A Modern Craftsman Revival

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Virginia Commonwealth University

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Craft and design are directly related. An environment is not one entity but a collection of individual elements that are perfectly composed into a harmonious work. The designer’s material sensibility should be evident in each individual component, both macro and micro, or he will be alienated from the creative process. To compose the grand symphony he must never abandon intent and write with one calculated phrase after another. A craftsman’s hands should find the opportunity to manipulate all components and create harmony to ensure the elements of the space connect with no discord. When the designer and craftsman are one, creativity will be apparent.
ABSTRACT

The modern Craftsman movement is an attempt to break the contemporary mold, that is a desire to introduce a younger generation to a level of interior detail that has been lost in contemporary construction and material usage. Components such as drywall tend to envelop all contemporary residential surfaces leaving little room for tectonic expression and opportunities for detailing. Further, a modern revival would re-establish the goals of the original movement and ensure the hand was present in the design of the home, as discussed by Winter & Vertikoff, “all versions were meant to counter the excesses of the Victorian period by returning to a preindustrial past when handicrafts displayed personal involvement in the products of a laborer’s work” (31).

A craftsman by definition is very skilled in a particular trade (Merriam-Webster, 2014). Gustav Stickley, a key founder of The American Craftsman architectural movement, describes a Craftsman style home as being rooted in specific principles that define the home itself. He states, “These principles are simplicity, durability, fitness for the life that is to be lived in the house and harmony with its natural surroundings” (Stickley, 11). To accomplish this ideal the movement required craftsmen from many disciplines, such as masonry and carpentry, to create hallmarks of this style in each home such as handcrafted stone facades and custom built-in cabinetry that were very functional while also very beautiful. While these elements were typically time consuming and expensive, reviving the concepts in modern application is possible. By reducing waste and manipulating materials quickly and accurately, certain forms of modern technology such as 3D printing, laser cutting, water jet cutting and CNC construction can provide a cost efficient and time saving process of material manipulation.

Introducing concepts of Craftsman kit construction to the interior, as well as modern technology to lessen the cost of handcrafted details, opens the possibility to new methods of modular design in which interior units are configured around structural skeletons and central base points that provide supply lines to residential units. One example is Dutch design firm Minale-Maeda's Connect, a 3D printed connector that holds together any necessary components, like furniture. These keystones can be printed at home and saved time and the need to obtain anything but essential components (website). The design firm works towards creating an “ongoing awareness of the possibilities of both mass-production and skilled craftsmanship” (Dario Balen, 2014). Another interesting example is Dutch design brand Prometheus’ Minimal Waste Table, which is created from one piece of laminated plywood with a CNC milling machine which makes for extremely minimal waste (Williams, 2013). These examples of automation require a craftsman’s hand and mind to create the concept but introduce a modern approach to reducing time and cost.

Richmond’s Fan District provides an appropriate target demographic for the introduction of residential models that are efficient and economical means of residential development. Within it, 40% of residents are ages 20-34, 37% have a bachelor’s degree, and 51% of households are renting (US Census Community Survey, 2012). Sensible materials, local artistry and modern technology form a residential model that is suited for craft patrons and young adults such as the demographic living in the Fan. Evidence of the population’s support and appreciation for art and craft is high in the number of galleries, studios and museums that have thrived in the area for years. Evidence of the demographic’s need for affordable housing lies in the significant number of renters who are struggling to buy or unable to afford the style of housing they desire.
A MODERN CRAFTSMAN REVIVAL

This thesis investigates the parallels between contemporary residential life and that of the original craftsman movement. It explores a modern craftsman revival that preserves the use of traditional architectural elements in technology such as 3-D printing, laser cutting, and water jet cutting along with eco-friendly materials to create affordable housing while preserving craft and technique.

PERSONAL RELEVANCE

My undergraduate fine arts degree drives an appreciation for art which escapes commoditization. A recent craft history course deepened my interest further, and brought the idea for the exploration of craft preservation in residential application to light. While affordability and design seemed to be something I thought to always be at odds, I found through researching the American Craftsman movement that they can be one. Many of my friends who are starting their careers have shared concerns about finding well designed, affordable housing. I am interested in exploring how to bridge the gap between these two issues while integrating principles of the Craftsman style.

LOCAL RELEVANCE

Fox Elementary is located in Richmond’s historic Fan District, a fine art and crafts community. The Fan is home to a number of fine arts and crafts galleries, artist studios, and community facilities, such as the Visual Arts Center of Richmond, that form close relationships with the local population, both professionally and academically. Virginia Commonwealth University, home to the top public arts school in the country according to U.S. News and World Report (2012), is only a short bike ride away. The building is also in close proximity to the Virginia Museum of Fine Art, the Virginia Center for the Art, the Science Museum of Virginia, and the Virginia Historical Society. The building’s location within the educational and creative community allows students to develop a close relationship with the fine art and crafts community.

GLOBAL RELEVANCE

The investigation of the parallels between the facets of contemporary society and the original Craftsman movement may articulate a new template for affordable residential housing. Sustainable materials, local artistry and modern technology could combine to create a residential model that is suited for craft patrons, particularly between their late 20s and 40s. Technology of the modern craftsman era can create a globally relevant, advantageous formula for affordable living, by reducing waste and manipulating materials both quickly and accurately, these forms of modern technology provide a cost efficient method of material use. Artistic detailing, motifs, and colors that are often lost within modern residences due to cost, time or skill level required can be adapted and preserved with new technology.
Children leaving Fox Elementary in September 1955
© Richmond Times-Dispatch
William Fox Elementary was built in 1911 and was one of the many buildings in Richmond, Virginia designed by regional architect Charles M. Robinson. The building is located in the heart of the Fan District where it has remained both a school and one of the only examples of the Arts and Crafts style in the city for over 100 years (Robinson, 2014). The Fan area is young (40% of residents are 20-34), highly educated (37% with a bachelor's degree or higher) and has a thriving rental market (51% of households) (U.S. Census, 2012). The district’s proximity to universities, dining, art and entertainment have also contributed to rising property values in recent years. Re-purposing buildings like Fox Elementary for residential purposes strikes a balance between what residents of the Fan value and what they need.

According to the Richmond Public Schools Survey Report, Fox Elementary showcases the rare instance of the influence of the arts and crafts movement among Richmond’s architecture (Robinson, 2014). The building structure has multiple existing features that are conducive for the creation of residential units, providing a large amount of natural light, green space, and high ceilings. A large atrium and spacious common areas within the existing structure provide an excellent opportunity for public spaces, including a lounge, media room, and reception area. The building’s location within the Fan District of Richmond is ideal, as men and women in their 20s, 30s, and 40s comprise 68.3% of the Fan’s population, according to recent census (U.S. Census, 2012).
BUILDING SECTIONS

1 North Facing Section

Second Floor
First Floor
Basement

2 East Facing Section

Second Floor
First Floor
Basement
<table>
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<tr>
<th>RECEPTION</th>
<th>STAFF OFFICE</th>
<th>CONDOS</th>
<th>MEDIA ROOM</th>
<th>LOUNGE</th>
<th>OFFICE</th>
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<tbody>
<tr>
<td>Approximately 150 gross sq ft</td>
<td>Approximately 200 gross sq ft</td>
<td>Approximately 1,800 gross sq ft</td>
<td>Approximately 2,000 net sq ft</td>
<td>Approximately 150 gross sq ft</td>
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**Considerations for Tertiary Use Area**

- This area provides individualized mailboxes for each unit, functioning as the front entry and leaving the building.
- There is a relatively quiet area for storage, the mail room with lockers for CAs and maintenance personnel.
-é.

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<tr>
<th>FF+E</th>
<th>Accessibility</th>
<th>Security &amp; Safety</th>
<th>Occupancy/Occupant Load</th>
<th>Advancements</th>
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<td><strong>HOA Assistance</strong></td>
<td><strong>Answering Phone</strong></td>
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<td><strong>Main Building Entrance</strong></td>
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<td><strong>Buyers, Public</strong></td>
<td><strong>Maintenance requests</strong></td>
<td><strong>Reception</strong></td>
<td><strong>Main Building Entrance</strong></td>
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<td><strong>Residents provided a key to mailbox</strong></td>
<td><strong>Building employees</strong></td>
<td><strong>Reception</strong></td>
<td><strong>Main Building Entrance</strong></td>
<td><strong>FF+E</strong></td>
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<tr>
<td><strong>Residents are easily accessible via key / card</strong></td>
<td><strong>24 HR access to building residents via FF+E</strong></td>
<td><strong>Reception</strong></td>
<td><strong>Main Building Entrance</strong></td>
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| **Digital Projector** | **OFFICE** | **Staff Office** | **Main Building Entrance** | **FF+E** |
| **Seating** | **Dining area with bar seating + tables** | **Main Building Entrance** | **FF+E** | **OFFICE** |

| **Private Parties / Meetings** | **Entertainment** | **Stairwell** | **SECONDARY: Building Employees, Mail Deliverer, Maintenance** | **FF+E** |
| **Cooking** | **Sleeping** | **Main Building Entrance** | **SECONDARY: Building Employees, Mail Deliverer, Maintenance** | **FF+E** |

| **Privacy / Security** | ** helicopters, drones, security systems, etc.** | **Main Building Entrance** | **SECONDARY: Building Employees, Mail Deliverer, Maintenance** | **FF+E** |

| **Occupyancy / Occupant Load** | **Applications and Other Building Users** | **Main Building Entrance** | **SECONDARY: Building Employees, Mail Deliverer, Maintenance** | **FF+E** |

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PROGRAM / CODE ANALYSIS

BUILDING TYPE: TYPE III-B

REQUIRED FIRE SEPARATIONS:
- Stair Wells: 1 HR
- Elevator Shaft: 1 1/2 HR
- Elevator Equipment: 1 1/2 HR
- Exterior Walls: 2 HR
- Storage Rooms: 1 1/2 HR

OCCUPANCY TYPE: R-2
(Residential Occupancies containing sleeping units or more than two dwelling units where the occupants are primarily permanent in nature.)

OCCUPANT LOAD FOR RESIDENTIAL UNITS:
200 ft² gross (includes wall thickness)

GROSS SQUARE FOOTAGE:
- First floor: 13,723 ft²
- Second floor: 13,753 ft²
- TOTAL: 27,476 ft²

NET SQUARE FOOTAGE:
- TOTAL: 17,866 ft² (0.65)

ACCESSIBLE SPACES:
- Media Room
- Lounge
- Mail Room

LIVABLE SPACES:
- Residences / Condominiums

GRAPHIC PROGRAM

FLOOR PLAN LEVEL 1
SCALE: 1/32” = 1 ft
SPECIAL EQUIPMENT (MARKED “Y”) AS FOLLOWS:

MAINTENANCE
- cleaning equipment, repair tools, replacement parts

RECEPTION
- office phone, desktop computers (2), small storage space, desk / counter area, task chairs (2)

STAFF OFFICE
- task chairs (2), 6-8 chairs (formal / informal meetings), printer, fax machine, coffee maker, mini fridge / kitchenette, file storage, desktop computers (2)

LOUNGE
- bar seating, tables and chairs
- plush, comfortable furniture
- TV, video games, large screen televisions

MEDIA ROOM
- large format scanner, large format printer, laser printer, desktop computers (6), digital projector, task chairs

CONDOMINIUMS
- sink, fridge, stove, microwave, oven, dishwasher
- washer / dryer
- sink(s), tub(s), shower(s)
- laundry room

PROGRAM / ADJACENCY + CRITERIA MATRIX

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<th>MAIN HALLWAY</th>
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<th>CENTRAL HALLWAY SECOND FLOOR</th>
<th>MAIN STAIRWELL</th>
<th>PERIMETER WINDOWS</th>
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<th>SELF STORAGE</th>
<th>WEST STAIRWELL / ELEVATOR</th>
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<th>RECEPTION</th>
<th>STAFF OFFICE</th>
<th>MAKER</th>
<th>LOUNGE</th>
<th>MEDIA ROOM</th>
<th>DOUBLE CONDOMINIUM UNIT</th>
<th>CONDOMINIUM FAMILY UNIT</th>
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PRECEDE NTS
MIDDLETON INN

ARCHITECT: CLARK and MENEFEE

LOCATION: CHARLESTON, SC

HIGHLIGHTS:
Great example of modular configuration. Rooms are tied together using a central spine that provides a fireplace to each reflected layout.

RELATIONSHIP:
Modular units have the potential to reflect the implementation and configuration of prefabrication craftsman interiors.

As depicted in the plan, small windows on either side of the spine allow for the penetration of natural light while providing viewpoints to either side of the structure.

The rooms also incorporate a wooden shutter system that can manipulate natural light.

Large windows used in Fox will be extremely important in dictating the layout of individual condominiums.

SOURCE:

SITE PLAN

Inn Units

Central Spines

The rooms surround central courtyard of lower elevation than perimeter courtyard. A pattern is created using perimeter lines and the reflection of units (in green).
Units are mirrored about central axis/spine that house chimney plumes and placement/power for refrigerators.

Units are stacked 3 high against earth barrier. 2 units are above ground level to right while the bottom units rest on the ground level of the central courtyard to the left.

© Images provided by Progressive Architecture
DIAGOON HOUSES

Multiple Configurations of Diagoon Houses

HERMAN HERTZBERGER
DELFT, THE NETHERLANDS

Presented with “an incomplete framework” or “skeleton” that “is a half-product which everyone can complete according to his own needs.”

Easily customized for the individual client.

The design utilizes panelized systems and unit masonry that can be configured in seemingly endless ways.

Small changes can be made to quickly and affordably change the use of individual spaces within the residences.

Units can be configured based on the number of occupants and can be reconfigured to accommodate a growing family.

Central cores serve as the spines of the houses and the center for configurations.

ABILITY to customize and reconfigure residences may prove to be important within the modern craftsman era.

Residences that are easily customized, utilizing prefabrication techniques, draws on the prefabricated nature of many traditional craftsman homes.

SOURCES:
Row Houses: A Housing Typologie, Volume 2
By Günter Pfeifer, Günter Pfeifer (architect.), Per Brauneck

© Images provided by A + C Arquitectura
HOMB MODULAR PREFAB (TAFT RESIDENCE)

ARCHITECTS: SKYLAB ARCHITECTS

LOCATION: PORTLAND, OR

AREA: 4,000 ft²

COMPLETION: 2013

HIGHLIGHTS:
Prefabricated modular units create a cohesive interior based on 100 ft² triangular modules that can be infinitely configured and expanded upon.
Units range from an 800 ft² residence to 40,000 ft² mixed use structures (spanning from residential to commercial).
Units are arranged in connection geometrically.
Units are ready to assemble on site.
Triangular modules add an element of interest within overall geometry of residence.
Sharp angles and different configurations among levels create unique building facades that break conventional flat planes.

RELATIONSHIP:
Concepts from Skylab prefab units can be implicated in Fox Elementary to create an interior method of joining residential units

SOURCE:
skylabarchitects.com

The Oregonian
Gensler Architects’ Bangkok office draws on inspiration from local craftsmen and culture to reflect the local culture.

Traditional Thai screens were constructed using a strong geometric pattern to help divide the space without impeding the penetration of natural light and completely closing off sub-spaces.

According to Gensler, most all of the materials were locally sourced. This included locally sourced fabrics from a local silk market. The local culture is reflected in the space.

Each decorative element also serves a function and has a practical quality. The space is responsible in its use of local resources. This may serve as a model for the practice of integrating local craft culture into an interior dwelling. The use of screens to divide spaces is something that I am extremely interested in as well.

HIGHLIGHTS:
- Screens separate different methods of work
- Traditional Thai screens
- Most materials sourced locally

SOURCE:
CONTRACT DESIGN MAGAZINE

Gensler Architects
ARCHITECT: GENSLER
LOCATION: BANGKOK, THAILAND
AREA: 1,765 SQUARE FEET
HIGHLIGHTS:
- Gensler Architects’ Bangkok office draws on inspiration from local craftsmen and culture to reflect the local culture.
- Traditional Thai screens were constructed using a strong geometric pattern to help divide the space without impeding the penetration of natural light and completely closing off sub-spaces.
- According to Gensler, most all of the materials were locally sourced. This included locally sourced fabrics from a local silk market. The local culture is reflected in the space.

RELATIONSHIP:
This is a good case study involving the architectural reflection of local culture, materials, and environment, all of which are extremely important to my thesis.

The space is responsible in its use of local resources. This may serve as a model for the practice of integrating local craft culture into an interior dwelling. The use of screens to divide spaces is something that I am extremely interested in as well.

SOURCE:
CONTRACT DESIGN MAGAZINE
MATERIAL + TECHNOLOGY PRECEDENTS
MINIMAL WASTE TABLE

DESIGNER: FRAAIHEID
LOCATION: AMSTERDAM, THE NETHERLANDS
HIGHLIGHTS: A good example of how CNC technology can help tremendously with reducing woodworking related waste. Here, CNC has provided perfect joinery among furniture pieces with minimal waste of materials.

The table has been cut using a CNC machine from one piece of laminated plywood.


© Images provided by Fraaheid

3D PRINTED KEYSTONES

DESIGNER: MINALE MAEDA
LOCATION: ROTTERDAM, THE NETHERLANDS
HIGHLIGHTS: 3D printed connectors such as these could play a roll in constructing furniture for the modern craftsman revival. These plastic connectors could drive down the price of various interior components and finishes.

Connectors provide a cheap, quick and efficient means of joinery that can be printed on any 3D printer when construction specs are purchased by the supplier.


© Images provided by Minale-Maeda
APARTMENT 65
ARCHITECTS: ATELIER PETER EBNER AND FRIENDS
LOCATION: OBEROSTERREICH, AUSTRIA
AREA: 800 ft²
HIGHLIGHTS:
The concept is based on the conservation of the available space using one central volume to delineate space within the confines of a small residential unit. Components of the central spine can be shifted, pivoted, and rotated to serve multiple rooms and spaces within the apartment.


MODEL APARTMENT
ARCHITECT: SMITH-MILLER & HAWKINSON
LOCATION: NEW YORK, NY
AREA: 1,200 ft²
COMPLETION: 1989
HIGHLIGHTS:
This project exhibits the concept of using a central spine-like mass to delineate space within the confines of a small residential unit. Components of the central mass can be shifted, pivoted, and rotated to serve multiple rooms and spaces within the apartment.

CHELSEA LOFT

ARCHITECTS: SCOTT MARBLE & KAREN FAIRBANKS
LOCATION: NEW YORK, NY
COMPLETION: 1994

HIGHLIGHTS:
The pivoting door component that is used in the space, exemplifies a successful method of dividing space while allowing the user to adjust the partitions' transparency.

The door panels are constructed using a combination of natural and synthetic materials, each serving a different structural and functional purpose while combining to create one uniform aesthetic.

Pivoting doors provide an approach to delineating space within a small footprint.

The size and scale of these pivoting doors can be changed to adjust for privacy concerns, need for natural light, and acoustical needs.


Combining pivoting doors with sliding doors
Natural light penetrates the translucent materials of the doors
View into bedroom with pivoting doors at their open position

Plan of Pivot Doors
1/2" = 1'

Plan of Pivot Doors Detail
2" = 1'

Door Section Detail
2" = 1’

© Images provided by Peter Paige, Arch. Photo Inc., Eduard Hueber
PRIVATE RESIDENCE WITH 13 CABINETS

ARCHITECTS: WESLEY WEI ARCHITECTS

LOCATION: PHILADELPHIA, PA

COMPLETION: 1995

HIGHLIGHTS:
The project utilizes a number of introduced storage columns in the apartment.

Storage units surround existing columns and service lines and also create new faux columns to enhance the existing structural post and provide extra storage space.

The inner tectonics or flesh of the columns provide a great aesthetic to their own. Painted ash veneer clad the majority of columns while the interiors are composed of wood, aluminum, bronze, acid-etched zinc plate, and glass mirrors.

Storage columns surrounding existing structure and mechanical chases leave room for future adjustments and additions.

“The columns, also functioning as cabinets, visually support the weight of the ceiling while engaging the imagination through the intimate spaces of their cavities.” (Oscar, 210).

SOURCE:

© Images provided by Catherine Bogert
The concept of the apartment explores two main architectural systems: the closed system considers the existing space that is traditionally defined by secure walls which dictate volumes and the abstract system that is superimposed on the closed system, defining space without the use of columns, windows, and conventional walls (Oscar 248).

The abstract system is composed of large L-shaped elements that articulate the vertices that create inferred corners and subconsciously divide the interior. The L-shaped elements are constructed using a plywood substructure with a layer of expanded metal nailed to the plywood. Metal edging is embedded within seven outer layers of hand sanded, dyed plaster finish (248).

Elements such as these can be used to divide space within small residential condominiums without the use of generic, drywall partitions.

SOURCE:

© Images provided by Jeff Goldberg/Esto
CONCEPT DEVELOPMENT
CONCEPT COLLAGES
INVESTIGATING A CENTRAL SPINE:
BUILDING OFF OF A FOCAL POINT OR HUB
CONCEPT STUDIES

INVESTIGATING A CENTRAL SPINE: BUILDING OFF OF A FOCAL POINT OR HUB
CONCEPT MODELS

INVESTIGATING A CENTRAL SPINE:
BUILDING OFF OF A FOCAL POINT OR HUB
CONCEPT MODELS

A STANDARD SPINE IS UTILIZED IN EACH MODEL.

THE GEOMETRIC VOLUMES ACTING ON THESE SPINES MAY VARY ACCORDINGLY.
DESIGN PROCESS
Natural light analysis suggests that chase walls and supply lines are best positioned between the existing series of glass facades.

Individual residential units divided into triangular modules at center points.

Units divided into large triangular modules opening into hallways.
Modules are bought and sold among residents, contributing to expansion and contraction of individual units.

Given the rectilinear nature of the structure, existing partition walls are used to create central spines.

Spines, or central chases (depicted in red), are introduced upon which bathrooms (depicted in green) and kitchen areas are reflected.

Plans are depicted in blue, sub axes depicted in green.
Introducing concepts of Craftsman kit construction to the interior, as well as modern technology to lessen the cost of handcrafted details, opens the possibility to new methods of modular design in which interior units are configured around structural skeletons and central base points that provide supply lines to residential units. Standardized modules are introduced to the residential wings to create a reflection about the geometry of the existing classrooms.

Central spines are implemented to allow kitchen and bathroom areas to share a common 8” chase wall while residential units are individually divided. Once individual units are combined as resident’s needs change, spines, along with movable partition walls, are utilized to create entirely new environments.
Movable panels attach from a floor grid to a matching coffered ceiling grid that is larger in width and depth.
Skeletal panels are constructed of 1” tubular aluminum and are light enough for one individual to carry and two individuals to set in place vertically.

Panels attach to a floor grid consisting of common 3/4” x 1 1/2” lumber and to a coffered ceiling that brings the panel’s total attachment height to approximately 12’ from grid to coffered ceiling.
PANEL LATCH DETAIL

DETAIL OF MAGNETIC ATTACHMENT OF PANELS TO ALUMINUM FRAME
Staggered panels create finger joints.

Panels are shifted on the aluminum frame according to the thickness of cladding that is used. This assures a flush corner when partitions are attached perpendicularly.
The spine, or central chase allows for more drastic movements and customization within the living unit. The distance that the spine protrudes from the existing wall maintain increments of 3’ to accommodate standard kitchen appliances. From there, storage columns are fully mobile and can be rearranged as desired. Standard datum lines are established on the kitchen facing wall to assure appropriate counter and clearance heights. Storage above is interchangeable using an attachable grid along the spine’s face. This method of attachment is articulated on the face of the spine to enhance the idea of tectonic expression.

CENTRAL SPINE

Central Spines are divided horizontally into 3’ increments (9 total) to allow for custom configuration of appliances below. The spines may be expanded to allow kitchens to grow. The interchangeable parts acting on the spines may be raised and lowered to accommodate the resident’s needs.
**Project:** Assemble Studio  
Architects: Assemble  
Location: Northcote, VIC, Australia  
The main feature of the space is the ceiling which is inspired by triangular origami folds. The geometric pattern can be repeated infinitely while allowing for adequate sound absorption.

**Material Application:**  
**Material Precedents and Products**

**Product:** Geometric Perforated Ceiling Tiles  
Example of how modern technology (CNC) has allowed for the construction of custom reconfigurable ceiling panels. The CNC machine provides a perfect geometry and fit among pieces. CNC also is responsible for the acoustic perforations.

**Project:** Book Case Screen Wall  
Architect: Iwamoto Scott  
Architecture Book Case acts as a partition that can also direct light.

**Product:** Geometric Wall Pattern  
Designer: John Houshmand  
Wall tiles are constructed from wood. These geometric tiles have the ability to be back-lit, illuminating the interior.

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**Product:** RoboFold - "Sartorial Tectonics" Facade System  
Designer: Andrew Saunders  
Machine fabricated modular facade system that can be configured in a number of shapes, sizes and densities.

**Project:** Hyundai Card Travel Library  
Architect: Wonderwall  
Location: Seoul, South Korea  
Project demonstrates the successful transition of articulated geometry from a vertical to horizontal surface.
3/4” Interchangeable floor panels are comprised of a 1/4” synthetic rubber base, 1/2” foam spacer, and a 1/4” top layer that can take on a number of finishes and materials.
EXPANSION AND CONTRACTION OF RESIDENTIAL UNITS

A NEW APPROACH TO AGING IN PLACE DESIGN

In addition to reviving Craftsman-era principles, this design also allows for unique flexibility in providing aging-in-place design solutions. Through the use of spines and movable partitions, residents have the opportunity to expand and contract their living spaces while also having customizable material finishes.


