### **Urban Forest Park Vision** and Pedestrian Access Denali Consulting L.L.C. Corridors

Project No. CED 2024.03

**DATE: 4/26/2024** 

**Presented by: Eric Jenkins and Daniel Tedrick** 





**Client**: Facilities and Campus Services University of Alaska Anchorage



### Overview

Introduction **Background & Existing Conditions** Methodology **Alternative Designs Typical Sections Project Schedule** 

## Introduction

### **Urban Forest Park**

- 20 Acres of underutilized land
- Transportation and recreactional opportunity
- Currently an obstacle



### **Purpose of Project**

- Accessibility & Connectivity in UAA/UMED Area
- Safety
- Trail Rehabilitation

#### **Urban Forest Park**

Goose Lake

UAA

UPA

Driv

## **Background & Existing Conditions**

Career Center Dr Drive

Center

- UAA & MOA Parcels
- Snow Maintenance
- Type A Wetland
- Chugach Electric **Substation**





### Methodology





### **Design Criteria**

### **Develop Alternatives**

### **Alternative Cost Estimates**

### Analysis Criteria





## Maintenance

6

## 1. No Build Alternative



### Pros (+)

- No wetland Impact
- No utility relocation
- No property acquisition cost

## Cons (-)

- No improvement to connectivity
- KCC student safety concerns
- UAA Drive crossing concerns

### **Estimated New Costs: \$0**

## 2. Roundabout Alternative



### Pros (+)

- Safety
- Minimal impact on the Wetland area
- No Utility relocation

### Cons (-)

- Doesn't unlock areas full potential
- Lacks Connectivity of Northern Lights Blvd and Career Center Dr.

**Estimated New Costs:** \$2,878,000 -\$4,230,000

8







### Pros (+) LEGEND

- Connectivity and Accessibility
- Safety of nonmotorized users

### Cons (-)

- Major Utility **Relocation costs**
- Wetland Impact Cost

### **Estimated New Costs:** \$88,892,000 -\$126,530,000

## 4. Multi-Way Alternative

#### Northern Lights Blvd.



#### LEGEND

### Pros (+)

- The best design for connectivity
- Improvements to UFP and surrounding areas

### Cons (-)

- Wetland impact Utility relocation
- costs along UAA Drive

### **Estimated New Costs:** \$441,000 - \$605,000

### Developed Trail - Urban Forest Park



NTS

### 4% Cross Slope

### **Typical Section**

## \$50 / Linear Foot 20 MPH Speed Limit

We have been a start of the sta

### Boardwalk Trail - Urban Forest Park



#### NTS

#### **Typical Section**

## \$400 / Linear Foot 20 MPH Speed Limit

### Separate Bike Lane with Sidewalk



#### **Career Center Drive, UAA Drive, Mallard Lane Typical Section**

#### NTS

### Shared Used Sidewalk



#### **Career Center Drive, UAA Drive, Mallard Lane Typical Section**

NTS



### Intersection Crossing



Rectangular Rapid Flashing Beacon, Courtesy of FHWA Alaska Native Medical Center Bridge, Courtesy of Google Maps

#### Single Lane Roundabout, Courtesy of FHWA

## **Decision Matrix**

Alternatives	Cost	Environmental Impact	Utility Impact	Connectivity	Aesthetics	ROW	O&M
1. No Build	1	1	1	3	3	1	1
2. Roundabout	3	1	1	2	1	1	1
<b>3. N. Lights Bridge</b>	3	3	3	1	1	3	3
4. Multi-way	2	2	2	1	1	1	2
Impact Level		Alternatives	Average (L	ower is Better)			
				A E 7			

Level	Allematives	Average (Lower	
1 = Low	1. No Build	1.57	
	2. Roundabout	1.43	
2 = Medium	3. N. Lights Bridge	2.43	
3 = High	4. Multi-way	1.57	

## **Project Schedule**



### 1/16 - 1/26/24 1/26 - 2/23/24

- Project Scope and Limits
- Potential Problems
- Stakeholder Interviews

- Existing Conditions
- Asbuilds
- Surface Data
- Presentation

#### 2/19 - 3/11/24

- Conceptual Alternatives
- Potential Solutions

### Alternative **Analysis Report**

### **Alternatives Development**

4

# 5

3/2 - 3/18/24

- Decision Matrix
- Selected 4 Alternatives
- Presentation

### 2/25 - 4/26/24

- Evaluation Matrix
- Analysis of 4 Alternatives
- Final Presentation
- Poster 17

### **Project Management and Design Team**



**Daniel Tedrick** Student Project Manager

**Eric Jenkins** Water Resources Engineer



Client

Kimberly Mahoney, P.E.

Associate Vice Chancellor, Facilities & Campus Services, UAA



#### Chris Post, P.E.

Program Development & Standards Manager, DOT&PF



Jesse Moose, P.E.

Senior Project Manager -Capital Projects, ARRC

#### **Gun Jang** Geotechnical Engineer

### **Bora Lena** Design Engineer

#### Professional Mentor Professional Mentor

#### **Faculty Mentor**



Vinod Vasudevan, Ph.D., P.E. Associate Professor Department of Civil Engineering, UAA

## THANK Denali Consulting L.L.C. YOU

Contact: datedrick@alaska.edu

