

# North Academic Precinct Pedestrian Study

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

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January 16, 2015



# Agenda

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Project Purpose and Campus Context

Existing Conditions and Key Areas

Options

Opportunities

Integrated Concept

Project Order of Magnitude Cost

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## **Project Purpose and Campus Context**

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## Purpose of Study

*Comprehensively plan for pedestrian movements and multi-modal strategies in the northern precinct of campus*

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- Understand existing conditions
- Consider future campus development edge and perception
- Reimagine the spaces between
- Outline implementation strategies

# Outline Schedule

2014

April

May

June

July

August

September

October

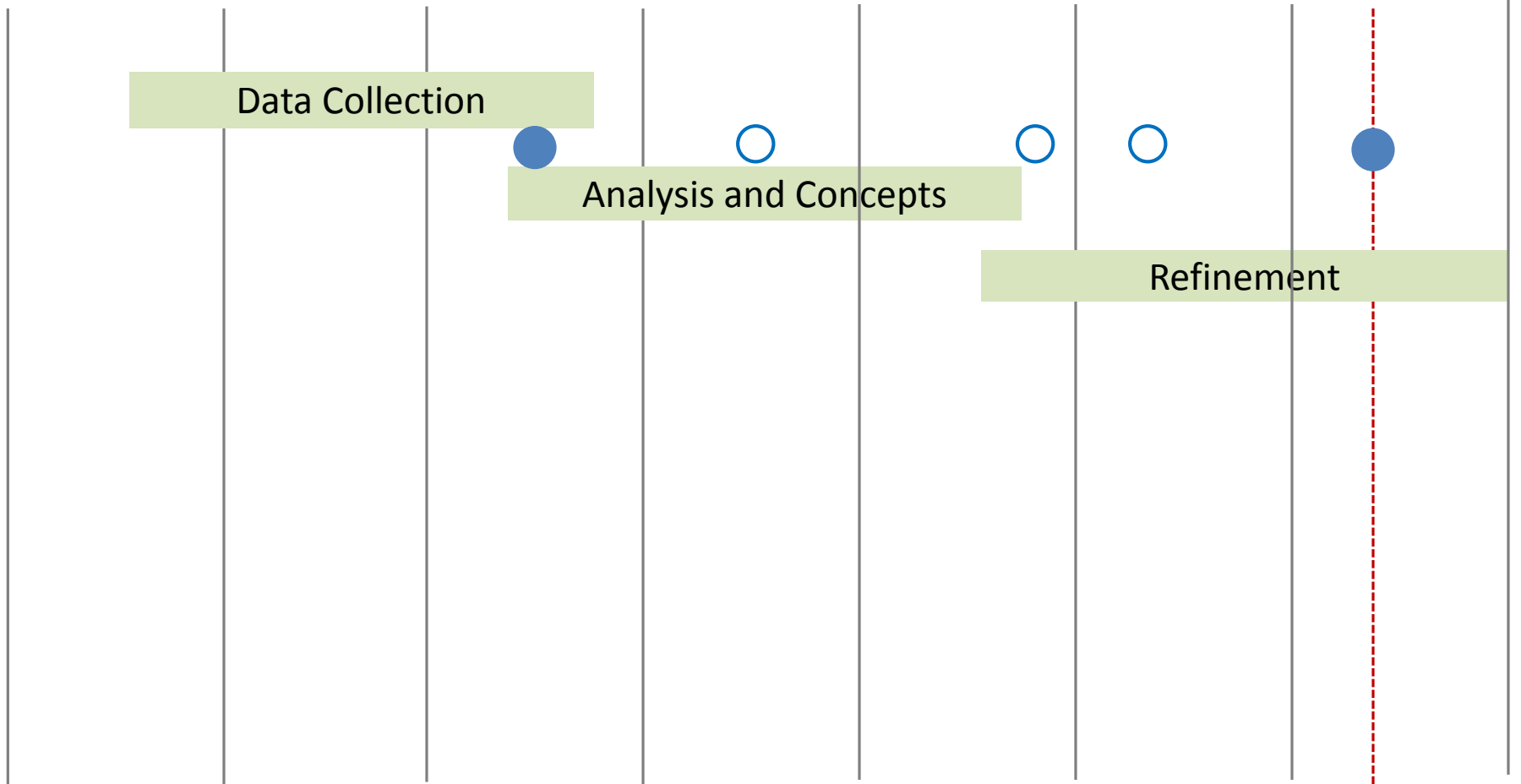
Data Collection

Analysis and Concepts

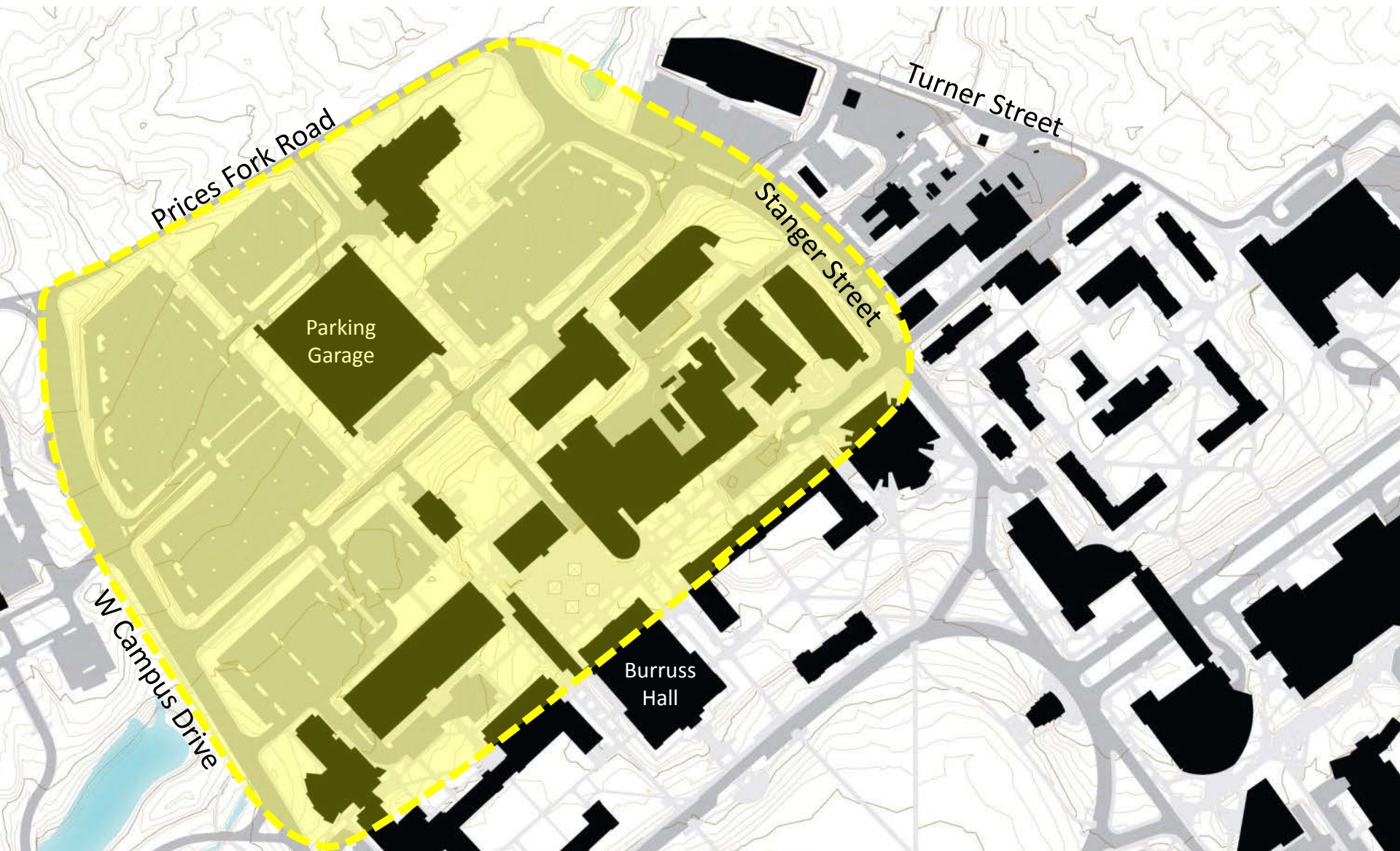
Refinement

● Constituent Workshop

○ Design Team Charette

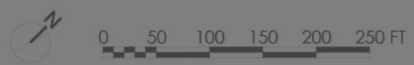


# Focus Area of Study



# Multi-Modal Transit Facility and New Classroom Building

Design by Others



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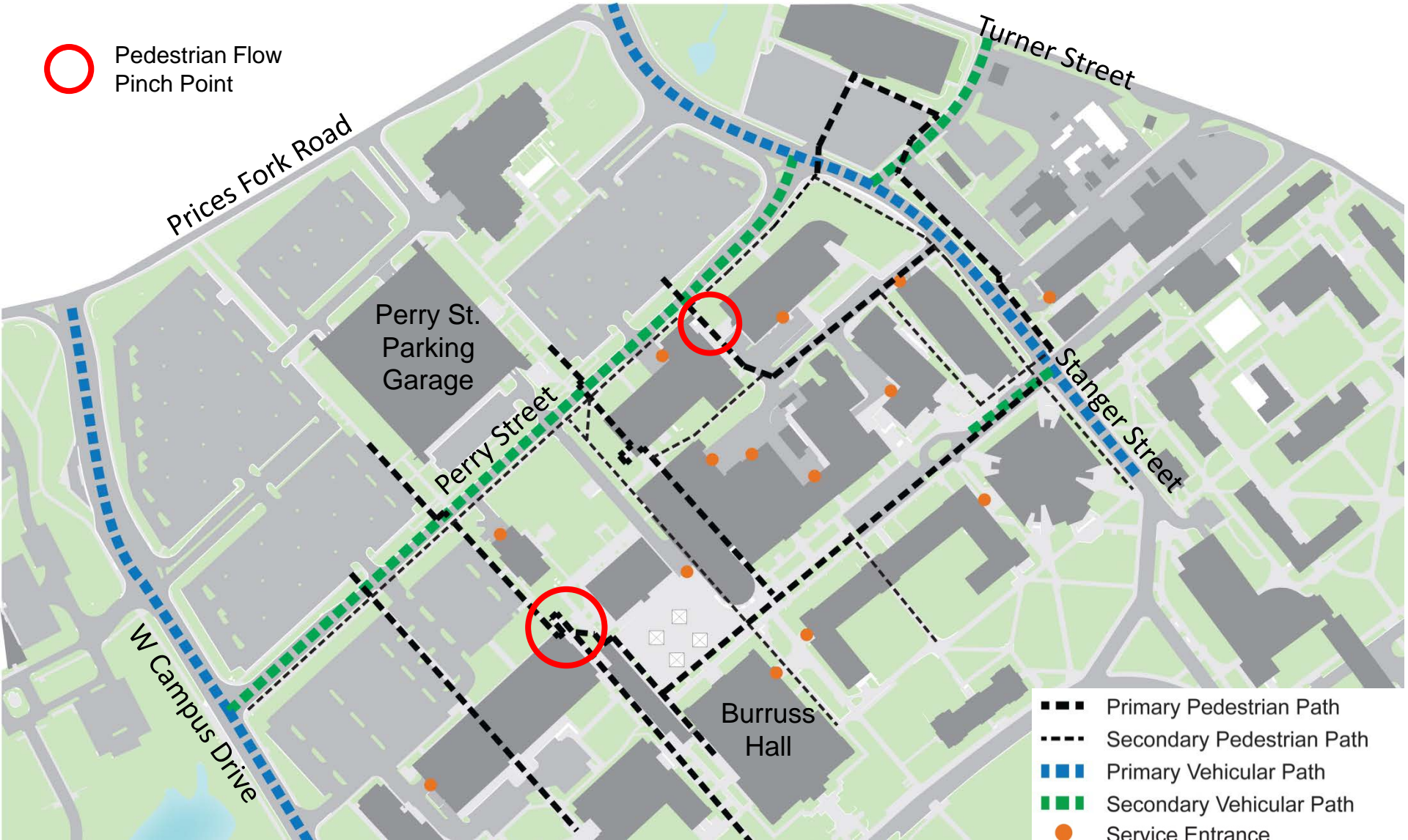
Project Order of Magnitude Cost







# Major Pedestrian and Vehicular Access Ways

## Existing Conditions

 Pedestrian Flow Pinch Point



-  Primary Pedestrian Path
-  Secondary Pedestrian Path
-  Primary Vehicular Path
-  Secondary Vehicular Path
-  Service Entrance



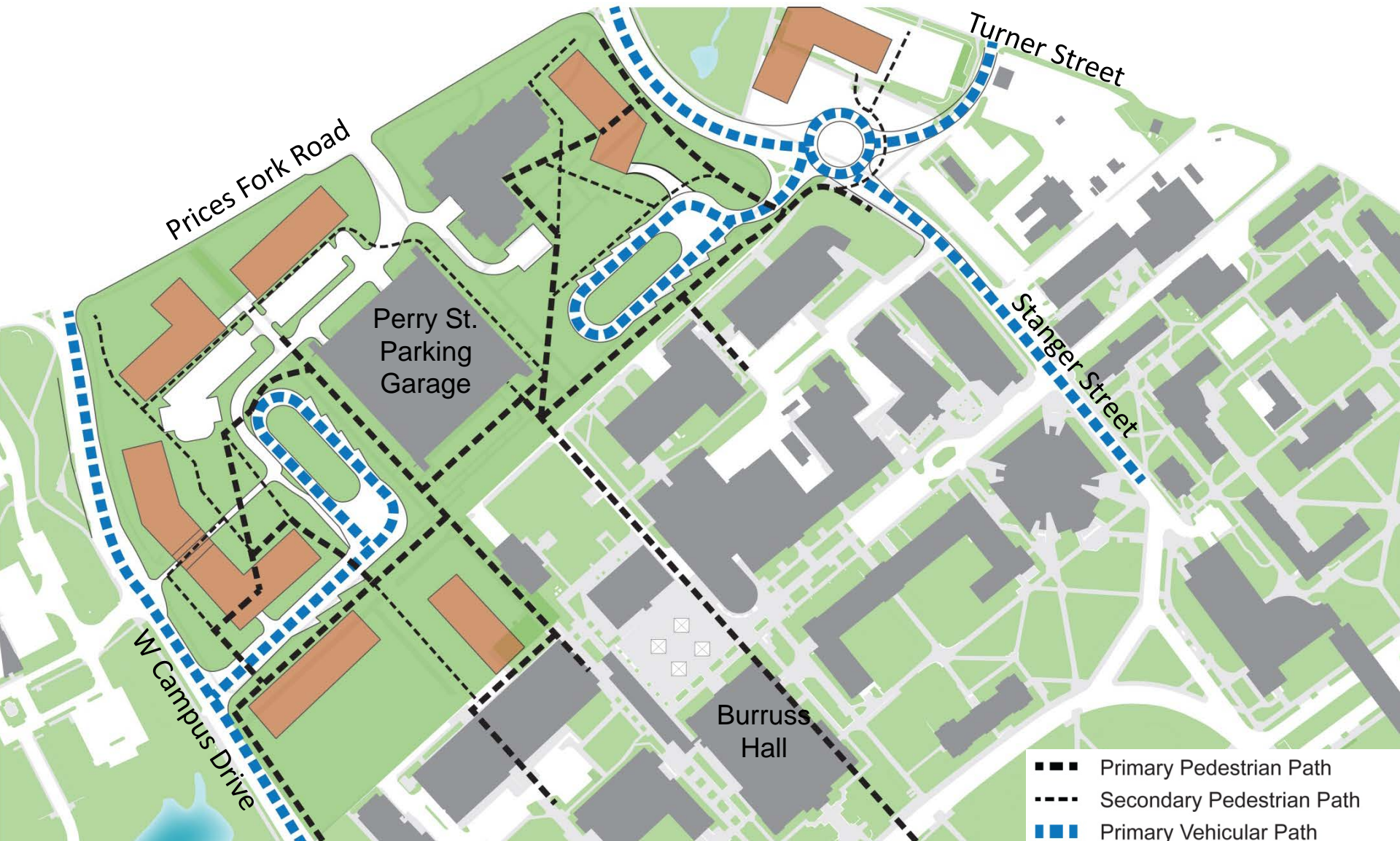
View looking north by Perry Street Parking Garage



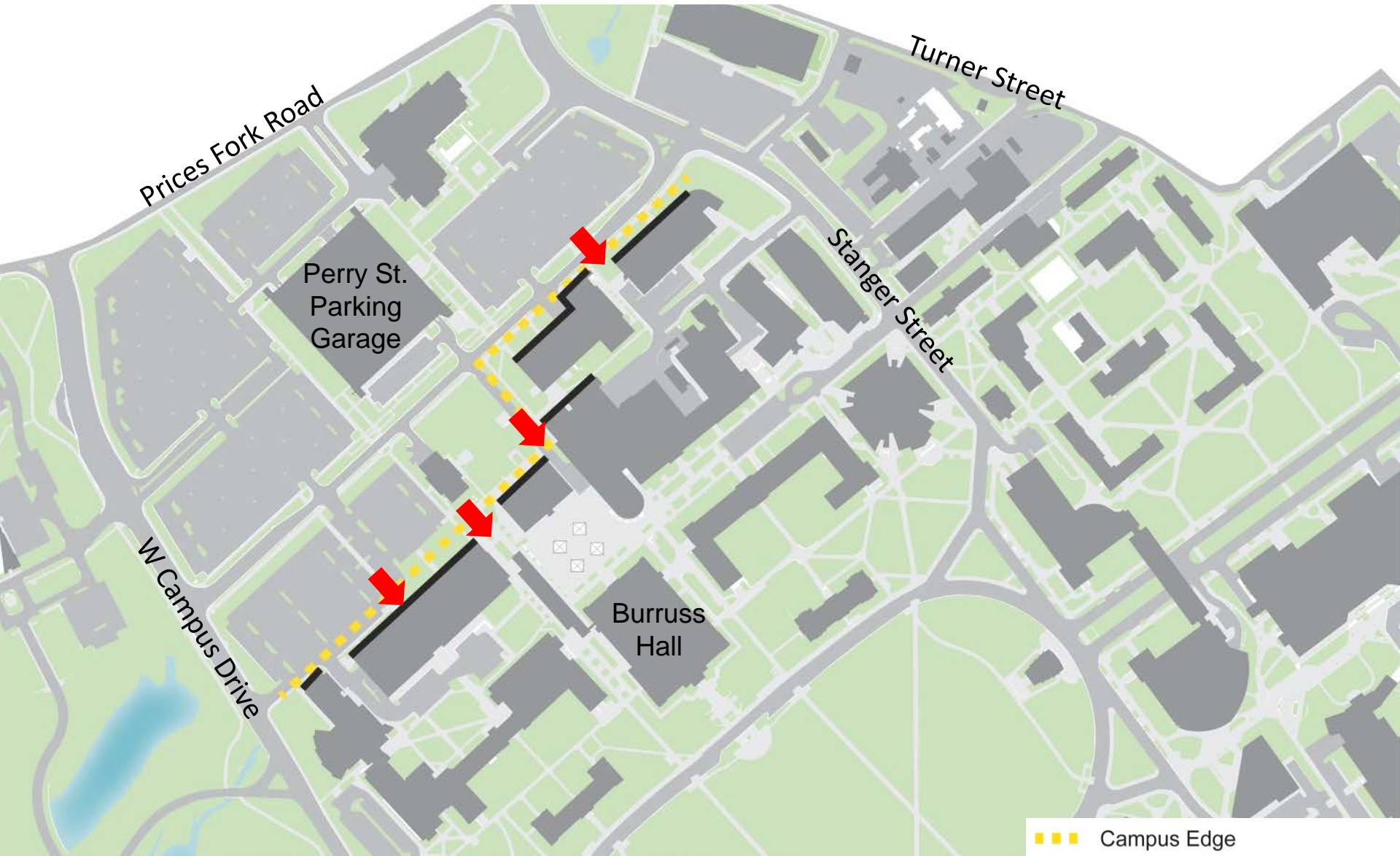
View looking east from atop Perry Street Parking Garage



# Future Pedestrian and Vehicular Pathways, Multi-Modal Transit Facility

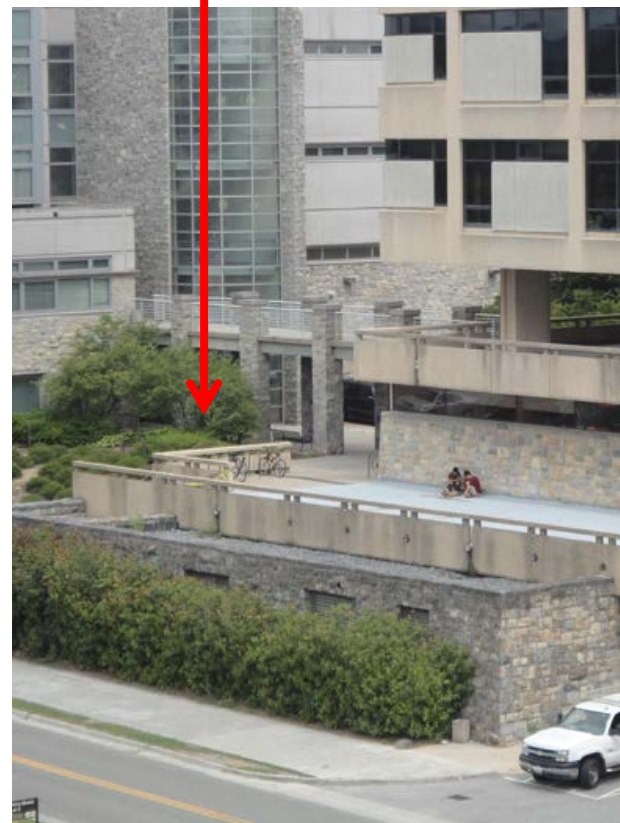


# Campus Edge, Threshold, and Portal Conditions

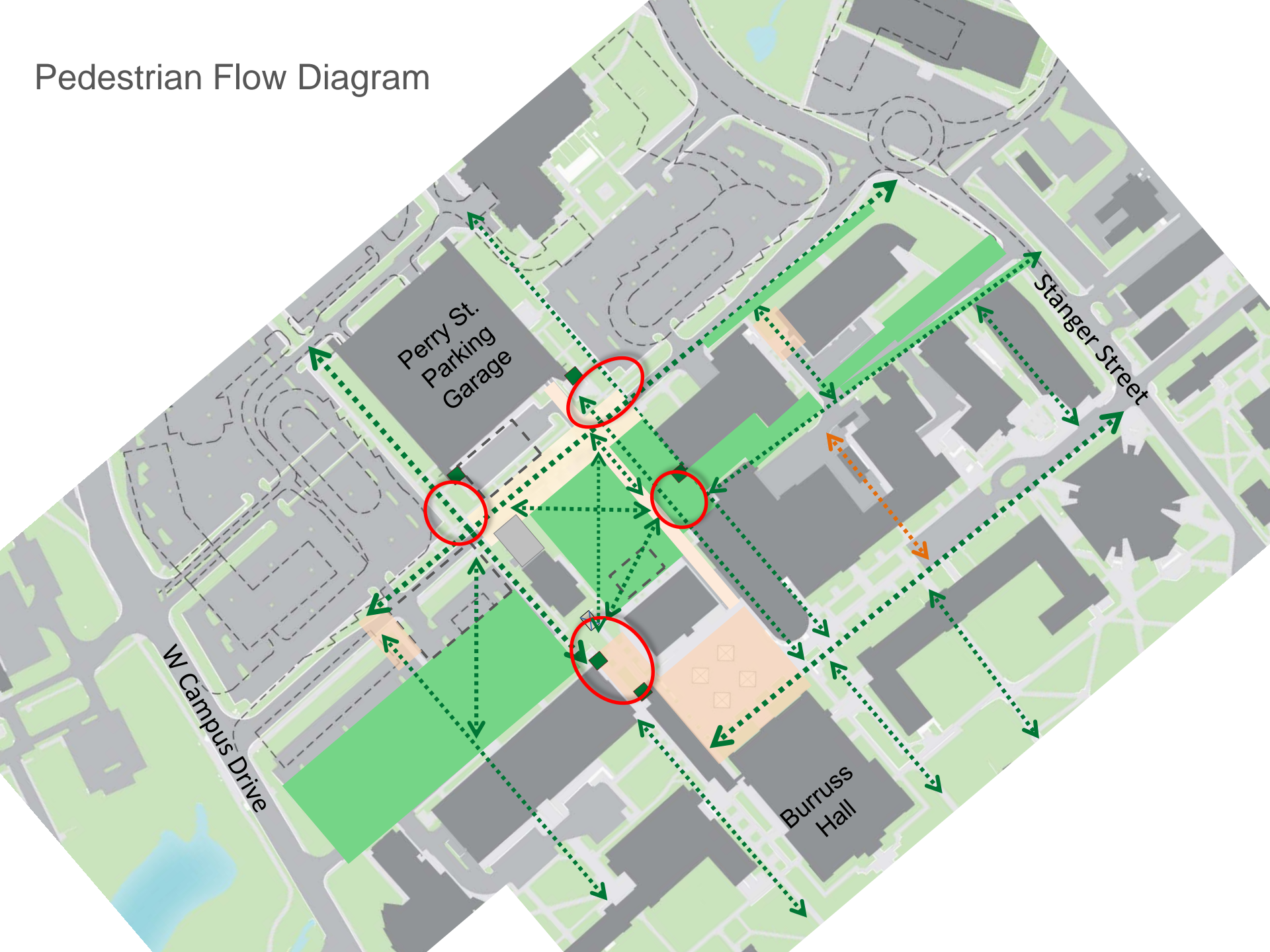


# Massing and Penetrating the Campus Edge





# Pedestrian Flow Diagram





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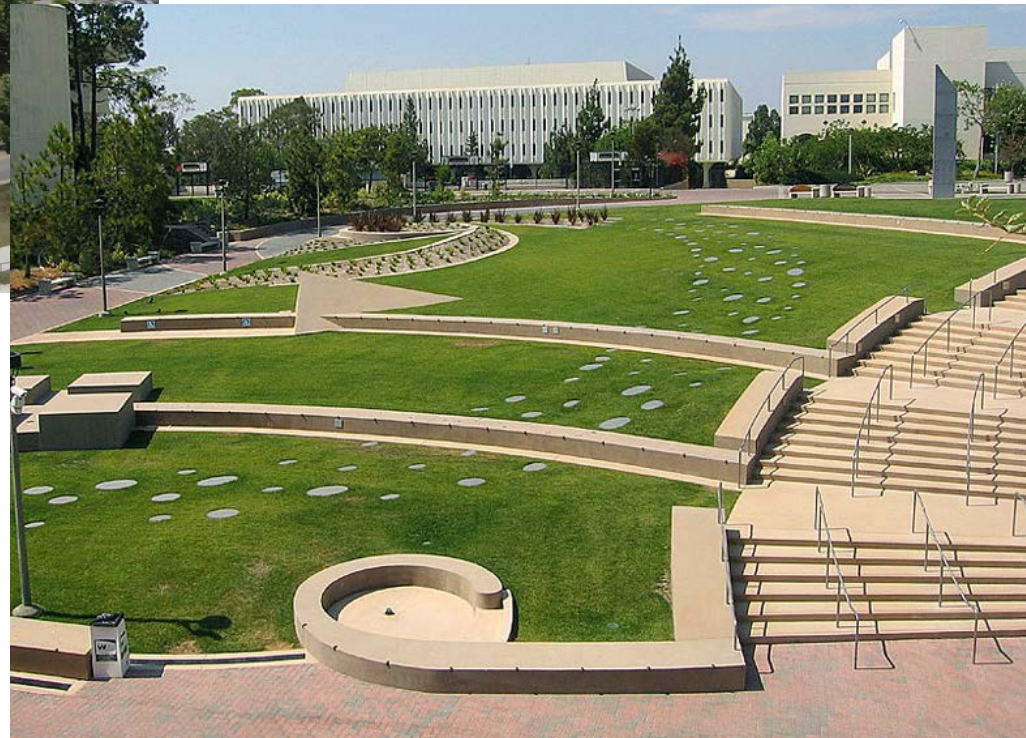
Project Order of Magnitude Cost

# Option A



Existing Lawn Behind Cowgill Hall

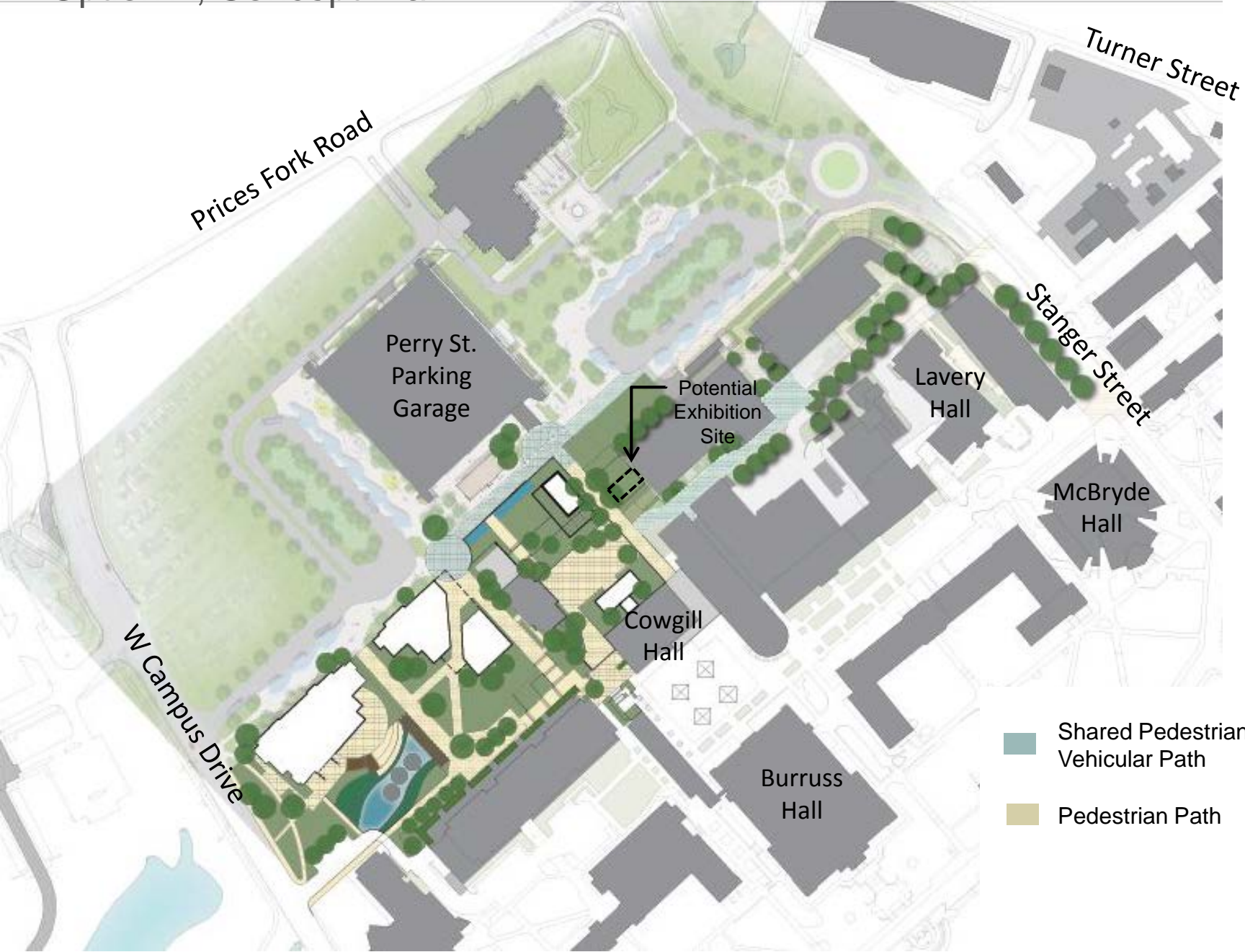
Public Space Opportunity



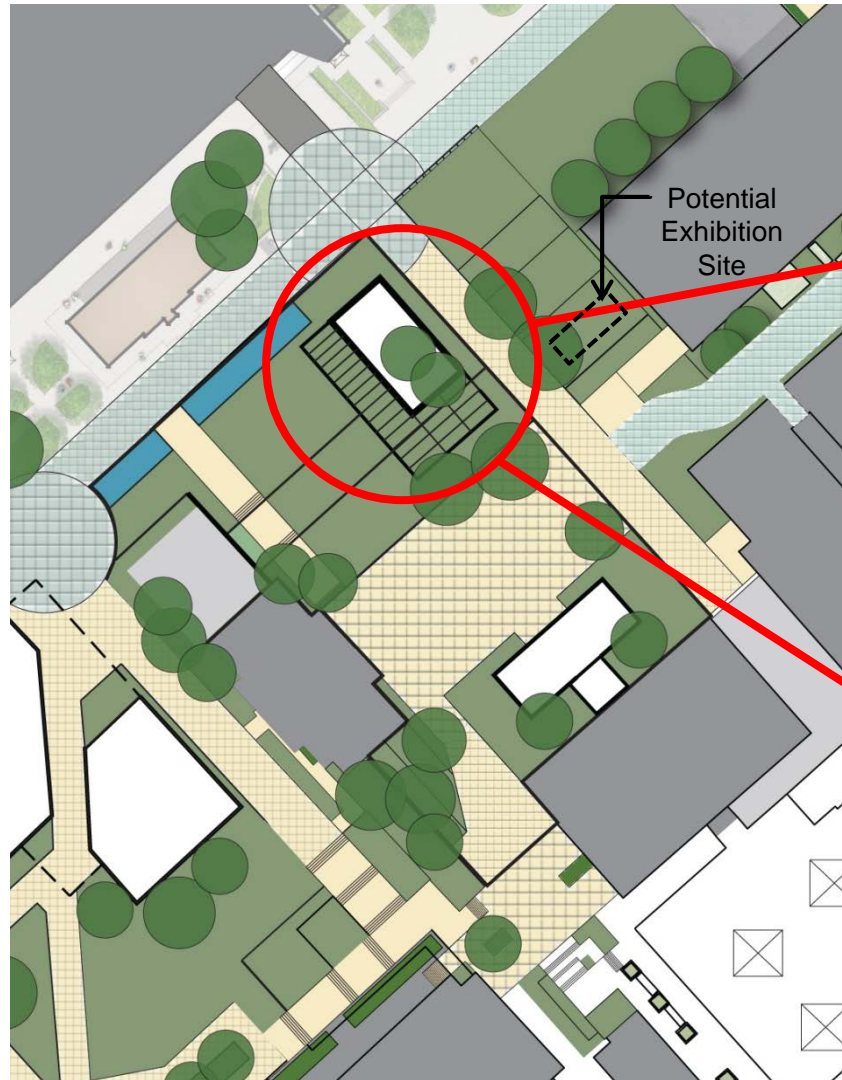
*San Diego State University,*

*Image sourced from estradalandplan.com*

# Option A, Concept Plan



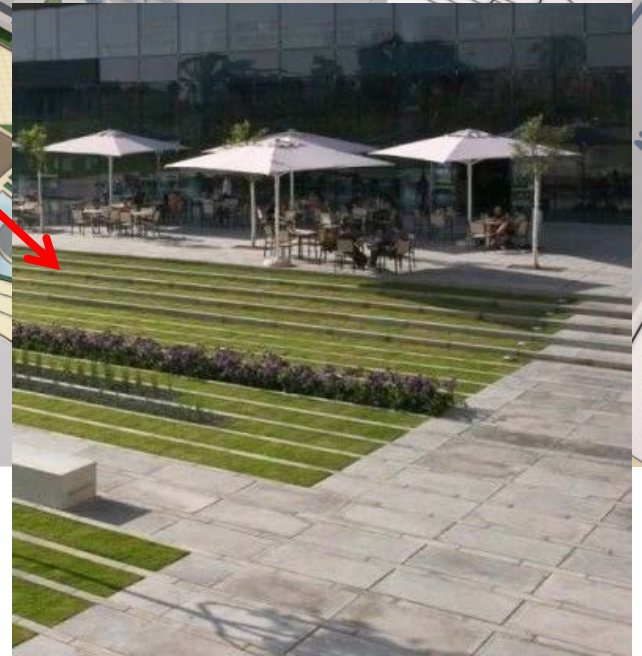
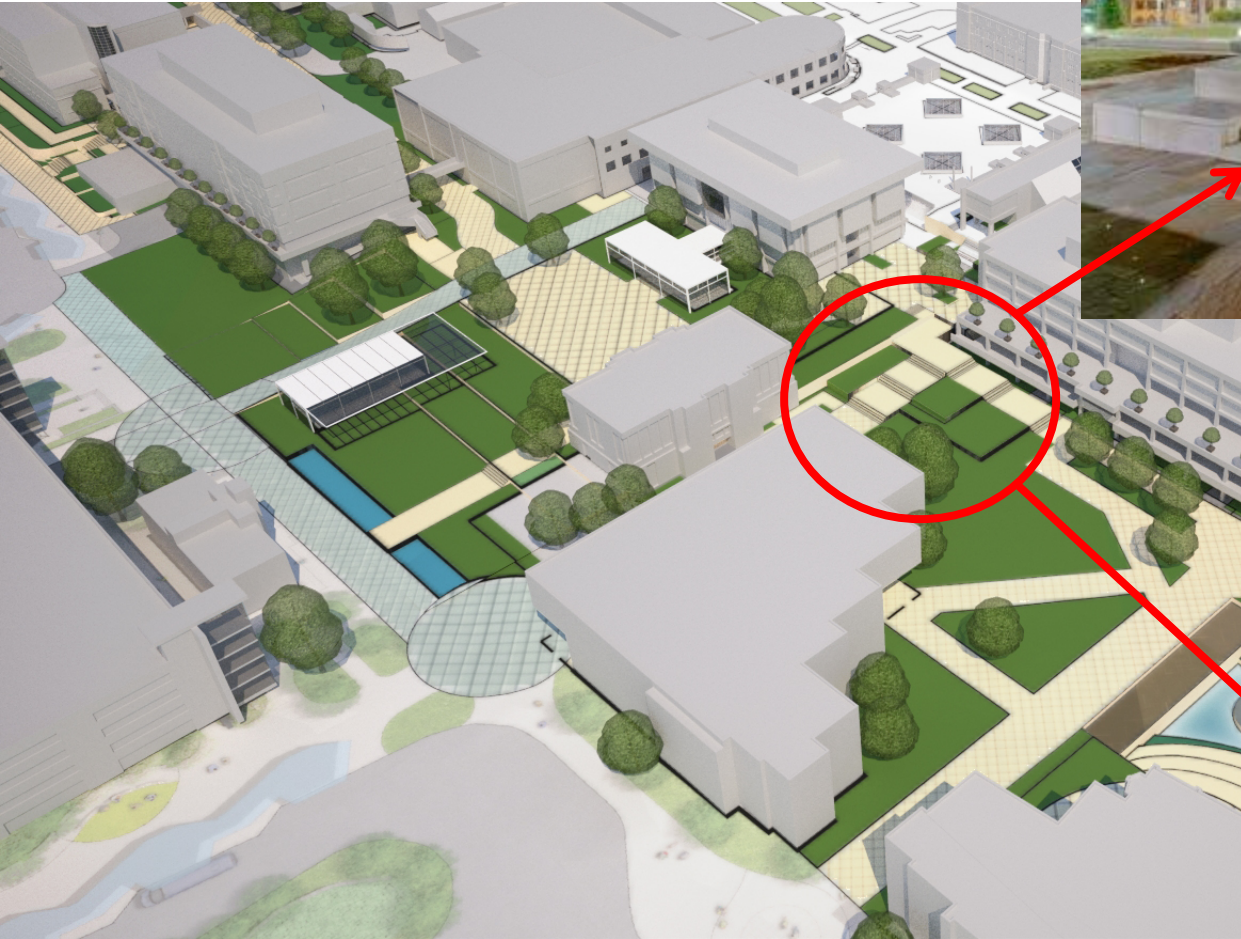
# Option A , Enlarged Concept Plan



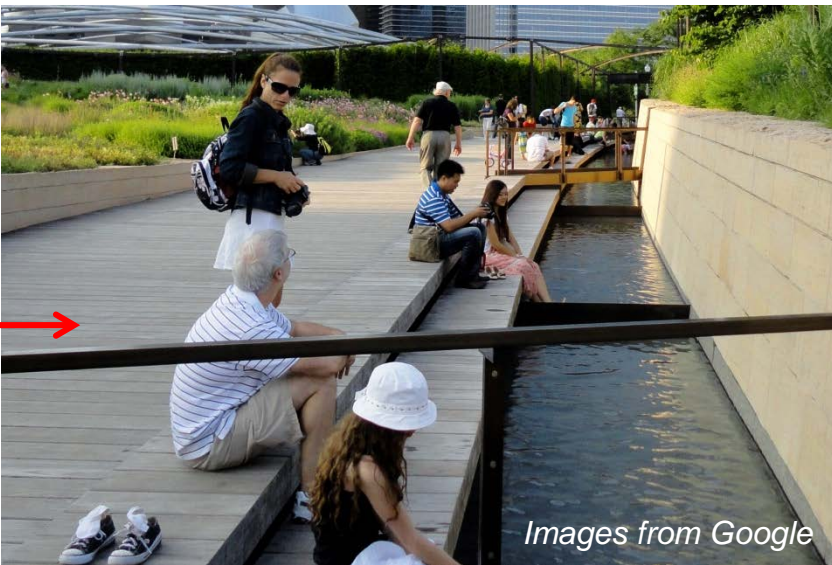
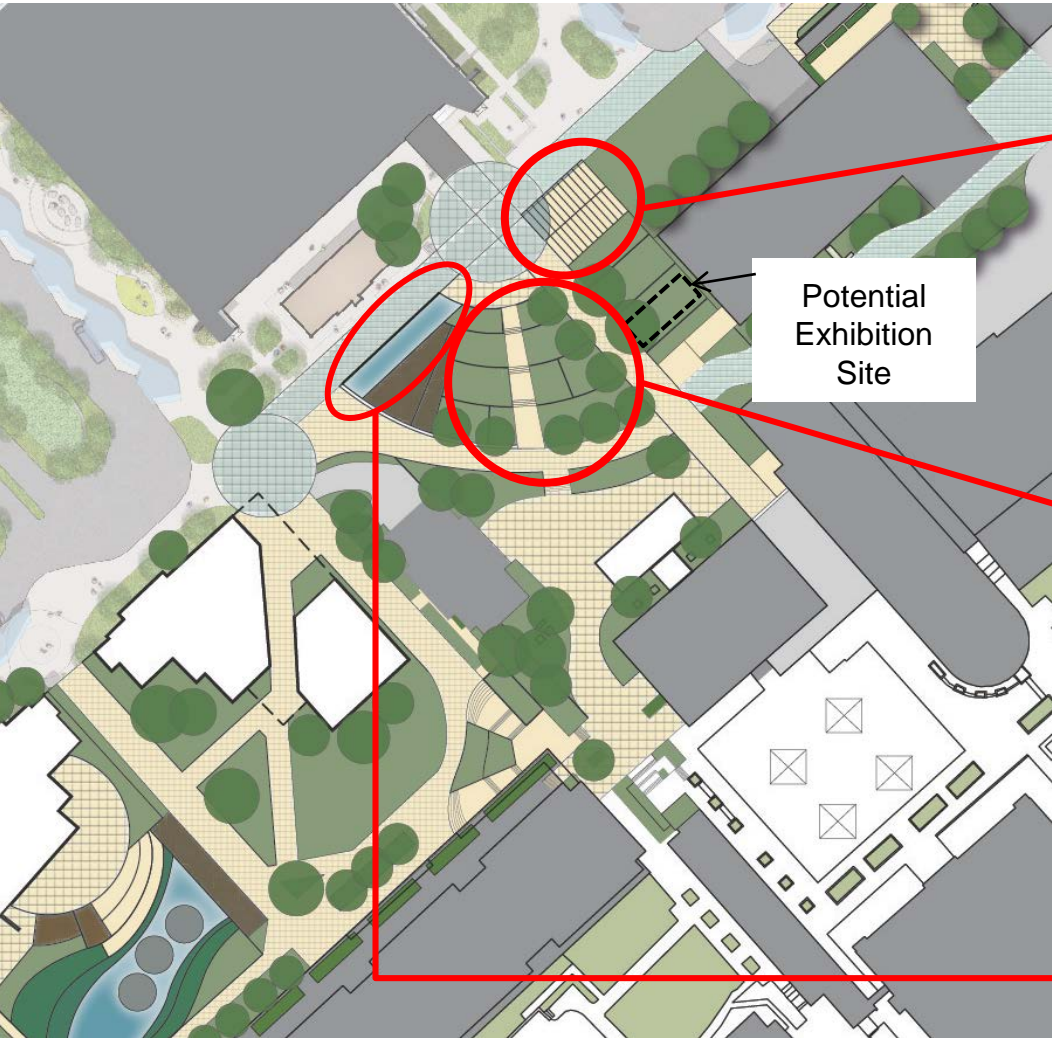
# Option A , 3D Rendering



# Option A , 3D Rendering



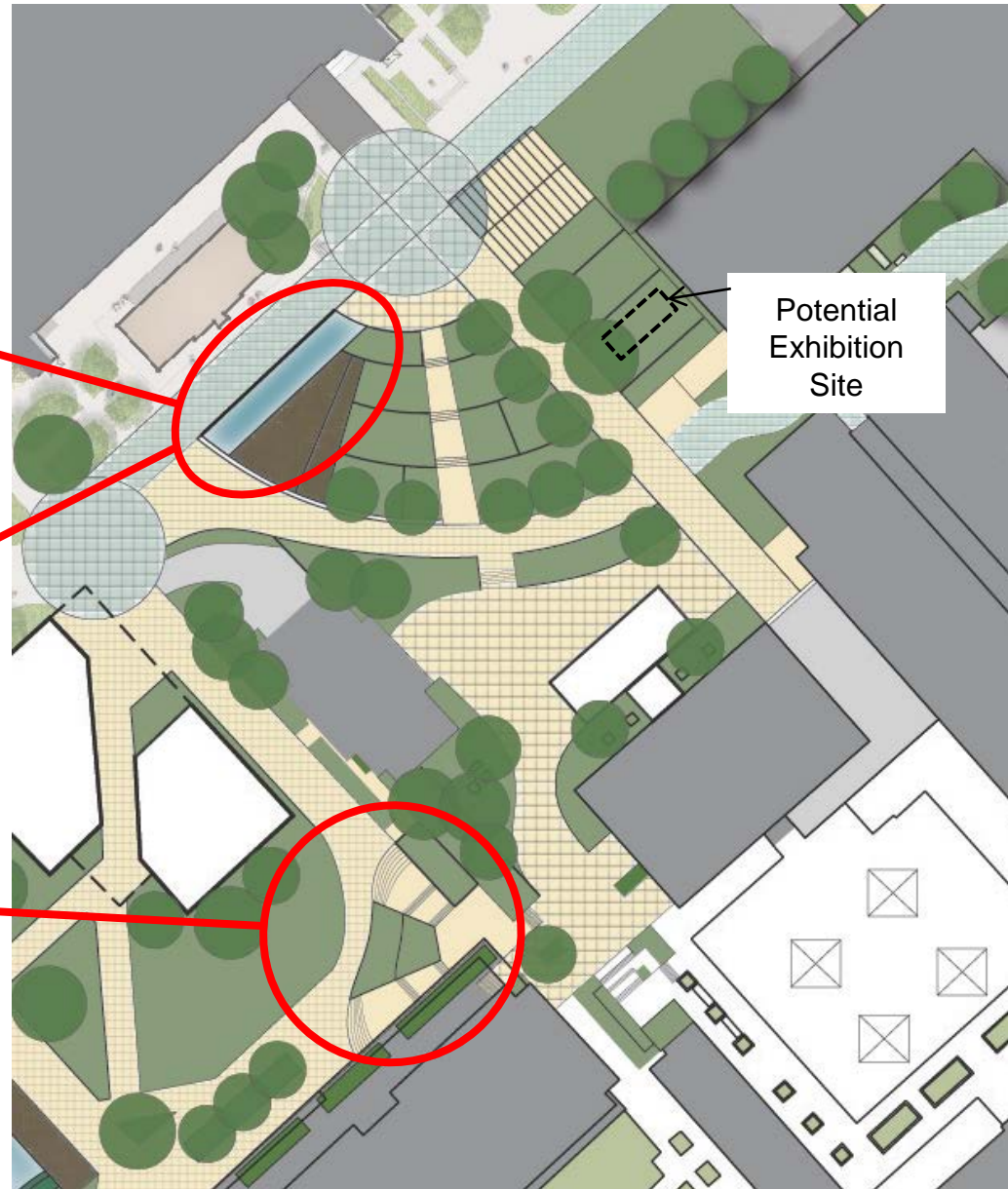
# Option A-Alternate, Enlarged Concept Plan



# Option A- Alternate, Enlarged Concept Plan

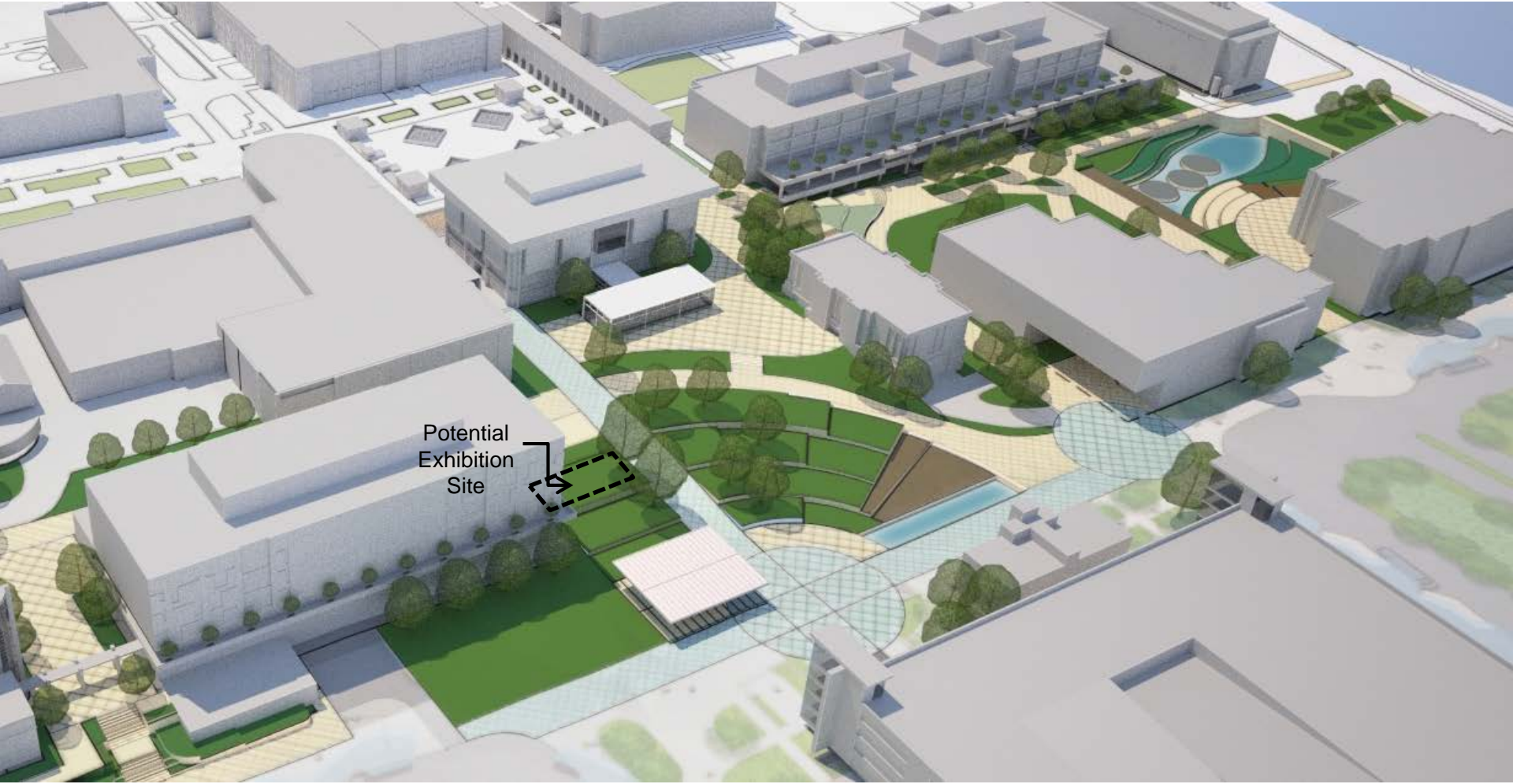


Images from Google





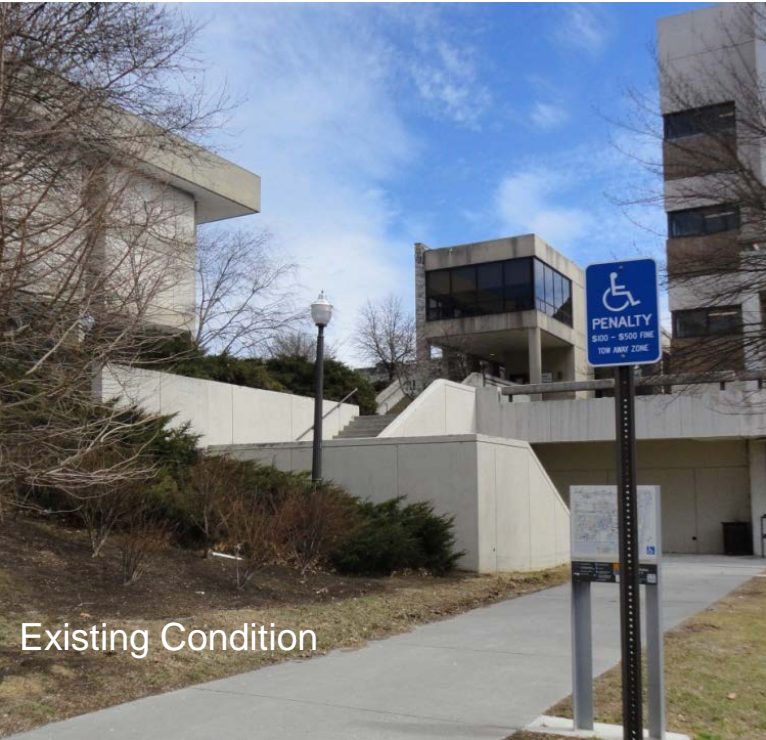
Option A- Alternate, 3D view



Option A-Alternate, 3D view



# Opening Sightlines and Enhancing the Pedestrian Experience



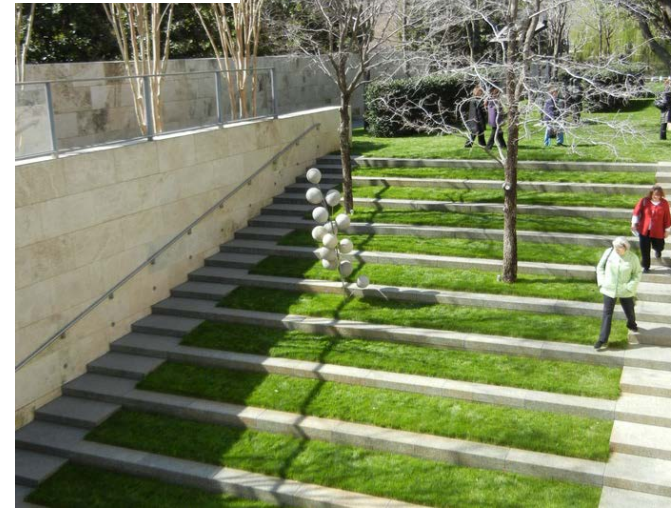
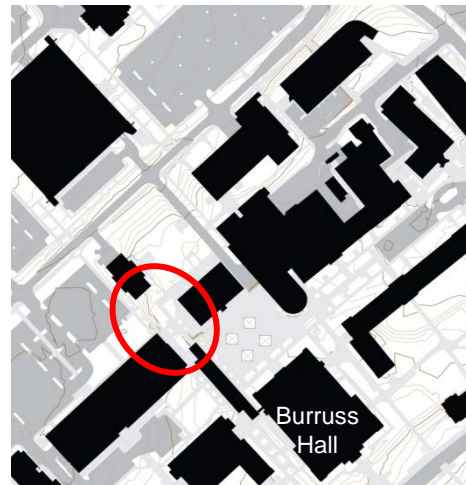
Existing Condition

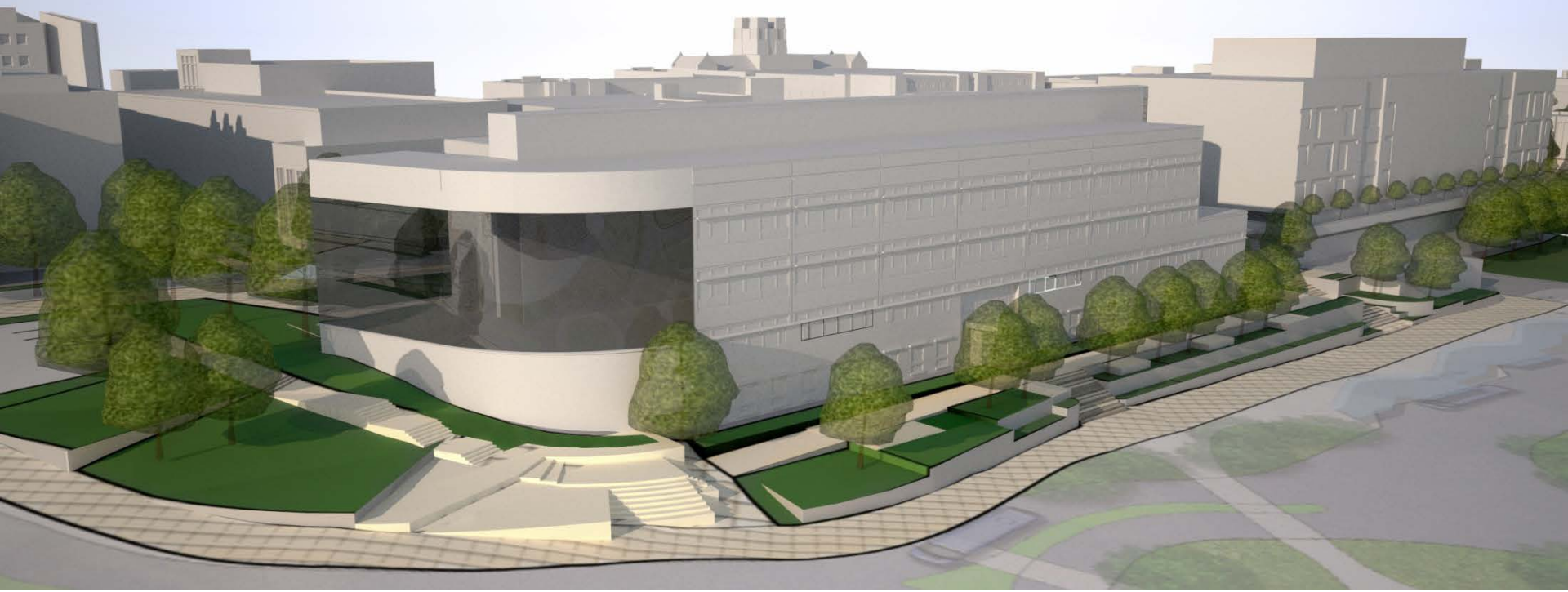


Conceptual Sketch

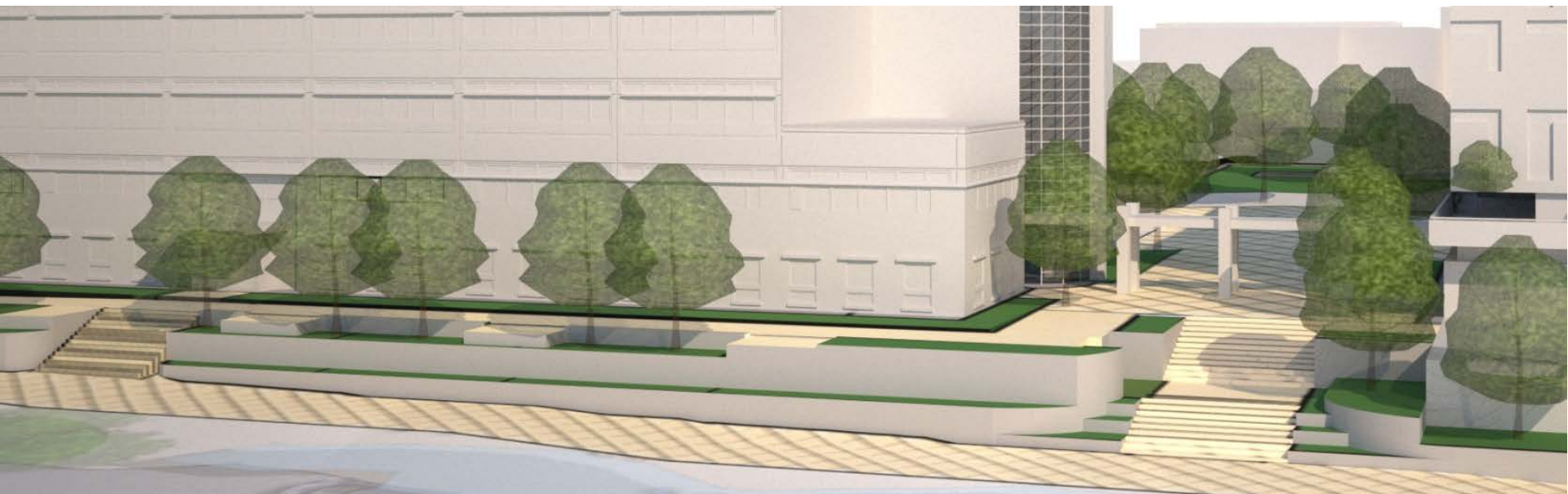


Existing Condition





## Connections between Buildings



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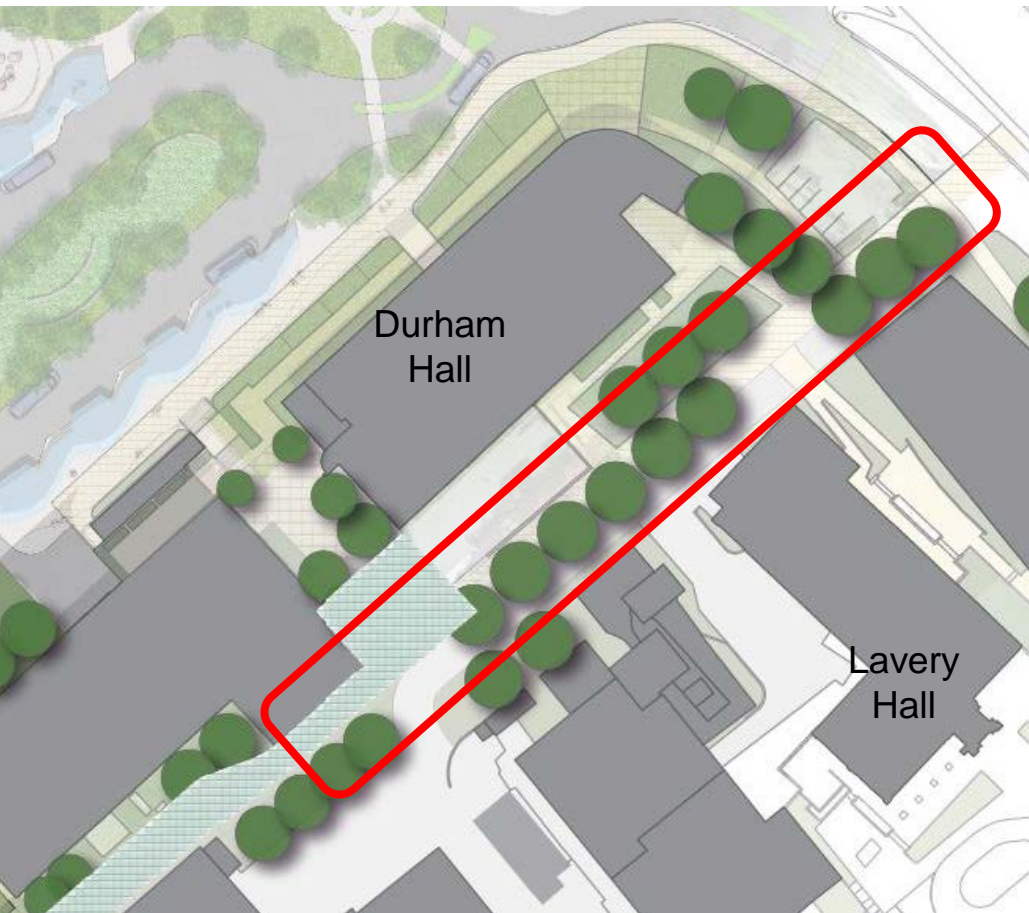
Options

**Opportunities**

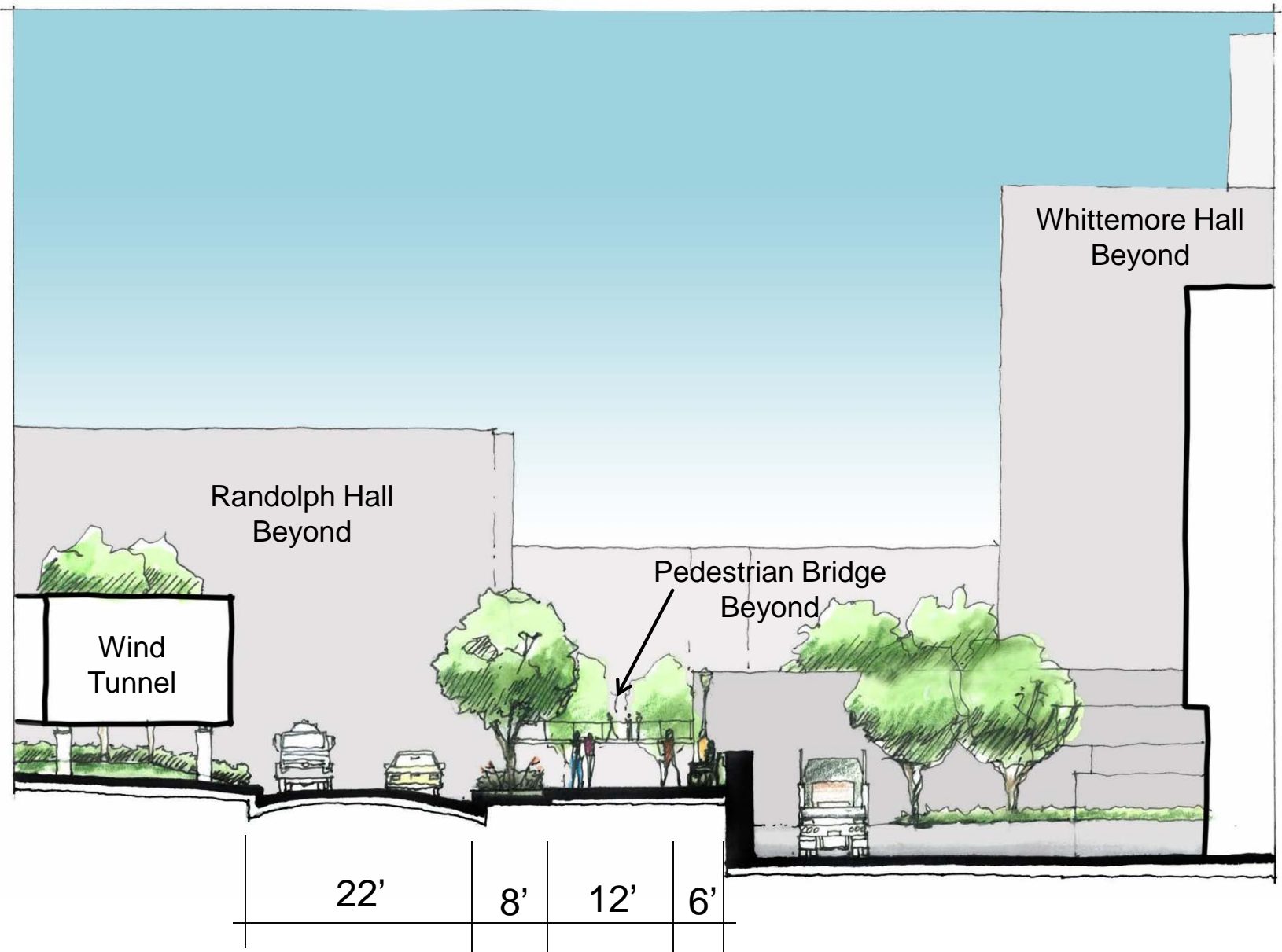
Integrated Concept

Project Order of Magnitude Cost

# Pedestrian Corridor with Service Access



# Section Through Service Corridor





Existing Service Corridor



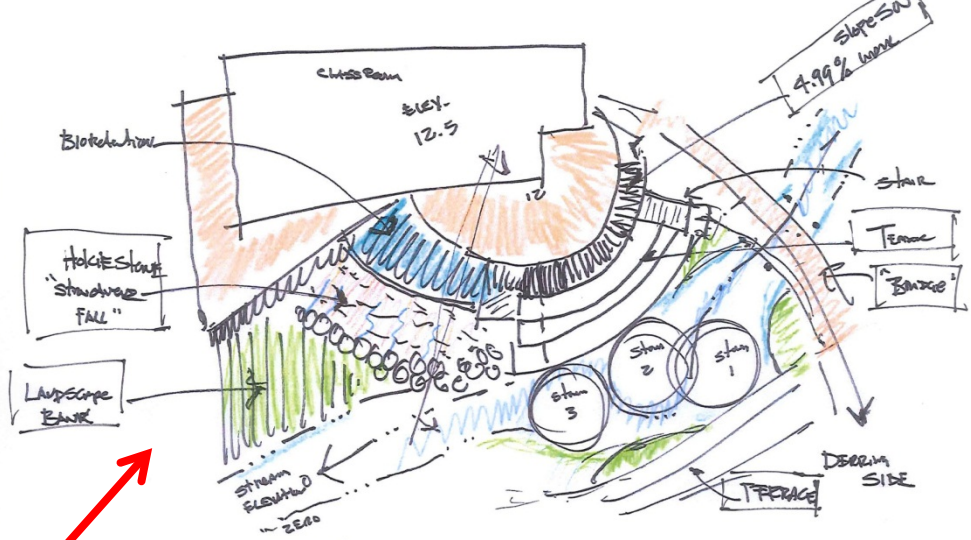
College Ave., Downtown Blacksburg



Conceptual Sketch

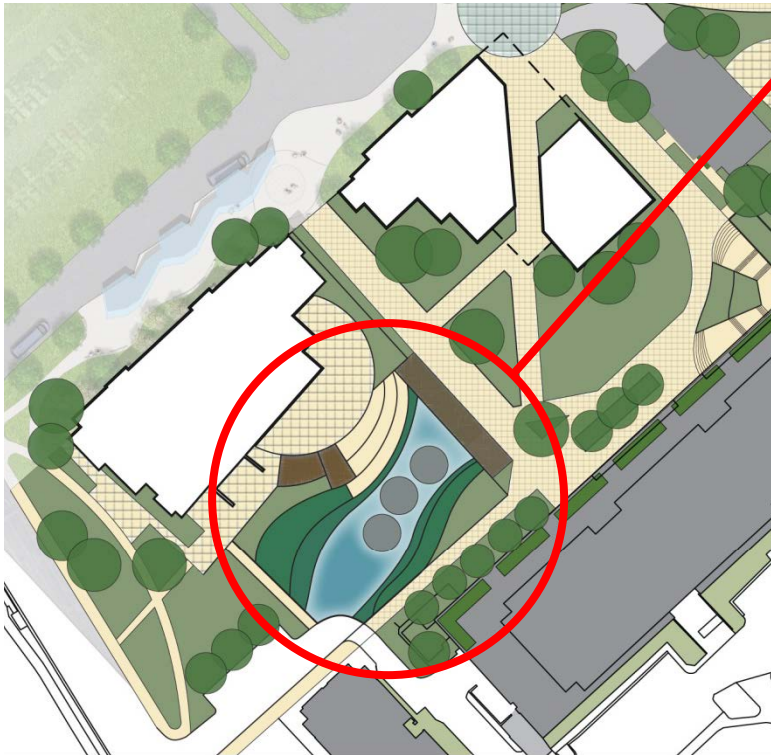


# Daylighting Stroubles Creek

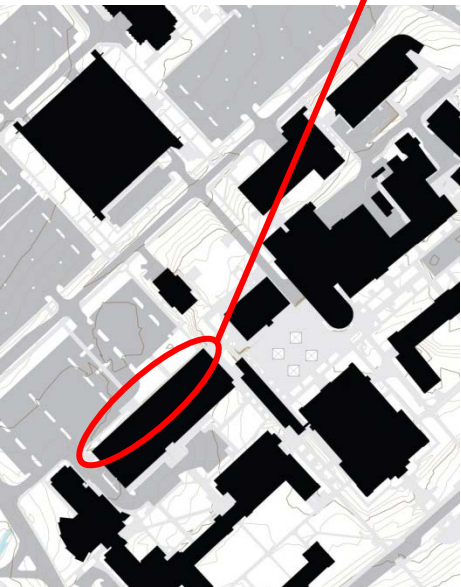
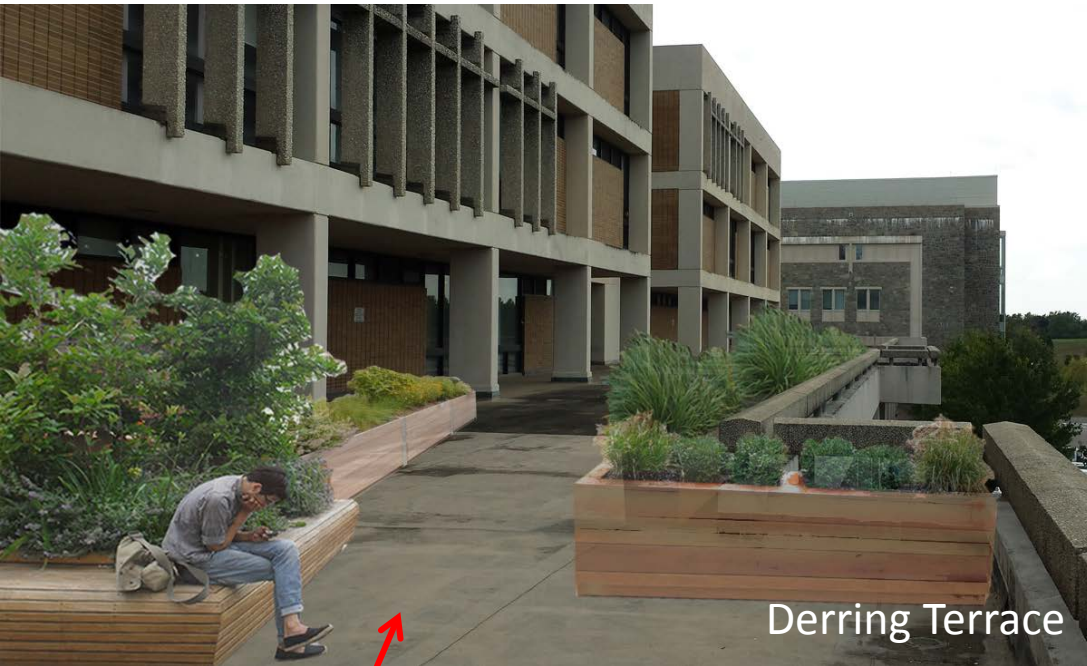


CONCEPT SKETCH  
OUTDOOR STREAM CLASSROOM  
NO SCALE

DANGER ATEN ASSOC  
Nov 5, 2015  
CXL

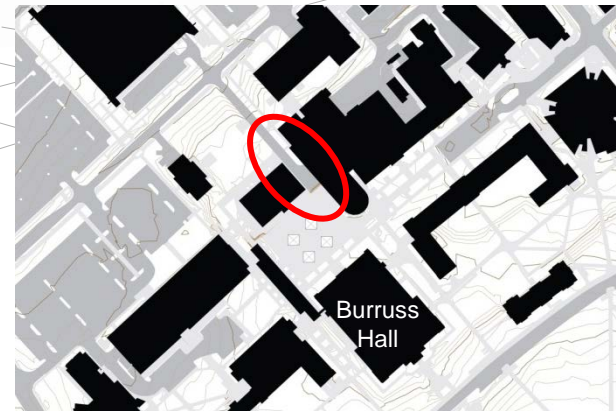


# Recapturing Lost Space



# Smaller move with Big Impact

## Delineating Pedestrian vs. Service spaces



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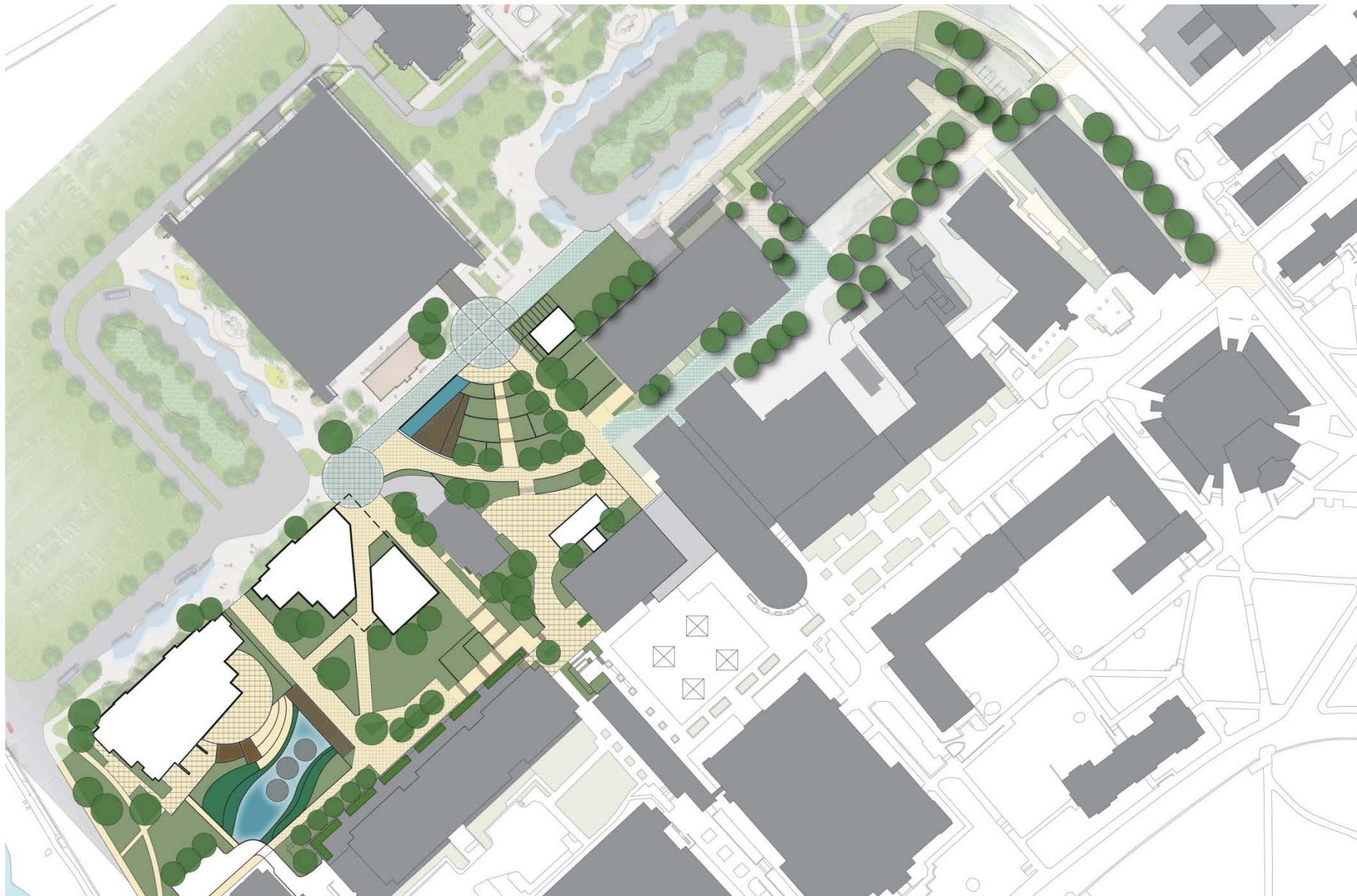
Options

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**Integrated Concept**

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# Integrated Concept



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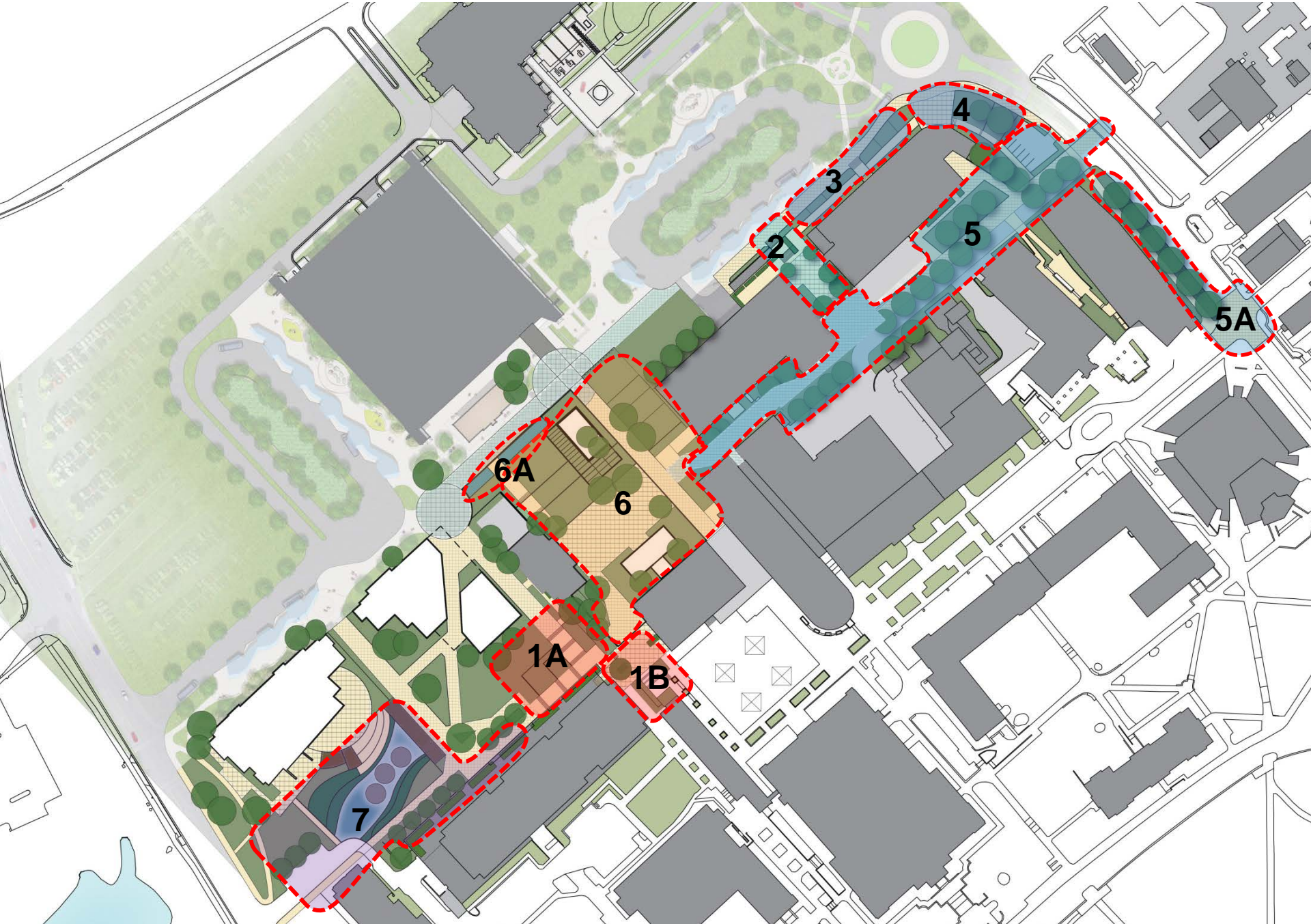
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

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Project Order of Magnitude Cost



# Proposed Improvements, Key Plan





# North Academic Precinct Pricing Study

\*Hokie Stone Material Furnished by Others

Description of Work	Project 1A	Project 1B	Project 2	Project 3	Project 4	Project 5	Project 5A	Project 6	Project 6A	Project 7	Project 8
	Replace stair at Derring, lower Cowgill connector	Replace Stair at Johnston Student Center, Cowgill Plaza Connector	Replace Stair Between Whittemore and Durham	New Terraces & Accessible sidewalk in front of Durham	New Plaza and Terracing at Roundabout	New Pedestrian Corridor w/ Service Drive	New Sidewalk, Landscaping and Crosswalks	New Plaza and Terracing North of Cowgill Hall	New Water Feature at Foot of North Cowgill Terracing	Daylighting of Stroubles Creek	Planters for Whittemore and Derring Terraces
Cut Openings in Existing Walls								\$ 15,000			
Demolition of Existing Stairs & Walls	\$ 15,000	\$ 15,000	\$ 22,500	\$ 15,000							
Demolition of Existing Retaining Wall & Sidewalks											
Demolition and Regrading						\$ 45,000	\$ 7,500		\$ 7,500	\$ 67,500	
Fill and Grading	\$ 57,000	\$ 24,000	\$ 7,400	\$ 59,600	\$ 62,100			\$ 263,300			
Temporary Stairs	\$ 9,600	\$ 14,400	\$ 9,600			\$ 9,600					
Traffic Control	\$ 4,000	\$ 2,000	\$ 2,000	\$ 3,000	\$ 4,000	\$ 6,000	\$ 2,000	\$ 4,000	\$ 1,000	\$ 6,000	
Concrete Stairs	\$ 12,800	\$ 32,000	\$ 13,700		\$ 5,100			\$ 50,400		\$ 19,000	
Retaining Walls at Landscaped Terraces	\$ 33,600	\$ 37,600	\$ 38,300	\$ 131,000	\$ 44,100			\$ 117,600		\$ 157,600	
* Hokie Stone Veneer on Retaining Walls		\$ 43,000	\$ 43,700	\$ 81,100	\$ 50,400				\$ 33,000		
Precast Wall Coping and Flashings		\$ 35,700	\$ 29,600	\$ 22,700	\$ 42,700				\$ 24,800		
Concrete Walks	\$ 43,200		\$ 2,900	\$ 25,200	\$ 7,100		\$ 24,800	\$ 137,600		\$ 22,700	
Curbs at Landscape Islands						\$ 13,600					
Concrete Sub-Slab at Pavers		\$ 49,600		\$ 43,100	\$ 21,300	\$ 121,700	\$ 4,900	\$ 124,100			
Stone Pavers		\$ 63,000		\$ 54,700	\$ 27,000	\$ 273,800	\$ 6,300	\$ 157,500			
Asphalt Paving and Base											
Patch Asphalt Paving						\$ 10,800					
Concrete Curb at Service Drive						\$ 9,600					
Railings	\$ 6,000	\$ 3,600	\$ 4,700	\$ 6,300	\$ 6,000			\$ 7,200		\$ 4,800	
Terraced Topsoiling	\$ 2,400	\$ 1,400	\$ 1,000	\$ 4,600	\$ 4,200	\$ 3,600	\$ 4,200	\$ 12,600		\$ 12,600	
Terraced Landscaping	\$ 4,800	\$ 2,000	\$ 1,700	\$ 7,800	\$ 7,200	\$ 6,100	\$ 6,300	\$ 21,900		\$ 21,600	
Trees			\$ 1,000	\$ 14,000	\$ 3,000	\$ 10,000	\$ 6,000	\$ 15,000			
Wood Planters and Landscaping				\$ 19,500						\$ -	\$ 45,500
Landscape Planters						\$ 16,000					
Light Pole Bases						\$ 10,000	\$ 10,000				
Benches											
Trash Receptacles											
Bike Racks											
Gates								\$ 4,500			
Relocate Underground Utilities			\$ 20,000	\$ 20,000	\$ 20,000	\$ 30,000	\$ 10,000	\$ 110,000	\$ 10,000	\$ 16,800	
Recirculating Pump and Enclosure									\$ 4,000		
Screens at Existing Utilities						\$ 1,500					
Pedestrian Bridge											
Daylights of Stroubles Creek										\$ 26,300	
Hokie Stone Rip-Rap at Stream										\$ 27,000	
Stream Enclosure									\$ 80,900	\$ 425,900	
Stream Structures										\$ 33,400	
Contingency, Overhead and Contractor's Fees	\$ 41,800	\$ 81,700	\$ 46,900	\$ 121,300	\$ 68,000	\$ 133,500	\$ 15,100	\$ 209,400	\$ 39,500	\$ 300,300	\$ 10,350
Calculated using 8% for Contingency, 10% for Contractor's Fees, and 5-7% for Contractor Overhead depending on anticipated time and necessary on-site supervision											
<b>TOTALS</b>	<b>\$ 230,200</b>	<b>\$ 405,000</b>	<b>\$ 245,000</b>	<b>\$ 628,900</b>	<b>\$ 372,200</b>	<b>\$ 700,800</b>	<b>\$ 97,100</b>	<b>\$ 1,250,100</b>	<b>\$ 200,700</b>	<b>\$ 1,141,500</b>	<b>\$ 55,850</b>