

STATE ENVIRONMENTAL STUDY





BANGERTER HIGHWAY AT 13400 SOUTH INTERCHANGE IMPROVEMENTS

STATE ENVIRONMENTAL STUDY

PIN: 18808

Project Number: S-0154(92)0

Prepared For: Utah Department of Transportation

Prepared By: HDR

Date: March 2022

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PIN: 18808 March 2022

Environmental Study

Project Name: Bangerter Highway at 13400 South Interchange Improvements

PIN: 18808

Project Number: S-0154(92)0 Prepared by: **Amy Croft, HDR**

For guidance in preparing this environmental study, refer to Chapter 4 of the UDOT **Environmental Process Manual of Instruction.**

REQUIRED SIGNATURES STATE FUNDED PROJECTS

As a result of this Environmental Study, UDOT finds that this project will NOT cause significant environmental impacts.

Recommended by Brandon Weston: 3 Mod.

UDOT Environmental Services Director

Approved by Ben Huot:

UDOT Program Development Director

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1. PURPOSE AND NEED FOR ACTION

The Utah Department of Transportation (UDOT) is conducting a State Environmental Study (SES) to analyze improvements at the Bangerter Highway (State Route 154) and 13400 South intersection in Riverton, Utah.

During the current (2021) AM and PM peak periods, drivers waiting at this intersection experience an average delay of 58 and 64 seconds, respectively. These delay conditions are both classified as level of service (LOS) E.

If no operational improvements are made at the Bangerter Highway and 13400 South intersection, traffic modeling indicates that, by 2050, this intersection would operate at LOS F during the AM peak and PM peak periods, and delays would exceed 180 seconds per vehicle. Additionally, traffic modeling indicates that, by 2050, long queues of vehicles stopped at the Bangerter Highway and 13400 South intersection would extend back through adjacent intersections on 13400 South (4050 West, Market Center Drive, and Hamilton View Road), causing these intersections to also operate at LOS F during at least one peak period. For additional details, see the *Bangerter Highway & 13400 South Existing and 2050 No Build Traffic Analysis* and the *Bangerter Highway & 13400 South Future Build Traffic Analysis* in Appendix B.

The primary purpose of the project is to alleviate congestion and improve traffic operations and mobility at the Bangerter Highway and 13400 South intersection.

2. DESCRIPTION

UDOT is proposing to construct a grade-separated, single-point urban interchange (SPUI) at the existing intersection of Bangerter Highway and 13400 South. The new interchange would allow unimpeded traffic flow on Bangerter Highway and is projected to operate at LOS D in 2050. For more information, see the *Bangerter Highway & 13400 South Future Build Traffic Analysis* in Appendix B. The project study area is along Bangerter Highway from milepost 4.9 to 6.5 and along 13400 South between 3700 West and 4100 West (see the *Study Area Map* in Appendix A).

Project work for the Proposed Action includes shifting Bangerter Highway to the west and constructing a grade-separated interchange at Bangerter Highway and 13400 South as well as the associated on- and off-ramps. Project work would also include minor widening and restriping on 13400 South to accommodate the turn lanes for the new grade-separated interchange; modifying utilities and storm drainage; and installing new pavement, traffic signals, advanced traffic management systems (ATMS) equipment, and roadway signs. These improvements would improve traffic flow and safety on Bangerter Highway and 13400 South.

When funding is available, project work might also include adding a dual northbound off-ramp, extending the southbound on-ramp east of 3600 West, constructing auxiliary lanes between the 13400 South northbound on-ramp and the 12600 South northbound off-ramp, and constructing auxiliary lanes between the 12600 South southbound on-ramp and the 13400 South southbound off-ramp. A noise wall would be added on the east side of Bangerter Highway from about 13650 South to 13750 South near the clear zone for northbound Bangerter Highway traffic and across the bridge that spans 3600 West if the auxiliary lanes are constructed. This wall would be constructed only when funding is available for the extension of the northbound off-ramp and southbound on-ramp east of 3600 West and approved balloting.

There are three options for the Proposed Action's grade-separated interchange:

Bangerter Highway Over Option. The vertical alignment for 13400 South would stay at the existing grade, and Bangerter Highway would go over 13400 South above the existing grade.

Bangerter Highway Under Option. The vertical alignment for 13400 South would be at the existing grade, and Bangerter Highway would go under 13400 South below the existing grade.

Bangerter Highway Hybrid Option. The vertical alignment for 13400 South would be lower than the existing grade, and Bangerter Highway would go over 13400 South above the existing grade. Both Bangerter Highway and 13400 South would be at lower elevations compared to the Bangerter Highway Over Option.

The decision regarding which grade-separated interchange is selected will be made at a later date based on funding and coordination with Riverton City. Once a decision is made, UDOT will communicate this decision using various outreach channels. Expected impacts to environmental resources are discussed separately in this SES if there are differences among the three options. See the *Bangerter Highway at 13400 South Alternatives Memo* in Appendix B for detailed information regarding the process of determining the selected alternative and options.

3. PUBLIC HEARING/OPPORTUNITY FOR PUBLIC HEARING

Yes	This project could result in public controversy or substantial impacts to adjacent

properties, or substantially changes roadway geometry.

No There are significant social, economic, environmental, or other effects. If YES, a

Categorical Exclusion is not applicable. Consult with UDOT Central Environmental

Services.

Yes UDOT/FHWA has determined that a public hearing is in the public interest.

If the answer to ANY of the above questions is YES, a public hearing or opportunity for a public hearing is required (attach documentation identifying date and location of hearing, summary of comments, and responses to substantial comments, or include certification of opportunity for hearing).

The following types of public involvement have been provided:

Yes Public Hearing in accordance with state and federal procedures

No Opportunity for Public Hearing

Yes Open House

Yes Other: Project-specific scoping meetings, website, email, hotline, neighborhood

and business meetings, and reoccurring meetings with Riverton City and Jordan

School District.

Yes Documentation is attached identifying the date and location of hearing, summary

of comments, and responses to substantial comments; or the Certification of

Opportunity for a Hearing is attached.

Comments: Public scoping meeting opportunities were held online via a Zoom webinar July 13, 2021, from 6 to 7 PM and in person at South Hills Middle School (13508 S. 4000 W. in Riverton) on July 14, 2021, from 6 to 7:30 PM. A total of 28 comments were received during the comment period. Legal notices were published in accordance with Utah Administrative Code Rule R930-2 and UDOT's *Environmental Manual of Instruction*. See the *Bangerter Highway at 13400 South Public Scoping Report* in Appendix C.

A neighborhood meeting was held in person at South Hills Middle School (13508 South 4000 West in Riverton) on December 9, 2021, from 6:00 to 7:00 PM. Invitees included both commercial and residential property owners whose properties might be affected by the project to build a grade-separated interchange. Notices for the meeting were posted on the project website and hand delivered.

Public hearing opportunities were held in person at South Hills Middle School (13508 South 4000 West in Riverton) on January 19, 2022, from 6:00 to 7:30 PM and online via a Zoom webinar January 20, 2022, from 6:00 to 7:00 PM. A total of 35 comments were received during the comment period from January 17, 2022, to February 15, 2022. Legal notices were published in accordance with Utah Administrative Code Rule R930-2 and UDOT's *Environmental Manual of Instruction*. See the *Bangerter Highway at 13400 South Public Meeting Report* in Appendix C. A summary of the public hearing documentation and responses to comments is included with this report.

4. RIGHT-OF-WAY

Yes Acquisition of right-of-way is required.

No The right-of-way required is significant because of its size, location, use, or

relationship to remaining property and abutting properties. (If the right-of-way required is significant, the project does not qualify as a Categorical Exclusion).

Comments: The Proposed Action would require acquiring right-of-way from properties along Bangerter Highway. The amount of right-of-way acquisition required for each option is described below. Temporary and permanent right-of-way easements are not included in the descriptions below.

Bangerter Highway Over Option. The approximate amount of right-of-way acquisition required for the Bangerter Highway Over Option is 14.53 acres, which would affect 15 parcels. This includes 14 partial property acquisitions (2 residential properties, 11 commercial properties, and 1 park/open space property) and 1 full property acquisition (commercial).

Bangerter Highway Under Option. The approximate amount of right-of-way acquisition required for the Bangerter Highway Under Option is 19.43 acres, which would affect 15 parcels. This includes 14 partial property acquisitions (2 residential properties, 11 commercial properties, and 1 park/open space property) and 1 full property acquisition (commercial).

Bangerter Highway Hybrid Option. The approximate amount of right-of-way acquisition required for the Bangerter Highway Hybrid Option is 15.59 acres, which would affect 15 parcels. This includes 14 partial property acquisitions (2 residential properties, 11 commercial properties, and 1 park/open space property) and 1 full property acquisition (commercial).

Temporary construction easements and perpetual easements have been identified and are shown on the *Bangerter Highway Over Option Map*, the *Bangerter Highway Under Option Map*, and the *Bangerter Highway Hybrid Option Map* in Appendix A.

More information regarding the location of right-of-way acquisitions for each option is provided in the *Bangerter Highway Over Option Map*, the *Bangerter Highway Under Option Map*, and the *Bangerter Highway Hybrid Option Map* in Appendix A.

5. CULTURAL

According to the UDOT Region NHPA/NEPA Specialist and/or the Architectural Historian, the Finding of Effect for the project is one of the following:

Yes No historic properties affected

N/A No adverse effect

N/A Adverse effect

Project documentation for determination of eligibility and finding of effect consists of one of the following and is attached:

Yes Memo from UDOT Region NEPA/NHPA Specialist and/or Architectural Historian

stating a finding of No Historic Properties Affected.

N/A SHPO concurrence with the Determinations of Eligibility and Finding of Effect AND

memo from UDOT Region NEPA/NHPA Specialist and/or Architectural Historian

stating a finding of No Adverse Effect or Adverse Effect.

Yes Have letters for Native American Consultation been sent? Attach letters.

No Have letters for federal and state agencies, CLGs, historical societies, etc. been

sent? If so attach letters.

No Do the impacts to historic properties require mitigation?

If YES, a signed Memorandum of Agreement (MOA) is attached.

Comments: Native American consultation was initiated through letters sent to the Eastern Shoshone Tribe of the Wind River Reservation, Shoshone-Bannock Tribes, Paiute Indian Tribe of Utah, Northwestern Band of Shoshone Nation, Uintah and Ouray Ute Tribes, and Skull Valley Band of Goshute Indians (sent September 9, 2021). In addition, notification was also sent to those tribes with whom

UDOT has Section 106 Programmatic Agreements: Cedar Band of Paiutes, Shivwits Band of Paiute Indian Tribe, and Confederated Tribes of the Goshute Reservation (sent September 9, 2021). To date, none of the tribes have responded to these notifications. Any future comments will be addressed. See the *Cultural and Paleontological Clearance with Tier 1 Screening Form* and the *Tribal Notification Form* in Appendix D.

6. PALEONTOLOGICAL

Yes

This project is one of the 16 types of projects listed in Stipulation III of the Memorandum of Understanding (MOU) with the Utah Geological Survey (UGS) that has no effect on paleontological resources and does not require notification to the UGS. If YES, a memo from the UDOT Region NEPA/NHPA Specialist is attached (can be included in cultural memo).

For all other projects, the UGS has been notified and has responded with the following (attach UGS letter and memo from the UDOT Region NEPA/NHPA Specialist):

N/A There are no known paleontological localities in the area of potential effects and

the formations in the project area have a low potential for containing fossil

remains (Class 1 or 2).

N/A Fossil-bearing formations (Class 3-5) and/or known paleontological localities are

present in the area of potential effects, but the UDOT Region NEPA/NHPA Specialist (or paleontologist) has determined that they will not be affected by the

project.

N/A Fossil-bearing formations (Class 3-5) and/or known paleontological localities are

present in the area of potential effects and may be affected by construction activities. A survey and/or monitoring by a qualified paleontologist is required.

Comments: See the Utah Geological Survey Letter in Appendix D.

7. THREATENED, ENDANGERED, OR CANDIDATE SPECIES

For Federally or State Funded Projects:

Yes Project will have "no effect" to T&E species, or their critical habitats, protected

under the Endangered Species Act. If YES, attach "no effect" memo or

review/comments (in the case of local government projects) from UDOT's Wildlife

Biologist.

No Project "may affect, but is not likely to adversely affect" T&E species, or their

critical habitats, protected under the Endangered Species Act. If YES, attach BA and

"concurrence" from the U.S. Fish and Wildlife Services (USFWS). List all

mitigation/conservation measures.

No Project "may affect, and is likely to adversely affect" threatened and endangered

species, or their critical habitats, protected under the Endangered Species Act. If

YES, attach BA and USFWS BO. List all mitigation/conservation measures.

No The USFWS has issued a "jeopardy" opinion regarding this project. If YES, attach

BA and BO as above. This project cannot go forward without being reconsidered.

Comments: See the *UDOT Threatened and Endangered Species and Wildlife Concurrence Memo* and the *Biological Resources Evaluation Memo* in Appendix D.

8. WILDLIFE

No Project has the potential to affect state-sensitive species, important wildlife

habitat, big game migration routes, habitat connectivity, migratory birds, or fish

spawning habitat or fish passage.

Comments: See the *UDOT Threatened and Endangered Species and Wildlife Concurrence Memo* and the *Biological Resources Evaluation Memo* in Appendix D.

9. INVASIVE SPECIES

If the project involves earthwork, grading or landscaping, there is potential to introduce or spread invasive weed species.

Yes Based upon location, this project has the potential to introduce or spread invasive

species included on the noxious weed list of the State of Utah and the county

noxious weed lists.

Comments: The project includes earthwork, which has the potential to introduce noxious weeds. See Mitigation Commitments.

10. NOISE

Projects that may affect noise levels to adjacent receptors include changes in roadway alignment, roadway widening and the addition of traffic lanes.

Yes This project has the potential to increase noise to adjacent receptors.

Yes A noise study is attached.

Comments: This project is considered a Type I project that requires a noise study due to the construction of a new interchange and supporting auxiliary lanes (if funding is available). Results from the noise study for each option are summarized below. Detailed information is provided in the *Noise Study* in Appendix D.

Bangerter Highway Over Option. Overall, noise levels with the Bangerter Highway Over Option would range from 53 to 73 A-weighted decibels (dBA) compared to the existing conditions of 49 to 71 dBA. With the Bangerter Highway Over Option, 78 of the 168 receptors would have traffic noise impacts (they

would exceed noise-abatement criteria). None of the receptors would have future worst-case noise levels greater than or equal to an increase of 10 dBA over the existing noise level.

Two noise walls were evaluated along Bangerter Highway where noise impacts would occur with the Bangerter Highway Over Option. One noise wall was found to be both feasible and reasonable and met the requirements of UDOT's Noise Abatement Policy. This noise wall would be on the east side of Bangerter Highway from about 13650 South to 13750 South near the clear zone for northbound Bangerter Highway traffic and across the bridge that spans 3600 West. The wall would be about 2,119 feet long, 14 feet high on ground, and 6 feet high on structure.

Bangerter Highway Under Option. Overall, noise levels with the Bangerter Highway Under Option would range from 53 to 73 dBA compared to the existing conditions of 49 to 71 dBA. With the Bangerter Highway Under Option, 65 of the 168 receptors would have traffic noise impacts (they would exceed noise-abatement criteria). None of the receptors would have future worst-case noise levels greater than or equal to an increase of 10 dBA over the existing noise level.

Two noise walls were evaluated along Bangerter Highway where noise impacts would occur with the Bangerter Highway Under Option. One noise wall was found to be both feasible and reasonable and met the requirements of UDOT's Noise Abatement Policy. This noise wall would be on the east side of Bangerter Highway from about 13650 South to 13750 South near the clear zone for northbound Bangerter Highway traffic and across the bridge that spans 3600 West. The wall would be about 2,119 feet long, 18 feet high on ground, and 6 feet high on structure.

Bangerter Highway Hybrid Option. Overall, noise levels with the Bangerter Highway Hybrid Option would range from 53 to 74 dBA compared to the existing conditions of 49 to 71 dBA. With the Bangerter Highway Hybrid Option, 54 of the 168 receptors would have traffic noise impacts (they would exceed noise-abatement criteria). None of the receptors would have future worst-case noise levels greater than or equal to an increase of 10 dBA over the existing noise level.

Two noise walls were evaluated along Bangerter Highway where noise impacts would occur with the Bangerter Highway Hybrid Option. One noise wall was found to be both feasible and reasonable and met the requirements of UDOT's Noise Abatement Policy. This noise wall would be on the east side of Bangerter Highway from about 13650 South to 13750 South near the clear zone for northbound Bangerter Highway traffic and across the bridge that spans 3600 West. The wall would be about 2,119 feet long, 18 feet high on ground, and 6 feet high on structure.

In summary, one noise wall was found to be both feasible and reasonable and met the requirements of UDOT's Noise Abatement Policy. This noise wall would be located on the east side of Bangerter Highway from about 13650 South to 13750 South near the clear zone for northbound Bangerter Highway traffic and across the bridge that spans 3600 West. This noise wall applies to all three options. In accordance with UDOT's Noise Abatement Policy, the construction of a noise wall will require future balloting during the final design phase. Balloting for and construction of a noise wall would occur only when funding is available for the extension of the northbound off-ramp and southbound on-ramp east of 3600 West. See *Mitigation Commitments*.

11. WETLANDS, WATER RESOURCES, STORM WATER, AND FLOODPLAINS

Wetlands and Water Resources

NoThe project is a type that does not have the potential to affect or cross Waters of

the United States. If YES, no concurrence letter is needed.

Yes Project affects waters of the United States (e.g. wetlands, mudflats, lakes, or

perennial or ephemeral streams). If NO, have a UDOT Landscape Architect provide a concurrence letter stating they agree with the determination. In order to indicate "NO" on this question, answers to the following statements must also be

"NO".

Yes Project impacts perennial, intermittent, or ephemeral streams that have a

riparian vegetation component. If YES, a Programmatic General Permit 40 (PGP40), also known as a Stream Alteration Permit, from the Utah Division

of Water Rights will be required.

Yes Project exceeds the impact limitation for streams or washes identified in

the PGP40. If YES, both a PGP40 and a separate Department of the Army

permit will be required.

No Project impacts an ephemeral wash not captured under PGP40 that has an

ordinary high water mark (OHWM) with a connected flow to a downstream Traditional Navigable Water and the impact below the

OHWM exceeds 1/10 of an acre per crossing. If YES, a Department of Army

permit will be required.

No Project impacts a perennial or intermittent stream below the OHWM less

than 1/10 of an acre per crossing. If YES, notification to the U.S. Army

Corps of Engineers will be required.

No Project impacts navigable waters of the United States (Lake Powell,

Flaming Gorge Reservoir, Bear Lake, Green River – mouth to 20 miles above Green River Station, Colorado River - mouth of Castle Creek to Cataract Canyon - 4.5 miles below mouth of Green River) below the OHWN. If YES, a Section 10 Department of the Army permit will be

required.

No Project impacts jurisdictional wetlands. If YES, a Department of Army

Nationwide Permit (NWP) will be required for wetland impacts under the 1/2 acre threshold; a Letter of Permission (LOP) will be required for wetland impacts between 1/2 and 1 acre; an Individual Permit (IP) will be

required for impacts greater than 1 acre.

No Project impacts non-jurisdictional wetlands. If YES, wetland mitigation may

still be required under the federal policy of "no net loss". Consult UDOT

Environmental Section.

Storm Water Runoff

Yes Project disturbs 1 acre or more of ground surface.

If YES, a UPDES Storm Water Discharge Permit for Construction Activities is

required from the Utah Division of Water Quality.

Floodplains

Yes This project requires new construction or alteration of existing structures within

the FEMA designated 100-year flood plain.

If YES, a Development Permit is required from the local permit official.

Comments: The Proposed Action would impact Rose Creek, a jurisdictional resource, and would require a U.S. Army Corps of Engineers Nationwide 14 Permit and a Stream Alteration Permit from the Utah Division of Water Rights.

The table below summarizes the linear feet (LF) and acres of Rose Creek that would be impacted by each option.

	Linear feet of Rose Creek that would be impacted (either the existing channel or the existing box culvert)		would be replace	Rose Creek that ced in either a new nt or a box culvert
Option	Existing Channel	Existing Box Culvert	New Channel	New Box Culvert
Bangerter Highway Over Option	1,305 LF (0.13 acre)	300 LF	1,010 LF	635 LF
Bangerter Highway Under Option	1,305 LF (0.12 acre)	300 LF	1,010 LF	635 LF
Bangerter Highway Hybrid Option	1,508 LF (0.13 acre)	300 LF	1,010 LF	845 LF

In addition, Rose Creek is designated as a Zone A area in the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map. Zone A areas are those with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. A pre-project Letter of Map Revision (LOMR) and post-project Conditional Letter of Map Revision (CLOMR) are anticipated.

See the UDOT Environmental Review for Water Resources and Wetlands, Noxious Weeds, and Visual Aesthetics and the Aquatic Resources Delineation Report in Appendix D.

12. HAZARDOUS WASTE

No Has a visual inspection of the project area found substances that may be

hazardous to human health and/or the environment?

Yes This project involves excavation beyond and below the existing roadway footprint.

If YES to either question 1 or 2, then site investigations and coordination with DEQ

may be necessary.

Comments: A review of records from the Utah Department of Environmental Quality (UDEQ) identified a total of 7 sites within proximity of the study area including 4 underground storage tanks sites (UST), two Enforceable Written Assurance sites (EWA), and one Tier II site. See the *Hazardous Materials Memo* in Appendix D.

The Proposed Action would not impact any hazardous materials sites, nor would the sites affect the Proposed Action. If hazardous materials are encountered during work, all work will stop in the area of contamination according to UDOT 2022 Standard Specification 01355, and the contractor will consult with UDOT and UDEQ to determine the appropriate remedial measures. See *Mitigation Commitments*.

13. PRIME, UNIQUE, STATEWIDE, OR LOCALLY IMPORTANT FARMLAND

Projects in areas whose land use maps indicate no current or future farming activities would not usually affect farmlands.

No This project MAY affect Prime, Unique, Statewide, or Locally Important Farmlands.

N/A The Natural Resource Conservation Service letter and Form AD1006 are attached.

14. AIR QUALITY

Yes This project has the potential to increase particulate matter due to construction

activities.

No This project adds or alters roadway capacity or will result in increased traffic

volumes at signalized intersections

If YES, the Air Quality Supplement is attached.

Comments: An air quality review was completed for this project. The review concludes that the construction of a grade-separated interchange would improve mobility and reduce congestion, resulting in lower levels of criteria pollutants in the study area compared to not building the project. Best management practices should be used in all construction phases in accordance with UDOT 2022

Standard Specifications for Road and Bridge Construction. See *Mitigation Commitments* and the *Air Quality Summary* in Appendix D.

15. RELOCATIONS

No There may be relocations of residences or businesses as a result of this project.

Comments: The Proposed Action would not require the relocation of any residences or businesses.

16. LAND USE/URBAN POLICY

No This project may affect land use or urban policy.

17. SECTION 4(F) PROPERTIES

Projects under the 327 NEPA Assignment MOU and the 326 CE MOU require the implementation of Section 4(f) (DOT Act of 1966). This project does not fall under either MOU category, meaning that neither MOU is applicable to this project. This section remains included to follow the UDOT EPM format.

N/A Section 4(f) properties are impacted.

N/A An Individual Section 4(f) Evaluation AND written concurrence from UDOT

Environmental Services on the Individual Section 4(f) determination is attached.

N/A A Programmatic Section 4(f) Evaluation AND written concurrence from UDOT

Environmental Services on the Programmatic Section 4(f) determination is

attached.

N/A The 4(f) property(s) is an historic property and the impact is considered

de minimis.

N/A SHPO has concurred in writing on UDOT's "no adverse effect"

determination to historic properties and has been notified of the intent to

make a de minimis finding. Attach letter to SHPO and de minimis

agreement letter.

N/A The 4(f) property(s) is a park, recreational area, wildlife or waterfowl refuge and

the impact is considered de minimis.

N/A The official(s) with jurisdiction have concurred, in writing, that the project

will "not adversely affect" the activities, features, and attributes that qualify the resource for protection under Section 4(f) and have been notified of the intent to make the **de minimis** impact finding. Letters are

attached.

N/AThe project sponsor has provided public notice and opportunity for public

review and comment. Describe public involvement efforts in the

comments below.

N/A Written concurrence from UDOT Environmental Services is attached.

18. OTHER ENVIRONMENTAL FACTORS CONSIDERED

This Project, except as noted and explained in attachments, will have no disproportionate, serious or lasting effect on the following:

Yes Active Transportation

Comments: Current active transportation facilities include sidewalks on the north and south sides of 13400 South between 3700 West and 4100 West 3400 West.

The 2019–2050 RTP includes proposed bike lanes on 13400 South from Rose Canyon Road to Redwood Road that will connect to other transit options on 3600 West as well as Redwood Road and planned bike lanes to the west in Herriman. The *Riverton City Active Transportation Plan* also identifies future bike lanes along 13400 South in the study area.

Yes Visual

Comments: Visual changes for each option are summarized below:

Bangerter Highway Over Option. The vertical alignment for 13400 South would stay at the existing grade, and Bangerter Highway would go over 13400 South above the existing grade. The visual changes would be the elevated Bangerter Highway road and structure. This option would have visual changes similar to the Bangerter Highway interchange projects at Redwood Road, 9000 South, 7800 South, 7000 South, 6200 South, and 5400 South.

Bangerter Highway Under Option. The vertical alignment for 13400 South would be at the existing grade, and Bangerter Highway would go under 13400 South below the existing grade. This option would have visual changes similar to the Bangerter Highway interchange projects at 10400 South and 11400 South.

Bangerter Highway Hybrid Option. The vertical alignment for 13400 South would be lower than the existing grade, and Bangerter Highway would go over 13400 South above the existing grade. Both Bangerter Highway and 13400 South would be at lower elevations compared to the Bangerter Highway Over Option. This option would have visual changes similar to the Bangerter Highway interchange project at 12600 South.

No Social/Economic

N/A Title VI and/or Environmental Justice

No Natural Resources

Bangerter Highway at 13400 South

Yes Construction

Comments: There could be delays and temporary closures of 13400 South during construction of the project.

No Energy

No Geology/Soils

No Wild/Scenic Rivers

No Ecology

19. CONCLUSION

No This project may have substantial controversy or significant impacts.

Mitigation Commitments

Preliminary Engine	eering	Responsible
Floodplains	Obtain a Floodplain Development Permit from the local floodplain administrator prior to construction.	UDOT
Invasive Species	Include UDOT Special Provision Section 02924S, <i>Noxious</i> Weed Control, in the contract documents to require earthmoving construction equipment to be properly cleaned before mobilizing onto the project site.	UDOT
Noise	Conduct noise wall balloting consistent with the procedures in UDOT's Noise Abatement Policy as part of the final design phase.	UDOT
Streams	Apply for and obtain a Stream Alteration Permit from the Utah Division of Water Rights and a Nationwide Permit 14 from the U.S. Army Corps of Engineers. Include permits in contract documents.	UDOT
Water Quality	Comply with the Utah Construction General Permit (UCGP) by preparing a Storm Water Pollution Prevention Plan (SWPPP) during the design and advertisement; provide the SWPPP to the project awarded contractor prior to Notice to Proceed.	UDOT

Construction		Responsible
Air Quality	Follow requirements in UDOT Standard Specification 01572, Dust Control and Watering, and UDOT 2022 Standard Specifications 01355 1.11, Fugitive Dust, Parts A, B, and C.	Contractor
Environmental	Comply with UDOT 2022 Standard Specification 01355.	Contractor
Hazardous Waste	Comply with UDOT 2022 Standard Specification 01355 regarding the treatment and disposal of hazardous materials, if encountered.	Contractor
Invasive Species	Comply with UDOT Special Provision Section 02924S, <i>Noxious Weed Control</i> , requirements before construction by cleaning all earthmoving construction equipment before mobilizing onto the project site and avoiding unnecessary earth disturbance.	Contractor
Nighttime Construction Work	Comply with UDOT 2022 Standard Specification 00555 for nighttime construction work including notification, lighting, and temporary noise permits.	Contractor
Noise	Comply with UDOT 2017 Special Provision Section 00555M, Prosecution and Progress, to reduce the impact of construction noise on the surrounding community.	Contractor
Streams	Comply with all conditions and findings in the U.S. Army Corps of Engineers Nationwide 14 Permit and the Stream Alteration Permit from the Utah Division of Water Rights.	Contractor

Bangerter Highway at 13400 South

Construction		Responsible
Water Quality	Comply with UCGP by finalizing the SWPPP before beginning earth-disturbing activities; implement and maintain the project SWPPP throughout project construction.	Contractor
Visual	Reclaim all disturbed areas per UDOT standard specifications.	Contractor

Appendices

Appendix A: Project Figures

- Study Area Map
- Bangerter Highway Over Option Map
- Bangerter Highway Under Option Map
- Bangerter Highway Hybrid Option Map

Appendix B: Traffic and Design

- Bangerter Highway & 13400 South Existing and 2050 No Build Traffic Analysis
- Bangerter Highway & 13400 South Future Build Traffic Analysis
- Bangerter Highway at 13400 South Alternatives Memo

Appendix C: Public Involvement

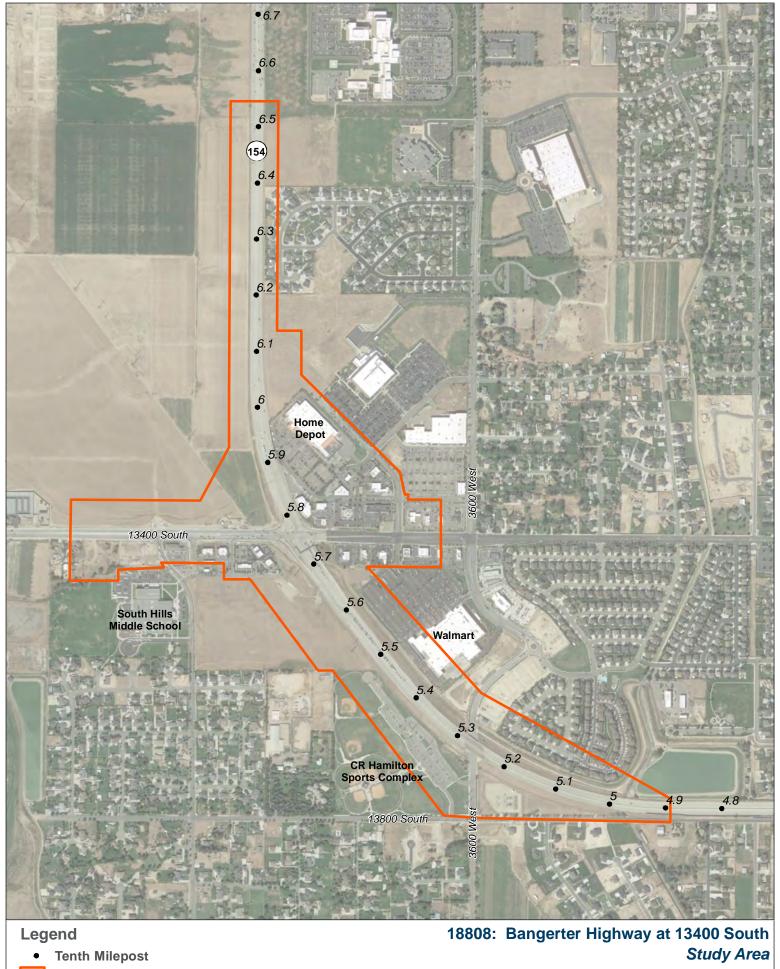
- Bangerter Highway at 13400 South Public Scoping Report
- Bangerter Highway at 13400 South Public Meeting Report

Appendix D: Environmental Resources

- Cultural and Paleontological Clearance with Tier 1 Screening Form
- Tribal Notification Form
- Utah Geological Survey Letter
- UDOT Threatened and Endangered Species and Wildlife Concurrence Memo
- Biological Resources Evaluation Memo
- UDOT Environmental Review for Water Resources and Wetlands, Noxious Weeds, and Visual Aesthetics
- Aquatic Resources Delineation Report
- Noise Study
- Hazardous Materials Memo
- Air Quality Summary



Study Area Map



Legend

• Tenth Milepost

18808: Bangerter Highway at 13400 South

Study Area

13400 South - Study Area

0 0.125 0.25 Miles



Bangerter Highway Over Option Map







Bangerter Highway Under Option Map







Bangerter Highway Hybrid Option Map



