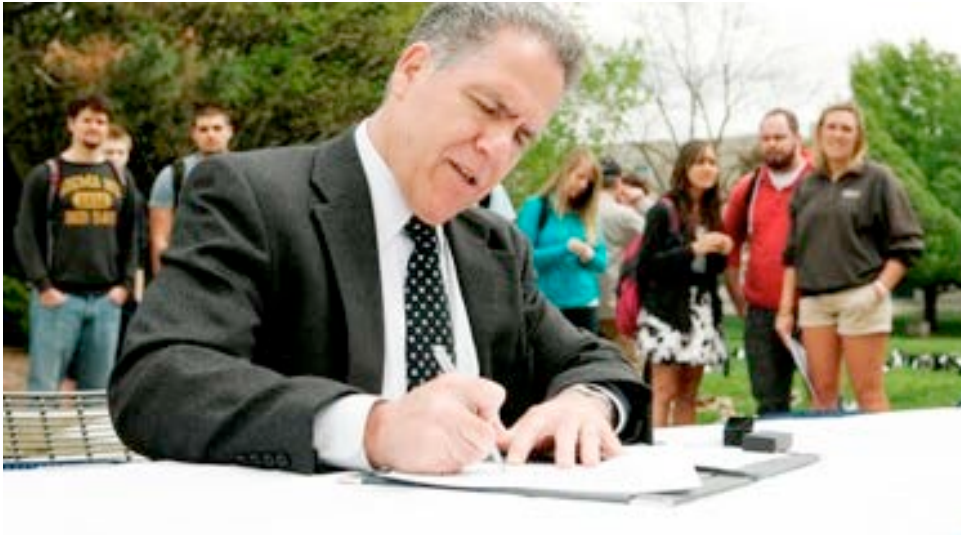


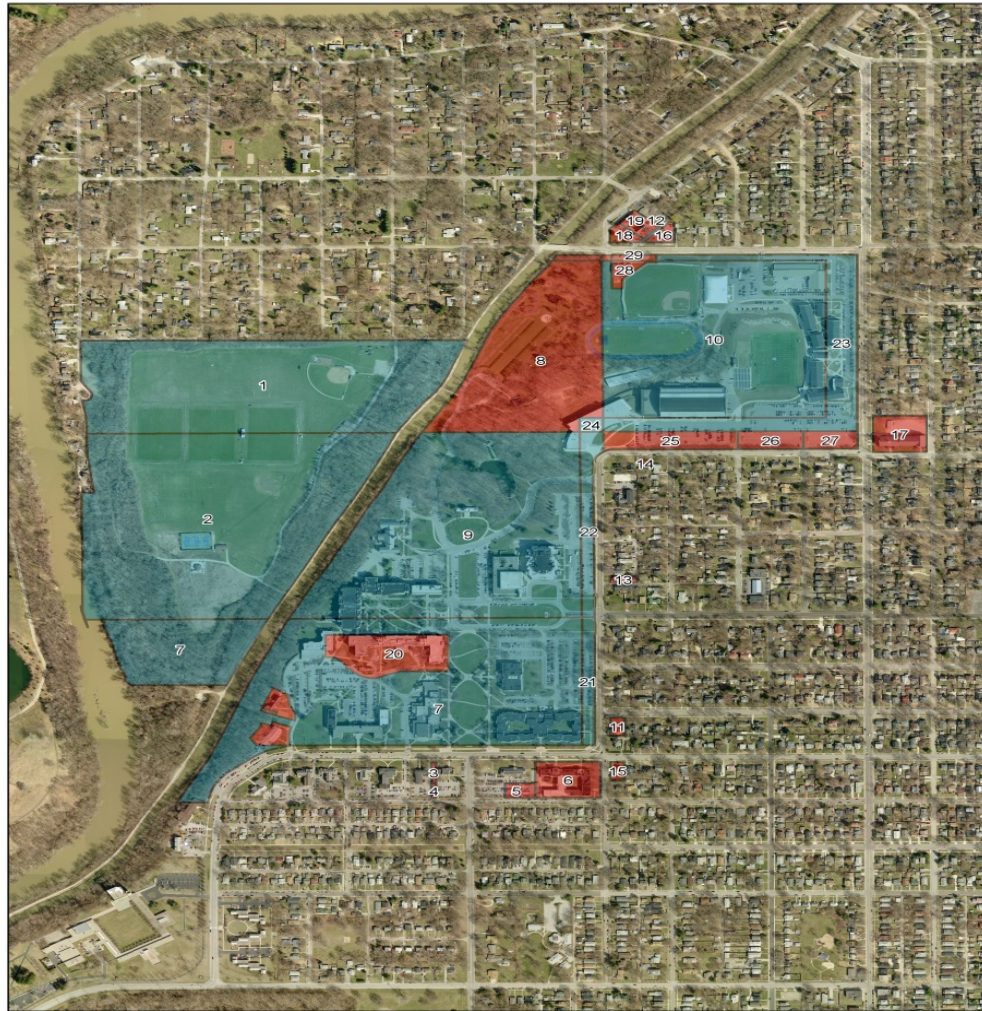
Butler University

- Founded in 1855
- 295 acre campus
- Located 5 miles north of downtown Indianapolis
- 60 major academic fields and 19 graduate programs
- Current enrollment: ~5,000 students









Butler Stormwater Parcel Billings

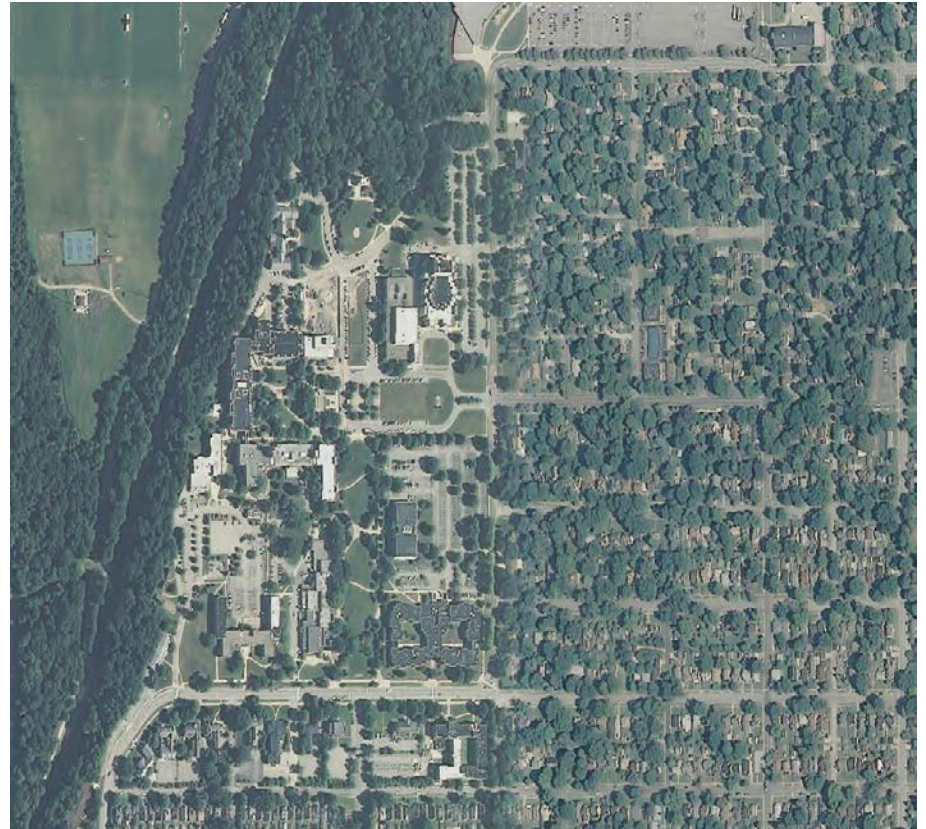
Prepared for:
Butler University

Date:
June 2013

Existing GI-Campus Examples



Sunset Avenue Streetscape Project



Sunset Avenue -Existing Conditions



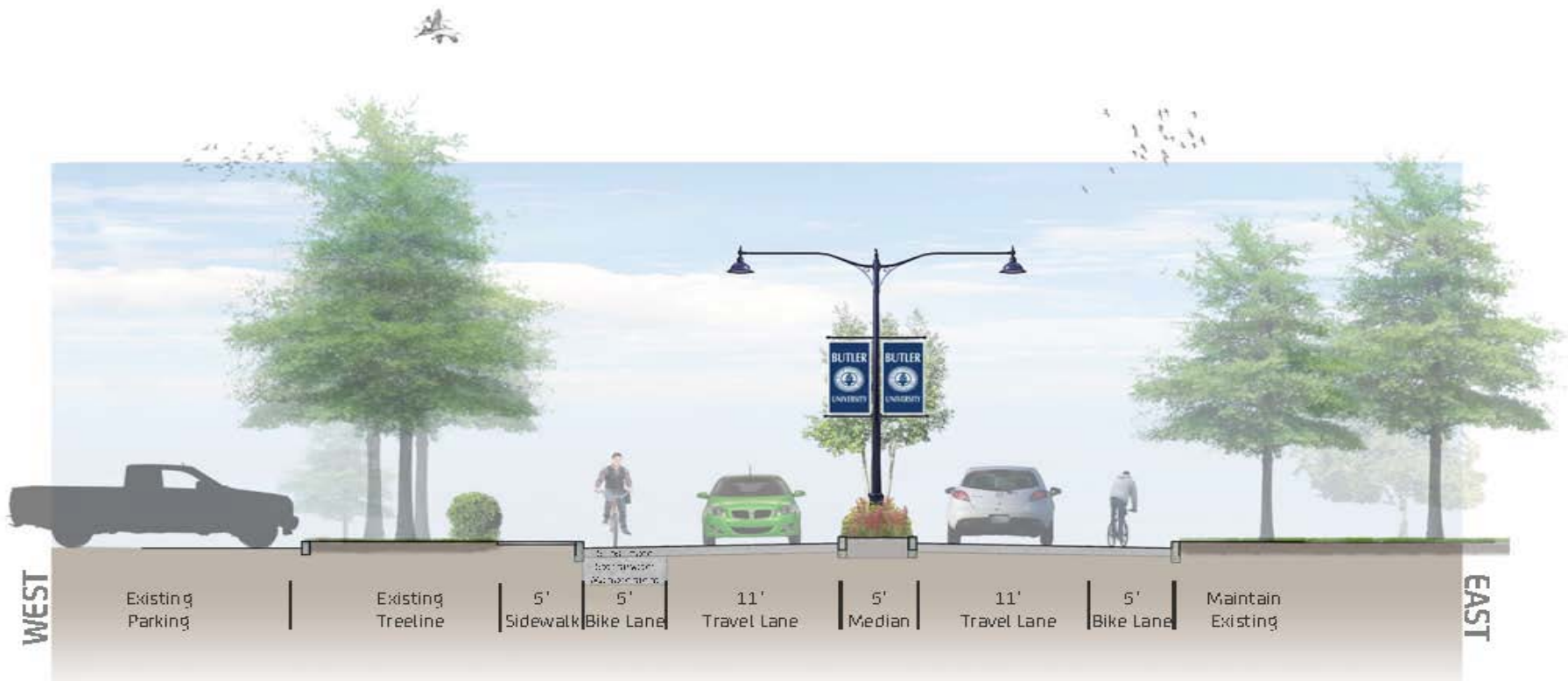
Sunset Avenue Retrofit-Complete Street Principles

- Improve stormwater management
- Clearly define campus
- Develop campus entry at 46th street
- Reduce on street parking and visual clutter
- Traffic calming and enhanced pedestrian and bike safety
- Beautification and enhanced landscaping
- Accommodate future public transportation



Sunset Avenue Streetscape
Bike Lane Option (North of 46th Street)





Sunset Avenue Streetscape
 Bike Lane Option (South of 46th Street)



Sunset Avenue –Bus Lane Turnout



Sunset Avenue-Hinkle Rain Garden



Sunset Avenue –Hinkle Rain Garden



Sunset Avenue –Hinkle Rain Garden



Sunset Avenue –Permeable Bike Lanes



Sunset Avenue – Stormwater Modeling Results

Watershed	AREA (SF)	100YR PEAK (CFS)		
		PRE	POST	
WS 1	143,447			
WS 2	31,580	34.74	15.18	56%
WS 3	7,831	1.55	0.69	55%
WS 4	9,272	1.84	0.83	55%
WS 5	9,723	1.93	0.87	55%
WS 6	12,722	2.52	1.15	54%
WS 7	4,421	0.88	0.75	15%
WS 8	47,788	9.48	9.48	0%
WS 9	10,371	2.06	2.06	0%
WS 10	15,150	3.01	3.01	0%
WS 11	21,474	4.26	4.26	0%
WS 12	41,917	8.32	8.32	0%
WS 13	52,707	10.46	10.46	0%
WS 14	15,082	2.99	2.99	0%
WS 15	12,264	2.43	2.43	0%
WS 16	66,899	13.28	13.28	0%
WS 17	56,526	12.47	12.47	0%



GI Operations and Maintenance

Sunset Avenue | INDIANAPOLIS, INDIANA

Sunset Avenue - Indianapolis, Indiana Operations and Maintenance Manual



Prepared for:
City of Indianapolis and Butler University

Prepared by:
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Indianapolis, IN 46204

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WILLIAMS CREEK
CONSULTING

February 2014

RAINGARDEN/INFILTRATION BASIN INSPECTION CHECKLIST

Site Name _____

BMP - ID _____

"As Built" Plans Available? _____

Inspection Date _____ Inspection Time _____

Days Since Previous Rainfall _____ Depth of Previous Rainfall _____

Inspector _____ Inspector Signature _____

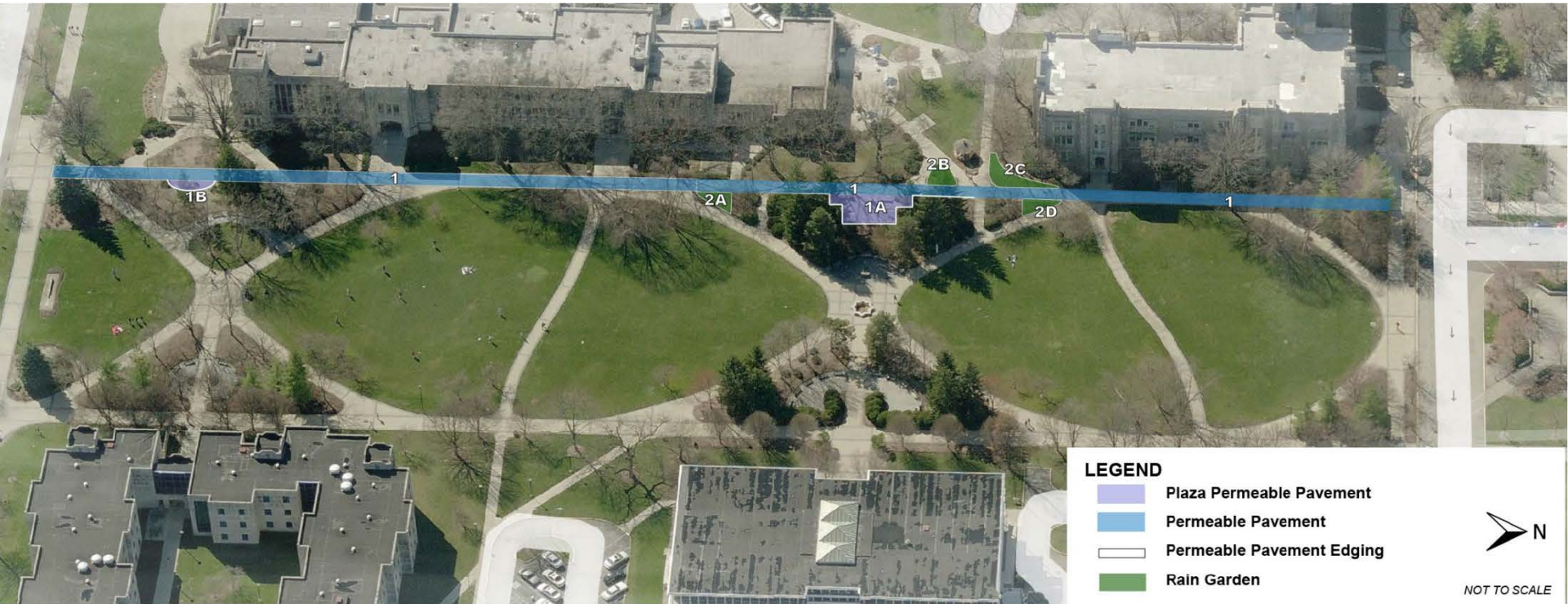
Maintenance Item	Satisfactory or Unsatisfactory	Notes
Vegetation		
Vegetation is healthy		
Specified vegetation is present		
Invasive species identified		
Plants are watered as needed		
Other: _____		
Dewatering		
Bioretention dewater within 48 hours		
Other: _____		
Debris		
Remove floatable debris		
Remove debris from overflow devices		
Remove shoreline pollution (trash, oil liquids)		
Note visible pollution (oily sheen, discoloration)		
Other: _____		
Erosion		
Inspect inlet for erosion/ undercutting		
Inspect slope of bioretention for sliding/scouring		
Other: _____		
Embankments		
Inspect for animal burrows		
Other: _____		
Actions to be taken:		
To be Completed by (Date):		

POST CONSTRUCTION OPERATION AND MAINTENANCE MANUAL | WILLIAMS CREEK CONSULTING, INC. | 9

Atherton Sidewalk Retrofit-Existing Conditions



Atherton Sidewalk Retrofit-Project Location



Atherton Sidewalk Retrofit-Conceptual Design



Thank You!

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