

# **a FEASIBILITY STUDY for BLENDING HOUSING and URBAN AGRICULTURE**



**in LANSING, MI**

**PRACTICUM REPORT  
MICHIGAN STATE UNIVERSITY  
2010**

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# AGENDA



- **Site and neighborhood description**
- **Housing market analysis**
- **Potential occupants, design options, and construction methods**
- **Agriculture and green space analysis**
- **Development options**
- **Development recommendations**
- **Conclusion**



# INTRODUCTION



- **Our client, the Cohousing Development Co. is partnering with the Greater Lansing Food Bank to develop a parcel of land that will incorporate housing and agriculture**
- **The goal of this project is to provide our client and its partner with use alternatives that include housing type and agricultural/open space possibilities for their Lansing property**



# PREVIOUS CLIENT DEVELOPMENTS

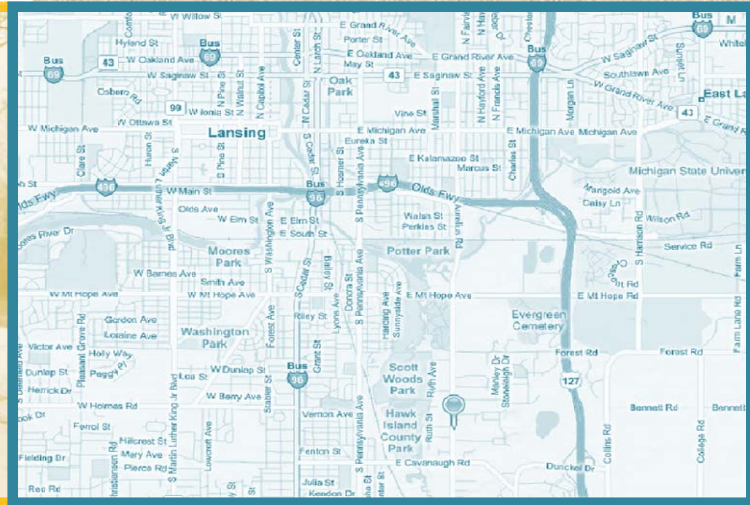


- **Cohousing Development Company (CDC)** developed three adjacent cohousing communities in Scio Township near Ann Arbor, Michigan
  - **Sunward Cohousing**
  - **Great Oak Cohousing**
  - **Touchstone Cohousing**



**COHOUSING**  
DEVELOPMENT COMPANY L.L.C.

# SITE and NEIGHBORHOOD DESCRIPTION





# 3721 Aurelius Rd.

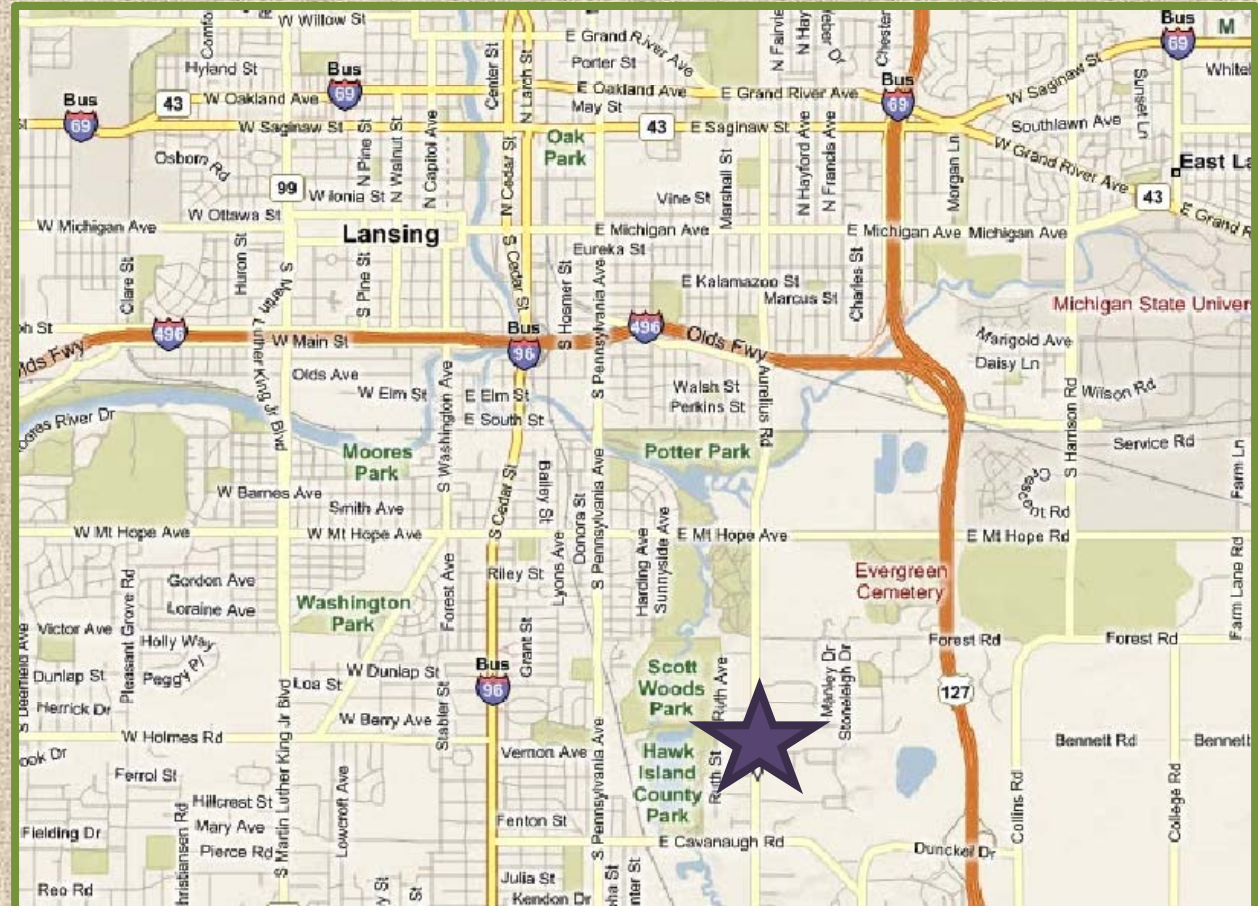
Area is mostly  
single family  
residential

Near many  
natural  
recreational  
areas

Near MSU, LCC  
and Cooley Law  
School

Near Jolly and  
Mt. Hope

On CATA bus  
route #7



# site basics



- **22.84 acres**
- **Used to be a farm but has been fallow for 30 years**
- **Zoning: A-residential, single**
- **Previously approved for an 86 unit condominium dev**



# neighborhood description

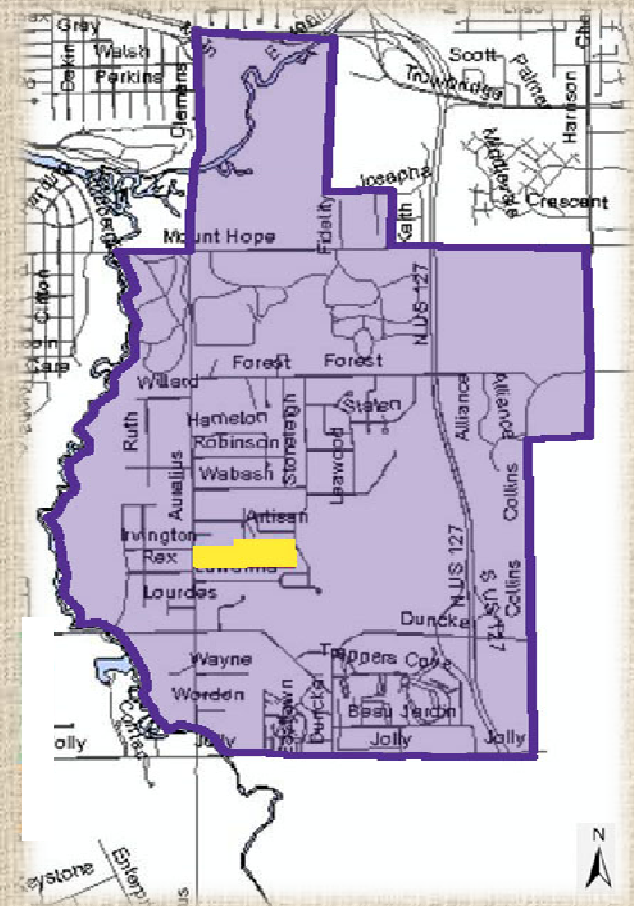


- **City of Lansing population is declining and aging**
  - **Population with largest growth is 55 to 64 years of age**
- **Population within one mile of site is relatively stable**
- **LEAP is encouraging employment growth in Mid-Michigan**
  - **Financial services, health care, life sciences, information technology**



# characteristics

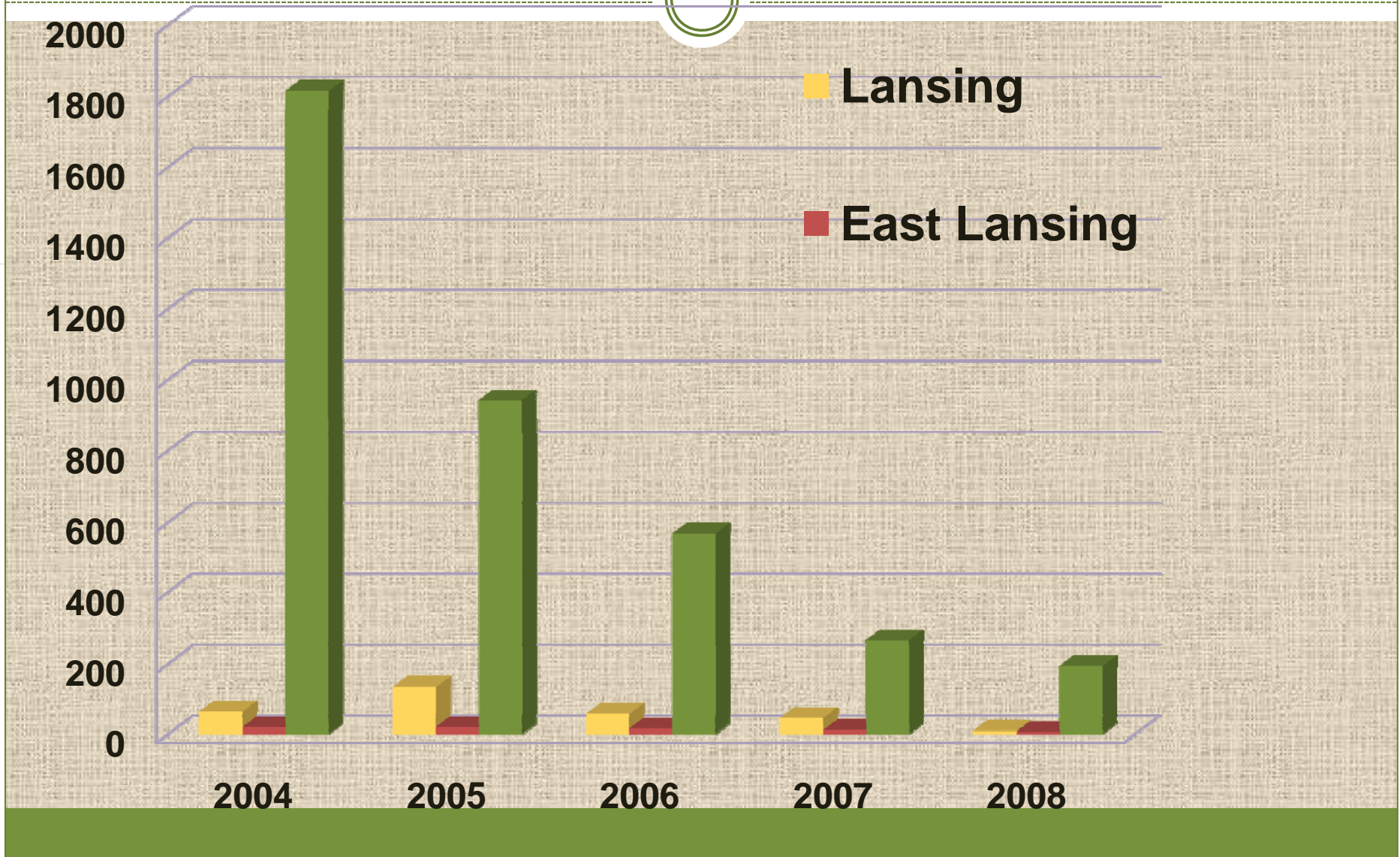
- **Forest View Neighborhood**
  - **Diverse housing stock**
  - **70% constructed 1970-1989**



# HOUSING MARKET ANALYSIS



# trends: new single-family home construction permits 2004-2008

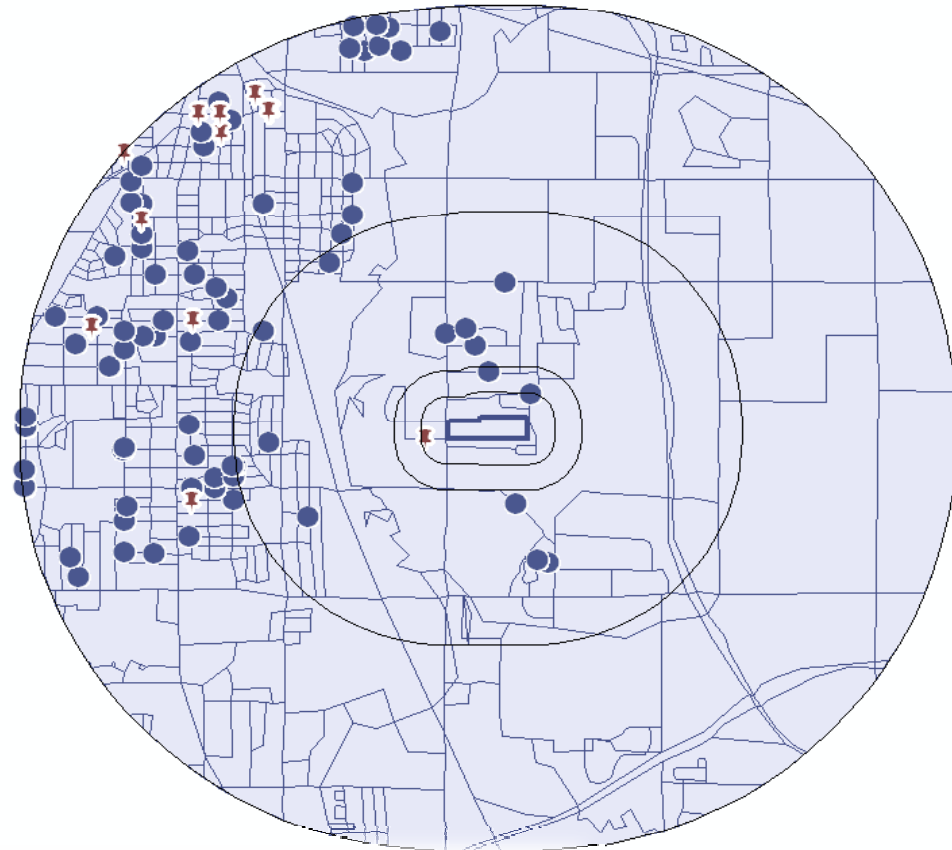




# trends: foreclosed and distressed housing

Large increase in  
home foreclosures  
in recent years

Foreclosures drive  
down home sale  
prices



## Legend

- Foreclosed Houses
- 📌 Ingham County Landbank

# trends: occupancy and tenure

- % renter occupied (2000):
  - One mile: 57.5%
  - Three mile: 43.9%
- % change renter occupied (2000-2013):
  - One mile: +.1%
  - Three mile: -1.2%
- % change vacancy (2000-2013):
  - One mile: +1.6%
  - Three mile: + 3.9%

Year 2000 vacancy (1-3 mile)



# market rate housing analysis



## Lansing SE

## Lansing

	2008	2009	Diff.
Avg. List \$	\$57,978	\$46,678	-19%
# of sales	349	419	20%
Avg. sale \$	\$54,336	\$43,104	-21%
Avg. Market Time	77	71	Less 6 Days

	2008	2009	Diff.
Avg. List \$	\$57,591	\$50,843	-12%
# of sales	1,549	1,730	12%
Avg. sale \$	\$53,738	\$47,275	-12%
Avg. Market Time	75	71	Less 4 Days

# feasibility: low income



## ○ Lansing Stats

- 11.7% - unemployed
- 4.2% - receive cash assistance
- 17.4% - received food stamps in last 12 months
- Below the poverty line
  - 24% - all people
  - 18.3% - families
  - 33.7% - unrelated individuals 15+



# feasibility: low income



- The National Low Income Housing Coalition (NLIHC) reports that Lansing residents must make \$2,500 a month or \$30,000 a year to access affordable housing (no more than 30% of annual income)

- **Percent change 2000-2008**

- **One mile: -12.4%**

- **Three mile: -11.6%**

Household income near site, 2000-2008

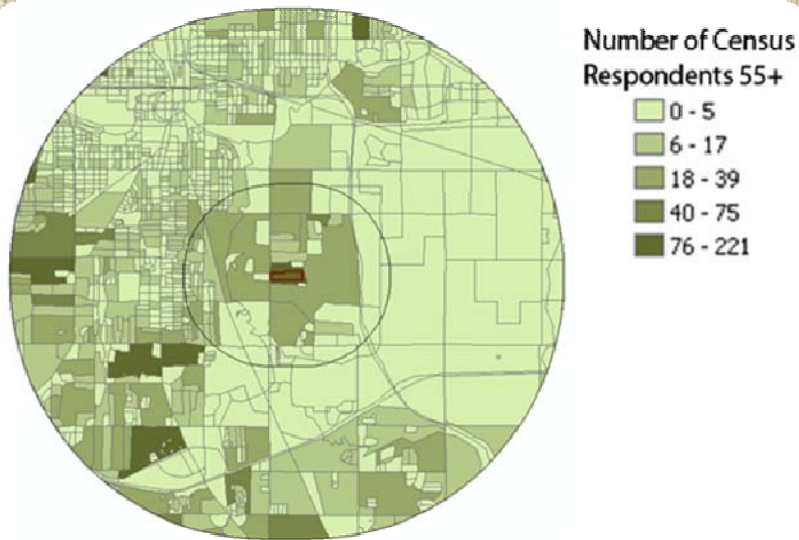
	1 mile radius		3 mile radius	
	2000	2008	2000	2008
HH earn < \$35,000 year	50.3%	37.9%	53%	41.4%

Source: US Census and ESRI Forecasts



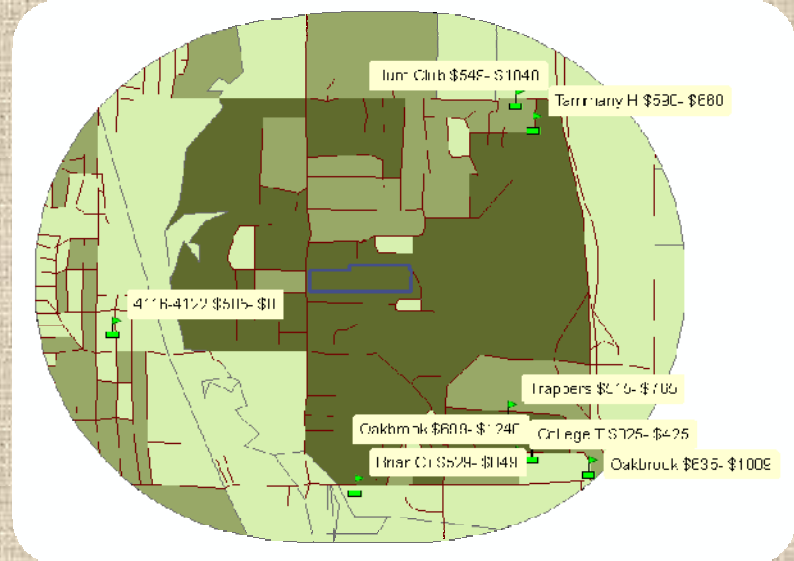
# feasibility: senior and student

## Senior



Between 2000 and 2008, 55+ grew  
In Lansing: 2.8%  
Within one mile of project site: 1.7%  
Within three miles of project site:  
1.8%

## Student



Enrolled in college/grad school  
One mile: 20.8%  
Three mile: 20.5%

# OCCUPANTS/ DESIGN/ CONSTRUCTION



# potential occupants



- **Analysis shows that these populations should be targeted due to stable or growing population:**
  - **Seniors and/or Disabled Persons**
    - **May require similar housing design (universal design)**
  - **Low to Moderate Income Families and/or students**
    - **May require similar ownership type (rental)**



# design strategies and construction methods

- **Cottage Communities**
  - **Small, dense single-family**
- **Cohousing**
  - **Emphasizes community interaction**
- **Universal Design**
  - **Non-exclusive, accommodates virtually everyone**
- **Prefabrication**
  - **Parts of a building are made off-site and then assembled on-site, saves money**
- **Green Building**
  - **Energy efficient, utilize natural energy, minimize footprint**

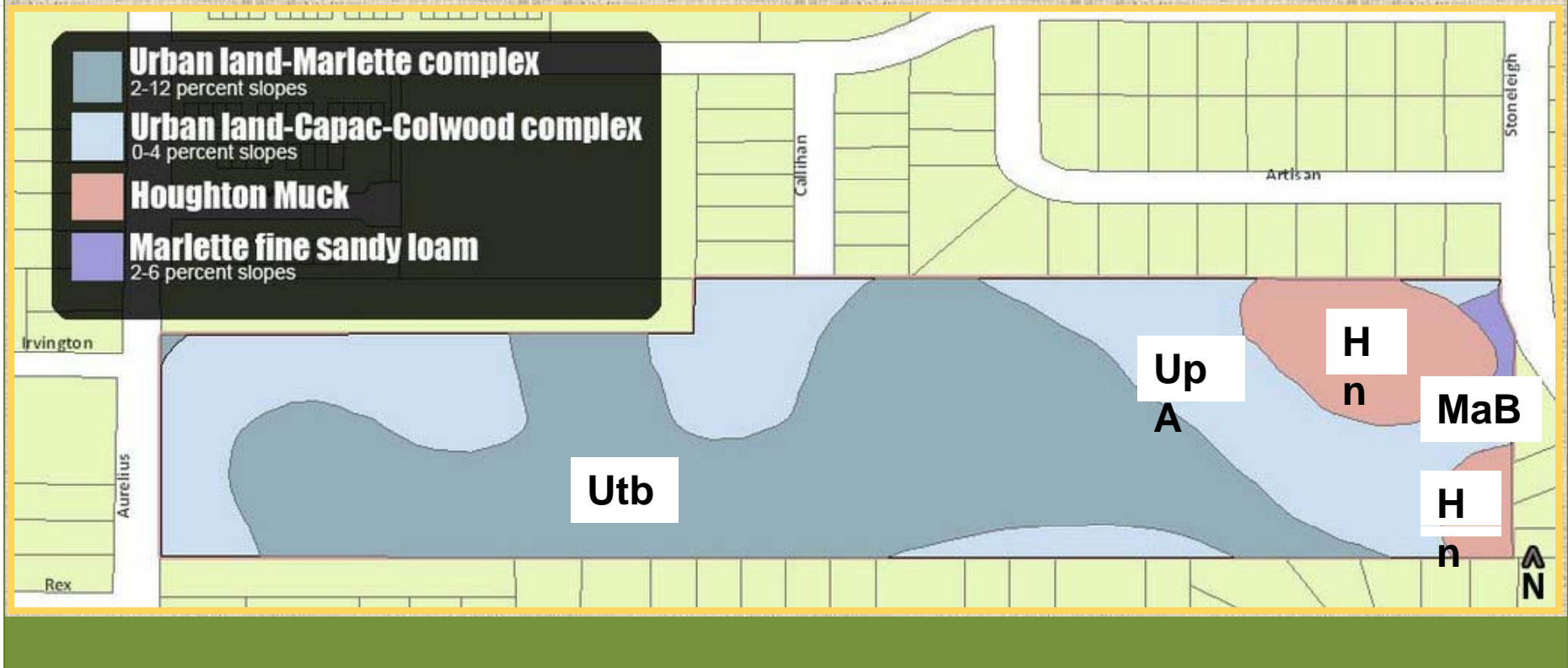


# URBAN AGRICULTURE and OTHER GREEN SPACE



# agriculture feasibility

- Soil is viable for agricultural activities
  - Soil analysis is necessary to determine which crops will grow best



# types of urban green spaces



- **Urban Farming**
  - **Production agriculture scaled down to fit the urban form**
- **Community Supported Agriculture**
  - **“the cohousing of agriculture”**
- **Open Space**
  - **A green third space where community interact**
- **Urban Gardening**
  - **Individual; may be private or public**



# case studies



- **Project Grow: Ann Arbor, Michigan**
  - Urban gardening, rental plots
- **Troy Gardens: Madison, Wisconsin**
  - CSA, production agriculture
- **Growing Power: Milwaukee, Wisconsin**
  - Intensive production agriculture
- **Lessons Learned:**
  - Fosters community interaction
  - Increases education about food production
  - Increases food security – locally grown produce





# troy gardens: madison, wi

- **Residential uses**
  - **30 units of mixed-income cohousing**



- **Agricultural uses**
  - **Five acres: CSA**
  - **330 family garden plots**

# ANALYSIS of OPTIONS



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	<b>Strengths</b>	<b>Weaknesses</b>	<b>Opportunities</b>	<b>Threats</b>
<b>Cohousing + CSA</b>	Increases strength of residential community	Niche market may be hard to sell	Bring surrounding community to the site	Does not fit with character of surrounding neighborhoods
<b>Cottages + Production Ag</b>	Agriculture can as an interim use, cottages are dense	Ag is not as profitable as housing	Potentially low cost housing for Ag workers	None foreseen
<b>Cottages + Open Space</b>	Allows for private space without compromising a strong sense of community, has wide appeal	Lower density may be less profitable, maintaining open space may be costly	Third space supplements private property	Does not fit with character of surrounding neighborhoods
<b>Attached Housing + Rental Plots</b>	Gardens can easily be configured around housing	Rental plots may be less appealing and practical for short term leasers	Allows residents an opportunity to grow their own food by leasing outdoor space	Increased foot traffic may make the site less secure
<b>Attached Housing + Open Space</b>	Open Space can be an interim use, attached housing is dense	There is already park space in the area	Open space acts as a backyard	If too large, a park may attract unwanted visitors

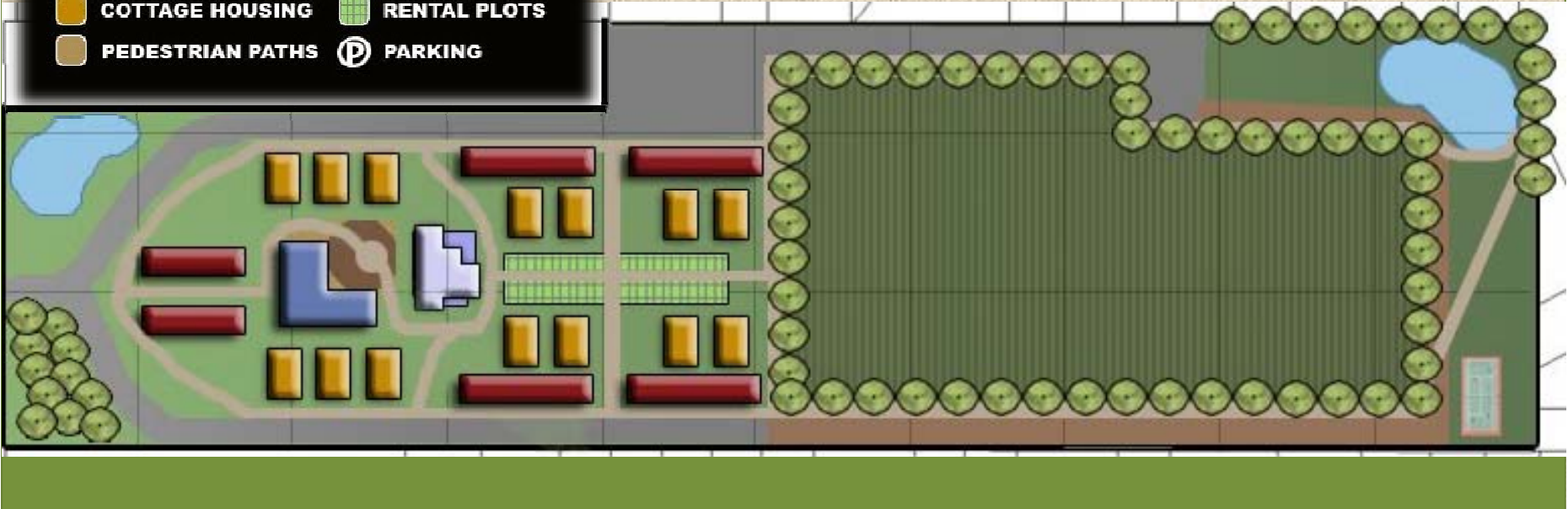
# DEVELOPMENT RECOMMENDATION

- URBAN AGRICULTURE
- TOWNHOMES
- COTTAGES
- MULTI STORY UNIT

- COMMON HOUSE
- PARKING AT THE PERIPHERY
- PEDESTRIAN PATHS
- COMMUNITY GREEN SPACE
- PONDS IN LOW AREAS

## LEGEND

 TOWNHOUSES	 ROADS
 COMMON HOUSE	 PRODUCTION AG
 COTTAGE HOUSING	 RENTAL PLOTS
 PEDESTRIAN PATHS	 PARKING

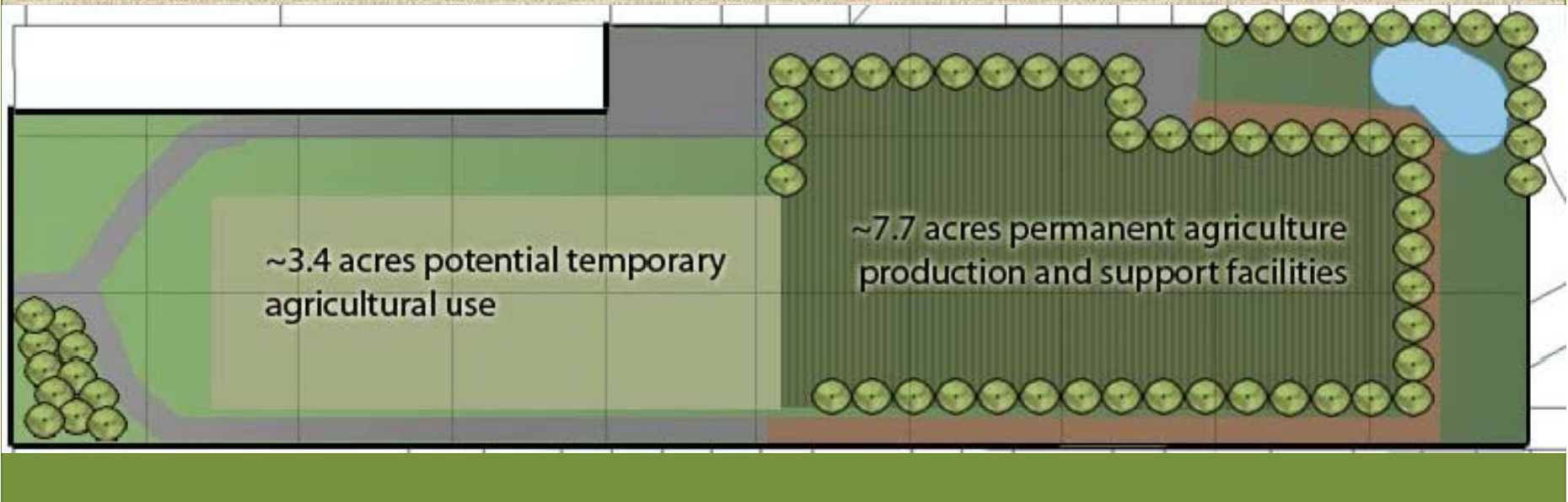




# PHASE ONE



- PERMANENT AGRICULTURE (EAST)
- TEMPORARY AGRICULTURE (WEST)
- ROADS AT PERIPHERY
- SOME LANDSCAPING
- FIRST POND (EAST)

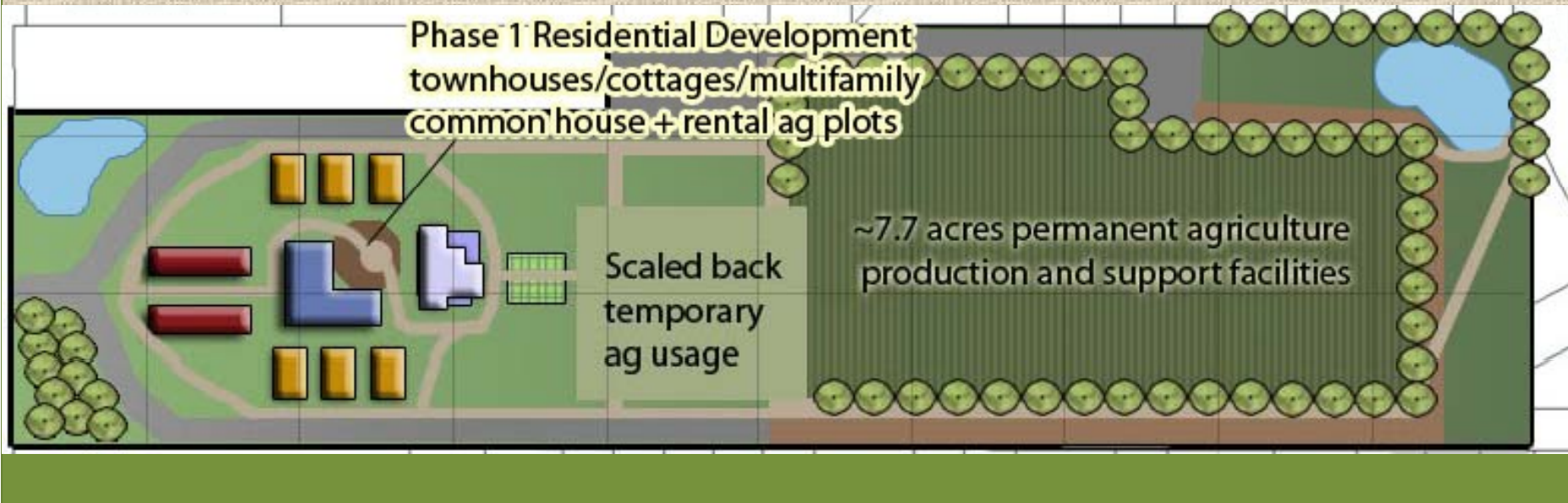




# PHASE TWO



- PERMANENT AGRICULTURE
- TEMPORARY AGRICULTURE SCALED BACK FOR HOUSING
- COTTAGES
- TOWNHOMES
- COMMON HOUSE
- MULTIFAMILY
- PEDESTRIAN PATHS





# PHASE THREE



- PERMANENT AGRICULTURE
- ADDITIONAL TOWNHOMES AND COTTAGES
- EXPAND PEDESTRIAN PATHS
- POSSIBLE EXPANSION OF RENTAL PLOTS
- PREFABRICATION
- GREEN ROOFS (MULTI + COMMON HOUSE)
- SOLAR PANELING (HOUSING)
- UNIVERSAL DESIGN (ALL)



**THANK YOU!**



**QUESTIONS?**

