

*Manufactured Housing for  
Affordable Infill Development*

**A Case Study  
Brotherton Square  
City of Escondido**



## *Presented by:*

- **City of Escondido**
  - Beverly Peterka, Housing Division Manager
- **Trinity Housing Group**
  - Stephen Kuptz, President
- **Silvercrest/Western Homes**
  - Steve Truslow, Corporate Developer Sales
- **Precision Manufactured Developments, Inc.**
  - Glenn White, President

# *A Case Study – Brotherton Square City of Escondido*

- Redevelopment of a 1.35-acre blighted motel site to 22 manufactured homes for First-time Homebuyers



# *Goal from City Staff Perspective*

- Redevelopment of blighted property to affordable housing
  - Problem property
- Propose acceptable form of project for approval of funding subsidy and maximization of City goals
  - Rental vs. ownership
  - Acceptance of manufactured housing product
    - Reputation of developer was key

# *Goal from City Staff Perspective*

- **Why Brotherton Square was the answer**
  - Addressed many City housing priorities
    - Expands supply of affordable ownership housing
    - Expands supply of 3-bedroom units
    - Promotes neighborhood stability
    - Increases supply of well-designed units
  - Eliminated crime and other illicit activities that were occurring at the motel
  - Increases property tax base and surrounding property values

# *Seeking Approvals: Show and Tell EVERYONE*



# *PENNY LODGE MOTEL*



**Circa 1971**  
**50 units**

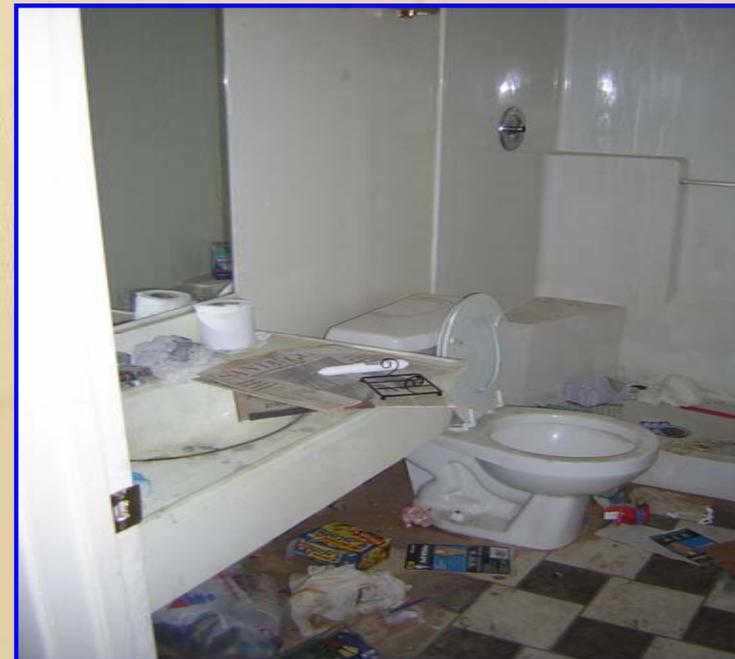
## **Amenities**



**Street presence**

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# Acquisition November 2004



*Know your developer (stick-built or try manufactured housing?)*



**Via Roble Communities**



*Visit other manufactured housing communities*



# *From the Developer's Viewpoint*

- Steve Kuptz, President
- Trinity Housing Group
  - 1565 Coast Blvd., Del Mar, CA 92014
  - 858-704-1503
  - <http://www.trinityhg.com>



Affordable Housing Solutions

**TRINITY**  
**HOUSING GROUP**



# ***BROTHERTON SQUARE***

**Another creative community  
redevelopment solution for the City of  
Escondido**

# *Brotherton Square*

## **Preliminary Site Concept**



# *Architect's Initial Presentation*



# *Architect's Initial Presentation*



# *Why Manufactured Housing?*

- **Cost savings**
  - Reduced interest carry
  - Hard costs saving over similar stick-built product
    - \$10,000-\$15,000 per unit
  - Prevailing Wage savings
- **Construction certainty**
  - Minimal change orders
  - Cost certainty
  - Delivery certainty

# *Why Manufactured Housing?*

- **Site management efficiency and safety**
  - Efficient labor movement around site
  - Minimal on-site storage requirements
- **Durability**
  - Silvercrest Silver Shield 7-year Warranty
  - Steel floor frames, fire sprinklers, Hardee board siding
- **Quality**
  - Bull-nosed corners, deep window sills, archways, six-panel doors



# *Public/Private Partnership is Key to Success*

- **Creative and detail-oriented design team**
  - Architect
  - Civil Engineer
  - Utility Consultant
- **High quality and flexible manufacturer**
  - Commitment to quality
  - Work well with development team
  - Committed to building homes/not widgets



# *Public/Private Partnership is Key to Success*

- **Experienced installation contractor**
  - Experience with manufacturer is critical
  - Must be team-oriented
  - Exhibit creativity in working with development team

# *Financing and Insurance Challenges*

- **Financing**

- Fannie Mae currently not underwriting manufactured homes on permanent foundations
- California Manufactured Housing Institute working with Fannie Mae, changes anticipated late 2007

- **Insurance**

- Wrap insurers yet to recognize the lower risks inherent in manufactured housing
  - Cleaner site and lower incident of injury
  - Brotherton Square being used as test underwriting case

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# *Project Site Clean and Efficient*





# *From the Manufacturer's Viewpoint*

- **Steve Truslow**  
**Corporate Developer Sales**
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  - 299 N. Smith Ave., Corona, CA 91720
    - 909-734-6610
    - [struslow@silvercrest.com](mailto:struslow@silvercrest.com)



# *The Design Challenge for Infill Development*

- Increase square footage on small lots
- Develop two-story HUD code homes
- Design adaptable floor system for stacking
- Engineer foundation system eliminating piers

# *Finding the Right Manufacturer*

- **Designing the home**
  - Existing floor plans similar to project concept
  - Modify floor plan or create new design
  - Develop cohesive team to accomplish design and installation
- **Bringing the team together**
  - Review concept
  - Work through details
  - Develop specifications and finalize
  - Finalize design and factory cost

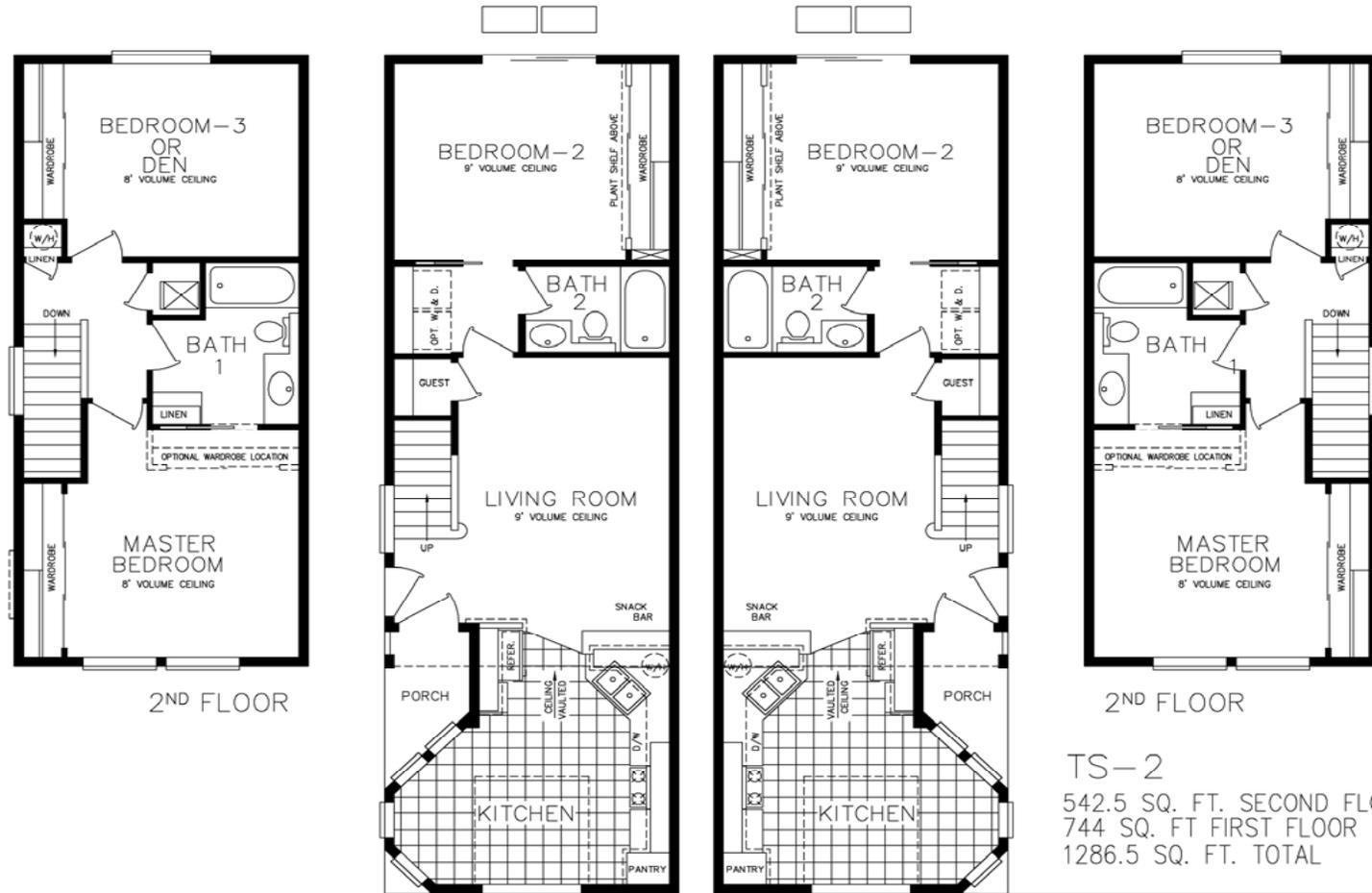
# *Finding the Right Manufacturer*

- **Order Process**
  - Complete sales order with client
  - Review sales order, floor plan and elevation specifications
  - Execute sales order and return to manufacturer
- **Release home for production (Prototype)**
  - Manufacturer reviews production order with production team prior to commencing to clarify any questions
  - When completed, have all team members critique

# *Finding the Right Manufacturer*

- **Manufacturer's Service and Warranty**
  - Choose a manufacturer with commitment to respond to factory responsibilities
  - Create a punch list for service – work with client, manufacturer and installation contractor
  - Create long-term warranty policy
  - Identify the right installation contractor

# TS-2 Duplex Floor Plan



TS-2  
 542.5 SQ. FT. SECOND FLOOR  
 744 SQ. FT. FIRST FLOOR  
 1286.5 SQ. FT. TOTAL

# *Duplex With Adjoining Garages*

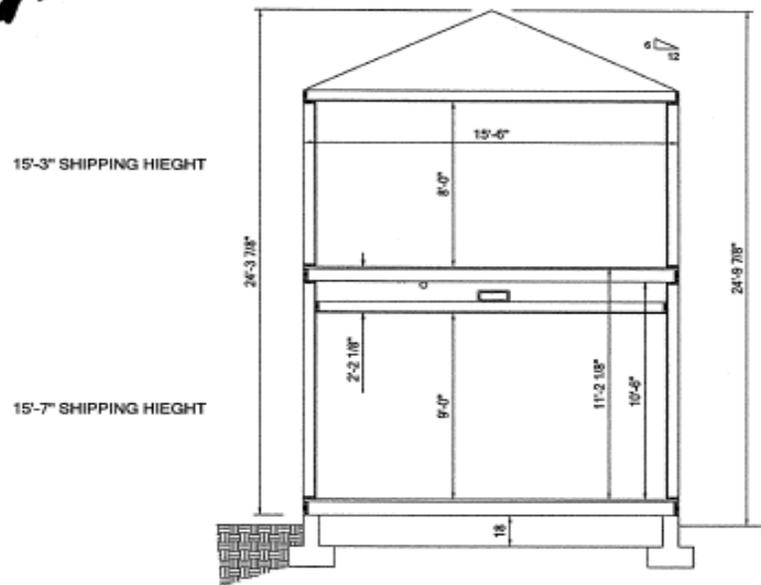


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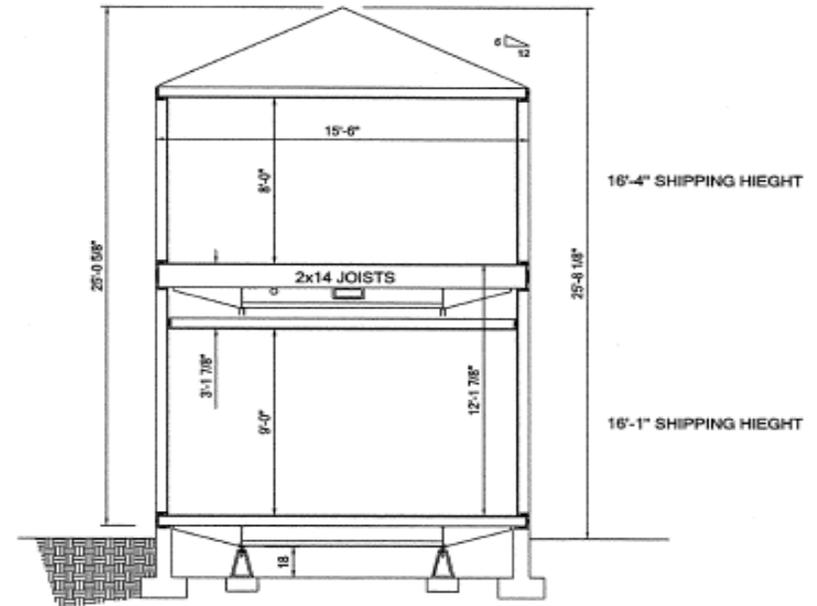
Recent  
Installation



# Super Floor vs. Standard 2-Story Diagram



1. FOUNDATION WALL 18" TALL.
2. NO PIERS TO BUY, NO PIER FOOTINGS TO DIG
3. 12" OF EXCAVATION = 25 YARDS
4. CHASSIS/FLOOR INTEGRATED INTO ONE STRUCTURAL COMPONENT.
5. STAIRWELL LOCATION VIRTUALLY ANYWHERE.  
17 STAIR RISERS.
6. LOWER SHIPPING HEIGHTS.
7. STEEL CHASSIS/FLOOR WITH 1 1/8" T&G DECKING WELDED CONNECTIONS BETWEEN FIRST & SECOND FLOOR AS WELL AS FIRST FLOOR TO THE FOUNDATION.
8. 9' CEILING DOWNSTAIRS WITH THE OPTION OF 10' TIERED CEILINGS.



1. FOUNDATION WALL 30" TALL.
2. PIERS TO BUY, PIER FOOTINGS TO DIG & POUR.
3. 24" OF EXCAVATION = 50 YARDS
4. SECOND FLOOR CHASSIS NON STRUCTURAL & DEAD WEIGHT
5. LIMITED STAIRWELL LOCATION.  
19 STAIR RISERS.
6. SHIPPING HEIGHTS OVER 16'.
7. WOOD FLOOR WITH 5/8" DECKING, CONVENTIONAL CONNECTIONS BETWEEN FIRST & SECOND FLOOR AS WELL AS FIRST FLOOR TO THE FOUNDATION.
8. 9' CEILING DOWNSTAIRS WITHOUT THE OPTION OF TIERED CEILINGS.

# *Steel Floor*



# *Regular Floor*



# *“Super Floor” Underside*



# *From the Installation Viewpoint*

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    - 949-723-0763
    - [info@pmdhomes.com](mailto:info@pmdhomes.com)



# *Identify Experienced Installer*



# *State-of-the-Art Equipment*



# *Qualified Workforce*



# *Project Development Team*

- Determine all members of the project development team and their respective responsibilities
  - Create team roster outlining individual tasks as needed from concept to completion of project
  - Throughout all phases keep all members of the team informed of any and all changes required to build project

# *Design Engineering*

- Pre-existing site conditions?
- Overall Objective?
  - Increase/decrease lot or space count?
  - Increase/decrease density?
  - Assess emergency access and parking requirements?
- Work with experienced engineer familiar with manufactured or modular homes
  - Determine engineered design that works best for the site

# *Site Buildability*

- Site analysis and accessibility study
- Grading and civil engineering requirements for stem-wall foundations
- Heavy equipment feasibility study
- Once manufacturer and engineered floor plan is determined, basic manufactured buildability requirements above must be confirmed in the Order to Proceed

# *Permit Process*

- Check with local Planning Department
- Obtain manufacturer's submittal package with specific engineered drawings as required
- Obtain comprehensive geotechnical study specific to site
- **NEVER PLACE FACTORY ORDERS INTO PRODUCTION WITHOUT FIRST OBTAINING ALL NECESSARY BUILDING PERMITS**

# *Factory Production Orders*

- Prior to releasing orders to the production line, confirm with all development team members that factory orders match or align with the engineered drawings approved for use by Building/Planning and Fire Departments
- Determine if any altering of the manufactured homes will be required on-site
  - Projected site-built structures must be reviewed by the manufacturer

# *Factory Production Orders*

- Determine all interior and exterior design criteria to reflect site specific needs
- Have all key development team members review factory orders prior to releasing to the production line

# *On-site Production Management*

- Determine all necessary site support and management team for entire build-out time frame
- Determine “Chain of Command” with regard to:
  - Conceptual design
  - Pre-construction services
  - Off-site construction
  - Horizontal development
  - Vertical build-out
  - Interior and exterior finishes

# *On-site Production Management*

- Reconfirm that your choice of installation contractor/builder has the right team experience to complete your project scope of work
- In order to maximize cost savings using off-site built homes, the right management team is critical in keeping the project on time and within budget

# *Factory On-site Service*

- Choose a manufacturer that has a proven service record
- Confirm installation contractor is authorized by manufacturer to complete entire installation process
  - At on-set of development have installation contractor develop positive working relationship with factory service department
  - Make sure contractor/builder has on-site ‘point of contact’ person in touch with factory service department throughout project build-out phases of construction

# *Manufacturer's Warranty Program*

- This is key if ordering directly from factory
- Provide primary contact person information regarding warranty issues during warranty period
- Have all factory warranty orders placed in writing and kept on file for minimum of 18 months

*Roll Cameras!!*

















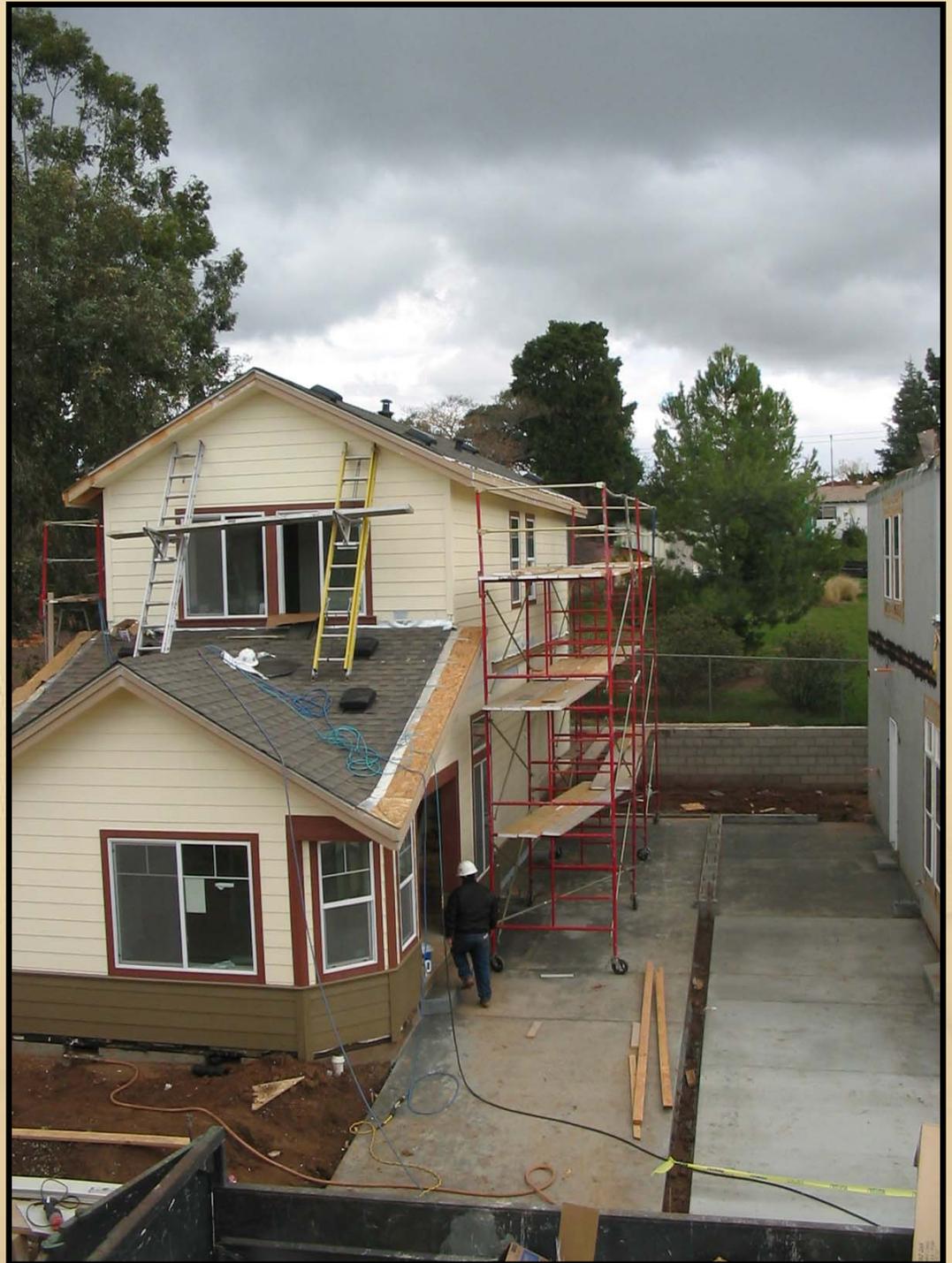






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*22 Houses are set  
On-sites begin*



# Siding, Driveways and Garages



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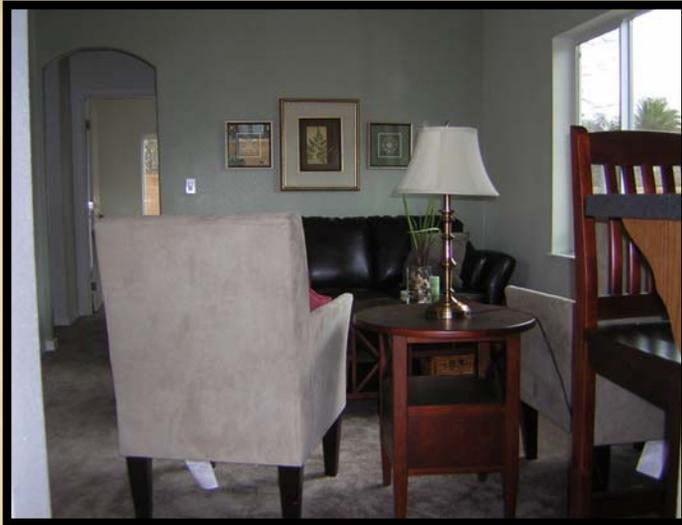
*Brotherton Square Begins  
with One Family's...*



# *Home Sweet Home*



# *Family gatherings*



# *Sweet Dreams*





*Questions  
& Comments*