



INTRODUCTION:

The hypothesis of this Foundation Studio is that the design of housing is embedded and necessarily attached to a specific urban or suburban culture. The aim of this studio is to design dwellings/housing within the context of an urban renewal of the suburban context aiming to increase **density and complexity** in a process of urban infill. The site chosen for that infill and transformation is at the City of Charlottesville, and more specifically at Preston Avenue between the intersection with Grady Avenue to the North-West and the rail track to the South-East. (See orthophoto next page with chosen area in grey).

'Garden cities of tomorrow' (1898) written by Ebenezer Howard (1850-1928) in England promoted the 'Garden City movement' which aimed to design settlements in which people would live harmoniously together with nature. The cultural movement was a reaction to overcrowded and polluted European cities in process of fast industrialization and growth without urban legislation and environmental control. The other cultural reaction to the unhealthy urbanized conditions in industrialized cities was the 'hygienism' and later the 'modernist' models of cities based on the incorporation of sewer, water supply, electricity, mobility, ventilation or sunlight as some basic living conditions to reach. These two opposite models, the 'Garden City movement' and the 'hygienism' were adopted, mutated and too often poorly interpreted. In the United States after World War II, this new pattern of living - the city garden - became simplified and spread across the landscape as the only model for living outside dense cities in the United States. The consumption of land as consequence of this model of urbanization grew very fast - helped by the influence of car companies - from the 50's to 90's of the XXth century. As a result, both large and smaller cities have spread out and often decayed at the core. The variety of housing has decreased with an increasing inequity regarding where and how people can afford to live.

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Ultimately, the goal of this studio is to re house the “American dream’ in a denser way. Pools on the air, gardens on walls, barbecues in collective realms, attics and their dreams looking at the stars, basements and their variety of functions, all these figures of the American home rearranged in a innovative way, and displayed throughout a neighborhood to provide a sense of community without losing the flavor of the relaxed American suburban lifestyle.

THE CHALLENGES OF A FOUNDATION STUDIO.

The Foundation Studio **ARCH2020** is meant to build on three basic type of skills through the semester being the first one, related to **visualization** (analogue and digital drawing, perspectives, plans, axons or sections); the second one to the specifics of the **discipline of architecture** (space, form, program, scale, circulation, typologies of aggregation or type of stairs) and the third one related to the capacity to question through design contemporary problems in the field of architecture and urban design.

The Foundation Studio **ARCH2020** will rehouse the American dream by rethink **housing for the suburban lifestyle**. Considering higher density, different levels of shared resources and the value and complexities of living together, we will design a conglomerate of buildings within the context of a polarized urban condition. This polarity is portrayed with two types of buildings. On the one hand an area of big boxes of commercial and old lost industrial facilities while on the other a small grain of single use houses in small parcels.

Nowadays, the so named sprawl phenomenon that emptied the mid-sized American cities seems to be slowing. People – especially young generations now in college - are looking for more human interaction, ways to save resources, less car dependency and more flexible and varied models of living. Based on that reality, we see the opportunity to combine an inevitable densification of the area well served by the presence of the infrastructure of Preston Avenue with the revitalization of a neighborhood and a community that has been oppressed and divided for a long period of time. Beyond the social issues there are urban, architectural and landscape strategies that can push the area into a better future for its citizens. Aspects such as policy, public investment in infrastructure or forms to drive private investment towards the public good, are some of the strategies that can be applied. We will try to improve a neighborhood while learning about housing typologies and pursuing innovation in housing culture.

OBJECTIVES AND METHODOLOGY:

The topic of designing collective housing is complex and has a lot of preconceptions, assumptions and clichés that are difficult to ignore especially without a large culture in housing’s typologies or having experienced different cultures of habitation. Therefore, this course’s first objective is to change the way of approaching housing by expanding our knowledge through the analysis of references and typologies of aggregation of units before the individual design starts.

Following a sequence of exercises, the **ARCH2020** studio will introduce a **hybrid housing** program as a catalyst for urban renewal on Preston Avenue.

The sequence of two exercises and six project strategies that build one into the other to just arrive at the end with an project articulated in many scales in a smooth conducted manner.

EXERCISE 1: SITE FAMILIARIZATION

EXERCISE 2: HOUSING ANALYSIS+READINGS

PROJECT STRATEGY 1: URBAN AGGREGATION AS ITERATION OF 5 GIVEN CONCEPTS

PROJECT STRATEGY 2: LIVING MODES-PROGRAM COMPOSITE

PROJECT STRATEGY 3: HOME DWELLINGS-WEBHOMES

PROJECT STRATEGY 4: LANGUAGES-LINEAGES&SPATIAL ORGANISATIONS

PROJECT STRATEGY 5: BUILDING-TO-BUILDING. THE QUADRANT.

PROJECT STRATEGY 6: UNIT-TO-UNIT. BUILDING AS BODY.

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HOUSING DENSITY: But, what sort of magnitudes are we talking about?

“ The average densities in dwellings per hectare shows exaggerated differences according to the way in which laid out are placed on the land. The number of dwellings that occupy a square area of land measuring 100 meters by 100 meters (10,000m²=1Hectare=2,47 acres) usually varies in European cities from 25 to 100. Residential estate with detached homes on plots of 1000 square meters would represent about 10 dwellings per hectare. The average density of Los Angeles is 15. The minimum recommendable density for providing a public bus service is 25. The new planning guidelines in England, PPG3, stipulate that 30 dwellings per hectare should be the minimum for new developments, too high for the British nevertheless!. The average density for London is 42. A density of 60 is required to warrant the installation of a tram service. The average density of consolidated urban centers in Europe is 93 dwellings per hectare. During the development of Singapore in the '70s, there were 250 dwellings per hectare, and today in the Kowloon region of China this figure stands at 1250. In general terms, it can be said that high density optimizes land use, lessens the pressure on agricultural land, reduces the need to travel and the risk of traffic accidents, making public transport more profitable and creating areas of urban activity that favors trading and cultural exchanges. All organizations, entities and associations that advocate sustainability and low-consumption development, support the idea of high-density development and consider ideal density to be around 100 dwellings per hectare. “

From: Density. New collective housing. Javier Mozas. Aurora Fernandez Per. a+t Ediciones. p.43.

PPG3: planning policy guidance. 3 housing. / 1250: Source: David Rudlin. “Tomorrow a peaceful path to urban reform: the feasibility of accommodating 75% of new Homes in Urban areas”, 1998. Quoted by: Michael Breheny in “Densities and Sustainable Cities: The UK Experience”.

BASIC INFORMATION:

The Surface of 1 hectare is equal to 2,47acre.

Density will not be predetermined in this project, but on the contrary it will be the result of massing strategies as well as aggregation strategies while considering site conditions of topography, giant trees, orientation, views, access, etc.; however, it will be important to keep track of the density's number you are generating with your project.

HOUSING DENSITY:

In our site, the area in which we can operate is around 25 hectares (500 meters by 500 meters) within the grey marked surface above. The amount of units or dwellings will be variable depending on the density. Here below you just have a first test on numbers of dwellings in a certain amount of land area and what is the density as a result.

AREA OF LAND TAKEN TO POPULATE WITH HOUSING	400 DWELLINGS IN TWO DIFFERENT AREAS	THE SAME DENSITY WITH DIFFERENT HOUSING QUANTITIES	ABOVE IDEAL DENSITY ACCORDING TEXT ABOVE
Land: 25 hectares = 61,75 acres (500x500m)	400dwellings/25hectares =DENSITY: 16 dwellings/Ha	2,500 dwellings /25hectare =DENSITY: 100 dwellings/Ha	4,000dwellings/25hectares =DENSITY: 160 dwellings /Ha.
Land:10 hectares =24,70 acre (500x200 m)	400 dwellings /10hectares =DENSITY:40 dwellings /Ha	1,000 dwellings/10hectare =DENSITY:100 dwellings /Ha	8,000 dwellings /10hectares =DENSITY: 800 dwellings /Ha.

POLICY ON EXISTING & NEW BUILDINGS:

Although several buildings are occupying the site, your urban design does not need to erase them. Instead, the existing buildings can allow new relationships between individual dwellings and collective thriving spaces. The main goal of this project is to design the housing complex including exterior spaces connecting to existing buildings. The high of new buildings can be freely decided according to your urban ideas and your instructor. **The existing buildings can be used but not demolished;** however, housing buildings can be sitting above the existing commercial buildings or big boxes. The parking removed has to be replaced in parking buildings on site.

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TYPICAL SIZE OF UNITS OR DWELLINGS

We ask you to propose dwellings for a variety of people. Ranging from students in individual rooms or in pairs, married students, visiting scholars, retired and families (staff, faculty) with kids. The size of a house is different according to culture, climate, historical moments or even social classes. Here you have a relation of typical square meters and squared feet for apartments just as an orientation.

XS	S	M	M	M	L	XL	XXL
30m2 =322.91ft2	50 m2=538ft2	90m2 =970sft2	100m2 = 1080ft2	120m2 = 1292 ft2	150m2 = 1615 ft2	200m2 = 2152 ft2	250m2 = 2691 ft2 300m2 = 3230 ft2

BIG HOME OF DWELLINGS:

Aggregating dwellings around a series of indoor and outdoor collective space is the main purpose of this housing design course. The big home of units can be formed by collective spaces that connect with the ethos of a basement, an attic, a kitchen or a garden described by Gaston Bachelard at [The poetics of space](#). An “open community” as an expanded home that is opened to the city at large and a “real house” what habitants of the “open community” feel they can use freely within the surroundings. In that sense, the “real house” of a very small apartment in a city like Tokyo is the City itself and the unit is really the “room” and not much more.

STUDIO CULTURE AND POLICIES:

CONTACT:

Instructor/Course coordinator:

Margarita Jover, Professor of Practice.

Instructors:

Eric Barr, Lecturer
Ryan Carbone, Lecturer
Ian Carr, Lecturer
Luis Pancorbo, Assistant Professor

Visualization's coordination:

Ryan Carbone, Lecturer
Visual.'s TA:
Ismail, Mohamed Abdelbagi.

Teaching Assistants:

Group Luis Pancorbo:

Josh Aronson
Sam Manock

Group Ian Carr:

Joseph Brookover
Ashli Monika Marino

Group Eric Barr:

Sean Brandon Sullivan
Christina Nicole Griggs

Group Ryan Carbone:

Spring Braccia-Beck
Dixi Wu

1_ORGANIZATION: INSTRUCTORS AND TEACHING ASSISTANTS

This course is formed by 4 sections of 12 students. Each section is lead by one instructor and two teaching assistants. Your instructor will provide your main studio critics and guidance. Moreover, you will benefit from other studio critiques from the other instructors as well as from the studio coordinator. Teaching assistants – in close contact with their instructor - will follow up on instructor's guidance and help with representation, communication and workflow. Each teaching assistant will take care of 6 students providing a time slot in which they will be available; in addition, they will provide an indication on where their desk is in the building. This course is organized with the same workflow of exercises, lectures and readings for the whole 4 sections throughout the whole semester. The semester schedule is available at *UvaCollab* as a general framework for everyone. The schedule can be slightly changed by instructors to adjust to student's progress and instructor's rhythm. At our studio space, a common table is set up for instructors and teaching assistants during studio time. The coordinator's course will be available in office hours at 127; and, in studio space in certain moments.

2_STUDIO CULTURE

Every week or two is there an exercise and reading due. The methodology has been carefully thought to arrive to a certain specific depth in housing design tailored to your capacities as second year undergrad. You will learn from the close recognition, analysis and drawing of built referents, as well as from readings and specifically guided iterations on morphology and typology of housing.

To copy is here at this studio, part of your training; and, to share information amongst your peers as well as to work in groups is part of the studio culture here at the school of Architecture at the University of Virginia. The studio dynamic however will move from collective work and analysis of existing built work to individual projects that are site specific. (More details and nuances about copying at university honor code below)

Be mindful of when your instructors are speaking and refrain from carrying on side conversations. When we engage in presentations of didactic content, we may move the studio outside or to a small auditorium or classroom, typically 158 or 105. It's important to make the transition to and from such presentations as efficiently as possible to maximize our studio time.

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3 UNIVERSITY HONOR CODE:

This architectural studio is built on a foundation of analysis, transformation, and reuse of precedent and is, therefore, intended to be an open community of shared research, process, and ideas. However, the University of Virginia Honor Code applies with respect to the building and preservation of a community of trust across the University and prohibits lying, cheating, or stealing. You may find more information at <http://www.virginia.edu/honor/>, and if you have questions about special cases in the context of the School of Architecture's curriculum, contact the School of Architecture's representatives.

4 STUDIO EVALUATION AND GRADES

The course is a continuous evaluation. Every exercise counts and builds towards the final review. Projects and exercises are to be specifically advanced from Monday to Wednesday and Wednesday to Friday. Wednesdays have always a portion of time for visualization content at 105 and a specific curriculum in parallel to studio dynamic. Before the final review however, a week is dedicated to have personal feedback from your instructor regarding your strengths and weaknesses from the end of the semester onto the future. (See general schedule). Your instructor is the ultimate responsible of your grade.

5 POLICY TABLES: CLEANING DYNAMICS & EATING CULTURE

At the space provided at the third floor at Campbell hall, this year you will have your own individual table not having to share with any first year student as in the past. However, it is important to maintain a certain care of your work by keeping delicate pieces apart and avoiding food and other 'hazardous' substances on the area. In that regard, it is highly recommended to eat in other places than the work place. We suggest, to eat in areas like the Naug, or the café, both at the first floor. This dynamic also helps on a certain mental hygiene especially if eating happens in groups of two or three becoming a socializing moment of relax.

In addition, it is important to keep in mind that the cleaning crew at the school needs the floor to be clear of objects such as models, paper and other material to actually be able to clean the floor. Use available bins for undesired material and keep safely your workflow of drawings and models.

6 POLICY ON STUDENT'S ASSISTENCE IN DISTRESS

Faculty and Teaching assistants are not expected to diagnose the source of distress or take on the role of counselor. However, Faculty and teaching assistants might identify students in need of assistance and provide appropriate referral. Ask them time to talk and share your worries if needed.

7 STUDIO ATTENDANCE:

Absences are excused only in extreme circumstances, and must be approved by an instructor. Studio begins promptly at 2pm with announcements at the Common Table. If you are working at a workstation or lab outside of studio, you should be present at the start of class and let one of the instructors know where to find you during studio. Instructors expect from you that you keep track of your work through the elaboration of a booklet. (More details in visualization curriculum)

The SARC Lecture series is an invaluable learning experience, and your participation in studio extends to attending lectures by the Department of Architecture. We will structure Monday and Friday sessions to end before the beginning of School Lectures.

8 SPECIAL NEEDS

All students with special needs requiring accommodations should present the appropriate paperwork from the Student Disability Access Center. It is the student's responsibility to present this paperwork in a timely fashion and follow up with the instructor about the accommodations being offered. Students are urged to fulfill this responsibility within the first two weeks of the class. The SDAC is located in the Department of Student Health at Elson Student Health Center and can be contacted at 243-5180 or <http://www.virginia.edu/studenthealth/sdac.html>.

9_MULTI-TASKING:

Use of cell phones, texting, non-curricular social media, and entertainment media is strongly discouraged during studio. Multi-tasking or “continuous partial attention” can degrade your performance in studio and life in general according to this [article](#)¹. **Abuse of this recommendation will result in changes to the policy including temporary removal of cell phones during studio hours.**

10_COMPUTER AND MATERIAL REQUIREMENTS FOR STUDENTS

All students in the School of Architecture should consider obtaining their own personal computer.

Use of digital tools and technology in the School of Architecture is significant, especially for students of design (Architecture and Landscape Architecture), and as early as the first year of study for both undergraduate and graduate students. Computer use is far more intense than basic office and productivity work, and will include significant use of graphics tools like the Adobe suite, CAD, 3D modeling, GIS, and more. To be effective and not frustrated with your computer's working performance, this requires a higher specification, and higher cost, than what would be required of some other academic areas. All incoming students should read through the information on this page and look to purchase a computer according to this expectation.<http://www.arch.virginia.edu/it-tech-support>; <http://www.arch.virginia.edu/tech/requirement>
Regarding to material requirements, each student should have available on desk a scaler, semi-transparent tracing paper, a draft book (DIN A-5 size) and the adequate drawing tools (pens of different colors, pencils, etc)

11_ACADEMIC RULES AND REGULATIONS, A-SCHOOL:

Undergraduate students of the School of Architecture can review the Academic Rules, Regulations, and Information provided at the following link for specifics on Incomplete Grades and Ownership of Work, among other issues relevant to studio.

<http://records.ureg.virginia.edu/content.php?catoid=33&navoid=1275>.

12_RESOURCES

The main source of information and place where to submit exercises is uvacollab. Let your instructor know if there is any problem accessing it.

13_BIBLIOGRAPHY AND COURSE RESERVES:

A large bibliography on housing is reserved at the Library for ARCH2020; however, here below you have a basic list as well as at UvaCollab.

Typology+

Peter Heebner and others. Birkhauser Architecture; 432 p. edition (October 16, 2009)

Key Urban Housing of the twentieth century.

Hilary French.w.w.Norton&Company; Pap/cdr edition (November 17, 2008)

Home: a short history of an idea.

Rybczynski, Witold. New York, NY: Penguin Books, 1987, c1986

10stories of collective housing: graphical analysis of inspiring masterpieces.

Fernandez Per, Aurora.Vitoria-Gasteiz, Spain: a+t architecture Publishers, 2013

Density projects: 36 nuevos conceptos de vivienda colectiva:36 new concepts on collective housing.

Fernandez Per, AuroraVitoria-Gasteiz, Spain: a+t architecture Publishers, 2007

Densidad: nueva vivienda colectiva/Density: new collective housing

Javier Mozas, aurora Fernandez Per.Vitoria-Gasteiz, Spain: a+t architecture Publishers, 2007

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