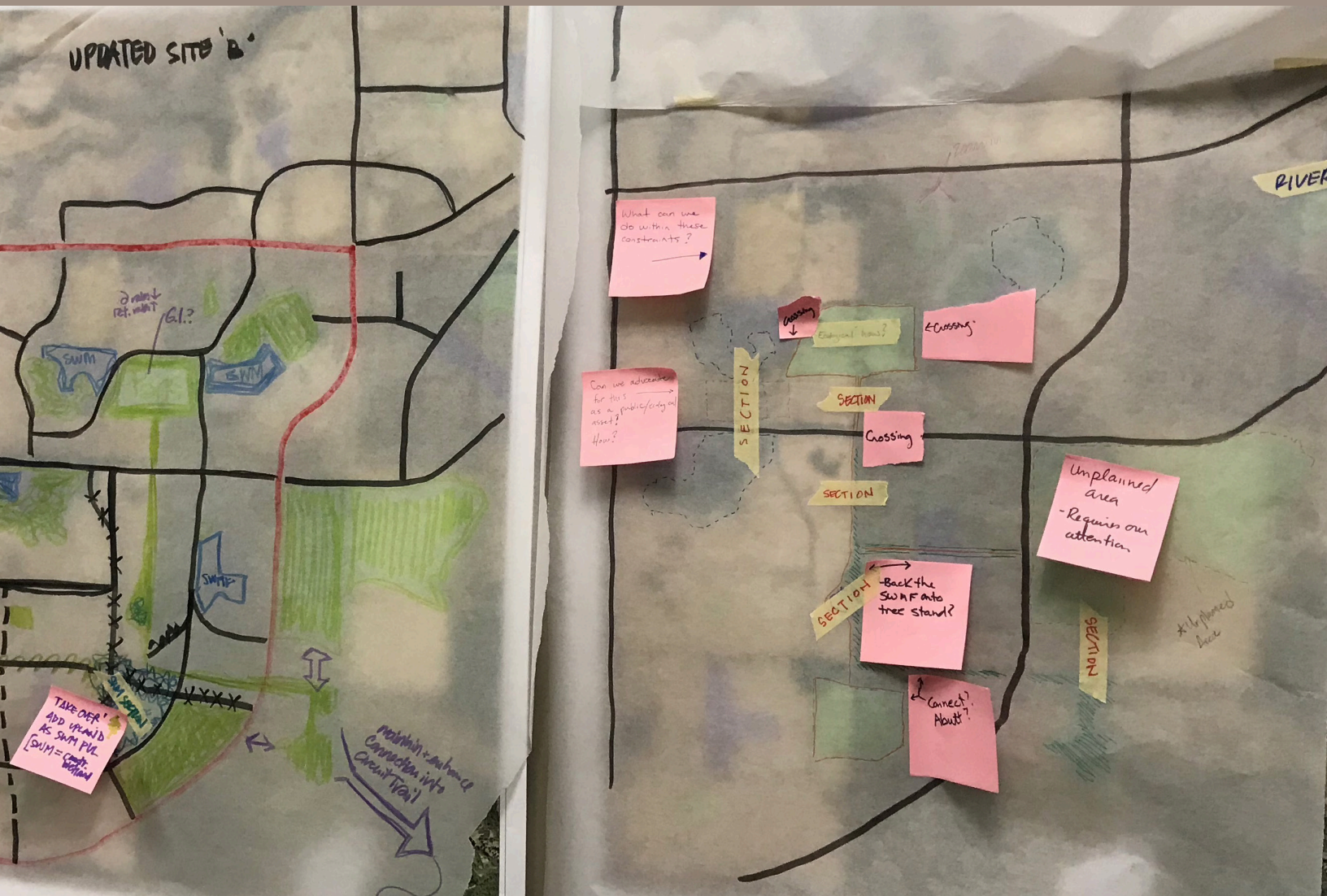# TOWARDS INTEGRATED GREEN INFRASTRUCTURE DESIGN

EDMONTON COLAB

SAFE PASSAGES: EXPLORING NEW MATERIALS FOR THE INTEGRATION OF LANDSCAPE AND INFRASTRUCTURE

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TO: Grant Pearsell, Director – Urban Analysis, City of Edmonton

FROM: Nina-Marie Lister, Director, Ecological Design Lab (Ryerson University)

RE: Edmonton CoLab: Riverview and Decoteau Design for Landscape Connectivity

EVENT DATE: September, 2018

BACKGROUND

The Ecological Design Lab along with ARC Solutions, and the Safe Passages Partnership Team, were invited to facilitate an interdepartmental and community stakeholder CoLaboratory (CoLab) to review and respond to Riverview and Decoteau in the City of Edmonton, Alberta.

A team of experts and practitioners was assembled to support the workshop goals and contribute individual subject-matter expertise during the CoLab process.

The CoLab is an interdisciplinary, collaborative workshop used as a team-based method for design, research and development. Different disciplines, including but not limited to: planning, ecology, landscape architecture and engineering, are drawn upon to advance integrated strategies and develop solutions to complex problems for which there are currently few protocols, and little or no agency practice. In this context, the CoLab workshop is also an experiential learning process and professional development opportunity to evolve interdisciplinary design solutions.

COLAB ATTENDEES

- Ecological Design Lab and respective academic partners from Ryerson University, McGill University, University of Toronto, and the Toronto and Region Conservation Authority:
- Nik Luka (McGill University), Marta Brocki (Ecological Design Lab), Sheila Boudreau (Toronto and Region Conservation Authority), Aaron Hernandez (University of Toronto),
- City of Edmonton:
- Grant Pearsell, Catherine Shier, Geoff Smith, Achyut Adhikari, Sherif Barsom, Michael Silzer, Agnieszka Kotwoska,
- B&A Planning Group: Marissa Koop
- Sierra Club: Charlie Richmond

PURPOSE

The Riverview and Decoteau areas in the City of Edmonton were selected as key urbanizing landscapes with particular opportunity to enhance ecological connectivity and integration within the City's green network, while also addressing the growing pressures for development in coming decades.

STRUCTURE AND OBJECTIVES

CoLab participants were organized into two working groups and each was tasked with developing a design concept intended to enhance ecological connectivity and function in response to the assigned site.

During the first phase of the CoLab, particular attention was paid to landscape and streetscape design elements, ecological connectivity and biodiversity, and ecological greenways and corridors, as well as wildlife movement, and green and blue infrastructure. The outcome in this first phase was an overall spatial design concept.

Specifically, the teams were asked to:

1. **Explore and develop landscape design approaches** that facilitate the planning and implementation of ecological connectivity enhancements within the urban matrix
2. **Exchange insights and identify common emerging approaches** and strategies in municipal planning and design research to advance resilient city building municipal planning and design research to advance resilient city building

DESIGN AND POLICY CONSIDERATIONS

At the end of the second phase, the teams presented the following outcomes pertaining to objectives in design concept, and policy factors.

Opportunities for Public Land

- Focus on connectivity to rivers, around parks and vertical corridors
- Naturalize schoolyards to provide added space for green infrastructure, as well as on school roofs, particularly for the development of green roofs
- Expand programming and naturalized infrastructure:
    - E.g., Rainwater harvesting could be utilized more frequently to capture stormwater runoff. Additionally, urban agriculture could be promoted to support local food systems
- Enhance ecological quality around drop off zones, which are currently considered underutilized
- Leverage existing contextual environmental factors to enhance desirability (e.g., topography, water systems, grasslands, etc.)
- Develop an urban forest to create new habitat (or ameliorate existing habitat), provide food including nuts and fruits, and restore native nut trees
- Development of new parks and new ecological corridors
    - Increase opportunities for passive and active recreation, and bring together communities (e.g., through creation of local leagues and off-leash dog parks)

Opportunities for Private Lands

- Enhance ecological connectivity along the Utility Corridor:
    - The IOM (International Organization for Migration) Row - a specific area within the Utility Corridor - is significant in Edmonton. Although trees could compete with utility company interests (as there may also be limitations on plant species), greater consideration should be placed on how the use of the Corridor as an ecological connector can coexist with the utility lines and services
- Bridge public and private corridors:
    - Buffering private land can be accomplished through the growth of certain vegetative typologies. Specifically, incentivising the planting of pollinator species could help to bridge uses and interests

Increase Public Engagement

- Develop a public engagement initiative to spark community interest in ecological connectivity and green infrastructure across the City
- Public organizations and community groups (E.g., Friends of the Corridor) could be further engaged to advocate for ecological enhancement and greater connectivity, while maintaining the functional role for the utility infrastructure
- Develop education, learning centers, and incentivize neighbourhood level action (e.g., through incorporating green and ecological-focussed infrastructure in public places, such as schools and recreation centers)
    - Explore opportunity for existing and new HBI Nature Interpretive Centres
- Enhance community building and neighbourhood connectivity (e.g., positive correlation on community wellbeing through active transportation patterns by moving people through and within landscapes)

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