

REQUEST FOR COUNCIL ACTION

SUBJECT: 7000 South Road Closure

SUMMARY: Approve a request by the Utah Department of Transportation to close 7000 South for the 7000 South Bangerter Highway intersection improvements.

FISCAL AND/OR ASSET IMPACT: No impact.

STAFF RECOMMENDATION:

Staff recommends approval of the UDOT's request for closing 7000 South.

MOTION RECOMMENDED:

I move to adopt Resolution No. 16-14 approving:

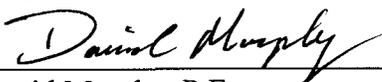
_____ Option A – Close 7000 South at Bangerter Highway, allowing right-turns to and from Bangerter Highway

_____ Option B – Eliminate all left-turns

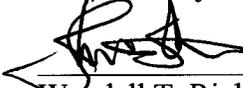
_____ Option C – Reduce capacity on 7000 South and close left turns from Bangerter Highway (7000 South remains open)

Roll Call vote required

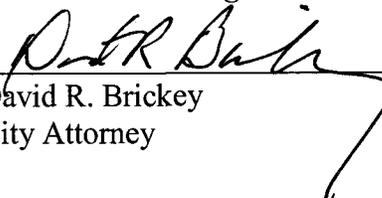
Prepared by:


David Murphy, P.E.
CIP Manager

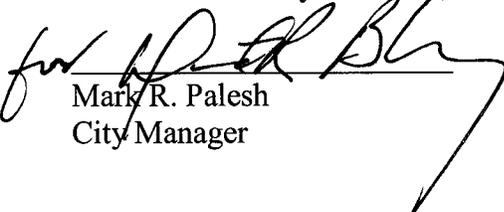
Reviewed by:

 STOKER FOR
Wendell T. Rigby, P.E.
Director of Public Works

Reviewed as to Legal Sufficiency:


David R. Brickey
City Attorney

Recommended by:


Mark R. Palesh
City Manager

BACKGROUND DISCUSSION:

UDOT staff, Horrocks Engineers, Inc. and City staff have been working for approximately one year to complete a State environmental clearance document, and preliminary engineering for the intersection of 7000 South and Bangerter Highway. As part of this process, and from City master plans, City utilities (sewer and water) have been identified that will need to be upgraded. In order to accommodate those upgrades as part of the project, UDOT is requesting that 7000 South, a City controlled street, be closed for short durations to accomplish both the City betterment work, and the bridge work as well.

A detailed presentation to be given by Horrocks Engineers, Inc. will detail three options for this closure. Of these options, staff recommends option A be selected. This is the shortest closure time of 60 days. The contractor can divide the 60 days into short closure blocks of time, anywhere from one day up to the full 60, until the full 60 days are used up. This is up to the Contractor's discretion. UDOT's goal is to have the intersection open by November 22, 2017.

As a reminder, significant time and money savings have been garnered during the 9000 South reconstruction project, and 5600 West widening project when limited closure time windows have been made available to the bidding contractors.

Attachments:

- Resolution
- 7000 South Closure Request

THE CITY OF WEST JORDAN, UTAH

A Municipal Corporation

RESOLUTION NO. 16-144

**A RESOLUTION AUTHORIZING STAFF TO IMPLEMENT OPTION A
FOR 7000 SOUTH ROAD CLOSURE**

Whereas, the City Council of the City of West Jordan has reviewed the options for the 7000 South Road Closure; and

Whereas, the City Council desires to recommend staff implement Option A.

NOW, THEREFORE, IT IS RESOLVED BY THE CITY COUNCIL OF WEST JORDAN, UTAH:

Section 1. Staff is hereby authorized and directed to implement Option A, closing 7000 South at Bangerter Highway and maintaining right turns to and from Bangerter Highway.

Section 2. This Resolution shall take effect immediately.

Adopted by the City Council of West Jordan, Utah, this 7th day of September 2016.

Kim V. Rolfe
Mayor

ATTEST:

MELANIE S. BRIGGS
City Recorder

Voting by the City Council	"AYE"	"NAY"
Council Member Dirk Burton	_____	_____
Council Member Jeff Haaga	_____	_____
Council Member Zach Jacob	_____	_____
Council Member Chris McConnehey	_____	_____
Council Member Chad Nichols	_____	_____
Council Member Sophie Rice	_____	_____
Mayor Kim V. Rolfe	_____	_____

THE CITY OF WEST JORDAN, UTAH

A Municipal Corporation

RESOLUTION NO. 16-144

**A RESOLUTION AUTHORIZING STAFF TO IMPLEMENT OPTION B
FOR 7000 SOUTH ROAD CLOSURE**

Whereas, the City Council of the City of West Jordan has reviewed the options for the 7000 South Road Closure; and

Whereas, the City Council desires to recommend staff implement Option B.

NOW, THEREFORE, IT IS RESOLVED BY THE CITY COUNCIL OF WEST JORDAN, UTAH:

Section 1. Staff is hereby authorized and directed to implement Option B to eliminate all left-turns at the intersection of 7000 South and Bangerter Highway.

Section 2. This Resolution shall take effect immediately.

Adopted by the City Council of West Jordan, Utah, this 7th day of September 2016.

Kim V. Rolfe
Mayor

ATTEST:

MELANIE S. BRIGGS
City Recorder

Voting by the City Council	"AYE"	"NAY"
Council Member Dirk Burton	_____	_____
Council Member Jeff Haaga	_____	_____
Council Member Zach Jacob	_____	_____
Council Member Chris McConnehey	_____	_____
Council Member Chad Nichols	_____	_____
Council Member Sophie Rice	_____	_____
Mayor Kim V. Rolfe	_____	_____

THE CITY OF WEST JORDAN, UTAH

A Municipal Corporation

RESOLUTION NO. 16-144

**A RESOLUTION AUTHORIZING STAFF TO IMPLEMENT OPTION C
FOR 7000 SOUTH ROAD CLOSURE**

Whereas, the City Council of the City of West Jordan has reviewed the options for the 7000 South Road Closure; and

Whereas, the City Council desires to recommend staff implement Option C.

NOW, THEREFORE, IT IS RESOLVED BY THE CITY COUNCIL OF WEST JORDAN, UTAH:

Section 1. Staff is hereby authorized and directed to implement Option C to reduce capacity on 7000 South and close left turns from Bangerter Highway, maintaining all traffic on 7000 South.

Section 2. This Resolution shall take effect immediately.

Adopted by the City Council of West Jordan, Utah, this 7th day of September 2016.

Kim V. Rolfe
Mayor

ATTEST:

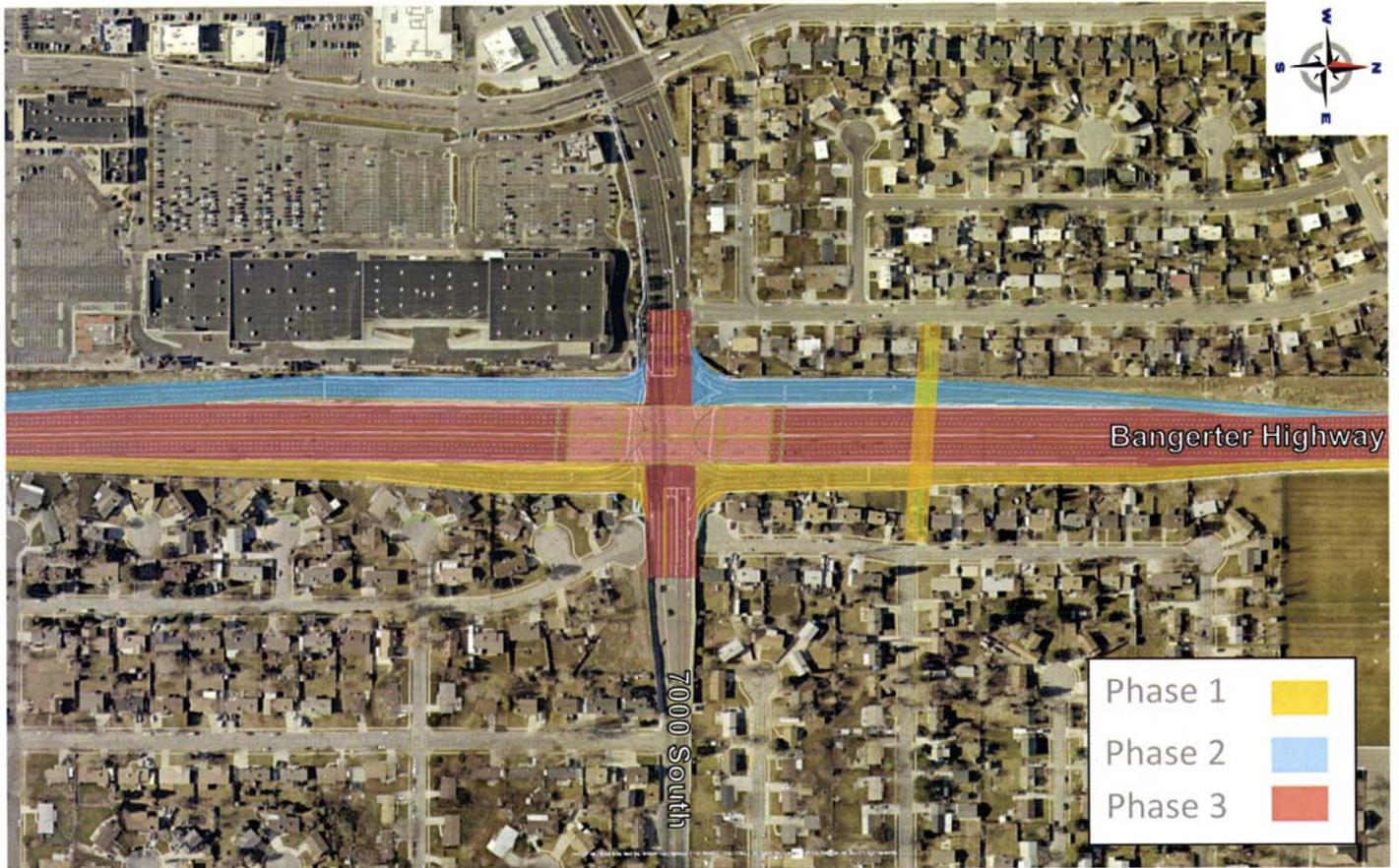
MELANIE S. BRIGGS
City Recorder

Voting by the City Council	"AYE"	"NAY"
Council Member Dirk Burton	_____	_____
Council Member Jeff Haaga	_____	_____
Council Member Zach Jacob	_____	_____
Council Member Chris McConnehey	_____	_____
Council Member Chad Nichols	_____	_____
Council Member Sophie Rice	_____	_____
Mayor Kim V. Rolfe	_____	_____

7000 South Closure Request

West Jordan City Council Meeting
September 7, 2016

7000 South Construction Phasing



Bangerter Hwy 7000 South MOT Phase 1

- Construction 
- Traffic 
- Aqueduct Conflict 



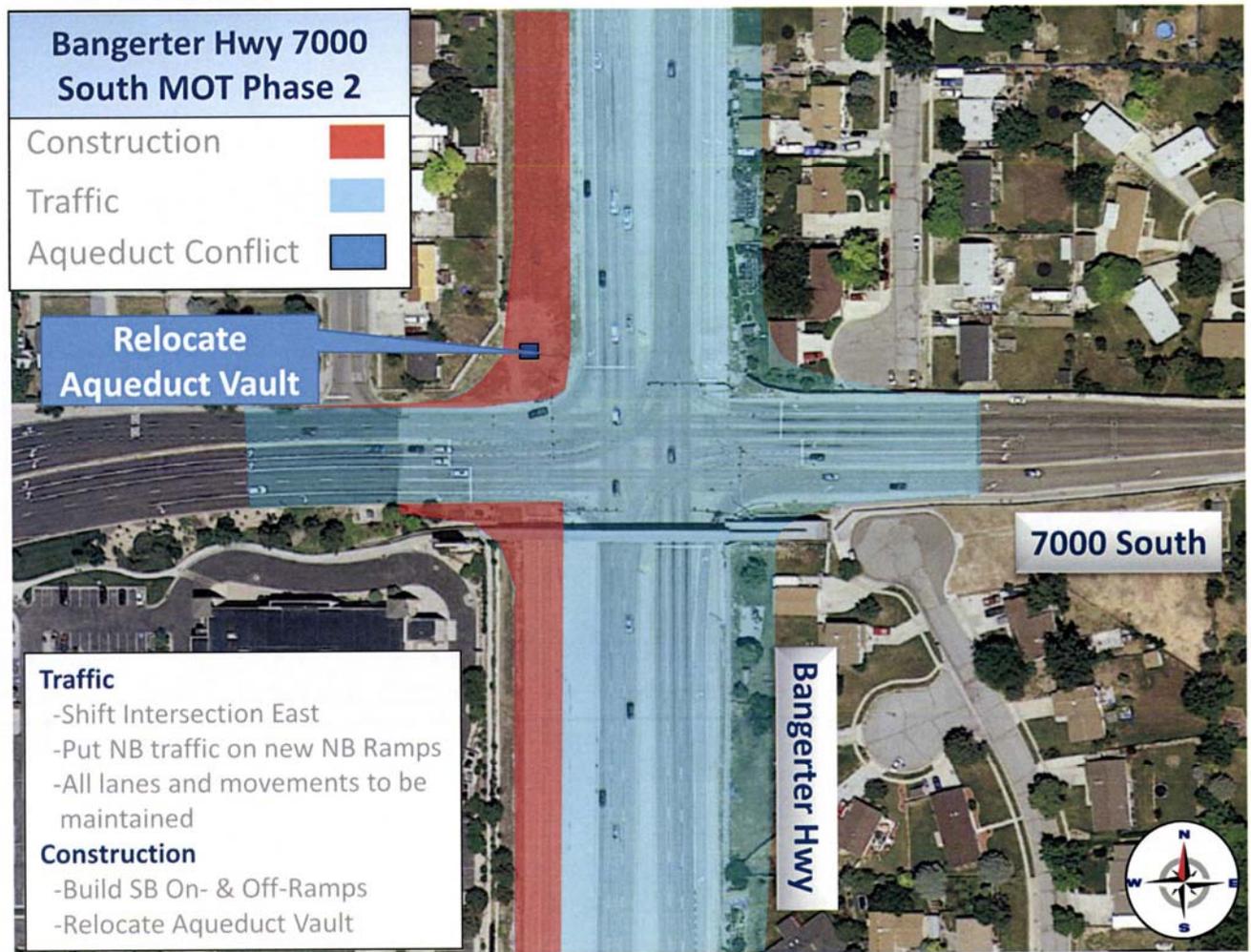
Pedestrian bridge to remain open until new bridge is complete

Traffic

- Remove CFI (reconfigure as conventional intersection)
- All lanes and movements to be maintained

Construction

- Build NB On- & Off-Ramps
- Construct new Pedestrian Bridge
- Remove existing Pedestrian Bridge

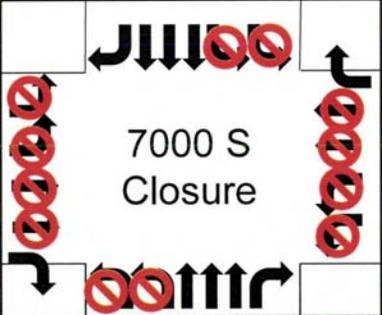
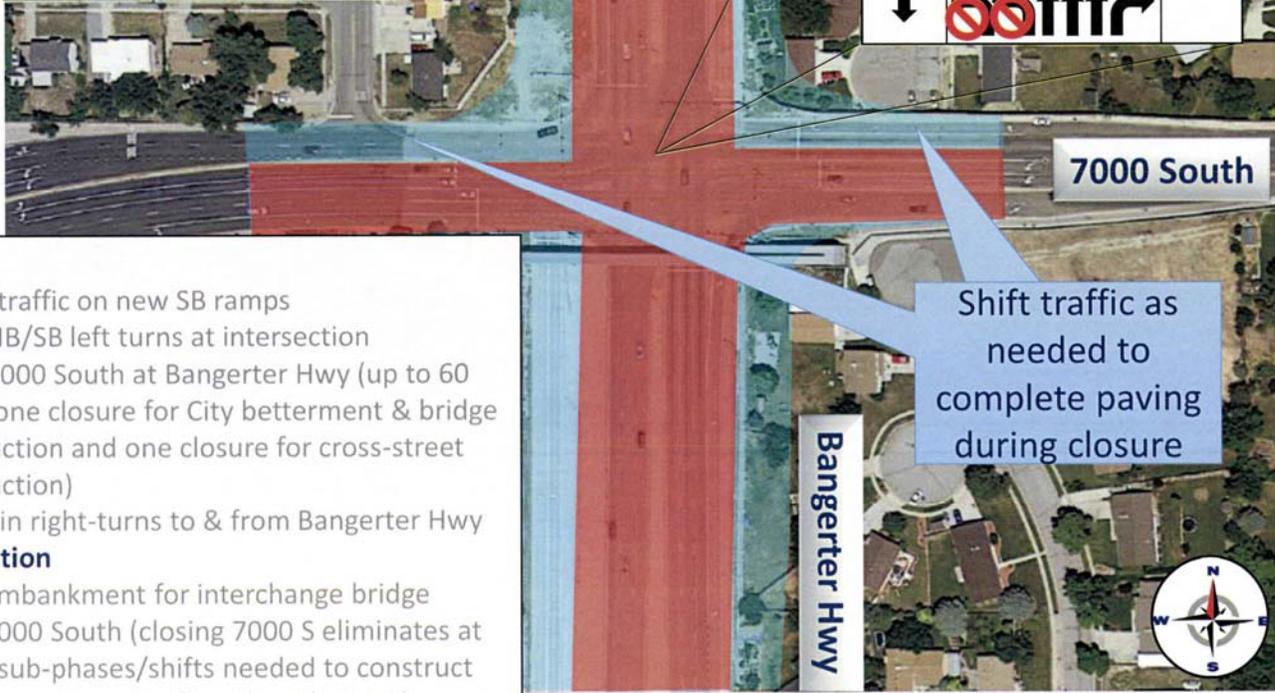


Phase 3 Options

- **Option A – Close 7000 South at Bangerter Hwy** (maintain right-turns to & from Bangerter Hwy)
- **Option B – Eliminate all left-turns**
- **Option C – Reduce capacity on 7000 South & close left turns from Bangerter Hwy** (maintain all movements on 7000 South)

Bangerter Hwy 7000 South MOT Phase 3 (Option A)

Construction ■
Traffic ■



Traffic

- Put SB traffic on new SB ramps
- Close NB/SB left turns at intersection
- Close 7000 South at Bangerter Hwy (up to 60 days – one closure for City betterment & bridge construction and one closure for cross-street construction)
- Maintain right-turns to & from Bangerter Hwy

Construction

- Build embankment for interchange bridge
- Build 7000 South (closing 7000 S eliminates at least 6 sub-phases/shifts needed to construct the intersection, significantly reducing the overall duration of construction)

Shift traffic as needed to complete paving during closure

Bangerter Hwy 7000 South MOT Phase 3 (Option A) Proposed Detour Routes



Phase 3 Option A – Full Closure (Estimated Completion October 2017)

Pros

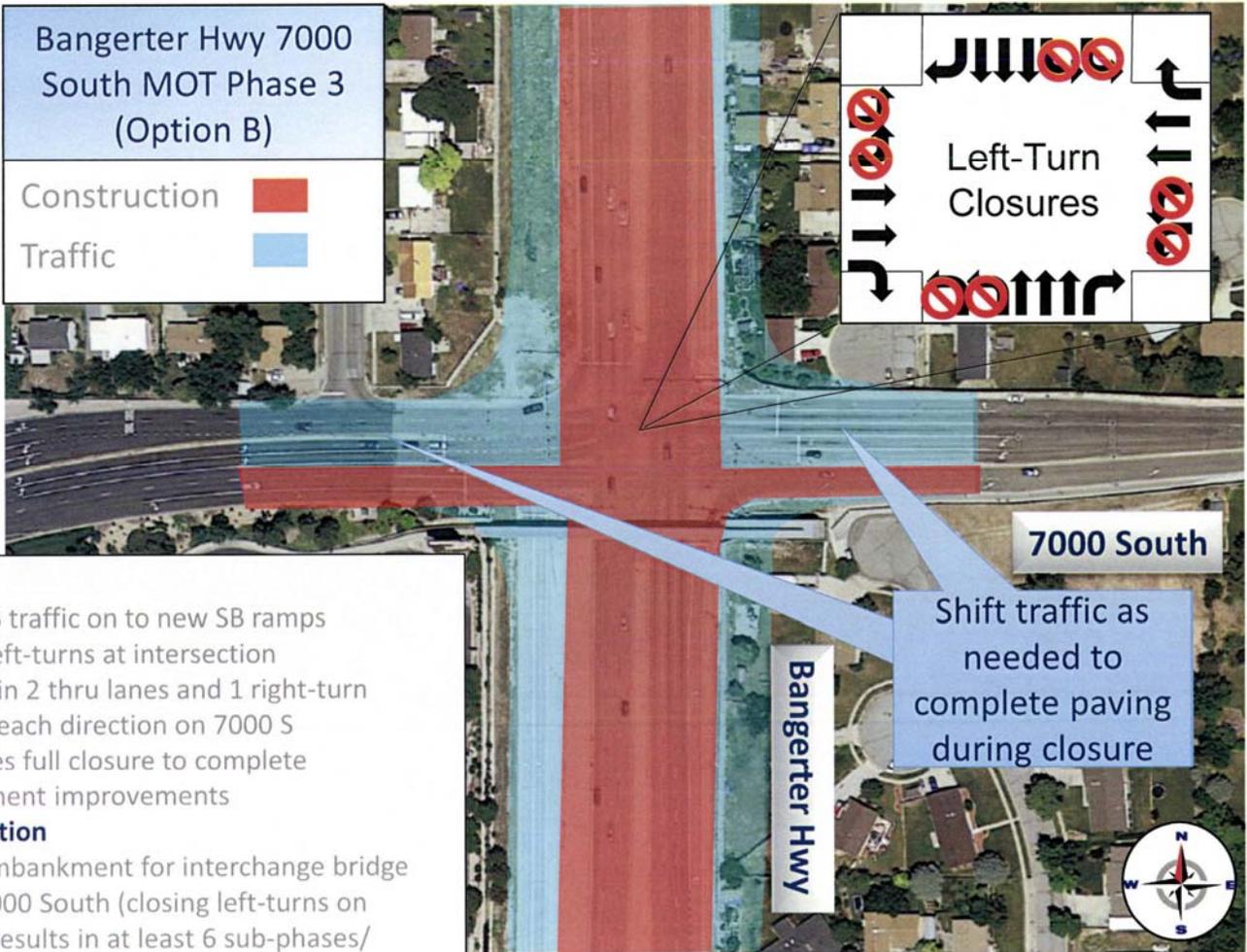
- Significantly reduces overall duration by as much as 3 to 6 weeks (a full closure of up to 60 Days can be used at the contractor's discretion)
- Maintains all right-turns to & from Bangerter Hwy
- Coincides with anticipated full closures of 7000 South for City's water line project to the east
- Eliminates conflicts & enhances safety for workers and the general public
- Benefits the City's proposed betterment improvements by minimizing costs and construction impacts

Cons

- Increases traffic on the surrounding area (Center Park Dr, 6200 South, 7800 South, etc.)
- Increases emergency response times by approx. 3 minutes for area east of Bangerter Hwy

Bangerter Hwy 7000
South MOT Phase 3
(Option B)

Construction ■
Traffic ■



Traffic

- Shift SB traffic on to new SB ramps
- Close left-turns at intersection
- Maintain 2 thru lanes and 1 right-turn lane in each direction on 7000 S
- Requires full closure to complete betterment improvements

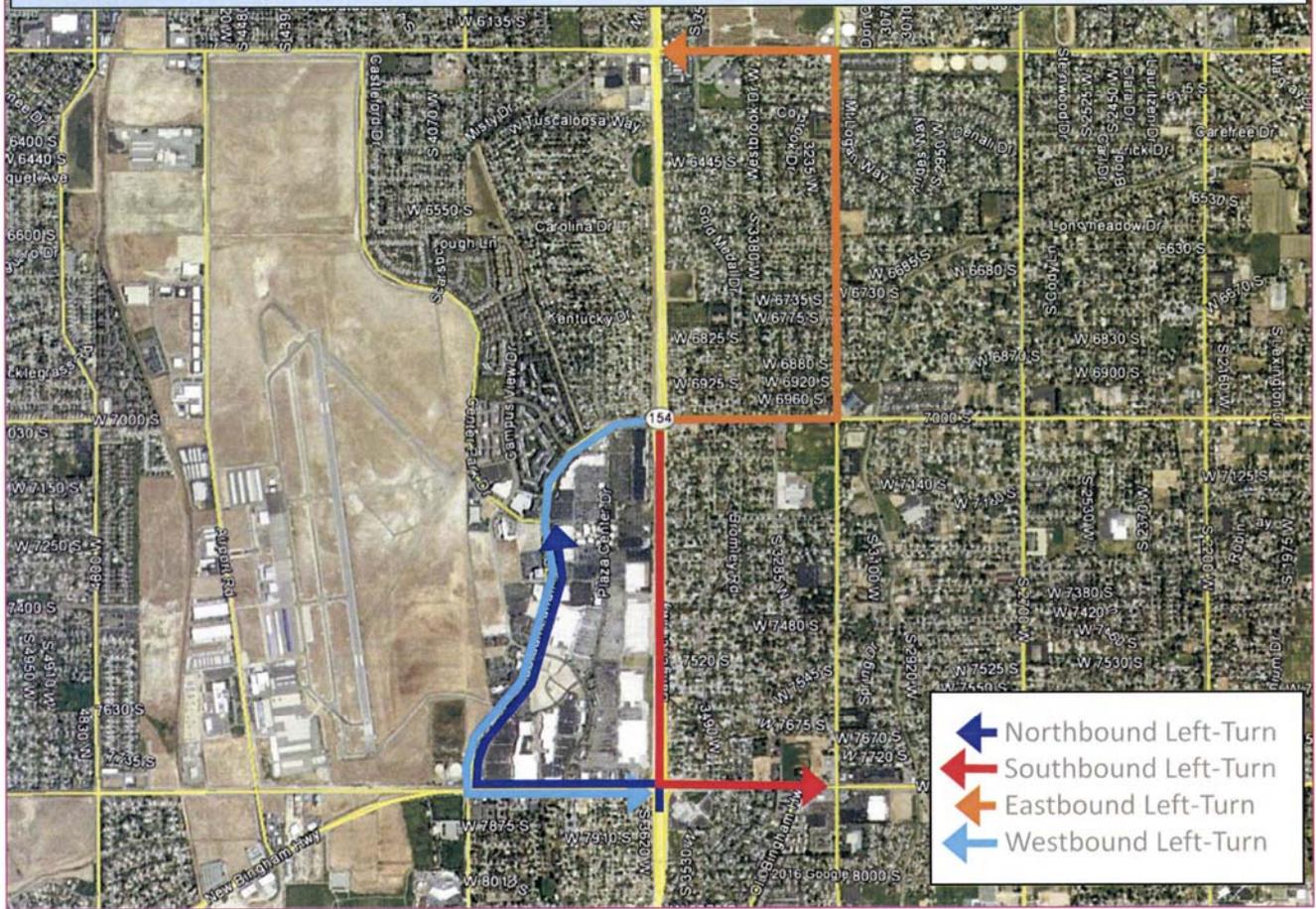
Construction

- Build embankment for interchange bridge
- Build 7000 South (closing left-turns on 7000 S results in at least 6 sub-phases/shifts needed to construct the intersection)

Shift traffic as needed to complete paving during closure



Bangerter Hwy 7000 South MOT Phase 3 (Option B) Proposed Detour Routes



Phase 3 Option B – Left Closures (Estimated Completion November 2017)

Pros

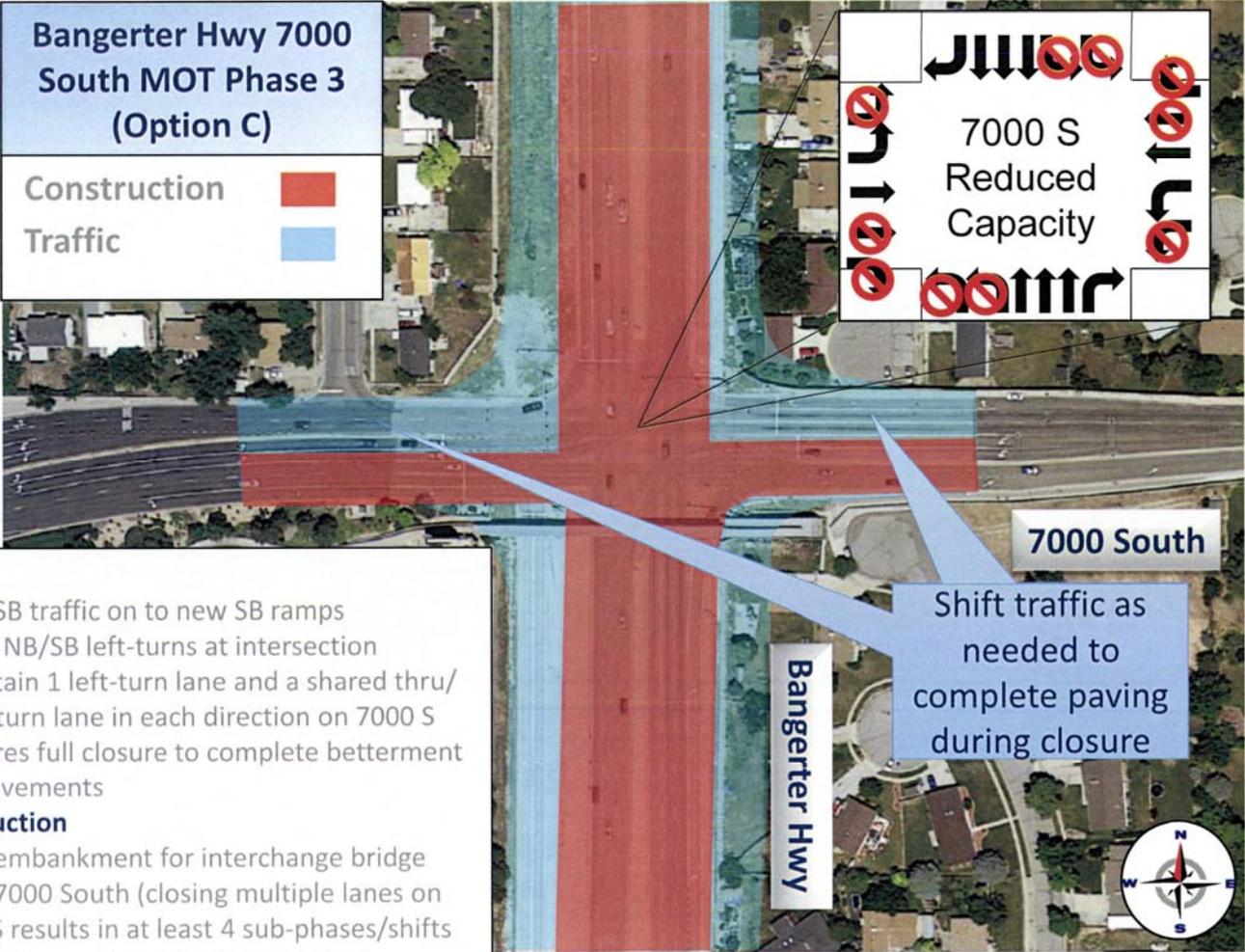
- Maintains through & right-turn movements on 7000 South
- Provides the most capacity within the intersection during construction
- Eliminates the left-turn phasing within the intersection will allow the intersection to operate at a more acceptable level of congestion (LOS E)

Cons

- Requires detour for left-turn movements
- Necessitates at least 6 different sub-phases/traffic shifts to reconstruct pavement through the intersection
- Increases duration of construction by 3 to 6 weeks
- Results in work zones between traffic movements
- Full closure is necessary to provide adequate space for bore pits needed to install City betterments
- Requires construction 24/7 to meet schedule

Bangerter Hwy 7000 South MOT Phase 3 (Option C)

Construction ■
Traffic ■



Traffic

- Shift SB traffic on to new SB ramps
- Close NB/SB left-turns at intersection
- Maintain 1 left-turn lane and a shared thru/right-turn lane in each direction on 7000 S
- Requires full closure to complete betterment improvements

Construction

- Build embankment for interchange bridge
- Build 7000 South (closing multiple lanes on 7000 S results in at least 4 sub-phases/shifts needed to construct the intersection)

Shift traffic as needed to complete paving during closure

Bangerter Hwy 7000 South MOT Phase 3 (Option C) Proposed Detour Routes



Phase 3 Option C – 7000 South Reduced Capacity (Estimated Completion November 2017)

Pros

- Maintains all movements on 7000 South
- Detours only necessary for the northbound & southbound left-turn closures
- Results in fewer sub-phases (4 vs. 6) compared to Option B

Cons

- Results in heavy congestion on 7000 South (Level of Service F) during construction
- Requires at least 4 different sub-phases/traffic shifts to reconstruct pavement through the intersection compared to Option A
- Increases duration of construction by 3 to 6 weeks
- Requires construction 24/7 to meet schedule
- Full closure is necessary to provide adequate space for bore pits needed to install City betterments

Summary of Phase 3 Options

Closure Option	Closure Duration	Anticipated Completion Date	Movements Closed	Max Detour Length (Extra Travel Time)
Option A – Full Closure	60 Days Total (at contractor’s discretion)	October 2017	NB & SB Lefts EB & WB Thru & Left (Rights Open)	EB Thru – 3 Miles (~7 Minutes)
Option B – Left-Turn Closures	Approx. 120 Days	November 2017	All Left-turns*	SB Left – 2 Miles (~4 Minutes)
Option C – 7000 S Reduced Capacity	Approx. 120 Days	November 2017	NB & SB Lefts (Reduced Capacity on 7000 S – LOS F)*	SB Left – 2 Miles (~4 Minutes) WB Thru – (5+ Minutes)

*Options B & C require a full closure to construct City betterments.

Questions