UBC SALA 540 Studio | **Fall 2025**

Matt Grady | **Re:Tower – Adaptations of Tall Buildings**

Re:Tower – Adaptations of Tall Buildings
Studio Proposal

Studio Description, Context & Objectives

Cities are currently facing a complex set of competing challenges, and if trends continue, the situation will increasingly get worse. The global population is increasing exponentially; the current global population of around 7.6 billion, is expected to grow to 9.8 billion in 2050 and 11.2 billion in 2100. Despite the pandemic, urban cores are continuing to densify; more than 50% of the world's population is now urban, and that number is set to balloon exponentially. The population growth and density boom coincide with a global rise in prosperity; consequently, global material use is expected to rise by 56% by 2060[1]. GHG emissions will increase at pace with this material use[2]. Architecture is one of the largest contributors to this problem; between 40% to 50% of resources extracted for global materials are used for construction and infrastructure[3], and approximately 40% of the world's waste results from construction and demolition in the building industry[4]. This cycle of constant obliteration of the 'old' for wholesale replacement of the 'new' obliterates the continuity of our cities' memory, heritage and character; though there is obviously need and desire to improve our built condition, this does not necessarily mean we should be starting from scratch endlessly, forgetting where we came from, and ignoring the value that could be found in the existing. We need to stop throwing the proverbial baby out with the bathwater, stop taking a binary stance on the evaluation of what exists as either 'acceptable-as-is' or 'need-to-replace'. It is becoming clear that we cannot sustain this punishing cycle of demolition and construction if we are to maintain the well-being of our environment, our cities and ourselves. Surely there is a more nuanced and granular way forward.

In parallel to this, the ubiquitous vessel for dealing with density and growth, aside from horizontal urban sprawl, has been the vertical tower. Given its sheer scale and presence in the city, it has increasingly become a cautionary tale of the pressures of the wholesale demolition/reconstruction cycle. As a relatively recent typology in architecture (re: early 'skyscraper' boom starting in Chicago 1930s), its presence in the skyline of cities has exploded in the past 90 years, fundamentally redefining cities' character and skyline; before-after photographs of Shanghai, New York, London, and Vancouver and other major city centers across the world are barely recognizable. However, many of the towers that were built in the 1960s and 1970s, and sadly some built more recently, were designed in times where many factors were not adequately considered – fire-safety, seismic design, code, GHG emission and many other factors have radically changed since. In addition, typical towers have been a voracious consumers of materials in their construction and energy consumption in their operation. Today, many towers built in their relatively short history are reaching the end of their natural life span; At 30-40 years old, many parts of a building elements and systems typically need significant maintenance, renewal, or outright replacement. Many towers are currently underperforming in many respects; inadequate spaces for changing use patterns and densification, poor energy performance, resiliency for fire-safety and seismic events and their general inability to respond to the changing pressures of evolving urban centres are putting pressure on their presence. The number of tall buildings in this state is staggeringly high – Singapore, Hong Kong, New York City and Toronto alone have close to 20,000 tall towers that are woefully underperforming.[5]

Over time, towers have seldomly departed from their normative character in their relatively short history. Despite several emblematic examples, and despite significant progress in the science around building technologies, systems and strategies, towers continue to be designed and built to prescribed and conventional norms, using standard strategies, systems and products applied similarly to sites around the world without consideration of the site's unique contextual conditions; a site's maximized allowable floor plate is repeated vertically and undifferentiated limited only by zoning restrictions; hermetically sealed exterior envelopes wrap all orientations uniformly regardless of solar exposure, view, or urban context; little generosity is given to the city and the public further than the first floors at grade, reserving the benefits of height, view, air and prospect for those who have access and who can afford it. Those tall buildings that do depart from the standards of the typical tower do so with gestural expression as their goal, their sculptural formalism and gimmickry abetted by the increasing ease of advanced computer modelling in order to justify their value to a city. Alongside a growing appetite of clients to differentiate their product from their competitors by defining and promoting themselves with increasingly "iconic" architecture, tower design has swung violently from the traditional extruded tower toward evermore sculpturally expressive and daring forms into which the life of the building and its inhabitants must fit, at times uneasily, and with unfortunate consequences for cities and citizens alike.

---

[1] UNEP – SCBI (United Nations Environment Program – Sustainable Buildings and Climate Initiative) – 2020 Annual Report

[2] UNEP – SCBI (United Nations Environment Program – Sustainable Buildings and Climate Initiative) – 2020 Annual Report

[3] de Wit, M., Hoogzaad, J., Rumjumar, S., Friedl, H., Douma, A.,(2018) The Circularity Gap Report, Circle Economy, Amsterdam

[4] UNEP – SCBI (United Nations Environment Program – Sustainable Buildings and Climate Initiative) – 2020 Annual Report

[5] Second Life of Tall Buildings, B+H Architects

This studio aims to expose students to the very specific set of parameters, constraints, and opportunities inherent in the tower typology, in order to critically explore ways in which these factors can be manipulated, modified and mutated toward towers that can be more responsive, reactive and adapted to their surrounding context. The studio will explore the radical reshaping the typical tower typology through a deep and careful reconsideration of an existing tower. The studio will reconsider the Guinness Tower in Vancouver's downtown core, which represents in many ways a typical ur-tower. Of specific concern will be the influence of environmental factors in how the tower typology can respond responsibly to its energy-intensive nature, given the inherent challenges this typology embodies – i.e., large exterior envelope surfaces exposed to the elements (sun, wind, rain, etc.); imbalances between the desire for expansive views and the concurrent loss of thermal performance; gluttonous use of energy in vertical transportation as well as mechanical servicing systems, etc. Students will be encouraged to explore ways in which environmental factors inherent in building high can not only be controlled for and defended against but rather be harnessed and channelled towards positively benefit the building and its inhabitants, turning constraints into advantages. In parallel, attention will be paid to the ways in which the tower, as opposed to being a solipsistic and solitary entity, can become a more intimately connected, richly programmed vertical extension of the city, and can intelligently respond to the evolving nature of the use patterns of its citizens.

Studio Values

The studio will be guided by SALA's 5 core principles of Excellence, Integrity, Respect, Academic Freedom and Accountability. These guiding principles will cut across the studio's modules, and will benchmark student's work as well as the studio's process. The studio's aims will be to critically engage and understand the tower typology, of specific relevance to the Vancouver context as well as the densification of cities worldwide, in order to explore the future opportunities this typology can allow. The studio will specifically explore the ways in which the tower typology can be fundamentally reinterpreted, reshaped and re-used through adaptive interventions that respond to each building and site's specific context, better adapting and integrating to local conditions - perform better environmentally, create more social and community connections, etc. The studio will study the benefits and challenges of engaging with an existing building through adaptive re-use through a series of design interventions at different scales.

The studio will also be guided by the belief that the design of large-scale projects, like towers, and their adaptive re-use and renewal has a major part to play in responding to our current climate crisis. Given the aforementioned environmental challenges of this typology specifically, and the benefits of the adaptive reuse of an existing architecture, a long-lasting and adapted architecture can act as an important lever in mitigating the damaging cycle of demolition/construction by designing versatile buildings that are fitted to their context, are responsive to change, and can resiliently persist in time. The scale and importance of this typology to the city's fabric has a significant effect on cultural sustainability and the additive character of a place over time.

The studio aims to expose students to the importance of coordinating interdisciplinary factors. The tower typology specifically addresses a large number of technical challenges and broad disciplinary issues inherent in architecture and practice, and amplifies them given the scale and complexity of building tall. Students will be exposed to many interdependent factors they will need to address in practice: structural principles for verticalization and bracing statics, verticalization of MEP and circulation services, impacts of differing solar orientation to large expanses of façade, influences of wind not only to the tower's behaviour but to the surrounding urban context, fire safety, etc.

In addition, the studio aims to show students the value and importance of collaboration, especially important in large-scale architectural practice. Group research modules, collaborative design exercises, and a culture of dialogue and exchange of ideas within the studio will be encouraged, and will expose students to the fact that architecture, especially at this scale and complexity, involves not only the interplay of cross-disciplinary knowledge, but of the interplay of people. Students will be exposed to working as a team, confronting them with challenges that must be resolved as a group, inviting them to constantly learn from each other. It is the aim of the studio to expose students to the fact that leadership, collaboration, and positive group dynamics are key to successful outcomes.

Studio Term

Given the scale, complexity and technicity of the tower typology, as well as the understanding of the multi-faceted constructive reality of existing buildings and the need of students to be able to study strategies of adaptive-reuse interventions at various scales of design (large-scale urban down to the technical detail of resolution necessary to engage with existing buildings) the studio is geared to more advanced students. The tower typology as well as strategies of adaptive re-use require understandings of the technical coordination and assembly of existing buildings, the critical influence of structure, the complex systems of mechanical, electrical and plumbing, the importance of exterior envelope performance, the functioning of vertical circulation and fire egress, etc. which they should have had exposure to in their previous years of study. Given that landscape architecture opportunities are too often ignored in this typology, students from the Landscape stream and/or dual Architecture/Landscape stream will be considered and are encouraged to apply.

Schedule

During the first 3 weeks, the first phase of the studio will immerse the students in 'tower-ness'. The studio will immediately confront the building we will consider for the term, namely the Guinness Tower in Vancouver's downtown core. The studio will collectively study, assemble and produce all the essential background information and documentation that will shared and displayed as foundation for the studio's work going forward. Acknowledging that the most successful towers are the fruit of the efforts and interactions between many people, and not a result of the individual gesture of a solitary "genius", the first phase will entail a collective exercise where the studio as a whole will engage in the collaborative building of a large-scale model of the Guinness Tower that will occupy the centre of the studio for the semester. During this first phase, the studio also will read and review comprehensive historical, theoretical, and technical writings as well as study notable precedent tower projects that will expose students to the specific characteristics of the tower typology. This phase will be punctuated by critically-minded visits of specific and emblematic towers in Vancouver, as well as by talks by practitioners and specialists in the field of tower design (which may spill into module 2 depending on availability)

During the following 2 weeks, the second phase of the studio will immerse the students in 'adaptive reuse-ness', reading and reviewing writings on the theoretical, tactical, and pragmatic intervention strategies to existing structures. The studio will also study a series of emblematic adaptive re-use and intervention-focused projects to explore the breadth of ways of engaging with an existing condition.

For the final 8 weeks, the third phase of the studio will involve an in-depth design engagement with the Guinness Tower in Vancouver's downtown core, transforming a single-use office tower into a mixed-use project. Students will develop a design that adaptively integrates a series of new programs for the tower, specifically tailoring the interventions to the essential qualities of the building, site and context. The students will develop their final projects following a common and proscribed set of scaled drawings and models, large-scale and small, so as to be able to compare each project across the studio's work. Students will be given the freedom to complement these prescribed deliverables with individually specific modes of representation, depending on the direction and theme each student takes to their exploration.

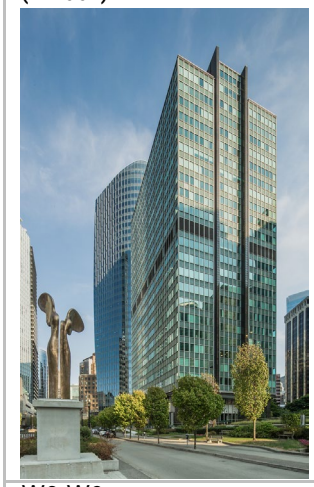
Travel

No distant travel outside of Vancouver is anticipated. Emblematic projects in the Vancouver downtown core have been contacted for site visits; namely Vancouver House (BIG/Dialog) & the Exchange Tower (Harry Gugger/Iredale), The Alberni Tower (Kengo Kuma), the Deloitte Cube Tower (OSO) the Butterfly (Revery) and/or the Terrace House (Shigeru Ban). Visits to existing towers will be paired with the specific thematics explored in each module, and will help enrich the student's general understanding of the tower typology.

Guinness Tower, Downtown Vancouver

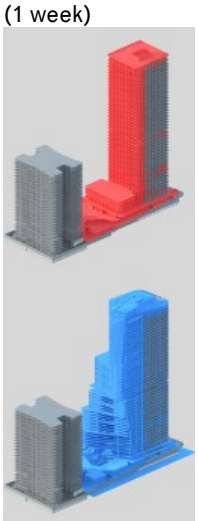
Re;Tower – Adaptations of Tall Buildings
Detailed Schedule

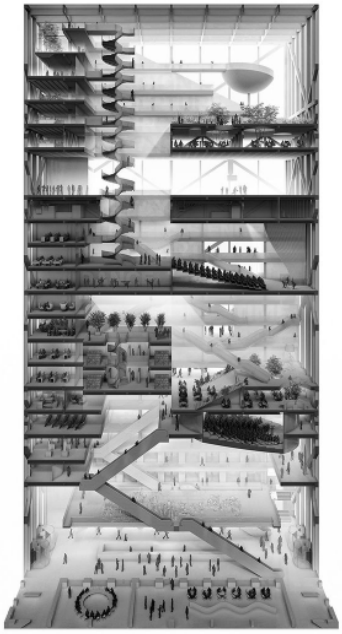
3 WEEKS	MODULE 1 - **UNDERSTANDING TOWERS**

W1
(1 week)
 
	Visit of the Guinness Tower
	Introduction to and description of the existing building, site and urban context for the semester's focus.
	Distribution of readings & precedent studies
	Immersion into 'tower-ness'
	• Distribution of reading material on historical, theoretical, constructive/technical background of the tower typology to discuss collectively
	  ○ Including: The Skyscraper (Allabeck), Origins of the Skyscraper (CTBUH), Delirious New York (Koolhaas), Skyscraper (Goldberger), Icebergs, Zombies & The Ultra-Thin (Soules),...
	• Assignment of significant precedent towers to study for each student and present to studio
	  ○ Including: Unité d'Habitation (Le Corbusier), HKSB Tower (Foster & Partners), Phare Tower (Morphosis), Vagelos Education Center (DSRNY), Pluralist Tower (Gaetano Pesce), Bosco Verticale (Stefano Boeri), EDITT Tower (Ken Yeang),...

W2-W3 (2 weeks) 	**Gathering/production of project foundations** *Creation of the foundational information and resources for the semester's work* • Assignment of 'champions' that will document, produce, collect the history of building/site, the urban constraints, the site context (including underground), the tower and sites 2D/3D documents, construction details, photo reportage, climate, and view analysis, etc. (to create a database/compendium displayed centrally in the studio and available to all for the semester) • Collective construction of a large-scale model (that will occupy the centre of the studio for the semester) **Interspersed events** (In parallel to gathering/production work, and could spread to Module 2 depending on availability • Review and discussion of readings • Presentation of precedent tower study (by students to each other) • Tour of notable towers in Vancouver Downtown (by invited local architects) • Lectures/Talks (by invited experts, researchers, faculty) – potential collaborators could include: Jason Heinrich (building performance), Matthew Soules (cultural and economic influences on towers), Sara Stevens (history of towers), RJC (seismic upgrades), representatives of the Council for Tall Buildings & Habitat (CTBUH), etc.

2 WEEKS	MODULE 2 - **EXPLORING ADAPTIVE RE-USE**

W4
(1 week)
 
	Distribution of readings & studies
	Immersion into 'adaptive reuse-ness'
	• Distribution of reading material
	  ○ Including: How Buildings Learn (Stuart Brand), Time Builds! (Garcia-Huidobro, Torriti, Tugas), Inside Architecture (Vitorri Gregotti), From Object to Field (Stan Allen),...
	• Assignment of significant precedent adaptive re-use projects to study for each student
	  ○ Including: The Quay Quarter Tower (3XN), Grand Parc (Locaton & Vassal), Conical Intersections (Gordon Matta-Clark), Palais de Tokyo Unbuilding (Locaton & Vassal), Torre David (Informal Community),...
	  ○ Production of an emblematic detail at the connection between existing and new

W5 (1 week)	**Reviews / Presentations** • Review and discussion of readings • Presentation of precedents of Renewal, Adaptive Re-use and Interventions to existing structures
8 WEEKS	MODULE 3 - **FINAL PROJECT**
W6 (1 week)	Introduction / Initiation • Schedule of programs and sizes to integrate into tower adaptation project • Initial discussion and identification of each student's specific interest/attitude for final project, focusing on a critical issue/deficiency to address in the tower.
W7-W14 (7 weeks - excludes 1 week study break) 	Development • Students will be allowed to work alone, or in groups of 2 maximum (to allow landscape students and/or junior students to pair) • Students will be asked to: o Respect a common set of predetermined drawings, perspectives and scales. o Create a small-scale model of the entire tower at a scale that is common to the whole studio. o Create an emblematic intervention directly to pre-reserved area of the large-scale collective model, making a physical 'collage' or 'exquisite corpse' of the collective model. o Create a detail that is emblematic of their project (1:10 or 1:25) at the junction between existing and new.

Matt Grady
Instructor

I have been fortunate to live, study, and practice between North America and Europe, and have recently returning to Vancouver after several years in Paris. I've designed, developed, and delivered award-winning, landmark architectural projects for various Pritzker Prize and globally recognized firms, including Jean Nouvel, Morphosis, Diamond Schmitt, Herzog&deMeuron, Paul Andreu and SOM. I have been fortunate to have worked on a number of ambitious tower projects across Europe, North America, the Middle East, and Asia, most notably the Phare Tower in Paris, France, the Nouvel in Kuala Lumpur, and Tower 25 in Nicosia. I am currently the Design Principal for the West Coast offices of HDR, an international office of 10000 people, with a broad spectrum of expertise in architecture, urban planning, landscape architecture and engineering.

I have focused my practice on creating meaningful architecture that emerges from the unique sets of variables of each projects' context, rejecting object-oriented impositions to a site. I am guided by the conviction that every context poses a different set questions to each project, and that the project should in turn respond with wholly unique, hyper-contextual answers. I believe the measured combination of the intrinsic factors of each specific project (site, program, culture, cost, climate, calendar, etc.) should fundamentally shape each project's specific resolution.

I am also guided by the belief that architecture has a major part to play in responding to our current climate crisis. Given that architecture accounts for a large proportion of environmental impacts, especially waste and energy, a long-lasting and adaptive architecture can act as an important lever in mitigating the damaging cycle of demolition/construction we are witness to today. By designing resilient buildings that are fitted to their context and that are responsive to change, we can hope that buildings resiliently persist in time. In unique opportunities, we are confronted with existing buildings that are neither fully operational or valuable in their current state nor completely devoid of opportunity and promise; these buildings demand a more nuanced evaluation than the simple black-and-white of demolish and build new vs. leave alone and cosmetically touch-up; these buildings should be seen as sites of opportunity, and are worthy of a more balanced and multi-scaled approach of deeply upgrading or adaptively re-using. This dynamic is especially important to me considering that, in the words of Carl Elefante (former president of the AIA) "the most green building is the one that is already built".

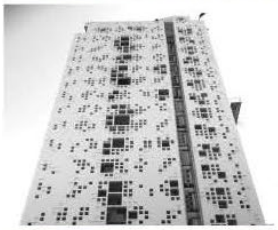
In my 25 years' experience, I have been keenly interested in the interplay of practice and teaching, of pragmatics and ideas, and of bottom-up and top-down processes. I have tried to stay committed to exploiting the seams between these dynamics towards finding innovative and meaningful ways in which ambitious ideas and ideals can find their most meaningful built resolution, both in practice and in teaching.

I am an alumnus of UBC and McGill University, have previously taught at l'Ecole Spéciale d'Architecture, l'Ecole Camondo and l'Ecole d'Architecture de Versailles. I have had the benefit of lecturing across Canada at universities including McGill and Carleton, and have been frequently invited as a guest critic or thesis committee member at Ecole de Versailles, and Ecole Camondo in Paris, University of Toronto, McGill. I have held teaching positions at Ecole Camondo in Paris for 5 years in various capacities, where I conceived, planned, and managed the year-long introductory Practicum on Scales of Design, exposing prospective students to various design fields increasing in scale from industrial design, to furniture design, to interior architecture, to building architecture, and finally to urban and landscape design. I also led a English-speaking class on Contemporary Architectural Thinking, and taught various design studios concentrating on topics such as the future of office design, subterranean architecture, transportation design, scenographic set design for theatre, and highway rest-stop renewals.

I have enjoyed being a regular contributor at SALA over the years. I have been privileged to be invited as a regular studio reviewer, thesis committee member, and thesis panelist as well as being involved with efforts in connecting practice and academia. I have previously taught 2 tower-based studios at UBC SALA in 2017 and 2019, and continue my interest in innovative tower design in my practice and teaching.

Matt Grady
Selected Tower Experience

Phare Tower
[Paris, France]
Date: 2007 – 2011
Program: Offices, Office Restaurants, Public VIP Restaurant, Retail,
Phase: APD [Conceptual Design], DCE [Detail Design], Permit, AC
Surface Area: 164 180 m² gross, 147 000 m² net
Budget: 600 M euros
Client: Unibail-Rodamco
(with Morphosis)



Residential Tower
[Nicosia, Cyprus]
Date: 2003
Program: Retail, Office, Apartments
Phase: APS [Schematic Design]
Surface Area: 4 000 m² net
Client: Nice Day Developments
(with Jean Nouvel)

Horizons Tower
[Boulogne-Billancourt, France]
Date: 2005 (now built)
Program: Offices
Phase: Competition (won)
(with Jean Nouvel)

Towers
[Kuala Lumpur, Malaysia]
Date: 2005
Program: Offices
Phase: APD [Conceptual Design]
(with Jean Nouvel)

Calgary Masonic Temple + Residences
Location: Calgary, AB
Date: 2014
Phase: Private Contract
Surface Area: 25 000m² net
Budget: 75 $M
Client: IDS Realty
(with B+H Architects)

CETC Tower
Location: Shanghai, China
Date: 2015
Phase: Competition
Program: Offices, Retail
Client: CETC Group
(with B+H Architects)

UnionPay Tower
Location: Shanghai, China
Date: 2015
Phase: Competition
Program: Offices, Retail
Client: UnionPay
(with B+H Architects)

Cumberland Terrace
Location: Toronto, ON
Date: 2013
Phase: Competition
Program: Residential, Amenities, Retail
Client: Oxford Properties
(with B+H Architects)

Origami Tower
In partnership with AS+GG
Location: Vancouver, BC
Date: 2014-2015
Phase: SD, DD
Program: Offices
Client: Cadillac Fairview
(with B+H Architects)

Re:Tower – Adaptations of Tall Buildings
Selected Precedent Images