

ARCHITECTURAL ASSOCIATION

DIPLOMA UNIT 12

2009 – 2010

Holger Kehne / Jeffrey Turko

Nip & Tuck:

bridging - infrastructure, intersection and architecture

Preface

Diploma Unit 12 seeks to gather, organize and develop the disciplinary techniques that are able to connect the contrasting demands as well as the manifold spheres of architecture as social, cultural, environmental and material practice.

Continuing its research into organisational systems, indexical prototypes and parametric relational models, the unit is continuing to work outside the academic self-referential framework, operating parametrically rather than linearly to become instrumental, agile and efficient.

This year's programme (by using a variety of techniques indiscriminately, opportunistically, and open-ended yet bound within an operational logical matrix) is once again placing the student in the driver's seat. This set up demands responsibility, and aligns its processes with those in leading contemporary practices.

This strategy requires the constant calibration of top-down with bottom-up processes.

Nip & Tuck

"There is a desperate need, in particular, to imagine ways of weaving secessionary and glocal network spaces into the finer-grained fabric of the urban spaces and times that surround them. We must speculate as to how airports, malls, theme parks and the like 'may weave themselves into the local fabric to create social interaction and acceptance as opposed to continually reinforcing barriers'"

Stephen Graham and Simon Marvin, Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition.

Since 2003 Diploma 12 pursues the agenda to forge, develop and construct new spatial and social constellations from an engagement with infrastructure. This year we will develop a visionary network of public bridging systems for the Los Angeles Metropolitan region.

Before the advent of Modernism in architecture and the development of regional planning practices, such as those notoriously enacted by Robert Moses in New York, infrastructure was integrated within the experience and performance of cities and buildings. By contrast, and according to the modernist paradigm in which urban space was conceived of as a series of rationalised and functionally distinct operations, infrastructural projects built to network transport at a regional or national scale have tended, at the same time, to sever connections at a local one. The scalar disjunctions and social fragmentations that result have produced what Stephan Graham and Simon Marvin term a condition of 'splintering urbanism', where the local public realm is ill-served by privately funded and mono-programmatic large-scale projects.

In response to this condition, and in the context of the multi-billion dollar investment in infrastructural renewal currently underway in the US, we will explore alternative futures for infrastructure, using Los Angeles — one of the most radical, innovative and yet fragile of urban ecologies — as our location. Here the unit will address the potential of architecture to mediate between the different scales across which networked infrastructures are mapped, and to explore their capacity to support an array of local and public interests as well as the demands for more global forms of connectivity. To this end the typically linear trajectory and narrow functionality of the bridge typology will be reoriented toward a field condition in which multiple programmes are articulated.

The unit will travel to L.A. to study the complex conditions surrounding infrastructural settings, and will visit a wide range of modernist and contemporary buildings, as well as some of the most exciting architectural practices currently working in this region, so as to discuss our agenda and learn from their working processes.

Each student will select and study a condition that runs along, over, under and/or across an existing freeway in terms of structure, topography, geometry, programme and potential. Accordingly, we will again employ the diagram and the index as methodological tools through which these conditions can be read and reconfigured.

Exploiting architecture's capacities to fuse the functional, the projective and the spiritual we will propose visionary material structures that will transpose the term 'freeway' into a sustainable and inclusive future.

Nip & Tuck: Brief 1

Destabilized Field workshop

28 Sept – 30 Sept

“Field conditions move from the one toward the many, from individuals to collectives, from objects to fields.”

Stan Allen, From Object to Filed: Field Conditions In Architecture and Urbanism

The **Destabilized Fields** Workshops will run approximately 3.5 weeks.

It will comprise a series of investigations starting from a regular field/ framework of structural order, and then destabilizing it by a removal of key elements. The destabilized fields will form the basis for developing new structural and spatial systems that span and reconnect it into a new coherent organisation.

Students are expected to diagram, index, 3D model and build during this workshop.

Workshop structure:

week 1: indexical and diagrammatic distortions: the development of a structural field based on a combining of 2 – 3 field organizations, i.e... (axial + linked elements)....
This phase of work will be developed on an individual student basis.

week 2: structural field: similar themes and results from the first week of individual investigations will be combined this week into group based development of structural and material constructs. i.e. (axial +linked elements) + (axial + centripetal)
This phase will be in teams of 2-3 individuals.

week 3: constructed field: this week the teams will build scaled constructions of the structural field. Taking into account the material structural efficiencies and the materials effects that can be produced and explored.
Work is to be built in the AA workshop and there will also be a possible trip to the AA workshops at Hook Park.

week 4: critical field: public review / jury of the work produced.
Jury: to be confirmed

- **Field Organizations:** axial, centripetal, fragmented, collision of fragments, linked elements, and transformative aggregates
- **Structural Systems:** form active, vector active, section active, surface active, height active, and hybrids

Deliverables: all unit members are expected to document and record this phase of work in the form of an A3 landscape document. This will be composed of individual investigations, team development, and assessments of the constructed field phase with conclusive thesis statements to be developed in the further phase of work in the year.

Nip & Tuck: Brief 2

Parametric Field workshop

26 Oct - 06 Nov

“Soon we will be designing form based on the air turbulence generated by pedestrians near the building.”

Greg Lynn

Parametric Fields will be a 1.5 -2 week workshop.

The results of the Destabilized Field workshops will be transferred from the analogue world back into the digital through the use of Grasshopper and /or Digital Project.

The models will be introduced to a generic site condition in the city of Los Angeles. Unit members should bring on board parameters such as climate, site, and further relationships that are relevant in the development of their interests and thesis. This workshop is just as much about thinking parametrically as it is about understanding how to develop form parametrically.

Links:

Grasshopper:

<http://grasshopper.rhino3d.com/>

Grasshopper primer:

<http://www.liftarchitects.com/journal/2009/3/25/the-grasshopper-primer-second-edition.html>

ParaCloud:

<http://paraclouding.com/WP/>

Digital Project:

<http://www.gehrytechnologies.com/>

AA Digital Fabrication:

<http://www.digitalfabrication.net/>

Architectural Geometry:

<http://www.architecturalgeometry.at/>

Note: This will not be a class in the use of RHINO 3d! Nor will it be full classes in grasshopper and any other software that you are interested in using. The AA does provide classes in some of the software that we are planning to use, check the prospectus to find out what is on offer from the AA. There is also the possibility to arrange for private intro-classes in RHINO and grasshopper out side of the unit (please ask the unit staff regarding this for contacts).

Deliverables: documentation and recording of this phase of work should be added to the A3 landscape document.

Nip & Tuck: Brief 3

Relational Field DIP12 Design Competition 2.0

02 Nov- 18 Jan

Diploma 12 students are asked to design a field that connects, highlights and capitalises on the potentials of infrastructure and public space through the development of a volumetric bridging field.

Intro / Brief:

Bridges connect but also separate. Being a standard type within the discussion of infrastructure, bridges have lost their status as a gateway device that marks an experiential spatial moment, a place. They, for the most part have ended up as purely functional. Point A to point B, linear in their development and linear in their structural and spatial manifestation. Lateral contextual affiliations and connections produced are by default.

This competition is a call to rethinking the role and potential of public space within a contemporary infrastructural network.

You are asked to design a tangible and structurally sound material organisation, creating space that takes advantage of the obvious and latent potentials within the ubiquitous arrangement of pedestrian and vehicular flows and added commerce. This new field formation is sought to interact with, alter or complement the existing functional template with the aim of lifting it from its mundane problem-solving status to a contemporary civic place: where a multitude of activities, encounters and experiences can take place.

Site:

Santa Monica Beach Pier

Design Requirements:

The structure should be visionary and inviting as well as practical and feasible

The propositions should take into account climate, public / social impact, function, sustainability, and economy.

The design should consider:

Ground conditions

Temporality

Material practicality and structural efficiency

Frequency of use

Context

Submission Requirements: (aka Deliverables)

Submissions will be presented on:

Four A1size mounted panels and a supportive A3 bound document that should include key diagrams, models and process development, minimum 8 pages.

Submissions that fail to submit all required materials in time will be disqualified.

Drawing requirements:

Site plan / location plan. 1:200 – 1:500, or appropriate size

Plan. 1:100 –1:200 , or appropriate size

Elevations

Sections

Perspectives

Model requirement:

Scale: To be confirmed

These are minimum guidelines participants may exceed these to support their design.

Eligibility:

Participants must be members of Diploma Unit 12 2009-10

Jury:

To be confirmed

Timeline:

Brief announced: week of 06-11-09

Questions: 06-11-09 to 07-12-09

Final submission: 15-01-10 entries must be delivered to the Dip12 Unit space before 17:00.

Late entries will not be accepted.

Jury committee: 18-01-10

Prize announced: 18-01-10

Prize:

To Be Confirmed

We will publish the results of the competition in a Dip12 publication!

Nip & Tuck: Brief 4

NETWORKED INFRASTRUCTURES: L.A. – indexing & diagramming

02 Nov - 05 Feb

“The best place to view Los Angeles of the next millennium is from the ruins of its alternative future.”

Mike Davis, City of Quartz

Networked Infrastructures will aim to expand the frame to the urban and regional scale and its strategic, organisational and durational dimensions. Initiating research into the site, Los Angeles, and the various conditions that will form the intellectual ground for the development of the Relational Network Project. Unit members' will research and information gather in teams and as individuals.

The Unit will be expected to develop strategic models and to start linking global with the local conditions. Researching, documenting, and mapping the conditions that comprises the diverse ecologies of Los Angeles and to demonstrate these conditions through the development and creation of diagrammatic & indexical models that engage with local forces, conditions, and relationships.

The Unit wide conclusions and speculations on Los Angeles will determine the locations and territories where the Relational Network of projects will be deployed. The unit trip is planned to take place during this phase of work in the year.

The key strands of investigation should run along the following scales of investigation:

- Continental implications (*The United States of America*)
- State implications (*California*)
- City implications (*Los Angeles*)
- Town / regional implications (*i.e...Hollywood*)

Deliverables: the research is to be a documented in a book type format! This will be determined and confirmed by the unit staff on the delivery of the full brief to the unit.

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RELATIONAL NETWORK: Bridging Field

08 Feb - 21 May

“While our engineers utilize many of the structural systems inherited from modernist practice, we contend that they have a broader range of application than modernism lent them, inherited in their untapped capacity to be transformed. We work on structural and typological models like a material that can be stretched, warped, and otherwise subjected to formal and organizational transformation.”

Reiser + Umemoto, Atlas of Novel Tectonics

In the 1930's the New deal initiative was launched and produced a wide ranging variety of infrastructure that is still in place today and has had such a profound effect it has become part of the fabric of the United States, the Hoover Dam and Rockefeller Center in NYC to just name two examples. The New Deal acted as a device set out by the government to bring the USA out of the great depression by producing cultural and functional infrastructural projects and initiatives. This produced jobs and also supported the younger generations by giving them the opportunities and outlets to develop work.

The whole world, the United States and in particular California is currently in a similar slump and our thesis is that only a radical paradigm shift that unifies new structural efforts with new spiritual ones. In other words the Trillions needed to update and expand the crumbling infrastructure need the cultural agency of architecture to mirror the sheer force and lasting legacy of the first New Deal.

Infrastructural forms have more to offer then just a target for commercial outlets. Freeways airports, ferry terminals and railway stations act as the actual and virtual gateway to where they arrive and can also become destinations in themselves. We are very interested in the potential of infrastructural forms and their potential to become the new public/ civic locations of social and political exchange and how they can become more finely tuned and integrated into the surrounding urban/ landscape morphology.

Currently California is in a financial spiral and we will be focusing around Los Angeles as our ground zero for implementing a new visionary network of infrastructure that aims to have a transformative effect on the city beyond efficiency of transport connection, providing public and civic spaces that aim to give a new lifeline of growth and expansion for the city.

The self-generated network of this will become the site for each individual project thesis. Each student is expected to fully design one of Bridging Fields within the overall network. The station will form the link between the local site conditions and the coherence of the whole system.

Projects should engage with the following conditions and issues.

1. programme, typology, functions
2. social make up
3. topographical and geological conditions
4. urban/ landscape morphology
5. climate
6. material logics and there application
7. structural and functional organisations

The formal materials from briefs 1,2,& 3 will be directly applied to this phase of the years work.

Readings:

The books listed below contain key essays that the unit will use as reference throughout the year. The list will expand as the year evolves!

1. Diagram Diaries, Peter Eisenman
2. Feints', Skira Editore, Peter Eisenman
3. Hunch 11', The Berlage Institute report no. 11
4. *Atlas of Novel Tectonics*, Reiser + Umemoto ,Princeton Architectural Press, 2006.
5. Translation from Drawing to Building and Other Essays, Robin Evans, Architectural Association London, 1997
6. Folding in Architecture , AD magazine , John Wiley & Sons
7. ANY (Architecture New York) 23 Diagram Work, Anyone Corporation, 1998
8. Source Books in Architecture 1, Diamond Ranch High School, The Monacelli Press 2001
9. Far From Equilibrium, Sanford Kwinter, ACTAR 2008
10. *S,M,L,XL*, Rem Koolhaas, 010 or Monacelli Press 1995
11. Space Reader: Heterogeneous Space in Architecture, Michael Hensel , Achim Menges, Christopher Hight, AD magazine, John Wiley & Sons