



# **Arch 401: Design Studio**

## **Adaptive Reuse of Fire Stations**

**Winter Quarter 2008**

**UW Department of Architecture**

**Instructor Dr. Sharon E. Sutton, FAIA**

**Class Times Mon Wed Fri 01:30 - 05:20 PM**

**Location 210 Architecture Hall**

### **Students**

**Jason R. Bushman**

**Hyunji Lee**

**James Connolly**

**Elena Meyers**

**Sarah Hidano-Cardinelli**

**Elizabeth Ann Mitchell**

**Erin Mulvey**

**Joanna Lacanale**

**Philip LaFranchi**

**Ted Lance Wegrich**

## SCHEDULE

	<i><b>Monday</b></i>	<i><b>Wednesday</b></i>	<i><b>Friday</b></i>
<b>1</b>	05 Jan—Studio Overview Begin Programming	07 Jan—Site Visit Guided Tour by Fire Chief	09 Jan—Crits Optional Field/Library Work
<b>2</b>	12 Jan—Client Presentation Field/Library Work	14 Jan—Client Presentation Individual Crits	16 Jan—Research Pin Up
<b>3</b>	19 Jan—HOLIDAY! No Class	21 Jan—Team Crits	23 Jan—RESEARCH REVIEW Begin Program of Spaces
<b>4</b>	26 Jan—Individual Crits	28 Jan—PROGRAMMING DUE Journals Due	30 Jan—Individual Crits Begin Concept Design
<b>5</b>	02 Feb—Individual Crits	04 Feb—Individual Crits	06 Feb—Team Crits
<b>6</b>	09 Feb—Individual Crits	11 Feb—Individual Crits	13 Feb—CONCEPT REVIEW Journals Due
<b>7</b>	16 Feb—HOLIDAY No Class	18 Feb—Pin-up Revisions Begin Final Design	20 Feb—Team Crits
<b>8</b>	23 Feb—Individual Crits	25 Feb—Individual Crits	27 Feb—Team Crits
<b>9</b>	02—Individual Crits	04 Mar—Individual Crits	06 Mar—Team Crits
<b>10</b>	09 Mar—Individual Crits	11 Mar—DRAWINGS DUE Begin Client Docs	13 Mar—Team Crits Last Day of Classes
<b>11</b>	Tuesday 17 Mar—FINAL REVIEW 12 Noon - 05:30 Journals Due		20 Mar—CLIENT DOCS DUE Grades Distributed

Students are responsible to create and maintain a crit schedule for each class.

Schedule allows time for each team to prepare high-quality client documentation of the research, program of spaces, and individual designs.

## SYLLABUS

### Studio Overview

This is a community-service-learning studio in which you will work with representatives from the City of Seattle's Fleets and Facilities Department and Historic Preservation Program to program and design an adaptive reuse for three different historic fire stations. These stations will soon be for sale to private developers, and yet they have untold symbolic value in their respective neighborhoods. Your task will be to conceive a new use for each building that honors its distinctive architecture and prominent spatial location, while also complying with zoning and historic preservation constraints and targeting a reasonable market niche. Because your work will lay the foundation for actual projects, you will have adequate time to develop a high-quality presentation oriented toward city officials and the public. In addition to these programming and design tasks, you will reflect on your progress through a journal. Finally given the 2030 Challenge, all architecture students are encouraged (obligated) to incorporate sustain design principles in their projects.

### Studio Goals

In this studio, you will develop your ability to:

- Conduct project research, including literature review, site analysis, code analysis, and identification of architectural precedents;
- Develop a program of spaces based upon project research and interactions with a client;
- Develop a design concept that reflects project research and sustainable design principles;
- Reflect critically upon your own progress and that of your peers; and
- Produce strong documentation of your work suitable for use by a client.

### Studio Project: Adaptive Reuse

*Fire stations are not the kinds of buildings that histories of architecture usually treat; their design and requirements have stayed so simple and so constant over the years that they have offered architects little room for creative manipulations of space and form. Because fire stations are usually modest buildings, commissioned by conservative bureaucrats and designed by lesser-known architects, they rarely display the radical innovation found in more symbolically important structures such as skyscrapers, houses, churches, or campus buildings. . . . Fire stations are the most ubiquitous of public buildings—until recently, no community, neighborhood, or section of town could do without one (Zurier, 1982, p. 13).*



In this studio, you will work in a three-person team to conduct research and develop a program of spaces for one of three fire stations. Then you will individually develop a design that accommodates your team's program. The client (Fleets and Facilities) will receive three digital "booklets," with each documenting the research and program of spaces for one station along with three designs for its reuse.

The fire stations are of different sizes and located in very different neighborhoods as follows:



**Fire Station #6**, an Art Deco/Moderne structure designed by George Stewart in 1931, this 8,130 SF building is located at 101 23rd Avenue South in the Central District on a .47-acre site. Not only is it the largest building and site, it is the most prominent as a neighborhood landmark. The area is zoned L-4 Lowrise.



**Fire Station #37**, a Mission Revival structure most likely designed by Daniel Huntington in 1925, this a 5,360-SF building is located at 7300 35th Avenue SW in the Southwest Seattle on a .22-acre site. The site is nearby HighPoint, Mithun's award-winning HOPE VI mixed-income project, but at the longest travel distance from our studio. The area is zoned SF 5000.



**Fire Station #38**, a Mission Revival/Moderne structure designed by George Stewart in 1930, this 2,568-SF building is located at 5503 33rd Avenue NE in the Ravenna neighborhood on a .21-acre site. Not only is it the smallest building and site, it is located across the street from cemetery. The area is zoned L-1 Lowrise.

## Studio Structure

The studio project is broken into three programming and design assignments plus a journal: Research (conducted in a team) comprises 10 sessions (with 2 devoted to developing the program of spaces); Concept Design comprises 7 sessions, and Final Design comprises 11 sessions (with 1 devoted to client documentation). Reviews all occur on Fridays as will team meetings, which will be used for team work and to exchange ideas on individual work. Your journal will be due at the end of each review.

Outside reviewers, including client representatives, will attend all three of the reviews. The Research Review will take place before final documentation of the research is due to allow client input into the research as well as the program of spaces. After the Concept Design review, you will do a quick revision of your project in response to lessons learned from the review—an approach that minimizes the "spinning of wheels" that usually occurs after outside reviewers provide feedback. The revision pin-up is intended to be a affirming session that get you moving forward with your design intentions.

You will participate in a combination of team crits and individual crits throughout the quarter. At the beginning of class, you will make a schedule for these crits with times. The next team or person on the list is responsible for making sure that the next session starts on time.

You will receive continuous written feedback on your progress in the studio via the journal (see below). You will also have a substantial amount of time for production at the end of the term to produce client documentation that will hopefully also be useful for your portfolio.

## Studio Requirements

### Programming and Design Assignments

You will receive a separate hand out for each assignment and review, which together with this handout form the syllabus. Note: You are responsible for *reading* the syllabus, including any documents sent via email, so please check your email regularly. THIS IS A PAPERLESS STUDIO; the syllabus will be entirely digital. Course Materials may be accessed at

<http://faculty.washington.edu/sesut/> Look in the Firehouse Adaptive Reuse Folder

### Participation in Team Crits

You will work in a team of three students to conduct research, write a program of spaces, and complete digitally document your work for use by the client. In addition to the work that your team will produce collectively, your teammates will provide peer feedback on your individual design development. At a minimum, these sessions will allow you to improve your critical abilities and develop a student perspective on the project. Ideally, these sessions will promote a synergy of ideas about the adaptive reuse potential of the particular structure you are investigating (See "Rules for Team Crits").

[Journal \(PLEASE READ and heed!!!\)](#)

The journal is a record of your design development, your independent research, and your self-evaluation and reflection upon the studio. It should exhibit thoughtfulness and design quality, not quantity, though *regular dated entries are required*. Most of all, it should be a learning tool that helps you understand/discover your own unique approach to the design process.

The journal should include:

- Sketches and notes related to the assignments, particularly precedent studies and developmental sketches;
- Sketches and notes documenting and assessing the reviews (of yourself, as well as the other students in your team);
- A self-evaluation of your progress on each assignment (written/drawn during the review);
- Any strong feelings you have about the assignments, reviews, or the studio in general.

The journal can be bound, loose-leaf, or boxed; it can be handwritten, computer generated, or collaged (8.5" x 11" is much preferred). Computer generated journals must be presented in hard copy. Whatever the format, it is NOT A NOTEBOOK, but an expression of your learning experience—a professional diary you will always keep. Your journal will be due after each review and will be used by the instructor to provide a written evaluation of your progress. This evaluation will roughly follow the "areas of assessment" required by the Architecture Department.

Note: Some students hate the journal and see it as a tedious detraction from design work. Other students love the journal and see it as a life-changing experience. Still other students hate the journal during the class but later see its benefits, as did this student, who continues to keep one now that he has graduated and is working fulltime:

*I would really like to thank you for many of the design approaches that you showed us last quarter. I didn't really see the impact of this until this quarter where I have found myself solving many of my design problems through a personal journal that I made for myself. This has actually helped me out a lot with consolidating my thoughts and exploring different solutions. . . . Again, thank you, and I really appreciate many of the things that you pushed us to do last quarter (Arch 400 student).*

Whatever your particular reaction, journals have been used by many artists throughout history as a way of disciplining their thinking, so having a journal experience in your undergraduate education seems reasonable.

[Email Contact](#)

Especially as reviews approach, you must check your email prior to studio for announcements.

[Client Documentation](#)

By the end of the Research Assignment, teammates should have agreed on the format (page orientation, type, layout, etc) for the digital "booklet" that will comprise client documentation. The Research Assignment, including the Program of Spaces, must be presented in this format on 28 January. At the end of the quarter, individual designs will be added to the initial booklet.

### Rules for Team Crits

- Be an active participant in your team
- Agree on the rules for giving feedback with your team
- Provide an overview of your feedback before going into details
- Avoid being prescriptive or attempting to create a solution; stick to principles
- Avoid giving vague comments, which can be emotionally unsettling
- Encourage reactions to your feedback—make the exchange a dialogue
- Remember that feedback can be better or worse than your own self-evaluation
- Remember that all feedback is on a take-it-or-leave-it basis

### **Studio Resources**

The City of Seattle Fleets & Facilities Department (FFD) is our client. You can expect assistance from FFD as well as the Department of Neighborhoods (DON) and other practicing professionals.

### Resources to Contact Directly

Erin Paysse—FFD Research and Evaluation Assistant

She is our primary contact and a UW alumna whose Au.2006 Arch 400 studio focused on Fire Station 17

[Erin.Paysse@Seattle.gov](mailto:Erin.Paysse@Seattle.gov)

206.684.3194

David C. Hemmelgarn—FFD Senior Real Property Agent

[David.Hemmelgarn@Seattle.gov](mailto:David.Hemmelgarn@Seattle.gov)

206.684.0701

### Resources to Contact through Erin Paysse

Ted Maslin—FFD Director, Real Estate Services

Beth Chave—DON Landmarks Preservation Board

### Other Possible Resources

Don Brubeck, AIA, Bassetti Architects

Susan Bola, Bola Architects

George Rolfe, UW Department of Urban Planning

Peter Steinbreuck, FAIA, UW Department of Architecture

Jerry Finrow, FAIA, UW Department of Architecture

## Grading Procedures

Your final grade will contain the following areas of assessment:

1. Research Assignment (Team Assignment) 25 Percent  
Literature review, zoning analysis, precedent study, site analysis, program of spaces
2. Concept Design 20 Percent  
Interior space planning with emphasis building circulation
3. Final Design 25 Percent  
Site development, interior design, architectural details
4. Client Documentation (Team and Individual Assignment) 15 Percent  
Digital "booklet" containing research, program of spaces, and individual designs
5. Journal 15 Percent  
Critical reflection on the studio

## Areas of Assessment

All students at the 401 level are assessed in the following areas, adapted to this particular project. The assessment is on a scale of 1 to 5, with 3 indicating student performance at approximately the faculty's expectation for this studio. Higher evaluations (4 and 5) indicate areas of strength and lower ones (1 and 2) indicate areas where additional effort is warranted. Evaluations for the five assignments roughly follow these categories as indicated in parentheses below.

### Design Process and Abilities

**Self-reflection**—the ability to critically reflect on design projects in order to understand/discover one's unique approach to the design process (i.e., the journal).

**Ethical Response**—the ability to articulate a personal set of values and intentions relative to sustainability and universal access.

**Programmatic Skills**—the ability to develop functional spaces and circulation suited to the adaptive reuse.

**Spatial Skills**—the ability to develop a compelling three-dimensional interior design.

**Tectonic Skills**—the ability to specify appropriate structure, construction, and materials in adapting the existing building.

**Representation Skills**—the ability to use sketches, drawings, and models to simulate and communicate design solutions.



[Methods and Manners of Study](#)

**Attendance and Participation**—listens well, contributes in a timely way to the progress of the class.

**Receptive**—accepts comments and ideas of others and responds positively to them.

**Methods**—uses appropriate drawings, models, and archival materials to develop ideas from concept formation to presentation.

[Summary Evaluation](#)

The student's general studio performance is appropriate at this studio level.

**ENJOY YOUR COMMUNITY-SERVICE-LEARNING STUDIO!**

## RESEARCH

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### Assignment Overview

This assignment, which will be carried out in a team, involves the in-depth investigation of the fire station of your choice in relation to the body of knowledge that exists on adaptive reuse of fire stations and other similar buildings. Specifically, you will conduct a literature review (including study of historic preservation materials, case studies, and codes), site analysis, building analysis, and market analysis. After you get feedback on your research findings from the client and a historic preservation expert, you will develop a program of spaces for your fire station. The assignment will result in the first two sections of the digital "booklet" that comprises client documentation.

### Assignment Tasks

Team should make, and get approved, a work plan that identifies which tasks each teammate will undertake with a schedule of due dates. The work plan should be in the form of a matrix:

<i>Detailed Task</i>	<i>Person Responsible</i>	<i>Due Date</i>
Literature Review—Seattle Land Use Code	Who Dunn It	Ions from Now

### Task 1: Literature Review

Each team is responsible for developing a bibliography suited to its particular fire station. However, here are some beginning citations. Note: You should only report *relevant* findings from your literature review.

### Masters Theses

Borda, Rosalie Anne (1982). *Recycling historic buildings: a case study of Old Firehouse 3* [University of Washington Masters Thesis].

Shiffler, Gregory (2004). *Fremont youth hostel & arts center: an adaptive reuse of the historic Fremont trolleybarn* [University of Washington Masters Thesis].

### Books

Burchell, Robert W. & Listokin, David (1981). *The adaptive reuse handbook: procedures to inventory, control, manage, and reemploy surplus municipal properties*. New Brunswick, NJ: Rutgers University, Center for Urban Policy Research.

Croft, Virginia (1991). *Recycled as restaurants: case studies in adaptive reuse*. New York: Whitney Library of Design,

Gebhard, David (1996). *The National Trust guide to Art Deco in America*. New York: J. Wiley; Washington, DC: Preservation Press.

Rabun, J. Stanley (2000). *Structural analysis of historic buildings: restoration, preservation, and adaptive reuse application*. New York: Wiley.

Royal Australian Institute of Architects (2004). *Adaptive reuse: preserving our past, building our future*. Canberra: Heritage Division, Department of the Environment and Heritage.

Woodstock, David G., Steward, Cecil W., & Forrester, R. Alan (eds.) (1987). *Adaptive reuse: issues and case studies in building preservation*. New York: Van Nostrand Reinhold [AUP Reserve]

Zurier, Rebecca (1982). *The American firehouse : an architectural and social history with photographs by A. Pierce Bounds*. New York: Abbeville Press.

### Articles

Ross, Sharon (1993, May-June). Firehouse make-over. *Architecture Minnesota*, 19, 3, 32-35. 1906 firehouse in Minneapolis was converted to condominiums.

Nesmith, Lynn (1991, November). Change of scenery: Newburyport Firehouse Center. *Architecture*, 80, 11, 74-79. Addition to an 1823 firehouse in the Massachusetts to create a performing arts center.

Zarin, Cynthia (1999 August). A firehouse revival: remodeling an 1864 Manhattan structure for a young client. *Architectural Digest*, 56, 8, 134-141,165.

### City Documents

Fire Station Landmark Nominations [Available online at <<http://faculty.washington.edu/sesut/>>].

Seattle Land Use Code [Available online at <<http://clerk.ci.seattle.wa.us/~public/toc/t23.htm>>].

Neighborhood Plans (1999) (for the urban villages or centers where the fire stations are located) [Available online at <<http://www.seattle.gov/neighborhoods/npi/plans.htm>>].

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### Task 2: Site Analysis

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Using the Neighborhood Plan as a guide, define a STUDY AREA for your fire station (perhaps a 1/4 mile walking distance or in relation to an Urban Center). Create maps of the Study Area that document: land use, demographics, public transportation, and amenities (open space, landmarks, commercial, educational and social services, etc.). Then brainstorm with your teammates the strengths, weakness, opportunities, and threats presented by the adaptive reuse of the fire station itself. The acronym for this planning method is: SWOT analysis; a good way to present the analysis is as a simple matrix with photographs to illustrate your points (just Google SWOT Analysis for quick and dirty approaches to this task).

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### Task 3: Building Analysis

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This task involves creating two sets of diagrams of the fire station. One set is a two-dimensional analysis of the elevations; the other is a volumetric/structural analysis of the interior. Most likely you will find that the proportioning systems of the interior and exterior align, at least in part. Your goal is to understand how the building is organized so you can most effectively intervene in that organization.

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### Task 4: Market Analysis

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Hopefully this task will become clearer as the assignment proceeds, but as a start, you need to project what kind of uses would "add value" to the neighborhood, for example by becoming an income producing (tax paying) property, providing a missing resource, or creating some other opportunity.

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### Task 5: Graphic Design

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This task involves specifying the design the digital "booklet" that will summarize your team's work, including the software application, page size and orientation, type, colors, page layout, placement of images, etc. You should test 2-3 dummy pages before applying the layout to your research findings.

## Research Review

Each team will have about 20-30 minutes to make a concise presentation of its findings with a similar amount of time for discussion by the reviewers. You should only present *relevant* information that supports your team's perspective on the reuse potential of your fire station, which means that a lot of good stuff will end up on the editing floor. At the end of the review, you will engage in a brainstorming session with the reviewers on possible new uses for these stations.

## Assignment Outcome

By 28 January, the Research Assignment will result in Part I (Research) and Part II (Program of Spaces) of the digital "booklet." At the end of the quarter, you will complete Part III (Design Alternatives) of the booklet.