




Land Development Code Student Revision Project



**Tyler Asher, Anders Bergsten,
Syd Garrison, Ryan Harvey,
Miranda Lentz**

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Who We Are

Tyler Asher

c/o 2023

Majors: Political Sci. &
Env. Sci., social sci. track

**Environmental
Studies 237**

Focus on Academic
Civic Engagement
Project

Miranda Lentz

c/o 2022

Major: Biology,
Env. Sci. concentration

Anders Bergsten

c/o 2022

Majors: Chemistry &
Math, Env. Sci.
concentration

Syd Garrison

c/o 2023

Major: Env. Sci., social
science track

Ryan Harvey

c/o 2022

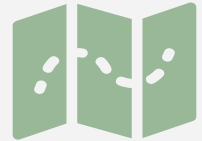
Majors: Computer Sci. &
Math, Env. Sci.
concentration

Our Project

- **Report detailing opportunities to integrate Northfield's 2019-adopted CAP into LDC**
- Ensure CAP goals are met by the LDC
- Target LDC Articles 3 & 4, knowing future student groups will contribute to breadth of project
- Propose changes/additions to current code based on targets of CAP, GreenStep Cities, other city codes, etc.
 - Offer additional info. and program ideas in appendices
- Lend next-generation environmentalist perspectives and wishes for future climate resilience

Our Findings

- **The LDC needs major amendments to make CAP goals possible**
- LDC concepts that dictate progress towards sustainability include:
 - New developments and retrofitting
 - City design and future expansion
 - Purpose of zoning districts
- Certain sections require small tweaks, others require expansions or complete overhauls
- Some CAP goals require change beyond LDC
 - City programs and incentives



Big Ideas



Form-Based
Coding



Complete
Streets



Parking and
Transportation



Vegetation



Stormwater &
Flood Management



Buffering and
Screening

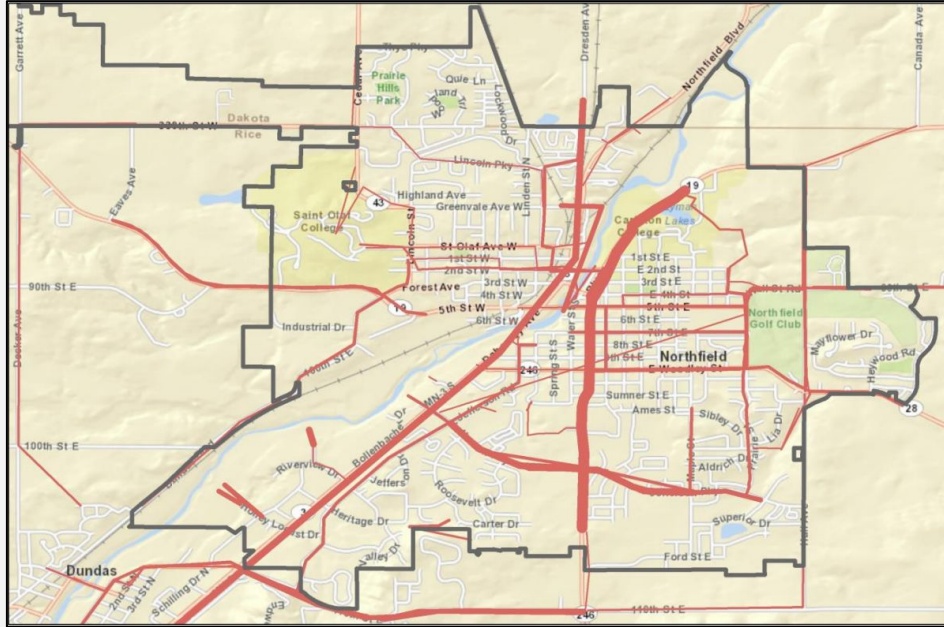
Case Study 1: Multimodal Movement

- Multimodal transit is crucial for sustainable development
- Adopting a complete streets mentality
- Current Forms include:
 - Hiawatha Bus System
- Opportunities for improvement
 - Bike Paths
 - Bike Parking
 - Form-based code

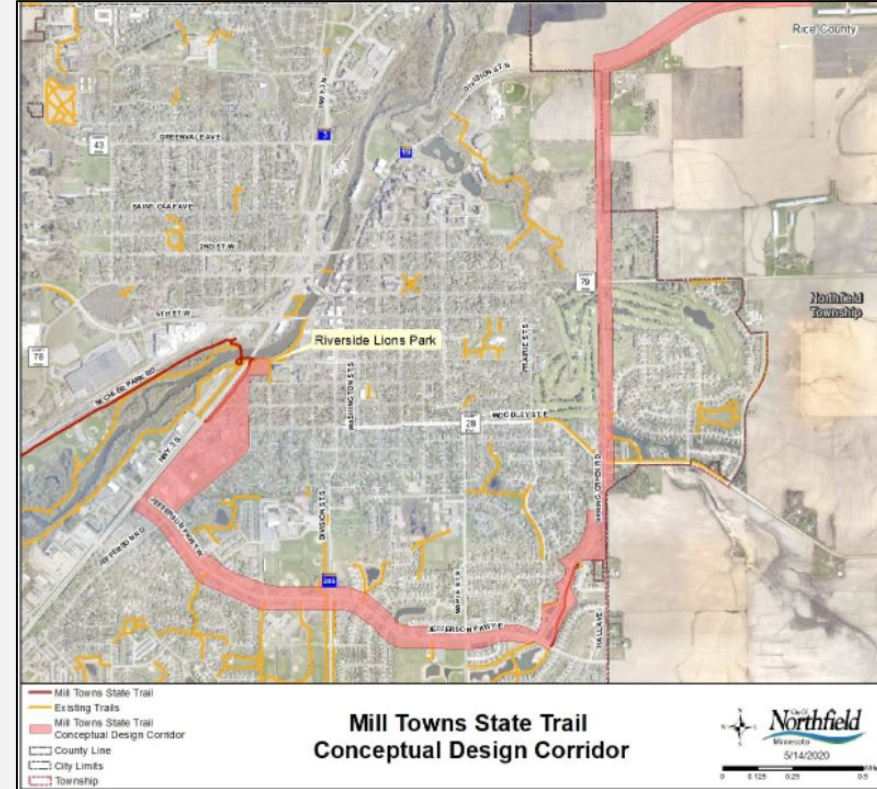


<https://visitnorthfield.com/plan-your-trip/transportation/>

Infrastructure: Desired vs. Planned



Bicycling gaps in Northfield that were identified by online map respondents. Thicker lines indicate that more people identified a bicycling gap in this location. [Source](#)



More opportunities for sustainable transportation

- Bicycle use may be improved by:
 - Adding solar canopies to power parking shelters and provide shade
 - Ensuring residents' safety while biking
 - Back-in parking
 - Clearly marking bicycle lanes



Case Study 2: Flood Mitigation

- Climate change-driven weather patterns will lead to more frequent extreme weather events, including severe storms and floods
- **Northfield faces a higher likelihood of flooding when compared to the rest of MN**
- LDC Articles 4.1 and 4.2



[2020 Downtown Flooding Preliminary Improvement Assessment | Northfield, MN - Official Website](#)

Stormwater Mitigation in Northfield



Parking

Stormwater drainage within parking lots is not adequately addressed. Multiple solutions are addressed in our report.



Landscaping

Vegetative cover and healthy shorelines are essential in preventing erosion and mitigating floods.



Stormwater Infrastructure

GreenStep Cities Best Practices include many pieces of stormwater infrastructure that could be implemented in Northfield, including smart sewer systems, retention ponds, and microgrids.

Annexation Agreements

- **Neighboring townships and community members under Northfield's protection will also be affected by increased flooding**
- Annexation agreements are the only legal contracts between Northfield and the townships
- Northfield has a responsibility toward helping these communities
- Incorporation of flood/ stormwater mitigation planning into annexation agreements → cooperation is key



INTEGRATING CAP INTO THE LDC IS CRUCIAL

CLIMATE RESILIENCE & SUSTAINABILITY
MUST BE PRIORITIZED



Moving Forward

01

St. Olaf Students

Expand 2022 report to
other LDC articles

Add to annotated bib. of
associated resources

02

PC & collaborators

Implement revisions

Create additional
incentive programs

Increase community
awareness & accessibility

03

City of Northfield


Prioritize sustainability &
community-based values

Reach 100% C-free
living by 2040

THANK YOU!



Do you have any questions?



Community partner: rohn@stolaf.edu
St. Olaf instructor: jackson@stolaf.edu

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