufacturer sample
- Simple trim details - Wood or Cementitious trim

**DOOR** shapes should be rectangular. Sliding and wall-type doors (e.g. Nanawall) are allowable per review. Front entry doors shall be single unit doors; Sidelites are acceptable.

**DOOR MATERIALS & DETAILS:**

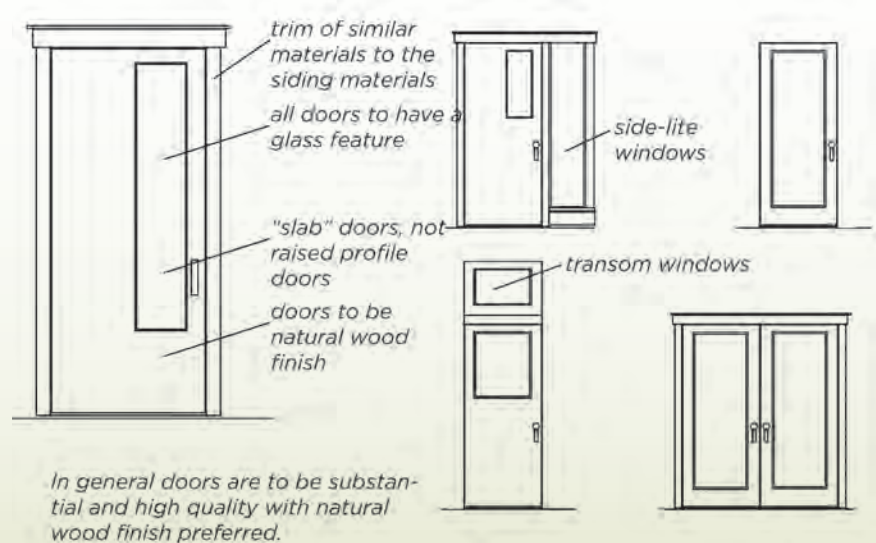
- Wood, Wood Clad, or Metal Doors Are Permitted
- Wood screen doors shall be painted or stained
- Screens should not reflect light
- Rectilinear transoms are allowed
- Lites shall be single, orthogonal lites - no muntins
- Glass: clear, frosted, textured, sandblasted - no tints



Windows should be expressive and complement the design of the building. Trim may be expressed or minimized.



The exterior detailing, coloring, and trim of the windows are important elements of style.





# 5.4: PORCH DETAILS

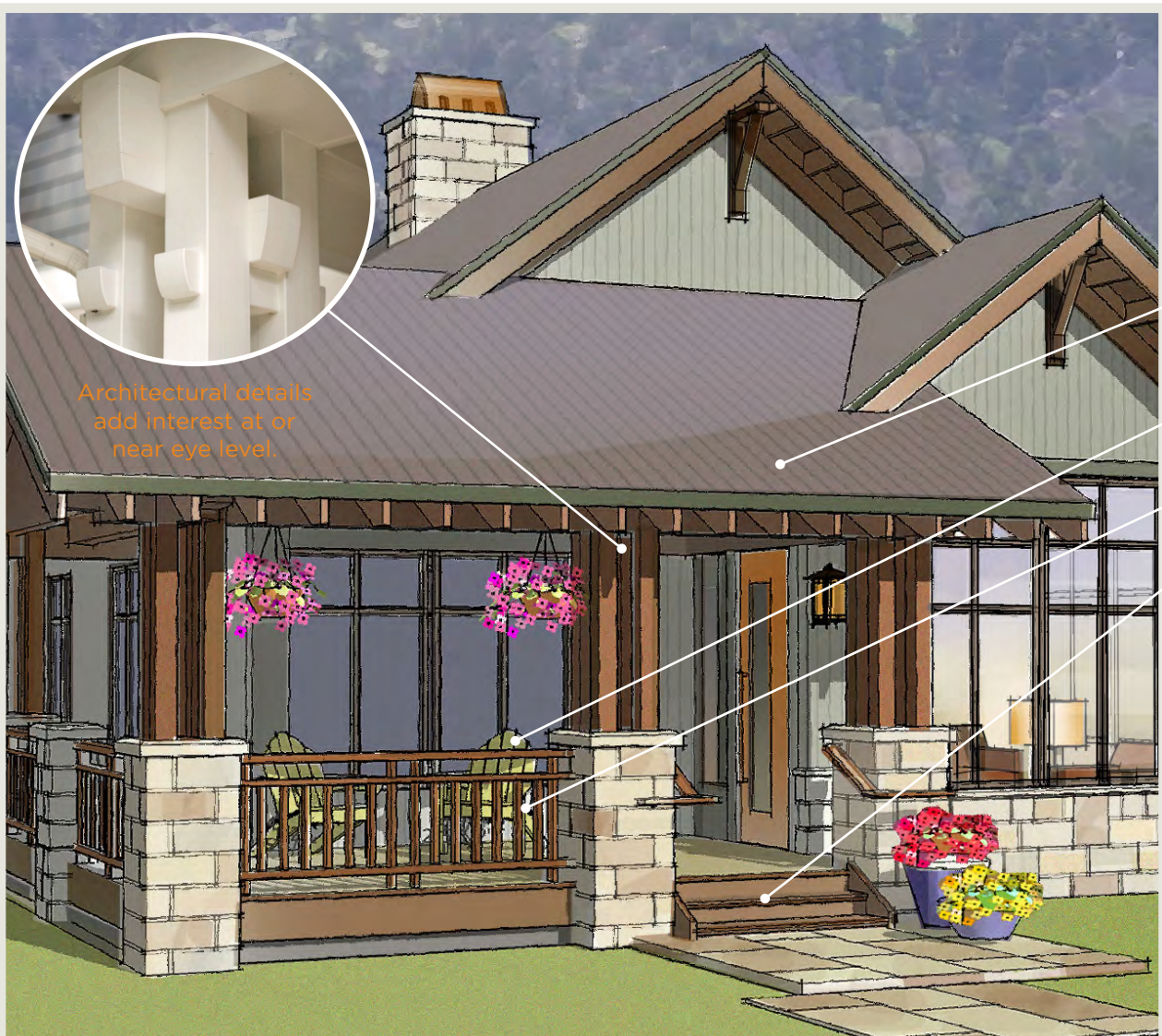
**A WELCOMING FRONT ENTRY AND PORCH** are essential parts of these designs. The porch is the essential transitional space between a private home and the community outside. Natural materials, seating areas, architectural details, and inviting plantings and lighting are highly encouraged in porch designs.

**PORCH REQUIREMENTS:**

- An Entry Porch is required on the primary 4th Street facade for all Carriage Lot homes
- Minimum porch depth: 6' - 0"
- Minimum porch width: 10' - 0"
- Columns and posts groupings are allowed
- Stone or masonry bases and low-wall guardrail sections are allowed per approval
- Railings and balustrades of painted or stained wood or steel and wood caps (per Approval) should vary in design from adjacent homes
- Porch structure and porch roof structural details should be simple and refined
- Minimize and/or hide manufactured fasteners such as hangers, clips, and bolts where possible
- Porch structure and flooring shall be wood, metal, stone
- Formal classical details (literal interpretations) are discouraged



Seating is invitational and encouraged.



**PORCH FEATURES:**

The scale of a porch is best if small and intimate. Details and materials should similarly acknowledge a human, tactile scale.

- Porch is inset to be protected by roof overhang
- Small seating areas
- Unique guardrail details
- Two or more steps above grade enhance privacy





## 5.5: GARAGE DETAILS



Garage doors open to alleys and private drives are to be hidden from the view from 4th Street and Dewey when possible. Architectural requirements pertaining to the main houses shall also apply to all alley and garage structures.

**THE PATTERNS FOR THE DESIGN OF THE GARAGE STRUCTURES** are intended to promote several important design considerations. All architectural character requirements and guidelines previously covered in the discussion of the main houses shall also pertain to garage structures.

### GARAGE REQUIREMENTS:

- Architectural requirements pertaining to the main house shall apply to all garage structures. Variations shall be subject to approval.
- The parking structure is best designed as a separate yet relatable structure from the main home structure.
- The exterior finishes of the parking structure should be identical to the main building in terms of quality and finish, as well as detail and craftsmanship.
- Garage doors should be solid wood or wood clad, or metal framed doors with glass or translucent panels. Glazing is allowable per approval.
- Garage structure variation is encouraged.
- Features such as dormers are encouraged as methods of variegating garage roofs and taking advantage of natural light in garage interior spaces.



Quality and finish should equal the primary house structure.



Neighborhood garages exude great character - emulate this!







SURROUND ARCHITECTURE  
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LANDSCAPES 6.0



# 6.1: PHILOSOPHY & APPROACH



## PHILOSOPHY & APPROACH:

For years, this property has been neglected and was severely altered by past uses. This project is an opportunity to improve the quality of this site and apply a restorative process to the landscape. *It's our prime intent to have this project blend in the neighborhood;* to preserve the eclectic feel of the landscape along 4th Street and the adjacent streets through continuing the perception of random tree spacing and species.

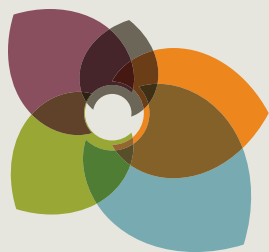
## LANDSCAPE CONCEPT:

The streetscape concept for 4th Street has a 5-foot detached walk with an 8-foot planting strip. Large deciduous trees are proposed at various spacing to allow for utilities as well as walks to front doors. Two 5-foot-walkways have been provided for pedestrian access into the site that align with the adjacent neighborhood alleys. The walks will meander within the 10-foot outlet and have a series of steps to reach the terrace above the street. The walk will be buffered from the adjacent homes with shrub beds, of mostly low water and low maintenance shrubs, with touches of seasonal color.

The extension of Dewey into the site to the alley will follow the 4th Streetscape concept - detached walk and planting strip with the large deciduous street trees. The planting strip will be graded as a swale to collect the drainage and clean the water (a bio-swale), planting it with shrubs and installing check dams as needed.

The second block (to the west), which switches from access street to access lane designation, will again have a similar character, large deciduous trees on random spacing. For this block, a detached 4' walk is separated from the street by a swale.

The main north south alley will be paved and include a few additional parallel parking spaces. The parking and garage entries will together create a feeling of a meandering alley, with areas to plant trees adjacent to the paving and continue the eclectic concept.



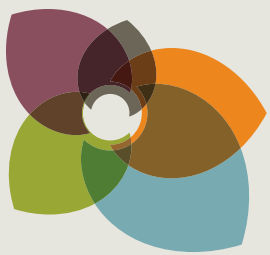


## 6.2: CARRIAGE LOT LANDSCAPE APPROACH

### CARRIAGE LOT LANDSCAPE APPROACH:

The Carriage Lots that front 4th Street will have homes built on the terrace above the walk. While the final finish floor elevation above the walk will vary with each lot, the hillside along the street can have different landscape concepts or expressions, ranging from a planted slope to terrace gardens, all the while acting as a welcoming landscape leading guests to the front door. It is recommended that plants include a mix of colorful shrubs, or-

namental grasses and perennials that provide year round interest as well as stabilize the slopes. The side yards should be planted in a manner to help screen views between homes and provide some level of privacy. Backyards can provide outdoor living and play areas. Landscape areas along the alley could be constructed into vegetable gardens giving life and character to the alley.



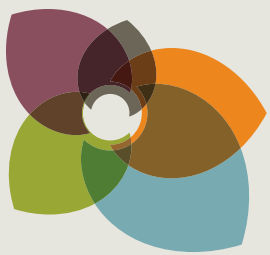
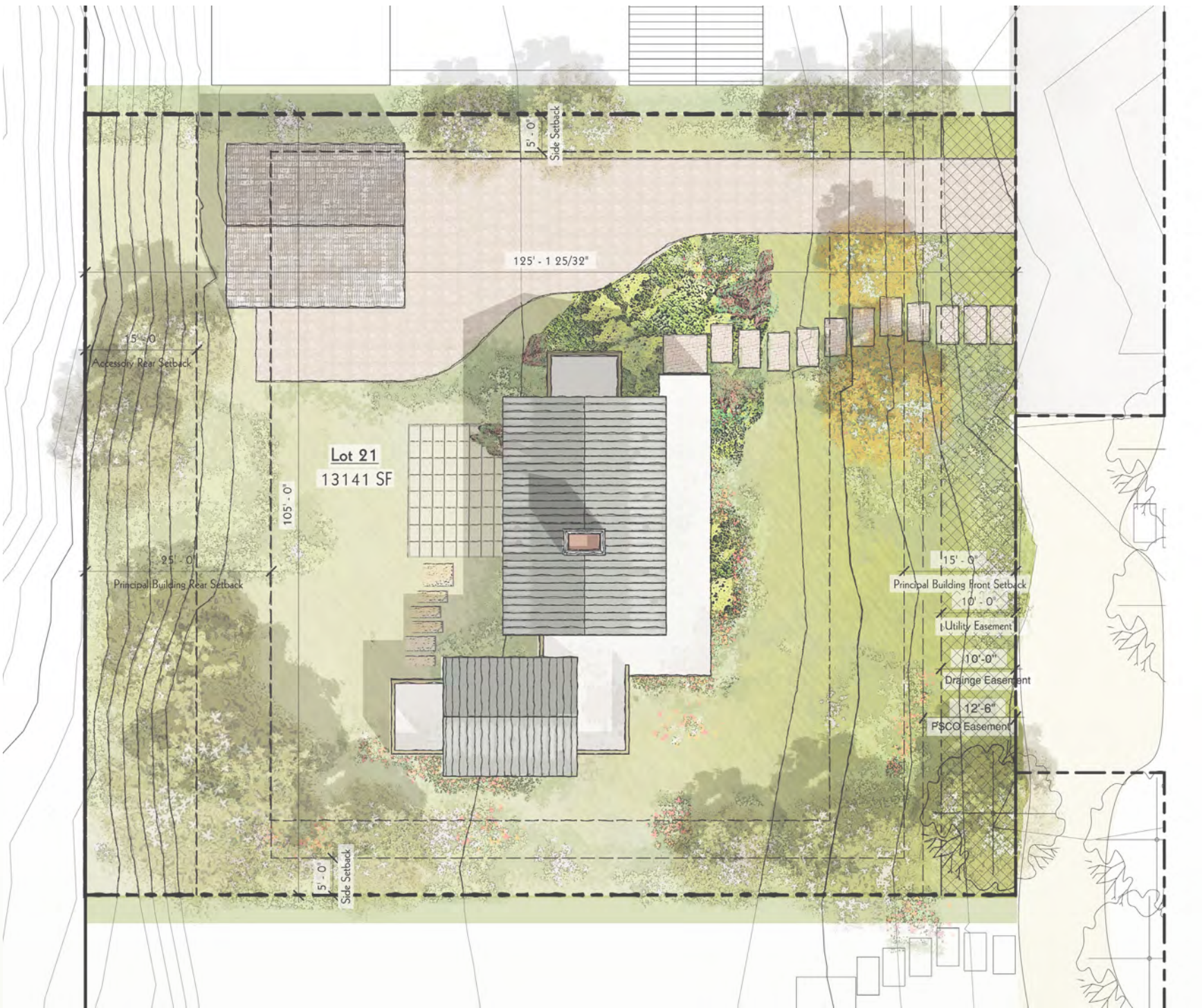


### 6.3: COTTAGE LOT LANDSCAPE APPROACH

**COTTAGE LOT LANDSCAPE APPROACH:**

The lots in the western portion of the site will, again, have a mix of sizes, location of garages and unique grading opportunities. The existing vegetated slopes will remain as is and will be protected during construction. Care will be taken to not undercut the existing fragile slope as homes will be constructed away from the toe of the slope. Since some of these lots are larger, and the

homes could be designed around a courtyard, providing excellent outdoor living space. The planting design should transition from the manicured landscape adjacent to the home to the existing native landscape on the slope, while providing a welcoming entry to guests off the shared drives.





# 6.4: LANDSCAPE PALETTE

## PLANT PALETTE:

The specific landscape materials chosen for the development will emphasize a variety of colors, textures and forms in order to provide year-round interest. Among the major landscape objectives are the following:

- Provide attractive naturalistic streetscapes along 4th Street and Dewey as well as the alleys and shared drives. Use large deciduous trees to provide canopy/overstory and create a more human scale within the neighborhood.
- Visually enhance architectural features at street corners and pedestrian entries into the project by using ornamental trees and shrubs, providing accent, color and winter forms.
- Provide outdoor gathering spaces for neighbors and the community-at-large at the Sanitas Trailhead with stone benches and native planting, while providing a landscape screen to the adjacent lots.
- Plant ground covers as alternative to turf in the bioswales that act as soil stabilizers to control erosion, clean and filter runoff and create textural accents.
- The landscape provided by the HOA shall incorporate creative landscaping concepts to conserve water usage within the development by:
  1. improving the soil by adding organic materials,
  2. incorporating native grass/turf varieties that are drought-tolerant and require less maintenance.
  3. Design a “zoned planting scheme” would reduce water demand by grouping similar varieties of native plants that are drought resistant together.
  4. Incorporate organic mulches to reduce moisture loss through evaporation.

## SITE MATERIALS PALETTE:

- Paved streets and alleys
- Porous pavers at Dewey and the alley
- Crusher fines at the trailhead
- Stone terracing
- Stone benches

## FENCING:

Fencing is allowable and will be subject to review. Height limit 3'-6" within the front setback. Privacy fencing in limited areas may be considered. Fences should follow the details and construction techniques of the house's exterior, including wood and metal posts, gates, panels, and pickets.

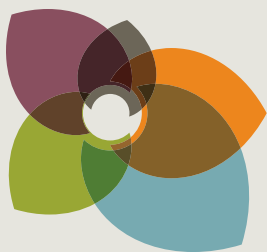
## SEEDING:

For front or side yards slopes greater than 4:1 adjacent to 4th street and Dewey, recommend either terraced walls landscape gardens or a choice of seed mixtures that do not require mowing:

1. Low Grow See Mix (as supplied by Arkansas Valley Seed) enhanced with wildflowers or
2. Blue Grama seed mix.

For portions of the development areas in lots have slopes great than 4:1 and adjacent to open space, a taller seed mixture that does not require mowing such as:

1. Foothills mix enhanced with wildflowers or
2. Multi-Color High Altitude Mix (as supplied by Arkansas Valley Seed)

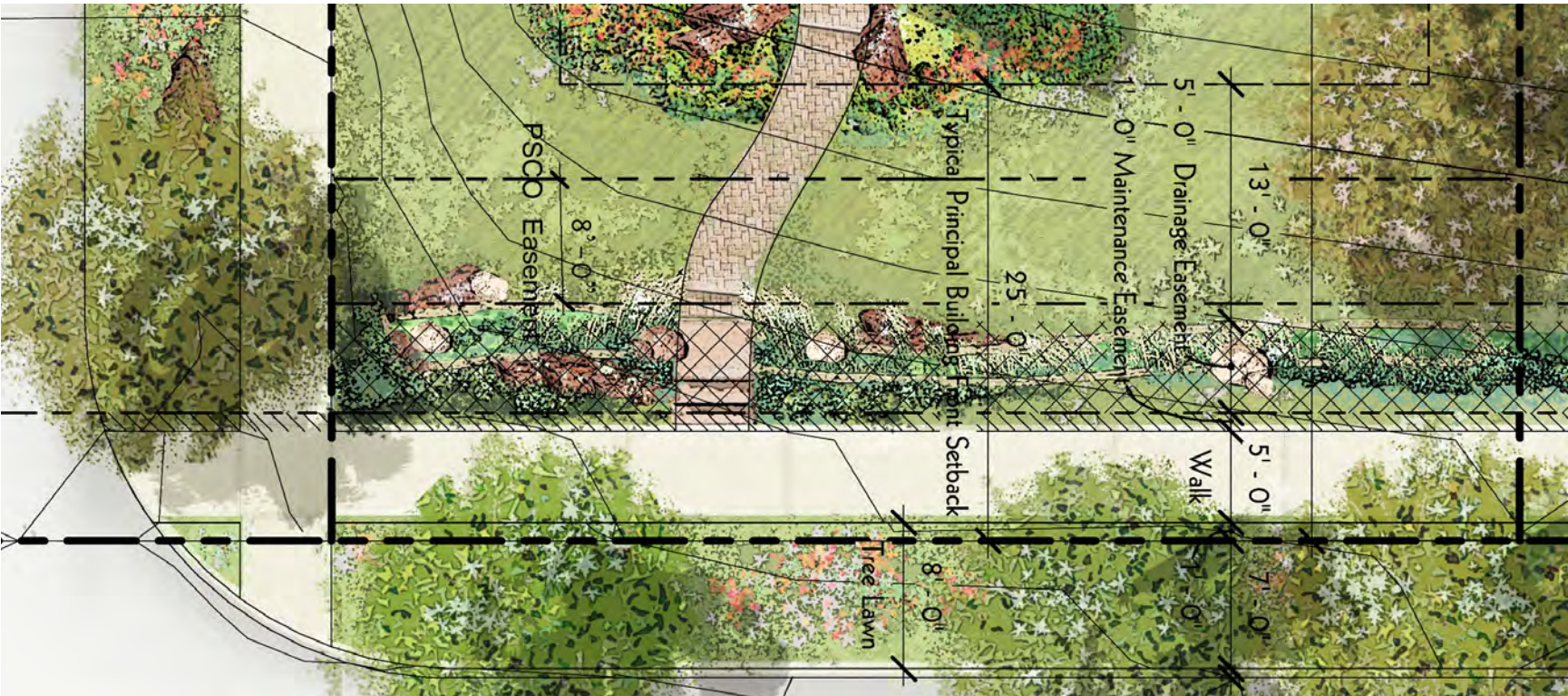




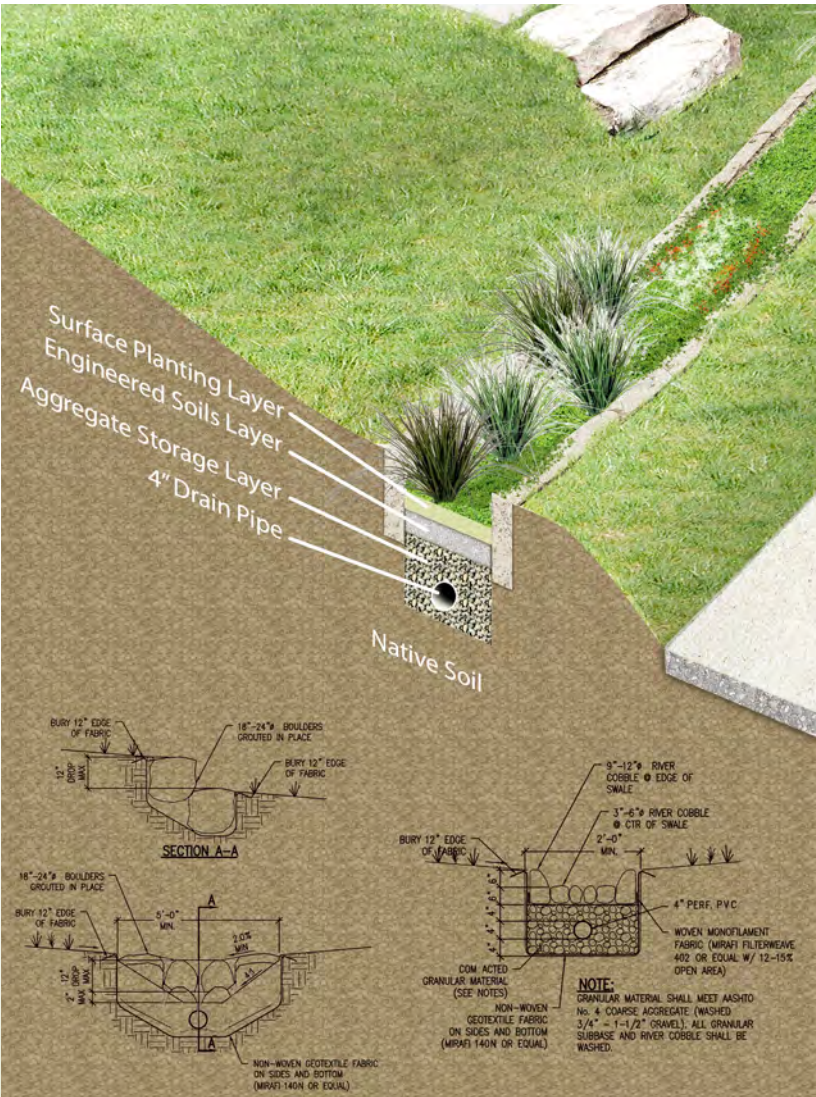
6.5: BIO-SWALE

CARRIAGE LOT BIO-SWALE FEATURE:

The planting strip adjacent to the sidewalk on 4th Street is a bio-swale. In addition to providing a pervious and gentle buffer between the sidewalk and the individual front yards, and also providing a splash of color and an opportunity for a variety of plants and flowers; the bio-swale will collect site runoff drainage and clean the water through a variety of plantings suited to this purpose. It will include plants, flowers, shrubs, rocks and boulders, as well as check dams as necessary to function smoothly and efficiently.



Plan view detail of the bio-swale illustrating its' relationship to the sidewalk and the stone 'bridge' pathway leading to the yard beyond.



Refer to Civil Construction drawings for final Bio-Swale details.



Section: Swale, sidewalk, street trees, curb, street.

