

Surface Transportation Block Grant Program – Urban (STBG-U) Project Application and Ranking Process - Roadway Reconstruct/Expansion

Due: February 3, 2021

Project Name, Location and Brief Description: E St.; Memorial to Yellowstone, Idaho Falls. This is a roadway reconstruction and widening project from Memorial to Yellowstone. It will increase the roadway from 2 lanes to 4 lanes (2 thru lanes EB, 1 thru lane EB and 1 center turn lane).

[Attachment 2435 Form](#)

A) Congestion Relief and System Operations (0-25 points)

When assigning points consider how well the project provides immediate and long term congestion relief at an intersection, roadway or the network as a whole.

How congested is the intersection or roadway segment currently and projected to be in the future? Traffic on E St backs up significantly (over 2 blocks) during the afternoon peak hours.

1) Current v/c ratio: 0.89

2) Projected no-build v/c ratio: 1.09

To what degree is the project expected to improve capacity, not only on the roadway itself but elsewhere in the transportation system? Improvements to this roadway will relieve peak hour traffic stress on other East/West streets in the Idaho Falls downtown area.

3) Projected build v/c ratio*: 0.56

Location:	Transportation system v/c ratios*:	
4)	No-build v/c ratio:	Build v/c ratio:
5)	No-build v/c ratio:	Build v/c ratio:
6)	No-build v/c ratio:	Build v/c ratio:
7)	No-build v/c ratio:	Build v/c ratio:
8)	No-build v/c ratio:	Build v/c ratio:

*may require additional model runs to determine traffic projections under build conditions. Contact BMPO.

[Capacity Worksheet](#)

B) Safety (0-25 points)

When assigning points consider how well the project addresses high accident locations by including safety improvements to mediate the primary causes of crashes.

What location(s) exist within the projects scope that are considered to have a high degree of accidents? Why are they deemed to be critical accident locations that need attention? 18 accidents in the last 5 years within the project limits (7 C accidents and 9 PDO accidents). The initial construction with a parabolic crown coupled with multiple overlays over the years has resulted in a significant drop in the pavement to gutter pan drop of over six inches deep.

Accident Location and Rates:

1) Intersection of E & Capital	Crash: 3	Severity: 2	Density: 0	Overall: 1.67
2) E & Park	Crash: 1	Severity: 2	Density: 0	Overall: 1.00
3) Intersection of E & Shopup thru to Yellowstone	Crash: 3	Severity: 3	Density: 0	Overall: 2.00

Accident Worksheet

What are the primary causes of accidents and contributing circumstances from crash reports? 76% are angle turning accidents that would be prevented by the addition of the center left turn lane. 12% are pedestrian accidents that would be mitigated by sidewalk and curb ramp improvements. The remaining accidents 12% are rear end accidents that would be mitigated by the reduction in congestion.

Identify project design elements/counter measures implemented to address primary causes of accidents. Include related crash reduction factor:

Crash reduction counter measures:	Crash reduction factor:
1) Center Left Turn Lane Installation	92% per CMF Clearing House (see attached)
2) Construction of Curb & Sidewalks	78% of Pedestrian accidents per CMF Clearinghouse (see attached)
3) Additional Thru lanes	24% per CMF Clearing House (see attached)

C) System Preservation (0-20 points)

When assigning points consider how well the project preserves or enhances the transportation system.

What is the current pavement condition? **Rutted significantly.**

Pavement surface rating: **3 (1 inch ruts)**

[Pavement Rating System \(for more information regarding surface rating\)](#)

What traffic control devices, if any, will be added or upgraded? **Roadway Illumination will be provided. Pavement Striping and crosswalks at the intersections will be enhanced. Signing throughout the project will be upgraded.**

What bridges in poor condition, if any, will be replaced (deck, superstructure, and/or substructure or culvert) as part of this project? What bridges in fair or poor condition, if any, will be rehabilitated as part of this project? **N/A**

D) Multi-modal and Accessibility (0-10 points)

When scoring points consider if the project includes multi-modal facilities for improved accessibility, connectivity and safety.

Plan or study that identifies multi-modal project or need: **Connecting Our Community Plan**

What bicycle and pedestrian improvements, if any, are included in the project? **ADA corners and improved sidewalks will be provided.**

What public transportation improvements, if any, are included in the project? **Pedestrian access for bus stops can be accommodated with the design near this route.**

E) Support Economic Vitality (0-10 points)

When scoring points consider if the project improves access to housing, jobs, recreation and other areas of economic importance.

What corridor preservation techniques, if any, were implemented in relation to the project? **The corridor has been preserved through platting dedicated right of way to accommodate this facility. Sidewalk improvements anticipated will require some right of way acquisition.**

Does the project extend an existing roadway or address a gap in the roadway network? **No, however additional lanes are provided as the roadway is near capacity and traffic is increasing.**

F) Project Feasibility (0-10 points)

When scoring points consider if the project is good fit for federal funds based on cost and impacts.

Attachment 1150 Form

What is the total estimated cost of the project? **\$1,900,000**

What is the estimated cost per mile? **\$7,307,692**

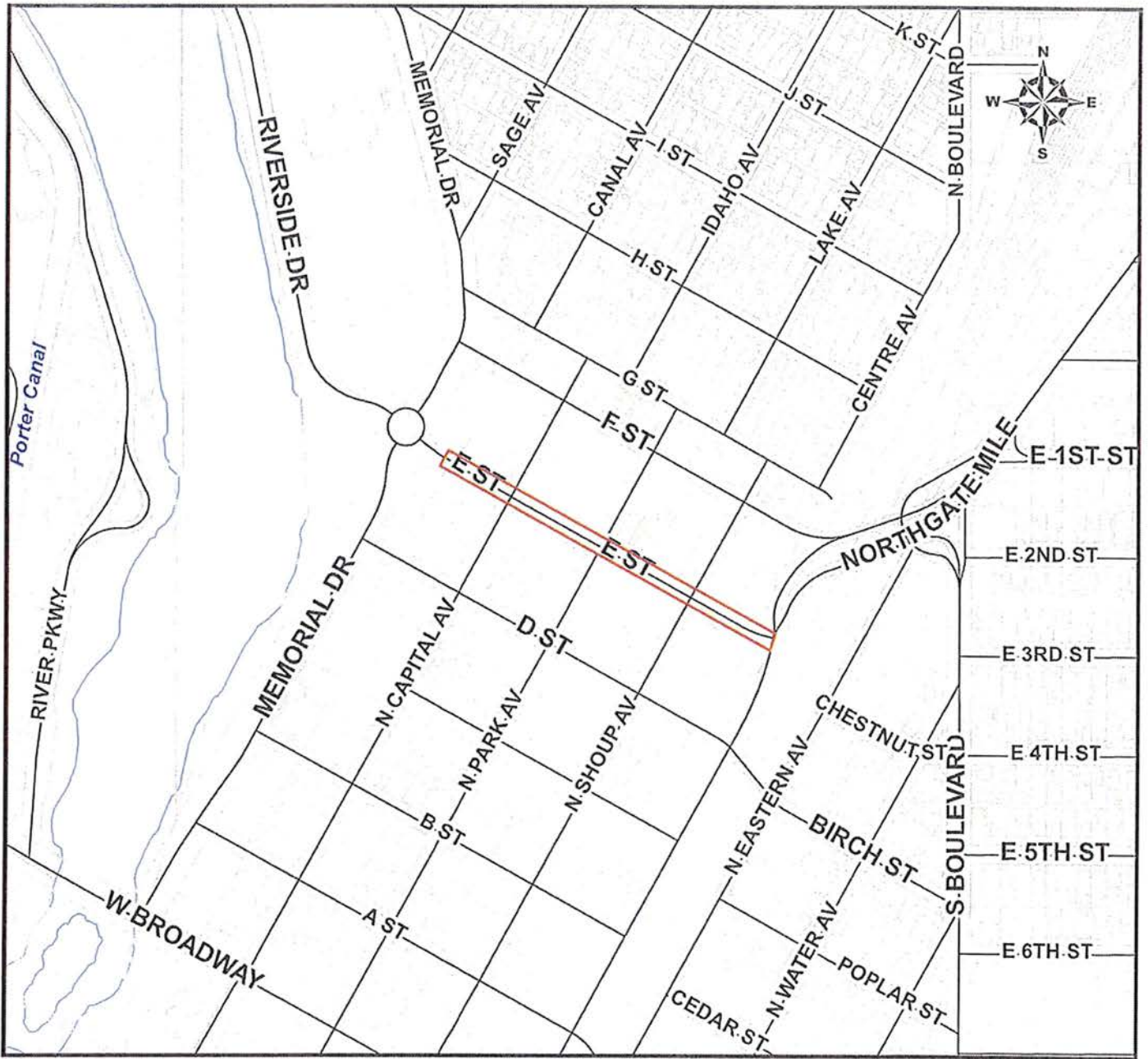
Is the project coordinated with other funding sources? **No**

What potential environmental impacts may require remediation? **None other than normal projects.**

E ST; Memorial to Yellowstone

APPENDIX A: VICINITY MAP

VICINITY MAP



1" = 500'

E ST RECONSTRUCTION

YELLOWSTONE AV TO MEMORIAL DR

BONNEVILLE COUNTY

CITY OF IDAHO FALLS

E ST; Memorial to Yellowstone

APPENDIX B: ITD 1150

Project Cost Summary Sheet



Round Estimates to Nearest \$1,000

Key Number	Project Number	Date
		2/25/2015
Location		District
E Street Reconstruction, Memorial Dr to Yellowstone Ave		6
Segment Code	Begin Mile Post	End Mile Post
4300		0.26
		Length in Miles
		0.26

	Previous ITD 1150	Initial or Revise To
1. Preliminary Engineering		\$280,000
2. Right-of-Way: Number of Parcels Number of Relocations		\$60,000
3. Utility Adjustments: <input type="checkbox"/> Work <input type="checkbox"/> Materials <input type="checkbox"/> By State <input type="checkbox"/> By Others		\$50,000
4. Earthwork		\$140,000
5. Drainage and Minor Structures		\$50,000
6. Pavement and Base		\$300,000
7. Railroad Crossing: Grade/Separation Structure _____ At-Grade Signals <input type="checkbox"/> Yes <input type="checkbox"/> No		
8. Bridges/Grade Separation Structures: <input type="checkbox"/> New Structure Location _____ Length/Width _____ <input type="checkbox"/> Repair/Widening/Rehabilitation Location _____ Length/Width _____		
9. Traffic Items (Delineators, Signing, Channelization, Lighting, and Signals)		\$340,000
10. Construction Traffic Control (Sign, Pavement Markings, Flagging, and Traffic Separation)		\$25,000
11. Detours		
12. Landscaping		\$30,000
13. Mitigation Measures		\$40,000
14. Other Items (Roadside Development, Guardrail, Fencing, Sidewalks, Curb and Gutter, C.S.S. Items)		\$190,000
15. Cost of Constructions (Items 3 through 14)		\$1,165,000
16. Mobilization 10 % of Item 15		\$117,000
17. Construction Engineer and Contingencies 20 % of Items 15 and 16		\$256,000
18. Total Construction Cost (15 + 16 + 17)		\$1,538,000
19. Total Project Cost (1 + 2 + 18)		\$1,878,000
20. Project Cost Per Mile		\$7,223,000

Prepared By:

K. Fugal

E ST; Memorial to Yellowstone

APPENDIX C: ITD 2435

Local Federal-Aid Project Request



Instructions

- Under Character of Proposed Work, mark appropriate boxes when work includes Bridge Approaches in addition to a Bridge.
- Attach a Vicinity Map showing the extent of the project limits.
- Attach an ITD 1150, Project Cost Summary Sheet.
- Signature of an appropriate local official is the only kind recognized.

Note: In Applying for a Federal-Aid Project, You are Agreeing to Follow all of the Federal Requirements Which Can Add Substantial Time and Costs to the Development of the Project.

Sponsor (City, County, Highway District, State/Federal Agency) Idaho Falls			Date 2/2/21		
Project Title (Name of Street or Road) E St; Memorial to Yellowstone		F.A. Route Number 004300	Project Length 0.26 mile		Bridge Length N/A
Project Limits (Local Landmarks at Each End of the Project) E St; Memorial to Yellowstone					
Character of Proposed Work (Mark Appropriate Items)					
<input checked="" type="checkbox"/> Excavation	<input checked="" type="checkbox"/> Bicycle Facilities	<input type="checkbox"/> Utilities		<input checked="" type="checkbox"/> Sidewalk	
<input checked="" type="checkbox"/> Drainage	<input checked="" type="checkbox"/> Traffic Control	<input checked="" type="checkbox"/> Landscaping		<input type="checkbox"/> Seal Coat	
<input checked="" type="checkbox"/> Base	<input type="checkbox"/> Bridge(s)	<input type="checkbox"/> Guardrail		<input type="checkbox"/>	
<input checked="" type="checkbox"/> Bit. Surface	<input checked="" type="checkbox"/> Curb & Gutter	<input checked="" type="checkbox"/> Lighting			
Estimated Costs (Attach ITD 1150, Project Cost Summary Sheet)					
Preliminary Engineering (ITD 1150, Line 1)		\$ 280,000			
Right-of-Way (ITD 1150, Line 2)		\$ 50,000			
Construction (ITD 1150, Line 18)		\$ 1,571,000			
Preliminary Engineering By: <input type="checkbox"/> Sponsor Forces <input checked="" type="checkbox"/> Consultant					
Checklist (Provide Names, Locations, and Type of Facilities)					
Railroad Crossing		N/A			
Within 2 miles of an Airport		N/A			
Parks (City, County, State or Federal)		N/A			
Environmentally Sensitive Areas		N/A			
Federal Lands (Indian, BLM, etc.)		N/A			
Historical Sites		N/A			
Schools		N/A			
Other		N/A			
Additional Right-of-Way Required: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor (1-3 Parcels) <input type="checkbox"/> Extensive (4 or More Parcels)					
Will any Person or Business be Displaced: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Possibly					

Standards	Existing	Proposed	Standards	Existing	Proposed
Number of Lanes	2	4	Roadway Width (Shoulder to Shoulder)	36 ft	45 ft
Pavement Type	Plantmix	Plantmix	Right-of-Way Width	60 ft	70 ft

Sponsor's Signature 		Title Asst. Public Works Director	
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Additional Information to be Furnished by the District

Functional Classification	Terrain Type	20	ADT/DHV
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E ST; Memorial to Yellowstone

APPENDIX D: Capacity Worksheets

Capacity Worksheet for Roadway Segments

Roadway Segment	E St.; Memorial to Yellowstone	Current	
Segment	4300		
Current/Model Year	2021	Adjusted from 2014 count data	
Functional Classification	Collector	https://static1.squarespace.com/static/5f4818ef31f0ff53d986ae65/t/5f909fe001f962385e5ebd7f/1603313637320/2040-LRTP.pdf	(see pages 8 and 9)
Number of Current/Future Lanes	2		
Capacity Threshold	10501		
Current/Projected Traffic Volume	9300	https://www.bmpo.org/traffic-counts	adjusted from the 2014 count
V/C Ratio	0.89		

Collector

One Lane	5251
Two Lanes	10501
Three Lanes	13001
Four Lanes	20501
Five Lanes	25001

Minor Arterial

Two Lanes	12501
Three Lanes	16001
Four Lanes	26001
Five Lanes	31001

Principal Arterial

Two Lanes	14001
Three Lanes	18501
Four Lanes	31001
Five Lanes	37001
Six Lanes	47001
Seven Lanes	56001

Freeway

Four Lanes	83001
Six Lanes	124001

Capacity Worksheet for Roadway Segments

Roadway Segment	E St.; Memorial to Yellowstone	No Build
Segment	4300	
Current/Model Year	2021	Adjusted from 2014 count data
Functional Classification	Collector	https://static1.squarespace.com/static/5f4818ef31f0ff53d986ae65/t/5f909fe001f962385e5ebd7f/1603313637320/2040-LRTP.pdf (see pages 8 and 9)
Number of Current/Future Lanes	2	
Capacity Threshold	10501	
Current/Projected Traffic Volume	11410	https://www.bmbo.org/traffic-counts based on 2040 projection from 2014 count
V/C Ratio	1.09	

Collector

One Lane	5251
Two Lanes	10501
Three Lanes	13001
Four Lanes	20501
Five Lanes	25001

Minor Arterial

Two Lanes	12501
Three Lanes	16001
Four Lanes	26001
Five Lanes	31001

Principal Arterial

Two Lanes	14001
Three Lanes	18501
Four Lanes	31001
Five Lanes	37001
Six Lanes	47001
Seven Lanes	56001

Freeway

Four Lanes	83001
Six Lanes	124001

Capacity Worksheet for Roadway Segments

Roadway Segment	E St.; Memorial to Yellowstone	Build	
Segment	4300		
Current/Model Year	2021	Adjusted from 2014 count data	
Functional Classification	Collector		https://static1.squarespace.com/static/5f4818ef31f0ff53d986ae65/t/5f909fe001f962385e5ebd7f/1603313637320/2040-LRTP.pdf (see pages 8 and 9)
Number of Current/Future Lanes	4		
Capacity Threshold	20501		
Current/Projected Traffic Volume	11410	https://www.bmpo.org/traffic-counts	based on 2040 projection from 2014 count
V/C Ratio	0.56		

Collector

One Lane	5251
Two Lanes	10501
Three Lanes	13001
Four Lanes	20501
Five Lanes	25001

Minor Arterial

Two Lanes	12501
Three Lanes	16001
Four Lanes	26001
Five Lanes	31001

Principal Arterial

Two Lanes	14001
Three Lanes	18501
Four Lanes	31001
Five Lanes	37001
Six Lanes	47001
Seven Lanes	56001

Freeway

Four Lanes	83001
Six Lanes	124001

E ST; Memorial to Yellowstone

APPENDIX D: Accident Worksheets & CMF's

Basic Intersection Crash Performance

Location:

E & Capital

Years:

2015-2020

Input Analysis Period (in years)

5

Input # Fatal Crashes at Intersection (Not # of Persons)

0

Input # of 'A' Severity Crashes at Intersection

0

Input # of 'B' Severity Crashes at Intersection

0

Input # of 'C' Severity Crashes at Intersection

0

Input # of Property Damage Crashes at Intersection

5

Input Average # of Vehicles Entering Intersection Daily*

3555

[Historical Crash Data - WebCARS Office of Highway Safety](#)

<https://www.bmpo.org/traffic-counts>

*Average number of vehicles entering intersection can be calculated by adding ADTs for all of the intersection legs, and then dividing that by 2. This assumes that directional split of the roadway for the average day is 50/50

Intersection Crash Rate (average 0.65) =

0.77

per million entering vehicles

Intersection Severity Rate (average 1.00) =

0.77

Intersection Crash Density (average 5.00) =

1.00

crashes per year

Crash Rate Score

3

Severity Rate Score

2

Crash Density Score

0

Overall Rate (average 1.33)

1.67

Basic Intersection Crash Performance

Location:

E & Park

Years:

2015-2020

Input Analysis Period (in years)

5

Input # Fatal Crashes at Intersection (Not # of Persons)

0

[Historical Crash Data - WebCARS Office of Highway Safety](#)

Input # of 'A' Severity Crashes at Intersection

0

Input # of 'B' Severity Crashes at Intersection

0

Input # of 'C' Severity Crashes at Intersection

3

Input # of Property Damage Crashes at Intersection

1

Input Average # of Vehicles Entering Intersection Daily*

4695

<https://www.bmpo.org/traffic-counts>

*Average number of vehicles entering intersection can be calculated by adding ADTs for all of the intersection legs, and then dividing that by 2. This assumes that directional split of the roadway for the average day is 50/50

Intersection Crash Rate (average 0.65) =

0.47

per million entering vehicles

Intersection Severity Rate (average 1.00) =

0.82

Intersection Crash Density (average 5.00) =

0.80

crashes per year

Crash Rate Score

1

Severity Rate Score

2

Crash Density Score

0

Overall Rate (average 1.33)

1.00

Basic Intersection Crash Performance

Location:

E & Shoup thru Yellowstone

Years:

2015-2020

Input Analysis Period (in years)

5

Input # Fatal Crashes at Intersection (Not # of Persons)

0

Input # of 'A' Severity Crashes at Intersection

0

Input # of 'B' Severity Crashes at Intersection

0

Input # of 'C' Severity Crashes at Intersection

4

Input # of Property Damage Crashes at Intersection

4

Input Average # of Vehicles Entering Intersection Daily*

4650

[Historical Crash Data - WebCARS Office of Highway Safety Crash Analysis Reporting System](#)

<https://www.bmpo.org/traffic-counts>

*Average number of vehicles entering intersection can be calculated by adding ADTs for all of the intersection legs, and then dividing that by 2. This assumes that directional split of the roadway for the average day is 50/50

Intersection Crash Rate (average 0.65) =

0.94

per million entering vehicles

Intersection Severity Rate (average 1.00) =

1.41

Intersection Crash Density (average 5.00) =

1.60

crashes per year

Crash Rate Score

3

Severity Rate Score

3

Crash Density Score

0

Overall Rate (average 1.33)

2.00

E St Accident reduction Crash Modification Factors

2/2/21

[CMF Clearinghouse >> Search Results](#)

▼ Countermeasure: Add two-way left-turn lane

Compare	CMF	CRF(%)	Quality	Crash Type	Crash Severity	Area Type	Reference	Comments
<input type="checkbox"/>	0.92	8	★☆☆☆☆	All	All		HOVEY AND CHOWDHURY, 2005	

[CMF Clearinghouse >> Search Results](#)

▼ Countermeasure: Install sidewalk

Compare	CMF	CRF(%)	Quality	Crash Type	Crash Severity	Area Type	Reference	Comments
<input type="checkbox"/>	1.78	-78	★★★★☆	Vehicle/bicycle		Urban	ALLURI ET AL., 2017	Minor Arterial, Major Collector, and ... [READ MORE]

[CMF Clearinghouse >> Search Results](#)

▼ Countermeasure: Install an additional lane

Compare	CMF	CRF(%)	Quality	Crash Type	Crash Severity	Area Type	Reference	Comments
<input type="checkbox"/>	0.76	24	★★★★☆	All	Fatal,Serious injury,Minor injury	Urban	DIXON ET AL., 2016	CMF applies to adding one ... [READ MORE]
<input type="checkbox"/>	0.75	25	★★★★☆	All	Fatal,Serious injury,Minor injury	Urban	DIXON ET AL., 2016	CMFs of adding one additional ... [READ MORE]
<input type="checkbox"/>	0.74	26	★★★★☆	All	Fatal,Serious injury,Minor injury	Urban	DIXON ET AL., 2016	CMFs of adding one additional ... [READ MORE]

E ST; Memorial to Yellowstone

APPENDIX E: Photos



E ST Existing Conditions



E St & Capital



E St & Park