Planning Commission Meeting Agenda

July 16, 2025
Council Chambers
07:00 PM

To watch meetings online, visit Tooele County's YouTube or visit this Zoom link: https://us06web.zoom.us/j/89320115244?pwd=CHiOPErmphp4CBuy3BiZBxaG3wbY9M.1 To submit a public comment before the meeting, email comments, anytime up until the meeting starts. Pursuant to the Americans with Disability Act, individuals needing special accommodations during this meeting should notify Stephanie Eastburn, Tooele County Community Development, at 435-843-3160 prior to the meeting.

1. **Pledge of Allegiance**
2. **Roll Call**
3. **Minutes**
   A. **Minutes from the June 4, 2025 Meeting**

      MOTION AND VOTE

      Attachments
      1. June 4, 2025 Planning Commission Meeting Minutes - Draft.pdf
4. **Conditional Use Permits**
   A. **CUP 2023-116 Richard Ahadjie with Staker Parsons is requesting a Conditional Use Permit for Mining, Quarry, Sand and Gravel Excavations**

      MOTION AND VOTE

      Attachments
      1. CUP 2023-116_Public Meeting notice_24 hours.pdf
      2. CUP 2023-116_2_Planning_Commission_Agenda_Summary.pdf
      3. CUP 2023-116_Staff_report_Final 2.pdf
5. **Land Use Ordinances**
   A. **TCLUO 2025-079 Staff is requesting a text amendment to Tooele County Land Use Chapters 2 and 27**

      PUBLIC HEARING, MOTION, AND VOTE

      Attachments
      1. Public Notice_Hearing_10 days_TCLUO 2025-079.pdf
      2. Planning_Commission_Agenda_Summary_2025-079.pdf
      3. TCLUO 2025-079_staff report_Final.pdf
   B. **TCLUO 2025-082 Brock Brown is requesting a text amendment to Tooele County Land Use Chapter 2, and Land Use tables 15-5-3.5 and 17-5-3.8**

      PUBLIC HEARING, MOTION, AND VOTE

Attachments
1. Public Notice_Hearing_10 days_TCLUO 2025-082.pdf
2. Planning_Commission_Agenda_Summary_2025-082.pdf
3. TCLUO 2025-082_staff report_final.pdf

C. **TCLUO 2025-092 Staff is requesting a text amendment to Tooele County Land Use Chapter 35**

PUBLIC HEARING, MOTION, AND VOTE

Attachments
1. Public HEARING notice_10 days_TCLUO 2025-092.pdf
2. Planning_Commission_Agenda_Summary_2025-092.pdf
3. TCLUO 2025-092_staff report_FINAL.pdf

6. **Rezones**

A. **REZ 2025-046 Charles Akerlow with the Inland Port is requesting a rezone of 232.52 acres from MU-40 to M-G**

PUBLIC HEARING, MOTION, AND VOTE

Attachments
1. REZ 2025-046_ Public hearing_Notice_10 days.pdf
2. Planning_Commission_Agenda_Summary 2025-046.pdf
3. REZ 2025-046_Staff Report_Final.pdf

B. **REZ 2025-035 Michael Drury is requesting a rezone for 61.02 acres from MU-40 to M-D**

MOTION AND VOTE

Attachments
1. REZ 2025-035_Public Meeting notice_24 hours.pdf
2. Planning_Commission_Agenda_Summary 2025-035.pdf
3. REZ 2025-035_Staff Report_FINAL_2.pdf

7. **Site Plan Review**

A. **SPR 2025-086 Adobe Rock is requesting reduced setback approval for a pavilion on their commercial property**

MOTION AND VOTE

Attachments
1. SPR 2025-086_Public Meeting notice_24 hours.pdf
2. SPR 2025-086_Planning_Commission_Agenda_Summary.pdf
3. SPR 2025-086_Staff_Report_Final.pdf

8. **Subdivisions**

A. **AMD SUB 2025-037 Applicants are requesting final plat approval for the amended plat of Prickly Pear Acres Subdivision**

MOTION AND VOTE

Attachments
1. AMD SUB 2025-037_Public Meeting notice_24 hours.pdf
2. AMD SUB 2025-037_Planning_Commission_Agenda_Summary.pdf
3. AMD SUB 2025-037_Staff report_Final.pdf

9. **Planning Commission Comments**

10. **Adjournment**

Planning Commission Meeting Minutes

June 04, 2025

47 S Main St. Tooele, UT 84074

Council Chambers Room 308

7:00 p.m.

Draft

1. **Pledge of Allegiance**

   Pledge of allegiance led by Councilman Kendal Thomas.

2. **Roll Call**

   Blair Hope called the meeting to order at 7:01pm. Roll call showed: Commissioner Dow (online), Commissioner Beckstrom, Commissioner Stetz, Commissioner Scott, Commissioner Bartholemew, Commissioner Alder, Commissioner Hope. Commissioner Mitchell was excused.

3. **Minutes**

   A. **Minutes from the April 23, 2025 Meeting**

      MOTION AND VOTE

      Agenda Attachments
      1. April 23, 2025 Planning Commission Meeting Minutes_Draft.pdf

   Commissioner Scott made a motion to approve the April 23rd, 2025, Meeting Minutes. 2nd by Commissioner Beckstrom. All in favor. Motion passed unanimously. Commissioner Hope abstained.

4. **Subdivisions**

   A. **SUB 2025-026 Skylar Tolbert is Requesting Preliminary Plat Approval for Sagewood Village Phase 14, Trish DuClos**

      PUBLIC HEARING AND MOTION

      Agenda Attachments
      1. SUB 2025-026_Staff_Report_Final.pdf
      2. SUB 2025-026_Planning_Commission_Agenda_Summary.pdf
      3. SUB 2025-026_Public Notice_Hearing_10 days.pdf

   Trish Duclos, Planning Staff, summarized Preliminary Plat Approval for the proposed Sagewood Village Phase 14 Subdivision in Stansbury Park and the applicant is online. This is for 25 residential lots, and 1 alpha lot, “A” for open space that will be deeded to SSA (Stansbury Service Agency). All reviewing agencies have approved of the preliminary plat. Ivory’s development agreement says that they will allow any lot size and up to 1,050 lots at build out. Including this Plat (phase 14), they will have 963 single-family lots. Staff recommends that the Planning Commission approve the preliminary plat for the proposed 26-lot, Sagewood Village Phase 14 Subdivision Preliminary Plat.
   Commissioner Hope opened the public hearing.
   Commissioner Hope closed the public hearing.
   Commissioner Beckstrom asked if Ivory Homes had started developing this phase. Mr. Timothy with Ivory

Homes, who is online, confirmed that they have not dug any holes in phase 14.
Commissioner Scott made a motion to approve 2025-026 Subdivision Preliminary Plat with the 26 lots according to the staff recommendations to approve the preliminary plat. 2nd by Commissioner Beckstrom. Roll call vote: Commissioner Dow – yes. Commissioner Beckstrom – yes. Commissioner Stetz. Commissioner Scott – yes. Commissioner Bartholomew – yes. Commissioner Alder – yes. Commissioner Hope – yes. All in favor. Passed unanimously.

5. **Conditional Use Permits**

   A. **CUP 2023-116 Richard Ahadjie with Staker Parsons is requesting a Conditional Use Permit for Mining, Quarry, Sand and Gravel Excavations, Trish DuClos**

      PUBLIC HEARING AND MOTION

      Agenda Attachments
      1. CUP 2023-116_Staff_report_Final.pdf
      2. CUP 2023-116_Planning_Commission_Agenda_Summary.pdf
      3. CUP 2023-116_Public Notice_Hearing_10 days.pdf

      Trish Duclos, Planning Staff, summarized that this is for a Conditional Use Permit for a gravel pit operation from Staker and Parsons and the applicant is online. It is located in the Bauer area. Referring to it as The North Bauer Pit, it is near other gravel operations. The property is 100-acres and will be a 5-phase project (20-acre phases). The applicant will improve half of Bauer Road, along that section that is adjacent to the property. As developments come in, the same requirements will be addressed. All reviewing agencies have approved the site plan. Staff recommends the Planning Commission put the following conditions in place 1). Before operations of each phase, the correct bonding is in place for that phase. 2) Renewals of state department permitting are submitted to staff upon expiration of that permit. 3) Ensure the 5-year plan is updated and sent to staff before the following 5-year expiration date.
      Commissioner Scott asked about switching Bauer Road where it comes out on HW-36 from its existing location and moving it north, so it ties in with where the jail is. Trish said that no, they don't touch that north road, their access will be from Old Bauer Road, the same as if you are going to the landfill and then turning in. Commissioner Beckstrom asked about Class D roads and if there was a concern coming in onto a gravel road. Rachelle Custer, Community Development Director, said that not all gravel roads are Class D, and this one is not a Class D road. This gravel road is maintained. Commissioner Hope's concern is turning lanes on and off. He said there isn't a turn lane which is a safety and congestion concern. Trish stated that the applicant provided a traffic study, but it did not call out turn lanes in the area. Rachelle said that because the applicant is accessing off of an approved road/intersection, there has not been input from UDOT. Rachelle said that may be a condition the Planning Commission place: some type of approval from UDOT to add the increased traffic to that intersection. The traffic study itself does not require it, that would have to be UDOT that requires it.
      Commissioner Hope opened the public hearing.
      Commissioner Hope closed the public hearing.
      Commissioner Alder shared the same concerns as the other commissioners. The commissioners further discussed the neighboring gravel pits, congestion, access, delays and the traffic study. Rachelle said that the Planning Commission can either put the condition that the applicant gets approval from UDOT, or they can request the County Council to commission their own traffic study, but the Commissioners cannot commit funds for it. Trish said that with the negative impacts in the area, they can put mitigation measure conditions.

      Commissioner Scott made a motion to table CUP 2023-116 until at least the August business meeting. During that time, the applicant is to get with UDOT regarding acceleration and deceleration access lanes at this location and the Planning Commission would like the County Council to look at hiring their own traffic study that encompasses all future growth in this area and not just the company's first phase. 2nd by Commissioner Dow. Roll call vote: Commissioner Dow – yes. Commissioner Beckstrom – yes. Commissioner Stetz – yes. Commissioner Scott – yes. Commissioner Bartholomew – yes. Commissioner Alder – yes. Commissioner Hope – yes. All in favor. Motion passed unanimously.

6. **Rezones**

   A. **REZ 2024-159 Jason Harris is Requesting a Rezone of 40 Acres from RR-5 to RR-1, Trish DuClos**

MOTION AND VOTE

Agenda Attachments
1. REZ 2024-159_ORD 2025-02_Staff Report_Final.pdf
2. Planning_Commission_Agenda_Summary 2024-159-2.pdf
3. REZ 2024-159 Public Notice.pdf

Trish Duclos, Planning Staff, summarized rezone request 2024-159 on the Planning Commission side is referred to as Ordinance 2025-02 on the County Council side. The Planning Commission has heard this rezone request a couple of times. The applicant has provided more information on the water study and provided a complete change order application from the State. The applicant has sufficient water rights in the area and the Health Department deems the area feasible. He will have to get soil, septic and water during the subdivision phases as the Health Department cannot process them at this time. The first vote was 4 in favor, with the conditions that the lot sizes were a minimum of 3 acres and that there was documentation from the State that it was feasible in that area. 2 were unfavorable because it should conform to the General Plan or remain a 5-acre minimum, and concerns with water and wells in that area. The County Council added that onto the Planning Commission, that the County needed to do a General Plan Amendment which has now been changed to medium density residential. The applicant is now requesting a minimum of 2 acres and, with the information he has provided, it is feasible. The city does have a high-density residential area next to this property as well as, adjacent to this property, there is active agriculture. Trish feels that 1-acre lots and larger are a decent buffer for planning. The original request was RR-1 (1-acre minimum), and the Commissioners decided that the 3-acre minimum was fair.

Jason Harris, the applicant, stated that the original application was for 1 ½ and 3-acre lot sizes. He would like to change this to all 2-acre lots with a total of 18 lots. Commissioner Alder asked if the lots were going to have shared wells. Jason confirmed that there would be one well per 2 lots with a shared well user agreement between property owners. Jason also confirmed that each home will have its own septic system.
Commissioner Dow asked staff why they would consider smaller lot sizes when a neighboring municipality has expressed concern about their wells being negatively affected by nitrates and phosphates gravitating downstream. He is addressing the letter that Tooele City sent in for the first public hearing. The Commissioners discussed the septic systems and Tooele City, allowing a larger density development next to the same property that they referred the County to. Commissioner Scott asked staff about staff recommendations. Trish asked that they consider the uses such as dwelling unit density, building square footage, height of the structures, minimum lot sizes. Trish also mentioned ADUs because that will double the septic systems. Trish said that currently, per state code, we have to allow internal ADUs. They have not come forward regarding detached ones yet. Trish said that the Planning Commission can put conditions in now regarding detached ADUs and if the state changes the code, it can be addressed at that time. Commissioner Bartholemew asked about addressing septic and water for the ADUs. Trish said that is a type of use that they can restrict or put conditions on.

Commissioner Scott made a motion to give a favorable recommendation to the County Council for approval of Rezone 2024-159 with the attached staff recommendations to include 2-acre minimum lot sizes and no detached ADUs. 2nd by Commissioner Beckstrom. Roll call vote: Commissioner Dow – no for reasons mirroring Tooele City's and neighbors' concerns regarding septic waste traveling downstream and negatively impacting neighboring wells. Commissioner Beckstrom – yes. Commissioner Stetz – yes. Commissioner Scott – yes. Commissioner Bartholomew – yes. Commissioner Alder – yes. Commissioner Hope – yes. Motion passed 6 to 1.

7. **Adjournment**

Motion to adjourn by Commissioner Hope at 7:50pm.

8. **Planning Commission Comments**

NOTICE OF PUBLIC MEETING

- **SUBJECT:** CUP 2023-116 – Mining, Quarry, Sand and Gravel Excavation CUP
- **PROJECT SUMMARY:** Conditional Use Permit for North Bauer Gravel Pit
- **ADDRESS:** 2800 W Bauer Rd
- **PARCEL:** 06-017-B-0041
  Unincorporated: Tooele **Planner:** Trish DuClos

On **July 16, 2025** the Tooele County Planning Commission will hold a public meeting regarding the request described above. The meeting will be held at 7:00 p.m. at the Tooele County Administration Building (Council Chamber, Third Floor), 47 S. Main Street, Tooele, UT 84074. You may also attend online at https://tooeleco.org/ under "Meeting Agendas." The zoom link will be attached to the planning commission agenda.

For questions or additional information, please contact the Planning Office at 435-843-3160.

The future meeting regarding this application will also be posted on the Tooele County Website and Utah Public Noitce Website.

Tooele County
Community Development

Tooele County Planning Commission
Agenda Item Summary

Department Making Request:	**Meeting Date:**
Community Development	**July 16, 2025**

Item Title:

CUP 2023-116 Mining, Quarry, Sand and Gravel Excavation

Summary:

Conditional Use Permit for Mining, Quarry, Sand and Gravel Excavations

ADDRESS: 2800 W Bauer Rd
PARCEL: 06-017-B-0041
Unincorporated: Tooele
Planner: Trish DuClos

Planning and Zoning
47 S. Main Street • Room 208 • Tooele, UT 84074
Phone: (435) 843-3160 • Fax: (435) 843-3252
https://tooeleco.org/government/county-departments/community-development/

CUP 2023-116

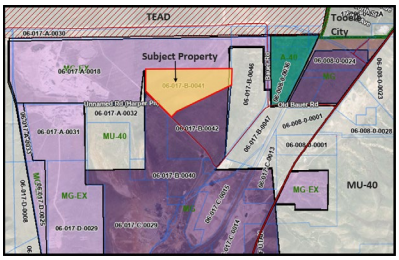
Conditional Use Summary and Recommendation

Public Body: Tooele County Planning Commission
Meeting Date: July 16, 2025
Parcel ID: 06-017-B-0041
Current Zone: MG-EX (Mining, Quarry, Sand and Gravel Excavation)
Property Address: 2800 W Bauer Rd
Request: Conditional Use Approval for Mining, Quarry, Sand and Gravel Excavations
Planner: Trish DuClos
Planning Staff Recommendation: Approval with Conditions
Planning Commission Response: Not yet received.
Applicant Name: Richard Ahadjie

PROJECT DESCRIPTION

Richard Ahadjie with Staker and Parsons is requesting a conditional use permit for mining, quarry, sand and gravel excavations.

SITE & VICINITY DESCRIPTION (see attached map)



The subject property is located just South of TEAD and North of Tooele County's landfill. It is currently zoned MG-EX (Mining, Quarry, Sand and Gravel Excavation), where the proposed use is a allowed with a conditional use permit approved through planning commission. It is 100 acres in size. The property will be excavated in 5 phases.

LAND USE CONSIDERATIONS

Compatibility with existing buildings in terms of size, scale and height.	Yes
Compliance with the General Plan.	Yes

NEIGHBORHOOD RESPONSE

Planning staff has not received any neighborhood feedback on this item. Any comments received after this staff report is submitted will be addressed to the planning commission at the meeting.

PLANNING STAFF ANALYSIS

Planning Staff and reviewing agencies have approved the site plan. Half of Bauer Road will be improved, along that section that is adjacent to the property. As developments come in, the same requirement will be addressed.

ISSUES OF CONCERN/PROPOSED MITIGATION

Planning Commission brought up concerns of access lanes on SR 36 in their meeting held on 6/4/25. Commission tabled the item to get information from UDOT on access lanes and peitioned the Council to provide a traffic study for that interstection. Planning Staff found that access and decel lanes already exist there and the traffic study that was provided addressed them. Staff has not identified issues at this time.

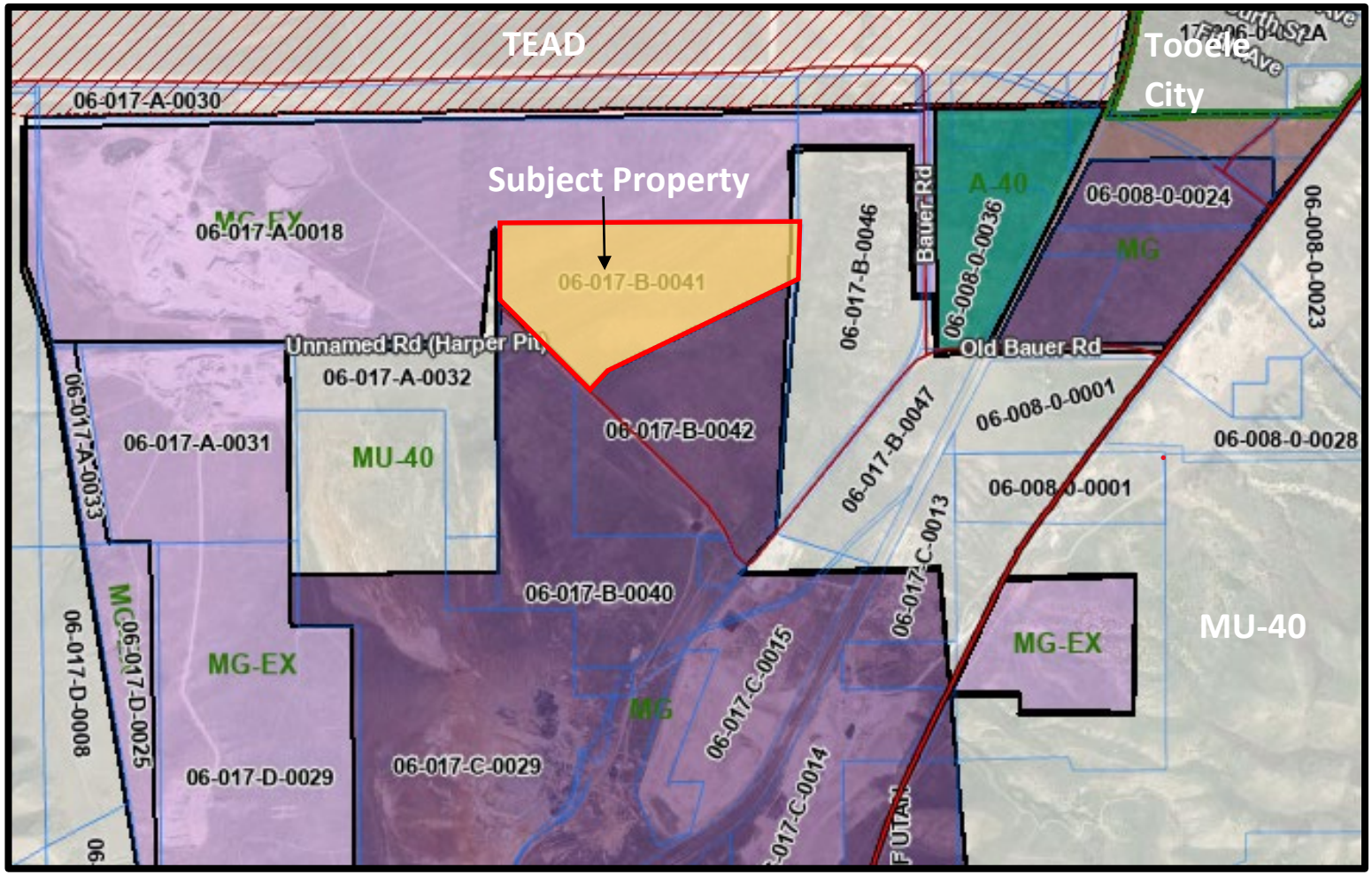
PLANNING STAFF RECOMMENDATION

Staff recommends that the Tooele County Planning Commission review all attachments and information before making a decision. With the possible following conditions of approval.

1. Before operations of each phase, the correct bonding is in place for that phase.
2. Renewals of state department permitting is submitted to staff upon expiration of that permit.
3. Ensure the 5-year plan is updated and sent to staff before the following 5-year expiration date.

CUP 2023-116: CUP for Gravel Pit

Address: 2800 W Bauer Rd. *Parcels: 06-017-B-0041*



TOOELE COUNTY

Gravel Operations Conditional use permit Application

Fee $1,000.00 ($250 Annual Inspection Fee)

Property information and location

(All lines applicable to this site must be filled in)

Section 12 Township 4S Range 5W

Parcel # 06-017-B-0041 Lot # _____

You MUST include a parcel map obtained from the Tooele County Recorder's Office with this application!

Property Owner(s) Information

Name(s): Staker & Parson Companies

Address per tax rolls: 89 W 13490 S

City/County: Draper State: UT Zip: 84020

Office/home phone: (801) 871-6600 Fax: _____

Mobile phone: _____ Message phone: _____

Email address: richard.ahadjie@stakerparson.com

A copy of the deed, offer or tax notice MUST be included to demonstrate ownership

cc: joel.peterson@stakerparson.com

(For Office Use Only)

CUP #: 2023-116 Fee $ 500.00 Receipt #: 1146 2/21/24

Is this an amendment? ☐ Yes ● No

Agent for the Property Owner(s) Information

Name(s):_____

Address per tax rolls: _____

City/County:_____ State:_____ Zip:_____

Office/home phone:_____ Fax:_____

Mobile phone:_____Message phone: _____

Email address: _____

A copy of the deed, offer or tax notice MUST be included to demonstrate ownership

There shall be no presumption of approval of any aspect of the process.

Each application for a conditional use permit shall have all required submittals before it is accepted as a complete application.

APPLICATION IS HEREBY MADE TO THE PLANNING COMMISSION REQUESTING THAT:

The North Bauer Pit will be used as a sand and gravel operation to produce construction aggregates

Total acreage of parcel: 100 acres Area occupied by this use: 30 acres

Current zoning designation: MU-40 Current use of land: _____

I (We) understand that the Planning Commission or zoning administrator shall not authorize a conditional use permit unless the evidence presented is such as to establish that such use will not, under the circumstances of the particular case, be detrimental to the health, safety or general welfare of persons residing or working in the vicinity, and the proposed use will comply with the regulations and conditions specified in the Tooele County zoning ordinance for such use.

_____ _____

SIGNATURE DATE

AFFIDAVIT

AGENT AUTHORIZATION

I (we), _____
the owner(s) of the real property located as follows:

_____
and further described in the attached application, do authorize as my (our) agent(s) _____to represent me (us) regarding the attached application and to appear on my (our) behalf before any administrative or legislative body in the County considering this application and to act in all respects as our agent in matters pertaining to the attached application.

_____ _____
(Property Owner) (Property Owner)

_____ _____
(Property Owner) (Property Owner)

Dated this_____day of_____, 20_____, personally appeared before me

_____

the signer(s) of the above agent authorization who duly acknowledged to me that they executed the same.

_____
(Notary)

Residing in:_____Tooele County, Utah

My commission expires: _____

AFFIDAVIT

PROPERTY OWNER

STATE OF UTAH)
)
COUNTY OF TOOELE)

I (we), Staker & Parson Companies
being duly sworn, depose and say that I (we) am (are) the owner(s) of the property located as follows: S 12 T 4S R 5W, and further identified in the attached application and that the statements herein contained and the information provided in the attached plans and other exhibits are in all respects true and correct to the best of my (our) knowledge. I also acknowledge that I have received written instruction regarding the process for which I am applying and the Tooele County Department of Engineering staff have indicated they are available to assist me in making this application.

James B Larsen
(Property Owner)

(Property Owner)

(Property Owner)

(Property Owner)

Dated this 1st day of February, 20 24, personally appeared before me:

James B Larsen
the signer(s) of the above who duly acknowledged to me that they executed the same.

GINA SMITH
NOTARY PUBLIC • STATE of UTAH
COMMISSION NO. 728769
COMM. EXP. 02-26-2027

Gina Smith
(Notary)

Residing in: Salt Lake County, Utah

My commission expires: 02-26-2027

Include the following with the application:

27-4. Application.

All applications for conditional use permits shall be accompanied by the following materials:

	Applicant	County	
(a)	☐	☐	Application form for a conditional use permit;
(b)	☐	☐	Evidence of ownership or control over the land and a legal description of the property where the pit will be located;
(c)	☐	☐	Evidence of capability to complete the project, which includes:
(i)	☐	☐	A statement of the applicant's ability to post performance bonds or other financial assurance;
(ii)	☐	☐	Cost estimates for reclamation costs to include removal of roads, buildings, overburden, etc;
(iii)	☐	☐	Liability insurance coverage;
(d)	☐	☐	A site plan showing:
(i)	☐	☐	All prominent man made and geologic features within the surrounding areas that will be affected by the operation;
(ii)	☐	☐	Dimensions;
(iii)	☐	☐	Locations, clearances, and rights-of-ways, easements, utility lines;
(iv)	☐	☐	property lines and names of adjoining property owners;

Chapter 30-4. Application Contents and Review Procedures. In order to ensure that the existing or proposed excavation operation is conducted in a manner that will mitigate the effects on the community and provide for reclamation of the land to a state that enables meaningful use and respects aesthetic values, the Owner or Operator shall, prior to the commencement of any phase of operation, submit to the CDD an Application containing, among other things, a proposed Operation and Reclamation Plan which addresses the following:

A. General Information. The following shall be provided:

	Applicant	County	
1.	☐	☐	The name, permanent business mailing address, and telephone number, including a cell phone number, of the Operator responsible for the mining operations and reclamation of the site. (Above).
2.	☐	☐	The name, permanent mailing address, and telephone number of the Owner(s) of all land to be included as a part of the operations. (Above).
3.	☐	☐	The name, permanent business mailing address, and telephone number, including a cell phone number, of the initial representative designated or appointed by the Owner or Operator to serve as the initial representative to act as a liaison between the County and its various departments and the Owner or Operator. The Owner or Operator may change its designated representatives by notice. The representatives shall be available at all reasonable times to discuss and review the Excavation Permit. (Above)
4.	☐	☐	The name and mailing address of the surface landowner(s) and mineral owner(s) as set forth in the public property tax records available from the County of all land directly adjacent to the operations. (Provided through the Recorder's office).
5.	☐	☐	The DOGM Notice of Intent Application approval, if subject to DOGM oversight.
6.	☐	☐	Proposed starting date and the anticipated period of operation.
7.	☐	☐	Preliminary reclamation plan as described in section **30-9.**

B. Plans, Drawing, Materials Required.

One hard copy and an electronic copy of:

	Applicant	County	
1.	☐	☐	All items submitted to or required by DOGM for the Notice of Intent Application approval (including surety), or equivalent information if not subject to DOGM oversight.

2. ☐ ☐ A regional vicinity analysis describing other land uses within one thousand feet (1000') of the site, the possible impacts of the proposed excavation on surrounding land and, if necessary, any proposed measures to mitigate these impacts;
3. ☐ ☐ A description of the hauling routes anticipated to be employed by the Operator in hauling material from the excavation site to roads maintained by the County or State;
4. ☐ ☐ A description of the visual characteristics, with particular attention given to the potential use of existing natural topography and vegetation, and, if necessary, to shield site operations from nearby properties, roadways, and the general public;
5. ☐ ☐ The most currently available aerial photograph of the proposed excavation site and adjacent properties;
6. ☐ ☐ All maps, drawings or cross sections as found in the DOGM application, if applicable;
7. ☐ ☐ Planned phases of excavation and anticipated amount of material to be removed at each phase, depicted on an appropriate map;
8. ☐ ☐ Number, type and kinds of machinery and equipment to be used;
9. ☐ ☐ Operational processes to be used, including crushing, stockpiling, milling, etc.;
10. ☐ ☐ The water to be used in operations, its source, control and disposal;
11. ☐ ☐ Electrical power requirements, source and control;
12. ☐ ☐ Accessory facilities, such as scales and buildings;
13. ☐ ☐ Sanitary facilities and disposal system;
14. ☐ ☐ Proposed techniques to be used for control of dust and noise;
15. ☐ ☐ Storm Water Management Plan (SWPPP).
16. ☐ ☐ Proposed lighting plan.
17. ☐ ☐ A proposed Operation and Reclamation Plan.
18. ☐ ☐ Division of Air Quality Permit.

Additional information required:

Applicant County

☐ ☐ Mailing labels of property owners within 1000' if the property which is subject of the Application (taken from outer boundary lines of subject property).

I (We) understand that Site plan approval shall be required as a condition to receiving a building or conditional use permit for all permitted or conditional uses in all zoning districts. Sites must meet minimum development standards of Tooele County for the intended use. Upon planning commission approval of the CUP, planning commission or staff find that other conditions are required that may affect the site plan, the site plan must be adjusted before a permit can be issued.

I (We) do understand and will follow all regulations listed in Tooele County Land Use codes pertaining to Mining, Quarry, Sand, and Gravel Excavation. Found in Tooele County Land Use Chapters 7, 8, 12, 27, 30 and any other applicable chapters. I (We) will also abide by and follow all state, federal and local laws and regulations.

_____ _____

APPPLICANT'S SIGNATURE DATE

_____ _____

PROPERTY OWNER'S SIGNATURE DATE

_____ _____

OPERATOR'S SIGNATURE DATE

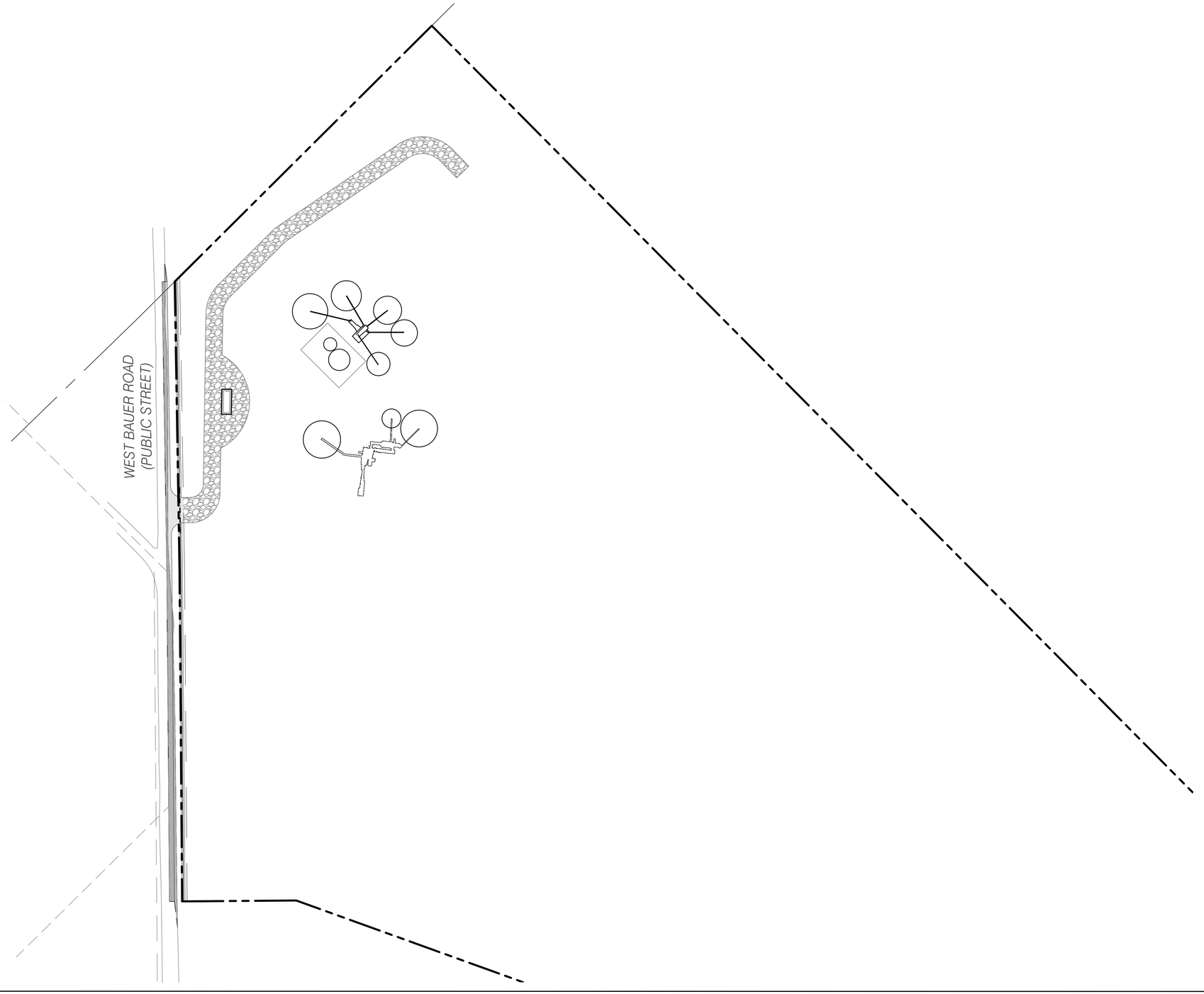
_____ _____

INITIAL REPRESENTATIVE/LIASON'S SIGNATURE DATE

STAKER PARSON TOOELE

LOCATED IN THE NORTHWEST QUARTER & SOUTHWEST QUARTER OF
SECTION 12, TOWNSHIP 4 SOUTH, RANGE 5 WEST,
SALT LAKE BASE AND MERIDIAN
TOOELE COUNTY, UTAH

PARCEL NO. 06-017-B-0041 STOCKTON CITY, UTAH

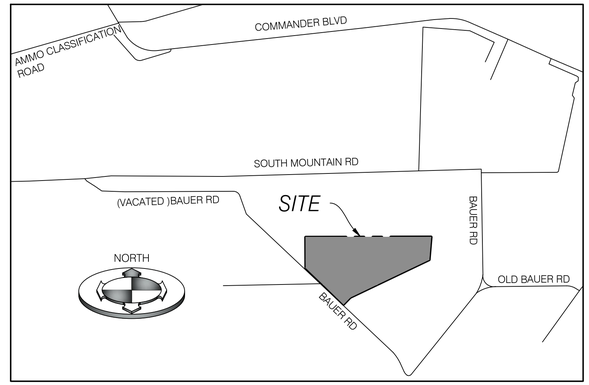


NORTH

GRAPHIC SCALE

120 0 60 120 240

(IN FEET)
1 inch = 120ft.



VICINITY MAP: N.T.S

OWNER/DEVELOPER:
GABRIEL GAVIDIA
385-285-6197
gabriel.gavidia@stakerparson.com

DRAWING INDEX

COVER	COVER SHEET
CGN.01	GENERAL NOTES, LEGEND & ABBREVIATION
CSP.01	SITE PLAN
CSP.02	OVERALL SITE PLAN
CGD.01	GRADING & DRAINAGE PLAN
CEP.01	EROSION CONTROL PLAN
CEP.02	EROSION CONTROL DETAILS

PRELIMINARY CIVIL PLANS
NOT FOR CONSTRUCTION

BENCHMARK CIVIL

PRELIMINARY PLAN
PROFESSIONAL ENGINEER
2/5/25
No. 10360773
M. CHRIS POULSEN
STATE OF UTAH

BENCHMARK ENGINEERING &
LAND SURVEYING
9138 SOUTH STATE STREET SUITE # 100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

STAKER PARSON TOOELE
2800 W. BAUER ROAD
TOOELE COUNTY, UTAH

DRAFT: HT	DESIGN: TJB	CHECK: MCP
DATE: XX/XX/2024	DATE: XX/XX/2024	DATE: XX/XX/2024

PROJECT NO. 2409141

No.	DATE	DESCRIPTION
1	02/05/25	REVISED PER TOOELE COUNTY COMMENTS

COVER

1 OF 7

BENCHMARK ENGINEERING CONTACT: M. CHRIS POULSEN, PE

LINETYPES:

NEW	EXISTING	
		SECTION LINE
		PROPERTY LINE
		ADJACENT PL or LOT LINES
		RIGHT-OF-WAY LINE
		CENTERLINE of ROAD
		EASEMENT LINE
		CURB & GUTTER
		EDGE OF ASPHALT
		FENCE / WALL, STONE
		FENCE, BLOCK
		FENCE, BRICK
		FENCE, CHAIN
		FENCE, IRON
		FENCE, VINYL
		FENCE, WIRE
		FENCE, WOOD
4475	4475	INDEX CONTOUR LINE
		INTERMEDIATE CONTOUR LINE
XXXX TOC		SPOT ELEVATION
SS	SS	SANITARY SEWER LINE
SD	SD	STORM DRAIN LINE
W	W	WATER LINE
IRR	IRR	IRRIGATION LINE
OHP	OHP	OVERHEAD POWER LINE
UG	UG	UNDERGROUND POWER LINE
GAS	GAS	GAS LINE
T	T	TELEPHONE LINE
CATV	CATV	CABLE TELEVISION LINE
		DRAINAGE / DITCH CENTERLINE
		TREE LINE EDGE
FO	FO	FIBER OPTIC LINE
		PROPOSED ASPHALT
		PROPOSED CONCRETE

SYMBOLS:

NEW	EXISTING	
		SECTION CORNER (FOUND)
		SECTION CORNER (NOT FOUND)
		STREET MONUMENT (FOUND)
		STREET MONUMENT (NOT FOUND)
		BRASS CAP MONUMENT
		POWER POLE & OVERHEAD POWER
		LIGHT POLE
		GUY WIRE
		TELEPHONE MANHOLE
		SANITARY SEWER MANHOLE
		STORM DRAIN MANHOLE
		CATCH BASIN
		DIRECTION OF DRAINAGE
		WATER MANHOLE
		WATER VALVE
		WATER METER
		FIRE HYDRANT
		IRRIGATION VALVE
		GAS MANHOLE
		TREE

ABBREVIATIONS

BC	BAR & CAP	PUE	PUBLIC UTILITY EASEMENT
BOW	BOTTOM OF VISIBLE WALL	R	RADIUS OF CURVE
COR.	SECTION CORNER	RR	RAILROAD
CB	CATCH BASIN	ROW	RIGHT-OF-WAY
CF	CUBIC FEET	R/W	RIGHT-OF-WAY
D	DELTA ANGLE	SCO	SEWER CLEANOUT
EG	EXISTING GROUND	SSMH	SEWER MANHOLE
EOA	EDGE OF ASPHALT	SD	STORM DRAIN
EOC	EDGE OF CONCRETE	SF	SQUARE FEET
EX	EXISTING	TBC	TOP BACK OF CURB
FFE	FINISH FLOOR ELEVATION	TMH	TELEPHONE MANHOLE
FG	FINISHED GRADE	TOA	TOP OF ASPHALT
FH	FIRE HYDRANT	TOC	TOP OF CONCRETE
FL	FLOW LINE	TOF	TOP OF FOOTING
GB	GRADE BREAK	TOE	TOE OF SLOPE
GW	GUY WIRE	TOG	TOP OF GRATE
HW	HEAD WALL	TOP	TOP OF SLOPE
I.E.	INVERT ELEVATION	TOW	TOP OF WALL
LIP	LENGTH OF CURVE	TR	TELEPHONE RISER
L	LIP OF CURB	UGP	UNDERGROUND POWER
LF	LINEAR FEET	VPC	VERTICAL POINT OF CURVATURE
LP	LOW POINT	VPI	VERTICAL POINT OF INTERSECTION
M-M	MONUMENT TO MONUMENT	VPT	VERTICAL POINT OF TANGENCY
MH	MANHOLE	WM	WATER METER
MON.	SURVEY MONUMENT	WV	WATER VALVE
OHP	OVERHEAD POWER		
PVC	POINT OF CURVATURE		
PVI	POINT OF INTERSECTION		
PP	POWER POLE		
PVT	POINT OF TANGENCY		

CONSTRUCTION NOTES

RESPONSIBLE DISTRICTS OR AGENCIES AND APPLICABLE STANDARDS
COUNTY- TOOELE COUNTY
WATER UTILITY COMPANY- NA
SEWER- NA
STORM DRAIN/GROUNDWATER- NA
ELECTRICAL- ROCKY MOUNTAIN POWER
TELEPHONE- NA
NATURAL GAS- ENBRIDGE GAS

APPLICABLE STANDARDS: APWA 2017 STANDARDS

Blue Stakes of UTAH811 Bluestakes.org

NOTE:

IN THE EVENT THAT THE CONSTRUCTION NOTES CONFLICT WITH RESPONSIBLE DISTRICT OR AGENCY STANDARDS NOTES AND SPECIFICATIONS, THE DISTRICT OR AGENCY STANDARD NOTES AND SPECIFICATIONS GOVERN.

CAUTION NOTICE TO CONTRACTORS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO THE NORMAL WORKING HOURS; AND THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AN HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

GENERAL

1. ALL MATERIALS AND CONSTRUCTION IN THE PUBLIC RIGHT OF WAY SHALL BE IN ACCORDANCE WITH RESPONSIBLE DISTRICT OR AGENCY.

2. CONTRACTOR AND APPLICABLE SUBCONTRACTORS SHALL ATTEND ALL PRE-CONSTRUCTION CONFERENCES AND PERIODIC PROGRESS MEETINGS. PRIOR TO ANY WORK BEING PERFORMED, THE CONTRACTOR SHALL CONTACT RESPONSIBLE DISTRICT OR AGENCY FOR A PRE-CONSTRUCTION CONFERENCE. CONTRACTOR SHALL ALSO NOTIFY THE APPROPRIATE PROJECT CONTACTS (48) HOURS IN ADVANCE OF SAID MEETING.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUBLIC SAFETY AND OSHA STANDARDS.

4. THE CONTRACTOR SHALL FAMILIARIZE HIM/HER SELF WITH THE PLANS, THE GEOLOGY REPORTS AND THE SITE CONDITIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL INSPECT THE SITE OF WORK PRIOR TO BIDDING TO SATISFY THEMSELVES BY PERSONAL EXAMINATION OR BY SUCH OTHER MEANS AS THEY MAY PREFER, OF THE LOCATION OF THE PROPOSED WORK, AND OF THE ACTUAL CONDITIONS OF AND AT THE SITE OF WORK.

CONDITIONS WHICH APPEAR TO THEM TO BE IN CONFLICT WITH THE LETTER OR SPIRIT OF THE PROJECT PLANS AND SPECIFICATIONS, THEY SHALL CONTACT THE ENGINEER FOR ADDITIONAL INFORMATION AND EXPLANATION BEFORE SUBMITTING THEIR BID.

SUBMISSION OF A BID BY THE CONTRACTOR SHALL CONSTITUTE ACKNOWLEDGMENT THAT, IF AWARDED THE CONTRACT, THEY HAVE RELIED AND ARE RELYING ON THEIR OWN EXAMINATION OF (1) THE SITE OF THE WORK, (2) ACCESS TO THE SITE, AND (3) ALL OTHER DATA AND MATTERS REQUISITE TO THE FULFILLMENT OF THE WORK AND ON THEIR OWN KNOWLEDGE OF EXISTING FACILITIES ON AND IN THE VICINITY OF THE SITE OF THE WORK TO BE CONSTRUCTED UNDER THIS CONTRACT.

THE INFORMATION PROVIDED BY THE OWNER OR THE ENGINEER IS NOT INTENDED TO BE A SUBSTITUTE FOR, OR A SUPPLEMENT TO, THE INDEPENDENT VERIFICATION BY THE CONTRACTOR TO THE EXTENT SUCH INDEPENDENT INVESTIGATION OF SITE CONDITIONS IS DEEMED NECESSARY OR DESIRABLE BY THE CONTRACTOR. CONTRACTOR SHALL ACKNOWLEDGE THAT THEY HAVE NOT RELIED SOLELY UPON OWNER OR ENGINEER FURNISHED INFORMATION REGARDING SITE CONDITIONS IN PREPARING AND SUBMITTING THEIR BID.

5. ALL WORK SHALL COMPLY WITH THE AMERICAN PUBLIC WORKS ASSOCIATION UTAH CHAPTER (APWA) MANUAL OF STANDARD SPECIFICATIONS 2017 EDITION AND THE MANUAL OF STANDARD PLANS 2017 EDITION. SAID STANDARD SPECIFICATIONS AND PLANS SHALL BE SUBSIDIARY TO MORE STRINGENT REQUIREMENTS BY APPLICABLE LOCAL JURISDICTION.

6. THE CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PROJECT PLANS AND SPECIFICATIONS. THEREFORE, THE OWNER IS RELYING UPON THE EXPERIENCE AND EXPERTISE OF THE CONTRACTOR, IT SHALL BE EXPECTED THAT THE PRICES PROVIDED WITHIN THE CONTRACT DOCUMENTS SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE.

THE CONTRACTOR SHALL BE COMPETENT, KNOWLEDGEABLE AND HAVE SPECIAL SKILLS ON THE NATURE, EXTENT AND INHERENT CONDITIONS OF THE WORK TO BE PERFORMED. CONTRACTOR SHALL ALSO ACKNOWLEDGE THAT THERE ARE CERTAIN REGULAR AND INHERENT CONDITIONS EXISTENT IN THE CONSTRUCTION OF THE PARTICULAR FACILITIES WHICH MAY CREATE, DURING THE CONSTRUCTION PROGRAM, UNUSUAL OR PECULIAR UNSAFE CONDITIONS HAZARDOUS TO PERSONS, PROPERTY AND THE ENVIRONMENT. CONTRACTOR SHALL BE AWARE OF SUCH PECULIAR RISKS AND HAVE THE SKILL AND EXPERIENCE TO FORESEE AND TO ADOPT PROTECTIVE MEASURES TO ADEQUATELY AND SAFELY PERFORM THE CONSTRUCTION WORK WITH RESPECT TO SUCH HAZARDS.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND LICENSES REQUIRED FOR THE CONSTRUCTION AND COMPLETION OF THE PROJECT, AND SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS AND CONDITIONS OF ALL PERMITS AND APPROVALS APPLICABLE TO THIS PROJECT. THE CONTRACTOR SHALL INSURE THAT THE NECESSARY RIGHT-OF-WAY, EASEMENTS, AND/OR PERMITS ARE SECURED PRIOR TO CONSTRUCTION. CONTRACTOR SHALL OBTAIN APPROPRIATE PERMITS AND NOTIFY APPLICABLE AUTHORITY WITH RIGHT-OF-WAY OR EASEMENTS FROM THE CITY AND/OR UDOT. CONTRACTOR SHALL NOTIFY CITY, COUNTY, AND/OR STATE, 24 HOURS IN ADVANCE OF COMMUNICATING THE WORK, OR AS REQUIRED BY SAID PERMITS.

8. CONCRETE PLACEMENTS SHALL BE CONTINUOUS BETWEEN CONSTRUCTION JOINTS. CONTRACTION JOINTS SHALL BE PLACED FOR SLAB-ON-GRADE SUCH THAT THE MAXIMUM DISTANCE BETWEEN JOINTS IS 20 FEET IN EITHER DIRECTION FOR LIGHT DUTY TRAFFIC AND 12 FEET IN EITHER DIRECTION FOR HEAVY DUTY TRAFFIC.

9. IT IS INTENDED THAT THESE PLANS AND SPECIFICATIONS REQUIRE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY REGARDING ANY DISCREPANCY OR AMBIGUITIES WHICH MAY EXIST IN THE PLANS OR SPECIFICATIONS. THE ENGINEERS INTERPRETATION THEREOF SHALL BE CONCLUSIVE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNER AND/OR ENGINEER.

10. ALL WORK OUTSIDE THE SCOPE OF THESE PLANS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RESPONSIBLE DESIGN. THESE PLANS DO NOT REPLACE ANY STRUCTURAL, ARCHITECTURAL, OR MECHANICAL PLANS. SHOULD A DISCREPANCY ARISE BETWEEN THESE PLANS AND ANOTHER PLAN SET, THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT BOTH PARTIES TO DETERMINE WHAT SHOULD BE CONSTRUCTED.

11. ALL STAIRS AND RAILINGS ARE DESIGNED BY OTHERS AND MUST COMPLY WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN. SAID STANDARD SPECIFICATIONS AND PLANS SHALL BE SUBSIDIARY TO MORE STRINGENT REQUIREMENTS BY APPLICABLE LOCAL JURISDICTION.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL TESTING AND INSPECTION SHALL BE PAID FOR BY THE OWNER. ALL RE-TESTING AND/OR REINSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.

13. IF EXISTING IMPROVEMENTS NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING OR REPAIRING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT OF EXISTING IMPROVEMENTS AND ANYTHING THAT HAS ALREADY BEEN CONSTRUCTED. THERE WILL BE NO EXTRA COST DUE THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS. WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT BY THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTORS EXPENSE, AFTER PROPER BACKFILLING AND/OR CONSTRUCTION, WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.

14. THE CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL MECHANICAL, ELECTRICAL AND INSTRUMENTATION EQUIPMENT; PIPING AND CONDUITS; STRUCTURES AND OTHER FACILITIES. THE AS-BUILTS OF THE ELECTRICAL SYSTEM SHALL INCLUDE THE STREET LIGHT LAYOUT PLAN SHOWING LOCATION OF LIGHTS, CONDUITS, CONDUCTORS, POINTS OF CONNECTIONS TO SERVICES, PULLBOXES, AND WIRE SIZES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR.

15. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO ENGINEER, ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE AS-BUILT RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATION REDLINES AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.

UTILITIES

16. CONTRACTOR TO SPACE UTILITIES TO PROVIDE MINIMUM DISTANCES AS REQUIRED BY LOCAL, COUNTY, STATE, AND INDIVIDUAL UTILITY CODES.

17. ALL UTILITES INSTALLED IN ACCORDANCE WITH THE RESPONSIBLE DISTRICTS OR AGENCIES STANDARDS AND SPECIFICATIONS.

18. COORDINATE ALL SERVICE LATERAL AND BUILDING CONNECTIONS WITH CORRESPONDING ARCHITECTURAL, MECHANICAL OR ELECTRICAL DRAWING FOR LOCATION AND ELEVATION. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE ENCOUNTERED.

19. ALL STORM DRAIN MANHOLES AND CATCH BASINS ARE TO BE PRECAST CONCRETE FROM APPROVED LOCAL MANUFACTURER UNLESS OTHERWISE NOTED. AND COMPLY WITH CITY/COUNTY STANDARD

20. ALL STORM WATER CONVEYANCE PIPING TO BE RCP - CLASS 3 OR ADS HDPE PIPE OR EQUAL UNLESS OTHERWISE NOTED.

21. ALL ELECTRICAL CONDUITS/LINES TO BE PVC SCH 40 OR BETTER.

22. ALL GAS LINES TO BE HDPE WITH COPPER TRACER WIRE AND DETECTA TAPE. TERMINATE TRACER WIRE AT APPROVED LOCATIONS.

23. ALL GAS LINE TAPS, VALVES AND CAPS TO BE FUSED USING ELECTRO - FUSION TECHNOLOGY.

24. ALL PHONE AND TV CONDUITS TO BE PVC SCH 40 OR BETTER.

25. NO GROUNDWATER OR DEBRIS TO BE ALLOWED TO ENTER THE NEW PIPE DURING CONSTRUCTION. THE OPEN END OF ALL PIPES IS TO BE COVERED AND EFFECTIVELY SEALED AT THE END OF EACH DAYS WORK.

26. THE CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 4' OR MORE AND SHALL COMPLY WITH INDUSTRIAL COMMISSION OF UTAH SAFETY ORDERS SECTION 68 - EXCAVATIONS, AND SECTION 69 - TRENCHES. ALONG WITH ANY LOCAL CODES OR ORDINANCES.

27. PRIOR TO OPENING AN EXCAVATION, EFFORT SHALL BE MADE TO DETERMINE WHETHER UNDERGROUND INSTALLATIONS; I.E. SEWER, WATER, FUEL, ELECTRIC LINES, ETC., WILL BE ENCOUNTERED AND IF SO, WHERE SUCH UNDERGROUND INSTALLATIONS ARE LOCATED. WHEN THE EXCAVATION APPROACHES THE APPROXIMATE LOCATION OF SUCH AN INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING, AND, WHEN IT IS UNCOVERED, ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION. ALL KNOWN OWNERS OF UNDERGROUND FACILITIES IN THE AREA CONCERNED SHALL BE ADVISED OF PROPOSED WORK AT LEAST 48 HOURS PRIOR TO THE START OF ACTUAL EXCAVATION.

28. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL PIPE OF ADEQUATE CLASSIFICATION WITH SUFFICIENT BEDDING TO MEET ALL REQUIREMENTS AND RECOMMENDATIONS FOR H-20 LOAD REQUIREMENTS.

29. ACTUAL CONNECTIONS TO EXISTING WATER LINES WILL NOT BE PERMITTED PRIOR TO THE COMPLETION OF STERILIZATION AND TESTING OF NEW WATER MAINS. ALL EXISTING WATER VALVES TO BE OPERATED UNDER THE DIRECTION OF THE CITY/COUNTY PUBLIC WORKS DEPARTMENT PERSONNEL ONLY.

30. ALL UNDERGROUND UTILITIES SHALL BE IN PLACE, INSPECTED, TESTED, AND APPROVED BY AUTHORITIES HAVING JURISDICTION PRIOR TO INSTALLATION OF CURB, GUTTER, SIDEWALK, AND STREET PAVING.

31. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH UTILITY COMPANIES FOR THE INSTALLATION OF ALL NEW AND THE REMOVAL, RELOCATION, AND/OR BURIAL OF ALL EXISTING DRY UTILITIES INCLUDING BUT NOT LIMITED TO POWER, GAS, AND COMMUNICATION LINES. IF THERE IS A CONFLICT WITH AN EXISTING DRY UTILITY THE CONTRACTOR SHALL COORDINATE THE REMOVAL OR RELOCATION OF THE EXISTING UTILITY WITH THE RESPONSIBLE DISTRICT OR AGENCY. ALL WORK FOR DRY UTILITIES SHALL BE COORDINATED WITH AND COMPLETED TO THE STANDARDS AND REQUIREMENTS OF THE RESPONSIBLE DISTRICT OR AGENCY.

SEWER

32. ALL SEWER LINE TO BE FLUSHED, PRESSURE TESTED TO 5 PSI VIDEO INSPECTED AND OTHERWISE TESTED IN ACCORDANCE WITH DISTRICT STANDARDS PRIOR TO PLACING IN SERVICE.

33. ALL SEWER PIPES ARE TO BE SDR-35 PVC PIPE.

34. SEWER MANHOLES, LATERALS AND CLEANOUTS TO BE INSTALLED PER RESPONSIBLE DISTRICT OR AGENCY STANDARDS. THE UNIT COST OF THE SEWER LATERAL INCLUDES CONNECTION TO THE SEWER MAIN. THE CLEANOUT RISER FOR EACH SERVICE SHALL BE INSTALLED BY THE CONTRACTOR.

35. SEWER CLEANOUTS MUST BE INSTALLED AT A MINIMUM OF EVERY 93 L.F. FOR 4 INCH Ø LATERALS AND EVERY 100 L.F. FOR 6 INCH Ø LATERALS, OR PER THE RESPONSIBLE DISTRICT OR AGENCY STANDARDS, WHICHEVER IS MORE FREQUENT.

36. A SEWER CLEANOUT MUST BE INSTALLED 5 L.F. TO 10 L.F. FROM ANY PROPOSED STRUCTURE, OR PER THE RESPONSIBLE DISTRICT OR AGENCY STANDARDS.

37. ALL SEWER LATERAL BENDS AND ANGLES TO BE INSTALLED AS SWEEPING BENDS WITH SEWER CLEANOUTS.

38. DURING CONSTRUCTION OF THE SEWERLINE, WYES NEED TO BE INSTALLED FOR THE LATERALS. LATERALS ARE 4" AND NEED TO COME IN AT THE TOP OF THE PIPE WITH A WYE. (SEE RESPONSIBLE DISTRICT OR AGENCY STANDARDS)

39. IT IS THE INTENT ON THESE PLANS THAT ALL SEWER PIPES SHALL SLOPE TO AN EXISTING SEWER CONNECTION VIA GRAVITY FLOW. CONTRACTOR TO START AT THE LOW END OF GRAVITY UTILITY LINES AND VERIFY THAT ALL INVERT ELEVATIONS PROVE SLOPE TO EXISTING CONNECTION VIA GRAVITY. SLOPES MUST MEET OR EXCEED THE SEWER DISTRICTS MINIMUM STANDARDS. NOTIFY ENGINEER IF THERE ARE DISCREPANCIES THAT WOULD CAUSE THE SEWER UTILITY NOT TO DRAIN VIA GRAVITY ON THE SITE.

WATER

40. WATERLINES TO BE PVC C-900, WATER LINES SHALL BE A MINIMUM OF 10' HORIZONTALLY FROM SEWER MAINS. CROSSINGS SHALL MEET STATE HEALTH STANDARDS. (MECHANICAL JOINTS REQUIRED WHEN LESS THAN 18' VERTICAL OR TEN FEET HORIZONTAL SEPARATION FROM SEWERLINE

41. ALL WATERLINES SHALL BE 8" MINIMUM SIZE AND SERVICE LATERALS SHALL BE 1-1/2" MINIMUM UNLESS OTHERWISE NOTED.

42. WATER SERVICE LATERALS TO INCLUDE ALL BRASS SADDLE: CORP, STOP LATERAL, DOUBLE CHECK VALVE AND BACKFLOW PREVENTION DEVICE, AND SHUTOFF VALVE IN BOX NEAR BUILDING EDGE.

43. ALL WATERLINES SHALL BE 48" BELOW FINISH GROUND TO TOP OF PIPE. ALL VALVE BOXES AND MANHOLES SHALL BE RAISED OR LOWERED TO FINISH GRADE AND SHALL INCLUDE A CONCRETE COLLAR IN PAVED AREAS. ALL WATER LINES SHALL BE LOOPED AROUND GRAVITY LINES OR ROPED PER RESPONSIBLE DISTRICT OR AGENCY INSPECTOR.

44. CONTRACTOR TO NOTIFY RESPONSIBLE DISTRICT OR AGENCY FOR CHLORINE TEST PRIOR TO FLUSHING LINES, CHLORINE LEFT IN PIPE 24 HRS. MINIMUM WITH 25 PPM RESIDUAL. ALL TURNING OF MAINLINE VALVES, CHLORINATION, FLUSHING, PRESSURE TESTING, BACTERIA TESTING, ETC. TO BE COORDINATED WITH RESPONSIBLE DISTRICT OR AGENCY. ALL TESTS TO BE IN ACCORDANCE WITH RESPONSIBLE DISTRICT OR AGENCY.

45. BOTTOM FLANGE OF FIRE HYDRANTS TO BE SET TO APPROXIMATELY 4 INCHES ABOVE BACK OF CURB ELEVATION. HYDRANTS TO INCLUDE TEE, 6" LINE VALVE, AND HYDRANT COMPLETE TO MEET RESPONSIBLE DISTRICT OR AGENCY STANDARDS, UNLESS OTHERWISE NOTED ON PLANS.

EXISTING UTILITIES

46. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITIES SHOWN OR NOT SHOWN. THE INFORMATION SHOWN ON THE PLANS WITH REGARDS TO THE EXISTING UTILITIES AND/OR IMPROVEMENTS WAS DERIVED FROM FIELD INVESTIGATION AND/OR RECORD INFORMATION. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE FACILITIES SHOWN AND ANY OTHER FACILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. PRIOR TO CONSTRUCTION OR FABRICATION, IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY ALL EXISTING IMPROVEMENT AND TO EXPOSE ALL EXISTING UNDERGROUND UTILITIES RELATED TO THE PROJECT, INCLUDING BUT NOT LIMITED TO, SEWER, STORM DRAIN, WATER IRRIGATION, GAS, ELECTRICAL, ETC. AND SHALL NOTIFY THE ENGINEER IN WRITING FORTY-EIGHT (48) HOURS IN ADVANCE OF EXPOSING THE UTILITIES SO, THAT THE EXACT LOCATION, ELEVATION, MATERIAL, ETC. CAN BE VERIFIED AND DOCUMENTED. THE COST ASSOCIATED TO PERFORM THIS WORK SHALL BE INCLUDED IN EITHER THE LUMP SUMP CLEARING COST OR IN THE VARIOUS ITEMS OF WORK. IF LOCATION AND/OR ELEVATION DIFFERS FROM THAT SHOWN ON THE DESIGN PLANS, PROVISIONS TO ACCOMMODATE NEW LOCATION BE MADE PRIOR TO CONSTRUCTION.

47. PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE, IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY BLUE STAKES 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK THE CONTRACTOR SHALL RECORD THE BLUE STAKES ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION. IT WILL BE THE CONTRACTORS SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.

48. ALL MANHOLE RIMS, LAMPHOLES, VALVE BOX COVERS, MONUMENT BOXES AND CATCH BASIN GRATES ARE TO BE ADJUSTED TO FIT THE FINISHED GRADE AFTER PAVING, UNLESS OTHERWISE NOTED. COST FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES FOR SAID FACILITIES.

49. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT ALL PIPES, WALLS, ETC. ARE ADEQUATELY BRACED DURING CONSTRUCTION.

CLEARING AND GRADING

50. CONTRACTOR SHALL PERFORM EARTHWORK IN ACCORDANCE WITH APWA 2017 STANDARD DRAWINGS AND STANDARD SPECIFICATIONS AND THE RECOMMENDED EARTHWORK SPECIFICATION FOUND IN THE PROFESSIONALLY PREPARED REPORT OF GEOTECHNICAL INVESTIGATION.

51. THE CONTRACTOR SHALL REMOVE ALL VEGETATION AND DELETERIOUS MATERIALS FROM THE SITE UNLESS NOTED OTHERWISE: ALL EXISTING WELLS AND SEPTIC TANKS SHALL BE REMOVED AND/OR ABANDONED PER THE REQUIREMENTS OF ALL LOCAL, STATE AND FEDERAL REGULATIONS. THE COST TO PERFORM THIS WORK SHALL BE INCLUDED IN THE LUMP SUM CLEARING COST.

52. SUBSOIL INVESTIGATIONS HAVE BEEN CONDUCTED AT THE SITE OF THE WORK. ALL FOOTING, FOUNDATION OR STRUCTURAL WALL CONSTRUCTION MUST ADHERE TO THE RECOMMENDATIONS DETAILED BY THE PROFESSIONAL REPORT OF THESE INVESTIGATIONS, CREATED BY GSH.

53. SOIL INVESTIGATIONS WERE CONDUCTED BY GSH FOR DESIGN PURPOSES ONLY, AND THE DATA SHOWN IN THE REPORTS ARE FOR SUBSURFACE CONDITIONS FOUND AT THE TIME OF THE INVESTIGATION. THE OWNER AND ENGINEER DISCLAIM RESPONSIBILITY FOR THE INTERPRETATION BY THE CONTRACTOR OF DATA, SUCH PROJECTION OR EXTRAPOLATION, FROM THE TEST HOLES TO OTHER LOCATIONS ON THE SITE OF THE WORK, SOIL BEARING VALUES AND PROFILES, SOIL STABILITY AND THE PRESENCE, LEVEL AND EXTENT OF UNDERGROUND WATER FOR SUBSURFACE CONDITIONS DURING CONSTRUCTION OPERATIONS.

54. ALL PROPOSED ELEVATIONS SHOWN ON THE GRADING PLAN ARE TO FINISHED SURFACE, THE CONTRACTOR IS RESPONSIBLE TO DEDUCT THE THICKNESS OF THE PAVEMENT STRUCTURAL SECTION FOR TOP OF SUB GRADE ELEVATIONS.

55. IF AT ANY TIME DURING CONSTRUCTION ANY UNFAVORABLE GEOLOGICAL CONDITIONS ARE ENCOUNTERED, WORK IN THAT AREA WILL STOP UNTIL APPROVED CORRECTIVE MEASURES ARE OBTAINED FROM THE ENGINEER.

56. UNSUITABLE MATERIAL, SUCH AS TOP SOIL, WEATHERED BED ROCK, ETC., SHALL BE REMOVED AS REQUIRED BY THE SOILS ENGINEER (AND/OR ENGINEERING GEOLOGIST, WHERE EMPLOYED) FROM ALL AREAS TO RECEIVE COMPACTED FILL OR DRAINAGE STRUCTURES.

57. NO TREES SHALL BE REMOVED OR DAMAGED WITHOUT SPECIFIC WRITTEN AUTHORIZATION FROM PROPERTY OWNER.

58. THE EXISTING TOPOGRAPHY ON THESE PLANS IS BASED ON A TOPOGRAPHIC SURVEY PERFORMED BY BENCHMARK ENGINEERING AND LAND SURVEYING ON 10/10/2024 AND MAY HAVE BEEN MODIFIED SINCE THIS SURVEY WAS PERFORMED.

59. FILLS IN EXCESS OF 4 FEET IN THICKNESS AND BENEATH ALL FOUNDATIONS OR PAVEMENT SECTIONS SHALL BE COMPACTED TO 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM D-1557 COMPACTION CRITERIA. ALL OTHER STRUCTURAL FILL LESS THAN 4 FEET IN THICKNESS SHOULD BE COMPACTED TO AT LEAST 90 PERCENT OF THE ABOVE CRITERIA. REFERENCE GSH GEOTECHNICAL REPORT (JOB NO. 3981-001-24).

60. COMPACTION TESTING WILL BE ACCOMPLISHED BY THE CONTRACTOR, O

NOTE:
SAWCUT WIDTH, LOCATIONS AND TIE-IN ELEVATIONS TO EXISTING GRADE ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY LOCATION, EXTENT OF SAWCUTTING, AND TIE-IN SLOPES TO EXISTING GRADE PRIOR TO CONSTRUCTION. IT IS THE INTENT ON THESE PLANS THAT ALL PAVEMENT SHALL TIE INTO EXISTING GRADE PER SLOPES LISTED ON CGN.01 NOTE 70. SEE NOTES 66, 70, 82, & 83 ON CGN.01 FOR FURTHER DETAIL.

NOTE:
ALL WORK WITHIN PUBLIC ROADS TO BE DONE IN STRICT ACCORDANCE WITH TOOELE COUNTY STANDARDS AND SPECIFICATIONS

AREA TABLE		
PARTICULARS	S.F.	%
HARDSCAPE:	57,620	1.3
LANDSCAPE	4,298,386	98.7
TOTAL	4,356,006	100.0

NOTE:
POWER POLE AND POWER LINE LOCATIONS TO BE COORDINATED WITH RMP PRIOR TO CONSTRUCTION.

LIGHTING NOTE:
LIGHTING SHALL COMPLY WITH TOOELE COUNTY LAND USE CODE 8-13. LIGHTING SHALL NOT BE POINTED AT SR-36 OR SHINE BEYOND PROPERTY LINES.

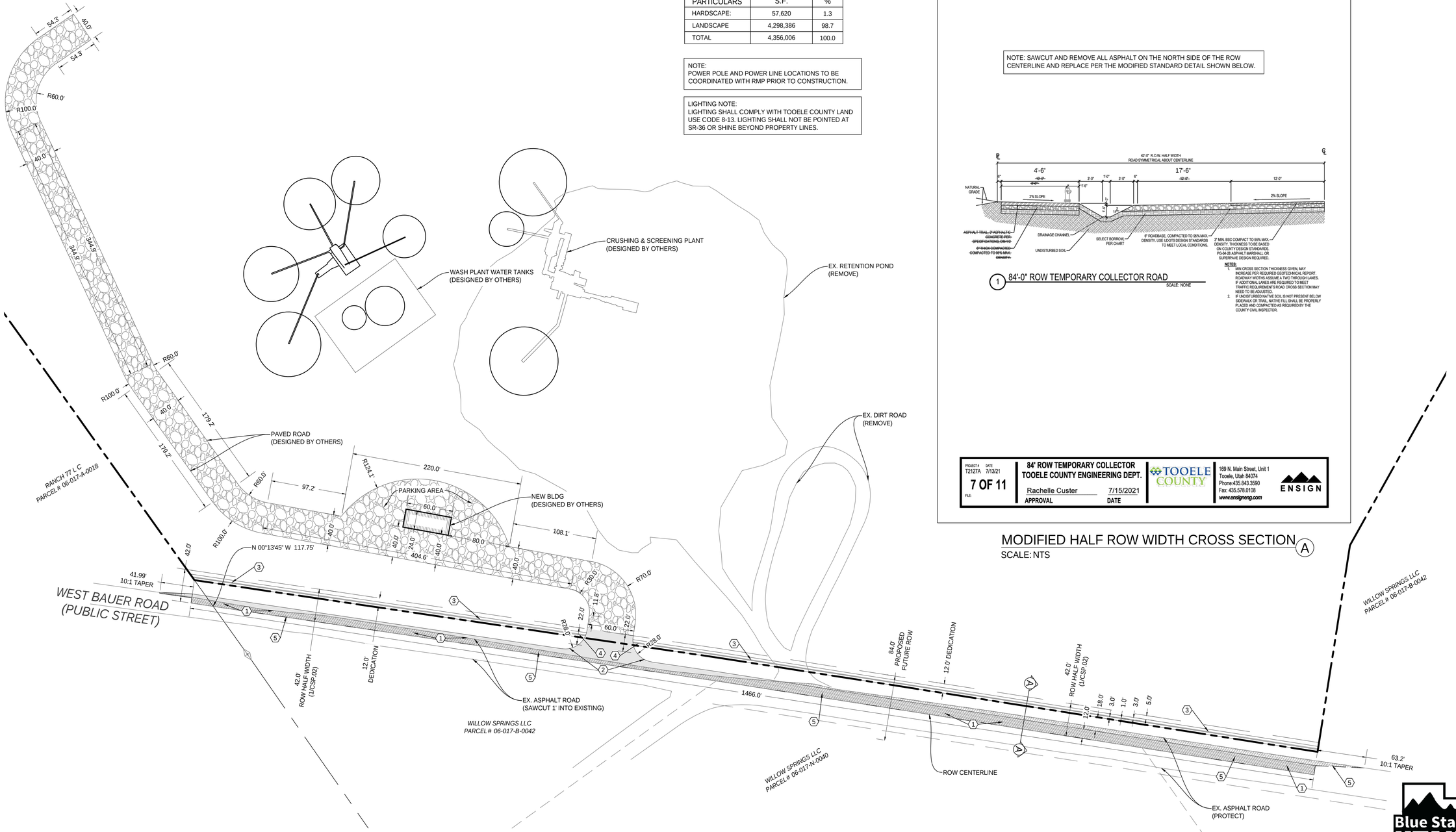
CONSTRUCTION KEY NOTE REFERENCE		
NO.	DESCRIPITON	DETAIL
1	ASPHALT PAVEMENT PER TOOELE COUNTY STDS	A/CSP.01
2	DRIVE APPROACH PER TOOELE COUNTY STDS	A/CSP.02
3	DRAINGE CHANNEL PER TOOELE COUNTY STDS	A/CSP.01
4	24" CULVERT PER TOOELE COUNTY STDS	A/CSP.02
5	SAWCUT PER TOOELE COUNTY STDS	

NORTH

GRAPHIC SCALE

60 0 30 60 120

(IN FEET)
1 inch = 60 ft.



NOTE: SAWCUT AND REMOVE ALL ASPHALT ON THE NORTH SIDE OF THE ROW CENTERLINE AND REPLACE PER THE MODIFIED STANDARD DETAIL SHOWN BELOW.

NOTES:
1. MIN CROSS SECTION THICKNESS GIVEN, MAY INCREASE PER REQUIRED GEOTECHNICAL REPORT. ROADWAY WIDTHS ASSUME A TWO THROUGH LANES. IF ADDITIONAL LANES ARE REQUIRED TO MEET TRAFFIC REQUIREMENTS ROAD CROSS SECTION MAY NEED TO BE ADJUSTED.
2. IF UNDISTURBED NATIVE SOIL IS NOT PRESENT BELOW SIDEWALK OR TRAIL, NATIVE FILL SHALL BE PROPERLY PLACED AND COMPACTED AS REQUIRED BY THE COUNTY CIVIL INSPECTOR.

1 84'-0" ROW TEMPORARY COLLECTOR ROAD
SCALE: NONE

MODIFIED HALF ROW WIDTH CROSS SECTION A
SCALE: NTS

PROJECT# T2127A	DATE 7/13/21
FILE: 7 OF 11	

84' ROW TEMPORARY COLLECTOR
TOOELE COUNTY ENGINEERING DEPT.

Rachelle Custer — APPROVAL — 7/15/2021 — DATE

TOOELE COUNTY

169 N. Main Street, Unit 1
Tooele, Utah 84074
Phone:435.843.3590
Fax: 435.576.0108
www.ensigneng.com

ENSIGN

No.	DATE	DESCRIPTION
1	02/05/25	REVISED PER TOOELE COUNTY COMMENTS

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY: AD
CHECKED BY: MCP
FIELD CREW: BC/TF
DATE: 11/06/2024
DWG. FILE: 2409141_SITE

PRELIMINARY PLAN

PROFESSIONAL ENGINEER
2/5/25
No. 10360773
M. CHRIS POULSEN
STATE OF UTAH

NOT FOR CONSTRUCTION

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

STAKER PARSON TOOELE

2800 W. BAUER ROAD
TOOELE COUNTY, UTAH

PROJECT NO. 2409141

SITE PLAN

CSP.01
3 OF 7

Blue Stakes of UTAH811
Bluestakes.org

NORTH

GRAPHIC SCALE

120 0 60 120 240

(IN FEET)
1 inch = 120ft.

AREA TABLE		
PARTICULARS	S.F.	%
HARDSCAPE:	57,620	1.3
LANDSCAPE	4,298,386	98.7
TOTAL	4,356,006	100.0

NOTE:
SAWCUT WIDTH, LOCATIONS AND TIE-IN ELEVATIONS TO EXISTING GRADE ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY LOCATION, EXTENT OF SAWCUTTING, AND TIE-IN SLOPES TO EXISTING GRADE PRIOR TO CONSTRUCTION. IT IS THE INTENT ON THESE PLANS THAT ALL PAVEMENT SHALL TIE INTO EXISTING GRADE PER SLOPES LISTED ON CGN.01 NOTE 70. SEE NOTES 66, 70, 82, & 83 ON CGN.01 FOR FURTHER DETAIL.

NOTE:
ALL WORK WITHIN PUBLIC ROADS TO BE DONE IN STRICT ACCORDANCE WITH TOOELE COUNTY STANDARDS AND SPECIFICATIONS

METAL FENCE POST ON PROPERTY CORNER NOT SET

FOUND REBAR AND CAP "LS 15331543"

RANCH 77 L C
PARCEL# 06-017-A-0018

GRAVEL ROAD (DESIGNED BY OTHERS)

WASH PLANT WATER TANKS (DESIGNED BY OTHERS)

CRUSHING & SCREENING PLANT (DESIGNED BY OTHERS)

N 00°13'45" W 117.75'

PARKING AREA

NEW BLDG (DESIGNED BY OTHERS)

EX. RETENTION POND (REMOVE)

GRAVEL ROAD (DESIGNED BY OTHERS)

RANCH 77 L C
PARCEL# 06-017-A-0018

EX. DIRT ROAD (REMOVE)

1466.0'

12.0' DEDICATION

EXISTING ROAD (PROTECT)

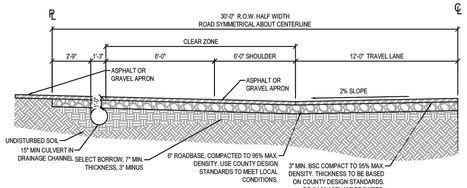
42.0' HALF ROW WIDTH (1/CSP.02)

BASIS OF BEARINGS
N 00°28'26" E 2614.56' (RECORD) 2614.49' (MEASURED)

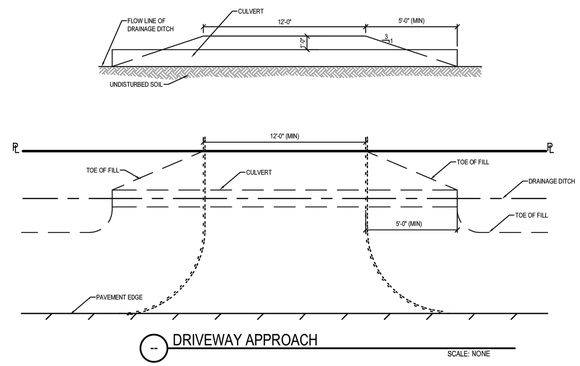
WILLOW SPRINGS LLC
PARCEL# 06-017-N-0040

WILLOW SPRINGS LLC
PARCEL# 06-017-B-0042

WEST BAUER ROAD (PUBLIC STREET)



SECTION THROUGH CENTER LINE OF DRIVEWAY
SCALE: NONE



DRIVEWAY APPROACH
SCALE: NONE

NOTE: TOOELE COUNTY MINIMUM STANDARDS SHOWN
GEOTECHNICAL REPORT MAY SUPERSEDE TOOELE COUNTY MINIMUM STANDARDS

PROJECT #	DATE	PRIVATE ROAD	TOOELE COUNTY	169 N. Main Street, Unit 1 Tooele, Utah 84074 Phone:435.843.3590 Fax: 435.578.0108 www.ensigneng.com	ENSIGN
T2127A	7/13/21	TOOELE COUNTY ENG. DEPT.			
11 OF 11		Rachelle Custer	7/15/2021		
FILE:		APPROVAL	DATE		

DRIVE APPROACH PER TOOELE COUNTY (A)
SCALE: NTS

SHANNON R SORENSEN
PARCEL# 06-017-B-0034

Blue Stakes of UTAH811 Bluestakes.org

No.	DATE	DESCRIPTION
1	02/06/25	REVISED PER TOOELE COUNTY COMMENTS

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY	CHECKED BY	FIELD CREW	DATE	DWG. FILE
AD	MCP	BC/TF	11/06/2024	2409141_SITE

PRELIMINARY PLAN
NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER
No. 10360773
M. CHRIS POULSEN
STATE OF UTAH
2/5/25

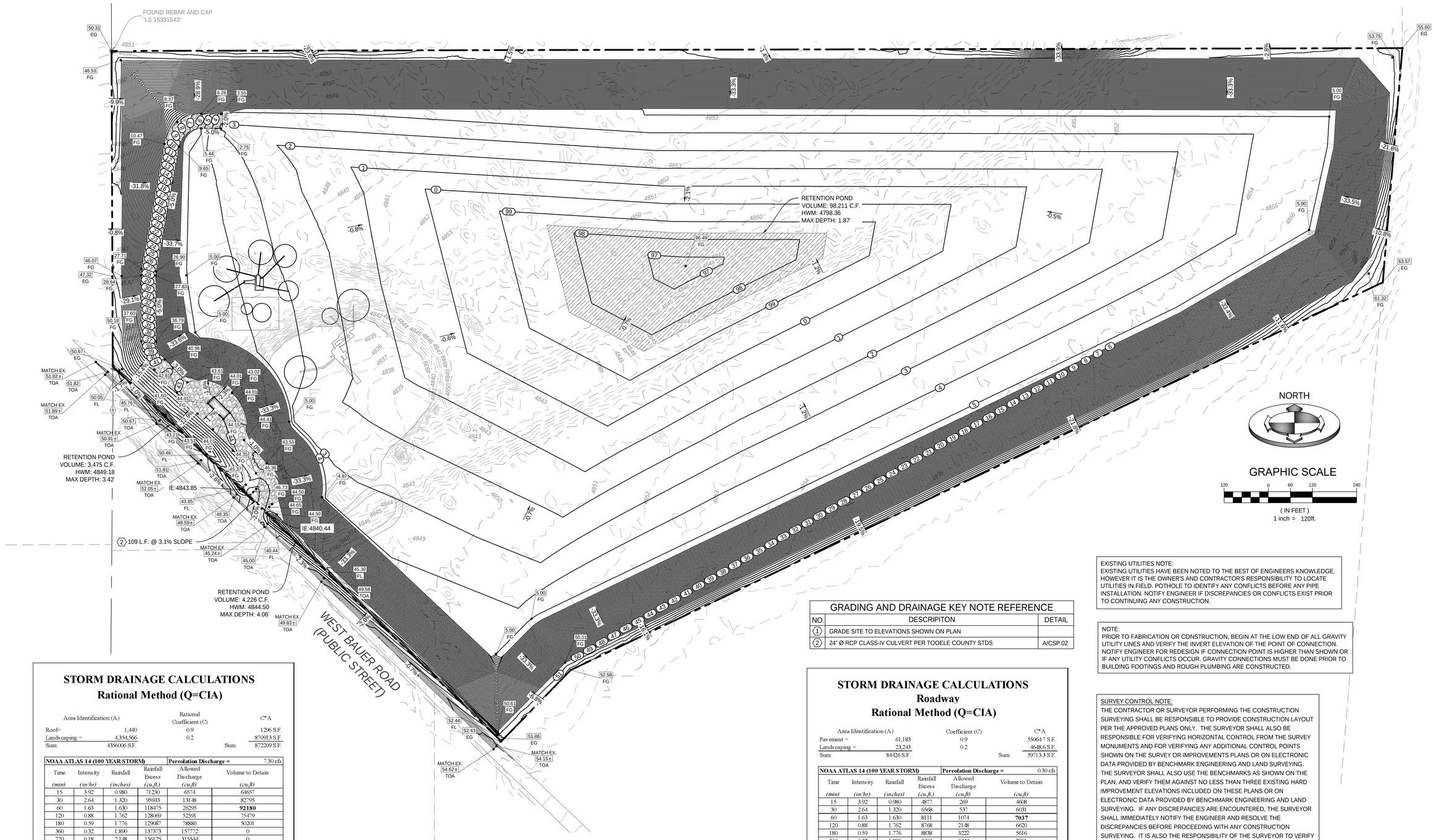
BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

STAKER PARSON TOOELE
2800 W. BAUER ROAD
TOOELE COUNTY, UTAH

PROJECT NO. 2409141

OVERALL SITE PLAN

CSP.02
4 OF 7



GRADING AND DRAINAGE KEY NOTE REFERENCE

NO.	DESCRIPITON	DETAIL
1	GRADE SITE TO ELEVATIONS SHOWN ON PLAN	
2	24" Ø RCP CLASS-IV CULVERT PER TOOELE COUNTY STDS	A/CSP.02

STORM DRAINAGE CALCULATIONS
Rational Method (Q=CIA)

Area Identification (A)		Rational Coefficient (C)	C*A
Roof=	1,440	0.9	1296 S.F.
Landscaping =	4,354,566	0.2	870913 S.F.
Sum:	4356006 S.F.	Sum:	872209 S.F.

NOAA ATLAS 14 (100 YEAR STORM) — **Percolation Discharge =** 7.30 cfs

Time (min)	Intensity (in/hr)	Rainfall (inches)	Rainfall Excess (cu.ft.)	Allowed Discharge (cu.ft)	Volume to Detain (cu.ft)
15	3.92	0.980	71230	6574	64657
30	2.64	1.320	95943	13148	82795
60	1.63	1.630	118475	26295	**92180**
120	0.88	1.762	128069	52591	75479
180	0.59	1.776	129087	78886	50201
360	0.32	1.890	137373	157772	0
720	0.18	2.148	156125	315544	0
1440	0.11	2.592	188397	631088	0

Detention Calculations

Pond Volume

Pond 1 Civil 3D = **98,211 cf**

Discharge

Percolation rate (P) 30.00 min/in

Percolation surface area (S) 157,772.00 sf

Allowed Discharge (Q) **7.30 cfs**

Is there adequate storage? Storage Provided = **98,211 cf**

Req. Storage = **92,180 cf** **YES**

STORM DRAINAGE CALCULATIONS
Roadway
Rational Method (Q=CIA)

Area Identification (A)		Coefficient (C)	C*A
Pavement =	61,183	0.9	55064.7 S.F.
Landscaping =	23,243	0.2	4648.6 S.F.
Sum:	84426 S.F.	Sum:	59713.3 S.F.

NOAA ATLAS 14 (100 YEAR STORM) — **Percolation Discharge =** 0.30 cfs

Time (min)	Intensity (in/hr)	Rainfall (inches)	Rainfall Excess (cu.ft.)	Allowed Discharge (cu.ft)	Volume to Detain (cu.ft)
15	3.92	0.980	4877	269	4608
30	2.64	1.320	6568	537	6031
60	1.63	1.630	8111	1074	**7037**
120	0.88	1.762	8768	2148	6620
180	0.59	1.776	8838	3222	5616
360	0.32	1.890	9405	6444	2961
720	0.18	2.148	10689	12888	0
1440	0.11	2.592	12898	25776	0

Detention Calculations

Pond Volume

Pond 1 Civil 3D = **7,701 cf**

Discharge

Percolation rate (P) 30.00 min/in

Percolation surface area (S) 6,444.00 sf

Allowed Discharge (Q) **0.30 cfs**

Is there adequate storage? Storage Provided = **7,701 cf**

Req. Storage = **7,037 cf** **YES**

EXISTING UTILITIES NOTE:
EXISTING UTILITIES HAVE BEEN NOTED TO THE BEST OF ENGINEERS KNOWLEDGE, HOWEVER IT IS THE OWNER'S AND CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITIES IN FIELD. POTHOLE TO IDENTIFY ANY CONFLICTS BEFORE ANY PIPE INSTALLATION. NOTIFY ENGINEER IF DISCREPANCIES OR CONFLICTS EXIST PRIOR TO CONTINUING ANY CONSTRUCTION.

NOTE:
PRIOR TO FABRICATION OR CONSTRUCTION, BEGIN AT THE LOW END OF ALL GRAVITY UTILITY LINES AND VERIFY THE INVERT ELEVATION OF THE POINT OF CONNECTION. NOTIFY ENGINEER FOR REDESIGN IF CONNECTION POINT IS HIGHER THAN SHOWN OR IF ANY UTILITY CONFLICTS OCCUR. GRAVITY CONNECTIONS MUST BE DONE PRIOR TO BUILDING FOOTINGS AND ROUGH PLUMBING ARE CONSTRUCTED.

SURVEY CONTROL NOTE:
THE CONTRACTOR OR SURVEYOR PERFORMING THE CONSTRUCTION SURVEYING SHALL BE RESPONSIBLE TO PROVIDE CONSTRUCTION LAYOUT PER THE APPROVED PLANS ONLY. THE SURVEYOR SHALL ALSO BE RESPONSIBLE FOR VERIFYING HORIZONTAL CONTROL FROM THE SURVEY MONUMENTS AND FOR VERIFYING ANY ADDITIONAL CONTROL POINTS SHOWN ON THE SURVEY OR IMPROVEMENTS PLANS OR ON ELECTRONIC DATA PROVIDED BY BENCHMARK ENGINEERING AND LAND SURVEYING. THE SURVEYOR SHALL ALSO USE THE BENCHMARKS AS SHOWN ON THE PLAN, AND VERIFY THEM AGAINST NO LESS THAN THREE EXISTING HARD IMPROVEMENT ELEVATIONS INCLUDED ON THESE PLANS OR ON ELECTRONIC DATA PROVIDED BY BENCHMARK ENGINEERING AND LAND SURVEYING. IF ANY DISCREPANCIES ARE ENCOUNTERED, THE SURVEYOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND RESOLVE THE DISCREPANCIES BEFORE PROCEEDING WITH ANY CONSTRUCTION SURVEYING. IT IS ALSO THE RESPONSIBILITY OF THE SURVEYOR TO VERIFY ANY ELECTRONIC DATA WITH THE APPROVED STAMPED AND SIGNED PLANS AND NOTIFY THE ENGINEER WITH ANY DISCREPANCIES.

NOTE:
SAWCUT WIDTH, LOCATIONS AND TIE-IN ELEVATIONS TO EXISTING GRADE ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY LOCATION, EXTENT OF SAWCUTTING, AND TIE-IN SLOPES TO EXISTING GRADE PRIOR TO CONSTRUCTION. IT IS THE INTENT ON THESE PLANS THAT ALL PAVEMENT SHALL TIE INTO EXISTING GRADE PER SLOPES LISTED ON CGN.01 NOTE 70. SEE NOTES 66, 70, 82, & 83 ON CGN.01 FOR FURTHER DETAIL.

BENCHMARK
WEST QUARTER CORNER OF SECTION 12, TOWNSHIP 4 SOUTH, RANGE 5 WEST, SALT LAKE BASE AND MERIDIAN. ELEVATION = 4849.55

No.	DATE	DESCRIPTION
1	02/05/25	REVISED PER TOOELE COUNTY COMMENTS

DRAWN BY: AD
CHECKED BY: MCP
FIELD VIEW: BC/TF
DATE: 11/06/2024
DWG FILE: 2409141 SITE

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS
0 0.5 1"

PRELIMINARY PLAN
PROFESSIONAL ENGINEER
2/5/25
No. 10360773
M. CHRIS POULSEN
STATE OF UTAH
NOT FOR CONSTRUCTION

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

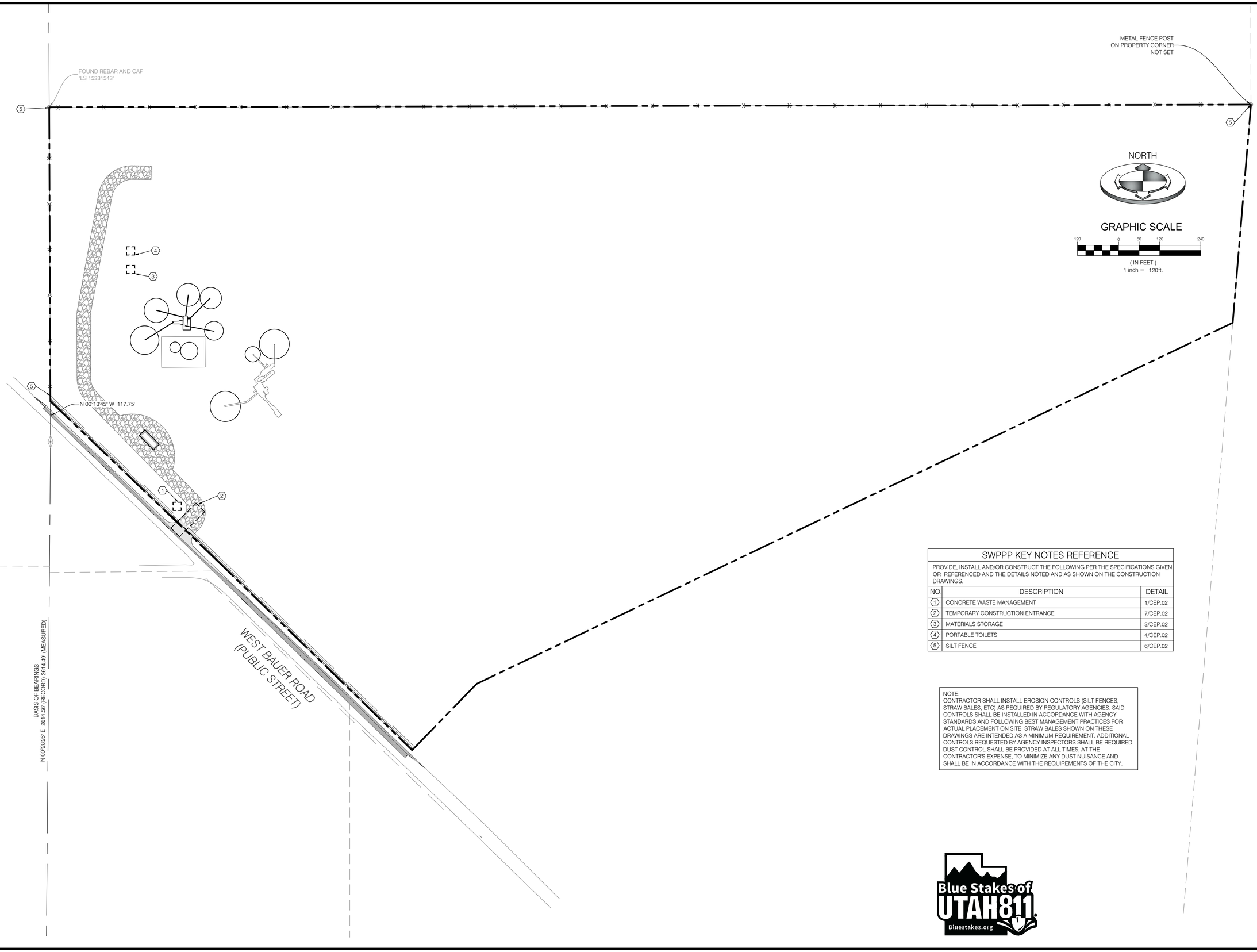
STAKER PARSON TOOELE
2800 W. BAUER ROAD
TOOELE COUNTY, UTAH

PROJECT NO. 2409141

GRADING & DRAINAGE PLAN

CGD.01
5 OF 7

Blue Stakes of UTAH 811 Bluestakes.org



SWPPP KEY NOTES REFERENCE

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED AND THE DETAILS NOTED AND AS SHOWN ON THE CONSTRUCTION DRAWINGS.

NO.	DESCRIPTION	DETAIL
1	CONCRETE WASTE MANAGEMENT	1/CEP.02
2	TEMPORARY CONSTRUCTION ENTRANCE	7/CEP.02
3	MATERIALS STORAGE	3/CEP.02
4	PORTABLE TOILETS	4/CEP.02
5	SILT FENCE	6/CEP.02

NOTE:
CONTRACTOR SHALL INSTALL EROSION CONTROLS (SILT FENCES, STRAW BALES, ETC) AS REQUIRED BY REGULATORY AGENCIES. SAID CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH AGENCY STANDARDS AND FOLLOWING BEST MANAGEMENT PRACTICES FOR ACTUAL PLACEMENT ON SITE. STRAW BALES SHOWN ON THESE DRAWINGS ARE INTENDED AS A MINIMUM REQUIREMENT. ADDITIONAL CONTROLS REQUESTED BY AGENCY INSPECTORS SHALL BE REQUIRED. DUST CONTROL SHALL BE PROVIDED AT ALL TIMES, AT THE CONTRACTOR'S EXPENSE, TO MINIMIZE ANY DUST NUISANCE AND SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY.

Blue Stakes of UTAH 811 Bluestakes.org

No.	DATE	DESCRIPTION
1	02/05/25	REVISED PER TOOELE COUNTY COMMENTS

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS
0 0.5 1

DRAWN BY: AD
CHECKED BY: MCP
FIELD CREW: BC/TF
DATE: 11/06/2024
DWG FILE: 2409141_SITE

PRELIMINARY PLAN

PROFESSIONAL ENGINEER
2/5/25
No. 10360773
M. CHRIS POULSEN
STATE OF UTAH

NOT FOR CONSTRUCTION

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com
BENCHMARK CIVIL

STAKER PARSON TOOELE

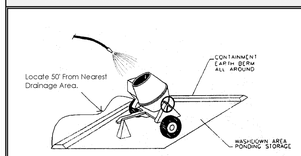
2800 W. BAUER ROAD
TOOELE COUNTY, UTAH

PROJECT NO. 2409141

EROSION CONTROL PLAN

CEP.01
6 OF 7

BMP: Concrete Waste Management



DESCRIPTION:
Prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout off-site, performing on-site washout in a designated area, and training employees and subcontractors.

APPLICATIONS:
This technique is applicable to all types of sites.

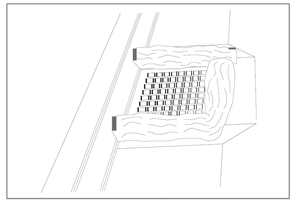
INSTALLATION/APPLICATION CRITERIA:
- Store dry and wet materials under cover, away from drainage areas.
- Avoid mixing excess amounts of fresh concrete or cement on-site.
- Perform washout of concrete trucks off-site or in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped on-site, except in designated areas.
- When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by draining the water within a bermed or level area. (See Earth Berm Barrier information sheet.)
- Train employees and subcontractors in proper concrete waste management.

LIMITATIONS:
- Off-site washout of concrete wastes may not always be possible.

MAINTENANCE:
- Inspect subcontractors to ensure that concrete wastes are being properly managed.
- If using a temporary pit, dispose hardened concrete on a regular basis.

CONCRETE WASTE MANAGEMENT 1
SCALE: NTS

BMP: Inlet Protection – Wattle
IP-W
CONSTRUCTION



DESCRIPTION:
Sediment barrier erected around storm drain inlet.

APPLICATION:
Construct at storm drainage inlets located down-gradient of areas to be disturbed by construction.

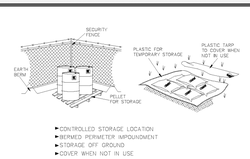
INSTALLATION/APPLICATION CRITERIA:
- Provide up-gradient sediment controls, such as silt fence during construction of inlet
- When construction of curb and gutter and roadways is complete, install gravel filled wattles around perimeter of inlet

LIMITATIONS:
- Recommended maximum contributing drainage area of one acre
- Requires shallow slopes adjacent to inlet

MAINTENANCE:
- Inspect inlet protection following storm event and at a minimum of once every 14 days.
- Remove accumulated sediment when it reaches 4 inches in depth.
- Look for bypassing or undercutting and repair or realign as needed.

INLET PROTECTION WATTLE 2
SCALE: NTS

BMP: Materials Storage



DESCRIPTION:
Controlled storage of on-site materials.

APPLICATION:
- Storage of hazardous, toxic, and all chemical substances.
- Any construction site with outside storage of materials.

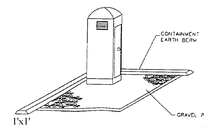
INSTALLATION/APPLICATION CRITERIA:
- Designate a secured area with limited access as the storage location. Ensure no waterways or drainage paths are nearby.
- Construct compacted earthen berm (See Earth Berm Barrier Information Sheet), or similar perimeter containment around storage location for impoundment in the case of spills.
- Ensure all on-site personnel utilize designated storage area. Do not store excessive amounts of material that will not be utilized on site.
- For active use of materials away from the storage area ensure materials are not set directly on the ground and are covered when not in use. Protect storm drainage during use.

LIMITATIONS:
- Does not prevent contamination due to mishandling of products.
- Spill Prevention and Response Plan still required.
- Only effective if materials are actively stored in controlled location.

MAINTENANCE:
- Inspect daily and repair any damage to perimeter impoundment or security fencing.
- Check materials are being correctly stored (i.e. standing upright, in labeled containers, tightly capped) and that no materials are being stored away from the designated location.

MATERIALS STORAGE 3
SCALE: NTS

BMP: Portable Toilets



DESCRIPTION:
Temporary on-site sanitary facilities for construction personnel.

APPLICATION:
All sites with no permanent sanitary facilities or where permanent facility is too far from activities.

INSTALLATION/APPLICATION CRITERIA:
- Locate portable toilets in convenient locations throughout the site.
- Prepare level, gravel surface and provide clear access to the toilets for servicing and for on-site personnel.
- Construct earth berm perimeter (See Earth Berm Barrier Information Sheet), control for spill/protection leak.

LIMITATIONS:
No limitations.

MAINTENANCE:
- Portable toilets should be maintained in good working order by licensed service with daily observation for leak detection.
- Regular waste collection should be arranged with licensed service.
- All waste should be deposited in sanitary sewer system for treatment with appropriate agency approval.

PORTABLE TOILETS 4
SCALE: NTS

BMP: Spill Clean-Up



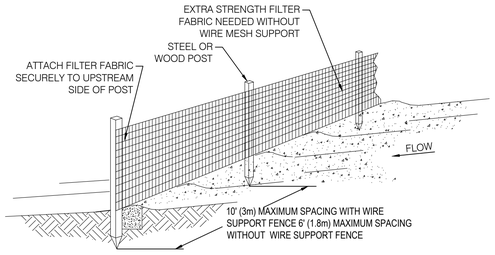
DESCRIPTION:
Practices to clean-up leakage/spillage of on-site materials that may be harmful to receiving waters.

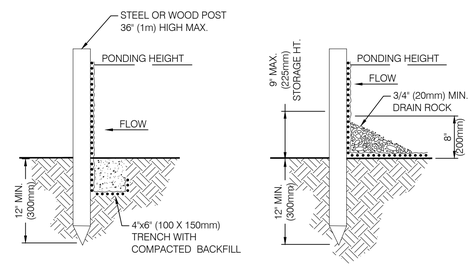
APPLICATION:
All sites

GENERAL:
- Store controlled materials within a storage area.
- Educate personnel on prevention and clean-up techniques.
- Designate an Emergency Coordinator responsible for employing preventative practices and for providing spill response.
- Maintain a supply of clean-up equipment on-site and post a list of local response agencies with phone numbers.

METHODS:
- Clean-up spills/leaks immediately and remediate cause.
- Use as little water as possible. NEVER HOSE DOWN OR BURY SPILL CONTAMINATED MATERIAL.
- Use rags or absorbent material for clean-up. Excavate contaminated soils. Dispose of clean-up material and soil as hazardous waste.
- Document all spills with date, location, substance, volume, actions taken and other pertinent data.
- Contact local Fire Department and State Division of Environmental Response and Remediation (Phone #536-4100) for any spill of reportable quantity.

SPILL CLEAN UP 5
SCALE: NTS





TRENCH DETAIL

INSTALLATION WITHOUT TRENCHING

NOT TO SCALE

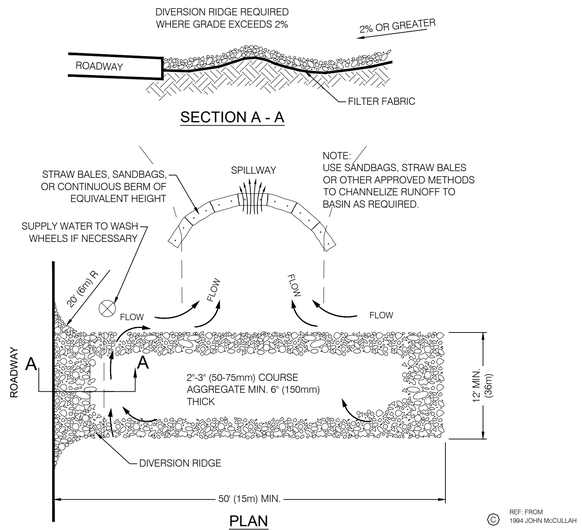
NOTES:
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" (225mm) MAXIMUM RECOMMENDED STORAGE HEIGHT.

3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

© REF: FROM 1994 JOHN McCULLAH

SILT FENCE 6
SCALE: NTS



© REF: FROM 1994 JOHN McCULLAH

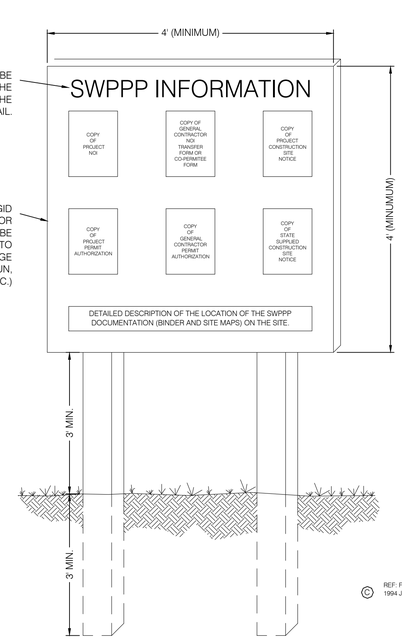
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.

2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT 7
SCALE: NTS

Blue Stakes of UTAH811 Bluestakes.org



NOTES:
1) THE SWPPP INFORMATION SIGN MUST BE LOCATED NEAR THE CONSTRUCTION EXIT OF THE SITE, SUCH THAT IT IS ACCESSIBLE AND VIEWABLE BY THE GENERAL PUBLIC, BUT NOT OBSTRUCTING VIEWS AS TO CAUSE A SAFETY HAZARD.

2) ALL POSTED DOCUMENTS MUST BE MAINTAINED IN A CLEARLY READABLE CONDITION AT ALL TIMES THROUGHOUT CONSTRUCTION AND UNTIL THE NOTICE-TO TERMINATION (NOT) IS FILED FOR THE PERMIT.

3) CONTRACTOR SHALL POST OTHER STORM WATER AND/OR EROSION AND SEDIMENT CONTROL RELATED PERMITS ON THE SIGN AS REQUIRED BY THE GOVERNING AGENCY.

4) SIGN SHALL BE LOCATED OUTSIDE OF PUBLIC RIGHT-OF-WAY AND EASEMENTS UNLESS APPROVED BY THE GOVERNING AGENCY.

5) CONTRACTOR IS RESPONSIBLE FOR ENSURING STABILITY IF THE SWPPP INFORMATION SIGN.

© REF: FROM 1994 JOHN McCULLAH

SWPPP INFORMATION SIGN 8
SCALE: NTS

No.	DATE	DESCRIPTION
1	02/06/25	REVISED PER TOOELE COUNTY COMMENTS

SCALE MEASURES 1INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS
1" 0.5 0

DRAWN BY: AD
CHECKED BY: MCP
FIELD CREW: BCTF
DATE: 11/06/2024
SURVEY FILE: 2409141_SITE

PRELIMINARY PLAN
PROFESSIONAL ENGINEER
2/5/25
No. 10360773
M. CHRIS POULSEN
STATE OF UTAH
NOT FOR CONSTRUCTION

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com
BENCHMARK CIVIL

STAKER PARSON TOOELE
2800 W. BAUER ROAD
TOOELE COUNTY, UTAH

PROJECT NO. 2409141

EROSION CONTROL DETAILS

CEP.02
7 OF 7

State of Utah
SPENCER J. COX
Governor

DEIDRE HENDERSON
Lieutenant Governor

Department of
Environmental Quality

Tim Davis
Interim Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

April 16, 2025

DAQC-358-25
Site 11518 (B1)
Site 11572 (B1)

Chris Rose
Staker Parson Companies
89 West 13490 South
Draper, Utah 84020

Dear Mr. Rose:

Re: Staker Parson Companies – Temporary Relocation/Operation, Notice of Intent – Tooele County

Your Notice of Intent dated April 8, 2025, to relocate portable aggregate equipment to the temporary project located west of State Road 36 on Bauer Road, 0.7 miles past the landfill, Tooele, Utah, was received by the Utah Division of Air Quality (DAQ) and has been reviewed.

The following equipment has been approved for operation for this temporary project:

500 TPH VSI crusher
500 TPH cone crusher
1000 kW generator

This equipment has been permitted for operation in the State of Utah by the Staker Parson Companies' Approval Orders (AOs) DAQE-AN115180014-15 dated July 6, 2015, and DAQE-AN115720002-14 dated September 29, 2014. Approval is granted to relocate and operate this equipment at the new location for a period not to exceed 180 operational days. As per Utah Administrative Code (UAC) R307-401-17, the operation of equipment at this temporary site may be for up to 180 working days in any calendar year not to exceed 365 consecutive days, starting from the initial relocation date. Approval is subject to the conditions of the dust control plan submitted for this location and the above portable AO. Hours of operation for this equipment shall be held to 10 hours each day. The maximum production rate shall be held to the requested 400 tons per hour.

Emissions for this project have been estimated at the following:

Pollutant	gram/sec	lbs/hr	lbs/24 hr	tons/yr
PM10	1.97	15.67	156.71	12.22
SOx	0.78	6.16	61.56	4.80
NOx	5.15	40.91	409.11	31.91
CO	1.36	10.75	107.54	8.39
VOC	0.21	1.68	16.83	1.31

The owner/operator shall maintain records of the actual operation hours, days, and production rate, of the above referenced equipment at this relocation site and have the ability to submit the information to the DAQ upon the request of representatives of the director. Please make certain that the plant operator is aware of all the location specific requirements for this site and the conditions of the aforementioned AO.

Federal New Source Performance Standards Subpart OOO requires that initial Method 9 observations be performed for all applicable portable crushers, screens, and attached conveyors. Subpart OOO also mandates that all crushers constructed, modified, or reconstructed on or after April 22, 2008, which are not enclosed, must install spray bars on the equipment and keep maintenance records to ensure proper spray bar operations.

Utah Division of Water Quality Storm Water Permits and regulations may apply to this temporary project. Please refer to Utah DEQ Water Quality's current Storm Water Construction requirements for additional information.

This approval for relocation in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including the UAC.

If you have any questions regarding this relocation authorization or the temporary relocation process please contact Susan Weisenberg at (385) 306-6512.

Sincerely,

Jay Morris (Apr 15, 2025 08:54 MDT)

Jay P. Morris
Assistant Director

JPM:SW:rh

Enclosure: Submitted Temporary Relocation Form

cc: Tooele County Health Department



Susan Weisenberg <sweisenberg@utah.gov>

Portable/Temporary Relocation Form

1 message

noreply@qemailserver.com <noreply@qemailserver.com> Tue, Apr 8, 2025 at 9:35 AM
Reply-To: trigger@qemailserver.com
To: sweisenberg@utah.gov

Susan/Chad:

Site # -- Staker & Parson Companies has requested a Temporary Relocation. Please see the information below. Any attachments can be access by clicking on the links.

Recipient Data:
Time Finished: 2025-04-08 09:35:34 MDT
IP: 165.225.10.79
ResponseID: R_5wv45PGhLFVatFv
Link to View Results: Click Here
URL to View Results: https://utahgov.iad1.qualtrics.com/apps/single-response-reports/reports/PBIh_Jq2DjAEy0RQGSWos3MvEMZGUJEJMuPDlnXRPhtOuoAjRyJ6MbfC4IPrp2-6PRZLKYboboR-NNuFdhQqBZ71rjuWYrdxwQptM58ITgoqnkVx4hHHo1SG9Lc_gYictBll0QW0lVQMjcY8QDQiXyPM1G8OZ7eSELCRalXWvl6VGtgdcqfKd6FJUlouV1D1_pqPKPO1sNqiA01v9wp82UFyKNUKPsI7vTdR4-MF_ntR1ZUxJV05n4aPOq2M_HA_GBfgnZlWhWCCgP4_iAA1IN2MM6x4XOqi7mRCbRexEZ3VOJ_ahFltPtVavmE-TDS3z443_jpUtoB95dyD933zxg

---

Response Summary:

Please fill out the information below:
Contact Person: Christopher Rose
Company Name: Staker & Parson Companies
Mailing Address: 89 W 13490 S
City: Tooele
Zip: 84074
Phone Number: 3854002119
Email: chris.rose@stakerparson.com

Is the site located within a PM2.5 non-attainment and maintenance plan areas on cleared land grea...
Yes

All temporary relocation projects are required to submit a Fugitive Dust Control Plan (FDCP). Lo...
C533361767

Briefly give directions to the site and/or physical address:
Drive West from SR36 on Bauer Rd, past the landfill. The entrance is on the right after 0.7 miles.

Proposed Relocation Information:
Closest City Tooele
County Tooele
UTM X Coordinates 384280.00 m E
UTM Y Coordinates 4482544.00 m N
Approximate distance to the nearest house/business 0.7 Miles
UTM X Coordinates to nearest house/business 385018.60 m E
UTM Y Coordinates to nearest house/business 4481678.14 m N

Does this site currently have a permit with DAQ?

No

Please provide the permit ID for the equipment? (DAQE-XXXXXXXXX-XX)
DAQE-AN115720002-14, DAQE-AN115180014-15

Please list all the Equipment on Site:Note: It is important to identify ALL diesel powered engine...
1
Equipment Type VSI Crusher
Serial or ID# II.A.14
Design Capacity 500 TPH
2
Equipment Type Cone Crusher
Serial or ID# II.A.13
Design Capacity 500 TPH
3
Equipment Type Generator
Serial or ID# II.A.716
Design Capacity 1000 kW

Please attach a site diagram showing the equipment layout and general site dimensions for this re...
https://utahgov.co1.qualtrics.com/WRQualtricsControlPanel/File.php?F=F_2c1tbRLafbkC89i

Have any other state or local regulatory agencies issued any other "Conditional Use Permits" for...
Yes

If Yes, please list all other local and state agencies that have issued any other permits
Tooele County

Operational Information: (Please note: Operating time over 16 hours in a 24 hour period will re...
Total Hours of operation per 24 hr period 10
Starting time of operation (am/pm) 6 AM
Ending time of operation (am/pm) 4 PM
Maximum hourly production rate for project 500 TPH
Expected startup date 04/22/2025
Expected completion date 04/01/2026

What type of application is this for?
New Application

In accordance with the fee schedule approved by the Utah State Legislature, the Division of Air Q...
https://utahgov.co1.qualtrics.com/WRQualtricsControlPanel/File.php?F=F_1pSArJZcFLIahNS

Owner/Operator Representative:
https://utahgov.co1.qualtrics.com/WRQualtricsControlPanel/File.php?F=F_2diE1C7BwuVE6ej

HALES ENGINEERING
innovative transportation solutions

North Bauer Pit

Traffic Impact Study



Tooele County, Utah

June 25, 2024

UT24-2776

LICENSED PROFESSIONAL ENGINEER
NO. 12890754
Jordi J. Berrett
06/25/2024
STATE OF UTAH

1220 North 500 West, Ste. 202 Lehi, UT 84043 p 801.766.4343
www.halesengineering.com

EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed North Bauer Pit development located in Tooele County, Utah. The development is located on Bauer Road, west of S.R. 36.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2024) conditions with and without the proposed project and to recommend mitigation measures as needed. The morning peak hour level of service (LOS) results are shown in Table ES-1. A site plan of the project is provided in Appendix A.

Table ES-1: Morning Peak Hour Level of Service Results

	Intersection	Level of Service	
		Existing (2024)	
		Background	Plus Project
1	Bauer Road / S.R. 36	a	a

1. Intersection LOS values represent the overall intersection average for roundabout, signalized, and all-way stop-controlled (AWSC) intersections (uppercase letter) and the worst movement for all other unsignalized intersections (lowercase letter)

Source: Hales Engineering, June 2024

SUMMARY OF KEY FINDINGS & RECOMMENDATIONS

Project Conditions

- The development will consist of a gravel pit
- The project is anticipated to generate approximately 90 weekday daily trips, including 10 trips in the morning peak hour, and 5 trips in the evening peak hour
- Due to the existing northbound and southbound acceleration and deceleration lanes at the Bauer Road / S.R. 36 intersection, no additional auxiliary lanes are recommended.

2024	Background	Plus Project
Assumptions	• None	• Trip generation estimated from the truck loading information operation plan provided by the developer.
Findings	• Acceptable LOS	• Acceptable LOS

TABLE OF CONTENTS

EXECUTIVE SUMMARY ..... **i**
SUMMARY OF KEY FINDINGS & RECOMMENDATIONS i
TABLE OF CONTENTS ..... **ii**
LIST OF TABLES ..... **iii**
LIST OF FIGURES ..... **iii**
I. INTRODUCTION **1**
A. Purpose 1
B. Scope 2
C. Analysis Methodology 2
D. Level of Service Standards 2
II. EXISTING (2024) BACKGROUND CONDITIONS **4**
A. Purpose 4
B. Roadway System 4
C. Traffic Volumes 4
D. Level of Service Analysis 6
E. Queuing Analysis 6
F. Mitigation Measures 6
III. PROJECT CONDITIONS **7**
A. Purpose 7
B. Project Description 7
C. Trip Generation 7
D. Trip Distribution and Assignment 8
E. Access 8
F. Auxiliary Lanes 10
IV. EXISTING (2024) PLUS PROJECT CONDITIONS **11**
A. Purpose 11
B. Traffic Volumes 11
C. Level of Service Analysis 11
D. Queuing Analysis 11
E. Mitigation Measures 11

Appendix A: Project Site Plan
Appendix B: Turning Movement Counts
Appendix C: LOS Results
Appendix D: Queuing Results

LIST OF TABLES

Table 1: Level of Service Description 3
Table 2: Existing (2024) Background Morning Peak Hour LOS 6
Table 3: Trip Generation 7
Table 4: Trip Distribution 8
Table 5: Existing (2024) Plus Project Morning Peak Hour LOS 11

LIST OF FIGURES

Figure 1: Vicinity map showing the project location in Tooele County, Utah 1
Figure 2: Existing (2024) background morning peak hour traffic volumes 5
Figure 3: Trip assignment for the evening peak hour 9
Figure 4: Existing (2024) plus project evening peak hour traffic volumes 12

I. INTRODUCTION

A. Purpose

This study addresses the traffic impacts associated with the proposed North Bauer Pit development located in Tooele County, Utah. The proposed project is located on Bauer Road, west of S.R. 36. Figure 1 shows a vicinity map of the proposed development.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2024) conditions with and without the proposed project and to recommend mitigation measures as needed.

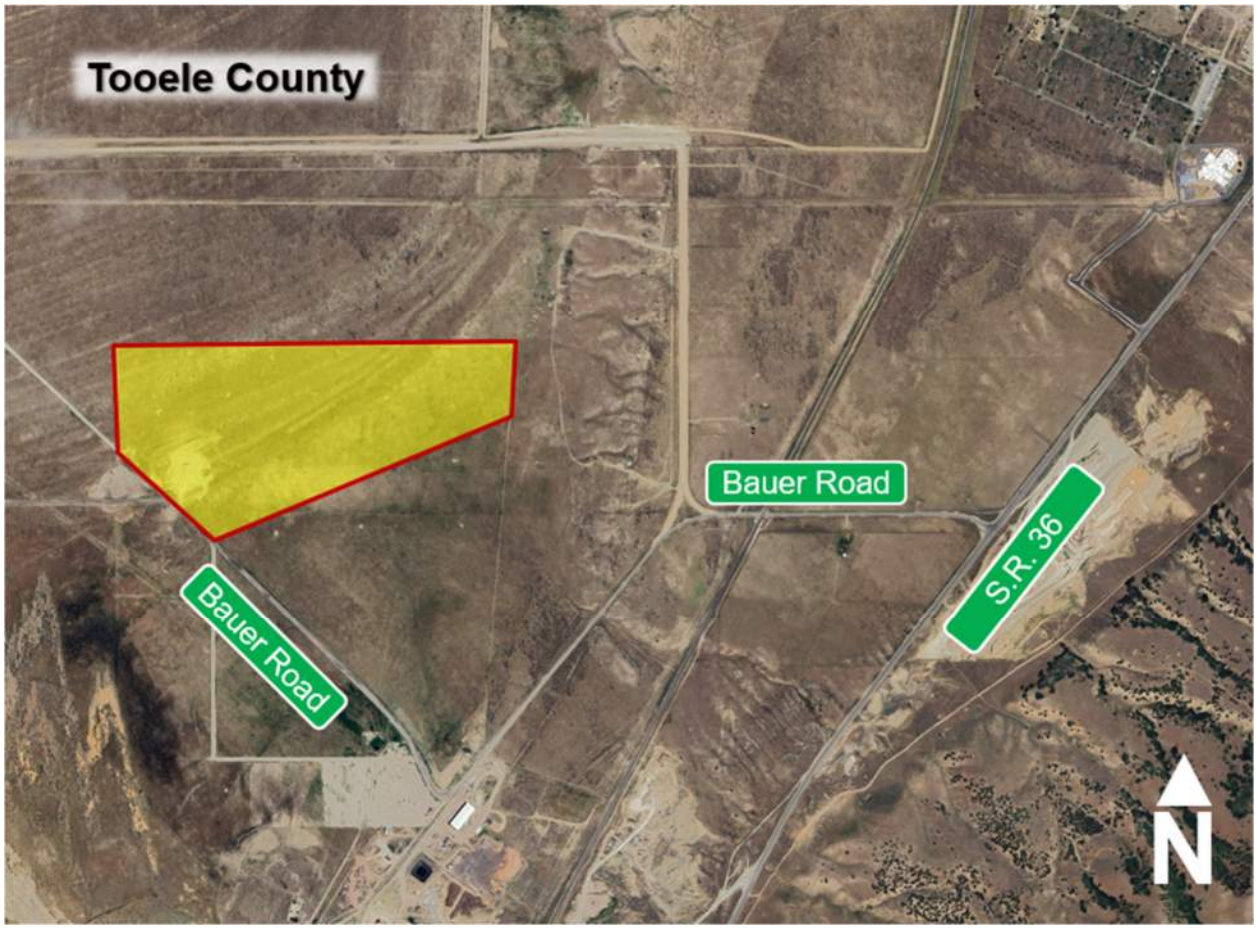


Figure 1: Vicinity map showing the project location in Tooele County, Utah

B. Scope

The study area was defined based on conversations with the development team. This study was scoped to evaluate the traffic operational performance impacts of the project on the Bauer Road / S.R. 36 intersection.

C. Analysis Methodology

Level of service (LOS) is a term that describes the operating performance of an intersection or roadway. LOS is measured quantitatively and reported on a scale from A to F, with A representing the best performance and F the worst. Table 1 provides a brief description of each LOS letter designation and an accompanying average delay per vehicle for both signalized and unsignalized intersections.

The *Highway Capacity Manual* (HCM), 7th Edition, 2022 methodology was used in this study to remain consistent with "state-of-the-practice" professional standards. This methodology has different quantitative evaluations for signalized and unsignalized intersections. For signalized, roundabout, and all-way stop-controlled (AWSC) intersections, the LOS is provided for the overall intersection (weighted average of all approach delays). For all other unsignalized intersections, LOS is reported based on the worst movement.

Using Synchro/SimTraffic software, which follow the HCM methodology, the peak hour LOS was computed for each study intersection. Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. The detailed LOS reports are provided in Appendix C. Hales Engineering also calculated the 95th percentile queue lengths for the study intersections using SimTraffic. The detailed queue length reports are provided in Appendix D.

Many of the figures in this report are printouts of the Synchro model. These figures are not meant to be a design exhibit for exact lane striping and design, due to the limitations of the Synchro software. Instead, the purpose of these figures is to show assumed peak hour turning movement volumes and the conceptual travel lane configuration of the study roadway network.

D. Level of Service Standards

For the purposes of this study, a minimum acceptable intersection performance for each of the study intersections was set at LOS D. If levels of service E or F conditions exist, an explanation and/or mitigation measures will be presented. A LOS D threshold is consistent with "state-of-the-practice" traffic engineering principles for urbanized areas.

Table 1: Level of Service Description

LOS		Description of Traffic Conditions	Average Delay (seconds/vehicle)	
			Signalized Intersections	Unsignalized Intersections
A		Free Flow / Insignificant Delay	≤ 10	≤ 10
B		Stable Operations / Minimum Delays	> 10 to 20	> 10 to 15
C		Stable Operations / Acceptable Delays	> 20 to 35	> 15 to 25
D		Approaching Unstable Flows / Tolerable Delays	> 35 to 55	> 25 to 35
E		Unstable Operations / Significant Delays	> 55 to 80	> 35 to 50
F		Forced Flows / Unpredictable Flows / Excessive Delays	> 80	> 50

Source: Hales Engineering Descriptions, based on the *Highway Capacity Manual* (HCM), 7th Edition, 2022 Methodology (Transportation Research Board)

II. EXISTING (2024) BACKGROUND CONDITIONS

A. Purpose

The purpose of the background analysis is to study the intersections and roadways during the peak travel periods of the day with background traffic and geometric conditions. Through this analysis, background traffic operational deficiencies can be identified, and potential mitigation measures recommended. This analysis provides a baseline condition that may be compared to the build conditions to identify the impacts of the development.

B. Roadway System

The primary roadways that will provide access to the project site are described below:

Bauer Road – is a county-maintained roadway which is classified by the Tooele County Transportation Master Plan (February 2015) as a minor collector. The roadway has one travel lane in each direction. The posted speed limit is 25 mph in the study area.

C. Traffic Volumes

Weekday morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak period traffic counts were performed at the following intersections:

- Bauer Road / S.R. 36

The counts were performed on Wednesday, June 5, 2024. The morning peak hour was determined to be between 8:00 and 9:00 a.m., and the evening peak hour was determined to be between 5:00 and 6:00 p.m. The evening peak hour volumes were approximately 35% higher than the morning peak hour volumes. However, the planned hours of operation for the project site are 6:00 am to 4:00 pm. Therefore, the morning peak hour volumes were used in the analysis to represent a worst-case scenario for the impact the project will have on the traffic conditions at the studied intersection. Detailed count data are included in Appendix B.

Hales Engineering considered making seasonal adjustments to the observed traffic volumes. Monthly traffic volume data were obtained from a nearby UDOT automatic traffic recorder (ATR) on I-80 (ATR #615). In recent years, traffic volumes in June have been equal to approximately 107% of average traffic volumes. Therefore, as a conservative measure, the observed traffic volumes were not adjusted. Figure 2 shows the existing morning peak hour volumes as well as intersection geometry at the study intersections.

Tooele County - Bauer North Pit TIS
Existing (2024) Background

Morning Peak Hour
Figure 2



Hales Engineering
1220 North 500 West, Ste. 202 Lehi UT 84043

801.766.4343
06/21/2024

D. Level of Service Analysis

Hales Engineering determined that all study intersections are currently operating at acceptable levels of service during the morning peak hour, as shown in Table 2. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2024) conditions.

Table 2: Existing (2024) Background Morning Peak Hour LOS

Intersection		Level of Service		
Description	Control	Movement[1]	Aver. Delay (Sec. / Veh.)	LOS[2]
Bauer Road / S.R. 36	SEB Stop	SEL	5.5	a

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, June 2024

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing was observed during the evening peak hour.

F. Mitigation Measures

No mitigation measures are recommended.

III. PROJECT CONDITIONS

A. Purpose

The project conditions discussion explains the type and intensity of development. This provides the basis for trip generation, distribution, and assignment of project trips to the surrounding study intersections defined in Chapter I.

B. Project Description

The proposed North Bauer Pit development is located on Bauer Road, west of S.R. 36. The development will consist of a mining pit. A concept plan for the proposed development is provided in Appendix A.

C. Trip Generation

Trip generation for the development was calculated using truck loading information provided by the developer. It is estimated that 5 trucks will make a total of 40 round trips each day during operating hours from 6:00 am to 4:00 pm. A total of 5 employees will also access the site each day with personal vehicles. For the purposes of this study, it was assumed that the 5 employees arrive on-site during the morning peak hour and exit the site with trucks during the same hour. Trip generation for the proposed project is included in Table 3.

The total trip generation for the development is as follows:

- Daily Trips: 90
- Morning Peak Hour Trips: 10
- Evening Peak Hour Trips: 5

Table 3: Trip Generation

Trip Generation Tooele County - North Bauer Pit TIS						
Land Use[1]	Trip Generation			New Trips		
	Total	% In	% Out	In	Out	Total
Weekday Daily						
North Bauer Pit	90	50%	50%	45	45	90
AM Peak Hour						
North Bauer Pit	10	50%	50%	5	5	10
PM Peak Hour						
North Bauer Pit	0	0%	0%	0	0	0

1. Land Use Code from the Institute of Transportation Engineers (ITE) *Trip Generation*, 11th Edition, 2021.
SOURCE: Hales Engineering, June 2024

D. Trip Distribution and Assignment

Project traffic is assigned to the roadway network based on the type of trip and the proximity of project access points to major streets, high population densities, and regional trip attractions. Existing travel patterns observed during data collection also provide helpful guidance to establishing these distribution percentages, especially near the site. The resulting distribution of project generated trips during the morning peak hour is shown in Table 4.

Table 4: Trip Distribution

Direction	% To/From Project
North	90%
South	10%

These trip distribution assumptions were used to assign the morning peak hour trip generation at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 3.

E. Access

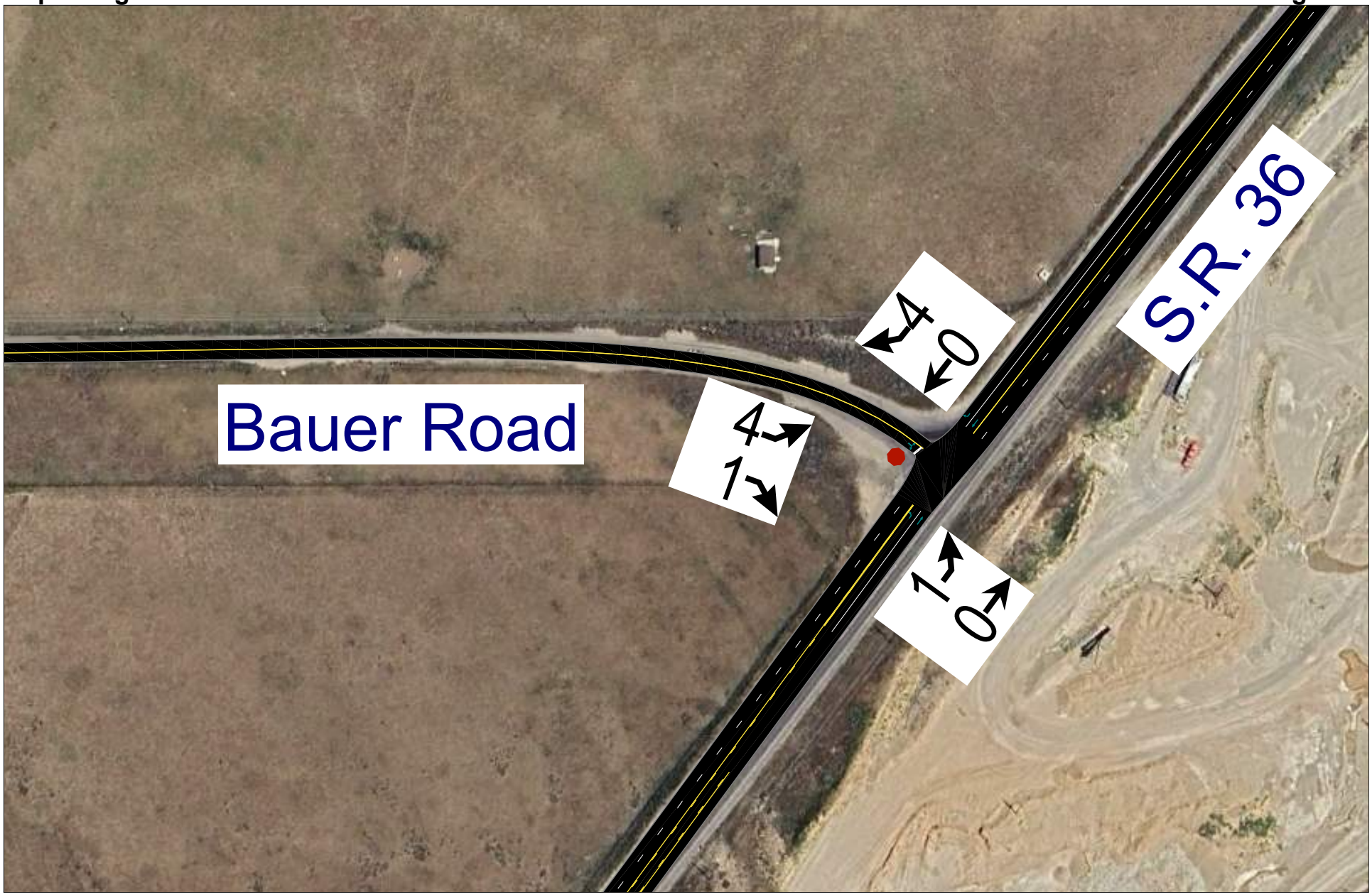
The proposed access for the site will be gained at the following locations:

Bauer Road:

- The project access will be located approximately 3,500 feet northwest of the Tooele County Solid Waste Management building on Bauer Road. It will access the project on the northeast side of Bauer Road. It is anticipated that the access will be stop controlled.

Tooele County - Bauer North Pit TIS
Trip Assignment

Morning Peak Hour
Figure 3



Hales Engineering
1220 North 500 West, Ste. 202 Lehi UT 84043

801.766.4343
06/21/2024

F. Auxiliary Lanes

Auxiliary lanes are deceleration (ingress) or acceleration (egress) turn lanes that provide for safe turning movements that have less impact on through traffic. These lanes are sometimes needed at accesses or roadway intersections if right- or left-turn volumes are high enough.

UDOT Administrative Rule R930-6 outlines minimum peak hour turn volumes to warrant auxiliary lanes on UDOT roadways. The following are the minimum requirements for these lanes on S.R. 36, which has an access category 2 designation:

- Left-turn Deceleration (Ingress): 5 left-turn vehicles per hour
- Left-turn Acceleration (Egress): Is there a safety benefit?
- Right-turn Deceleration (Ingress): 10 right-turn vehicles per hour
- Right-turn Acceleration (Egress): 10 right-turn vehicles per hour

At the present condition, the Bauer Road / S.R. 36 intersection has a deceleration lane and an acceleration lane in each direction on S.R. 36. Therefore, no additional auxiliary lanes are recommended.

IV. EXISTING (2024) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the existing (2024) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for existing background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the existing (2024) background traffic volumes to predict turning movement volumes for existing (2024) plus project conditions. Existing (2024) plus project morning peak hour turning movement volumes are shown in Figure 4.

C. Level of Service Analysis

Hales Engineering determined that all intersections are anticipated to operate at acceptable levels of service during the evening peak hour with project traffic added, as shown in Table 5.

Table 5: Existing (2024) Plus Project Morning Peak Hour LOS

Intersection		Level of Service		
Description	Control	Movement[1]	Aver. Delay (Sec. / Veh.)	LOS[2]
Bauer Road / S.R. 36	SEB Stop	SEL	5.8	a

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, June 2024

D. Queuing Analysis

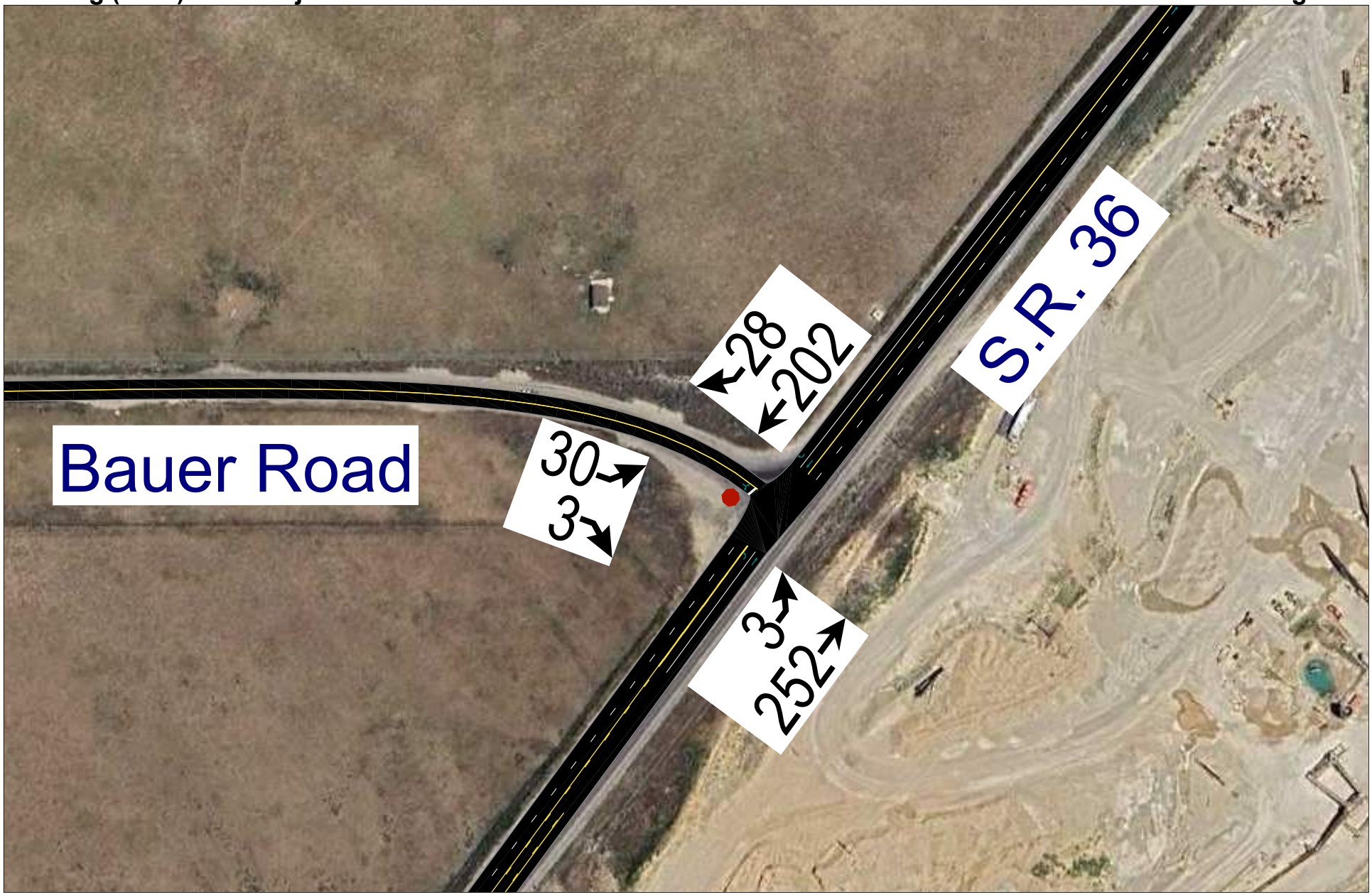
Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing is anticipated during the morning peak hour.

E. Mitigation Measures

No mitigation measures are recommended.

Tooele County - Bauer North Pit TIS
Existing (2024) Plus Project

Morning Peak Hour
Figure 4



Hales Engineering
1220 North 500 West, Ste. 202 Lehi UT 84043

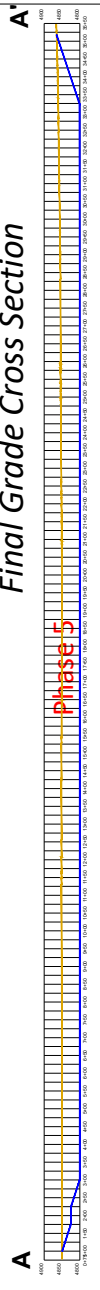
801.766.4343
06/24/2024

APPENDIX A

Site Plan

Bauer North Gravel Pit





Final Grade Cross Section

LEGEND

These standard symbols will be found in the drawing.

- Property Line
- Existing Grade
- Final Grade
- 20 Acre Disturbance
- Top Soil Storage
- 8" Toposoil Respread & Reseeding

- *The 8" of topsoil stripped per 20 acre will be stockpiled in ~21,500 CY piles as shown in the drawing.*
- *Staker Parson Materials & Construction will be the responsible party for reclamation.*
- *Water rights will provided from another site.*

Cut volume: 1,312,564 C.Y., 2,657,944 Tons
Estimated annual production: 500,000 Tons
Phase 5 mining duration: 5.3 Years
Estimated reject volume: 393,769 C.Y

Estimated total life of the mine: 26 Years

W Old Bauer Road & West Bauer Road
Tooele, Utah
40.485203, -112.365498.

Bauer North
Phase 5 Mining Area
Final Reclamation

SHEET 5 OF 5

Figure 6: Phase 5 mining area with final reclamation

APPENDIX B

Turning Movement Counts

Intersection Turning Movement Summary

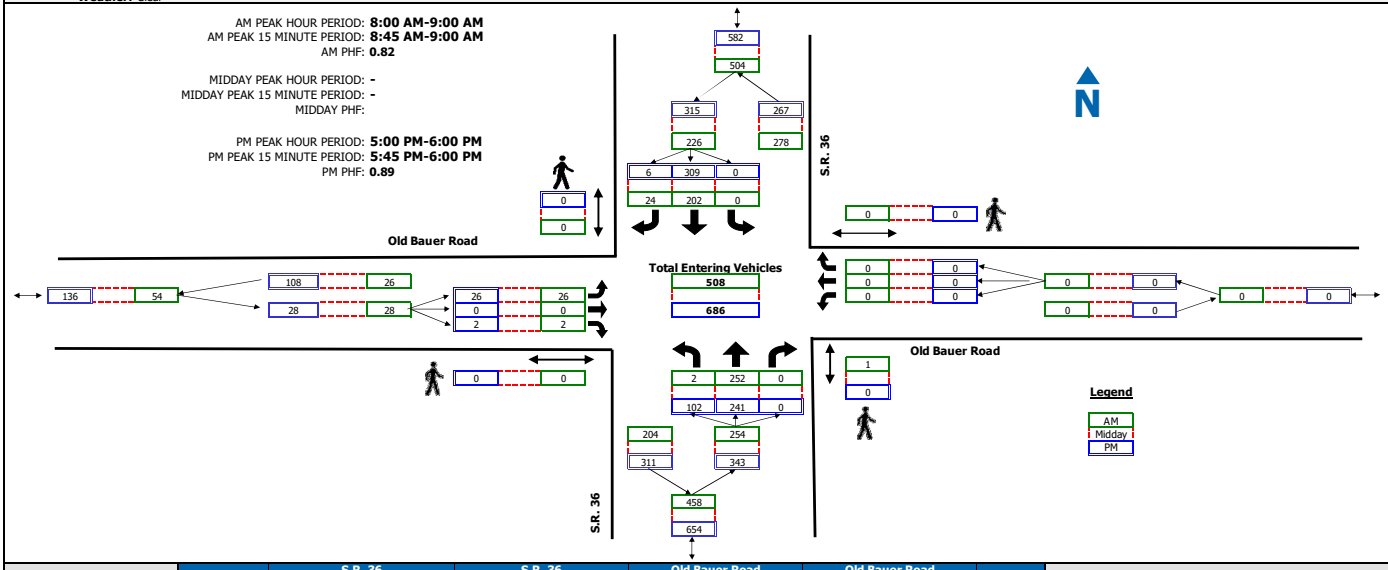
Intersection: S.R. 36 / Old Bauer Road
North/South Road: S.R. 36
East/West Road: Old Bauer Road
Jurisdiction: Tooele County
Project Title: Tooele County North Bauer Pit TGS
Project No: UT24-2776
Weather: Clear

Date: 6-5-24, Wed
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

AM PEAK HOUR PERIOD: **8:00 AM-9:00 AM**
AM PEAK 15 MINUTE PERIOD: **8:45 AM-9:00 AM**
AM PHF: **0.82**

MIDDAY PEAK HOUR PERIOD: **-**
MIDDAY PEAK 15 MINUTE PERIOD: **-**
MIDDAY PHF:

PM PEAK HOUR PERIOD: **5:00 PM-6:00 PM**
PM PEAK 15 MINUTE PERIOD: **5:45 PM-6:00 PM**
PM PHF: **0.89**



COUNT SUMMARY	S.R. 36 Northbound				S.R. 36 Southbound				Old Bauer Road Eastbound				Old Bauer Road Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
7:00 - 7:15	0	44	0	0	0	28	10	0	1	0	0	0	0	0	0	0	83
7:15 - 7:30	1	49	0	0	0	36	10	0	3	0	0	0	0	0	0	0	99
7:30 - 7:45	0	61	0	0	0	31	6	0	3	0	1	0	0	0	0	0	102
7:45 - 8:00	0	55	0	0	0	45	8	0	11	0	1	0	0	0	0	0	120
8:00 - 8:15	2	60	0	0	0	47	2	0	7	0	0	0	0	0	0	0	118
8:15 - 8:30	0	58	0	0	0	44	7	0	6	0	0	0	0	0	0	0	115
8:30 - 8:45	0	58	0	1	0	50	5	0	7	0	0	0	0	0	0	0	120
8:45 - 9:00	0	76	0	0	0	61	10	0	6	0	2	0	0	0	0	0	155
MIDDAY PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
16:00 - 16:15	0	74	0	0	0	66	5	0	6	0	2	0	0	0	0	0	153
16:15 - 16:30	1	61	0	0	0	60	5	0	9	0	3	0	0	0	0	0	139
16:30 - 16:45	0	56	0	0	0	87	3	0	8	0	1	0	0	0	0	0	155
16:45 - 17:00	0	58	0	0	0	90	7	0	1	0	1	0	0	0	0	0	157
17:00 - 17:15	54	29	0	0	0	85	0	0	11	0	0	0	0	0	0	0	179
17:15 - 17:30	47	33	0	0	0	78	4	0	2	0	0	0	0	0	0	0	164
17:30 - 17:45	1	61	0	0	0	79	1	0	7	0	1	0	0	0	0	0	150
17:45 - 18:00	0	118	0	0	0	67	1	0	6	0	1	0	0	0	0	0	193

APPENDIX C

LOS Results

SimTraffic LOS Report

Project: Tootle County - North Bauer Pit TIS
Analysis Period: *Existing (2024) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT24-2776*

Intersection: S.R. 36 & Bauer Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SE	***L***	***26***	***27***	***104***	***5.5***	***A***
	R	2	2	100	3.4	*A*
	Subtotal	28	29	104	5.4	*A*
NE	L	2	1	50	5.0	*A*
	T	252	251	100	0.2	*A*
	Subtotal	254	252	99	0.2	*A*
SW	T	202	198	98	0.2	*A*
	R	24	27	114	0.0	*A*
	Subtotal	226	225	100	0.2	*A*
Total		508	506	100	0.5	*A*

SimTraffic LOS Report

Project: Tootle County - North Bauer Pit TIS
Analysis Period: *Existing (2024) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT24-2776*

Intersection: S.R. 36 & Bauer Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SE	***L***	***30***	***31***	***102***	***5.8***	***A***
	R	3	3	92	3.4	*A*
	Subtotal	33	34	103	5.6	*A*
NE	L	3	2	62	3.5	*A*
	T	252	250	99	0.2	*A*
	Subtotal	255	252	99	0.2	*A*
SW	T	202	200	99	0.2	*A*
	R	28	30	107	0.0	*A*
	Subtotal	230	230	100	0.2	*A*
Total		519	516	99	0.6	*A*

APPENDIX D

95th Percentile Queue Length Reports

SimTraffic Queueing Report

Project: Tootle County - North Bauer Pit TIS

Analysis: Existing (2024) Background

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT24-2776

Intersection	NE	SE
	L	LR
01: S.R. 36 & Bauer Road		75

SimTraffic Queueing Report

Project: Tootle County - North Bauer Pit TIS

Analysis: Existing (2024) Plus Project

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT24-2776

Intersection	NE	SE
	L	LR
01: S.R. 36 & Bauer Road		75

NOTICE OF PUBLIC HEARING

- **SUBJECT:** TCLUO 2025-079 – Text amendment to Tooele County Land Use Chapters 2, and 27.
- **PROJECT SUMMARY:** Staff requests adding definitions of "Landfarming" and "Landfarming-modified" to the land use ordinances, as well as adding the terms to Chapter 27 MINING, QUARRY, SAND, AND GRAVEL EXCAVATION ZONE (MG-EX).
- **Unincorporated:** Tooele County **Planner:** Trish DuClos

On **July 16, 2025** the Tooele County Planning Commission will hold a public hearing regarding the request described above. The meeting will be held at 7:00 p.m. at the Tooele County Administration Building, Council Chambers (Third floor) 47 S. Main Street, Tooele, UT 84074. Also via zoom located on the Tooele County Website: https://tooeleco.gov/index.php under "Meeting agendas" and then the zoom link will be imbedded in the "Agenda Packet."

You have the right to attend and speak at the public hearing. Please be aware, however, that in making its decision the Planning Commission can only rely on evidence, not opinion or conjecture. You may also submit comments in writing, but please do so at least 24 hours before the meeting date so that your comments can be provided to the Planning Commission and to the applicant in an appropriate manner. For questions or additional information, please contact the Planning Office at 435-843-3160.

The future meeting regarding this application will also be posted at the Tooele County Building, posted on the Tooele County Website and Utah Public Noitce Website.

Tooele County
Community Development

Tooele County Planning Commission
Agenda Item Summary

Department Making Request:	**Meeting Date:**
Community Development	**July 16, 2025**

Item Title:

TCLUO 2025-079 – Text amendment to Tooele County Land Use Chapters 2, and 27

Summary:

Staff requests adding definitions of “Landfarming” and “Landfarming-modified” to the land use ordinances, as well as adding the terms to Chapter 27 MINING, QUARRY, SAND, AND GRAVEL EXCAVATION ZONE (MG-EX).

Planning and Zoning
47 S. Main Street • Room 208 • Tooele, UT 84074
Phone: (435) 843-3160 • Fax: (435) 843-3252
tooeleco.org/tooele-county-government/county-departments/community-development/

TCLUO 2025-079

Text Amendment Summary and Recommendation

Public Body: Tooele County Planning Commission
Meeting Date: July 16, 2025
Request: Land use ordinance update to Chapter 2, and Chapter 27
Planner: Trish DuClos
Applicant Name: Staff

PROJECT DESCRIPTION

Staff requests adding definitions of "Landfarming" and "Landfarming-modified" to the land use ordinances, as well as adding the terms to Chapter 27 MINING, QUARRY, SAND, AND GRAVEL EXCAVATION ZONE (MG-EX).

PLANNING STAFF ANALYSIS

Staff has identified a need to add the definitions of: "'Land farming' means a method of treating contaminated soil or sediments by spreading them on a prepared area and processing them to aid in remediation. This process utilizes natural biological and physical processes to degrade and treat contaminants." And "'Land farming – modified' means land farming that results in a finished soil product that does not remain at the processing site. The finished soil product has a beneficial use with a commercial value and sold to the marketplace."

And then adding these terms to Chapter 27 MINING, QUARRY, SAND, AND GRAVEL EXCAVATION ZONE (MG-EX) table 27-8.2. Staff also added the wording of "residential and commercial" in the title block.

PLANNING STAFF RECOMMENDATION

Planning Staff encourages the Planning Commission to review the proposed ordinance updates regarding Tooele County Land Use Ordinances before making a recommendation to council.

(159) "Interstate pipeline company" means a person or entity engaged in natural gas transportation across multiple states subject to the jurisdiction of the Federal Energy Regulatory Commission.

(160) "Intrastate pipeline company" means a person or entity engaged in natural gas transportation in one state that is not subject to the jurisdiction of the Federal Energy Regulatory Commission.

(161) "Junk" means any salvaged or scrap copper, brass, iron steel, metal, rope, rags, batteries, paper, wood, trash, plastic, rubber, tires, waste, or other articles or materials commonly designated as junk. Junk shall also mean any dismantled, wrecked or inoperable motor vehicles or parts thereof which remain in such condition for a period of time in excess of sixty days.

(162) "Junk yard" means the use of any lot, portion of a lot, or tract of land for the storage, keeping or abandonment of junk, scrap metals or material, the dismantling, demolition or abandonment of vehicles, or machinery or parts thereof; but shall include a salvage yard, or war surplus yard.

(163) "Kennel" means any premises where domestic animals, such as dogs and cats, older than four months are kept except where accessory to an agricultural use.

(164) "Land farming" means a method of treating contaminated soil or sediments by spreading them on a prepared area and processing them to aid in remediation. This process utilizes natural biological and physical processes to degrade and treat contaminants.

~~(163)~~(165) "Land farming – modified" means land farming that results in a finished soil product that does not remain at the processing site. The finished soil product has a beneficial use with a commercial value and sold to the marketplace.

~~(164)~~(166) "Land use applicant" means a property owner, or the property owner's designee, who submits a land use application regarding the property owner's land.

~~(165)~~(167) "Land use application":

(a) means an application that is:

(i) required by the county; and

(ii) submitted by a land use applicant to obtain a land use decision; and

(b) does not mean an application to enact, amend, or repeal a land use regulation.

~~(166)~~(168) "Land use authority" means:

(a) a person, board, commission, agency, or body, including the local legislative body, designated by the local legislative body to act upon a land use application; or

(b) if the local legislative body has not designated a person, board, commission, agency, or body, the local legislative body.

~~(167)~~(169) "Land use decision" means an administrative decision of a land use authority or appeal authority regarding:

(a) a land use permit;

(b) a land use application; or

(c) the enforcement of a land use regulation, land use permit, or development agreement.

~~(168)~~(170) "Land use permit" means a permit issued by a land use authority.

~~(169)~~(171) "Land use regulation":

(a) means a legislative decision enacted by ordinance, law, code, map, resolution, specification, fee, or rule that governs the use or development of land;

(b) includes the adoption or amendment of a zoning map or the text of the zoning code; and

(c) does not include:

(i) a land use decision of the legislative body acting as the land use authority, even if the decision is expressed in a resolution or ordinance; or

(ii) a temporary revision to an engineering specification that does not materially:

1. increase a land use applicant's cost of development compared to the existing specification; or

CHAPTER 27

MINING, QUARRY, SAND, AND GRAVEL EXCAVATION ZONE (MG-EX)

Section

27-1. Purpose.
27-2. Permitted and conditional uses.
27-3. Application.
27-4. Operation categories.
27-5. Minimum requirements.
27-6. Codes and symbols.
27-7. Uses.
27-7.1. Mining, quarry, sand, and gravel excavation and support uses table.
27-7.2. Manufacturing, curing, compounding, processing, packaging, production and treatment table.

27-1. Purpose

(1) The mining, quarry, sand, and gravel excavation zone (MG-EX) is a zoning district which allows and protects the mining, quarry, sand, and gravel excavation industry while protecting the environment. This zone is to assure that the operations of such sites do not impact adjoining uses, and are not encroached upon by surrounding non- compatible land uses.

(2) This chapter regulates the location, operations and reclamation of mining, quarries, and gravel pits to provide safe conditions and protection of the environment in Tooele County. These regulations are to protect the owner, employees and the public at large. (Ord.2005-30, 11/22/05)

27-2. Permitted and conditional uses.

The conditional use permit required by this chapter shall be obtained prior to the commencement of use of any sand or gravel pit, mine or quarry within Tooele County. No presumption of approval shall be made regarding an application. All applications for conditional use permits made to the Department of Engineering shall include all drawings, maps, specifications, statements and records as required by Chapters 7, 12 and this chapter. All applications that are incomplete upon submission shall be returned to the submitter. The landowner and operator shall be responsible to ensure all conditions are complied with. (Ord.2005-30, 11/22/05)

27-3. Operation categories.

All mining, quarry, sand, and gravel excavation operations shall fit into one of the two following categories:

(1) Permanent commercial operations are those that supply materials to the public on a continual basis. A permanent commercial operation may be approved by the zoning administrator with the minimum requirements. If it is determined by the zoning administrator that the minimum requirements do not adequately mitigate potential or actual impacts to surrounding properties, it shall then be submitted to the planning commission. All commercial pit operations shall work under an approved five-year operation plan. Upon expiration of the previous plan, a new five-year plan shall be submitted; otherwise closure and reclamation operations shall begin within six months. The conditional use permit shall remain in effect until such time that full reclamation has been made on the site.

(2) Temporary project specific operations supply material for specific projects, the termination of which shall also terminate the conditional use permit and the use of the pit. A temporary project may be

approved by the zoning administrator with the minimum requirements. If it is determined by the zoning administrator that the minimum requirements do not adequately mitigate potential or actual impacts to surrounding properties, it shall then be submitted to the planning commission. A temporary project shall be allowed to operate for a period up to six months and may be extended in six-month intervals for a period not to exceed two years. It is the responsibility of the landowner or operator to make application for an extension before the expiration of the current permit. Once the project is completed, the owner or operator shall begin closure and reclamation operations within six months. (Ord.2005-30, 11/22/05)

27-4. Application.

(1) All applications for conditional use permits shall be accompanied by the following materials:

(a) application form for a conditional use permit;

(b) evidence of ownership or control over the land and a legal description of the property where the pit will be located;

(c) evidence of capability to complete the project, which includes:

(i) a statement of the applicant's ability to post performance bonds or other financial assurance;

(ii) cost estimates for reclamation costs to include removal of roads, buildings, overburden, etc;

(iii) liability insurance coverage;

(d) a site plan showing:

(i) all prominent man made and geologic features within the surrounding areas that will be affected by the operation;

(ii) dimensions;

(iii) locations, clearances,
and rights-of-ways, easements, utility lines; and

(iv) property lines and
names of adjoining property owners;

(v) ingress and egress;

(vi) general geologic and top soils data from a qualified source as approved by the Department of Engineering; and

(vii) a contour map in intervals of five feet showing existing water courses, drainage and calculations.

(e) a reclamation plan addressing:

(i) types of existing dominant vegetation;

(ii) segregation and stockpiling of materials capable of supporting vegetation as determined by soils analysis or practical revegetation experience;

(iii) figures outlining depths of and volumes of topsoil to be stockpiled, measures to protect topsoil from wind and water erosion, and pollutants;

(iv) method of depths volumes, removal and storage of other overburden, plus a description of the procedures to be used in overburden replacement and stabilization and high wall elimination, including:

(a) slope factors;

(b) lift heights;

(c) terracing; and

(d) any testing procedures employed.

(v) methods of processing and disposing of waste and reject material, including toxicity analysis explaining in detail means for containment and long range stability;

(vi) existing site and post- contour cross sections typical of re-grading designs;
(vii) redistribution of topsoil and subsoil on the re-graded area, indicating final depth of soil cover;
(viii) re-seeding types or species to be used, the rate of application per acre, the season planting will occur, fertilizers or soil amendments required to aid re-vegetation, providing, however, that seed types, rates of application and suitability of area to re-seeding shall be based upon recommendations from the Soil Conservation District;
(ix) a description of the reclamation which shall include reasoning for the leaving of roads, pads or other similar structures and features; and
(x) a list all parties responsible for various stages of reclamation.

(f) an operations plan that outlines:
(i) proposed hours of operation;
(ii) traffic safety measures proposed on existing roads and streets adjoining the site;
(iii) the location, arrangement and dimensions of loading and processing facilities;
(iv) projected figures for quantities of materials to be removed from specified locations;
(v) an open and closure plan stating the phasing, acreage and duration of the operation involved, with the maps and narratives that describe the expected sequence of disturbed areas, processing and material treatment;
(vi) the extent of the land previously disturbed as well as the proposed extent of land disturbance;
(vii) areas of overburden and/or topsoil removal and storage areas, also the location of disposal and stockpile areas for reject materials, waste, and useable materials;
(viii) information on known test drilling, locations and status. and plans for any future test drilling and areas where that will occur;
(ix) appropriation and use of necessary water rights;
(x) the design, construction and maintenance of access and haul roads, including cross sections showing drainage, erosion control, and profiles of road grades, and
(xi) on-site control of surface and storm water drainage.
(xii) evidence that all required federal and state requirements for environmental health, occupational safety, and reclamation are complete and approved, as required, the each of the following entities:
(a) Tooele County Health Department
(b) OSHA, State of Utah OGM, and MSHA;
(c) Soil Conservation District;
(d) Utah Department of Transportation; and
(e) The State archeologist and paleontologist.
(xiii) a statement identifying mitigation of hazards to the public safety and welfare, including test hole closures, fencing, slopes, disposal of trash, scrap metal, wood, extraneous debris, waste oil, solvents, fuels, chemicals, explosives and sewage;
(xiv)access to county or state road design, to include acceleration, deceleration and left turn lanes; and
(xv)methods of fugitive dust
suppression for processing and site operations.

(2) Applications for conditional use permits shall have a design review by the Department of Engineering completed before being placed on the Planning Commission agenda. The Department of Engineering shall schedule a meeting with the applicant, roads, and planning department. The

Department of Engineering may make a site visit with the applicant as part of the review. (Ord.2005-30, 11/22/05)

27-5. Miniumum Requirements

All operations shall comply with the following requirements:

(1) warning signs, fences, trees, and berms shall be placed on the perimeter of the property to protect the public and act as barriers to access, fugitive dust, noise, glare, and/or view shall be indicated;

(2) no adverse drainage which would create soil instability or erosion shall be permitted. All drainage shall be contained on site;

(3) maximum slopes shall be in accordance MSHA;

(4) the applicant shall post a reclamation guarantee for the area of disturbance giving financial assurance in a form approved by Tooele County; guaranteeing the satisfactory reclamation of all disturbed areas. The amount of reclamation shall not be less than $1,000.00 per acre, with a $10,000.00 minimum and shall be adjusted upon the renewal of the operations plan to meet projected costs of reclamation based upon time, material and equipment needed to clean-up and remove structures, backfill, slopes (to include mine dumps) shall be graded to no greater than 3:1 finished slope or in relation to the contour of adjacent undisturbed land, contour redistribute and stabilize topsoil, re-vegetate, monitor, and reseed, if necessary. The release of the financial assurance obligations for reclamation shall not be made until the Department of Engineering consults with the Soil Conservation, Tooele County Attorney and approves the release in writing.

(5) all facilities and activities shall comply with applicable land use, health, building, plumbing, mechanical, and electrical codes. All structures erected, placed, built, or installed shall have a building permit;

(6) all fuel tanks and flammable materials shall be located above ground, in such locations, with containment, and under such conditions as to conform to the requirements of the national fire codes (NFPA);

(7) all crossing of state and county roads shall be done in such a manner as to hold Tooele County harmless from any and all legal proceedings as a result of the applicant's use of such roads. The applicant shall make provisions to place suitable road signs, restraints and flagging personnel at work-sites and road crossings as approved by the Manual on Uniform Traffic Control Devices and the Department of Engineering;

(8) all damage to state and county roads shall be repaired at the applicant's expense under the direction of the Department of Engineering;

(9) the applicant shall maintain on file, proof of liability insurance for the operation in the Department of Engineering;

(10) Tooele County reserves the right to limit and restrict the time activities of the operation should the planning commission deem those activities are a public nuisance;

(11) the owner or operator shall install such improvements to access county or state roads, to include acceleration, deceleration and left turn lanes as approved prior to operation;

(12) all activities shall be maintained and operated in such a way as to minimize fumes, dust, and smoke emissions;

(13) sufficient restroom facilities shall be provided at each location for employee use; and

(14) the applicant shall not begin operations until such time that they enter into a mitigation agreement with Tooele County addressing the upgrade, construction and maintenance of infrastructure. (Ord.2005-30, 11/22/05)

27-6. Codes and symbols

(1) In this part are tables describing uses of land or buildings that are allowed in the various districts as shown. Permitted uses are indicated by a "P" in the appropriate column. Uses that may be permitted by a conditional use permit issued by a planning commission are indicated by a "C" in the appropriate column. Uses that may be permitted by a conditional use permit issued by the zoning administrator are indicated by a "C1" in the appropriate column.

(2) If a use is not allowed in a given district, it is either not named in the use list or it is indicated in the appropriate column by a dash, "-"

(3) If a regulation applies in a given district, it is indicated in the appropriate column by an alphanumeric character that will show the linear feet or square feet or acres required or by the letter "A." If the regulation does not apply, it is indicated in the appropriate column by a dash "-".

No building, structure or land shall be used and no building or structure shall be hereafter erected, structurally altered, enlarged or maintained in the commercial, industrial or hazardous industries zoning districts except as provided in this part. (Ord.2005-30, 11/22/05)

27-7. Uses

Table 27-8.1. Mining, quarry, sand, and gravel excavation and support uses. (Ord.2005-30, 11/22/05)

	Use	(MG-EX)
a	Accessory uses buildings customarily incidental to conditional uses	C1
b	Agriculture, grazing of animals, raising of crops	P
c	Automobile and truck service station	C1
d	Cast stone, cement, cinder, terra cotta; tile, brick, synthetic cast stone, brick, block, pumice stone and gypsum products	C1
e	Coffee shop	P
f	Construction equipment and supply trailer, temporary	C1
g	Construction field office, temporary	C1
h	Convenience store with gasoline sales	C1
i	Gravel and sand excavation	
	commercial operations	C1
	temporary project specific operations	C1
j	Machine shop	C1
k	Mines	C
l	Non- hazardous landfill	C
m	Quarries	C
n	Parking lot incidental to a use conducted on the premises	C1
o	Parking lot not incidental to a use conducted on the premises	C1
p	Pottery, plaster, incidental plaster, plaster of paris, ceramic, and clay	C1
q	Power generation (electrical) for on-site use:	
	solar	P
	wind under 5.9 kva	P
	auxiliary, temporary, wind, with more than 6 kva, but less than 10 kva output	C1
	fuel cells, steam, hydro, or reciprocating engine with more than 10.05 kva, but less than 150 kva output	C1

Table 27-8.1. Mining, quarry, sand, and gravel excavation and support uses. (Ord.2005-30, 11/22/05)		
r	Steam, hydro, or reciprocating engine with more than 150 kva	C1
s	Rock crusher/ concrete batch plant	C1
t	Truck and freighting operation	C1
u	Truck and heavy equipment service station and repair facility	C1
v	Truck wash	C1

Table 27-8.2. Manufacturing, curing, compounding, processing, packaging, production and treatment. Such uses are to be located no closer than 1,300 feet from a residential and commercial zoning district boundary. (Ord.2005-30, 11/22/05)		
	Use	(MG-EX)
a	Accessory uses buildings customarily incidental to conditional uses	C
b	Asphalt plant	C
c	Coal	C
d	Gasoline and Petroleum	C
e	Iron	C
f	Landfarming and Landfarming-modified	C
~~i~~ g	Lime	C
~~j~~ h	Lubricating grease, oil, oilcloth, and oiled rubber goods	C
~~k~~ i	Ore smelting	C
j	Precious or semiprecious stones or metals	C
~~m~~ k	Tar	C

Table 27-8.3. Utilities and utility services		
	Use	(MG-EX)
a	Essential service facilities	P
b	Substations	C
c	Transmission lines of 50 kV or greater capacity	C
d	Large wind energy systems (i.e., wind turbine farms)	C

NOTICE OF PUBLIC HEARING

- **SUBJECT:** TCLUO 2025-082 – Text amendment to Tooele County Land Use Chapters 2, and Tables 15-5-3.5 and 17-5-3.8.
- **PROJECT SUMMARY:** Brock Brown is requesting a text amendment to Tooele County Land Use codes to add a definition to Chapter 2 of "Firearms Training Facility/Outdoor and Indoor Shooting Range" and adding the term into Tables 15-5-3.5 and 17-5-3.8 of Recreational uses.
- **Unincorporated:** Tooele County **Planner:** Trish DuClos

On **July 16, 2025** the Tooele County Planning Commission will hold a public hearing regarding the request described above. The meeting will be held at 7:00 p.m. at the Tooele County Administration Building, Council Chambers (Third floor) 47 S. Main Street, Tooele, UT 84074. Also via zoom located on the Tooele County Website: https://tooeleco.gov/index.php under "Meeting agendas" and then the zoom link will be imbedded in the "Agenda Packet."

You have the right to attend and speak at the public hearing. Please be aware, however, that in making its decision the Planning Commission can only rely on evidence, not opinion or conjecture. You may also submit comments in writing, but please do so at least 24 hours before the meeting date so that your comments can be provided to the Planning Commission and to the applicant in an appropriate manner. For questions or additional information, please contact the Planning Office at 435-843-3160.

The future meeting regarding this application will also be posted at the Tooele County Building, posted on the Tooele County Website and Utah Public Noitce Website.

Tooele County
Community Development

Tooele County Planning Commission
Agenda Item Summary

Department Making Request:	**Meeting Date:**
Community Development	**July 16, 2025**

Item Title:

TCLUO 2025-082 – Text amendment to Tooele County Land Use Chapters 2, and Tables 15-5-3.5 and 17-5-3.8.

Summary:

Brock Brown is requesting a text amendment to Tooele County Land Use codes to add a definition to Chapter 2 of "Firearms Training Facility/Outdoor and Indoor Shooting Range" and adding the term into Tables 15-5-3.5 and 17-5-3.8 of Recreational uses.

Planning and Zoning
47 S. Main Street • Room 208 • Tooele, UT 84074
Phone: (435) 843-3160 • Fax: (435) 843-3252
tooeleco.org/tooele-county-government/county-departments/community-development/

TCLUO 2025-082

Text Amendment Summary and Recommendation

Public Body: Tooele County Planning Commission
Meeting Date: July 16, 2025
Request: Land use ordinance update to Chapters 2, and tables 15-5-3.2 and 17-5-3.8.
Planner: Trish DuClos
Applicant Name: Brock Brown

PROJECT DESCRIPTION

Brock Brown is requesting a text amendment to Tooele County Land Use codes to add a definition to Chapter 2 of "Firearms Training Facility/Outdoor and Indoor Shooting Range" and adding the term into Tables 15-5-3.5 and 17-5-3.8 of Recreational uses, as a conditional use permit, approved by planning commission.

PLANNING STAFF ANALYSIS

Staff has identified that Tooele County Land Use codes do not currently allow for a shooting range. They does allow for "Commercial paintball course and paintball target range" with a conditional use permit, approved through planning commission. Staff has had many requests over the past couple of years for shooting ranges.

The applicant has provided detailed information on his request and possible operations. Also attached is information of similar areas that have shooting ranges. The request would allow firearms training facilities, and outdoor and indoor shooting ranges in the MU-40 (multiple use, 40-acre minimum) zone and the M-G (Manufacturing general) zone with a conditional use permit, approved through planning commission.

The applicant proposes the definition be, "Firearms Training Facility/ Outdoor and Indoor Shooting Range" means a facility designed and operated for the education, training, and development of firearms-related skills. This includes but is not limited to; live-fire shooting ranges (both indoor and outdoor), tactical training areas, simulation structures, and spaces for instructional coursework. The facility may host structured programs for civilians, law enforcement, military, or members of a private club. All operations shall be conducted in compliance with applicable safety regulations and noise ordinances, and may include force-on-force training, physical readiness courses, and simulated exercises within secured and designated boundaries.

Attached is the proposed draft for the 3 requested chapter changes.

PLANNING STAFF RECOMMENDATION

Planning Staff encourages the Planning Commission to review the proposed ordinance updates regarding Tooele County Land Use Ordinances before making a recommendation to council.

Table 15-5-3.5

Table 15-5-3.5. Recreational, camping and amusement uses.										
#	Use	Multiple Use (MU-)			Agricultural (A-)				Rural Residential (RR-)		
		40	80	160	5	10	20	40	1	5	10
e	Firearms Training Facility/Outdoor and Indoor Shooting Range	C	C	C	-	-	-	-	-	-	-

Table 17-5-3.8

Table 17-5-3.8. Recreation, camping and amusement.								
#	Use	Commercial (C-)				Industrial (M-)		Haz. Ind.
		N	S	H	G	D	G	MG-H
l	Firearms Training Facility/Outdoor and Indoor Shooting Range	-	-	-	-	-	C	-

Chapter 2
Definitions

(119) “Firearms Training Facility/ Outdoor and Indoor Shooting Range” means a facility designed and operated for the education, training, and development of firearms-related skills. This includes but is not limited to; live-fire shooting ranges (both indoor and outdoor), tactical training areas, simulation structures, and spaces for instructional coursework. The facility may host structured programs for civilians, law enforcement, military, or members of a private club. All operations shall be conducted in compliance with applicable safety regulations and noise ordinances, and may include force-on-force training, physical readiness courses, and simulated exercises within secured and designated boundaries.

Text Amendment of Tooele County's Land Use Ordinance Application

Required to go before Planning Commission and County Council.

Fee $1,000.00

Text amendments to the zoning ordinance shall be completed in full, signed, and supplemented with any additional information required by staff and the planning commission. An application which is incomplete or provides insufficient data is just cause for denial. Submittals must be filed with the Community Development Department.

(For office use only)

TCLUO #: 2025-002 ORD #_____ Fee $1,000.00 Receipt #: _____

Date complete application submitted: _____

Application Determination:

Planning Commission recommendation: Favorable ☐ Unfavorable ☐

Presented by: _____ Date: _____

County Council recommendation: Approved ☐ Denied ☐

Presented by: _____ Date: _____

Petitioner(s) Information

Name(s): Brock Brown

Address (Must reside in Tooele County): Tooele County Parcels: 06-080-0-0004, -0013, -0012 (portion)

City/County: Vernon/Tooele State: Utah Zip: 84080

Office/home phone: _____ Fax: _____

Mobile phone: 8013614620 Message phone: _____

Email address: Sovereigntactics@gmail.com

Petitioner(s) Agent's Information

*Petitioner's Authorization notarization needed

Name(s): Brock Brown

Address per tax rolls: 975 W Mckenna Rd.

City/County: Bluffdale/Salt Lake State: Utah Zip: 84065

Office/home phone: _____ Fax: _____

Mobile phone: 8013614620 Message phone: _____

Email: Sovereigntactics@gmail.com

Each application for a text amendment shall have all required submittals before it is accepted as a complete application.

There shall be no presumption of approval of any aspect of the process.
Each applicant bears the burden of proof to show that the amendment requested furthers the goals and policies of the general plan.

APPLICATION IS HEREBY MADE TO THE PLANNING COMMISSION REQUESTING THAT:

APPLICATION IS HEREBY MADE TO THE PLANNING COMMISSION REQUESTING THAT:

The Tooele County Land Use Ordinance be amended to include the following under the Table of Uses for the MG (Manufacturing General) and MU-40 (Multiple Use - 40-acre) zoning districts:

Proposed Table of Uses Addition - MG & MU-40 Zones
Firearms Training Facility / Outdoor and Indoor Shooting Range (Conditional Use):
A controlled, professionally managed environment for the purpose of firearms instruction, tactical training, marksmanship development, and membership-based shooting access. This may include structured tactical exercises such as force-on-force scenarios, simulated operations, hosted training events, physical readiness courses, and the use of specialized structures and support systems in accordance with federal and state safety regulations.

REQUESTED CHANGE SUMMARY
- Requested Change: Add "Firearms Training Facility / Outdoor and Indoor Shooting Range" as a Conditional Use under the Table of Uses
- Zoning Designations Affected: MG (Manufacturing General) and MU-40 (Multiple Use - 40-acre)
- Purpose: Provide a pathway for a world-class training facility to operate safely under county oversight, offering access to vetted civilians, military, law enforcement, and community members via club membership and special events.

Include the following with the application:

Applicant	County	
✔	☐	Original text
✔	☐	Requested change(s) to original text or additions to what sections.
✔	☐	Examples from other areas in Utah similar to Tooele County that have similar ordinances.
✔	☐	Examples of how the requested change(s) further the goals and policies Tooele County's General Plan 2022.

ADDITIONAL INFOMRATION OR SUBMITTALS MAY BE REQUIRED

I (We) understand that the Planning Commission and/or County Council may or may not adopt such changes listed. The fees associated with this application will not be refunded or returned once the notice of this application is submitted to planning commission. I (We) understand the process of this requested change must first go through Planning Commission for a recommendation to the County Council. The process will then proceed to go through County Council. Knowing this process, I (We) understand the application will take the needed time to ensure all processes are properly met and either board may make further changes to the request, or possible denial in whole.

Brock Brown — PETITIONER'S SIGNATURE
9TH June 2025 — DATE

PETITIONER'S SIGNATURE
DATE

AFFIDAVIT

PETINTIONER'S AUTHORIZATION

I (we), BROCK BROWN the owner(s) of the real property located in Tooele County and further described in the attached application, do authorize the applicant(s) listed in this application permissions to represent me (us) regarding the attached application and to appear on my (our) behalf before any administrative or legislative body in the County considering this application and to act in all respects as our agent in matters pertaining to the attached application.

BROCK BROWN
(Petitioner)

_____
(Petitioner)

_____
(Petitioner)

_____
(Petitioner)

Notary

STATE OF UTAH)

:ss

County of Tooele)

Dated this 9TH day of JUNE, 20 25, the property owners above personally appeared before me and acknowledged that he/she signed the above Notice and that the statements contained therein are true.

01/19/2027
My Commission Expires

Maria Lopez.
Notary Public

MARIA LOPEZ
Notary Public - State of Utah
Comm. No. 728895
My Commission Expires on
Jan 19, 2027

TEXT AMENDMENT REQUEST

To the Tooele County Planning Commission,

My name is Brock Brown, a former U.S. Army Ranger and founder of Sovereign Tactics—a Utah-based firearms training company focused on safety, tactical education, and professional development. I'm writing to formally request a text amendment to the Tooele County Land Use Ordinance to allow a Firearms Training Facility / Outdoor and Indoor Shooting Range as a Conditional Use in the MG (Manufacturing General) and MU-40 (Multiple Use – 40-acre) zoning districts.

I'm in the process of acquiring a parcel of land located along State Route 73, south of the Tooele Army Depot and before the 5 Mile Recreation Area. This acquisition is contingent on the zoning being amended to support our vision of building a comprehensive, veteran-owned training facility.

This facility will be designed with the highest safety and operational standards. It will serve military, law enforcement, vetted civilians, and members of the local community through controlled, curriculum-based instruction, club membership access, and hosted training events. We're committed to aligning with all Tooele County requirements and look forward to working alongside the planning committee to ensure long-term success and compliance.

APPLICATION IS HEREBY MADE TO THE PLANNING COMMISSION REQUESTING THAT:

The Tooele County Land Use Ordinance be amended to include the following under the Table of Uses for the MG (Manufacturing General) and MU-40 (Multiple Use – 40-acre) zoning districts:

Proposed Table of Uses Addition – MG & MU-40 Zones
Firearms Training Facility / Outdoor and Indoor Shooting Range (Conditional Use):
A controlled, professionally managed environment for the purpose of firearms instruction, tactical training, marksmanship development, and membership-based shooting access. This may include structured tactical exercises such as force-on-force scenarios, simulated operations, hosted training events, physical readiness courses, and the use of specialized structures and support systems in accordance with federal and state safety regulations.

Requested Change Summary
- Requested Change: Add "Firearms Training Facility / Outdoor and Indoor Shooting Range" as a Conditional Use under the Table of Uses
- Zoning Designations Affected: MG (Manufacturing General) and MU-40 (Multiple Use – 40-acre)
- Purpose: Provide a pathway for a world-class training facility to operate safely under county oversight, offering access to vetted civilians, military, law enforcement, and community members via club membership and special events.

Additional Request: Add in Chapter 2 a definition for "Firearms Training Facility / Outdoor and Indoor Shooting Range."

Proposed Definition (Chapter 2 – Definitions):
Firearms Training Facility / Outdoor and Indoor Shooting Range:
A facility designed and operated for the education, training, and development of firearms-related skills. This includes but is not limited to: live-fire shooting ranges (both indoor and outdoor), tactical training areas, simulation structures, and spaces for instructional coursework. The facility may host structured programs for civilians, law enforcement, military, or members of a private club. All operations shall be conducted in compliance with applicable safety regulations and noise ordinances, and may include force-on-force training, physical readiness courses, and simulated exercises within secured and designated boundaries.

CONDITIONAL USE FRAMEWORK

This Conditional Use framework reflects the operational intent of Black Flag Training Grounds and is submitted as a demonstration of professional foresight, commitment to public safety, and respect for Tooele County's planning process.

1. STRUCTURE AND INTENT
Black Flag Training Grounds is a veteran-led company focused on tactical operations, firearms instruction, survival training, and readiness development. Training will be conducted by vetted instructors for law enforcement, military, vetted civilians, and community members with club membership access. Public events and specialized training seminars will be hosted on a scheduled basis.

2. SITE USE AND FACILITY DESIGN
The facility will include multiple outdoor shooting bays, indoor ranges, precision platforms, terrain mobility areas, and mixed-use tactical zones. Training areas will support simulated structures—both modular and permanent—for force-on-force instruction, CQB, and structured movement. Long-distance platforms, shotgun areas, and designated zones for drone operations, obstacle shooting, and mission-based simulations are integrated into the layout. To accommodate specialized tactical training needs, we request that Tooele County consider conditional approval for vertical training structures exceeding standard height limitations on a case-by-case basis through site planning review. This flexibility would support realistic training conditions such as elevated shooting positions, overwatch towers, and rappel platforms essential to modern preparedness and force-on-force instruction.

3. SAFETY & INFRASTRUCTURE

The facility will implement layered safety protocols including controlled access to training zones, clear directional signage, range-specific safety markers, and structured flow to ensure safe movement between areas. Surveillance systems and access management may be applied at key entry points to monitor authorized use. Emergency protocols, trauma lanes, and on-site medical kits will be established, with support for comms, vehicle access, and instructor oversight.

4. COUNTY INTERFACE
Tooele County may request walkthroughs or planning reviews by coordination. Black Flag Training Grounds is committed to long-term alignment with development staff to ensure safe, secure, and scalable operation.

5. COMMUNITY BENEFIT & PARTNERSHIP
The facility will support law enforcement, fire/EMS, vetted civilians, and public safety organizations. It will generate local jobs, promote tourism through hosted events and competitions, and provide conditional access to Tooele County agencies for training purposes.

This model CUP framework is submitted voluntarily to demonstrate professionalism and proactive alignment with Tooele County, without implying waiver of rights or acceptance of oversight beyond approved conditions.

CONCEPTUAL SITE PLAN DESCRIPTION

The proposed Black Flag Training Grounds will be a multi-dimensional complex purpose-built for firearms instruction, tactical operations, scenario-based simulations, and comprehensive readiness development. The property will feature both indoor and outdoor shooting ranges, including multiple bays varying in length and configuration, optimized for both live fire and technical drills under controlled conditions.

Designated areas will accommodate:

- Precision shooting platforms reaching beyond 1000 yards
- Shotgun-specific lanes for skeet and trap evolutions
- Force-on-force zones structured to support dynamic movement, mission simulations, and team-based entries
- Adaptive structures with configurable layouts to simulate urban or rural objectives using a combination of modular containers and permanent buildings
- Indoor range space for close-quarters and low-light training regardless of weather

Specialized zones will support physical and operational preparedness, including:

- Terrain-based mobility lanes for off-road vehicle instruction

- A large asphalted area designed to facilitate roadway-based vehicle interdiction training and contact drills under varied conditions
- Medical lanes to support trauma response, casualty care, and TCCC-based evolutions
- Aerial operation zones designed to accommodate rotary-wing coordination or airborne scenario planning
- Obstacle-integrated courses for elevated heart rate marksmanship and vertical mobility
- Technology integration areas for drone systems, UAV instruction, and air-to-ground element support

Additional infrastructure will include a fitness facility for compound members and long-term course attendees, archery ranges for alternative marksmanship practice, and comprehensive access control, signage, and flow management throughout the property.

All evolutions and operations will be supervised by certified instructors and will conform to federal, state, and local safety regulations, with procedures in place to ensure mission realism while maintaining structured oversight and range discipline.

COMMUNITY BENEFITS & LAW ENFORCEMENT PARTNERSHIP

Black Flag Training Grounds will bring the following benefits to Tooele County:
• Economic impact from tourism, students, and hosted events
• Employment opportunities and training development roles
• Support for public safety readiness and veteran-owned business growth
• A controlled, professional alternative to unregulated or unsafe training
• Access for Tooele County law enforcement and first responders
• Strengthened community preparedness through curriculum-based instruction

ZONING PRECEDENTS & COMPARATIVE FACILITIES

To support this proposed amendment, we've compiled examples of existing facilities across Utah—including within Tooele County—that have been permitted, operated, or repurposed for firearms, tactical, and training-related use. These examples demonstrate alignment with the intent of MU-40 and MG zoning categories and establish a precedent for regulated, safety-driven training operations at scale.

Tooele Army Depot (TEAD) – Tooele County, UT
TEAD is a U.S. Army Joint Munitions Command installation that serves as a storage site for war reserve and training ammunition. The depot stores, issues, receives, renovates, modifies, maintains, and demilitarizes conventional munitions. It also serves as the National Inventory Control Point for ammunition-peculiar equipment, developing, fabricating, modifying, storing, and distributing such equipment to all services and other customers worldwide.

- **Zoning Designation:** MU-40 (Multiple Use, 40-acre minimum)

- **Relevant Code Section:**
  Tooele County Land Use Ordinance – Chapter 15: Multiple Use, Agricultural, and Rural Residential Districts
- **Section 15-1-2: MU-40 Development Restrictions**
- "The multiple use districts in Tooele County are MU-40, MU-80 and MU-160. The development restrictions in MU-40 are intended to provide areas for multiple uses, including agriculture, grazing, and other compatible uses."
- **Additional Relevant Precedent within MU-40 Zoning:**
  According to the Tooele County Land Use Ordinance Table 15-5-3.5, commercial projectile-based recreational facilities—such as paintball courses and paintball target ranges—are allowed as conditional uses within MU-40. These are explicitly listed under:
- **Section 15-5-3.5(c):**
- "Commercial paintball course and paintball target range – Conditional Use (C) in MU-40"
- This establishes a precedent for projectile-based training or recreational use under MU-40 zoning. Given the safety, noise, and projectile control similarities between paintball and structured firearms training facilities, this use can reasonably be considered compatible under existing conditional use provisions in the same zone.
- This provides strong justification for approving a shooting range or tactical training facility within the MU-40 zone, especially when paired with enhanced oversight, safety procedures, and community benefit—such as military, law enforcement, and civilian readiness training.

Utah Test and Training Range (UTTR) – Western Utah
UTTR is the largest contiguous block of over-land supersonic-authorized restricted airspace in the contiguous United States. It is used for military training exercises, including air-to-ground and air-to-air combat scenarios.

Zoning Designation: Federal land; not subject to local zoning ordinances.

Relevant Information:

- UTTR is managed by Hill Air Force Base and encompasses vast tracts of public lands in the West Desert of Utah.

FARM Training Center – Fairfield, UT
The FARM Training Center is a facility tailored for serious firearms training. It features multiple bermed ranges, a shoot house, and a classroom, accommodating both pistol and long-range rifle practice. The center is designed for military, law enforcement, and professional firearms instructors, as well as dedicated enthusiasts.

Zoning Designation: Light Industrial West Zone (LI-W)

Relevant Code Section:

- **Fairfield Town Code – Section 10.11.200: Light Industrial West Zone**
    - **Section 10.11.200.010: Purpose**
      "The purpose of this chapter is to regulate light industrial development in Fairfield while ensuring compatibility with adjacent residential and commercial areas."

Swanson Tactical Training Center – Ogden, UT
Swanson Tactical Training Center offers specialized training programs for individuals seeking to enhance their tactical skills. With a focus on practical and hands-on instruction, the center provides a range of courses designed to improve proficiency in various tactical disciplines.

Zoning Designation: Specific zoning not detailed; facility acquired by Weber County for public safety training.

Relevant Information:

- A 2013 Weber County Commission meeting document states:
  "The county approved a contract for the purchase of the Swanson Tactical Training Center for use as a public shooting range and public safety training facility."

Weber County Sport Shooting Complex – Ogden, UT
This complex houses 50-yard and 300-yard ranges and offers several types of classes, trainings, and leagues. It supports both public shooting activities and law enforcement training.

Zoning Designation: Designated as a county-operated shooting complex.

Relevant Code Section:

- **Weber County Code – Section 16-2-15: Weber County Sport Shooting Complex**
  "The Weber County Sport Shooting Complex is established to provide a safe and controlled environment for public and law enforcement shooting activities."

Lee Kay Public Shooting Range – Salt Lake City, UT
Operated by the Utah Division of Wildlife Resources, Lee Kay features seven outdoor ranges open year-round, dog training grounds, shooting clinics, and hunter education classes.

Zoning Designation: Operated by the Utah Division of Wildlife Resources; specific zoning not detailed.

Relevant Information:

- The facility offers multiple outdoor ranges and is open year-round for public use.

Davis County Shooting Range – Kaysville, UT
Primarily used for law enforcement agency training, this range also accommodates public use during designated hours. It has been a training site for over two decades.

Zoning Designation: County-owned facility; specific zoning not detailed.

Relevant Information:

- The range is owned by Davis County and is primarily for law enforcement agency training and secondarily for public use.

OBSERVED DETONATION FROM APPLICANT PROPERTY

The attached image was taken directly from the applicant's property, capturing a visible and audible controlled detonation at the Tooele Army Depot (TEAD). These explosive operations are a longstanding part of regional activity in Tooele County, supporting munitions demilitarization and storage for the U.S. Army Joint Munitions Command.

This proximity illustrates:

- - Tactical and explosive operations are already accepted and ongoing in the region.
- - The proposed Black Flag Training Grounds will introduce less noise and impact than current federal operations.
- - The property lies in a corridor that is already conditioned to accommodate military sound and activity without affecting the local community.

Conclusion:
The proposed amendment aligns with established federal and military training infrastructure in the area and supports a continuation of compatible land use consistent with regional precedent.



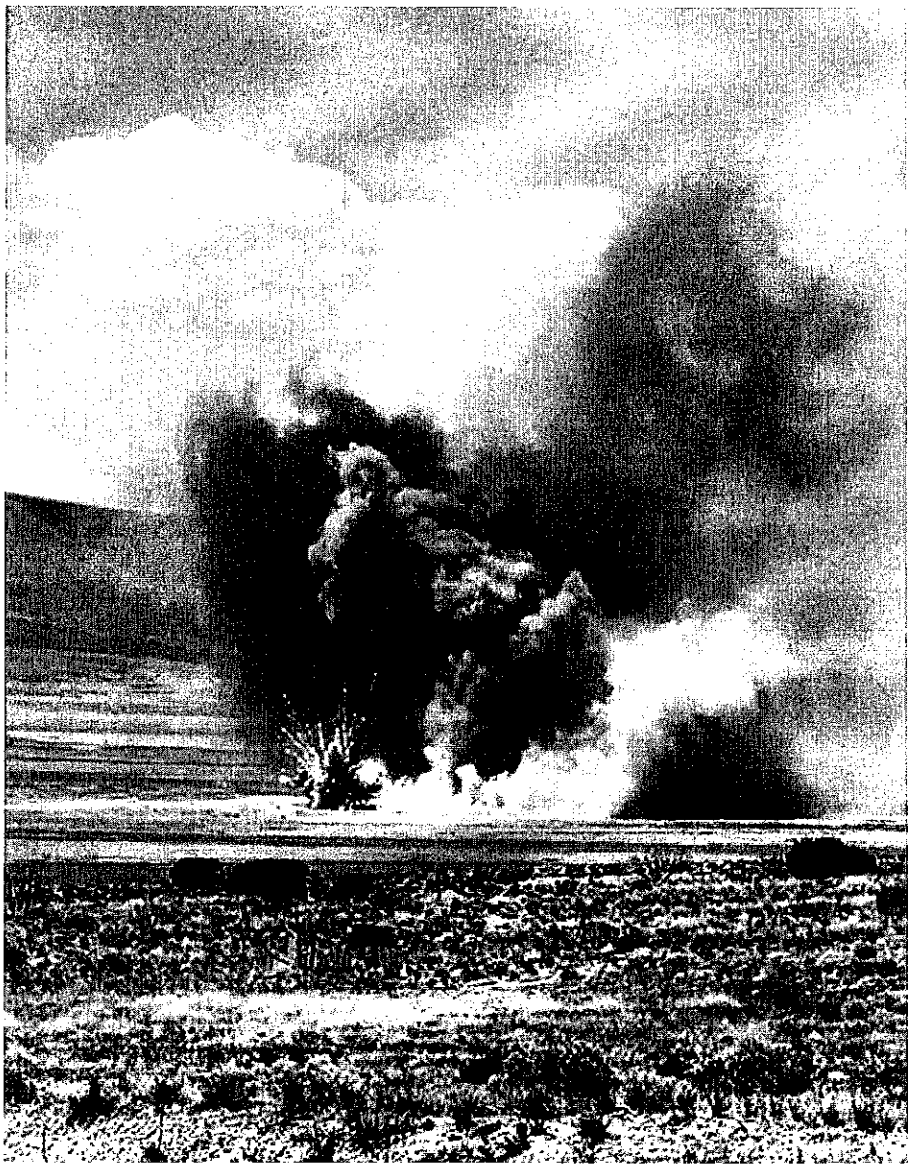
OBSERVED DETONATION FROM APPLICANT PROPERTY

The attached image was taken directly from the applicant's property, capturing a visible and audible controlled detonation at the Tooele Army Depot (TEAD). These explosive operations are a longstanding part of regional activity in Tooele County, supporting munitions demilitarization and storage for the U.S. Army Joint Munitions Command.

This proximity illustrates:

- - Tactical and explosive operations are already accepted and ongoing in the region.
- - The proposed Black Flag Training Grounds will introduce less noise and impact than current federal operations.
- - The property lies in a corridor that is already conditioned to accommodate military sound and activity without affecting the local community.

Conclusion:
The proposed amendment aligns with established federal and military training infrastructure in the area and supports a continuation of compatible land use consistent with regional precedent.



NOTICE OF PUBLIC HEARING

- **SUBJECT:** TCLUO 2025-092 – Text amendment to Tooele County Land Use Chapter 35
- **PROJECT SUMMARY:** Staff is requesting a text amendment to Tooele County Land Use Ordinance Chapter 35 to adjust preliminary and final plat requirements in Major Subdivisions, and add Boundary Adjustments in accordance with state codes.
- **Unincorporated:** Tooele County **Planner:** Trish DuClos

On **July 16, 2025** the Tooele County Planning Commission will hold a public hearing regarding the request described above. The meeting will be held at 7:00 p.m. at the Tooele County Administration Building, Council Chambers (Third floor) 47 S. Main Street, Tooele, UT 84074. Also via zoom located on the Tooele County Website: https://tooeleco.gov/index.php under "Meeting agendas" and then the zoom link will be imbedded in the "Agenda Packet."

You have the right to attend and speak at the public hearing. Please be aware, however, that in making its decision the Planning Commission can only rely on evidence, not opinion or conjecture. You may also submit comments in writing, but please do so at least 24 hours before the meeting date so that your comments can be provided to the Planning Commission and to the applicant in an appropriate manner. For questions or additional information, please contact the Planning Office at 435-843-3160.

The future meeting regarding this application will also be posted at the Tooele County Building, posted on the Tooele County Website and Utah Public Noitce Website.

You can access Tooele Land Use Ordinances through this link:
https://tooeleco.gov/departments/development/land_use_ordinance.php#outer-193

Tooele County
Community Development

Tooele County Planning Commission
Agenda Item Summary

Department Making Request:	**Meeting Date:**
Community Development	**July 16, 2025**

Item Title:

TCLUO 2025-092 – Text amendment to Tooele County Land Use Chapter 35

Summary:

Staff is requesting a text amendment to Tooele County Land Use Ordinance Chapter 35 to adjust preliminary and final plat requirements in Major Subdivisions, and add Boundary Adjustments in accordance with state codes.

Planning and Zoning
47 S. Main Street • Room 208 • Tooele, UT 84074
Phone: (435) 843-3160 • Fax: (435) 843-3252
tooeleco.org/tooele-county-government/county-departments/community-development/

TCLUO 2025-092

Text Amendment Summary and Recommendation

Public Body: Tooele County Planning Commission
Meeting Date: July 16, 2025
Request: Land use ordinance update to Chapter 35
Planner: Trish DuClos
Applicant Name: Staff

PROJECT DESCRIPTION

Staff is requesting a text amendment to Tooele County Land Use ordinance Chapter 35 to adjust preliminary and final plat requirements in Major Subdivisions, minor fixes, and add Boundary Adjustments in accordance with state codes.

PLANNING STAFF ANALYSIS

Staff has identified that Tooele County Land Use code chapter 35 does not comply with State code 17-27a-522 on the newly adopted Boundary Adjustment requirements. Staff requests section 35-8 be amended to comply with the new state code update.

Staff also recognized the need to adjust section 35-4 for Master Plan (Preliminary) and Final plat requirements. There were duplications in requirements and with the state changes requires some items be reviewed only during one process, not both.

Attached is the proposed draft for requested chapter changes.

GENERAL PLAN CONSIDERATION

The requested changes conform with the Tooele County General Plan updated 2022. They also comply with Utah state code required updates.

PLANNING STAFF RECOMMENDATION

Planning Staff encourages the Planning Commission to review the proposed ordinance updates regarding Tooele County Land Use Ordinances before making a recommendation to council.

CHAPTER 35

SUBDIVISIONS

Part
35-1 General.
35-2 Subdivision Application Procedures.
35-3 Minor Subdivisions.
35-4 Major Subdivisions.
35-5 Conservation Subdivisions.
35-6 Design Standards.
35-7 Financial Assurances.
35-8 Vacation, Alteration, and Amendment of Subdivision Plats.

PART 35-1 GENERAL

Section
35-1-1. Short title.
35-1-2. Purpose.
35-1-3. Notice.
35-1-4. Penalties.
35-1-5. Creation of substandard lots prohibited.
35-1-6. Subdivisions located near a state protection area.
35-1-7. Plats required.
35-1-8. Certain agricultural partitions exempt.
35-1-9. Condominium projects.

35-1-1. Short title.

This chapter is known as the "Subdivision Ordinance of Tooele County, Utah." (Ord. 2022-32, 11/29/22)

35-1-2. Purpose.

The purposes of this chapter are:

(1) to provide policies, standards, requirements, and procedures to regulate and control the design and construction of all subdivisions;

(2) to ensure that all subdivisions are consistent with the general plan and applicable specific plans; and

(3) to ensure that land is subdivided in a manner that will promote public health, safety, convenience, general welfare, and the physical, social, and economic development of the county. (Ord. 2022-32, 11/29/22)

35-1-3. Notice.

When notice is required, the county shall provide the notice required by the County Land Use, Development, and Management Act. (Ord. 2022-32, 11/29/22)

35-1-4. Penalties.

(1) (a) An owner of any land located in a subdivision who transfers or sells any land in that subdivision before a plat of the subdivision has been approved and recorded violates this chapter for each lot or parcel transferred or sold.

(b) The description by metes and bounds in an instrument of transfer or other document used in the process of selling or transferring real property does not exempt the transaction from being a violation of Subsection (1)(a) or from the penalties or remedies provided in this chapter.

(c) Notwithstanding any other provision of this chapter, the recording of an instrument of transfer or other document used in the process of selling or transferring real property that violates this chapter:

(i) does not affect the validity of the instrument or other document; and

(ii) does not exempt the property that is the subject of the instrument or other document from compliance with applicable county ordinances.

(2) (a) The county may bring an action to require compliance with the provisions of this chapter.

(b) An action under this Subsection (2) may seek injunction, abatement, the merger of title, or any other appropriate action or proceeding to prevent, enjoin, or abate the violation.

(c) The county need only establish a violation to obtain the relief sought.

(3) The county may assess civil penalties for any violation of this chapter.

(4) A violation of this chapter may also be prosecuted as a class C misdemeanor. (Ord. 2022-32, 11/29/22)

35-1-5. Creation of substandard lots prohibited.

All lots created shall conform to the requirements of this chapter and the zoning district in which they are located. (Ord. 2022-32, 11/29/22)

35-1-6. Subdivisions located near a state protection area.

If a new subdivision is proposed to be located in whole or in part within 300 feet of the boundary of an agriculture protection area, or within 1,000 feet of the boundary of an industrial protection area or critical infrastructure materials protection area or mining protection area or shooting range, the owner of the subdivision shall provide, on any plat filed with the County Recorder, the notice required by state law. (Ord. 2022-32, 11/29/22)

35-1-7. Plats required.

(1) Unless a division of land is exempt from the plat requirements of this chapter, whenever any land is subdivided, the owner of that land shall provide an accurate plat that sets forth and describes:

(a) all the parcels divided, by their boundaries, course, and extent, and whether they are intended for streets or other public uses; and

(b) the lot or unit reference, the block or building reference, the road or site address, the road name or coordinate address, the acreage or square footage for all parcels, units, or lots, and the length and width of the blocks and lots intended for sale.

(2) The owner of the land shall acknowledge the plat before an officer authorized by law to acknowledge conveyances of real estate.

(3) The surveyor making the plat shall certify the plat.

(4) The Community Development Department may approve the plat as provided in this chapter. Before the Community Development Department may approve a plat, the owner shall submit a tax clearance indicating that all taxes, interest, and penalties on the land have been paid.

(5) After the plat has been acknowledged, certified, and approved, the county shall retain the plat until the owner records the plat. (Ord. 2023-20, 11/7/23; Ord. 2022-32, 11/29/22)

35-1-8. Certain agricultural partitions exempt.

(1) A lot or parcel resulting from a division of agricultural land is exempt from the plat requirements of this chapter if the lot or parcel:

(a) qualifies as land in agricultural use under the Farmland Assessment Act;

(b) meets the minimum size requirement of the applicable zoning district;

and (c) is not used and will not be used for any nonagricultural purpose.

(2) The boundaries of each lot or parcel exempted under Subsection (1) shall be graphically illustrated on a record of survey map that, after receiving the same approvals as are required for a plat under this chapter, shall be recorded with the County Recorder. (Ord. 2022-32, 11/29/22)

35-1-9. Condominium projects.

(1) Condominium projects shall comply with the Utah Condominium Ownership Act.

(2) Condominium projects shall be considered a subdivision.

(3) Condominium projects shall comply with all provisions of state law and the County Land Use Ordinance.

(4) Condominium plats shall follow the same approval process and provide the same application materials as a major subdivision. Each additional condominium plat within an expandable condominium project shall follow the final plat approval process.

(5) The Planning Commission shall review and approve all declaration documents. (Ord. 2022-32, 11/29/22)

PART 35-2 SUBDIVISION APPLICATION PROCEDURES

Section

35-2-1. Application expiration.
35-2-2. Application procedure.
35-2-3. Final plat requirements.
35-2-4. Infrastructure design and engineering drawings requirements.

35-2-1. Application expiration.

Each application shall be actively pursued to completion. An application shall become null and void, and all rights vested by that application shall be terminated, if the applicant does not complete a stage or fails to make a progress report to the Community Development Department within 180 days. Any extension must be requested before the expiration of the original application. If an application becomes void, the applicant must reapply at the first stage for that level of development. (Ord. 2022-32, 11/29/22)

35-2-2. Application procedure.

(1) Each application shall include all required submittals before it is accepted as a complete application. No application for a subsequent stage shall be accepted until the Community Development Department has approved the application for the stage of the development currently under consideration.

(2) There shall be no presumption of approval of any aspect of the process.

(3) No application for a subsequent stage shall be accepted if a prior application has expired.

(4) The Planning Commission, or the Community Development Department in the case of a minor subdivision, may request additional information determined to be incomplete and table further action until the requested information is submitted.

(5) A denial shall include written findings of fact and a written decision. A denial may be based, in addition to other reasons of good cause, upon incompatibility with the General Plan, lack of a culinary water supply, insufficient fire suppression system, geological concerns, location, incompatibility with surrounding land uses, the inability of service or utility providers to provide services, or the adverse effect on the health, safety, and general welfare of the county and its residents.

(6) Appeals of a final decision approving or denying a minor subdivision shall be made to the Planning Commission. Appeals of a final decision approving or denying any other subdivision shall be made to the County Council. Appeals of any other decision administering or interpreting the county land use ordinance shall be made to the administrative hearing officer. (Ord. 2023-20, 11/7/23; Ord. 2022-32, 11/29/22)

35-2-3. Final plat requirements.

(1) The final plat shall be prepared and certified by a registered land surveyor who holds a valid Utah license, has completed a survey of the property described on the plat, has verified all measurements and monumented any unmarked property corners, and has referenced to the filing number for the Record of Survey map filed with the County Surveyor's office. The applicant shall bond or provide to the county adequate security to place monuments as represented on the plat upon the completion of the subdivision improvements.

(2) Every detail of the plat shall be legible.

(3) A traverse shall not have an error of closure greater than one part in 10,000.

(4) Each final plat shall include:

(a) an indication that the plat is a final plat;

(b) the date of the plat;

(c) the general location of the subdivision with name and phase and adjoining properties with ownership with Entry number of vesting deed;

(d) all deed lines of the proposed subdivision and all adjoining property lines;

(e) the 100-foot radius wellhead protection zone for all wells proposed within the subdivision, all existing wells located within the subdivision, and all existing wells located outside of the subdivision where any portion of the protection zone falls within the subdivision;

(f) bearing and distance tie-in to the historic and dependent survey and at least one established monument, or a statement that no historical monument could be located;

(g) county, township, range, section, quarter sections, plats, and true north;

(h) the graphic scale of the plat;

(i) the square footage and acreage of each lot under one acre, or the acreage of each lot one acre or larger;

(j) existing ground contours at 20-foot intervals;

(k) the name of the subdivision as approved by the County Recorder;

(l) the amount of water allocated to each lot in acre-feet if the subdivision does not have a public water system connection;

(m) the following owners' dedication:

OWNERS' DEDICATION AND CONSENT TO RECORD

We are the owners of this tract of land and divide the same into lots and streets together with easements, to be known as (NAME OF SUBDIVISION). We dedicate to Tooele County the tracts of land designated on this plat as public roads. We also convey to any and all public and private utility companies a perpetual, non-exclusive easement over the public utility easements shown on this plat, the same to be used for drainage and the installation, maintenance, and operation of utility service lines and facilities.

(n) the names of all owners, of record, under the signature lines in the owners' dedication; and

(o) signature blocks for:

(i) all improvement, service, and special districts or areas where any part of the subdivision is located;

(ii) the County Engineer;

(iii) the County Surveyor;

(iv) the County Attorney;

(v) the County Health Department;

(vi) the County Treasurer, indicating that all property taxes have been paid in full;

(vii) the County Recorder, with space for the recordation number, the name(s) of the person(s) for whom the plat is recorded, the date and time of recording, and the fee;

(viii) the fire authority having jurisdiction; and

(ix) the Administrative Land Use Authority and Community Development Department, or in the case of a minor subdivision, the Community Development Department; and

(x) the local fire authority.

(5) The bearings, distances, and curve data of all perimeter boundary lines shall be indicated outside the boundary line. When the plat is bounded by an irregular shoreline of a body of water, the bearings and distances of a closing meander traverse shall be provided, and a notation made that the plat includes all land to the water's high-level mark.

(6) If a plat is revised, a copy of the previous plat shall be provided for comparison purposes.

(7) All blocks and lots within each block shall be consecutively numbered.

(8) For all curves in the plat, sufficient data shall be given to re-establish the curves on the ground. The curve data shall include the radius, central angle, cord bearing and distance, tangent, and arc length. (9) Excepted parcels, if any, shall be marked, "Not included in this subdivision."

(10) All public lands shall be identified.

(11) All public roads shall be marked as "dedicated public road."

(12) All private roads shall be marked as "private road."

(13) All roads shall be identified by names approved by the Community Development Department.

(14) All lands within the subdivision's boundaries shall be accounted for as lots, walkways, streets, or excepted parcels.

(15) Bearings and dimensions shall be given for all lot lines and easements, except bearings and lengths need not be provided for interior lot lines where the bearings and lengths are the same as those of both end lot lines.

(16) Parcels not contiguous shall not be included in one plat, nor shall more than one plat be made on the same sheet. Contiguous parcels owned by different parties may be included in one plat provided all owners join in the dedication and acknowledgments.

(17) Lengths shall be shown to hundredths of a foot. Angles and bearings shall be shown to seconds of arc.

(18) Surveys shall tie into the Public Land Survey System (PLSS) and shall include a description, the name, and the date for survey monuments located.

(19) The surveyor shall provide remainder descriptions for all property from the original parcel(s) or lot(s) that is not included in the subdivision. (Ord. 2023-20, 11/7/23; Ord. 2022-32, 11/29/22)

35-2-4. Infrastructure design and engineering drawings requirements.

(1) Infrastructure design and engineering drawings and documents shall be submitted with the final plat and shall include:

(a) plan, profile, and typical cross-section drawings of the roads, bridges, culverts, water, sewers, and drainage structures;

(b) a grading and drainage plan indicated by solid-line contours superimposed on dashed-line contours of existing topography;

(c) the general location of trees over six inches in diameter measured at four and one-half feet above the ground, and in the case of heavily-wooded areas, an indication of the outline of the wooded area and location of trees which are to remain;

(d) proposed and existing water and sewage system layouts;

(e) location of fire hydrants;

(f) proposed road layouts in dashed lines for any portion of the property to be developed in a later phase;

(g) water courses and proposed stormwater drainage systems, including culverts, water areas, streams, areas subject to occasional flooding, marshy areas, or swamps;

(h) areas within the 100-year floodplain;

(i) soil types and soil interpretations taken from the National Cooperative Soils Survey;

(j) a signing and striping plan showing the location of all street signs, striping, and traffic control devices required by the county per the Manual of Uniform Traffic Control Devices;

(k) a signature block for the County Engineer on each design and construction drawing;

(l) when the subdivision is located within the jurisdiction of a service or improvement district or area, a signature block for such service or improvement district or area;

(m) geologic maps and investigation reports regarding area suitability; and

(n) a design report stamped by an engineer licensed in the State of Utah.

(2) All drawings shall be drawn to a scale not less than one inch equals 100 feet and indicate the basis of bearings, true north, the name of the subdivision, township, range, section, quarter section, and lot numbers of the property.

(3) To change any aspect of the design of off-site improvements, a new set of infrastructure design and engineer drawings shall be submitted for approval. A signed set of drawings shall be onsite at all times during construction. All construction must conform to the approved plans. (Ord. 2022-32, 11/29/22)

PART 35-3 MINOR SUBDIVISIONS

Section

35-3-1. Standards.
35-3-2. Approval process.

35-3-1. Standards.

(1) All lots shall front on a county road or an approved private road.

(2) Land may be dedicated along existing county roads to increase the right-of-way to current county standards.

(3) If the Community Development Department determines that public infrastructure improvements are required, the applicant must proceed with the major subdivision approval processes.

(4) A minor subdivision shall be filed on a plat drawn and certified by a licensed surveyor and shall not be created by deed alone.

(5) Public utility easements may be required in a minor subdivision.

(6) A minor subdivision shall:

(a) consist of four or fewer lots;

(b) not include the construction or dedication of new infrastructure;

(c) not be a part of, or a phase of, a larger subdivision;

(d) not be a further division of land that has been previously subdivided within the last five years;

(e) not include commercial or industrial uses; or

(f) comply with UCA 17-27a-605. (Ord. 2023-20, 11/7/23; Ord. 2022-32, 11/29/22)

35-3-2. Approval process.

(1) The application for a minor subdivision shall be submitted to the Community Development Department. An application is complete and correct when:

(a) all signatures are on the plat;

(b) notice has been sent to all surrounding landowners giving them 14 days to submit written comments to the Community Development Department; and

(c) notice has been sent to affected entities giving them ten days to submit comments to the Community Development Department.

(2) A failure to timely respond under Subsections (1)(b) or (1)(c) may be deemed an approval.

(3) A minor subdivision application shall include:

(a) the application;

(b) a PDF copy, legibly reproducible for a 24"x36" print, of the plat for distribution to affected entities;

(c) proof of ownership demonstrated by a title report completed within the previous six months;

(d) utility service approval;

(e) evidence of water rights for all lots;

(f) a completed County Health Department subdivision feasibility study;

(g) approval of the subdivision name from the County Recorder's office;

(h) if the applicant is not the owner of record, a notarized statement from the owner stating that the owner has authorized the applicant to make the application;

(i) a letter from the applicable fire authority acknowledging that fire protection can and will be provided to the subdivision;

(j) any unpaid fees owed to Tooele County for the development of land, code enforcement, or building permits; and

(k) required signature block(s).

(4) An approved plat shall become void if not recorded within 14 months of approval. (Ord. 2023-20, 11/7/23; Ord. 2022-32, 11/29/22)

PART 35-4 MAJOR SUBDIVISIONS

Section

35-4-1. Standards.
35-4-2. Approval process.
35-4-3. Phased development.
35-4-4. Master plan requirements.
35-4-5. Master plan application (Preliminary plan).
35-4-6. Final plat application.
35-4-7. Utility and agency response.

35-4-1. Standards.

(1) A major subdivision is any subdivision other than a minor subdivision or a conservation subdivision.

(2) Subdivisions of more than 25 lots shall be phased for development.

(3) Phased developments shall include a master plan of the entire development, including street and active transportation connectivity.

(4) Infrastructure and public facilities shall be dedicated. (Ord. 2022-32, 11/29/22)

35-4-2. Approval process.

(1) The master plan shall be approved by the administrative land use authority.

(2) The final plat for each phase shall be approved by the Community Development Department.

(3) Signed plats shall be recorded within 14 months, or they shall be void. (Ord. 2023-20, 11/7/23; Ord. 2022-32, 11/29/22)

35-4-3. Phased development.

(1) Phased developments shall be designed, platted, and recorded in phased order so that the phases and required improvements are continuous.

(2) When it is prudent to engineer improvements in a future phase, such improvements may be installed if shown on an approved plat of a prior phase. (Ord. 2022-32, 11/29/22)

35-4-4. Master plan requirements.

The master plan shall show:

(1) the general location of the subdivision and the property boundaries;

(2) lot and road layout;

(3) parcels located within the subdivision;

(4) the acreage of the entire tract and the acreage of the portion to be developed;
(5) phasing plan for the development, including lots per phase;
(6) the sites of any use other than single-family dwellings;
(7) total development area and the number of proposed dwelling units;
(8) easements and rights-of-way; and
(9) parcels of land to be dedicated or set aside for schools, roads, parks, trails, or other public purposes.
(Ord. 2022-32, 11/29/22)

35-4-5. Master plan application (Preliminary plan).

(1) Prior to the applicant submitting a master plan application, the applicant may request a pre-design conference of the concept plan with the Community Development Department, all affected entities, the County Health Department, the County Recorder, and any other private or public body that has jurisdiction or an interest in providing public or utility services to the subdivision to receive preliminary comments.

(2) The application for master plan approval shall be submitted to the Community Development Department. When staff determines that the application is complete, the application shall be placed on a Planning Commission agenda and a public hearing shall be held.

(3) A master plan application shall include:

(a) the application form;

(b) the original engineered pdf ~~and AutoCAD files~~ of the master plan for distribution to affected entities;

(c) proof of ownership demonstrated by a title report completed within the previous six months;

(d) utility service will serve approvals;

(e) ~~evidence of water rights for all lots;~~

(f) ~~a completed County Health Department Subdivision Feasibility Study;~~

(g) approval of the subdivision name from the County Recorder's office;

(h) if the applicant is not the owner of record, a notarized statement that the owner has authorized the applicant to make the application;

(i) ~~a letter from the applicable fire authority acknowledging that fire protection can and will be provided to the subdivision;~~

(j) any unpaid fees owed to Tooele County for the development of land, code enforcement, or building permits;

(k) a pedestrian circulation plan; and

(l) a road connectivity plan.

(4) The final plat for the first development phase shall be submitted within six months of master plan approval or the master plan approval will be void. The applicant or authorized representative may obtain no more than two six-month extensions by petitioning the Planning Commission. The Planning Commission may not grant any extension without substantial progress having been demonstrated by the applicant or authorized representative. (Ord. 2023-20, 11/7/23; Ord. 2022-32, 11/29/22)

35-4-6. Final plat application.

(1) After the preliminary plan is approved by Planning Commission, the applicant shall submit an accurate final plat to the Community Development Department.

(2) When it is determined that the final plat is accurate and complete, the applicant shall submit the final PDF copy, legibly reproducible for a 24"x36" print, of the plat with all required signatures for approval by the Community Development Department.

(3) The final plat application shall include:

(a) the application form;

(b) a cost estimate for construction of infrastructure, approved and signed by the County Engineer;

(c) an agreement for subdivision improvements;

(d) the original engineered pdf ~~and AutoCAD~~ of the final plat and infrastructure design and engineering drawings for distribution to affected entities;

(e) evidence of water rights for all lots;

(f) the type of water system proposed, historical water use, the estimated number of gallons per day of water system requirements, and a description of water storage requirements for daily fluctuations, irrigation, and fire suppression;

(g) proof of ownership demonstrated by a title report completed within the previous six months;

(h) geologic technical maps and investigation reports regarding area suitability;

(i) a completed County Health Department Subdivision Feasibility Study;

(j) any unpaid fees owed to Tooele County for the development of land, code enforcement, or building permits;

(k) ~~a pedestrian circulation plan;~~

(l) ~~a road connectivity plan; and~~

(m) ~~list required signature blocks.~~

(4) All signature blocks except for the Planning Commission and Community Development shall be signed by the appropriate authority before the plat is submitted to the Community Development Department.

(5) An approved final plat shall be valid for no more than 14 months. The applicant or authorized representative may obtain no more than two six-month extensions by petitioning the Planning Commission. The Planning Commission may not grant any extension without substantial progress having been demonstrated by the applicant or authorized representative.

(6) The Community Development Department shall sign the final plat only after it has been approved by all reviewing agencies. The improvement agreements and bonds shall be forwarded to the County Manager for approval and acceptance. The plat shall be recorded within 14 months of approval, or it shall be void.

(7) After 30 days of approving final plat, the County shall submit to the Geospatial Resource Center:

(a) an electronic copy of the approved plat; or

(b) preliminary geospatial data that depict any new streets and situs addresses purposed for construction within the bounds of the approved plat. (Ord. 2024-13; 10/1/24; Ord. 2023-20, 11/7/23; Ord. 2022-32, 11/29/22)

35-4-7. Utility and agency response.

Failure of any affected entity to respond to a written requested approval within 14 days may be deemed approval by such entity. (Ord. 2023-20, 11/7/23; Ord. 2022-32, 11/29/22)

PART 35-5 CONSERVATION SUBDIVISIONS

Section

35-5-1. Purpose.
35-5-2. Applicability of regulations.
35-5-3. Application requirements. 35-5-4.
Open space requirements.
35-5-5. Open space network configuration.
35-5-6. Open space and conservation areas.
35-5-7. Primary conservation areas.
35-5-8. Value of primary conservation areas.
35-5-9. Secondary conservation areas.
35-5-10. Ownership and management of open space.
35-5-11. Prohibited uses of open space.
35-5-12. Requirements for conservation easements.

35-5-1. Purpose.

It is the purpose and intent of conservation subdivisions to preserve open space within residential developments; provide flexibility to allow for creativity in developments; minimize the environmental and visual impacts of new development on critical natural resources and historically and culturally significant sites and structures; provide an interconnected network of permanent open space; encourage a more efficient form of development that consumes less open land and conforms to existing topography and natural features; reduce erosion and sedimentation by minimizing land disturbance and removal of vegetation; enhance the community character; permit clustering of houses and structures which will reduce the amount of infrastructure, including paved surfaces and utility lines; encourage street design that controls traffic speeds and creates street inter-connectivity; and promote construction of convenient and accessible trails both within a subdivision and connected to neighboring communities, businesses, and facilities to reduce reliance on automobiles. (Ord. 2022-32, 11/29/22)

35-5-2. Applicability of regulations.

(1) The conservation subdivision option is available for single-family detached residential developments in the following districts: residential, multi-family, rural residential, agricultural, and multiple use. Compliance with all applicable county ordinances, regulations, or resolutions is required; however, when in conflict, the provisions of this chapter shall prevail.

(2) The maximum number of lots in the conservation subdivision shall be determined by dividing the area of the tract of land by the minimum lot size specified in the underlying zoning. In making this calculation, the following shall not be included in the total area of the parcel:

(a) slopes over 30% of at least 5,000 square feet contiguous area;

(b) the 100-year flood plain;

(c) bodies of open water over 5,000 square feet contiguous area; and

(d) wetlands that meet the definition of the Army Corps of Engineers according to the Clean Water Act. (Ord. 2022-32, 11/29/22)

35-5-3. Application requirements.

(1) Concurrent with submitting a master plan, the applicant shall prepare and submit a site analysis map. The purpose of the site analysis map is to ensure that the important site features have been adequately identified before the creation of the site design and that the proposed open space will meet the requirements of this chapter. The site master plan shall include the following features:

(a) property boundaries;
(b) all streams, rivers, lakes, wetlands, and other hydrologic features;
(c) topographic contours of no less than 10-foot intervals;
(d) all primary and secondary conservation areas, labeled by type;
(e) general vegetation characteristics;
(f) general soil types;
(g) the planned location of protected open space;
(h) existing roads and structures; and
(i) potential connections with existing greenspace and trails.

(2) An open space management plan shall be prepared and submitted before the approval of the final plat.

(3) An instrument permanently protecting the open space, such as a conservation easement, shall be recorded concurrently with the issuance of a state issued land disturbance permit.

(4) The applicant shall adhere to all other applicable requirements of the underlying zoning district and county land use codes.

(5) A conservation subdivision shall require a development agreement to establish lot and design standards. (Ord. 2022-32, 11/29/22)

35-5-4. Open space requirements.

(1) Each conservation subdivision shall provide a minimum of 40% of its total acreage as open space. The open space shall be designated on the master plan and recorded on the final plat.

(2) Utility rights-of-way and small areas of impervious surface may be included within the protected open space but cannot be counted towards the 40% minimum area requirement, except historic structures and existing trails may be counted. Areas greater than 15% of the total open space area covered with an impervious surface shall be excluded from the open space.

(3) At least 25% of the open space shall consist of land that is suitable for building.

(4) At least 75% of the open space shall be in a contiguous tract. The open space shall adjoin any neighboring areas of open space, other protected areas, and non-protected natural areas that would be candidates for inclusion as part of a future area of protected open space.

(5) The open space shall be directly accessible to the largest practicable number of lots within the subdivision. Non-adjoining lots shall be provided with safe, convenient access to the open space.

(6) The required open space areas shall be protected in perpetuity from further development or unauthorized use by a conservation easement or permanent restrictive covenant. Tooele County reserves the right to enforce all restrictive covenants and conservation easements. Uses of open space may include the following:

(a) conservation of natural, archeological, or historical resources;
(b) meadows, woodlands, wetlands, wildlife corridors, game preserves, or similar conservation oriented areas;
(c) walking, equestrian, off-highway vehicle, or bicycle trails;
(d) passive recreation areas, such as open fields;

(e) active recreation areas, which include 15% or less of the total open space area on impervious surfaces;

(f) agriculture, horticulture, silviculture, or pasture uses, provided that all applicable best management practices are used to minimize environmental impacts;

(g) landscaped stormwater management facilities;

(h) easements for drainage, access, and underground utility lines; and

(i) other conservation-oriented uses compatible with the purposes of this chapter. (Ord. 2022-32, 11/29/22)

35-5-5. Open space network configuration.

The minimum standards for open space networks are as follows:

(1) The minimum width of any open space area is 25 feet.

(2) All paths shall be a minimum of 20 feet from any property line except where inter-parcel access may be provided.

(3) All open space networks shall provide connectivity to any common areas within the development and any adjacent public places and rights-of-way.

(4) Paths located in primary conservation areas shall be constructed of pervious materials.

(5) Where path networks cross internal subdivision streets or public streets, access points shall be directly across from each other. Exceptions may be approved by the Community Development Department.

(6) Crossings and access points shall be identified to pedestrians and motorists and may include traffic control devices, bridges, and tunnels as approved by the Community Development Department.

(7) Open space networks shall be designed in coordination with the active transportation network, with overlap between the networks as much as possible and direct active transportation access to open space. (Ord. 2022-32, 11/29/22)

35-5-6. Open space and conservation areas.

Open space shall be designated as either primary or secondary conservation areas and configured to create or maintain a network of open space. (Ord. 2022-32, 11/29/22)

35-5-7. Primary conservation areas.

Primary conservation areas form the core of the open space to be protected. The following are considered primary conservation areas and are required to be included within the open space unless the applicant demonstrates that this provision would constitute an unusual hardship and be counter to the purposes of this chapter:

(1) cemeteries;

(2) alluvial soils identified by the Federal Emergency Management Agency (FEMA) and the 100-year flood plain;

(3) archaeological sites, cemeteries, and burial grounds;

(4) prime agricultural lands of at least five acres of contiguous area;

(5) habitats for endangered or threatened species;

(6) wetlands identified by the County Soil Survey prepared by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) or a certified wetlands delineation using data from the U. S. Army Corps of Engineers;

(7) lakes, both natural and man-made, rivers, streams, existing ponds, stormwater management ponds and facilities, creeks, and state waters;

(8) riparian zones along all perennial and intermittent streams equal to any required stream buffers and improvement setbacks;

(9) existing slopes greater than 30% on average with a site area greater than 5,000 square feet identified as part of a site analysis conducted by a registered engineer, land surveyor, or landscape architect and calculated using topographic maps; and

(10) critical wildlife habitat as identified by the State of Utah Division of Wildlife Resources. (Ord. 2022-32, 11/29/22)

35-5-8. Value of primary conservation areas.

Because primary conservation areas are either protected or sensitive environmental areas, only 50% of the acreage of a primary conservation area may be counted as open space. (Ord. 2022-32, 11/29/22)

35-5-9. Secondary conservation areas.

(1) Secondary conservation areas consist of undeveloped or unconstrained but buildable land and protected or constrained lands. Secondary conservation areas include the following:

(a) farmlands, including fields, pastures, and meadows;

(b) woodlands and buffers except for riparian buffers;

(c) historic and archaeological sites as identified by the Utah Division of State History, Utah State Historical Society;

(d) passive recreation areas, public and private, including pedestrian, bicycle, and equestrian trails, picnic areas, community commons or greens, and similar areas;

(e) active recreation areas and facilities, public and private, to include parks, playing fields, and playgrounds, but recreation areas with impervious surfaces greater than 15% of the total secondary open space such as parking lots, tennis courts, basketball courts, and pools shall be excluded;

(f) existing healthy, native forests of at least one-acre contiguous area;

(g) individual existing healthy trees greater than eight inches caliper;

(h) other significant natural features and scenic viewsheds such as ridge lines, peaks, and rock outcroppings, particularly those that can be seen from public roads; and (i) trails that connect the tract to neighboring areas.

(2) One hundred percent of secondary conservation areas may be considered open space. (Ord. 2022-32, 11/29/22)

35-5-10. Ownership and management of open space.

(1) A homeowners association representing residents of the conservation subdivision may own the open space. If owned by a homeowners association, membership in the association shall be mandatory and automatic for all subdivision homeowners and their successors. The homeowners association's lien authority shall be governed by the UCA 57-8a Community Association Act.

(2) The owner shall bear responsibility for maintaining the open space and any facilities thereon.

(3) The applicant shall submit a plan for the management of open space and common facilities that:

(a) allocates responsibility and guidelines for the maintenance and operation of the open space and any facilities located thereon, including provisions for ongoing maintenance and long-term capital improvements;

(b) estimates the costs and staffing requirements needed for maintenance and operation of, and insurance for, the open space, and outlines how funding will be obtained or provided;

(c) provides that changes to the plan must be approved by the County Council; and

(d) provides for enforcement of the plan.

(4) If the party responsible for maintenance of the open space fails to maintain all or any portion in reasonable order and condition, the county may assume responsibility for its maintenance and enter the premises and take corrective action, including the provision of extended maintenance. The costs of such maintenance may be charged to the homeowners association or the individual property owners and may include administrative costs and penalties. Such costs may become a lien if unpaid. (Ord. 2022-32, 11/29/22)

35-5-11. Prohibited uses of open space.

(1) Uses of open space shall not include the following:

(a) roads;

(b) parking lots that occupy more than 15% of the open space;

(c) dwellings;

(d) commercial uses; or

(e) land set aside for use that solely benefits any one person or entity.

(2) The instrument for permanent protection shall include clear restrictions on the use of the open space. (Ord. 2022-32, 11/29/22)

35-5-12. Requirements for conservation easements.

(1) A conservation easement shall:

(a) delineate primary and secondary conservation areas;

(b) describe the features of the subject property that will be permanently protected per the Utah Land Conservation Easement Act;

(c) identify the boundaries of the property by survey and a metes and bounds legal description; (d) list restrictions;

(e) protect the open space in perpetuity by a binding legal instrument to be recorded, which instrument shall be:

(i) a permanent conservation easement in favor of either:

1. a land trust or similar conservation-oriented non-profit organization with legal authority to accept such easements. The organization shall be bona fide and in perpetual existence, and the conveyance instruments shall contain an appropriate provision for retransfer in the event the organization becomes unable to carry out its functions; or

2. a governmental entity with interest in pursuing goals compatible with the purposes of this chapter;

(ii) a permanent restrictive covenant for conservation purposes in favor of a governmental entity; or

(iii) an equivalent legal tool that provides permanent protection, if approved by the Community Development Department;

(f) show the area and a notation as to the conservation easement on the final plat and be duly recorded with the County Recorder; and

(g) provide for amendments only with the express written permission of the property owners, the holder of the easement, and the County Council.

(2) The permanent restrictive covenants shall:

(a) delineate the primary and secondary conservation areas;

(b) describe the features of the subject property that will be permanently protected;

(c) identify the boundaries of the property by survey and a metes and bounds legal description;

(d) list restrictions;

(e) provide for the maintenance of the property;

(f) be shown on the final plat and duly recorded with the County Recorder; and

(g) provide for amendments only with the express written permission of the property owners and the County Council, which amendments to the covenant shall be recorded in the office of the County Recorder. (Ord. 2022-32, 11/29/22)

PART 35-6 DESIGN STANDARDS

Section

35-6-1. Application.
35-6-2. Lots.
35-6-3. Roads.
35-6-4. Frontage on arterial and collector roads.
35-6-5. Sidewalks, curbs, and gutters.
35-6-6. Monuments.
35-6-7. Easements.
35-6-8. Utilities to be underground.
35-6-9. Sewer systems.
35-6-10. Sanitary sewer mains, laterals, and house connections – Future.
35-6-11. Water supply.
35-6-12. Storm drainage and floodplains.
35-6-13. Fire mitigation standards.
35-6-14. Street connectivity requirements.
35-6-15. Master planned and off-street trails.

35-6-1. Application.

(1) All new subdivisions shall comply with the design standards outlined in this chapter.

(2) The design and development of subdivisions shall preserve, when possible, the natural terrain, natural drainage, existing topsoil, and trees.

(3) Land subject to hazardous conditions shall not be subdivided until the hazards have been eliminated or will be eliminated by the construction of the subdivision. (Ord. 2022-32, 11/29/22)

35-6-2. Lots.

(1) No single lot shall be divided by a municipality, service or improvement district, or county boundary line.

(2) A lot shall not be divided by a road or another lot.

(3) The frontage of a wedge-shaped lot shall meet the minimum width requirements of the underlying zoning district at the front setback.

(4) Side lot lines shall be at substantially right angles or radial to road lines.

(5) All lots shall front on a publicly dedicated road except as may be approved by development agreement or upon private roads approved by the Planning Commission, subject to the standards set by the county.

(6) All lots shall conform to area requirements of the zoning district in which they are located.

(7) The joining of a lot or lots to a parcel does not constitute a subdivision or subject the parcel to the requirements of this chapter.

(8) Consolidating lots does not require an amended subdivision plat so long as the consolidated lot complies with all county ordinances. The new consolidated lot shall be surveyed, and a new legal description shall be recorded. (Ord. 2022-32, 11/29/22)

35-6-3. Roads.

(1) Roads shall be designed per standards adopted by the county.

(2) Roads shall bear the names of existing aligned roads. There shall be no duplication of road names. The Community Development Department shall approve all road names.

(3) The applicant shall bear the cost of all road and public safety signs.

(4) The applicant shall install temporary, legible road signs using the road names approved in the plat.

(5) Temporary road signs shall be maintained by the applicant until permanent road signs are installed.

(6) Dead-end stubbed roads shall be allowed only with the following conditions:

(a) "L," "T," or branch turnarounds shall not be allowed;

(b) Cul-de-sac roads shall be designed per county standards;

(c) Length limits, connectivity requirements, and block length maximums shall comply with the Active Transportation Implementation Plan; and

(d) Roads in commercial and industrial zoning districts shall be determined by the Community Development Department using the current edition of the Institute of Transportation Engineers' Trip Generation Manual for road load and design for the transportation system.

(7) Roads shall be constructed per county standards to the full width required by the road classification.

(8) Roads shall be constructed to at least the following standards:

(a) in multiple-use and agricultural zones, rural low-density roads with gravel surface;

(b) in rural residential, residential, and residential multi-family zones, rural higher density roads with asphaltic or concrete surface;

(c) in commercial or industrial zones, high-level traffic roads designed for commercial or industrial traffic loads and levels that serve the uses within the development; and

(d) in mining, quarry, sand, and gravel excavation zones, municipal solid waste zones, and construction debris overlay zones, roads that mitigate impacts to surrounding land uses and minimize maintenance by the county.

(9) All subdivisions with internal roads with a maximum trip generation of 400 trips per day as calculated by the current edition of the Institute of Transportation Engineers' Trip Generation Manual shall have more than one access route, each of which shall provide egress to different locations. The design of access routes shall consider traffic circulation and employ looped road networks. Roads shall be designed with stub roads for connection to future phases and future subdivisions when required by the County Engineer.

(10) No building permits shall be issued until all curb, gutter, sidewalk, trails, and road infrastructure is installed or bonded, and the final plat is recorded.

(11) Any dedication established by this Section does not impose liability upon the county for public streets and other public places that are dedicated in this manner but are unimproved unless:

(a) adequate financial assurance has been provided in accordance with this chapter; and

(b) the county has accepted the dedication. (Ord. 2022-32, 11/29/22)

35-6-4. Frontage on arterial and collector roads.

No residential dwelling lot shall directly access arterial or major collector roads. Subdivision design shall provide local access roads to lots along arterial and major collector roads. (Ord. 2022-32, 11/29/22)

35-6-5. Sidewalks, curbs, and gutters.

(1) Sidewalks, curbs, and gutters shall be provided per the requirements of the zoning district, the Planning Commission, or the County Engineer.

(2) Sidewalks, curbs, and gutters shall be installed per APWA standards.

(3) Active Transportation Facilities Requirements on Local Streets.

(a) Requirements for active transportation facilities on local streets are divided into higher density, lower density, and non-residential. For these requirements, density is determined by zoning category – zone R-1-21 and more intense zones are "higher density." In comparison, zone RR-1 and less intense zones are "lower density." See Table 2.2 in the Active Transportation Implementation Plan.

(b) In conservation subdivisions, the density category is determined according to the average lot size in the clustered portion of the development. If the average lot size is .5 acre or greater, the development is lower density. If the average lot size is less than .5 acre, the development is higher density.

(c) Applicants must create an active transportation circulation plan. The active transportation circulation plan identifies how pedestrians and cyclists will move around the neighborhood. Examples of active transportation circulation plans are shown for higher density (Figure 2-3 of the Active Transportation Implementation Plan) and lower density (Figure 2-4 of the Active Transportation Implementation Plan) subdivisions. For the design of the required facilities, see Section 2.5 of the Active Transportation Implementation Plan.

(d) Residential subdivisions zoned R-1-21 or higher density shall adhere to the following requirements:

(i) Active transportation facilities must be on both sides of every local street. Active transportation facility options for local streets for higher density subdivisions include shared use paths with standard buffers, neighborhood shared-use paths, and standard sidewalks.

(ii) Higher-level streets (connector, community spine, and highway/freeway street types and collector/arterial functional class), either existing or new and within the development or bordering it, must implement the active transportation facility requirements for the Street Type in the Active Transportation Implementation Plan Section 2.2.

(iii) The applicant must provide appropriate active transportation crossings of major streets. See design guidelines, Section 2.4 of the Active Transportation Implementation Plan.

(iv) The applicant must ensure that any connections shown in the Vision Network (Figure 2-1 of the Active Transportation Implementation Plan) running through the subdivision

are implemented with active transportation facilities with existing or future connections to adjoining areas.

(v) The applicant must prepare an Active Transportation Circulation Plan showing how the above four requirements are being met and must identify any other active transportation infrastructure and amenities. See the example in Figure 2-3 of the Active Transportation Implementation Plan.

(e) Residential subdivisions zoned with lower density than R-1-21 shall adhere to the following requirements:

(i) Active transportation facilities must be on at least one side of every local street. Active transportation facility options for local streets include shared use paths with standard buffers, neighborhood shared-use paths, and standard sidewalks.

(ii) If there is no adjacent development, the applicant must provide path "stubs" to create connections to future adjacent developments.

(iii) Higher-level streets (connector, community spine, and highway/freeway street types and collector/arterial functional class), either existing or new and within the development or bordering it, must implement the active transportation facility requirements for the Street Type in the Active Transportation Implementation Plan Section 2.2.

(iv) The applicant must provide appropriate active transportation crossings of major streets. See design guidelines, Section 2.4 of the Active Transportation Implementation Plan.

(v) The applicant must ensure that any connections shown in the Vision Network (Figure 2-1 of the Active Transportation Implementation Plan) running through the subdivision are implemented with active transportation facilities with existing or future connections to adjoining areas.

(vi) The applicant must prepare an Active Transportation Circulation Plan showing how the above five requirements are being met and any other active transportation infrastructure and amenities. See the examples in Figures 2-3 and 2-4 of the Active Transportation Implementation Plan.

(4) Active Transportation Facilities Requirements on Major Streets.

(a) To provide more flexibility to infrastructure builders along existing and future streets, a range of options for active transportation facilities is provided. The type of facility built on what street is guided by the Street Types system in the Active Transportation Implementation Plan. Street Types provide a vision and guidance for the various aspects of streets in the county, including active transportation facilities. A range of appropriate active transportation treatments is allowed for each street type.

(b) This Section identifies the types of facilities that are appropriate for various street types. Section 2.4 of the Active Transportation Implementation Plan provides specific design guidance for each facility.

(c) Street Types in Tooele County:

(i) Freeway/Highway;

(ii) Community Spine;

(iii) Mobility Connector;

(iv) Neighborhood Connector;

(v) Rural Preservation Connector; (vi) Center Connector; and (vii) Industrial Connector.

(d) The Active Transportation Implementation Plan designates Street Types for many of Tooele Valley's streets, as shown in Figure 4.1 of the Tooele County Transportation Plan. However, Street Types are also intended to be applied to future major streets as the valley is built out.

(e) To find the active transportation facility requirements/options for a street:

(i) Consult the map in Figure 2-1 of the Active Transportation Implementation Plan;

(ii) Identify the street's Street Type;

(iii) If there is no designated Street Type for your street, consult with the Community Development Department to assign one;

(iv) Find the active transportation facility options in Figure 2-1 of the Active Transportation Implementation Plan or the list below;

(v) Select one of the options for active transportation facilities; and

(vi) Locate the design guidance and standard for the active transportation facility in Section 2.4 of the Active Transportation Implementation Plan.

(5) Drainage infrastructure, such as curb and gutter, storm drain systems, and swales, shall be provided per the requirements of the zoning district, the Planning Commission, or the County Engineer.

(6) Sidewalks, other active transportation facilities, curbs, and gutters shall be installed per county standards. (Ord. 2022-32, 11/29/22)

35-6-6. Monuments.

(1) Permanent reference monuments shall be installed per county standards. They shall be set on the external boundary of the subdivision, at all road centerline intersections, and at all beginning and end points of curves, to provide line of sight control for re-establishing the survey.

(2) Block and lot monuments shall be set.

(3) At least one second-order benchmark shall be set within every subdivision. (Ord. 2022-32, 11/29/22)

35-6-7. Easements.

(1) A ten-foot public utility easement shall traverse the front of each lot.

(2) Guying easements at corners may be required. (Ord. 2022-32, 11/29/22)

35-6-8. Utilities to be underground.

All power lines, telephone lines, and other normally overhead utility lines shall be placed underground in all subdivisions. The applicant shall establish final utility grades before utility lines are placed underground. (Ord. 2022-32, 11/29/22)

35-6-9. Sewer systems.

(1) Except as otherwise provided in this Section, the applicant shall provide a piped sanitary sewer system to the property line of every lot in the subdivision. The sewer system shall meet the minimum standards and requirements of the County Health Department.

(2) On-site wastewater disposal systems will be approved only when an existing sewer system is more than 300 feet away from the boundary line of the subdivision or the service provider will not provide the service to the subdivision. All on-site wastewater disposal systems shall be approved in writing by the County Health Department. Subdivisions proposing to use on-site wastewater disposal systems shall submit a feasibility report to the County Health Department. Percolation tests and soil exploration pits shall be

required to determine the adequacy of the soil involved for on-site wastewater disposal systems to absorb sewage effluent. When an application is made for a building permit, a soil evaluation test of the proposed drain field shall be required for each lot that will be served by a septic system. The following requirements shall also be met:

(a) Lands filled within the last ten years shall not be divided into building sites that are to be served by septic systems.

(b) Each septic system shall be installed at a depth and location approved by the County Health Department.

(c) Land with an unacceptable soil evaluation, as determined by the County Health Department, shall not be divided into building sites to be served by septic systems.

(d) Land rated as having severe limitations for septic tank absorption fields, as defined by the County Soil Survey prepared by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), shall not be divided into building sites to be served by septic systems unless each such building site contains not less than 20,000 square feet of other soils rated suitable for installation of a septic system.

(e) An applicant desiring to install septic systems in soils with severe limitations shall obtain additional on-site investigations, including soil evaluation tests. The applicant shall obtain a soil scientist's certification that specific areas within these soils are suitable for the proposed septic system. The facilities shall meet County Health Department standards and regulations. To be approved, the County Health Department must find that proposed corrective measures have overcome the severe soil limitations. (Ord. 2022-32, 11/29/22)

35-6-10. Sanitary sewer mains, laterals, and house connections – Future.

Where county or regional general plans indicate that construction or extension of a sanitary sewer system may serve the subdivision area within a reasonable time, the county shall require the applicant to install and cap sanitary sewer mains and house connections in addition to the installation of temporary individual onlot sewage disposal systems. Whenever individual on-lot sewage disposal systems are proposed, the applicant shall either install such facilities or require by deed restrictions or otherwise as a condition of the sale of each lot or parcel within such subdivision that those facilities be installed before or during the construction of the principal building. No building permit shall be issued until such installation is assured. In other cases, a community or public sewer system shall provide sewage disposal facilities for every lot or parcel. (Ord. 2022-32, 11/29/22)

35-6-11. Water supply.

(1) Major and planned community subdivisions require a public water supply system that complies with all applicable state and local laws:

(a) when more than 70% of the lots in the subdivision are less than two acres in area; or

(b) when the County Health Department determines that conditions require a public water supply to protect the public's health.

(2) The supply of water from a source other than an approved public water system may be approved only if proof of adequate water rights and proof of water availability, flow, and quality meet the Safe Drinking Water Standards by a water sample from wells on ten percent of the lots rounded up to the next whole number. In the application stage, the applicant shall show proof of sufficient water rights to provide domestic use for the total number of proposed dwellings for the entire development. The first phase of

development shall include the engineering for the water system if required. The engineering for the entire development shall include the water tank and treatment facilities with a fire flow calculation. The County Health Department shall approve the location of the test wells before the applicant drills them. The samples shall be taken by and have a complete chemical analysis performed and approved by the County Health Department. All non-public drinking water systems shall meet the standards of the County Health Department. (Ord. 2022-32, 11/29/22)

35-6-12. Storm drainage and floodplains.

(1) A storm drainage system for the entire subdivision shall be designed by a professional engineer licensed in the State of Utah and qualified to perform such work. Existing storm drainage features to be incorporated into the design shall be identified. If the subdivision has phases, a general storm drainage plan for the entire area shall be presented with the design and engineering. Appropriate development stages for the storm drainage system for each phase shall be indicated.

(2) No lot one acre or less in area shall include flood lands. All lots of more than one acre shall contain not less than 40,000 square feet of land at least two feet above the elevation of the 100-year recurrence interval flood or, where such data is unavailable, five feet above the elevation of the maximum flood of record.

(3) Storm drainage systems shall be designed to consider the storm drainage basin. They shall accommodate not only runoff from the subdivision but also, where applicable, the runoff from those areas adjacent to and upstream from the subdivision itself and its effects on lands downstream. (Ord. 2022-32, 11/29/22)

35-6-13. Fire mitigation standards.

(1) The Fire Warden and local fire authority having jurisdiction shall perform a wildland fire protection analysis of all developments, existing or planned, to determine wildland fire protection ratings. The ratings developed under the analysis shall be the basis for implementing fire-safe design, construction criteria, and fire protection systems. The higher the relative value, the higher the wildland/urban interface and the fire protection hazard rating.

(2) The analysis shall reference the Tooele County wildland/urban interface risk zones map identified in Title 6, Chapter 18 of the Tooele County Code to determine the wildland-urban interface hazard rating.

(3) Subdivision design shall reflect mitigation for those hazards identified in the fire protection analysis and those standards required in Title 6, Chapter 18 of the Tooele County Code.

(4) Fire suppression water sources shall be reviewed and approved by the Fire Warden or the local fire authority having jurisdiction. The system shall provide for fire flow storage of water that complies with the current state-adopted fire code, local ordinances, local fire authority regulations, and NFPA guidelines for the type of occupancy and level of development. Any fire hydrants shall be placed per the International Fire Code and the National Fire Protection Association standards.

(5) Defensible space for structures and buildings shall be used in all covenants, contracts, and subdivisions in conformance with development standards adopted by Tooele County Code Title 6, Chapter 18.

(6) Roads and streets shall provide safe access for emergency equipment, civilian evacuation, and unobstructed traffic circulation during an emergency. They shall be designed per Title 6, Chapter 18 of the Tooele County Code and/or 6-17-3 of the Tooele County Code, which adopts the International Fire Code and IFC Appendix D: Fire Apparatus Access. (Ord. 2022-32, 11/29/22)

35-6-14. Street connectivity requirements.

Connectivity standards require that the streets in new neighborhoods have a minimum level of connectivity both within the neighborhood and outside it to existing and future developments. Street connectivity provides various benefits, including access to community destinations, active transportation, emergency response, and traffic performance. While traffic impact must be reviewed for connections to new subdivisions, connectivity is generally better for community traffic performance and safety.

(1) Internal connections:

(a) Minimum connectivity index: The connectivity index measures how connected the streets in an area are. The connectivity index is the ratio of the street segments in a given area to the intersections in the same area. The connectivity index is the number of "links," or street segments, divided by the number of "nodes," which include intersections and dead ends within a given area. For the purposes of the code, the area is the subdivision being proposed, including any major streets along its edges. The connectivity index shall be at least as high as the minimums specified in Table 23 in the Active Transportation Implementation Plan. The example connectivity plans in Figures 2-5 and 2-6 of the Active Transportation Implementation Plan include the identification of links and nodes and connectivity index calculations.

(i) Maximum block length

1. Maximum block lengths ensure that street networks have a minimum level of intersection density. Block lengths in the subdivision shall not exceed the maximums in Table 2-3 in the Active Transportation Implementation Plan. Subdivisions zoned RR-1, RR-5, and RR-10 have no block length maximums.

2. To maintain flexibility in subdivision design, for every 40 lots included in the development, one exception to the maximum block length is allowed. A block may be up to 2.5 times as long as the minimum.

3. In addition, access management requirements for UDOT-managed streets may also allow block lengths along these streets to be longer. Active transportation pathways may be substituted in this case to maintain transportation connectivity.

4. The example connectivity plans in Figures 2-5 and 2-6 of the Active Transportation Implementation Plan include identifying maximum block lengths and exceptions.

Connectivity Requirements					
	Internal Connectivity			External Connectivity	
Zone	Connectivity index (links per node)	Maximum block length (ft)[1]	Cul-de-sac maximum length (ft)[2]	Maximum spacing of connection to collector and arterial level streets[3]	Maximum stub street spacing

[1] There can be one exception to the maximum block length per 40 lots, where one block face can be up to double length.

[2] Every cul-de-sac must have a pedestrian connection to the other side of the block.

[3] Excludes connections to UDOT-managed streets.

(ii) Maximum cul-de-sac length

R-M-30	1.5	400	0	400	400
R-M-15	1.5	400	0	400	400
R-M-7	1.5	400	0	400	400
R-1-8	1.5	400	200	860	400
R-1-10	1.5	400	275	860	400
R-1-12	1.5	400	275	860	400
R-1-21	1.5	750	400	1,320	N/A
RR-1	1.5	N/A	400	1,320	N/A
RR-5	1.5	N/A	400	N/A	N/A
RR-10	1.5	N/A	400	N/A	N/A

1. Cul-de-sacs and other dead-end streets included in a subdivision shall not be longer than the limits in Table 2-3 in the Active Transportation Implementation Plan.

2. Stub streets intended for future connections are not included in this requirement.

(iii) Active transportation connection for each cul-de-sac

1. A shared-use path meeting the design standards in Section 2-4 of the Active Transportation Implementation Plan for off-street paths must be included at each internal cul-de-sac or dead-end street.

(iv) External connections

1. Stub Streets: Stub streets are streets that dead-end against vacant or undeveloped land with the intention of connecting to development on that land in the future. To maintain a consistent street network that ties together different subdivisions, stub streets shall be built at a minimum spacing that matches the maximum block length requirements in Table 2-3 of the Active Transportation Implementation Plan**.** Stub streets shall not include temporary cul-de-sacs and shall be no longer than 150 feet. For zones with no maximum block spacing, stub streets shall be built as extensions of the subdivision's street network.

2. Master Planned Trails: Active transportation connections in the subdivision shall connect the subdivision to any master-planned trails where applicable. These connections can be any of the Shared Use Path types specified in Section 2.4 of the Active Transportation Implementation Plan.

(v) Connectivity Plan

1. Achievement of connectivity standards must be shown on a Connectivity Plan to be submitted with each development application and including the following information. Basic information:

(A) Street links
(B) Nodes
(C) Block length dimensions
(D) Cul-de-sac length dimensions
(E) Connectivity index
(F) Maximum block lengths
(G) Stub streets with the minimum spacing

(H) Active transportation – only links connecting cul-de-sacs or to accessmanagement controlled streets.

2. For examples of Connectivity Plans, see Figures 2-5 and 2-6 in the Active Transportation Implementation Plan. (vi) Exceptions

1. The connectivity requirements may be reduced if the applicant provides clear and convincing evidence that it is impossible or impracticable to achieve due to the following limitations:

(A) Topography: Natural features including lakes, rivers, and designated wetlands

(B) Existing adjacent development: A new subdivision must connect to an adjacent pre-existing development and the connection must be balanced with the external connectivity requirements (for example, if the pre-existing development has stub streets, they must be incorporated into the new subdivision to best adhere to the connectivity requirements)

(C) Rail corridors

(D) Limited access roadways

2. Reductions in the required connectivity index will be reviewed on a case-by-case basis and must require approval by the Planning Commission or the Community Development Department. (Ord. 2022-32, 11/29/22)

35-6-15. Master Planned and Off-Street Trails.

For each subdivision and/or development, the applicants, Tooele County, and other stakeholders shall work together to identify opportunities for master-planned and off-street trails, both within the subdivision/development and connecting to trails outside it. Developments of over 20 acres are required to have an off-street, master-planned trail system, the extent of which shall be commensurate to the relative size of the development. Master-planned trails shall connect to any adjacent pre-existing or planned trails. (Ord. 2022-32, 11/29/22)

PART 35-7 FINANCIAL ASSURANCES

Section

35-7-1. Improvement completion assurance.
35-7-2. Default.
35-7-3. Maintenance guarantee.
35-7-4. Acceptance and release of surety.
35-7-5. Engineering review and inspection fee.

35-7-1. Improvement completion assurance.

(1) In lieu of actual installation of improvements required by this chapter, after final plat approval by the Community Development Department and before the plat is recorded, the applicant shall guarantee the installation of such improvements by a combination of one or more of the following methods: a corporate surety bond, a deposit in escrow, a cash bond held by the county, or a letter of credit issued by a financial institution.

(2) The guarantee shall be in an amount equal to 110% of the cost of required improvements as estimated by an engineer retained by the applicant and approved by the County Engineer. The guarantee shall assure the actual construction of such improvements within one year, or at a date approved by the County Manager.

(3) The County Manager and County Attorney shall approve the method, institution, and form guarantee. (Ord. 2023-20, 11/7/23; Ord. 2022-32, 11/29/22)

35-7-2. Default.

In the event the applicant defaults or fails, or neglects to satisfactorily install required improvements within one year, the County Manager may declare the guarantee forfeit and may execute thereon and install or cause the required improvements to be installed using the proceeds from the collection to defray the expenses thereof. The applicant shall be responsible for all costs incurred by the county to complete the required improvements in excess of the proceeds of the guarantee. (Ord. 2022-32, 11/29/22)

35-7-3. Maintenance guarantee.

The applicant shall guarantee that all improvements will remain in good condition for a period of one year after the date of final acceptance by the county. The applicant shall make all repairs to and maintain the improvements in good condition during that one year at no cost to the county. Upon completion of the improvements, the county shall retain 10% of the guarantee for a surety to cover the maintenance period. The exact amount retained shall be determined by the Community Development Department. The Community Development Department shall identify necessary repairs and maintenance, and this decision shall be final and binding upon the applicant. The guarantee shall extend to and include, but shall not be limited to the entire street, subgrade, base, and surface and all pipes, joints, valves, backfill, and compacting as well as the working surface, curbs, gutters, sidewalks, and other accessories that are, or may be, affected by construction operations. Whenever, in the judgment of the Community Development Department, the improvements shall need repairs, maintenance, or re-building, the Community Development Department shall cause a written notice to be mailed or given to the applicant. Upon receipt, the applicant shall undertake and complete such repairs, maintenance, or re-building. If repairs are not completed within the specified time, the County Manager may declare the guarantee forfeit and may execute thereon and install or cause the required improvements to be installed using the proceeds from the collection to defray the expenses thereof. The applicant shall be responsible for all costs incurred by the county to install the improvements in excess of the proceeds of the guarantee. (Ord. 2022-32, 11/29/22)

35-7-4. Acceptance and release of surety.

(1) The applicant shall submit to the Community Development Department a copy of the as-built construction drawings and stormwater certification by a design engineer. Acceptance of all improvements shall be in writing from the Community Development Department.

(2) Final inspection by the Community Development Department shall be made one year after all work has been completed and before the release of the guarantee. All defects shall be corrected before acceptance by the county.

(3) Upon completion of improvements and acceptance by the Community Development Department, the financial assurances may be released. (Ord. 2022-32, 11/29/22)

35-7-5. Engineering review and inspection fee.

In addition to the improvement and maintenance guarantees, the applicant shall deposit with the county a sum equal to three percent (3%) of the cost of the improvements to cover reviews and inspections prior to the pre-construction meeting. (Ord. 2024-13; 10/1/24; Ord. 2022-32, 11/29/22)

PART 35-8 VACATION, ALTERATION AND AMENDMENT OF SUBDIVISION PLAT

Section

35-8-1. Vacating or changing a subdivision plat.
35-8-2. Filing of a petition to vacate, alter, or amend a plat – Notice.
35-8-3. Planning Commission consideration of a petition to vacate or change a plat – Criteria for vacating or changing a plat – Recording the vacation or change.
~~35-8-4. Exchange of title for portions of parcels by adjacent property owners of record.~~ Boundary Adjustments.

35-8-1. Vacating or changing a subdivision plat.

(1) Subject to Subsection (~~2~~ 3), the ~~Planning Commission~~ land use authority may, with or without a petition, consider and resolve any proposed vacation, alteration, or amendment of a subdivision plat, any portion of a subdivision plat, or any road, lot, or alley contained in a subdivision plat, at a public hearing.

(2) Any fee owner, as shown on the last county assessment rolls, of land within the platted subdivision may petition in writing to have the plat, any portion of it, or any road or lot contained in it, vacated, altered, or amended.

(3) If a petition is filed, the ~~Planning Commission~~ land use authority shall hold the public hearing within 45 days after receipt of the petition if:

(a) the plat change includes the vacation of a public road;

(b) any owner within the plat notifies the county of their objection in writing within ten days of receiving mailed notification; or

(c) all of the owners in the subdivision have not signed the revised plat.

(4) The public hearing requirement of Subsections (1) and (2) does not apply and a land use authority may consider at a public meeting an owner's petition for a subdivision amendment if the petition seeks to:

(a) join two or more of the petitioning fee owner's contiguous lots;

(b) subdivide one or more of the petitioning fee owner's lots, if the subdivision will not result in a violation of a land use ordinance or a development condition;

(c) on a lot owned by the petitioning fee owner, adjust an internal lot restriction imposed by the local political subdivision; or

(d) alter the plat in a manner that does not change existing boundaries or other attributes of lots within the subdivision that are not:

i) owned by the petitioner; or

ii) designated as a common area; and

(e) notice has been given to adjoining property owners in accordance with 35-8-2.

(5) ~~Any fee owner, as shown on the last county assessment rolls, of land within the platted subdivision may petition in writing to have the plat, any portion of it, or any road or lot contained in it, vacated, altered, or amended.~~

(6) The Community Development Department shall review any proposal to vacate or alter any road or alley located within a subdivision. Upon receiving a recommendation from the Community Development Department, the application shall be considered at a public hearing held by the Planning Commission. The County Council shall then consider and act on the Planning Commission's recommendation at a public meeting.

(7) The vacation or narrowing of a public road does not affect any existing easement or franchise right of any public utility. (Ord. 2022-32, 11/29/22)

35-8-2. Filing of a petition to vacate, alter, or amend a plat – Notice.

(1) Each petition to vacate, alter, or amend an entire plat, a portion of a plat, or a road or lot contained in a plat shall include:

(a) the name and address of all owners of record of the land contained in the entire plat;

(b) the name and address of all owners of record of land adjacent to any road that is proposed to be vacated, altered, or amended; and

(c) the signature of each of these owners who consents to the petition.

(2) A petition that lacks the consent of all owners may not be scheduled for consideration at a public hearing before the Planning Commission until the following notice is given:

(a) Notice shall be provided of the date, time, and place of a public hearing and shall be:

i) mailed not less than ten calendar days before the public hearing and addressed to the record owner of each parcel that is accessed by the public street or municipal utility easement;

ii) mailed to each affected entity; and

iii) if the petition is regarding a public street or municipal utility easement, the notice shall comply with UCA 63G-30-102, as a class A notice, for at least ten days.

(b) For any proposal to vacate, alter, or amend a platted street, the Planning Commission shall give notice of a public hearing with the date, place, and time of the hearing as required by UCA 17-27a-609.5.

(3) The petitioner shall pay the costs of the notice.

(4) Subject to Subsection (1), if the Planning Commission proposes to vacate, alter, or amend a subdivision plat or any road ~~or lot~~ contained in a subdivision plat, they shall consider the issue at a public hearing after giving the notice required by this Section.

(5) The name of a recorded subdivision may be changed by recording an amended plat if the new name has been cleared and approved by the County Recorder. The recording of all other declarations or documents that purport to change the name of a recorded plat are void. (Ord. 2023-20, 11/7/23; Ord. 2022-32, 11/29/22)

35-8-3. Planning Commission consideration of a petition to vacate or change a plat – Criteria for vacating or changing a plat – Recording the vacation or change.

(1) If the ~~Planning Commission~~ land use authority is satisfied that the public will not be materially injured by the proposed vacation, alteration, or amendment, and that there is good cause for the vacation, alteration, or amendment, the ~~Planning Commission~~ land use authority may vacate, alter, or amend the plat, any portion of the plat, or lot.

(2) The ~~Planning Commission~~ land use authority may approve the vacation, alteration, or amendment by resolution, amended plat, or administrative order.

(3) The ~~Planning Commission~~ land use authority shall ensure that the vacation, alteration, or amendment is recorded with the County Recorder. (Ord. 2024-13; 10/1/24; Ord. 2022-32, 11/29/22)

~~**35-8-4. Exchange of title for portions of parcels by adjacent property owners of record.**~~

~~(1) The owners of record of adjacent parcels described by a metes and bounds description may exchange title to portions of those parcels if the Community Development Department approves the exchange of title per Subsection (2).~~

~~(2) The Community Development Department shall approve an exchange of title under Subsection (1) if:~~

~~(b) no new dwelling lot or housing unit will result from the exchange of title; and~~

~~(c) the exchange of title will not result in a violation of applicable zoning requirements.~~

~~(3) If an exchange of title is approved under Subsection (2), a notice of approval by the Community Development Department shall be recorded with the County Recorder by the owners with deeds which:~~

~~(b) are executed by each owner included in the exchange and by the Community Development Department;~~

~~(c) contain an acknowledgment for each party executing the notice; and~~

~~(d) recite the descriptions of both the original parcels and the parcels created by the exchange of title.~~

~~(4) A notice of approval recorded under Subsection (3) does not act as a conveyance of title to real property. (Ord. 2022-32, 11/29/22)~~

35-8-4. Boundary adjustments.

The parcel owners of record may submit a proposal to the land use authority to adjust boundary lines of parcels, if not within a subdivision. If the properties are located within a platted subdivision a plat amendment is required that corresponds with the full boundary adjustment.

(1) For Simple Boundary Adjustments the Land Use Authority shall provide a Notice of Consent once the applicants have submitted an application and complied with the following requirements:
   (a) Include a conveyance document that complies with UCA 57-1-45.5;
   (b) describe all lots or parcels affected by the proposed boundary adjustment; and
   (c) include a graphical exhibit of all properties affected by the adjustment, depicting:
      i) Former boundary location;
      ii) New boundary location; and
      iii) Size, shape and dimensions of each adjusted property.

(2) Simple Boundary Adjustments cannot:
   (a) affect a public right-of-way, county utility easement, or other public property;
   (b) affect an existing easement, onsite wastewater system, or an internal lot restriction; or
   (c) result in a lot or parcel out of conformity with land use regulations.

(3) Simple Boundary Adjustments are not subject to a public hearing or meeting.

(4) If the land use authority determines that a proposed simple boundary adjustment does not meet the requirements of Subsection (2), a full boundary adjustment is required.

(5) For Full Boundary Adjustments the land use authority shall provide a Notice of Consent once the applicants have submitted an application and complied with the following:
  (a) a conveyance document that complies with UCA 57-1-45.5;
  (b) a survey that complies with UCA 57-1-4.5(3)(b); and
  (c) the survey described in Subsection (2)(b) shows no evidence of a violation of a land use regulation.

(6) The recording of a boundary adjustment does not constitute a land use approval.

(7) Consent of these adjustments is an administrative act.

(8) Notice of consent under Subsection (1) or (5) shall be provided to the person proposing the boundary adjustment in a format that makes clear:
  a. the land use authority is not responsible for any error related to the boundary adjustment; and
  b. a county recorder may record the boundary adjustment.

(9) A boundary adjustment is effective from the day on which the boundary adjustment, as consented to by the land use authority, is recorded by the county recorder along with the relevant conveyance document.

(10) A county may enforce county ordinances against, or withhold approval of a land use application for, property that is subject to a boundary adjustment if the county determines that the resulting lots or parcels are not in compliance with the county's land use regulations in effect on the day on which the boundary adjustment is recorded.

NOTICE OF PUBLIC HEARING

- **SUBJECT:** REZ 2025-046 – Rezone from MU-40 to MG.
- **PROJECT SUMMARY:** Charles Ackerlow with the Inland Port is requesting a rezone from MU-40 (Mulitple use, 40-acre minimum) to M-G (Manufacturing General).
- **ADDRESS:** Not yet given. **PARCELS:** 05-054-0-0002, 0014, 0021, 0028
  Unincorporated: Tooele **Planner:** Trish DuClos

On **July 16, 2025** the Tooele County Planning Commission will hold a public hearing regarding the request described above. The meeting will be held at 7:00 p.m. at the Tooele County Administration Building (Council Chamber, Third Floor), 47 S. Main Street Tooele, UT 84074. Also via zoom located on the Tooele County Website: https://tooeleco.gov/index.php under "Agendas and meeting" and then the zoom link will be embedded in the "Agenda Packet."

The request is to change 232.52 acres from MU-40 (Mulitple use, 40-acre minimum) to M-G (Manufacturing General).

You have the right to attend and speak at the public hearing. Please be aware, however, that in making its decision the Planning Commission can only rely on evidence, not opinion or conjecture. You may also submit comments in writing, but please do so at least 24 hours before the meeting date so that your comments can be provided to the Planning Commission and to the applicant in an appropriate manner. For questions or additional information, please contact the Planning Office at 435-843-3160.

The future meeting regarding this application will also be posted at the Tooele County Building, posted on the Tooele County Website and Utah Public Noitce Website.

You may access Tooele County's Land Use Ordinances through this link:
https://tooeleco.gov/departments/development/land_use_ordinance.php#outer-193

Tooele County
Community Development

Tooele County Planning Commission
Agenda Item Summary

Department Making Request:	**Meeting Date:**
Community Development	**July 16, 2025**

Item Title:

REZ 2025-046: Rezone from MU-40 (Mulitple use, 40-acre minimum) to M-G (Manufacturing General).

Summary:

Charles Ackerlow with the Inland Port is requesting a rezone of 232.52 acres from MU-40 (Mulitple use, 40-acre minimum) to M-G (Manufacturing General).
Parcels: 05-054-0-0002, 0014, 0021, 0028

Planning and Zoning
47 S. Main Street • Room 208 • Tooele, UT 84074
Phone: (435) 843-3160 • Fax: (435) 843-3252
https://tooeleco.org

REZ 2025-046

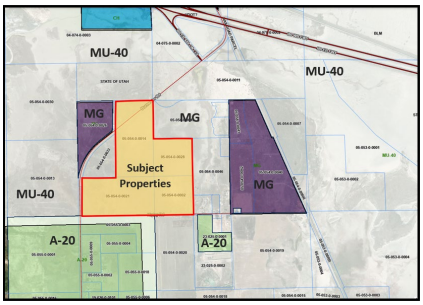
Rezone Summary and Recommendation

Public Body: Tooele County Planning Commission **Meeting Date: July 16, 2025**
Parcel ID: 05-054-0-0002, 0014, 0021, 0028
Property Address: Not yet given. **Unincorporated:** Tooele
Request: Rezone parcels from MU-40 (Mixed use, 40-acre min.) to M-G (Manufacturing, General).
Planner: Trish DuClos
Planning Commission Recommendation: Not Yet Received.
Applicant Name: Charles Ackerlow with the Inland Port

PROJECT DESCRIPTION

Charles Ackerlow is requesting a rezone from MU-40 (Mixed use, 40-acre min.) to M-G (Manufacturing, General). This would be part of the already approved extension of Inland Port Authority project.

SITE & VICINITY DESCRIPTION (see attached map)



The subject property is located off Burmester Rd just South of the I80 exit. It is surrounded on 3 sides by the MU-40 zone. Just East of it is an M-G zone. That same zone is part of the approved Inland Port area. South the properties are a few properties in the A-20 (Agricultural, 20-acre minimum) zone.

ZONE CONSIDERATIONS

Requirement	Existing Zone (MU-40)	Proposed zone (M-G)
Height	35 Feet	No max
Setbacks	Front: 30 Feet. Side: 20 Feet. Rear Main Building: 60 Feet Accessory Buildings: *10 Feet	Minimum yard setback requirements shall be established in the conditional use permit or planned unit development approval, except that no commercial building shall be located closer than 50 feet to any residential district boundary line or to any street line which continues as frontage into a residential district, and providing they do not encroach on any easement.
Lot Width	660 Feet	No requirement
Lot Area	40 Acre Minimum	No requirement
Maximum Building Coverage	5%	No more than 50%

Required Improvements	Street grading; street base; on-site surface drainage facilities; culinary water facilities; wastewater disposal; and street monuments.	Street grading; street base; on-site surface drainage facilities; culinary water facilities; wastewater disposal; and street monuments.

Compatibility with existing buildings/lots in terms of size, scale and height.	Yes

GENERAL PLAN CONSIDERATIONS

According to the future land use map of the Tooele County General Plan Update 2022, the subject property is located entirely in a manufacturing area. The planning commission & County Council should determine whether or not the requested rezone fits the general area and General Plan.

ISSUES OF CONCERN/PROPOSED MITIGATION

The Department of Army Corps of Engineers have already identified and addressed the protected wetlands in the area. The traffic impact study included addresses additional roads to be put in place to access off Burmester Rd. Including the existing Higley Rd.

NEIGHBORHOOD RESPONSE

Not yet received. Any comments that are received from the surrounding neighbors or affected entities will be addressed at the planning commission meeting.

PLANNING COMMISSION RESPONSE

Not yet received.

PLANNING STAFF ANALYSIS

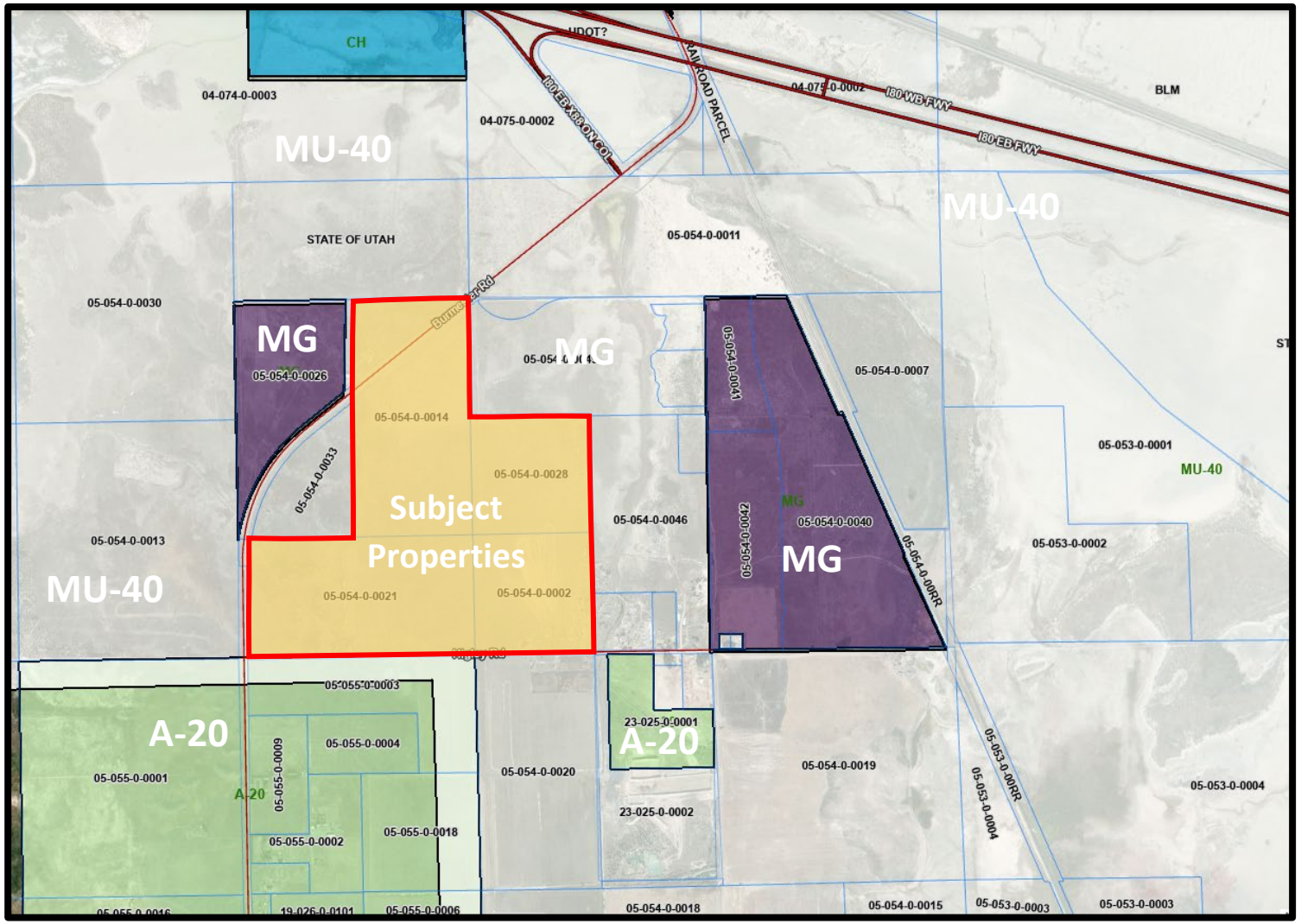
Planning staff found the proposed rezone aligns with the Tooele County General Plan update 2022. The original Inland Port Project was to use Higley Rd as access to the project. In order for Higley to be used it needs to be reclassified as a truck route in the Transportation Plan. The applicant would need to request the change with planning staff. The Traffic Study also addresses another future phase of the Inland Port, located North of the proposed properties.

PLANNING STAFF RECOMMENDATION

Planning Staff recommends that the Tooele County Planning Commission analyzes the information provided in this Staff Report and attachments to ensure that the proposed rezone request would be compatible with existing residential uses and infrastructure in the surrounding area prior to making a recommendation to the Tooele County Council. Higley Rd needs to be reclassified and improved before use of proposed industrial uses.

REZ 2025-046: Rezone from MU-40 (Multiple Use, 40-Acre Min.) to M-G (Manufacturing, General).

East of Burmester Rd and North of Higley Rd. (Parcels: 05-054-0-0002, 0014, 0021, 0028)



Rezone Application

Amendments to the zoning map shall be completed in full, signed, and supplemented with any additional information required by the planning commission. An application which is incomplete or provide insufficient data is just cause for denial. No refunds will be given. Submittals must be filed with the Community Development Department for staff and public review.

Fee $1,000.00

Property Information and location (All lines applicable to this site must be filled in)

Parcel(s) #: 05-054-0-0021; 05-054-0-0014; 05-054-0-0028; 05-054-0-0002 Lot(s) #: _____

Subdivision Name: Tooele Valley Inland Port Project Area (if applicable)

REZ #: 2025-046 (For office use only) Fee $1,000.00 Receipt #: _____

Date complete application submitted: _____

Application Determination:

Planning Commission recommendation: Favorable ☐ Unfavorable ☐

Presented by: _____ Date: _____

County Council recommendation: Approved ☐ Denied ☐

Presented by: _____ Date: _____

Property Owner(s) Information

Name(s): Burmester 1 LLC; MDL Timp Capital LLC; GSL Industrial LLC

Address per tax rolls: 8371 S. State St. STE 202 Sandy , UT 84070

City/County: Tooele County State: UT Zip: _____

Office/home phone: _____ Fax: _____

Mobile phone: 801-913-5959 Message phone: _____

Email address: charles@zenithpartners.org

Applicant(s) Information (If different than property owner)

*Property Owner's Authorization notarization needed

Name(s): Charles Akerlow

Address per tax rolls: same as above

City/County: same as above State: _____ Zip: _____

Office/home phone: same Fax: _____

Mobile phone: same Message phone: _____

Email address: same

Each application for a rezone shall have all required submittals before it is accepted as a complete application. All required information in this application must be completely filled out and signed with required paperwork submitted or application will be denied

There shall be no presumption of approval of any aspect of the process.

APPLICATION IS HEREBY MADE TO THE PLANNING COMMISSION REQUESTING THAT:

Tooele County change the zoning of these parcels from MU40 to MG to be in line with the rest of the property within the Tooele Valley Inland Port Project Area which is MG.

ADDITIONAL INFORMATION OR SUBMITTALS MAY BE REQUIRED

An application to amend the zoning map shall address:

(Must list in detail specific section and language to be amended, giving the original zoning and what is allowed there and the proposed zoning and what could be allowed in that zone)

Applicant check	County check		
☑	✓	a)	General existing site characteristics including ownership, topography, soils, drainage, vegetation, and other physical characteristics of the area proposed to be changed; Attached
☑	✓	b)	A legal description of the area to be zoned; Attached
☑	✓	c)	Types of land uses permitted, conditional or prohibited in the current zoning district and the proposed zoning district;
☑	✓	d)	Existing transportation patterns to include public and private roads and internal and external circulation patterns, rights-of-way, easements, and parking; Preliminary Site Plan attached
☑	✓	e)	Existing and proposed land uses, open spaces, impervious surfaces including streets, parking areas, structures, and buildings with a general description of size area, intensities/densities, and height, and proposed storm-water drainage facilities;
☑		f)	Existing and proposed utilities and infrastructure;
☑	✓	g)	Relationship of proposed zone change with Tooele County General Plan and how specifically the proposed zone change would conflict, conform, complement, or otherwise affect the Tooele County General Plan as well as any special studies that are designed to further detail the Tooele County General Plan in a specific area;
☑	✓	h)	An area map showing adjacent property owners and existing land uses within 1,000 feet of the area proposed to be rezoned; property owner labels printed from the recorder's office
☑	✓	i)	The location, description, and acreage of land uses; Land use drawing attached
☑	✓	j)	Approximate location and number of residential units along with approximate square footage, density, and height;
☑	✓	k)	Approximate location and square footage of non-residential buildings; Land use drawing attached

- [x] ✓ l) Calculation of approximate amount of open space both before and after buildout construction, indicating areas of expected open space and new landscaping, and including maintenance plans for these areas;
- [ ] ✓ m) If the site has unusual or unique natural features, a demonstration of how proposed development preserves and utilizes natural topography and geologic features, scenic vistas, trees, and other vegetation, and prevents the disruption of natural draining patterns, and if appropriate, geotechnical studies submitted to indicate soil types, depth of bedrock and slope stability; Geotechnical studies attached
- [x] ✓ n) A description of the availability of culinary and irrigation water, community facilities such as schools, fire protection services and other types of facilities that would serve the re-zoned area and how these facilities are affected by this proposal;
- [x] ✓ o) Approximate location and size of storm water detention and retention areas and calculations on the impact to those systems as a result of the change in density and use of land;
- [x] ✓ p) An indication of the construction schedule of any project proposed;
- [x] ✓ q) For multi-phased projects, a phasing plan that describes the anticipated timing and geographical extent of each phase;
- [x] ✓ r) A detailed traffic study showing the vehicle trips per day on average at buildout and a determination how the project would significantly alter existing traffic patterns or volume;
- [ ] N/A s) For applications involving a PUD, a table of proposed dimensional standards for the proposed land uses or phases including lot sizes and frontages, building heights and intensities, and setbacks and a description of any requested exceptions to the requirements of the underlying zone; and
- [x] t) Any other study or information required by the planning commission or Zoning Administrator.

I (We) understand that the Planning Commission and/or County Council may or may not adopt such changes listed. The fees associated with this application will not be refunded or returned once the notice of this application is submitted to planning commission. I (We) understand the process of this requested change must first go through Planning Commission for a recommendation to the County Council. The process will then proceed to go through County Council. Knowing this process, I (We) understand the application will take the needed time to ensure all processes are properly met and either board may make further changes to the request, or possible denial in whole.

Barmester I LLC

PROPERTY OWNER'S SIGNATURE — DATE 4/8/25

APPLICANT'S SIGNATURE — DATE

AFFIDAVIT

Charles Akerlow PROPERTY OWNER'S AUTHORIZATION

I (we), Matt Smock, Mark Horne the owner(s) of the real property located as follows: 05-054-0-0014; 05-054-A-0021; 05-054-0-0028; 05-054-A-0026 and further described in the attached application, do authorize the applicant(s) listed in this application permissions to represent me (us) regarding the attached application and to appear on my (our) behalf before any administrative or legislative body in the County considering this application and to act in all respects as our agent in matters pertaining to the attached application.

Charles Akerlow
(Property owner) Burmester LLC

(Property owner) GSL Industrial LLC

Mark Horne
(Property owner) MDL Timp Capital LLC

(Property owner)

Notary

STATE OF UTAH)
:ss
County of Tooele)

ADAM SAPERS
Notary Public - State of Utah
Comm. No. 740509
My Commission Expires on
Dec 6, 2028

Dated this 9 day of April, 20 25, the property owners above personally appeared before me and acknowledged that he/she signed the above Notice and that the statements contained therein are true.

12/6/28
My Commission Expires

Notary Public

TOOELE COUNTY ZONING APPLICATION
ADDITIONAL INFORMATION
TOOELE VALLEY INLAND PORT PROJECT AREA

a) The general site characteristics of this property are that it is essentially flat with maybe as much as a two foot differential across the property. The soils report is contained in an attached Soils Report. There is no useful vegetation on the site although it has been used for farming purposes. No major changes to the property's topography are expected. Proof of ownership received 4/22/25

b) Legal Description is Parcel Numbers 05-054-0-0014; 05-054-0-0021; 05-054-0-0028; 05-054-0-0002. Received 4/22/25

c) Current zoning is not an industrial zone and would be problematic in the building of industrial and manufacturing buildings on various sizes of land.

d) Only one road is contemplated to be constructed initially. As users acquire land individual site plans will be oriented to this main road plus any other ancillary street which may later be built. See attached Preliminary Site Plan.

e) The proposed land use is light manufacturing and high tech use. There will be the normal setbacks, side yards, buildings, landscaping, asphalt and normal building heights within the code. No parks or public spaces are planned as this is not a residential area. Will be handled @ subdivision phase & site plan stage

f) Tooele Valley Public Infrastructure District is in the process of completing all of the components to a potable water system, as wastewater system, a solid waste disposal system and all dry utilities.

g) The proposed zone change is in keeping with the General Plan for Tooele County as adopted by the County Council.

h) Property addresses of surrounding properties will be provided separately. Received 4/22/25

i) For location information see attached land use drawing.

j) No residential units planned for this site.

k) See attached land use drawing.

l) Not really applicable to an industrial site. Open space is usually roads, streets, parking areas and outdoor work areas.

m) Not Applicable. Geotechnical Report attached

n) Potable water is provided. There is no irrigation water or community facilities available. Fire protection provided by the North Tooele County Fire District or Department.

o) Because the land is flat storm water is to be retained on each building site as part of the site plan. Through sub division phase

p) Construction of buildings on this property is not likely to begin until 3rd quarter, 2026.

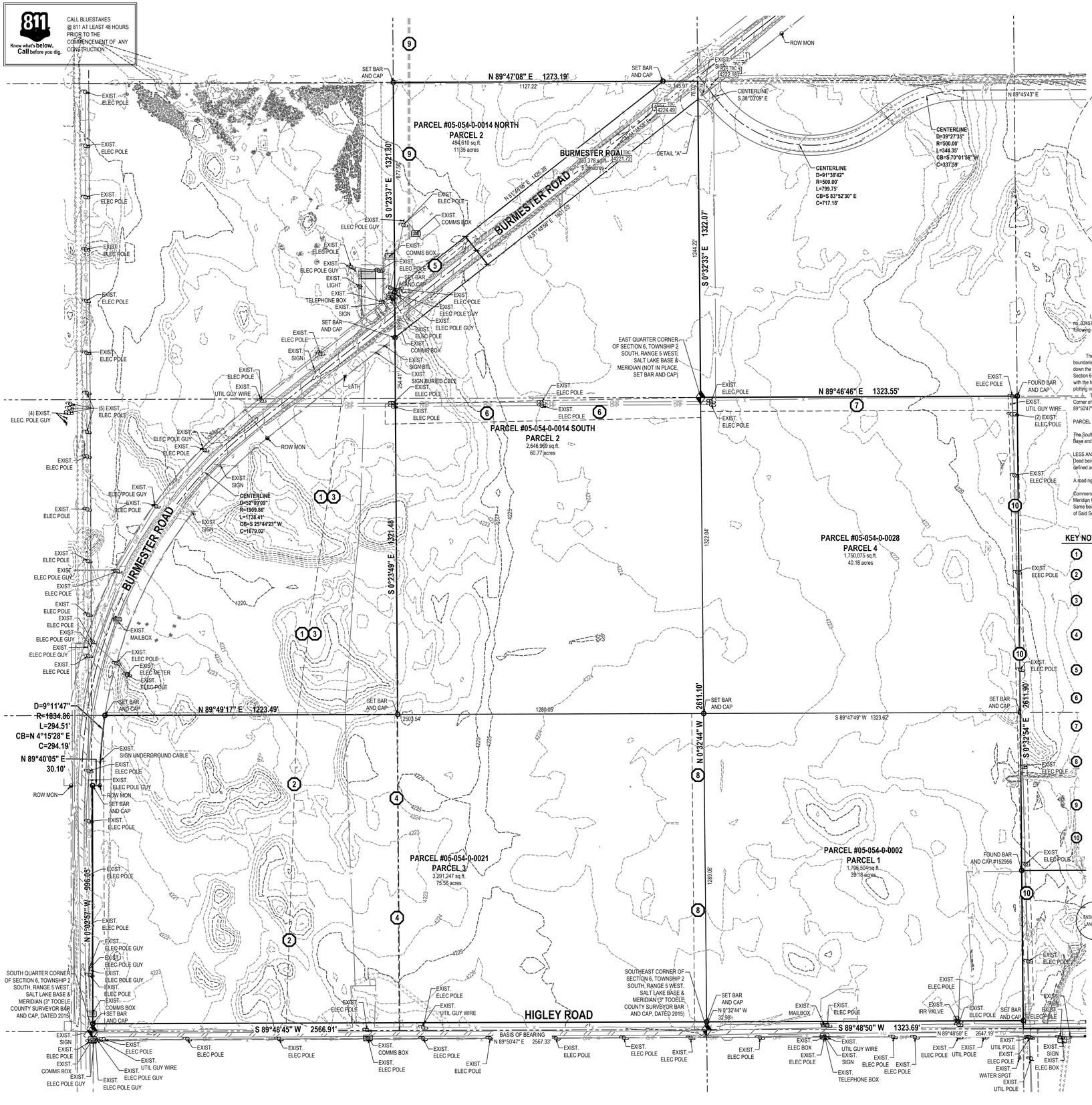
q) No phasing is planned. Built as needed

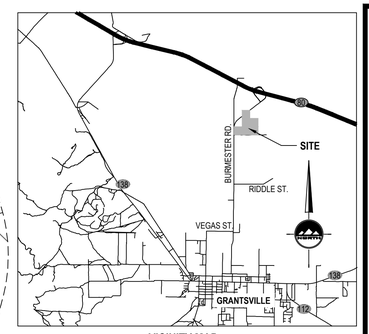
r) ~~Not Applicable.~~ Traffic study attached

s) Not Applicable. - Tooele County has no PUD ordinance

811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.





VICINITY MAP
NOT TO SCALE

DETAIL "A"
NOT TO SCALE

KEY NOTES

1. ITEM 14: The effects, terms and conditions of the Grant of Right of Way Easement, recorded August 25, 1917, as Entry No. 157586, in Book 3-K, at Page 499, of Official Records.
2. ITEM 15: The effects, terms and conditions of the Grant of Right of Way Easement, recorded November 19, 2020, as Entry No. 164427, in Book 3-M, at Page 91, of Official Records.
3. ITEM 16: The effects, terms and conditions of the Assignment of Right of Way Easement, recorded November 19, 2020, as Entry No. 164429, in Book 3-M, at Page 95, of Official Records.
4. ITEM 17: The effects, terms and conditions of the Right of Way Easement in favor of THE MOUNTAIN STATES TELEPHONE AND TELEGRAPH COMPANY, for the right to construct, operate, maintain and remove such communication and other facilities, upon, under, over and across the subject property, recorded #November 1, 1927, Entry No. 180271, Book E Page 285, official records of Tooele County, State of UT.
5. ITEM 21: The effects, terms and conditions of a 15' wide Easement, in favor of the State Road Commission, recorded February 18, 1971, as Entry No. 292822, in Book 101, at Page 62, of Official Records.
6. ITEM 22: The effects, terms and conditions of a 84' wide Easement in favor of Utah Power and Light Co., recorded November 19, 1971, as Entry No. 295593, in Book 108, at Page 77, of Official Records.
7. ITEM 23: The effects, terms and conditions of a 59' wide Easement in favor of Utah Power and Light Co., recorded November 19, 1971, as Entry No. 295594, in Book 108, at Page 78, of Official Records.
8. ITEM 24: The effects, terms and conditions of a 50' wide Right of Way Easement in favor of THE MOUNTAIN STATES TELEPHONE AND TELEGRAPH COMPANY, for the right to construct, operate, maintain and remove such communication and other facilities, upon, under, over and across the subject property, recorded #August 22, 1980, Entry No. 340002, Book 185 Page 301, official records of Tooele County, State of UT.
9. ITEM 25: The effects, terms and conditions of a 6' wide Right of Way Easement in favor of THE MOUNTAIN STATES TELEPHONE AND TELEGRAPH COMPANY, for the right to construct, operate, maintain and remove such communication and other facilities, upon, under, over and across the subject property, recorded #January 4, 1982, Entry No. 349443, Book 199 Page 497, official records of Tooele County, State of UT.
10. ITEM 26: The effects, terms and conditions of a 10' wide Easement in favor of Utah Power and Light Co., recorded February 15, 1985, as Entry No. 366061, in Book 226, at Page 697, of Official Records.

LEGEND

- SECTION CORNER
- MONUMENT
- EXIST REBAR AND CAP
- SET 5/8" X 24" REBAR WITH YELLOW PLASTIC CAP STAMPED "ENSIGN ENG. & LAND SURV."
- WATER METER
- WATER MANHOLE
- SIGN
- ELECTRICAL BOX
- UTILITY POLE
- LIGHT
- ADJACENT RIGHT OF WAY
- RIGHT OF WAY
- CENTERLINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- TANGENT LINE
- EXIST DITCH FLOW LINE
- FENCE
- EDGE OF ASPHALT
- CULINARY WATER LINE
- OVERHEAD POWER LINE
- ELECTRICAL LINE
- CONCRETE
- BUILDING
- PUBLIC DRAINAGE EASEMENT

NOTE: MAY CONTAIN SYMBOLS THAT ARE NOT USED IN THIS PLAN SET.

SURVEYORS CERTIFICATE

I, Douglas J. Kinsman, do hereby state that I am a Professional Land Surveyor, and that I hold license no. 334575, as prescribed by the laws of the state of Utah, and represent that I have made a survey of the following described property.

SURVEY NARRATIVE

The purpose of this survey is to provide boundary information to our client. I was able to solve the boundaries on these areas by finding the corners around the property. By doing that I was able to break down the Sections, which provided the corners and most of the boundaries. For the South Quarter Corner of Section 6 I used the newer monument since it has more monumentation on it, but that monument matched up with the historical data based on the roads and fence lines better. The rest of the boundaries were solved by plotting in Burmester and Higley Road Right of Ways.

The basis of bearing for this survey is the line between the Southeast Corner and the South Quarter Corner of Section 6, Township 2 South, Range 5 West, Salt Lake Base and Meridian, which bears North 89°50'47" East 2567.33 feet.

PARCEL 1:

The Southwest Quarter of the Southwest Quarter of Section 5, Township 2 South, Range 5 West, Salt Lake Base and Meridian.

LESS AND EXCLUDING therefrom, the following parcel conveyed to Tooele County Corporation by Warranty Deed being recorded February 5, 1941 as Entry No. 2[illegible] in Book 3-Z at Page 44 of Official Records, being defined as follows:

A road right of way, described as follows to-wit:

Commencing at the Southwest Corner of Section 5, Township 2 South, Range 5 West, Salt Lake Base and Meridian thence East 80 rods North 2 rods, thence West 80 rods thence South 2 rods to the place of beginning. Same being a 2 rod right of way for said road and is the South 2 rods of the West Half of the Southwest Quarter of Said Section 5, Township and Range aforesaid.

PARCEL 2:

The Southeast Quarter of the Northeast Quarter and the Northeast Quarter of the Southeast Quarter of Section 6, Township 2 South, Range 5 West, Salt Lake Base and Meridian.

LESS AND EXCLUDING therefrom, that portion taken by that certain Final Order of Condemnation being recorded February 18, 1971 as Entry No. 292822 in Book 101 at Page 62 of Official Records, being defined as follows:

A parcel of land in fee for a connection road incident to the construction of a freeway known as Project No. 80-2, being part of an entire tract of property, in the SE 1/4 NE1/4 of Section 6, T. 2 S., R. 5 W., S.L.B.&M. The boundaries of said parcel of land are described as follows:

Beginning at the NE. corner of said SE 1/4 NE 1/4; thence West 139 feet., more or less, along the north line of said SE 1/4 NE 1/4 to a point 75.0 feet. perpendicularly distant northwesterly from the center line of said connection road approximately at Engineer Station 309+88; thence S. 51 47'45" W. 1492 feet., more or less, to the west line of said SE 1/4 NE 1/4; thence South 190.0 ft. along said west line to a point 75.0 feet. perpendicularly distant southeasterly from said center line; thence N. 51°47'45" E. 1668 feet., more or less, to the east line of said SE 1/4 NE 1/4; thence North 82 feet, more or less, along said east line to the point of beginning.

PARCEL 3:

The South Half of the Southeast Quarter of Section 6, Township 2 South, Range 5 West, Salt Lake Base and Meridian.

LESS AND EXCLUDING therefrom, that portion taken by that certain Final Order of Condemnation being recorded February 18, 1971 as Entry No. 292821 in Book 101 at Page 60 of Official Records, being defined as follows:

A parcel of land in fee for a connection road incident to the construction of a freeway known as Project No. 80-2, being part of an entire tract of property, in the SW1/4SE1/4 of Section 6, T. 2 S., R. 5 W., S.L.B.&M. The boundaries of said parcel of land are described as follows:

Beginning at the NE. corner of said SW1/4SE1/4; thence South 304 feet., more or less, along the west line of said SW 1/4 SE 1/4 to a point opposite Engineer Station 270 + 26.62 of said connection road; thence N. 51°45' E., 330 feet., more or less, to a point 75.0 feet. perpendicularly distant easterly from the center line of said connection road; thence Northerly 304 feet., more or less, along the arc of a 1834.86-foot radius curve to the right to the point in the SW 1/4 SE 1/4 at a point 75.0 feet. radially distant easterly from said center line (Note: Tangent to the above arc at its point of beginning bears N. 0°21'15 "W.); thence West 148 feet., more or less, along said north line to the point of beginning.

PARCEL 4:

The Northwest Quarter of the Southwest Quarter of Section 5, Township 2 South, Range 5 West, Salt Lake Base and Meridian.

To: Mud Flats RE, LLC, a Utah Limited Liability Company; Burmester 1 LLC, a Delaware Limited Liability Company; Eagle Gate Title Insurance Agency, Inc.; and [illegible] National Title Insurance Company

This is to certify that this map or plat and the survey on which it is based were made in accordance with the "Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys," jointly established and adopted by ALTA and NSPS, and includes items 1, 2, [illegible] 19 of Table A thereof. Pursuant to the Accuracy Standards as adopted by ALTA and NSPS and in effect on the date of this certification, undersigned further certifies that in my professional opinion as a land surveyor licensed in the State of Utah, the relative positional accuracy of this survey does not exceed that which is specified therein.

Note: For conditions of record not shown hereon as well as specific references to items in the title report, please refer to the title report issued by Eagle Gate Title Insurance Agency, Inc., under File # CH-103406-JB, Commitment Date: September 9, 2022, at 8:00 a.m.

Date
Douglas J. Kinsman
License no: 334575

EXCEPTION NOTES

1. ITEMS 1-13, 18-20, AND 27-34, SCHEDULE B, PART 2, OF THE TITLE REPORT ISSUED BY EAGLE GATE TITLE INSURANCE AGENCY, INC., UNDER FILE #CH-103406-JB, COMMITMENT DATE: DECEMBER 15, 2022, AT 7:45 AM, ARE ALL GENERAL IN NATURE, AND/OR ARE NOT PLOTTABLE.
2. ITEMS 14-17 AND 21-26, SCHEDULE B, PART 2 OF THE ABOVE REFERENCED TITLE REPORT, IS PLOTTED, SEE KEY NOTES.

HORIZONTAL GRAPHIC SCALE

200 0 100 200 400
(IN FEET)
HORZ: 1 inch = 200 ft.

LOCATED IN THE EAST HALF OF SECTION 6 AND THE WEST HALF OF THE SOUTHWEST QUARTER OF SECTION 5, TOWNSHIP 2 SOUTH, RANGE 5 WEST, SALT LAKE BASE AND MERIDIAN TOOELE COUNTY, UTAH

For Review 05/08/2025 4:12:47 PM

ENSIGN
THE STANDARD IN ENGINEERING

SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
BURMESTER 1 LLC
8371 S STATE STREET, SUITE 202
SANDY, UT 84070
CONTACT:
CHARLES AKERLOW
PHONE: 801-913-5959

MUD FLATS ALTA/NSPS SURVEY

BURMESTER AND HIGLEY ROAD
GRANTSVILLE, UTAH 84029

ALTA/NSPS SURVEY

PROJECT NUMBER 7951D
PRINT DATE 5/8/25
DRAWN BY T. HUSSEY
CHECKED BY D. KINSMAN
PROJECT MANAGER D. KINSMAN

1 OF 1

Entry #: 616592
04/02/2025 04:48 PM SPECIAL WARRANTY DEED
Page: 1 of 5
FEE: $40.00 BY: FNT UTAH DOWNTOWN SLC - 170 MAIN ST S
Jerry Houghton, Tooele County, Recorder

WHEN RECORDED RETURN TO:
Wilford A. Beesley III, Esq.
WILFORD BEESLEY, PC
299 South Main Street, Suite 1300
Salt Lake City, Utah 84111
U0050958

Space above for County Recorder's Use
Tax Parcel Id Nos.: 05-054-0-0014; 05-054-0-0021; 05-054-0-0028; and 05-054-0-0002

SPECIAL WARRANTY DEED

MUD FLAT RANCH LLC, a Utah limited liability company, as **Grantor**, hereby GRANTS AND CONVEYS AND WARRANTS against all claiming by, through or under it, but not otherwise, for the sum of TEN DOLLARS and other good and valuable consideration, all of Grantors' right, title and interest in and to the described four tracts of land in Tooele County, Utah, described as follows, to Grantees (defined below) as follows:

BURMESTER 1 LLC, a Delaware limited liability company ("**Burmester**"):
Parcels 05-054-0-0014 and 05-054-0-0021, more particularly described on **Exhibit 1**;

MDL TIMP CAPITAL, LLC, a Utah limited liability Company ("**MDL**"):
Parcel 05-054-0-0002, more particularly described on **Exhibit 2**; and

GSL Industrial, LLC, a Delaware limited liability company ("**GSL**"):
Parcel 05-054-0-0028, more particularly described on **Exhibit 3**.

Together, Burmester, GSL, and MDL are the "**Grantees**."

DATED effective this 2 day of April, 2025.

GRANTOR:

MUD FLAT RANCH, LLC,
a Utah limited liability company

By Susan Higley
Name: Susan Higley
Title: Manager

[Grantor's Acknowledgement Page]

STATE OF UTAH)
: ss.
COUNTY OF Salt Lake)

This instrument was acknowledged before me this 2nd day of April, 2025, by Susan Higley, Manager of Mud Flat Ranch, LLC, a Utah limited liability company, on behalf of said company.

BRENDA HOLLIDAY
NOTARY PUBLIC · STATE OF UTAH
My Commission Expires October 13, 2027
COMMISSION NUMBER 733678

Notary Public, State of Utah

Exhibit 1 to Warranty Deed
Legal Description of Parcels 05-054-0-0014 and 05-054-0-0021

Parcel 05-054-0-0014:

The Southeast Quarter of the Northeast Quarter and the Northeast Quarter of the Southeast Quarter of Section 6, Township 2 South, Range 5 West, Salt Lake Base and Meridian.

LESS AND EXCLUDING therefrom, that portion taken by that certain Final Order of Condemnation being recorded February 18, 1971 as Entry No. 292822 in Book 101 at Page 62 of Official Records, being defined as follows:

A parcel of land in fee for a connection road incident to the construction of a freeway known as Project No. 80-2, being part of an entire tract of property, in the SE1/4NE1/4 of Section 6, T. 2 S., R. 5 W., S.L.B.&M. The boundaries of said parcel of land are described as follows:

Beginning at the NE. corner of said SE1/4NE1/4; thence West 139 feet., more or less, along the north line of said SE1/4NE1/4 to a point 75.0 feet. perpendicularly distant northwesterly from the center line of said connection road approximately at Engineer Station 309+88; thence S. 51 47'45" W. 1492 feet., more or less, to the west line of said SE1/4NE1/4; thence South 190.0 ft. along said west line to a point 75.0 feet. perpendicularly distant southeasterly from said center line; thence N. 51°47'45" E. 1668 feet., more or less, to the east line of said SE1/4NE1/4; thence North 82 feet, more or less, along said east line to the point of beginning.

Parcel 05-054-0-0021:

The South Half of the Southeast Quarter of Section 6, Township 2 South, Range 5 West, Salt Lake Base and Meridian.

LESS AND EXCLUDING therefrom, that portion taken by that certain Final Order of Condemnation being recorded February 18, 1971 as Entry No. 292821 in Book 101 at Page 60 of Official Records, being defined as follows:

A parcel of land in fee for a connection road incident to the construction of a freeway known as Project No. 80-2, being part of an entire tract of property, in the SW1/4SE1/4 of Section 6, T. 2 S., R. 5 W., S.L.B.&M. The boundaries of said parcel of land are described as follows:

Beginning at the NW. corner of said SW1/4SE1/4; thence South 304 feet., more or less, along the west line of said SW1/4SE1/4 to a point opposite Engineer Station 270 + 26.62 of said connection road; thence N. 89°38'45" E. 122 feet., more or less, to a point 75.0 feet. perpendicularly distant easterly from the center line of said connection road; thence Northerly 306 feet., more or less, along the arc of a 1834.86-foot radius curve to the right to the north line of said SW1/4SE1/4 at a point 75.0 feet. radially distant easterly from said center line (Note: Tangent to said curve at its point of beginning hears N. 0°21'15 "W.); thence West 148 feet., more or less, along said north line to the point of beginning.

Exhibit 2 to Special Warranty Deed
Legal Description of Parcel 05-054-0-0002

The Southwest Quarter of the Southwest Quarter of Section 5, Township 2 South, Range 5 West, Salt Lake Base and Meridian.

LESS AND EXCLUDING therefrom, the following portion conveyed to Tooele County Corporation by Warranty Deed being recorded February 5, 1941 as Entry No. 213279 in Book 3-Z at Page 44 of Official Records, being defined as follows:

A road right of way, described as follows to-wit:

Commencing at the Southwest Corner of Section 5, Township 2 South, Range 5 West, Salt Lake Base and Meridian thence East 80 rods North 2 rods, thence West 80 rods thence South 2 rods to the place of beginning.

Same being a 2 rod right of way for said road and is the South 2 rods of the West Half of the Southwest Quarter of Said Section 5, Township and Range aforesaid.

Exhibit 3 to Special Warranty Deed
Legal Description of Parcel 05-054-0-0028

The Northwest Quarter of the Southwest Quarter of Section 5, Township 2 South, Range 5 West, Salt Lake Base and Meridian.

GSH

PRELIIMINARY REPORT
GEOTECHNICAL STUDY
PROPOSED HIGLEY AREA DEVELOPMENT
NORTH OF HIGLEY ROAD
GRANTSVILLE, UTAH

Submitted To:

Burmester 1, LLC c/o Zenith Development, LLC
8371 South State Street, Suite 202
Sandy, Utah 84070

Submitted By:

GSH Geotechnical, Inc.
473 West 4800 South
Salt Lake City, Utah 84123

October 30, 2024

Job No. 3993-01-24

October 30, 2024
Job No. 3993-001-24

Mr. Charles W. Akerlow
Burmester 1, LLC
c/o Zenith Development, LLC
8371 South State Street, Suite 202
Sandy, Utah 84070

Mr. Akerlow:

Re: Report
Preliminary Geotechnical Study
Proposed Higley Area Development
North of Higley Road
Grantsville, Utah

1. INTRODUCTION

1.1 GENERAL

This report presents the results of our preliminary geotechnical study performed at the site of the proposed Higley Area Development to be located north of Higley Road in Grantsville, Utah. The general location of the site with respect to existing roadways, as of 2024, is presented on Figure 1, Vicinity Map. A more detailed layout of the site showing an aerial view, existing roadways, and the borings drilled in conjunction with this study is presented on Figure 2, Site Plan. Additionally, once final layout and design data has been determined, GSH must return to the site to perform a design level geotechnical study for each proposed structure.

1.2 OBJECTIVES AND SCOPE

The objectives and scope of the study were planned in discussions between Mr. Charles W. Akerlow of Burmester 1, LLC and Mr. Robert Gifford of GSH Geotechnical, Inc. (GSH).

In general, the objectives of this study were to:

1. Generally define and evaluate the subsurface soil and groundwater conditions across the site.

GSH Geotechnical, Inc.
473 West 4800 South
Salt Lake City, Utah 84123
Tel: 801.685.9190 Fax: 801.685.2990
www.gshgeo.com

2. Provide appropriate preliminary foundation, earthwork, pavement, and geoseismic recommendations to be utilized in the design and construction of the proposed facilities.

In accomplishing these objectives, our scope has included the following:

1. A field program consisting of the exploration, logging, and sampling of 8 borings.

2. A laboratory testing program.

3. An office program consisting of the correlation of available data, engineering analysis, and the preparation of this summary report.

1.3 AUTHORIZATION

Authorization was provided by returning a signed copy of the Professional Services Agreement No. 24-0932 dated September 18, 2024.

1.4 PROFESSIONAL STATEMENTS

Supporting data upon which our recommendations are based are presented in subsequent sections of this report. Recommendations presented herein are governed by the physical properties of the soils encountered in the exploration borings, projected groundwater conditions, and the layout and design data discussed in Section 2, Proposed Construction. If subsurface conditions other than those described in this report are encountered and/or if design and layout changes are implemented, GSH must be informed so that our recommendations can be reviewed and amended, if necessary. Additionally, once final layout and design data has been determined, GSH must return to the site to perform a design level geotechnical study for each proposed structure.

Our professional services have been performed, our findings developed, and our recommendations prepared in accordance with generally accepted engineering principles and practices in this area at this time.

2. PROPOSED CONSTRUCTION

The approximately 230-acre site is proposed to be developed for the construction of multiple office/warehouse structures and associated pavements. The structures are anticipated to be 1- to 2-stories of tilt-up concrete construction, to be placed slab-on-grade, and supported upon conventional spread and continuous wall footings.

Maximum real column and wall loads are anticipated to be on the order of up to 220 kips and 5 to 6 kips per lineal foot, respectively. Real loads are defined as the total of all dead plus frequently applied (reduced) live loads.

Paved parking areas, light- and heavy-duty drive lanes, and loading/unloading areas are planned around the structures. Projected traffic in the parking areas is anticipated to consist of a light volume of automobiles and light trucks, occasional medium-weight trucks, and no heavyweight trucks. Projected traffic in the light-duty drive lanes is anticipated to consist of a moderate volume of automobiles and light trucks, a light volume of medium-weight trucks, and occasional heavyweight trucks. Projected traffic in the heavy-duty drive lanes and loading/unloading areas is anticipated to consist of a moderate volume of automobiles, light trucks, and medium-weight trucks with a light volume of heavyweight trucks.

Site development will require some earthwork in the form of minor cutting and filling. At this time, we anticipate that maximum site grading cuts and fills, excluding utilities, will be on the order of 1 to 3 feet.

3. SITE INVESTIGATIONS

3.1 GENERAL

Subsurface conditions in unexplored locations or at other times may vary from those encountered at specific boring locations. If such variations are noted during construction or if project development plans are changed, GSH must review the changes and amend our recommendations, if necessary.

Boring locations were established by estimating distances and angles from site landmarks. If increased accuracy is desired by the client, we recommend that the boring locations and elevations be surveyed.

3.2 FIELD PROGRAM

To define and evaluate the subsurface soil and groundwater conditions across the site, 8 borings were completed within the accessible areas. These borings were completed to depths ranging from 16.5 to 46.5 feet with a truck-mounted drill rig equipped with hollow-stem augers. The approximate locations of the borings are presented on Figure 2.

The field portion of our study was under the direct control and continual supervision of an experienced member of our geotechnical staff. During the course of the drilling operations, a continuous log of the subsurface conditions encountered was maintained. In addition, samples of the typical soils encountered were obtained for subsequent laboratory testing and examination. The soils were classified in the field based upon visual and textural examination. These classifications were supplemented by subsequent inspection and testing in our laboratory. Graphical representation of the subsurface conditions encountered is presented on Figures 3A through 3H, Boring Logs. Soils were classified in accordance with the nomenclature described on Figure 4, Key to Boring Log (USCS).

3.25- and 3.0-inch outside diameter, 2.42-inch inside diameter (Dames & Moore) and a 2.0-inch outside diameter, 1.38-inch inside diameter drive sampler (SPT) were utilized at select locations

and depths. The blow counts recorded on the boring logs were those required to drive the sampler 12 inches with a 140-pound hammer dropping 30 inches.

Following completion of exploration operations, 1.25-inch diameter slotted PVC pipe was installed in some of the borings to provide a means of monitoring the groundwater fluctuations. The borings were backfilled with auger cuttings.

3.3 LABORATORY TESTING

3.3.1 General

To provide data necessary for our engineering analysis, a laboratory testing program was performed. This program included moisture, density, Atterberg limits, consolidation, laboratory vane shear, and chemical tests. The following paragraphs describe the tests and summarize the test data.

3.3.2 Moisture and Density Tests

To provide index parameters and to correlate other test data, moisture and density tests were performed on selected samples. The results of these tests are presented on the boring logs, Figures 3A through 3H.

3.3.3 Atterberg Limits Test

To aid in classifying the soils, an Atterberg limits test was performed on a sample of the fine-grained cohesive soils. Results of the test are tabulated below and presented on the boring logs, Figures 3A through 3H:

Boring No.	Depth (feet)	Liquid Limit (percent)	Plastic Limit (percent)	Plasticity Index (percent)	Soil Classification
B-4	10.0	41	25	16	CL
B-4	30.0	53	23	30	CH

3.3.4 Consolidation Tests

To provide data necessary for our settlement analysis, consolidation testing was performed on 3 representative samples of the natural fine-grained clay soils encountered at the site. The results of these tests indicate that the samples tested were moderately over-consolidated and will exhibit moderate strength and compressibility characteristics under the anticipated loading. Detailed results of the tests are maintained within our files and can be transmitted to you, upon your request.

3.3.5 Laboratory Vane Shear Tests

To determine the undrained shear strength of the clay soils encountered at the site, laboratory vane shear tests were performed. The results of the tests are tabulated below:

Boring No.	Depth (feet)	Soil Type	In-Situ Moisture Content (percent)	Dry Density (pcf)	Ultimate Shear Strength (psf)
B-3	5.0	CL	28.7	83	1,512
B-5	10.0	CL	39.4	73	1,125
B-8	15.0	CL	19.1	97	3,212

3.3.6 Chemical Tests

To determine if the site soils will react detrimentally with concrete, chemical tests were performed on a representative sample of the near-surface soil encountered at the site. The results of the chemical tests are tabulated below:

Boring No.	Depth (feet)	Soil Classification	pH	Total Water-Soluble Sulfate (mg/kg-dry)
B-3	2.5	CL	8.5	45

4. SITE CONDITIONS

4.1 SURFACE

The site is located north of Higley Road in Grantsville, Utah. The site is currently vacant/undeveloped land used for agricultural purposes with Burmester Road running through the northwest corner of the site in a roughly northeast direction. A small utility structure and cell tower are located in the northern most portion of the site. The topography of the site is relatively flat, grading down to the northeast with a total relief of approximately 8 to 10 feet. Site vegetation consists of agricultural grass fields in the center of the site with various weeds and brush/grass throughout the remainder of the site.

The site is bounded to the north and east by vacant/undeveloped brush/grass land along with Burmester Road; to the east by agricultural structures with associated vehicle/equipment storage areas along with similar vacant/undeveloped brush/grass land; and to the south by Higley Road followed by vacant/undeveloped brush/grass land along with livestock pens and pastures.

4.2 SUBSURFACE SOIL

The following paragraphs provide generalized descriptions of the subsurface profiles and soil conditions encountered within the borings conducted during this study. As previously noted, soil conditions may vary in unexplored locations.

The borings were completed to depths ranging from 16.5 to 46.5 feet. The soil conditions encountered in each of the borings, to the depths completed, were generally similar across the boring locations.

- Approximately 6 to 12 inches of topsoil was encountered in each boring. Topsoil thickness is frequently erratic and thicker zones of topsoil should be anticipated.

- Natural soils were encountered below the ground surface in each boring. The natural soils consisted primarily of clay with varying silt, sand, and gravel content. Boring B-4 encountered silty/clayey sand at a depth of approximately 43.0 feet beneath the ground surface, extending to the maximum depth explored of 46.5 feet.

The natural clay soils were soft to very stiff, dry to saturated, varied in color (green, white, gray, black, light tan, tan, and brown), and moderately over-consolidated. The natural clay soils are anticipated to exhibit moderate strength and compressibility characteristics under the anticipated loading.

The natural sand soils were dense, saturated, and gray in color. The natural sand soils are anticipated to exhibit moderately high strength and moderately low compressibility characteristics under the anticipated load range.

For a more descriptive interpretation of subsurface conditions, please refer to Figures 3A through 3H, Boring Logs. The lines designating the interface between soil types on the boring logs generally represent approximate boundaries. In situ, the transition between soil types may be gradual.

4.3 GROUNDWATER

On October 23, 2024 (28 days following drilling), groundwater was measured within the PVC pipes installed as tabulated on the following page.

Boring No.	Groundwater Depth (feet)
	October 23, 2024
B-2	9.0
B-5	6.9
B-7	8.3

Groundwater levels vary with changes in season and rainfall, construction activity, irrigation, snow melt, surface water run-off, and other site-specific factors.

5. DISCUSSIONS AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

The proposed structures may be supported upon conventional spread and continuous wall foundations supported upon suitable natural soils and/or structural fill extending to suitable natural soils.

The most significant geotechnical aspects at the site are:

1. The existing structures and utilities on the site that are to be demolished/relocated.
2. The potential to encounter non-engineered fill at the site.
3. The relatively shallow depth to groundwater.

Prior to proceeding with construction, demolition and removal of the existing structures, slabs, foundations, pavements, surface vegetation, root systems, topsoil, non-engineered fill (if encountered), and any deleterious materials from beneath an area extending out at least 5 feet from the perimeter of the proposed structure footprints and 3 feet beyond pavements and exterior flatwork areas will be required. All existing utility locations should be reviewed to assess their impact on the proposed construction and abandoned and/or relocated as appropriate.

Due to the developed nature of this site and the surrounding area, non-engineered fills may exist in unexplored areas of the site. Based on our experience, non-engineered fills are frequently erratic in composition and consistency. All surficial loose/disturbed soils and non-engineered fills (if encountered) must be removed below all footings, floor slabs, and pavements.

Groundwater was measured as shallow as 6.9 feet below the ground surface. GSH recommends placing floor slabs no closer than 4 feet from the highest groundwater elevation or 1.5 feet if a foundation subdrain system is utilized. A design for a foundation subdrain system will be provided, upon request.

Proof rolling of the natural clay subgrade must not be completed if cuts extend to within 1 foot of the groundwater surface. In areas where cuts are to extend to within 1 foot of the groundwater surface, stabilization must be anticipated.

To reduce disturbance of the natural soils during excavation, it is recommended that low-impact, track-mounted equipment with smooth edge buckets/blades be utilized.

Detailed discussions pertaining to earthwork, foundations, pavements, and the geoseismic setting of the site are presented in the following sections.

5.2 EARTHWORK

5.2.1 Site Preparation

Initial site preparation will consist of the demolition and removal of the existing structures, slabs, foundations, pavements, associated debris, non-engineered fills (if encountered), surface vegetation, root systems, topsoil, and any deleterious materials from beneath an area extending out at least 5 feet from the perimeter of the proposed structure footprint and 3 feet beyond pavements and exterior flatwork areas. All existing utility locations should be reviewed to assess their impact on the proposed construction and abandoned and/or relocated as appropriate.

It must be noted that from a handling and compaction standpoint, soils containing high amounts of fines (silts and clays) are inherently more difficult to rework and are very sensitive to changes in moisture content, requiring very close moisture control during placement and compaction. This will be very difficult, if not impossible, during wet and cold periods of the year. Additionally, the on-site soils are likely above optimum moisture content for compacting at present and would require some drying prior to re-compacting.

Subsequent to stripping and prior to the placement of floor slabs, foundations, structural site grading fills, exterior flatwork, and pavements, the exposed subgrade must be proof rolled by passing moderate-weight rubber tire-mounted construction equipment over the surface at least twice. If excessively soft or otherwise unsuitable soils are encountered beneath footings, they must be completely removed. If removal depth required is greater than 2 feet below footings, GSH must be notified to provide further recommendations. In pavement, floor slab, and outside flatwork areas, unsuitable natural soils shall be removed to a maximum depth of 2 feet and replaced with compacted granular structural fill.

Subgrade preparation as described must be completed prior to placing overlying structural site grading fills.

Due to the relatively high groundwater, site grading cuts should be kept to a minimum. Cuts extending to within 1 foot of the groundwater elevation will likely disturb the natural clay soils and proof rolling must not be completed. Stabilization must be anticipated in areas where cuts are to extend to within 1 foot of the groundwater surface.

To reduce disturbance of the natural soils during excavation, it is recommended that low-impact, track-mounted equipment with smooth edge buckets/blades be utilized.

GSH must be notified prior to the placement of structural site grading fills, floor slabs, footings, and pavements to verify that all loose/disturbed soils and non-engineered fills (if encountered) have been completely removed.

5.2.2 Temporary Excavations

Temporary excavations up to 8 feet deep in fine-grained cohesive soils, above or below the water table, may be constructed with sideslopes no steeper than one-half horizontal to one vertical (0.5H:1.0V). Excavations deeper than 8 feet are not anticipated at the site.

For granular (cohesionless) soils, construction excavations above the water table, not exceeding 4 feet, shall be no steeper than one-half horizontal to one vertical (0.5H:1.0V). For excavations up to 8 feet, in granular soils and above the water table, the slopes shall be no steeper than one horizontal to one vertical (1H:1V). Excavations encountering saturated cohesionless soils will be very difficult and will require very flat sideslopes and/or shoring, bracing, and dewatering.

To reduce disturbance of the natural soils during excavation, it is recommended that low-impact, track-mounted equipment with smooth edge buckets/blades be utilized.

The static groundwater table was encountered as shallow as 6.9 feet below the existing surface and may be shallower with seasonal fluctuations. Consideration for dewatering of utility trenches, excavations for the removal of non-engineered fill, and other excavations below this level should be incorporated into the design and bidding process.

All excavations must be inspected periodically by qualified personnel. If any signs of instability or excessive sloughing are noted, immediate remedial action must be initiated.

5.2.3 Structural Fill

Structural fill is defined as all fill which will ultimately be subjected to structural loadings, such as imposed by footings, floor slabs, pavements, etc. Structural fill will be required as backfill over foundations and utilities, as site grading fill, and as replacement fill below footings. All structural fill must be free of surface vegetation, root systems, rubbish, topsoil, frozen soil, and other deleterious materials.

Structural site grading fill is defined as structural fill placed over relatively large open areas to raise the overall grade. For structural site grading fill, the maximum particle size shall not exceed 4 inches; although, occasional larger particles, not exceeding 8 inches in diameter, may be incorporated if placed randomly in a manner such that "honeycombing" does not occur, and the desired degree of compaction can be achieved. The maximum particle size within structural fill placed within confined areas shall be restricted to 2 inches.

On-site soils may be re-utilized as structural site grading fill if they do not contain construction debris or deleterious material and meet the requirements of structural fill. Fine-grained soils will require very close moisture control and may be very difficult, if not impossible, to properly place and compact during wet and cold periods of the year.

Imported structural fill below foundations and floor slabs shall consist of a well graded sand and gravel mixture with less than 30 percent retained on the three-quarter-inch sieve and less than 20 percent passing the No. 200 Sieve (clays and silts).

To stabilize soft subgrade conditions (if encountered) or where structural fill is required to be placed closer than 2.0 feet above the water table at the time of construction, a mixture of coarse angular gravels and cobbles and/or 1.5- to 2.0-inch gravel (stabilizing fill) shall be utilized. It may also help to utilize a stabilization fabric, such as Mirafi 600X or equivalent, placed on the natural ground if 1.5- to 2.0-inch gravel is used as stabilizing fill.

5.2.4 Fill Placement and Compaction

All structural fill shall be placed in lifts not exceeding 8 inches in loose thickness. Structural fills shall be compacted in accordance with the percent of the maximum dry density as determined by the AASHTO[1] T180 (ASTM[2] D1557) compaction criteria in accordance with the following table:

Location	Total Fill Thickness (feet)	Minimum Percentage of Maximum Dry Density
Beneath an area extending at least 5 feet beyond the perimeter of the structure	0 to 5	95
Site grading fills outside area defined above	0 to 5	90
Utility trenches within structural areas	--	96
Road base	--	96

Structural fills greater than 5 feet thick are not anticipated at the site.

Subsequent to stripping and prior to the placement of structural site grading fill, the subgrade shall be prepared as discussed in Section 5.2.1, Site Preparation, of this report. In confined areas, subgrade preparation shall consist of the removal of all loose or disturbed soils.

Coarse angular gravel and cobble mixtures (stabilizing fill), if utilized, shall be end dumped, spread to a maximum loose lift thickness of 15 inches, and compacted by dropping a backhoe bucket onto

1 American Association of State Highway and Transportation Officials
2 American Society for Testing and Materials

the surface continuously at least twice. As an alternative, the stabilizing fill may be compacted by passing moderately heavy construction equipment or large self-propelled compaction equipment over the surface at least twice. Subsequent fill material placed over the coarse gravels and cobbles shall be adequately compacted so that the "fines" are "worked into" the voids in the underlying coarser gravels and cobbles. Where soil fill materials are to be placed directly over more than about 18 inches of clean gravel, a separation geofabric, such as Mirafi 140N or equivalent, is recommended to be placed between the gravel and subsequent soil fills.

Non-structural fill may be placed in lifts not exceeding 12 inches in loose thickness and compacted by passing construction, spreading, or hauling equipment over the surface at least twice.

5.2.5 Utility Trenches

All utility trench backfill material below structurally loaded facilities (footings, floor slabs, flatwork, pavements, etc.) shall be placed at the same density requirements established for structural fill. If the surface of the backfill becomes disturbed during the course of construction, the backfill shall be proof rolled and/or properly compacted prior to the construction of any exterior flatwork over a backfilled trench. Proof rolling shall be performed by passing moderately loaded rubber tire-mounted construction equipment uniformly over the surface at least twice. If excessively loose or soft areas are encountered during proof rolling, they shall be removed to a maximum depth of 2 feet below design finish grade and replaced with structural fill.

Many utility companies and City-County governments are now requiring that Type A-1a or A-1b (AASHTO Designation – granular soils with limited fines) soils be used as backfill over utilities. These organizations are also requiring that in public roadways, the backfill over major utilities be compacted over the full depth of fill to at least 96 percent of the maximum dry density as determined by the AASHTO T180 (ASTM D1557) method of compaction. GSH recommends that as the major utilities continue onto the site that these compaction specifications are followed.

Fine-grained soils, such as silts and clays, are not recommended for utility trench backfill in structural areas.

The static groundwater table was encountered as shallow as 6.9 feet below the existing surface and may be shallower with seasonal fluctuations. Dewatering of utility trenches and other excavations below this level should be anticipated.

To reduce disturbance of the natural soils during excavation, it is recommended that low-impact, track-mounted equipment with smooth edge buckets/blades be utilized.

5.3 GROUNDWATER

On October 23, 2024 (28 days following drilling), groundwater was measured within the PVC pipes installed as tabulated on the following page.

Boring No.	Groundwater Depth (feet)
	October 23, 2024
B-2	9.0
B-5	6.9
B-7	8.3

Based on the anticipated cuts necessary to reach design subgrades, we do not anticipate significant groundwater control problems during mass grading operations. However, temporary dewatering may be required for deeper excavations, such as those for utility construction and/or for the removal of non-engineered fills.

The groundwater measurements presented are conditions at the time of the field exploration and may not be representative of other times or locations. Groundwater levels may vary seasonally and with precipitation, as well as other factors including irrigation. Evaluation of these factors is beyond the scope of this study. Groundwater levels may, therefore, be at shallower or deeper depths than those measured during this study, including during construction and over the life of the structure.

The extent and nature of any dewatering required during construction will be dependent on the actual groundwater conditions prevalent at the time of construction and the effectiveness of construction drainage to prevent run-off into open excavations.

5.4 SPREAD AND CONTINUOUS WALL FOUNDATIONS

5.4.1 Design Data

The results of our analysis indicate that the proposed structures may be supported upon conventional spread and continuous wall foundations established upon suitable natural soils and/or structural fill extending to suitable natural soils. Under no circumstances shall foundations be established over non-engineered fills, loose or disturbed soils, topsoil, surface vegetation, root systems, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water. More heavily loaded footings will require a certain amount of granular structural replacement fill as specified in Section 5.4.3, Settlements, of this report. For design, the following parameters are provided:

Minimum Recommended Depth of Embedment for Frost Protection - 30 inches

Minimum Recommended Depth of Embedment for Non-frost Conditions - 15 inches

Recommended Minimum Width for Continuous Wall Footings	- 18 inches
Minimum Recommended Width for Isolated Spread Footings	- 24 inches
Recommended Net Bearing Capacity for Real Load Conditions	- 2,500 pounds per square foot
Bearing Capacity Increase for Seismic Loading	- 50 percent

The term "net bearing capacity" refers to the allowable pressure imposed by the portion of the structure located above lowest adjacent final grade. Therefore, the weight of the footing and backfill to lowest adjacent final grade need not be considered. Real loads are defined as the total of all dead plus frequently applied live loads. Total load includes all dead and live loads, including seismic and wind.

5.4.2 Installation

Under no circumstances shall the footings be installed upon non-engineered fills (if encountered), loose or disturbed soils, topsoil, surface vegetation, root systems, rubbish, construction debris, or other deleterious materials. If unsuitable soils are encountered, they must be removed and replaced with compacted granular fill. If granular soils become loose or disturbed, they must be recompacted prior to pouring the concrete.

The width of structural replacement fill below footings shall be equal to the width of the footing plus one foot for each foot of fill thickness.

5.4.3 Settlements

Granular structural replacement fill will be required under more heavily loaded footings. For the required amount, refer to the table below:

Foundations	Loading	Minimum Thickness of Replacement Structural Granular Fill (feet)
Wall	Up to 6 kips per lineal foot	0
Spread	Up to 130 kips	0
	130 kips to 220 kips	1.0

Based on column loadings, soil bearing capacities, and the foundation recommendations as discussed above, we expect primary total settlement beneath individual foundations to be less than one inch.

The amount of differential settlement is difficult to predict because the subsurface and foundation loading conditions can vary considerably across the site. However, we anticipate differential settlement between adjacent foundations could vary from 0.5 to 0.75 inch. The final deflected shape of the structure will be dependent on actual foundation locations and loading.

5.5 LATERAL RESISTANCE

Lateral loads imposed upon foundations due to wind or seismic forces may be resisted by the development of passive earth pressures and friction between the base of the footings and the supporting soils. In determining frictional resistance, a coefficient of friction of 0.35 may be utilized for the footing interface with in situ natural clay soils and 0.40 for footing interface with natural granular soils or granular structural fill. Passive resistance provided by properly placed and compacted granular structural fill above the water table may be considered equivalent to a fluid with a density of 300 pounds per cubic foot. Below the water table, this granular soil shall be considered equivalent to a fluid with a density of 150 pounds per cubic foot.

A combination of passive earth resistance and friction may be utilized provided that the friction component of the total is divided by 1.5.

5.6 FLOOR SLABS

Floor slabs may be established upon suitable natural subgrade soils or structural fill extending to suitable natural soils. Under no circumstances shall floor slabs be established directly over non-engineered fills (if encountered), loose or disturbed soils, sod, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water.

Additionally, GSH recommends that floor slabs be constructed a minimum of 4.0 feet from the stabilized groundwater elevation or 1.5 feet if a foundation subdrain system is utilized. A design for a foundation subdrain system will be provided, upon request.

To facilitate curing of the concrete and to provide a capillary moisture break, it is recommended that floor slabs be directly underlain by at least 4 inches of "free-draining" fill, such as "pea" gravel or three-quarters to one inch minus clean gap-graded gravel.

Settlement of lightly loaded floor slabs designed according to previous recommendations (average uniform pressure of 200 pounds per square foot or less) is anticipated to be less than one-quarter of an inch.

If a vapor barrier is proposed to be utilized, GSH must be contacted for additional recommendations.

5.7 PAVEMENTS

The natural clay soils will exhibit poor pavement support characteristics when saturated. All pavement areas must be prepared as previously discussed (see Section 5.2.1, Site Preparation). Under no circumstances shall pavements be established over non-engineered fills, loose or disturbed soils, topsoil, surface vegetation, root systems, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water. With the subgrade soils and the estimated projected traffic as discussed in Section 2, Proposed Construction, the following pavement sections are recommended:

Parking Areas

(Light Volume of Automobiles and Light Trucks,
Occasional Medium-Weight Trucks,
and No Heavyweight Trucks)
[6 equivalent 18-kip axle loads per day]

Flexible Pavements:
(Asphalt Concrete)

3.0 inches	Asphalt concrete
8.0 inches	Aggregate base
Over	Properly prepared natural subgrade soils and/or structural site grading fill extending to properly prepared natural subgrade soils

Rigid Pavements:
(Non-reinforced Concrete)

5.0 inches	Portland cement concrete (non-reinforced)
5.0 inches	Aggregate base
Over	Properly prepared natural subgrade soils and/or structural site grading fill extending to properly prepared natural subgrade soils

GSH

Light-Duty Drive Lanes

(Moderate Volume of Automobiles and Light Trucks,
Light Volume of Medium-Weight Trucks,
and Occasional Heavyweight Trucks)
[9 equivalent 18-kip axle loads per day]

Flexible Pavements:
(Asphalt Concrete)

3.0 inches	Asphalt concrete
9.0 inches	Aggregate base
Over	Properly prepared natural subgrade soils and/or structural site grading fill extending to properly prepared natural subgrade soils

Rigid Pavements:
(Non-reinforced Concrete)

6.0 inches	Portland cement concrete (non-reinforced)
5.0 inches	Aggregate base
Over	Properly prepared natural subgrade soils and/or structural site grading fill extending to properly prepared natural subgrade soils

Heavy-Duty Drive Lanes and Loading/Unloading Areas

(Moderate Volume of Automobiles, Light Trucks,
and Medium-Weight Trucks,
with a Light Volume of Heavyweight Trucks)
[40 equivalent 18-kip axle loads per day]

Flexible Pavements:
(Asphalt Concrete)

4.0 inches	Asphalt concrete
8.0 inches	Aggregate base
8.0 inches*	Aggregate subbase

Over	Properly prepared natural subgrade soils and/or structural site grading fill extending to properly prepared natural subgrade soils

* Subbase may consist of granular site grading fills with a minimum California Bearing Ratio (CBR) of 30 percent.

Rigid Pavements:
(Non-reinforced Concrete)

7.0 inches	Portland cement concrete (non-reinforced)
6.0 inches	Aggregate base
Over	Properly prepared natural subgrade soils and/or structural site grading fill extending to properly prepared natural subgrade soils

For dumpster pads, we recommend a pavement section consisting of 8.0 inches of Portland cement concrete, 12.0 inches of aggregate base, over properly prepared natural subgrade or site grading structural fills. Dumpster pads shall not be constructed overlying non-engineered fills under any circumstances.

These above rigid pavement sections are for non-reinforced Portland cement concrete. Concrete shall be designed in accordance with the American Concrete Institute (ACI) and joint details shall conform to the Portland Cement Association (PCA) guidelines. The concrete shall have a minimum 28-day unconfined compressive strength of 4,000 pounds per square inch and contain 6 percent ±1 percent air-entrainment.

The crushed stone shall conform to applicable sections of the current Utah Department of Transportation (UDOT) Standard Specifications. All asphalt material and paving operations shall meet applicable specifications of the Asphalt Institute and UDOT. A GSH technician shall observe placement and perform density testing of the base course material and asphalt.

Please note that the recommended pavement section is based on estimated post-construction traffic loading. If the pavement is to be constructed and utilized by construction traffic, the above pavement section may prove insufficient for heavy truck traffic, such as concrete trucks or tractor-trailers used for construction delivery. Unexpected distress, reduced pavement life, and/or premature failure of the pavement section could result if subjected to heavy construction traffic and the owner should be made aware of this risk. If the estimated traffic loading stated herein is not correct, GSH must review actual pavement loading conditions to determine if revisions to these recommendations are warranted.

5.8 CEMENT TYPES

The laboratory tests indicate that the natural soils tested contain a negligible amount of water-soluble sulfates. Based on our test results, concrete in contact with the on-site soil will have a low potential for sulfate reaction (ACI 318, Table 4.3.1). Therefore, all concrete which will be in contact with the site soils may be prepared using Type I or IA cement.

5.9 GEOSEISMIC SETTING

5.9.1 General

Utah municipalities have adopted the International Building Code (IBC) 2021. The IBC 2021 code refers to ASCE 7-16 Minimum Design Loads and Associated Criteria for Buildings and Other Structures (ASCE 7-16) determines the seismic hazard for a site based upon mapping of bedrock accelerations prepared by the United States Geologic Survey (USGS) and the soil site class. The USGS values are presented on maps incorporated into the IBC code and are also available based on latitude and longitude coordinates (grid points).

5.9.2 Faulting

Based on our review of available literature, no active faults pass through or immediately adjacent to the site. The nearest active mapped fault consists of the Oquirrh Fault Zone, located about 9.7 miles to the southeast of the site.

5.9.3 Site Class

For dynamic structural analysis, the Site Class D – Default Soil Profile as defined in Chapter 20 of ASCE 7-16 (per Section 1613.3.2, Site Class Definitions, of IBC 2021) can be utilized. If a measured site class is desired based on the project structural engineer's evaluation and recommendations, additional testing and analysis can be completed by GSH to determine the measured site class. Please contact GSH for additional information.

5.9.4 Ground Motions

The IBC 2021 code is based on USGS mapping, which provides values of short and long period accelerations for average bedrock values for the Western United States and must be corrected for local soil conditions. The following table summarizes the peak ground and short and long period accelerations for the MCE event and incorporates the appropriate soil amplification factor for a Site Class D – Default* Soil Profile. Based on the site latitude and longitude (40.6691 degrees north and 112.4503 degrees west, respectively) and Risk Category II, the values for this site are tabulated on the following page.

Spectral Acceleration Value, T	Bedrock Boundary [mapped values] (% g)	Site Coefficient	Site Class D - Default* [adjusted for site class effects] (% g)	Design Values** (% g)
0.2 Seconds (Short Period Acceleration)	S_S = 63.6	F_a = 1.291	S_{MS} = 82.1	S_{DS} = 54.7
1.0 Second (Long Period Acceleration)	S_1 = 22.9	F_v = 2.142	S_{M1} = 49.1	S_{D1} = 32.7

* If a measured site class in accordance with IBC 2021/ASCE 7-16 is beneficial based on the project structural engineer's review, please contact GSH for additional options for obtaining this measured site class.

**IBC 2021/ASCE 7-16 may require a site-specific study based on the project structural engineer's evaluation and recommendations. If needed, GSH can provide additional information and analysis including a complete site-specific study in accordance with chapter 21 of ASCE 7-16.

5.9.5 Liquefaction

The site is located in an area that has been identified by the Utah Geological Survey (UGS) as being a "low" liquefaction potential zone. Liquefaction is defined as the condition when saturated, loose, granular soils lose their support capabilities because of excessive pore water pressure, which develops during a seismic event. Clayey soils, even if saturated, will generally not liquefy during a major seismic event.

Due to the clayey nature of the soils, liquefaction is not anticipated to occur within the soils encountered at this site.

5.10 SITE VISITS

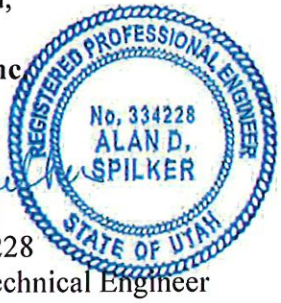
GSH must verify that all topsoil/disturbed soils and any other unsuitable soils have been removed, that non-engineered fills (if encountered) have been removed, and that suitable soils have been encountered prior to placing site grading fills, footings, slabs, and pavements. Additionally, GSH must observe fill placement and verify in-place moisture content and density of fill materials placed at the site.

6. CLOSURE

If you have any questions or would like to discuss these items further, please feel free to contact us at (801) 685-9190.

Respectfully submitted,

GSH Geotechnical, Inc.



Alan D. Spilker, P.E.
State of Utah No. 334228
President/Senior Geotechnical Engineer

ADS:jmt

Encl. Figure 1, Vicinity Map
Figure 2, Site Plan
Figures 3A through 3H, Boring Logs
Figure 4, Key to Boring Log (USCS)

Addressee (email)

BURMESTER 1, LLC
JOB NO. 3993-001-23



0.50 0 0 0 0 0 0.5 1 1.5 MI 2

1 0 0 0 0 0 0 1 2 KM 3

FIGURE 1
VICINITY MAP

REFERENCE:
ALL TRAILS - NATIONAL GEOGRAPHIC TERRAIN
DATED 2024

GSH

BURMESTER 1, LLC
JOB NO. 3993-001-24

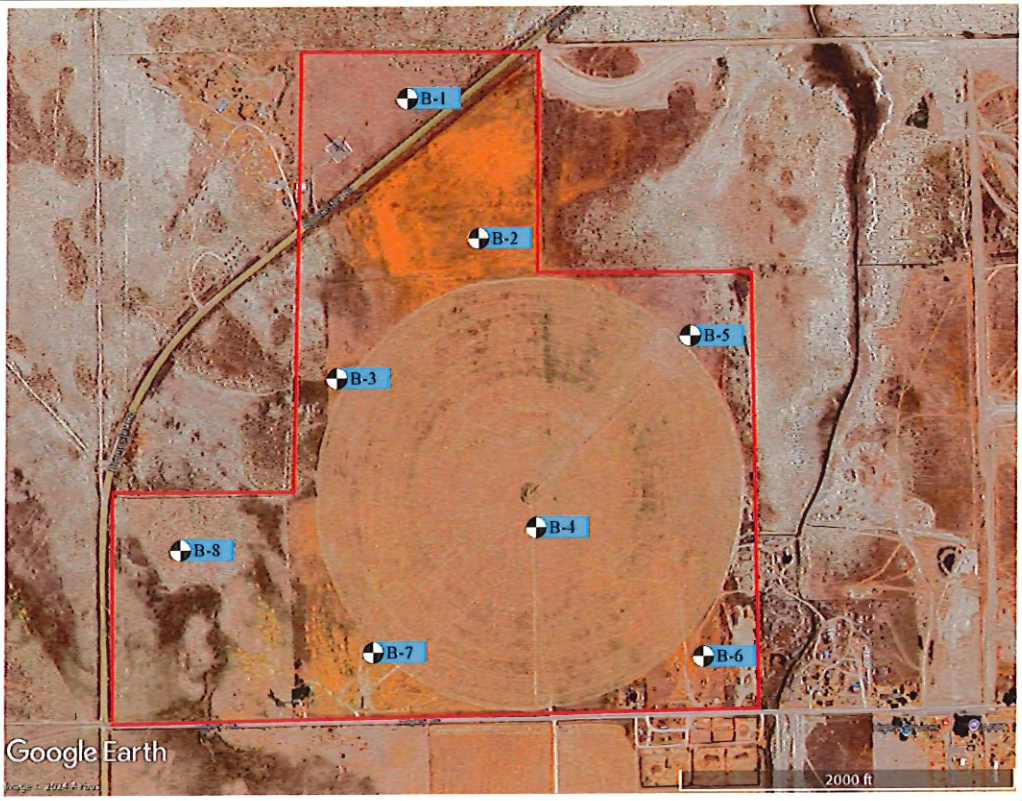


FIGURE 2
SITE PLAN

REFERENCE:
ADAPTED FROM AERIAL PHOTOGRAPH
DOWNLOADED FROM GOOGLE EARTH
IMAGERY DATED 7/2024

GSH

GSH BORING LOG

Page: 1 of 1

BORING: B-1

CLIENT: Burmester 1, LLC | PROJECT NUMBER: 3993-001-24

PROJECT: Proposed Higley Area Development | DATE STARTED: 9/25/24 | DATE FINISHED: 9/25/24

LOCATION: North of Higley Road, Grantsville, Utah | GSH FIELD REP.: RS

DRILLING METHOD/EQUIPMENT: 4-1/4" ID Hollow-Stem Auger | HAMMER: Automatic | WEIGHT: 140 lbs | DROP: 30"

GROUNDWATER DEPTH: 8.0' (9/25/24) | ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	BLOW COUNT	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0								
	CL	FINE TO MEDIUM SANDY CLAY with trace fine gravel; major roots (topsoil) to 6"; brown									dry medium stiff
				10		28.8	87				
		grades silty clay with trace fine to medium sand									
			5	4		37.7	72				soft very moist
▼											saturated
		grades with layers of fine to coarse sand with fine and coarse gravel up to 2" thick	10	4							
			15	16		31.2	86				stiff
		grades silty clay with trace fine sand; gray									
		End of Exploration at 16.5'.									
			20								
			25								

See Subsurface Conditions section in the report for additional information.

FIGURE 3A

GSH BORING LOG

Page: 1 of 1

BORING: B-2

CLIENT: Burmester 1, LLC | PROJECT NUMBER: 3993-001-24

PROJECT: Proposed Higley Area Development | DATE STARTED: 9/25/24 | DATE FINISHED: 9/25/24

LOCATION: North of Higley Road, Grantsville, Utah | GSH FIELD REP.: RS

DRILLING METHOD/EQUIPMENT: 4-1/4" ID Hollow-Stem Auger | HAMMER: Automatic | WEIGHT: 140 lbs | DROP: 30"

GROUNDWATER DEPTH: 9.0' (10/23/24) | ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	BLOW COUNT	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0								
	CL/ ML	FINE SANDY CLAY with silt; major roots (topsoil) to 6"; tan									dry very stiff
		grades with trace fine sand and trace organics; brown		20							
			5	13		24.0	75				
											stiff
▼											saturated
		grades with layers of fine and coarse gravel with fine to coarse sand up to 6" thick; gray	10	7							medium stiff
		grades silty clay with trace fine to medium sand	15	19		39.1	81				stiff
		End of Exploration at 16.5'. Installed 1.25" diameter slotted PVC pipe to 16.5'.	20								
			25								

See Subsurface Conditions section in the report for additional information.

FIGURE 3B

GSH BORING LOG

Page: 1 of 1

BORING: B-3

CLIENT: Burmester 1, LLC | PROJECT NUMBER: 3993-001-24

PROJECT: Proposed Higley Area Development | DATE STARTED: 9/25/24 | DATE FINISHED: 9/25/24

LOCATION: North of Higley Road, Grantsville, Utah | GSH FIELD REP.: RS

DRILLING METHOD/EQUIPMENT: 4-1/4" ID Hollow-Stem Auger | HAMMER: Automatic | WEIGHT: 140 lbs | DROP: 30"

GROUNDWATER DEPTH: 7.5' (9/25/24) | ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	BLOW COUNT	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0								
	CL	FINE SANDY CLAY with major roots (topsoil) to 6"; tan									dry stiff
		grades with trace fine sand and trace organics		16		24.1	95				
			5	8		28.7	83				moist medium stiff
▼											saturated
		grades fine to coarse sandy clay with trace fine gravel; gray	10	6							
		grades silty clay with some fine to medium sand; black	15	29							very stiff
		End of Exploration at 16.5'.	20								
			25								

See Subsurface Conditions section in the report for additional information.

FIGURE 3C

GSH BORING LOG

Page: 1 of 2

BORING: B-4

CLIENT: Burmester 1, LLC | PROJECT NUMBER: 3993-001-24

PROJECT: Proposed Higley Area Development | DATE STARTED: 9/25/24 | DATE FINISHED: 9/25/24

LOCATION: North of Higley Road, Grantsville, Utah | GSH FIELD REP.: RS

DRILLING METHOD/EQUIPMENT: 4-1/4" ID Hollow-Stem Auger | HAMMER: Automatic | WEIGHT: 140 lbs | DROP: 30"

GROUNDWATER DEPTH: 15.0' (9/25/24) | ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	BLOW COUNT	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0								
	CL	FINE SANDY CLAY with major roots (topsoil) to 12"; tan									dry very stiff
				15							
		grades with trace fine sand and trace organics; brown	5								
				4							moist medium stiff
		grades gray									
		grades brown	10	4					41	16	
▼		grades gray	15	10							saturated stiff
			20	23							very stiff
			25								

See Subsurface Conditions section in the report for additional information.

FIGURE 3D

GSH

BORING LOG

Page: 2 of 2

BORING: B-4

CLIENT: Burmester 1, LLC

PROJECT NUMBER: 3993-001-24

PROJECT: Proposed Higley Area Development

DATE STARTED: 9/25/24 DATE FINISHED: 9/25/24

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	BLOW COUNT	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
			25								
				15							
		grades high plasticity clay	30								
				9					53	30	stiff
			35								
				15							very stiff
			40								
				13							stiff
	SM/SC	SILTY/CLAYEY FINE TO MEDIUM SAND gray	45								saturated dense
				32							
		End of Exploration at 46.5'.	50								

See Subsurface Conditions section in the report for additional information.

FIGURE 3D
(continued)

GSH BORING LOG

Page: 1 of 1

BORING: B-5

CLIENT: Burmester 1, LLC | PROJECT NUMBER: 3993-001-24

PROJECT: Proposed Higley Area Development | DATE STARTED: 9/25/24 | DATE FINISHED: 9/25/24

LOCATION: North of Higley Road, Grantsville, Utah | GSH FIELD REP.: JC

DRILLING METHOD/EQUIPMENT: 4-1/4" ID Hollow-Stem Auger | HAMMER: Automatic | WEIGHT: 140 lbs | DROP: 30"

GROUNDWATER DEPTH: 6.9' (10/23/24) | ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	BLOW COUNT	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0								
	CL	FINE SANDY CLAY with trace fine gravel; major roots (topsoil) to 8"; tan									slightly moist stiff
				20		33.6	84				
			5								
		grades with layers of fine to coarse sand with fine and coarse gravel up to 4" thick; gray/tan		11							very moist medium stiff
▼											saturated
		grades fine to coarse sandy clay with trace fine and coarse gravel; light tan	10	5		39.4	73				
			15								
		grades silty clay		23							very stiff
		End of Exploration at 16.5'. Installed 1.25" diameter slotted PVC pipe to 16.5'.	20								
			25								

See Subsurface Conditions section in the report for additional information.

FIGURE 3E

GSH BORING LOG

Page: 1 of 1

BORING: B-6

CLIENT: Burmester 1, LLC | PROJECT NUMBER: 3993-001-24

PROJECT: Proposed Higley Area Development | DATE STARTED: 9/25/24 | DATE FINISHED: 9/25/24

LOCATION: North of Higley Road, Grantsville, Utah | GSH FIELD REP.: RS

DRILLING METHOD/EQUIPMENT: 4-1/4" ID Hollow-Stem Auger | HAMMER: Automatic | WEIGHT: 140 lbs | DROP: 30"

GROUNDWATER DEPTH: 10.0' (9/25/24) | ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	BLOW COUNT	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0								
	CL	FINE SANDY CLAY with trace fine gravel; major roots (topsoil) to 6"; brown									dry very stiff
		grades with silty clay and trace fine sald		43							slightly moist
			5								
		grades with fine to coarse sand		19		39.7	79				moist stiff
▽			10	5							saturated medium stiff
			15								
		grades with trace fine sand; gray		13		27.2	85				stiff
		End of Exploration at 16.5'.									
			20								
			25								

See Subsurface Conditions section in the report for additional information.

FIGURE 3F

GSH BORING LOG

Page: 1 of 1

BORING: B-7

CLIENT: Burmester 1, LLC | PROJECT NUMBER: 3993-001-24

PROJECT: Proposed Higley Area Development | DATE STARTED: 9/25/24 | DATE FINISHED: 9/25/24

LOCATION: North of Higley Road, Grantsville, Utah | GSH FIELD REP.: RS

DRILLING METHOD/EQUIPMENT: 4-1/4" ID Hollow-Stem Auger | HAMMER: Automatic | WEIGHT: 140 lbs | DROP: 30"

GROUNDWATER DEPTH: 8.3' (10/23/24) | ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	BLOW COUNT	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0								
	CL	FINE SANDY CLAY with major roots (topsoil) to 6"; tan									dry very stiff
				34		33.9	78				
		grades with some fine sand; white									
		grades brown	5	20							slightly moist
▼											saturated
		grades green/white	10	3							soft
		grades with layers of fine and coarse gravel up to 4" thick									
		grades gray	15	15							stiff
		End of Exploration at 16.5'. Installed 1.25" diameter slotted PVC pipe to 16.5'.	20								
			25								

See Subsurface Conditions section in the report for additional information.

FIGURE 3G

GSH BORING LOG

Page: 1 of 1

BORING: B-8

CLIENT: Burmester 1, LLC | PROJECT NUMBER: 3993-001-24

PROJECT: Proposed Higley Area Development | DATE STARTED: 9/25/24 | DATE FINISHED: 9/25/24

LOCATION: North of Higley Road, Grantsville, Utah | GSH FIELD REP.: RS

DRILLING METHOD/EQUIPMENT: 4-1/4" ID Hollow-Stem Auger | HAMMER: Automatic | WEIGHT: 140 lbs | DROP: 30"

GROUNDWATER DEPTH: 8.0' (9/25/24) | ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	BLOW COUNT	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0								
	CL	FINE TO COARSE SANDY CLAY with trace fine gravel; major roots (topsoil) to 6"; brown									dry stiff
											slightly moist
		grades fine sandy clay with fine gravel		15							
			5								moist
		grades silty clay with trace fine sand		6		53.0	69				
▽		grades with layers of fine to coarse sand with trace fine and coarse gravel up to 6" thick									medium stiff saturated
			10	5							
		grades silty clay with trace fine sand									
			15	14		19.1	97				stiff
		grades silty clay with trace fine to coarse sand									
		End of Exploration at 16.5'.									
			20								
			25								

See Subsurface Conditions section in the report for additional information.

FIGURE 3H

CLIENT: Burmester 1, LLC
PROJECT: Proposed Higley Area Development
PROJECT NUMBER: 3993-001-24

KEY TO BORING LOG

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	BLOW COUNT	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫

COLUMN DESCRIPTIONS

① **Water Level:** Depth to measured groundwater table. See symbol below.

② **USCS:** (Unified Soil Classification System) Description of soils encountered; typical symbols are explained below.

③ **Description:** Description of material encountered; may include color, moisture, grain size, density/consistency,

④ **Depth (ft.):** Depth in feet below the ground surface.

⑤ **Blow Count:** Number of blows to advance sampler 12" beyond first 6", using a 140-lb hammer with 30" drop.

⑥ **Sample Symbol:** Type of soil sample collected at depth interval shown; sampler symbols are explained below.

⑦ **Moisture (%):** Water content of soil sample measured in laboratory; expressed as percentage of dryweight of

⑧ **Dry Density (pcf):** The density of a soil measured in laboratory; expressed in pounds per cubic foot.

⑨ **% Passing 200:** Fines content of soils sample passing a No. 200 sieve; expressed as a percentage.

⑩ **Liquid Limit (%):** Water content at which a soil changes from plastic to liquid behavior.

⑪ **Plasticity Index (%):** Range of water content at which a soil exhibits plastic properties.

⑫ **Remarks:** Comments and observations regarding drilling or sampling made by driller or field personnel. May include other field and laboratory test results using the following abbreviations:

CEMENTATION:

Weakly: Crumbles or breaks with handling or slight finger pressure.

Moderately: Crumbles or breaks with considerable finger pressure.

Strongly: Will not crumble or break with finger pressure.

MODIFIERS:

Trace
<5%
Some
5-12%
With
> 12%

MOISTURE CONTENT (FIELD TEST):

Dry: Absence of moisture, dusty, dry to the touch.

Moist: Damp but no visible water.

Saturated: Visible water, usually soil below water table.

Descriptions and stratum lines are interpretive; field descriptions may have been modified to reflect lab test results. Descriptions on the logs apply only at the specific boring locations and at the time the borings were advanced; they are not warranted to be representative of subsurface conditions at other locations or times.

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

MAJOR DIVISIONS			USCS SYMBOLS	TYPICAL DESCRIPTIONS
COARSE-GRAINED SOILS More than 50% of material is larger than No. 200 sieve size.	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve.	CLEAN GRAVELS (little or no fines)	GW	Well-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines
			GP	Poorly-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines
		GRAVELS WITH FINES (appreciable amount of fines)	GM	Silty Gravels, Gravel-Sand-Silt Mixtures
			GC	Clayey Gravels, Gravel-Sand-Clay Mixtures
	SANDS More than 50% of coarse fraction passing through No. 4 sieve.	CLEAN SANDS (little or no fines)	SW	Well-Graded Sands, Gravelly Sands, Little or No Fines
			SP	Poorly-Graded Sands, Gravelly Sands, Little or No Fines
		SANDS WITH FINES (appreciable amount of fines)	SM	Silty Sands, Sand-Silt Mixtures
			SC	Clayey Sands, Sand-Clay Mixtures
FINE-GRAINED SOILS More than 50% of material is smaller than No. 200 sieve size.	SILTS AND CLAYS Liquid Limit less than 50%		ML	Inorganic Silts and Very Fine Sands, Rock Flour, Silty or Clayey Fine Sands or Clayey Silts with Slight Plasticity
			CL	Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays
			OL	Organic Silts and Organic Silty Clays o f Low Plasticity
	SILTS AND CLAYS Liquid Limit greater than 50%		MH	Inorganic Silts, Micacious or Diatomacious Fine Sand or Silty Soils
			CH	Inorganic Clays of High Plasticity, Fat Clays
			OH	Organic Silts and Organic Clays of Medium to High Plasticity
HIGHLY ORGANIC SOILS			PT	Peat, Humus, Swamp Soils with High Organic Contents

Note: Dual Symbols are used to indicate borderline soil classifications.

STRATIFICATION:

DESCRIPTION	THICKNESS
Seam	up to 1/8"
Layer	1/8" to 12"
Occasional:	One or less per 6" of thickness
Numerous;	More than one per 6" of thickness

TYPICAL SAMPLER GRAPHIC SYMBOLS

- Bulk/Bag Sample
- Standard Penetration Split Spoon Sampler
- Rock Core
- No Recovery
- 3.25" OD, 2.42" ID D&M Sampler
- 3.0" OD, 2.42" ID D&M Sampler
- California Sampler
- Thin Wall

WATER SYMBOL

- Water Level

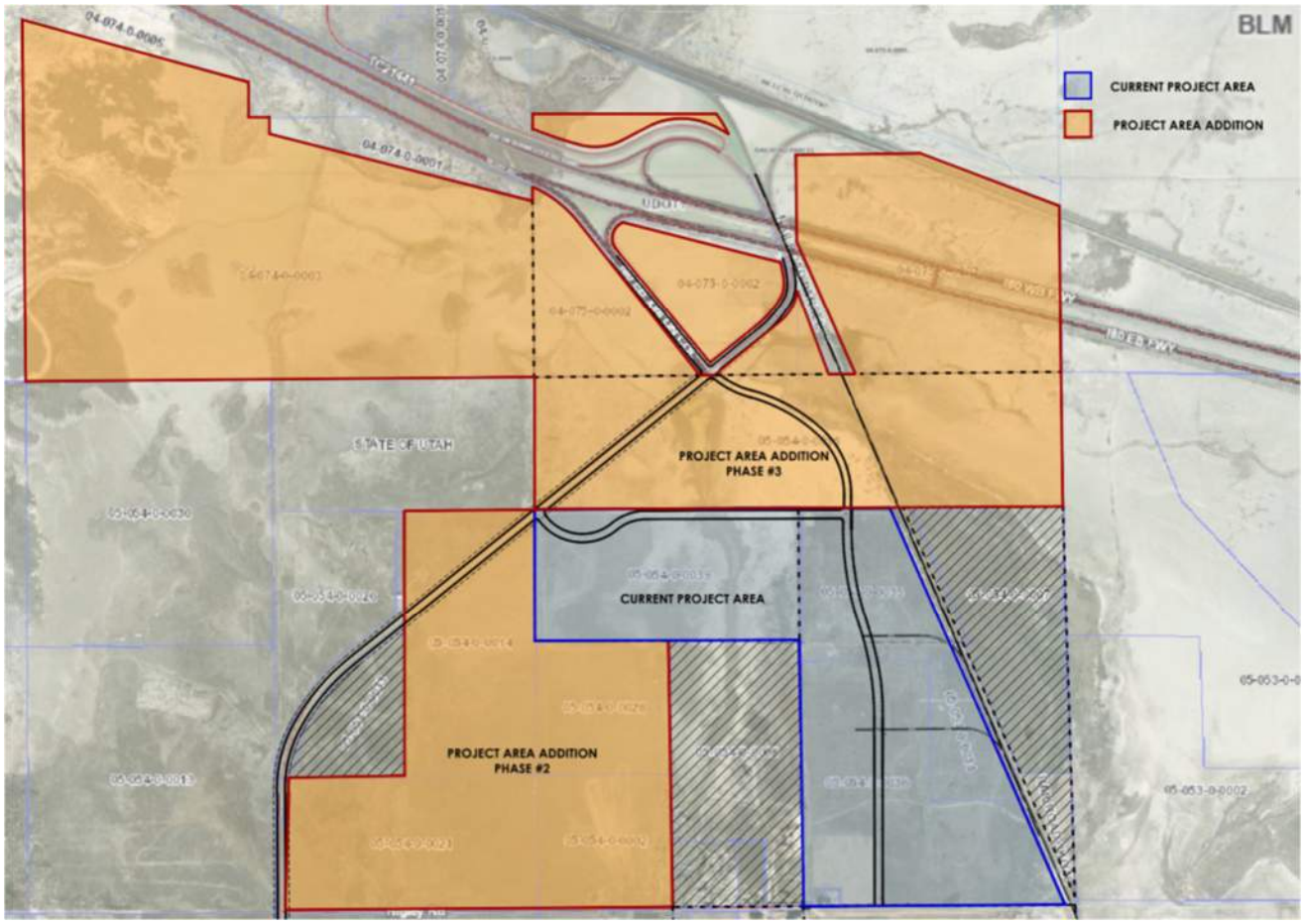
FIGURE 4

GSH

HALES ENGINEERING
innovative transportation solutions

Burmester Road

Traffic Impact Study



Tooele County, Utah

June 23, 2025

UT25-3026

LICENSED PROFESSIONAL ENGINEER
NO. 12890754
Jordi J. Berrett
06/23/2025
STATE OF UTAH

1220 North 500 West, Ste. 202 Lehi, UT 84043 p 801.766.4343
www.halesengineering.com

EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed Burmester Road development located in Tooele County, Utah. The development is located just off the I-80 Eastbound Ramps between Burmester Road and Higley Road.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2025), future (2030), and future (2050) conditions with and without the proposed project and to recommend mitigation measures as needed. The peak hour level of service (LOS) results are shown in Table ES-1. Recommended storage lengths are shown in Table ES-2. An exhibit of the proposed mitigated roadway network is shown in Figure ES-1. A site plan of the project is provided in Appendix A.

Table ES-1: Peak Hour Level of Service Results

	Intersection	Level of Service													
		Existing (2025)				Future (2030)						Future (2050)			
		BG		+P		BG		+P		+P Mit		BG		+P	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Morton Access Rd & I-80 EB Ramps / Burmester Rd	a	a	c	b	a	a	f	f	C	C	a	a	C	D
2	Higley Ln / Burmester Rd	a	a	a	a	a	a	a	a	a	a	a	a	a	a
3	SITLA Access Rd / Burmester Rd	-	-	a	a	-	-	a	b	a	b	-	-	b	c
4	Higley North Access Rd / Burmester Rd	-	-	-	-	-	-	b	b	b	b	-	-	c	c
5	Higley South Access Rd / Burmester Rd	-	-	-	-	-	-	b	a	b	a	-	-	c	b

1. Intersection LOS values represent the overall intersection average for roundabout, signalized, and all-way stop-controlled (AWSC) intersections (uppercase letter) and the worst movement for all other unsignalized intersections (lowercase letter)
2. BG = Background (without project traffic), +P = Plus Project (with project traffic), Mit = Mitigation

Source: Hales Engineering, June 2025

Table ES-2: Recommended Storage Length

	Intersection	Recommended Storage Lengths (feet)													
		Northeast-bound				Northwest-bound				Southeast-bound				Southwest-bound	
		LT		RT		LT		RT		LT		RT		LT		RT	
		E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
1	Morton Access Rd & I-80 EB Ramps / Burmester Rd	-	200	-	-	-	125	-	250	-	100	-	100	-	575	-	-
3	SITLA Access Rd / Burmester Rd	-	-	-	100	-	-	-	125	-	100	-	-	-	-	-	-
4	Higley North Access Rd / Burmester Rd	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-
5	Higley South Access Rd / Burmester Rd	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-

1. Storage lengths are based on 2050 95th percentile queue lengths and do not include required deceleration / taper distances
2. E = Existing storage length (approximate), if applicable; P = proposed storage length for new turn lanes or changes to existing turn lanes, if applicable

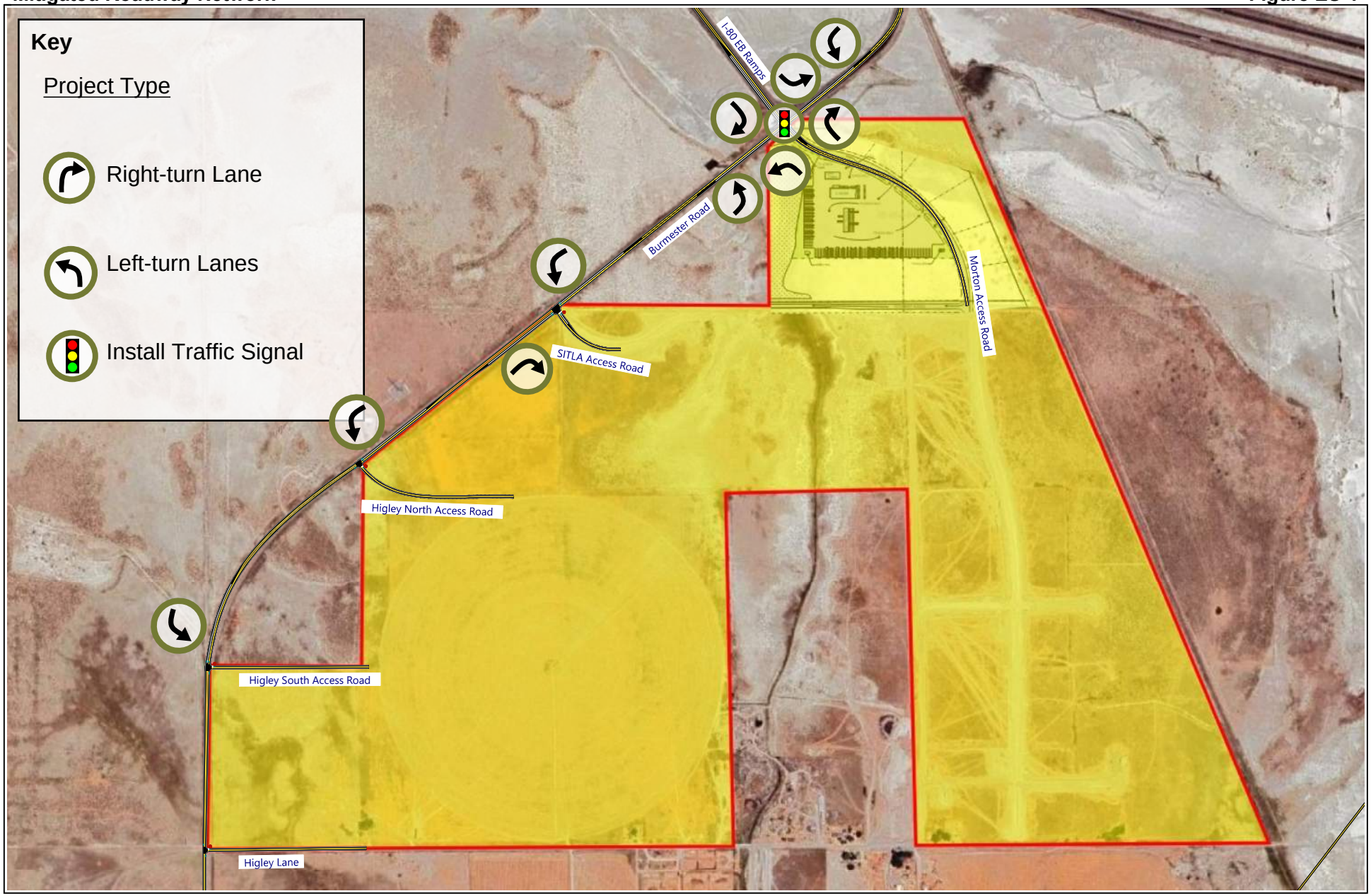
Source: Hales Engineering, June 2025

SUMMARY OF KEY FINDINGS & RECOMMENDATIONS

Project Conditions		
• The development will consist of warehousing and manufacturing space, a business park, a data center, a gas station with a convenience store, and a fast-food restaurant spread throughout multiple properties. • The project is anticipated to generate approximately 13,683 weekday daily trips, including 1,676 trips in the morning peak hour, and 1,867 trips in the evening peak hour. • Auxiliary lanes are recommended at several locations in the project study area where there are at least 50 right-turn vehicles or 25 left-turn vehicles in an hour.		
2025	**Background**	**Plus Project**
Assumptions	• None	• Partial land use intensity • Project accessed by Morton Access Rd and SITLA Access Rd • Auxiliary lanes installed where applicable
Findings	• Acceptable LOS	• Acceptable LOS
2030	**Background**	**Plus Project**
Assumptions	• Background vehicle counts increased according to the Utah Statewide Annual Average Daily Traffic Forecast	• Full land use intensity • Higley North Access Rd and Higley South Access Rd added to project area
Findings	• Acceptable LOS	• Poor LOS at Morton Access Road & I-80 EB Ramps / Burmester Road
Mitigations	• None	• Install a traffic signal at Morton Access Road & I-80 EB Ramps / Burmester Road
2050	**Background**	**Plus Project**
Assumptions	• Background vehicle counts increased according to the Utah Statewide Annual Average Daily Traffic Forecast	• Full land use intensity
Findings	• Acceptable LOS	• Acceptable LOS
Mitigations	• None	• None. ○ If queue lengths become too long, permissive-protective left-turn phasing can be added to the traffic signal

Tooele County - Burmester Road TIS
Mitigated Roadway Network

Figure ES-1



Hales Engineering
1220 North 500 West, Ste. 202 Lehi UT 84043
801.766.4343
06/17/2025

TABLE OF CONTENTS

EXECUTIVE SUMMARY ..... **i**
SUMMARY OF KEY FINDINGS & RECOMMENDATIONS ii
TABLE OF CONTENTS ..... **iv**
LIST OF TABLES ..... **vi**
LIST OF FIGURES ..... **vi**
I. INTRODUCTION **1**
A. Purpose 1
B. Scope 2
C. Analysis Methodology 2
D. Level of Service Standards 2
II. EXISTING (2025) BACKGROUND CONDITIONS **4**
A. Purpose 4
B. Roadway System 4
C. Crash Data Summary 4
D. Traffic Volumes 5
E. Level of Service Analysis 5
F. Queuing Analysis 8
G. Mitigation Measures 8
III. PROJECT CONDITIONS **9**
A. Purpose 9
B. Project Description 9
C. Trip Generation 9
D. Trip Distribution and Assignment 11
E. Access 16
F. Auxiliary Lanes 16
IV. EXISTING (2025) PLUS PROJECT CONDITIONS **17**
A. Purpose 17
B. Traffic Volumes 17
C. Level of Service Analysis 17
D. Queuing Analysis 17
E. Mitigation Measures 17
V. FUTURE (2030) BACKGROUND CONDITIONS **20**
A. Purpose 20
B. Roadway Network 20
C. Traffic Volumes 20
D. Level of Service Analysis 20
E. Queuing Analysis 23
F. Mitigation Measures 23
VI. FUTURE (2030) PLUS PROJECT CONDITIONS **24**
A. Purpose 24
B. Traffic Volumes 24
C. Level of Service Analysis 24
D. Queuing Analysis 27
E. Mitigation Measures 27

F. Mitigation Results 27

VII. FUTURE (2050) BACKGROUND CONDITIONS 28

A. Purpose 28
B. Roadway Network 28
C. Traffic Volumes 28
D. Level of Service Analysis 28
E. Queuing Analysis 31
F. Mitigation Measures 31

VIII. FUTURE (2050) PLUS PROJECT CONDITIONS 32

A. Purpose 32
B. Traffic Volumes 32
C. Level of Service Analysis 32
D. Queuing Analysis 32
E. Mitigation Measures 35
F. Recommended Storage Lengths 35

Appendix A: Project Site Plan
Appendix B: Turning Movement Counts
Appendix C: LOS Results
Appendix D: Queuing Results
Appendix E: Crash Data Reports

LIST OF TABLES

Table 1: Level of Service Description 3
Table 2: Crash Severity by Intersection 4
Table 3: Crash Type by Intersection 5
Table 4: Existing (2025) Background Peak Hour LOS 8
Table 5: Project Land Uses 9
Table 6: Trip Reductions 10
Table 7: Trip Generation 10
Table 8: New Trip Distribution 11
Table 9: Pass-by Trip Distribution 11
Table 10: Existing (2025) Plus Project Peak Hour LOS 17
Table 11: Future (2030) Background Peak Hour LOS 20
Table 12: Future (2030) Plus Project Peak Hour LOS 24
Table 13: Future (2030) Plus Project Peak Hour LOS Mitigation Results 27
Table 14: Future (2050) Background Peak Hour LOS 28
Table 15: Future (2050) Plus Project Peak Hour LOS 32
Table 16: Recommended Storage Lengths 35

LIST OF FIGURES

Figure 1: Vicinity map showing the project location in Tooele County, Utah 1
Figure 2: Existing (2025) background peak hour traffic volumes 6
Figure 3: Trip assignment for the peak hours 12
Figure 4: Existing (2025) plus project peak hour traffic volumes 18
Figure 5: Future (2030) background peak hour traffic volumes 21
Figure 6: Future (2030) plus project peak hour traffic volumes 25
Figure 7: Future (2050) background peak hour traffic volumes 29
Figure 8: Future (2050) plus project peak hour traffic volumes 33

I. INTRODUCTION

A. Purpose

This study addresses the traffic impacts associated with the proposed Burmester Road development located in Tooele County, Utah. The proposed project is located just off the I-80 eastbound ramps between Burmester Road and Higley Road. Figure 1 shows a vicinity map of the proposed development.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2025), future (2030), and future (2050) conditions with and without the proposed project and to recommend mitigation measures as needed.

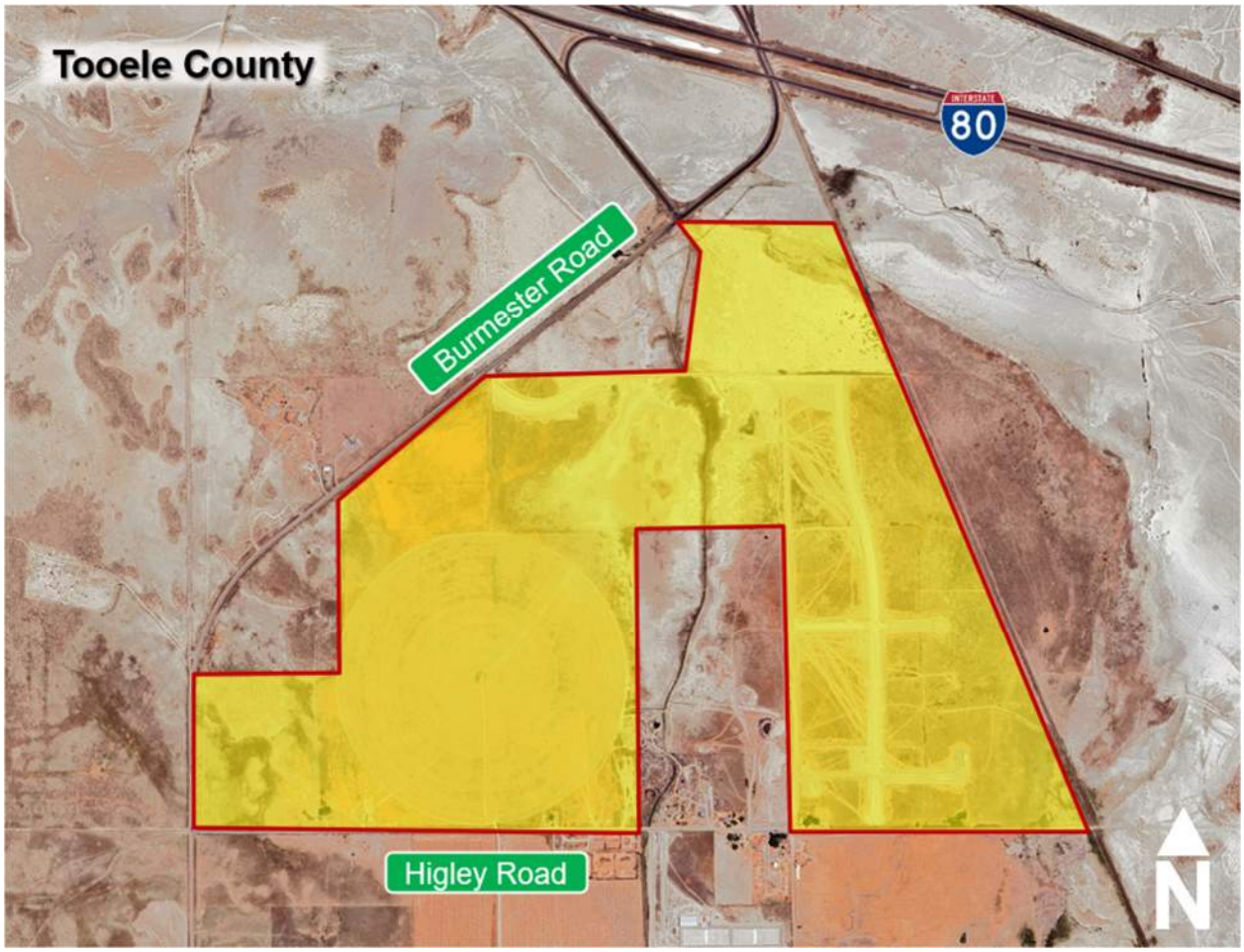


Figure 1: Vicinity map showing the project location in Tooele County, Utah

B. Scope

The study area was defined based on conversations with the development team. This study was scoped to evaluate the traffic operational performance impacts of the project on the following intersections:

- I-80 EB Ramps / Burmester Road
- Higley Lane / Burmester Road
- SITLA Access Road / Burmester Road
- Higley North Access Road / Burmester Road
- Higley South Access Road / Burmester Road

C. Analysis Methodology

Level of service (LOS) is a term that describes the operating performance of an intersection or roadway. LOS is measured quantitatively and reported on a scale from A to F, with A representing the best performance and F the worst. Table 1 provides a brief description of each LOS letter designation and an accompanying average delay per vehicle for both signalized and unsignalized intersections.

The *Highway Capacity Manual* (HCM), 7th Edition, 2022 methodology was used in this study to remain consistent with "state-of-the-practice" professional standards. This methodology has different quantitative evaluations for signalized and unsignalized intersections. For signalized, roundabout, and all-way stop-controlled (AWSC) intersections, the LOS is provided for the overall intersection (weighted average of all approach delays). For all other unsignalized intersections, LOS is reported based on the worst movement.

Using Synchro/SimTraffic software, which follow the HCM methodology, the peak hour LOS was computed for each study intersection. Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. The detailed LOS reports are provided in Appendix C. Hales Engineering also calculated the 95th percentile queue lengths for the study intersections using SimTraffic. The detailed queue length reports are provided in Appendix D.

Many of the figures in this report are printouts of the Synchro model. These figures are not meant to be a design exhibit for exact lane striping and design, due to the limitations of the Synchro software. Instead, the purpose of these figures is to show assumed peak hour turning movement volumes and the conceptual travel lane configuration of the study roadway network.

D. Level of Service Standards

For the purposes of this study, a minimum acceptable intersection performance for each of the study intersections was set at LOS D. If levels of service E or F conditions exist, an explanation and/or mitigation measures will be presented. A LOS D threshold is consistent with "state-of-the-practice" traffic engineering principles for urbanized areas.

Table 1: Level of Service Description

LOS		Description of Traffic Conditions	Average Delay (seconds/vehicle)	
			Signalized Intersections	Unsignalized Intersections
A		Free Flow / Insignificant Delay	≤ 10	≤ 10
B		Stable Operations / Minimum Delays	> 10 to 20	> 10 to 15
C		Stable Operations / Acceptable Delays	> 20 to 35	> 15 to 25
D		Approaching Unstable Flows / Tolerable Delays	> 35 to 55	> 25 to 35
E		Unstable Operations / Significant Delays	> 55 to 80	> 35 to 50
F		Forced Flows / Unpredictable Flows / Excessive Delays	> 80	> 50

Source: Hales Engineering Descriptions, based on the *Highway Capacity Manual* (HCM), 7th Edition, 2022 Methodology (Transportation Research Board)

II. EXISTING (2025) BACKGROUND CONDITIONS

A. Purpose

The purpose of the background analysis is to study the intersections and roadways during the peak travel periods of the day with background traffic and geometric conditions. Through this analysis, background traffic operational deficiencies can be identified, and potential mitigation measures recommended. This analysis provides a baseline condition that may be compared to the build conditions to identify the impacts of the development.

B. Roadway System

The primary roadways that will provide access to the project site are described below:

Burmester Road – is a county-maintained roadway which is classified by the Tooele County Transportation Plan (2015) as a major collector. The roadway has one travel lane in each direction. The posted speed limit is 40 mph in the study area.

Higley Lane – is a county-maintained roadway which is classified by the Tooele County Transportation Plan (2015) as a minor collector. The roadway has one travel lane in each direction. The posted speed limit is 25 mph in the study area.

C. Crash Data Summary

Hales Engineering obtained crash data within 250 feet of the study intersections. Five years of crash data were collected between January 1, 2019, and June 8, 2025, and the data is summarized by crash severity in Table 2 and by crash type in Table 3. As shown, there were a total of 4 crashes within the study area. The detailed crash data reports are provided in Appendix E. There were no suspected serious injury or fatal crashes reported in the study area within the last 5 years. Due to the use of crash data, this report may be protected by 23 USC 407.

Table 2: Crash Severity by Intersection

Intersection	Crash Severity					Total Crashes at Intersection
	Fatal	Suspected Serious Injury	Suspected Minor Injury	Possible Injury	Property Damage Only	
I-80 EB Ramps / Burmester Road	0	0	1	1	0	**2**
Higley Lane / Burmester Road	0	0	0	1	1	**2**
TOTAL	**0**	**0**	**1**	**1**	**1**	**4**

Source: UDOT Numetric AASHTOWare, June 2025

Table 3: Crash Type by Intersection

Intersection	Crash Type					Total Crashes at Intersection
	Front to Rear	Single Vehicle	Angle	Sideswipe	Other	
I-80 EB Ramps / Burmester Road	0	1	0	1	0	**2**
Higley Lane / Burmester Road	1	1	0	0	0	**2**
TOTAL	**1**	**2**	**0**	**1**	**0**	**4**

Source: UDOT Numetric AASHTOWare, June 2025

D. Traffic Volumes

Weekday morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak period traffic counts were performed at the following intersections:

- I-80 EB Ramps / Burmester Road
- Higley Lane / Burmester Road

The counts at the I-80 EB Ramps were performed on Thursday, May 29, 2025. The morning peak hour was determined to be between 7:00 and 8:00 a.m., and the evening peak hour was determined to be between 5:00 and 6:00 p.m. The evening peak hour volumes were approximately 110% higher than the morning peak hour volumes. Both the morning and evening peak hour volumes were used in the analysis. The Higley Lane counts were performed in June 2024 and grown to reflect 2025 traffic volumes. Detailed count data are included in Appendix B.

Hales Engineering considered potential seasonal adjustments to the observed traffic volumes. Monthly traffic volume data were obtained from a nearby UDOT automatic traffic recorder (ATR) on I-80 (ATR #321). In recent years, traffic volumes in May and June have been equal to approximately 123% and 106% of average traffic volumes, respectively. As a conservative measure, observed traffic volumes were not adjusted for seasonality.

Figure 2 shows the existing peak hour volumes as well as intersection geometry at the study intersections.

E. Level of Service Analysis

Hales Engineering determined that all study intersections are currently operating at acceptable levels of service during the peak hours, as shown in **Error! Reference source not found.**. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2025) conditions.


I-80 EB Ramps
Burmester Road
Higley Lane
Burmester Road
2
1
39
3
31
4
65
12
39
3
39
3


I-80 EB Ramps
Burmester Road
Higley Lane
Burmester Road
5
14
2
1
39
5
70
8
15
4
21
4

Table 4: Existing (2025) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
I-80 EB Ramps / Burmester Road	SEB Stop	a (1.0) / SER	a (0.9) / NET
Higley Lane / Burmester Road	WB Stop	a (4.8) / WBL	a (4.5) / WBL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, June 2025

F. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing was observed during the peak hours.

G. Mitigation Measures

No mitigation measures are recommended.

III. PROJECT CONDITIONS

A. Purpose

The project conditions discussion explains the type and intensity of development. This provides the basis for trip generation, distribution, and assignment of project trips to the surrounding study intersections defined in Chapter I.

B. Project Description

The proposed Burmester Road developments are located just off the I-80 eastbound ramps between Burmester Road and Higley Road. A concept plan for the proposed development is provided in Appendix A. The proposed land use for the development has been identified in Table 5.

Table 5: Project Land Uses

Land Use	Intensity	
	2025	2030, 2050
Warehousing	360,700 sq. ft.	1,214,100 sq. ft.
Manufacturing	360,700 sq. ft.	1,214,100 sq. ft.
Business Park	150,900 sq .ft	150,900 sq .ft
Data Center	-	1,844,900 sq .ft
Gas Station and Convenience Store	36 Fueling Stations	36 Fueling Stations
Fast Food Restaurant	5,000 sq. ft.	5,000 sq. ft.

C. Trip Generation

Trip generation for the development was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE), *Trip Generation*, 11th Edition, 2021. Trip reductions for pass-by trips and internal capture were estimated and applied to the project.

Pass-by trips are trips already on the road that visit the site before continuing the original route. For the proposed has station and convenience store, Hales Engineering referenced average ITE pass-by rates and assumed higher percentages due to the proximity to the I-80 Interchange, as shown in Table 6.

Internal capture trips are trips that stay within the development due to a mix of land uses instead of entering or exiting the site externally. As shown in Table 6, Hales Engineering assumed an internal capture of 90% for the fast food restaurant due to the proximity of the gas station and convenience store, as well as the proximity of the nearby land uses being included in the study.

It is anticipated that the fast-food restaurant will serve as an auxiliary land use to the gas station / c-store.

Table 6: Trip Reductions

Time Period	Land Use	Pass-by		Internal Capture
		ITE	Assumed	Assumed
Daily	Gas Station and Convenience Store	-	70%	-
	Fast Food Restaurant	-	-	90%
Morning	Gas Station and Convenience Store	76%	70%	-
	Fast Food Restaurant	-	-	90%
Evening	Gas Station and Convenience Store	75%	70%	-
	Fast Food Restaurant	-	-	90%

Trip generation for the proposed project is included in Table 7. The new trip generation for the development at full build is as follows:

- Daily Trips: 13,683
- Morning Peak Hour Trips: 1,676
- Evening Peak Hour Trips: 1,867

Table 7: Trip Generation

Property	Land Use[1]	# of Units	Unit Type	Trip Generation					Reductions		New Trips		
				Total	% In	% Out	In	Out	Internal Capture	Pass-by	In	Out	Total
Weekday Daily													
Rail	Warehousing (150)	950.0	KSF	1,540	50%	50%	770	770	0%	0%	770	770	1,540
	Manufacturing (140)	950.0	KSF	3,784	50%	50%	1,892	1,892	0%	0%	1,892	1,892	3,784
Higley	Data Center (160)	1,844.9	KSF	1,828	50%	50%	914	914	0%	0%	914	914	1,828
Morton	Convenience Store/Gas Station, 4-5.5 KSF (945)	36	Pumps	9,258	50%	50%	4,629	4,629	0%	70%	1,388	1,389	2,777
	Fast-Food Restaurant with Drive-Through Window (934)	5.0	KSF	2,338	50%	50%	1,169	1,169	90%	0%	117	117	234
	Business Park (770)	150.0	KSF	1,866	50%	50%	933	933	0%	0%	933	933	1,866
SITLA	Warehousing (150)	264.1	KSF	456	50%	50%	228	228	0%	0%	228	228	456
	Manufacturing (140)	264.1	KSF	1,198	50%	50%	599	599	0%	0%	599	599	1,198
TOTAL				**22,268**			**11,134**	**11,134**			**6,841**	**6,842**	**13,683**
AM Peak Hour													
Rail	Warehousing (150)	950.0	KSF	138	77%	23%	106	32	0%	0%	106	32	138
	Manufacturing (140)	950.0	KSF	590	76%	24%	448	142	0%	0%	448	142	590
Higley	Data Center (160)	1,844.9	KSF	204	55%	45%	112	92	0%	0%	112	92	204
Morton	Convenience Store/Gas Station, 4-5.5 KSF (945)	36	Pumps	974	50%	50%	487	487	0%	70%	146	146	292
	Fast-Food Restaurant with Drive-Through Window (934)	5.0	KSF	224	51%	49%	114	110	90%	0%	11	11	22
	Business Park (770)	150.0	KSF	202	85%	15%	172	30	0%	0%	172	30	202
SITLA	Warehousing (150)	264.1	KSF	56	77%	23%	43	13	0%	0%	43	13	56
	Manufacturing (140)	264.1	KSF	172	76%	24%	131	41	0%	0%	131	41	172
TOTAL				**2,560**			**1,613**	**947**			**1,169**	**507**	**1,676**
PM Peak Hour													
Rail	Warehousing (150)	950.0	KSF	142	28%	72%	40	102	0%	0%	40	102	142
	Manufacturing (140)	950.0	KSF	810	31%	69%	251	559	0%	0%	251	559	810
Higley	Data Center (160)	1,844.9	KSF	168	30%	70%	50	118	0%	0%	50	118	168
Morton	Convenience Store/Gas Station, 4-5.5 KSF (945)	36	Pumps	820	50%	50%	410	410	0%	70%	123	123	246
	Fast-Food Restaurant with Drive-Through Window (934)	5.0	KSF	166	52%	48%	86	80	90%	0%	9	8	17
	Business Park (770)	150.0	KSF	210	26%	74%	55	155	0%	0%	55	155	210
SITLA	Warehousing (150)	264.1	KSF	60	28%	72%	17	43	0%	0%	17	43	60
	Manufacturing (140)	264.1	KSF	214	31%	69%	66	148	0%	0%	66	148	214
TOTAL				**2,590**			**975**	**1,615**			**611**	**1,256**	**1,867**

1. Land Use Code from the Institute of Transportation Engineers (ITE) *Trip Generation*, 11th Edition, 2021.
SOURCE: Hales Engineering, June 2025

D. Trip Distribution and Assignment

Trip distribution percentages for new trips were based on the type of trip and the proximity of project access points to major streets, high population densities, and regional trip attractions. Existing travel patterns observed during data collection were also used to establish these distribution percentages, especially near the site. The assumed distribution of new trips during the peak hour is shown in Table 8.

Trip distribution percentages for pass-by trips were calculated based on the existing directional traffic on the major roads near the project, as summarized in Table 9.

Table 8: New Trip Distribution

Direction	% To/From Project
South	25%
East	55%
West	20%

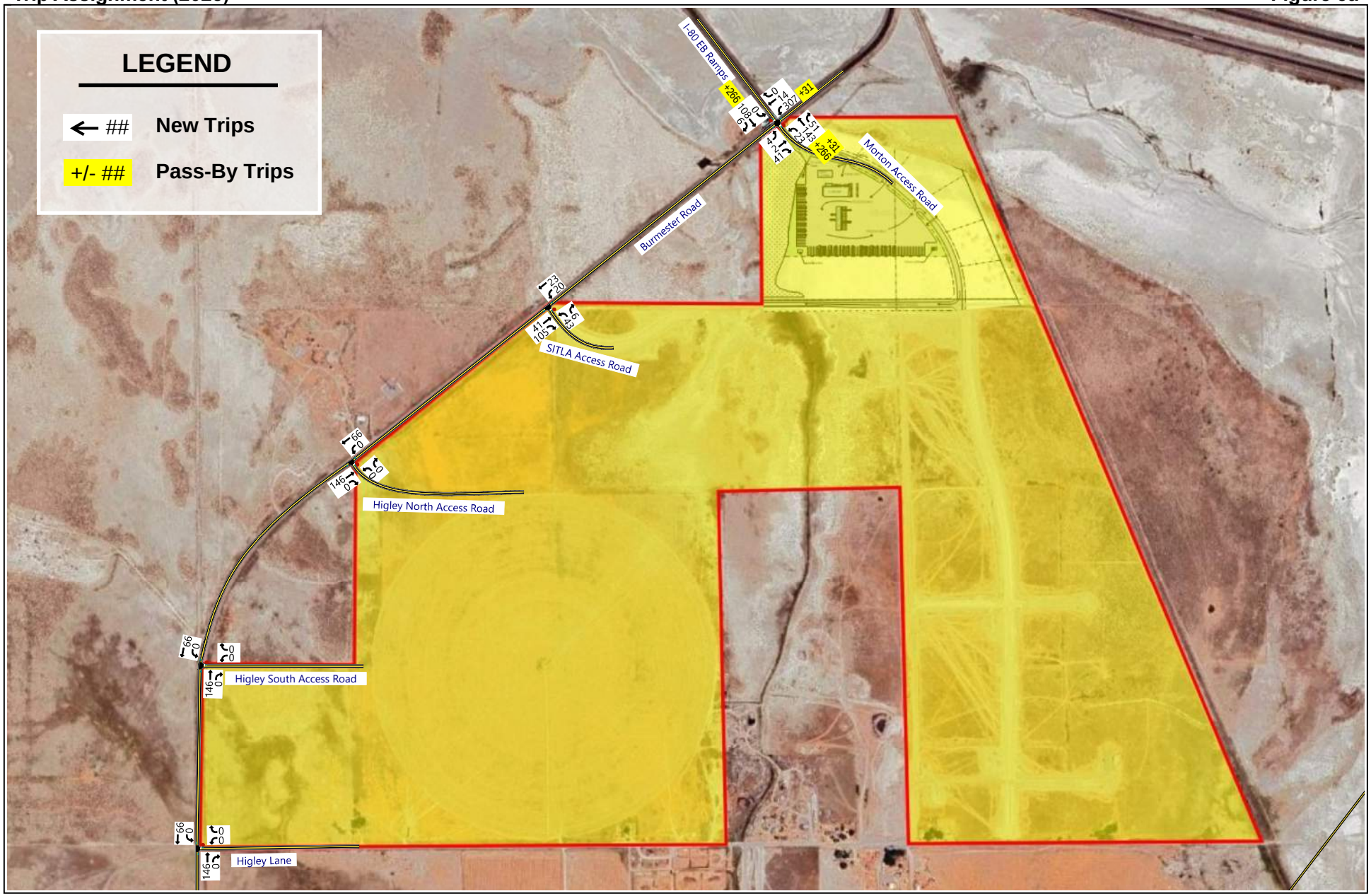
Table 9: Pass-by Trip Distribution

Direction	AM %	PM %
Westbound I-80	10%	15%
Eastbound I-80	70%	60%
Internal to Morton Access Road Project Trips	20%	25%

These trip distribution assumptions were used to assign the peak hour trip generation at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 3.

Tooele County - Burmester Road TIS
Trip Assignment (2025)

Morning Peak Hour
Figure 3a

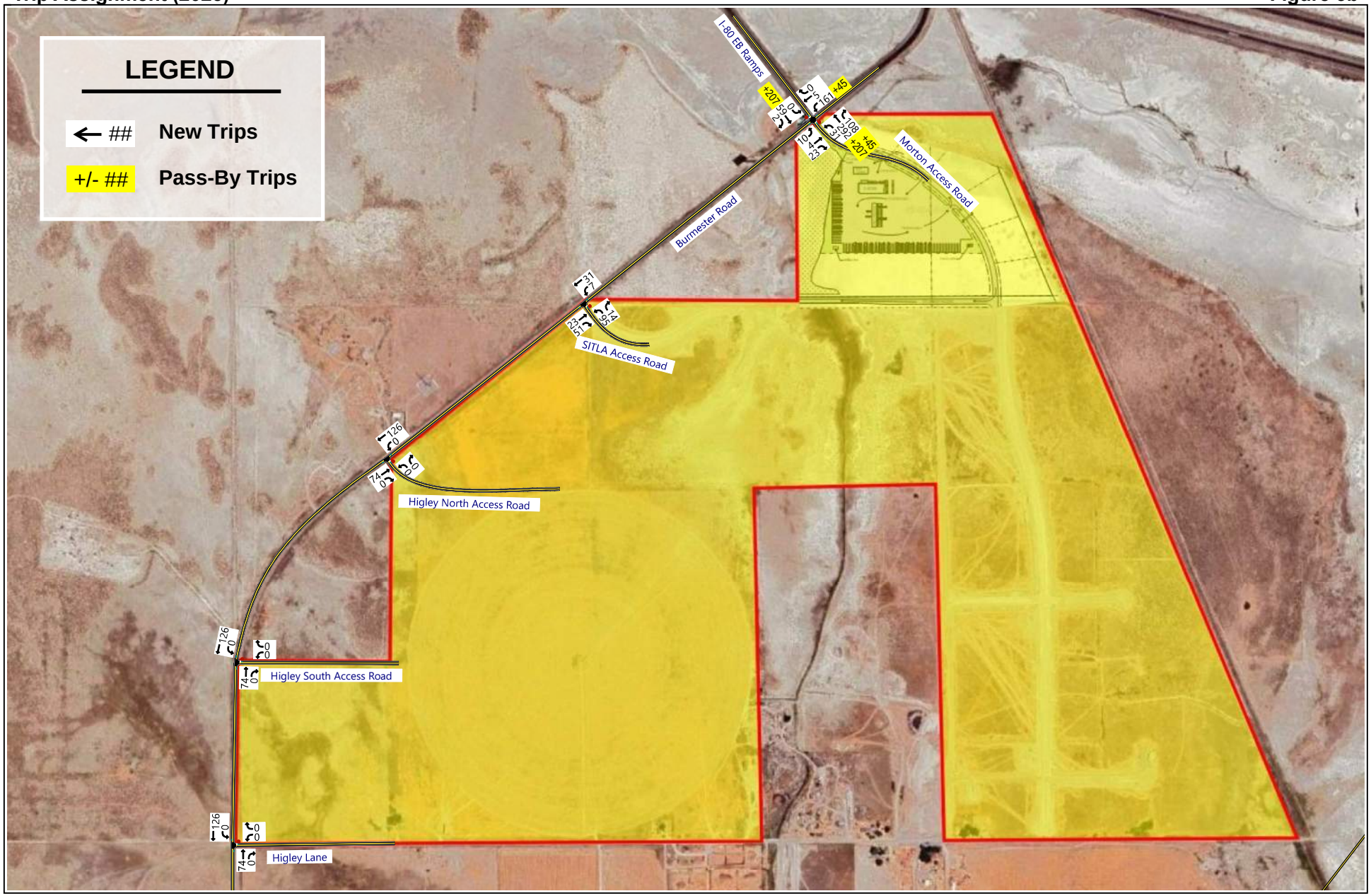


Hales Engineering
1220 North 500 West, Ste. 202 Lehi UT 84043

801.766.4343
06/12/2025

Tooele County - Burmester Road TIS
Trip Assignment (2025)

Morning Peak Hour
Figure 3b

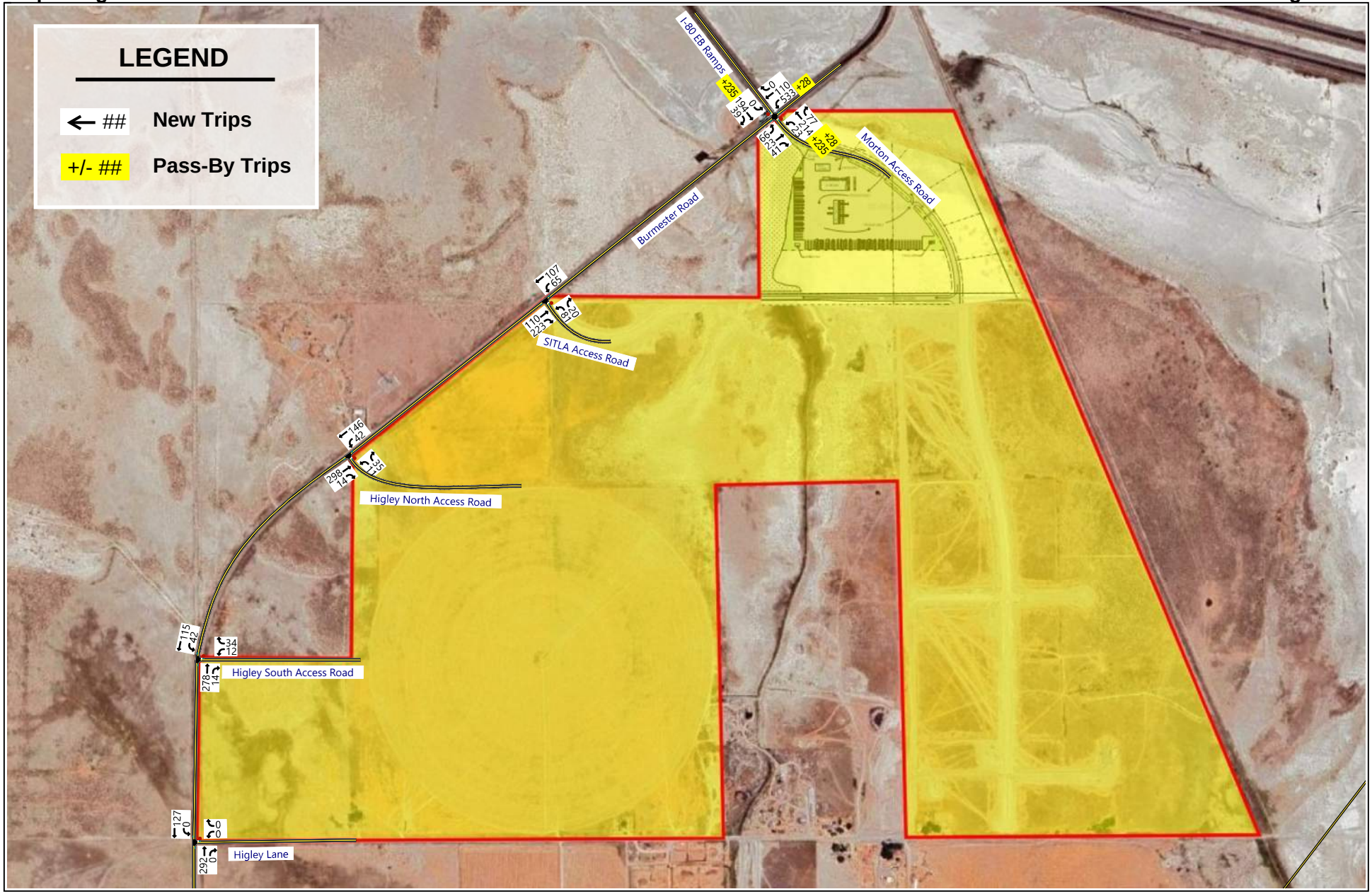


Hales Engineering
1220 North 500 West, Ste. 202 Lehi UT 84043

801.766.4343
06/12/2025

Tooele County - Bolinder TIS Update
Trip Assignment

Morning Peak Hour
Figure 3c

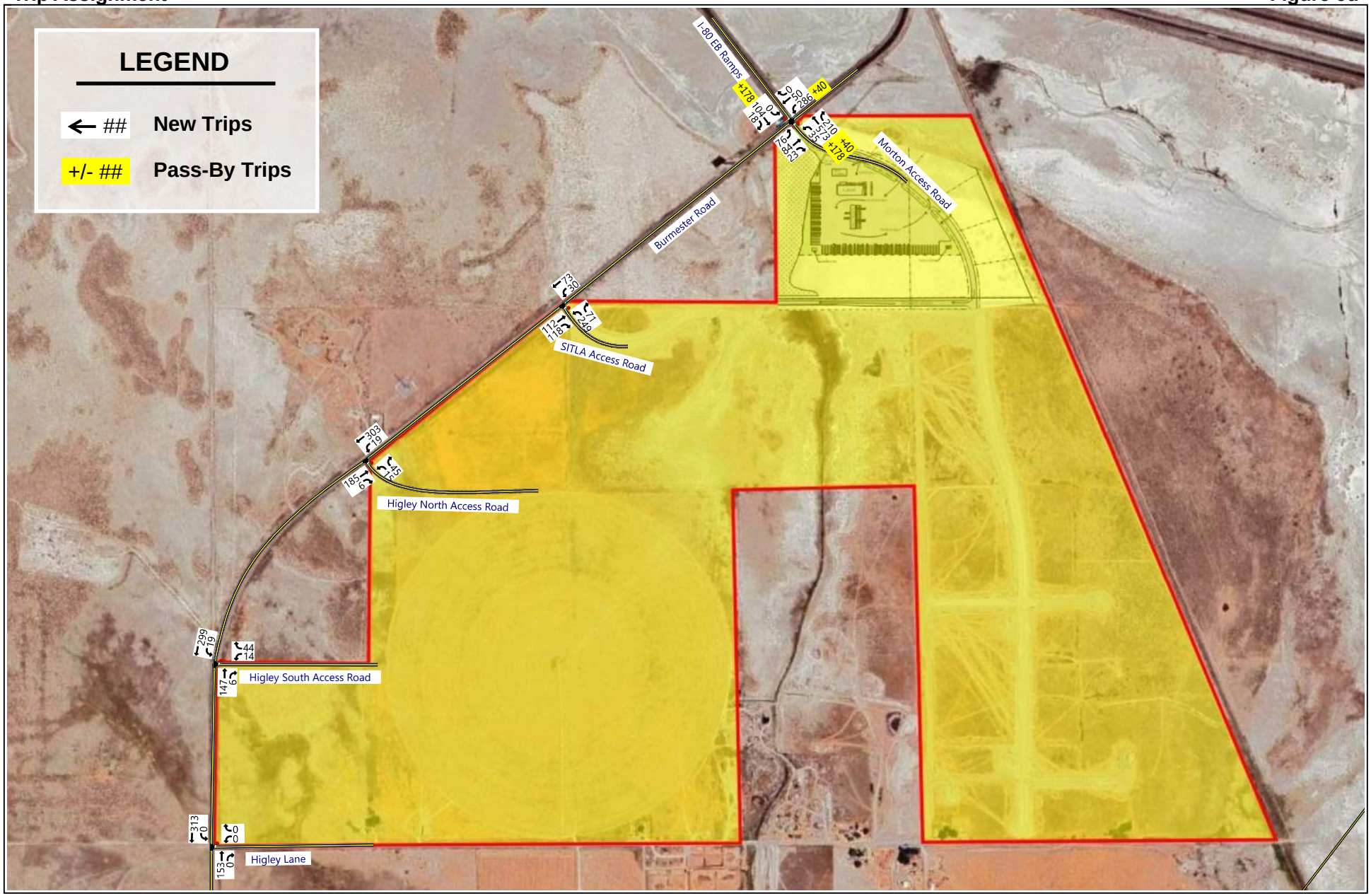


Hales Engineering
1220 North 500 West, Ste. 202 Lehi UT 84043

801.766.4343
06/12/2025

Tooele County - Bolinder TIS Update
Trip Assignment

Evening Peak Hour
Figure 3d



Hales Engineering
1220 North 500 West, Ste. 202 Lehi UT 84043

801.766.4343
06/12/2025

E. Access

The proposed access for the site will be gained at the following locations:

Burmester Road:

- Morton Access Road will be located across from the I-80 Eastbound Ramps / Burmester Road intersection. It will access the project on the southeast side of Burmester Road. It is anticipated that the access will be stop-controlled.
- SITLA Access Road will be located approximately 2,130 feet southwest of the I-80 Eastbound Ramps / Burmester Road intersection. It will access the project on the southeast side of Burmester Road. It is anticipated that the access will be stop-controlled.
- Higley North Access Road will be located approximately 4,000 feet southwest of the I-80 Eastbound Ramps / Burmester Road intersection. It will access the project on the southeast side of Burmester Road. It is anticipated that the access will be stop-controlled.
- Higley South Access Road will be located approximately 1,350 feet north of the Higley Lane / Burmester Road intersection. It will access the project on the east side of Burmester Road. It is anticipated that the access will be stop-controlled.

F. Auxiliary Lanes

Auxiliary lanes are deceleration (ingress) or acceleration (egress) turn lanes that provide for safe turning movements that have less impact on through traffic. These lanes are sometimes needed at accesses or roadway intersections if right- or left-turn volumes are high enough.

Deceleration (ingress) lanes are generally needed when there are at least 50 right-turn vehicles or 25 left-turn vehicles in an hour. These guidelines were used for the county roadways in the study area.

Based on these guidelines and the anticipated project traffic, it is recommended that the following deceleration (ingress) lanes be installed:

- Morton Access Road & I-80 Eastbound Ramps / Burmester Road:
  - Southwest bound left-turn
- SITLA Access Road / Burmester Road:
  - Northeast bound right-turn
  - Southwest bound left-turn
- Higley North Access Road / Burmester Road:
  - Southwest bound left-turn
- Higley South Access Road / Burmester Road:
  - Southbound left-turn

Some additional turn lanes were assumed at study intersections in preparation for future signalization and heavy egress volumes from the project.

IV. EXISTING (2025) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the existing (2025) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for existing background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the existing (2025) background traffic volumes to predict turning movement volumes for existing (2025) plus project conditions. Existing (2025) plus project peak hour turning movement volumes are shown in Figure 4.

C. Level of Service Analysis

Hales Engineering determined that all intersections are anticipated to operate at acceptable levels of service during the peak hours with project traffic added, as shown in Table 10.

Table 10: Existing (2025) Plus Project Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
Morton Access Rd & I-80 EB / Burmester Rd	NW/SE Stop	c (19.7) / SEL	b (12.3) / NWT
Higley Lane / Burmester Road	WB Stop	a (7.2) / WBL	a (6.2) / WBL
SITLA Access Road / Burmester Road	NWB Stop	a (5.4) / NBL	a (5.2) / NWL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, June 2025

D. Queuing Analysis

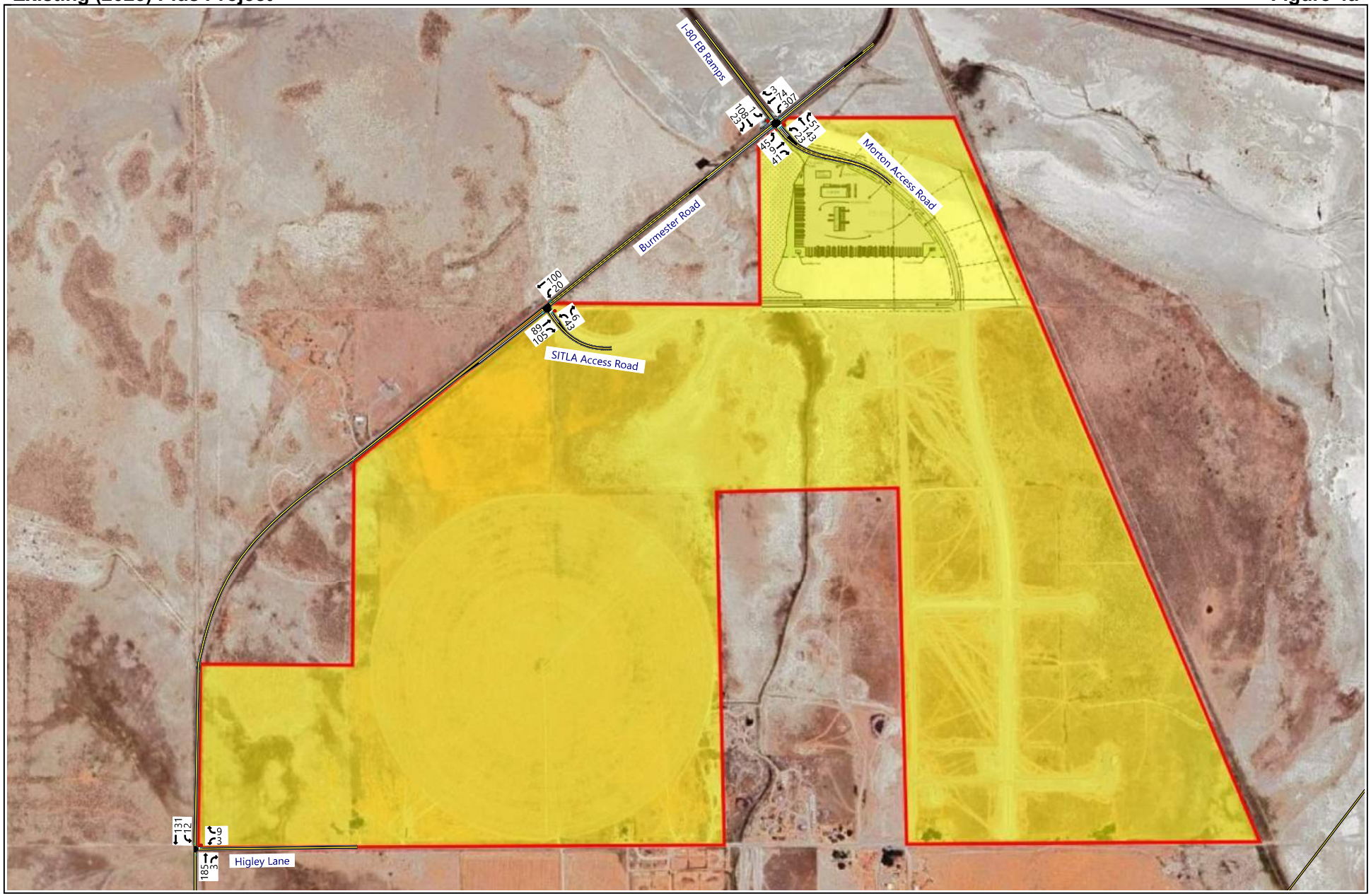
Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. With the recommended auxiliary lanes installed in the plus project scenario, no significant queueing is anticipated during the peak hours.

E. Mitigation Measures

No mitigation measures are recommended.

Tooele County - Burmester Road TIS
Existing (2025) Plus Project

Morning Peak Hour
Figure 4a

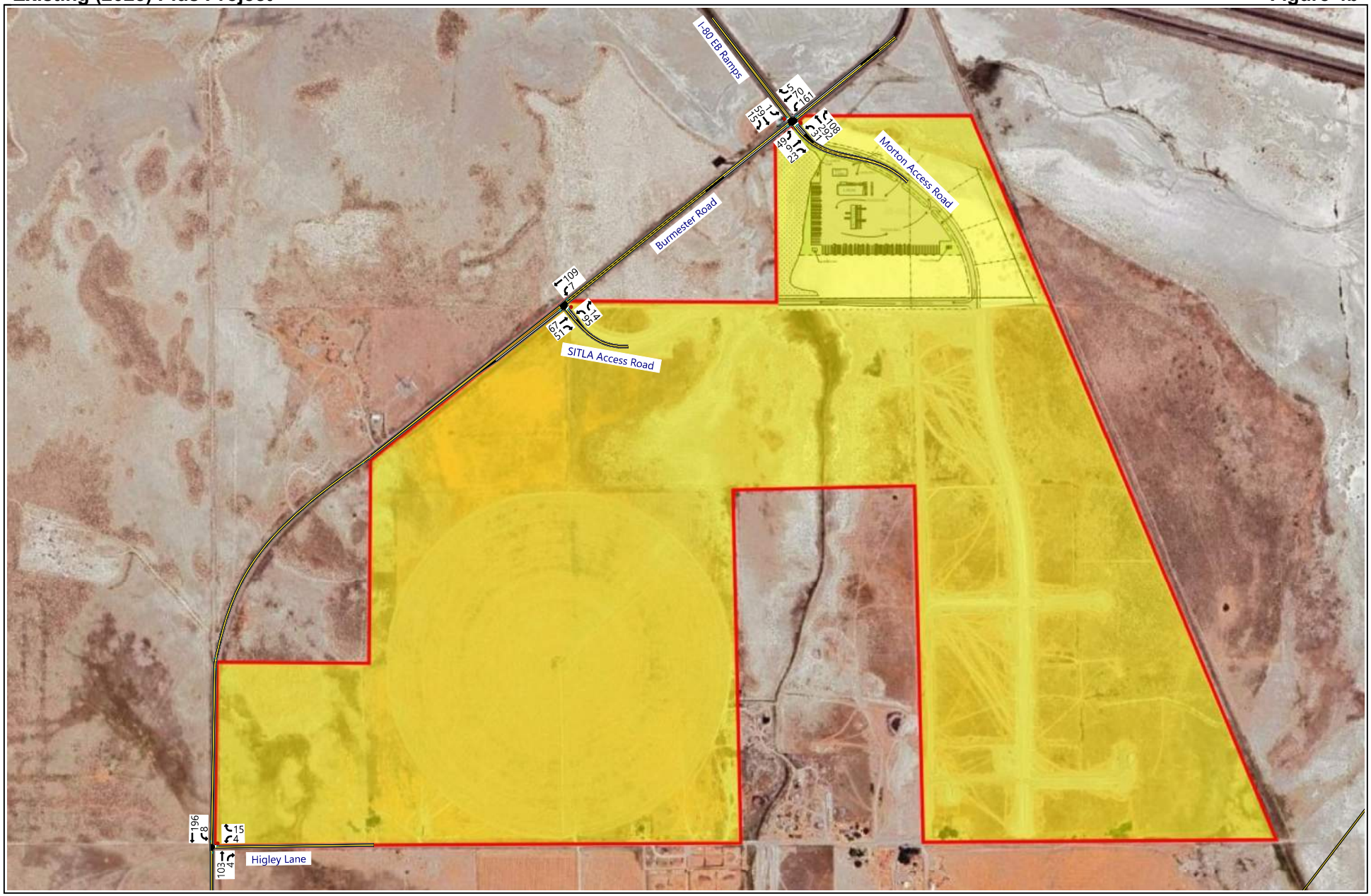


Hales Engineering
1220 North 500 West, Ste. 202 Lehi UT 84043

801.766.4343
06/17/2025

Tooele County - Burmester Road TIS
Existing (2025) Plus Project

Evening Peak Hour
Figure 4b



Hales Engineering
1220 North 500 West, Ste. 202 Lehi UT 84043

801.766.4343
06/17/2025

V. FUTURE (2030) BACKGROUND CONDITIONS

A. Purpose

The purpose of the future (2030) background analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions. Through this analysis, future background traffic operational deficiencies can be identified, and potential mitigation measures recommended.

B. Roadway Network

According to the Utah Unified Transportation Plan, there are no projects planned before 2030 in the study area. Therefore, no changes were made to the roadway network for the future (2030) analysis.

C. Traffic Volumes

Hales Engineering obtained future (2030) forecasted volumes from the Utah Statewide Annual Average Daily Traffic Forecast. Peak period turning movement counts were estimated using National Cooperative Highway Research Program (NCHRP) 255 methodologies which utilize existing peak period turn volumes and future average weekday daily traffic (AWDT) volumes to project the future turn volumes at the major intersections. Future (2030) peak hour turning movement volumes are shown in Figure 5.

D. Level of Service Analysis

Hales Engineering determined that all study intersections are anticipated to operate at acceptable levels of service during the peak hours in future (2030) background conditions, as shown in Table 11. These results serve as a baseline condition for the impact analysis of the proposed development for future (2030) conditions.

Table 11: Future (2030) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
I-80 EB Ramps / Burmester Road	SEB Stop	a (2.2) / SEL	a (2.2) / SEL
Higley Lane / Burmester Road	WB Stop	a (5.0) / WBL	a (5.0) / WBL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, June 2025


I-80 EB Ramps
Burmester Road
Higley Lane
Burmester Road
5
20
35
10
15
85
10
5
5
50


I-80 EB Ramps
5
5
5
30
Burmester Road
45
10
95
10
15
5
25
5
Higley Lane
Burnester Road

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing is anticipated during the peak hours.

F. Mitigation Measures

No mitigation measures are recommended.

VI. FUTURE (2030) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the future (2030) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on future background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the future (2030) background traffic volumes to predict turning movement volumes for future (2030) plus project conditions. Future (2030) plus project peak hour turning movement volumes are shown in Figure 6.

C. Level of Service Analysis

Hales Engineering determined that the Morton Access Road & I-80 EB Ramps / Burmester Road intersection is not anticipated to operate at an acceptable level of service during the peak hours in future (2030) plus project conditions, as shown in Table 12.

Table 12: Future (2030) Plus Project Peak Hour LOS

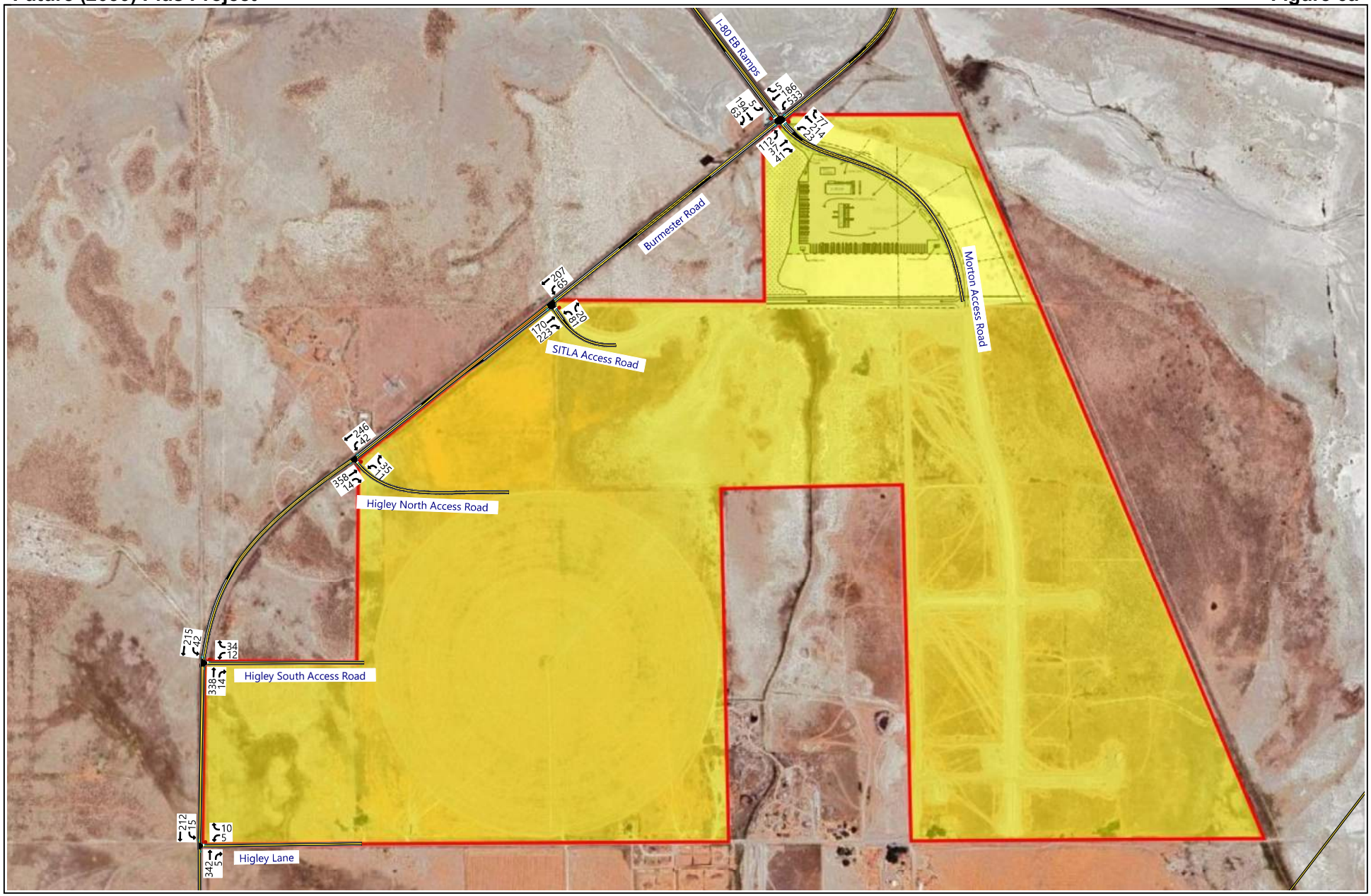
Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
Morton Access Rd & I-80 EB / Burmester Rd	NW/SE Stop	f (>50) / NWT	f (>50) / NWT
Higley Lane / Burmester Road	WB Stop	a (6.9) / WBL	a (7.4) / WBL
SITLA Access Road / Burmester Road	NWB Stop	a (9.5) / NBL	b (10.9) / NBL
Higley North Access Road / Burmester Road	NWB Stop	b (10.3) / NWL	b (11.4) / NWL
Higley South Access Road / Burmester Road	WB Stop	b (10.9) / WBL	a (9.8) / WBL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, June 2025

Tooele County - Burmester Road TIS
Future (2030) Plus Project

Morning Peak Hour
Figure 6a

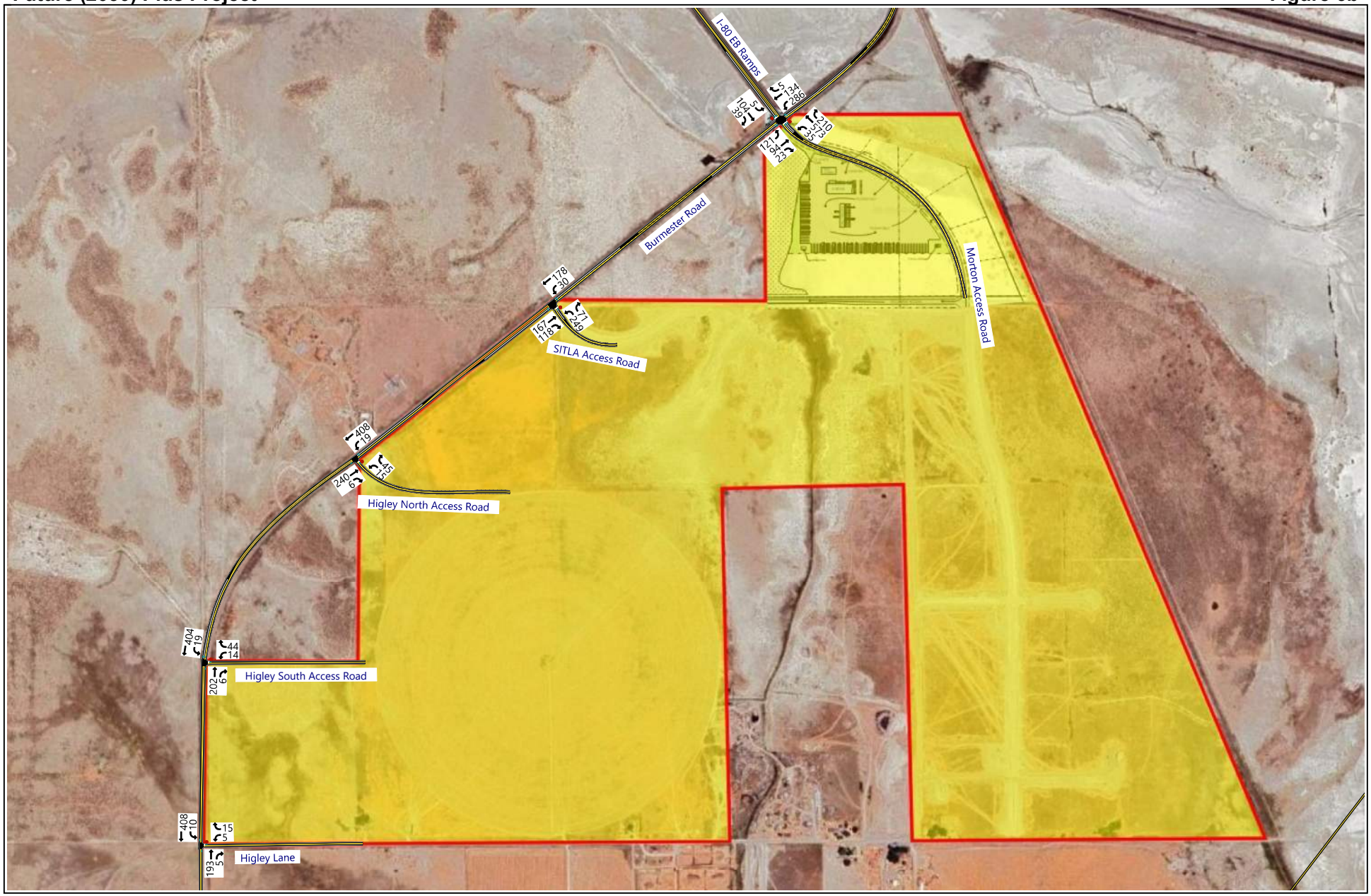


Hales Engineering
1220 North 500 West, Ste. 202 Lehi UT 84043

801.766.4343
06/17/2025

Tooele County - Burmester Road TIS
Future (2030) Plus Project

Evening Peak Hour
Figure 6b



Hales Engineering
1220 North 500 West, Ste. 202 Lehi UT 84043

801.766.4343
06/17/2025

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths during the peak hour are summarized as follows:

- Morton Access Road & I-80 EB Ramps / Burmester Road:
  - Northwest bound: >1000 feet (AM & PM)
  - Southeast bound: >1000 feet (AM)

E. Mitigation Measures

With the project trips added to the project intersections, it is anticipated that a traffic signal will be warranted at the Morton Access Road & I-80 EB Ramps / Burmester Road intersection. It is recommended that a signal be installed at this location.

F. Mitigation Results

With the traffic signal installed at Morton Access Road & I-80 EB Ramps / Burmester Road, all intersections in the study area are anticipated to operate at an acceptable LOS during the morning and evening peak hours. The queues at the intersection are also cut down to an acceptable length.

Table 13: Future (2030) Plus Project Peak Hour LOS Mitigation Results

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
Morton Access Road & I-80 EB Ramps / Burmester Road	Signal	C (22.9)	C (25.1)
Higley Lane / Burmester Road	WB Stop	a (7.2) / WBL	a (7.3) / WBL
SITLA Access Road / Burmester Road	NWB Stop	a (10.0) / NBL	b (11.1) / NBL
Higley North Access Road / Burmester Road	NWB Stop	b (10.2) / NWL	b (11.6) / NWL
Higley South Access Road / Burmester Road	WB Stop	b (11.2) / WBL	a (9.8) / WBL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, June 2025

VII. FUTURE (2050) BACKGROUND CONDITIONS

A. Purpose

The purpose of the future (2050) background analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions. Through this analysis, future background traffic operational deficiencies can be identified, and potential mitigation measures recommended.

B. Roadway Network

According to the Utah Unified Transportation Plan, there are no projects planned before 2050 in the study area. Therefore, no changes were made to the roadway network for the future (2050) analysis.

C. Traffic Volumes

Hales Engineering obtained future (2050) forecasted volumes from the Utah Statewide Annual Daily Traffic Forecast. Peak period turning movement counts were estimated using NCHRP 255 methodologies which utilize existing peak period turn volumes and future AWDT volumes to project the future turn volumes at the major intersections. Future (2050) background peak hour turning movement volumes are shown in Figure 7.

D. Level of Service Analysis

Hales Engineering determined that all study intersections are anticipated to operate at acceptable levels of service during the peak hours in future (2050) background conditions, as shown in Table 14. These results serve as a baseline condition for the impact analysis of the proposed development for future (2050) conditions.

Table 14: Future (2050) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
I-80 EB Ramps / Burmester Road	SEB Stop	a (2.8) / SEL	a (3.2) / SEL
Higley Lane / Burmester Road	WB Stop	a (5.0) / WBL	a (5.5) / WBL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, June 2025


I-80 EB Ramps
Burmester Road
Higley Lane
Burmester Road
10
110
5
5
35
65
15
195
10
5
125
5


I-80 EB Ramps
5
5
10
160
Burmester Road
45
60
10
215
15
5
5
59
Higley Lane
Burmester Road

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing is anticipated during the peak hours.

F. Mitigation Measures

No mitigation measures are recommended.

VIII. FUTURE (2050) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the future (2050) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on future background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the future (2050) background traffic volumes to predict turning movement volumes for future (2050) plus project conditions. Future (2050) plus project peak hour turning movement volumes are shown in Figure 8.

C. Level of Service Analysis

Hales Engineering determined that all intersections are anticipated to operate at acceptable levels of service during the peak hours in future (2050) plus project conditions, as shown in Table 15.

Table 15: Future (2050) Plus Project Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Evening Peak
Morton Access Rd & I-80 EB / Burmester Rd	Signal	C (27.0)	D (36.7)
Higley Lane / Burmester Road	WB Stop	a (7.5) / WBL	a (7.7) / WBL
SITLA Access Road / Burmester Road	NWB Stop	b (13.0) / NBL	c (19.4) / NBL
Higley North Access Road / Burmester Road	NWB Stop	c (16.2) / NWL	c (16.5) / NWL
Higley South Access Road / Burmester Road	WB Stop	c (15.4) / WBL	b (10.4) / WBL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, June 2025

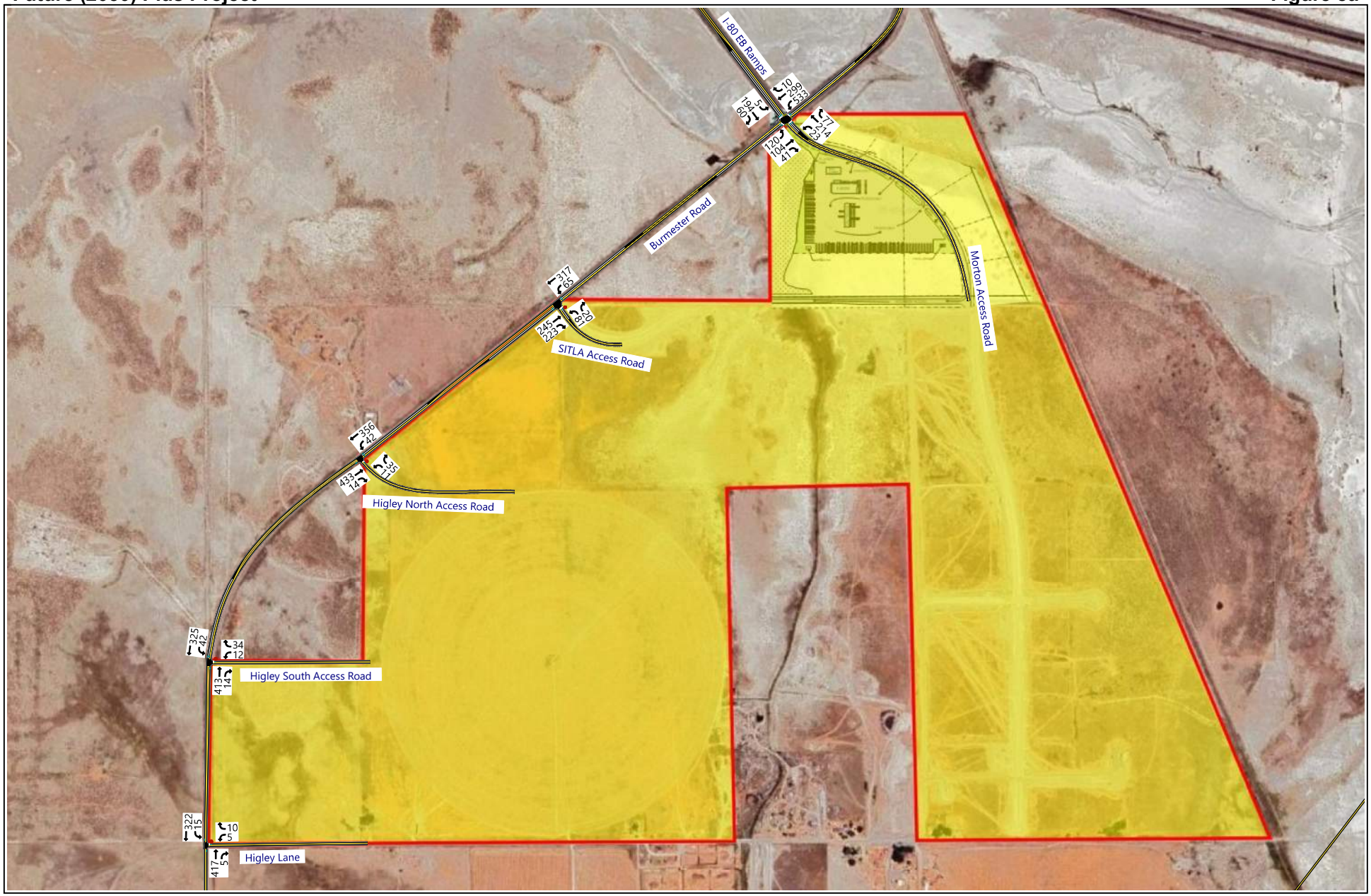
D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Potentially significant 95th percentile queue lengths during the peak hours are summarized as follows:

- Morton Access Road & I-80 EB Ramps / Burmester Road:
  - Northwest bound: 500 feet (PM)
  - Southwest bound: 575 feet (AM & PM)

Tooele County - Burmester Road TIS
Future (2050) Plus Project

Morning Peak Hour
Figure 8a

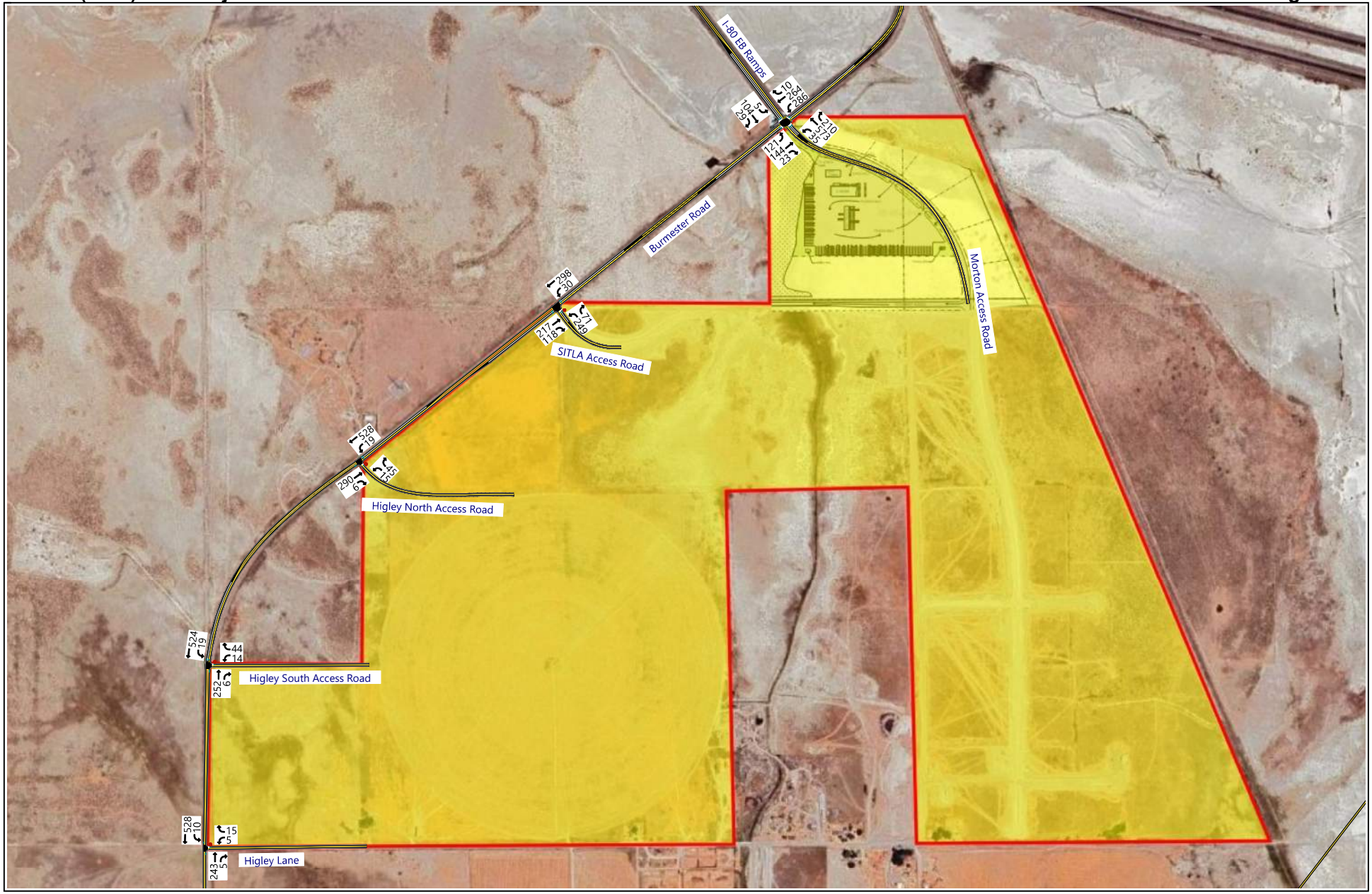


Hales Engineering
1220 North 500 West, Ste. 202 Lehi UT 84043

801.766.4343
06/17/2025

Tooele County - Burmester Road TIS
Future (2050) Plus Project

Evening Peak Hour
Figure 8b



Hales Engineering
1220 North 500 West, Ste. 202 Lehi UT 84043

801.766.4343
06/17/2025

E. Mitigation Measures

No further mitigation measures are recommended. Although queues at the northwest bound and southwest bound approaches of Morton Access Road & I-80 EB Ramps / Burmester Road may be a cause of concern, most of the vehicles move through the intersection within one cycle. Installing permissive protective left-turn phasing or extending the right and left-turn storage length at the northwest bound approach will likely mitigate potential congestion concerns.

F. Recommended Storage Lengths

Hales Engineering determined recommended storage lengths based on the 95th percentile queue lengths given in the future (2050) plus project scenario. These storage lengths do not include the taper length. Recommended storage lengths for the study intersections are shown in Table 16. Intersections shown in Table 16 include new intersections and existing intersections that have recommended storage length changes.

Table 16: Recommended Storage Lengths

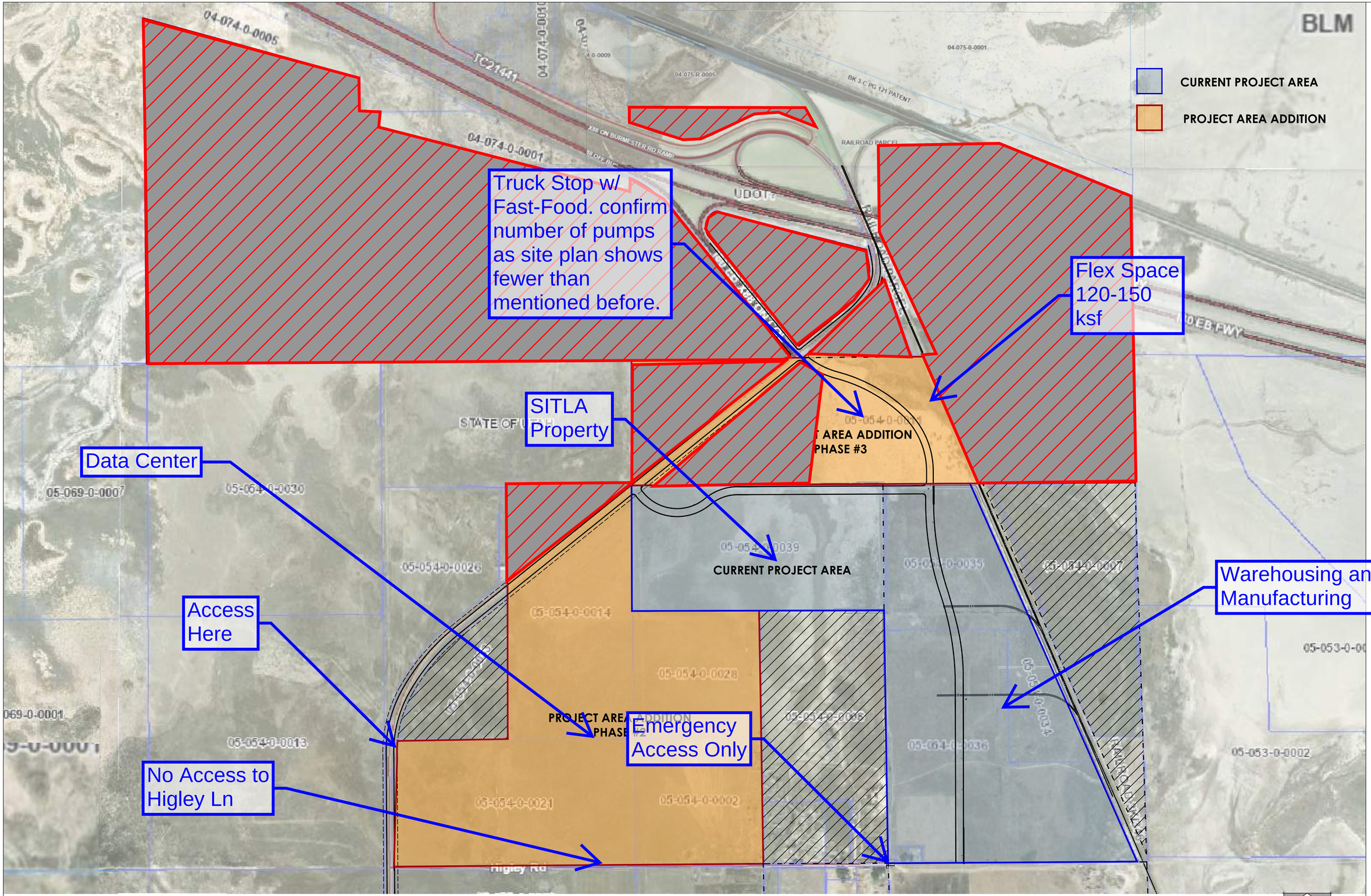
	Intersection	Recommended Storage Lengths (feet)															
		Northeast-bound				Northwest-bound				Southeast-bound				Southwest-bound			
		LT		RT		LT		RT		LT		RT		LT		RT	
		E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
1	Morton Access Rd & I-80 EB Ramps / Burmester Rd	-	200	-	-	-	125	-	250	-	100	-	100	-	575	-	-
2	Higley Ln / Burmester Rd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	SITLA Access Rd / Burmester Rd	-	-	-	100	-	-	-	125	-	100	-	-	-	-	-	-
4	Higley North Access Rd / Burmester Rd	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-
5	Higley South Access Rd / Burmester Rd	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-

1. Storage lengths are based on 2050 95th percentile queue lengths and do not include required deceleration / taper distances
2. E = Existing storage length (approximate), if applicable; P = proposed storage length for new turn lanes or changes to existing turn lanes, if applicable

Source: Hales Engineering, June 2025

APPENDIX A

Site Plan



PROPOSED PROJECT AREA ADDITION

NTS

NORTH

TOOELE VALLEY INLAND PORT

ENGINEER OF RECORD

PROJECT NUMBER

REVISION NUMBER

DRAWING TITLE

DATE:

DRAWN BY:

CHECKED BY:

APPENDIX B

Turning Movement Counts

Traffic Count Solutions LLC
801.505.9052

Intersection Turning Movement Summary

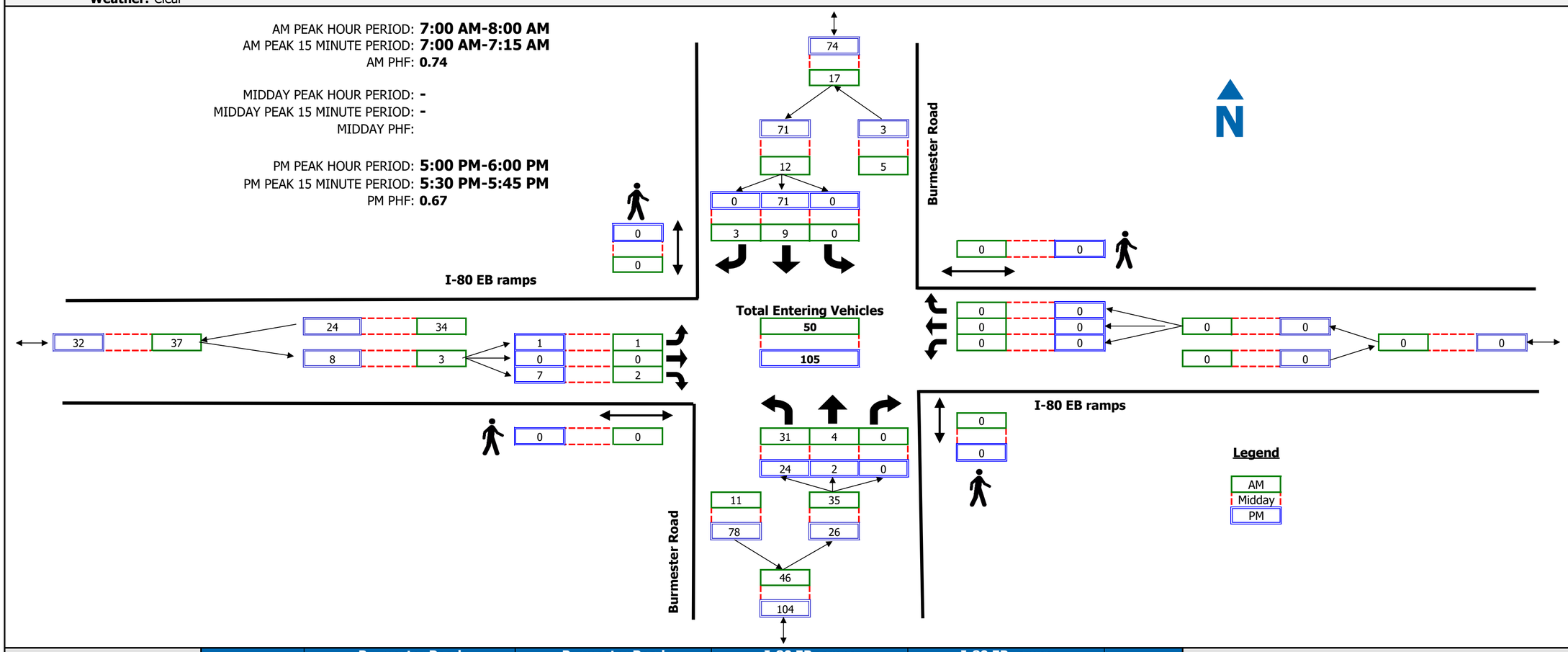
Intersection: Burmester Road / I-80 EB ramps
North/South Road: Burmester Road
East/West Road: I-80 EB ramps
Jurisdiction: Tooele County
Project Title: Tooele County Burmester TIS
Project No: UT25-3026
Weather: Clear

Date: 5-29-25, Thu
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

AM PEAK HOUR PERIOD: **7:00 AM-8:00 AM**
AM PEAK 15 MINUTE PERIOD: **7:00 AM-7:15 AM**
AM PHF: **0.74**

MIDDAY PEAK HOUR PERIOD: **-**
MIDDAY PEAK 15 MINUTE PERIOD: **-**
MIDDAY PHF:

PM PEAK HOUR PERIOD: **5:00 PM-6:00 PM**
PM PEAK 15 MINUTE PERIOD: **5:30 PM-5:45 PM**
PM PHF: **0.67**



COUNT SUMMARY	Burmester Road Northbound				Burmester Road Southbound				I-80 EB ramps Eastbound				I-80 EB ramps Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	

AM PERIOD COUNTS

Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00 - 7:15	12	1	0	0	0	3	1	0	0	0	0	0	0	0	0	0	17
7:15 - 7:30	10	1	0	0	0	3	1	0	1	0	0	0	0	0	0	0	16
7:30 - 7:45	6	2	0	0	0	3	1	0	0	0	2	0	0	0	0	0	14
7:45 - 8:00	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:00 - 8:15	2	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	6
8:15 - 8:30	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
8:30 - 8:45	3	2	0	0	0	5	0	0	0	0	0	0	0	0	0	0	10
8:45 - 9:00	5	0	0	0	0	5	0	0	0	0	1	0	0	0	0	0	11

MIDDAY PERIOD COUNTS

Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PM PERIOD COUNTS

Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
16:00 - 16:15	4	0	0	0	0	8	1	0	0	0	4	0	0	0	0	0	17
16:15 - 16:30	5	0	0	0	0	14	1	0	0	0	2	0	0	0	0	0	22
16:30 - 16:45	0	0	0	0	0	16	3	0	1	0	2	0	0	0	0	0	22
16:45 - 17:00	5	1	0	0	0	11	0	0	0	0	0	0	0	0	0	0	17
17:00 - 17:15	6	1	0	0	0	13	0	0	0	0	1	0	0	0	0	0	21
17:15 - 17:30	6	1	0	0	0	16	0	0	0	0	2	0	0	0	0	0	25
17:30 - 17:45	8	0	0	0	0	28	0	0	0	0	3	0	0	0	0	0	39
17:45 - 18:00	4	0	0	0	0	14	0	0	1	0	1	0	0	0	0	0	20

Traffic Count Solutions LLC
801.505.9052

Intersection Turning Movement Summary

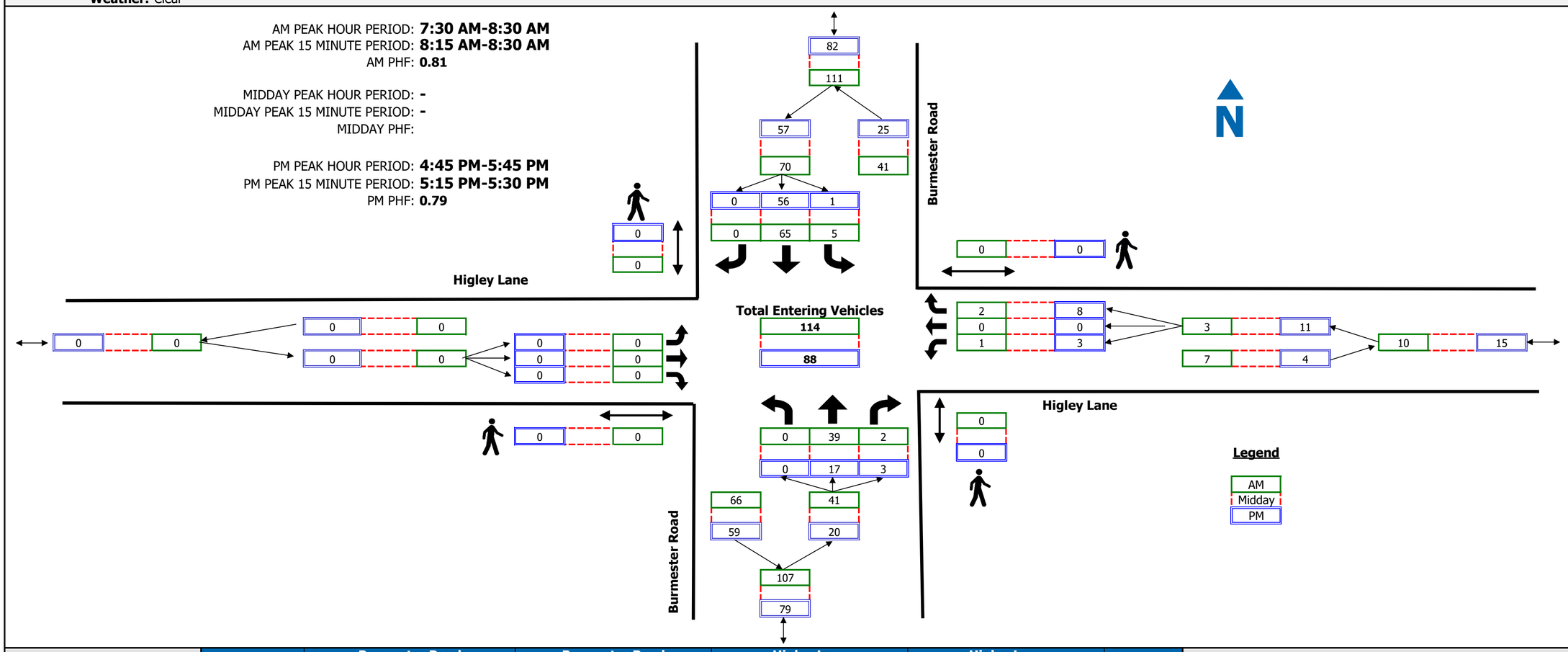
Intersection: Burmester Road / Higley Lane
North/South Road: Burmester Road
East/West Road: Higley Lane
Jurisdiction: Tooele County
Project Title: Tooele County GRE Industrial Park TIS
Project No: UT24-2779
Weather: Clear

Date: 6-6-24, Thu
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 3.5%
Number of Years: 1

AM PEAK HOUR PERIOD: **7:30 AM-8:30 AM**
AM PEAK 15 MINUTE PERIOD: **8:15 AM-8:30 AM**
AM PHF: **0.81**

MIDDAY PEAK HOUR PERIOD: **-**
MIDDAY PEAK 15 MINUTE PERIOD: **-**
MIDDAY PHF:

PM PEAK HOUR PERIOD: **4:45 PM-5:45 PM**
PM PEAK 15 MINUTE PERIOD: **5:15 PM-5:30 PM**
PM PHF: **0.79**



COUNT SUMMARY	Burmester Road Northbound				Burmester Road Southbound				Higley Lane Eastbound				Higley Lane Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	

AM PERIOD COUNTS

Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00 - 7:15	0	8	0	0	2	5	0	0	0	0	0	0	0	0	1	0	16
7:15 - 7:30	0	12	1	0	0	1	0	0	0	0	0	0	0	0	0	0	14
7:30 - 7:45	0	9	0	0	0	9	0	0	0	0	0	0	0	0	1	0	19
7:45 - 8:00	0	8	0	0	1	17	0	0	0	0	0	0	0	0	0	0	26
8:00 - 8:15	0	9	1	0	2	19	0	0	0	0	0	0	0	0	0	0	31
8:15 - 8:30	0	12	1	0	2	18	0	0	0	0	0	0	1	0	1	0	35
8:30 - 8:45	0	9	0	0	0	6	0	0	0	0	0	0	1	0	0	0	16
8:45 - 9:00	0	6	1	0	0	7	0	0	0	0	0	0	0	0	0	0	14

MIDDAY PERIOD COUNTS

Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PM PERIOD COUNTS

Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
16:00 - 16:15	0	5	1	0	0	10	0	0	0	0	0	0	0	0	0	0	16
16:15 - 16:30	0	4	0	0	2	13	0	0	0	0	0	0	0	0	3	0	22
16:30 - 16:45	0	4	2	0	0	10	0	0	0	0	0	0	0	0	1	0	17
16:45 - 17:00	0	1	1	0	0	15	0	0	0	0	0	0	0	0	1	0	18
17:00 - 17:15	0	4	1	0	0	8	0	0	0	0	0	0	1	0	3	0	17
17:15 - 17:30	0	5	1	0	1	15	0	0	0	0	0	0	2	0	4	0	28
17:30 - 17:45	0	6	0	0	0	16	0	0	0	0	0	0	0	0	0	0	22
17:45 - 18:00	0	3	0	0	0	13	0	0	0	0	0	0	0	0	0	0	16

APPENDIX C

LOS Results

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Existing (2025) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & I-80 EB Ramps
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SE	L	1	0	0		
	R	***2***	***3***	***150***	***1.0***	***A***
	Subtotal	3	3	100	1.0	*A*
NE	L	36	34	94	0.5	*A*
	T	5	5	105	0.9	*A*
	Subtotal	41	39	95	0.6	*A*
SW	T	10	12	114	0.5	*A*
	R	4	4	107	0.0	*A*
	Subtotal	14	16	114	0.4	*A*
Total		58	58	100	0.5	*A*

Intersection: Burnester Road & Higley Lane
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	46	46	101	0.2	*A*
	R	4	5	133	0.1	*A*
	Subtotal	50	51	102	0.2	*A*
SB	L	14	12	84	0.3	*A*
	T	76	76	100	0.3	*A*
	Subtotal	90	88	98	0.3	*A*
WB	***L***	***4***	***3***	***80***	***4.8***	***A***
	R	10	11	105	2.3	*A*
	Subtotal	14	14	100	2.8	*A*
Total		154	153	99	0.5	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Existing (2025) Background*
Time Period: *Evening Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & I-80 EB Ramps
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SE	L	1	0	0		
	R	3	4	145	0.8	*A*
	Subtotal	4	4	100	0.8	*A*
NE	L	37	36	97	0.5	*A*
	T	***5***	***6***	***126***	***0.9***	***A***
	Subtotal	42	42	100	0.6	*A*
SW	T	10	10	95	0.6	*A*
	R	4	3	80	0.0	*A*
	Subtotal	14	13	93	0.5	*A*
Total		60	59	99	0.6	*A*

Intersection: Burnester Road & Higley Lane
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	21	20	96	0.3	*A*
	R	5	6	126	0.0	*A*
	Subtotal	26	26	100	0.2	*A*
SB	L	10	9	95	0.4	*A*
	T	67	66	98	0.2	*A*
	Subtotal	77	75	97	0.2	*A*
WB	***L***	***5***	***5***	***105***	***4.5***	***A***
	R	18	19	106	2.5	*A*
	Subtotal	23	24	104	2.9	*A*
Total		125	125	100	0.8	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Existing (2025) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & Morton Access Road/I-80 EB Ramps
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	25	26	103	13.6	*B*
	T	158	160	101	16.6	*C*
	R	56	54	96	3.7	*A*
	Subtotal	239	240	100	13.4	*B*
SE	***L***	***1***	***1***	***100***	***19.7***	***C***
	T	119	117	98	17.3	*C*
	R	25	26	103	6.2	*A*
	Subtotal	145	144	99	15.3	*C*
NE	L	50	53	107	1.4	*A*
	T	10	9	92	2.8	*A*
	R	46	47	103	0.7	*A*
	Subtotal	106	109	103	1.2	*A*
SW	L	338	344	102	3.3	*A*
	T	82	83	102	1.2	*A*
	R	3	4	133	0.2	*A*
	Subtotal	423	431	102	2.9	*A*
Total		913	924	101	7.3	*A*

Intersection: Burnester Road & Higley Lane
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	204	208	102	0.4	*A*
	R	3	4	133	0.1	*A*
	Subtotal	207	212	102	0.4	*A*
SB	L	14	13	96	1.3	*A*
	T	144	144	100	1.1	*A*
	Subtotal	158	157	99	1.1	*A*
WB	***L***	***3***	***1***	***33***	***7.2***	***A***
	R	10	10	103	3.1	*A*
	Subtotal	13	11	85	3.5	*A*
Total		378	380	101	0.8	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Existing (2025) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & SITLA Access Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***48***	***45***	***95***	***5.4***	***A***
	R	7	6	89	2.9	*A*
	Subtotal	55	51	93	5.1	*A*
NE	T	98	103	105	1.3	*A*
	R	116	117	101	1.1	*A*
	Subtotal	214	220	103	1.2	*A*
SW	L	22	21	94	1.9	*A*
	T	110	114	103	1.4	*A*
	Subtotal	132	135	102	1.5	*A*
Total		401	406	101	1.8	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Existing (2025) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & Morton Access Road/I-80 EB Ramps
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	33	32	96	8.5	*A*
	T	***311***	***308***	***99***	***12.3***	***B***
	R	115	115	100	4.0	*A*
	Subtotal	459	455	99	9.9	*A*
SE	L	1	1	100	7.3	*A*
	T	63	62	99	11.4	*B*
	R	16	17	108	3.3	*A*
	Subtotal	80	80	100	9.6	*A*
NE	L	52	51	98	1.2	*A*
	T	10	10	103	2.3	*A*
	R	24	28	114	0.6	*A*
	Subtotal	86	89	103	1.1	*A*
SW	L	172	166	97	1.5	*A*
	T	74	74	99	1.1	*A*
	R	5	5	100	0.2	*A*
	Subtotal	251	245	98	1.4	*A*
Total		876	869	99	6.6	*A*

Intersection: Burnester Road & Higley Lane
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	110	111	101	0.4	*A*
	R	4	5	125	0.1	*A*
	Subtotal	114	116	102	0.4	*A*
SB	L	9	9	103	1.2	*A*
	T	209	211	101	1.1	*A*
	Subtotal	218	220	101	1.1	*A*
WB	***L***	***4***	***4***	***100***	***6.2***	***A***
	R	16	16	102	2.5	*A*
	Subtotal	20	20	100	3.2	*A*
Total		351	356	101	1.0	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Existing (2025) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & SITLA Access Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	***L***	***101***	***103***	***102***	***5.2***	***A***
	R	15	16	108	2.6	*A*
	Subtotal	116	119	103	4.9	*A*
NE	T	72	74	102	0.9	*A*
	R	54	52	96	0.7	*A*
	Subtotal	126	126	100	0.8	*A*
SW	L	8	7	90	1.0	*A*
	T	117	117	100	1.4	*A*
	Subtotal	125	124	99	1.4	*A*
Total		367	369	101	2.3	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2030) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & I-80 EB Ramps
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SE	***L***	***6***	***5***	***87***	***2.2***	***A***
	R	6	6	104	1.1	*A*
	Subtotal	12	11	92	1.6	*A*
NE	L	41	44	107	0.7	*A*
	T	12	14	122	1.2	*A*
	Subtotal	53	58	109	0.8	*A*
SW	T	24	22	93	0.6	*A*
	R	6	5	87	0.0	*A*
	Subtotal	30	27	90	0.5	*A*
Total		94	96	103	0.8	*A*

Intersection: Burnester Road & Higley Lane
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	59	57	97	0.3	*A*
	R	6	6	104	0.2	*A*
	Subtotal	65	63	97	0.3	*A*
SB	L	18	18	100	0.6	*A*
	T	100	107	107	0.5	*A*
	Subtotal	118	125	106	0.5	*A*
WB	***L***	***6***	***5***	***87***	***5.0***	***A***
	R	12	11	96	2.6	*A*
	Subtotal	18	16	89	3.4	*A*
Total		200	204	102	0.7	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2030) Background*
Time Period: *Evening Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & I-80 EB Ramps
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SE	***L***	***6***	***5***	***87***	***2.2***	***A***
	R	6	5	87	1.0	*A*
	Subtotal	12	10	83	1.6	*A*
NE	L	54	57	106	0.9	*A*
	T	12	14	114	1.3	*A*
	Subtotal	66	71	108	1.0	*A*
SW	T	36	37	103	0.6	*A*
	R	6	5	87	0.0	*A*
	Subtotal	42	42	100	0.5	*A*
Total		120	123	103	0.9	*A*

Intersection: Burnester Road & Higley Lane
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	30	30	99	0.2	*A*
	R	6	6	104	0.2	*A*
	Subtotal	36	36	100	0.2	*A*
SB	L	12	11	90	0.4	*A*
	T	114	113	99	0.4	*A*
	Subtotal	126	124	98	0.4	*A*
WB	***L***	***6***	***5***	***87***	***5.0***	***A***
	R	18	19	106	2.7	*A*
	Subtotal	24	24	100	3.2	*A*
Total		186	184	99	0.7	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2030) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & Morton Access Road/I-80 EB Ramps
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	25	15	59	802.2	*F*
	T	***236***	***163***	***69***	***815.2***	***F***
	R	85	56	66	715.2	*F*
	Subtotal	346	234	68	790.4	*F*
SE	L	6	3	52	517.3	*F*
	T	214	172	81	555.5	*F*
	R	70	61	87	146.3	*F*
	Subtotal	290	236	81	449.2	*F*
NE	L	123	124	101	2.7	*A*
	T	41	41	101	3.5	*A*
	R	46	44	97	1.0	*A*
	Subtotal	210	209	100	2.5	*A*
SW	L	588	596	101	7.3	*A*
	T	205	202	99	3.6	*A*
	R	6	6	104	1.6	*A*
	Subtotal	799	804	101	6.3	*A*
Total		1,643	1,483	90	241.0	*F*

Intersection: Burnester Road & Higley Lane
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	377	375	99	0.8	*A*
	R	6	6	104	0.4	*A*
	Subtotal	383	381	99	0.8	*A*
SB	L	16	13	79	1.8	*A*
	T	234	224	96	1.2	*A*
	Subtotal	250	237	95	1.2	*A*
WB	***L***	***6***	***4***	***70***	***6.9***	***A***
	R	11	12	112	3.5	*A*
	Subtotal	17	16	94	4.4	*A*
Total		650	634	97	1.0	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2030) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & SITLA Access Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***89***	***83***	***93***	***9.5***	***A***
	R	22	24	108	3.4	*A*
	Subtotal	111	107	96	8.1	*A*
NE	T	188	185	98	2.1	*A*
	R	246	255	104	2.4	*A*
	Subtotal	434	440	101	2.3	*A*
SW	L	72	67	93	4.6	*A*
	T	229	212	93	1.8	*A*
	Subtotal	301	279	93	2.5	*A*
Total		846	826	98	3.1	*A*

Intersection: Higley North Access Road & Burmester Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	***L***	***12***	***13***	***104***	***10.3***	***B***
	R	39	41	106	4.8	*A*
	Subtotal	51	54	106	6.1	*A*
NE	T	396	398	101	2.5	*A*
	R	16	14	90	2.3	*A*
	Subtotal	412	412	100	2.5	*A*
SW	L	46	40	86	3.2	*A*
	T	272	254	94	3.6	*A*
	Subtotal	318	294	92	3.5	*A*
Total		780	760	97	3.2	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2030) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3026*

Intersection: Burnester Road & Higley South Access Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	373	373	100	3.8	*A*
	R	16	14	90	0.4	*A*
	Subtotal	389	387	99	3.7	*A*
SB	L	46	41	88	5.5	*A*
	T	238	226	95	1.5	*A*
	Subtotal	284	267	94	2.1	*A*
WB	***L***	***14***	***13***	***96***	***10.9***	***B***
	R	38	38	101	6.1	*A*
	Subtotal	52	51	98	7.3	*A*
Total		724	705	97	3.3	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2030) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & Morton Access Road/I-80 EB Ramps
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	37	21	56	463.4	*F*
	T	***610***	***334***	***55***	***483.6***	***F***
	R	224	123	55	429.5	*F*
	Subtotal	871	478	55	468.8	*F*
SE	L	5	3	60	28.4	*D*
	T	111	113	102	22.9	*C*
	R	41	38	92	5.0	*A*
	Subtotal	157	154	98	18.6	*C*
NE	L	129	127	98	2.6	*A*
	T	100	96	96	3.4	*A*
	R	24	27	110	1.1	*A*
	Subtotal	253	250	99	2.7	*A*
SW	L	305	303	99	3.6	*A*
	T	143	141	99	2.2	*A*
	R	5	6	120	1.0	*A*
	Subtotal	453	450	99	3.1	*A*
Total		1,735	1,332	77	187.7	*F*

Intersection: Burnester Road & Higley Lane
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	206	198	96	0.5	*A*
	R	5	4	80	0.2	*A*
	Subtotal	211	202	96	0.5	*A*
SB	L	11	10	93	1.9	*A*
	T	434	422	97	1.7	*A*
	Subtotal	445	432	97	1.7	*A*
WB	***L***	***5***	***4***	***80***	***7.4***	***A***
	R	16	15	95	2.9	*A*
	Subtotal	21	19	90	3.8	*A*
Total		677	653	96	1.4	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2030) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & SITLA Access Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***266***	***264***	***99***	***10.9***	***B***
	R	76	76	101	4.2	*A*
	Subtotal	342	340	99	9.4	*A*
NE	T	179	175	98	2.0	*A*
	R	126	126	100	1.2	*A*
	Subtotal	305	301	99	1.7	*A*
SW	L	32	28	87	2.9	*A*
	T	189	173	91	2.5	*A*
	Subtotal	221	201	91	2.6	*A*
Total		867	842	97	5.0	*A*

Intersection: Higley North Access Road & Burmester Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	***L***	***16***	***14***	***89***	***11.4***	***B***
	R	48	52	108	4.2	*A*
	Subtotal	64	66	103	5.7	*A*
NE	T	256	247	96	1.5	*A*
	R	7	7	104	1.3	*A*
	Subtotal	263	254	97	1.5	*A*
SW	L	20	17	83	2.1	*A*
	T	435	421	97	4.4	*A*
	Subtotal	455	438	96	4.3	*A*
Total		782	758	97	3.4	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2030) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT25-3026*

Intersection: Burnester Road & Higley South Access Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	216	207	96	3.1	*A*
	R	7	8	119	0.3	*A*
	Subtotal	223	215	96	3.0	*A*
SB	L	20	18	88	4.5	*A*
	T	430	418	97	2.3	*A*
	Subtotal	450	436	97	2.4	*A*
WB	***L***	***15***	***14***	***95***	***9.8***	***A***
	R	47	46	98	4.3	*A*
	Subtotal	62	60	97	5.6	*A*
Total		735	711	97	2.8	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2030) Plus Project Mitigation*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & Morton Access Road/I-80 EB Ramps
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	25	23	91	26.6	C
	T	236	242	103	21.8	C
	R	85	85	100	5.8	A
	Subtotal	346	350	101	18.2	B
SE	L	6	4	70	23.9	C
	T	214	215	101	24.3	C
	R	70	69	99	4.3	A
	Subtotal	290	288	99	19.5	B
NE	L	123	124	101	15.8	B
	T	41	41	101	11.5	B
	R	46	43	95	4.4	A
	Subtotal	210	208	99	12.6	B
SW	L	588	595	101	33.5	C
	T	205	201	98	15.6	B
	R	6	6	104	8.8	A
	Subtotal	799	802	100	28.8	C
Total		1,643	1,648	100	22.9	C

Intersection: Burnester Road & Higley Lane
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	377	374	99	0.8	A
	R	6	6	104	0.4	A
	Subtotal	383	380	99	0.8	A
SB	L	16	14	85	1.9	A
	T	234	232	99	1.3	A
	Subtotal	250	246	98	1.3	A
WB	***L***	***6***	***4***	***70***	***7.2***	***A***
	R	11	12	112	3.5	A
	Subtotal	17	16	94	4.4	A
Total		650	642	99	1.1	A

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2030) Plus Project Mitigation*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & SITLA Access Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***89***	***83***	***93***	***10.0***	***A***
	R	22	24	108	3.4	*A*
	Subtotal	111	107	96	8.5	*A*
NE	T	188	185	98	2.1	*A*
	R	246	255	104	2.5	*A*
	Subtotal	434	440	101	2.3	*A*
SW	L	72	70	98	7.2	*A*
	T	229	225	98	4.3	*A*
	Subtotal	301	295	98	5.0	*A*
Total		846	842	100	4.0	*A*

Intersection: Higley North Access Road & Burmester Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	***L***	***12***	***13***	***104***	***10.2***	***B***
	R	39	41	106	4.8	*A*
	Subtotal	51	54	106	6.1	*A*
NE	T	396	398	101	2.5	*A*
	R	16	14	90	2.3	*A*
	Subtotal	412	412	100	2.5	*A*
SW	L	46	43	92	3.4	*A*
	T	272	264	97	3.8	*A*
	Subtotal	318	307	97	3.7	*A*
Total		780	773	99	3.3	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2030) Plus Project Mitigation*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3026*

Intersection: Burnester Road & Higley South Access Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	373	373	100	3.8	*A*
	R	16	14	90	0.4	*A*
	Subtotal	389	387	99	3.7	*A*
SB	L	46	42	90	5.7	*A*
	T	238	235	99	1.6	*A*
	Subtotal	284	277	98	2.2	*A*
WB	***L***	***14***	***13***	***96***	***11.2***	***B***
	R	38	38	101	6.2	*A*
	Subtotal	52	51	98	7.5	*A*
Total		724	715	99	3.4	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2030) Plus Project Mitigation*
Time Period: *Evening Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & Morton Access Road/I-80 EB Ramps
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	37	38	102	23.7	C
	T	610	621	102	24.1	C
	R	224	222	99	14.9	B
	Subtotal	871	881	101	21.8	C
SE	L	5	3	60	26.8	C
	T	111	113	102	12.1	B
	R	41	39	95	2.5	A
	Subtotal	157	155	99	10.0	A
NE	L	129	127	98	25.7	C
	T	100	97	97	19.4	B
	R	24	27	110	6.1	A
	Subtotal	253	251	99	21.2	C
SW	L	305	304	100	49.0	D
	T	143	142	99	18.7	B
	R	5	6	120	11.8	B
	Subtotal	453	452	100	39.0	D
Total		1,735	1,739	100	25.1	C

Intersection: Burnester Road & Higley Lane
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	206	199	97	0.5	A
	R	5	4	80	0.2	A
	Subtotal	211	203	96	0.5	A
SB	L	11	10	93	2.1	A
	T	434	435	100	1.8	A
	Subtotal	445	445	100	1.8	A
WB	***L***	***5***	***4***	***80***	***7.3***	***A***
	R	16	15	95	2.9	A
	Subtotal	21	19	90	3.8	A
Total		677	667	99	1.5	A

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2030) Plus Project Mitigation*
Time Period: *Evening Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & SITLA Access Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***266***	***264***	***99***	***11.1***	***B***
	R	76	76	101	4.2	*A*
	Subtotal	342	340	99	9.6	*A*
NE	T	179	175	98	2.1	*A*
	R	126	126	100	1.2	*A*
	Subtotal	305	301	99	1.7	*A*
SW	L	32	30	93	5.5	*A*
	T	189	189	100	5.3	*A*
	Subtotal	221	219	99	5.3	*A*
Total		867	860	99	5.7	*A*

Intersection: Higley North Access Road & Burmester Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	***L***	***16***	***14***	***89***	***11.6***	***B***
	R	48	52	108	4.2	*A*
	Subtotal	64	66	103	5.8	*A*
NE	T	256	247	96	1.5	*A*
	R	7	7	104	1.3	*A*
	Subtotal	263	254	97	1.5	*A*
SW	L	20	18	88	2.6	*A*
	T	435	436	100	4.5	*A*
	Subtotal	455	454	100	4.4	*A*
Total		782	774	99	3.6	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2030) Plus Project Mitigation*
Time Period: *Evening Peak Hour* **Project #:** *UT25-3026*

Intersection: Burnester Road & Higley South Access Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	216	208	96	3.0	*A*
	R	7	8	119	0.3	*A*
	Subtotal	223	216	97	2.9	*A*
SB	L	20	19	93	4.1	*A*
	T	430	432	100	2.4	*A*
	Subtotal	450	451	100	2.5	*A*
WB	***L***	***15***	***14***	***95***	***9.8***	***A***
	R	47	46	98	4.3	*A*
	Subtotal	62	60	97	5.6	*A*
Total		735	727	99	2.9	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2050) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & I-80 EB Ramps
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SE	***L***	***6***	***6***	***104***	***2.8***	***A***
	R	6	6	104	1.2	*A*
	Subtotal	12	12	100	2.0	*A*
NE	L	41	41	100	1.0	*A*
	T	76	80	105	1.3	*A*
	Subtotal	117	121	103	1.2	*A*
SW	T	130	127	98	0.8	*A*
	R	12	13	113	0.0	*A*
	Subtotal	142	140	99	0.7	*A*
Total		270	273	101	1.0	*A*

Intersection: Burnester Road & Higley Lane
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	147	148	101	0.5	*A*
	R	6	7	122	0.1	*A*
	Subtotal	153	155	101	0.5	*A*
SB	L	18	17	94	0.8	*A*
	T	230	241	105	0.7	*A*
	Subtotal	248	258	104	0.7	*A*
WB	***L***	***6***	***5***	***87***	***5.0***	***A***
	R	12	12	104	3.0	*A*
	Subtotal	18	17	94	3.6	*A*
Total		417	430	103	0.8	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2050) Background*
Time Period: *Evening Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & I-80 EB Ramps
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SE	***L***	***6***	***6***	***104***	***3.2***	***A***
	R	6	6	104	1.4	*A*
	Subtotal	12	12	100	2.3	*A*
NE	L	54	51	94	1.5	*A*
	T	72	79	110	1.5	*A*
	Subtotal	126	130	103	1.5	*A*
SW	T	192	197	102	0.9	*A*
	R	12	15	122	0.1	*A*
	Subtotal	204	212	104	0.8	*A*
Total		342	354	104	1.1	*A*

Intersection: Burnester Road & Higley Lane
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	78	77	99	0.3	*A*
	R	6	7	122	0.0	*A*
	Subtotal	84	84	100	0.3	*A*
SB	L	12	13	106	0.6	*A*
	T	258	254	99	0.6	*A*
	Subtotal	270	267	99	0.6	*A*
WB	***L***	***6***	***6***	***104***	***5.5***	***A***
	R	18	19	106	2.8	*A*
	Subtotal	24	25	104	3.4	*A*
Total		377	376	100	0.7	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2050) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & Morton Access Road/I-80 EB Ramps
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	25	26	103	34.9	C
	T	236	241	102	27.7	C
	R	85	82	96	6.8	A
	Subtotal	346	349	101	23.3	C
SE	L	6	4	70	40.6	D
	T	214	212	99	28.8	C
	R	66	69	105	5.3	A
	Subtotal	286	285	100	23.3	C
NE	L	132	137	104	19.3	B
	T	114	116	101	12.8	B
	R	46	47	103	5.7	A
	Subtotal	292	300	103	14.7	B
SW	L	588	570	97	42.7	D
	T	330	328	99	18.4	B
	R	11	12	112	14.8	B
	Subtotal	929	910	98	33.6	C
Total		1,852	1,844	100	27.0	C

Intersection: Burnester Road & Higley Lane
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	460	456	99	0.9	A
	R	6	7	122	0.4	A
	Subtotal	466	463	99	0.9	A
SB	L	16	15	91	3.2	A
	T	356	359	101	2.0	A
	Subtotal	372	374	101	2.0	A
WB	***L***	***6***	***4***	***70***	***7.5***	***A***
	R	11	10	93	3.7	A
	Subtotal	17	14	82	4.8	A
Total		854	851	100	1.4	A

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2050) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & SITLA Access Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***89***	***89***	***100***	***13.0***	***B***
	R	22	22	99	4.0	*A*
	Subtotal	111	111	100	11.2	*B*
NE	T	270	280	104	2.5	*A*
	R	246	236	96	2.6	*A*
	Subtotal	516	516	100	2.5	*A*
SW	L	72	72	100	8.6	*A*
	T	350	353	101	5.0	*A*
	Subtotal	422	425	101	5.6	*A*
Total		1,049	1,052	100	4.7	*A*

Intersection: Higley North Access Road & Burmester Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	***L***	***12***	***13***	***104***	***16.2***	***C***
	R	39	40	103	5.8	*A*
	Subtotal	51	53	104	8.4	*A*
NE	T	478	478	100	2.9	*A*
	R	16	16	103	2.2	*A*
	Subtotal	494	494	100	2.9	*A*
SW	L	46	48	103	3.8	*A*
	T	393	395	101	4.4	*A*
	Subtotal	439	443	101	4.3	*A*
Total		984	990	101	3.9	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2050) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3026*

Intersection: Burnester Road & Higley South Access Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	456	454	100	4.1	*A*
	R	16	14	90	0.8	*A*
	Subtotal	472	468	99	4.0	*A*
SB	L	46	45	97	7.2	*A*
	T	359	366	102	2.6	*A*
	Subtotal	405	411	101	3.1	*A*
WB	***L***	***14***	***12***	***89***	***15.4***	***C***
	R	38	40	106	6.8	*A*
	Subtotal	52	52	100	8.8	*A*
Total		928	931	100	3.8	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2050) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & Morton Access Road/I-80 EB Ramps
Type: Signalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	37	37	99	24.8	C
	T	610	590	97	24.0	C
	R	224	223	100	14.2	B
	Subtotal	871	850	98	21.5	C
SE	L	5	4	80	33.2	C
	T	111	111	100	12.7	B
	R	31	31	99	3.5	A
	Subtotal	147	146	99	11.3	B
NE	L	129	134	104	45.7	D
	T	154	150	98	19.1	B
	R	24	24	98	8.6	A
	Subtotal	307	308	100	29.9	C
SW	L	305	306	100	98.6	F
	T	281	281	100	35.5	D
	R	11	12	112	27.9	C
	Subtotal	597	599	100	67.6	E
Total		1,922	1,903	99	36.7	D

Intersection: Burnester Road & Higley Lane
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	259	259	100	0.6	A
	R	5	5	100	0.2	A
	Subtotal	264	264	100	0.6	A
SB	L	11	10	93	2.6	A
	T	564	574	102	2.4	A
	Subtotal	575	584	102	2.4	A
WB	***L***	***5***	***4***	***80***	***7.7***	***A***
	R	16	14	89	3.5	A
	Subtotal	21	18	86	4.4	A
Total		859	866	101	1.9	A

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2050) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT25-3026*

Intersection: Burmester Road & SITLA Access Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***266***	***265***	***100***	***19.4***	***C***
	R	76	75	99	4.9	*A*
	Subtotal	342	340	99	16.2	*C*
NE	T	232	234	101	2.5	*A*
	R	126	125	100	1.5	*A*
	Subtotal	358	359	100	2.2	*A*
SW	L	32	30	93	8.0	*A*
	T	318	321	101	7.3	*A*
	Subtotal	350	351	100	7.4	*A*
Total		1,048	1,050	100	8.4	*A*

Intersection: Higley North Access Road & Burmester Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	***L***	***16***	***15***	***95***	***16.5***	***C***
	R	48	48	100	5.4	*A*
	Subtotal	64	63	98	8.0	*A*
NE	T	309	309	100	2.0	*A*
	R	7	7	104	1.5	*A*
	Subtotal	316	316	100	2.0	*A*
SW	L	20	18	88	2.9	*A*
	T	564	569	101	5.2	*A*
	Subtotal	584	587	101	5.1	*A*
Total		963	966	100	4.3	*A*

SimTraffic LOS Report

Project: Tooele County - Burmester Road TIS
Analysis Period: *Future (2050) Plus Project*
Time Period: *Evening Peak Hour* **Project #:** *UT25-3026*

Intersection: Burnester Road & Higley South Access Road
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	269	266	99	3.3	*A*
	R	7	8	119	0.3	*A*
	Subtotal	276	274	99	3.2	*A*
SB	L	20	17	83	4.5	*A*
	T	558	568	102	3.2	*A*
	Subtotal	578	585	101	3.2	*A*
WB	***L***	***15***	***15***	***102***	***10.4***	***B***
	R	47	50	106	5.1	*A*
	Subtotal	62	65	105	6.3	*A*
Total		916	924	101	3.4	*A*

APPENDIX D

95th Percentile Queue Length Reports

SimTraffic Queueing Report

Project: Tooele County - Burmester Road TIS

Analysis: Existing (2025) Background

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3026

Intersection	NE	SB	SE	WB
	LT	LT	LR	LR
01: Burmester Road & I-80 EB Ramps				
02: Burnester Road & Higley Lane				50

SimTraffic Queueing Report

Project: Tooele County - Burmester Road TIS

Analysis: Existing (2025) Background

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3026

Intersection	NE	SB	SE	WB
	LT	LT	LR	LR
01: Burmester Road & I-80 EB Ramps				
02: Burnester Road & Higley Lane				50

SimTraffic Queueing Report

Project: Tooele County - Burmester Road TIS

Analysis: Existing (2025) Plus Project

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3026

Intersection	NB		NE			NW			SB	SE	SW		WB
	L	R	L	R	TR	L	R	T	LT	LTR	L	LT	LR
01: Burmester Road & Morton Access Road/I-80 EB Ramps						50	75	150		100	75		
02: Burnester Road & Higley Lane													50
03: Burmester Road & SITLA Access Road	75	50											

SimTraffic Queueing Report

Project: Tooele County - Burmester Road TIS

Analysis: Existing (2025) Plus Project

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3026

Intersection	NE		NW			SB	SE	SW			WB
	L	TR	L	R	T	LT	LTR	L	LT	TR	LR
01: Burmester Road & Morton Access Road/I-80 EB Ramps			75	75	150		75	50			
02: Burnester Road & Higley Lane											50
03: Burmester Road & SITLA Access Road			75	50							

SimTraffic Queueing Report

Project: Tooele County - Burmester Road TIS

Analysis: Future (2030) Background

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3026

Intersection	NE	SB	SE	WB
	LT	LT	LR	LR
01: Burmester Road & I-80 EB Ramps			50	
02: Burnester Road & Higley Lane				50

SimTraffic Queueing Report

Project: Tooele County - Burmester Road TIS

Analysis: Future (2030) Background

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3026

Intersection	NE	SB	SE	WB
	LT	LT	LR	LR
01: Burmester Road & I-80 EB Ramps			50	
02: Burnester Road & Higley Lane				50

SimTraffic Queueing Report

Project: Tooele County - Burmester Road TIS

Analysis: Future (2030) Plus Project

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3026

Intersection	NB			NE			NW				SB		SE		SW		WB
	L	R	TR	L	R	TR	L	LR	R	T	L	LT	LT	R	L	TR	LR
01: Burmester Road & Morton Access Road/I-80 EB Ramps				50			225		300	2,475			1,750	1,000	150	50	
02: Burnester Road & Higley Lane																	50
03: Burmester Road & SITLA Access Road	75	50													50		
04: Higley North Access Road & Burmester Road								75							50		
05: Burnester Road & Higley South Access Road											75						75

SimTraffic Queueing Report

Project: Tooele County - Burmester Road TIS

Analysis: Future (2030) Plus Project

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3026

Intersection	NB		NE			NW				SB		SE		SW		WB
	L	R	L	R	TR	L	LR	R	T	L	LT	LT	R	L	TR	LR
01: Burmester Road & Morton Access Road/I-80 EB Ramps			50			250		275	2,100			125	50	75		
02: Burnester Road & Higley Lane																50
03: Burmester Road & SITLA Access Road	150	100												50		
04: Higley North Access Road & Burmester Road							75									
05: Burnester Road & Higley South Access Road										50						75

SimTraffic Queueing Report

Project: Tooele County - Burmester Road TIS

Analysis: Future (2030) Plus Project Mitigation

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3026

Intersection	NB		NE			NW				SB		SE			SW		WB
	L	R	L	R	TR	L	LR	R	T	L	LT	L	R	T	L	TR	LR
01: Burmester Road & Morton Access Road/I-80 EB Ramps			100		75	75		125	225				50	175	425	200	
02: Burnester Road & Higley Lane																	50
03: Burmester Road & SITLA Access Road	100	50													75		
04: Higley North Access Road & Burmester Road							75								50		
05: Burnester Road & Higley South Access Road										75							75

SimTraffic Queueing Report

Project: Tooele County - Burmester Road TIS

Analysis: Future (2030) Plus Project Mitigation

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3026

Intersection	NB		NE				NW				SB		SE			SW		WB
	L	R	L	R	T	TR	L	LR	R	T	L	LT	L	R	T	L	TR	LR
01: Burmester Road & Morton Access Road/I-80 EB Ramps			125			100	125		250	575				50	100	350	125	
02: Burnester Road & Higley Lane																		50
03: Burmester Road & SITLA Access Road	150	75														50		
04: Higley North Access Road & Burmester Road								75										
05: Burnester Road & Higley South Access Road											50							75

SimTraffic Queueing Report

Project: Tooele County - Burmester Road TIS

Analysis: Future (2050) Background

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3026

Intersection	NE	SB	SE	WB
	LT	LT	LR	LR
01: Burmester Road & I-80 EB Ramps			50	
02: Burnester Road & Higley Lane				50

SimTraffic Queueing Report

Project: Tooele County - Burmester Road TIS

Analysis: Future (2050) Background

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3026

Intersection	NE	SB	SE	WB
	LT	LT	LR	LR
01: Burmester Road & I-80 EB Ramps	50		50	
02: Burnester Road & Higley Lane				75

SimTraffic Queueing Report

Project: Tooele County - Burmester Road TIS

Analysis: Future (2050) Plus Project

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3026

Intersection	NB			NE			NW				SB		SE			SW		WB
	L	R	TR	L	R	TR	L	LR	R	T	L	LT	L	R	T	L	TR	LR
01: Burmester Road & Morton Access Road/I-80 EB Ramps				125		100	100		125	225			50	75	175	525	375	
02: Burnester Road & Higley Lane												50						50
03: Burmester Road & SITLA Access Road	100	50														75		
04: Higley North Access Road & Burmester Road								75								50		
05: Burnester Road & Higley South Access Road											75							75

SimTraffic Queueing Report

Project: Tooele County - Burmester Road TIS

Analysis: Future (2050) Plus Project

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3026

Intersection	NB		NE			NW				SB		SE			SW		WB
	L	R	L	R	TR	L	LR	R	T	L	LT	L	R	T	L	TR	LR
01: Burmester Road & Morton Access Road/I-80 EB Ramps			200		125	125		250	500				50	100	575	525	
02: Burnester Road & Higley Lane																	50
03: Burmester Road & SITLA Access Road	200	125													50		
04: Higley North Access Road & Burmester Road							75										
05: Burnester Road & Higley South Access Road										50							75

APPENDIX E

Crash Data Reports

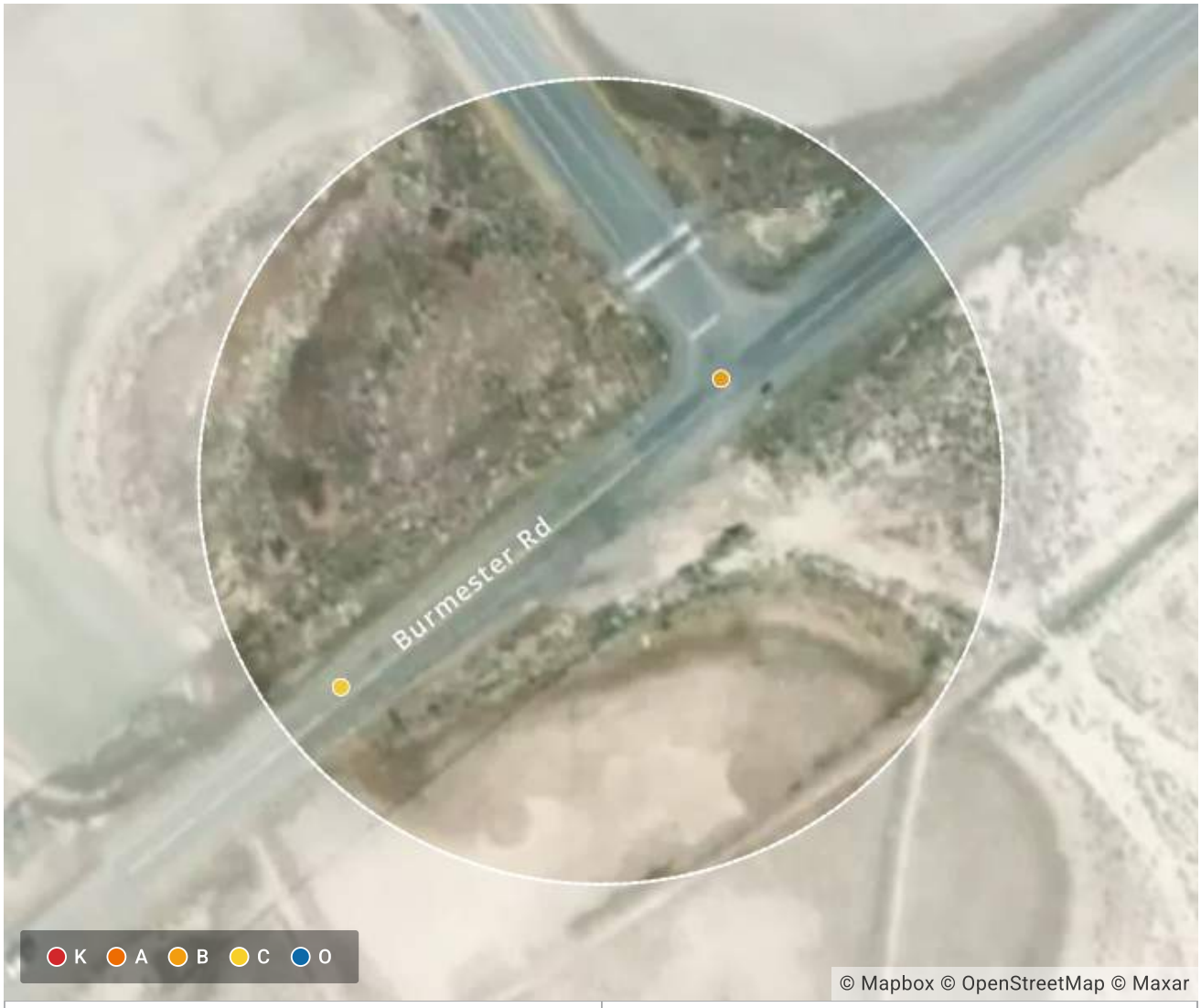
CRASH SUMMARY REPORT

I-80 EB Ramps / Burmester Road

Created on June 9, 2025
Created by Cory Ward
Data extents: January 1, 2019 to June 8, 2025

Applied Filters

Shape: Circle | 250 ft



Total Crashes	2	Fatal Crashes	0

UDOT Crash Summary	Crash_View	
Total Crashes	2	100.00%
Intersection Related	1	50.00%
Roadway Departure	1	50.00%

+ 10 more	0	0%

Crash Verified		Crash_View
True	2	100.00%
False	0	0.00%

Crash Severity		Crash_View
Possible injury	1	50.00%
Suspected Minor Injury	1	50.00%
+ 3 more	0	0%

Injury Level		Person_View
No injury	3	60.00%
Possible injury	1	20.00%
Suspected Minor Injury	1	20.00%
+ 3 more	0	0%

Manner of Collision		Crash_View
Not Applicable/Single Vehicle	1	50.00%
Sideswipe Same Direction	1	50.00%
+ 10 more	0	0%

Crash Date Time (Year)		Crash_View
2021	1	50.00%
2019	1	50.00%
+ 14 more	0	0%

V1 & V2 Movement & Direction (Crash Level Only)		Crash_View
Leaving Traffic Lane (Southbound) & Straight Ahead (Southbound)	1	50.00%
+ 999 more	0	0%

Roadway Surface Condition		Crash_View
Dry	2	100.00%
+ 14 more	0	0%

Weather Condition		Crash_View
Clear	2	100.00%
+ 11 more	0	0%

Most Harmful Event		Vehicle_View
Collision With Other Motor Vehicle in Transport	2	66.67%
Other Post, Pole or Support	1	33.33%
+ 54 more	0	0%

Light Condition		Crash_View
Daylight	2	100.00%
+ 8 more	0	0%

Countermeasures		Crash_View
+ 15 more	0	0%

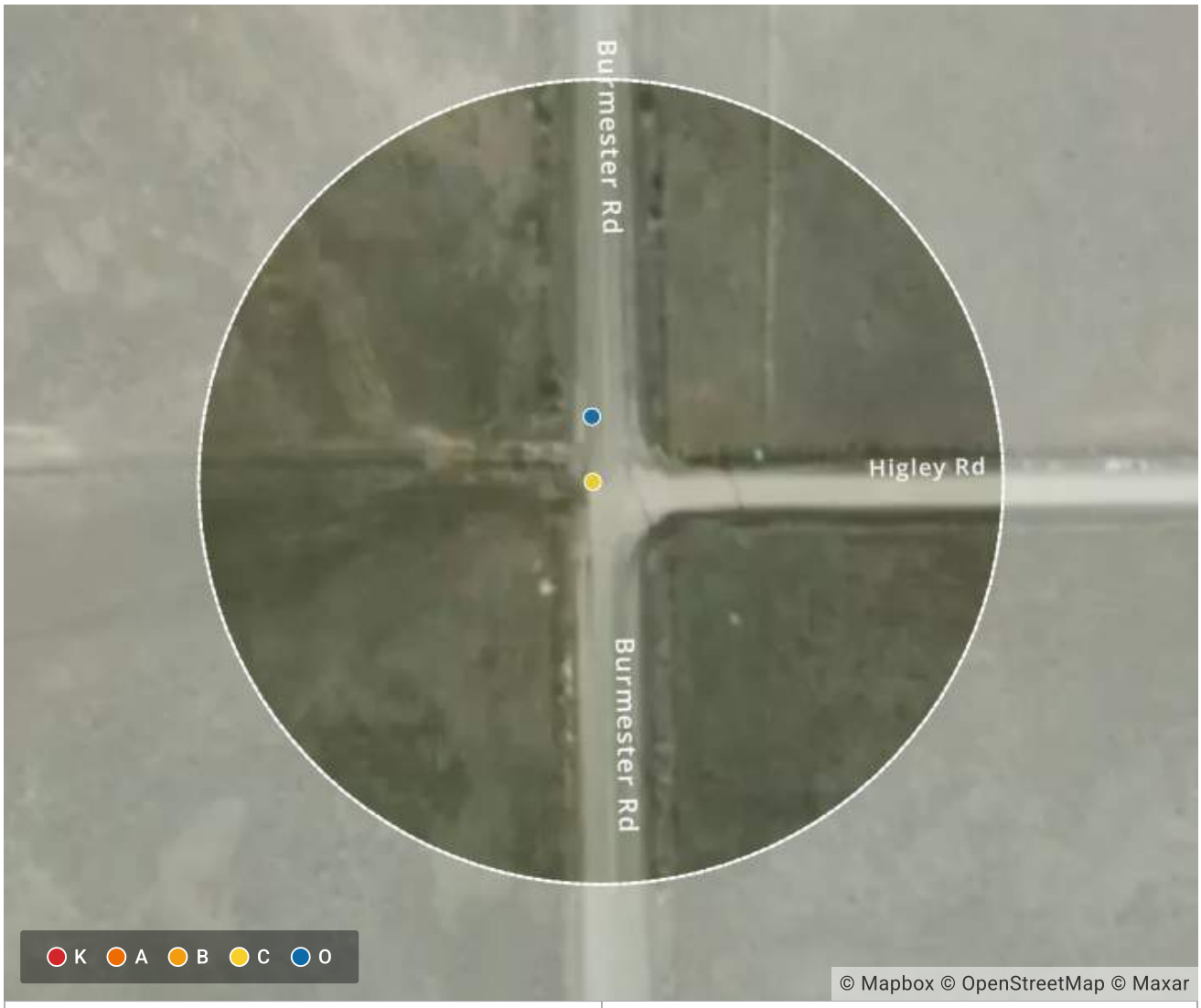
CRASH SUMMARY REPORT

Higley Lane / Burmester Road

Created on June 9, 2025
Created by Cory Ward
Requested by Hales Engineering
Data extents: January 1, 2019 to June 8, 2025

Applied Filters

Shape: Circle | 250 ft



Total Crashes	2	Fatal Crashes	0

UDOT Crash Summary	Crash_View	
Total Crashes	2	100.00%
Animal Related	1	50.00%
Intersection Related	1	50.00%

+ 10 more	0	0%

Crash Verified		Crash_View
True	2	100.00%
False	0	0.00%

Crash Severity		Crash_View
No injury/PDO	1	50.00%
Possible injury	1	50.00%
Fatal	0	0.00%
Suspected Minor Injury		
Suspected Serious Injury		

Injury Level		Person_View
No injury	2	66.67%
Possible injury	1	33.33%
+ 4 more	0	0%

Manner of Collision		Crash_View
Front to Rear	1	50.00%
Not Applicable/Single Vehicle	1	50.00%
+ 10 more	0	0%

Crash Date Time (Year)		Crash_View
2019	2	100.00%
+ 15 more	0	0%

V1 & V2 Movement & Direction (Crash Level Only)		Crash_View
Straight Ahead (Northbound) & Turning Right (Northbound)	1	50.00%
+ 999 more	0	0%

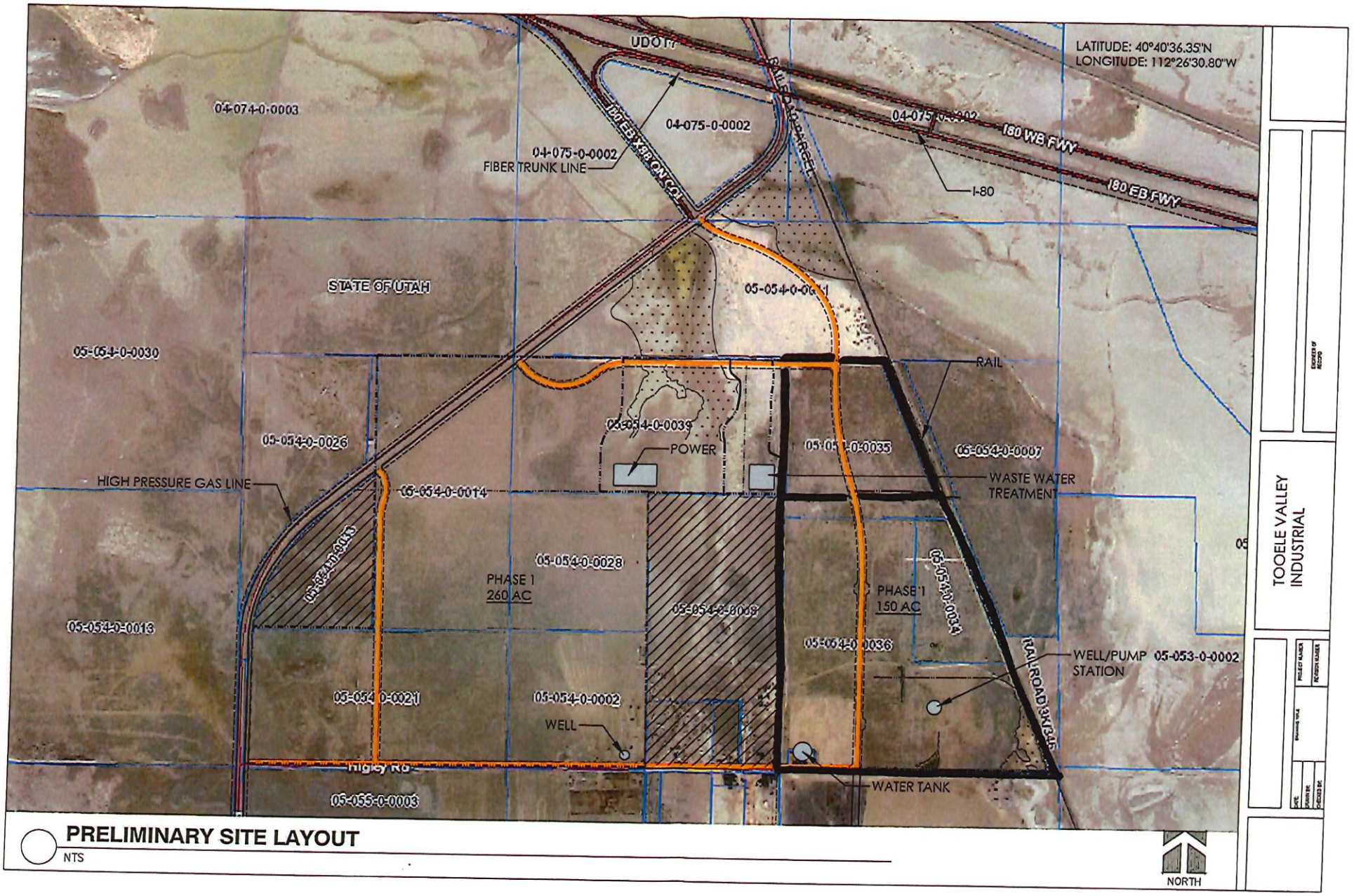
Roadway Surface Condition		Crash_View
Dry	2	100.00%
+ 14 more	0	0%

Weather Condition		Crash_View
Clear	1	50.00%
Cloudy	1	50.00%
+ 10 more	0	0%

Most Harmful Event		Vehicle_View
Collision With Other Motor Vehicle in Transport	2	66.67%
Animal - Domestic	1	33.33%
+ 54 more	0	0%

Light Condition		Crash_View
Dawn	1	50.00%
Daylight	1	50.00%
+ 7 more	0	0%

Countermeasures		Crash_View
Countermeasure: Right Turn Lane	1	50.00%
+ 14 more	0	0%



PRELIMINARY SITE LAYOUT

NTS

Entry #: 616593
04/02/2025 04:48 PM QUIT CLAIM DEED FOR WATER
Page: 1 of 3
FEE: $40.00 BY: FNT UTAH DOWNTOWN SLC - 170 MAIN ST S
Jerry Houghton, Tooele County, Recorder

AFTER RECORDING RETURN TO:
Wilford A. Beesley III, Esq.
WILFORD BEESLEY, PC
299 South Main Street, Suite 1300
Salt Lake City, Utah 84111

SPACE ABOVE THIS LINE (3 ½" X 5") FOR RECORDER'S USE

QUIT-CLAIM

WATER RIGHT DEED

(with addendum)

MUD FLAT RANCH, LLC, a Utah limited liability company, **GRANTOR**, Hereby quitclaims and assigns, to

BURMESTER 1 LLC, a Delaware limited liability company, **GRANTEE**

for ten dollars and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, 42 acre feet of the following water right, on file and of record in the Tooele County recorders' office in the State of Utah, as obtained by appurtenance and by a certain quit claim deed, from Arthur S. Higley (aka Arthur Stephan Higley), recorded on May 9, 2024, Entry No. 602826, and more particularly described and limited as follows:

> 42 Acre Feet of Water Right No. 15-1937, as on file in the records of the State Engineer of the state of Utah, pertaining to water located in Tooele County, Utah, together with all applications associated therewith.

Witness, the hands of said Grantor,

Susan Higley _____ Dated: 4-2-25

Susan Higley
(Manager for Mud Flat Ranch, LLC)

STATE OF UTAH)
: ss.
COUNTY OF SALT LAKE)

On the 2ND day of April 2025, personally appeared before me Susan Higley, the signer of the foregoing instrument, who duly acknowledged to me that he is the acting Manager of Mud Flat Ranch, LLC, and having authority to sign, executed the same.

BRENDA HOLLIDAY
NOTARY PUBLIC · STATE OF UTAH
My Commission Expires October 13, 2027
COMMISSION NUMBER 733678

B _____
Notary Public

Accommodation Recording

WATER RIGHTS ADDENDUM TO WATER DEEDS

Grantor: Mud Flat Ranch, LLC

Grantee: Burmester 1 LLC

Water Right No(s): 15-1937

In connection with the foregoing water rights conveyance, Grantor hereby assigns to Grantee all water rights listed which are not yet capable by law of being conveyed by deed (e.g., pending or unapproved water rights) and all applications pertaining to the water rights listed (e.g., all change applications, extension applications, non-use applications, etc.). Grantor also makes the following declarations and disclosures:

SECTION 1 - TYPE OF DEED Check one box only - Must match language in the deed

- ☐ The foregoing deed is a warranty deed. (Grantor is making all standard warranties.)
- ☐ The foregoing deed is a special warranty deed. (Grantor is only warranting that Grantor has not previously conveyed title to others, i.e., a warranty of title as to all claiming by or through Grantor.)
- ✓ ☒ The foregoing deed is a quit claim deed. (Grantor is making no warranties.)
- ☐ The language in the foregoing deed is controlling as to the type of deed and associated warranties, if any.

(County Recorder should forward a copy of this form to the Utah Division of Water Rights if any box above is checked)

SECTION 2 - APPURTENANT WATER RIGHTS Check one box only

- ☐ All of Grantor's water rights approved for use on the following described parcel(s) are being conveyed.

  _____
- ☐ In addition to any specifically identified rights, all other water rights owned by Grantor and approved for use on the following described parcel(s) are being conveyed. _____

  _____
- ✓ ☒ No water rights other than those specifically identified by water right number are being conveyed.

SECTION 3 - WATER RIGHTS CONVEYED IN WHOLE OR IN PART Check all applicable boxes

- ☑ 100% of the following water rights described in the deed are being conveyed. Water Right Nos. 15-1937

  consisting of: 9.8 acres/39.2 acre feet of irrigation water and 100 ELUs/2.8 acre-feet of stock water, for a total of 42.0 acre-feet.
- ☐ Only the portion indicated of the following water rights described in the deed are being conveyed.

  _____ acre-feet from Water Right No. _____ for: _____ families; _____ acres of irrigated land; stock water for _____ Equivalent Livestock Units; and/or for the following other uses: _____

  _____ acre-feet from Water Right No. _____ for: _____ families; _____ acres of irrigated land; stock water for _____ Equivalent Livestock Units; and/or for the following other uses: _____

  _____ acre-feet from Water Right No. _____ for: _____ families; _____ acres of irrigated land; stock water for _____ Equivalent Livestock Units; and/or for the following other uses: _____
- ☐ The language in the foregoing deed is controlling as to quantity, if any.

SECTION 4 - OTHER DISCLOSURES Check all applicable boxes

- ☐ Grantor is endorsing and delivering to Grantee stock certificates for _____ shares of stock in the following water company: _____
- ☐ Other water related disclosures: _____

The undersigned acknowledge sole responsibility for the information contained herein even though they may have been assisted by employees of the Utah Division of Water Rights, real estate professionals, or other professionals, except to the extent that title insurance or a legal opinion concerning such information is obtained.

Grantor's Signature: Susan Digley

Grantee's Acknowledgment of Receipt: _____

Grantee's Mailing Address: _____

NOTE: GRANTEE MUST KEEP A CURRENT ADDRESS ON FILE WITH THE UTAH DIVISION OF WATER RIGHTS

WATER RIGHTS ADDENDUM TO WATER DEEDS

Grantor: Mud Flat Ranch, LLC

Grantee: Burmester 1 LLC

Water Right No(s): 15-1937

In connection with the foregoing water rights conveyance, Grantor hereby assigns to Grantee all water rights listed which are not yet capable by law of being conveyed by deed (e.g., pending or unapproved water rights) and all applications pertaining to the water rights listed (e.g., all change applications, extension applications, non-use applications, etc.). Grantor also makes the following declarations and disclosures:

SECTION 1 - TYPE OF DEED Check one box only - Must match language in the deed

- ☐ The foregoing deed is a warranty deed. (Grantor is making all standard warranties.)
- ☐ The foregoing deed is a special warranty deed. (Grantor is only warranting that Grantor has not previously conveyed title to others, i.e., a warranty of title as to all claiming by or through Grantor.)
- ✓ ☑ The foregoing deed is a quit claim deed. (Grantor is making no warranties.)
- ☐ The language in the foregoing deed is controlling as to the type of deed and associated warranties, if any.

(County Recorder should forward a copy of this form to the Utah Division of Water Rights if any box above is checked)

SECTION 2 - APPURTENANT WATER RIGHTS Check one box only

- ☐ All of Grantor's water rights approved for use on the following described parcel(s) are being conveyed.

  _____
- ☐ In addition to any specifically identified rights, all other water rights owned by Grantor and approved for use on the following described parcel(s) are being conveyed. _____

  _____
- ✓ ☑ No water rights other than those specifically identified by water right number are being conveyed.

SECTION 3 - WATER RIGHTS CONVEYED IN WHOLE OR IN PART Check all applicable boxes

- ☑ 100% of the following water rights described in the deed are being conveyed. Water Right Nos. 15-1937

  consisting of: 9.8 acres/39.2 acre feet of irrigation water and 100 ELUs/2.8 acre-feet of stock water, for a total of 42.0 acre-feet.
- ☐ Only the portion indicated of the following water rights described in the deed are being conveyed.

  _____ acre-feet from Water Right No. _____ for: _____ families; _____ acres of irrigated land; stock water for _____ Equivalent Livestock Units; and/or for the following other uses: _____

  _____ acre-feet from Water Right No. _____ for: _____ families; _____ acres of irrigated land; stock water for _____ Equivalent Livestock Units; and/or for the following other uses: _____

  _____ acre-feet from Water Right No. _____ for: _____ families; _____ acres of irrigated land; stock water for _____ Equivalent Livestock Units; and/or for the following other uses: _____
- ☐ The language in the foregoing deed is controlling as to quantity, if any.

SECTION 4 - OTHER DISCLOSURES Check all applicable boxes

- ☐ Grantor is endorsing and delivering to Grantee stock certificates for _____ shares of stock in the following water company: _____
- ☐ Other water related disclosures: _____

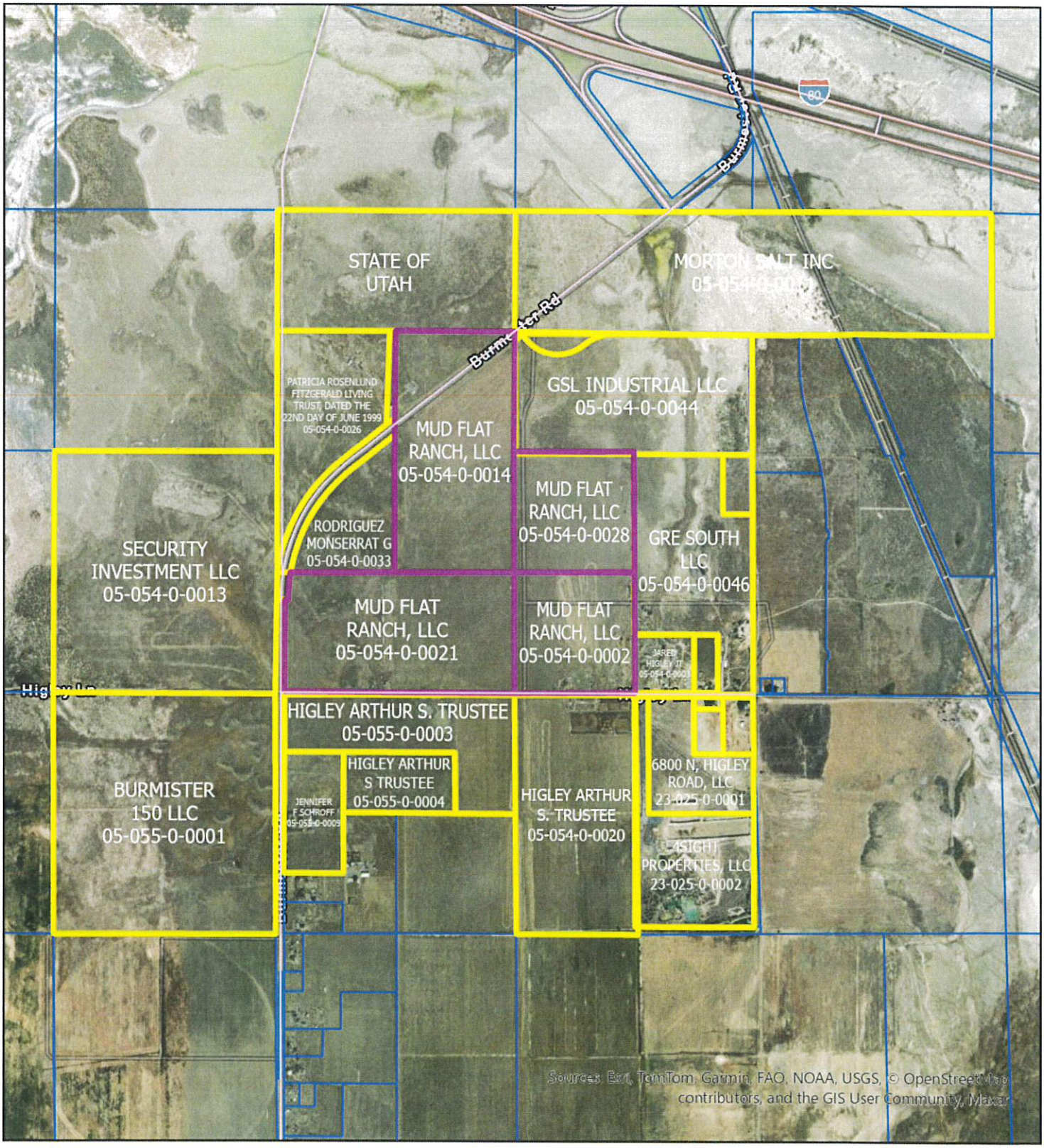
The undersigned acknowledge sole responsibility for the information contained herein even though they may have been assisted by employees of the Utah Division of Water Rights, real estate professionals, or other professionals, except to the extent that title insurance or a legal opinion concerning such information is obtained.

Grantor's Signature: _____

Grantee's Acknowledgment of Receipt: _____

Grantee's Mailing Address: 8371 S. State St Suite 200 Sandy, UT 84070

NOTE: GRANTEE MUST KEEP A CURRENT ADDRESS ON FILE WITH THE UTAH DIVISION OF WATER RIGHTS



RADIUS REPORT

CHARLES AKERLOW
05-054-0-0014, 05-054-0-0002
05-054-0-0028, 05-054-0-0021

N
W E
S

GIS Map Disclaimer: TOOELE COUNTY

This is not an official map but for reference use only. The data was compiled from the best sources available but various errors from the sources may be inherent on the map. All boundaries and features therein should be treated as such. For boundary information, the pertinent County Departments or Municipalities should be contacted. This map is a representation of ground features and is not a legal document of their locations. The scale represented is approximate so this is NOT a Survey or Engineering grade map and should by no means be used as such. This map is not intended for all uses. Tooele County is not responsible or liable for any derivative or misuse of this map.

0 500 1,000 2,000 US Feet

4SIGHT PROPERTIES, LLC
6382 WEST 2100 SOUTH
WEST VALLEY CITY, UT 84128

6800 N, HIGLEY ROAD, LLC
PO BOX 3193
PARK CITY, UT 84060

TOOELE COUNTY CORPORATION
47 S MAIN ST
TOOELE, UT 84074

GSL INDUSTRIAL LLC
8371 S STATE ST
SUITE 202
SANDY, UT 84070

DIAZ DAVID
836 N STARCREST DR
SALT LAKE CITY, UT 84116

JENNIFER F SCHROFF
7378 BURMESTER RD
GRANTSVILLE, UT 84029

HIGLEY ARTHUR S TRUSTEE
487 E 2400 S
SALT LAKE CITY, UT 84115

HIGLEY ARTHUR S. TRUSTEE
487 E 2400 S
SALT LAKE CITY, UT 84115

BURMISTER 150 LLC
6173 WEST 2100 SOUTH
WEST VALLEY, UT 84128

RODRIGUEZ MONSERRAT G
6101 W PARKWAY BLVD
WEST VALLEY CITY, UT 84128

MUD FLAT RANCH, LLC
487 E 2400 S
SALT LAKE CITY, UT 84115

HIGLEY RULON MILO JT
5758 HIGLEY ROAD
GRANTSVILLE, UT 84029

STEVEN IVIE CO-TRUSTEE
5605 W HIGLEY RD
GRANTSVILLE, UT 84029

SECURITY INVESTMENT LLC
320 W 500 S STE. 200
BOUNTIFUL, UT 84010

MORTON SALT INC
444 W LAKE STREET, SUITE 3000
CHICAGO, IL 60606

HIGLEY JARED JT
5758 HIGLEY ROAD
GRANTSVILLE, UT 84029

JARED HIGLEY JT
5758 HIGLEY LANE
GRANTSVILLE, UT 84029

PATRICIA ROSENLUND FITZGERALD
LIVING TRUST
3584 W. 12600 S.
RIVERTON, UT 84065

MCRAE DANIEL ERIC JT
4092 S 3670 W
WVC, UT 84120

GRE SOUTH LLC
PO BOX 71369
SALT LAKE CITY, UT 84171

Request for Surrounding Property Owners

Description: Please allow our mapping department 2 business days to complete your request	**Created by:**	Charles Akerlow
	Created on:	April 17, 2025
	Status:	Open
	Case ID:	p5h0tn1x

Submit Request Information

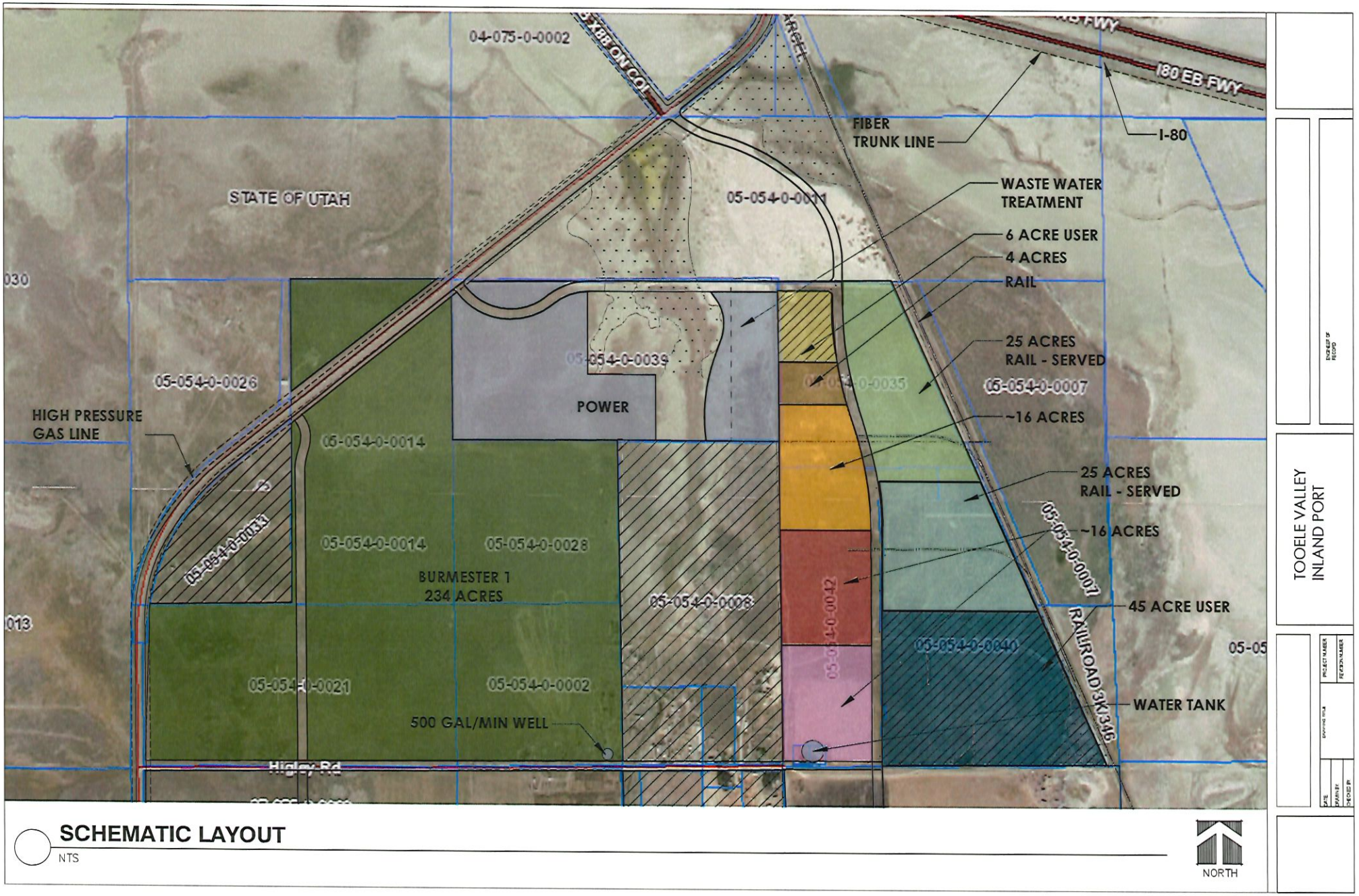
Completed by Charles Akerlow on April 17, 2025 at 09:07 PM

Parcel #	05-054-0-0014; 05-054-0-0002; 05-054-0-0028; 05-054-0-0021
Contact Information	Charles Akerlow State Street 202, Sandy, Utah 84070 charles@zenithpartners.org 8019135959
Please choose one of the following	Other
If other, please describe	1,000 feet
How do you want your boundary map and mailing labels sent to you?	Pick up in person

Submit Payment for Request for Surrounding Property Owners Notification

Status: Completed on April 17, 2025 at 09:09 PM

Description	Amount


04-075-0-0002
I80 EB FWY
I-80
FIBER
TRUNK LINE
STATE OF UTAH
05-054-0-0011
WASTE WATER
TREATMENT
6 ACRE USER
4 ACRES
RAIL
030
05-054-0-0039
25 ACRES
RAIL - SERVED
05-054-0-0026
05-054-0-0035
05-054-0-0007
POWER
HIGH PRESSURE
GAS LINE
05-054-0-0014
~16 ACRES
25 ACRES
RAIL - SERVED
05-054-0-0033
05-054-0-0014
05-054-0-0028
~16 ACRES
BURMESTER 1
234 ACRES
05-054-0-0008
05-054-0-0042
45 ACRE USER
013
05-054-0-0040
05-05
RAILROAD 3K/346
05-054-0-0021
05-054-0-0002
WATER TANK
500 GAL/MIN WELL
Higley Rd
TOOELE VALLEY
INLAND PORT
SCHEMATIC LAYOUT
NTS
NORTH

Aquatic Resources Delineation Report for the Burmester Industrial Project in Tooele County, Utah

SEPTEMBER 2023

PREPARED FOR

Zenith Bolinder LLC

PREPARED BY

SWCA Environmental Consultants

AQUATIC RESOURCES DELINEATION REPORT FOR THE BURMESTER INDUSTRIAL PROJECT IN TOOELE COUNTY, UTAH

Prepared for

Zenith Bolinder LLC
8371 South State Street, Suite 202
Sandy, Utah 84070
Attn: Charles W. Akerlow

Prepared by

SWCA Environmental Consultants
257 East 200 South, Suite 200
Salt Lake City, Utah 84111
www.swca.com

September 2023

CONTENTS

Introduction **1**
Contact Information 1
Background 1
Survey Area 1
Landscape Setting 2
Regulatory Setting 2
Waters of the United States 2
Waters of the State 2
Methods **3**
Prefield Analysis 3
Field Survey 3
Wetlands 3
Other Aquatic Resources 4
Interstate Commerce 4
Results **5**
Prefield Analysis 5
Field Survey 6
Wetlands 6
Other Aquatic Resources 9
Interstate Commerce 9
Discussion **10**
Literature Cited **11**

Appendices

Appendix A. Maps
Appendix B. Soil Series Descriptions
Appendix C. Photographs
Appendix D. U.S. Army Corps of Engineers Antecedent Precipitation Tool for the Survey Area
Appendix E. Data Forms

Tables

Table 1. National Wetlands Inventory Data for the Survey Area 5
Table 2. National Hydrography Dataset Results for the Survey Area 5
Table 3. Natural Resources Conservation Service Soil Survey Geographic Soil Data for the Survey Area 5
Table 4. Water-Related Land Use for the Survey Area 6
Table 5. Wetland Aquatic Resources in the Survey Area 6
Table 6. Dominant Plant Species Observed at Sampling Points in the Survey Area 8
Table 7. Wetland and Upland Status of Sampling Points in the Survey Area 9

INTRODUCTION

Contact Information

Applicant:

Zenith Bolinder LLC
8371 South State Street, Suite 202
Sandy, Utah 84070
Charles@zenithpartners.org

Agent:

SWCA Environmental Consultants
257 East 200 South, Suite 200
Salt Lake City, Utah 84111
508.245.3223
Samantha.mello@swca.com

Background

This delineation report describes the extent and location of aquatic resources in the Burmester Industrial Project (project) survey area in Tooele County, Utah. Aquatic resources comprise potential waters of the United States (WOTUS) and State of Utah, including wetlands. The survey area covers 243.9 acres (Figure A-1), with elevations ranging from 4,221 to 4,224 feet.

Zenith Bolinder LLC (Bolinder) requested a delineation to assist with wetland avoidance and permitting, if necessary.

Five appendices support this delineation report. Appendix A provides maps showing the prefield and field results (Figures A-1–8). Appendix B provides descriptions of the soil series recorded in the survey area. Appendix C provides photographs (Figures C-1–21) of the survey area. Appendix D shows the results of the U.S. Army Corps of Engineers (USACE) Antecedent Precipitation Tool for the survey area. Appendix E contains wetland data forms.

Survey Area

The survey area is in Tooele County, Utah, approximately 6 miles north of Grantsville, Utah. The survey area is in Section 5, Township 2 South, and Range 5 West, and is shown on the Burmester U.S. Geological Survey 7.5-minute quadrangle (see Figure A-1). Bolinder will be responsible for providing survey area access to the USACE to collect samples and data related to this aquatic resources delineation report, if necessary. To access the survey area, head east on UT-138 toward Commercial Avenue for 0.5 mile. Turn left, heading north, on North Kearl Street for 0.3 mile. Turn left, heading west, on East North Street, for 153 feet. Turn right, heading north, onto Burmester Road for 5.3 miles. The survey area will be on the right.

The survey area is largely comprised of greasewood (*Sarcobatus vermiculatus*) flat, upland grassland, invasive forbland, and iodine bush (*Allenrolfea occidentalis)* playa habitats. The southern and eastern portions of the survey area have been heavily grazed and contain areas of heavily infested invasive vegetation. The dominant vegetation in the survey area includes iodine bush, desert saltgrass (*Distichlis spicata*), red saltwort (*Salicornia rubra*), prickly Russian thistle (*Salsola tragus*), greasewood,

intermediate wheatgrass (*Thinopyrum intermedium*), fivehook bassia (*Bassia hyssopifolia*), drooping brome (*Bromus tectorum*), and bulbous bluegrass (*Poa bulbosa*).

Landscape Setting

The survey area consists of mostly flat or slightly rolling terrain approximately 2 miles west of the southern edge of the Great Salt Lake and 5.8 miles east of the Stansbury Mountains. Small changes in microtopography affect where water concentrates and wetlands form within the survey area. The survey area slopes west to east towards the Great Salt Lake.

Regulatory Setting

Waters of the United States

On May 25, 2023, the Supreme Court of the United States issued the Sackett v. U.S. Environmental Protection Act (EPA) decision, which narrows the interpretation of federal WOTUS (Supreme Court of the United States 2023). The decision determines that the Clean Water Act (CWA) jurisdiction extends to only those wetlands with a continuous surface connection to bodies that are WOTUS "in their own right" so that they are "indistinguishable" from those waters. In addition, the decision abandons the existing significant nexus test for adjacent wetlands moving forward. The Sackett v. EPA decision also emphasizes statutory language in the CWA that protects the primary responsibilities and rights of states to reduce water pollution and to manage land and water resources.

In light of this decision, the EPA and U.S. Department of the Army will interpret WOTUS consistent with the Sackett v. EPA decision and as defined by the EPA and U.S. Department of the Army under 33 Code of Federal Regulations (CFR) 328.3. Eight exclusions from the WOTUS definition are codified at 40 CFR 120 and 33 CFR 328.3 paragraph (b), and key terms are defined at paragraph (c).

Wetlands are a subset of jurisdictional WOTUS and are jointly defined by the USACE and the EPA as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (Environmental Laboratory 1987).

REGULATED ACTIVITIES

Under Section 404 of the CWA, dredged and fill material may not be discharged into jurisdictional WOTUS, including wetlands, without a permit.

Regulated activities include

- fill for development,
- utility line projects (such as pipelines), and
- infrastructure development (such as roads).

Waters of the State

Section 73-3-29 of the Utah Code requires any person, governmental agency, or other organization wishing to alter the bed or banks of a natural stream to obtain written authorization from the State Engineer, Utah Division of Water Rights before beginning work. Section 73-3-29 is intended to protect

the natural resource values of Utah's streams, with special consideration of water rights and recreational opportunities. The State of Utah asserts jurisdiction over natural streams, which are defined in Rule R655-13-4 of the Utah Administrative Code as "any waterway, along with its fluvial system, that receives sufficient water to sustain an ecosystem (typically identified by changes in vegetation) that distinguishes it from the surrounding upland environment." Canals, ditches, and other human-made channels are not regulated under Rule R655-13-4. Authorization from the State Engineer is required 1) if an activity will fall within two times the width of the active channel up to a maximum of 30 feet from the water's edge, 2) if the activity will take place within continuous riparian areas adjacent to the stream, or 3) if the activity will take place in areas of the floodplain that have been observed conducting or storing water during high-flow events or that show physical evidence of conducting or storing water during high flows.

METHODS

Prefield Analysis

Before the delineation fieldwork, SWCA reviewed the following data sources as they pertain to the survey area:

- Aerial photographs and topographic maps to identify potential aquatic resources in the survey area
- National Wetlands Inventory (NWI) data and the National Hydrography Dataset (NHD) to identify potential aquatic resources in the survey area (U.S. Fish and Wildlife Service 2023; Utah Automated Geographic Reference Center and U.S. Geological Survey 2023)
- Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database to identify potential hydric soils in the survey area (NRCS 2023)
- Utah Division of Water Resources Water Related Land Use data to identify potential land uses in the survey area (Utah Automated Geographic Reference Center and Utah Division of Water Resources 2022)

Field Survey

Wetlands

SWCA recorded all sampling points and wetland boundaries using a Samsung tablet and a Juniper Geode GNSS2 receiver global positioning system (GPS) unit with submeter accuracy. During the fieldwork, all potential wetland and upland vegetation communities observed were sampled to characterize vegetation, soil, and hydrology.

The fieldwork was done in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008). Based on these documents, wetlands are identified using the following three criteria:

1. Hydrophytic vegetation
2. Wetlands hydrology
3. Hydric soil

All three criteria must be met for an area to be considered a wetland. An explanation of the three wetlands criteria follows.

HYDROPHYTIC VEGETATION

Hydrophytic plants are plants that are adapted to wet conditions. The National Wetland Plant List (USACE 2020) is used to determine the wetlands indicator status of plant species observed at the sampling points.

Most plant species are identified on-site during the wetlands delineation. If a plant species cannot be determined in the field, a sample is identified in SWCA's laboratory using a hand lens, ruler, and dichotomous plant key. Plant species are identified using *A Utah Flora* (Welsh et al. 2003).

WETLANDS HYDROLOGY

Wetlands hydrology examines the behavior of water in wetlands. Primary hydrologic indicators assessed in the field include soil saturation, surface water, hydrogen sulfide odor, and presence of reduced iron in the soil. Secondary indicators are also assessed and can include drainage patterns.

HYDRIC SOILS

The NRCS defines hydric soils as those soils formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper portion of the soil column (above 12- to 20-inch soil depth, depending on soil texture [NRCS 2018]). Soils are assessed for hydric conditions in the field using a sharpshooter shovel to excavate a soil pit and to examine the soil profile. A Munsell soil color chart is used to determine soil color.

Other Aquatic Resources

Potential non-wetland aquatic resources, including ephemeral, intermittent, and perennial streams, were delineated based on the location of the ordinary high-water mark (OHWM), which typically occurs at the transition between the active floodplain and the low terrace. Indicators of OHWM can be physical or vegetative and include benches, drift lines, changes in sediment size distribution, and transitions in vegetation type and density. During the delineation process, SWCA uses the *Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Lichvar and McColley 2008); *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (Mersel and Lichvar 2014); and *Regulatory Guidance Letter 05-05* (USACE 2005). Although the OHWM field guide (Lichvar and McColley 2008) focuses primarily on ephemeral and intermittent streams, the OHWM indicators also apply to perennial streams and were used to delineate these types of systems in the survey area.

Interstate Commerce

During field surveys, SWCA recorded any interstate or foreign commerce associated with aquatic resources in the survey area, specifically recreation or other use by interstate or foreign travelers, sale of fish or shellfish in interstate or foreign commerce and use by industries operating in interstate or foreign commerce.

RESULTS

Prefield Analysis

NWI data for the survey area are provided in Table 1 and shown on Figure A-2.

Table 1. National Wetlands Inventory Data for the Survey Area

Wetland Type*	Type Description	Area (acres)
L2US	Unconsolidated Shore, Littoral, Lacustrine	7.21
PEM1	Persistent, Emergent, Palustrine	46.55
R4SB	Streambed, Intermittent, Riverine	0.28
R5UB	Unconsolidated Bottom, Unknown Perennial, Riverine	0.31
Total		**54.35**

Source: USFWS (2023).

* Wetland types are derived from the *Classification of Wetlands and Deepwater Habitats of the United States* (Federal Geographic Data Committee 2013).

NHD data for the survey area are provided in Table 2 and shown on Figure A-2.

Table 2. National Hydrography Dataset Results for the Survey Area

National Hydrography Dataset Classification	Length (feet)
Canal/Ditch	1,040.16
Connector	2,736.93
Stream/River - Ephemeral	1,381.39
Total	**5,158.48**

Source: Utah Automated Geographic Reference Center and U.S. Geological Survey (2023).

NRCS Soil Survey Geographic Database soil data for the survey area is provided in Table 3 and shown on Figure A-3. Descriptions of the soil series are found in Appendix B. There are 0.9 acre of hydric soils within the survey area.

Table 3. Natural Resources Conservation Service Soil Survey Geographic Soil Data for the Survey Area

Soil Unit Name	Hydric? (yes or no)	Area (acres)
Saltair-Playas complex, 0 to 1 percent slopes	Yes	0.09
Skumpah silt loam, saline, 0 to 2 percent slopes	No	122.72
Taylorsflat loam, saline, 0 to 3 percent slopes	No	121.10
Total		**243.91**

Source: NRCS (2023).

Utah Division of Water Resources water-related land use data (including agricultural land use data) for the survey area are provided in Table 4 and shown on Figure A-4.

Table 4. Water-Related Land Use for the Survey Area

Land Use Type	Area (acres)
Agricultural	78.79
Riparian/Wetland	9.53
Urban	2.35
Other	153.24
Total	**243.91**

Source: Utah Automated Geographic Reference Center and Utah Division of Water Resources (2022).

Field Survey

SWCA conducted the delineation fieldwork on August 7 and 8, 2023. Weather conditions were mostly sunny with a temperature of approximately 85 degrees Fahrenheit. According to the USACE Antecedent Precipitation Tool, the survey area had wetter than normal conditions during the field survey (see Appendix D), which may affect surface flow conditions. However, there are additional wetland hydrological indicators that were assessed in the field, and all three criteria must be met for an area to be considered a wetland.

Wetlands

Using the paired sampling point method in the survey area's vegetation communities, SWCA delineated 16.07 acres of palustrine emergent wetlands and 3.09 acres of palustrine scrub shrub wetlands in the survey area. Table 5 summarizes these wetland areas, and detailed descriptions of each follow this table. An overview map of the wetlands delineated in the survey area can be viewed in Figure A-5. Select photographs of the survey area and examples of the various wetland and upland features are provided in Appendix C.

Table 5. Wetland Aquatic Resources in the Survey Area

Wetland ID	Wetland Type*	Type Description	Area (acres)
W01	PEM	Palustrine emergent	12.23
W01	PSS	Palustrine scrub shrub	3.09
W02	PEM	Palustrine emergent	3.30
W03	PEM	Palustrine emergent	0.42
W04	PEM	Palustrine emergent	0.09
W05	PEM	Palustrine emergent	0.03
Total			**19.16**

Source: U.S. Fish and Wildlife Service (2023).

* Wetland types are derived from the *Classification of Wetlands and Deepwater Habitats of the United States* (Federal Geographic Data Committee 2013).

W01 is a wetland complex consisting of palustrine emergent and scrub shrub wetland types. W01 PEM is a palustrine emergent wetland in a depressional area that appears to mostly be fed by lake water levels. It is dominated by red saltwort (70% cover) and iodinebush (3% cover). This wetland extends north and south outside of the survey area (Figure A-6). Salt crystals were found throughout the soil profile; the soil is very salt heavy, which could reduce redoximorphic features. A depleted matrix was present in the soil core retrieved at the time of the survey. Drainage patterns (B10), Saturation Visible on Aerial Imagery (C9), and FAC-Neutral Test (D5) were present at the time of the survey. W01 PSS is a palustrine scrub shrub wetland dominated by iodinebush (30% cover); salty soils inhibit most plant growth. This wetland extends north outside of the survey area. A depleted matrix was present in the soil core retrieved at the time of the survey. Soils may be naturally problematic due to the high salt content. Drainage patterns (B10), Saturation Visible on Aerial Imagery (C9), and FAC-Neutral Test (D5) were present at the time of the survey. W01 is suspected to be jurisdictional; the wetland is formed in a depression in the survey area that extends north out of the survey area into the Warm Springs Slough approximately 0.5 mile away. The Warm Springs Slough flows east into the Great Salt Lake approximately 1.4 miles away. The Great Salt Lake is a traditionally navigable water, which is considered jurisdictional under the CWA.

W02 is a palustrine emergent wetland dominated by red saltwort (40% cover) and coastal salt grass (30% cover). This wetland is within a depression on the southeastern edge of the survey where the ground slopes to the east and intercepts a railroad berm (Figure A-8). A depleted matrix was present in the soil core retrieved at the time of the survey. Soils may be naturally problematic due to the high salt content. Drainage patterns (B10), Saturation Visible on Aerial Imagery (C9), and FAC-Neutral Test (D5) were present at the time of the survey. Hydrology seems to be driven by artesian springs reaching the surface. W02 is suspected to be non-jurisdictional; the wetland appears to be isolated as it is formed in a depression and is surrounded by railway and roadway berms. It does not appear to extend outside of the survey area.

W03 is a palustrine emergent wetland dominated by cursed buttercup (*Ranunculus sceleratus*) (30% cover), common spike-rush (*Eleocharis palustris*) (10% cover), and annual rabbits-foot grass (*Polypogon monspeliensis*) (10% cover). This wetland is an isolated wetland within a depression on the southern edge of the survey area (Figure A-7). Hydrogen sulfide (A4) and a depleted matrix (F3) were present in the soil core retrieved at the time of survey. Surface water (A1), high water table (A2), and saturation (A3) were present at the time of the survey. Hydrology appears to be driven by artesian springs reaching the surface. W03 is suspected to be non-jurisdictional; the wetland appears to be isolated as it is formed in a depression and does not appear to extend outside of the survey area.

W04 is a palustrine emergent wetland dominated by coastal salt grass (45% cover), annual rabbits-foot grass (15% cover), Nebraska sedge (*Carex nebrascensis*) (5% cover), and cursed buttercup (3% cover). This wetland is an isolated wetland within a depression in the center of the survey area (see Figure A-7). Hydrogen sulfide (A4) and a depleted matrix (F3) were present in the soil core retrieved at the time of survey. Surface water (A1), high water table (A2), saturation (A3), drainage patterns (B10), Saturation Visible on Aerial Imagery (C9), and FAC-Neutral Test (D5) were present at the time of the survey. Hydrology appears to be driven by water from the high-water table pooling in a depression in the center of the survey area. W04 is suspected to be non-jurisdictional; the wetland appears to be isolated as it is formed in a depression and does not appear to extend outside of the survey area.

W05 is a palustrine emergent wetland dominated by common spike-rush (30% cover), coastal salt grass (30% cover), Baltic rush (*Juncus balticus*) (25% cover), annual rabbits-foot grass (10% cover), and lambs-quarters (*Chenopodium album*) (5% cover). This wetland is an isolated wetland within a depression in the center of the survey area (see Figure A-7). Hydrogen sulfide (A4) and a depleted matrix (F3) were present in the soil core retrieved at the time of survey. Surface water (A1), high water table (A2), and saturation (A3) were present at the time of the survey. Hydrology appears to be driven by water from the

high-water table pooling in a depression in the center of the survey area. W05 is suspected to be non-jurisdictional; the wetland appears to be isolated as it is formed in a depression and does not appear to extend outside of the survey area.

HYDROPHYTIC VEGETATION

The dominant plant species observed at sampling points in the survey area are listed in Table 8. Data forms for each sampling point are provided in Appendix D.

Table 6. Dominant Plant Species Observed at Sampling Points in the Survey Area

Scientific Name	Common Name	National Wetlands Plant List Indicator Status*
Allenrolfea occidentalis	Iodinebush	FACW
Atriplex confertifolia	Shadscale saltbush	UPL
Atriplex gardneri	Gardner's saltbush	UPL
Bassia hyssopifolia	Five-horn smotherweed	FACU
Bromus tectorum	Cheatgrass	UPL
Carex nebrascensis	Nebraska sedge	OBL
Chenopodium album	Lambs-quarters	FACU
Distichlis spicata	Coastal salt grass	FAC
Eleocharis palustris	Common spike-rush	OBL
Ericameria nauseosa	Rubber rabbitbrush	UPL
Halogeton glomeratus	Saltlover	UPL
Iva axillaris	Deer-root	FACU
Juncus balticus	Baltic rush	FACW
Neokochia americana	Green-molly	FAC
Poa bulbosa	Bulbous blue grass	FACU
Polypogon monspeliensis	Annual rabbits-foot grass	FACW
Ranunculus sceleratus	Cursed buttercup	OBL
Salicornia rubra	Red saltwort	OBL
Salsola tragus	Prickly Russian thistle	FACU
Sarcobatus vermiculatus	Greasewood	FACU
Sisymbrium altissimum	Tall hedge-mustard	FACU
Thinopyrum intermedium	Intermediate wheatgrass	UPL

Note: FACU = facultative upland; UPL = obligate upland; FAC = facultative; FACW = facultative wetland; OBL = obligate wetland.
* Data from USACE (2020).

WETLANDS HYDROLOGY

Hydrology in the survey area appears to be driven by a high-water table due to the close proximity of the Great Salt Lake and small changes in microtopography affecting where water is concentrated and where wetlands form in this landscape. Many of the southern wetlands appear to come from artesian springs reaching the surface. Hydrological indicators in the survey area are Drainage Patterns (B10), FAC-Neutral Test (D5), High Water Table (A2), Saturation (A3), Saturation Visible on Aerial Imagery (C9), and Surface Water (A1). Hydrologic data collected at the sampling points are provided in Appendix E.

HYDRIC SOILS

The primary hydric soil indicators found in soils in the survey area are Depleted Matrix (F3) and Hydrogen Sulfide (A4). Soils in the survey area have a high salt content, which can be problematic for the formation of redoximorphic features in the soil. However, redoximorphic features were still found throughout the survey area. Soil data collected at the sampling points are provided in Appendix E.

SAMPLING POINTS

Six of the sixteen points sampled in the survey area met the three criteria to qualify as wetland. Table 7 summarizes the sampling point data. Detailed delineation data forms for all sampling points are provided in Appendix E. Upland points were selected where mapped NWI features lacked wetland criteria.

Table 7. Wetland and Upland Status of Sampling Points in the Survey Area

Sampling Point	Associated Wetland	Hydrophytic Vegetation Present? (yes or no)	Hydric Soil Present? (yes or no)	Wetland Hydrology Present? (yes or no)	Is the Sampling Point a Wetland? (yes or no)
P01*	W01	Yes	Yes	Yes	Yes
P02	W01	No	No	No	No
P03*	W01	Yes	Yes	Yes	Yes
P04	W01	No	No	No	No
P05	None	No	No	No	No
P06	None	No	No	No	No
P07	None	No	No	No	No
P08	None	No	No	No	No
P09*	W02	Yes	Yes	Yes	Yes
P10	W02	No	No	No	No
P11*	W03	Yes	Yes	Yes	Yes
P12	W03	No	No	No	No
P13*	W04	Yes	Yes	Yes	Yes
P14	W04	No	No	No	No
P15*	W05	Yes	Yes	Yes	Yes
P16	W05	No	No	No	No

* These sampling points met the three criteria to qualify as wetland.

Other Aquatic Resources

Other than wetlands, SWCA delineated no other aquatic resources potentially regulated by the USACE or the Utah Division of Water Rights under the CWA or Utah State regulations.

Interstate Commerce

SWCA observed no evidence of interstate or foreign commerce associated with the aquatic resources identified in this inventory and found no other documentation of any historical commercial activity within the survey area.

DISCUSSION

SWCA evaluated the entire survey area, including NHD- and NWI-mapped features for OHWM and wetland indicators. SWCA mapped five wetlands and no other aquatic resources within the survey area. One wetland complex consisted of palustrine scrub shrub and palustrine emergent wetland types and the remaining four wetlands were palustrine emergent wetlands. W01 is suspected to be jurisdictional due to its proximity to the Great Salt Lake and its directional flow outside the survey area toward this traditionally navigable water. It is SWCA's professional opinion that there are no other jurisdictional WOTUS within the survey area.

LITERATURE CITED

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. Vicksburg, Mississippi: U.S. Army Corps of Engineers Waterways Experiment Station.

Federal Geographic Data Committee. 2013. *Classification of Wetlands and Deepwater Habitats of the United States*. Reston, Virginia: U.S. Geological Survey.

Lichvar, R.W., and S.M. McColley. 2008. *Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*. Hanover, New Hampshire: Cold Regions Research and Engineering Laboratory, USACE Research and Development Center.

Mersel, M.K., and R.W. Lichvar. 2014. *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States*. Hanover, New Hampshire: Cold Regions Research and Engineering Laboratory, USACE Research and Development Center.

Natural Resources Conservation Service (NRCS). 2018. *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils, Version 8.2, 2018*. Edited by L.M Vasilas, G.W. Hurt, and J.F. Berkowitz. U.S. Department of Agriculture, Natural Resources Conservation Service, in cooperation with the National Technical Committee for Hydric Soils.

———. 2023. SSURGO Data. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available at: http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed September 1, 2023.

Supreme Court of the United States. 2023. Syllabus. Sackett et ux. V. Environmental Protection Agency et al. Certiorari to the United States Court of Appeals for the Night Circuit. No 21-454. Argued October 3, 2022—Decided May 25, 2023.

U.S. Army Corps of Engineers (USACE). 2005. *Regulatory Guidance Letter 05-05*. Available at: https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll9/id/1253. Accessed September 1, 2023.

———. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. Vicksburg, Mississippi: USACE Research and Development Center.

———. 2020. National Wetland Plant List, version 3.5. Available at: https://cwbi-app.sec.usace.army.mil/nwpl_static/v34/home/home.html. Accessed September 1, 2023.

U.S. Fish and Wildlife Service. 2023. National Wetlands Inventory. Available at: http://www.fws.gov/wetlands/Data/Mapper.html. Accessed September 1, 2023.

Utah Automated Geographic Reference Center and U.S. Geological Survey. 2023. National Lakes, Rivers, Streams, and Springs. Available at: https://gis.utah.gov/data/water/lakes-rivers-dams/. Accessed September 1, 2023.

Utah Automated Geographic Reference Center and Utah Division of Water Resources. 2022. Water Related Land Use. Available at: http://gis.utah.gov/data/planning/water-related-land/. Accessed September 1, 2023.

Welsh, S.L., N.D. Atwood, L.C. Higgins, and S. Goodrich. 2003. *A Utah Flora*. Great Basin Naturalist Memoir No. 9. Provo, Utah: Brigham Young University.

APPENDIX A

Maps

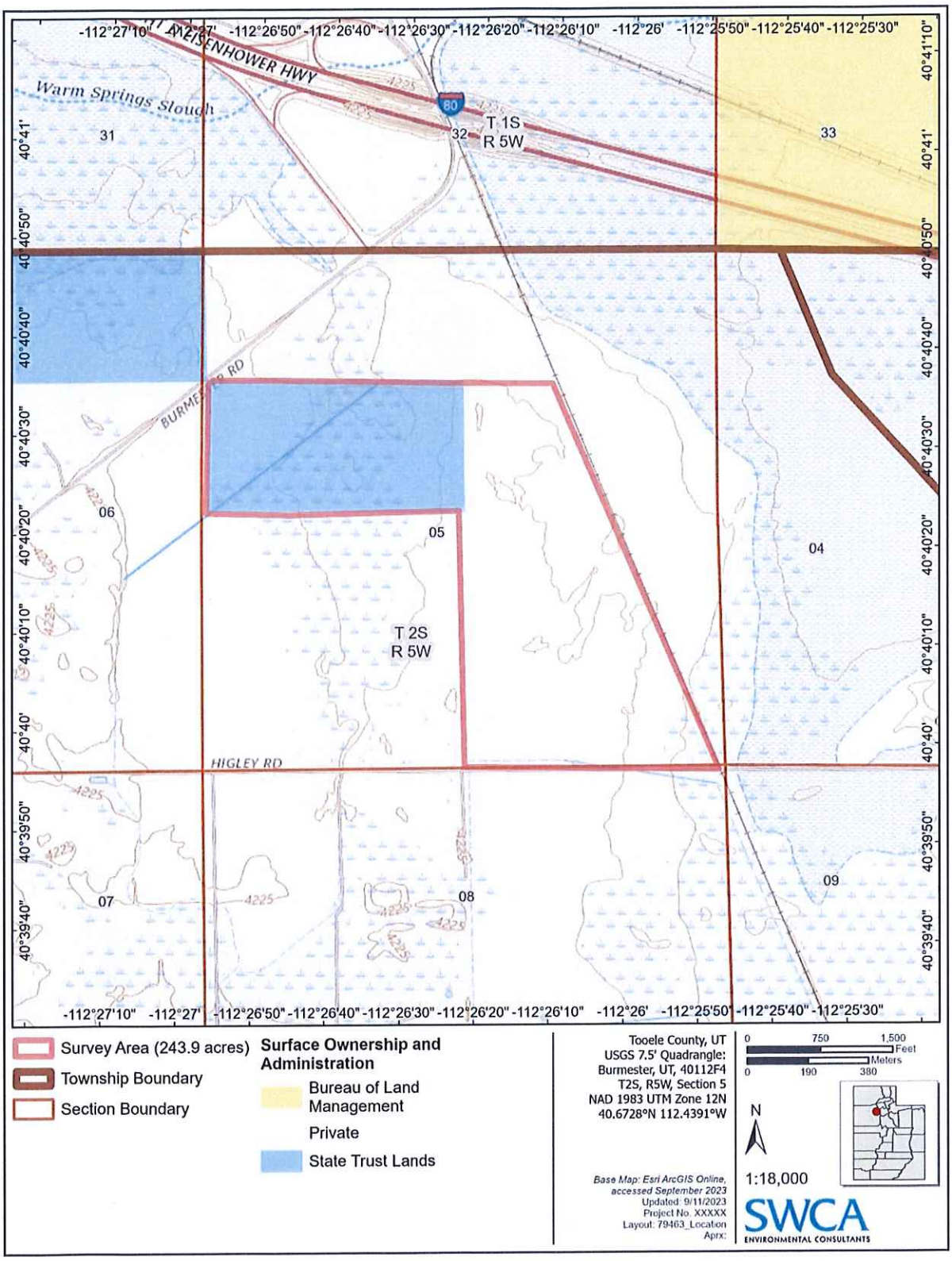


Figure A-1. Survey area location.

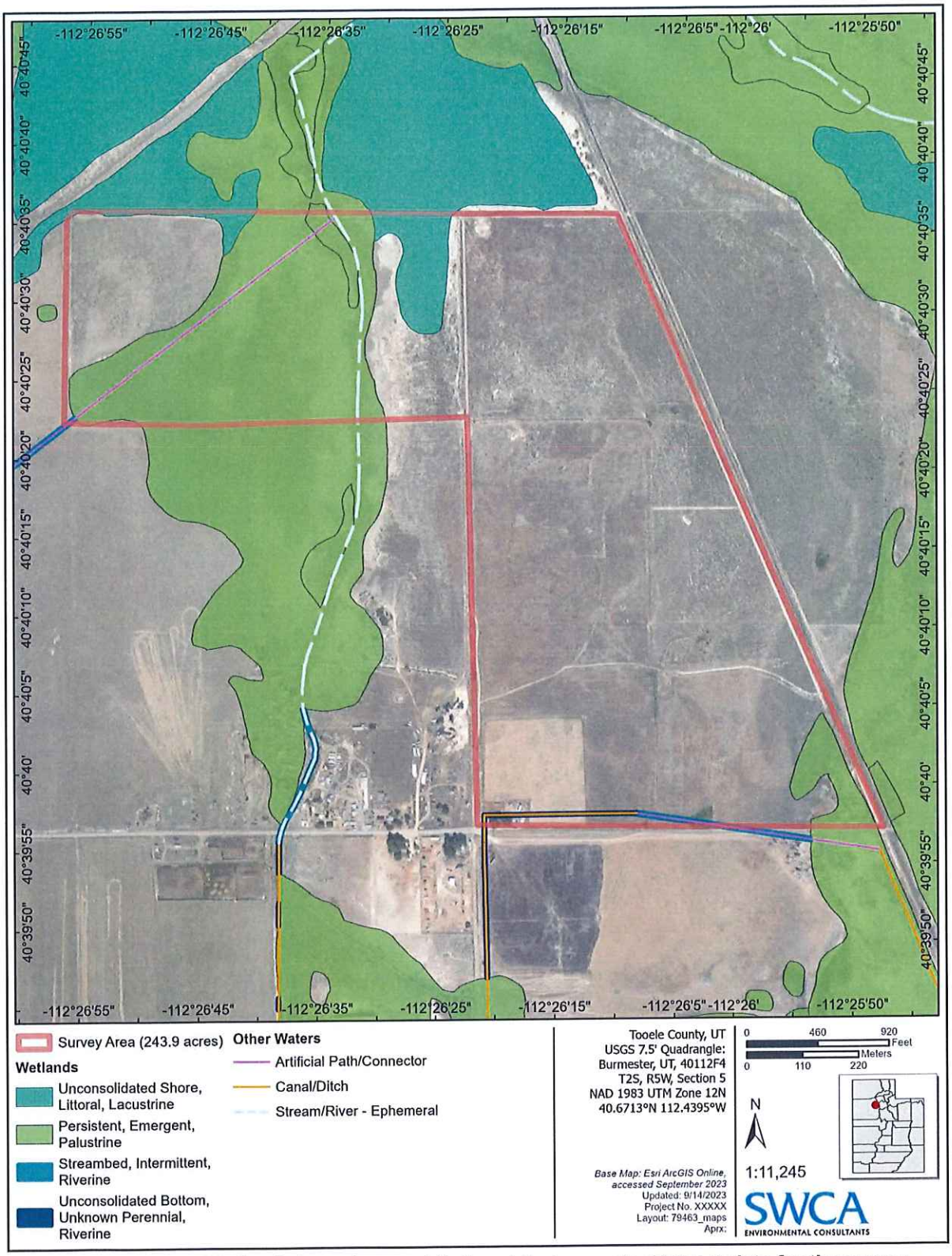


Figure A-2. National Wetlands Inventory and National Hydrography Dataset data for the survey area.

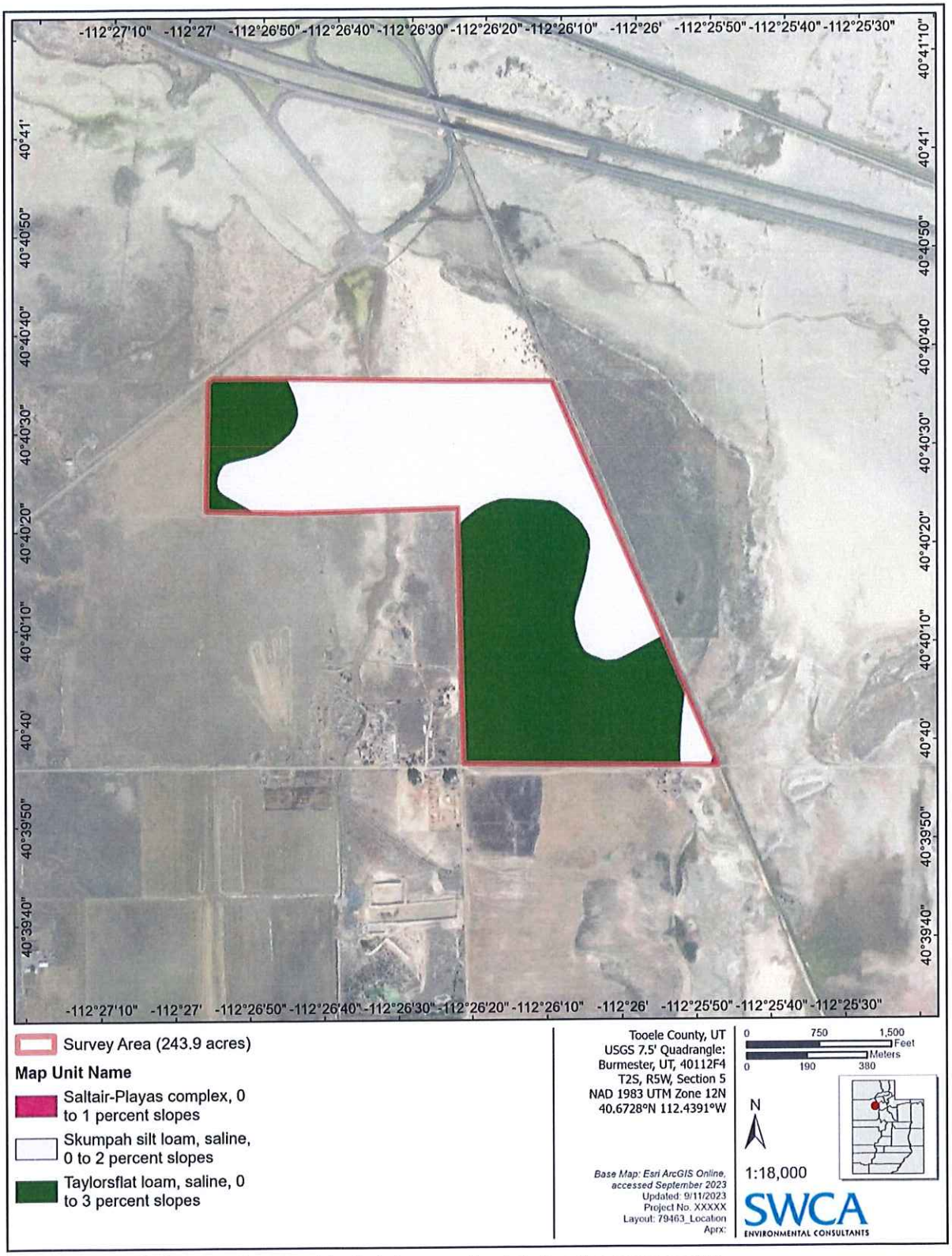


Figure A-3. Soil Survey Geographic Database soils data for the survey area.

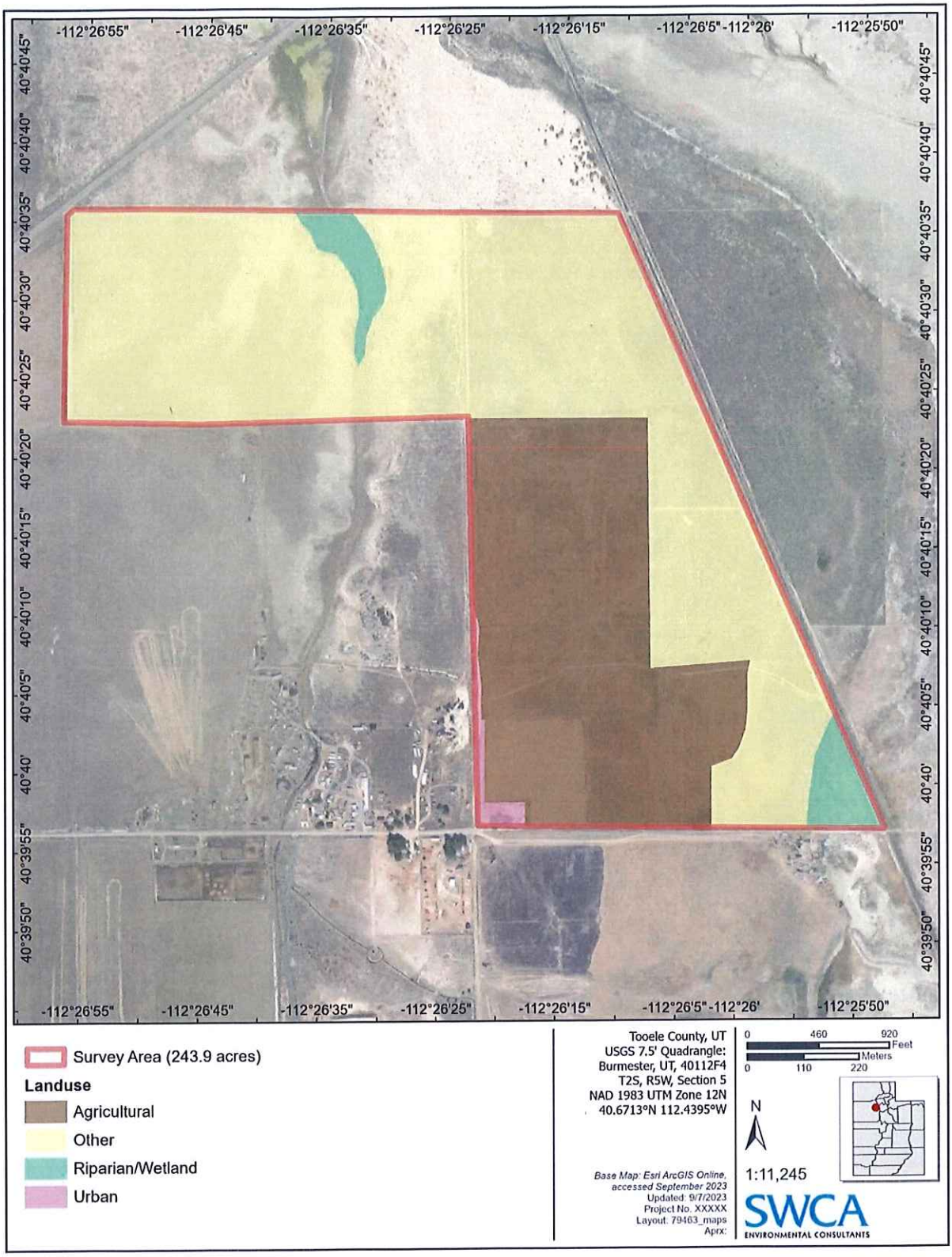


Figure A-4. Water-related and agricultural land use for the survey area.

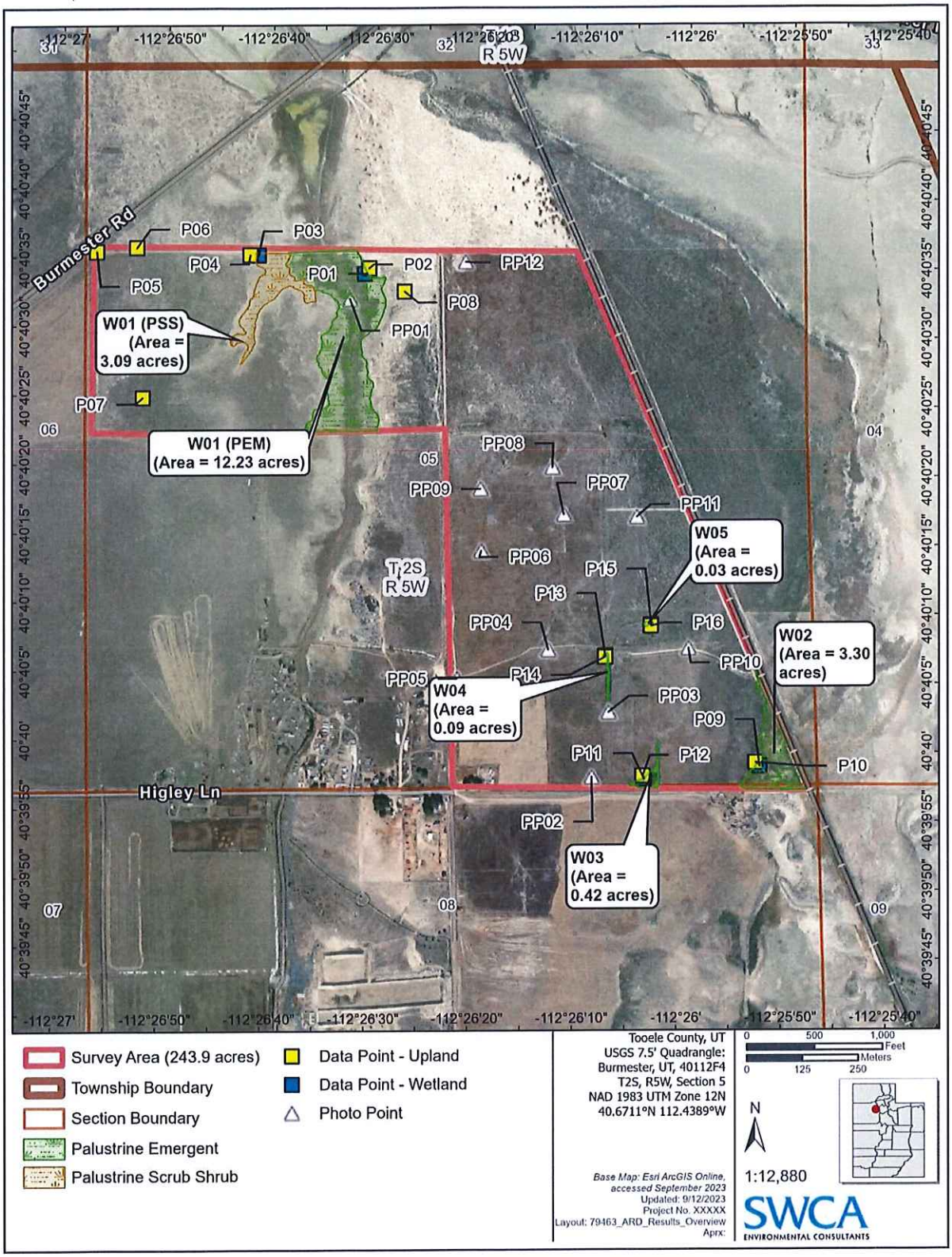


Figure A-5. Aquatic resources overview map for the survey area.

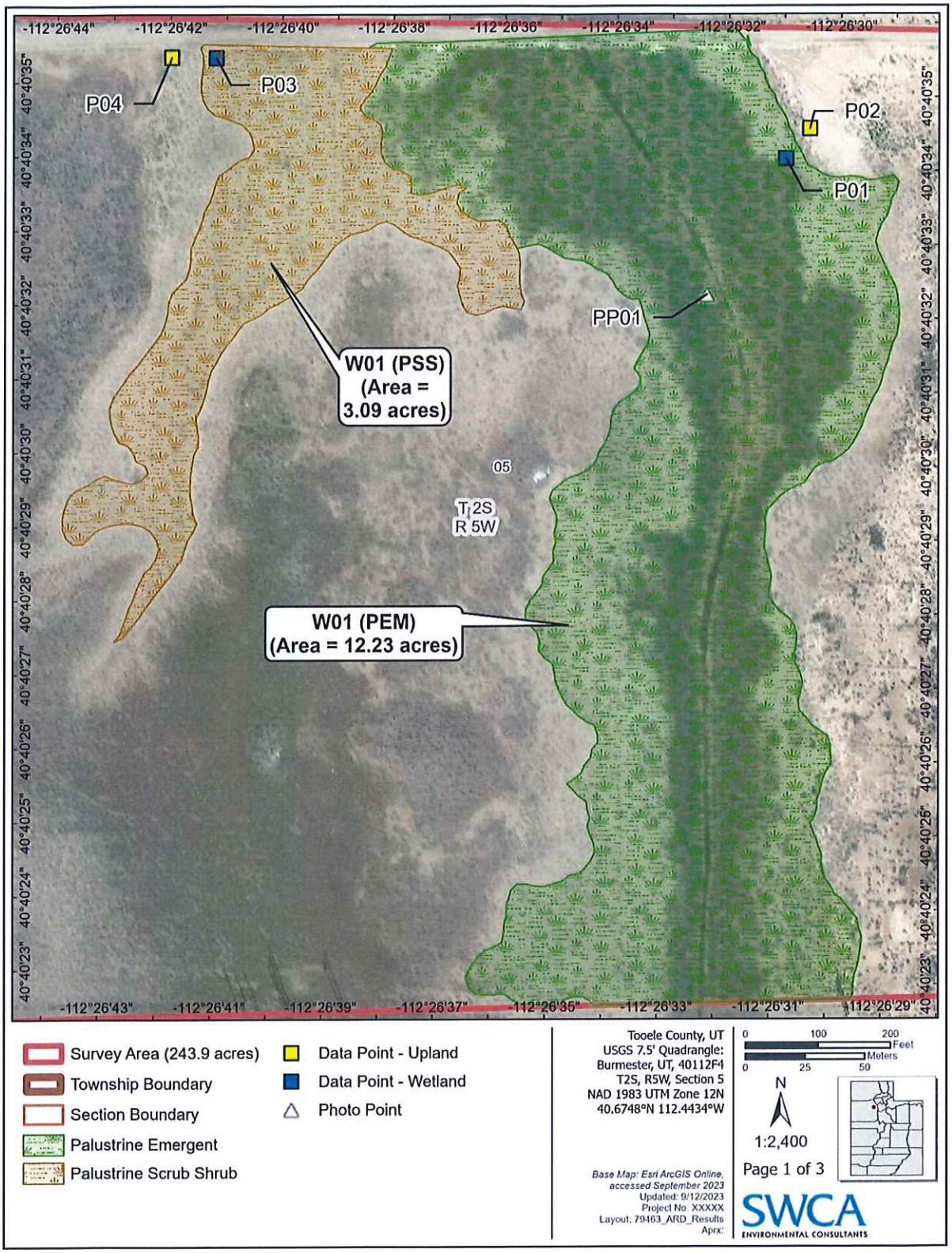


Figure A-6. Aquatic resources survey results map for the survey area (map 1 of 3).

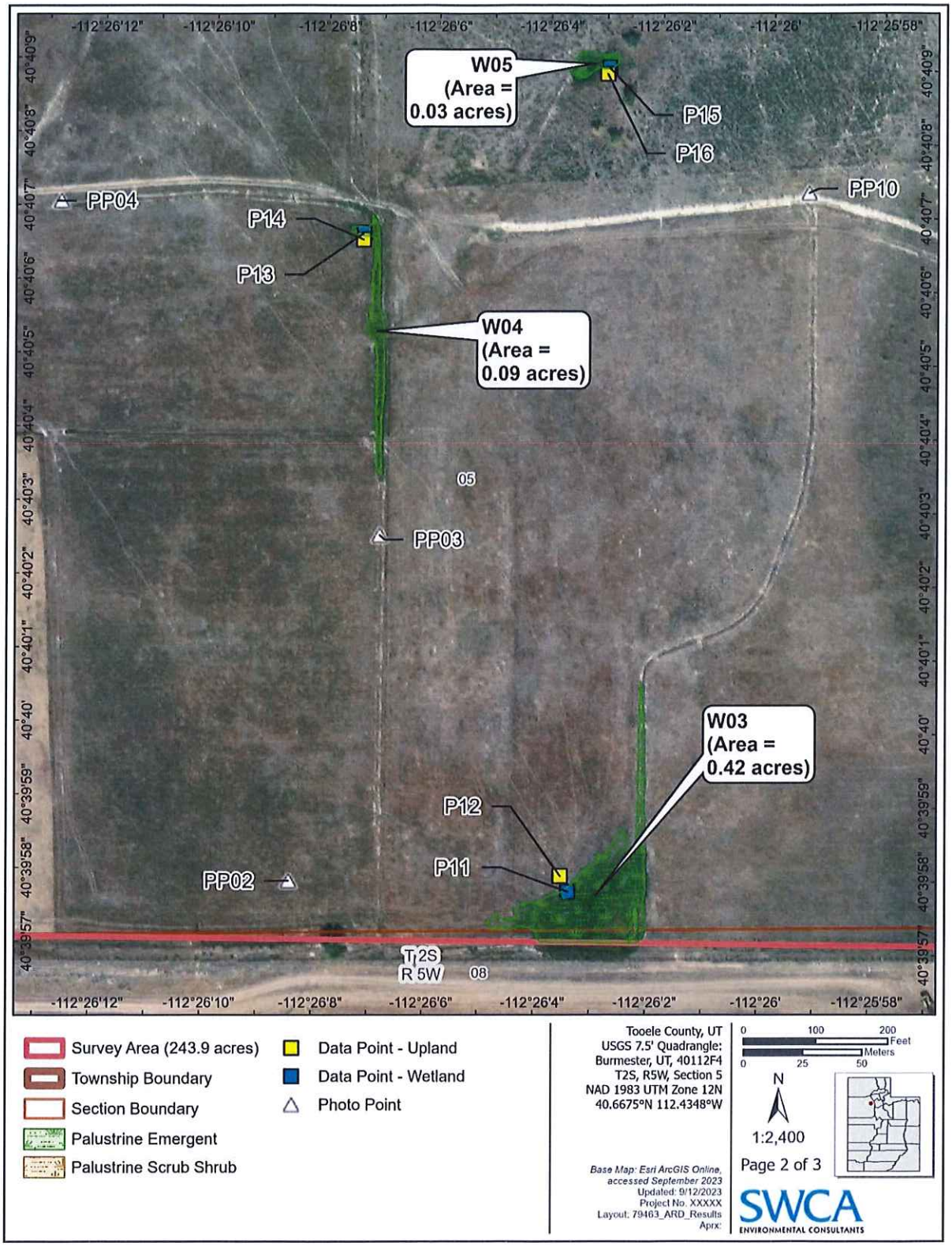


Figure A-7. Aquatic resources survey results map for the survey area (map 2 of 3).

NOTICE OF PUBLIC MEETING

- **SUBJECT:** REZ 2025-035: Rezone request
- **PROJECT SUMMARY:** Rezone of 61.02 acres from MU-40 (Multiple use, 40-acre minimum) to M-D (Manufacturing Distribution).
- **ADDRESS:** Approximately 5600 W Higley Rd
- **PARCEL:** 05-054-0-0046 (parcel split from 05-054-0-0008)

Unincorporated: Tooele **Planner:** Trish DuClos

On **July 16, 2025** the Tooele County Planning Commission will hold a public meeting regarding the request described above. The meeting will be held at 7:00 p.m. at the Tooele County Administration Building (Council Chamber, Third Floor), 47 S. Main Street, Tooele, UT 84074. You may also attend online at https://tooeleco.org/ under "Meeting Agendas." The zoom link will be attached to the planning commission agenda.

For questions or additional information, please contact the Planning Office at 435-843-3160.

The future meeting regarding this application will also be posted on the Tooele County Website and Utah Public Noitce Website.

Tooele County
Community Development

Tooele County Planning Commission
Agenda Item Summary

Department Making Request:	**Meeting Date:**
Community Development	**July 16, 2025**

Item Title:

REZ 2025-035: Rezone from MU-40 (Mulitple use, 40-acre minimum) to M-D (Manufacturing Distribution).

Summary:

Mike Drury is requesting a rezone of 61.02 acres from MU-40 (Mulitple use, 40-acre minimum) to M-D (Manufacturing Distribution).
Parcels: 05-054-0-0046

Planning and Zoning
47 S. Main Street • Room 208 • Tooele, UT 84074
Phone: (435) 843-3160 • Fax: (435) 843-3252
https://tooeleco.gov/index.php

REZ 2025-035

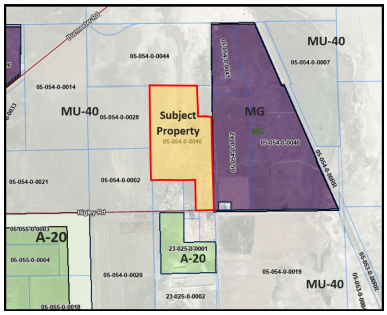
Rezone Summary and Recommendation

Public Body: Tooele County Planning Commission **Meeting Date: July 16, 2025**
Parcel ID: 05-054-0-0046
Property Address: Not yet given. **Unincorporated:** Tooele
Request: Rezone from MU-40 (Multiple use, 40-acre minimum) to M-D (Manufacturing Distribution).
Planner: Trish DuClos
Planning Commission Recommendation: Not Yet Received.
Applicant Name: Mike Drury

PROJECT DESCRIPTION

Mike Drury is requesting a Rezone from MU-40 (Multiple use, 40-acre minimum) to M-D (Manufacturing Distribution). The property is 61.02 acres in size.

SITE & VICINITY DESCRIPTION (see attached map)



The subject property is located on the North side of Higley Rd. It borders the Western boundary of the Inland Port properties. Those properties are found in the M-G (Manufacturing General) zone. The surrounding properties are the MU-40 (Multiple use, 40-acre minimum) zone. There are properties close by that are zoned agricultural.

ZONE CONSIDERATIONS

Requirement	Existing Zone (MU-40)	Proposed zone (MD)
Height	35 Feet	No max
Setbacks	Front: 30 Feet. Side: 30 Feet. Rear Main Building: 60 Feet Accessory Buildings: *10 Feet	Minimum yard setback requirements shall be established in the conditional use permit or planned unit development approval, except that no commercial building shall be located closer than 50 feet to any residential district boundary line or to any street line which continues as frontage into a residential district, and providing they do not encroach on any easement.
Lot Width	660 Feet	None
Lot Area	40-Acre Minimum, 6% reduction for dedication of public rights-of-way that affect the lot or parcel.	None
Maximum Building Coverage	5%	Buildings and structures shall cover no more than 50% of the lot area except as may otherwise be allowed through planned unit development approval.

Required Improvements	Street grading; street base; on-site surface drainage facilities; culinary water facilities; wastewater disposal; and street monuments.	Street grading; street base; curb and gutter; sidewalk; on-site surface drainage facilities; culinary water facilities; wastewater disposal; and street monuments; any other infrastructure deemed necessary.

GENERAL PLAN/LAND USE CONSIDERATIONS

Tooele County Land Use Code 17-2-1 states, "The purpose of Manufacturing Distribution (M-D) zoning districts are to provide areas in appropriate locations where light manufacturing, industrial processes and warehousing not producing objectionable effects may be established, maintained and protected. The regulations of this district are designed to protect environmental quality of the district and adjacent areas."

Traffic along Higley Rd is not a proposed truck route. A General Plan amendment would be required to provide trucks on Higley Rd. Along with new infrastructure for it to be a truck route. Council approved the Inland Port expansion to Properties just West of the subject property on 6/17/25. Higley Rd's classification will still need to be changed and improved upon before heavy industrial uses could safely use this road.

According to the future land use map of the Tooele County General Plan Update 2022, the subject property is located in a proposed Manufacturing zone, with some agricultural areas nearby.

ISSUES OF CONCERN/PROPOSED MITIGATION

Many traffic concerns have been brought before the planning commission in the past regarding different applications for properties in this area. Higley Rd is not a truck route. The only access these properties have is off Higley Road. In the attached traffic study, Higley Rd was determined to not be wide enough to provide adequate access. Acceleration and Deceleration lanes are suggested on Burmester. The Inland Port is also not allowed to use Higley Rd because of these issues.

The Department of Army Corps of Engineers have identified the properties as having wetlands. It was determined to be just over 9 acres are wetlands. The wetlands are found in the middle of the property. Any development will be required to have the Department of Army Corps of Engineers' approval.

In past meetings the neighboring properties have brought forth concerns for their agricultural uses and animals that already exist on the property.

NEIGHBORHOOD RESPONSE

Not yet received. Any comments that are received from the surrounding neighbors or affected entities will be addressed at the planning commission meeting.

PLANNING STAFF ANALYSIS

Planning staff found the proposed rezone aligns with the Tooele County General Plan update 2022, however, the infrastructure, and wetlands in the area raise large concern for this requested rezone in this area. Along with the effects it will have on the already existing residential, and active agriculture uses in the area.

On 4/23/25 Planning Commission tabled the request. And motioned to have the applicant get with staff to decide on the acceptable uses in the area and a plan for infrastructure. Motion by Toni Scott, seconded by Michael Dow and all voted in favor.

The applicant provided an updated traffic study (study date 3/31/25). According to Hales Engineering Traffic study Higley Rd is able to handle up to 400 trips per day. "It is anticipated that the addition of the project will total 190 trips on Higley Lane. This is within the recommended 400 daily trip threshold for 20-foot rural road, based on AASHTO guidelines for low-volume roads."

Starting on page 7 of the study, Hales was provided with information that the proposed use would be equipment storage, with 5 trips in and 5 trips out. Hales provided 20 trips in and out with 40 trips total to the property. It states, "The daily trips generated by the GRE Industrial Park in conjunction with current Higley Lane counts are estimated to be 190 trips." And the study states the 20' wide road can handle 400 trips per day. Table 4 shows that the current use on Higley Rd is 150 trips. So, 250 more trips per day could be safely allowed without any mitigation measures.

Although, the original study (provided 11/22/24) projected the proposed trips per day for the subject property was 116 trips per day. It is hard to project the uses of the property. However, the 400 trips per day still remains the same in both studies.

The staff's recommendation is below.

PLANNING STAFF RECOMMENDATION

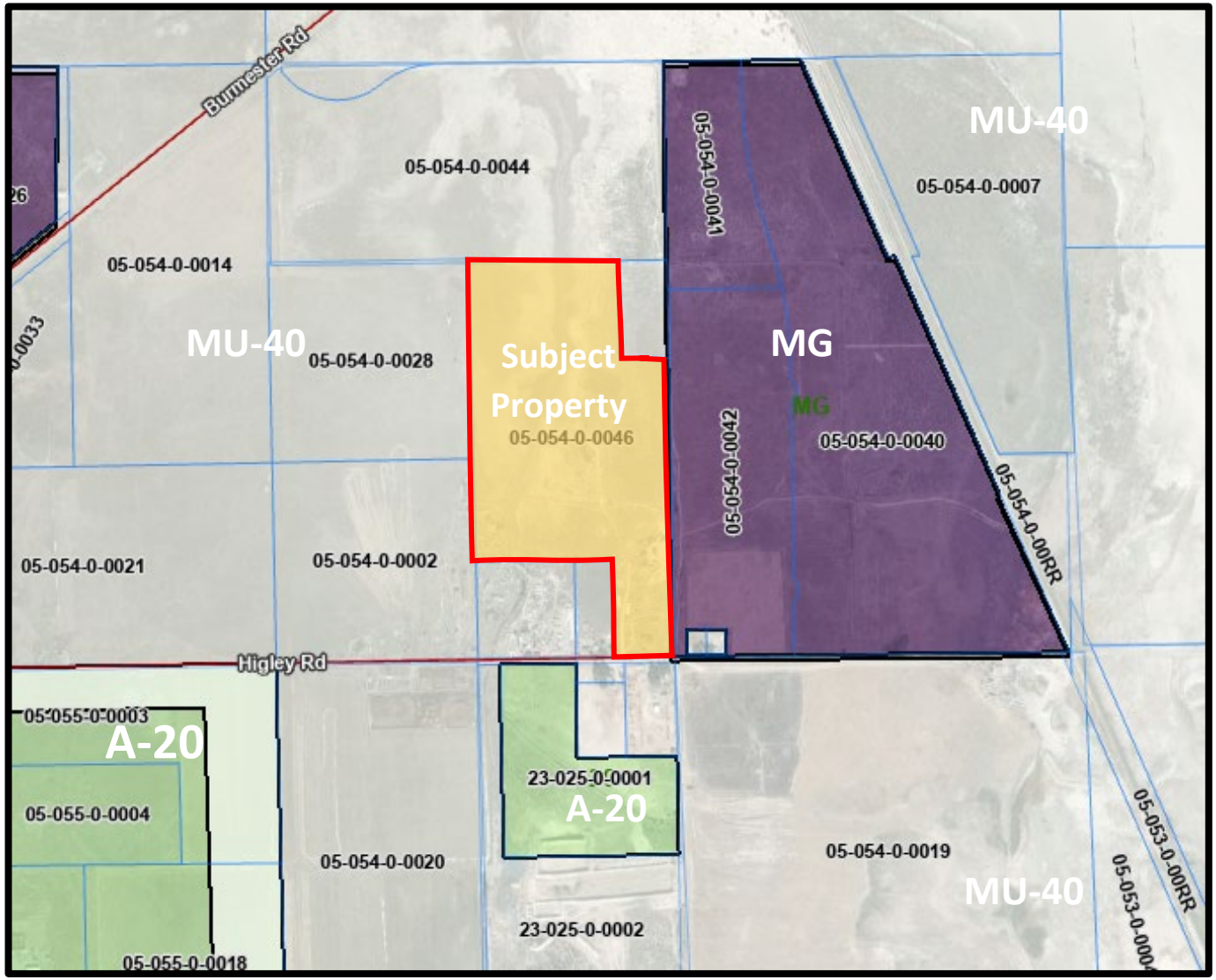
Planning Staff recommends that the Tooele County Planning Commission analyzes the information provided in this Staff Report and attachments to ensure that the proposed rezone request would be compatible with the general plan 2022, and existing residential uses and infrastructure in the surrounding area prior to making a recommendation to the Tooele County Council.

Since it is uncertain when/if the Inland Port may use or improve Higley Rd, staff recommends a condition on the zoning for max trips per day. Given Hales's study, planning staff recommends a condition that:

1. Each future business use proposed shall provide a number of trips per day that their business will bring. The max allowed trips for the entire proposed rezone area be capped at 250 trips per day, until Higley Rd is sufficiently improved to provide more traffic.

REZ 2025-035: Rezone from MU-40 to MG

North side of Higley Rd. Just West of Inland Port.



Legal Description Parcel 05-054-0-0046

COM AT THE SE COR OF THE SW 1/4 OF SEC 5, T2S, R5W, SLM, N 160 RDS, W 80 RDS, S 120 RDS, E 56 RDS, S 40 RDS, E 24 RDS, TO BEG, CONT 66 AC 66.00 AC----LESS 4.98 AC ENTRY# 606007 --- ALSO DESCRIBED AS--- COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF SECTION 5, TOWNSHIP 2 SOUTH, RANGE 5 WEST, SALT LAKE BASE AND MERIDIAN, THENCE SOUTH 89°48'50" WEST, A DISTANCE OF 396.01 FEET; THENCE NORTH 00°33'03" WEST, A DISTANCE OF 665.40 FEET; THENCE SOUTH 89°46'45" WEST, A DISTANCE OF 924.02 FEET: THENCE NORTH 00°33'03" WEST, A DISTANCE OF 1,980.03 FEET; THENCE NORTH 89°46'45" EAST, A DISTANCE OF
990.02 FEET; THENCE SOUTH 00°46'06" EAST, A DISTANCE OF 657.26 FEET; THENCE NORTH 89°46'45" EAST, A DISTANCE OF 327.51 FEET; THENCE SOUTH 00°33'03" EAST, A DISTANCE OF 1,988.43 FEET TO THE POINT OF BEGINNING. LESS AND EXCEPTING THEREFROM THE FOLLOWING: BEGINNING A POINT THAT IS NORTH 00°33'03" WEST, A DISTANCE OF 1,988.16 FEET FROM THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER (3"ALUMINUM CAP) OF SECTION 5, TOWNSHIP 2 SOUTH, RANGE 5 WEST, SLB&M; THENCE SOUTH 89°46'45" WEST, A DISTANCE OF 330.01 FEET; THENCE NORTH 00°33'03" WEST, A DISTANCE OF 657.51 FEET, MORE OR LESS, TO THE SOUTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION; AND RUNNING THENCE ALONG SAID SOUTH LINE, NORTH 89°46'45" EAST, A DISTANCE OF 330.01 FEET; THENCE SOUTH 00°33'03" EAST, A DISTANCE OF 657.51 FEET TO THE POINT OF BEGINNING.

TOOELE COUNTY

Rezone Application

Amendments to the zoning map shall be completed in full, signed, and supplemented with any additional information required by the planning commission. An application which is incomplete or provide insuffiecient data is just cause for denial. No refunds will be given.

Submittals must be filed with the Community Development Department for staff and public review.

Fee $1,000.00

Property information and location (All lines applicable to this site must be filled in)

Parcel(s) #: 05-054-0-0046 Lot(s) #: _____

Subdivision Name: _____ (if applicable)

(For office use only)

REZ #: 2025-035 Fee $1,000.00 Receipt #: 1211

Date complete application submitted: 3/20/25 (Revised 4/01/25)

Application Determination:

Planning Commission recommendation: Favorable ☐ Unfavorable ☐

Presented by: _____ Date: _____

County Council recommendation: Approved ☐ Denied ☐

Presented by: _____ Date: _____

Property Owner(s) Information

Name(s): GRE South, LLC

Address per tax rolls: P.O. Box 71369

City/County: Salt Lake City State: Utah Zip: 84171

Office/home phone: 801-860-6453 Fax: 800-418-2191

Mobile phone: 801-860-6453 Message phone: 801-860-6453

Email address: mike@unitedmanda.com

Applicant(s) Information (if different than property owner)

*Property Owner's Authorization notarization needed

Name(s): Michael Drury

Address per tax rolls: 13 Windsong Ln

City/County: Sandy State: UT Zip: 84092

Office/home phone: 801-860-6453 Fax: 800-418-2191

Mobile phone: 801-860-6453 Message phone: 801-860-6453

Email address: mike@unitedmanda.com

Each application for a rezone shall have all required submittals before it is accepted as a complete application. All required information in this application must be completely filled out and signed with required paperwork submitted or application will be denied

There shall be no presumption of approval of any aspect of the process.

APPLICATION IS HEREBY MADE TO THE PLANNING COMMISSION REQUESTING THAT:

The 61 acre parcel would be rezoned to Manufacturing Distribution (M-D)

Currently zoned: MU-40

****ADDITIONAL INFORMATION OR SUBMITTALS MAY BE REQUIRED****

An application to amend the zoning map shall address:

(Must list in detail specific section and language to be amended, giving the original zoning and what is allowed there and the proposed zoning and what could be allowed in that zone)

Applicant check	County check		
☑	☑	a)	General existing site characteristics including ownership, topography, soils, drainage, vegetation, and other physical characteristics of the area proposed to be changed;
☑	☑	b)	A legal description of the area to be zoned;
☑	☑	c)	Types of land uses permitted, conditional or prohibited in the current zoning district and the proposed zoning district;
☑	☑	d)	Existing transportation patterns to include public and private roads and internal and external circulation patterns, rights-of-way, easements, and parking;
☑	☑	e)	Existing and proposed land uses, open spaces, impervious surfaces including streets, parking areas, structures, and buildings with a general description of size area, intensities/densities, and height, and proposed storm-water drainage facilities;
☑	☑	f)	Existing and proposed utilities and infrastructure;
☑	☑	g)	Relationship of proposed zone change with Tooele County General Plan and how specifically the proposed zone change would conflict, conform, complement, or otherwise affect the Tooele County General Plan as well as any special studies that are designed to further detail the Tooele County General Plan in a specific area;
☑	☑	h)	An area map showing adjacent property owners and existing land uses within 1,000 feet of the area proposed to be rezoned; property owner labels printed from the recorder's office.
☑	☑	i)	The location, description, and acreage of land uses;
☑	☑	j)	Approximate location and number of residential units along with approximate square footage, density, and height;
☑	☑	k)	Approximate location and square footage of non-residential buildings;

- [x] [x] l) Calculation of approximate amount of open space both before and after buildout construction, indicating areas of expected open space and new landscaping, and including maintenance plans for these areas;
- [x] [x] m) If the site has unusual or unique natural features, a demonstration of how proposed development preserves and utilizes natural topography and geologic features, scenic vistas, trees, and other vegetation, and prevents the disruption of natural draining patterns, and if appropriate, geotechnical studies submitted to indicate soil types, depth of bedrock and slope stability;
- [x] [x] n) A description of the availability of culinary and irrigation water, community facilities such as schools, fire protection services and other types of facilities that would serve the re-zoned area and how these facilities are affected by this proposal;
- [x] [x] o) Approximate location and size of storm water detention and retention areas and calculations on the impact to those systems as a result of the change in density and use of land;
- [x] [x] p) An indication of the construction schedule of any project proposed;
- [x] [x] q) For multi-phased projects, a phasing plan that describes the anticipated timing and geographical extent of each phase;
- [x] [x] r) A detailed traffic study showing the vehicle trips per day on average at buildout and a determination how the project would significantly alter existing traffic patterns or volume;
- [x] [x] s) For applications involving a PUD, a table of proposed dimensional standards for the proposed land uses or phases including lot sizes and frontages, building heights and intensities, and setbacks and a description of any requested exceptions to the requirements of the underlying zone; and
- [x] [x] t) Any other study or information required by the planning commission or Zoning Administrator.

I (We) understand that the Planning Commission and/or County Council may or may not adopt such changes listed. The fees associated with this application will not be refunded or returned once the notice of this application is submitted to planning commission. I (We) understand the process of this requested change must first go through Planning Commission for a recommendation to the County Council. The process will then proceed to go through County Council. Knowing this process, I (We) understand the application will take the needed time to ensure all processes are properly met and either board may make further changes to the request, or possible denial in whole.

49278f63-8e82-48cf-a34c-e4575bf3549b Digitally signed by 49278f63-8e82-48cf-a34c-e4575bf3549b Date: 2026.03.14 11:33:51 -06'00'

PROPERTY OWNER'S SIGNATURE

DATE

Michael Scott Drury Digitally signed by Michael Scott Drury Date: 2026.03.14 11:35:54 -06'00'

APPLICANT'S SIGNATURE

03/14/2025

DATE

An application to amend the zoning map shall address:

(a) General existing site characteristics including ownership, topography, soils, drainage, vegetation and other physical characteristics of the area proposed to be changed; Ownership of the land is GRE South, LLC., a Utah Limited Liability Company. The current site characteristics include a flat and solid clay base of soil with miscellaneous shrubs throughout the 61 acres of the property. A Topography Survey is attached as A) 1 for review. There is a manmade drainage canal from the South side of the property that runs parallel to the West side of the property all the way to the North side of the property that will stay in place. The Division of Natural Resources determined that after about 1/3 of the way from the South boundary of the property that it "is not considered a state jurisdictional natural stream channel going North". Please see the attached DNR Site Visit Report attached as A) In addition, the U.S. Army Corps of Engineers was also involved to help determine the scope of any possible wetland issues. They recommended Equinox Engineering to do a study which determined that 9.9 acres surrounding the manmade canal would be determined to be wetland in which wetland credits could be used to develop that wetland area or the area could be left alone and developed around it as we plan to do. The Aquatic Resources Delineation Report as recommended by the U.S. A.C.E. via Hollis Jencks is attached as A) for review.

(b) A legal description of the area to be rezoned; A.P.N.: 05-054-0-0046, See attached B) legal description ⟶ and description below.

Property Description for Parcel 05-054-0-0046 (Remaining West Parcel)

COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF SECTION 5, TOWNSHIP 2 SOUTH, RANGE 5 WEST, SALT LAKE BASE AND MERIDIAN, THENCE SOUTH 89°48'50" WEST, A DISTANCE OF 396.01 FEET; THENCE NORTH 00°33'03" WEST, A DISTANCE OF 665.40 FEET; THENCE SOUTH 89°46'45" WEST, A DISTANCE OF 924.02 FEET; THENCE NORTH 00°33'03" WEST, A DISTANCE OF 1,980.03 FEET; THENCE NORTH 89°46'45" EAST, A DISTANCE OF 990.02 FEET; THENCE SOUTH 00°46'06" EAST, A DISTANCE OF 657.26 FEET; THENCE NORTH 89°46'45" EAST, A DISTANCE OF 327.51 FEET; THENCE SOUTH 00°33'03" EAST, A DISTANCE OF 1,988.43 FEET TO THE POINT OF BEGINNING.

CONTAINING 2,661,120 SQUARE FEET OF 61.09 ACRES, MORE OR LESS.

(c) Types of land uses permitted, conditional or prohibited in the current zoning districtand the proposed zoning district; The current zoning for the entire 61 acres is MU-40. Application is being made to convert the 61 acre parcel to Manufacturing Distribution (M-D) for the potential permitted uses such as "Truck and heavy equipment service station and repair facility as stated on Table 17-5-3.2 (l).

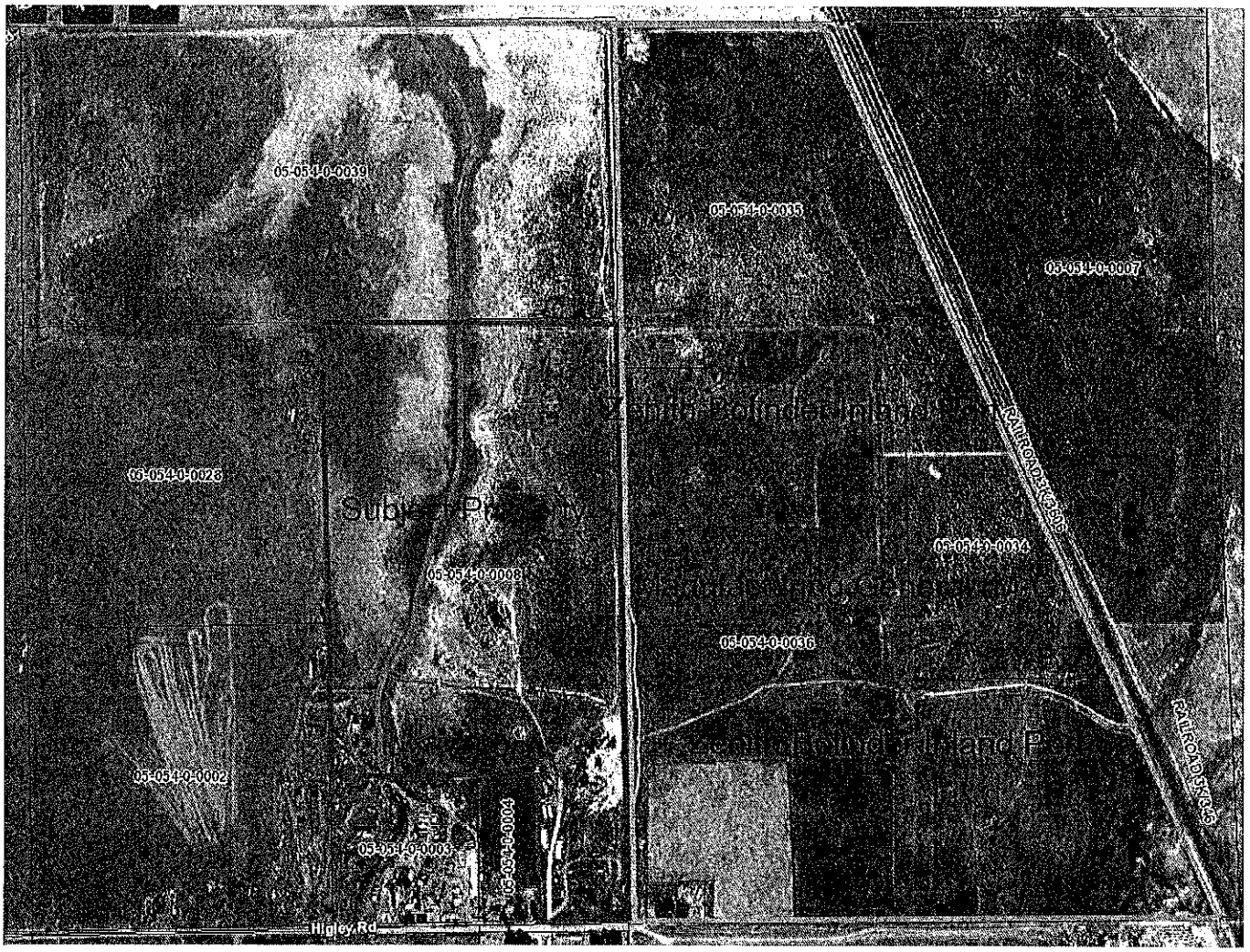
(d) Existing transportation patterns to include public and private roads and internal and external circulation patterns, rights-of-way, easements and parking; Currently Higley Road has direct access to the front of the property which has 450' of frontage. There are no known issues with access to the property. The Southside of the parcel will have access from Higley Road. A traffic study has been performed by Hales Engineering and shows that Higley Road will handle 400 trips per day. The current load with the new anticipated use of this property will be a total of 266 trips per day. Please see the traffic study attached as (D) provided along with the amendment attached as (D) that acknowledges traffic studies from Wholesome.co, Utah Track and Welding etc. Lastly, two additional home owners have now sold out to the Zenith-Bolinder Inland Port which will reduce the original numbers from the traffic study as well.

(e) Existing and proposed land uses, open spaces, impervious surfaces including streets, parking areas, structures and buildings with a general description of size area, intensities/densities, and height, and proposed storm-water drainage facilities; The parcel will be used for Manufacturing Distribution (M-D). There is a drainage canal from the South side of the property that runs parallel to the West side of the property all the way to the North side of the property that will stay in place. The current storm water drainage canal outlined in blue, which consists of 9.9 acres according to the Aquatic Resource Delineation Report attached hereto as (E) will remain intact. Any building on the property will be around the water canal/wetland issue to keep it as a natural feature in place.

(f) Existing and proposed utilities and infrastructure; Rocky Mountain Power will be brought in. A water well and septic tank are proposed in the immediate future as approved by Tooele County Health Department. GRE South owns 20 plus water rights for the property. See attached (F) Water Rights Detail certificate issued by the Division of Water Rights on 11-20-2024.

(g) Relationship of proposed zone change with Tooele County General Plan and howspecifically the proposed zone change would conflict, conform, complement or otherwise affect the Tooele County General Plan as well as any special studies that are designed to further detail the Tooele County General Plan in a specific area; It is anticipated that this zoning change would be consistent with the adjacent property owned by Zenith-Bolinder Inland Port property and also consistent with the overall General Plan of Tooele County.

(h) An area map showing adjacent property owners and existing land uses within 1,000feet of the area proposed to be rezoned; See attached picture below of the subject property. There are approximately five known residences within 1,000 feet of the subject property. There is also the Zenith-Bolinder Inland Port which has the identical zoning that the subject property is applying for, in addition to Ivie Acres Petting Zoo, Wholesome.Co medical cannabis farm, Utah Track and Welding and lastly the Higley farm operation. Attachment H)



(i) the location, description and acreage of land uses; The current location address is approximately 5660 Higley Road, Grantsville, Utah 84029. 61.02 acres proposed use would be for Manufacturing Distribution (M-D) as approved by Tooele County.

(j) approximate location and number of residential units along with approximate square footage, density and height; No residential uses are anticipated.

(k) approximate location and square footage of non-residential buildings; A non-residential industrial building may be constructed in the front of the property which will be

approximately 17,000 sq. ft. as approved by Tooele County.

(l) Calculation of approximate amount of open space both before and after buildout construction, indicating areas of expected open space and new landscaping, and including maintenance plans for these areas; The parcel will be developed according to the existing requirements for buildings regarding the particular zoning and building requirements as approved by Tooele County. The potential industrial building is expected to exist near the front of the property. There will be an abundance of open space after construction of the potential building.

(m) If the site has unusual or unique natural features, a demonstration of how proposed development preserves and utilizes natural topography and geologic features, scenic vistas, trees and other vegetation, and prevents the disruption of natural draining patterns, and if appropriate, geotechnical studies submitted to indicate soil types, depth of bedrock and slope stability;
The current sites natural features includes a very flat and solid clay base of soil with miscellaneous shrubs. The current man-made water drainage canal will remain intact which is colored in blue. Geotechnical map attachment M)

(n) A description of the availability of culinary and irrigation water, community facilities such as schools, fire protection services and other types of facilities that would serve the re-zoned area and how these facilities are affected by this proposal;
The property currently has twenty one water rights. The general area is also supported by the North Tooele Fire District.

(o) Approximate location and size of storm water detention and retention areas and calculations on the impact to those systems as a result of the change in density and use of land; GRE South does not anticipate any major impact to the current storm water detention and retention areas. The current man-made water drainage canal will remain intact which is colored in blue.

(p) An indication of the construction schedule of any project proposed; I anticipate that construction would start in the summer of 2025 conditioned upon all of the other necessary approvals from Tooele County that need to be in place.

(q) For multi-phased projects, a phasing plan that describes the anticipated timing andgeographical extent of each phase; I do not anticipate doing a multiphase project.

(r) A detailed traffic study showing the vehicle trips per day on average at buildout and a determination how the project would significantly alter existing traffic patterns or volume; Currently Higley Road has direct access to the front of the property which has 450' of frontage. There are no known issues with access to the property. The Southside of the parcel will have access from Higley Road. A traffic study has been performed by Hales Engineering and shows that Higley Road will handle 400 trips per day. The current load with the new anticipated use of this property will be a total of 266 trips per day. Please see the traffic study attached as R) provided along with the amendment attached as R) that acknowledges traffic studies from Wholesome.co, Utah Track and Welding etc. Lastly, two additional home owners have now

sold out to the Zenith-Bolinder Inland Port which will reduce the original numbers from the traffic study as well.

(s) For applications involving a PUD, a table of proposed dimensional standards forthe proposed land uses or phases including lot sizes and frontages, building heights and intensities, and setbacks and a description of any requested exceptions to the requirements of the underlying zone; and I do not plan to involve a PUD.

(t) any other study or information required by the planning commission or zoning administrator. None at this time.

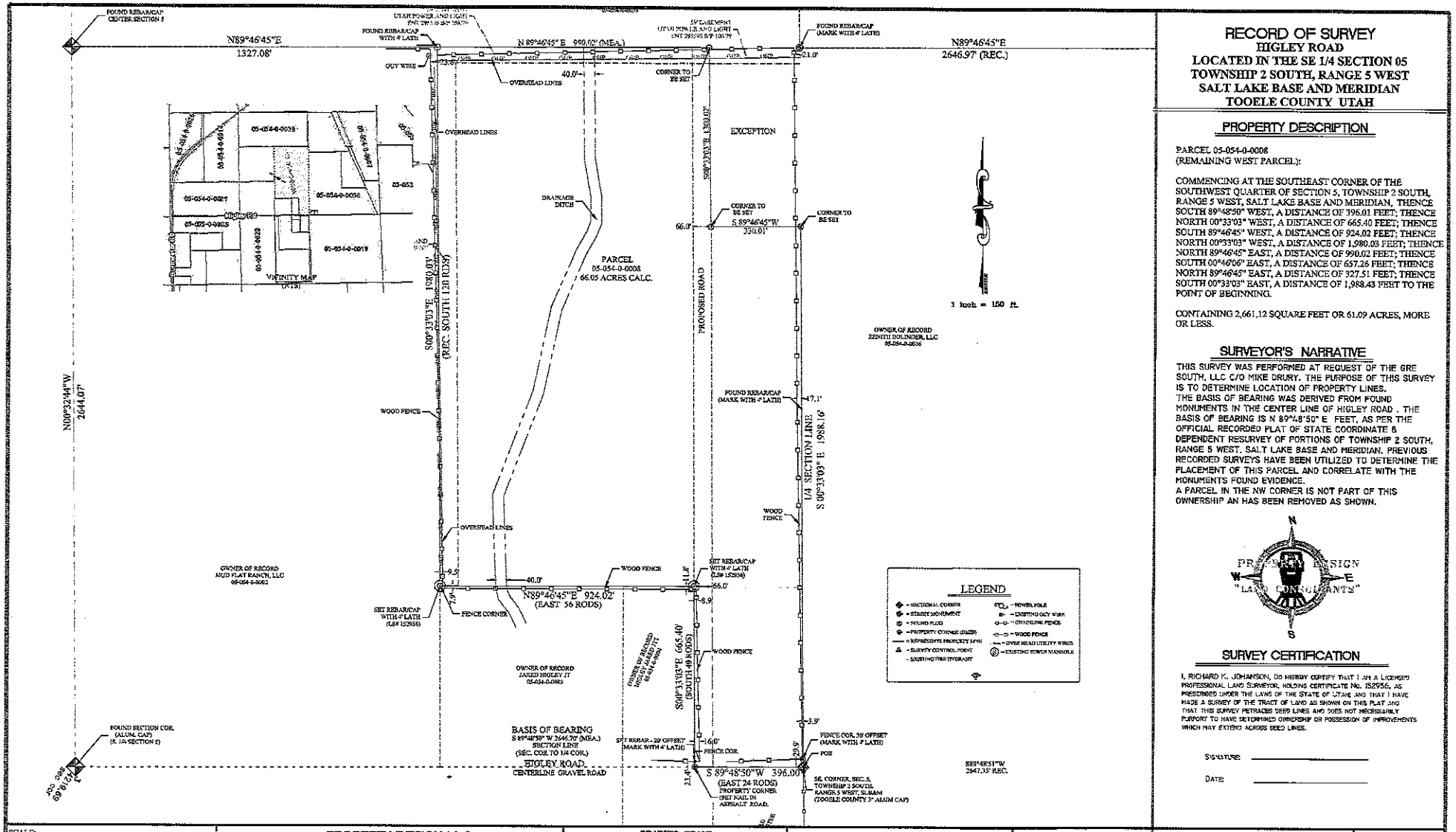
ADDITIONAL ATTACHMENTS:

attachment 1) Survey of the property
attachment 2) Plat Map of the property

Date Submitted: March 14, 2025



Signature of owner(s) or agent(s):



RECORD OF SURVEY
HIGLEY ROAD
LOCATED IN THE SE 1/4 SECTION 05 TOWNSHIP 2 SOUTH, RANGE 5 WEST SALT LAKE BASE AND MERIDIAN TOOELE COUNTY UTAH

PROPERTY DESCRIPTION

PARCEL 05-054-0-0008
(REMAINING WEST PARCEL):

COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF SECTION 5, TOWNSHIP 2 SOUTH, RANGE 5 WEST, SALT LAKE BASE AND MERIDIAN, THENCE SOUTH 89°48'50" WEST, A DISTANCE OF 396.01 FEET; THENCE NORTH 00°33'03" WEST, A DISTANCE OF 665.40 FEET; THENCE SOUTH 89°46'45" WEST, A DISTANCE OF 924.02 FEET; THENCE NORTH 00°33'03" WEST, A DISTANCE OF 1,980.03 FEET; THENCE NORTH 89°46'45" EAST, A DISTANCE OF 990.02 FEET; THENCE SOUTH 00°46'06" EAST, A DISTANCE OF 657.26 FEET; THENCE NORTH 89°46'45" EAST, A DISTANCE OF 327.51 FEET; THENCE SOUTH 00°33'03" EAST, A DISTANCE OF 1,988.43 FEET TO THE POINT OF BEGINNING.

CONTAINING 2,661,12 SQUARE FEET OR 61.09 ACRES, MORE OR LESS.

SURVEYOR'S NARRATIVE

THIS SURVEY WAS PERFORMED AT REQUEST OF THE GRE SOUTH, LLC C/O MIKE DRURY. THE PURPOSE OF THIS SURVEY IS TO DETERMINE LOCATION OF PROPERTY LINES.
THE BASIS OF BEARING WAS DERIVED FROM FOUND MONUMENTS IN THE CENTER LINE OF HIGLEY ROAD . THE BASIS OF BEARING IS N 89°48'50" E FEET, AS PER THE OFFICIAL RECORDED PLAT OF STATE COORDINATE & DEPENDENT RESURVEY OF PORTIONS OF TOWNSHIP 2 SOUTH, RANGE 5 WEST. SALT LAKE BASE AND MERIDIAN. PREVIOUS RECORDED SURVEYS HAVE BEEN UTILIZED TO DETERMINE THE PLACEMENT OF THIS PARCEL AND CORRELATE WITH THE MONUMENTS FOUND EVIDENCE.
A PARCEL IN THE NW CORNER IS NOT PART OF THIS OWNERSHIP AN HAS BEEN REMOVED AS SHOWN.

SURVEY CERTIFICATION

I, RICHARD K. JOHANSON, DO HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR, HOLDING CERTIFICATE No. 152956, AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH, AND THAT I HAVE MADE A SURVEY OF THE TRACT OF LAND AS SHOWN ON THIS PLAT AND THAT THIS SURVEY RETRACES DEED LINES AND DOES NOT NECESSARILY PURPORT TO HAVE DETERMINED OWNERSHIP OR POSSESSION OF IMPROVEMENTS WHICH MAY EXTEND ACROSS DEED LINES.

SIGNATURE: _____

DATE: _____

SCALE:	AS SHOWN
DATE:	7-28/2024
DRAWN BY:	R.K.J/CFB
SURVEY BY:	R.K.J
CHECKED BY:	R.K.J/C.F.B.
JOB #:	R-24-006-B

PROPERTY DESIGN L.L.C.
"LAND CONSULTANTS"
P.O. BOX 701168
SALT LAKE CITY UT 84170
(801) 955-6339
(propertydesignllc@gmail.com)

GRAPHIC SCALE
(20 FEET)
1 Inch = 150 ft.

COPYRIGHT
THIS DRAWING IS AND AT ALL TIMES REMAINS THE EXCLUSIVE PROPERTY OF PROPERTY DESIGN LLC SHALL NOT BE USED WITH OUT COMPLETE AUTHORIZATION AND WRITTEN SUPPORT.

DISCLAMER

THIS DRAWING IS AND AT ALL TIMES REMAINS THE EXCLUSIVE PROPERTY OF PROPERTY DESIGN LLC SHALL NOT BE USED WITH OUT COMPLETE AUTHORIZATION AND WRITTEN SUPPORT.

SURVEY FOR
MIKE DRURY

SURVEYOR'S NOTES

A TITLE REPORT MAY PROVIDE INFORMATION CONCERNING EASEMENTS. SURVEYOR MAKES NO WARRANTEES OR GUARANTEES TO THE EXISTENCE OF/OR POSSIBLE EASEMENTS THAT MAY AFFECT PARCELS.

SHEET 1 OF 1
PRELIMINARY
AUGUST 28, 2024

B)

Legal Description Parcel 05-054-0-0046

COM AT THE SE COR OF THE SW 1/4 OF SEC 5, T2S, R5W, SLM, N 160 RDS, W 80 RDS, S 120 RDS, E 56 RDS, S 40 RDS, E 24 RDS, TO BEG, CONT 66 AC 66.00 AC----LESS 4.98 AC ENTRY# 606007 --- ALSO DESCRIBED AS--- COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF SECTION 5, TOWNSHIP 2 SOUTH, RANGE 5 WEST, SALT LAKE BASE AND MERIDIAN, THENCE SOUTH 89°48'50" WEST, A DISTANCE OF 396.01 FEET; THENCE NORTH 00°33'03" WEST, A DISTANCE OF 665.40 FEET; THENCE SOUTH 89°46'45" WEST, A DISTANCE OF 924.02 FEET: THENCE NORTH 00°33'03" WEST, A DISTANCE OF 1,980.03 FEET; THENCE NORTH 89°46'45" EAST, A DISTANCE OF
990.02 FEET; THENCE SOUTH 00°46'06" EAST, A DISTANCE OF 657.26 FEET; THENCE NORTH 89°46'45" EAST, A DISTANCE OF 327.51 FEET; THENCE SOUTH 00°33'03" EAST, A DISTANCE OF 1,988.43 FEET TO THE POINT OF BEGINNING. LESS AND EXCEPTING THEREFROM THE FOLLOWING: BEGINNING A POINT THAT IS NORTH 00°33'03" WEST, A DISTANCE OF 1,988.16 FEET FROM THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER (3"ALUMINUM CAP) OF SECTION 5, TOWNSHIP 2 SOUTH, RANGE 5 WEST, SLB&M; THENCE SOUTH 89°46'45" WEST, A DISTANCE OF 330.01 FEET; THENCE NORTH 00°33'03" WEST, A DISTANCE OF 657.51 FEET, MORE OR LESS, TO THE SOUTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION; AND RUNNING THENCE ALONG SAID SOUTH LINE, NORTH 89°46'45" EAST, A DISTANCE OF 330.01 FEET; THENCE SOUTH 00°33'03" EAST, A DISTANCE OF 657.51 FEET TO THE POINT OF BEGINNING.

AQUATICS RESOURCE DELINEATION REPORT

Atlas 66 Industrial Center

Prepared for:
GRE South LLC
6975 South Union Park Center
Suite 600
Midvale, Utah 84047



Prepared by:

EQUINOX ENGINEERING
Wetland Environmental Consulting and Civil Engineering

Equinox Engineering & Environmental
Post Office Box 612
West Jordan, Utah 84084
(801) 739-8218
www.equinoxengineering.us

February 28, 2025

This Page Has Been Left Blank Intentionally

Executive Summary

The subject property (herein referred to as the site) of this aquatic resource delineation report is a parcel of real property owned or controlled by GRE South LLC.

GRE South LLC is proposing to develop an industrial center that is the subject of this evaluation. The final utilization of the project site is unknown with respect to the type of business that will occupy the space; however the expectation is that it will be companies that require a significant amount of space for their respective operations. Potentially manufacturing operations will be attracted to the industrial center given the semi-remote location in rural Tooele County.

The parcel that is the subject of this evaluation is located in rural Tooele County, Utah. The property is recorded with Tooele County as parcel 05-054-0-0008 and is reported to contain 66.00 acres. The site is located in NESW and SESW Quarter Sections of Section 5 - Township 2 South - Range 5 West; Salt Lake Base and Meridian. Latitude/Longitudinal coordinates for the access location from Higley Road to the parcel is 40°39'56.80" North by 112°26'26.95" West.
(See Figure 1 Area Map, Figure 2 Vicinity Map and Figure 3 Site Map in Appendix B Site Maps and Exhibits)

It is the conclusion of this delineation report that wetlands do exist on the site that can be determined to be wetland by using the three-parameter approach as required by the Regional Supplement for the Corps of Engineers Wetland Delineation Manual: Arid West Regions (Version 2.0).

The entire 66 acres site was evaluated and the boundary footprint of the evaluation overlays on the entire project site. A total of 400,322 Square Feet (9.190 Acres) of wetland were delineated on the site.

Table EX1 - Aquatic Resources Within the Survey Area

AQUATIC RESOURCE NAME	AQUATIC RESOURCE CLASSIFICATION	AREA[1]				LINEAR	
LOCATION DESIGNATION AREA	COWARDIN	SIZE	UNIT	SIZE	UNIT	LENGTH	UNIT
Drainage Swale	R4SB7C	±25,025	SqFt	±0.574	Acre	±2,049	Feet
Non Persistent Emergent Marsh	PEM1C	±176,321	SqFt	±4.048	Acre	N/A	N/A
Saltwater Playa	PUSA	±198,987	SqFt	±4.568	Acre	N/A	N/A
	Totals	±400,333	SqFt	±9.190	Acre	±2,049	Feet

[1]Areas do not sum to 100% due to rounding error associated with using only 3 significant digits

Table EX2 - Total Delineated Areas Ratio

LOCATION	TOTAL AREA				% OF TOTAL AREA[1]
	SIZE[1]	UNIT	SIZE[1]	UNIT	
Evaluation Area (Full Parcel)	±66.0	Acres	±2,874,960	SqFt	100%
Delineated Wetland	±9.190	Acres	±400,333	SqFt	±13.92%
Delineated Upland	±56.810	Acres	±2,474,638	SqFt	±86.08%

[1]Areas do not sum to 100% due to rounding error associated with using only 3 significant digits

This aquatic resource delineation was performed on January 22, 2025 by Equinox Engineering in accordance with the Army Corps of Engineers Wetland Delineation Manual using the methods prescribed and required by the USACOE Wetland Delineation Manual and utilizing the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0)

This Page Has Been Left Blank Intentionally

TABLE OF CONTENTS

EXECUTIVE SUMMARY..... I
PROPERTY OWNER STATEMENT
1.0 INTRODUCTION..... 1
1.1 Project Overview 1
1.2 Contact Information 1
1.3 Survey Area Legal Description 1
1.4 Purpose of Report 2
2.0 LOCATION 2
2.1 Project Location 2
2.2 Directions to the Survey Area 2
3.0 EVALUATION METHODS 3
4.0 EXISTING CONDITIONS 5
4.1 General Features 5
4.2 Vegetation 7
4.3 Soils 8
4.4 Hydrology 11
4.5 Delineated Aquatic Resources 12
5.0 CONCLUSIONS 13
6.0 CLOSURE 14

APPENDIX A - WETLAND DETERMINATION DATA FORMS
APPENDIX B - SITE MAPS AND EXHIBITS
FIGURE 1: AREA MAP
FIGURE 2 : VICINITY MAP
FIGURE 3 : SITE MAP
FIGURE 4 : SAMPLING LOCATION ONLY
FIGURE 5: DELINEATED WETLANDS – ALL WETLANDS
FIGURE 7 : ORDINARY HIGH WATER LEVEL
FIGURE 8: PHOTO POINTS - SOUTH
FIGURE 9: PHOTO POINTS - NORTH
FIGURE 10: NATIONAL WETLAND INVENTORY OVERLAY
FIGURE 11 : SOILS MAP
APPENDIX C - SITE PHOTOS
APPENDIX D - WETLAND DELINEATION METHODOLOGY
APPENDIX E - IMPORTANT INFORMATION ABOUT YOUR WETLAND DELINEATION REPORT
APPENDIX F - REFERENCES

This Page Has Been Left Blank Intentionally

1.0 INTRODUCTION

1.1 Project Overview

Equinox Engineering was contracted by GRE South LLC to provide permitting support for a proposed project that will include development of open land in Tooele County, Utah for an industrial center. The final utilization of the project site is unknown with respect to the type of business that will occupy the space; however the expectation is that it will be companies that require a significant amount of space for their respective operations. Potentially manufacturing operations will be attracted to the industrial center given the semi-remote location in rural Tooele County. The project site and/or property that is the subject of this evaluation is located immediately south of the developing in-land port facility.

The goal of this Aquatics Resource Delineation is to assist with the determination of existing wetlands and subsequently allow for quantification of any impacts to any found existing wetlands and/or waters of the United States that fall under the jurisdiction of the Army Corps of Engineers. Utilizing this delineation report, decisions will be made that will determine the location and extent of any needed mitigation and/or development activities.

1.2 Contact Information

The property on which the project is proposed to be constructed is owned and/or controlled by GRE South LLC. Contact Information for vested parties:

Property Owner
GRE South LLC
6975 South Union Park Center
Suite 600
Midvale, Utah 84047
Mr. Mike Drury
mike@atlasindustrialcenters.com

Environmental Consultant
Equinox Engineering & Environmental
Mr. W. Chris Christiansen P.E.
Post Office Box 612 - West Jordan, Utah 84084
801.910.9480
cchristiansen@equinoxengineering.us

1.3 Survey Area Legal Description

The parcel that is the subject of this evaluation is located in rural Tooele County, Utah. The property is recorded with Tooele County as parcel 05-054-0-0008 and is reported to contain 66.00 acres. The legal description as provided by GRE LLC as listed on a preliminary Plat map prepared by Property Design LLC “Land Consultants” dated 03/21/2024 and is as follows:

“Commencing at the Southeast Corner of the Southwest Quarter of Section 5, Township 2 South, Range 5 West, Salt Lake Base and Meridian, Thence North 160 Rods, Thence West 80 Rods, Thence South 120 Rods, Thence East 56 Rods, Thence South 40 Rods, Thence East 24 Rods, To the Point of Beginning”

1.4 Purpose of Report

The purpose of this report is to identify and describe aquatic resources within the survey area. The report facilitates the efforts to:

1. Avoid or minimize impacts to aquatic resources during the design process, if possible while meeting the project goals.
2. Document aquatic resources boundary determinations for review by regulatory authorities.
3. Provide background information.

It should be noted that the extent of the landform features associated with the historic water channels and wetlands surrounding the evaluation area are much larger than the scope and/or project footprint and extend beyond the evaluation area; as such only the area of the proposed project and immediately adjacent existing site conditions that impact the evaluation area has been evaluated and included in the contents of this report. It is the intent of this report to be utilized in conjunction with the permitting process and has been completed so as to be sufficient to be accepted by regulatory agencies as part of any review and permitting process. This Aquatic Resource Delineation will provide a written determination as to the presence, absence, and/or specific location(s) of wetlands on the site.

The scope of the delineation was limited to the following tasks:

1. Review background information available for the site, including the National Wetland Inventory database, soil surveys of Tooele County Utah, and aerial photographs of the site available in readily available databases and/or on the internet.
2. Identify and/or validate the presence or absence of wetlands across the site and determine the boundary between uplands and wetlands. Identification of wetlands to be in accordance with the United States Army Corps of Engineers Delineation Manual with utilization of the most recent version of the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region.
3. Prepare a site map showing the extent of the identified wetland boundaries using Handheld Global Positioning System (HHGPS) points of the wetland boundaries as located in the field.
4. Prepare a wetland delineation report that describes the methods and results of the fieldwork.

2.0 LOCATION

2.1 Project Location

The parcel that is the subject of this evaluation is located in rural Tooele County, Utah. The site is located in NESW and SESW Quarter Sections of Section 5 - Township 2 South - Range 5 West; Salt Lake Base and Meridian. Latitude/Longitudinal coordinates for the access location from Higley Road to the parcel is 40°39'56.80" North by 112°26'26.95" West.
(See Figure 1 Area Map, Figure 2 Vicinity Map and Figure 3 Site Map in Appendix B Site Maps and Exhibits)

2.2 Directions to The Survey Area

From Salt Lake City
Travel west on Interstate 80 to Exit 88 “Grantsville Exit”
The exit ramp and roadway is a partial clover leaf which wraps around and under Interstate 80 and turns into Burmester Road.
Travel south on Burmester Road approximately 1.5 miles to the intersection of Burmester Road and Higley Road.
Turn left (East) onto Higley Road.
Travel East approximately 1.0 mile to the corner of the property and access location.

3.0 EVALUATION METHODS

Prior to fieldwork, the location was evaluated initially by reviewing aerial photos of the site showing the vegetation and soil maps of the local area covering the site. The National Wetland Inventory (NWI) was consulted, and the search returned results indicating that the site may contain the following:

Definitions provided by US Fish and Wild Service as listed on the National Wetland Inventory Website
https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper

1. PEM1/USA (Palustrine - Emergent - Persistent - Unconsolidated - Temporary Flooded).
   - *System **Palustrine (P)**: The Palustrine System includes all nontidal wetland dominated by trees, shrubs, persistent emergent, emergent mosses or lichens and all such wetlands that occur in tidal areas where salinity due ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of the basin less than 2.5 m (8.2 feet) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.*
   - *Class **Emergent (EM)**: Characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.*
   - *Subclass **Persistent (1)**: Dominated by species that normally remain standing at least until the beginning of the next growing season. This subclass is found only in Estuarine and Palustrine systems.*
   - *Split Class **Unconsolidated Shore (US):** Includes all wetland habitats having two characteristics: (1) unconsolidated substrates with less than 75 percent areal cover of stones, boulders or bedrock and; (2) less than 30 percent areal cover of vegetation. Landforms such as beaches, bars and flats are included in Unconsolidated Shore Class.*
   - *Water Regime **Temporary Flooded (A)**: Surface water is present for brief periods (from a few days to a few weeks) during the growing season, but the water table usually lies well below the ground surface for most of the season.*

2. PEM1C (Palustrine - Emergent - Persistent - Seasonally Flooded)
   - *System **Palustrine (P)**: The Palustrine System includes all nontidal wetland dominated by trees, shrubs, persistent emergent, emergent mosses or lichens and all such wetlands that occur in tidal areas where salinity due ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of the basin less than 2.5 m (8.2 feet) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.*
   - *Class **Emergent (EM)**: Characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.*
   - *Subclass **Persistent (1)**: Dominated by species that normally remain standing at least until the beginning of the next growing season. This subclass is found only in Estuarine and Palustrine systems.*
   - *Water Regime **Seasonally Flooded (C)**: Surface water is present for extended periods especially early in the growing season but is absent by the end of the growing season in most years. The water table after flooding ceases is variable extending from saturated to the surface to a water table well below the ground surface.*

3. R4SBC (Riverine - Intermittent - Stream Bed - Seasonally Flooded - Excavated)
   - *System **Riverine (R)**: The Riverine System includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergent, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.*
   - *Subsystem **Intermittent (4)**: This subsystem includes channels that contain flowing water only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent.*
   - *Class **Streambed (SB)**: Includes all wetlands contained within the intermittent Subsystem of the Riverine System and all channels of the Estuarine System or of the Tidal Subsystem of the Riverine System that are completely dewatered at low tide.*
   - *Water Regime **Seasonally Flooded (C)**: Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is variable extending from saturated to the surface to a water table well below the ground surface.*

(See Appendix B - Figure 10 - National Wetland Inventory Overlay)

Equinox Engineering conducted the major fieldwork portion of the delineation on January 22, 2025. Wetlands were delineated using a triple parameter approach, which considers vegetation types, soil conditions, and hydrology as required, by the United States Army Corps of Engineers (USACOE) Delineation Manual and the regional supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). The Ordinary High Water (OHW), which is synonymous with and can be commonly substituted for the Ordinary High Water Mark (OHWM) or Ordinary High Water Line (OHWL). The usage of these three acronyms can be interchangeable for the purposes of this delineation. The OHW was evaluated using methods provided by the published Army Corps of Engineers field guide for determining OHW.

Field work entailed visual examination and assessment of the localized vegetation and classification of observed vegetation into the categories defined in the national list of plant species that occur in Intermountain Region (Region 8). If the vegetation was not found to be hydrophytic then the location was classified as non-wetland due to the failure to meet the three criteria. If however, the vegetation was found to be hydrophytic then additional investigation was performed by excavating a soils pit to determine the presence or absence of hydric soils and supporting wetland hydrology.

The presence of hydric soils and wetland hydrology were defined through direct soil strata observations within multiple data points. Soil observations were completed utilizing test pit excavations. Excavation support was provided by a Caterpillar 305 CR Mini-Excavator for deep excavations to a depth of approximately 5 feet. Additionally an annular soil probe was used at select locations to observe the soil profile to an approximate depth of 24” inches below the existing surface. Both methods allowed for direct soil strata observation to the full depth of the excavation. Trenches were excavated to a depth of at least 48”. Soil composition and organic contents were estimated visually and texturally.



Caterpillar 305 CR Mini-Excavator

Soil colors were determined through analysis of hue, value and chroma as best represented in the Munsell Soil charts (Year 2000 Edition). Water saturation depth
and/or apparent water table measurements were taken and recorded. Recorded data and findings for each data point are included within Appendix A.
Complete description, methods and criteria are described in Appendix D.

No deviations from the standard or problematic methods outlined in the guidelines were used in the evaluation. No remote sensing methods were used as the site was completely accessible.

4.0 EXISTING CONDITIONS

4.1 General Features

The general topography and configuration of the site is observed to be indistinguishable from the surrounding area with respect to landform, type, and usage. The project site covers an area that exhibits characteristics that are consistent with a gentle shallow slope associated with alluvial flood plain topography transitioning to a wide valley bottom lacustrine configuration. The site has a gentle gradient slope (less than 2%) downward along a line from south to north toward the Great Salt Lake shoreline.
The vegetation across the site was represented with all four vegetation stratums (Herb, Sapling/Shrub, Trees and Woody Vines stratum) as identified and/or observed on site. All vegetation appeared to be healthy and exhibited appropriate coloration and hydration for the season. While the site is private property and the public is not allowed on property, the site currently does not have restricted access and can be considered to be open and accessible 24/7/365 for authorized visitors.

The property is shaped generally like large rectangle with a panhandle extending to the south in the southeast corner. The southern edge of the panhandle abuts Higley Road which is a maintained roadway with homes and semi-developed properties. The western edge of the panhandle and southern edge of the rectangle portion of the property abuts with a parcel that contains what appears to be residential structures and property with numerous storage sheds, containers or structures, equipment, and vehicles. The western northern and eastern edges abut with undeveloped open space land. Partial fences were observed along significant sections of the property perimeter; however the entire perimeter was not fenced. A ±20 foot wide drainage swale was observed entering the property from the south approximately 220 feet from the southeast corner of the property. The drainage swale does not exhibit any significant sinuosity and appears to have been constructed by modifying an existing natural drainage channel. The swale follows a generally point to point straight line path between gentle corners and angles toward the middle of the parcel. The swale extends the entire length of the property from the southern to the northern boundary. The swale was observed to be approximately 24” 36” deep at the southern end of the property where it enters the property via a culvert and gradually tapered to less than 12” depth at the northern boundary. The flowline gradient along the swale is measured to be approximately 0.5% (1 foot fall over 2,050 linear feet) as measured from topographical survey data collected for the property provided and prepared by Property Design LLC dated March 21, 2024. Visually different vegetation was observed in the swale



Atlas 66 Industrial Center Boundary
Image from Google Earth
Dated October 19, 2023



Existing Swale
Near South Property Boundary / Culvert
Discharge - View North

between the high water line within the swale as compared to locations above and beyond the swale, indicating the presence of different wetland type communities on the property.
Areas east of the swale appeared to have been grubbed in preparation for grading activities associated with the proposed development. Minimal ground disturbance was observed west of the swale to the fence line along the western boundary. Power poles and overhead lines were observed on the east side of the boundary fence along the western property boundary. Power poles were in place along the western and central portion of the northern boundary; however they did not appear to have overhead lines attached. The power poles along the northern boundary did not extend to the eastern boundary or northeast corner.
It is reported that that the property immediately to the north is the location of the developing Salt Lake Inland Port.

The topography of the property varies from generally flat terrain with a very minimal slope toward the north to localized drainage patterns adjacent to the swale that directs flow into the swale. There are three visually distinct landforms types across the property.

Landform Type A: The Drainage Swale Channel between bank full elevations which is densely vegetated.

Landform Type B: Saltwater Playa depressions Immediately adjacent to the Drainage Swale (both sides) where the elevation of the natural ground is close to the top of bank elevation and the land formation provides for depressions consistent with a classic saltwater playa configuration with high salt tolerant vegetation to little or no vegetation.

Landform Type C: Higher elevations across the property not immediately adjacent to and/or connected to the Drainage Swale via drainage patterns that do not exhibit depressions capable of retaining water for extended periods.


Representative Landform Type A
Swale Between Bankfull


Representative Landform Type B
Adjacent to Swale - Saltwater Playa


Representative landform Type C
Upland Vegetation

The property provides approximately 10 foot of elevation change from ± 4222 in the very far southeast corner (in the panhandle) to an elevation of ± 4212 at the flowline of the drainage swale at the north boundary where the swale exits the property. The property is generally flat, however there are several non-uniformly shaped earthen mounds (± 200 to ± 300 feet wide/long) that are spread across the property which appear to have been created by water and wind erosional forces over time. The highest elevation shown on the property is ± 4224 at the top of one of the earthen mounds. The naturally formed earthen mounds are roughly oval shaped and are observed to be covered with mostly upland vegetation.


Typical Earthen Mound Land Formation

4.2 Vegetation

The evaluation site can be effectively divided into three different vegetation location groups that are associated with the three previously defined different Landform types.

Landform Type A: The observed vegetation was robust and dominated by facultative grassy flora evaluated to be mostly Salt Grass (Distichlis spicata). Salt Grass dominated the swale footprint and was observed to be a solid dense stand that completely covered the channel cross section and extended from bankfull to bankfull. In locations near the south end of the property where the swale was deeper (> 2 feet) the Salt Grass was mostly contained within the swale, however as the swale extended north and became shallower, Salt Grass was observed to extend beyond the top of the swale and blend with other salt tolerant vegetation species adjacent to the top of the drainage swale, on both sides. The extent and density of the wetland vegetation above and outside of the channel varied as the landform transitioned from the drainage swale to a saltwater playa type configuration.

Notwithstanding the extension of the Salt Grass vegetation beyond the top of bank of the swale, there was a very distinct visual change between the swale and the saltwater playa vegetation associated with Landform Type B. Landform Type A vegetation was evaluated to be mostly Facultative (FAC) and passed the prevalence and dominance test and was determined to be hydrophytic vegetation.

Landform Type B: The vegetation in this area was observed to provide variable ground surface covering ranging from dense vegetation at or near the brow of the drainage channel/swale which included heavy stands of Salt Grass (Distichlis spicata) and Joint Grass (Equisetum hyemale) that gradually but quickly thinned as the landform transitioned from the drainage swale overflow terrace to the saltwater playa formation. In addition to the Salt Grass and Joint Grass other wetland vegetation including Pickleweed (Salicornia europaea) were observed. The vegetation quickly transitioned to sparsely interspersed Iodine Bush (Allenfolfea occidentialis) and/or bare ground that was evaluated to be saltwater playa depressions where the salt soil concentration was elevated to levels too high to support any vegetation.
Landform Type B vegetation was evaluated to be (OBL) Obligor, Facultative Wet (FACW) and/or Facultative (FAC) and passed the prevalence and dominance test and was determined to be hydrophytic vegetation.

Landform Type C:
The vegetation in this area was observed to provide variable ground coverage that ranged from sparse (< 20% coverage) to (100% coverage) with much of the area providing less than 100% coverage with visible soil. A significant amount of the property east of the drainage swale had been grubbed and rough graded in preparation for construction activities associated with the industrial park development. Within Landform Type C there were two different vegetation groupings. A grouping of Facultative Wet (FACW) Iodine Bush (Allenfolfea occidentialis) along the outer perimeter of the interface between the saltwater playas (Landform Type B) interface with Landform Type C. Beyond the Iodine Bush grouping along the interface the vegetation grouping quickly transitioned to more upland type vegetation including Tall Wheat Grass (Thinopyrum ponticum) and Ragweed (Ambrosia psilostachya). The general configuration of the land surface was irregular and was visually evaluated to not be conducive to providing ponding depressions as the elevations and slope, while minimal, were too steep to create impoundments and/or localized depressions required for saltwater playas to form.



Grubbed and Cleared Land
Photo Point XX - View N

Due to the observed surface slope and drainage patterns that directed surface runoff toward the swale, areas associated with Landform Type C were determined to be uplands. The upland determination was primarily arrived at due to the lack of hydrology coupled with the increased grouping and/or scatter of Facultative Upland (FACU), Upland (UPL) and vegetation that has not been assigned a wetland indicator (NI/UPL).
Landform Type C vegetation, while containing Facultative Wet (FACW) and/or Facultative (FAC) type vegetation, most vegetation groupings were dominated by (FACU), (UPL) and (NI/UPL) type vegetation which did not pass the prevalence and/or dominance test and was determined to be non-hydrophytic vegetation.

(See Wetland Determination Data Forms in Appendix A for location specific vegetation).

The following is a list of the vegetation that was found on site and identified:
(Species listed may or may not be located at a sampling point)

TREE STRATUM		
COMMON NAME	**SCIENTIFIC NAME**	**WETLAND INDICATOR***
RUSSIAN OLIVE	Elaeagnus angustifolia	FAC

SHRUB STRATUM		
COMMON NAME	**SCIENTIFIC NAME**	**WETLAND INDICATOR***
GREASEWOOD	Sarcobatus vermiculatus	FACU

HERB STRATUM		
COMMON NAME	**SCIENTIFIC NAME**	**WETLAND INDICATOR***
CHEAT GRASS	Bromus tectorum	UPL
CURLYCUP GUM WEED	Grindelia squarrosa	FACU
IODINE BUSH	Allenrolfea occidentalis	FACW
JOINT GRASS	Equisetum hyemale	FACW
PICKLEWEED	Salicornia europaea	OBL
RAGWEED	Ambrosia psilostachya	FACU
SALT GRASS	Distichlis spicata	FAC
TALL WHEAT GRASS	Thinopyrum ponticum	NI/UPL*
THISTLE (RUSSIAN)	Salsola australis	FACU

WOODY VINE STRATUM		
COMMON NAME	**SCIENTIFIC NAME**	**WETLAND INDICATOR***
SAGEBRUSH (MOUNTAIN BIG)	Artemisia tridentata	NI/UPL*

*See Table 1 in Appendix D for definition of WETLAND INDICATOR.

4.3 Soils

The general and most prominent geological formations of the area are quaternary stratified sequences from the Cenozoic era that consist of alluvial sediments associated with typical lake bottom configuration of deposited stratified layers that are erosional deposits that have been hydraulically sorted and transported. The dominant types of soil observed on the property consist of clayey loam with minimal organic components contained within the topsoil layer (± 0 - 3") to a very stiff mineral clay substrata beginning at the ± 2 to 3 feet in depth and extending deeper (maximum depth for soil testing ± 5 feet). The soils in this region are reported to be well drained despite the fine particle size. The observed colors of the soils were observed to be brown (5YR 4/2) to dark brown (5Y 5/2)

to black (Gley 2 - 2.5/10B) with some clays exhibiting a green hue (Gley 1 - 4/1 5G). All soils colors noted are referenced to the Munsell
Soils Color Chart Year 2000 Edition. Soils across the site generally exhibited a greasy texture associated with hydric or partially hydric conditions. No anomalies or unsuspected environmental concerns were raised or discovered by the soil profile on the site.

The major components of the soils found on site are alluvial sediments deposits and/or mixed lacustrine deposits from glacial outwash exhibiting properties of sandstone, quartzite, and limestone. Components of these soils have been transported and deposited on the site by seasonal runoff with minor amounts arriving from other sources such as wind erosion and/or associated drainage that previously or presently transit the site.

An online search of websoilsurvey.nrcs.usda.gov for the evaluation property location returned the presence of the following two soils classifications with their respective associated characteristics:

1. *Skumpah Silt Loam; 0 - 2% Slopes (59)*
2. *Taylors Flat Loam; 0 - 3% Slopes (65)*

(See Appendix B - Figure 11 - Soils Map).

Skumpah Silt Loam (59)

This soil type is lacustrine in nature and exhibits a generally shallow gradient of 0 to 2 percent slopes that is reported to be comprised of mostly silty loamy topsoil (0 - 4 inches); clay loam shallow substrate (4 - 11 inches) and silty clay loam deep substrate (11 - 60 inches).
Major components of the soil profile are reported to be Calcium Carbonate (< 40%) and Gypsum (< 5%).
This soil type is classified as being found from elevations of 4,200 to 5,050 feet ASL.
The soils are reported to be well drained with a very low to moderately low transmissivity (0.00 to 0.06 inch/hour).
Salinity content is reported to be moderate saline to strongly saline (8.0 to 16.0 mmhos/cm) with a maximum sodium adsorption ratio of 90.0
Water table depth is reported to be 80 inches or more.

Taylors Flat Loam (65)

This soil type is lacustrine in nature and exhibits a generally shallow to moderate gradient of 0 to 3 percent slopes that is reported to be comprised of mostly loamy topsoil (0 - 3 inches); loamy shallow substrate (3 - 9 inches) and loamy deep substrate (11 - 60 inches).
Major components of the soil profile are reported to be Calcium Carbonate (< 40%).
This soil type is classified as being found from elevations of 4,300 to 5,300 feet ASL.
The soils are reported to be well drained with a moderately low to moderately high transmissivity (0.06 to 0.20 inch/hour).
Salinity content is reported to be slightly saline to strongly saline (4.0 to 16.0 mmhos/cm) with a maximum sodium adsorption ratio of 30.0
Water table depth is reported to be 80 inches or more.

Consistent with this type of classification the soils on site are generally uniform in nature and very little variation was observed across the entire site. The soils exhibited a very tight pore space associated with a colloidal transport and sub-critical flow deposition regime. Information obtained relating to the soils on the site and the general regional soil formations contributing to the site were consistent with observed conditions. It was found that the

majority of the site that supported vegetation exhibited a top layer of ± 3 inches in depth that contained organic material composed mostly of roots and/or other vegetative matter. No significant organic matter was found or observed at locations where zero ground cover was identified. The soil profile exhibited minor variations between the different sampling locations and no significant differences were observed across the site in layers below the topsoil layer and deeper.
(See Appendix A - Wetland Determination Data Forms for specific site soils information).

The soils on the site were observed to be generally similar across the site with respect to color and consistency of texture. The top layer of soil generally exhibited a high mineral material content, which was expected due to transition from alluvial fan to lacustrine configuration prevalent across the site. The topsoil was interspersed with minimal organic matter associated with root mass. The top layers contain nominal organic material due to the limited vegetation growth associated with the high soil salinity coupled with the minimal precipitation received in the high desert climate.
Organic root mass was generally observed within the top several inches of the soil profile and quickly disappeared as the evaluation moved deeper. The top layers consisted of a loamy clay mixture that varied from loam with a crumbly texture to a medium to stiff clay material that exhibited mostly a high value and low chroma coloration. Below the topsoil layer, variation in strata depth and color was observed, however the general overall pattern was consistent. The small size of the project site (66 acres) significantly contributed to the location soils exhibiting similar surface characteristics and localized hydrology which likely led to the soil's observed general uniformity. Deeper observed strata exhibited a much stiffer clay composition that was very stiff and highly plastic. Colors of the deeper strata ranged from 10YR to 5Y color palettes generally exhibiting medium values and low chromas. Additionally, stiff clay material was found across the site that exhibited Gley colored material indicating a long term saturated low oxygen environment necessary to create hydric soils. The Gley Clay material ranged from solid color samples to layered samples with multiple gley colors deposited in layers.



Stiff Clay Gley Material
Sampling Location 8

Overall the site soils were observed to be a clay loam with very fine grain particles and variable amounts of inorganic silt incorporated into different strata. Clay composition ranged from crumbly clay loam, at/or just below the topsoil layer and became more of a heavy stiff ribbon clay at deeper elevations. The deeper layers contained a higher moisture content (based on tactile feel and visual observations only) as no laboratory testing was performed. The soil profile to a depth of ±36 inches was observed at all sampling locations to be moist, but not wet or saturated, likely due to the sampling taking place in mid-January. The water table was encountered at around the 40 inch depth mark in the drainage swale, which was approximately 2 to 3 feet deep as compared to the top of bank elevation. The maximum depth excavation, as measured from ground surface outside of the drainage swale was ± 6 feet deep. The water table was encountered between 48 to 72" deep depending on the sampling location. The variation in depth was due to variable surface elevations associated with surface topography. No location above ± 36 inches was observed to be saturated. The clay soils encountered at the deeper elevations (below 36") were observed to be very "sticky" and very "greasy" when incorporated with moisture.
It should be noted that the extent of the soil's classification entailed visual and tactical observations only with respect to general type, color and textures. In all cases the observations were made in the field, and no samples were taken to a laboratory for testing. It was found that the site soils are consistent with the reported information and with soils types expected in this environment. Typically, the soils strata across the areas sampled exhibited little to no variation.

4.4 Hydrology

Hydrology on the site has been significantly impacted by anthropomorphic modifications to the localized natural storm drain patterns to the extent that natural macro scale drainage patterns no longer exist in the surrounding vicinity. Flow has been highly channelized and re-directed via ditches and/or modifications to the historic waterways to dewater and/or support expansion of irrigated crop land, industrial, residential and/or commercial development in the area.

The overall property has a gentle slope to the north towards the Great Salt Lake, with a large (± 20 foot wide and ±1 to ±2 foot deep) drainage swale that bisects the property along a mostly north/south alignment. The majority of the site does direct flow toward the drainage swale along a northwesterly vector from locations east of the swale and along a northeasterly vector from locations west of the swale, however there are locations on the property that have micro scale localized drainage patterns that direct flow in different directions into natural depressions. Localized adjacent to the drainage swale (along the east and west) are micro depressions that hold and retain precipitation and are evaluated to be saltwater playa wetlands. The lowest location on the property is the drainage swale which collects the majority of any site precipitation and effectively conveys the collected precipitation along with inflow drainage collected from points south, across and property to the northern boundary and beyond. Limited amounts of site precipitation will remain on site in the Saltwater playas.

The closest weather reporting station to the site is Grantsville Utah, which is reported by the U.S. Weather Service to receive 20.98 inches precipitation annually. Given this relatively low amount of precipitation, the site is expected to be dry most of the year with the majority of the moisture arriving due to snow accumulation over the winter months and from isolated and infrequent summer showers. Due to precipitation patterns associated with the high desert location, it is expected that the site will see flashy flows associated with the irregular rain events, which will be quickly collected and drained from the site as allowed by localized topography. Notwithstanding the generally swift drainage across the site, there are localized depressions adjacent to the drainage swale will do collect and impound water. These saltwater playas act as micro terminal basins and impound and hold water until evaporation and/or percolation process leave the playas dry.

The aquatic resources delineated for this report include the Drainage Swale, Non Persistent Emergent Marsh and Saltwater Playas. These delineated wetlands are generally consistent with the National Wetland Inventory map designations, however the delineated boundaries as determined in the field by this evaluation are smaller in size than those reported by the National Wetland Inventory due to localized topography and drainage patterns that are evaluated to preclude site hydrology from meeting the minimum criteria to be classified as a wetland.

(See Figure 5 Delineated Wetlands - All Wetlands, Figure 6 Delineated Areas by Cowardin Classification, and Figure 10 National Wetland Inventory Map Overlay in Appendix B Site Maps and Exhibits)

4.5 Delineated Aquatic Resources

Wetlands were delineated on site that were observed to exist with all three parameters concurrently and the results are shown on the following table.

Table 1 - Delineated Wetlands

AQUATIC RESOURCE NAME	AQUATIC RESOURCE CLASSIFICATION		AREA[1]				LINEAR	
LOCATION DESIGNATION AREA (Ax)	COWARDIN	LOCATION (Lat/Long)	SIZE	UNIT	SIZE	UNIT	LENGTH	UNIT
Drainage Swale A1	R4SB7C	40.670226° x 112.441940°	±25,025	SqFt	±0.574	Acre	±2,049	Feet
Non Persistent Emergent Marsh A1	PEM1C	40.670838° x 112.442619°	±82,857	SqFt	±1.902	Acre	N/A	N/A
Non Persistent Emergent Marsh A2	PEM1C	40.671023° x 112.442247°	±93,464	SqFt	±2.146	Acre	N/A	N/A
Saltwater Playa A1	PUSA	40.672012° x 112.442841°	±63,502	SqFt	±1.458	Acre	N/A	N/A
Saltwater Playa A2	PUSA	40.670253° x 112.443517°	±69,102	SqFt	±1.586	Acre	N/A	N/A
Saltwater Playa A3	PUSA	40.672181° x 112.441714°	±57,203	SqFt	±1.313	Acre	N/A	N/A
Saltwater Playa A4	PUSA	40.670088° x 112.442606°	±2,687	SqFt	±0.620	Acre	N/A	N/A
Saltwater Playa A5	PUSA	40.669423° x 112.442688°	±6,493	SqFt	±0.149	Acre	N/A	N/A
		Totals	±400,322	SqFt	±9.190	Acre	±2,049	Feet

[1]Areas do not sum to 100% due to rounding error associated with using only 3 significant digits

Table 2 Delineated Wetlands Totals - Totals From Table 1

AQUATIC RESOURCE NAME	AQUATIC RESOURCE CLASSIFICATION	AREA[1]				LINEAR	
LOCATION DESIGNATION AREA	COWARDIN	SIZE	UNIT	SIZE	UNIT	LENGTH	UNIT
Drainage Swale	R4SB7C	±25,025	SqFt	±0.574	Acre	±2,049	Feet
Non Persistent Emergent Marsh	PEM1C	±176,321	SqFt	±4.048	Acre	N/A	N/A
Saltwater Playa	PUSA	±198,987	SqFt	±4.568	Acre	N/A	N/A
	Totals	±400,333	SqFt	±9.190	Acre	±2,049	Feet

[1]Areas do not sum to 100% due to rounding error associated with using only 3 significant digits

1. R4SB7C (Riverine - Intermittent - Streambed – Vegetated – Seasonally Flooded).
   - *System **Riverine (R)**: The Riverine System includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergent, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.*
   - *Subsystem **Intermittent (4)**: This subsystem includes channels that contain flowing water only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent.*
   - *Class **Streambed (SB)**: Includes all wetlands contained within the intermittent Subsystem of the Riverine System and all channels of the Estuarine System or of the Tidal Subsystem of the Riverine System that are completely dewatered at low tide.*
   - *Subclass **Vegetated (7)***
   - *Water Regime **Seasonally Flooded (C)**: Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is variable extending from saturated to the surface to a water table well below the ground surface.*

2. PUSA (Palustrine - Emergent - Persistent - Seasonally Flooded)
   - *System **Palustrine (P)**: The Palustrine System includes all nontidal wetland dominated by trees, shrubs, persistent emergent, emergent mosses or lichens and all such wetlands that occur in tidal areas where*

salinity due ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of the basin less than 2.5 m (8.2 feet) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.

- *Class **Unconsolidated Shore (US)**: Includes all wetland habitats having tow characteristics: (1) unconsolidated substrates with less than 75 percent areal cover of stones, boulders or bedrock and; (2) less than 30 percent areal cover of vegetation. Landforms such as beaches, bars, and flats are included in the Unconsolidated Shore class.*
- *Water Regime **Temporary Flooded (A)**: Surface water is present for brief periods (from a few days to a few weeks) during the growing season, but the water table usually lies well below the ground surface for most of the season.*

3. PEM1C (Palustrine - Emergent - Persistent - Seasonally Flooded)
   - *System **Palustrine (P)**: The Palustrine System includes all nontidal wetland dominated by trees, shrubs, persistent emergent, emergent mosses or lichens and all such wetlands that occur in tidal areas where salinity due ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of the basin less than 2.5 m (8.2 feet) at low water; and (4) salinity due to ocean-derived salts less than 0.5 ppt.*
   - *Class **Emergent (EM)**: Characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.*
   - *Subclass **Persistent (1)**: Dominated by species that normally remain standing at least until the beginning of the next growing season. This subclass is found only in Estuarine and Palustrine systems.*
   - *Water Regime **Seasonally Flooded (C)**: Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is variable extending from saturated to the surface to a water table well below the ground surface.*

Table 4 – Total Delineated Areas Ratio

LOCATION	TOTAL AREA				% OF TOTAL AREA[1]
	SIZE[1]	UNIT	SIZE[1]	UNIT	
Evaluation Area (Full Parcel)	±66.0	Acres	±2,874,960	SqFt	100%
Delineated Wetland	±9.190	Acres	±400,333	SqFt	±13.92%
Delineated Upland	±56.810	Acres	±2,474,638	SqFt	±86.08%

[1]Areas do not sum to 100% due to rounding error associated with using only 3 significant digits

5.0 CONCLUSIONS

It is the conclusion of this delineation report that wetlands exist on the site that can be established using the three-parameter approach as required by the Regional Supplement for the Corps of Engineers Wetland Delineation Manual: Arid West Regions (Version 2.0).

Additionally, the delineated areas as determined by the field evaluation concur with the existence of the PEM1/USA and PEM1C categories shown on the site in the NWI database, however the delineated aquatic resources boundaries are different due to sampling locations within the PEM1/USA polygon as shown on the NWI data that did not return

results indicating that all three wetland parameters existed at the respective sampling locations concurrently. The missing parameters were generally hydrology, vegetation and/or both.

The delineated site covers approximately ±2,874,960 Square Feet (66.0 Acres) of which only 400,333 Square Feet (9.109 Acres) acres can be determined to wetlands, using the three parameters evaluation approach.

6.0 CLOSURE

The findings and conclusions documented in this report have been prepared for this specific site and are only applicable to this project and have been developed in a manner consistent with the level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area, and in accordance with the terms and conditions presented in the agreement governing this work. The conclusions and/or recommendations presented in this report are professional opinions based on interpretation of information currently available, and have been made within the operational scope, budget and schedule constraints of this project. No warranty, express or implied is made.

Wetland boundaries and/or determinations identified and presented in this report are considered to be preliminary until the USACOE and/or local jurisdictional agencies having authority over the subject property, validate any delineated wetland boundaries. Validation of any wetland boundaries by the regulating agency(s) is provided by a certification, usually written, that the wetland boundaries or waters of the United States verified are the boundaries that will be regulated by the agency(s) until specified data or until the regulations governing this project are modified. Only the regulating agencies can provide this certification.

Since wetlands and waters of the United States are dynamic communities affected by both natural and human activities, changes in boundaries may be expected; therefore, delineations cannot remain valid for an indefinite period of time. The Army Corps of Engineers typically recognized the validity of delineations for a period of five years after completion. Development activities on a site five years after the completion of this wetland delineation report may require revision of the wetland delineation. In addition, changes in government code, regulation, or laws may occur. Because such changes are beyond our control, our observations and conclusions regarding this site may need to be revised wholly or in part.

APPENDIX A

WETLAND DETERMINATION DATA FORMS

This Page Has Been Left Blank Intentionally

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 1
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.667657 | Long: -112.443502 | Datum: N/A
Soil Map Unit Name: 65 - Taylors Flat Loam 0-3% Slopes | NWI classification: PEM1/USA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Salt Grass (Distichlis spicata)*	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	100	x 3 =	300
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		300 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	5YR 4/2	100					Loamy/Clayey	Roots / High Organic Matter/ Stiff Clay
2-32	5YR 4/2	100					Loamy/Clayey	Stiff Clay
32 - 60	5GY 4/2	70					Loamy/Clayey	Stiff Clay
32-60	10B 2.5/1	15						
32-60	5G 3/2	15						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Soils Pit Max Depth = +/- 60"
Drop Down Menu for Soil Color Does Not Allow Variation From Predefined List.
32"- 60" 1) Gley 1 - 4/5G @ +/- 70% 2) Gley 2 - 2.5/10B @ +/- 15% 3) Gley 1 - 3/5G @ +/- 15%

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- x Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- x Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- x Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___		
Water Table Present?	Yes x	No ___	Depth (inches): 40		
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___	**Wetland Hydrology Present?**	**Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Sampling Location in Bottom of Drainage Swale - Ground Water Depth Measured from Top of Bank
Bankfull Bench (Minor Bench) @ +/- 24" Above Flowline
Top of Bank @ +/- 36" Above Flowline

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 2
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.6667657 | Long: -112.443397 | Datum: N/A
Soil Map Unit Name: 65 - Taylors Flat Loam 0-3% Slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Tall Wheat Grass (Thinopyrum ponticum)*	30	Yes	UPL
2. *Salt Grass (Distichlis spicata)*	15	Yes	FAC
3. *Iodine Bush (Allenrolfea occidentalis)*	5	No	FACW
4.			
5.			
6.			
7.			
8.			
	50 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	15	x 3 =	45
FACU species	0	x 4 =	0
UPL species	30	x 5 =	150
Column Totals:	50 (A)		205 (B)

Prevalence Index = B/A = 4.10

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	5Y 4/2	100					Loamy/Clayey	Roots / High Organic Matter/ Stiff Clay
2-60	5Y 4/2	90	10YR 4/6	10			Loamy/Clayey	Stiff Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Soils Pit Max Depth = +/- 60"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes x	No ___	Depth (inches): 40
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 3
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.667666 | Long: -112.443586 | Datum: N/A
Soil Map Unit Name: 65 - Taylors Flat Loam 0-3% Slopes | NWI classification: PEM1/USA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 1)			
1. *Tall Wheat Grass (Thinopyrum ponticum)*	20	Yes	UPL
2. *Salt Grass (Distichlis spicata)*	10	Yes	FAC
3. *Iodine Bush (Allenrolfea occidentalis)*	5	No	FACW
4.			
5.			
6.			
7.			
8.			
	35 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum 65 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	20	x 5 =	100
Column Totals:	35 (A)		140 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Subsurface Soils Not Evaluated Due to Absence of Wetland Vegetation. The Soils on the Site are Considered to be Similar Within Vicinity and Influenced by the Great Salt Lake and as such are Considered to be Hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 4
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.668789 | Long: -112.443440 | Datum: N/A
Soil Map Unit Name: 59 - Skumpah Silt Loam 0-2% Slopes | NWI classification: PEM1/USA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Salt Grass (Distichlis spicata)*	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	100	x 3 =	300
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		300 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	5YR 4/2	100					Loamy/Clayey	Roots / High Organic Matter/ Stiff Clay
2-10	5YR 4/2	100					Loamy/Clayey	Stiff Clay
10-50	5GY 4/2	70					Loamy/Clayey	Stiff Clay
10-50	10B 2.5/1	15						
10-50	5G 3/2	15						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Soils Pit Max Depth = +/- 50"
Drop Down Menu for Soil Color Does Not Allow Variation From Predefined List.
32"- 60" 1) Gley 1 - 4/5G @ +/- 70% 2) Gley 2 - 2.5/10B @ +/- 15% 3) Gley 1 - 3/5G @ +/- 15%

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- x Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- x Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- x Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___		
Water Table Present?	Yes x	No ___	Depth (inches): 48	**Wetland Hydrology Present?**	**Yes** X **No** ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Sampling Location in Bottom of Drainage Swale - Ground Water Depth Measured from Top of Bank
Water Table +/- 12" Below Flowline of Channel

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 5
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.671045 | Long: -112.442392 | Datum: N/A
Soil Map Unit Name: 59 - Skumpah Silt Loam 0-2% Slopes | NWI classification: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Salt Grass (Distichlis spicata)*	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	100	x 3 =	300
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		300 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	5Y 4/2	100					Loamy/Clayey	Roots / High Organic Matter/ Stiff Clay
2-8	5YR 4/2	100					Loamy/Clayey	Stiff Clay
8-50	10GY 4/1	90					Loamy/Clayey	Stiff Clay
8-50	5Y 5/2	10						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Soils Pit Max Depth = +/- 50"
Drop Down Menu for Soil Color Does Not Allow Variation From Predefined List.
8"- 50" 1) Gley 1 - 4/10GY @ +/- 90%
Hard Pan Layer (Caliche) Encountered at +/- 50"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- x Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- x Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- x Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___		
Water Table Present?	Yes x	No ___	Depth (inches): 48		
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___	**Wetland Hydrology Present?**	**Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Sampling Location in Bottom of Drainage Swale - Ground Water Depth Measured from Top of Bank
Water Table +/- 12" Below Flowline of Channel

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 6
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.671061 | Long: -112.442513 | Datum: N/A
Soil Map Unit Name: 59 - Skumpah Silt Loam 0-2% Slopes | NWI classification: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Curlycup Gum Weed (Grindelia squarrosa)*	25	Yes	FACU
2. *Salt Grass (Distichlis spicata)*	10	Yes	FAC
3. *Iodine Bush (Allenrolfea occidentalis)*	5	No	FACW
4.			
5.			
6.			
7.			
8.			
	40 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	10	x 3 =	30
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	40 (A)		140 (B)

Prevalence Index = B/A = 3.50

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Subsurface Soils Not Evaluated Due to Absence of Wetland Vegetation. The Soils on the Site are Considered to be Similar Within Vicinity and Influenced by the Great Salt Lake and as such are Considered to be Hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 7
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.671010 | Long: -112.441876 | Datum: N/A
Soil Map Unit Name: 59 - Skumpah Silt Loam 0-2% Slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling p X

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *iodine Bush (Allenrolfea occidentalis)*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	10 (A)		20 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Subsurface Soils Not Evaluated Due to Absence of Wetland Hydrology. The Soils on the Site are Considered to be Similar Within Vicinity and Influenced by the Great Salt Lake and as such are Considered to be Hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 8
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.672895 | Long: -112.442703 | Datum: N/A
Soil Map Unit Name: 59 - Skumpah Silt Loam 0-2% Slopes | NWI classification: PEM1/USA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *iodine Bush (Allenrolfea occidentalis)*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	10 (A)		20 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-48	5Y 5/3	60	2.5Y 6/6	40			Loamy/Clayey	Medium Stiff Clay
48-60	10BG 3/1	33	5GY 6/1	33			Loamy/Clayey	Stiff Clay
48-60			5G 4/1	33			Loamy/Clayey	Stiff Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Soils Pit Max Depth = +/- 60"
Drop Down Menu for Soil Color Does Not Allow Variation From Predefined List.
48"- 60" 1) Gley 2 - 3/10BG @ +/- 33% 2) Gley 1 - 6/5GY @ +/- 33% 3) Gley 1 4/5G @ +/- 33%

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- x Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- x Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Salt Water Playa

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 9
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.667912 | Long: -112.442294 | Datum: N/A
Soil Map Unit Name: 59 - Skumpah Silt Loam 0-2% Slopes | NWI classification: PEM1/USA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
End of Swale At North Property Boundary

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Salt Grass (Distichlis spicata)*	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	100	x 3 =	300
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		300 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	5YR 4/2	100					Loamy/Clayey	Roots / High Organic Matter/ Stiff Clay
2-26	5YR 4/2	100					Loamy/Clayey	Stiff Clay
26 - 64	5GY 4/2	70					Loamy/Clayey	Stiff Clay
26-64	10B 2.5/1	15						
26-64	5G 3/2	15						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Soils Pit Max Depth = +/- 64"
Drop Down Menu for Soil Color Does Not Allow Variation From Predefined List.
26"- 64" 1) Gley 1 - 4/5G @ +/- 70% 2) Gley 2 - 2.5/10B @ +/- 15% 3) Gley 1 - 3/5G @ +/- 15%

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- x Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- x Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- x Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___		
Water Table Present?	Yes x	No ___	Depth (inches): 48	**Wetland Hydrology Present?**	**Yes** X **No** ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Sampling Location in Bottom of Drainage Swale
Ground Water Encountered +/- 12" Below Bottom of Drainage Swale

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 10
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.671700 | Long: -112.443067 | Datum: N/A
Soil Map Unit Name: 59 - Skumpah Silt Loam 0-2% Slopes | NWI classification: PEM1/USA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Salt Water Playa

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *iodine Bush (Allenrolfea occidentalis)*	1	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	1 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 99 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	1	x 2 =	2
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	1 (A)		2 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-60	10YR 6/2	100					Loamy/Clayey	Silty Loam
60-72	5GY 4/1	100					Loamy/Clayey	Stiff Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- _x_ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- _X_ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _X_ **No** ___

Remarks:
Soils Pit Max Depth = +/- 72"
Drop Down Menu for Soil Color Does Not Allow Variation From Predefined List.
60"- 72" Gley 1 - 4/5GY

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- _x_ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- _x_ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No _x_	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): 72
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** _X_ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Salt Water Playa

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 11
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.672917 | Long: -112.441668 | Datum: N/A
Soil Map Unit Name: 59 - Skumpah Silt Loam 0-2% Slopes | NWI classification: PEM1/USA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Salt Water Playa

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *iodine Bush (Allenrolfea occidentalis)*	1	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	1 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 99 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	1	x 2 =	2
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	1 (A)		2 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-48	10YR 6/2	100					Loamy/Clayey	Silty Loam
48-52	2.5Y 6/8	100					Loamy/Clayey	Stiff Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Soils Pit Max Depth = +/- 72"
Drop Down Menu for Soil Color Does Not Allow Variation From Predefined List.
60"- 72" Gley 1 - 4/5GY

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- x Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- x Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Salt Water Playa

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 12
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.669400 | Long: -112.442917 | Datum: N/A
Soil Map Unit Name: 59 - Skumpah Silt Loam 0-2% Slopes | NWI classification: PEM1/USA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *iodine Bush (Allenrolfea occidentalis)*	15	Yes	FACW
2. *Joint Grass (Equisetum hyemale)*	15	Yes	FACW
3. *Salt Grass (Distichlis spicata)*	15	Yes	FAC
4. *Pickleweed (Salicornia)*	15	Yes	OBL
5.			
6.			
7.			
8.			
	60 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	30	x 2 =	60
FAC species	15	x 3 =	45
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	60 (A)		120 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: 12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-48	5Y 6/2	100					Loamy/Clayey	Silty Loam
48-55	10Y 5/2	100					Loamy/Clayey	Stiff Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Soils Pit Max Depth = +/- 55"
Drop Down Menu for Soil Color Does Not Allow Variation From Predefined List.
48"- 55" Gley 1 - 5/10Y

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- x Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- x Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___		
Water Table Present?	Yes x	No ___	Depth (inches): 55		
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___	**Wetland Hydrology Present?**	**Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 13
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.667553 | Long: -112.444263 | Datum: N/A
Soil Map Unit Name: 65 - Taylors Flat Loam 0-3% Slopes | NWI classification: PEM1/USA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 1)			
1. *Greasewood (Sarcobatus vermiculatus)*	10	Yes	FACU
2.			
3.			
4.			
5.			
	10 =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Tall Wheat Grass (Thinopyrum ponticum)*	50	Yes	UPL
2. *Cheat Grass (Bromus tectorum)*	15	No	UPL
3. *Ragweed (Ambrosia psilostachya)*	10	No	FACU
4. *Russian Thistle (Salsola tragus)*	10	No	FACU
5.			
6.			
7.			
8.			
	85 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	65	x 5 =	325
Column Totals:	95 (A)		445 (B)

Prevalence Index = B/A = 4.68

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: 13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Subsurface Soils Not Evaluated Due to Absence of Wetland Vegetation. The Soils on the Site are Considered to be Similar Within Vicinity and Influenced by the Great Salt Lake and as such are Considered to be Hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 14
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.662908 | Long: -112.444468 | Datum: N/A
Soil Map Unit Name: 59 - Skumpah Silt Loam 0-2% Slopes | NWI classification: PEM1/USA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 1)			
1. *Greasewood (Sarcobatus vermiculatus)*	15	Yes	FACU
2.			
3.			
4.			
5.			
	15 =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Cheat Grass (Bromus tectorum)*	25	Yes	UPL
2. *Iodine Bush (Allenrolfea occidentalis)*	5	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	30 =Total Cover		
Woody Vine Stratum (Plot size: 1)			
1. *Big Sagebrush (Artemisia tridentata)*	5	Yes	UPL
2.			
	5 =Total Cover		

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	0	x 3 =	0
FACU species	15	x 4 =	60
UPL species	30	x 5 =	150
Column Totals:	50 (A)		220 (B)

Prevalence Index = B/A = 4.40

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: 14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Subsurface Soils Not Evaluated Due to Absence of Wetland Vegetation. The Soils on the Site are Considered to be Similar Within Vicinity and Influenced by the Great Salt Lake and as such are Considered to be Hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 15
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.672962 | Long: -112.439829 | Datum: N/A
Soil Map Unit Name: 59 - Skumpah Silt Loam 0-2% Slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: 1)			
1. *Greasewood (Sarcobatus vermiculatus)*	20	Yes	FACU
2.			
3.			
4.			
5.			
	20	=Total Cover	
Herb Stratum (Plot size: 1)			
1. *Cheat Grass (Bromus tectorum)*	40	Yes	UPL
2. *Iodine Bush (Allenrolfea occidentalis)*	5	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	45	=Total Cover	
Woody Vine Stratum (Plot size: 1)			
1. *Big Sagebrush (Artemisia tridentata)*	15	Yes	UPL
2.			
	15	=Total Cover	

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	0	x 3 =	0
FACU species	20	x 4 =	80
UPL species	55	x 5 =	275
Column Totals:	80 (A)		365 (B)

Prevalence Index = B/A = 4.56

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Subsurface Soils Not Evaluated Due to Absence of Wetland Vegetation. The Soils on the Site are Considered to be Similar Within Vicinity and Influenced by the Great Salt Lake and as such are Considered to be Hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 16
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.667845 | Long: -112.439813 | Datum: N/A
Soil Map Unit Name: 65 - Taylors Flat Loam 0-3% Slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: 1)			
1. *Greasewood (Sarcobatus vermiculatus)*	5	Yes	FACU
2.			
3.			
4.			
5.			
	5	=Total Cover	
Herb Stratum (Plot size: 1)			
1. *Cheat Grass (Bromus tectorum)*	40	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	40	=Total Cover	
Woody Vine Stratum (Plot size: 1)			
1. *Big Sagebrush (Artemisia tridentata)*	15	Yes	UPL
2.			
	15	=Total Cover	

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	55	x 5 =	275
Column Totals:	60 (A)		295 (B)

Prevalence Index = B/A = 4.92

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: 16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Subsurface Soils Not Evaluated Due to Absence of Wetland Vegetation. The Soils on the Site are Considered to be Similar Within Vicinity and Influenced by the Great Salt Lake and as such are Considered to be Hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 17
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.666003 | Long: -112.440107 | Datum: N/A
Soil Map Unit Name: 65 - Taylors Flat Loam 0-3% Slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Russian Thistle (Salsola)*	15	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	15 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 85 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	15	x 5 =	75
Column Totals:	15 (A)		75 (B)
Prevalence Index = B/A =	5.00		

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:
Exsiting Ground Grubbued

SOIL

Sampling Point: 17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Subsurface Soils Not Evaluated Due to Absence of Wetland Vegetation. The Soils on the Site are Considered to be Similar Within Vicinity and Influenced by the Great Salt Lake and as such are Considered to be Hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 18
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.668157 | Long: -112.442323 | Datum: N/A
Soil Map Unit Name: 65 - Taylors Flat Loam 0-3% Slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Tall Wheat Grass (Thinopyrum ponticum)*	15	Yes	UPL
2. *Iodine Bush (Allenrolfea occidentalis)*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	20 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 80 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	15	x 5 =	75
Column Totals:	20 (A)		85 (B)

Prevalence Index = B/A = 4.25

Hydrophytic Vegetation Indicators:

____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:
Exsiting Ground Grubbued

SOIL

Sampling Point: 18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Subsurface Soils Not Evaluated Due to Absence of Wetland Vegetation. The Soils on the Site are Considered to be Similar Within Vicinity and Influenced by the Great Salt Lake and as such are Considered to be Hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 19
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.670466 | Long: -112.440436 | Datum: N/A
Soil Map Unit Name: 65 - Taylors Flat Loam 0-3% Slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Tall Wheat Grass (Thinopyrum ponticum)*	15	Yes	UPL
2. *Cheat Grass (Bromus tectorum)*	10	Yes	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	25 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 75 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	25	x 5 =	125
Column Totals:	25 (A)		125 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:
Exsiting Ground Grubbued

SOIL

Sampling Point: 19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Subsurface Soils Not Evaluated Due to Absence of Wetland Vegetation. The Soils on the Site are Considered to be Similar Within Vicinity and Influenced by the Great Salt Lake and as such are Considered to be Hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 20
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.670353 | Long: -112.443068 | Datum: N/A
Soil Map Unit Name: 59 - Skumpah Silt Loam 0-2% Slopes | NWI classification: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Pickleweed (Salicornia)*	15	Yes	OBL
2. *Salt Grass (Distichlis spicata)*	25	Yes	FAC
3. *Iodine Bush (Allenrolfea occidentalis)*	5	No	FACW
4.			
5.			
6.			
7.			
8.			
	45 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 55 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	5	x 2 =	10
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	45 (A)		100 (B)

Prevalence Index = B/A = 2.22

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: 20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-42	5Y 6/2	100					Loamy/Clayey	Silty Loam
42-54	10Y 5/2	100					Loamy/Clayey	Stiff Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- x Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? Yes ___ No ___ Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 21
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.670281 | Long: -112.443654 | Datum: N/A
Soil Map Unit Name: 59 - Skumpah Silt Loam 0-2% Slopes | NWI classification: PEM1/USA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:
Salt Water Playa

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *iodine Bush (Allenrolfea occidentalis)*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	10 (A)		20 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: 21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-48	10YR 6/2	100					Loamy/Clayey	Silty Loam
48-60	5GY 4/1	100					Loamy/Clayey	Stiff Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Soils Pit Max Depth = +/- 60"
Drop Down Menu for Soil Color Does Not Allow Variation From Predefined List.
48"- 60" Gley 1 - 4/5GY

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- x Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- x Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___		
Water Table Present?	Yes ___	No ___	Depth (inches): 72		
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___	**Wetland Hydrology Present?**	**Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Salt Water Playa

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Atlas 66 Ibndustrial Center | City/County: Grantsville / Tooele | Sampling Date: 01/22/25
Applicant/Owner: GRE LLC | State: UT | Sampling Point: 22
Investigator(s): W. Chris Christiansen | Section, Township, Range: Section 5 - Township 2 South - Range 5 West
Landform (hillside, terrace, etc.): Alluvial Flood Plain | Local relief (concave, convex, none): None | Slope (%): > 1
Subregion (LRR): LRR D | Lat: 40.671180 | Long: -112.443784 | Datum: N/A
Soil Map Unit Name: 59 - Skumpah Silt Loam 0-2% Slopes | NWI classification: PEM1/USA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Salt Water Playa

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Iodine Bush (Allenrolfea occidentalis)*	10	Yes	FACW
2. *Cheat Grass (Bromus tectorum)*	20	Yes	UPL
3. *Tall Wheat Grass (Thinopyrum ponticum)*	5	No	UPL
4.			
5.			
6.			
7.			
8.			
	35 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	25	x 5 =	125
Column Totals:	35 (A)		145 (B)

Prevalence Index = B/A = 4.14

Hydrophytic Vegetation Indicators:
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: 22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- x Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Subsurface Soils Not Evaluated Due to Absence of Wetland Vegetation. The Soils on the Site are Considered to be Similar Within Vicinity and Influenced by the Great Salt Lake and as such are Considered to be Hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No ___	Depth (inches): 72
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX B

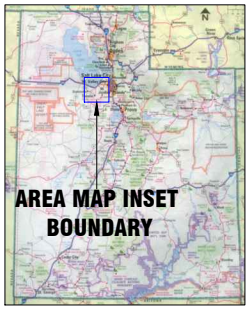
SITE MAPS AND EXHIBITS

This Page Has Been Left Blank Intentionally



SECTION 5 - TOWNSHIP 2 SOUTH - RANGE 5 WEST - SALT LAKE BASE & MERIDIAN
PROPERTY LOCATED IN TOOELE COUNTY, UTAH
LATITUDE / LONGITUDE LOCATION FOR ACCESS TO THE PROJECT SITE IS 40° 39' 56.80' NORTH x 112° 26' 26.95 WEST

MAP ACQUIRED FROM GOOGLE EARTH - IMAGE DATE DECEMBER 31, 2020



STATE OF UTAH
1 inch = 245 Mile

LEGEND

- AREA MAP - 1:240,000 SCALE (UTAH MAP INSET)
- VICINITY MAP - 48,000 SCALE
- SITE MAP - 1,200 SCALE
- PROJECT PROPERTY BOUNDARY ± 66.0 ACRES
- PHOTO POINT - ARROW INDICATES DIRECTION OF VIEW
- DELINEATION SAMPLING POINT - UPLAND
- DELINEATION SAMPLING POINT - WETLAND
- MAJOR ROADS - INTERSTATE / UTAH HIGHWAY
- OHWL - ORDINARY HIGH WATER LINE FIELD EVALUATED BANKFULL BENCH. ESTIMATED TOTAL AREA OF ±25,025 SQUARE FEET (0.574 ACRES) WITH A CHANNEL CENTERLINE LENGTH OF ±2,049 LINEAR FEET BASED ON TOPOGRAPHICAL DATA. DELINEATED TO BE WETLAND.
- DELINEATED WETLANDS BOUNDARY ±9.190 ACRES (±400,333 SQFT)
- SOILS MAP - (59) SKUMPAH SILT LOAM
- SOILS MAP - (65) TAYLORS FLAT LOAM
- DELINEATED WETLAND - PUSA - 4.568 ACRES
- DELINEATED WETLAND - PEM1C - 4.048 ACRES
- DELINEATED WETLAND - R4SB7C - 0.574 ACRES
- NWI MAP - PEM1/USA WETLANDS
- NWI MAP - PEM1C WETLANDS
- NWI MAP - R4SBC WETLANDS

NORTH

SCALE 1:240,000
1 INCH = 20000 FEET
0 5000 10000 20000

PREPARED BY:
EQUINOX ENGINEERING
POST OFFICE BOX 612
WEST JORDAN, UTAH 84084
PHONE 801.739.8218
www.equinoxengineering.us

PREPARED BY EQUINOX ENGINEERING FEBRUARY 26, 2025

FIGURE 1 - AREA MAP

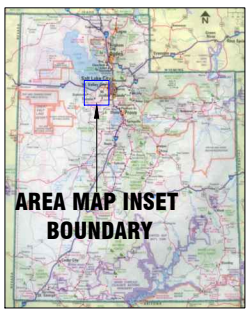


SECTION 5 - TOWNSHIP 2 SOUTH - RANGE 5 WEST - SALT LAKE BASE & MERIDIAN
PROPERTY LOCATED IN TOOELE COUNTY, UTAH
LATITUDE / LONGITUDE LOCATION FOR ACCESS TO THE PROJECT SITE IS 40° 39' 56.80' NORTH x 112° 26' 26.95 WEST

MAP ACQUIRED FROM GOOGLE EARTH - IMAGE DATE JULY 05, 2024

LEGEND

- AREA MAP - 1:240,000 SCALE (UTAH MAP INSET)
- VICINITY MAP - 48,000 SCALE
- SITE MAP - 1,200 SCALE
- PROJECT PROPERTY BOUNDARY ± 66.0 ACRES
- PHOTO POINT - ARROW INDICATES DIRECTION OF VIEW
- DELINEATION SAMPLING POINT - UPLAND
- DELINEATION SAMPLING POINT - WETLAND
- MAJOR ROADS - INTERSTATE / UTAH HIGHWAY
- OHWL - ORDINARY HIGH WATER LINE FIELD EVALUATED BANKFULL BENCH. ESTIMATED TOTAL AREA OF ±25,025 SQUARE FEET (0.574 ACRES) WITH A CHANNEL CENTERLINE LENGTH OF ±2,049 LINEAR FEET BASED ON TOPOGRAPHICAL DATA. DELINEATED TO BE WETLAND.
- DELINEATED WETLANDS BOUNDARY ±9.190 ACRES (±400,333 SQFT)
- SOILS MAP - (59) SKUMPAH SILT LOAM
- SOILS MAP - (65) TAYLORS FLAT LOAM
- DELINEATED WETLAND - PUSA - 4.568 ACRES
- DELINEATED WETLAND - PEM1C - 4.048 ACRES
- DELINEATED WETLAND - R4SB7C - 0.574 ACRES
- NWI MAP - PEM1/USA WETLANDS
- NWI MAP - PEM1C WETLANDS
- NWI MAP - R4SBC WETLANDS



STATE OF UTAH
1 inch = 245 Mile

NORTH

SCALE 1:48,000
1 INCH = 4000 FEET
0 1000 2000 4000

PREPARED BY:
EQUINOX ENGINEERING
POST OFFICE BOX 612
WEST JORDAN, UTAH 84084
PHONE 801.739.8218
www.equinoxengineering.us

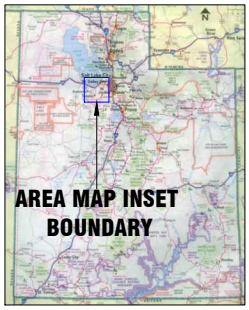
PREPARED BY EQUINOX ENGINEERING FEBRUARY 26, 2025

FIGURE 2 - VICINITY MAP



SECTION 5 - TOWNSHIP 2 SOUTH - RANGE 5 WEST - SALT LAKE BASE & MERIDIAN
PROPERTY LOCATED IN TOOELE COUNTY, UTAH
LATITUDE / LONGITUDE LOCATION FOR ACCESS TO THE PROJECT SITE IS 40° 39' 56.80' NORTH x 112° 26' 26.95 WEST

MAP ACQUIRED FROM GOOGLE EARTH - IMAGE DATE JULY 05, 2024



STATE OF UTAH
1 inch = 245 Mile

LEGEND

- AREA MAP - 1:240,000 SCALE (UTAH MAP INSET)
- VICINITY MAP - 48,000 SCALE
- SITE MAP - 1,200 SCALE
- PROJECT PROPERTY BOUNDARY ± 66.0 ACRES
- PHOTO POINT - ARROW INDICATES DIRECTION OF VIEW
- DELINEATION SAMPLING POINT - UPLAND
- DELINEATION SAMPLING POINT - WETLAND
- MAJOR ROADS - INTERSTATE / UTAH HIGHWAY
- OHWL - ORDINARY HIGH WATER LINE FIELD EVALUATED BANKFULL BENCH. ESTIMATED TOTAL AREA OF ±25,025 SQUARE FEET (0.574 ACRES) WITH A CHANNEL CENTERLINE LENGTH OF ±2,049 LINEAR FEET BASED ON TOPOGRAPHICAL DATA. DELINEATED TO BE WETLAND.
- DELINEATED WETLANDS BOUNDARY ±9.190 ACRES (±400,333 SQFT)
- SOILS MAP - (59) SKUMPAH SILT LOAM
- SOILS MAP - (65) TAYLORS FLAT LOAM
- DELINEATED WETLAND - PUSA - 4.568 ACRES
- DELINEATED WETLAND - PEM1C - 4.048 ACRES
- DELINEATED WETLAND - R4SB7C - 0.574 ACRES
- NWI MAP - PEM1/USA WETLANDS
- NWI MAP - PEM1C WETLANDS
- NWI MAP - R4SBC WETLANDS

NORTH

SCALE 1:5400
1 INCH = 450 FEET
0 100 200 450

PREPARED BY:
EQUINOX ENGINEERING
POST OFFICE BOX 612
WEST JORDAN, UTAH 84084
PHONE 801.739.8218
www.equinoxengineering.us

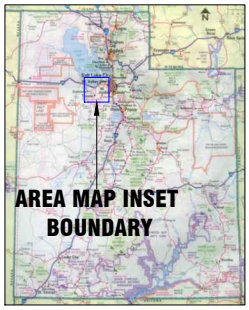
PREPARED BY EQUINOX ENGINEERING FEBRUARY 26, 2025

FIGURE 3 - SITE MAP



SECTION 5 - TOWNSHIP 2 SOUTH - RANGE 5 WEST - SALT LAKE BASE & MERIDIAN
PROPERTY LOCATED IN TOOELE COUNTY, UTAH
LATITUDE / LONGITUDE LOCATION FOR ACCESS TO THE PROJECT SITE IS 40° 39' 56.80' NORTH x 112° 26' 26.95 WEST

MAP ACQUIRED FROM GOOGLE EARTH - IMAGE DATE JULY 05, 2024



STATE OF UTAH
1 inch = 245 Mile

LEGEND

- AREA MAP - 1:240,000 SCALE (UTAH MAP INSET)
- VICINITY MAP - 48,000 SCALE
- SITE MAP - 1,200 SCALE
- PROJECT PROPERTY BOUNDARY ± 66.0 ACRES
- PHOTO POINT - ARROW INDICATES DIRECTION OF VIEW
- DELINEATION SAMPLING POINT - UPLAND
- DELINEATION SAMPLING POINT - WETLAND
- MAJOR ROADS - INTERSTATE / UTAH HIGHWAY
- OHWL - ORDINARY HIGH WATER LINE FIELD EVALUATED BANKFULL BENCH. ESTIMATED TOTAL AREA OF ±25,025 SQUARE FEET (0.574 ACRES) WITH A CHANNEL CENTERLINE LENGTH OF ±2,049 LINEAR FEET BASED ON TOPOGRAPHICAL DATA. DELINEATED TO BE WETLAND.
- DELINEATED WETLANDS BOUNDARY ±9.190 ACRES (±400,333 SQFT)
- SOILS MAP - (59) SKUMPAH SILT LOAM
- SOILS MAP - (65) TAYLORS FLAT LOAM
- DELINEATED WETLAND - PUSA - 4.568 ACRES
- DELINEATED WETLAND - PEM1C - 4.048 ACRES
- DELINEATED WETLAND - R4SB7C - 0.574 ACRES
- NWI MAP - PEM1/USA WETLANDS
- NWI MAP - PEM1C WETLANDS
- NWI MAP - R4SBC WETLANDS

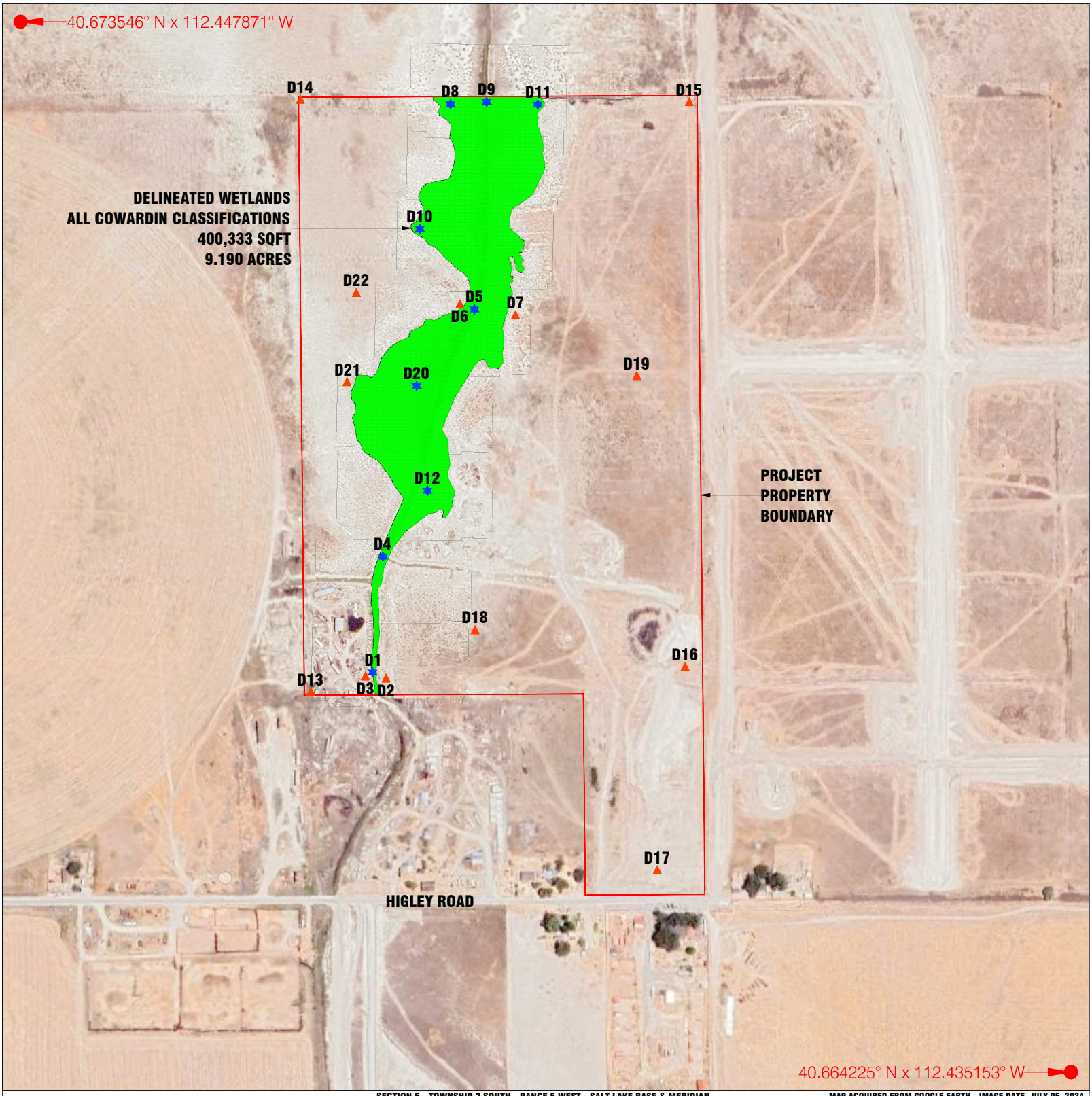
NORTH

SCALE 1:5400
1 INCH = 450 FEET
0 100 200 450

PREPARED BY:
EQUINOX ENGINEERING
POST OFFICE BOX 612
WEST JORDAN, UTAH 84084
PHONE 801.739.8218
www.equinoxengineering.us

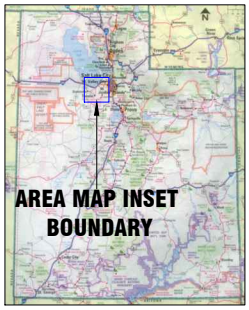
PREPARED BY EQUINOX ENGINEERING FEBRUARY 26, 2025

FIGURE 4 - SAMPLING LOCATIONS ONLY



SECTION 5 - TOWNSHIP 2 SOUTH - RANGE 5 WEST - SALT LAKE BASE & MERIDIAN
PROPERTY LOCATED IN TOOELE COUNTY, UTAH
LATITUDE / LONGITUDE LOCATION FOR ACCESS TO THE PROJECT SITE IS 40° 39' 56.80' NORTH x 112° 26' 26.95 WEST

MAP ACQUIRED FROM GOOGLE EARTH - IMAGE DATE JULY 05, 2024



STATE OF UTAH
1 inch = 245 Mile

LEGEND

- AREA MAP - 1:240,000 SCALE (UTAH MAP INSET)
- VICINITY MAP - 48,000 SCALE
- SITE MAP - 1,200 SCALE
- PROJECT PROPERTY BOUNDARY ± 66.0 ACRES
- PHOTO POINT - ARROW INDICATES DIRECTION OF VIEW
- DELINEATION SAMPLING POINT - UPLAND
- DELINEATION SAMPLING POINT - WETLAND
- MAJOR ROADS - INTERSTATE / UTAH HIGHWAY
- OHWL - ORDINARY HIGH WATER LINE FIELD EVALUATED BANKFULL BENCH. ESTIMATED TOTAL AREA OF ±25,025 SQUARE FEET (0.574 ACRES) WITH A CHANNEL CENTERLINE LENGTH OF ±2,049 LINEAR FEET BASED ON TOPOGRAPHICAL DATA. DELINEATED TO BE WETLAND.
- DELINEATED WETLANDS BOUNDARY ±9.190 ACRES (±400,333 SQFT)
- SOILS MAP - (59) SKUMPAH SILT LOAM
- SOILS MAP - (65) TAYLORS FLAT LOAM
- DELINEATED WETLAND - PUSA - 4.568 ACRES
- DELINEATED WETLAND - PEM1C - 4.048 ACRES
- DELINEATED WETLAND - R4SB7C - 0.574 ACRES
- NWI MAP - PEM1/USA WETLANDS
- NWI MAP - PEM1C WETLANDS
- NWI MAP - R4SBC WETLANDS

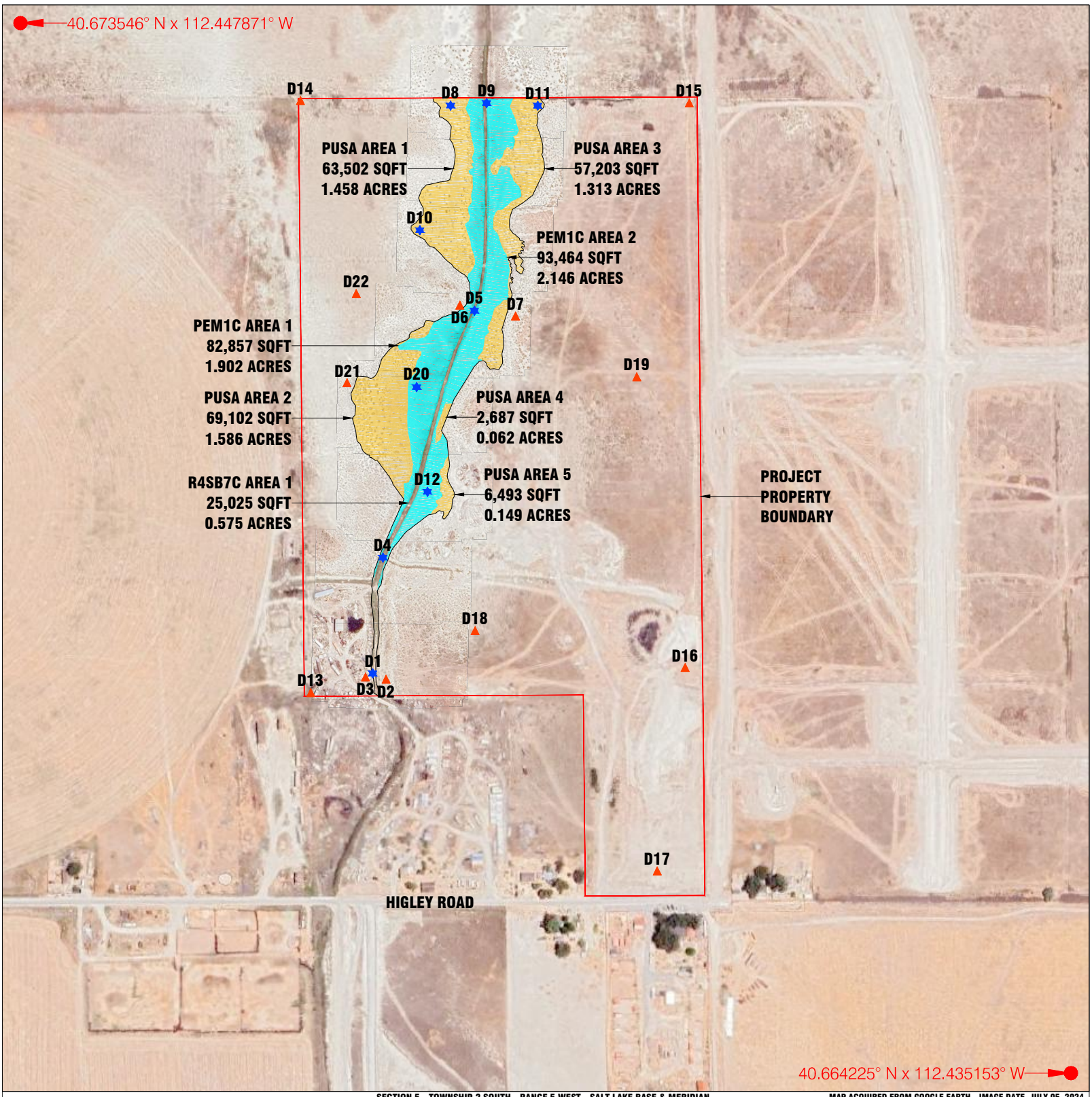
NORTH

SCALE 1:5400
1 INCH = 450 FEET
0 100 200 450

PREPARED BY:
EQUINOX ENGINEERING
POST OFFICE BOX 612
WEST JORDAN, UTAH 84084
PHONE 801.739.8218
www.equinoxengineering.us

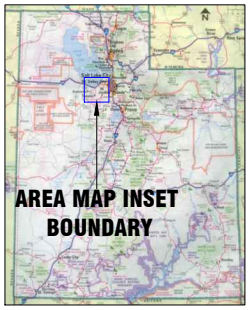
PREPARED BY EQUINOX ENGINEERING FEBRUARY 26, 2025

FIGURE 5 - DELINEATED WETLANDS - ALL WETLANDS



SECTION 5 - TOWNSHIP 2 SOUTH - RANGE 5 WEST - SALT LAKE BASE & MERIDIAN
PROPERTY LOCATED IN TOOELE COUNTY, UTAH
LATITUDE / LONGITUDE LOCATION FOR ACCESS TO THE PROJECT SITE IS 40° 39' 56.80' NORTH x 112° 26' 26.95 WEST

MAP ACQUIRED FROM GOOGLE EARTH - IMAGE DATE JULY 05, 2024



STATE OF UTAH
1 inch = 245 Mile

LEGEND

- AREA MAP - 1:240,000 SCALE (UTAH MAP INSET)
- VICINITY MAP - 48,000 SCALE
- SITE MAP - 1,200 SCALE
- PROJECT PROPERTY BOUNDARY ± 66.0 ACRES
- PHOTO POINT - ARROW INDICATES DIRECTION OF VIEW
- DELINEATION SAMPLING POINT - UPLAND
- DELINEATION SAMPLING POINT - WETLAND
- MAJOR ROADS - INTERSTATE / UTAH HIGHWAY
- OHWL - ORDINARY HIGH WATER LINE FIELD EVALUATED BANKFULL BENCH. ESTIMATED TOTAL AREA OF ±25,025 SQUARE FEET (0.574 ACRES) WITH A CHANNEL CENTERLINE LENGTH OF ±2,049 LINEAR FEET BASED ON TOPOGRAPHICAL DATA. DELINEATED TO BE WETLAND.
- DELINEATED WETLANDS BOUNDARY ±9.190 ACRES (±400,333 SQFT)
- SOILS MAP - (59) SKUMPAH SILT LOAM
- SOILS MAP - (65) TAYLORS FLAT LOAM
- DELINEATED WETLAND - PUSA - 4.568 ACRES
- DELINEATED WETLAND - PEM1C - 4.048 ACRES
- DELINEATED WETLAND - R4SB7C - 0.574 ACRES
- NWI MAP - PEM1/USA WETLANDS
- NWI MAP - PEM1C WETLANDS
- NWI MAP - R4SBC WETLANDS

NORTH

SCALE 1:5400
1 INCH = 450 FEET
0 100 200 450

PREPARED BY:
EQUINOX ENGINEERING
POST OFFICE BOX 612
WEST JORDAN, UTAH 84084
PHONE 801.739.8218
www.equinoxengineering.us

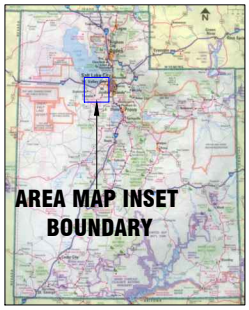
PREPARED BY EQUINOX ENGINEERING FEBRUARY 26, 2025

FIGURE 6 - DELINEATED AREA BY COWARDIN CLASSIFICATION



SECTION 5 - TOWNSHIP 2 SOUTH - RANGE 5 WEST - SALT LAKE BASE & MERIDIAN
PROPERTY LOCATED IN TOOELE COUNTY, UTAH
LATITUDE / LONGITUDE LOCATION FOR ACCESS TO THE PROJECT SITE IS 40° 39' 56.80' NORTH x 112° 26' 26.95 WEST

MAP ACQUIRED FROM GOOGLE EARTH - IMAGE DATE JULY 05, 2024



STATE OF UTAH
1 inch = 245 Mile

LEGEND

- AREA MAP - 1:240,000 SCALE (UTAH MAP INSET)
- VICINITY MAP - 48,000 SCALE
- SITE MAP - 1,200 SCALE
- PROJECT PROPERTY BOUNDARY ± 66.0 ACRES
- PHOTO POINT - ARROW INDICATES DIRECTION OF VIEW
- DELINEATION SAMPLING POINT - UPLAND
- DELINEATION SAMPLING POINT - WETLAND
- MAJOR ROADS - INTERSTATE / UTAH HIGHWAY
- OHWL - ORDINARY HIGH WATER LINE FIELD EVALUATED BANKFULL BENCH. ESTIMATED TOTAL AREA OF ±25,025 SQUARE FEET (0.574 ACRES) WITH A CHANNEL CENTERLINE LENGTH OF ±2,049 LINEAR FEET BASED ON TOPOGRAPHICAL DATA. DELINEATED TO BE WETLAND.
- DELINEATED WETLANDS BOUNDARY ±9.190 ACRES (±400,333 SQFT)
- SOILS MAP - (59) SKUMPAH SILT LOAM
- SOILS MAP - (65) TAYLORS FLAT LOAM
- DELINEATED WETLAND - PUSA - 4.568 ACRES
- DELINEATED WETLAND - PEM1C - 4.048 ACRES
- DELINEATED WETLAND - R4SB7C - 0.574 ACRES
- NWI MAP - PEM1/USA WETLANDS
- NWI MAP - PEM1C WETLANDS
- NWI MAP - R4SBC WETLANDS

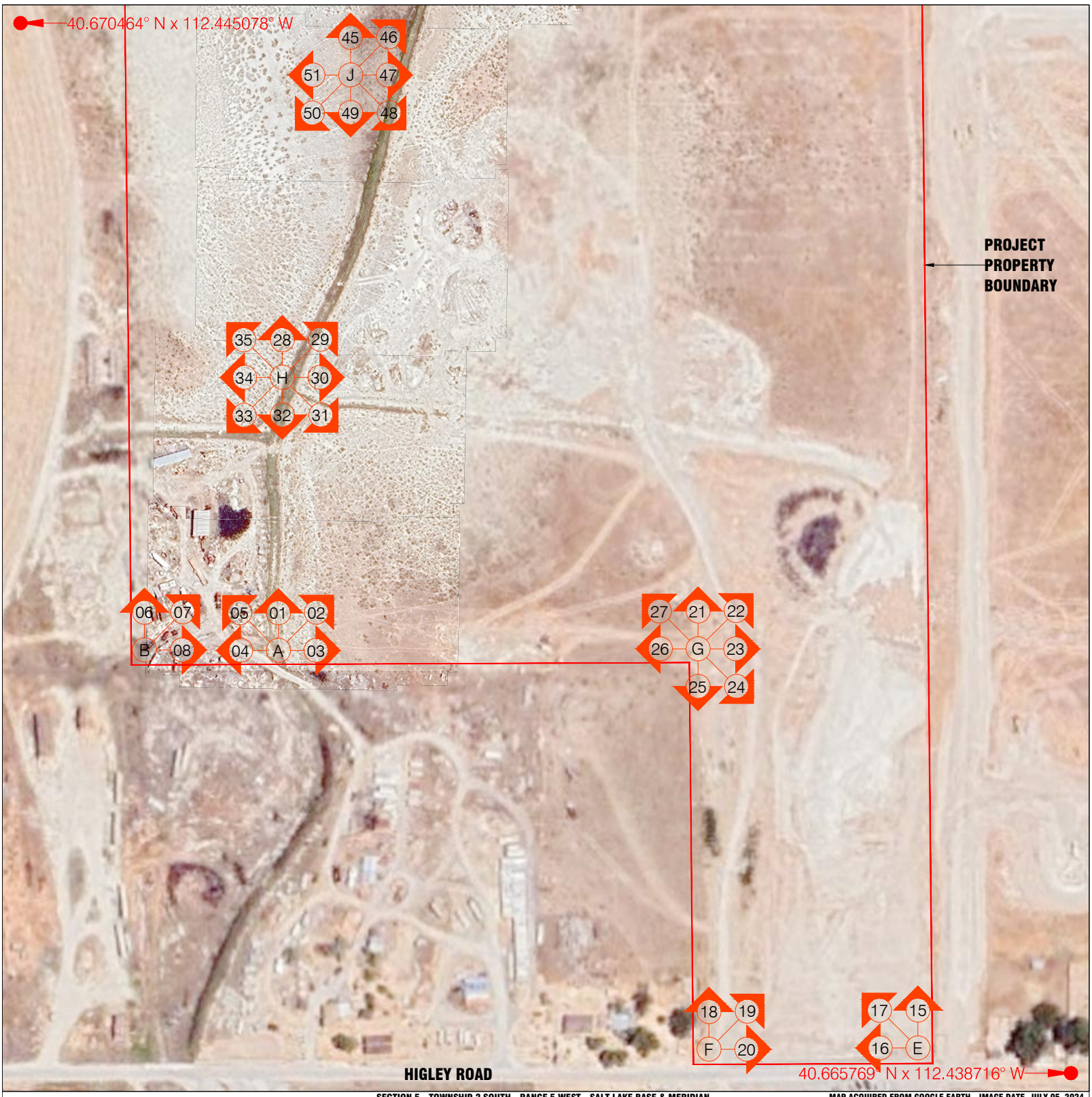
NORTH

SCALE 1:5400
1 INCH = 450 FEET
0 100 200 450

PREPARED BY:
EQUINOX ENGINEERING
POST OFFICE BOX 612
WEST JORDAN, UTAH 84084
PHONE 801.739.8218
www.equinoxengineering.us

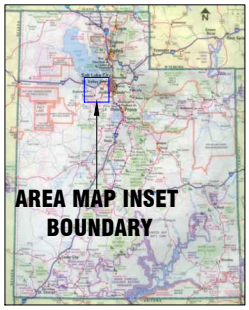
PREPARED BY EQUINOX ENGINEERING FEBRUARY 26, 2025

FIGURE 7 - ORDINARY HIGH WATER LEVEL



SECTION 5 - TOWNSHIP 2 SOUTH - RANGE 5 WEST - SALT LAKE BASE & MERIDIAN
PROPERTY LOCATED IN TOOELE COUNTY, UTAH
LATITUDE / LONGITUDE LOCATION FOR ACCESS TO THE PROJECT SITE IS 40° 39' 56.80' NORTH x 112° 26' 26.95 WEST

MAP ACQUIRED FROM GOOGLE EARTH - IMAGE DATE JULY 05, 2024



STATE OF UTAH
1 inch = 245 Mile

LEGEND

- AREA MAP - 1:240,000 SCALE (UTAH MAP INSET)
- VICINITY MAP - 48,000 SCALE
- SITE MAP - 1,200 SCALE
- PROJECT PROPERTY BOUNDARY ± 66.0 ACRES
- PHOTO POINT - ARROW INDICATES DIRECTION OF VIEW
- DELINEATION SAMPLING POINT - UPLAND
- DELINEATION SAMPLING POINT - WETLAND
- MAJOR ROADS - INTERSTATE / UTAH HIGHWAY
- OHWL - ORDINARY HIGH WATER LINE FIELD EVALUATED BANKFULL BENCH. ESTIMATED TOTAL AREA OF ±25,025 SQUARE FEET (0.574 ACRES) WITH A CHANNEL CENTERLINE LENGTH OF ±2,049 LINEAR FEET BASED ON TOPOGRAPHICAL DATA. DELINEATED TO BE WETLAND.
- DELINEATED WETLANDS BOUNDARY ±9.190 ACRES (±400,333 SQFT)
- SOILS MAP - (59) SKUMPAH SILT LOAM
- SOILS MAP - (65) TAYLORS FLAT LOAM
- DELINEATED WETLAND - PUSA - 4.568 ACRES
- DELINEATED WETLAND - PEM1C - 4.048 ACRES
- DELINEATED WETLAND - R4SB7C - 0.574 ACRES
- NWI MAP - PEM1/USA WETLANDS
- NWI MAP - PEM1C WETLANDS
- NWI MAP - R4SBC WETLANDS

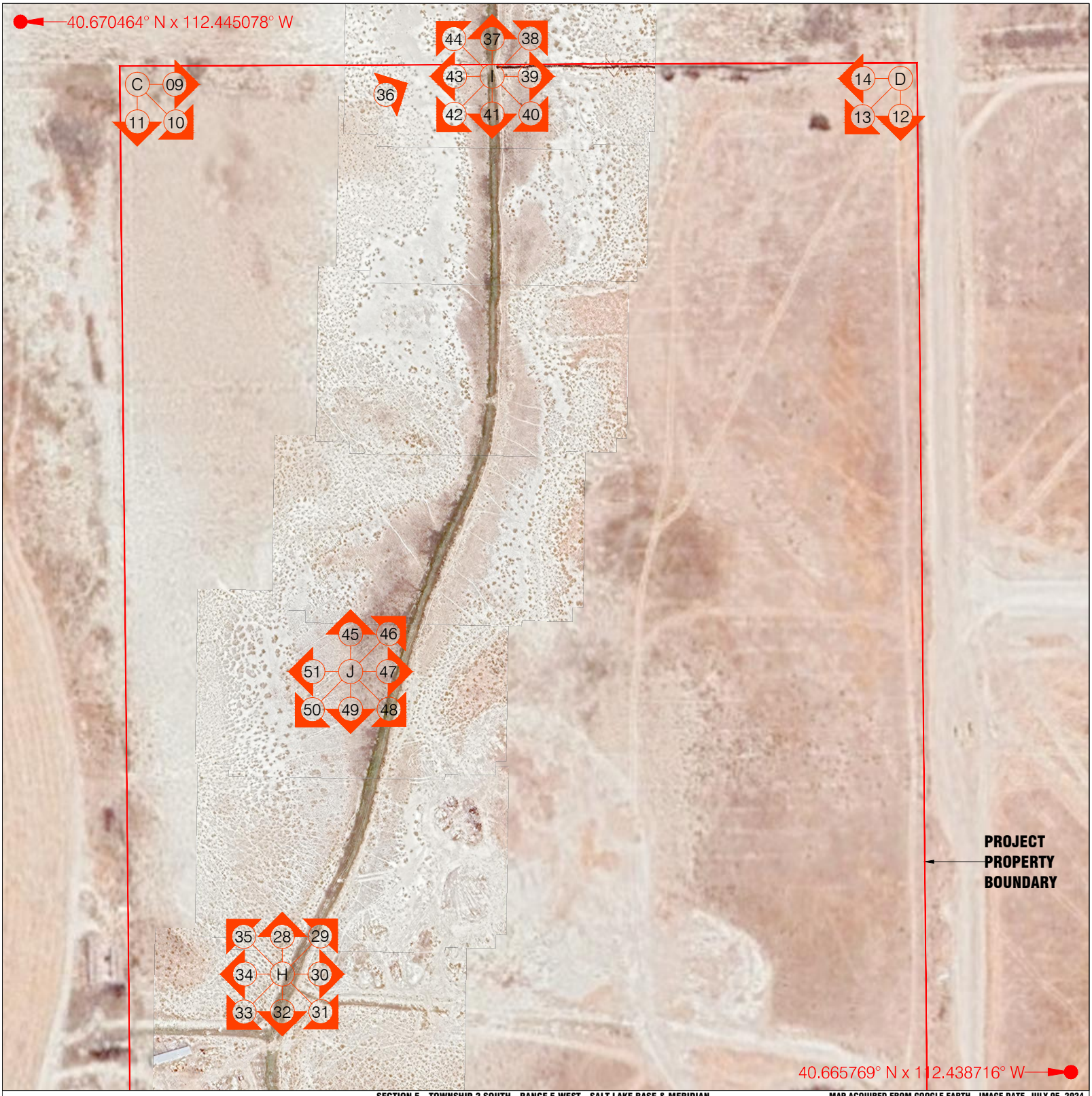
NORTH

SCALE 1:2700
1 INCH = 225 FEET
0 50 100 225

PREPARED BY:
EQUINOX ENGINEERING
POST OFFICE BOX 612
WEST JORDAN, UTAH 84084
PHONE 801.739.8218
www.equinoxengineering.us

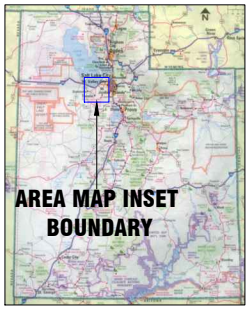
PREPARED BY EQUINOX ENGINEERING FEBRUARY 26, 2025

FIGURE 8 - PHOTO POINTS - SOUTH



SECTION 5 - TOWNSHIP 2 SOUTH - RANGE 5 WEST - SALT LAKE BASE & MERIDIAN
PROPERTY LOCATED IN TOOELE COUNTY, UTAH
LATITUDE / LONGITUDE LOCATION FOR ACCESS TO THE PROJECT SITE IS 40° 39' 56.80' NORTH x 112° 26' 26.95 WEST

MAP ACQUIRED FROM GOOGLE EARTH - IMAGE DATE JULY 05, 2024



STATE OF UTAH
1 inch = 245 Mile

LEGEND

- AREA MAP - 1:240,000 SCALE (UTAH MAP INSET)
- VICINITY MAP - 48,000 SCALE
- SITE MAP - 1,200 SCALE
- PROJECT PROPERTY BOUNDARY ± 66.0 ACRES
- PHOTO POINT - ARROW INDICATES DIRECTION OF VIEW
- DELINEATION SAMPLING POINT - UPLAND
- DELINEATION SAMPLING POINT - WETLAND
- MAJOR ROADS - INTERSTATE / UTAH HIGHWAY
- OHWL - ORDINARY HIGH WATER LINE FIELD EVALUATED BANKFULL BENCH. ESTIMATED TOTAL AREA OF ±25,025 SQUARE FEET (0.574 ACRES) WITH A CHANNEL CENTERLINE LENGTH OF ±2,049 LINEAR FEET BASED ON TOPOGRAPHICAL DATA. DELINEATED TO BE WETLAND.
- DELINEATED WETLANDS BOUNDARY ±9.190 ACRES (±400,333 SQFT)
- SOILS MAP - (59) SKUMPAH SILT LOAM
- SOILS MAP - (65) TAYLORS FLAT LOAM
- DELINEATED WETLAND - PUSA - 4.568 ACRES
- DELINEATED WETLAND - PEM1C - 4.048 ACRES
- DELINEATED WETLAND - R4SB7C - 0.574 ACRES
- NWI MAP - PEM1/USA WETLANDS
- NWI MAP - PEM1C WETLANDS
- NWI MAP - R4SBC WETLANDS

NORTH

SCALE 1:2700
1 INCH = 225 FEET
0 50 100 225

PREPARED BY:
EQUINOX ENGINEERING
POST OFFICE BOX 612
WEST JORDAN, UTAH 84084
PHONE 801.739.8218
www.equinoxengineering.us

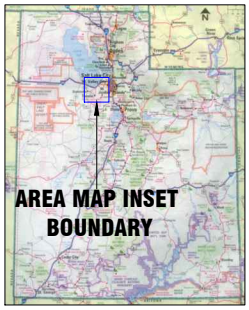
PREPARED BY EQUINOX ENGINEERING FEBRUARY 26, 2025

FIGURE 9 - PHOTO POINTS - NORTH



SECTION 5 - TOWNSHIP 2 SOUTH - RANGE 5 WEST - SALT LAKE BASE & MERIDIAN
PROPERTY LOCATED IN TOOELE COUNTY, UTAH
LATITUDE / LONGITUDE LOCATION FOR ACCESS TO THE PROJECT SITE IS 40° 39' 56.80' NORTH x 112° 26' 26.95 WEST

MAP ACQUIRED FROM GOOGLE EARTH - IMAGE DATE JULY 05, 2024



STATE OF UTAH
1 inch = 245 Mile

LEGEND

- AREA MAP - 1:240,000 SCALE (UTAH MAP INSET)
- VICINITY MAP - 48,000 SCALE
- SITE MAP - 1,200 SCALE
- PROJECT PROPERTY BOUNDARY ± 66.0 ACRES
- PHOTO POINT - ARROW INDICATES DIRECTION OF VIEW
- DELINEATION SAMPLING POINT - UPLAND
- DELINEATION SAMPLING POINT - WETLAND
- MAJOR ROADS - INTERSTATE / UTAH HIGHWAY
- OHWL - ORDINARY HIGH WATER LINE FIELD EVALUATED BANKFULL BENCH. ESTIMATED TOTAL AREA OF ±25,025 SQUARE FEET (0.574 ACRES) WITH A CHANNEL CENTERLINE LENGTH OF ±2,049 LINEAR FEET BASED ON TOPOGRAPHICAL DATA. DELINEATED TO BE WETLAND.
- DELINEATED WETLANDS BOUNDARY ±9.190 ACRES (±400,333 SQFT)
- SOILS MAP - (59) SKUMPAH SILT LOAM
- SOILS MAP - (65) TAYLORS FLAT LOAM
- DELINEATED WETLAND - PUSA - 4.568 ACRES
- DELINEATED WETLAND - PEM1C - 4.048 ACRES
- DELINEATED WETLAND - R4SB7C - 0.574 ACRES
- NWI MAP - PEM1/USA WETLANDS
- NWI MAP - PEM1C WETLANDS
- NWI MAP - R4SBC WETLANDS

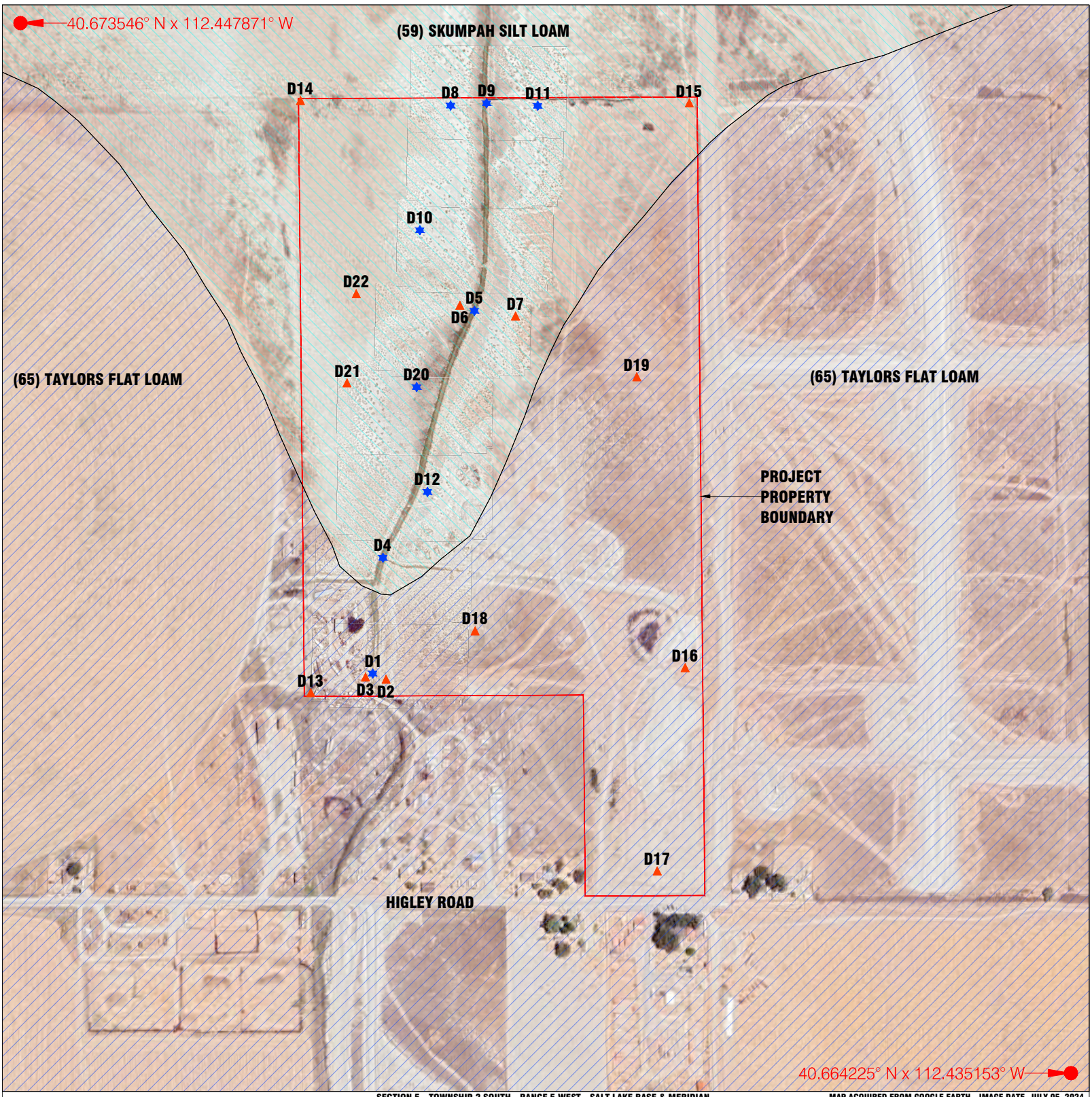
NORTH

SCALE 1:5400
1 INCH = 450 FEET
0 100 200 450

PREPARED BY:
EQUINOX ENGINEERING
POST OFFICE BOX 612
WEST JORDAN, UTAH 84084
PHONE 801.739.8218
www.equinoxengineering.us

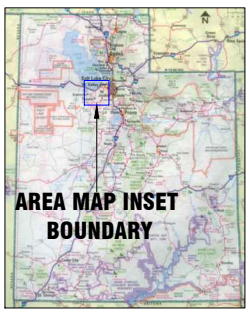
PREPARED BY EQUINOX ENGINEERING FEBRUARY 26, 2025

FIGURE 10 - NATIONAL WETLAND INVENTORY MAP OVERLAY



SECTION 5 - TOWNSHIP 2 SOUTH - RANGE 5 WEST - SALT LAKE BASE & MERIDIAN
PROPERTY LOCATED IN TOOELE COUNTY, UTAH
LATITUDE / LONGITUDE LOCATION FOR ACCESS TO THE PROJECT SITE IS 40° 39' 56.80' NORTH x 112° 26' 26.95 WEST

MAP ACQUIRED FROM GOOGLE EARTH - IMAGE DATE JULY 05, 2024



STATE OF UTAH
1 inch = 245 Mile

LEGEND

- AREA MAP - 1:240,000 SCALE (UTAH MAP INSET)
- VICINITY MAP - 48,000 SCALE
- SITE MAP - 1,200 SCALE
- PROJECT PROPERTY BOUNDARY ± 66.0 ACRES
- PHOTO POINT - ARROW INDICATES DIRECTION OF VIEW
- DELINEATION SAMPLING POINT - UPLAND
- DELINEATION SAMPLING POINT - WETLAND
- MAJOR ROADS - INTERSTATE / UTAH HIGHWAY
- OHWL - ORDINARY HIGH WATER LINE FIELD EVALUATED BANKFULL BENCH. ESTIMATED TOTAL AREA OF ±25,025 SQUARE FEET (0.574 ACRES) WITH A CHANNEL CENTERLINE LENGTH OF ±2,049 LINEAR FEET BASED ON TOPOGRAPHICAL DATA. DELINEATED TO BE WETLAND.
- DELINEATED WETLANDS BOUNDARY ±9.190 ACRES (±400,333 SQFT)
- SOILS MAP - (59) SKUMPAH SILT LOAM
- SOILS MAP - (65) TAYLORS FLAT LOAM
- DELINEATED WETLAND - PUSA - 4.568 ACRES
- DELINEATED WETLAND - PEM1C - 4.048 ACRES
- DELINEATED WETLAND - R4SB7C - 0.574 ACRES
- NWI MAP - PEM1/USA WETLANDS
- NWI MAP - PEM1C WETLANDS
- NWI MAP - R4SBC WETLANDS

NORTH

SCALE 1:5400
1 INCH = 450 FEET
0 100 200 450

PREPARED BY:
EQUINOX ENGINEERING
POST OFFICE BOX 612
WEST JORDAN, UTAH 84084
PHONE 801.739.8218
www.equinoxengineering.us

PREPARED BY EQUINOX ENGINEERING FEBRUARY 26, 2025

FIGURE 11 - SOILS MAP

This Page Has Been Left Blank Intentionally

APPENDIX C

SITE PHOTOS

This Page Has Been Left Blank Intentionally



Photo Location A1 - Figure 8 Photo Points South
View N



Photo Location A2 - Figure 8 Photo Points South
View NE



Photo Location A3 - Figure 8 Photo Points South
View E



Photo Location A4 - Figure 8 Photo Points South
View W



Photo Location A5 - Figure 8 Photo Points South
View NW



Photo Location B6 - Figure 8 Photo Points South
View N



Photo Location B7 - Figure 8 Photo Points South
View NE



Photo Location B8 - Figure 8 Photo Points South
View E



Photo Location C9 - Figure 9 Photo Points North
View E



Photo Location C10 - Figure 9 Photo Points North
View SE



Photo Location C11 - Figure 9 Photo Points North
View S



Photo Location D12 - Figure 9 Photo Points North
View S



Photo Location D13 - Figure 9 Photo Points North
View SW



Photo Location D14 - Figure 9 Photo Points North
View W


Photo Location E15 - Figure 8 Photo Points South
View N



Photo Location E16 - Figure 8 Photo Points South
View W


Photo Location E17 - Figure 8 Photo Points South
View NW



Photo Location F18 - Figure 8 Photo Points South
View N



Photo Location F19 - Figure 8 Photo Points South
View NE



Photo Location F20 - Figure 8 Photo Points South
View E


Photo Location G21 - Figure 8 Photo Points South
View N


Photo Location G22 - Figure 8 Photo Points South
View NE


Photo Location G23 - Figure 8 Photo Points South
View E



Photo Location G24 - Figure 8 Photo Points South
View SE



Photo Location G25 - Figure 8 Photo Points South
View S



Photo Location G26 - Figure 8 Photo Points South
View W


Photo Location G27 - Figure 8 Photo Points South
View NW


Photo Location H28 - Figure 8 Photo Points South
View N


Photo Location H29 - Figure 8 Photo Points South
View NE


Photo Location H30 - Figure 8 Photo Points South
View E



Photo Location H31 - Figure 8 Photo Points South
View SW



Photo Location H32 - Figure 8 Photo Points South
View S



Photo Location H33 - Figure 8 Photo Points South
View SW



Photo Location H34 - Figure 8 Photo Points South
View W



Photo Location H35 - Figure 8 Photo Points South
View NW



Photo Location 36 - Figure 9 Photo Points North
View NE



Photo Location I37 - Figure 9 Photo Points North
View NE



Photo Location I38 - Figure 9 Photo Points North
View NE


Photo Location I39 - Figure 9 Photo Points North
View E


Photo Location I40 - Figure 9 Photo Points North
View SE



Photo Location I41 - Figure 9 Photo Points North
View S



Photo Location I42 - Figure 9 Photo Points North
View SW



Photo Location I43 - Figure 9 Photo Points North
View W



Photo Location I44 - Figure 9 Photo Points North
View NW



Photo Location J45
Figure 8 Photo Points South AND Figure 9 Photo Points North
View N



Photo Location J46
Figure 8 Photo Points South AND Figure 9 Photo Points North
View NE



Photo Location J47
Figure 8 Photo Points South AND Figure 9 Photo Points North
View E



Photo Location J48
Figure 8 Photo Points South AND Figure 9 Photo Points North
View SE



Photo Location J49
Figure 8 Photo Points South AND Figure 9 Photo Points North
View S



Photo Location J50
Figure 8 Photo Points South AND Figure 9 Photo Points North
View SW



Photo Location J51
Figure 8 Photo Points South AND Figure 9 Photo Points North
View W

THIS SPACE LEFT BLANK INTENTIONALLY

THIS SPACE LEFT BLANK INTENTIONALLY

THIS SPACE LEFT BLANK INTENTIONALLY

This Page Has Been Left Blank Intentionally

APPENDIX D

WETLAND DELINEATION METHODOLOGY

This Page Has Been Left Blank Intentionally

WETLAND DELINEATION METHODOLOGY

The triple parameter approach, as required by the United States Army Corps of Engineers (USACOE) Wetland Delineation Manual Arid West Region (Version 2.0), was used to identify and delineate the wetlands on the site described in this report. According to this methodology, vegetation, soils and hydrology are examined and evaluated to make a determination as to the presence or absence of wetlands. Inherent to this method, an area can be considered or classified as a wetland if each of the following criteria are met: (1) Hydrophytic Vegetation must be present on the site (2) Hydric Soils must be present on the site (3) Hydrologic conditions must be present and/or evident to support wetland conditions.

Investigation of the overall site was first performed on the macro scale where drainage channels and/or patterns were evaluated against the specific criteria for classification as exhibiting wetland hydrology and supporting hydrophytic vegetation as based on color. This action is primarily performed by reviewing aerial photos prior to field work and during initial site reconnaissance during the field work activities that includes general observations pertaining to the "lay of the land" with specific attention given to swales or depressions where water could be impounded or flow. Based on this general macro review of the site a preliminary wetland boundary is projected. This projected boundary is roughly identified in the field as a starting point for the sampling point locations.

Sampling points are where the micro scale investigation was undertaken. The sampling point location was evaluated first for the presence or absence of hydrophytic vegetation using a dominance or prevalence index test. In the event that the sampling point did not contain sufficient hydrophytic vegetation to meet the minimum criteria, then the location was determined to be non-wetland, and no further examination was conducted. If the sampling point was determined to contain hydrophytic vegetation in sufficient quantities to meet the minimum criteria then a test pit was excavated to evaluate the soils and hydrology. If during this evaluation hydric soils and wetland hydrology were observed then all three criteria were considered to have been met and the sampling point was considered to be a wetland. If however the site was found to not exhibit either hydric soils or wetland hydrology then the site was considered to be non-wetland, and a new sampling location was identified in the general area where the possibility of wetland conditions could exist. If this new point was determined to be a wetland then the area between the two points was evaluated with sampling points until the boundary of the wetland could be identified.

The following information outlines more specifically the delineation process as explained previously.

HYDROPHYTIC VEGETATION

Plant species that specifically adapted to exist in saturated and/or anaerobic conditions are considered Hydrophytic. These species are usually found in areas where there is a significant duration and/or frequency of inundation, which produces periodically or permanently saturated soil conditions. Hydrophytic species, due to morphological, physiological and reproductive adaptations, have the ability to grow and effectively compete, reproduce and thrive in anaerobic soil. The USACOE and the United States Fish and Wildlife Service (USFWS) have assigned indicator status to many plant species, based on the estimated probability of the species existing under different conditions. Plants have been grouped into five different categories which directly correspond to the plants preferred habitat. These Five categories are as follows: Obligate (OBL), Facultative Wetland (FACW), Facultative (FAC), Facultative Upland (FACU), and Upland (UPL). Species that are indicated as OBL,

FACW or FAC are considered to be adaptive to saturated and/or anaerobic (i.e. Wetland) conditions and are referred to as hydrophytic vegetation. **See Table 1.**

Trees within a ± Thirty (30) foot radius, shrubs or woody bushes within a ± Fifteen (15) foot radius and herbs within a ± Five (5) foot radius of each data point were identified and noted. The approximate percentage of cover for each of the different plant species that were found to occur within the respective radiuses was determined. Dominant plant species were considered to be those that, when cumulatively totaled in descending order of abundance, exceed Fifty (50) percent of the aerial cover for each vegetative stratum. Any additional species individually comprising Twenty (20) percent or greater of the total aerial cover for each vegetative stratum were also considered dominant.

The indicator status of the dominant plant species within each of the vegetative strata was used to determine the presence of Hydrophytic vegetation near each data point. A data point was considered to have Hydrophytic vegetation if the vegetation found had an indicator status of OBL, FACW or FAC and compromised cover of greater than Fifty (50) percent for the respective radii.

TABLE 1

INDICATOR STATUS	
OBL	Obligate Wetland : Occurs almost always under natural conditions in wetlands Estimated probability species found in wetlands > 99% of the time Estimated probability species found in non-wetlands < 1% of the time
FACW	Facultative Wetland : Usually occurs in wetlands under natural conditions Estimated probability species found in wetlands 67% to 99% of the time Estimated probability species found in non-wetlands 1% to 33% of the time
FAC	Facultative : Equally likely to occur in wetlands and non-wetlands under natural conditions Estimated probability species found in wetland 34% to 66% of the time Estimated probability species found in non-wetlands 34% to 66% of the time
FACU	Facultative Upland : Usually occurs in non-wetlands under natural conditions Estimated probability species found in wetlands 1% to 33% of the time Estimated probability species found in non-wetlands 67% to 99% of the time
UPL	Obligate Upland : Occur almost always in non-wetlands under natural conditions Estimated probability species found in wetlands < 1% of the time Estimated probability species found in non-wetlands >99% of the time
NI	No Indicator : Species that have not been given an indicator status, Assumed to by upland

Source: National List of Plant Species That Occur In Wetlands: Intermountain (Region 8)
US Fish and Wildlife Service Report prepared by National Ecology Research Center
Biological Report 88(26.9). May 1988 - page 9

HYDRIC SOILS

Hydric soils are defined as those that exist due to saturated, flooded, or ponded conditions of sufficient duration during the growing season to allow the development of anaerobic conditions that favor the growth and regeneration of Hydrophytic vegetation. Resulting from anaerobic conditions, Hydric soils exhibit characteristics directly observable in the field. These observations include, high organic matter content, gley formations (greenish or bluish gray color), accumulation of sulfidic material, mottling (spots of orange or yellow color), and low chromas (dark soil colors). **See Table 2.**

TABLE 2

HYDRIC SOILS INDICATORS	
Hydric Indicator	Diagnostic Criteria
Organic Content	>50 % by Volume (Constitutes Organic Soil)
Sulfidic Material	"Rotten Egg" odor
Soil Color	Matrix Chroma of 2 or less in mottled soils Matrix Chroma of 1 or less in un-mottled soils Gleyed Colors
Water Saturation	Soil Saturated at 12" or less from the surface (depending on soil drainage class and permeability) for a significant period during the growing season.
Soil Color Definitions	Hue: Indicated the dominant spectral color (i.e. red, yellow, green, blue, purple). Value: Measures the degree of darkness or lightness of the color. Chroma: Measure of the purity or strength of the color.

Source: Environmental Laboratory, 1987, Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1, U.S. Army Waterways Experiment Station, Vicksburg, Mississippi

Additionally the Arid West Region Delineation Supplement provides for distinctive criteria for the Indication of Hydric soils in these Regions as follows:

HYDRIC SOILS INDICATORS FOR ARID WEST REGION

Indicator A1: Histosols –

In a Histosol, 16 in. (40 cm) or more of the upper 32 in. (80 cm) is organic soil material. Histosols also include soils that have organic soil material of any thickness over rock or fragmental soil material that has interstices filled with organic soil material. Organic soil material has an organic carbon content (by weight) of 12 to 18 percent or more, depending on the clay content of the soil. The material includes muck (sapric soil material), mucky peat (hemic soil material), or peat (fibric soil material).

Indicator A2: *Histic Epipedon*

Most histic epipedons are surface horizons 8 in. (20 cm) or more thick of organic soil material. Aquic conditions or artificial drainage are required; however, aquic conditions can be assumed if indicators of hydrophytic vegetation and wetland hydrology are present A histic epipedon is underlain by mineral soil material with chroma of 2 or less.

Indicator A3: Black Histic

A layer of peat, mucky peat, or muck 8 in. (20 cm) or more thick that starts within 6 in. (15 cm) of the soil surface; has hue of 10YR or yellower, value of 3 or less, and chroma of 1 or less; and is underlain by mineral soil material with chroma of 2 or less.

Indicator A4: Hydrogen Sulfide

A hydrogen sulfide (rotten egg) odor within 12 in. (30 cm) of the soil surface.

Indicator A5: Stratified Layers

Several stratified layers starting within 6 in. (15 cm) of the soil surface. One or more of the layers has a value of 3 or less with chroma of 1 or less and/or it is muck, mucky peat, or peat, or has a mucky modified mineral texture. The remaining layers have chroma of 2 or less.

Indicator A9: 1cm Muck

A layer of muck 0.5 in. (1 cm) or more thick with a value of 3 or less and chroma of 1 or less, starting withing 6 in. (15 cm) of the soil surface.

Indicator A10: 2cm Muck

A layer of muck 0.75 in. (2 cm) or more thick with a value of 3 or less and chroma of 1 or less, starting within 6 in. (15 cm) of the surface.

Is the dominant (60 percent or more) condition of a layer at least 4 in. (10 cm) thick within the upper 12 in. (30 cm) (or at least 2 in. (5 cm) thick within the upper 6 in. (15 cm)) of the mineral or muck soil surface.

Occurs for at least 7 continuous days and 28 cumulative days, AND

Occurs during a normal (within 16 to 84 percent of probable precipitation) or drier season and month.

Indicator A11: Depleted Below Dark Surface

A layer with a depleted or gleyed matrix that has 60 percent or more chroma of 2 or less, starting within 12 in. (30 cm) of the soil surface, and having a minimum thickness of either: 6 in. (15 cm), or 2 in. (5 cm) if the 2 in. (5 cm) consists of fragmental soil material. Loamy/clayey layer(s) above the depleted or gleyed matrix must have a value of 3 or less and chroma of 2 or less. Any sandy material above the depleted or gleyed matrix must have a value of 3 or less and chroma of 1 or less, and at least 70 percent of the visible soil particles must be covered, coated, or similarly masked with organic material.

Indicator A12: Thick Dark Surface

A layer at least 6 in. (15 cm) thick with a depleted or gleyed matrix that has 60 percent or more chroma of 2 or less starting below 12 in. (30 cm) of the surface. The layer(s) above the depleted or gleyed matrix must have a value of 2.5 or less and chroma of 1 or less to a depth of at least 12 in. (30 cm) and value of 3 or less and chroma of 1 or less in any remaining layers above the depleted or Gleyed matrix. Any sandy material above the depleted or gleyed matrix must have at least 70 percent of the visible soil particles covered, coated, or similarly masked with organic material.

Indicator S1: Sandy Mucky Mineral

A layer of mucky modified sandy soil material 2 in. (5 cm) or more thick starting within 6 in. (15 cm) of the soil surface.

Indicator S4: Sandy Gleyed Matrix

A gleyed matrix that occupies 60 percent or more of a layer starting within 6 in. (15 cm) of the soil surface.

Indicator S5: Sandy Redo*x*

A layer starting within 6 in. (15 cm) of the soil surface that is at least 4 in. (10 cm) thick and has a matrix with 60 percent or more chroma of 2 or less with 2 percent or more distinct or prominent redox concentrations occurring as soft masses and/or pore linings.

Indicator S6: Stripped Matrix

A layer starting within 6 in. (15 cm) of the soil surface in which iron/manganese oxides and/or organic matter have been stripped from the matrix and the primary base color of the soil material has been exposed. The stripped areas and translocated oxides and/or organic matter form a faint, diffuse splotchy pattern of two or more colors. The stripped zones are 10 percent or more of the volume; they are rounded and approximately 0.5 to 1 in. (1 to 3 cm) in diameter.

Indicator F1: Loamy Mucky Mineral

A layer of mucky modified loamy or clayey soil material 4 in. (10 cm) or more thick starting within 6 in. (15 cm) of the soil surface.

Indicator F2: Loamy Gleyed Matrix

A gleyed matrix that occupies 60 percent or more of a layer starting within 12 in. (30 cm) of the soil surface.

Indicator F3: Depleted Matrix

A layer that has a depleted matrix with 60 percent or more chroma of 2 or less and that has a minimum thickness of either:

2 in. (5 cm) if 2 in. (5 cm) is entirely within the upper 6 in. (15 cm) of the soil, OR

6 in. (15 cm) starting within 10 in. (25 cm) of the soil surface.

Indicator F6: Redox Dark Surface

A layer that is at least 4 in. (10 cm) thick, is entirely within the upper 12 in. (30 cm) of the mineral soil and has a:

Matrix value of 3 or less and chroma of 1 or less and 2 percent or more distinct or prominent redox concentrations occurring as soft masses or pore linings, OR

Matrix value of 3 or less and chroma of 2 or less and 5 percent or more distinct or prominent redox concentrations occurring as soft masses or pore linings.

Indicator F7: Depleted Dark Surface

Redox depletions with a value of 5 or more and chroma of 2 or less in a layer that is at least 4 in. (10 cm) thick, is entirely within the upper 12 in. (30 cm) of the mineral soil, and has a:

Matrix value of 3 or less and chroma of 1 or less and 10 percent or more redox depletions, OR

Matrix value of 3 or less and chroma of 2 or less and 20 percent or more redox depletions.

Indicator F8: Redox Depressions

In closed depressions subject to ponding, 5 percent or more distinct or prominent redox concentrations occurring as soft masses or pore linings in a layer that is 2 in. (5 cm) or more thick and is entirely within the upper 6 in. (15 cm) of the soil.

Indicator F9: Vernal Pools

In closed depressions that are subject to ponding, presence of a depleted matrix with 60 percent or mor chroma of 2 or more less in a layer 2 in. (5 cm) thick entirely within the upper 6 in. (15 cm) of the soil.

Indicator F18: Reduced Vertic

In Vertisols and Vertic intergrades, a positive reaction to alpha, alpha-dipyridyl that:

Indicator TF2: Red Parent Material

In parent material with a hue of 7.5YR or redder, a layer at least 4 in. (10 cm) thick with a matrix value and chroma of 4 or less and 2 percent or more redox depletions and/or redox concentrations occurring as soft masses and/or pore linings. The layer is entirely within 12 in. (30 cm) of the soil surface. The minimum thickness requirement is 2 in. (5 cm) if the layer is the mineral surface layer.

The extent of hydric soils were defined through direct soil observation within multiple data points, taken both within and outside the wetland. Soil observations were completed within test pits. The test pits were excavated to an approximate depth of 6" below the existing surface elevation with a handheld shovel, and deeper soil observations were obtained with the use of a 21" long annular soil probe that was inserted vertically into the soil which provided for direct and accurate soil strata observation to the full depth of the probe. Soil organic contents were estimated visually and texturally. Soil colors were determined through analysis of hue, value and chroma as best represented in the Munsell Soil and recorded.

WETLAND HYDROLOGY

Wetland hydrology can be evident with primary or secondary indicators. Only one primary indicator is required to meet the criteria to define the site as having wetland hydrology. Secondary indicators require at least two concurrent observations to meet the criteria to define the site as having wetland hydrology.

In following the Arid West Regional Supplement to the Delineation Manual if the water table was observed to be above or within 12" of the surface it was considered to be a primary indicator and assumed that wetland hydrology existed at the sampling point. Additionally other primary indicators were checked for which include:

WETLAND HYDROLOGY INDICATORS FOR THE ARID WEST REGION

Group A – Observation of Surface Water or Saturated Soils

Indicator A1: Surface Water (PRIMARY)

This indicator consists of the direct, visual observation of surface water (flooding or ponding) during a site visit

Indicator A2: High Water Table (PRIMARY)

This indicator consists of the direct, visual observation of the water table 12 in. (30 cm) or less below the surface in a soil pit, auger hole, or shallow monitoring well. This indicator includes water tables derived from perched water, through flow, and discharging groundwater (e.g., in seeps) that may be moving laterally near the soil surface.

Indicator A3: Saturation (PRIMARY)

Visual observation of saturated soil conditions 12 in. (30 cm) or less from the soil surface as indicated by water glistening on the surfaces and broken interior faces of soil samples removed from the pit or auger hole. This indicator must be associated with an existing water table located immediately below the saturated zone; however, this requirement is waived under episaturated conditions if there is a restrictive soil layer or bedrock within 12 in. (30 cm) of the surface.

Group B – Evidence of Recent Inundation

Indicator B1: Water Marks (PRIMARY) (SECONDARY in riverine situations)

Water marks are discolorations or stains on the bark or woody vegetation, rocks, bridge supports, buildings, fences or other fixed objects as a result of inundation.

Indicator B2: Sediment Deposits (PRIMARY) (SECONDARY in riverine situations)

Sediment deposits are thin layers or coatings of fine-grained mineral material (e.g., silt or clay) or organic matter (e.g., pollen), sometimes mixed with other detritus, remaining on tree bark, plant stems or leaves, rocks and other objects after surface water recedes.

Indicator B3: Drift Deposits (PRIMARY) (SECONDARY in riverine situations)

Drift deposits consist of rafted debris that has been deposited on the ground surface or entangled in vegetation or other fixed objects. Debris consists of remnants of vegetation (e.g., branches stems, and leaves), man-made litter, or other waterborne materials. Drift material may be deposited at or near the high water line in ponded or flooded areas, piled against the upstream side of trees, rocks, and other fixed objects, or widely distributed within the dewatered area.

Indicator B6: Surface Soil Cracks (PRIMARY)

Surface soil cracks consist of shallow cracks that form when fine-grained mineral or organic sediments dry and shrink, often creating a network of cracks or small polygons.

Indicator B7: Inundation Visible On Aerial Imagery (PRIMARY)

One or more recent aerial photographs or satellite images show the site to be inundated.

Indicator B9: Water-Stained Leaves (PRIMARY)

Water-stained leaves are fallen or recumbent dead leaves that have turned grayish or blackish in color due to inundation for long periods.

Indicator B10: Drainage Patterns (SECONDARY)

This indicator consists of flow patterns visible on the soil surface or eroded into the soil, low vegetation bent over in the direction of flow, absence of leaf litter or small woody debris due to flowing water, and similar evidence that water flowed across the ground surface.

Indicator B11: Salt Crust (PRIMARY)

Salt crusts are hard or brittle deposits of salts formed on the ground surface due to the evaporation of saline surface water.

Indicator B12: Biotic Crust (PRIMARY)

This indicator includes ponding-remnant biotic crusts, microflora, and the dried remains of fee-floating algae left on or near the soil surface after dewatering.

Indicator B13: Aquatic Invertebrates (PRIMARY)

Presence of numerous live individuals, diapausing insect eggs or crustacean cysts, or dead remains of aquatic invertebrates, such as clams, snails, insects, ostracods, shrimp, and other crustaceans, either on the soil surface or clinging to plants or other emergent objects.

Group C – Evidence of Current or Recent Soil Saturation

Indicator C1: Hydrogen sulfide odor (PRIMARY)

A hydrogen sulfide (rotten egg) odor within 12 in. (30 cm) of the soil surface.

Indicator C2: Dry-season water table (SECONDARY)

Visual observation of the water table between 12 and 24 in. (30 and 60 cm) below the surface during the normal dry season or during a drier-than-normal year.

Indicator C3: Oxidized rhizospheres along living roots (PRIMARY)

Presence of a layer containing 2 percent or more iron-oxide coatings or plaques on the surfaces of living roots and/or iron oxide coatings or linings on soil pores immediately surrounding living roots within 12 in. (30 cm) of the soil surface.

Indicator C4: Presence of reduced iron (PRIMARY)

Presence of a layer containing reduced (ferrous) iron in the upper 12 in. (30 cm) of the soil profile, as indicated by a ferrous iron test or by the presence of a soil that changes color upon exposure to the air.

Indicator C6: Recent iron reduction in tilled soils (PRIMARY)

Presence of a layer containing 2 percent or more redox concentrations as pore linings or soft masses in the tilled surface layer of soils cultivated within the last two years. The layer containing redox concentrations must be within the tilled zone or within 12 in. (30 cm) of the soil surface, whichever is shallower.

Indicator C8: Crayfish burrows (SECONDARY)

Presence of crayfish burrows, as indicated by openings in soft ground up to 2 in. (5 cm) in diameter, often surrounded by chimney-like mounds of excavated mud.

Indicator C9: Saturation visible on aerial imagery (SECONDARY)

One or more recent aerial photographs or satellite images indicate soil saturation. Saturated soil signatures must correspond to field-verified hydric soils, depressions or drainage patterns, differential crop management, or other evidence of a seasonal high water table.

Group D – Evidence from Other Site Conditions or Data

Indicator D3: Shallow aquitard (SECONDARY)

This indicator occurs in and around the margins of depressions, such as temporary pools, and consists of the presence of an aquitard within the soil profile that is potentially capable of perching water within 12 in. (30 cm) of the surface. Indicators of hydrophytic vegetation and hydric soil must also be present.

Indicator D5: FAC-neutral test (SECONDARY)

The plant community passes the FAC-neutral test.

APPENDIX E

IMPORTANT INFORMATION ABOUT YOUR WETLAND DELINEATION REPORT

This Page Has Been Left Blank Intentionally

A WETLAND DELINEATION REPORT IS BASED ON PROJECT SPECIFIC FACTORS

Wetland delineation reports are based on a unique set of project-specific factors. These typically include the general nature of the project and property involved, its size, and its configuration; historical use and practice; the location of the project on the site and its orientation; and the level of additional risk the client assumed by virtue of limitations imposed upon the exploratory program. The jurisdiction of any particular wetland is determined by the regulatory authority(s) issuing the permit(s). As a result, one or more agencies may have jurisdiction over a particular wetland with sometimes confusing regulations. It is necessary to involve a consultant who understands which agency(s) has jurisdiction over a particular wetland and agency(s) permitting requirements are for that wetland. To help reduce or avoid potential costly problems, Equinox should determine how any factors or regulations (which can be changed subsequent to the report) may affect the recommendations.

Unless the report indicates otherwise, your report should not be used:

- If the size or configuration of the proposed project is altered.
- If the location or orientation of the proposed project is modified.
- If there is a change or ownership.
- For application to an adjacent site.
- For construction at an adjacent site.
- For construction on other areas of the site not identified herein or applicable to report.
- Following floods, earthquakes, or other significant acts of nature.

Equinox Engineering & Environmental (Equinox) cannot accept responsibility for problems that may develop if they are not consulted after factors considered in their reports have changed. Therefore, it is incumbent upon you to notify Equinox of any factors that may have changed prior to submission of the final report.

Wetland boundaries identified by Equinox Engineering are considered preliminary until validated by the United States Army Corps of Engineers (Corps) and/or the local jurisdictional agency. Validation by the regulating agency(s) provides a certification, usually written, that the wetland boundaries verified are the boundaries that will be regulated by the agency(s) until a specified date or until regulations are modified. Only the regulating agency(s) can provide this certification.

MOST WETLAND "FINDINGS" ARE PROFESSIONAL ESTIMATES

Site exploration identifies wetlands conditions at only those points where samples are taken and when they are taken, but the physical means of obtaining data preclude the determination of précised conditions. Consequently, the information obtained is intended to be sufficiently accurate for design but is subject to interpretation. Additionally, data derived through sampling and subsequent laboratory testing are extrapolated by the Equinox who has rendered an opinion about overall conditions, the likely reaction to proposed construction activity, and/or appropriate design. Even under optimal circumstances, actual conditions may differ from those thought to exist because no consultant, no matter how qualified, and no exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock and time. Nothing can be done to prevent the unanticipated, but steps can be taken to help reduce their impacts. For this reason, most experienced owners retain their consultants through the construction stage to identify variances, to conduct additional evaluations that may be needed, and to recommend solution to problems encountered on site.

WETLAND CONDITIONS CAN CHANGE

Since natural systems are dynamic systems affected by both natural processes and human activities, changes in wetland boundaries and conditions may be expected. Therefore, delineated wetland boundaries cannot remain valid for an indefinite period of time. The Corps typically recognize the validity of wetland delineations for a period of five years after completion. Some city and county agencies recognize the validity of wetland delineations for a period of two years; however this is subject to specific site conditions and may be altered as needed by the respective agency(s) at their sole discretion. If a period of years has passed since the wetland report was completed, the owner is advised to have the Equinox reexamine the wetland to determine if the classification is still accurate.

Construction operations at or adjacent the site and natural events such as floods, earthquakes, or water fluctuations may also affect conditions and, thus, the continuing adequacy of the wetland report. Equinox should be kept apprised of any such events and should be consulted to determine if additional evaluation is necessary.

THE WETLAND REPORT IS SUBJECT TO MISINTERPRETATION

Costly problems can occur when plans are developed based on misinterpretations of a wetland report. To help avoid these problems, Equinox should be retained to work with the other appropriate professionals to explain relevant wetland, stream, water, geological and other findings and to review the adequacy of plans and specifications related to these issues.

DATA FORMS SHOULD NOT BE SEPARATED FROM THE REPORT

Final data forms are developed by Equinox based on interpretation of field sheets (assembled by site personnel) and laboratory evaluation of field samples, as necessary. Only final data forms customarily are included in a report. These data forms should not, under any circumstances, be drawn for inclusion in other drawings because drafters may commit errors or omissions in the transfer process. Although photographic reproduction eliminates this problem, it does nothing to reduce the possibility of misinterpreting the forms. When this occurs, delays, disputes and unanticipated costs are frequently the result.

To reduce the likelihood of data form misinterpretation, contactors, engineers, and planners should be given ready access to the complete report. Those who do not provide such access may proceed under the mistaken impression that simply disclaiming responsibility for the accuracy of information always insulates them from attendant liability. Providing the best available information to contractors, engineers, and planners helps prevent costly problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY

A wetland delineation is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for the use in written transmittals. These are not exculpatory clauses designed to foist the consultant's liabilities onto someone else; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these clauses are likely to appear in your

report, and you are encouraged to read them closely. Equinox will be pleased to give full and frank answers to your questions.

THERE MAY BE OTHER STEPS YOU CAN TAKE TO REDUCE RISK

Equinox will be pleased to discuss other techniques or designs that can be employed to mitigate the risk of delays and to provide a variety of alternatives that may be beneficial to your project.

Please contact Equinox Engineering for further information.

This Page Has Been Left Blank Intentionally

APPENDIX F

REFERENCES

This Page Has Been Left Blank Intentionally

REFERENCES

http://websoilsurvey.sc.egov.usda.gov

United States Department of Agriculture, Soil Conservation Service, 1988, *Western Wetland Flora.*

http://plants.usda.gov/wetland.html

National Wetland Inventory - http://www.fws.gov/wetlands/NWI

USDA – NRCS Western Wetland Flora – Field Guide to Plant Species

Lahring, H. 2003. *Water and Wetland Plants of the Prairie Provinces*. Canadian Plains Research Center, University of Regina.

Knobel, E. 1980. *Field Guide to the Grasses, Sedges and Rushes of the United States.* Dover Publications Inc. New York.

United States Fish and Wildlife Service Report prepared by National Ecology Research Center. *National List of Plant Species That Occur In Wetlands: Intermountain (Region 8)*
Biological Report 88 (26.9). May 1988 - page 9

United States Army Corps of Engineers Wetlands Delineation Manual, Technical Report
Y-87-1 Environmental Laboratory, 1987, United States Army Waterways Experiment Station, Vicksburg, Mississippi.

This Page Has Been Left Blank Intentionally

DEPT. OF NATURAL RESOURCES
DIVISION OF WATER RIGHTS

DAM SAFETY
&
STREAM ALTERATIONS

1594 West North Temple, Suite 220
Salt Lake City, UT 84116
(801) 538-7414
www.waterrights.utah.gov

SITE VISIT REPORT

OWNER	
ENGINEER	
CONTRACTOR	

PROJECT	Drury Grantsville Project (north of Higley Rd)
LOCATION	~lat 40.668789, long -112.443444
DATE	November 19, 2024
WEATHER	
PURPOSE OF VISIT	Determine Natural Stream Jurisdiction

IN ATTENDANCE

NAME	REPRESENTING
Daren Rasmussen	Stream Alterations-State Engineer-UDWRi-DNR
Ryan Broadbent	Regional WR Engineer-State Engineer-UDWRi-DNR
Mike Drury (Mike@unitedmanda.com)	Property Owner
Cameron Ordakowski (Camoski5@gmail.com)	Property Owner
Paul Gettings	Property Owner

OBSERVATIONS/DISCUSSIONS

Erosional channel appears to be a downstream end of the Fishing Creek/Blue Lakes drainage. The erosional channel slowly transitions to a non-erosional channel at about latitude 40.668789, longitude -112.443444 and is not considered a state jurisdictional natural stream channel going north.

FOLLOW-UP ACTION

Any construction activity or similar impacts within approximately 30 feet of the channel edge on both sides, south of the referenced coordinates, would require a stream alteration permit.

Signature: _____ Date: November 19, 2024

Photo #1



Caption: View north from south-end.

Photo #2



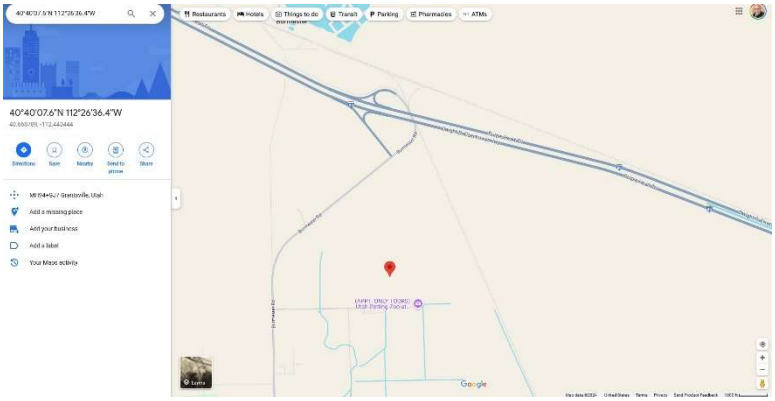
Caption: View south at jurisdictional channel.

Photo #3



Caption: View north at non-jurisdictional drainage.

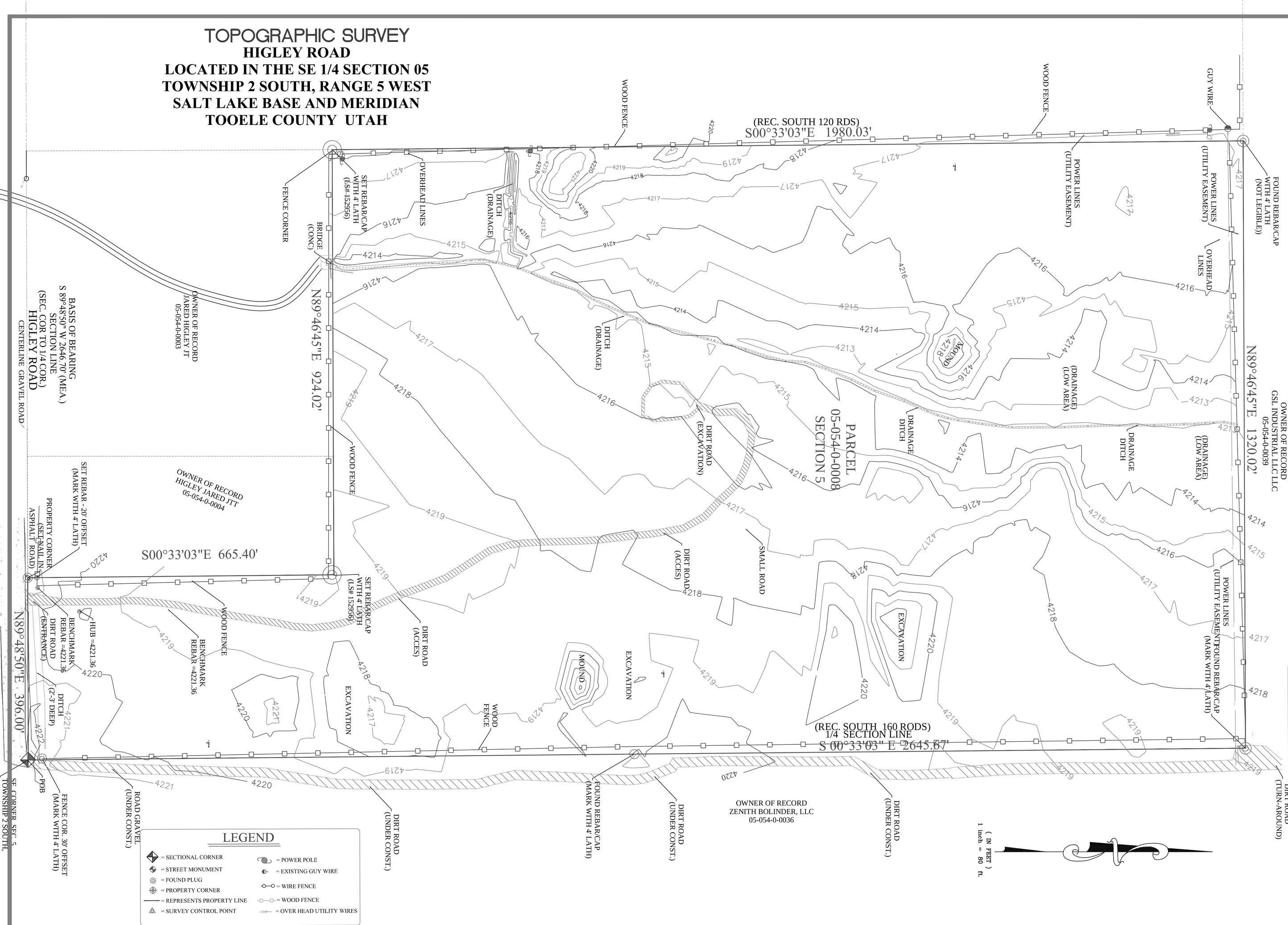
Photo #4



Caption: Transition location with jurisdictional channel to the south and non-jurisdictional channel to the north.

R:\2024 NEW\West 2024 grantsfield\TOPOGRAPHIC\GRANTSVILLE SEC 5 BASEWITH GOOD LIGHTER.dwg, 5/11/2024 11:25:40 PM, DWG To PDF.pc3

TOPOGRAPHIC SURVEY
HIGLEY ROAD
LOCATED IN THE SE 1/4 SECTION 05
TOWNSHIP 2 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
TOOELE COUNTY UTAH



LEGEND

- = SECTIONAL CORNER
- = STREET MONUMENT
- = FOUND PLUG
- = PROPERTY CORNER
- = REPRESENTS PROPERTY LINE
- = SURVEY CONTROL POINT
- = POWER POLE
- = EXISTING GUY WIRE
- = WIRE FENCE
- = WOOD FENCE
- = OVER HEAD UTILITY WIRES

PROPERTY DESCRIPTION

PARCEL 05-054-0-0008

COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF SECTION 5, TOWNSHIP 2 SOUTH, RANGE 5 WEST, SALT LAKE BASE AND MERIDIAN, THENCE NORTH 160 RODS, THENCE WEST 80 RODS, THENCE SOUTH 120 RODS, THENCE EAST 56 RODS, THENCE SOUTH 40 RODS, THENCE EAST 24 RODS, TO THE POINT OF BEGINNING.

SURVEYOR'S NARRATIVE

THIS SURVEY WAS PERFORMED AT REQUEST OF THE GRE SOUTH, LLC C/O MIKE DRURY. THE PURPOSE OF THIS SURVEY IS TO DETERMINE LOCATION OF PROPERTY LINES.
THE BASIS OF BEARING WAS DERIVED FROM FOUND MONUMENTS IN THE CENTER LINE OF HIGLEY ROAD . THE BASIS OF BEARING IS N 89°48'50" E FEET, AS PER THE OFFICIAL RECORDED PLAT OF STATE COORDINATE & DEPENDENT RESURVEY OF PORTIONS OF TOWNSHIP 2 SOUTH, RANGE 5 WEST, SALT LAKE BASE AND MERIDIAN. PREVIOUS RECORDED SURVEYS HAVE BEEN UTILIZED TO DETERMINE THE PLACEMENT OF THIS PARCEL AND CORRELATE WITH THE MONUMENTS AND OTHER FOUND EVIDENCE, AND HAVE BEEN UTILIZED IN THE PREPARATION OF THIS SURVEY.

N
W E
S

SURVEY CERTIFICATION

I, RICHARD K. JOHANSON, DO HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR, HOLDING CERTIFICATE NO. 152956, AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH; AND THAT I HAVE MADE A SURVEY OF THE TRACT OF LAND AS SHOWN ON THIS PLAT AND THAT THIS SURVEY RETRACES DEED LINES AND DOES NOT NECESSARILY PURPORT TO HAVE DETERMINED OWNERSHIP OR POSSESSION OF IMPROVEMENTS WHICH MAY EXTEND ACROSS DEED LINES.

SIGNATURE: _____

DATE: _____ PRELIMINARY

SCALE:	AS SHOWN
DATE:	5-8/2024
DRAWN BY:	R.K.J./CFB
SURVEY BY:	R.K.J
CHECKED BY:	R.K.J/C.F.B.
JOB #:	R-24-010 A

PROPERTY DESIGN LLC.
"LAND CONSULTANTS"
P.O. BOX 701168
SALT LAKE CITY UT 84170
(801) 955-6339
(propertydesignllc@gmail.com)

GRAPHIC SCALE
80 0 40 80 160 320
(IN FEET)
1 inch = 80 ft.

COPYRIGHT
THIS DRAWING IS AND AT ALL TIMES REMAINS THE EXCLUSIVE PROPERTY OF PROPERTY DESIGN LLC SHALL NOT BE USED WITH OUT COMPLETE AUTHORIZATION AND WRITTEN SUPPORT.

DISCLAMER

THIS DRAWING IS AND AT ALL TIMES REMAINS THE EXCLUSIVE PROPERTY OF PROPERTY DESIGN LLC SHALL NOT BE USED WITH OUT COMPLETE AUTHORIZATION AND WRITTEN SUPPORT.

SURVEY FOR:

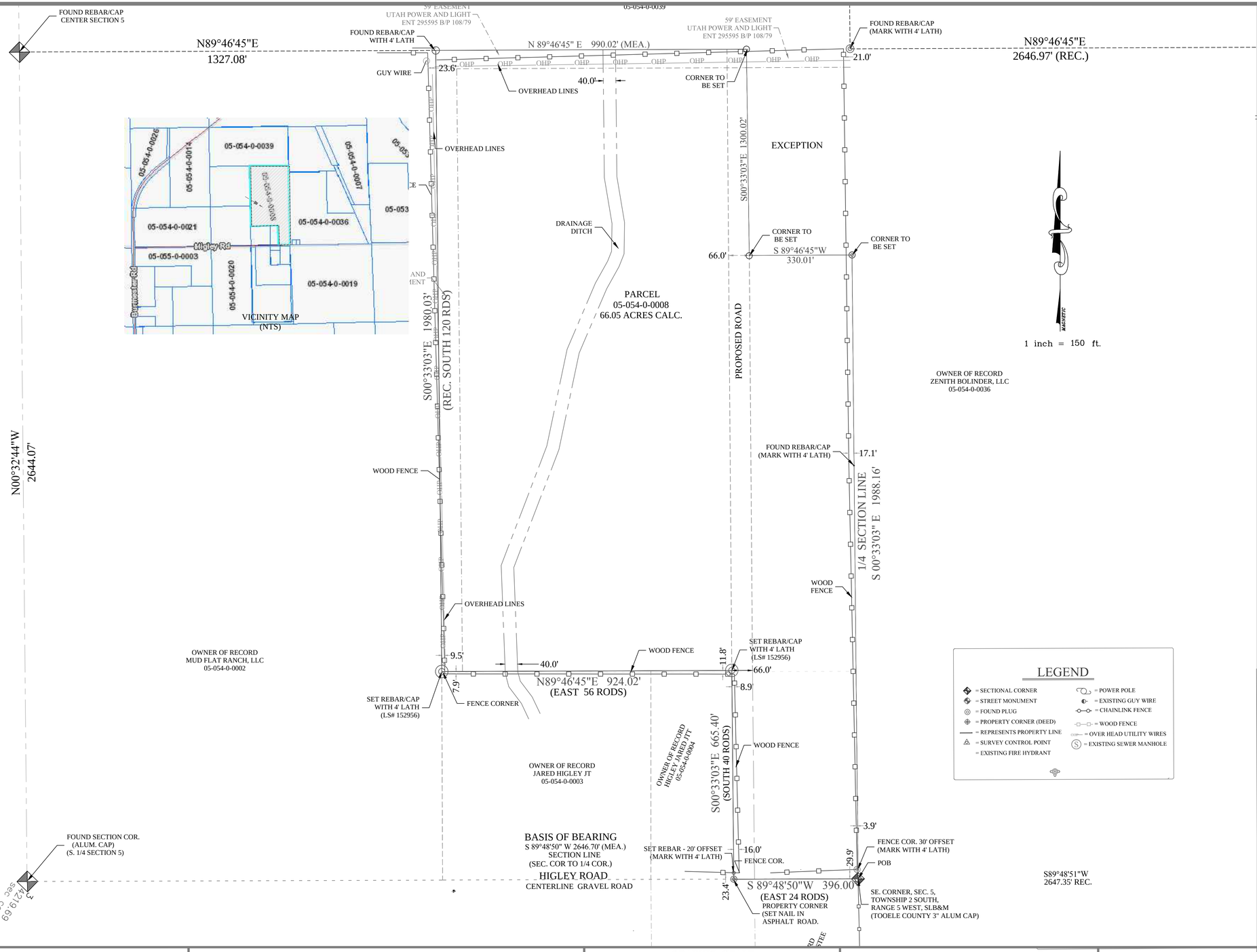
MIKE DRURY

TOPOGRAPHIC LEGEND

SHOWN ARE 2' CONTOURS DELINEATED AT A 1' CONTOURS INTERVAL
THE BENCHMARK IS A REBAR AT THE ENTRANCE WAY ON THE NORTH SIDE OF HIGLEY ROAD
THE ELEVATION IS 4221.37 GPS ASSIGNED

SHEET 1 OF 1
PRELIMINARY
MAY 8, 2024

RECORD OF SURVEY
HIGLEY ROAD
LOCATED IN THE SE 1/4 SECTION 05 TOWNSHIP 2 SOUTH, RANGE 5 WEST SALT LAKE BASE AND MERIDIAN TOOELE COUNTY UTAH



LEGEND

- = SECTIONAL CORNER
- = STREET MONUMENT
- = FOUND PLUG
- = PROPERTY CORNER (DEED)
- = REPRESENTS PROPERTY LINE
- = SURVEY CONTROL POINT
- = EXISTING FIRE HYDRANT
- = POWER POLE
- = EXISTING GUY WIRE
- = CHAINLINK FENCE
- = WOOD FENCE
- = OVER HEAD UTILITY WIRES
- = EXISTING SEWER MANHOLE

PROPERTY DESCRIPTION

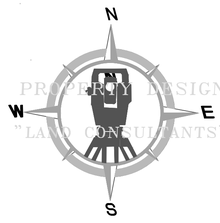
~~PARCEL 05-054-0-0008~~ Parcel 05-054-0-0046
(REMAINING WEST PARCEL):

COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF SECTION 5, TOWNSHIP 2 SOUTH, RANGE 5 WEST, SALT LAKE BASE AND MERIDIAN, THENCE SOUTH 89°48'50" WEST, A DISTANCE OF 396.01 FEET; THENCE NORTH 00°33'03" WEST, A DISTANCE OF 665.40 FEET; THENCE SOUTH 89°46'45" WEST, A DISTANCE OF 924.02 FEET; THENCE NORTH 00°33'03" WEST, A DISTANCE OF 1,980.03 FEET; THENCE NORTH 89°46'45" EAST, A DISTANCE OF 990.02 FEET; THENCE SOUTH 00°46'06" EAST, A DISTANCE OF 657.26 FEET; THENCE NORTH 89°46'45" EAST, A DISTANCE OF 327.51 FEET; THENCE SOUTH 00°33'03" EAST, A DISTANCE OF 1,988.43 FEET TO THE POINT OF BEGINNING.

CONTAINING 2,661,12 SQUARE FEET OR 61.09 ACRES, MORE OR LESS.

SURVEYOR'S NARRATIVE

THIS SURVEY WAS PERFORMED AT REQUEST OF THE GRE SOUTH, LLC C/O MIKE DRURY. THE PURPOSE OF THIS SURVEY IS TO DETERMINE LOCATION OF PROPERTY LINES.
THE BASIS OF BEARING WAS DERIVED FROM FOUND MONUMENTS IN THE CENTER LINE OF HIGLEY ROAD . THE BASIS OF BEARING IS N 89°48'50" E FEET, AS PER THE OFFICIAL RECORDED PLAT OF STATE COORDINATE & DEPENDENT RESURVEY OF PORTIONS OF TOWNSHIP 2 SOUTH, RANGE 5 WEST, SALT LAKE BASE AND MERIDIAN. PREVIOUS RECORDED SURVEYS HAVE BEEN UTILIZED TO DETERMINE THE PLACEMENT OF THIS PARCEL AND CORRELATE WITH THE MONUMENTS FOUND EVIDENCE.
A PARCEL IN THE NW CORNER IS NOT PART OF THIS OWNERSHIP AN HAS BEEN REMOVED AS SHOWN.



SURVEY CERTIFICATION

I, RICHARD K. JOHANSON, DO HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR, HOLDING CERTIFICATE NO. 152956, AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH; AND THAT I HAVE MADE A SURVEY OF THE TRACT OF LAND AS SHOWN ON THIS PLAT AND THAT THIS SURVEY RETRACES DEED LINES AND DOES NOT NECESSARILY PURPORT TO HAVE DETERMINED OWNERSHIP OR POSSESSION OF IMPROVEMENTS WHICH MAY EXTEND ACROSS DEED LINES.

SIGNATURE: _____

DATE: _____

SCALE:	AS SHOWN
DATE:	7-28/2024
DRAWN BY:	R.K.J./CFB
SURVEY BY:	R.K.J
CHECKED BY:	R.K.J/C.F.B.
JOB #:	R-24-006-B

PROPERTY DESIGN LLC.
"LAND CONSULTANTS"
P.O. BOX 701168
SALT LAKE CITY UT 84170
(801) 955-6339
(propertydesignllc@gmail.com)

GRAPHIC SCALE

150 0 75 150 300 600
(IN FEET)
1 inch = 150 ft.

COPYRIGHT
THIS DRAWING IS AND AT ALL TIMES REMAINS THE EXCLUSIVE PROPERTY OF PROPERTY DESIGN LLC SHALL NOT BE USED WITH OUT COMPLETE AUTHORIZATION AND WRITTEN SUPPORT.

DISCLAMER

THIS DRAWING IS AND AT ALL TIMES REMAINS THE EXCLUSIVE PROPERTY OF PROPERTY DESIGN LLC SHALL NOT BE USED WITH OUT COMPLETE AUTHORIZATION AND WRITTEN SUPPORT.

SURVEY FOR:

MIKE DRURY

SURVEYOR'S NOTES

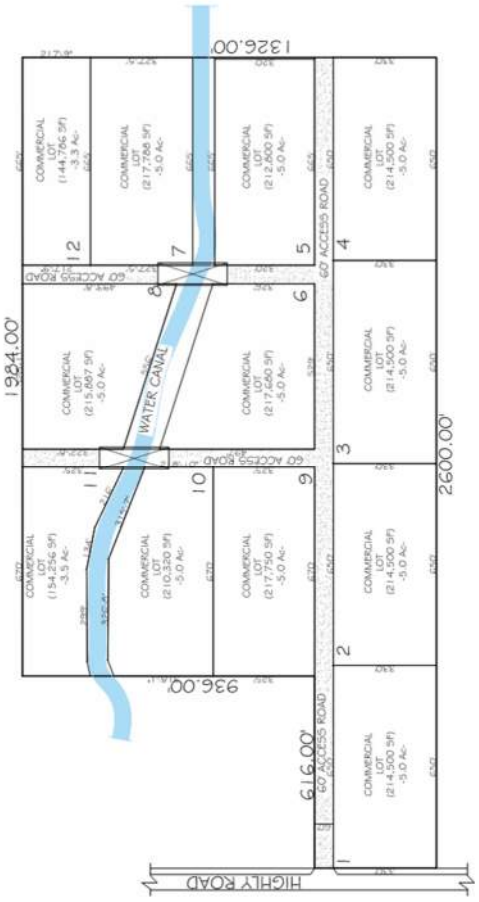
A TITLE REPORT MAY PROVIDE INFORMATION CONCERNING EASEMENTS.
SURVEYOR MAKES NO WARRANTEES OR GUARANTEES TO THE EXISTENCE OF/OR POSSIBLE EASEMENTS THAT MAY AFFECT PARCELS.

SHEET
1 OF 1
PRELIMINARY
AUGUST 28, 2024

HALES ENGINEERING
innovative transportation solutions

GRE South, LLC – Equipment Storage

Traffic Impact Study



Tooele County, Utah

March 31, 2025

UT24-2779

LICENSED PROFESSIONAL ENGINEER
NO. 12890754
Jordi J. Berrett
03/31/2025
STATE OF UTAH

1220 North 500 West, Ste. 202 Lehi, UT 84043 p 801.766.4343
www.halesengineering.com

EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed GRE South, LLC – Equipment Storage development located in Tooele County, Utah. The development is located on Higley Lane, east of Burmester Road.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2025) conditions with and without the proposed project and to recommend mitigation measures as needed. The evening peak hour level of service (LOS) results are shown in Table ES-1.

Table ES-1: Evening Peak Hour Level of Service Results

	Intersection	Level of Service	
		Existing (2025)	
		Background	Plus Project
1	Higley Lane / Burmester Road	a	a

1. Intersection LOS values represent the overall intersection average for roundabout, signalized, and all-way stop-controlled (AWSC) intersections (uppercase letter) and the worst movement for all other unsignalized intersections (lowercase letter)

Source: Hales Engineering, March 2025

SUMMARY OF KEY FINDINGS & RECOMMENDATIONS

Project Conditions

- The development will consist of 61 acres of equipment storage.
- The project is anticipated to generate approximately 40 weekday daily trips, including 16 trips in the morning peak hour, and 16 trips in the evening peak hour.
- It is anticipated that the addition of the project will total 190 trips on Higley Lane. This is within the recommended 400 daily trip threshold for 20-foot rural road, based on AASHTO guidelines for low-volume roads.

2025	Background	Plus Project
Assumptions	• Increased June 2024 traffic counts to a 2025 scenario for traffic on Burmester Road	• None
Findings	• Acceptable LOS	• Acceptable LOS
Mitigations	• None	• None

TABLE OF CONTENTS

EXECUTIVE SUMMARY ..... **i**
SUMMARY OF KEY FINDINGS & RECOMMENDATIONS i
TABLE OF CONTENTS ..... **ii**
LIST OF TABLES ..... **iii**
LIST OF FIGURES ..... **iii**
I. INTRODUCTION **1**
A. Purpose 1
B. Scope 2
C. Analysis Methodology 2
D. Level of Service Standards 2
II. EXISTING (2025) BACKGROUND CONDITIONS **4**
A. Purpose 4
B. Roadway System 4
C. Traffic Volumes 4
D. Level of Service Analysis 6
E. Queuing Analysis 6
F. Mitigation Measures 6
III. PROJECT CONDITIONS **7**
A. Purpose 7
B. Project Description 7
C. Trip Generation 7
D. Higley Lane Roadway Width Evaluation 8
E. Trip Distribution and Assignment 8
F. Access 10
G. Auxiliary Lanes 10
IV. EXISTING (2025) PLUS PROJECT CONDITIONS **11**
A. Purpose 11
B. Traffic Volumes 11
C. Level of Service Analysis 11
D. Queuing Analysis 11
E. Mitigation Measures 11

Appendix A: Turning Movement Counts
Appendix B: LOS Results
Appendix C: Queuing Results

LIST OF TABLES

Table 1: Level of Service Description 3
Table 2: Existing (2025) Background Evening Peak Hour LOS 6
Table 3: Trip Generation 7
Table 4: Daily Trips Generated on Higley Lane 8
Table 5: Trip Distribution 8
Table 6: Existing (2025) Plus Project Evening Peak Hour LOS 11

LIST OF FIGURES

Figure 1: Vicinity map showing the project location in Tooele County, Utah 1
Figure 2: Existing (2025) background evening peak hour traffic volumes 5
Figure 3: Trip assignment for the evening peak hour 9
Figure 4: Existing (2025) plus project evening peak hour traffic volumes 12

I. INTRODUCTION

A. Purpose

This study addresses the traffic impacts associated with the proposed GRE South, LLC – Equipment Storage development located in Tooele County, Utah. The proposed project is located on Higley Lane, east of Burmester Road. Figure 1 shows a vicinity map of the proposed development.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2025) conditions with and without the proposed project and to recommend mitigation measures as needed.

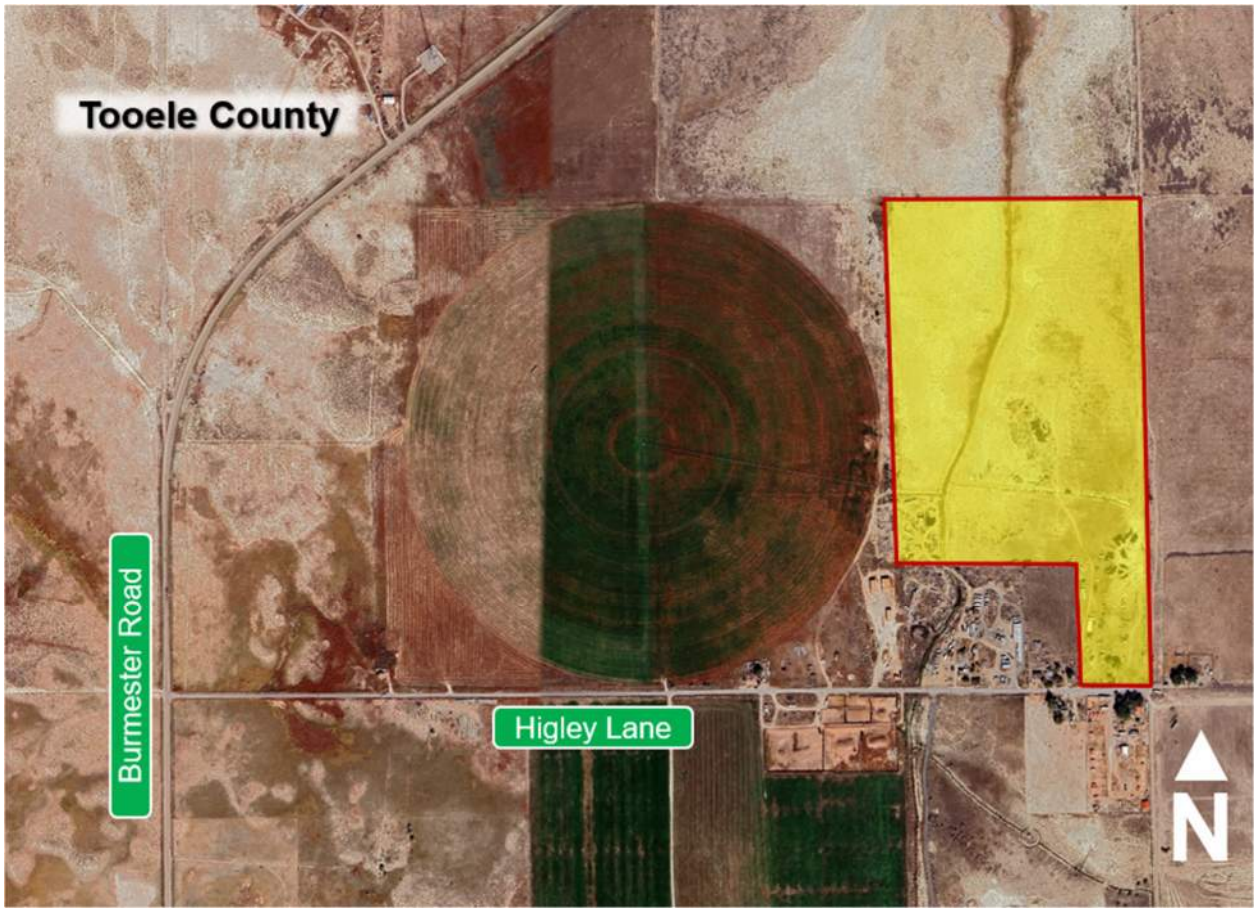


Figure 1: Vicinity map showing the project location in Tooele County, Utah

B. Scope

The study area was defined based on conversations with the development team. This study was scoped to evaluate the traffic operational performance impacts of the project on the Higley Lane / Burmester Road intersection.

C. Analysis Methodology

Level of service (LOS) is a term that describes the operating performance of an intersection or roadway. LOS is measured quantitatively and reported on a scale from A to F, with A representing the best performance and F the worst. Table 1 provides a brief description of each LOS letter designation and an accompanying average delay per vehicle for both signalized and unsignalized intersections.

The *Highway Capacity Manual* (HCM), 7th Edition, 2022 methodology was used in this study to remain consistent with "state-of-the-practice" professional standards. This methodology has different quantitative evaluations for signalized and unsignalized intersections. For signalized, roundabout, and all-way stop-controlled (AWSC) intersections, the LOS is provided for the overall intersection (weighted average of all approach delays). For all other unsignalized intersections, LOS is reported based on the worst movement.

Using Synchro/SimTraffic software, which follow the HCM methodology, the peak hour LOS was computed for each study intersection. Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. The detailed LOS reports are provided in Appendix B. Hales Engineering also calculated the 95th percentile queue lengths for the study intersections using SimTraffic. The detailed queue length reports are provided in Appendix C.

Many of the figures in this report are printouts of the Synchro model. These figures are not meant to be a design exhibit for exact lane striping and design, due to the limitations of the Synchro software. Instead, the purpose of these figures is to show assumed peak hour turning movement volumes and the conceptual travel lane configuration of the study roadway network.

D. Level of Service Standards

For the purposes of this study, a minimum acceptable intersection performance for each of the study intersections was set at LOS D. If levels of service E or F conditions exist, an explanation and/or mitigation measures will be presented. A LOS D threshold is consistent with "state-of-the-practice" traffic engineering principles for urbanized areas.

Table 1: Level of Service Description

LOS		Description of Traffic Conditions	Average Delay (seconds/vehicle)	
			Signalized Intersections	Unsignalized Intersections
A		Free Flow / Insignificant Delay	≤ 10	≤ 10
B		Stable Operations / Minimum Delays	> 10 to 20	> 10 to 15
C		Stable Operations / Acceptable Delays	> 20 to 35	> 15 to 25
D		Approaching Unstable Flows / Tolerable Delays	> 35 to 55	> 25 to 35
E		Unstable Operations / Significant Delays	> 55 to 80	> 35 to 50
F		Forced Flows / Unpredictable Flows / Excessive Delays	> 80	> 50

Source: Hales Engineering Descriptions, based on the *Highway Capacity Manual* (HCM), 7th Edition, 2022 Methodology (Transportation Research Board)

II. EXISTING (2025) BACKGROUND CONDITIONS

A. Purpose

The purpose of the background analysis is to study the intersections and roadways during the peak travel periods of the day with background traffic and geometric conditions. Through this analysis, background traffic operational deficiencies can be identified, and potential mitigation measures recommended. This analysis provides a baseline condition that may be compared to the build conditions to identify the impacts of the development.

B. Roadway System

The primary roadway that will provide access to the project site is described below:

Higley Lane – is a county-maintained roadway which is classified by the Tooele County Transportation Master Plan (February 2015) as a local road. The roadway has one travel lane in each direction. The posted speed limit is 30 mph in the study area.

C. Traffic Volumes

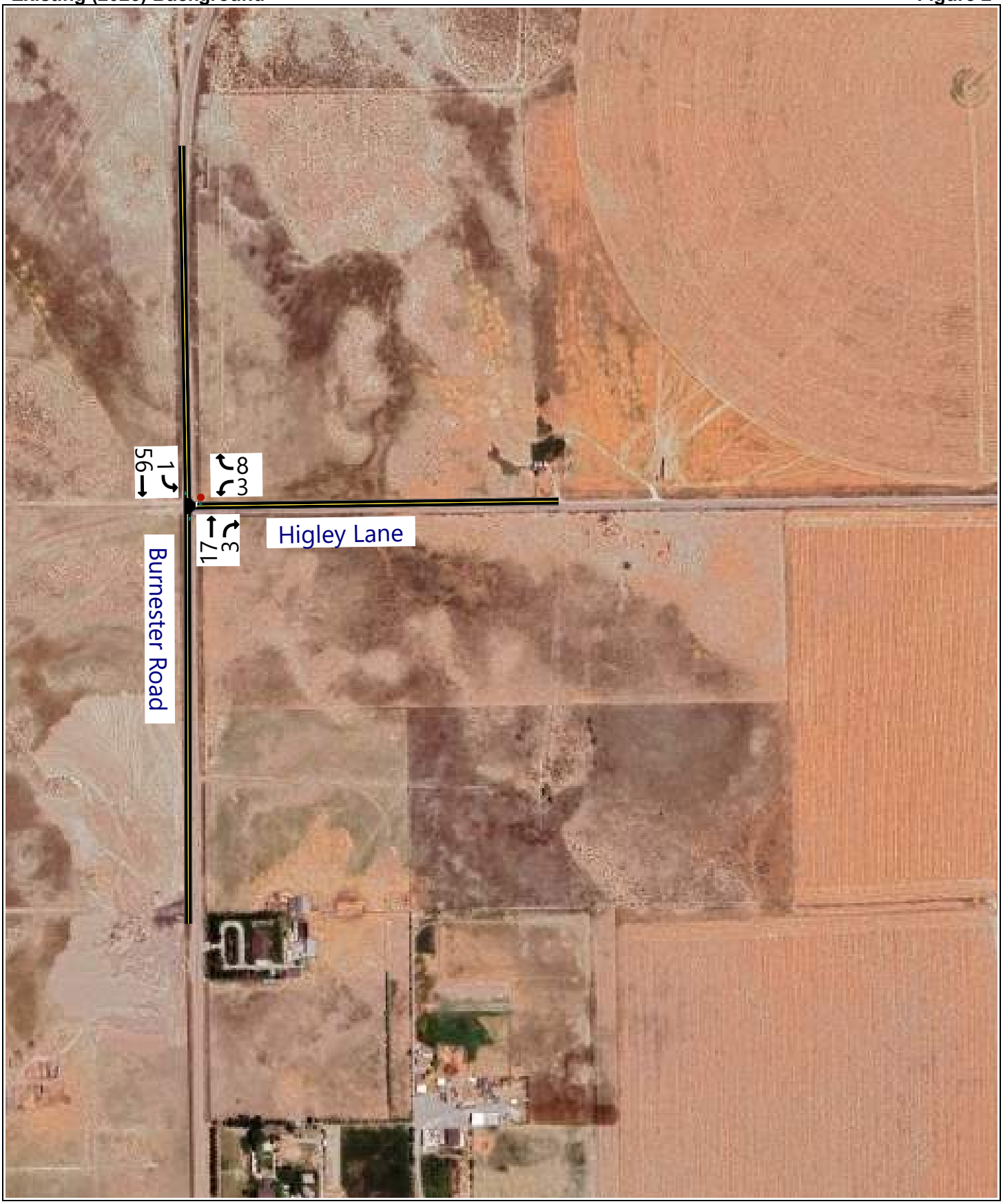
Weekday morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak period traffic counts were performed at the following intersection:

- Higley Lane / Burmester Road

The counts were performed on Thursday, June 6, 2024. The morning peak hour was determined to be between 7:30 and 8:30 a.m., and the evening peak hour was determined to be between 4:45 and 5:45 p.m. The morning peak hour volumes were approximately 31% higher than the evening peak hour volumes. However, the evening peak hour volumes were used in the analysis due to higher turning volumes on Higley Lane. This analysis represents the worst-case conditions for this intersection. The traffic counts were projected to 2025 volumes using average annual growth rates derived from a nearby UDOT automatic traffic recorder (ATR) on I-80 (ATR #615). Hales Engineering applied a 3.5% annual growth rate to estimate 2025 volumes. Detailed count data are included in Appendix A.

Hales Engineering considered making seasonal adjustments to the observed traffic volumes. Monthly traffic volume data were obtained from UDOT ATR #615. In recent years, traffic volumes in June have been equal to approximately 107% of average traffic volumes. Therefore, as a conservative measure, the observed traffic volumes were not adjusted.

Figure 2 shows the existing evening peak hour volumes as well as intersection geometry at the study intersections.


1
56
8
3
3
17
Higley Lane
Burnester Road

D. Level of Service Analysis

Hales Engineering determined that all study intersections are currently operating at acceptable levels of service during the evening peak hour, as shown in Table 2. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2025) conditions.

Table 2: Existing (2025) Background Evening Peak Hour LOS

Intersection		Level of Service		
Description	Control	Movement[1]	Aver. Delay (Sec. / Veh.)	LOS[2]
Higley Lane / Burmester Road	WB Stop	WBL	4.2	a

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, March 2025

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing was observed during the evening peak hour.

F. Mitigation Measures

No mitigation measures are recommended.

III. PROJECT CONDITIONS

A. Purpose

The project conditions discussion explains the type and intensity of development. This provides the basis for trip generation, distribution, and assignment of project trips to the surrounding study intersections defined in Chapter I.

B. Project Description

The proposed GRE South, LLC – Equipment Storage development is located on Higley Lane, east of Burmester Road. The development will consist of approximately 61 acres of equipment storage.

C. Trip Generation

Trip generation is generally calculated using trip generation rates published in the Institute of Transportation Engineers (ITE), *Trip Generation*, 11th Edition, 2021. However, ITE does not have trip generation for equipment storage land use. The client expects there will be 5 trips in and 5 trips out each day. To remain conservative Hales Engineering assumed 20 trips in and 20 trips out each day. Trip generation for the proposed project is included in Table 3. Hales Engineering also assumed 20% of daily trips for both the morning and evening peak hour.

The total trip generation for the development is as follows:

- Daily Trips: 40
- Morning Peak Hour Trips: 16
- Evening Peak Hour Trips: 16

Table 3: Trip Generation

Trip Generation Tooele County - GRE Industrial Park									
	Land Use	# of Units	Unit Type	Trip Generation			New Trips		
				Total	% In	% Out	In	Out	Total
Weekday Daily									
	Equipment Storage	61	Acres	40	50%	50%	20	20	40
AM Peak Hour									
	Equipment Storage	61	Acres	16	50%	50%	8	8	16
PM Peak Hour									
	Equipment Storage	61	Acres	16	50%	50%	8	8	16
SOURCE: Hales Engineering, March 2025									

D. Higley Lane Roadway Width Evaluation

Hales Engineering collected peak hour turning movement counts to estimate daily volumes. Typically, daily volumes are approximately equal to 10 times the evening peak hour volumes. Based on these traffic counts, Higley Lane has existing evening peak hour volumes of 15 vehicles, which is equivalent to approximately 150 daily vehicles.

The daily trips generated by the GRE Industrial Park in conjunction with current Higley Lane counts is estimated to be 190 trips. Table 4 shows the breakdown of trips generated from the properties on Higley Lane. These 190 trips are within the 400 daily trip threshold of a 20-foot road, based on AASHTO's Guidelines for Geometric Design of Low-Volume Roads, Second Edition (2019). Per AASHTO, if the design speed is 50 mph or lower, and there are more than 400 daily trips, a roadway width of 20 feet may not be sufficient.

Table 4: Daily Trips Generated on Higley Lane

Daily Trips Tooele County - GRE Industrial Park		
	Project	**Daily Trips**
	GRE Industrial Park	40
	Current Higley Lane Properties	150
TOTAL		**190**

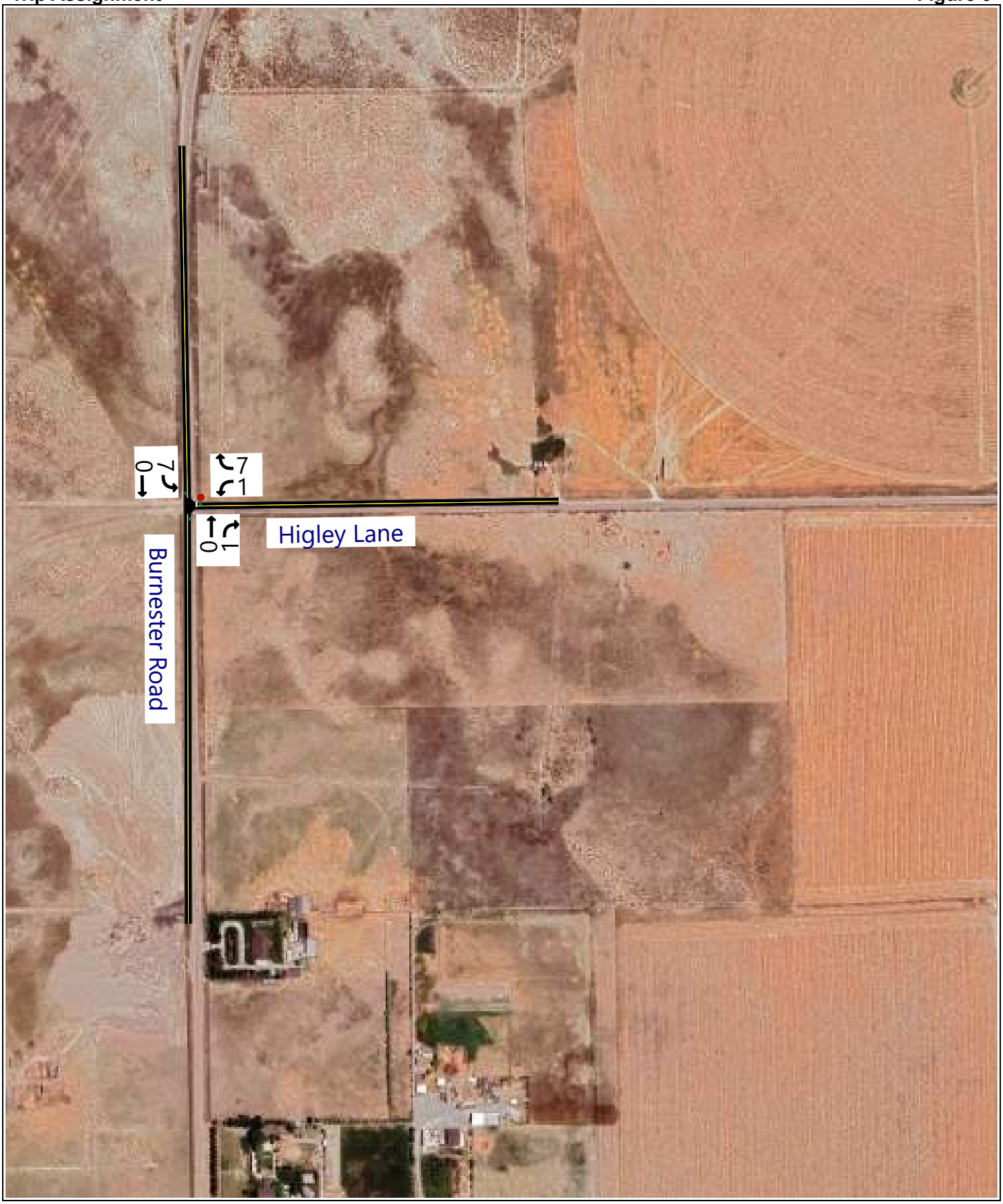
E. Trip Distribution and Assignment

Project traffic is assigned to the roadway network based on the type of trip and the proximity of project access points to major streets, high population densities, and regional trip attractions. Existing travel patterns observed during data collection also provide helpful guidance to establishing these distribution percentages, especially near the site. The resulting distribution of project generated trips during the evening peak hour is shown in Table 5.

Table 5: Trip Distribution

Direction	% To/From Project
North	90%
South	10%

These trip distribution assumptions were used to assign the evening peak hour trip generation at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 3.


7
0
7
1
0
1
Higley Lane
Burnester Road

F. Access

The proposed access for the site will be gained at the following locations:

Higley Lane:

- The project access will be located approximately 4,900 feet East of the Higley Lane / Burmester Road intersection. It will access the project on the north side of Higley Lane. It is anticipated that the access will be stop-controlled.

G. Auxiliary Lanes

Auxiliary lanes are deceleration (ingress) or acceleration (egress) turn lanes that provide for safe turning movements that have less impact on through traffic. These lanes are sometimes needed at accesses or roadway intersections if right- or left-turn volumes are high enough.

Deceleration (ingress) lanes are generally needed when there are at least 50 right-turn vehicles or 25 left-turn vehicles in an hour. These guidelines were used for the City roadways in the study area. Based on these guidelines and the anticipated project traffic, no auxiliary lanes are recommended

IV. EXISTING (2025) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the existing (2025) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for existing background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the existing (2025) background traffic volumes to predict turning movement volumes for existing (2025) plus project conditions. Existing (2025) plus project evening peak hour turning movement volumes are shown in Figure 4.

C. Level of Service Analysis

Hales Engineering determined that all intersections are anticipated to operate at acceptable levels of service during the evening peak hour with project traffic added, as shown in Table 6.

Table 6: Existing (2025) Plus Project Evening Peak Hour LOS

Intersection		Level of Service		
Description	Control	Movement[1]	Aver. Delay (Sec. / Veh.)	LOS[2]
Higley Lane / Burmester Road	WB Stop	WBL	5.0	a

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

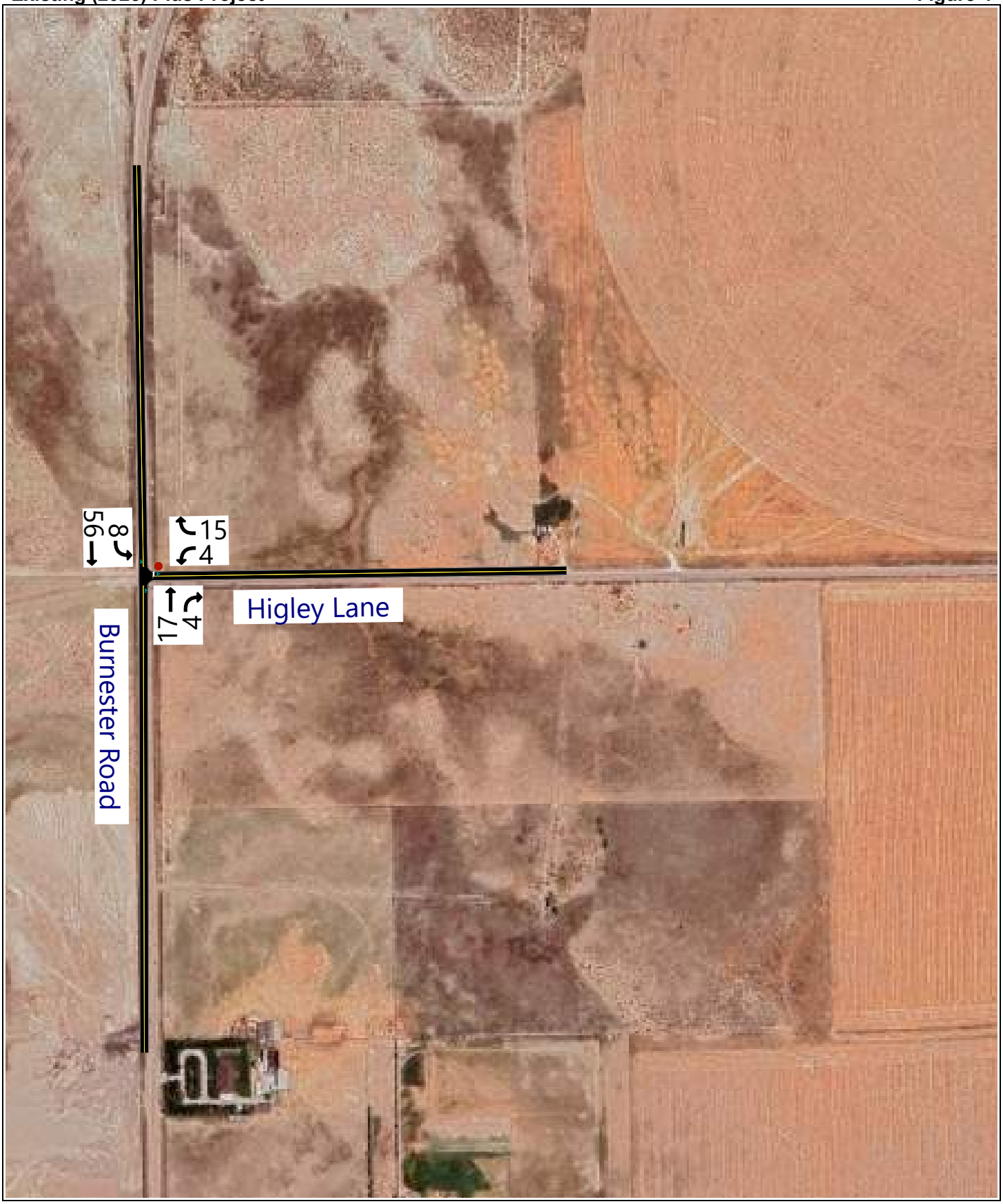
Source: Hales Engineering, March 2025

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing is anticipated during the evening peak hour.

E. Mitigation Measures

No mitigation measures are recommended.


56
8
15
4
17
4
Higley Lane
Burnester Road

APPENDIX A

Turning Movement Counts

Intersection Turning Movement Summary

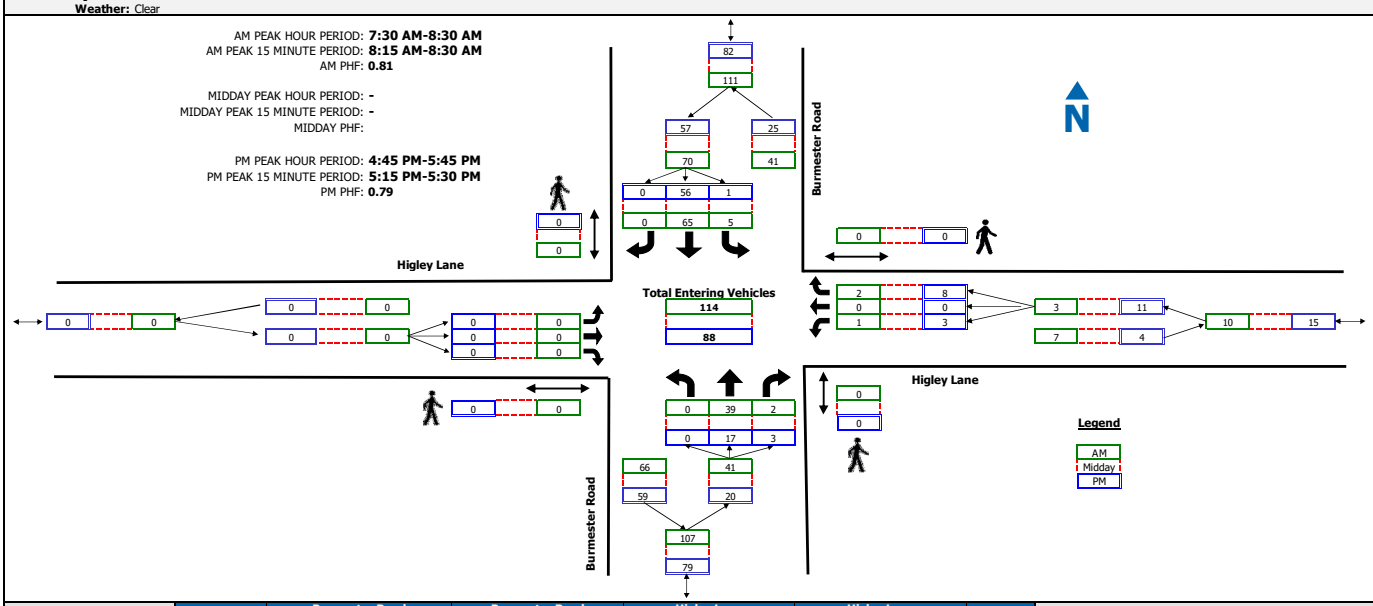
Intersection: Burmester Road / Higley Lane
North/South Road: Burmester Road
East/West Road: Higley Lane
Jurisdiction: Tooele County
Project Title: Tooele County GRE Industrial Park TIS
Project No: UT24-2779
Weather: Clear

Date: 6-6-24, Thu
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 3.5%
Number of Years: 1

AM PEAK HOUR PERIOD: **7:30 AM-8:30 AM**
AM PEAK 15 MINUTE PERIOD: **8:15 AM-8:30 AM**
AM PHF: **0.81**

MIDDAY PEAK HOUR PERIOD: **-**
MIDDAY PEAK 15 MINUTE PERIOD: **-**
MIDDAY PHF:

PM PEAK HOUR PERIOD: **4:45 PM-5:45 PM**
PM PEAK 15 MINUTE PERIOD: **5:15 PM-5:30 PM**
PM PHF: **0.79**



COUNT SUMMARY	Burmester Road Northbound				Burmester Road Southbound				Higley Lane Eastbound				Higley Lane Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
7:00 - 7:15	0	8	0	0	2	5	0	0	0	0	0	0	0	0	1	0	16
7:15 - 7:30	0	12	1	0	0	1	0	0	0	0	0	0	0	0	0	0	14
7:30 - 7:45	0	9	0	0	0	9	0	0	0	0	0	0	0	0	1	0	19
7:45 - 8:00	0	8	0	0	1	17	0	0	0	0	0	0	0	0	0	0	26
8:00 - 8:15	0	9	1	0	2	19	0	0	0	0	0	0	0	0	0	0	31
8:15 - 8:30	0	12	1	0	2	18	0	0	0	0	0	0	1	0	1	0	35
8:30 - 8:45	0	9	0	0	0	6	0	0	0	0	0	0	1	0	0	0	16
8:45 - 9:00	0	6	1	0	0	7	0	0	0	0	0	0	0	0	0	0	14
MIDDAY PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
16:00 - 16:15	0	5	1	0	0	10	0	0	0	0	0	0	0	0	0	0	16
16:15 - 16:30	0	4	0	0	2	13	0	0	0	0	0	0	0	0	3	0	22
16:30 - 16:45	0	4	2	0	0	10	0	0	0	0	0	0	0	0	1	0	17
16:45 - 17:00	0	1	1	0	0	15	0	0	0	0	0	0	0	0	1	0	18
17:00 - 17:15	0	4	1	0	0	8	0	0	0	0	0	0	1	0	3	0	17
17:15 - 17:30	0	5	1	0	1	15	0	0	0	0	0	0	2	0	4	0	28
17:30 - 17:45	0	6	0	0	0	16	0	0	0	0	0	0	0	0	0	0	22
17:45 - 18:00	0	3	0	0	0	13	0	0	0	0	0	0	0	0	0	0	16

APPENDIX B

LOS Results

SimTraffic LOS Report

Project: **Tooele County - GRE Industrial Park TIS**
Analysis Period: ***Existing (2025) Background***
Time Period: ***Evening Peak Hour*** **Project #:** ***UT24-2779***

Intersection: **Burnester Road & Higley Lane**
Type: **Unsignalized**

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	21	20	96	0.1	*A*
	R	4	4	107	0.1	*A*
	Subtotal	25	24	96	0.1	*A*
SB	L	1	0	0		
	T	67	69	103	0.1	*A*
	Subtotal	68	69	101	0.1	*A*
WB	***L***	***4***	***4***	***107***	***4.2***	***A***
	R	10	9	95	2.5	*A*
	Subtotal	14	13	93	3.0	*A*
Total		106	106	100	0.5	*A*

SimTraffic LOS Report

Project: **Tooele County - GRE Industrial Park TIS**
Analysis Period: ***Existing (2025) Plus Project***
Time Period: ***Evening Peak Hour*** **Project #:** ***UT24-2779***

Intersection: **Burnester Road & Higley Lane**
Type: **Unsignalized**

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	21	20	96	0.1	*A*
	R	5	5	105	0.1	*A*
	Subtotal	26	25	96	0.1	*A*
SB	L	10	8	84	0.3	*A*
	T	67	70	104	0.2	*A*
	Subtotal	77	78	101	0.2	*A*
WB	***L***	***5***	***4***	***84***	***5.0***	***A***
	R	18	18	100	2.6	*A*
	Subtotal	23	22	96	3.0	*A*
Total		125	125	100	0.7	*A*

APPENDIX C

95th Percentile Queue Length Reports

Intersection	WB
	LR
01: Burnester Road & Higley Lane	50

SimTraffic Queueing Report

Project: Tooele County - GRE Industrial Park TIS

Analysis: Existing (2025) Plus Project

Time Period: Evening Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT24-2779

Intersection	SB	WB
	LT	LR
01: Burnester Road & Higley Lane		50

NOTICE OF PUBLIC MEETING

- **SUBJECT:** SPR 2025-086: Setback approval for Commercial zone
- **PROJECT SUMMARY:** Adobe Rock is requesting a setback of 3' for a pavilion on their commercial property.
- **ADDRESS:** 700 E Village Blvd **PARCEL:** 05-038-0-0047
  Unincorporated: Tooele **Planner:** Trish DuClos

On **July 16, 2025** the Tooele County Planning Commission will hold a public meeting regarding the request described above. The meeting will be held at 7:00 p.m. at the Tooele County Administration Building (Council Chamber, Third Floor), 47 S. Main Street, Tooele, UT 84074. You may also attend online at https://tooeleco.org/ under "Meeting Agendas." The zoom link will be attached to the planning commission agenda.

For questions or additional information, please contact the Planning Office at 435-843-3160.

The future meeting regarding this application will also be posted on the Tooele County Website and Utah Public Noitce Website.

Tooele County
Community Development

Tooele County Planning Commission
Agenda Item Summary

Department Making Request:	**Meeting Date:**
Community Development	**July 16, 2025**

Item Title:

SPR 2025-086: Setback approval for Commercial zone

Summary:

Adobe Rock is requesting a setback of 3’ for a pavilion on their commercial property.

Planning and Zoning
47 S. Main Street • Room 208 • Tooele, UT 84074
Phone: (435) 843-3160 • Fax: (435) 843-3252
tooeleco.org/government/county-departments/community-development/

SPR 2025-086

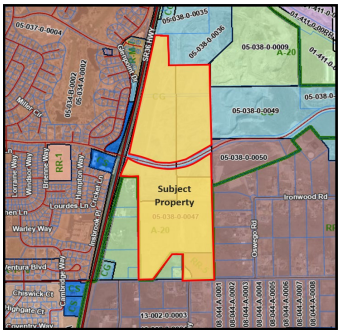
Subdivision Summary and Recommendation

Public Body: Tooele County Planning Commission **Meeting Date:** July 16, 2025
Parcel IDs: 05-038-0-0047
Current Zone: C-G (Commercial General)
Request: 3’ Commercial setback
Planners: Trish DuClos
Planning Staff Recommendation: Approval
Applicant Name: Adobe Rock

PROJECT DESCRIPTION

Adobe Rock is requesting a 3’ setback for a 18’x18’ pavilion on their commercial property.

SITE & VICINITY DESCRIPTION (see attached map)



The subject property is currently zoned C-G (Commercial General). The surrounding properties consist of a mix of zones, such as, other C-G, C-S (Commercial Shopping), R-1-10 (Residential, 10,000sf minimum), RR-5 (Rural Residential, 5-acre minimum), A-20 (Agricultural, 20-acre minimum). The current uses that surround the property are gravel operations, residential, and commercial shopping. Village Blvd splits the property, and the pavilion is proposed to be just South of Village Blvd.

LAND USE CONSIDERATIONS (C-G: Commercial General)

Requirement	Standard	Compliance Verified
Height	75 Feet	Complies
Setbacks	The minimum front yard setback requirement of 20 feet for commercial buildings may be reduced to 0 feet following approval by the Tooele County Planning Commission. Additionally, no commercial building shall be located closer than 50 feet to any residential district boundary line, and no such building shall encroach on any easement.	Can Comply with approval
Lot Width	No minimum	Complies
Lot Coverage	No more than 50%	.2% complies
Lot Area	No mimimum	Complies

Compatibility with existing buildings in terms of size, scale and height.	Yes
Compliance with the General Plan.	Yes

GENERAL PLAN CONSIDERATIONS

The proposed development is consistent with the Tooele County General Plan Update 2022.

ISSUES OF CONCERN/PROPOSED MITIGATION

If Planning Commission grants approval for the front setback to be 3’ Planning Staff has not found any issues with the proposed pavilion. Village Blvd is already a 100' ROW. The 3' setback would be from there.

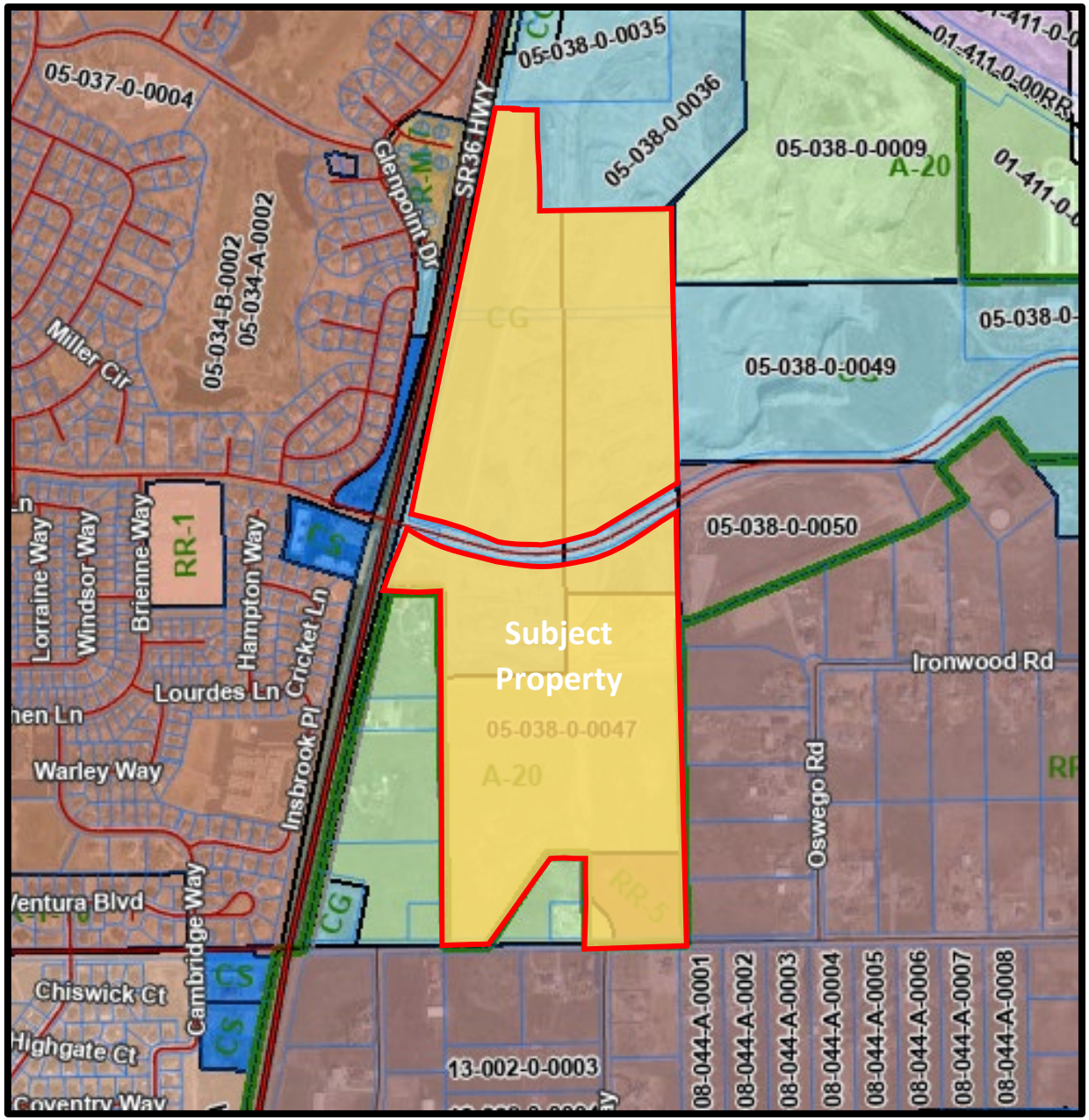
REVIEWING AGENCIES RESPONSE

All reviewing agencies such as Engineering, Roads, Fire, Health have approved the site plan.

PLANNING STAFF RECOMMENDATION

Staff recommends that the Tooele County Planning Commission makes a motion to grant approval for the 3’ setback of the proposed Adobe Rock Pavilion.

SUB 2025-086: Adobe Pavilion site plan



811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

SOUTH QUARTER CORNER OF SECTION 23, TOWNSHIP 2 SOUTH, RANGE 4 WEST, SALT LAKE BASE & MERIDIAN

ELEVATION = 4500.00 (ASSUMED)



GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
3. SEE LANDSCAPE/ARCHITECTURAL PLANS FOR CONCRETE MATERIAL, COLOR, FINISH, AND SCORE PATTERNS THROUGHOUT SITE.
4. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE M.U.T.C.D. (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES).
5. ALL SURFACE IMPROVEMENTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED OR REPLACED, INCLUDING TREES AND DECORATIVE SHRUBS, SOD, FENCES, WALLS AND STRUCTURES, WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.
6. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE OR ASPHALT.
7. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

1. PROPOSED 18'X18'X17' TALL PAVILION
2. PROPOSED PAVILION IS A DISPLAY IT IS NOT AN OCCUPIED STRUCTURE

NOTES:
1. PROPOSED STRUCTURE HEIGHT SINGLE STORY = 17'-0"
2. PROPERTY OWNER: KAMI JEAN BROWN CO-TRUSTEE
3. PARCEL NUMBER: 05-038-0-0047

ZONING ADMINISTRATOR APPROVAL

NORTH

HORIZONTAL GRAPHIC SCALE

10 0 5 10 20

(IN FEET)
HORZ: 1 inch = 10 ft.

ENSIGN
THE STANDARD IN ENGINEERING

TOOELE
169 N. Main Street, Unit 1
Tooele, UT. 84074
Phone: 435.843.3590

SALT LAKE CITY
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
ADOBE ROCK PRODUCTS
P.O. BOX 1336
GRANTSVILLE, UT 84029
CONTACT:
RICK PALMER
PHONE: 435-241-0153

ADOBE ROCK PRODUCTS OFFICE

5500 SR-36
STANSBURY PARK, UTAH 84074

LICENSED PROFESSIONAL ENGINEER
JACOB M. CLEGG
6/13/2025
STATE OF UTAH

SITE PLAN

PROJECT NUMBER	PRINT DATE
8014	6/13/25
DRAWN BY	CHECKED BY
A. JASPER	J. CLEGG
PROJECT MANAGER	
J. CLEGG	

C-100



BERLIN GARDENS
TAKE LIFE OUTDOORS™

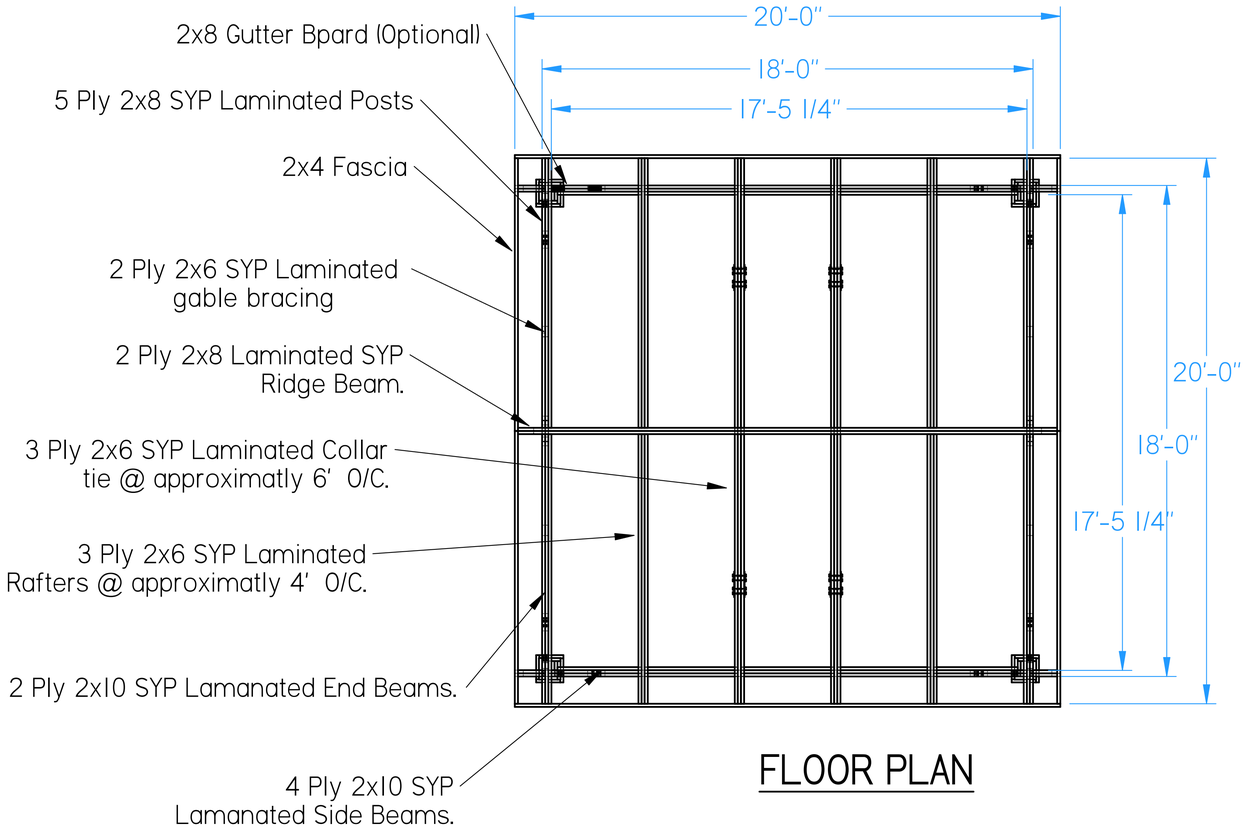
Breckenridge Pavilion Triple Rafter 18x18

DRAWN BY: Wayne.B

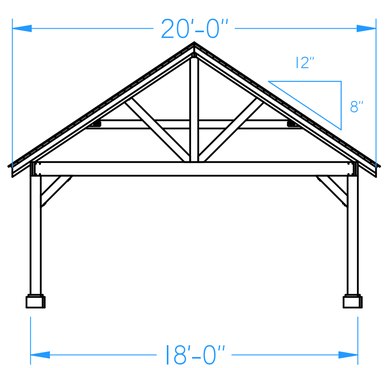
DATE:10/25/2024

PROJECT:

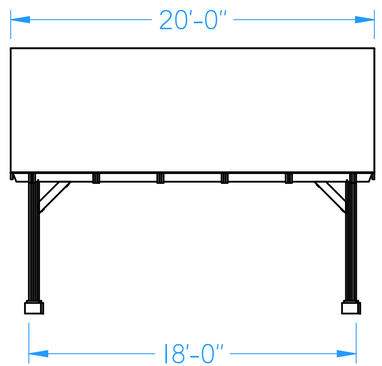
Breckenridge Triple Rafter.dft



FLOOR PLAN



END ELEVATION



SIDE ELEVATION

Design Complies with Ohio Residential Code 2019
and The Ohio Building Code 2017
Structural Design Based On ASCE 7 - 10
Snow Load:
Ground Snow Load = 20 Psf
Snow Exposure Factor For Terrain Category B = 1.0
Unbalanced Snow Load, Does Not Apply
Roof LL = 2- psf
Roof DL = 10 psf

Wind Load:
Basic Wind Speed = 115 MPH
Wind Pressure For Exposure B Per Table
Importance Factor For Category II = 1.0

SEISMIC DESIGN

S5 = 15
SI = 6
Site Class = D
Designed Using Simplified
Lateral Force Analysis
Procedures.
F = 1.0
Fa = 1.4
Sds = 1.0
R = 7

STRUCTURAL PLANS ONLY.
OTHERS RESPONSABLE FOR
MEETING ALL OTHER STATE AND
LOCAL REQUIREMENTS AND
REQUIRED SUBMITTAL

All materials,Treated Southern
Yellow Pine #2 or better grade
unless noted otherwise.

All fastners are Big Timber WTX
or BTX Construction screws at
length and diameter specified
W/ Coating approved for use in
Preservative Treated Wood
unless noted otherwise.

BERLIN GARDENS
TAKE LIFE OUTDOORS™

Breckenridge Pavilion
Triple Rafter
18x18

DRAWN BY: Wayne.B

DATE:10/25/2024

PROJECT:
Breckenridge
Triple Rafter.dft