

BANGERTER

4700 SOUTH 

STATE ENVIRONMENTAL STUDY





**BANGERTER HIGHWAY AT 4700 SOUTH
INTERCHANGE IMPROVEMENTS**

**STATE ENVIRONMENTAL
STUDY [FINAL]**

PIN: 18808

Project Number: S-0154(92)0

Prepared For: Utah Department of Transportation

Prepared By: Avenue Consultants

Date: March 2022

Table of Contents

Executive Summary	i
Environmental Study	1
1. Purpose and Need for Action	2
2. Description	2
3. Public Hearing/Opportunity for Public Hearing	3
4. Right-of-Way	4
5. Cultural	5
6. Paleontological	6
7. Threatened, Endangered, or Candidate Species	6
8. Wildlife.....	7
9. Invasive Species.....	7
10. Noise	7
11. Wetlands, Water Resources, Storm Water, and Floodplains.....	9
12. Hazardous Waste.....	10
13. Prime, Unique, Statewide, or Locally Important Farmland	11
14. Air Quality	11
15. Relocations.....	11
16. Land Use/Urban Policy	12
17. Section 4(f) Properties	12
18. Other Environmental Factors Considered.....	12
19. Conclusion	13
Mitigation Commitments	14
Appendix	A

ENVIRONMENTAL STUDY

Project Name: Bangerter Highway at 4700 South Interchange Improvements
PIN: 18808
Project Number: S-0154(92)0
Prepared by: Craig Bown, Avenue Consultants

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:  Date: 03/09/2022
UDOT Environmental Services Director

Approved by Ben Huot:  Date: 03/16/2022
UDOT Program Development Director

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 (SR-154) and 4700 South intersection in West Valley City and Taylorsville, Utah. Currently, this intersection experiences congestion operating at Level of Service (LOS) E (average of 67 seconds of delay per vehicle) during the AM peak hour and LOS D (average of 54 seconds of delay per vehicle) during the PM peak hour.

If no operational improvements are made at this intersection, traffic modeling indicates that by 2050 the intersection is projected to operate at LOS F during the AM peak and PM peak hours (average of 143 seconds and 112 seconds of delay per vehicle, respectively). Extensive queuing on Bangerter Highway and 4700 South intersection is also projected to extend through adjacent intersections on 4700 South (4000 West, Muirhouse Drive, 3740 West, and 3600 West) causing them to fail. For supporting traffic details see the *Bangerter Highway & 4700 South Existing and 2050 No Build Traffic Analysis* in Appendix B.

The purpose of the project is to alleviate congestion and improve operations at the Bangerter and 4700 South intersection and to support regional network mobility and operations.

2. DESCRIPTION

UDOT is proposing to construct a grade-separated Single Point Urban Interchange (SPUI) at the existing intersection of Bangerter Highway (SR-154) and 4700 South in West Valley City and Taylorsville, Utah. The new interchange would allow for traffic to move more freely along Bangerter Highway and is projected to operate at LOS C during 2050 AM and PM peak hours (an average of 21 seconds and 28 seconds of delay per vehicle, respectively). For supporting traffic details see the *Bangerter Highway & 4700 South Future Build Conditions Traffic Analysis* in Appendix B.

The project study area is along Bangerter Highway from milepost 16.0 to 17.7, and on 4700 South between 3535 West and 4055 West (see *Study Area Map* in Appendix A). The proposed action would shift the Bangerter Highway alignment to the east and construct a grade-separated interchange with exit and entrance ramps from Bangerter Highway to 4700 South; reconfigure the existing 4700 South lane configuration to integrate with the interchange design; install an auxiliary lane between the 4700 South entrance ramp and 5400 South exit; modify utilities, storm drain features, canal structures, and pedestrian facilities; and install new pavement, traffic signals, ATMS equipment, roadway signage, and a storm water detention basin. The proposed action would also relocate a portion of the Jordan Valley Water Conservancy District (JVWCD) aqueduct, between the Utah and Salt Lake Canal and the South Jordan Canal, to accommodate encroachment from the interchange facilities. Additionally, access to the U of U Health Center parking lot from 4700 South would be limited to right-in/right-out turn movements.

There are two options for the grade-separated interchange:

Bangerter Highway Over Option: The vertical alignment option for 4700 South would stay at the existing grade, and Bangerter Highway would go over 4700 South above the existing grade (see the *Bangerter at 4700 South Over Option Map* in Appendix A).

Bangerter Highway Under Option: The vertical alignment option for 4700 South would be at the existing grade, and Bangerter Highway would go under 4700 South below the existing grade (see the *Bangerter at 4700 South Under Option Map* in Appendix A).

The decision regarding which alternative to construct will be made at a later date. Detailed information regarding the process to select an alternative and an over or under option is found in the *Bangerter Highway at 4700 South Alternatives Memo* in Appendix B. Once a decision is made, UDOT will communicate this decision using various outreach channels.

Impacts to environmental resources discussed in this document are the same for both the Bangerter Highway Over Option and the Bangerter Highway Under Option, except for those associated with noise and hazardous waste. The proposed action would require the acquisition of commercial and residential properties.

If funding is available, the proposed action would also replace old portions of pavement not removed with the Bangerter 5400 South project between 4700 South and 5400 South; install auxiliary lanes between the 5400 South entrance ramp and the 4700 South exit ramp; and construct north and southbound pavement between 4700 South and 4100 South that is forward compatible with a future interchange at 4100 South.

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: Neighborhood, business, and municipality meetings; project website, email, and hotline

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 Zoom Webinar on July 20, 2021, from 6:00 to 7:00 PM, and in person at Kennedy Junior High School (4495 South 4800 West in West Valley City) on July 21, 2021. A total of 10 comments were received during the comment period. Legal notices were published in accordance with UT Administrative Code R930-2 and the Environmental

Manual of Instructions (MOI). See the *Bangerter Highway at 4700 South Public Scoping Report* in Appendix C.

Business and Neighborhood Meeting opportunities were held in person at Kennedy Junior High School (4495 South 4800 West in West Valley City) on January 12, 2022, in two separate sessions. Notices for the meeting were posted on the project website, mailed, and hand delivered.

Public Hearing opportunities were held in person at Kennedy Junior High School (4495 South 4800 West in West Valley City) on February 1, 2022, from 5:30 to 7:30 PM, and online via Zoom Webinar on February 2, 2022, from 6:00 to 7:00 PM. A total of 11 comments were received during the comment period. Legal notices were published in accordance with UT Administrative Code R930-2 and the Environmental Manual of Instructions (MOI). See the *Bangerter Highway at 4700 South Public Hearing Report* in Appendix C. A summary of the public hearing documentation and responses to comments are 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 acquire right-of-way (ROW) from properties along Bangerter Highway. The amount of ROW acquisition required is described below. Temporary and permanent ROW easements are not included in the descriptions below.

The approximate amount of ROW acquisition required for both the Bangerter Highway Over Option and Bangerter Highway Under Option is 17.42 acres, which would affect 91 parcels. This includes 54 partial property acquisitions (40 residential parcels and 14 commercial parcels), one potential residential full property acquisition, and 36 full property acquisitions (29 residential parcels and 7 commercial parcels).

More information regarding temporary construction easements, perpetual easements, and the location of ROW acquisitions for each option are found on the *Bangerter at 4700 South Over Option Map* and the *Bangerter at 4700 South Under Option Map* in Appendix A, and the *Bangerter Highway at 4700 South Property Impacts* table in Appendix D.

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:

- No** No historic properties affected
- No** No adverse effect
- Yes** 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.
- Yes** 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.
- Yes** Have letters for federal and state agencies, CLGs, historical societies, etc. been sent? If so attach letters.
- Yes** Do the impacts to historic properties require mitigation?

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

Comments:

Both the Bangerter Highway Over Option and Bangerter Highway Under Option would result in a finding of Adverse Effect for 7 architectural properties, No Adverse Effect for 1 archaeological site and 10 architectural properties, and a finding of No Historic Properties Affected for all remaining architectural properties and archaeological sites. Therefore, the Finding of Effect for the proposed action is Adverse Effect.

Native American consultation was initiated through letters sent to the Eastern Shoshone Tribe of the Wind River Reservation, Shoshone-Bannock Tribes, Northwestern Band of Shoshone Nation, Uintah and Ouray Ute Tribes, and the Skull Valley Band of Goshute Indians (sent September 24, 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 the Confederated Tribes of the Goshute Reservation (sent September 24, 2021). To date, none of the tribes have responded to these notifications.

See the *Determination of Eligibility and Finding of Adverse Effect* with Native American consultation letters and SHPO concurrence, and the *Memorandum of Agreement* in Appendix D.

6. PALEONTOLOGICAL

- No** 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):

- Yes** 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).
- No** 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.
- No** 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* 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* 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: A few noxious weed species, as defined by the Utah Noxious Weed Act (Utah Administrative Code, Rule R68-9), have been identified growing within the study area including field bindweed and puncturevine. Additionally, the proposed action 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: The following information can be found in detail in the *Noise Study* in Appendix D. Two options were evaluated as part of this noise study. One option evaluated a grade-separated interchange with Bangerter Highway over 4700 South. The second option evaluated a grade-separated interchange with Bangerter highway under 4700 South.

Bangerter Highway Over Option: Overall, noise levels for the Bangerter Highway Over Option would range from 40 dBA to 78 dBA compared to 36 dBA and 69 dBA for the existing conditions. Of the 790 receptors in the study area, 420 would be impacted by the Bangerter Highway Over Option. Three hundred sixty-four impacted receptors exhibit noise levels that are greater than 10 dBA above existing levels, with the greatest increase being 21 dBA at 4 receptors. One hundred fifty-nine impacted receptors exhibit noise levels that exceed the NAC. One hundred three impacted receptors exhibit both a noise level that exceeds the NAC as well as an increase greater than 10 dBA above existing levels.

Seven noise walls, including three walls that were removed as part of the proposed improvements, were evaluated for the Bangerter Highway Over Option. Walls 1-3 and 6 are recommended for balloting. Wall 4 is not feasible and reasonable and is not recommended for balloting. Wall 5 will be replaced “in-kind”. Wall 7 will remain in place.

Bangerter Highway Under Option: Overall, noise levels for the Bangerter Highway Under Option would range from 38 dBA to 78 dBA compared to 36 dBA and 69 dBA for the existing conditions. Of the 790 receptors in the study area, 321 would be impacted by the Bangerter Highway Under Option. Two hundred eighty-six impacted receptors exhibit noise levels that are greater than 10 dBA above existing levels, with the greatest increase being 21 dBA at 3 receptors. One hundred ten impacted receptors exhibit noise levels that exceed the NAC. Seventy-five impacted receptors exhibit both a noise level that exceeds the NAC as well as an increase greater than 10 dBA above existing levels.

Seven noise walls, including three walls that were removed as part of the proposed improvements, were evaluated for the Bangerter Highway Over Option. Walls 1-3 and 6 are recommended for balloting. Wall 4 is not feasible and reasonable and is not recommended for balloting. Wall 5 will be replaced “in-kind”. Wall 7 will remain in place.

The final decision to build a noise barrier will be made upon completion of the final design, and concurrence with the UDOT Noise Policy, including the balloting process that allows benefited receptors and adjacent properties to indicate their desire for a noise barrier (see Mitigation Commitments). Proposed noise wall locations are seen on the *Bangerter at 4700 South Over Option Map* and the *Bangerter at 4700 South Under Option Map* in Appendix A. For additional details on the analysis of noise impacts and noise walls see the *Noise Report* in Appendix D.

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

Wetlands and Water Resources

- No** The 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”.
- No** 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.
- No** 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 OHWM. 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

No 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: Both the Bangerter Highway Over Option and Bangerter Highway Under Option would impact the east side of the South Jordan Canal box culvert as it would need to be extended to accommodate a wider roadway footprint. The maximum estimated impact area (including the canal bank and surface water) is less than 2,000 square feet (0.045 acres). This area is within the allowable impact to Waters of the U.S. (WOTUS) under Nationwide Permit 14 Linear Transportation Projects with no preconstruction notification required to the U.S. Army Corps of Engineers. Additionally, impacts to the canal will occur outside of the irrigation season and no water will be present at that time. See Mitigation Commitments and the *Environmental Review of Water Resources and Wetlands, Noxious Weeds, and Visual Aesthetics* 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) and the Environmental Protection Agency identified a total of 12 sites within proximity to the study area, including: three CERCLIS sites (specifically, polluted groundwater plumes), eight underground storage tanks (UST), and one Environmental Incident. See the *Hazardous Materials Memo* in Appendix D.

The Bangerter Highway Over Option and Bangerter Highway Under Option would construct the interchange structure and/or roadway facilities on a UST property at 3752 West 4700 South (currently Diamond Rental). However, impacts to this site are not anticipated because the UST was removed in 2006.

The Bangerter Highway Under Option would require excavation below the existing roadway surface to facilitate the structure and/or roadway facilities. This construction has potential to encounter the 4700 South and Bangerter Plume (a contaminated ground water plume) located beneath the Bangerter Highway and 4700 South intersection. Based on available information, the depth to ground water is 24.5 feet at the Life Church USGS Monitoring Well.

If the Bangerter Highway Under Option is selected, additional research and investigation may be needed to adequately inform the risk of encountering contaminated soil and groundwater by completing a Phase I Environmental Site Assessment and/or Phase II Investigation per UDOT procedures.

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 the 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 the proposed action and 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 when compared to not building the proposed action. Best management practices should be employed in all construction phases in accordance with UDOT 2022 Standard Specifications for Road and Bridge Construction. See the Mitigation Commitments and the *Air Quality Summary* in Appendix D.

15. RELOCATIONS

Yes There may be relocations of residences or businesses as a result of this project.

Comments: Relocations would be required for residential and commercial properties purchased to accommodate the proposed action. Both the Bangerter Highway Over Option and Bangerter Highway Under Option would require 27 residential relocations, one potential residential relocation, and three commercial relocations. See the Mitigation Commitments and the *Bangerter at 4700 South Over Option Map* and the *Bangerter at 4700 South Under Option Map* in Appendix A.

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 it is not applicable. 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/A** The 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:

No Active Transportation

Comment: Current active transportation facilities in the study area include sidewalks on the north side and south sides of 4700 South. Regional and local active transportation plans include a future cycle track along the north side of 4700 South and a shared-use path along the south side of 4700 South. Both the Bangerter Highway Over Option and Under Option are forward compatible with these facilities.

Yes Visual

Comment: Visual changes are expected but are different for the two alternatives.

Bangerter Highway Over Option: This option would elevate Bangerter Highway to cross over 4700 South. The visual changes would include the elevated road and structure and would be similar to the Bangerter Highway and 5400 South interchange or the Bangerter Highway and 7000 South interchange locations.

Bangerter Highway Under Option: This option would have some visual changes as a structure would be built to accommodate Bangerter Highway going under 4700 South. The visual changes are expected to be minimal and similar to the Bangerter Highway and 11400 South interchange location.

No Social/Economic

Comment: Both the Bangerter Highway Over Option and Bangerter Highway Under Option would remove the Bible Baptist Church. Displacing the church could negatively affect the congregation.

No Title VI and/or Environmental Justice

No Natural Resources

Yes Construction

Comment:

Bangerter Highway Over Option: Delays and temporary east/west closures of 4700 South are possible during construction of the project.

Bangerter Highway Under Option: East and west closures of 4700 South are anticipated for up to 12 months.

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 Engineering		Responsible
Cultural	<p>In accordance with the Memorandum of Agreement (MOA) between UDOT and the Utah State Historic Preservation Officer (SHPO), document the following seven (7) buildings according to the Utah State Intensive Level Survey Standards (ILS) as required by SHPO:</p> <ul style="list-style-type: none"> 3739 West 4700 South 4534 South Orleans Way 4526 South Orleans Way 4502 South Orleans Way 4486 South Orleans Way 4472 South Orleans Way 4412 South Orleans Way <p>Prepare ILS Historic Site Forms, based partly on title searches and obituary research, photographs of the exterior of the buildings, a sketch map of the property layout, aerial photograph maps indicating the location of the buildings, and a U.S. Geological Survey map (scale 1:24,000) indicating the location of the buildings.</p> <p>Completed documentation is required prior to any demolition activities to the building or surrounding property.</p>	UDOT
Invasive Species	<p>Include UDOT Special Provision Section 02924S NOXIOUS WEED CONTROL in the contract documents to require that earthmoving construction equipment is to be properly cleaned before mobilizing onto the project site.</p>	UDOT
Noise Abatement	<p>Conduct the balloting process during the final design phase in accordance with UDOT's Noise Abatement Policy if proposed noise abatement measures still meet the Noise Reduction Design Goal and Cost Effectiveness criteria.</p>	UDOT
Hazardous Waste	<p>Complete Phase I Environmental Site Assessment and/or Phase II Investigation per UDOT procedures if the Bangerter Highway Under Option is selected.</p>	UDOT
Relocations	<p>Compensate property owners according to the requirements of the Utah Relocation Assistance Act and Real Property Acquisition Policies Act.</p>	UDOT

Bangerter Highway at 4700 South

Preliminary Engineering		Responsible
Water Quality	Comply with the Utah Construction General Permit (UCGP), by preparing a Storm Water Pollution Prevention Plan (SWPPP) during design and advertisement; provide the SWPPP to the project awarded contractor prior to Notice to Proceed.	UDOT

Construction		Responsible
Air Quality	Follow requirements outlined in UDOT Standard Specification 01572 titled "Dust Control and Watering" and UDOT 2022 Standard Specifications 01355 1.11 Part A, B, and C will be followed.	Contractor
Environmental	Comply with UDOT 2022 Standard Specifications 01355.	Contractor
Hazardous Waste	Comply with UDOT 2022 Standard Specification 01355 regarding the treatment and disposal of hazardous material, if encountered.	Contractor
Invasive Species	Comply with UDOT Special Provision Section 02924S NOXIOUS WEED CONTROL requirements by properly cleaning all earthmoving construction equipment before mobilizing onto the project site and avoiding unnecessary earth disturbances.	Contractor
Nighttime Construction Work	Comply with UDOT 2022 Standard Specifications 00555 for nighttime construction work including notification, lighting, and temporary noise permits.	Contractor
Visual	Reclaim all disturbed areas per UDOT standard specifications.	Contractor
Water Quality	Comply with the Utah Construction General Permit (UCGP), by finalizing the Storm Water Pollution Prevention Plan (SWPPP) prior to beginning earth disturbing activities; implementing and maintaining the project SWPPP throughout project construction.	Contractor
Water Quality	Complete work on the South Jordan Canal outside of the irrigation season.	Contractor
Water Quality	Comply with the conditions outlined in Nationwide Permit 14 – Linear Transportation Projects for impacts to the Utah and Salt Lake Canal and the South Jordan Canal.	Contractor

Appendix

A: Project Figures

- Study Area Map
- Bangerter at 4700 South Over Option Map
- Bangerter at 4700 South Under Option Map

B: Traffic and Design

- Bangerter Highway & 4700 South Existing and 2050 No Build Traffic Analysis
- Bangerter Highway & 4700 South Future Build Conditions Traffic Analysis
- Bangerter Highway at 4700 South Alternatives Memo

C: Public Involvement

- Bangerter Highway at 4700 South Public Scoping Report
- Bangerter Highway at 4700 South Public Hearing Report

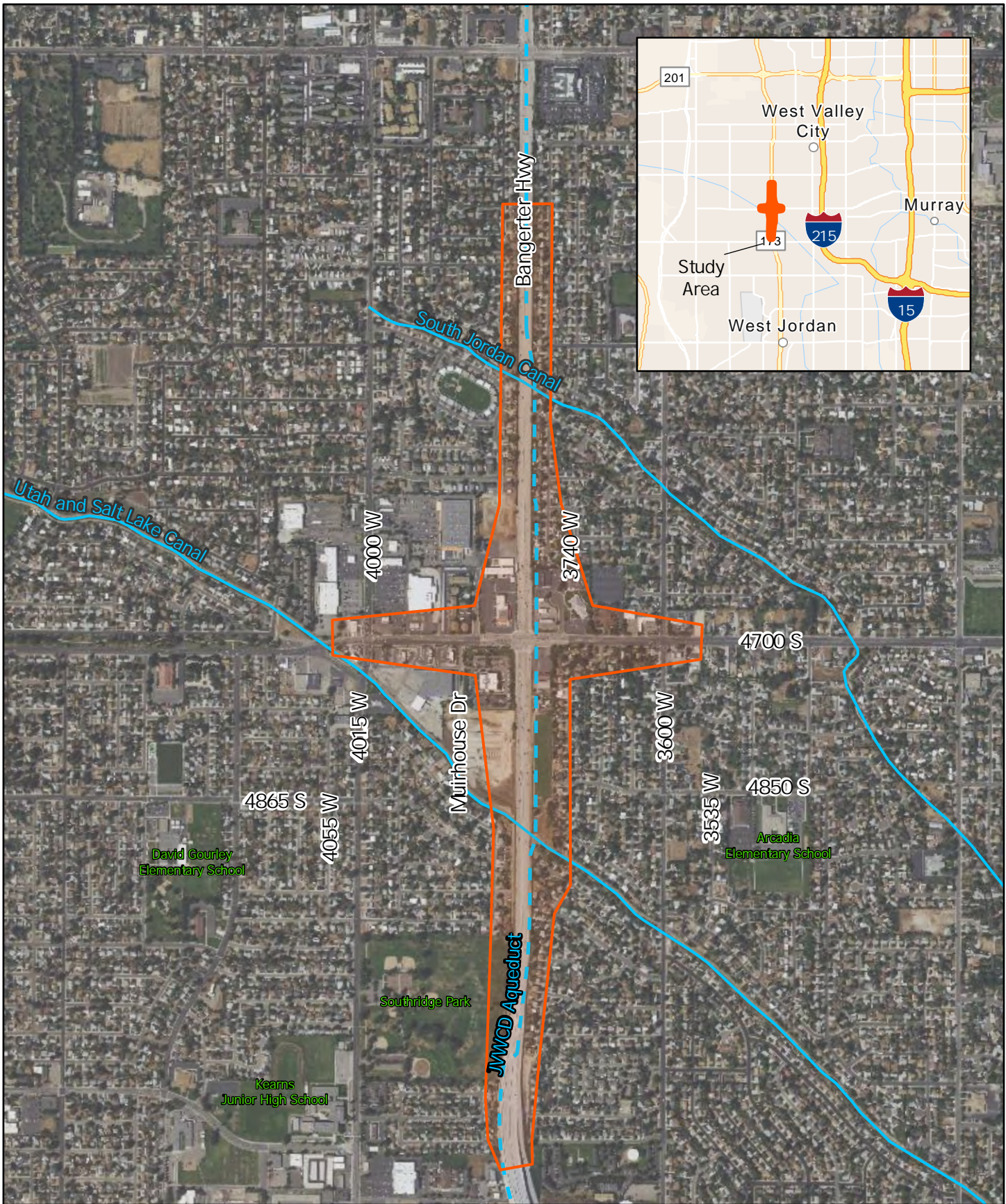
D: Environmental Resources

- Bangerter Highway at 4700 South Property Impacts
- Determination of Eligibility and Finding of Adverse Effect with Native American consultation letters and SHPO concurrence
- Memorandum of Agreement between the Utah Department of Transportation and the Utah State Historic Preservation Officer
- Utah Geological Survey Letter
- UDOT Threatened and Endangered Species and Wildlife Concurrence Memo
- Environmental Review of Water Resources and Wetlands, Noxious Weeds, and Visual Aesthetics
- Noise Report
- Hazardous Materials Memo
- Air Quality Summary




Appendix A: Project Figures

Study Area Map



Bangerter Highway at 4700 South Interchange Improvements
 Project No.: S-0154(92)0
 PIN: 18808

 Study Area

1" = 1,200'



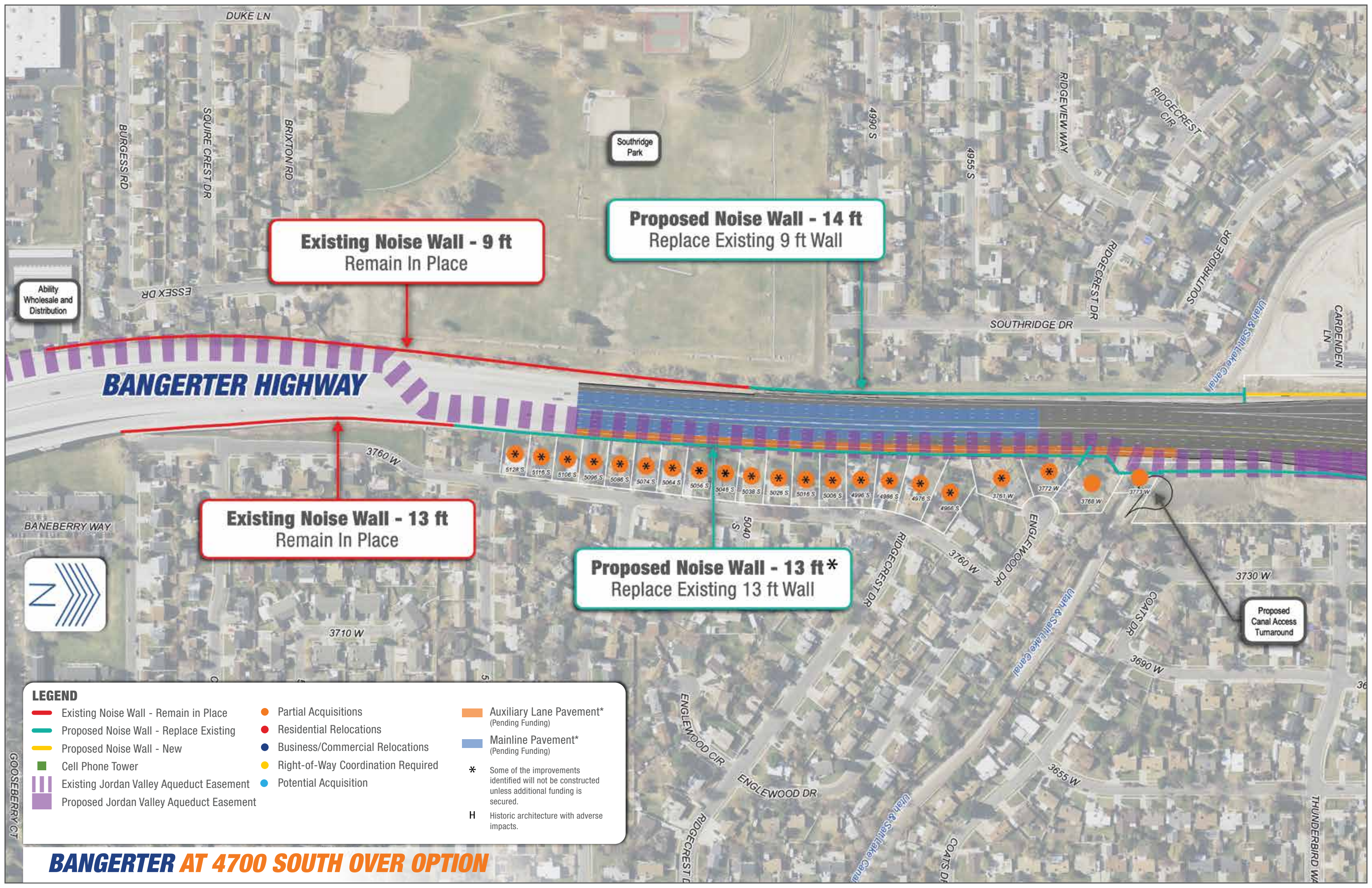
0 500 1,000 2,000 Feet

11/22/2021



Appendix A: Project Figures

Bangerter at 4700 South Over Option Map



Existing Noise Wall - 9 ft
Remain In Place

Proposed Noise Wall - 14 ft
Replace Existing 9 ft Wall

Existing Noise Wall - 13 ft
Remain In Place

Proposed Noise Wall - 13 ft*
Replace Existing 13 ft Wall

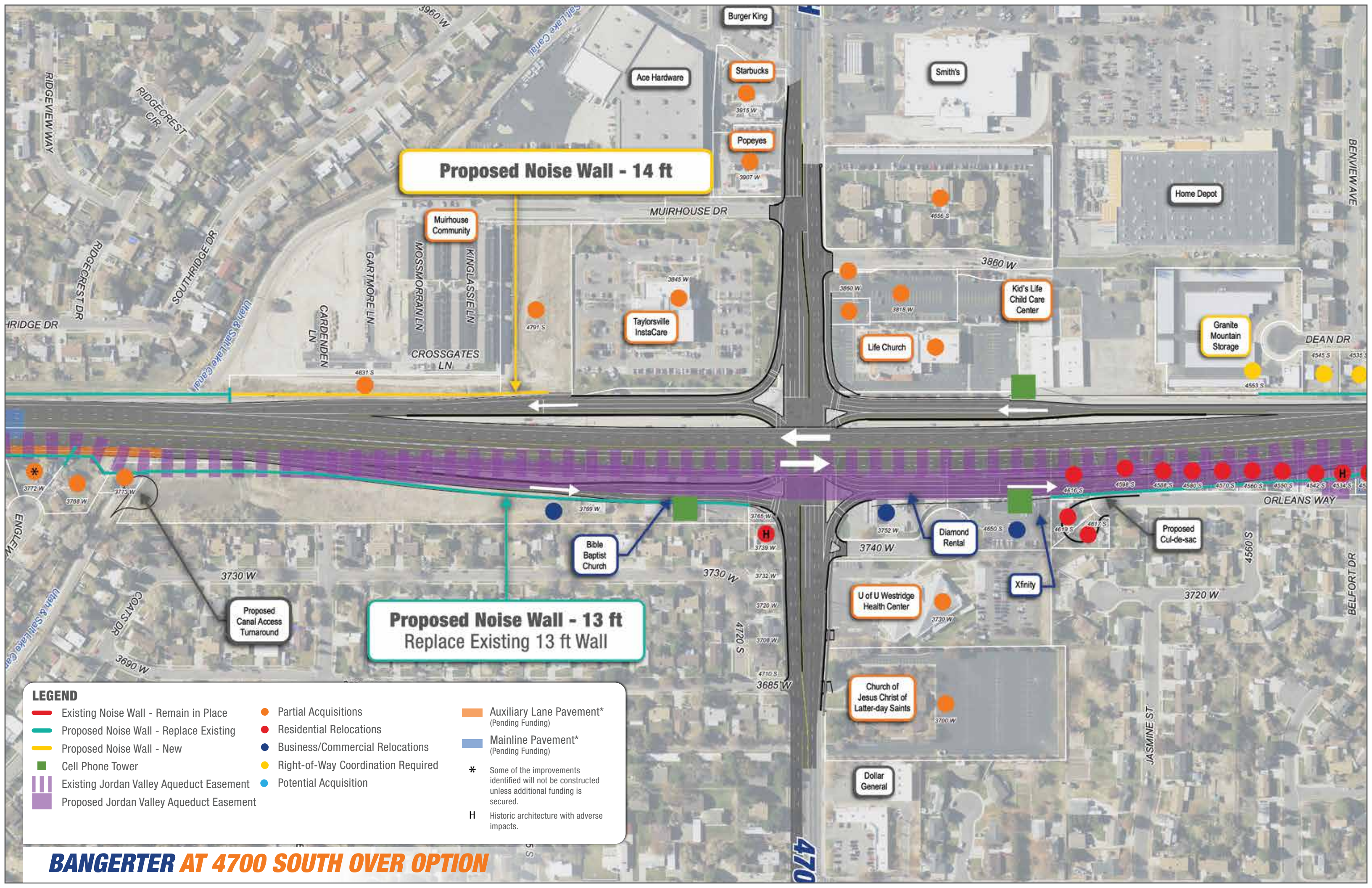
Proposed Canal Access Turnaround

LEGEND

	Existing Noise Wall - Remain in Place		Partial Acquisitions		Auxiliary Lane Pavement* (Pending Funding)
	Proposed Noise Wall - Replace Existing		Residential Relocations		Mainline Pavement* (Pending Funding)
	Proposed Noise Wall - New		Business/Commercial Relocations		Some of the improvements identified will not be constructed unless additional funding is secured.
	Cell Phone Tower		Right-of-Way Coordination Required		Historic architecture with adverse impacts.
	Existing Jordan Valley Aqueduct Easement		Potential Acquisition		
	Proposed Jordan Valley Aqueduct Easement				

BANGERTER AT 4700 SOUTH OVER OPTION

GOOSEBERRY CT



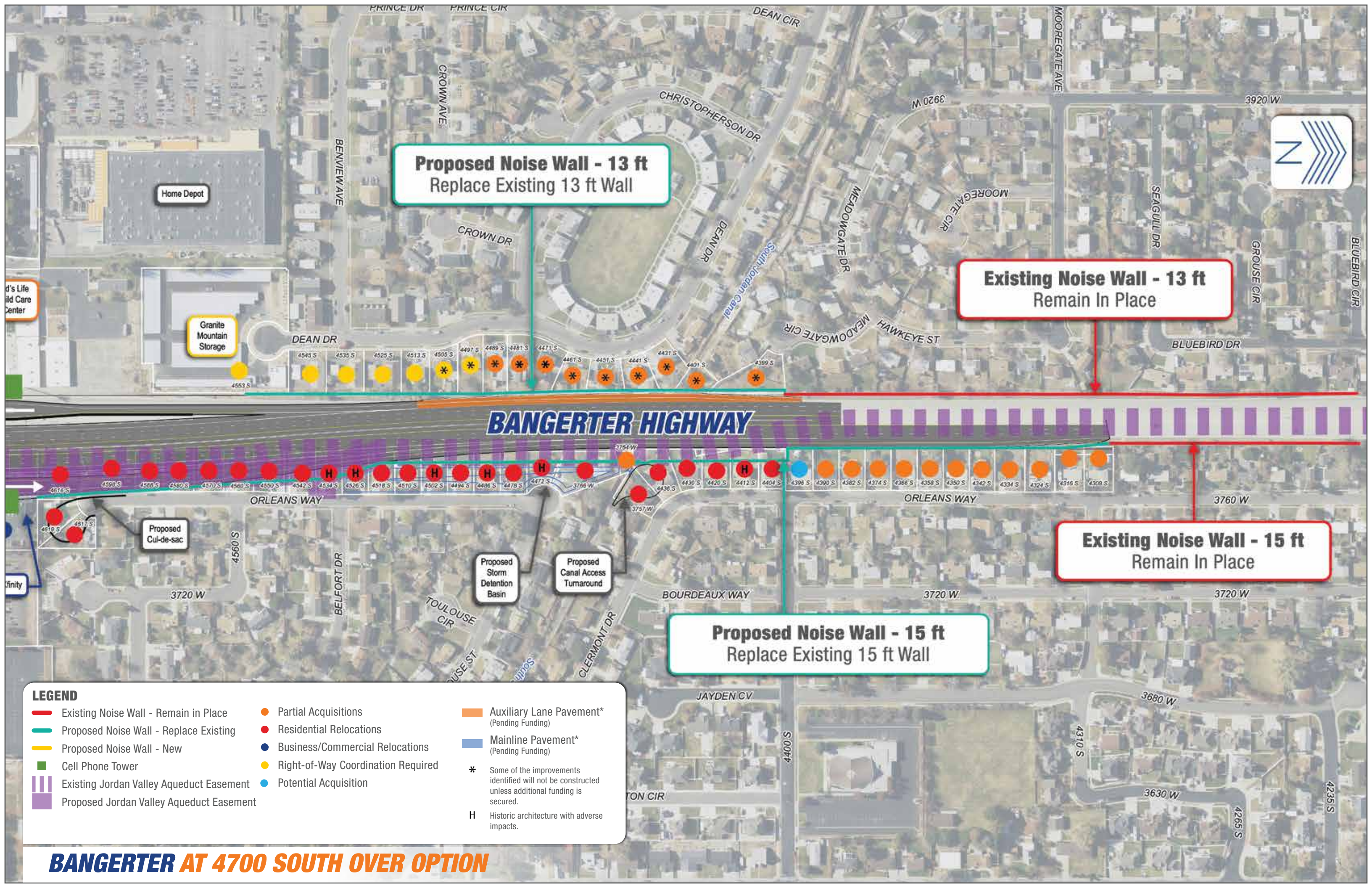
Proposed Noise Wall - 14 ft

**Proposed Noise Wall - 13 ft
Replace Existing 13 ft Wall**

LEGEND

Existing Noise Wall - Remain in Place	Partial Acquisitions	Auxiliary Lane Pavement* (Pending Funding)
Proposed Noise Wall - Replace Existing	Residential Relocations	Mainline Pavement* (Pending Funding)
Proposed Noise Wall - New	Business/Commercial Relocations	* Some of the improvements identified will not be constructed unless additional funding is secured.
Cell Phone Tower	Right-of-Way Coordination Required	H Historic architecture with adverse impacts.
Existing Jordan Valley Aqueduct Easement	Potential Acquisition	
Proposed Jordan Valley Aqueduct Easement		

BANGERTER AT 4700 SOUTH OVER OPTION



Proposed Noise Wall - 13 ft
 Replace Existing 13 ft Wall

Existing Noise Wall - 13 ft
 Remain In Place

Existing Noise Wall - 15 ft
 Remain In Place

Proposed Noise Wall - 15 ft
 Replace Existing 15 ft Wall

LEGEND

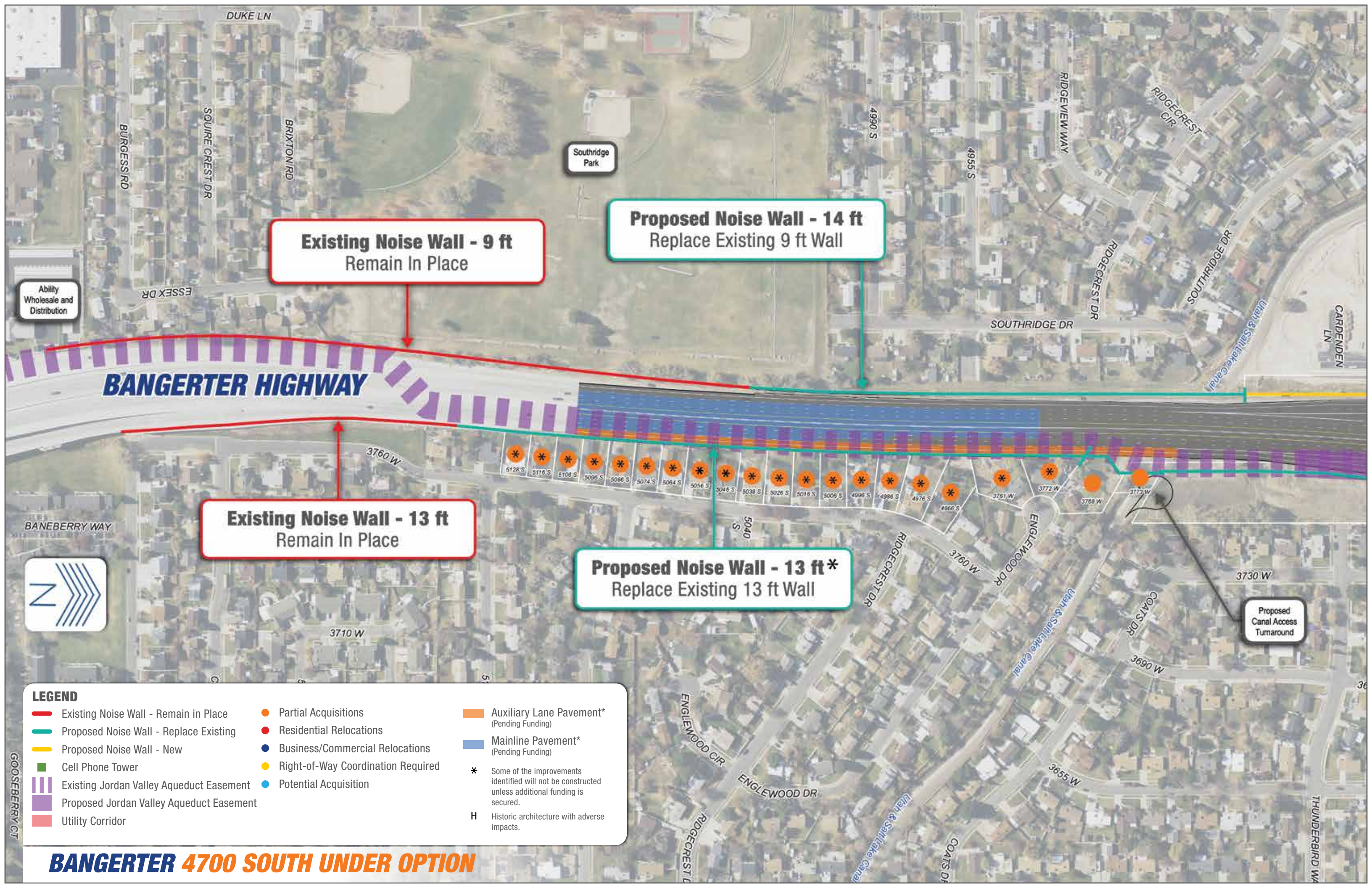
Existing Noise Wall - Remain in Place	Partial Acquisitions	Auxiliary Lane Pavement* (Pending Funding)
Proposed Noise Wall - Replace Existing	Residential Relocations	Mainline Pavement* (Pending Funding)
Proposed Noise Wall - New	Business/Commercial Relocations	Some of the improvements identified will not be constructed unless additional funding is secured.
Cell Phone Tower	Right-of-Way Coordination Required	Historic architecture with adverse impacts.
Existing Jordan Valley Aqueduct Easement	Potential Acquisition	
Proposed Jordan Valley Aqueduct Easement		

BANGERTER AT 4700 SOUTH OVER OPTION



Appendix A: Project Figures

Bangerter at 4700 South Under Option Map



Existing Noise Wall - 9 ft
Remain In Place

Proposed Noise Wall - 14 ft
Replace Existing 9 ft Wall

Existing Noise Wall - 13 ft
Remain In Place

Proposed Noise Wall - 13 ft*
Replace Existing 13 ft Wall

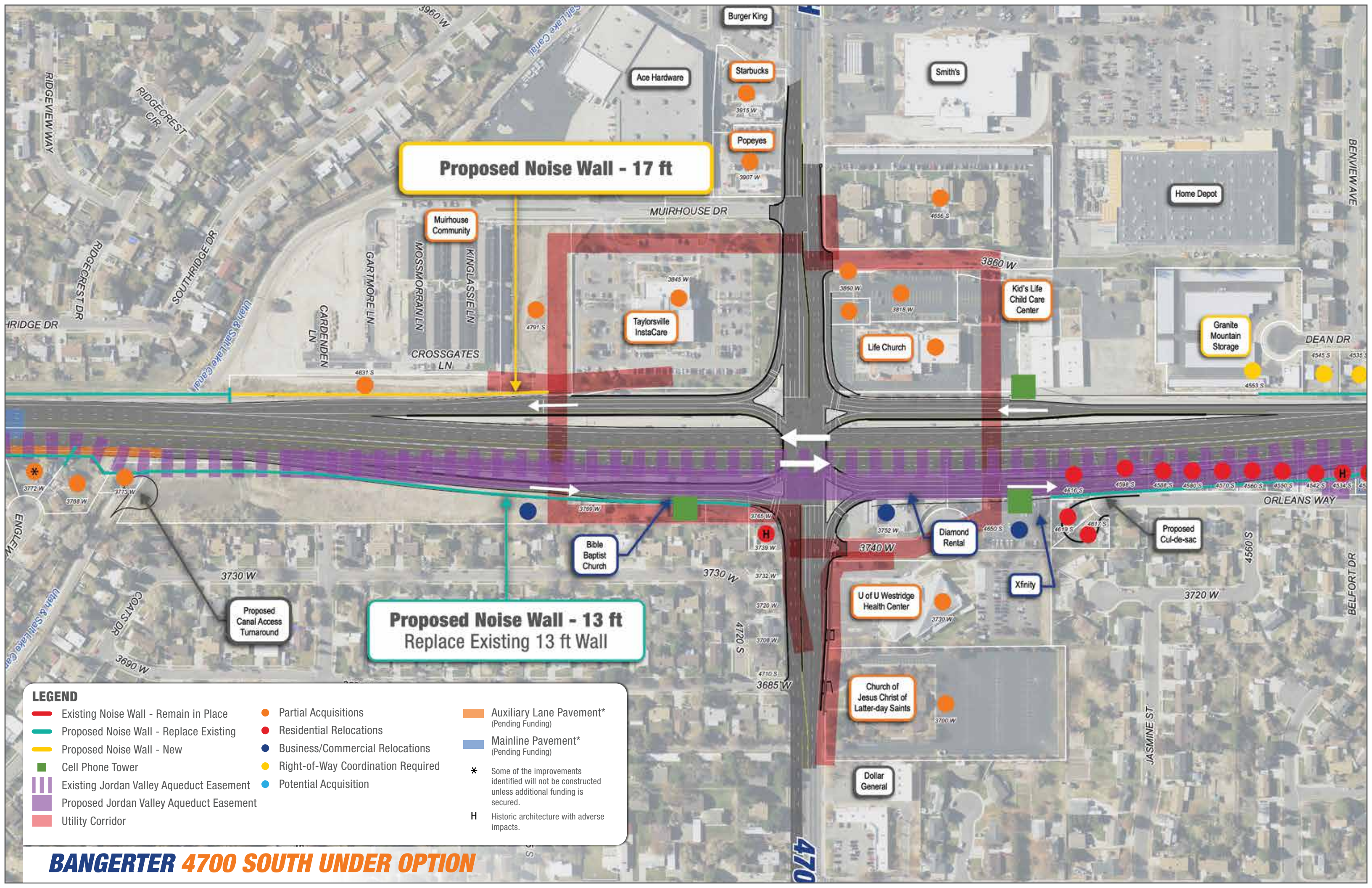
Proposed Canal Access Turnaround

LEGEND

Existing Noise Wall - Remain in Place	Partial Acquisitions	Auxiliary Lane Pavement* (Pending Funding)
Proposed Noise Wall - Replace Existing	Residential Relocations	Mainline Pavement* (Pending Funding)
Proposed Noise Wall - New	Business/Commercial Relocations	Some of the improvements identified will not be constructed unless additional funding is secured.
Cell Phone Tower	Right-of-Way Coordination Required	Historic architecture with adverse impacts.
Existing Jordan Valley Aqueduct Easement	Potential Acquisition	
Proposed Jordan Valley Aqueduct Easement		
Utility Corridor		

BANGERTER 4700 SOUTH UNDER OPTION

GOOSEBERRY CT



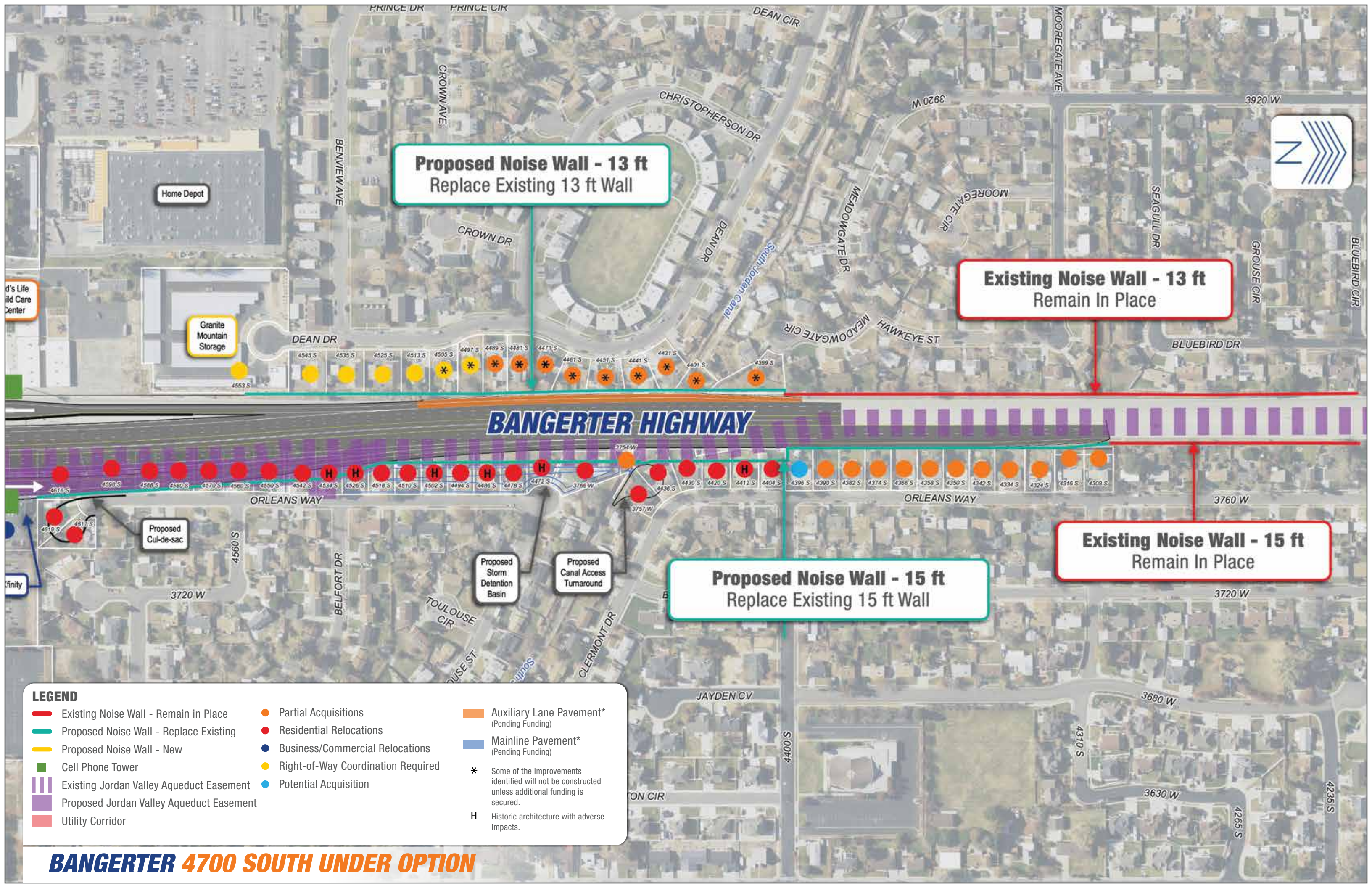
Proposed Noise Wall - 17 ft

Proposed Noise Wall - 13 ft
 Replace Existing 13 ft Wall

LEGEND

	Existing Noise Wall - Remain in Place		Partial Acquisitions		Auxiliary Lane Pavement* (Pending Funding)
	Proposed Noise Wall - Replace Existing		Residential Relocations		Mainline Pavement* (Pending Funding)
	Proposed Noise Wall - New		Business/Commercial Relocations		* Some of the improvements identified will not be constructed unless additional funding is secured.
	Cell Phone Tower		Right-of-Way Coordination Required		H Historic architecture with adverse impacts.
	Existing Jordan Valley Aqueduct Easement		Potential Acquisition		
	Proposed Jordan Valley Aqueduct Easement				
	Utility Corridor				

BANGERTER 4700 SOUTH UNDER OPTION



Proposed Noise Wall - 13 ft
 Replace Existing 13 ft Wall

Existing Noise Wall - 13 ft
 Remain In Place

Existing Noise Wall - 15 ft
 Remain In Place

Proposed Noise Wall - 15 ft
 Replace Existing 15 ft Wall

LEGEND

Existing Noise Wall - Remain in Place	Partial Acquisitions	Auxiliary Lane Pavement* (Pending Funding)
Proposed Noise Wall - Replace Existing	Residential Relocations	Mainline Pavement* (Pending Funding)
Proposed Noise Wall - New	Business/Commercial Relocations	Some of the improvements identified will not be constructed unless additional funding is secured.
Cell Phone Tower	Right-of-Way Coordination Required	Historic architecture with adverse impacts.
Existing Jordan Valley Aqueduct Easement	Potential Acquisition	
Proposed Jordan Valley Aqueduct Easement		
Utility Corridor		

BANGERTER 4700 SOUTH UNDER OPTION