

PARKING STUDY

St. Olaf College
Northfield, MN

June 24, 2020

Project No. 20-23959

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REPORT FOR:
St. Olaf College
1520 St. Olaf Avenue
Northfield, MN 55057

FROM:
ISG
Will Kratt, **PE, PTOE**
201 Main Street + Suite 1020
La Crosse, Wisconsin 54601
608.789.2034
Will.Kratt@ISGInc.com

SIGNATURE SHEET

I HEREBY CERTIFY THAT THESE CALCULATIONS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

William A. Kratt, **PE, PTOE**
Project Engineer
License No. 51210
My license renewal date is June 30, 2020
Documents covered by this seal:
St. Olaf Parking Study

ISG
201 Main Street, Suite 1020
La Crosse, WI 54601

St. Olaf College
Northfield, Minnesota

Engineer's Project Number: 20-23959

Dated this 24th day of June, 2020

TABLE OF CONTENTS

Executive Summary1

 Studied Site Description and Location1

 Recommendations + Conclusions1

Introduction.....2

 Purpose of Report.....2

 Study Objectives2

Approach2

Background.....3

 Enrollment and Inventory3

 Occupancy and Parking Permits4

 Multi-Modal Transportation.....5

 Key Findings.....7

Parking Analysis.....7

 2020-2021 Site Improvements.....8

Recommendations + Conclusions.....8

APPENDICES

Appendix A: Preliminary Site PlanA

Appendix B: Project Location Map.....B

Appendix C: St. Olaf Natural Features MapsC

Appendix D: Off-Campus Student Heat MapD

Appendix E: Campus Buildings MapE

Appendix F: Existing Campus Parking MapF

Appendix G: Public Transit RoutesG

Appendix H: Existing Campus Walkability MapH

Appendix I: City of Northfield Zoning Map.....I

Appendix J: Existing and Proposed Campus Parking Map.....J

Appendix K: Existing and Proposed Campus Walkability MapK

EXECUTIVE SUMMARY

Studied Site Description and Location

This Parking Study analyzed current and proposed parking throughout the campus of St. Olaf College located in Northfield, Minnesota. At the time of writing, the COVID-19 virus pandemic has had unprecedented and ongoing impacts on travel behavior. As a result, ISG did not collect and document occupancy or duration of vehicles on campus. This study has been prepared in response to the reconstruction of on-site student housing. The proposed student housing will provide additional student residences based on current enrollment needs. The site is located within the northwest city limits of Northfield, MN. The college campus is bounded by Highway 19 Boulevard along the southern property line, providing access to Interstate 35-W and Lincoln Street North along the east. This report is being provided in tandem with a Traffic Impact Study completed by ISG, which is reviewing the existing and proposed traffic generated by the reconstructed student housing.

Recommendations + Conclusions

Based on the parking permit regulations and historical sales, existing infrastructure, the school's mission, and existing multi-modal transportation, St. Olaf College meets the requirement of providing a parking stall for each student vehicle, faculty member, and staff member, and the average visitor parking demand. The current parking on-campus is meeting current parking demands. St. Olaf College offers a unique experience for its community and promotes a green lifestyle by increasing student awareness and involvement within the City of Northfield. The school is currently utilizing practices to decrease the demand of student, faculty, and staff parking on-site by:

- increasing permit prices
- providing permits to students on a need-basis
- providing fewer parking stalls
- providing school site infrastructure to establish a walkable campus and accommodate bicycle travel
- encouraging students to be sustainable and reduce their own carbon footprint
- and promoting a wide variety of transit, rental, and rideshare opportunities.

Per the historical permit sales, the proposed number of parking stalls is sufficient for future growth when all students will be living on campus. While enrollment and faculty/staff grow in the future, it is recommended for St. Olaf to increase existing multi-modal transportation and work with businesses to provide sustainable alternatives for the community that align with the school's values and keep demand for parking on-campus low by:

- Increasing the fleet size of the on-campus green bikes program
- Looking into the possibility of buses being equipped with GPS tracking features to allow transit riders to track buses in real time online or on their mobile devices. This would lead to a more convenient and pleasant transit experience that can increase ridership.
- Installing transit shelters on-campus at frequent stops to protect riders from wind and precipitation while they wait for buses. Transit shelters also offer an opportunity to coordinate shelter design with campus branding, wayfinding, signage, and security features.
- Providing a school resource for ridesharing for faculty, staff, and students.
- Constructing bike-lanes within existing roadways to reduce bicycle traffic on walkways or construct shared-use paths.
- Educate students, faculty, staff, and visitors on the availability of Lyft throughout the Northfield area and Uber in parts of Northfield

INTRODUCTION

Purpose of Report

The purpose of this report is to document the methodologies, findings, recommendations, and conclusions of the Parking Study; including the basis for all assumptions, analysis parameters, and conclusions. This report presents data in a logical format including tables and figures in order to accurately and clearly convey the data and its meaning.

Study Objectives

The objectives of this study include the following:

1. Identify how much parking is provided at the school
2. Determine how existing parking is being utilized
3. Determine how existing and future demands relate to current capacity

APPROACH

At the time of writing, the COVID-19 virus pandemic has had unprecedented and ongoing impacts on travel behavior. As a result, ISG did not collect occupancy and duration counts in preparation for this study. Higher education school facilities, including St. Olaf College, suspended in-person instruction through much of April and May. St. Olaf College students only attended classes online starting April 6 and online instruction will continue through the summer term. A Stay at Home order was issued by Minnesota State government directing Minnesotans to limit movements outside of their homes to essential needs and was effective until May 18th. Since, a Stay Safe Minnesota Plan has been put in place limiting the in-person school learning and promoting distance learning until further notice. It's likely that effects of the COVID-19 pandemic will continue until social distancing measures recommended by state and federal governments are lifted. It is unknown when local travel patterns will return to what was considered normal pre-COVID-19. Occupancy and duration counts conducted at this time would result in data unrepresentative of the facilities typical parking usage. To more accurately evaluate the occupancy of parking spaces, past data from issued permits have been provided from St. Olaf.

BACKGROUND

Enrollment and Inventory

This report studies the existing and proposed parking at St. Olaf College. A preliminary site plan of the reconstructed student housing is provided in **Appendix A** and a project location map is provided in **Appendix B**. St. Olaf College is a private liberal arts college on 650-acres of land within Northfield, Minnesota that offers 39 major areas of study for the bachelors of arts degree, 4 for the bachelors of music degree, and 19 areas of concentration.

Enrollment has steadily increased at an average annual growth rate of 0.4% since 2015 with 3,005 full-time students in 2015 and 3,050 in 2019. It is anticipated that the school will maintain this growth within future years. **Figure 1** provides a visual representation of the historical and projected enrollment numbers. Conservatively, this projection does not represent current economic trends that may impact future growth. For the intent of this study, the future growth of students will be assumed to maintain the shown trend.

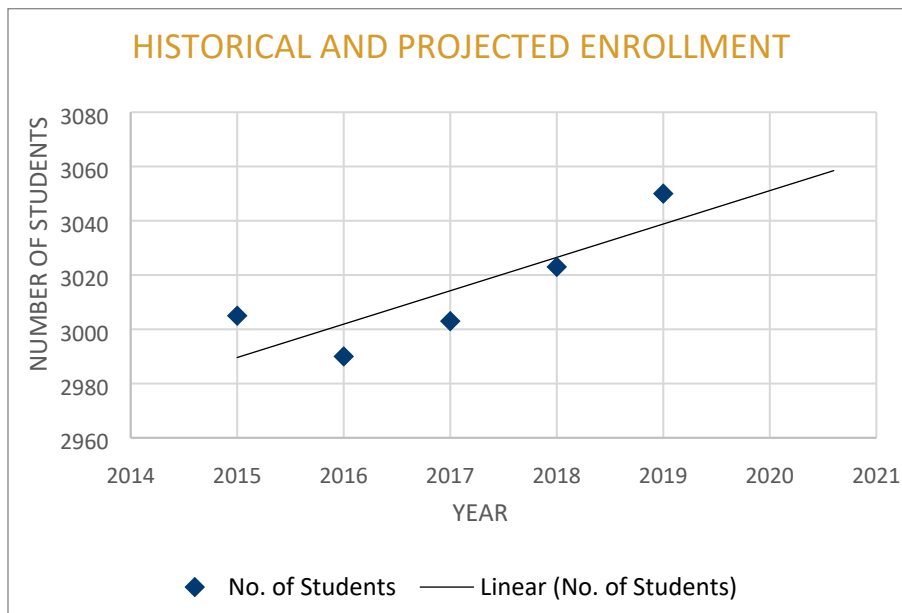


Figure 1: Historical and Projected Enrollment

TYPE OF STALL	NUMBER OF STALLS	% OF STALLS
Faculty, Staff, or Visitor	816	44.2%
Visitor Only	59	3.2%
Reserved	68	3.6%
Handicap	64	3.5%
Loading Only	12	0.0%
Student Spaces	822	45.5%
TOTAL	1841	100%

Table 1: Existing Parking Stall Count

St. Olaf College was founded in 1874 with a 300-acre campus and 350-acres of restored natural features such as wetlands, woodlands, and native tallgrass prairie as shown in the existing land use maps in **Appendix C**. The campus provides an interconnected network of pedestrian walkway that are primarily located internally. Vehicles navigate throughout the campus on a single roadway that loops around the main campus buildings and walkways to provide vehicle access to residence housing and adjacent parking lots. This design increases vehicle and pedestrian travel time by reducing the frequency of pedestrian crossing points

Throughout the site there are a total of 1,841 parking stalls across 39 lots. Each parking lot has designated intended uses for one or more of the following: visitor, faculty/staff, handicap, reserved, loading only, or student. **Table 1** provides the breakout of number of stalls and their designation throughout the campus. The majority of parking on-campus is for faculty, staff, and students during weekday business hours.

Table 2: St. Olaf's Parking Permit Fees.

Type of Permit	Sem. 1 Price	Sem. 2 Price	Year-Long
Commuter	\$ 140.00	\$ 140.00	\$ 260.00
Honor/Language	\$ 140.00	\$ 140.00	\$ 140.00
Lincoln Lot	\$ 140.00	\$ 140.00	\$ 140.00
Skoglund Lot	\$ 140.00	\$ 140.00	\$ 140.00
Storage - Lot J / Lot I	\$ 140.00	\$ 140.00	\$ 140.00
Motorcycle / Scooter	\$60.00 (per year)		
Temporary	\$30.00 for 7 consecutive days		
Summer Permit	\$35.00 for both summer sessions		

Occupancy and Parking Permits

Due to the inability to accurately collect parking data for this study, occupancy was determined based on the historical number of permits issued by St. Olaf. The types of parking permits correspond to the different categories of parking needs for the campus. The type of permit fees per permit is shown in **Table 2**.

STUDENTS

St. Olaf College currently has 94.1% of their students living on-campus. The student distribution is shown in **Figure 2**. Only 175 students live off-campus. 67% of off-campus students live within 0.5-miles of campus and the remaining 57 students live more than 0.5-miles away. A heat map has been provided in **Appendix D**, illustrating where off-campus students reside.

Student housing is provided across 11 residence halls and 19 honor houses that are illustrated in **Appendix E**. The on-campus population residing within student housing is approximately 2,776 students. In combination with the existing number of designated student parking stalls, there is on average 0.29 permitted parking stalls per student living on-campus. This lifestyle promotes the students to utilize the existing campus infrastructure and other forms of transportation to commute for personal needs, to volunteer, or work. Other forms of transportation are discussed within the *Multi-Modal Transportation* section of this report. By providing a limited number of student parking, it reduces the need and number of student vehicle storage permits and encourages less driving and more walking, biking, public transit and alternative transportation use.

To systematically assign student parking permits, a student is required to demonstrate a verifiable need for the permit such as:

- A commuter – Students living off-campus
- Academic – Nursing practicums, student teachers, or an off-campus senior project related. Qualifications are determined within the students specified education department.
- Service – Students who volunteer a minimum of 8 hours/week off-campus
- Work – Students who are employed off-campus and work more than 10-hours per week
- Storage – Students living beyond a 200-mile radius from campus
- Medical – Students on a short term or as needed basis due to physical limitations
- Temporary – Permits that are issued for 7-days and are not issued more than 3-times during an academic year

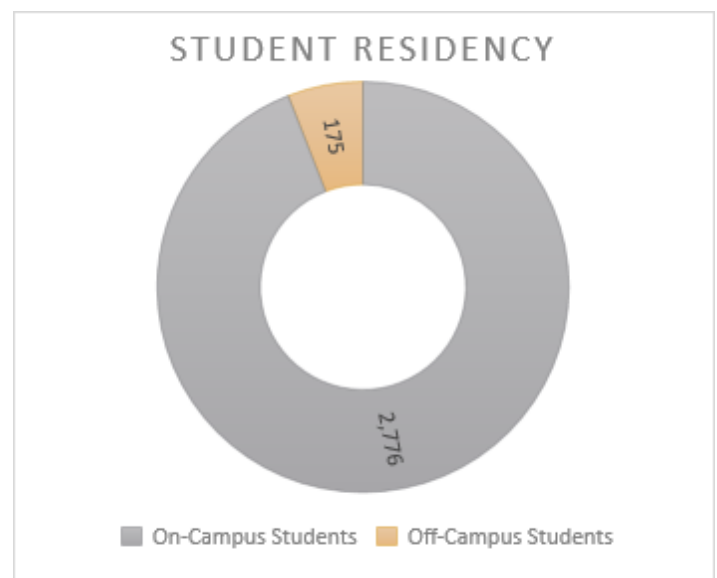


Figure 2 : St. Olaf student residency count

Permits are then issued based on student seniority. Student parking is provided across 8 dedicated parking lots with 2 of the parking lots dedicated to commuter parking only. The existing provided student parking is illustrated in **Appendix F**. Students who live in a current Honors or Language House are provided with 2 parking permits per house. These permits allow students to park in the house's driveway, and these permits are not shown within **Appendix F**. Lastly students can park on the street within the eastern residential neighborhood. Based on existing on-street parking restrictions for roadways that are 2-blocks from campus there are approximately 200 parallel parking stalls students may be able to utilize without a permit.

According to St. Olaf College permit data, the college issues a maximum of 850 student parking permits, 94 of which are commuter parking permits. This corresponds to approximately 27% percent of on-campus residents being issued parking permits and 54% of off-campus residents being issued commuter permits.

FACULTY, STAFF, AND VISITOR

Issued permits are provided to all faculty and staff of the school and parking is located across 28 parking lots. Refer to **Appendix F** to identify the locations of the allocated parking lots. Per St. Olaf College's most recent IPEDS Human Resources Report, St. Olaf College employed 821 people in 2019. The existing number of parking stalls and the provided staff count would equate to 0.99 parking stalls per 1 faculty / staff. In Fall of 2019 there were 573 full-time and 248 part-time faculty/staff, or 70% and 30% respectively. According to St. Olaf College permit data, the college issues approximately 800 faculty/staff permits. The school also reports that current occupancy rates are about 70% due to the large number of faculty and staff not on site daily.

All faculty and staff parking lots authorize visitor parking. Visitors are not required to obtain a parking permit. Three parking lots are dedicated to visitor parking only and there is unpaved overflow parking for special events such as Choral Concerts and Graduation in the intermural field, south of Lot I. This parking lot can fit approximately 270 additional standard vehicles for visitors. Note that this additional parking is not listed within **Table 2** due to its limited use throughout the academic year.

Multi-Modal Transportation

St. Olaf College promotes community environmental responsibility and sustainability while priding itself in immersing their students with opportunities to reduce their own carbon footprint. The campus promotes communal and multi-modal travel on- and off-campus. There are several alternative transportation options that students, faculty, and staff can utilize on a regular basis based on what works best for each individual's need.

CITY-WIDE BUS ROUTES

The Hiawathaland Transit system provides local connectivity. The Hiawathaland Transit system's Northfield Express Route is available during the St. Olaf school year and makes stops in the middle of St. Olaf College campus and at other major destination in Northfield. This bus route maintains 60-minute headways between buses from 4 pm to 11 pm Monday through Saturday and from 3 pm to 6 pm on Sundays, aligning with typical time periods when students have the availability after class to ride. The Northfield Blue Route is also available. Buses on this route stop in the middle of St. Olaf College campus and circulate the adjacent residential neighborhood to the east and other destinations within northern Northfield. Riders on the Northfield Blue Route can transfer to the Northfield Red Route at City Hall. The Northfield Red Route provides access to destinations within southern Northfield. Headways between buses on the Northfield Blue Route are 45 minutes and the buses run from 6 am to 5:15 pm daily.

The Express Route is a public, shortened route compared to the Blue Route and Red Route that is free to faculty, staff, and students with a St. Olaf ID. The City of Northfield's main public transportation is the Red and Blue Routes of Hiawathaland Transit. The Red Route and Blue Route buses are free with a St. Olaf ID. Maps are provided in **Appendix G** to illustrate the local public bus routes.

Lastly, Hiawathaland Transit provides a "Dial-A-Ride" option to St. Olaf students where they can pay \$1.25 for a token which provides the ability to schedule a one-way ride within city limits.

CAMPUS SHUTTLE

Oles-Go provides daytime transportation in Northfield for volunteer, medical appointments, and pharmacy trips or work locally. This shuttle is not provided for personal trips and is a mini-van that follows a route but does allow for some route deviations based on request. The shuttle service has two-standard routes that operate from 7:30-8:30AM and from 8:30AM-5:30PM. The shuttle off-campus stops include:

- Allina
- Northfield High School
- Northfield Community Resource
- Northfield Middle School
- Bridgewater School
- Sibley School
- Carleton College
- Bridge Square
- Greenvale School

RIDESHARE AND RENTALS

St. Olaf has sought out partnerships with businesses to provide other transportation opportunities to further enable their student's mobility by partnering with Enterprise. Enterprise and St. Olaf have created a CarShare program that allows students to become a member for \$1 and are charged \$5 per hour to use a vehicle. Students are recommended to use this program to run errands or travel out of town as needed. Additionally, students above the age of 21 can rent a vehicle through Enterprise's Rent-A-Car for personal usage.

The school has a fleet of vehicles that allow student organizations to reserve a vehicle for trips, volunteering opportunities, and general organization business. If all fleet vehicles are reserved, student organizations can work with staff to rent a vehicle from Enterprise, ensuring accessibility.

Lastly, there are a number of RideShare websites and groups, including Waze Carpool, that are not sponsored by St. Olaf College but provide students, faculty, and staff with the opportunity to carpool.

PEDESTRIAN AND BICYCLE TRAVEL

To promote accessibility and a healthy lifestyle, St. Olaf campus is primarily accessible via pedestrian walkways. The interconnected design allows students, visitors, and faculty/staff to access most of campus in under 10-minutes. The centralized network decreases pedestrian delay by limiting the number of pedestrian crossings of primarily vehicle-traveled roadways. **Appendix H** depicts the distance a student can-travel from on-campus housing using a standard walking speed of 3 MPH and the existing walkway infrastructure within 5-minutes or less. Travel time would decrease across campus for anyone who utilizes a bike, which is encouraged within the community based on current bicycle policies, the St. Olaf Cycling Club, and the school's annual participation in "National Walk/Bike to Work Week" as one of their various green initiatives.

Not only does the campus encourage students to bring their own bike from home but has created a student-run Green Bikes program which was launched to provide students with a mode of travel that reduced vehicle travel and promote fitness. The program allows anyone within the St. Olaf community to access a bike and safety equipment. Various bike sizes are available based on the user's height.

BEYOND NORTHFIELD

A large portion of the student population is not from Northfield or surrounding areas. If students need to travel outside of Northfield, there are a number of opportunities beyond ride sharing to commute outside of city limits.

Northfield Lines partner with St. Olaf College to provide shuttles to Minneapolis-St. Paul International Airport for all college breaks. One-way shuttle tickets are \$15 for students. Northfield Lines also operates a daily service from campus to various locations in the Twin Cities for the same price as the one-way shuttle to the Airport.

Lastly, students can commute via a taxi or car service. St. Olaf does not work directly with these companies, but staff is willing to work with the students to find transportation services through:

- First Choice Shuttle
- Shuttlefare
- Aspen Travel Taxi & Limo
- AmTrak Trains
- MegaBus

Key Findings

A compiled collection of existing principles established on how the site functions with its existing parking are summarized as:

- 96.1% of students live on campus and the school has a goal of 100% of their students living on-campus throughout their academic career
- Per current permitting practices, pricing and number of permits issued is used as a demand reduction management strategy
- Existing faculty/staff parking capacity exceeds current demand.
- Existing student parking capacity meets current demand.
- School infrastructure lends itself to a multi-modal transportation, including a walkable campus and bicycle travel
- School encourages students to be sustainable and reduce their own carbon footprint
- A wide variety of transit, rental, and rideshare opportunities decrease students' reliance on personal vehicles, reducing the need for long-term on-campus student parking capacity.

PARKING ANALYSIS

According to St. Olaf College, campus-wide parking is operating below capacity for students, faculty, and staff, and all faculty and staff who desire a permit are able to acquire one. Visitor parking is not able to be tracked due to the fact visitor parking does not require permitting. Considering there are three dedicated visitor parking lots and most permitted stalls allow visitor parking, it is deduced that visitor parking throughout campus is sufficient. During events that increase visitor traffic there is a provided overflow parking that can hold 270 more vehicles. Per the existing number of students, student permitted parking, and off-campus parking, St. Olaf College has 35% of their total student population bringing cars to campus (27% of on-campus students and 54% of off-campus students).

A 2017 survey completed by U.S. News across 214 national universities found that during the academic year approximately 46.8% of students brought cars to campus. Additionally, it was found that some colleges and universities had a less than 7% average. Many of these schools had low parking volumes and higher permitting prices to decrease demand and promoting their faculty, staff, and students to utilize other modes of transportation.

At St. Olaf College, students are encouraged to be fully immersed in their campus lifestyle by requiring a majority of students to live on-campus. Limiting parking permits to students who commute, regularly volunteer off campus, regularly work off campus, live further than 200 miles from campus, or require a campus permit for medical reasons encourages students to engage in

campus activities and utilize public transit to immerse themselves in the City of Northfield, consistent with the college's campus sustainability initiative and identity as a residential college. Additionally, not all faculty and staff work full-time, thus creating an influx of parking stalls that would not be utilized. Providing a stall for every student would reduce the demand for multi-modal transportation, increasing the community's carbon footprint and inadvertently reduce the number of jobs employed by impacted markets.

Per the City of Northfield's Zoning Map, **Appendix I**, the school is classified as College Development "CD-S" and the City's land use plan states:

"Campus-wide requirement as determined through a parking study. One parking space for each faculty, staff, student vehicle, and the number of parking spaces equal to the average visitor parking demand as documented in a parking study. On street parking adjacent to property owned by a college may be counted towards meeting the parking requirement".

If St. Olaf College provided 1 parking stall per each student vehicle, faculty member, and staff member, that would require a total of approximately 1,680 parking stalls (850 student vehicles and 820-830 faculty/staff). Across campus there are 1,829 permitted parking stalls (excluding loading parking stalls), 270 overflow visitor stalls, and 200 off-campus stalls within the adjacent residential neighborhood. The number of permitted parking stalls (excluding loading parking stalls) exceeds the number of required parking stall per the City's land use plan.

To maintain existing campus functionality and operations it would be in the school's best interest to supply a consistent percentage of parking for students, faculty, and staff based on number of students enrolled and faculty/staff employed. In doing so, parking demand would decrease and multi-modal transportation can grow.

2020-2021 Site Improvements

St. Olaf has identified one of their goals is to have all their students live on campus throughout their academic career. There is currently a disparity of student housing, resulting in approximately 5.9% of their students living off-campus. St. Olaf has planned to reconstruct student housing along St. Olaf Avenue and allow for all students to live on-campus once construction is completed. A proposed site plan is provided in **Appendix A**. The site construction is planned to begin in 2020 and completed by fall of 2021.

New student housing project would consist of dorm and townhome style housing designed to accommodate 440 students. The project also includes the construction of a 182-stall parking lot dedicated to students. The site construction would allow all students to live on-campus and create a net additional 134 parking stalls for students shown in **Appendix J**. The 175 students who live off-campus would be able to live on-campus, and assuming the current rate of issuing parking permits is maintained (27% of on campus students), about 48 additional stalls would be required. The number of stalls provided in the proposed parking lot exceeds the number of stalls required to maintain St. Olaf College's existing student parking rate. Adding 134 parking stalls instead of 48 stalls would increase the on-campus student parking rate from 27% to 33% (984 stalls / 2951 students). The campus walkability would increase as a result of additional proposed sidewalks. A map has been provided in **Appendix K** depicts the walkability and would maintain the existing results that most of the campus is accessible within 10-minutes at an average student walking speed.

RECOMMENDATIONS + CONCLUSIONS

St. Olaf College offers a unique experience for its community and promotes a green lifestyle by increasing student awareness and involvement within the City of Northfield. The school is currently utilizing practices to decrease the demand of student, faculty, and staff parking on-site such as increasing permit prices, providing permits to students on a need-basis, providing school site

infrastructure to establish a walkable campus and accommodate bicycle travel, encouraging students to be sustainable and reduce their own carbon footprint, and promoting a wide variety of transit, rental, and rideshare opportunities.

These demand management strategies reduce the number of students bringing vehicles to campus. Based on the compiled permit parking, existing infrastructure, the school's mission, and existing multi-modal transportation, St. Olaf College meets the requirement of providing a parking stall for each student vehicle, faculty member, and staff member, and the average visitor parking demand.

The proposed student housing development will increase student parking lot capacity. As enrollment and faculty/staff grow, increasing existing multi-modal transportation and working with businesses to provide sustainable alternatives for the community that align with the school's values and keep demand for parking on-campus low is recommended. Examples include:

- Increasing the fleet size of the green bikes program
- Looking into the possibility of buses being equipped with GPS tracking features to allow transit riders to track buses in real time online or on their mobile devices which leads to a more convenient and pleasant transit experience that can increase ridership.
- Installing transit shelters at frequent stops to protect riders from wind and precipitation while they wait for buses. Transit shelters also offer an opportunity to coordinate shelter design with campus branding, wayfinding, signage, and security features.
- Providing a school resource for ridesharing for faculty, staff, and students.
- Construct bike-lanes within existing roadways to reduce bicycle traffic on walkways or construct shared-use paths.
- Educate students, faculty, staff, and visitors on the availability of Lyft throughout the Northfield area and Uber in parts of Northfield

Appendix A: Preliminary Site Plan

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Reese A. Sudtlegte

DATE _____
LIC. NO. 54243



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DEPEND UPON COLOR COPIES.
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IN COLOR, THIS IS NOT AN
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PROJECT: **OLE AVENUE PROJECT**

ADDRESS:

[illegible]

WSA PROJECT #: 19-270

DATE: June 04, 2020

50% DESIGN DEVELOPMENT

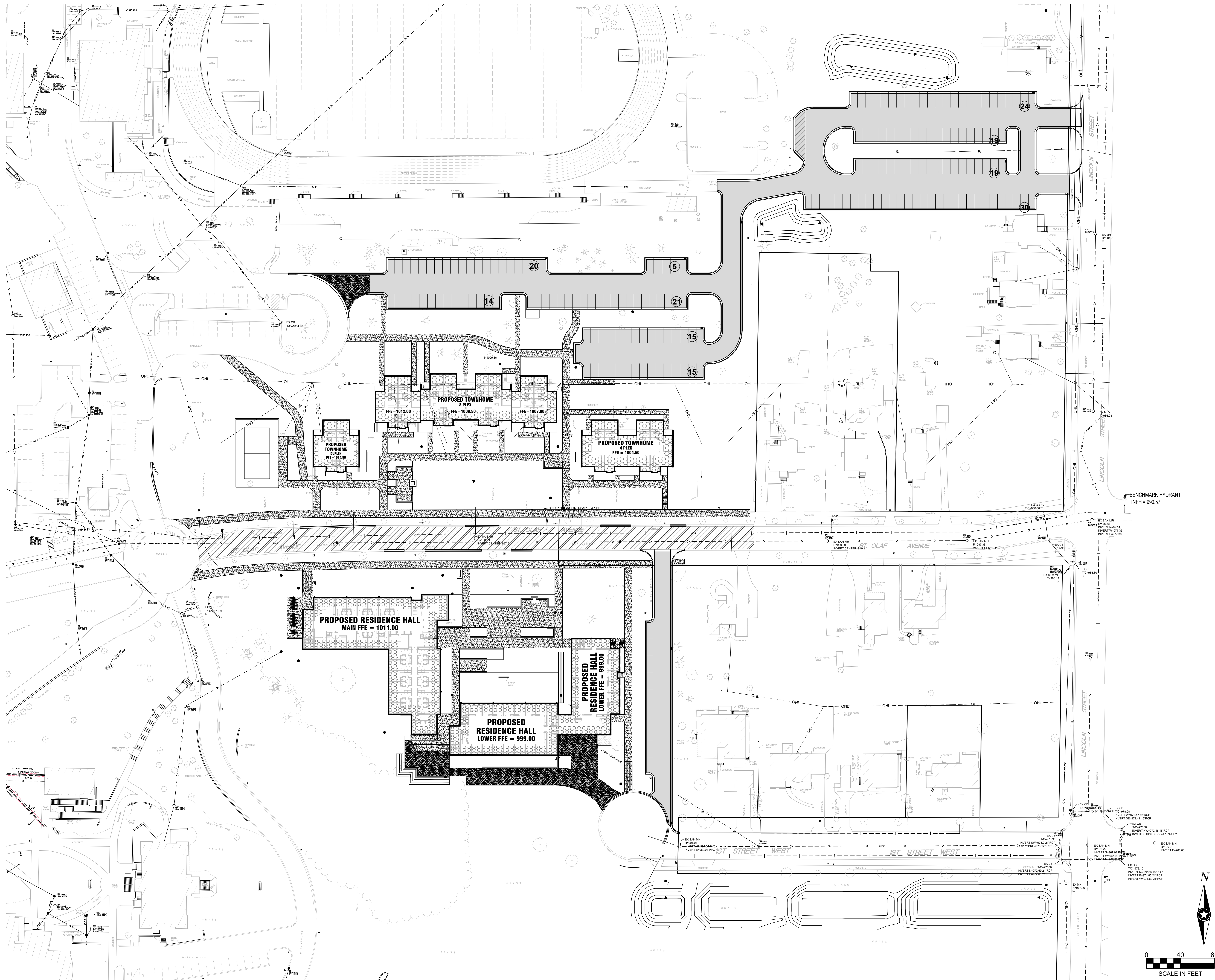
**PROPOSED SITE PLAN
(OVERALL)**

C3-10

○ COPYRIGHT WORKSHOP ARCHITECTS, INC.

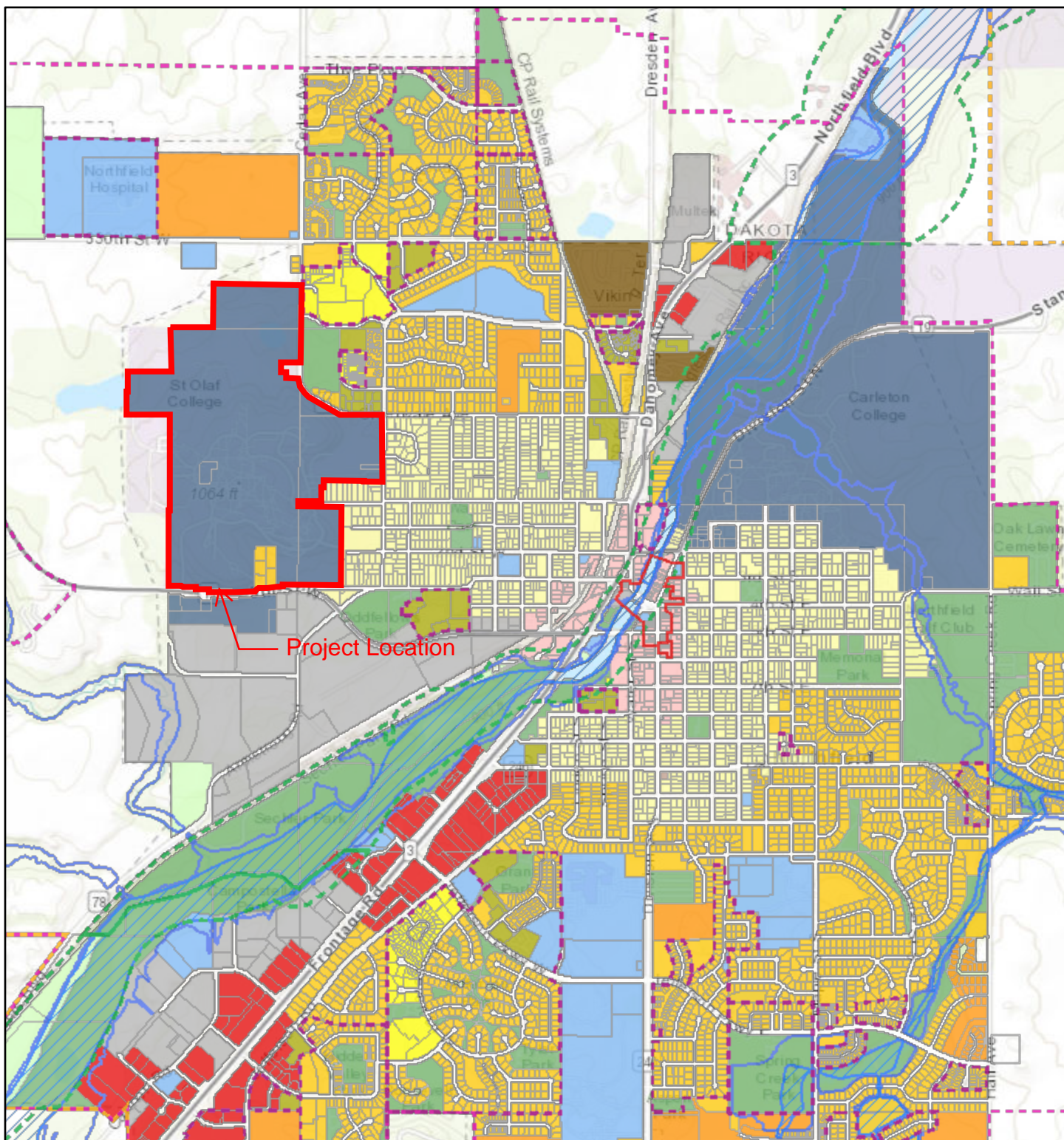
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FOR REFERENCE ONLY



Appendix B: Project Location Map

City of Northfield



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Rice County Parcels

R1-B: Low Density Residential

R2-B: Medium Density Residential

R3-B: High Density Residential

R4-B: Manufactured Home Park

N1-B: Neighborhood General 1

N2-B: Neighborhood General 2

NC-F

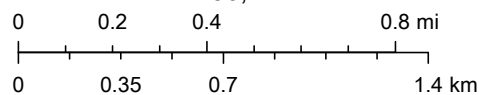
C1-B: Downtown

C2-B: Highway Commercial

I1-B: Industrial

A-S: Agricultural

1:36,112



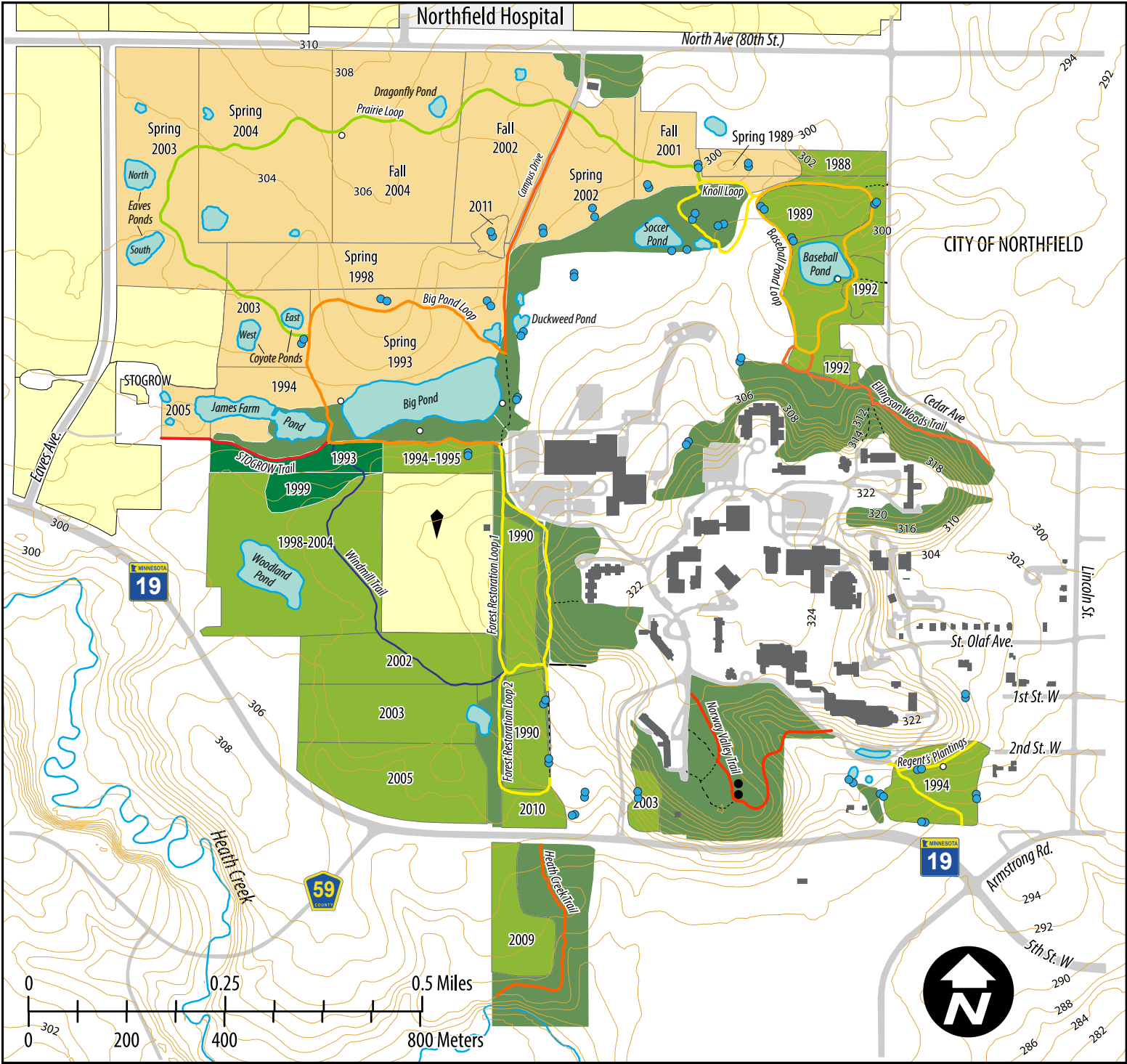
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Web AppBuilder for ArcGIS

Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA |

Appendix C: St. Olaf Natural Features Maps

St. Olaf College Natural Lands



EXPLANATION

- Restored Prairie
- Sustainable Agriculture
- Existing Forest
- Restored Forest: Hardwoods
- Restored Forest: Conifers
- Wetlands
- St. Olaf Wind Turbine
- Campus Buildings
- Campus Roads
- Land Restoration Date
- Bluebird Box Sites
- Bench
- City Water Tanks
- Prairie Loop (1.1 mi)
- Big Pond Loop (0.8 mi)
- STOGROW Trail (0.3 mi)
- Forest Restoration Loop 1 (0.6 mi)
- Forest Restoration Loop 2 (0.4 mi)
- Windmill Trail (0.6 mi)
- Heath Creek Trail (0.3 mi)
- Norway Valley Trail (0.4 mi)
- Regents' Plantings (0.2 mi)
- Ellingson Woods Trail (0.4 mi)
- Baseball Pond Loop (0.6 mi)
- Knoll Loop (0.3 mi)
- Campus Drive (0.3 mi)
- Access Trail

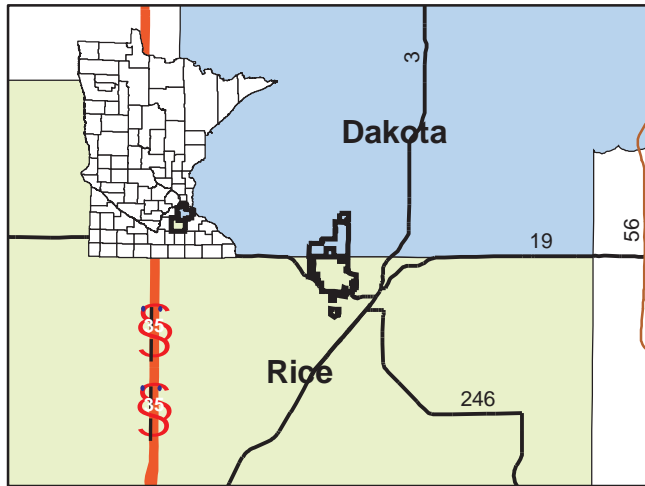
ELEVATIONS IN METERS
Contour interval two meters

Elevations derived from 2007 Rice County LiDAR from MN-DNR.

Map projection is NAD83 UTM Zone 15 North



St. Olaf College Landuse



St. Olaf College Landuse Classifications as of 2004. Of the nearly 1200 acres of land owned by the college, land devoted to ecological restoration and sustainable agriculture practices accounts for 42% and 38% respectively. Of the ecologically areas, 18% are restored wetlands, 13% restored praires, 9% restored forests, and 18% already existing forests.

Landuse Classifications

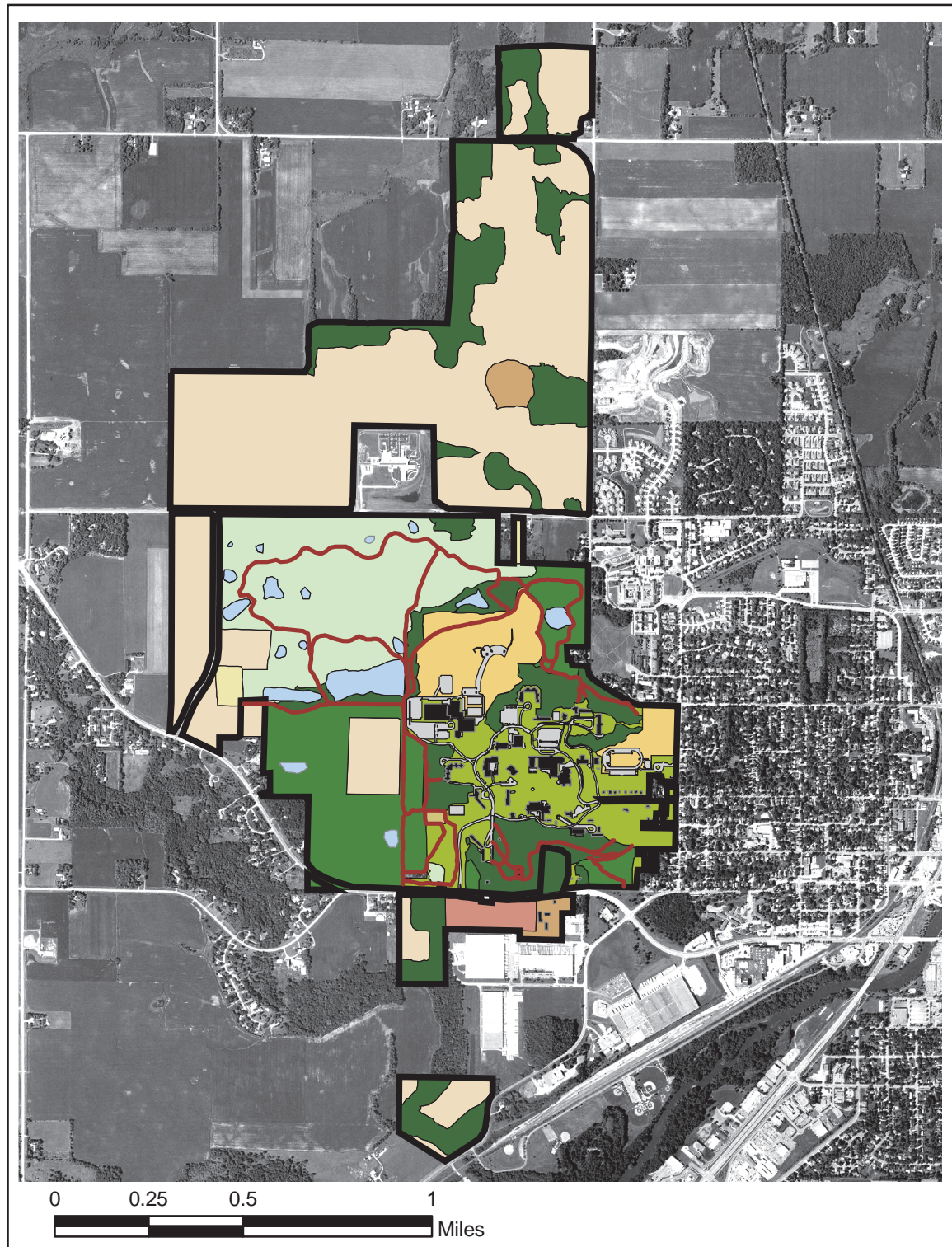
Type

	Agriculture		Lawn
	Athletic		Maintenance
	Business		Nursery
	Forest-Existing		Prairie-Restored
	Forest-Restored		Residential
			Wetland
			Roads
			Campus Buildings
			St. Olaf Trails

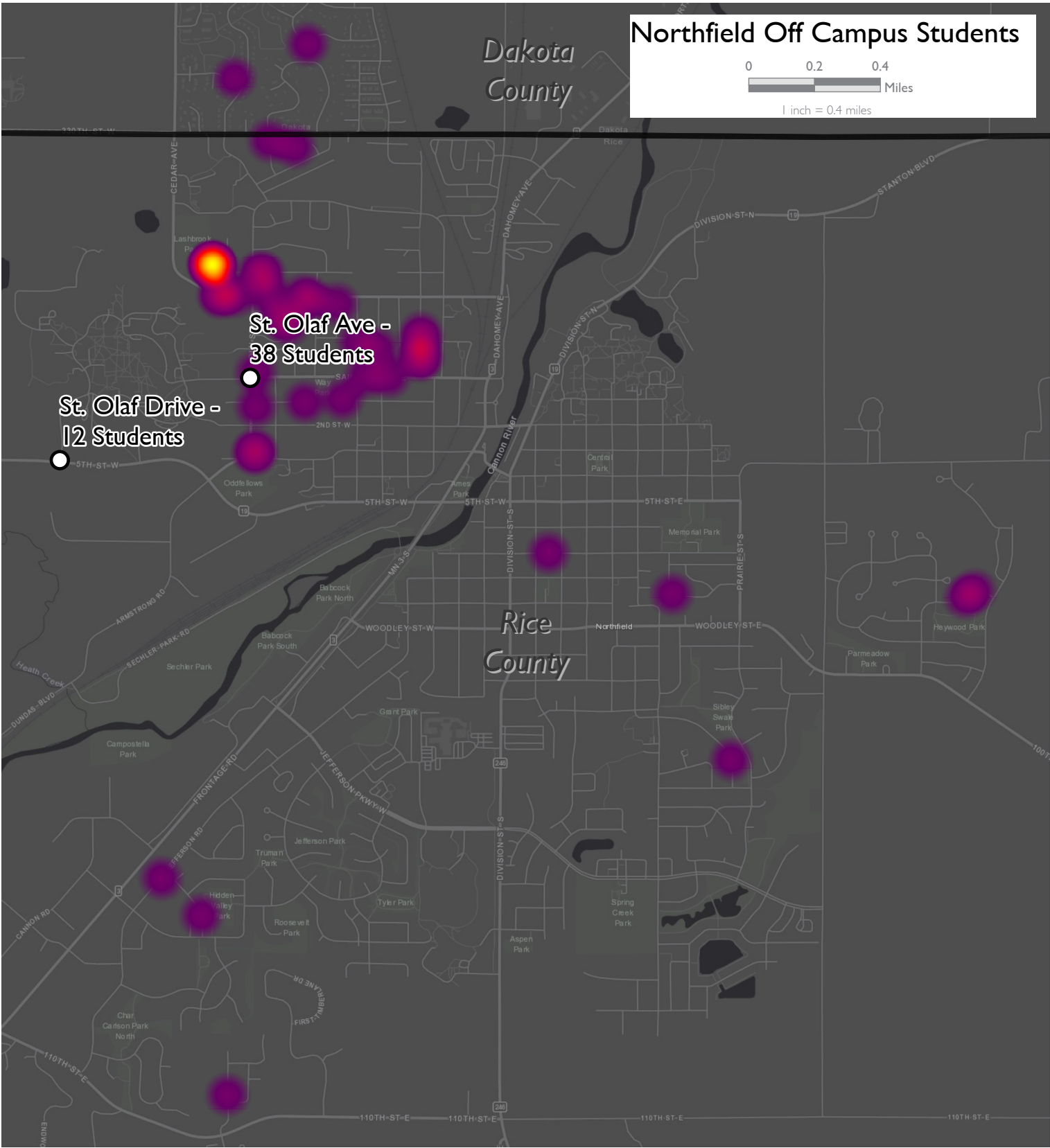
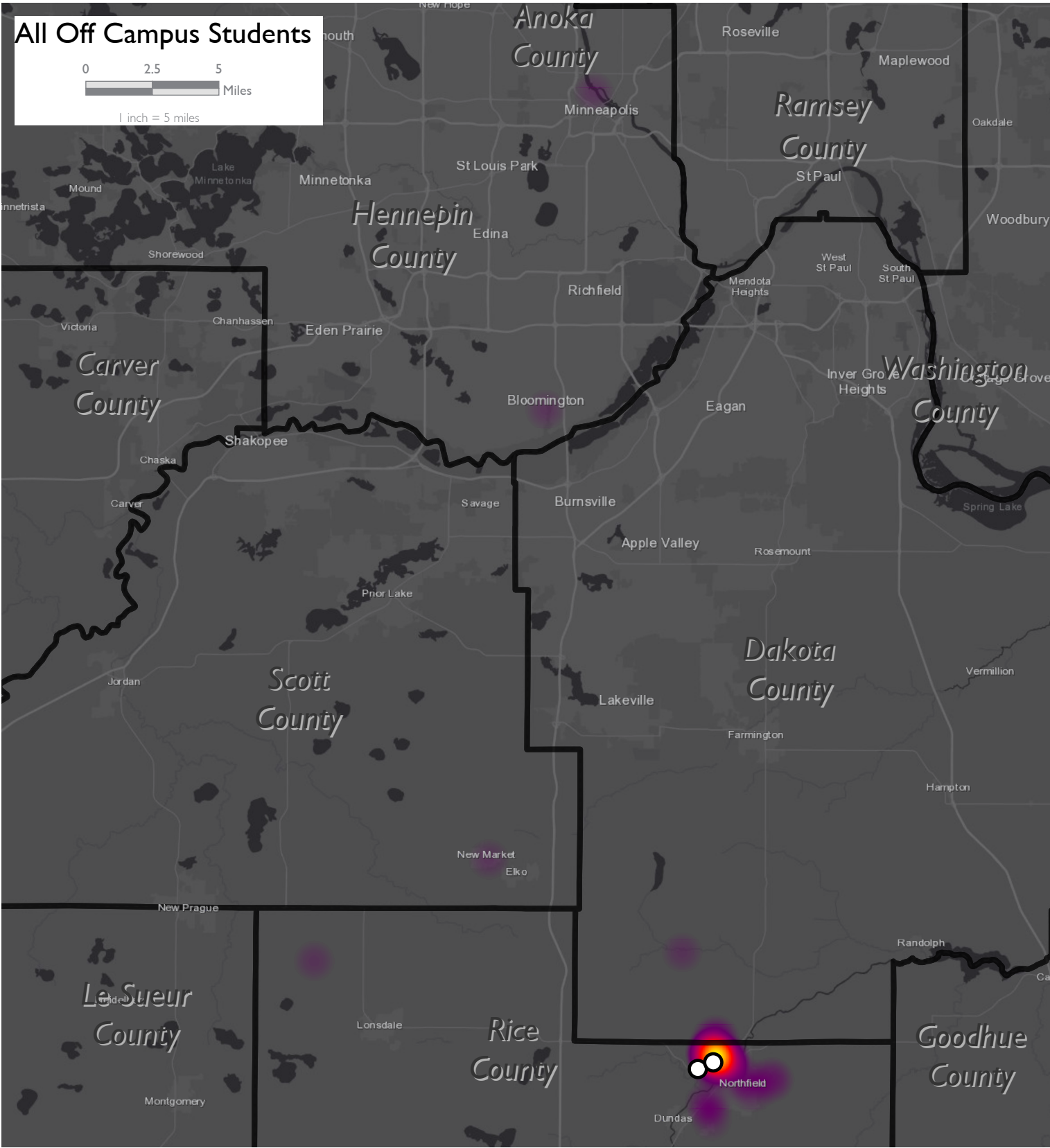


NORTHFIELD · MINNESOTA · USA

Data Sources:
MN Dept. of Nat. Res.
MN Dept. of Trans.
Rice County
USDA



Appendix D: Off-Campus Student Heat Map



Tuesday, June 16, 2020

Project Number 20-23959

Legend

- Entrance Locations
- ▬ Counties
- Student Density
 - Sparse
 - Dense



St. Olaf Off-Campus Students Heat Map

St. Olaf Student Housing

Northfield, Rice County, Minnesota

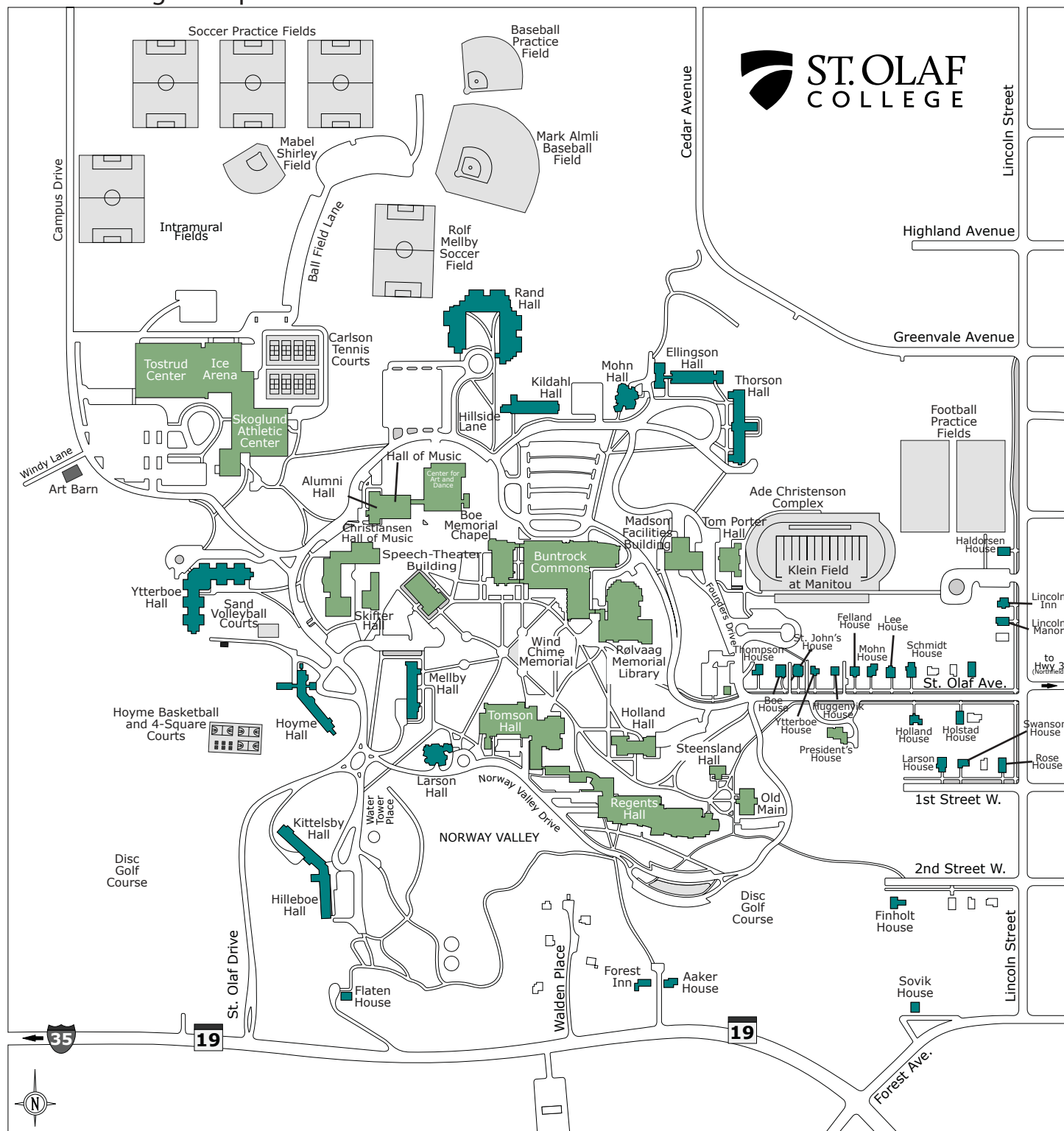
Source(s):
Basemap (ESRI)



S:\Projects\23000 PROJ\23900-23999\23959 St. Olaf Student Housing-Northfield MN\23959 GIS\23959 MapDocs\23959 - Student Housing.aprx

Appendix E: Campus Buildings Map

St. Olaf College Campus

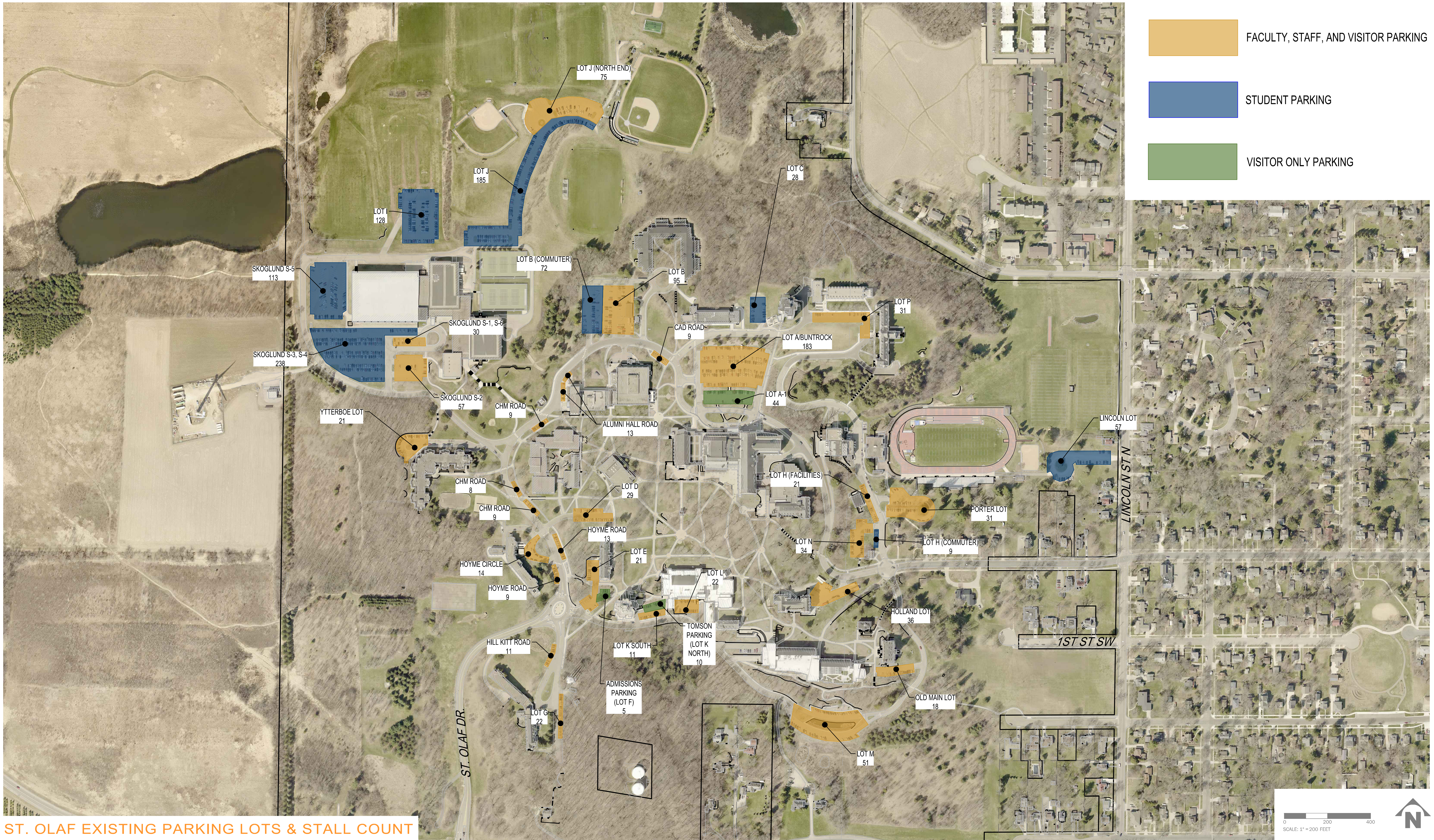


Student Housing / Residence Halls



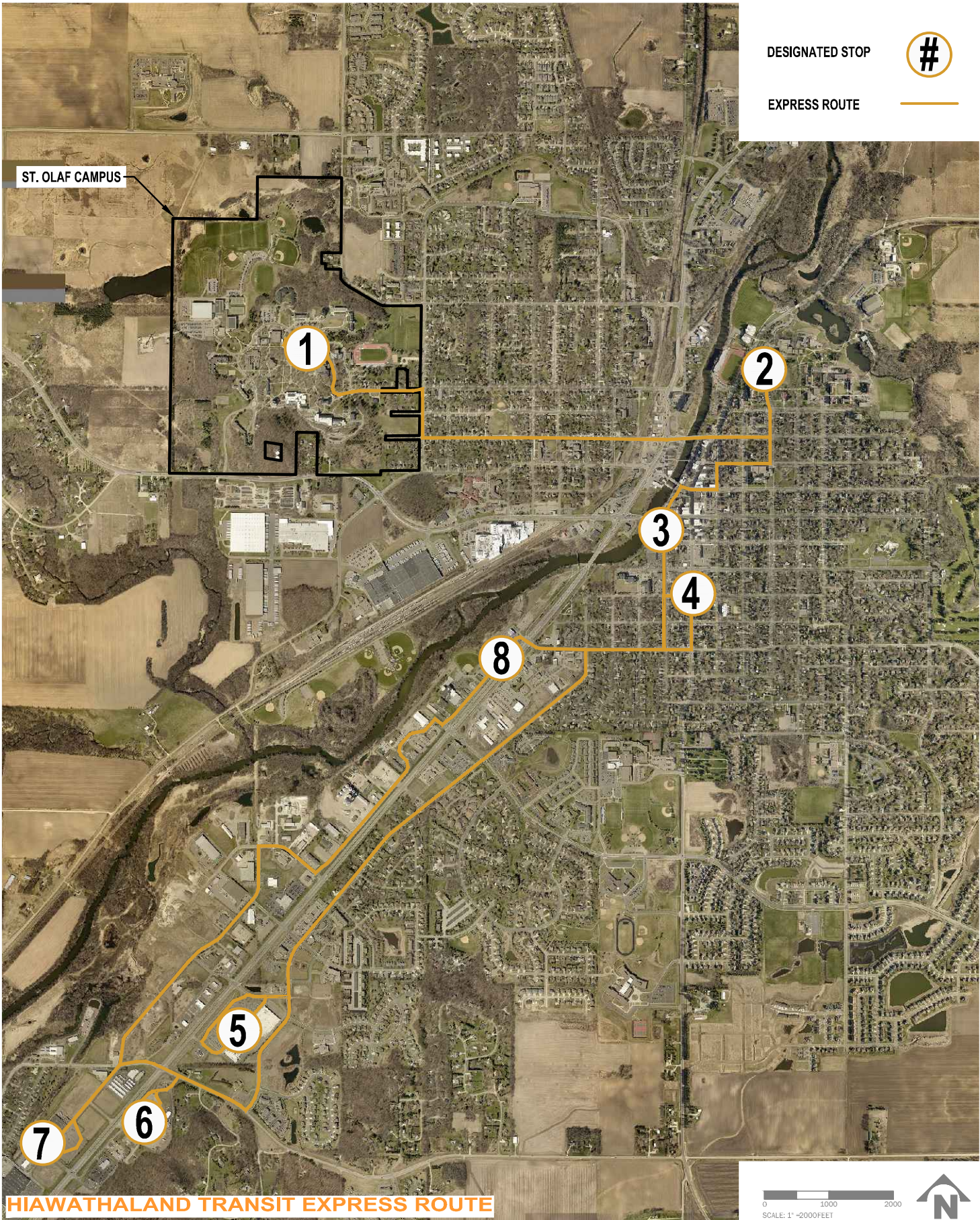
Educational Halls and Buildings

Appendix F: Existing Campus Parking Map



ST. OLAF EXISTING PARKING LOTS & STALL COUNT

Appendix G: Public Transit Routes



DESIGNATED STOP



EXPRESS ROUTE



ST. OLAF CAMPUS

1

2

3

4

8

5

7

6

HIAWATHALAND TRANSIT EXPRESS ROUTE

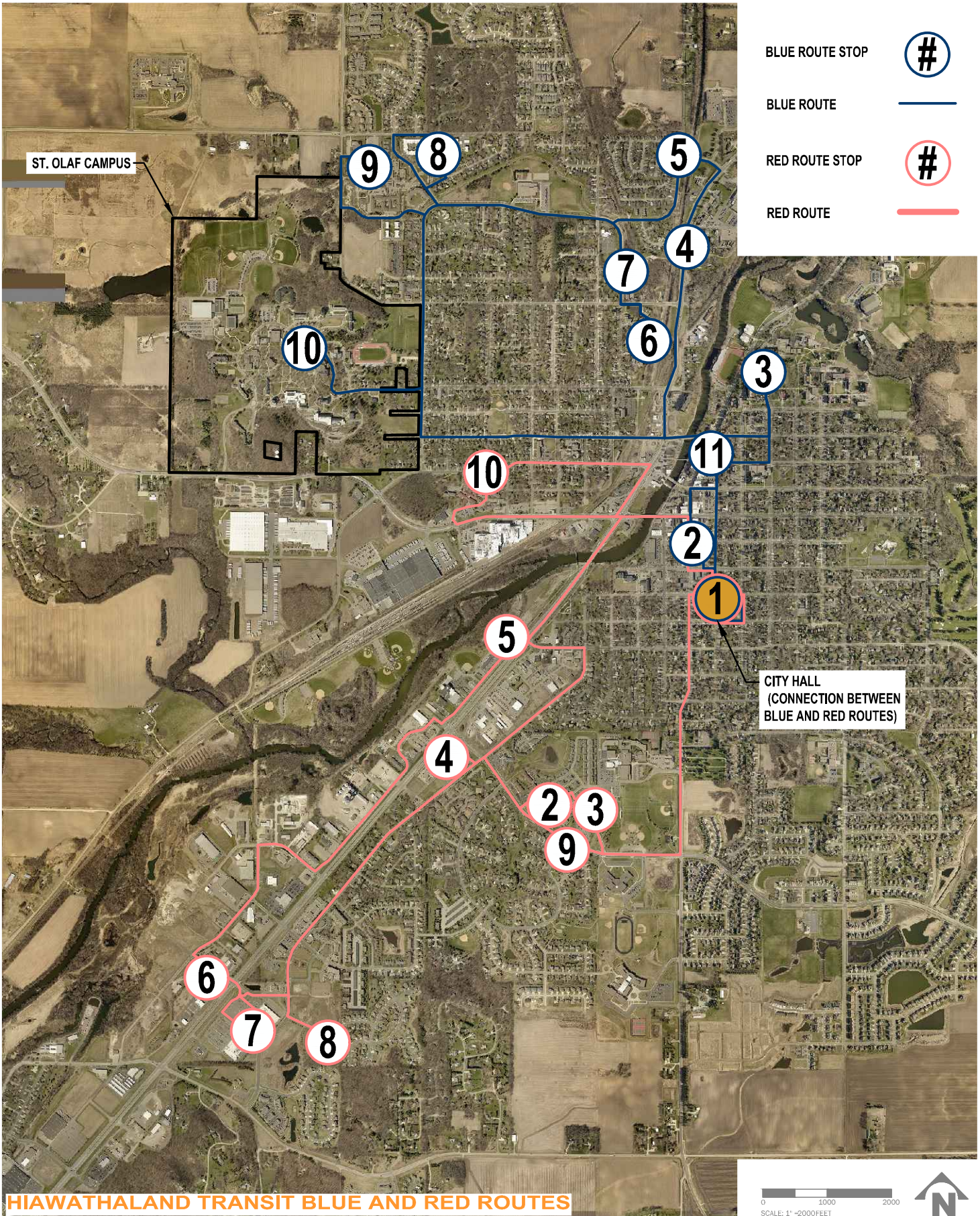
0 1000 2000
SCALE: 1" = 2000 FEET



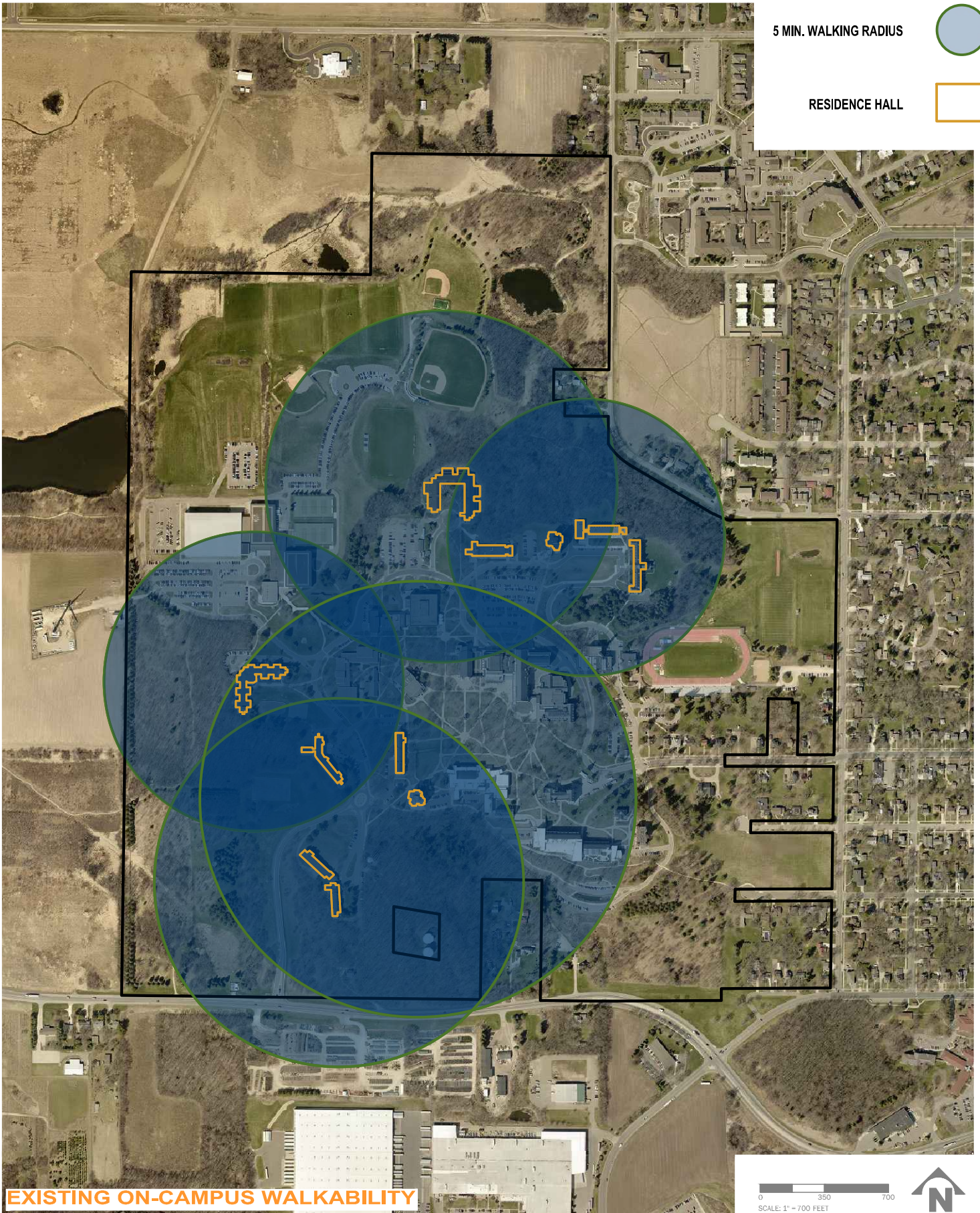
ISG

Architecture + Engineering + Environmental + Planning
ISGInc.com

ST OLAF STUDENT HOUSING PARKING STUDY
NORTHFIELD, MN - 6/18/20
ISG PROJECT NO. 20-23959



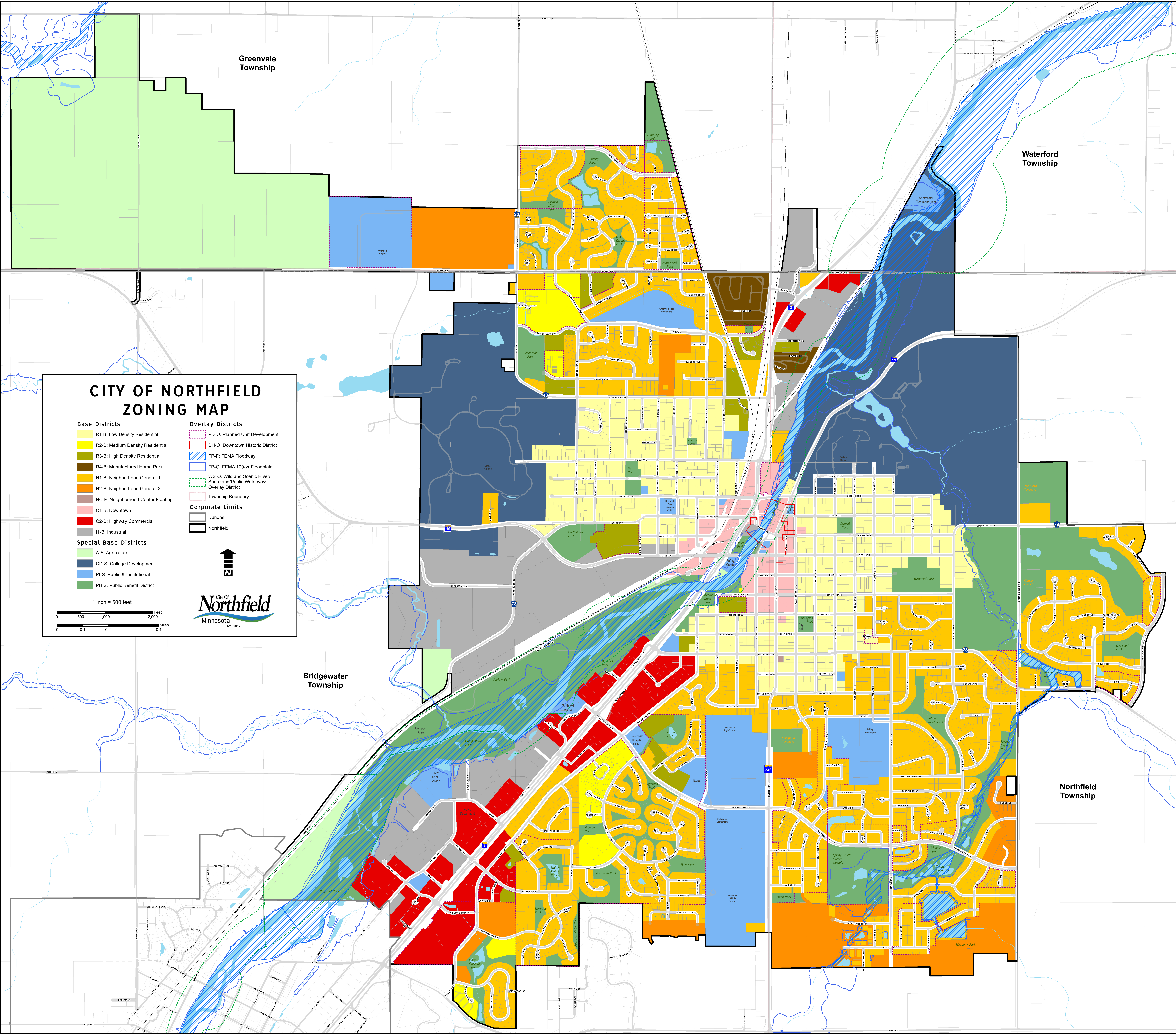
Appendix H: Existing Campus Walkability Map



Architecture + Engineering + Environmental + Planning
ISGInc.com

ST OLAF STUDENT HOUSING PARKING STUDY
NORTHFIELD, MN - 6/18/20
ISG PROJECT NO. 20-23959

Appendix I: City of Northfield Zoning Map



CITY OF NORTHFIELD ZONING MAP

Base Districts

- R1-B: Low Density Residential
- R2-B: Medium Density Residential
- R3-B: High Density Residential
- R4-B: Manufactured Home Park
- N1-B: Neighborhood General 1
- N2-B: Neighborhood General 2
- NC-F: Neighborhood Center Floating
- C1-B: Downtown
- C2-B: Highway Commercial
- I1-B: Industrial

Special Base Districts

- A-S: Agricultural
- CD-S: College Development
- PI-S: Public & Institutional
- PB-S: Public Benefit District

Overlay Districts

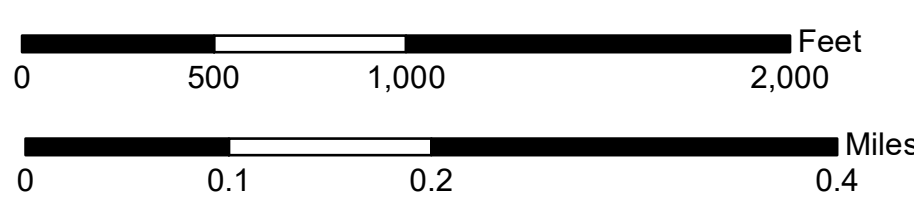
- PD-O: Planned Unit Development
- DH-O: Downtown Historic District
- FP-F: FEMA Floodway
- FP-Q: FEMA 100-yr Floodplain
- WS-O: Wild and Scenic River/Shoreland/Public Waterways Overlay District
- Township Boundary

Corporate Limits

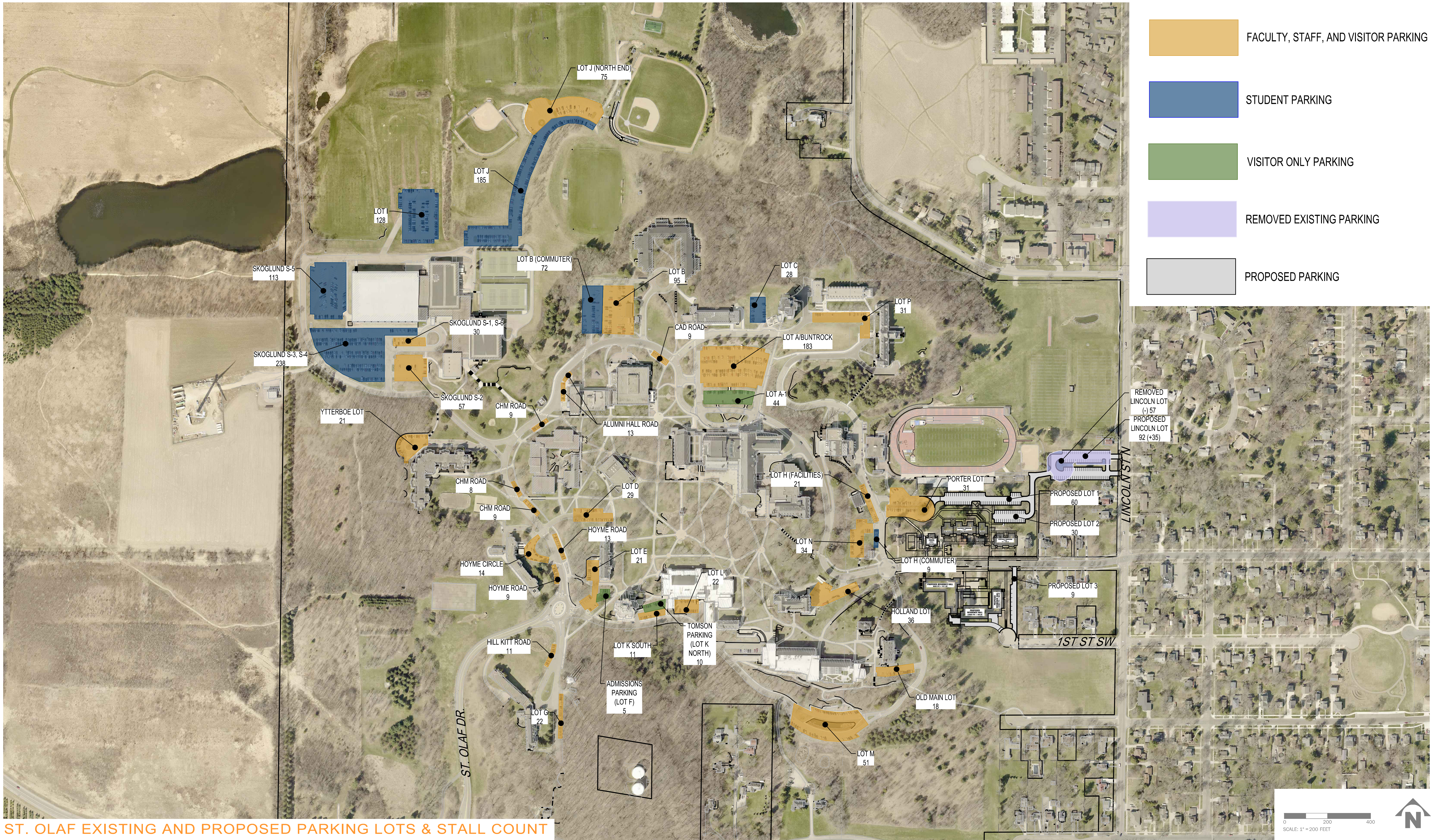
- Dundas
- Northfield



1 inch = 500 feet



Appendix J: Existing and Proposed Campus Parking Map



Appendix K: Existing and Proposed Campus Walkability Map

