

D4CR

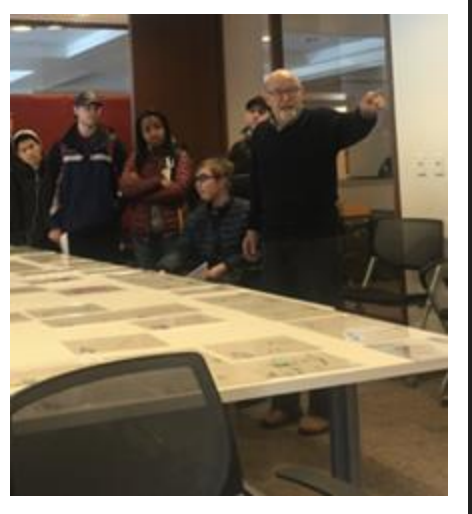
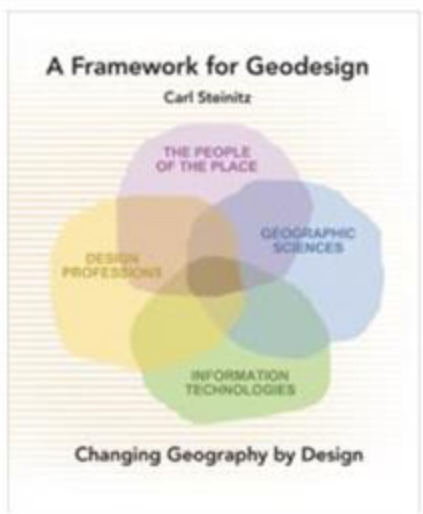
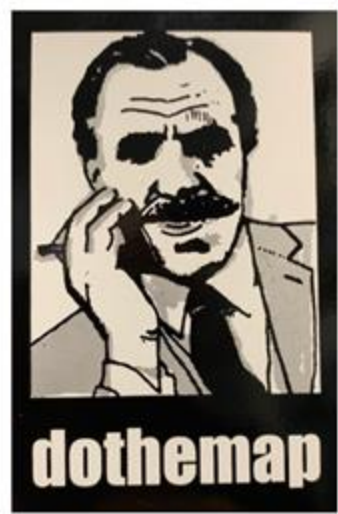
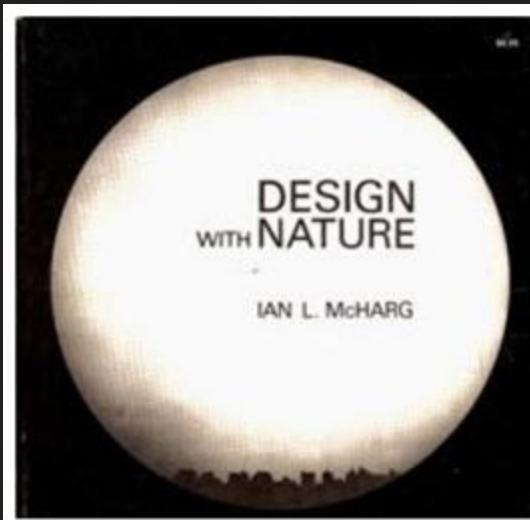
Design for Community Regeneration

Minnesota Design Center, University of Minnesota
Tim Griffin, FAIA, Senior Research Fellow
Jonee Kulman Brigham, AIA, Senior Research Fellow

Geodesign Summit, Redlands, CA
2.25.2020

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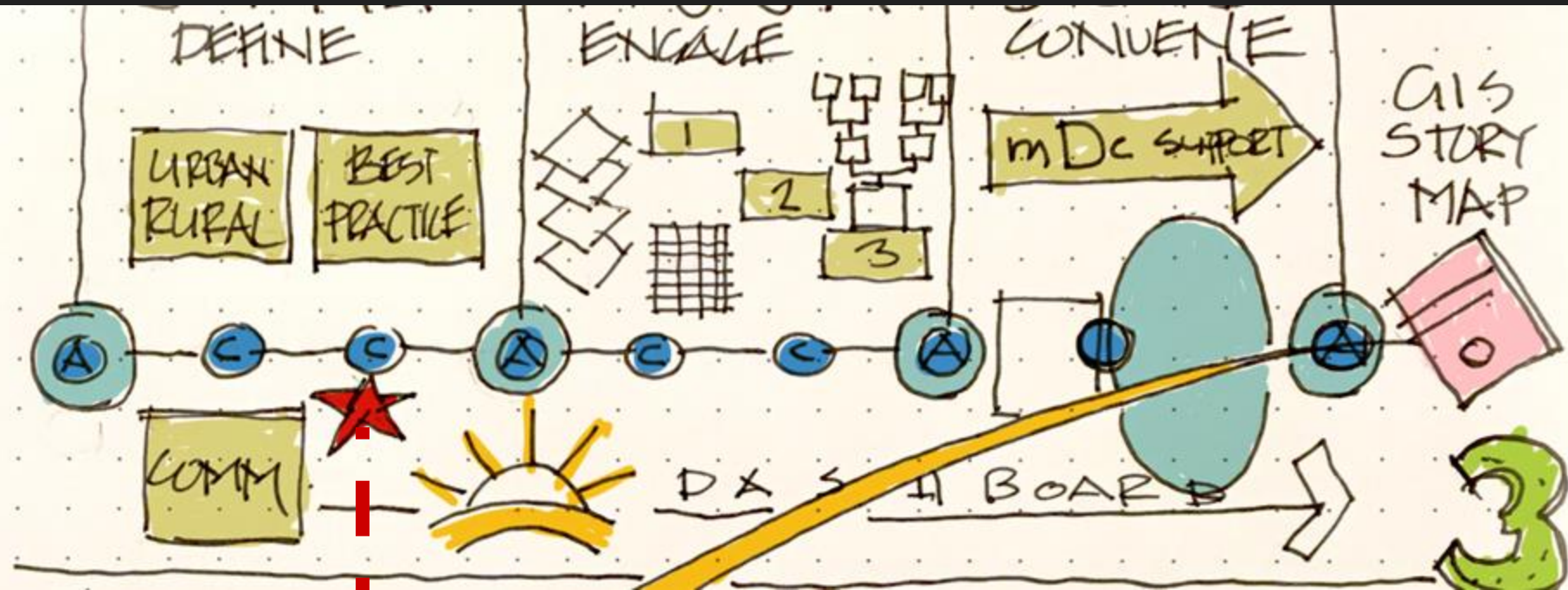
D4CR

Design for **Community Regeneration** (D4CR) catalyzes greater resilience in **rural, peri-urban, and urban communities** in Minnesota by bringing an interdisciplinary Minnesota Design Center D4CR Team to generate statewide redevelopment of **underutilized land** to address **21st Century Grand Challenges**.

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3-Year Pilot Project of a 10-Year Project



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Team

Minnesota Design Center Management Team

- **Tim Griffin FAIA, LEED AP, Project Manager and Geodesign Lead**
- **Jonee Kulman Brigham, AIA, LEED AP O+M, Sustainable Design Lead**
- **Duane (Dewey) Thorbeck, FAIA, FAAR, Design Lead**
- **Tom Fisher, MDC Director and IGC Lead**

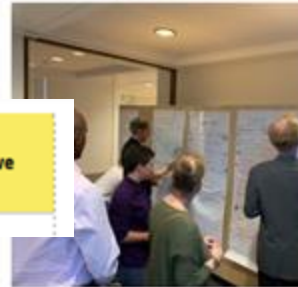
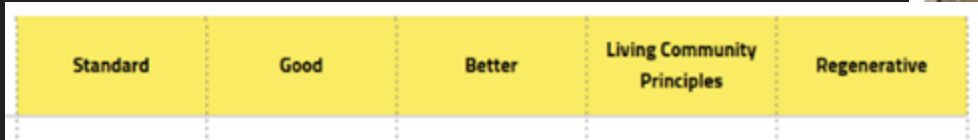
Partners

- **UMN Institute on the Environment**
- **UMN Energy Transition Lab**
- **UMN Department of Agriculture**
- **UMN U-Spatial**
- **UMN Extension: Regional Sustainable Development Partners**
- **AIA Minnesota**



The Shifts

What paradigms and processes will lead from today to the transformations we need for a regenerative future?



Colonial

Democratic

Star Architect

Trans-Disciplinary

GIS

CIS (Community Inf. Syst.)

Social Media

Participation System



Reduce Harm (Less Bad)	Regenerative Design
Static/Rigid	Vitality & Resilience
Privatization	Commons
Piecemeal	Interconnected/Interdependent
Incremental Change	Systemic Change
Master Planned/Long-Range	Resourceful/Rapid/Responsive
Privileged Access	Equitable and Inclusive
Authority-Defined Success Criteria	Community Defined Success Criteria
Standard Solutions	Learning Prototypes
Centralized Control & Solutions	Leaning to Local


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Community Regeneration



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Center for Sustainable Building Research.
“Development Matrix.”
<https://www.21stcenturydevelopment.org/development-matrix/>).

21CD twenty-first century development 

	Standard	Good	Better	Living Community Principles	Regenerative
 Place	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 Water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 Energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 Health + Happiness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 Materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 Equity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 Beauty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Assets and Aspirations

Multi-Solving & Layered

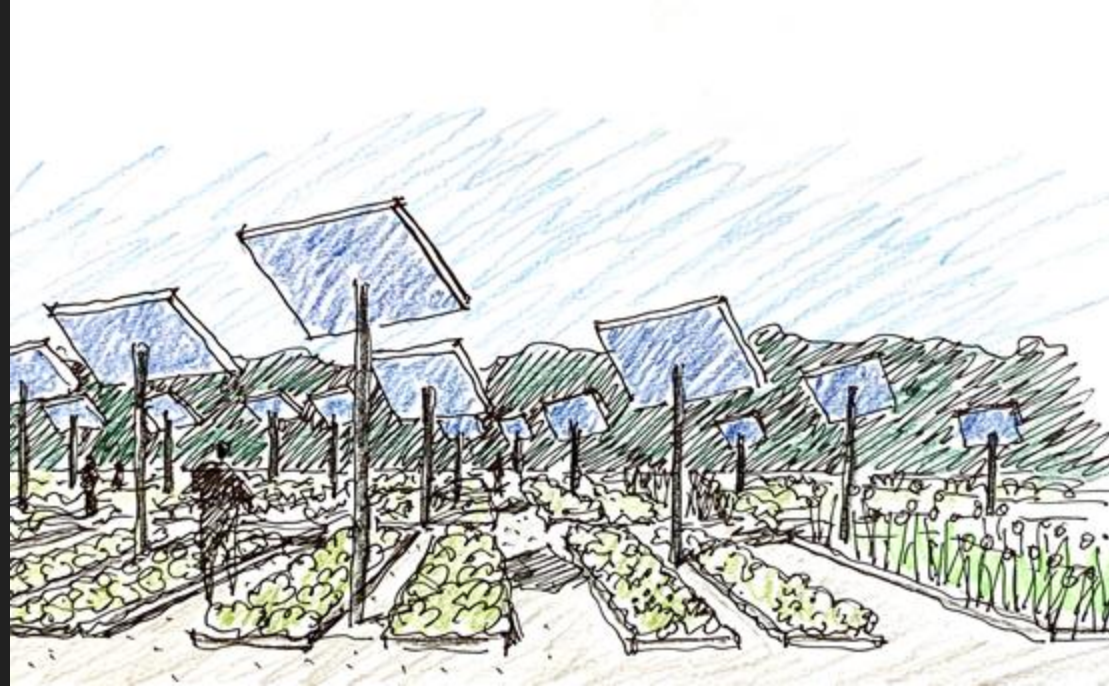
Features

Underutilized Land

- Golf Courses
- Industrial Parks
- School District Property

Resilience & Regeneration

- Food
- Energy
- Water
- Community Cohesion



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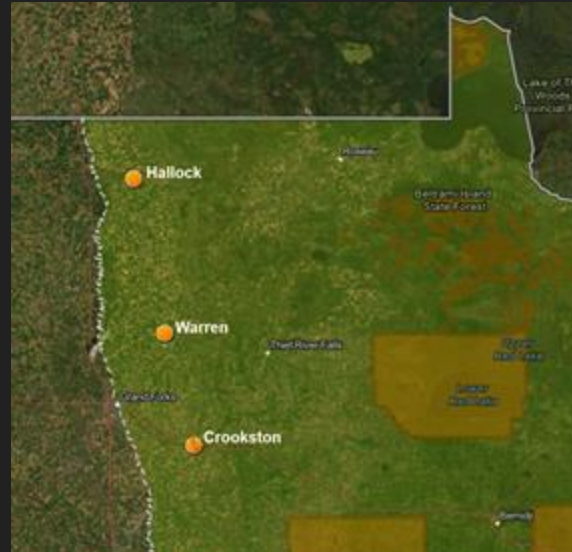


Location: Minnesota, USA

3 Year Pilot: Northwest Minnesota



Continental Divide / Watershed



Rural, Peri-Urban, Urban Cluster



Community (Hallock)

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People of the Place



Hallock
Kittson County

- **Total Population:** 4,580
- **Median Age:** 50
- **Diversity Index:** 8
- **Median Household Income:** \$54,664
- **Median Disposable Income:** \$44,350



Warren
Marshall County

- **Total Population:** 9,557
- **Median Age:** 46
- **Diversity Index:** 18
- **Median Household Income:** \$57,905
- **Median Disposable Income:** \$47,346

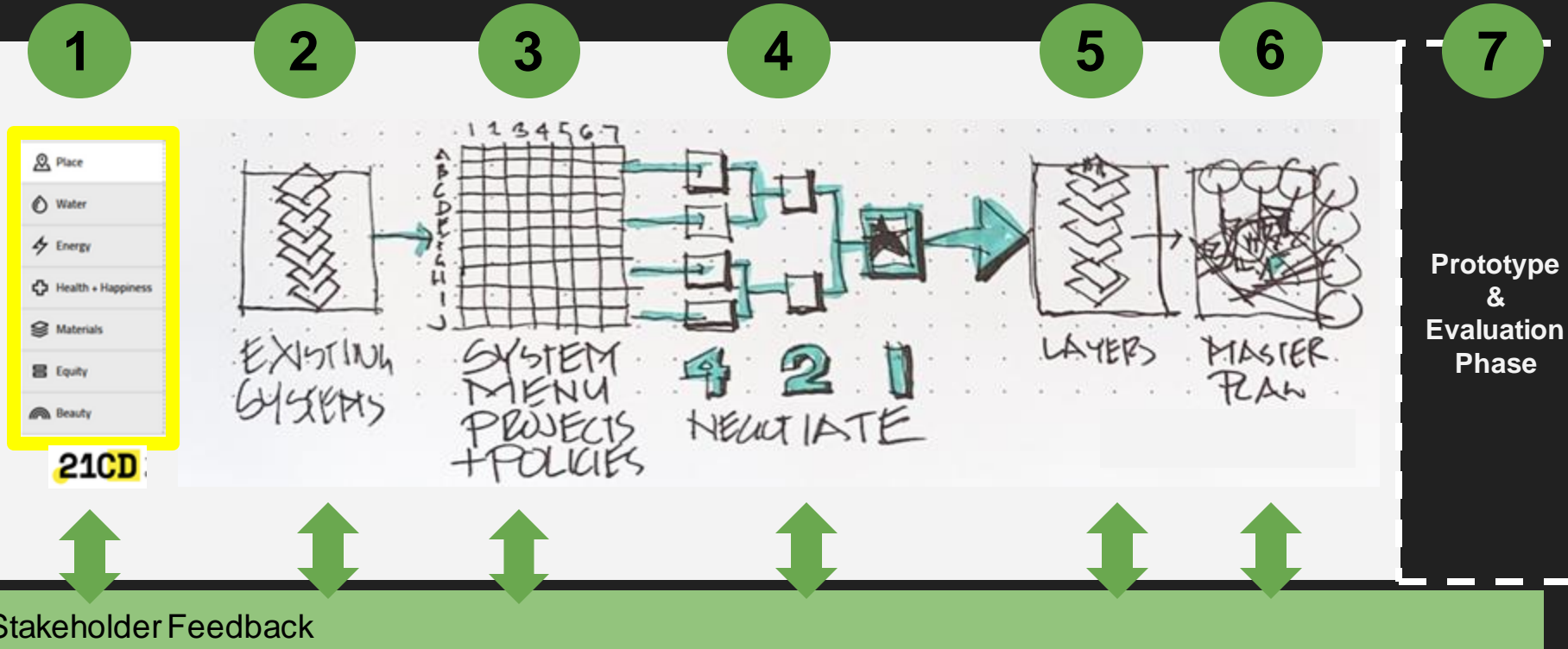


Crookston
Polk County

- **Total Population:** 32,753
- **Median Age:** 41
- **Diversity Index:** 28
- **Median Household Income:** \$59,098
- **Median Disposable Income:** \$48,266



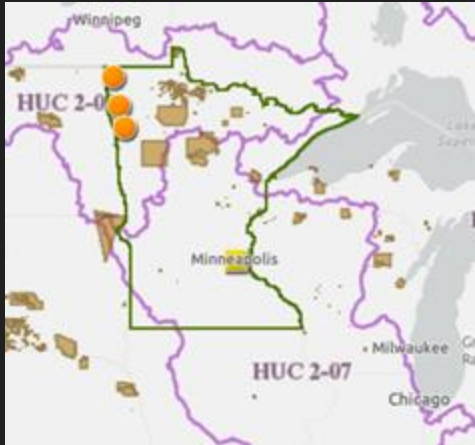
Geodesign Process



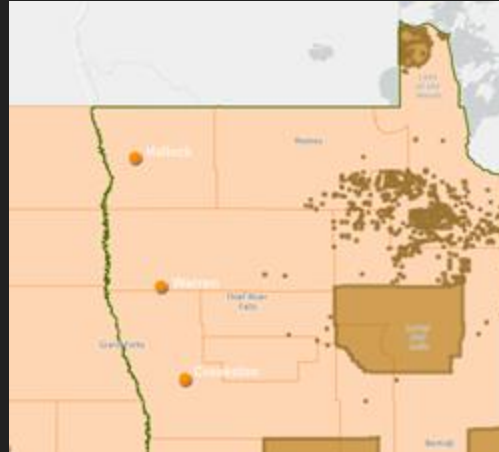
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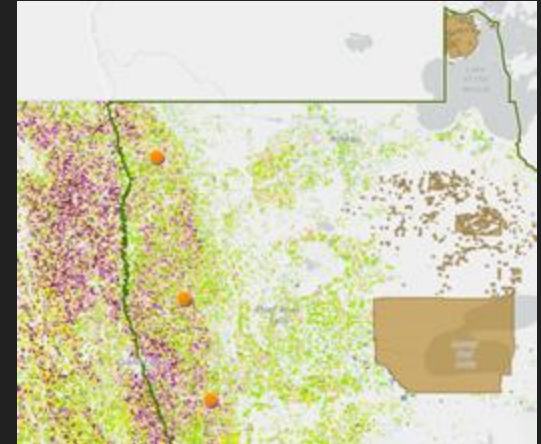
2 Existing Systems



North Flowing Watershed



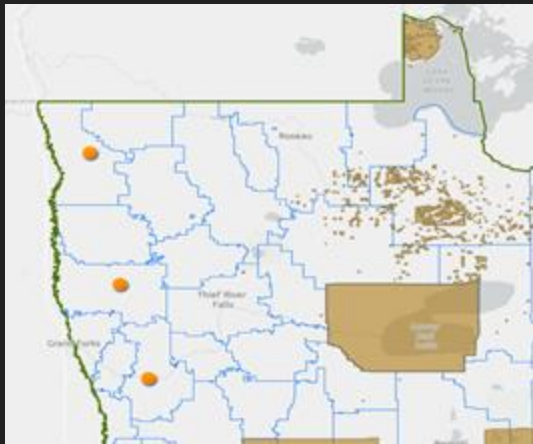
Three Counties



High Agricultural Use



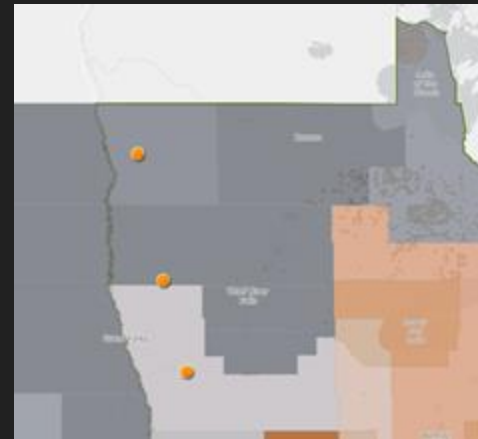
2 Existing Systems



3 Different School Districts
Some Consolidated



Electric Infrastructure
Transmission Lines
& Power Plants



Children in Poverty (12-18%)



3

Systems Menu



Res. Creative	Commerce
Res. University	Services
Res. Established	Blue Infra.
Transport	Green Infra.
Industry	

1 2 3 4 5 6 7 8 9 10

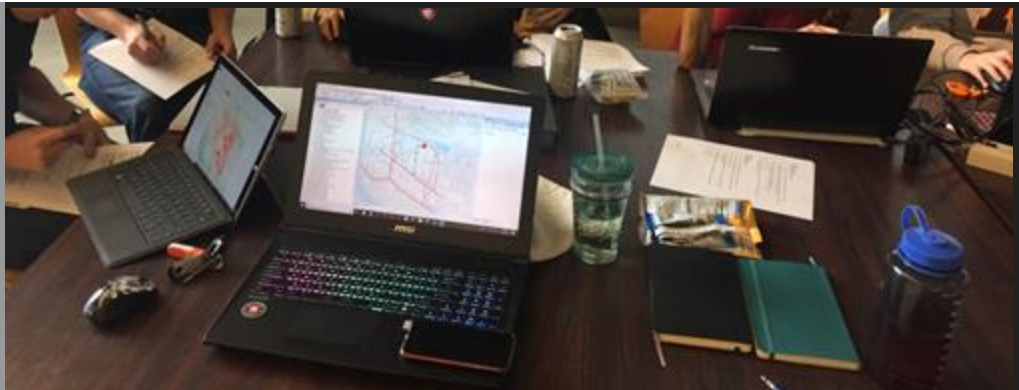
A B C D E F G H I J

TITLE _____
TEXT _____

2000 2010 2020 2030

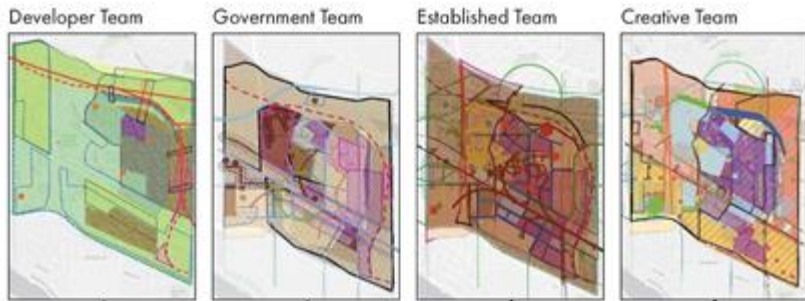
0 1 2 Miles

N



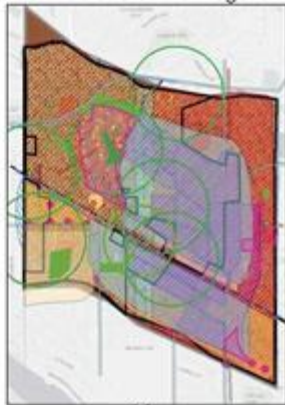
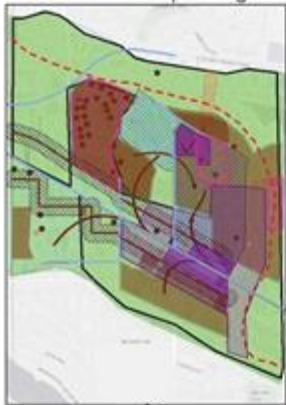
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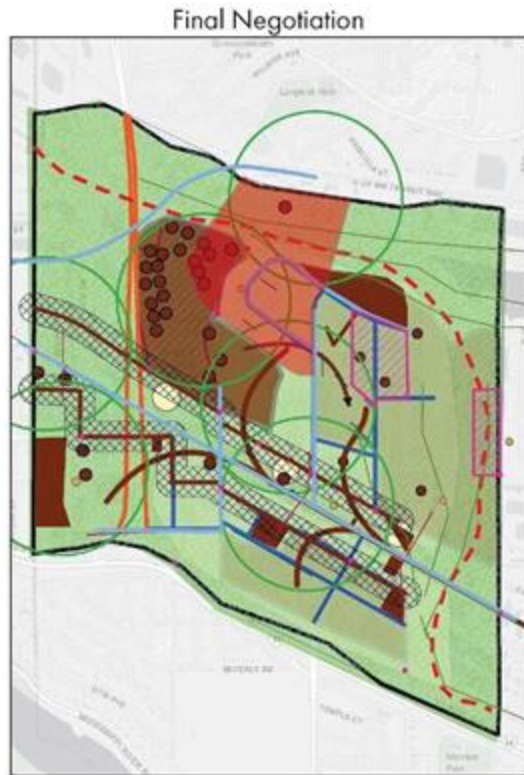
Government & Developer Negotiation

Established & Creative Negotiation



Final Negotiation

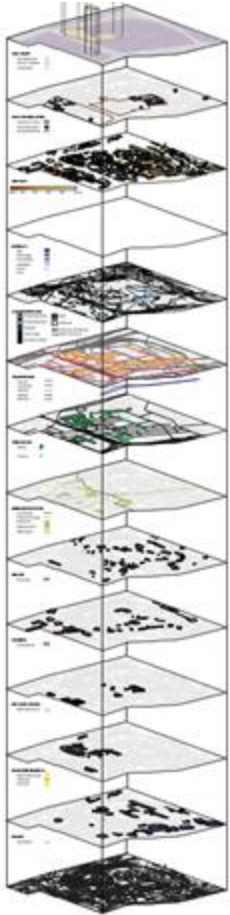
- A - Time & Events**
 A3 - Hampden Park Historic District
 A9 - Copp/Industrial Historic District
 A11 - Identifiers of Time & Events
- B - Blue Infrastructure**
 B5 - Raingardens as Streetscape
 B9 - Blue Infrastructure as Aesthetic
- C - Green Infrastructure**
 C3 - Park within 10 min. walk
 C5 - Native Plants
- D - Transportation**
 D3 - Bike Paths
 D10 - Pedestrian Focused Areas
- E - Creative Residential**
 E3 - New Development Should have Artists
- G - Industry**
 G11 - Expand Industrial Transition Zone



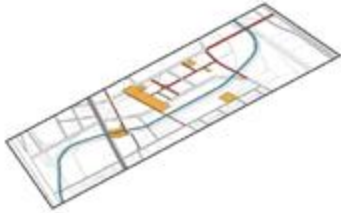
- H - Commerce**
 H6 - Tracks on Main Street
- I - Services**
 I2 - Transit Accessible Service Centers
 I7 - Creative Corridor Connected to Services
- J - Policy & Regulation**
 J1 - Tertiary Plan
 J5 - Policy Test Areas
 J6 - Fast Track Approval
 J7 - Increase City Presence
 J8 - Employment Incentives
 J12 - Opportunity to Purchase for Residents
- K - Verticality**
 K2 - Highway Art at 280
- L - Materiality**
 L6 - Pedestrian & Cyclist Infrastructure

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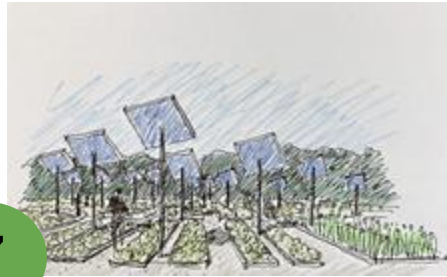
5



6



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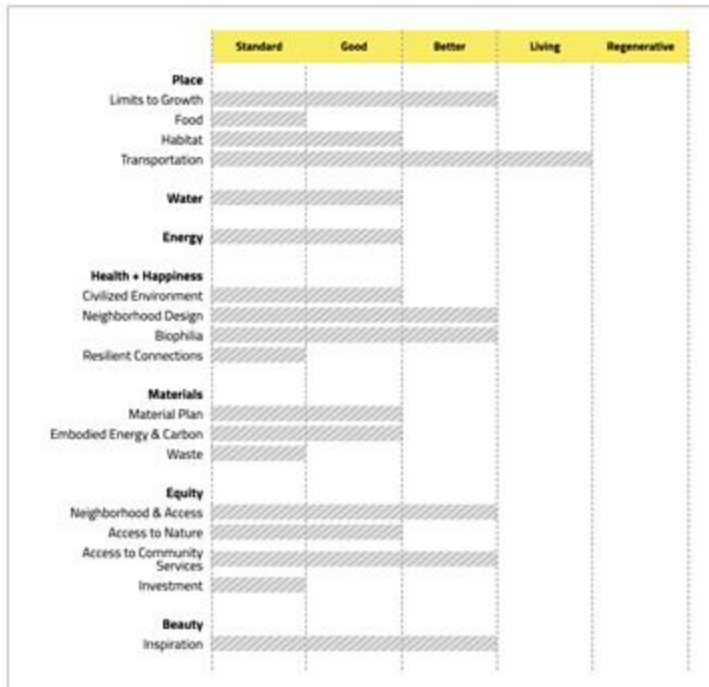


7 Evaluation

Performance Assessed

- Each Community
- Cluster/Region

Performance levels achieved:



Project Status

- 2019 Design Center Idea Grant
- September 2019 Workshop
- Funding Proposals Underway to: MDC, Institute on the Environment, Northwest Regional Sustainable Development Partnerships, Bush Foundation and NSF (soon)
- NW Minnesota Pilot Project Focus: Crookston, Warren and Hallock
- 2020 Geodesign Summit
- CDES Book Chapter



THANK YOU

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