

Joint Campus Area Committee Information/Recommendation



WISCONSIN
UNIVERSITY OF WISCONSIN-MADISON

ENGINEERING DRIVE UTILITIES REPLACEMENT AND RENOVATION

Project No. 21C3B

January 26, 2023

SHIVEHATTERY
ARCHITECTURE+ENGINEERING

KSingh | Engineers
Scientists
Consultants

GRāEF

SM&W

Project Goals and Objectives

Key Issues:

- The distribution piping will be upgraded and relocated to provide for the new Engineering Building
- The existing utilities will be replaced and upsized as needed for future campus growth

Project Specific:

- Maintain full occupancy of Engineering Campus Buildings during construction
- Provide a long-term solution with an anticipated approximately 50+ year expectancy
- Maximize use of available funds for physical construction through schedule optimization
- Project will be done in 3 bid packages

Background and Scope

Background:

- The utilities on Engineering Campus were originally installed 50 to 100 years ago and have exceed expected useful life resulting in the need for replacement.

Scope:

- Work is in Engineering Mall, Engineering Drive to the intersection of Randall Avenue, Randall Avenue from the intersection of Engineering Drive and Dayton Street, and Dayton Street to Charter Street.
- All areas disturbed by the project will be fully restored, including roadways and gutters, pedestrian walkways, terraces, landscape, and site structures.
- Temporary utilities will be required to serve connected loads during construction.
- Project work also includes traffic controls, phasing drawings, and asbestos abatement.

Background and Scope Cont.

Scope Cont.:

- Utilities being replaced include the following:
 - High Pressure Steam (HPS)
 - Low Pressure Steam (LPS)
 - Pumped Condensate Return (PCR)
 - Helium (He)
 - Compressed Air (CA)
 - Chilled Water Supply and Return (CWS/R)
 - Electrical Services
 - Signal Services
 - Fiber
 - Domestic Water
 - Sanitary
 - Storm

Overall Schedule

Design Report Schedule

Deliverable	Date
35% Set Documents	December 22, 2022
SBC	February 2023
Bid	September 2023
Award	October 2023
Mobilize	December 2023
Sub Completion	June 2026
Final Completion	July 2026

Bid Pack Construction Schedules

21C3B Construction Schedule Summary

Activity	Timeframe	Area Affected
Bid Package #1	December 2023 through December 2024	Engineering Mall and Engineering Drive Crossing between ERB and Engineering Hall
Bid Package #2	December 2024 through May 2026	Engineering Drive and Randall Avenue Crossing at Engineering Drive
Bid Package #3	December 2025 through June 2026	Randall Avenue and Dayton Street
Completion	July 2026	

Overall and Bid Pack Budgets

Design Report Budget

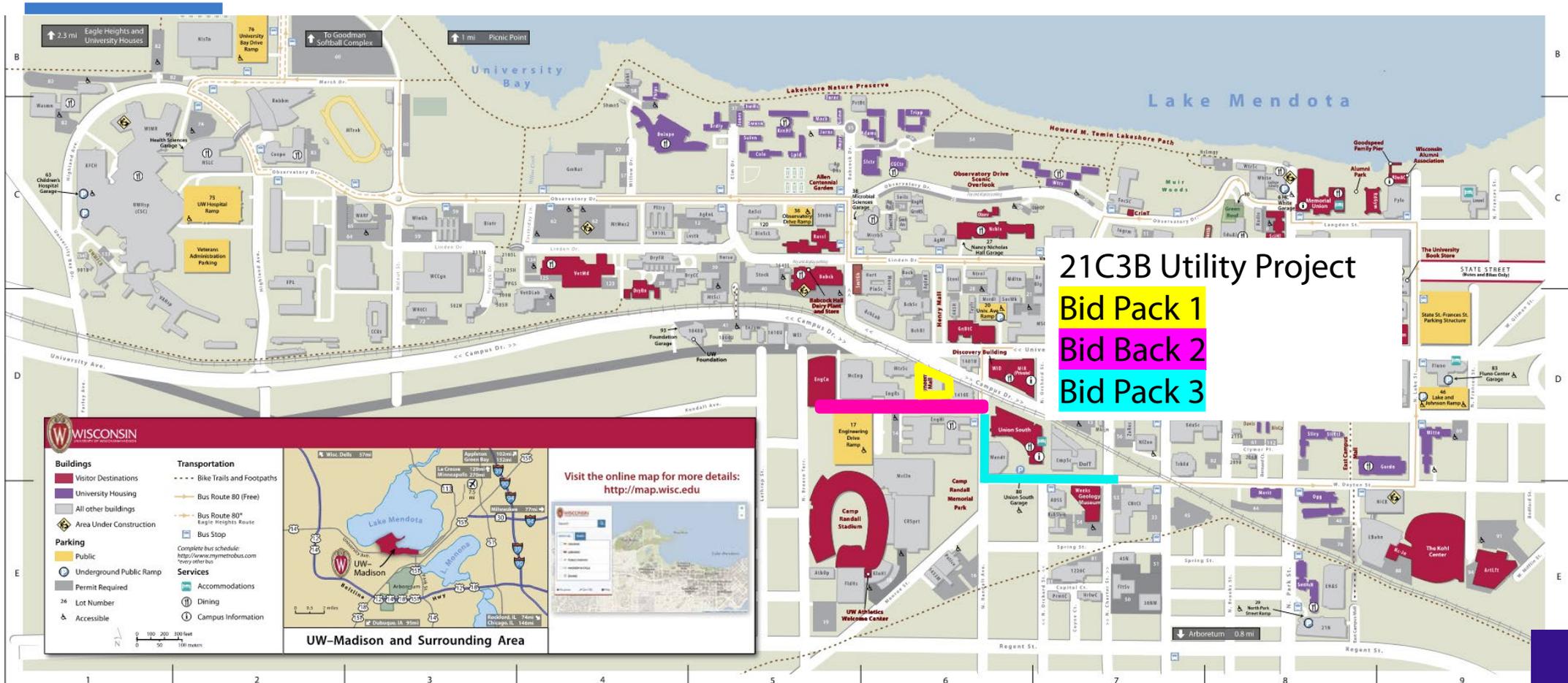
	As Enumerated	As Designed
Construction	\$ 56,446,000	\$ 57,839,300
Contingency	\$ 8,467,000	\$ 8,675,900
DFD Management Fee	\$ 2,597,000	\$ 2,660,700
A/E Fees	\$ 5,631,000	\$ 3,965,100
Total Project Cost	\$ 73,141,000	\$ 73,141,000

Bid Pack 1 – E Mall	
Construction	\$ 20,934,000.00
Contingency	\$ 3,140,100.00
DFD Management Fee	\$ 1,447,300.00
A/E Fees	\$ 963,000.00
Total Project Cost	\$ 26,484,400.00

Bid Pack 2 – E Drive	
Construction	\$ 27,098,900.00
Contingency	\$ 4,064,800.00
DFD Management Fee	\$ 1,816,000.00
A/E Fees	\$ 1,246,500.00
Total Project Cost	\$ 34,226,200.00

Bid Pack 3 – Randall/Dayton	
Construction	\$ 10,061,300.00
Contingency	\$ 1,509,200.00
DFD Management Fee	\$ 701,800.00
A/E Fees	\$ 462,800.00
Total Project Cost	\$ 12,735,100.00

Site Context



Neighborhood Context – Bid Pack 1 & 2



Mechanical Engineering



Engineering Research



Material Science



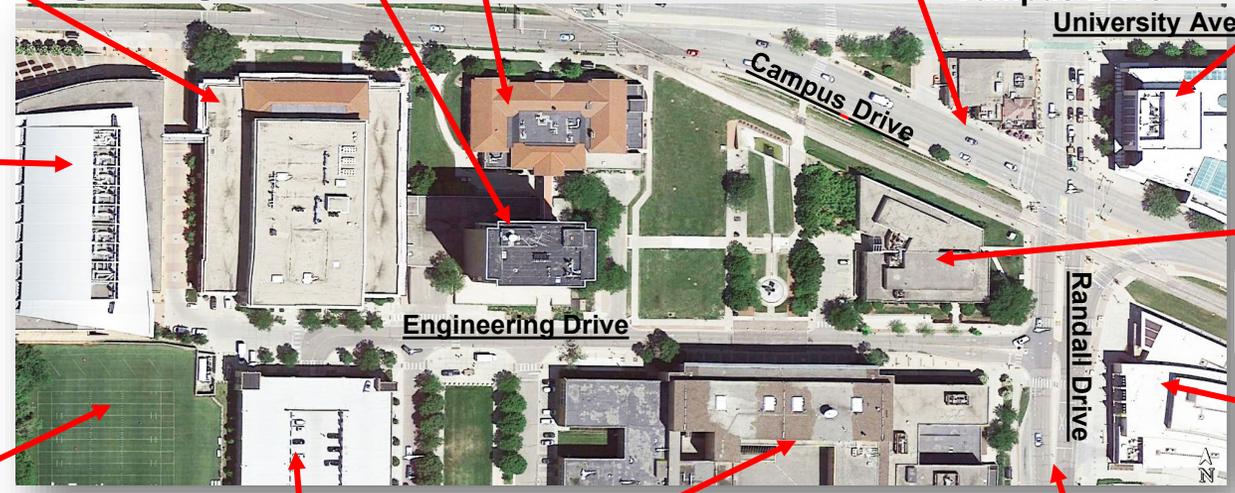
Campus Drive



Discovery



Engineering Centers



1410



Practice Field



Union South



Lot 17

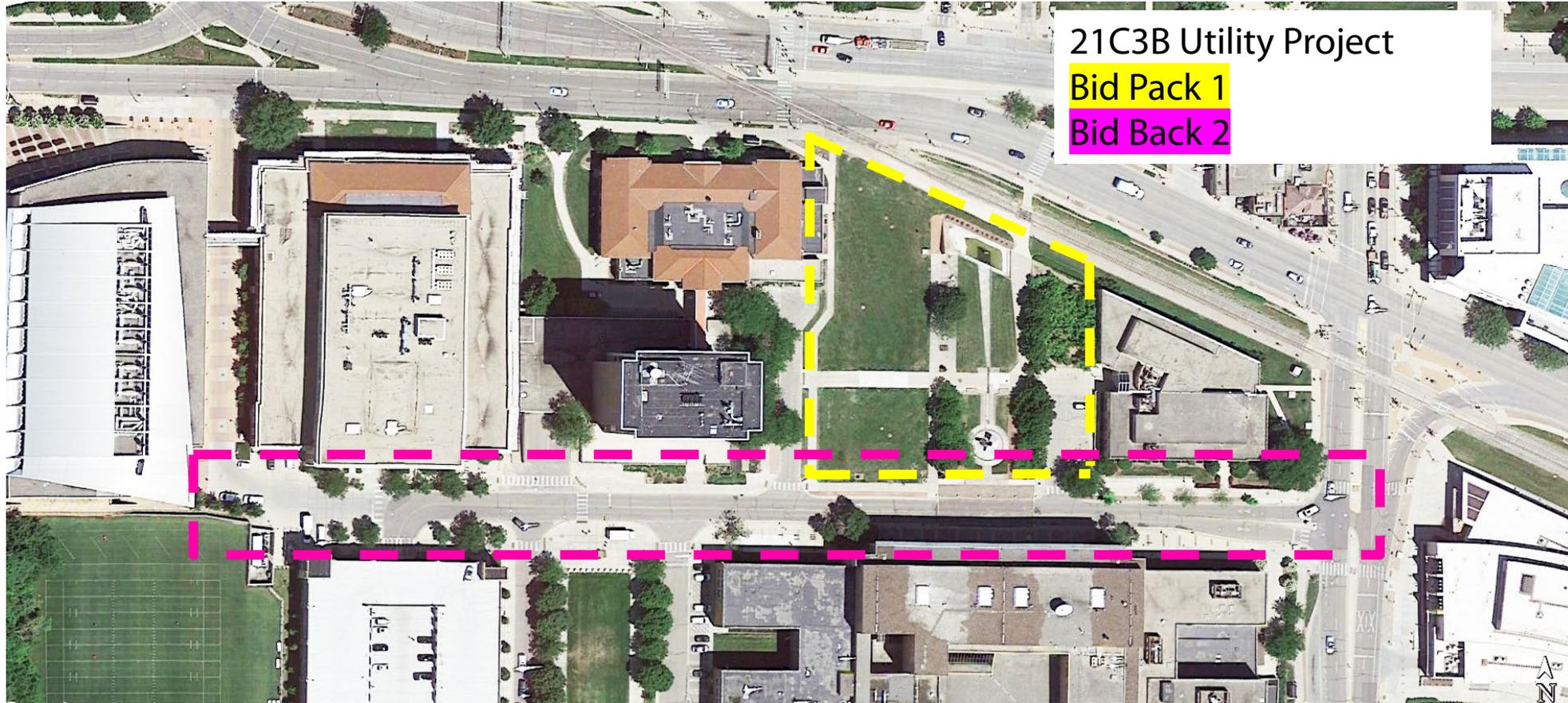


E Hall



Randall Drive

Overall Context Aerial – Bid Pack 1 & 2



Neighborhood Context – Bid Pack 3

Union South

Computer Science



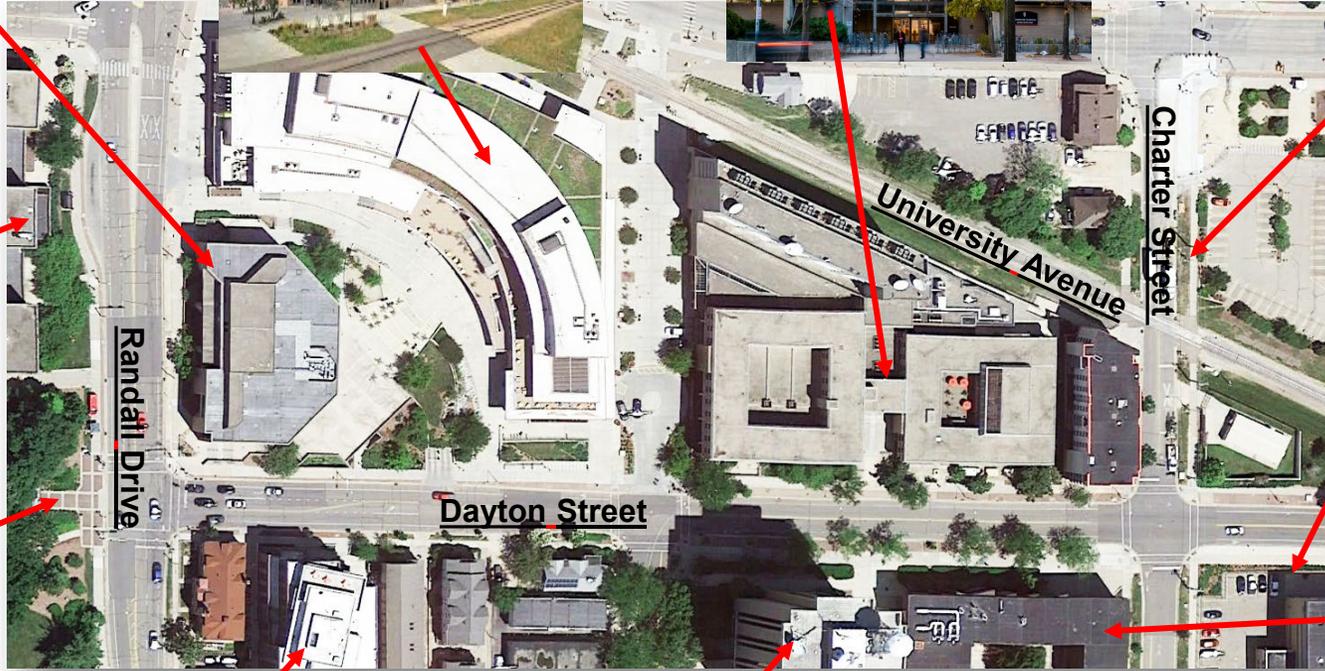
Wendt Library



East Dayton Street



E Hall



Randall Drive



Charter Heating Plant



Geology



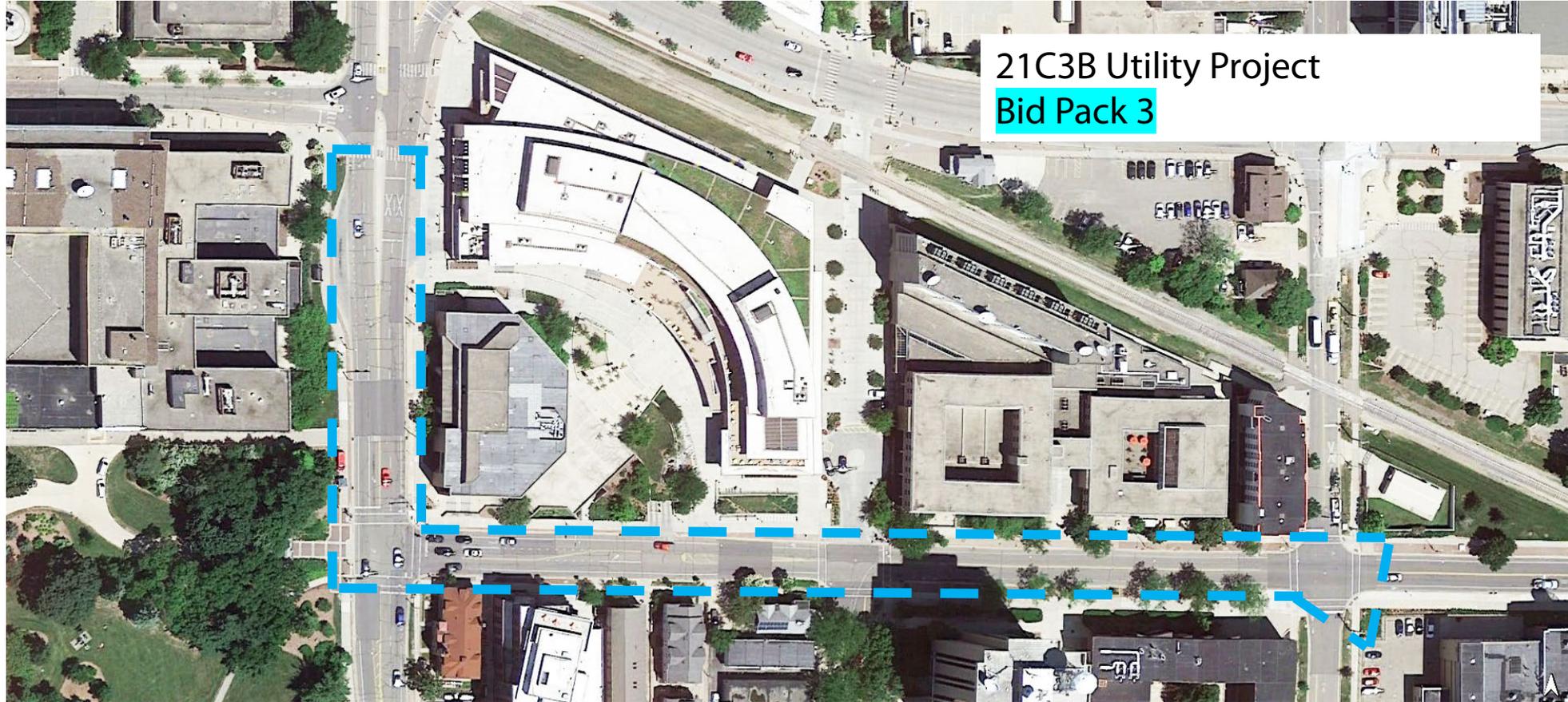
West Dayton Street



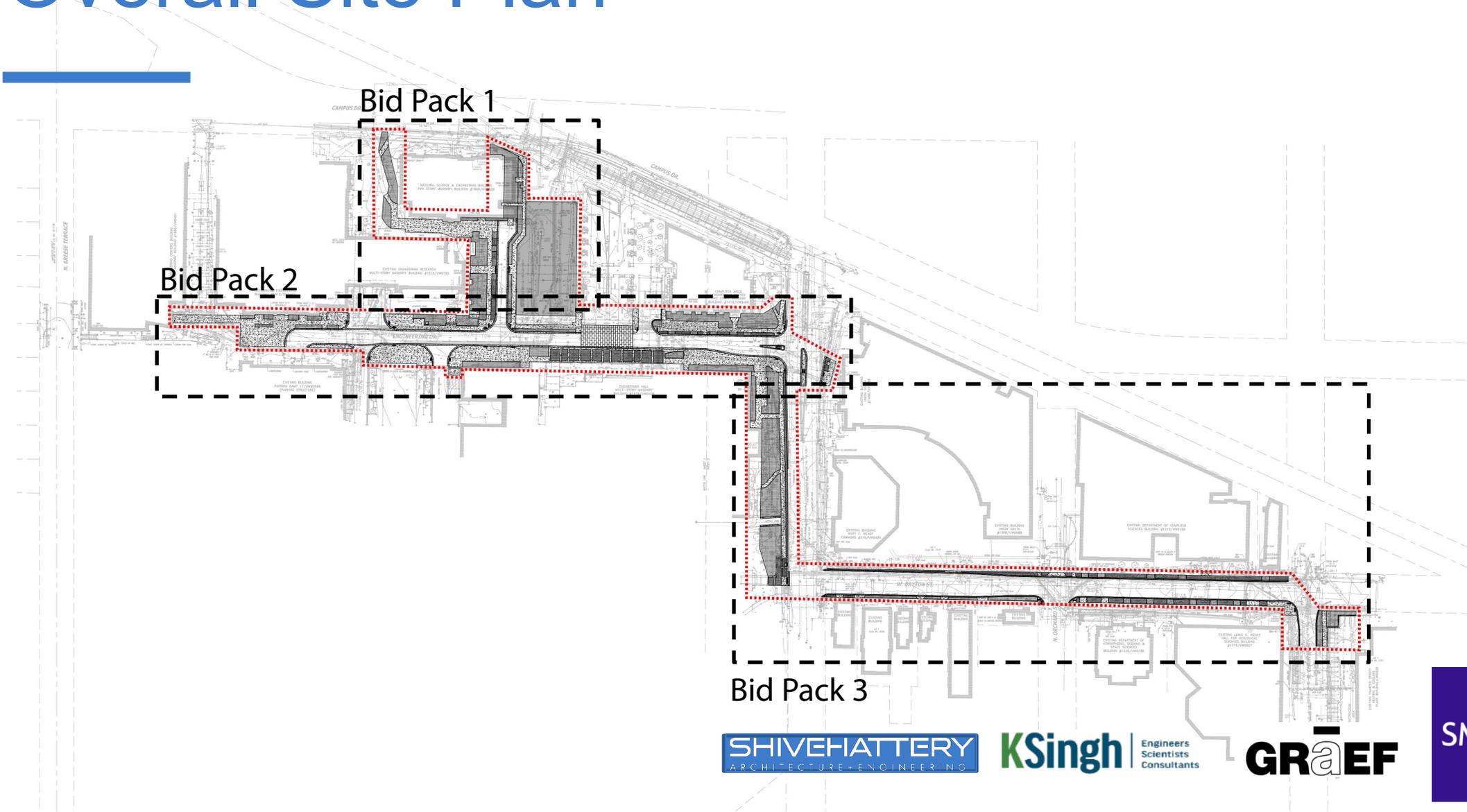
AOS Building



Overall Context Aerial – Bid Pack 3



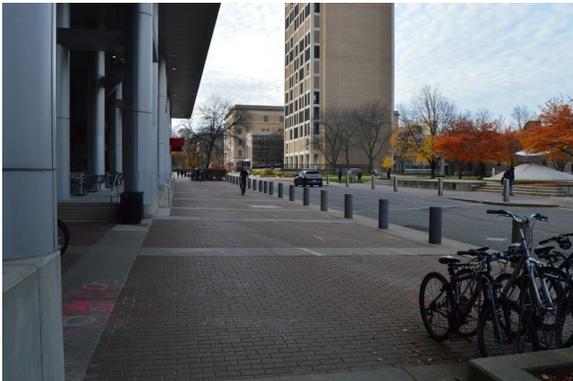
Overall Site Plan



Existing Photos



Bid Pack 1



Bid Pack 2



Existing Photos



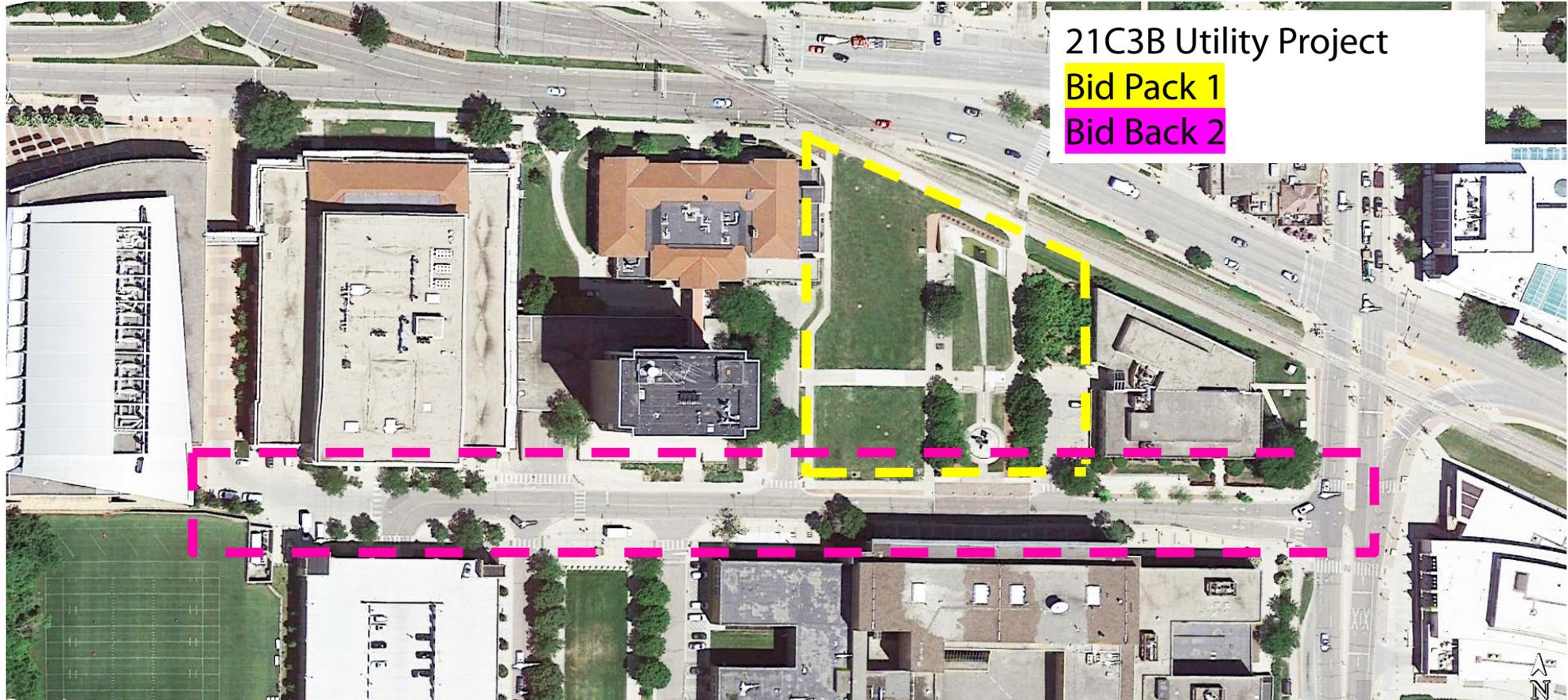
Bid Pack 2



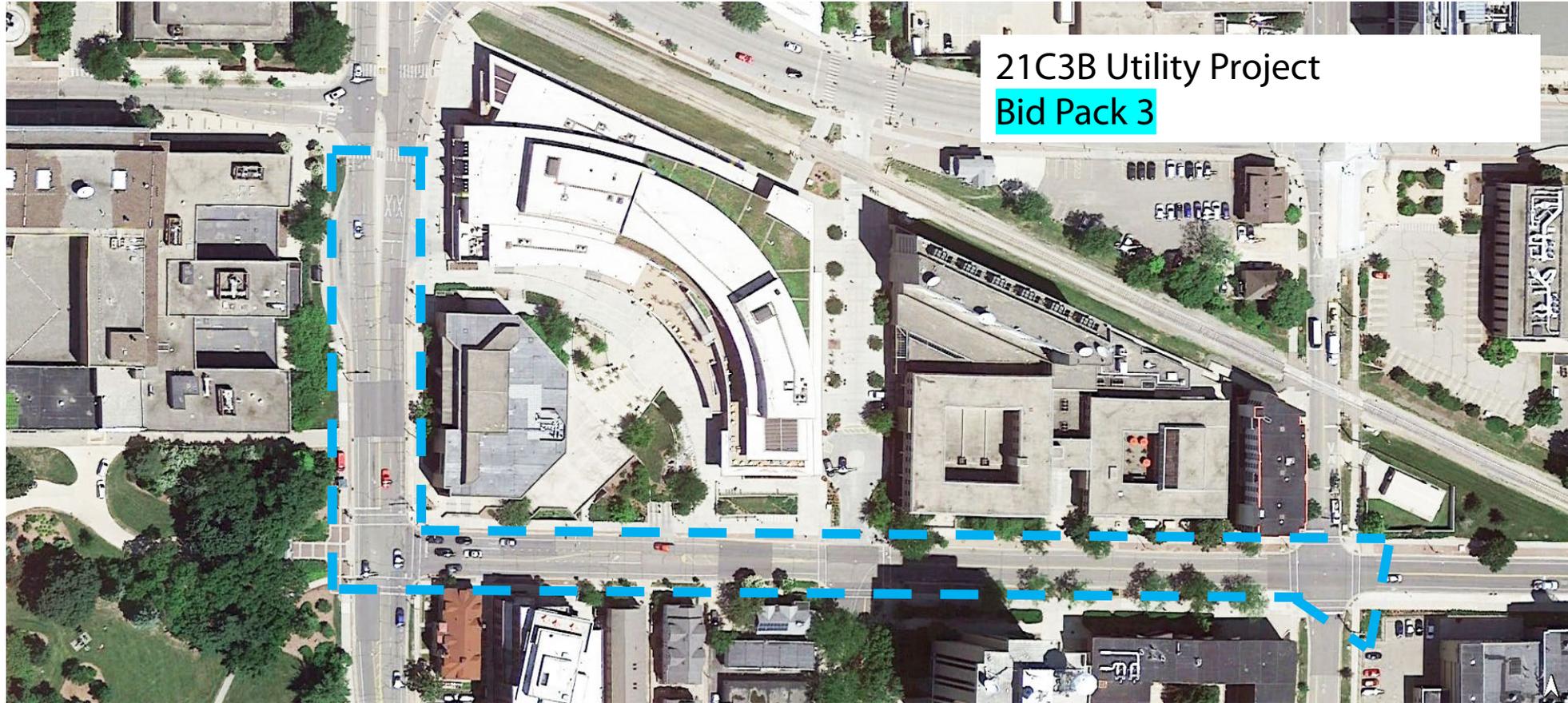
Bid Pack 3



Existing Conditions – Bid Pack 1+2 Aerial



Existing Conditions – Bid Pack 3 Aerial



Materials



Concrete Paving + Bike Racks



Concrete Pavers + Bollards



Clay Pavers



Lawn



Post and Chain Fence



Asphalt Pavement

Note: Materials selected are based on Campus standards and the existing conditions with replacement to be in kind.